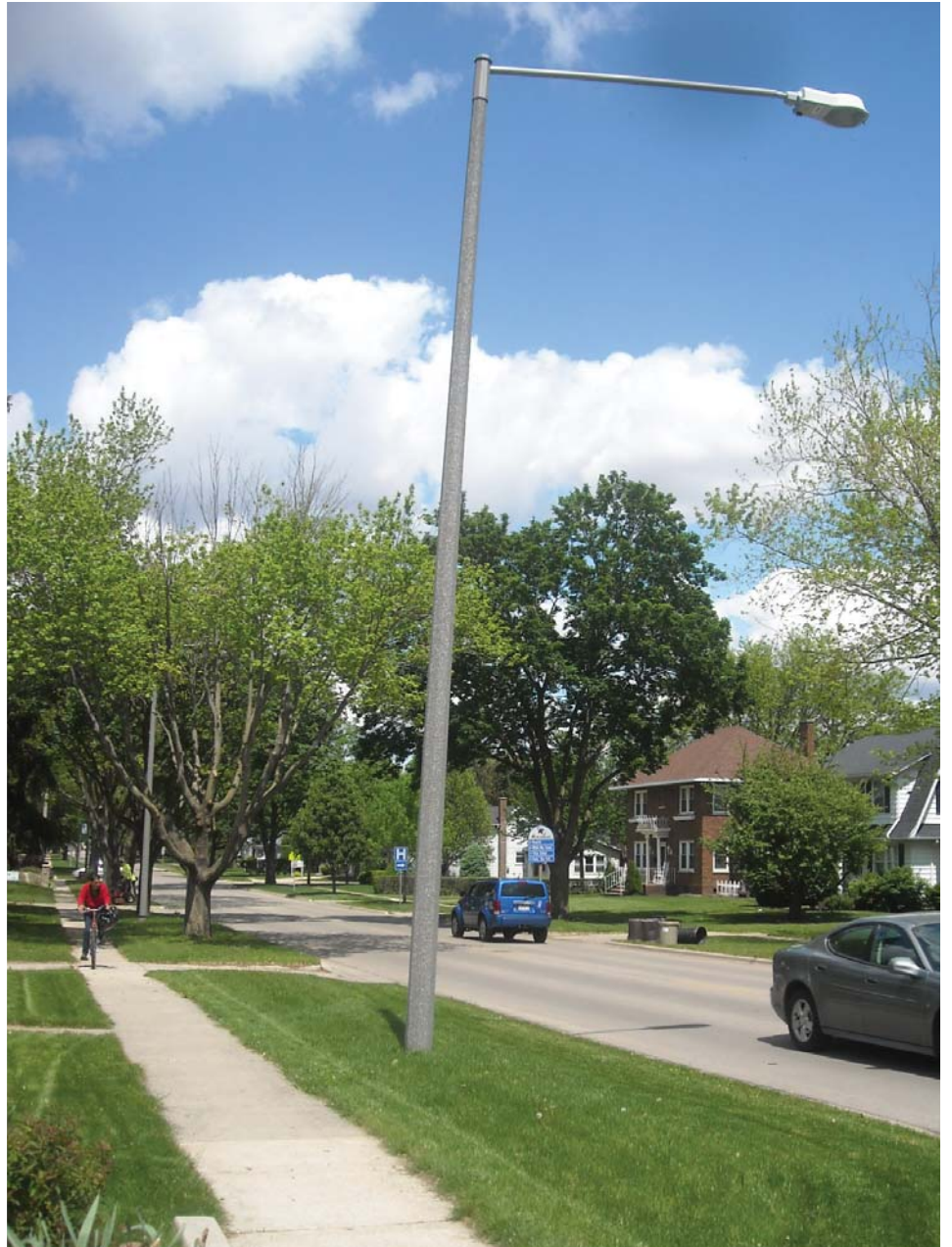


Corridor Lighting Design Plan



Prepared for the City of Rochelle
August 2012





View towards existing lighting within one of Rochelle's mature residential neighborhoods.



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CORRIDOR LIGHTING DESIGN COMMITTEE

David Plyman, City Manager
 Sam Tesreau, City Engineer
 Joe Orlikowski, Superintendent of Electric Operations
 Joanne Peters, Administrative Assistant, Utility Department
 Sue Messer, Assistant to City Manager
 Diane McNeilly, Planning & Zoning Commission Member
 Ross Freier, Head of Rochelle Tourism
 Don Elliott, Superintendent of Streets, Cemetery, and Airport
 Curt Ward, Engineering Technician
 Chris Limas, Community Development Director
 Peggy Friday, Executive Director of Chamber of Commerce

CONSULTANT

Teska Associates, Inc.



View towards existing lighting within Downtown Rochelle

EXECUTIVE SUMMARY

Rochelle has made great strides over the past 20 years through progressive planning that has led to investment in broadband infrastructure, rail, and a wide range of economic programs. These efforts have resulted in economic prosperity in the face of the economic challenges over the past few years. To build on this success the City recognizes the need for continued revitalization and investment in aging infrastructure, and to strengthen its image as a desirable community to live, work and shop.

Many of the City's main roadway corridors have not yet enjoyed the same level of economic success reflected in the poor quality and a lack of a cohesive lighting plan along commercial, downtown and residential streets. Over time, a variety of light standards have been implemented throughout the City. Today, as some light standards are in need of replacement or continued maintenance, the City has recognized the need for a comprehensive Corridor Lighting Plan that considers both the adequacy of lighting treatments as well as the image they convey throughout the City.

The need for this Plan is in part a response to the Illinois Department of Transportation's (IDOT) plans to widen the north section of Route 251 (7th Avenue), which will include the addition of new light poles. Due to this near term IDOT project, along with significant wear and tear on other City-wide light poles, the time is right to think about the future of lighting design throughout the City and along its business corridors.

Throughout this project, Teska Associates, Inc. worked with Village Staff and the Corridor Lighting Design Committee (CLDC) to develop an approach to lighting design that represents the City's cultural identity.

Plan Objective

Through careful and unified lighting design and selection, Rochelle has the opportunity to not only improve the efficiency and functionality of lighting, but also to express community character throughout the City.

