

**APPENDIX D. ANALYSIS &
SUPPORTING DOCUMENTATION**

**Attachment D-1. Public
Involvement**

**Mayor Bill Cervenik
Community Presentations on Citywide Development***

<u>DATE</u>	<u>Group/Organization</u>	<u>Attendees</u>
Tuesday	5/11/2010 Euclid Hospital Volunteer Banquet	150
Tuesday	4/27/2010 East Beverly Hills Homeowners Association	40
Tuesday	4/6/2010 Arbor Goller Homeowners Association	40
Thursday	3/18/2010 Euclid Democratic Club	60
Monday	2/1/2010 State of the City (to AARP)	200
Monday	2/1/2010 State of the City (to Council)	30
Tuesday	2/23/2010 State of the City (to Rotary Club)	40
Thursday	2/25/2010 State of the City (to Chamber)	150
Thursday	1/28/2010 Lakeland Quarry Homeowners	40
Sunday	11/1/2009 Holy Cross Genesis Group	80
Thursday	9/10/2009 Fullerwood Homeowners	50
Tuesday	8/18/2009 East 246/248 Homeowners	50
Total Estimated Attendees		930

*Note: Power Point presentation includes slides and a discussion about the proposed Lincoln Electric wind turbine.

Cleveland, Ohio -- Governor Ted Strickland today announced that 25 Ohio projects will receive more than \$13 million in grant awards funded through the *American Recovery and Reinvestment Act's* State Energy Program.

"We are shaping Ohio's future by strengthening our advanced energy economy today. Supporting the growing wind and solar industries creates jobs, creates energy and reduces costs for hard-working Ohioans," Strickland said. "These Recovery Act-funded projects take the state another vital step toward our goal of making Ohio a world center for advanced energy."

US Representatives Betty Sutton and Marcia Fudge, Ohio Department of Development Director Lisa Patt-McDaniel, the governor's energy advisor Mark Shanahan, and other community leaders and elected officials joined the governor and Lincoln Electric Chairman and CEO John Stropki for today's announcement in Cleveland. Lincoln Electric will receive a \$1 million grant for its wind turbine installation project.

These renewable energy awards are the first to be awarded from Ohio's \$96 million State Energy Program, which was accepted by the U.S. Department of Energy on June 26th.

"We are excited to have this opportunity under Ohio's energy program to demonstrate the value of wind energy by investing in our own installation," Stropki said. "This project is a continuation of other Lincoln EHS programs and green initiatives currently under way in our manufacturing operations to improve our costs and protect our environment. Not only will the wind project provide long-term benefits by reducing our energy costs, it will also showcase the unique benefits that Lincoln products and welding solutions provide to wind tower manufacturers to improve their quality and lower their costs."

Public and private entities will use the funds to install wind electric, solar electric and solar thermal technologies at businesses, schools, parks and other public locations throughout Ohio.

"Ohio is an impact state for advanced energy job creation potential," Patt-McDaniel said. "Our state's manufacturing strengths, logistics capabilities, skilled workforce, and competitive business environment make Ohio a major competitor in the growth of our nation's new energy economy."

Proposals for *Deploying Renewable Energy: Wind and Solar* component of the program were accepted beginning August 25, 2009. Projects submitted were selected through a competitive review process based on several criteria: project readiness and ability to be completed within 12 months, a matching investment of at least 50 percent, and direct economic impacts to create and retain jobs in Ohio.

Governor Strickland acknowledged that these awards would not have been possible without the support of members of Ohio's Congressional delegation and President Barack Obama for the *American Recovery and Reinvestment Act*.

"The Wind and Solar Awards afford Cuyahoga County and the State of Ohio an opportunity to create jobs in a burgeoning field. By investing in energy, we will promote an industry of endless possibilities, create sustainable jobs, and retrain workers to enter this expanding 'green' workforce," said Representative Fudge (OH-11).

"Today's announcement of \$1 million for the solar energy project that will be installed in Akron Metro's facility is great news," Representative Sutton said. "It is projected that these solar panels could save up to 33 percent in energy costs. The projects announced today will strengthen Ohio's advanced and renewable energy sectors, facilitate job creation and retention, and reduce energy costs along with greenhouse gas emissions."

Awarded projects meet the federal goals of the Recovery Act's State Energy Program to accelerate renewable energy development in Ohio by creating or preserving jobs and reduce energy usage and greenhouse gas emissions.

"Expanding the use of wind and solar energy across Ohio will create jobs in an expanding global market, positioning Ohio for growth for years to come," Shanahan said. "Recovery Act resources are helping Ohio communities make their own renewable energy while accelerating market-driven job creation in our state."

A list of award recipients follows below:

WIND PROJECTS

- **Archbold Area Local Schools** (Fulton County) - \$750,000 to install a 500 kW wind turbine and integrate the technology as a teaching tool in the classroom.
- **Cuyahoga County Board of Commissioners** (Cuyahoga County) - \$1 million to install a 600 kW wind turbine at the Cuyahoga County Fairgrounds in conjunction with a career and new energy training center.

Attachment D-1b

- **Green City Growers Cooperative** (Cuyahoga County) - \$1 million to install a 1.5 MW wind turbine to power a 5.35 acre greenhouse and a 40,000 square-foot facility that will process fresh produce for Northeast Ohio.
- **Huron-Wind LLC and City of Huron** (Erie County) - \$280,500 to install a 100 kW wind turbine.
- **Kenston Local School District** (Geauga County) - \$630,500 to install a 600 kW wind turbine and integrate the technology as a teaching tool in the classroom.
- **Lincoln Electric Company** (Cuyahoga County) - \$1 million to install a 2.5 MW wind turbine at its manufacturing facility.
- **Pettisville Local Schools** (Fulton County) - \$750,000 to install a 500 kW wind turbine and integrate the technology as a teaching tool in the classroom.
- **Toledo Electric Joint Apprentice and Training Committee** (Lucas County) - \$420,000 to install a 100 kW wind turbine to serve as a training tool for 1,000 apprentices.

SOLAR ELECTRIC PROJECTS

- **Affinity Building Systems, Inc** (Montgomery County) - \$292,684 to install a 105 kW solar photovoltaic system.
- **City of Cincinnati, Duke Energy Convention Center** (Hamilton County) - \$252,937 to install a 93 kW photovoltaic array rooftop system at the Duke Energy Convention Center.
- **City of Cincinnati Parks** (Hamilton County) - \$451,418 to install a total of 170 kW solar photovoltaic systems at 13 sites in the park system.
- **Forest City Residential Management Inc., Midtown Towers** (Cuyahoga County) - \$1 million to install a 350 kW solar photovoltaic rooftop system on three of The Midtown Towers' residential building complexes.
- **Greater Cincinnati Water Works** (Hamilton County) - \$775,655 to install a 280 kW photovoltaic solar array rooftop system.
- **Hull & Associates Inc, Bedford Office** (Cuyahoga County) - \$266,254 to install a 93 kW solar photovoltaic system at its office building in Northeast Ohio.
- **Hull & Associates Inc, PNA Solar Project** (Wood County) - \$680,782 to install a 250 kW solar array project on Pilkington North America, Inc's (PNA) Plant 21 site.
- **IGS Energy** (Franklin County) - \$261,089 to install a 93 kW solar photovoltaic system on their corporate office building.
- **Jewish Community Federation of Cleveland** (Cuyahoga County) - \$217,479 to install a 76 kW solar photovoltaic rooftop system at an office building built to LEED certification.
- **METRO Regional Transit Authority** (Summit County) - \$1 million to install a 488 kW solar photovoltaic rooftop system located on its central bus barn.
- **Ohio Department of Mental Health (ODMH), Summit Facility** (Hamilton County) - \$652,932 to install a 232.65 kW solar photovoltaic rooftop system.
- **Solar Vision LLC, Athens City Community Center** (Athens County) - \$631,637 to install a 220 kW photovoltaic solar array system on four carport structures in the parking lot of the Athens City Community Center.
- **Solar Vision LLC, Bexley Police** (Franklin County) - \$335,328 to install a 117 kW photovoltaic array system on four new carport structures in the parking lot.
- **Toledo Museum of Art** (Lucas County) - \$282,264 to install a 100 kW solar rooftop system.
- **Toledo Zoo** (Lucas County) - \$306,837 to install a 103 kW solar system.

SOLAR THERMAL PROJECTS

- **Great Lakes Brewing Company** (Cuyahoga County) - \$190,082 to install two hot water heating systems.
- **Parkway Local Schools** (Mercer County) - \$16,080 to install a solar thermal system.

For more information about the State Energy Program and project details, please visit:
<http://www.development.ohio.gov/recovery/StateEnergyProgram.htm>.



585 East 222nd Street, Euclid, OH 44123-2099

www.cityofeuclid.com

November 30, 2009

For Immediate Release

Contact:

Mayor Bill Cervenik

City of Euclid

216 289-2751

bcervenik@cityofeuclid.com

Lincoln Electric Awarded \$1M State Energy Grant

Demonstration Wind Turbine Project to be Built at the Euclid, Ohio World Headquarters Campus

Euclid, November 30 , 2009: The City of Euclid's **Going Green** initiative took another major step forward with the State Energy Program grant award announcement today by Governor Ted Strickland at the Lincoln Electric Company. Lincoln was awarded a \$1M grant funded through the American Recovery and Reinvestment Act's State Energy Program.

The renewable energy grant award, one of the first from Ohio's \$96 million State Energy Program, will help to fund the construction of a 2.5 megawatt Kenersys wind turbine on the Lincoln campus in Euclid, Ohio. The turbine will be one of the largest constructed in the State of Ohio to date.

Lincoln's exciting project will serve as a demonstration of wind turbine technology and will complement the company's business strategy to pursue manufacturing opportunities in the wind industry. According to Mayor Bill Cervenik, "Lincoln officials indicated that the turbine would also generate about 10% of their annual electric demand and help to reduce greenhouse gas emissions."

Mayor Bill Cervenik addressed local, State and Federal officials at Lincoln Electric's world headquarters in Euclid, Ohio where the award announcement was made. "The City of Euclid recognizes the importance of renewable energy to the future of our local economy and to the future of the economy our state.

Governor Strickland has demonstrated strong support of renewable energy for the State of Ohio as evidenced by today's grant awards" explained Cervenik.

The City of Euclid assisted Lincoln with the grant application process. With support from State Representative Kenny Yuko, in a cooperative effort with the State of Ohio, Cuyahoga County Department of Development, and the Great Lakes Wind Task Force, Lincoln successfully secured the grant.

According to Economic Development Director, Frank Pietravoia, "Already in place is the Automation Division of Lincoln Electric and its Wind Tower Welding Solutions program, which provides welding services and products for wind tower construction providing evidence of the potential impact on our local economy."

Lincoln is not alone. The City of Euclid is also **Going Green**. In a unique partnership with the Euclid Public Library one of the largest solar panel installations undertaken by such a partnership in the state of Ohio will be installed to help meet the electrical needs of City Hall and the library.

A number of other Euclid based companies are also actively exploring wind and solar installations for their own energy needs, as well as opportunities to grow their own business by manufacturing related components. Euclid has a long history of a strong manufacturing base with the area workforce and expertise to succeed in the evolving renewable energy manufacturing sector.

Bluestone Business Park, an over 80-acre development under construction just to the east of the Lincoln campus, provides a prime opportunity to attract renewable energy manufacturers to Euclid and Northeast Ohio. Fogg Building Methods, the park developer, is committed to a "green" industrial park. The State of Ohio and Cuyahoga County played a critical role in making the Park possible through a nearly \$5M Job Ready Sites grant and a \$1M Brownfield loan.

For further information contact:
Frank Pietravoia, Director
City of Euclid
Department of Community Services & Economic Development
216 289-8160
fpietravoia@cityofeuclid.com

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Lincoln Electric Awarded \$1M State Energy Grant

[lincoln turbine press release 11-30-09.pdf](#)

November 30, 2009

For Immediate Release

Lincoln Electric Awarded \$1M State Energy Grant Demonstration Wind Turbine Project to be Built at the Euclid, Ohio World Headquarters Campus

Euclid, November 30, 2009: The City of Euclid's Going Green initiative took another major step forward with the State Energy Program grant award announcement today by Governor Ted Strickland at the Lincoln Electric Company. Lincoln was awarded a \$1M grant funded through the American Recovery and Reinvestment Act's State Energy Program.

The renewable energy grant award, one of the first from Ohio's \$96 million State Energy Program, will help to fund the construction of a 2.5 megawatt Kenersys wind turbine on the Lincoln campus in Euclid, Ohio. The turbine will be one of the largest constructed in the State of Ohio to date.

Attachment D-1d

CRAIN'S
CLEVELAND BUSINESS
WWW.CRAINSCLEVELAND.COM

State of Ohio announces \$13 million in fed money for advanced energy projects

By **JAY MILLER**

2:56 pm, November 30, 2009

Gov. Ted Strickland came to Cleveland today to announce \$13 million of advanced energy projects statewide financed with federal stimulus money.

Nine of the 25 projects are in Northeast Ohio. They include a wind turbine at Lincoln Electric Co. in Euclid and solar panels for the Akron Metro Regional Transit Authority.

At a news conference this afternoon at Lincoln Electric, Gov. Strickland said this is the first wave of \$96 million from the state energy program. The projects will use either wind turbines or solar power to generate electricity or heat at their locations.

The governor said he believes the state's strong manufacturing base and skilled work force can make Ohio a pre-eminent state for advanced energy development.

"We believe we have the capacity to be the supplier of advanced energy in the world," the governor said.

The Northeast Ohio projects include wind turbines at the Cuyahoga County Fairgrounds in Middleburg Heights; Green City Growers Cooperative, a new greenhouse facility in Cleveland; Kenston Local School District; and Lincoln Electric.

Solar voltaic systems will be installed at the Midtown Towers residential complex operated by Forest City Residential Management Inc. in Parma; Hull & Associates Inc.'s office building in Bedford; the Jewish Community Federation's new headquarters in Beachwood, and Metro Transit in Akron.

In addition, a solar water-heating system will be installed at Great Lakes Brewing Co. in Cleveland.

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Attachment D-1e

BUSINESS

C | THE PLAIN DEALER  UPDATED FINANCIAL NEWS AT CLEVELAND.COM/BUSINESS

Stimulus money will power 10 NE Ohio energy projects

JOHN FUNK
Plain Dealer Reporter

Ohio is plowing more than \$13 million in federal stimulus money into 25 wind and solar power projects across the state, including 10 in Northeast Ohio.

The money for the "shovel-ready" projects is the first installment of the \$96 million Ohio has received for energy-related projects over two years.

Gov. Ted Strickland announced

the first recipients Monday at Lincoln Electric Co.'s global headquarters in Euclid. Lincoln, which employs more than 3,000 people in Ohio, was among the companies receiving grants.

The governor stressed that the projects would create jobs and help establish the state as a manufacturer of renewable energy technologies.

"These projects will create energy, create jobs and reduce greenhouse gases," he said. "And these projects will take us another vital step for-

ward as we work to make Ohio a world center for advanced energy."

Hundreds of Ohio companies already manufacture components for wind turbine projects, records at the Ohio Department of Development show, and the largest U.S. solar company, First Solar, is near Toledo.

In an interview after the presentations, Strickland described the grants as "a demonstration project."

"What we need to do is focus on the larger picture," he said. "Ohio is beautifully positioned right now to

become a supplier of the world's needs, and that is especially true when it comes to energy needs, whether solar, wind, biomass, clean coal technologies or whether it's nuclear power.

"We are talking about future jobs. We are concerned about jobs right now. And we are starting to see *some* jobs created," he said. "Ohio's supply chain is right now supplying component parts, but we are at the embryonic stage."

SEE ENERGY | C2

ENERGY

FROM C1

Wind, solar projects receiving funds

Lincoln Electric is receiving a \$1 million grant award toward a \$5.1 million project to erect a 2.5-megawatt (2.5 million watts) utility-scale turbine on its campus.

The giant turbine, which will weigh 300,000 pounds, will sit on a tower nearly 300 feet tall. Construction is planned to start in the spring, with completion in July.

"This is not a toy. This is a real project," said Lincoln's chairman and chief executive officer, John Stropki.

The turbine will generate about 10 percent of Lincoln Electric's power needs, or enough electricity for 450 homes, he said.

"This project will be an important part of our future," Stropki said.

"The project shows the importance of engineering and what it can do in terms of clean energy as well as cost-effective energy, and the creative nature of being able to take a risk like this and demonstrate to the world that these kind of projects can work.

"And it shows what can happen when you have cooperation between business and government to work together for a common cause, which not only creates but preserves jobs."

About 80 people attended the grant announcement and then toured the automation center, where workers demonstrated huge welding equipment that manufacturers of towers for wind turbines use to build the structures.