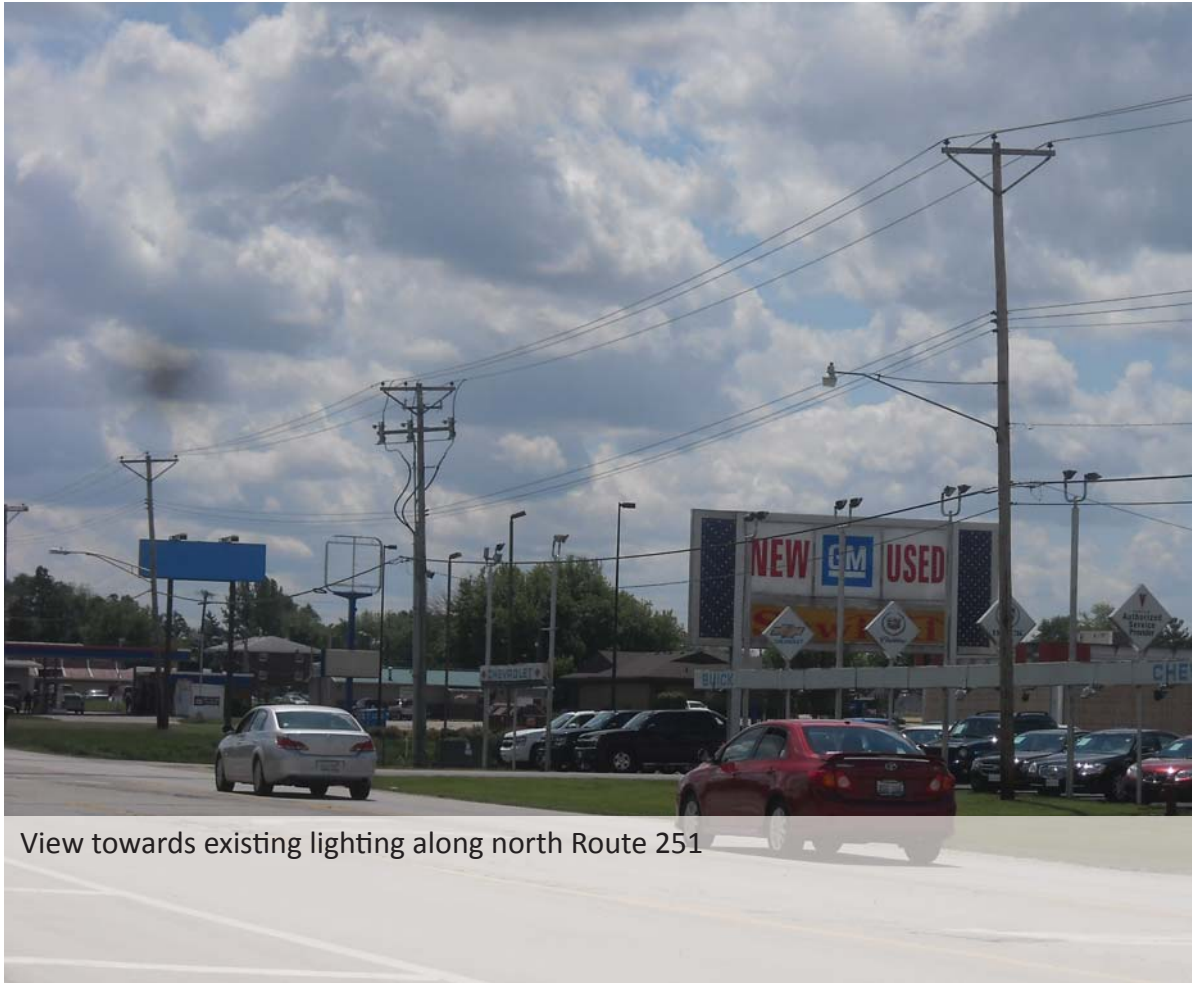
By following through on these project goals, the community can achieve its objective:

Goal 1: Lighting should be safe, efficient and considerate of applicable design standards for lighting along City roadways and sidewalks;

Goal 2: Lighting should be unique and inspiring in expressing the City's identity as a family friendly community with a quaint and historic downtown;

Goal 3: Lighting should be sustainable in its use of energy resources.

The Corridor Lighting Design Plan is the first step towards enhanced corridor treatments throughout the City. Although new lighting is important, it is only one of the elements needed to address the overall image and appearance of Rochelle. Enhanced lighting should be coordinated with additional landscaped community gateways, unified gateway and wayfinding signage and streetscape design improvements in the downtown and along the main roadway corridors.



View towards existing lighting along north Route 251

BACKGROUND

A variety of light standards exist throughout the City's corridors. Over time, lighting has been installed by multiple entities, including the City, IDOT and the private development community. As light standards have required maintenance and replacement, it became clear that changes to the City's lighting was necessary. When IDOT announced reconstruction of north Route 251, including the upcoming installation of new lighting, the City recognized this as an opportune time to think about the design and selection of lighting in a comprehensive manner.

Study Area

The study area is bounded by the municipal boundary of the City of Rochelle. The study area recognizes that not all roadways are controlled by the City. Therefore, the Plan does not recommend any specific manufacturer. Additionally, IDOT standards are incorporated into the planning process.

Process

The design process began with an examination of existing resources, including an evaluation of existing roadway and lighting conditions. During this process, a Lighting Design Workshop meeting was held. During this meeting, the CLDC participated in a series of engaging exercises to identify issues and opportunities relative to corridor lighting design. Upon completion of the Lighting Design Workshop, the following draft goals and objectives statement was established that would guide the Corridor Lighting Design Plan.

GOALS & OBJECTIVES

The City of Rochelle's Corridor Lighting Plan should be:

- 1) Safe, efficient, and considerate of applicable design standards for lighting along City roadways and sidewalks;**
- 2) Unique and inspiring in expressing the City's identity as a family friendly community with a quaint and historic downtown and;**
- 3) Sustainable in its use of energy resources.**

Goal 1: Safe, efficient and considerate of applicable design standards for lighting along City roadways and sidewalks

- a) Design standards as per IDOT, including but not limited to:
 - i. Breakaway pole mounting; Photometrics; Full cut-off lighting.

Goal 2: Unique and inspiring in expressing the City's identity as a family friendly community with a quaint and historic downtown

- a) Develop a hierarchy of lights that are coordinated with City corridors & districts.
 - i. Historic Core District (Core Downtown area and adjacent historic residential neighborhoods; Lincoln Highway within the Downtown area)
 - ii. Auto Oriented Corridors (US Rte 251; St Rte 38; Flagg Rd)
 - iii. Residential Neighborhoods
- b) Select lighting products that are reflective of Rochelle's identity as a historic, quaint, family friendly community.
 - i. Incorporate light pole appurtenances as appropriate to budgets and location, including community identity signage, banners, light receptacles, flagpole holders, hanging baskets, irrigation systems, recognition plaques, decorative banding.
 - ii. Select products that are traditional and timeless, not a replica of a historic style or modern design that could become dated over time.

Goal 3: Sustainable in its use of energy resources

- a) Dark Skies compliant fixtures;
- b) LED technology; shall be considered only as practical to quantities and spacing;
- c) Recycled material content as appropriate.

The Corridor Lighting Plan was developed based on these Goals and Objectives. Although the Plan gives direction to conceptual light pole designs and styles, the Plan does not recommend any specific manufacturer. Multiple reputable manufacturers would be capable to provide the conceptual light poles shown herein. Plan documents were created and reviewed with the CLDC and City staff via submittals and telephone discussions. Revisions were made as required.

Once the *Corridor Lighting Design Plan* was approved by the CLDC and City staff, the City engaged their consulting engineer to review the *Corridor Lighting Design Plan* recommendations. The City's consulting engineer evaluated photometrics, spacing and cost factors. As a result of this review, and in part due to the City's commitment to sustainable practices, City staff selected LED lighting as the desired light output for future lighting.

Based on the conceptual lighting described in the *Corridor Lighting Design Plan*, all future lighting implementation projects shall be evaluated to meet applicable codes and ordinances. Lighting planned for properties within state routes shall be coordinated with the appropriate agencies.

CORRIDOR LIGHTING PLAN

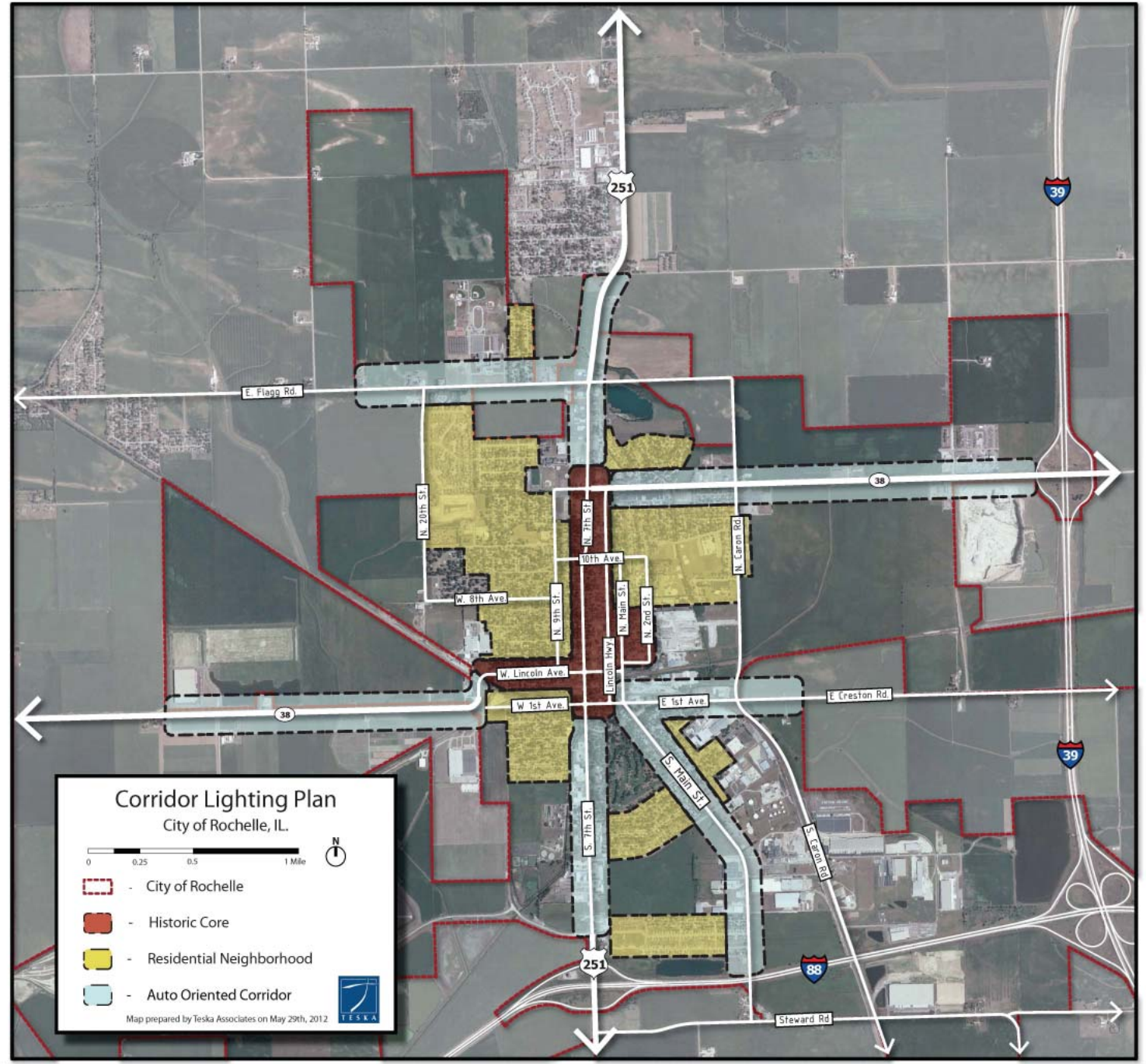
Plan Features

The Corridor Lighting Plan is guided by the results of the committee workshops. The Design Workshop and presentations that occurred during the design process focused on achieving the following goals:

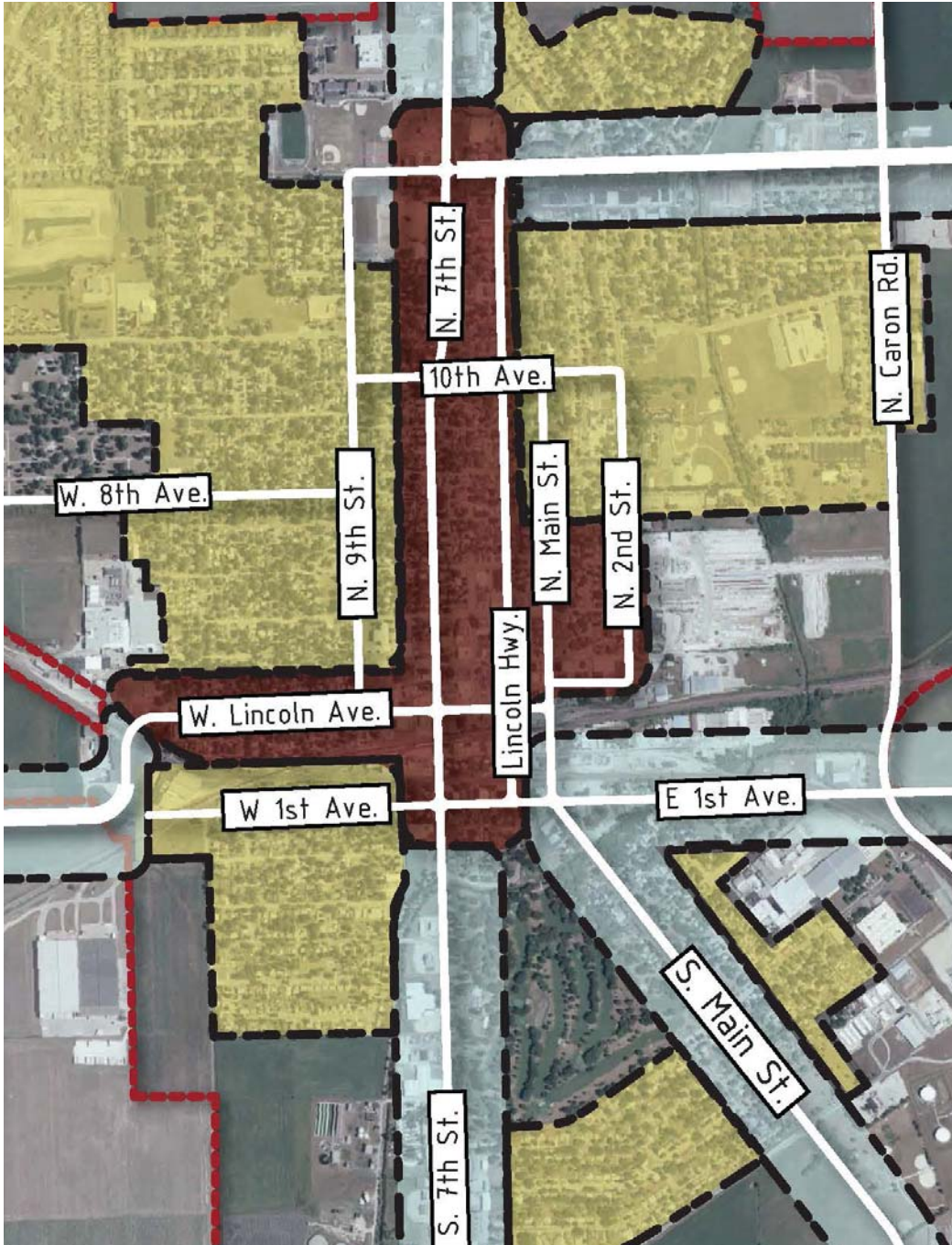
Goal 1: Lighting should be safe, efficient and considerate of applicable design standards for lighting along City roadways and sidewalks;