Attachment D-1f

To reach this Plain Dealer reporter:
jfunk@plained.com, 216-999-4138

Area projects getting more state stimulus greenbacks

Cassandra Shofar
CShofar@News-Herald.com

They're a bit behind, but it's a good behind, Kenston Schools Superintendent Bob Lee said.

Installation of the school district's 138-foot, 600-kilowatt wind turbine may have been pushed back a bit, but the delay allows the district to use some more grant money recently released from the state.

Gov. Ted Strickland announced Monday that 25 Ohio projects would receive more than \$13 million in grant awards funded through the American Recovery and Reinvestment Act's State Energy Program.

Kenston Schools received \$630,500 of that, and Lincoln Electric received \$1 million.

"We are ecstatic about the award, and it is such a great addition to the funding of the project, (which will) actually start making money from day one," Lee said, adding that many projects have unanticipated costs associated with them as well as some setbacks.

The roughly \$600,000 project has about \$550,000 being paid for by grant money, Lee has said. That total will now include the recent ARRA award, which the district applied for in September.

"We continue to explore the options that are available to us for the length of the blades and the tower height," he said, adding the project, which previously was set to be installed in December, will mostly likely be installed sometime in midwinter.

Originally, the district put out bids for a 185-foot wind turbine. However, the model it wanted wasn't

See Greenbacks, Page A4

Greenbacks

From Page A1

available, so the school board settled on the 138-foot tower instead, saving the district \$123,500. However, an extension to the tower may be an option, Lee said.

Another alteration included having the turbine reconditioned in Europe because it was purchased from Germany and needed to be rewired to fit American power standards.

The high school's electric bill is about \$240,000 per year, Lee has said.

The turbine will help power

about 40 percent of the electrical needs for the district's high school, saving an estimated \$100,000 to \$120,000 annually at the current rates, he added.

"We are shaping Ohio's future by strengthening our advanced energy economy today. Supporting the growing wind and solar industries creates jobs, creates energy and reduces costs for hard-working Ohioans," Strickland said in a statement.

"These Recovery Act-funded projects take the state another vital step toward our goal of making Ohio a world center for advanced energy."

The State Energy program will provide Lincoln Electric with a \$1

million grant for a wind-turbine installation project at its Euclid headquarters.

"We are excited to have this opportunity under Ohio's energy program to demonstrate the value of wind energy by investing in our own installation," Lincoln Chairman and Chief Executive Officer John Stropki said.

"Not only will the wind project provide long-term benefits by reducing our energy costs, it also will showcase the unique benefits that Lincoln products and welding solutions provide to wind tower manufacturers to improve their quality and lower their costs."

Staff Writer Brandon C. Baker contributed to this article.

Abutting Property Notifications for Lincoln Wind Turbine

Name	Parcel #	Physical Address	City	State	Zip	Notification Address	City	State	Zip
EGR Holdings, LLC	647-16-001	1151 E. 222 St.	Euclid	OH	44117	2625 Snowberry Ln.	Cleveland	OH	44124
PPG Industries Ohio, Inc	647-13-002	23000 St. Clair Ave.	Euclid	OH	44117	1 PPG Pl.	Pittsburgh	PA	15272
Tonino & Carmelina Difiore	647-13-001	23520 St. Clair Ave.	Euclid	OH	44117	16973 Hunting Meadows Dr.	Strongsville	OH	44136
M M & R, Inc.	647-10-003	23750 St. Clair Ave.	Euclid	OH	44117	23530 St. Clair Ave.	Euclid	OH	44117
Joseph & Zdravko Grman	646-16-001	22199 St. Clair Ave.	Euclid	OH	44117	22199 St. Clair Ave.	Euclid	OH	44117
Andy & Kristen Ludvik	646-16-027	1054 E. 222 St.	Euclid	OH	44117	1054 E. 222 St.	Euclid	OH	44117
Joseph R. Tillery	646-16-026	1058 E. 222 St.	Euclid	OH	44117	164 E. 191 St.	Euclid	OH	44119
Standard Properties, LTD	646-16-025	1060 E. 222 St.	Euclid	OH	44117	50 E. 213 St.	Euclid	OH	44123
Standard Properties, LTD	646-16-024	1062 E. 222 St.	Euclid	OH	44117	50 E. 213 St.	Euclid	OH	44123
Janko & Katica Novosel	646-16-023	1066 E. 222 St.	Euclid	OH	44117	38500 Florence Dr.	Willoughby Hills	OH	44094
G M & R Associates	646-16-021	1080 E. 222 St.	Euclid	OH	44117	1080 E. 222 St.	Euclid	OH	44117
Walter & Bernice Shippe	646-16-020	E. 222 St.	Euclid	OH	44117	35721 W. Island Dr.	Eastlake	OH	44095
Walter & Bernice Shippe	646-16-018	1084 E. 222 St.	Euclid	OH	44117	35721 W. Island Dr.	Eastlake	OH	44095
Euclid Corridor Industrial	646-11-001	1100 E. 222 St.	Euclid	OH	44117	400 Lazelle Rd. #4	Columbus	OH	43240
40 Properties Mgmt, LTD	647-17-003	1233 E. 222 St.	Euclid	OH	44117	1233 E. 222 St.	Euclid	OH	44117
40 Properties Mgmt, LTD	647-17-004	1247 E. 222 St.	Euclid	OH	44117	1233 E. 222 St.	Euclid	OH	44117
Wedge Properties, LLC	647-17-002	1245 E. 222 St.	Euclid	OH	44117	PO Box 241368	Cleveland	OH	44124
H.C. Stark, Inc	646-14-001	1250 E. 222 St.	Euclid	OH	44117	45 Industrial Pl.	Newton Highlands	MA	2461
Steel Warehouse LLC	646-13-002	1220 E. 222 St.	Euclid	OH	44117	2722 W. Tucker Dr.	South Bend	IN	46619
1160 Properties, LLC	646-13-003	1160 E. 222 St.	Euclid	OH	44117	1160 E. 222 St.	Euclid	OH	44117
Continental Products Co	646-13-001	1150 E. 222 St.	Euclid	OH	44117	1150 E. 222 St.	Euclid	OH	44117
Leonard Lowe	646-13-004	1148 E. 222 St.	Euclid	OH	44117	1148 E. 222 St.	Euclid	OH	44117
Leonard Lowe	646-13-007	E. 222 St. Rear	Euclid	OH	44117	1148 E. 222 St.	Euclid	OH	44117
7273 Millewr Properties, LLC	646-16-002	1050 E. 222 St.	Euclid	OH	44117	1050 E. 222 St.	Euclid	OH	44117
Michael G. Miller	646-16-002	1050 E. 222 St.	Euclid	OH	44117	7819 Curberry Ct.	Mentor	OH	44060

<p>The Lincoln Electric Company 22801 Saint Clair Ave. Euclid, OH 44117 ATTN: Seth Mason</p>	<p>The Lincoln Electric Company 22801 Saint Clair Ave. Euclid, OH 44117 ATTN: Jennifer Ansberry</p>	<p>EGR HOLDINGS LLC 2625 SNOWBERRY LN CLEVELAND OH 44124</p>
<p>PPG INDUSTRIES OHIO INC 1 PPG PL PITTSBURGH PA 15272-0001</p>	<p>TONINO & CARMELINA DIFIORE 16973 HUNTING MEADOWS DR STRONGSVILLE OH 44136</p>	<p>M M & R INC 23530 SAINT CLAIR AVE EUCLID OH 44117</p>
<p>Joseph & Zdravko Grman 22199 St. Clair Ave. Euclid, OH 44117</p>	<p>1054 E. 222 St. Euclid, OH 44117</p>	<p>Joseph R Tillery 164 E. 191 St. Euclid, OH 44119</p>
<p>Standard Properties LTD 50 E. 213 St. Euclid, OH 44123</p>	<p>JANKO & KATICA NOVOSEL 38500 FLORENCE DR WILLOUGHBY HILLS OH 44094</p>	<p>G M & R ASSOCIATES 1080 E 222ND ST EUCLID OH 44117</p>
<p>WALTER & BERNICE SHIPPE 35721 W ISLAND DR EASTLAKE OH 44095</p>	<p>EUCLID CORRIDOR INDUSTRIAL/MALL 400 LAZELLE RD #4 COLUMBUS OH 43240</p>	<p>40 Properties Management LTD 1233 E. 222 St. Euclid, OH 44117</p>
<p>Wedge Properties LLC PO Box 241368 Cleveland, OH 44124</p>	<p>H.C. Stark Inc. 45 Industrial PI Newton Highlands, MA 02461</p>	<p>H.C. Stark Inc. 1250 E. 222 St. Euclid, OH 44123</p>
<p>Steel Warehouse Cleveland LLC 2722 W. Tucker Dr. South Bend, IN 46619</p>	<p>Steel Warehouse LLC 1220 E. 222 St. Euclid, OH 44132</p>	<p>1160 Properties LLC 1160 E. 222 St. Euclid, OH 44117</p>
<p>Continental Products Co. 1150 E. 222 St. Euclid, OH 44117</p>	<p>Leonard Lowe 1148 E. 222 St. Euclid, OH 44117</p>	<p>7273 Millewr Properties LLC 1050 E. 222 St. Euclid, OH 44117</p>
<p>Michael G. Miller 7819 Curberry Court Mentor, OH 44060</p>		



585 East 222nd Street, Euclid, OH 44123-2099

www.cityofeuclid.com

Date: January 4, 2010

**RE: 2010-VAR-01
PP# 647-13-003
22800 SAINT CLAIR AVENUE
VARIANCE**

To Whom It May Concern:

Mr. Seth Mason, representative of The Lincoln Electric Company has submitted an application requesting the required height exemption to install a 443' high, 2.5MW wind turbine located at 22800 St. Clair Ave.

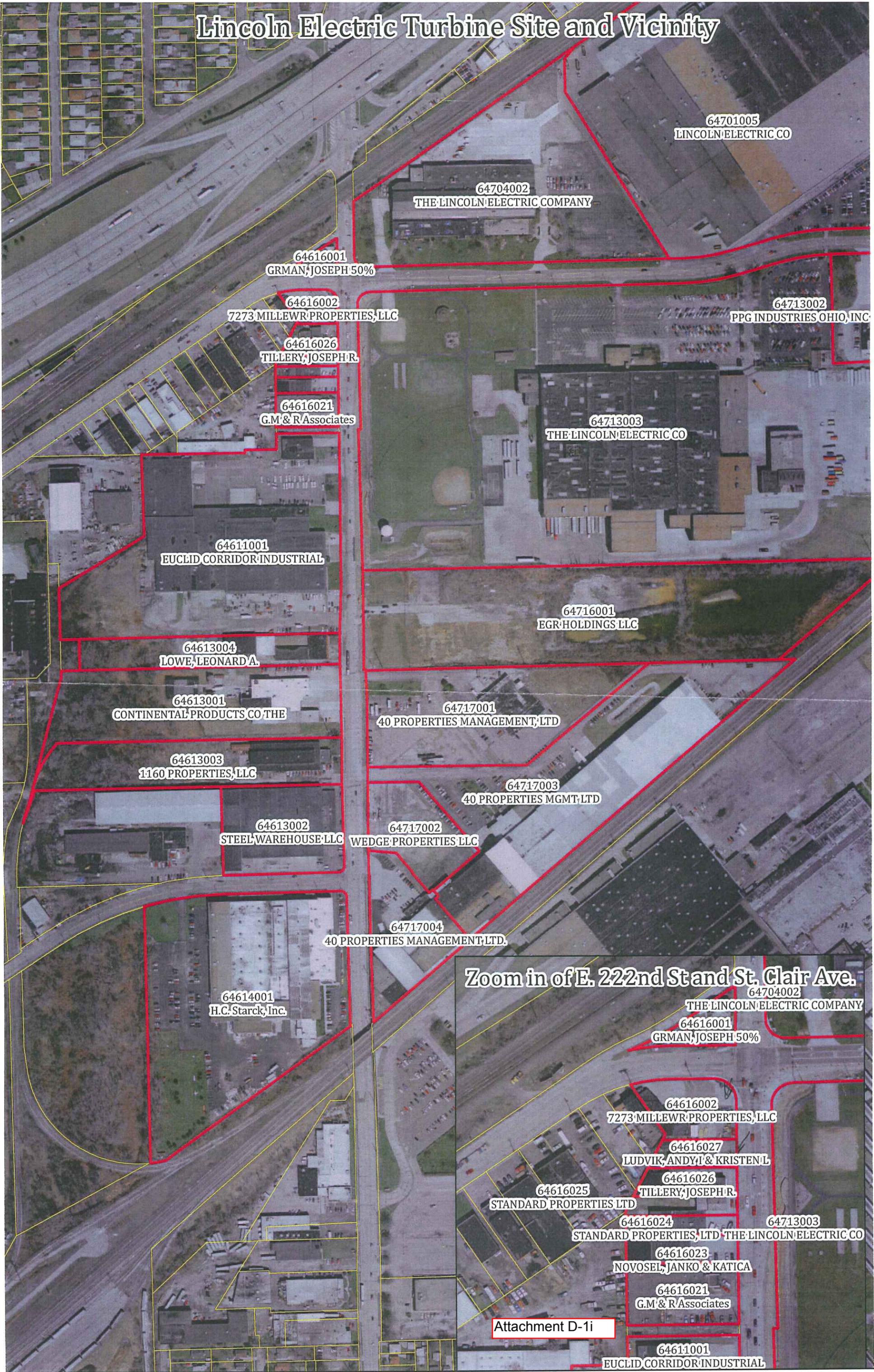
The City of Euclid Planning & Zoning Commission will hold a regular meeting to hear this request on Tuesday, January 12th, 2010 at 7:00 PM in the Euclid City Hall Council Chambers.

As you are an abutting/adjoining property owner, please plan on attending this meeting if you would care to ask any questions or voice any opinions in regard to this request.

Sincerely,

Brandon Hughes
Secretary
Planning & Zoning Commission
216-289-8164

Lincoln Electric Turbine Site and Vicinity



64701005
LINCOLN ELECTRIC CO

64704002
THE LINCOLN ELECTRIC COMPANY

64616001
GRMAN, JOSEPH 50%

64616002
7273 MILLEWR PROPERTIES, LLC

64616026
TILLERY, JOSEPH R.

64616021
G.M. & R Associates

64713002
PPG INDUSTRIES OHIO, INC

64713003
THE LINCOLN ELECTRIC CO

64611001
EUCLID CORRIDOR INDUSTRIAL

64716001
EGR HOLDINGS LLC

64613004
LOWE, LEONARD A.

64613001
CONTINENTAL PRODUCTS CO THE

64717001
40 PROPERTIES MANAGEMENT, LTD

64613003
1160 PROPERTIES, LLC

64717003
40 PROPERTIES MGMT LTD

64613002
STEEL WAREHOUSE LLC

64717002
WEDGE PROPERTIES LLC

64717004
40 PROPERTIES MANAGEMENT, LTD.

64614001
H.C. Starck, Inc.

Zoom in of E. 222nd St and St. Clair Ave.

64704002
THE LINCOLN ELECTRIC COMPANY
64616001
GRMAN, JOSEPH 50%

64616002
7273 MILLEWR PROPERTIES, LLC

64616027
LUDVIK, ANDY I & KRISTEN L

64616026
TILLERY, JOSEPH R.

64616025
STANDARD PROPERTIES LTD

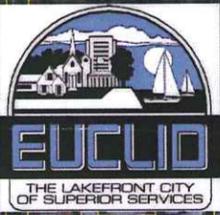
64616024
STANDARD PROPERTIES, LTD THE LINCOLN ELECTRIC CO

64616023
NOVOSEL, JANKO & KATICA

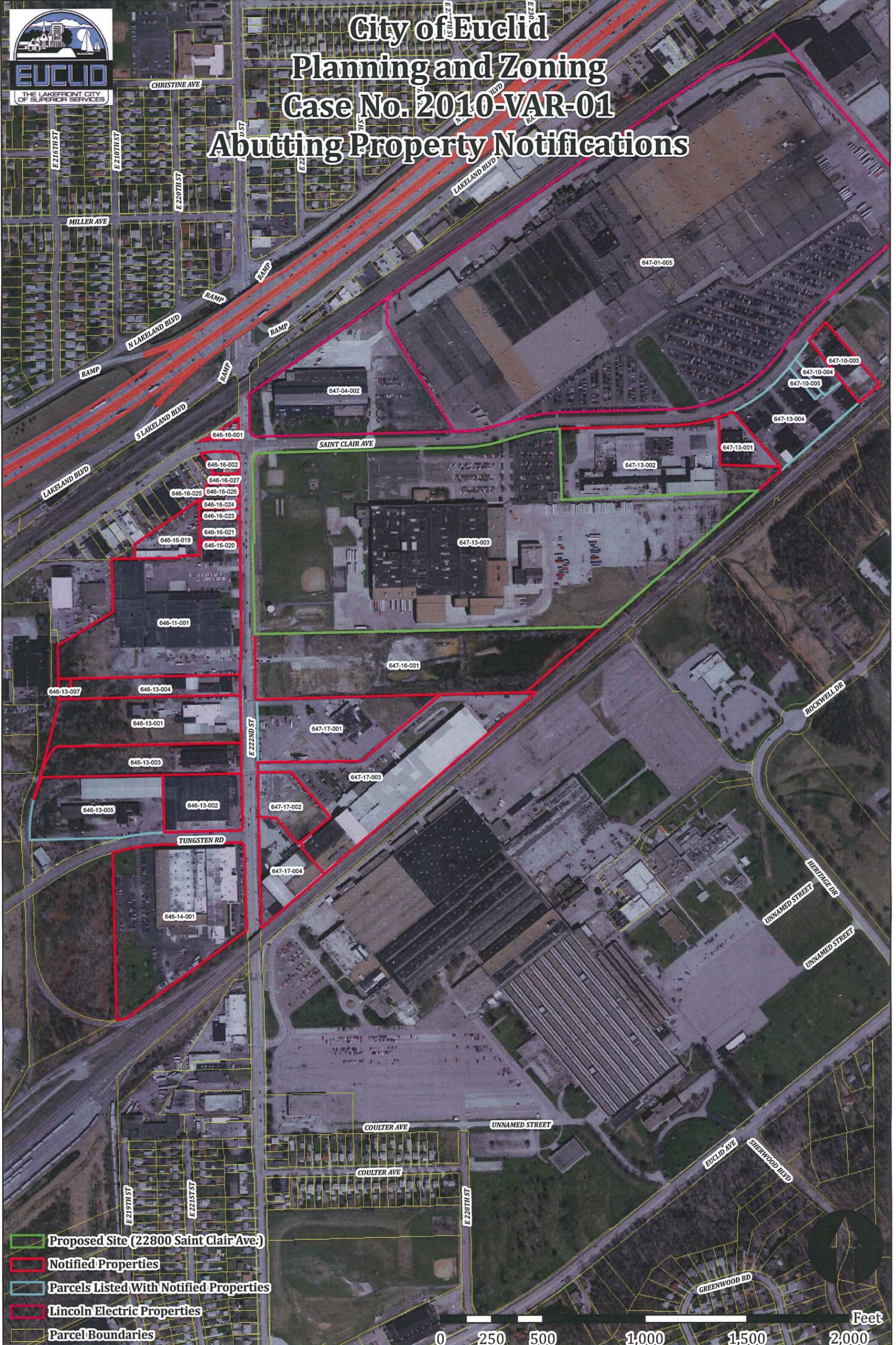
64616021
G.M. & R Associates

Attachment D-1i

64611001
EUCLID CORRIDOR INDUSTRIAL



City of Euclid Planning and Zoning Case No. 2010-VAR-01 Abutting Property Notifications



- Proposed Site (22800 Saint Clair Ave.)
- Notified Properties
- Parcels Listed With Notified Properties
- Lincoln Electric Properties
- Parcel Boundaries



**THE PLANNING AND ZONING COMMISSION
OF THE CITY OF EUCLID, REGULAR MEETING
FINISHED AGENDA / MINUTES**

The Planning & Zoning Commission of the City of Euclid, Ohio held a regular meeting on Tuesday January 12th, 2010 in the Euclid City Hall Council Chambers. The meeting was called to order at 7:00 PM by the Chairperson, Mr. John Monroe.

PLEDGE OF ALLEGIANCE:

ROLL CALL OF MEMBERS:

MEMBERS PRESENT:

Mr. John Monroe
Mr. Howard Drake
Ms. Marsha Curtis
Mr. Willie Brown
Ms. Laura Gorshe

MEMBERS ABSENT:

OTHERS PRESENT:

Mr. Mike Brown, Law Advisor
Mr. Brandon Hughes, Secretary Planning & Zoning
Mr. Paul Beno, Zoning Commissioner
Mr. Frank Pietravoia, Director of Community Services and Economic Development
Mr. Bill Cervenik, Mayor

ELECTION OF OFFICERS

Mayor Cervenik swore in Commissioners Willie Brown and Laura Gorshe.

Mr. Drake nominated Mr. Monroe as Chairman of the Planning and Zoning Commission.

Seconded by Mr. Brown.

Roll Call: Yes – Unanimous

APPROVED (5-0)

Ms. Curtis nominated Mr. Drake as Vice-Chairman of the Planning and Zoning Commission.

Seconded by Mr. Brown.

Roll Call: Yes – Unanimous

APPROVED (5-0)

Mr. Drake nominated Mr. Hughes as Secretary of the Planning and Zoning Commission.

Seconded by Mr. Brown.

Roll Call: Yes – Unanimous

APPROVED (5-0)

APPROVAL OF MINUTES

APPROVED AS SUBMITTED

Regular meeting of 12/8/09

COMMUNICATIONS:

OLD BUSINESS:

NEW BUSINESS:

The Lincoln Electric Company
22801 Saint Clair Ave.
Euclid, OH 44117

**RE: 2010-VAR-01
PP# 647-13-003
22800 SAINT CLAIR AVENUE
VARIANCE**

Mr. Seth Mason, representative of The Lincoln Electric Company has submitted an application requesting the required height exemption to install a 443' high, 2.5MW wind turbine located at 22800 St. Clair Ave. One motion is required.

1. A motion to approve a height district exception from 80 feet maximum height for buildings to 443 feet as similar to exempted structures listed in section 1379.02 (a) for PP# 647-13-003.

P & Z 1379.02(a)

Mayor Cervenik welcomed the representatives from Lincoln Electric Co. and Kenersys. Mayor Cervenik thanked the State of Ohio and the Wind Task Force and stated Lincoln Electric Co. received a \$1 million grant from the state. Mayor Cervenik stated he fully supports this project and urged a positive consideration from the Commission.

Mr. Seth Mason, as well as two other representatives from Lincoln Electric Co. and two representatives from Kenersys were present to discuss this case with the Planning and Zoning Commission. Mr. Mason stated he is the energy manager for Lincoln Electric Co. He is requesting a variance to install a 2.5 MW wind turbine at Lincoln's headquarters. The turbine will be supplied by Kenersys. The cost of the turbine is approximately \$5.3 million and Lincoln has received a grant from the state of Ohio in the amount of \$1.3 million. The turbine will be operational by October, 2010. This turbine will bring national recognition for renewable energy. The turbine will be 280' high at the hub and 443' at the top of the blade radius. It will provide 10% of Lincoln's electrical needs.

Mr. Mason stated Lincoln welds the towers for wind turbines and Lincoln would like to have an example to display at their world headquarters.

Mr. Beno stated the lot for the proposed location of the turbine is zoned U-6 (Industrial and Manufacturing), it is 34 acres and located within a 762 acre industrial tract. This turbine will not set a negative impact to residences or other businesses in the area. This turbine would not be acceptable in other areas of the city but is appropriate here. All the steps have been taken to ensure the safety of the turbine system. Documents will be reviewed additionally for permitting. The proposed turbine is similar to uses exempted from the height regulation such as wireless towers, water tanks, chimneys, etc. Staff recommends approval.

Director Pietravoia stated the Development Department has been working with Lincoln and Kenersys for a long time. Our community is on the leading edge of renewable energy efforts. Lincoln, combined with other projects supports Euclid's "Going Green" initiative. This turbine will set the stage for other renewable energy projects. Lincoln has the capacity and expertise to do this project. City staff has reviewed the proposal and concluded it will benefit Lincoln, our City and the region. Director Pietravoia urged the Planning and Zoning Commission to give positive consideration to this proposal.

Mr. Drake asked how noisy the turbine would be. Mr. Mason stated it would be 160db at the hub, but only 59db at ground level. The intersection of E. 222 St. and St. Clair Ave. is 80 - 90db. Noise at the base of the tower will be relatively quiet.

Mr. Drake asked about possible shadow flicker effect. Mr. Mason stated it is possible, but there are sensors that will read the sun's intensity. The turbine can be shut down if it produces shadow flicker effect.

Mr. Drake asked about ice build up. Mr. Mason stated the turbine will have ice sensors, and will not be permitted to run if there is ice on the blades. Ice will not build up on the blades if the unit is running.

Mr. Drake stated the City is planning a lakefront development and suggested to have some type of renewable energy there. Director Pietravoia stated JJR recommended the city look at turbines in the marina development.

Mr. Drake asked how far away the turbine will be able to be seen. Mr. Mason stated it would be able to be seen from a few miles away. Mr. Drake asked if there will be any lighting on the turbine. Mr. Mason stated the FAA mandates two red flashing lights at night and two white lights flashing during the daylight.

Mr. Drake asked the Kenersys representative if they have a U.S. plant yet. The representative from Kenersys stated they do not, but they are working on building one somewhere in the U.S. Mr. Drake stated Euclid has a brand new industrial park being built and the City would be happy to help Kenersys in building a plant there.

Mr. Brown was concerned about safety and asked what possible safety concerns are. Mr. Mason stated ice throw is a concern, but this unit will not have it due to the ice sensors and the machine won't be permitted to run if there is ice on the blades. Mr. Mason stated Lincoln looked at all the safety concerns involved with this project. This turbine is a 4th generation design. It can withstand 133 MPH wind gusts. The foundation is designed to the turbine. Lincoln performed boring samples and the foundation will be tailored to the soil that exists on site.

Ms. Curtis stated she is very excited about this project and asked if this turbine will be the tallest in the country. Mr. Mason stated it will be consistent with the tallest. On land, currently in the U.S., this is as big as they get.

Ms. Gorshe asked if this unit is computer driven. Mr. Mason stated the operation has a programmable logic controller. The programming listens to sensors and decides the pitch of the blades, output of the generator, which way to face, etc. There are many command and control decisions the unit makes. This is a cutting edge machine.

Mr. Monroe stated by granting this variance, he is concerned we are setting a precedent. Mr. Monroe asked Mr. Beno if any similar request would have to come before the Planning and Zoning Commission. Mr. Beno stated any permit application would have the same review.

Mr. Monroe asked Mr. Mason what the distance is between the ground and the blade in its lowest position. Mr. Mason stated 114'. There is no clearance issue with the bottom of the blade. Mr. Monroe asked if the blade speed is regulated. Mr. Mason stated it is; there are sensors that watch the speed 100% of the time. IF

the speed is exceeded the unit will shut down.

Ms. Scarniench, Ward 2 Councilperson stated this project is awesome. This will be a landmark for Euclid. Ms. Scarniench stated she is very excited and very glad Lincoln is here and that Euclid is their home.

Mr. David Carlson, Euclid Chamber of Commerce Chairman stated Euclid is going green. This sends a message to the country.

A motion was made by Ms. Curtis to approve a height district exception from 80 feet maximum height for buildings to 443 feet as similar to exempted structures listed in section 1379.02 (a) for PP# 647-13-003.

Seconded by Mr. Drake.

Roll Call: Yes – Unanimous

APPROVED (5-0)

Ruth Pisor
22261 Harms Rd.
Euclid, OH 44143

**RE: 2010-APL-01
2010-VAR-02
PP# 650-21-002
22261 HARMS ROAD
VIOLATION APPEAL AND VARIANCES**

Ms. Ruth Pisor has submitted an application to appeal residential violation case # 2009-00000854 regarding wire and mesh fence ground hazard as well as request the required variances to permit a 7' tall mesh fence to remain in use at 22261 Harms Rd. Four motions are required.

1. A motion to grant the appeal for residential violation case # 2009-00000854 regarding wire and mesh fence ground hazard for PP# 650-21-002.
P & Z 1301.07(a)
2. A motion to approve a 1' height variance on rear yard fences from 6' to 7'.
P & Z 1387.01
3. A motion to approve a fence type variance on front yard fences from wood split rail to plastic mesh.

4. A motion to approve a 4' height variance on front yard fences from 3' to 7'.

Mr. and Mrs. Pisor were present to discuss this case with the Planning and Zoning Commission. Ms. Pisor stated she has a deer problem in the area. She has been in this house for 20 years. Ms. Pisor stated the deer come right through her yard and eat her trees, plants and shrubs. Ms. Pisor has installed a heavy duty, plastic, mesh netting to keep the deer out. Ms. Pisor stated she has made the mesh fence safe and nice looking.

Mr. Beno stated city staff visited the site. There were concerns with the original fence with the wire system and metal poles. The new fence material does address the safety concerns. The first motion should not be required because the applicant has changed the fence material. Mr. Beno stated this is a large property situated at the top of a large valley. It does not merit a hardship for the height variance. Staff recommends denial of this variance request.

Mr. Brown asked Ms. Pisor how it was determined that 7' is the height the fence should be. Ms. Pisor stated 7' is the height that deer won't jump over. Ms. Pisor stated this plastic mesh is the best solution and that she does not want to install a solid wood fence.

Ms. Curtis asked if fencing off the plants, or garden would work. Ms. Pisor stated she has tried and the deer still get in. Ms. Curtis asked Ms. Pisor if she had any letters of support from her neighbors. Ms. Pisor stated she did not.

Ms. Gorshe asked what the pile of rebar was in the back yard. Ms. Pisor stated it was left from the previous owner. Ms. Gorshe suggested liquid deer repellent. She also stated other animals can burrow in under the staples.

Mr. Drake stated the main issue is the rear yard fence height. Mr. Drake asked if it's possible to reduce the fence height to 6'. Ms. Pisor stated no, the deer will jump over it. Mr. Drake stated he does not believe the additional foot will make a difference.

Mr. Monroe stated it doesn't sound like the height variance will be granted. Ms. Pisor stated she will reduce the height of the rear yard fence to 6'.

A motion was made by Mr. Drake to approve a fence type variance on front yard fences from wood split rail to plastic mesh.

Seconded by Mr. Brown.

Roll Call: Gorshe – No
 Curtis – No
 Brown – Yes
 Drake – Yes
 Monroe – No

DENIED (3-2)

An amended motion was made by Mr. Drake to approve a 3' height variance on front yard fences from 3' to 6'.

Seconded by Ms. Curtis.

Roll Call: Gorshe – Yes
 Brown – No
 Drake – Yes
 Curtis – Yes
 Monroe – No

APPROVED (3-2)

Mr. Monroe stated the requested variances have not been approved. The applicant will have to bring the fence into compliance with the code. No front yard mesh fence is permitted.

Mr. Monroe asked Mr. Beno if there will be any further action on the violation. Mr. Beno stated as long as the applicant brings the mesh fence into compliance, they will not be prosecuted.

David Phillips
1541 E. 204 St.
Euclid, OH 44117

**RE: 2010-VAR-03
 PP# 646-28-031
 1541 E. 204 STREET
 FENCE VARIANCE**

Mr. David Phillips has submitted an application requesting the required variances to permit a 6' high fence to remain in use in the side yard located at 1541 E. 204 St. Fences may not exceed 4' in height when located in a side yard between dwelling units. Application is result of residential violation case # 2009-00000077. One motion is required.

1. A motion to approve a 2' height variance on side yard fences from 4' to 6'.

Mr. David Phillips was present to discuss this case with the Planning and Zoning Commission. Mr. Phillips stated he erected the fence in 2007 under permit. A post hole and final inspections were completed by the City and approved. In 2009 a second fence was installed under permit and approved. Mr. Phillips is asking for a variance for 1 panel 6' in height to remain in use between the dwellings. Mr. Phillips stated there will be a financial hardship for him to correct this.

Mr. Beno stated a fence is installed in front of the rear line of the house by one panel. Mr. Beno stated 4' in height is permitted between the dwellings. There should be a unique situation or hardship to approve the variance. Staff recommends denial of this request.

Mr. Brown asked Mr. Beno if it's possible to approve a final fence inspection in error. Mr. Beno stated an error was made somewhere. The inspector probably approved the fence in error.

Mr. Beno stated this is a case where the violation notice was complaint driven.

Mr. Jerome Ross of 1535 E. 204 St. stated the fence is in the center of both of our driveways. It is hard to get into the driveway.

Gary and Carroll Baldrige of 1543 E. 204 St. stated we've had problems with the fence. Mr. Phillips accused us of breaking his gate. Mr. Ross has been harassed about lights, rocks, property line disputes and the driveway. Ms. Baldrige stated Mr. Phillips damaged their driveway and stole their grill and set a portion of their home on fire.