Goal 2: Lighting should be unique and inspiring in expressing the City's identity as a family friendly community with a quaint and historic downtown;

Goal 3: Lighting should be sustainable in its use of energy resources.



LIGHTING TREATMENT HIERARCHY - OVERALL ZONE MAP



LIGHTING TREATMENT HIERARCHY - ENLARGED ZONE MAP

Plan Organization

The Corridor Lighting Plan is organized into three (3) zones of lighting treatments. Each zone has distinct characteristics based on land use and scale. Therefore, the lighting design should be reflective of its surrounding character. The following three zones are identified for the Plan:

1. Auto Oriented Corridor – including the auto oriented commercial corridors along Route 251, Flagg Road, and Route 38.
2. Historic Core – including the quaint pedestrian oriented Downtown area along North 7th Street, Lincoln Highway, and North Main Street.
3. Residential Neighborhood – including the historic neighborhoods which abut the Downtown area as well as existing and new neighborhood areas beyond the Downtown.

AUTO ORIENTED CORRIDORS

These corridors serve as gateways into the community from the surrounding region. With direct access from Interstates 88 and 39, City corridors attract high traffic counts. The corridor lighting selection includes a full cutoff fixture with decorative pole and arm. The conceptual auto oriented corridor assembly diagram contemplates a 30'-0" height pole in keeping with typical pole heights along IDOT controlled roadways. Recommended color is powder coated black.

Recommendations for corridor signage and banners include permanent metal signs and changeable fabric banners. A thematic approach to corridor signage and banners depicts nostalgic imagery and fonts that celebrate period design features found in Downtown Rochelle, such as the Standard Oil Filling Station. Monochromatic sign design maximizes contrast and is reflective of classic forms. The City is encouraged to consider limited banner and sign placement so as not to overpower the quantity of signage elements along the street.

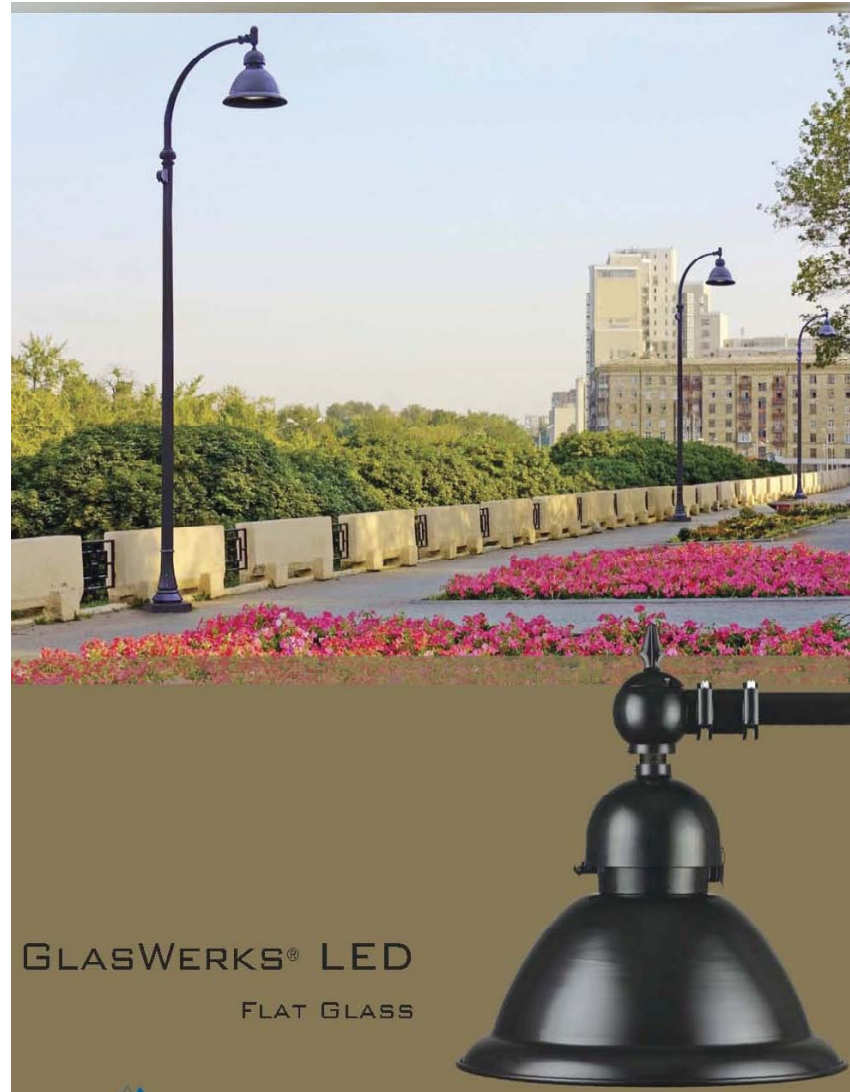


photo example: full cutoff fixture with hood
image credit: Holophane Lighting, Glaswerks Model