Mr. Monroe stated it sounds like there are a number of neighbor disputes going on. Mr. Monroe asked the Baldriges if they are opposed to this request. Ms. Baldrige stated she was.

Mr. David Gilliam, Ward 1 Councilperson stated this incident is a neighbor dispute that hasn't been resolved. Any resident attempting to follow the rules is a disincentive for a complaint driven violation. Both neighbors have tried to make improvements to their home. This fence does not impede anyone's driveway or add blight to the neighborhood.

Ms. Gorshe stated she visited the site and witnessed Mr. Ross trying to maneuver his truck around the fence. Ms. Gorshe stated she witnessed ingress and egress problems with the neighboring fence.

Mr. Drake asked Mr. Phillips if he was willing to reduce the height of the fence to 4' in the side yard. Mr. Phillips stated he was not. Mr. Drake stated if it's voted down, the applicant will be required to reduce or remove the non-conforming panel.

The discussion shifted to reducing the length of the non-conforming fence panel. Mr. Monroe clarified that the applicant wishes to reduce the length of the non-conforming fence panel to clear the driveway drain. This would still need a height variance, only would be less of a distance into the side yard.

Mr. Drake stated if the Commission is to consider this change; it would need to be written as 2' of 6' tall fence panel in the side yard between dwellings. The change would be to approve a height variance from 4' to 6' for a distance of 2' into the side yard.

A motion was made by Mr. Drake to approve a 2' height variance on side yard fences from 4' to 6' in the side yard for a distance of 2'.

Seconded by Mr. Brown.

Roll Call: Yes – Unanimous

APPROVED (5-0)

City of Euclid
585 E. 222 St.
Euclid, OH 44123

**RE: 2010-DMC-01
PP# 650-36-001, 002 and 003
24690-24720 EUCLID AVENUE
REZONING**

Mr. Paul Beno, Zoning Commissioner has submitted an application on behalf of the City of Euclid to rezone parcels 650-36-001, 650-36-002, and 650-36-003 from U-3 (Apartment House) to U-4 (Local Retail). The U-4 (Local Retail) use district is the appropriate zoning classification for the aforementioned parcels. One motion is required.

1. A motion to allow a zoning change from U-3 (Apartment House) to U-4 (Local Retail) Use District for PP# 650-36-001, 650-36-002 and 650-36-003.

P & Z 1343.01 (a)

NOTE: Approval by Council is required.

Mr. Beno stated there is a property within the City that has been developed as a small retail building that extends into a three parcel multi-family district. The history of the property since 1989 has been treated as if it were zoned U-4 (Local Retail). It is time to bring it into compliance and zone all the parcels U-4 (Local Retail).

Mr. Monroe asked if the building crosses three property lines. Mr. Beno stated it does. The property owner would be in favor of such a rezoning because it makes the zoning consistent with the use of the property. Mr. Beno stated it is hard to market a property with non-conforming zoning.

A motion was made by Mr. Brown to allow a zoning change from U-3 (Apartment House) to U-4 (Local Retail) Use District for PP# 650-36-001, 650-36-002 and 650-36-003.

Seconded by Ms. Curtis.

Roll Call: Yes – Unanimous

APPROVED TO COUNCIL (5-0)

Draft Ordinance: An ordinance repealing current Section 1377.01(e) of the Planning and Zone Code of the Codified Ordinances for the City of Euclid and enacting a replacement section to alter the required conditions of home occupations.

Mr. Beno stated the number and variety of home occupations has grown and issues need to be addressed. The proposed ordinance eliminates the specific list of permitted home occupations and makes the standards more clear as to what is permitted. It also regulates vehicles that are accessory to the home occupation. We want to limit the exterior impacts of a home occupation. No outdoor storage is permitted. The language is clearer in terms of employees, number of people permitted at the property, etc. This will make the code more enforceable.

Mr. Brown was concerned about only allowing 1 non-resident employee to be involved with the home occupation and suggested changing the language to read no more than two non-resident employees are permitted to be involved with the home occupation.

Commissioners Curtis, Drake and Gorshe all agreed with changing the language to allow not more than two non-resident employees to be involved with the home occupation.

Mr. Monroe stated he agrees with only allowing one non-resident employee. This is a matter of right, and a variance can always be applied for.

A motion was made by Mr. Brown to amend the proposed language in section 1377.01 (e)(2) to read no more than two non-resident employees be permitted to be involved with the home occupation.

Seconded by Ms. Curtis.

Roll Call: Yes – Unanimous

APPROVED (5-0)

Draft Ordinance: An emergency ordinance amending Sections 1359.05 and 1389.05 of the City of Euclid Codified Ordinances, which state that buffer requirements are mandatory for all locations where a use in a U-4, U-5 or U-6 District abuts a residential district, and that all locations not complying with this requirement will be considered a nuisance that is detrimental to the public welfare and the aesthetics of the community.

Mr. Beno stated non-conforming rights, or being “grandfathered in” applies to everything in the code. The only thing courts have upheld where the “grandfathering in” does not apply is where the issue constitutes a nuisance. We have fencing regulations that require a fence between a commercial parking area and abutting residential area. We have businesses that have never installed a fence between their business and the abutting residential. It does not seem reasonable to continue these non-conforming rights forever. A commercial business without a fence between it and the abutting residential property should be considered a nuisance.

Mr. Monroe asked if this would apply to existing businesses. Mr. Beno stated it would.

Mr. Monroe stated there is no sunset period and asked if this would go into effect as of Council approval. Mr. Beno stated it would; it’s a basic requirement.

Mr. Brown stated he understands that non-conforming rights cannot go on forever, but he would be in favor of some sort of time frame or sunset period.

Mr. Beno stated the code changed in 1971 and stated 40 years is too long.

Mr. Monroe stated he is uncomfortable in retroactively applying this.

Mr. Beno stated the Commission should hold off on voting on this until Law Director Frey can share the research with the Commission.

A motion was made by Mr. Monroe to table this request.

Seconded by Mr. Brown.

Roll Call: Yes – Unanimous

TABLED (5-0)

MATTERS OF CONCERN:

PUBLIC PARTICIPATION:

INFORMAL COMMENTS OF COMMISSION MEMBERS:

Mr. Monroe asked that a site plan be included for all violation appeals on fences.

Director Pietravoia stated the neighbor of case # 2010-VAR-03 presented information that was not shared during the meeting that may have affected the decision made. The matter may be coming back before the Commission.

Mr. Monroe stated if the case is being recalled due to additional evidence, notices need to be sent out.

ADJOURNMENT: 10:05 P.M.

SECRETARY

CHAIRPERSON

THE TAPED PUBLIC RECORD OF THIS MEETING IS ON FILE AT EUCLID CITY HALL AND MAY BE REVIEWED UPON REQUEST.

From: [Pietravoia, Frank](#)
To: [Pietravoia, Frank](#)
Subject: FW: Public Meetings and other Public Info RE Lincoln Electric Wind Turbine
Date: Friday, May 07, 2010 5:50:32 PM

From: Pietravoia, Frank
Sent: Friday, May 07, 2010 5:49 PM
To: Pietravoia, Frank
Subject: FW: P & Z meeting about Lincoln

Documentation of public airing of information regarding the proposed Lincoln Electric Wind Turbine is show below from the Mayor's Executive Assistant who is responsible for the community television channel, ECTV, as well as the City Newsletter and other public relations matters.

From: Mayernik, Lisa
Sent: Monday, April 26, 2010 12:48 PM
To: Pietravoia, Frank
Subject: FW: P & Z meeting about Lincoln

[Frank](#)

The Mayor is comprising a list of the meetings were he spoke about the turbine project.

The P & Z meeting agenda and televising airing schedule were promoted on our website and ECTV the week the show aired.

The Planning & Zoning meeting of Jan. 12, 2010 aired Jan. 13th through Jan. 20th at the following times.

1/13 12:00 p.m. & 9:00 p.m.

1/14 1:00 p.m. & 10:00 p.m.

1/15 2:00 p.m. & 11:00 p.m.

1/16 3:00 p.m.

1/17 12:00 a.m. & 4:00 p.m.

1/18 1:00 a.m. & 5:00 p.m.

1/19 2:00 a.m.

1/20 3:00 a.m.

The meeting lasted 2:58:19, and was preempted on Tuesday Jan. 19th at 6:00 p.m. for a City Council Meeting (Jan. 18th was MLK Day). I show no notes to the playback log that would indicate any problems with playback.

The proposed turbine project was a topic of discussion on the Mayor's "Our Town" ECTV program. The Our Town program aired a total of 27 times on the following dates;

Jan. 20th 1:00p.m. & 10:00 p.m.;

Jan. 21st 2:00p.m. & 11:00 p.m.;

Jan 22nd 3:00p.m.;

Jan 23rd 12:00 a.m. & 4:00 p.m.;

Jan. 24th 1:00 a.m. & 5:00 p.m.;

Jan. 25th 2:00 a.m. & 6:00 p.m.

Attachment D-1k

Jan. 26th 3:00 a.m. & 7:00 p.m.
Jan. 27th 4:00 a.m. 10:00 a.m.
Jan. 28th 11:00 a.m. & 8:00 p.m.
Jan. 29th 12:00 p.m. & 9:00 p.m.
Jan. 30th 1:00 p.m. & 10:00 p.m.
Jan. 31st 2:00 p.m. 11:00 p.m.
Feb. 1st 3:00 p.m.
Feb. 2nd 12:00 a.m. & 4:00 p.m.
Feb. 3rd 1:00 a.m.

In mid May, all households and businesses within the City will be mailed the "Euclid Update Newsletter." A featured article in this newsletter will be on the Lincoln Electric proposed turbine project.

The Library also makes this meeting available via a download on their website. Rebecca told me to date, the meeting was downloaded 7 times.

Lisa Mayernik

Assistant to the Mayor
City of Euclid
585 East 222 Street
Euclid, Ohio 44123
216-289-2786
216-289-2766 - Fax
Lmayernik@cityofeuclid.com

From: Scarniench, Madeline
Sent: Wednesday, May 12, 2010 11:20 AM
To: Pietravoia, Frank,
Subject: wind summary

Hi Frank

I just finished going through my calendar as far as the meetings I have attended and spoke about the Lincoln Wind Turbine Project. No one held meetings in December so it wasn't until January & February that I spoke about the project.

Jan. 20 I spoke to the Heritage Park Association. There were approximately 15 in attendance.

Jan 20 I also spoke at the Friends of Sherwood Forest. There were about 40 at this meeting.

Jan 21 I spoke at the Chardon Hill Association meeting. There were about 50 people at this meeting.

On Saturday Jan. 23rd I helped man the Euclid exhibit at the Home & Flower Show and spoke with over 100 people about the project.

Jan 28 was the Lakeland Quarry Association meeting. I spoke to about 25 people.

Feb.14th I helped man our exhibit at the Sports Show. I spoke to about 75 people about the project.

Feb. 25th was another Lakeland Quarry Meeting at which I spoke about the project a second time. There were about 20 in attendance.

On March 4th I spoke at the Weed & Seed Steering Committee meeting. There were about 15 at this meeting.

March 14 I helped man our exhibit at the Home & Patio Show where I spoke to about 50 residents.

March 16/17 was the 2nd time I discussed the project with Heritage Park & then with Friends of Sherwood Forest. Between the 2 meetings there were about 50 residents.

March 30 was the 1st meeting of the year for the East Beverly Hills Association. There were about 50 residents that heard about the project for the 1st time.

Unfortunately I am not good with saving my newsletters that I send out so I could not attach it here. But in case I find it I will forward it on to you.

Madeline

Attachment D-11

Going Green In Euclid

Lincoln Electric, City, Library & Others Pursue Renewable Energy Projects

The City of Euclid's **Going Green** initiative is taking another step forward with a \$1 million grant to The Lincoln Electric Company from the State of Ohio and the U.S. Dept. of Energy for the proposed construction of a demonstration wind turbine at the company's Euclid, Ohio, World Headquarters. This grant is one in a series intended to fund renewable projects made possible as part of the American Recovery and Reinvestment Act of 2009.

The renewable energy grant awarded in November of 2009, one of the first from Ohio's \$96 million State Energy Program, will help to fund the construction of a 2.5 megawatt Kenersys wind turbine. This turbine will be one of the largest constructed in the State of Ohio.

Lincoln's exciting project will serve as a demonstration of wind turbine technology and is complementary to the company's business strategy of pursuing manufacturing opportunities in the wind industry. According to Mayor Bill Cervenik, "Lincoln officials indicated that the turbine would also generate about 10% of their annual electric demand and help to reduce greenhouse gas emissions."

Mayor Bill Cervenik addressed local, state and federal officials at Lincoln Electric's world headquarters in Euclid, where the award announcement was made. "The City of Euclid recognizes the importance of renewable energy to the future of our local economy and to the future of the economy of our state." The Mayor also acknowledged that, "Governor Strickland has demonstrated strong support of renewable energy for the State of Ohio as evidenced by these grant awards."

The City of Euclid assisted Lincoln with the grant application process. With support from State Representative Kenny Yuko, and in a cooperative effort with the State of Ohio, the Cuyahoga County Department of Development, and the Great Lakes Wind Task Force, Lincoln successfully secured the grant.

According to Economic Development Director, Frank Pietravioia, "Already in place is the Automation Division of



Conceptual artist rendering of proposed wind turbine: this project is partially funded by the ARRA of 2009

Lincoln Electric and its Wind Tower Welding Solutions program, which provide welding services and products for wind tower construction providing evidence of the potential impact on our local economy."

Lincoln is not alone. The City of Euclid is also **Going Green**. In a unique partnership with the Euclid Public Library, solar panels will be installed to help meet the electrical needs of both City Hall and the Library.

A number of Euclid-based companies are exploring ways in which wind turbines and solar panels can be utilized to meet their own energy needs, while others are seeking to expand their business by manufacturing components that are essential to these new technologies. The City of Euclid has consistently maintained a strong manufacturing base with the skill and expertise necessary to succeed in the evolving advanced energy sector.

Bluestone Business Park provides a prime opportunity to attract renewable energy manufacturers to Euclid and Northeast Ohio. Fogg Building Methods, the park developer, is committed to creating a "green" industrial park. The State of Ohio and Cuyahoga County played a critical role in making the Park possible through a nearly \$5M Job Ready Sites grant and a \$1M Brownfield loan.

The City is also pursuing grant funds through the Fund for Our Economic Future Efficient Gov Now Grant Program in a partnership with the First Suburbs Development Council. The fund request is to support the establishment of a Solar Special Improvement District. The State of Ohio recently passed legislation to allow such districts to be formed.

Property owners within the district would be able to fund the installation of a solar panel system on their rooftop through a self-assessment on their property tax bill. The District would provide attractive financing rates over a twenty year period. The initial program will be geared to commercial and industrial property owners. For more information about this upcoming program contact the City of Euclid Department of Economic Development at 289-8158.



BRICKMAN BROS.
FUNERAL HOME

Ronald Brickman	Dennis Brickman
William Brickman	Joseph Brickman
John Brickman	Philip Brickman

37433 Euclid Ave. Willoughby, Oh. 44094
440-951-7800 Fax 440-951-7804
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Ed Cell: 216.387.0045 Office: 440.602.9700
Jim Cell: 440.346.5046 Fax: 440.602.9030

Dogs

YORKIES -Precious darling, very tiny female pups. 1 1/2 - 3 lbs. \$550 - \$750. 330-345-5417

Horses, Stables & Trailers

BOARDING-Olmsted Twp. Small private stable, indoor arena, all-weather turnouts, by Metro Park. 440-773-5736

BOARDING; Turn-out, Lessons, Leasing, Trail Rides, Pony Parties, Camps, 440-834-4356

JAMCO 2000 3 Horse Slant, white stainless alum. \$15,900 obo. 814-664-9314

STALL FOR RENT. Turn Out. - Close to Metro Parks - Self Care IN VALLEY VIEW. Call 216-644-1942

Other Animals & Pets

AFRICAN GREY CONGO FEMALE for sale, talks, loves men. \$600 Call 440-570-1702

BIRDS: babies hand fed Cockatiels & Love Birds Ready to go. Also African Greys & Conure Breeding pairs avail. 216-362-1122

Adult Information Services

HOT LOCAL GIRLS! 1-800-350-4323 NO Connection Fee!

HOT LOCAL WOMEN! 18+. 216-626-7777, Meet on Nightline! 216-453-1000

WILD LOCAL DATELINE Explore & Reply FREE! Straight (216) 912-2222 Curious (216) 912-6000 Free Code 7626, 18+

Legal Notices

Cuyahoga Metropolitan Housing Authority PUBLIC HEARING Amendments to the CMHA Annual Plan for 2010 Thursday, August 26, 2010 @ 4:00 pm CMHA Board Room 1441 West 25th Street Cleveland, Ohio

The Cuyahoga Metropolitan Housing Authority (CMHA) is announcing a Public Hearing on August 26, 2010 to consider amendments to the CMHA 2010 Public Housing Agency (PHA) Plan that was approved by the U.S. Department of Housing and Urban Development (HUD) on March 8, 2010.

- 1. Demolition/Disposition plan - CMHA needs to submit a demolition plan for the house that exploded at 17723 Federal Drive and a disposition plan for the sale of the vacant lot.
2. Demolition plan - CMHA needs to submit a demolition plan for two scattered site houses at 7307 Ivy and 2070 West 104th Street that are beyond repair and need to be demolished.
3. Admissions preferences - The CMHA Housing Choice Voucher program plans on adding a local preference for Cuyahoga County residents and employees.

Legal Notices

HEARING OF OBJECTIONS Notice is hereby given that on the 16th day of August, 2007 the Board of County Commissioners of Cuyahoga County, Ohio duly adopted a resolution by unanimous vote finding that public convenience and welfare require the improvement of the below listed project and that the County Engineer of Cuyahoga County, Ohio, has prepared surveys, plans, profiles, cross-sections, estimate of cost and specifications for the improvement and that the same are on file in the Office of the Clerk of the Board of County Commissioners, Room 435, County Administration Building, 1219 Ontario Street, Cleveland, Ohio 44113, for the inspection of persons interested therein.

Rehabilitation of Old Mill Road Bridge No. 162 over the Chagrin River in the Village of Gates Mills Notice is also given that objections to said improvement will be heard by said Board of County Commissioners, in its offices, Room 451, County Administration Building, 1219 Ontario Street, Cleveland, Ohio 44113 on the 22nd day of July, 2010, at 10:30 a.m., local time.

BOARD OF COUNTY COMMISSIONERS Jimmy Dimora Timothy F. Hagan Peter Lawson Jones Jeanne M. Schmotzer, Clerk of the Board 2483906

INVITATION TO BID SEALED PROPOSALS for the following project for the Cleveland Heights-University Heights City School District, Cuyahoga County, Ohio Project # 010C-023-001 Wiley Middle School Parking Lot Expansion WILL BE RECEIVED at the Office of the Director of Business Services of the Cleveland Heights - University Heights City School District at the Board of Education Building, 2155 Miramar Boulevard, University Heights, Ohio 44118-3397, UNTIL 2:00 P.M. Local Time, Thursday, July 22, 2010.

And will be publicly opened, read, and tabulated immediately thereafter. Bids will be received for: Trade of Contract PARKING LOT EXPANSION CONTRACT BASE BID Contract Cost Estimate \$ 125,000.00

No bid shall be considered unless submitted using forms furnished with the Construction Documents. The Construction Documents (Project Manual and Plans) will be available SE Blueprint at www.plancycle.com at the bidders expense. The contract documents may be reviewed for bidding purposes, without charge, during business hours at the following locations: The Builder's Exchange 9555 Rockside Rd., Suite 300 Valley View, Ohio 44125 Phone: 216-393-6300 / 866-907-6300 Fax: 216-393-6304 / 866-907-6304 Subcontractors Association of Northeast Ohio 76 East North St. Akron, Ohio 44304 Phone: 330-762-9951 Fax: 330-762-9960 Construction News Corporation 7261 Engle Road Suite 304 Middleburg Heights, Ohio 44130 Phone: 800-969-4700 / 440-826-4700 Fax: 800-229-4626

A Pre-Bid Conference will be held at 2:00 P.M. Local Time on Thursday, July 15, 2010 at the Board of Education offices, 2155 Miramar Boulevard, University Heights, Ohio 44118. Project requirements will be reviewed followed by a tour of the areas affected by this project at Wiley Middle School. Each bid shall be accompanied by a bond executed by a surety company authorized to do business in Ohio, or by a certified check on a solvent bank, payable to the Cleveland Heights-University Heights City School District in a sum equal to ten percent (10%) of the amount of the bid. The certified check or bond will be held as a guarantee that if the proposed bid is accepted, the

Legal Notices

Cleveland Heights -University Heights City School District reserves the right to waive informalities, to accept or reject any and all or parts of any and all bids, and to award a contract pursuant to Section 9.312 of the Ohio Revised Code. By Order of the Board of Education Cleveland Heights-University Heights City School District Pre-Bid Conference: July 15, 2010 Bid Opening: July 22, 2010 p.d.jul.9,16,2010 2488850

INVITATION TO BID S.J. Louis Construction, Inc. is soliciting subcontract and material bids for the Walworth Run Interceptor Realignment Bids Due Thu 07/29/2010 @ 2:00 PM. Qualified DBE/MBE & WBE firms are encouraged to submit bids in response to this invitation.

DOE's Proposed Financial Assistance to Ohio for Lincoln Electric's Wind Energy Project Euclid, Cuyahoga County, Ohio - DOE/EA 1777 DOE's Golden Field Office has prepared an EA in accordance with the National Environmental Policy Act (NEPA). The EA also provides documentation of DOE's Section 106 consultation with Ohio Historic Preservation Office and interested parties can comment on the proposed Undertaking's potential effects on listed and potentially eligible National Historic Preservation Act properties. The Lincoln Electric Company is proposing to use American Reinvestment and Recovery Act funds from DOE for the purchase and installation of a 2.5 MW wind turbine in an industrial park in Euclid, OH.

Sealed bids will be received by the Service Director at 11:00 a.m., local time on the 28th of July, 2010, for Bid No. 18-10 for MOTOR OIL & LUBRICANT in the City of Parma in accordance with specifications on file with the Service Director. Proposals for bids must be submitted on a form available in the office of the Service Director, City Hall, 6611 Ridge Road, Parma, Ohio and each proposal must state the full name and address of each person, firm or corporation interested in the bid submitted.

Bids must be submitted in a sealed envelope and clearly marked with the bid invitation number, opening date, and item being bid. In the event that several invitations are being bid simultaneously, each bid must be submitted in a separate envelope. Bids must be delivered directly to the office of the Purchasing Director, on the basement level of Parma City Hall, 6611 Ridge Road, Parma, Ohio 44129, prior to 11:00 a.m. local time on the day of the bid opening.

Each bid must be accompanied by a certified check on a solvent bank in an amount of 10% of the bid, or a 100% bid bond, the same being payable to the City of Parma as a guaranty that if the bid is accepted, a contract will be entered into a surety bond satisfactory to said municipality in an amount equal to 100% of the total bid will be furnished. All bonds must have full name and mailing address for the company acting as surety, full name, mailing address and telephone number of the office, business, or agency actually issuing the bond and name mailing address and telephone number of an agent in the State of Ohio authorized to accept service of process for claims on the bonds. The deposit of the successful bidder will be retained until the contract is properly executed and delivered. Deposits of all unsuccessful bidders will be returned immediately following award.

Legal Notices

LIQUIDATION NOTICE TO CREDITORS OF ST. PAUL CROATIAN FEDERAL CREDIT UNION The National Credit Union Administration Board placed the St. Paul Croatian Federal Credit Union, Charter No. 5049, 34900 Lakeshore Blvd., Eastlake, OH 44095, into involuntary liquidation pursuant to its authority under Section 207 (a) (1) (A) of the Federal Credit Union Act.

All creditors having any claim or demand against St. Paul Croatian Federal Credit Union must submit their claim or demand in writing, together with proof, by August 8, 2010. All such claims or demands must be sent to the following address: National Credit Union Administration Liquidating Agent for the St. Paul Croatian Federal Credit Union 4807 Spicewood Springs Road, Suite 5100 Austin, Texas 78759 Tel. No. (512) 231-7900 Claims or demands filed after August 8, 2010, may be barred due to untimely submission.

NOTICE OF AVAILABILITY The U.S. Department of Energy (DOE) has prepared a draft Environmental Assessment (EA) to analyze and describe the potential environmental impacts associated with: DOE's Proposed Financial Assistance to Ohio for Lincoln Electric's Wind Energy Project Euclid, Cuyahoga County, Ohio - DOE/EA 1777 DOE's Golden Field Office has prepared an EA in accordance with the National Environmental Policy Act (NEPA). The EA also provides documentation of DOE's Section 106 consultation with Ohio Historic Preservation Office and interested parties can comment on the proposed Undertaking's potential effects on listed and potentially eligible National Historic Preservation Act properties. The Lincoln Electric Company is proposing to use American Reinvestment and Recovery Act funds from DOE for the purchase and installation of a 2.5 MW wind turbine in an industrial park in Euclid, OH.

The draft EA is available for review on the DOE Golden Field Office website: http://www.eere.energy.gov/golden/Reading_Room.aspx. Public comments on the results of the environmental impacts of implementing the proposed action will be accepted until July 24, 2010. Please mail comments to the DOE Headquarters, c/o Caroline Mann, 1000 Independence Ave., SW, Washington, DC 20585, or send them by email to caroline.mann@ee.doe.gov. p.d.jul.9,2010 2488704

Notice of Initiation of the Section 106 Process: Public Participation Clearwire Wireless Broadband is proposing the redevelopment of an existing and construction of a new telecommunications facility at the following addresses in Cuyahoga County. Collocation at 2300 Overlook Road, Cleveland Heights 120' monopole within a 50' x 50' fenced compound at 691 Richmond Road, Richmond Heights The proposed developments will include the installation of associated equipment cabinets. Members of the public interested in submitting comments on the possible effects this proposed project may have on historic properties included in or eligible for inclusion in the National Register of Historic Places may send their comments to Carol Sullivan, RESCOM Environmental Corp., P.O. Box 6225, Traverse City, MI 49686 or call 1-231-947-4454

Legal Notices

Strongsville Municipal Offices (Service Center). Each bid must contain the full name of each person or company interested in the same and shall be accompanied by a bid bond issued by a responsible surety licensed to do business in the State of Ohio, in an amount equal to ten percent (10%) of the estimated FIRST ANNUAL BID PRICE or a certified check in such amount submitted on a solvent bank in the State of Ohio payable to the City of Strongsville, as a guarantee that if such bid is accepted, a contract pursuant thereto will be entered into. Bidders must use the printed bidding forms available as aforesaid, as none other will be accepted.

A Bidder/Contractor will be deemed committed to the Department of Labor's goals and timetables for the Cleveland, Ohio area as specified in the Notice of Requirements for Affirmative Action to ensure Equal Employment Opportunity (Executive Order 11246) by submitting a properly signed bid. Each bidder must ensure that all employees and applicants for employment are not discriminated against because of their race, creed, color, gender, religion, national origin, or disability.

The bidder to whom a contract is awarded is also required to furnish to the City of Strongsville an annual performance bond in an amount equal to one hundred percent (100%) of the amount of the first year's estimated contract price, and renewed annually for the total amount of each successive year's annual contract price, but in any event no less than \$2,000,000.00 annually. The City reserves the right within its sole discretion to award a contract for all services to the lowest and best bidder, to reject any or all bids, to waive any informalities, minor defects, or irregularities in the bids received, and to request additional information including but not limited to prior experience and/or equipment of the bidder. Furthermore, the City within its sole discretion, can award two separate contracts, one for collection services and one for operation of the transfer station and disposal of solid waste, if it is in the best interest of the City and to the benefit of the public health, safety and welfare.

Bids for the contract shall be sealed and endorsed with the title for the bid as follows: "BID FOR FURNISHING OF SOLID WASTE, RECYCLABLE AND YARD WASTE COLLECTION SERVICES; AND THE OPERATION AND MAINTENANCE OF THE STRONGSVILLE TRANSFER STATION AND THE RECEIPT, TRANSPORT AND DISPOSAL OF SOLID WASTE OF THE CITY OF STRONGSVILLE"

THE CITY OF STRONGSVILLE IS AN EQUAL OPPORTUNITY EMPLOYER. By authority of the Council of the City of Strongsville, pursuant to Resolution No. 2010-100. By order of the Council of the City of Strongsville, Ohio Leslie Seefried, MMC, Clerk of Council Thomas P. Perciak, Mayor

*PLEASE NOTE: Notice to Bidders and Instructions to Bidders have been substantially modified since those issued when this matter was last bid approximately ten years ago. Now the City is going to bid for one (1) combined contract (Parts I, II and III of the Agreement) in order to cover both services, namely, collection of waste, and operation of the City's Transfer Station and transport/disposal of waste." p.d.jul.9,16,2010 2488949

Attachment D-1n NOTICE TO BIDDERS/ LEGAL ADVERTISEMENT SEALED BIDS WILL BE RECEIVED UNTIL 10:00 A.M., THURSDAY AUGUST 5, 2010, by the Public Service Director of the City of Strongsville, at the Strongsville Municipal Offices (Service Center), 16099 Foitz Parkway, Strongsville, Ohio 44149, for the following contract: FURNISHING OF SOLID WASTE RECYCLABLE

TO BID SEPARATE BIDS SUBMITTED BY ROBERT C. DOWNEY, CITY MANAGER OF CLEVELAND HEIGHTS, OHIO, at his office in City Hall, 40 Severance Circle, Cleveland Heights, until 12:00 o'clock Noon, Daylight Saving Time in Ohio, on Friday, July 23, 2010, for the PURCHASE OF ONE HIGH COMPACT FRONT LOADING REFUSE COLLECTION TRUCK in accordance with Instructions to Bidders, Specifications and Proposal

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[City Departments](#)

[Resident Information](#)

[Seniors](#)

[Recreation](#)

[Photo Gallery](#)

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NOTICE OF AVAILABILITY

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The U.S. Department of Energy (DOE) has prepared a draft Environmental Assessment (EA) to analyze and describe the potential environmental impacts associated with:

DOE's Proposed Financial Assistance to Ohio for Lincoln Electric's Wind Energy Project
 Euclid, Cuyahoga County, Ohio - DOE/EA 1777

DOE's Golden Field Office has prepared an EA in accordance with the National Environmental Policy Act (NEPA). The EA also provides documentation of DOE's Section 106 consultation with Ohio Historic Preservation Office and interested parties can comment on the proposed Undertaking's potential effects on listed and potentially eligible National Historic Preservation Act properties. The Lincoln Electric Company is proposing to use American Reinvestment and Recovery Act funds from DOE for the purchase and installation of a 2.5 MW wind turbine in an industrial park in Euclid, OH.

The draft EA is available for review on the DOE Golden Field Office website:

http://www.eere.energy.gov/golden/Reading_Room.aspx.

Public comments on the results of the environmental impacts of implementing the proposed action will be accepted until July 24, 2010. Please mail comments to the DOE Headquarters, c/o Caroline Mann, 1000 Independence Ave., SW, Washington, DC 20585, or send them by email to

caroline.mann@ee.doe.gov.

Attachment D-1o

K 100 2.5 MW



MAIN DATA

Rotor diameter:	100 m
Installed power:	2500 kW
Power control:	pitch control
Operational mode:	variable speed
Presumed design Life ¹ :	20 years
IEC Type Class:	II
Turbulence Class:	a
Certification:	acc. IEC 61400, ED. 3
Ambient Operation Temperature:	+40°C/-20°C

¹ Relates to main components only and excludes any components that are subject to normal wear and tear.