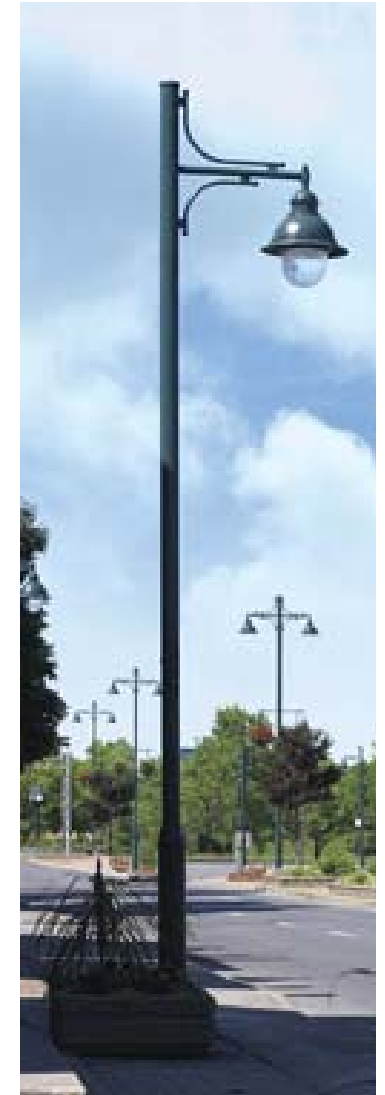
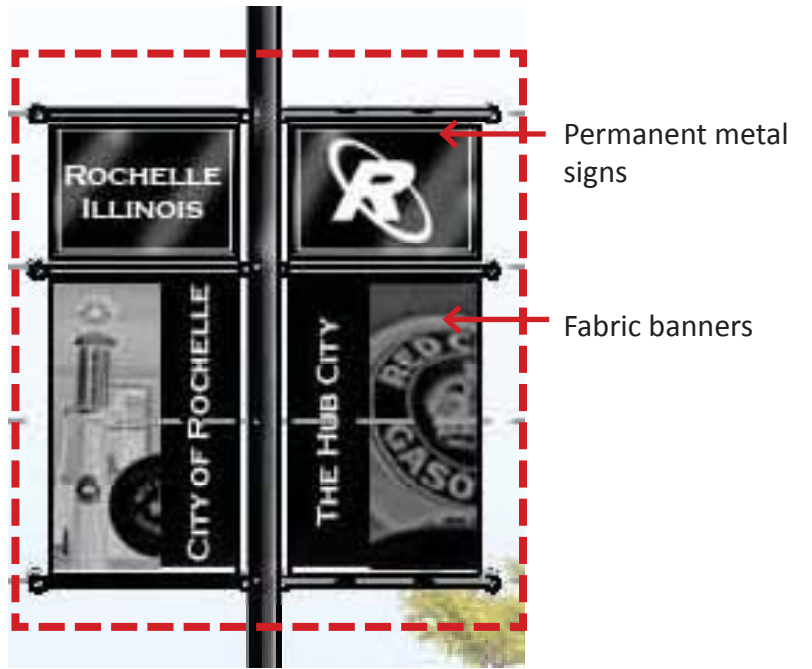
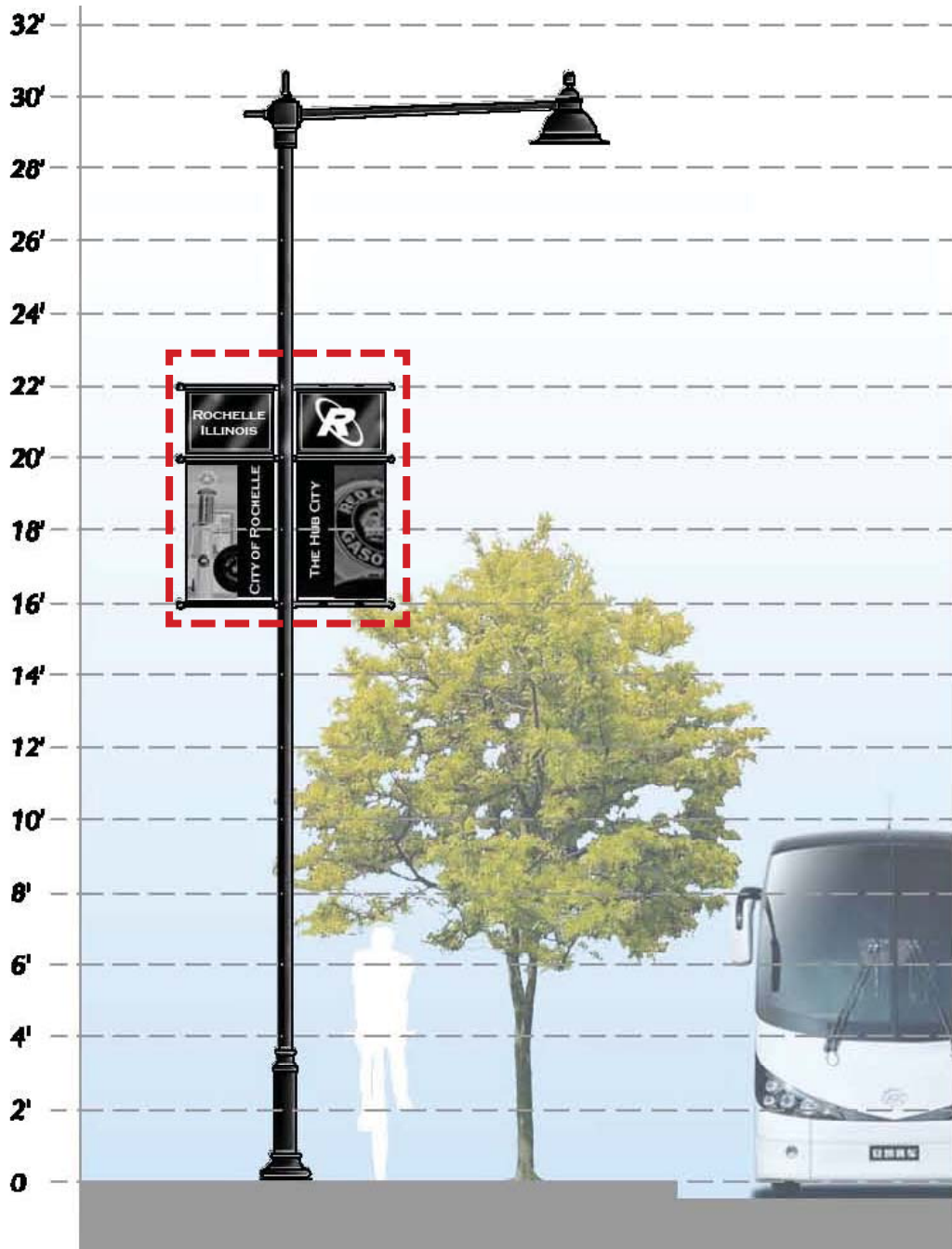


photo example: full cutoff fixture with decorative pole and arm
image credit: Lumec, Domus model

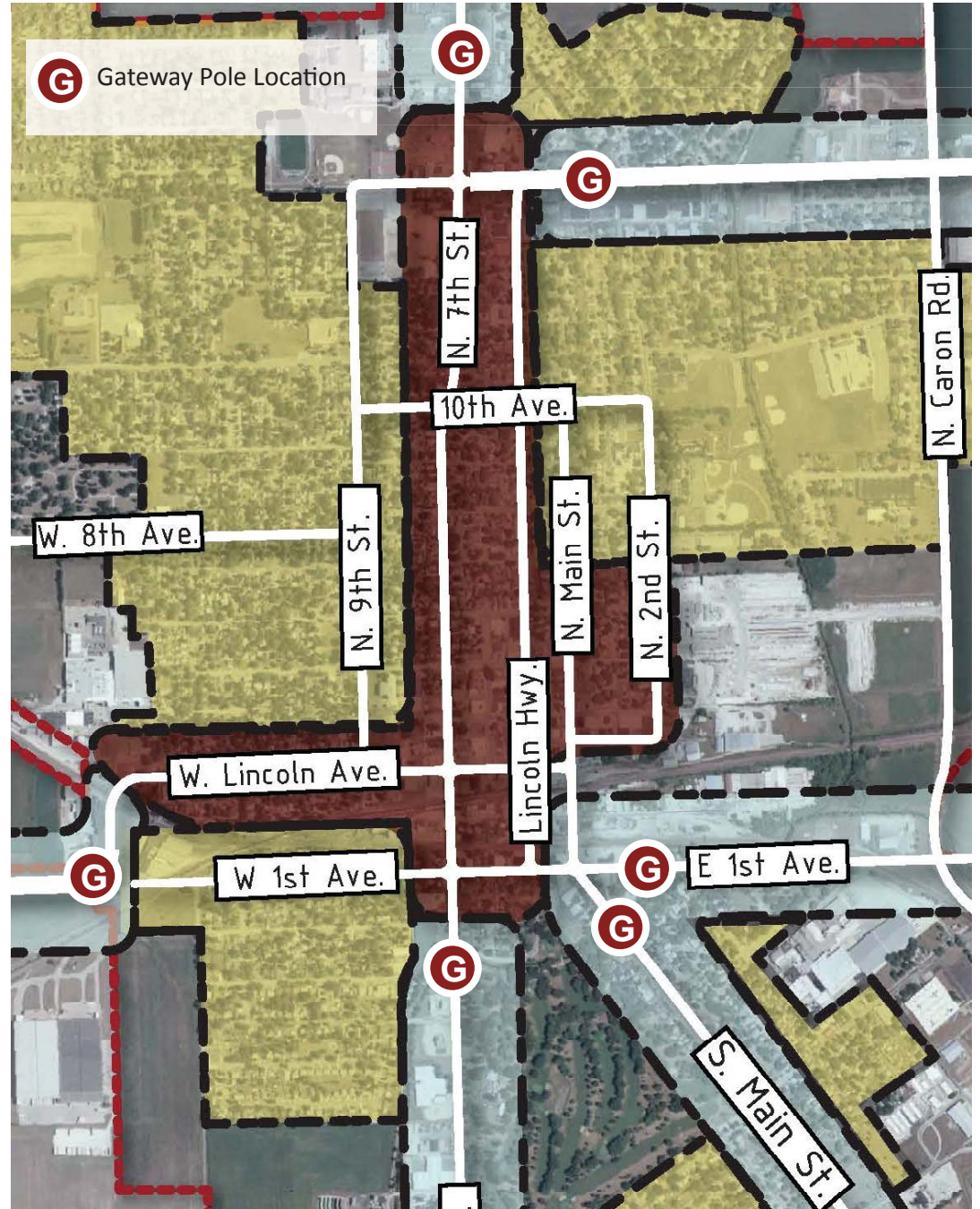


AUTO ORIENTED CORRIDOR ASSEMBLY DIAGRAM

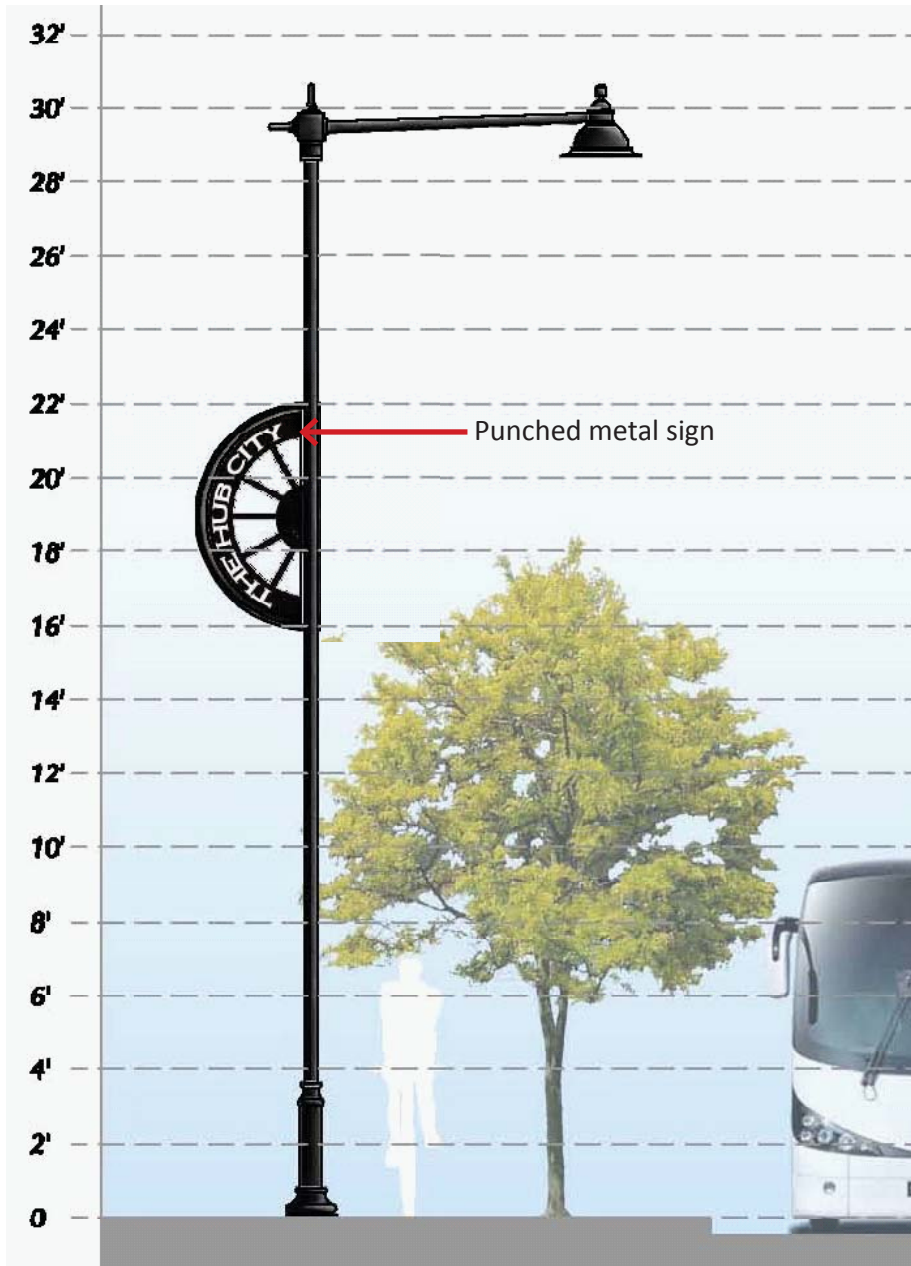
Full cutoff LED hood fixture with decorative arm, pole, base, signage and banners