ROTOR

Swept area:	7854 m ²
Number of blades:	3
Blade length:	48.7 m
Blade material:	GFRP
Tilt Angle:	5°
Cone angle:	2°
Rated speed:	14.1 rpm

GENERATOR-CONVERTER SYSTEM

Electrical system:	full conversion, electrically excited synchronous generator
Protection class:	IP 54
Converter voltage out:	600 V
Frequency:	50 / 60 Hz
Rated power:	2500 kW
Rated speed:	1650 rpm

PITCH SYSTEMS

Pitch bearing:	ball bearing slewing ring, externally geared
Pitch drives:	AC motors, angular gearboxes

OPERATION DATA

Noise power level ² :	106 dB(A)
Cut in wind speed:	3 m/s (60 s average)
Cut out wind speed:	25 m/s (10 min average)

² based on directive IEC 61400-11

DRIVE TRAIN

Principle:	3-point-support
Main bearing:	2-rows spherical roller
Gearbox type:	planetary / spur comb.
Rated torque:	approx. 1850 kNm

TOWER

Height:	85 m (IEC IIa / DIBt WZ3) and 100 m (IEC IIIa / DIBt WZ2) hub height. Other hub heights on request.
Type:	tubular conical steel segments
Material:	S235 / S355 construction steel
Access:	internal climbing system

YAW SYSTEM

Type:	active wind orientation
Yaw drives:	4 motors with planetary gearboxes
Yaw brake:	hydraulic callipers with brake disk

WEIGHT / MASSES

Rotor incl. hub:	approx. 55000 kg
Nacelle:	approx. 86000 kg
Tower:	depending on hub height
Foundation:	depending on soil condition, flat or pile foundation

POWER CURVE given for air density of 1.225 kg/m³ and based on the directive IEC 61400-12-1

VWIND (m/s)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
P (kW)	0	7	106	250	462	756	1137	1585	1999	2300	2429	2465	2497	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500

Disclaimer: All numbers and figures are preliminary, indicative and subject to change. Nothing in this product brochure shall be understood or construed to be or to create an express or implied warranty or guarantee in respect of the product described herein.

www.kenersys.com

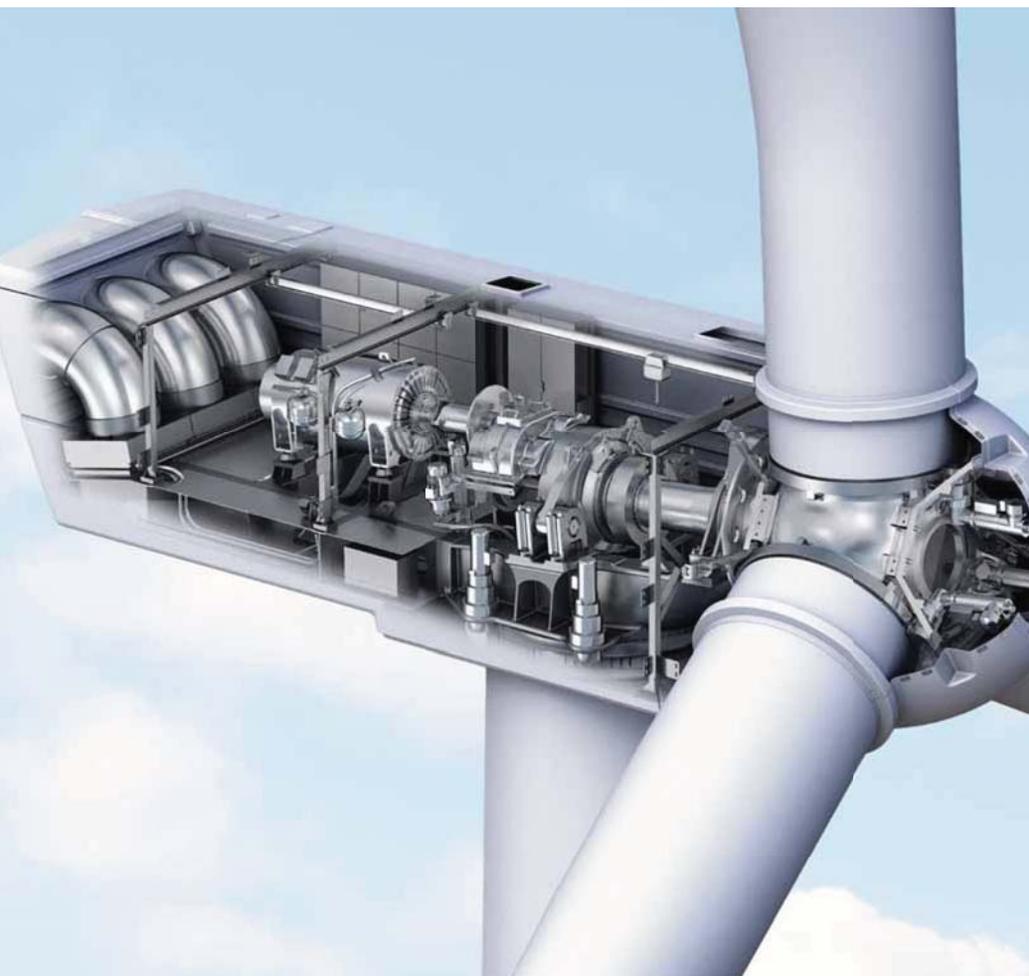


K 100 2.5 MW

K 100 2.5 MW

The K100 2.5MW wind turbine generator is a variable speed, pitch regulated machine with a distributed drive train. The electrical concept is based on a full conversion system with an electrically excited synchronous generator. Matured component design with demonstrated reliability will be the basis for a proven and economic design with high availability for sustainable investment.

Best possible component reliability which is crucial for the stable operation of wind turbine generator system is the integral element of the design of this new wind turbine platform.



COMPONENTS

Rotor

The machine is equipped with an up-wind orientated rotor. The rotor blades will be made of glass fibre reinforced plastics (GFRP).

Power regulation will be realised by a full-span pitch system based on AC-technology with 3 independent drives for high system safety.

Drive train

The mechanical drive train is realized in proven 3-point arrangement (distributed drive train). The main bearing is a double row spherical roller bearing, taking the entire rotor thrust. The gearbox is a multiple stage system with planetary stages and one conventional spur gear stage.

An oil filtering and an efficient cooling system provide proper oil conditioning under operation. The system can optionally be equipped with a condition monitoring system for monitoring of main bearing, gearbox and generator condition.

A brake on the high speed side off the gearbox is used only below a rotational speed of 500 rpm, in order to bring the rotor to a complete stop if needed.

Electrical system

An electrically excited synchronous generator is combined with a full size IGBT-converter.

The converter system will be based in the tower bottom to allow easy access by the service personnel.

The generator as well as the converter is water-cooled allowing a high ambient operation temperature environment.

The transformer location will be based on local requirements, also in the tower base or alternatively in an additional transformer housing close to the foundation.

Nacelle and yaw system

Active yawing is realised via a ball bearing slewing ring with outside gearing that is fixed to the main frame and the tower top flange. Four yaw drives, consisting of high transmission planetary stages with AC-drives and motor brakes, are used for the alignment of the nacelle to the main wind direction.

This system is combined with a brake disc and hydraulically activated callipers for handling the torque on the machine head due to sudden change in wind direction.

Tower and foundation

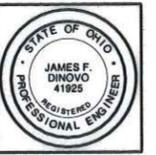
The machine will be available with different hub heights. Standard towers will be available for 85 m and 100 m hub height.

The foundation will be designed as flat and pile foundation depending on site-specific soil conditions. The tower connection will be realized by means of a foundation ring, embedded in reinforced concrete connecting the tower through an L-Flange.

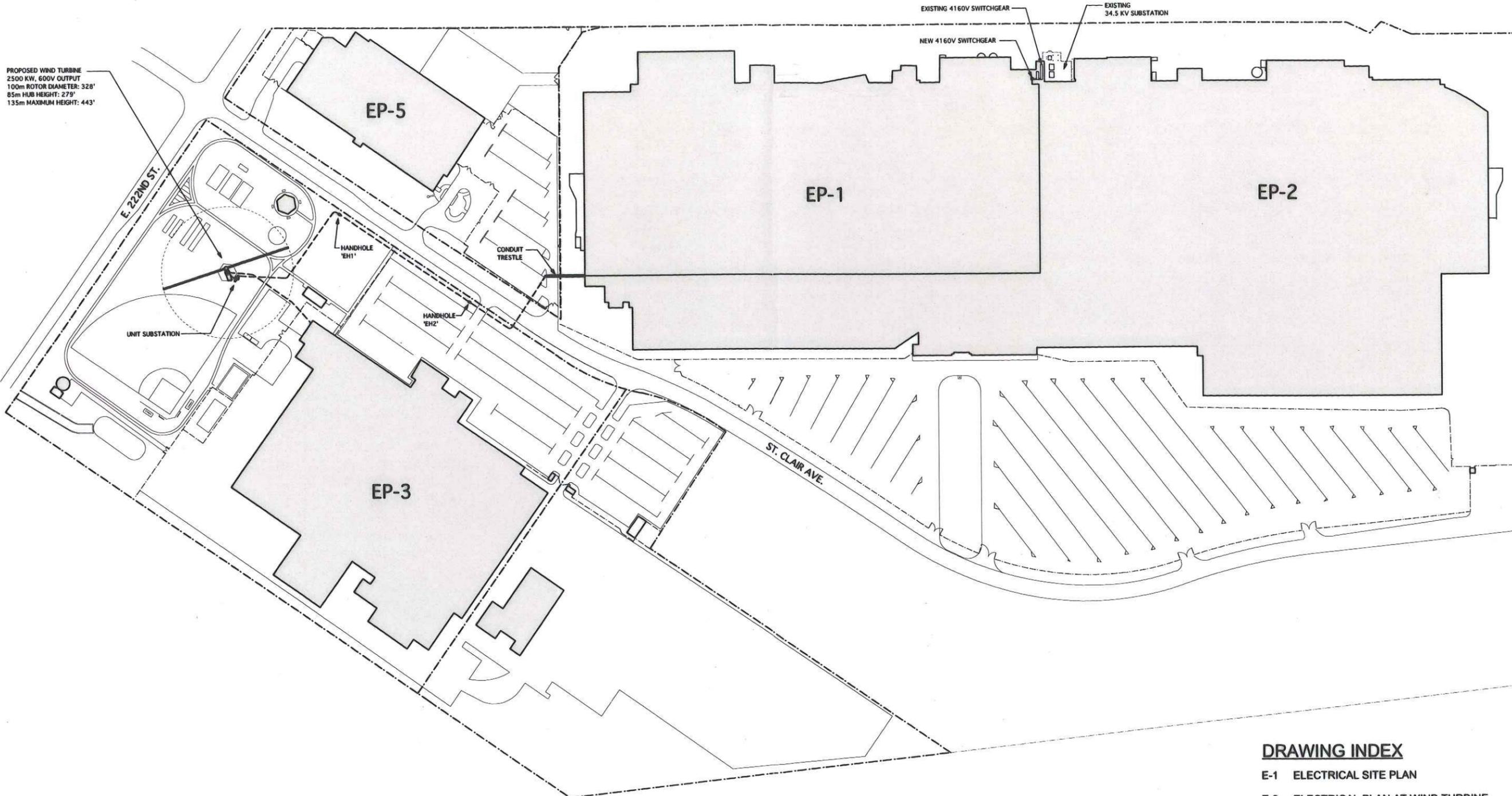
ABOUT KENERSYS

KENERSYS was founded as RSB Consult in 2003 as a design & consulting company for leading wind power and component manufacturers. As a wind turbine manufacturer today our considerable experience is based upon more than 400 accumulated years of expert knowledge of our engineers at the KENERSYS CENTER OF INNOVATION in Münster, Germany.

The technological competency ensures quality and reliability for our customers and provides KENERSYS with a sound basis for expanding its position in the wind turbine market.



ISSUE	DESCRIPTION	DATE
1	PRELIMINARY	5/14/10
2	INTERCONNECTION APPLICATION	6/30/10



PROPOSED WIND TURBINE
 2500 KW, 600V OUTPUT
 100m ROTOR DIAMETER: 328'
 85m HUB HEIGHT: 279'
 135m MAXIMUM HEIGHT: 443'



DRAWING INDEX

- E-1 ELECTRICAL SITE PLAN
- E-2 ELECTRICAL PLAN AT WIND TURBINE
- E-3 CONDUIT PLAN AT BUILDING
- E-4 ELECTRICAL PLAN AT SERVICE
- E-5 INTERCONNECTION RISER DIAGRAM
- E-6 ONE-LINE DIAGRAM
- E-7 ELECTRICAL SPECIFICATIONS

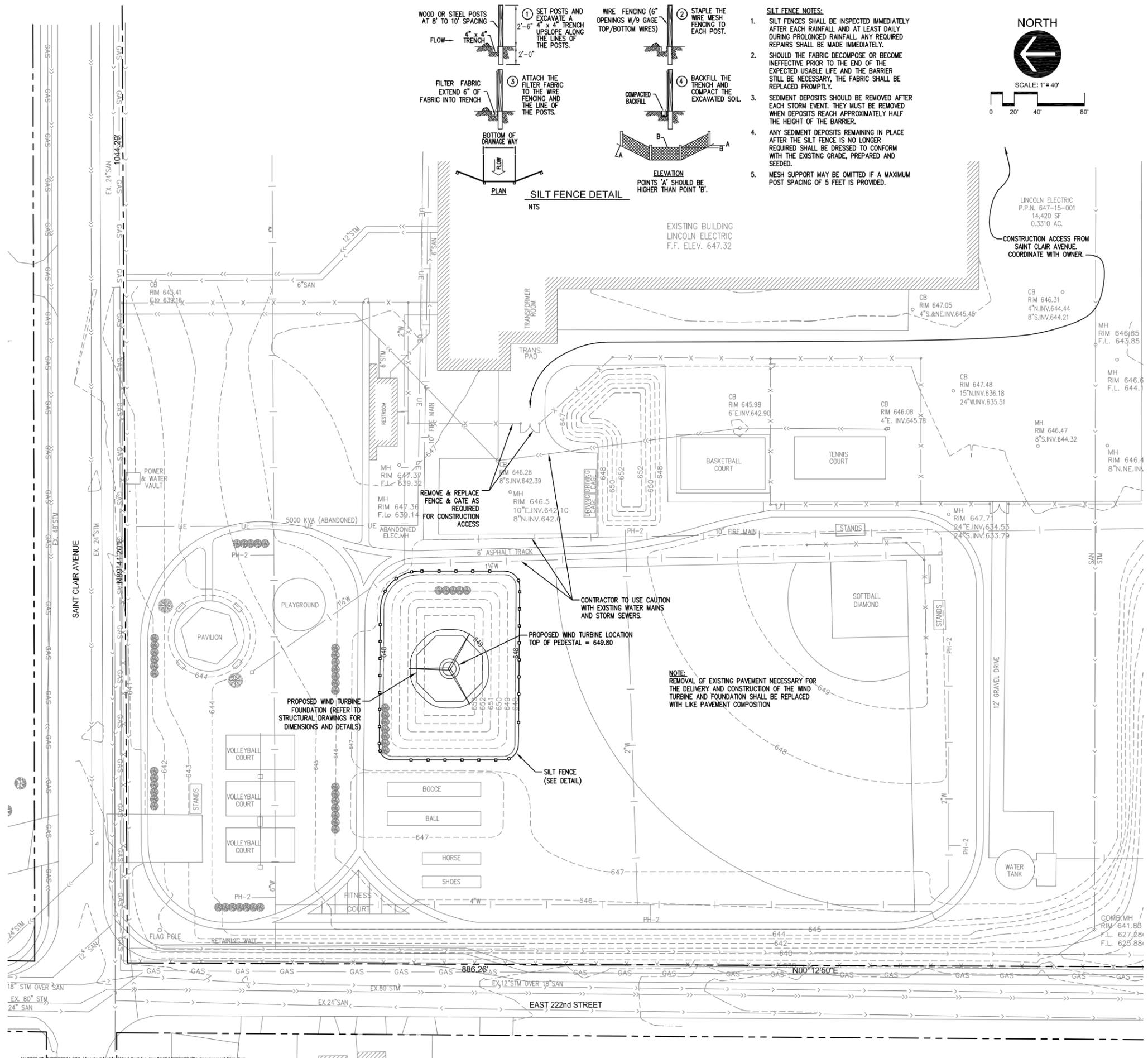
Attachment D-2a

ISSUED FOR INTERCONNECT APPLICATION
 NOT FOR CONSTRUCTION

WIND TURBINE INSTALLATION
THE LINCOLN ELECTRIC CO.
 22800 ST. CLAIR AVE. • EUCLID, OHIO 44117

ENGINEERED PROCESS SYSTEMS
 P.O. BOX 471 • HURON, OHIO 44839
 PHONE: (419) 433-7048 • FAX: (419) 433-6872

DRAWING NUMBER
E-1



GENERAL NOTES

- ELEVATIONS ARE U.S.G.S. DATUM.
- DO NOT SCALE DIMENSIONS FOR FOUNDATIONS FROM THESE DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO THE START OF WORK. ANY DISCREPANCIES FOUND SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ENGINEER.
- THE ACCURACY AND COMPLETE INCLUSION OF THE LOCATIONS OF EXISTING UTILITIES IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER, PROJECT OWNER AND UTILITY OWNER, BY THE CONTRACTOR AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL CONTACT "OHIO UTILITIES PROTECTION SERVICE" AT (800) 362-2764 TO HAVE CERTAIN UTILITY COMPANIES FIELD LOCATE THEIR INSTALLATIONS. A MINIMUM OF TWO FULL WORKING DAYS NOTICE ARE REQUIRED FOR A FIELD LOCATION.
- THE CONTRACTOR SHALL EXAMINE THE PLANS AND SPECIFICATIONS, VISIT THE SITE OF THE WORK AND INFORM HIMSELF FULLY WITH THE WORK INVOLVED, GENERAL AND LOCAL CONDITIONS, ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS AND ALL PERTINENT ITEMS WHICH MAY AFFECT THE COST AND TIME OF COMPLETION OF THIS PROJECT BEFORE SUBMITTING A PROPOSAL. PERMITS AND LICENSES OF A TEMPORARY NATURE NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE REQUIRED TO MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS, STRUCTURES, POLES, CABLES AND PIPE LINES, BEFORE CONSTRUCTION BEGINS. HE SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE ENGINEER AND OWNER AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL RESTORE ANY AREA DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL USE. THIS SHALL INCLUDE FINISH GRADING, ESTABLISHMENT OF A VEGETATIVE COVER (SEEDING OR SOD) AND GENERAL CLEANUP. THE CONTRACTOR SHALL NOT EXCAVATE OR DISTURB BEYOND PROPERTY LINE BOUNDARIES, UNLESS OTHERWISE NOTED.
- ALL WORK PERFORMED SHALL BE DONE BY QUALIFIED CONTRACTORS AND SUBCONTRACTORS FAMILIAR WITH THE TYPE OF WORK TO BE ACCOMPLISHED.
- ALL SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", LATEST EDITION.
- PERMITS AND LICENSES OF A TEMPORARY NATURE NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE ENGINEER TO ANY MATERIAL OR EQUIPMENT HE DEEMS INADEQUATE AND TO ANY ITEM OF WORK OMITTED.
- THE CONTRACTOR WILL HAVE IN HIS POSSESSION, ON THE JOB SITE, A COPY OF THE PLANS AND SPECIFICATIONS PRIOR TO BEGINNING WORK.
- ANY SOIL EROSION CONTROL MEASURES, IN ADDITION TO THOSE OUTLINED IN THESE PLANS AND WHICH ARE DEEMED NECESSARY BY THE CITY ENGINEER SHALL BE IMPLEMENTED IMMEDIATELY BY THE CONTRACTOR.