GATEWAY POLES

Recommendations for gateway poles include special metal signage treatments that include a stylized wheel and references to Rochelle's identity as "The Hub City". These Gateway poles would be located at key locations to mark entry points to the City.

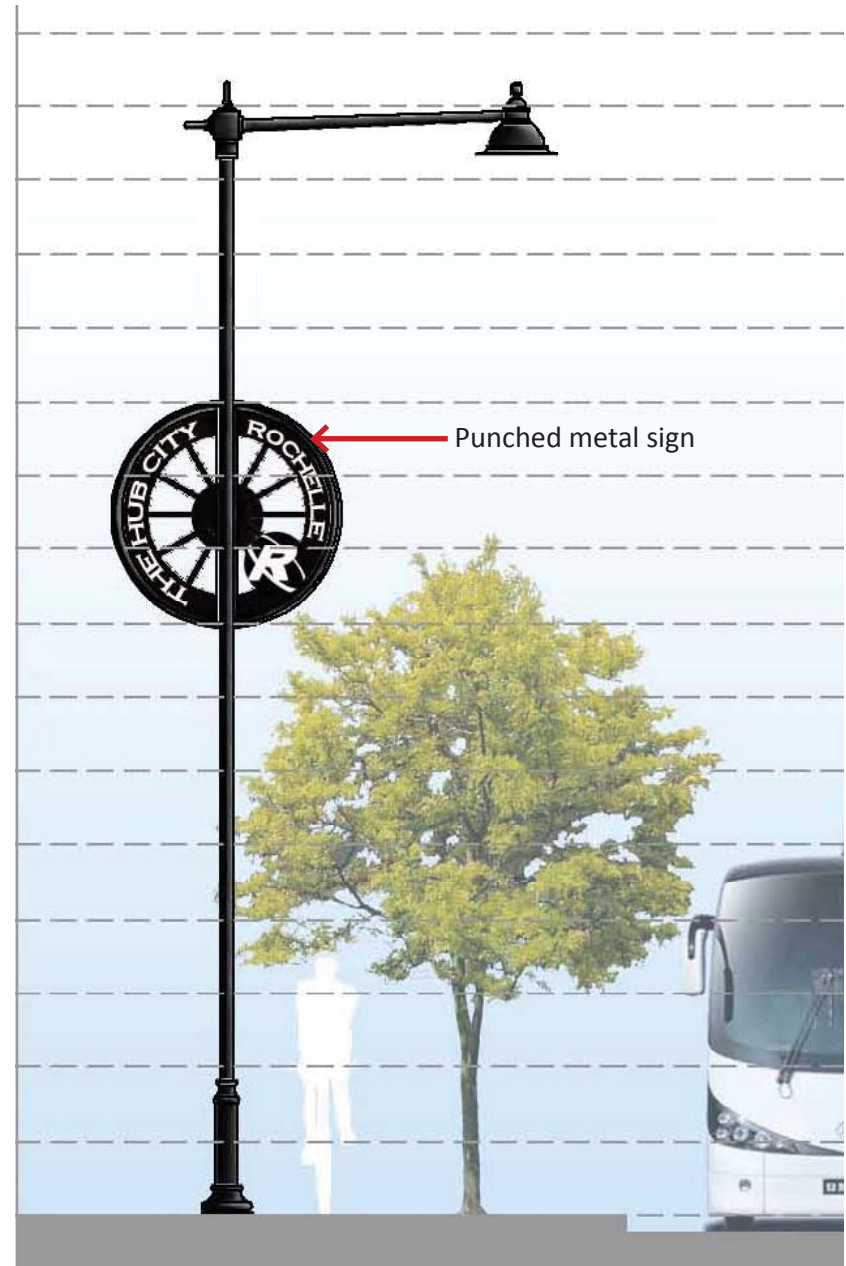


**AUTO ORIENTED CORRIDORS
GATEWAY POLES LOCATION DIAGRAM**



GATEWAY POLE ASSEMBLY DIAGRAM - OPTION 1

Full cutoff LED hood fixture with decorative arm, pole, base, and gateway signs occurs at key entry points into the City



GATEWAY POLE ASSEMBLY DIAGRAM - OPTION 2

Full cutoff LED hood fixture with decorative arm, pole, base, and gateway signs occurs at key entry points into the City



AUTO ORIENTED CORRIDOR VISUALIZATION - BEFORE

Existing roadway lighting, street sign and speed limit sign



AUTO ORIENTED CORRIDOR VISUALIZATION - AFTER

Proposed roadway lighting with identity signage and banners; Street signs modified with new decorative poles to match light poles

HISTORIC CORE AREA

The Historic Core area is the historic and cultural center of the community. With period architecture, a pedestrian oriented downtown environment, community events, shops and dining, this area attracts residents and visitors who are looking for a true downtown experience. The lighting selection includes a full cutoff post top fixture with attachments to support post amenities including flagpoles, banners and planters. The conceptual historic core area assembly diagram contemplates an 18'-0" height pole in keeping with typical pole heights along similar downtown areas. Recommended color is powder coated black.

Recommendations for historic core area signage and banners include fabric banners. A thematic approach to corridor signage and banners depicts nostalgic imagery and fonts that celebrate period design features found in Downtown Rochelle, such as the historic Hub Theater. Select banners may be used as permanent memorial plaques. Monochromatic sign design maximizes contrast and is reflective of classic forms. Purple accents reference the City's logo color.