SITE GRADING NOTES

- EARTHWORK AND EMBANKMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", LATEST EDITION.
- ALL SITE WORK SHALL INCLUDE CLEARING, STRIPPING, AND STOCKPILING OF TOPSOIL, REMOVING UNSUITABLE MATERIALS, THE CONSTRUCTION OF EMBANKMENTS, CONSTRUCTING NON-STRUCTURAL FILLS, AND FINAL SHAPING, AND TRIMMING TO THE LINES, GRADES AND CROSS-SECTION SHOWN ON THE PLANS.
- UNSUITABLE MATERIAL ENCOUNTERED IN EXCAVATING FOR PAVEMENT SUBGRADES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL TO THE LIMITS APPROVED BY THE ENGINEER. UNSUITABLE MATERIAL THAT IS EXCAVATED SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- TOPSOIL EXCAVATED SHALL BE STOCKPILED ON THE SITE IN AREAS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME THAT THIS TOPSOIL CAN BE USED FOR FINAL GRADING.
- CONTRACTOR SHALL LANDSCAPE DISTURBED ROW BY BACKFILLING FROM BACK OF CURB TO ROW LINE WITH A MINIMUM OF 6-INCHES OF TOPSOIL & PLACING SOD. FERTILIZE TOPSOIL WITH NITROGEN, PHOSPHORUS AND POTASSIUM FERTILIZER NUTRIENT.

Attachment D-3

ISSUED FOR CONSTRUCTION

Larson Engineering Inc
 1488 Bond Street, Suite 100
 Euclid, OH 44116
 (216) 337-0540 (F)
 (216) 337-0540 (C)
 ILLINOIS LICENSE NO. 184-001442
 LEIL Comm. No. 22090034.000

LINCOLN ELECTRIC

LINCOLN ELECTRIC WIND PROJECT
 EUCLID, OH

Date: January 26, 2010
 Expires: December 31, 2010

Rev.	Date	Description
1	01.26.10	Revised Location

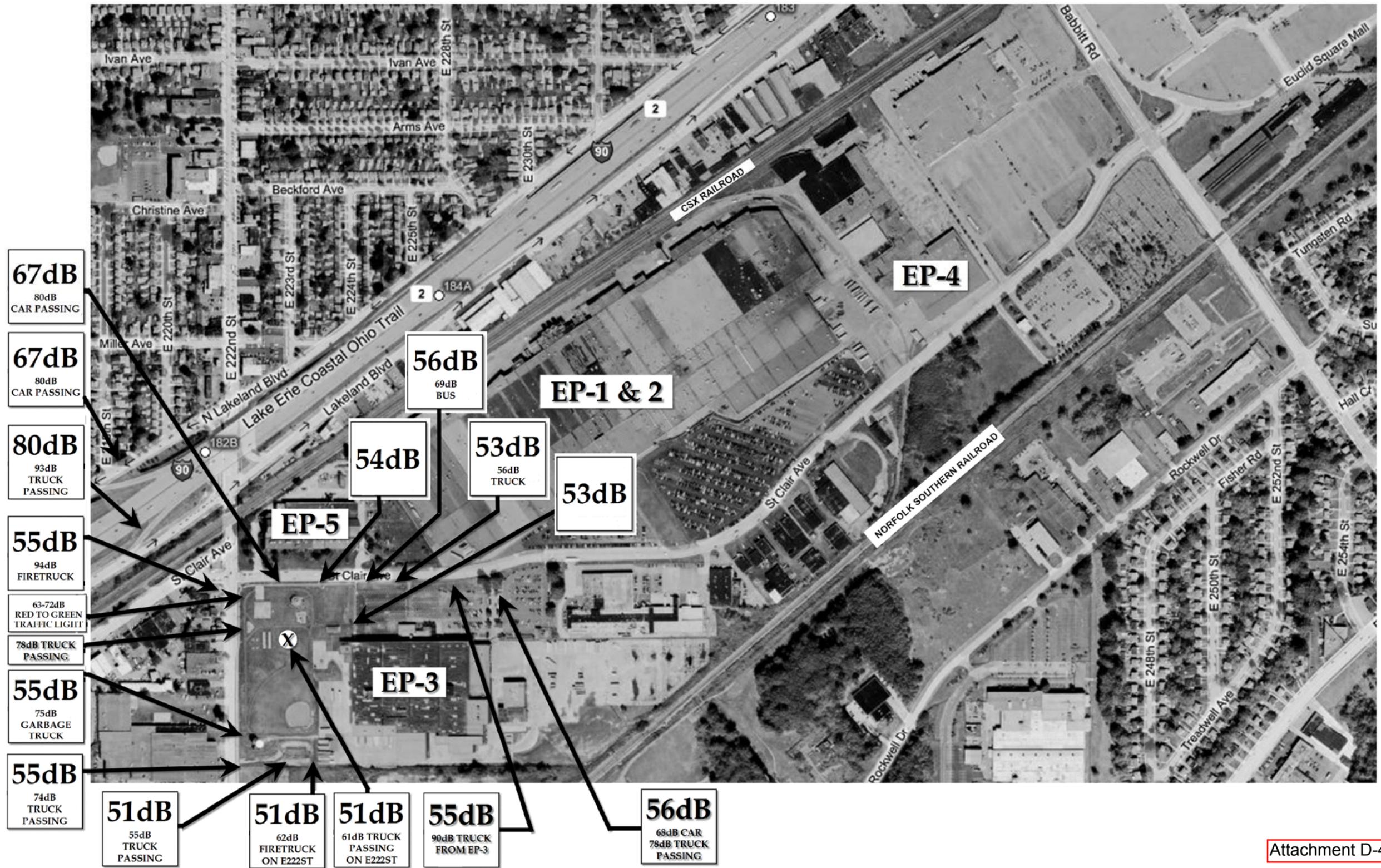
Project #: 22090034.000
 Drawn By: JLG
 Checked By: BJD
 Issue Date: 09.24.09
 Sheet Title:

SITE IMPROVEMENT PLAN

C02

SOUND READINGS BY:
D.STERIO
S.MASON

X= TURBINE LOCATION



Attachment D-4



CHG.	BY	DATE	DESCRIPTION	PART NO.	NAME	REQ.	MATERIAL	SIZE	REMARKS
C									
F									
E									
D									
C									
B									
A	BW	1/12/10	NEW						
				SITE					
				THE LINCOLN ELECTRIC CO., CLEVELAND, OHIO					
				LINCOLN ELECTRIC CO.					
				EUCLID AREA CAMPUS					
				RANDOM NOISE SURVEY					
				DRAWN	B.WILLIAMS	DATE	1/12/10	SCALE	N/A
				CHK'D	D.K.				
				MACH NO.	LOC.	GW- 3048-019			A



Shadow Flicker Analysis for the Lincoln Electric Wind Turbine, Cleveland, OH

Report to:

Seth Mason

Dave Sterio

The Lincoln Electric Company

22801 St. Clair Ave.

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Report by:

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Attachment D-5

I. Summary

juwi conducted a shadow flicker analysis for the proposed Lincoln Electric wind turbine at their company headquarters in Cleveland, OH. Lincoln is located in an industrial area of eastern Cleveland surrounding primarily by industry and commercial buildings. The results from the shadow flicker study indicate that a relatively small number of receptors receive more than 30 hours of shadow flicker per year. These receptors are all located south of the Interstate 90. Four receptors are within the 100 hours isoline, 12 receptors are within the 50 hours isoline, and 17 receptors are within the 30 hours isoline. Of the 17 receptors exceeding 30 hours shadowing per year, three are participating Lincoln properties and 14 are non-participating. The 14 non-participating receptors can be considered the more significant receptors that may require further study post-construction and possibly mitigation action.

II. Background:

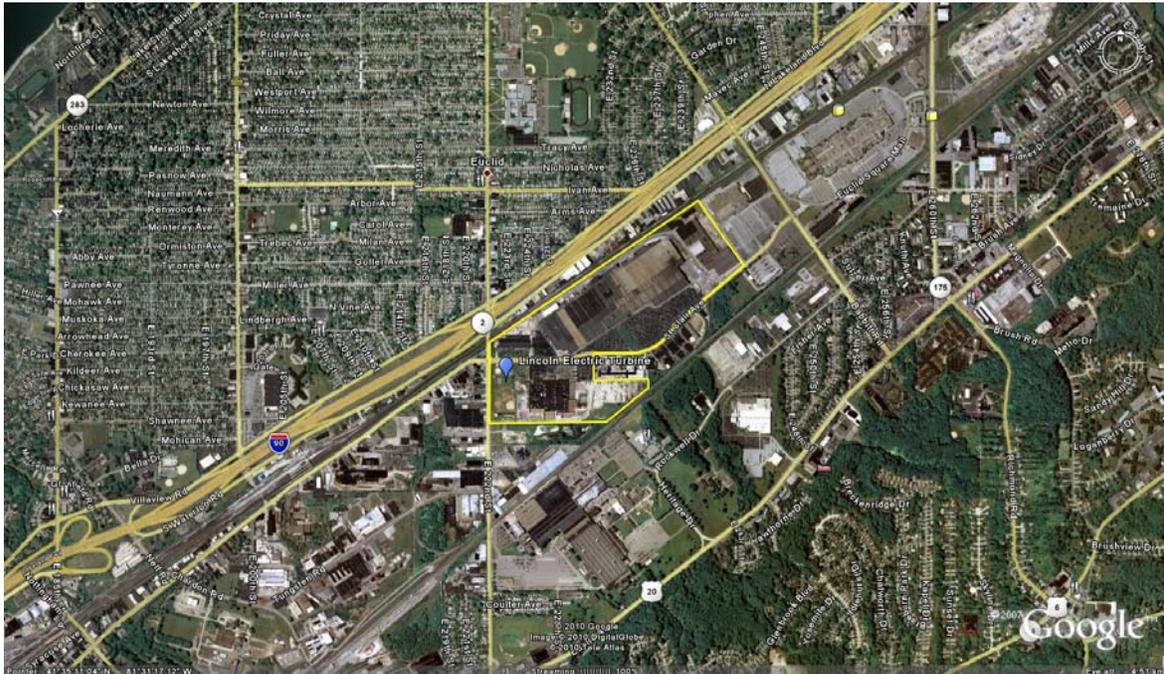
In February 2010 Lincoln Electric (“Lincoln”) contracted with juwi/JW Great Lakes Wind, LLC (“juwi”) to perform a shadow flicker analysis for their proposed wind turbine project at its company headquarters site in Cleveland, OH. Lincoln is proposing to install a single 2.5 MW wind turbine to generate electricity for consumption onsite. Lincoln is the world leader in the design, development and manufacture of arc welding products, robotic welding systems, plasma and oxyfuel cutting equipment. juwi is a Cleveland-based developer of utility-scale wind energy projects and is active across the Great Lakes, Great Plains, and Upper Midwest states.

juwi understands that the turbine model currently planned for the Lincoln site is a Kenersys K100 2.5 MW turbine with a 100 meter rotor diameter and an 85 meter tower height. Site information is provided in Table 1 and Figure 1 below.

Table 1: Site information

Coordinates	Structure height
41°35'4.89" N 81°31'32.81"W (NAD 1983)	450 feet AGL 1083 feet AMSL

Figure 1: Aerial view of Lincoln site (yellow) and turbine location



III.Shadow Flicker:

Shadow flicker is defined as alternating changes in light intensity caused by a moving object (such as a rotating rotor blade) casting shadows on another object. Shadow flicker from wind turbines can occur when moving turbine blades pass in front of the sun, creating alternating changes in light intensity or shadows. These flickering shadows can cause an annoyance when cast on nearby residences ("receptors"). The spatial relationship between a wind turbine and a receptor, the location of trees, buildings, and other obstacles, and weather characteristics such as wind speed/direction and sunshine probability, are key factors related to shadow-flicker impacts. Shadow flicker becomes much less noticeable at distances beyond about 1,000 ft, except at sunrise and sunset when shadows are long (NRC 2007).

IV. Lincoln Site

Lincoln is located in an industrial area of Cleveland. There are several buildings on site that house Lincoln employees. Immediate neighbors are primarily other industrial and commercial buildings. There are two rented apartment buildings immediately to the west of the proposed turbine location on East 222nd St. Significant residential neighborhoods are located north, across Interstate 90 / Route 2, and separated by trees and large highway noise barriers. Other residences are located to the east and south, separated from the Lincoln site by buildings and trees.

The Figures below illustrate views from the proposed turbine location and surroundings.

Figure 2: Aerial overview of turbine site and surroundings. Lincoln Electric property outlined in yellow. Locations of photos 1 and 2 depict locations from which enclosed photos were taken.



Figure 3: Turbine location looking north at Lincoln-owned building



Figure 4: Turbine location looking northeast at Lincoln-owned buildings



Figure 5: Turbine location looking east at Lincoln-owned building. Note absence of windows.



Figure 6: Turbine location looking southeast at Lincoln-owned building. Note absence of windows.



Figure 7: Turbine location looking south at Lincoln-owned property (ballfield)



Figure 8: Turbine location looking southwest



Figure 9: Turbine location looking west. Two rental properties are seen to the right in photo.



Figure10: Turbine location looking northwest



Figure 11: Turbine location shown by stake, looking north



Figure 12: Photo Location 1 Looking south in direction of turbine location



Figure 13: Photo Location 1 looking toward turbine, highway noise barrier ~20+ feet tall



Figure 14: Photo Location 1 example of trees and residences



Figure 15: Photo Location 1 looking toward turbine, noise barrier ~20+ feet tall



Figure 16: Photo Location 1, example residences



Figure 17: Photo Location 2 looking southwest in direction of turbine. Note noise barriers and trees.



V. Study and Results

To identify potential shadow flicker impacts from the Lincoln turbine, juwi utilized WindPRO, an industry standard software package. A large sampling of residences within 1,000 m (3,281 ft) of the proposed turbine were included in the analysis. Several government sources (USDOI 2005; BERR 2009) suggest that shadow flicker effects become relatively insignificant beyond 10 rotor

diameters (approximately 1,000 m or 3,281 ft). Because of the large number of residences within 1,000 m north of Interstate 90, juwi utilized a sampling effort whereby every second or third home was listed as a receptor (see Figure 18). Given the trees, other buildings, and noise barrier separating the turbine from that neighborhood, a sampling effort is appropriate for this study. Receptors were also categorized as “P” for participating (Lincoln-owned buildings), and “N” for non-participating. For a list of receptors included in the analysis, refer to the WindPRO output and calculations attached to this report.

The shadow flicker model was run in WindPRO using a realistic scenario with several settings. A maximum distance for influence was set at 1,000 m. As mentioned earlier, several government sources suggest that shadow flicker effects become relatively insignificant beyond 10 rotor diameters, in this case 1,000 meters. Calculations were performed only if 20% of the sun is covered by rotor blade. Typically, periods when the solar disc is covered less than 20% will not cause significant shadowing. The model does not factor in decreasing shadow intensity with distance from the turbine, but rather assumes that all shadow intensities are equal at varying distances. In reality, shadow intensity will decrease with increasing distance between turbine and receptor. Actual sunshine hours were used for modeling to support a “realistic scenario” approach. Sunshine data are from the Burke Lakefront ASOS weather station located approximately 15 km (9.5 miles) southwest of the project area. The calculations also accounted for realistic operational hours for the turbines. Wind data are based on a wind statistic from the Cleveland Crib offshore measuring station. While these data should not be used to model energy production for Lincoln’s turbine, they are accurate enough for a realistic understanding of operational hours.

The defined height for receptors was set at 1 meter. While some buildings may be taller, shadow is also received at the lowest windows. Furthermore, shadowing is less using greater receptor heights, so the analysis can be viewed as conservative in this respect. The shadow isolines on the maps are given for 10, 30, 50 and 100 hours per year, which is a standard breakdown of shadowing results. The 30 hours isoline is thicker as it represents the threshold by which the Ohio Power Siting Board and authorities in other countries (i.e. Germany) determine significant impact and whether mitigation is appropriate.

The results from the shadow flicker study indicate that a relatively small number of receptors receive more than 30 hours of shadow flicker per year. These receptors are all located south of the Interstate 90. Four receptors are within the 100 hours isoline, 12 receptors are within the 50 hours isoline, and 17 receptors are within the 30 hours isoline. These results are provided below in Table 2, and Figures 18 and 19.

Table 2: WindPRO shadow results

Receptor	Max shadow hours per day	Max shadow hours per year
N2	2:47	157:05:00
N1	2:48	154:12:00
N37	2:29	135:33:00
N40	2:31	126:08:00
N36	2:15	93:02:00
N39	2:26	88:10:00
N42	2:14	78:59:00
N41	1:51	77:28:00
N35	1:41	76:23:00
N34	1:28	66:38:00
N33	1:19	56:37:00
N130	1:14	51:14:00
P1	2:08	48:18:00
N130	1:08	42:52:00
N32	1:08	34:51:00
P2	1:49	33:02:00
P3	1:19	31:32:00

Of the 17 receptors exceeding 30 hours shadowing per year, three are participating Lincoln properties and 14 are non-participating. The 14 non-participating receptors can be considered the more significant receptors that may require further study post-construction and possibly mitigation action. If shadow impacts become a legitimate annoyance for receptor(s), juwi suggests that Lincoln discuss mitigation techniques with the affected receptor(s), including but not limited to purchasing blinds for windows. juwi also understands that Lincoln has elected shadow control equipment for the Kenersys turbine. The shadow control will have the ability to decrease shadowing to a certain threshold by curtailing turbine operation.

Figure 18: Shadow flicker isoline map

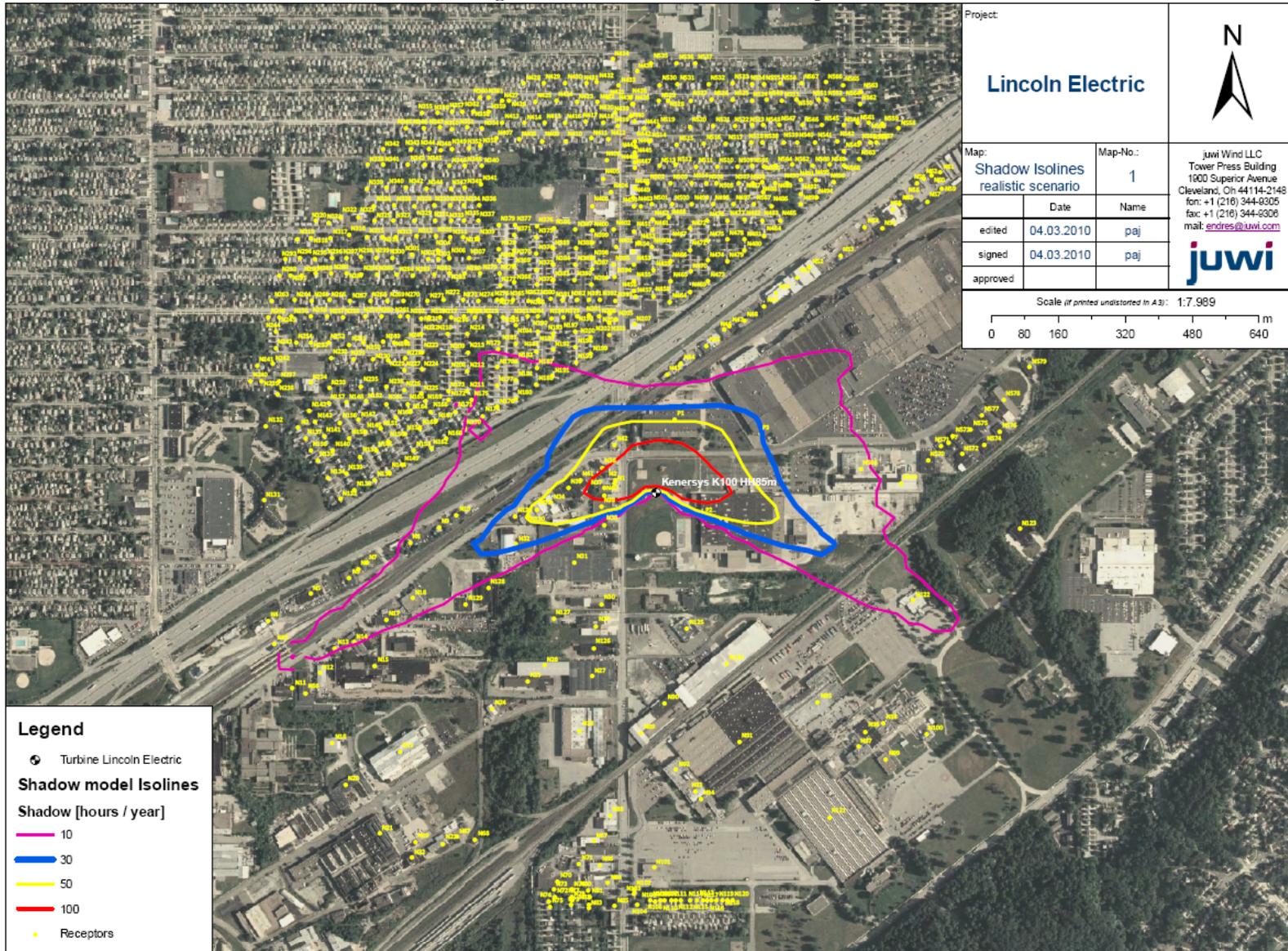
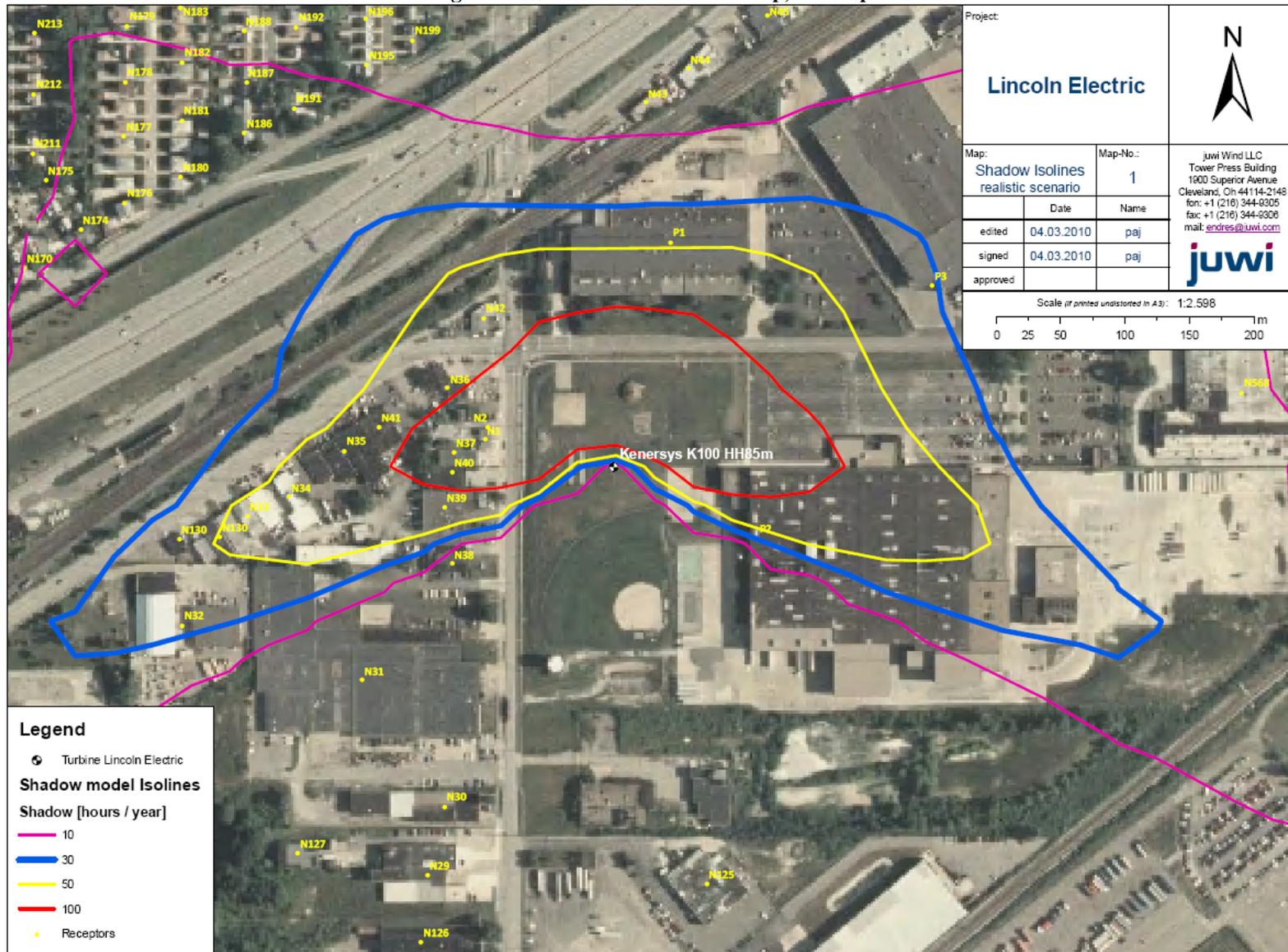


Figure 19: Shadow flicker isoline map, close-up



REFERENCES

- Business Enterprise and Regulatory Reform (BERR), United Kingdom Department. 2009. *Onshore Wind: Shadow Flicker*.
<http://www.berr.gov.uk/energy/sources/renewables/planning/onshore-wind/shadow-flicker/page18736.html>.
- National Research Council (NRC) of the National Academies. 2007. *Environmental Impacts of Wind Energy Projects*. Committee on Environmental Impacts of Wind Energy Projects, Board on Environmental Studies and Toxicology. Division of Earth and Life Sciences. The National Academies Press, Washington, DC.
- US Department of Interior (DOI). 2005. *Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States*. Bureau of Land Management.

Wind Power GeoPlanner™

Licensed Microwave Report

Single Turbine Site in Cuyahoga County, OH



Prepared on Behalf of
The Lincoln Electric
Company

February 23, 2010



COMSEARCH

A CommScope Company

Attachment D-6

Project Information

Client Name: The Lincoln Electric Company

Phone Number: 216-383-8875

County: Cuyahoga

State: Ohio

Number of turbines: 1

Turbine Location: 41° 35' 4.89" N, 81° 31' 32.81" W

Purpose

The purpose of this analysis is to determine if a proposed wind turbine installation will cause an obstruction to existing microwave communication links in the vicinity of the wind turbine.

Methodology

The obstruction analysis was performed using Comsearch's proprietary microwave database, which contains all non-government licensed paths from 0.9 - 23 GHz¹. First, we determined all microwave paths that intersect the area of interest². The area of interest was defined by the client and encompasses the planned turbine location. Next, for each microwave path that intersected the project area, we calculated a Worst Case Fresnel Zone (WCFZ). The calculated WCFZ radius, giving the linear path an area or swath, buffers each microwave path in the project area and provides a visual determination of whether the turbine can be installed as planned without creating an obstruction. See Table 1 for a summary of paths and WCFZ distances. In general, this is the area where the planned wind turbines should be avoided. A depiction of the WCFZ overlaid on topographic basemaps can be found in Figure 1 on the next page.

Path ID	Callsign 1	Callsign 2	Band	Licensee	WCFZ (m)
1	KQF92	WCR61	6.7 GHz	FELHC, Inc.	14.19
2	WQU52	WGX943	6.7 GHz	East Ohio Gas Company	13.94

Table 1: Microwave Paths that Intersect the Area of Interest

Analysis Results

For this project, one turbine was considered in the analysis, with a blade diameter of 100 meters and hub height of 85 meters. The edge of the closest microwave path's WCFZ is 85 meters

¹ Please note that this analysis does not include unlicensed microwave paths or federal government paths that are not registered with the FCC.

² We use FCC-licensed coordinates to determine which paths intersect the area of interest. It is possible that as-built coordinates may differ slightly from those on the FCC license.

from the planned wind turbine installation. Due to this separation distance, the turbine poses no potential conflict with the incumbent microwave paths.

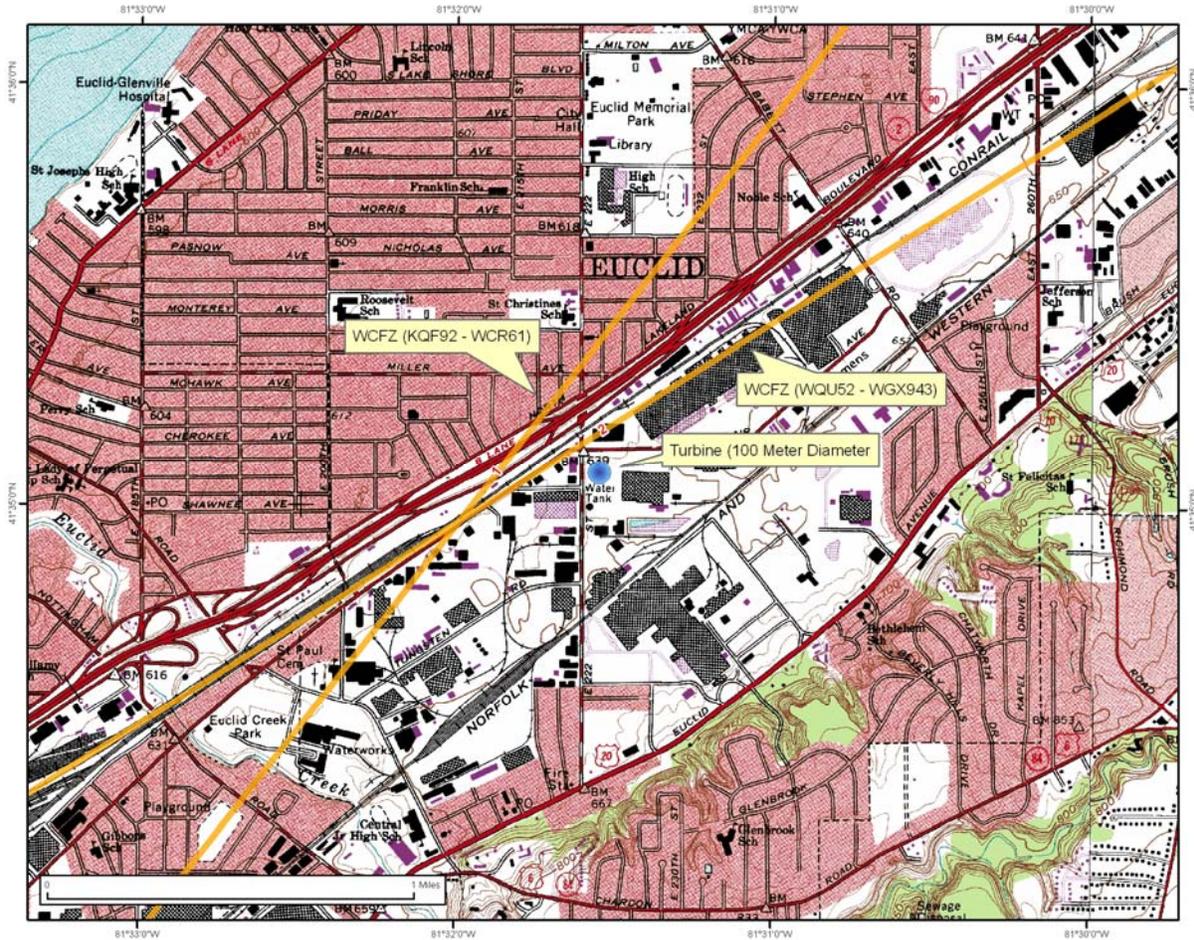


Figure 1: Microwave Paths with WCFZ



Contact Us

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