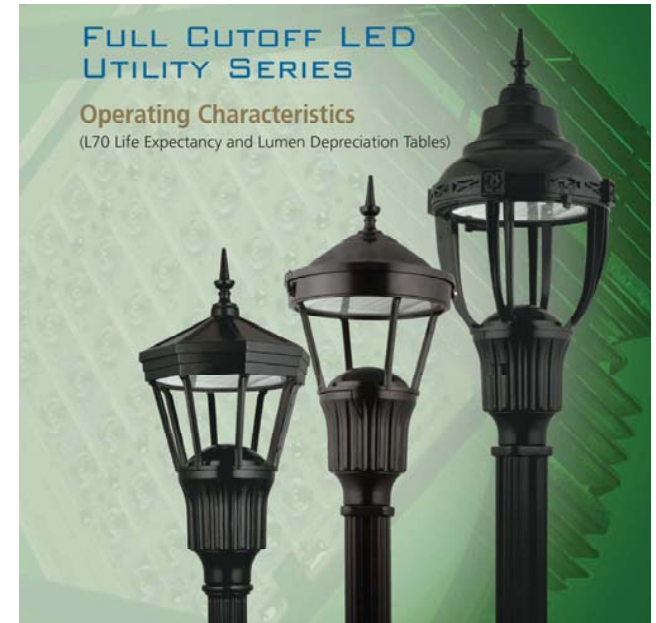
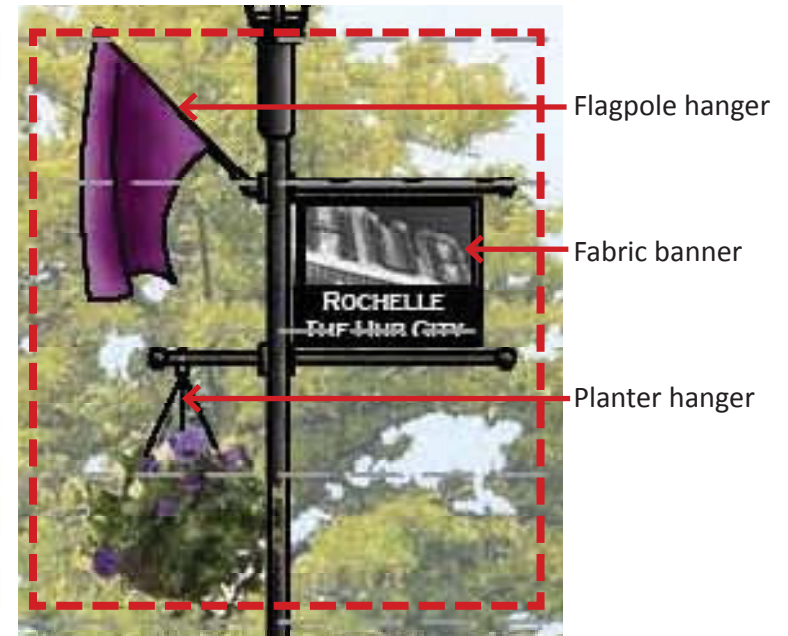
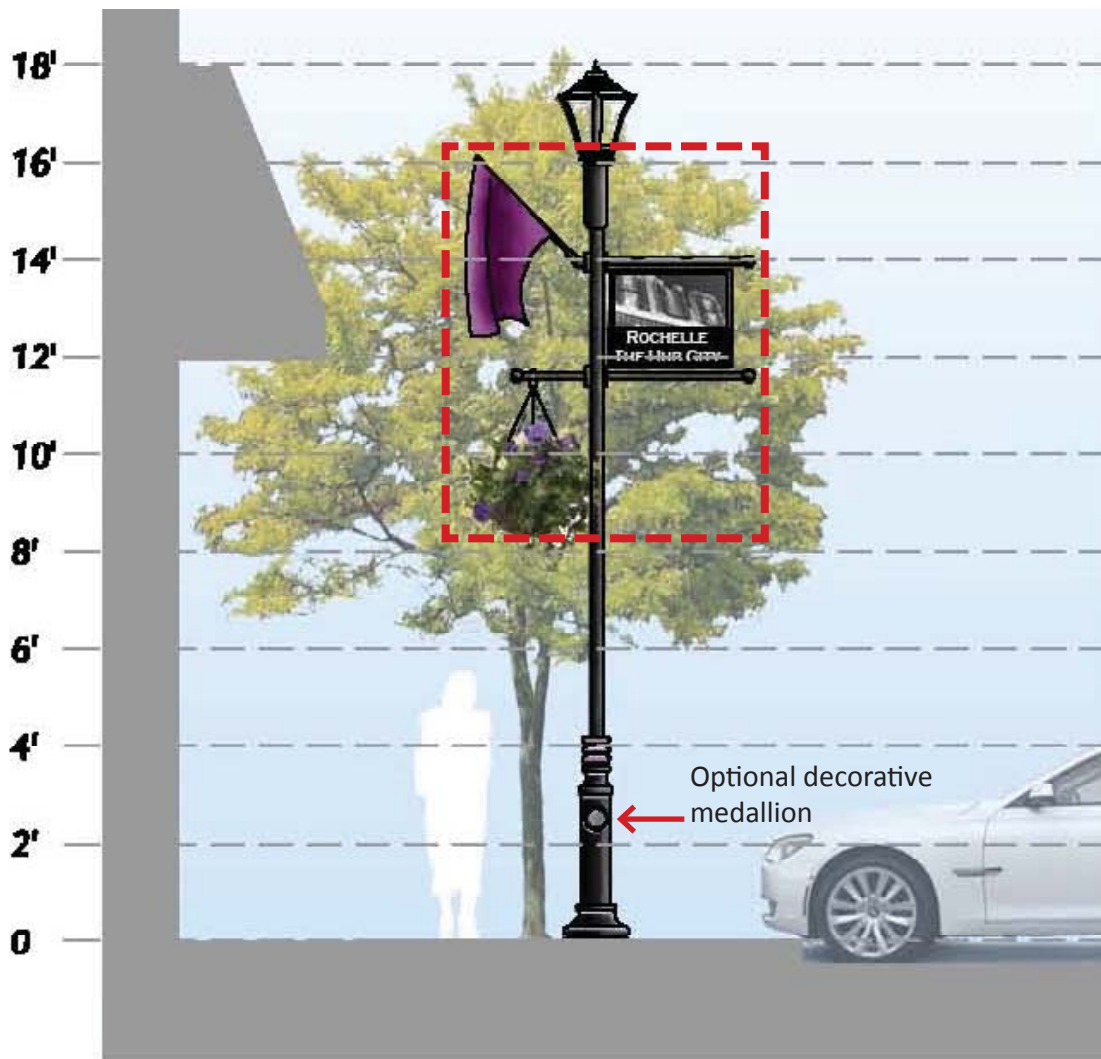


photo example:
full cutoff post top fixture
*image credit: Holophane
Lighting, Full Cutoff LED
Utility Series*



photo example: full cutoff
post top fixture
*image credit: Holophane
Lighting, Full Cutoff LED
Utility Series*



HISTORIC CORE ASSEMBLY DIAGRAM

Full cutoff LED post top fixture with banner, flagpole, hanging planter and optional decorative medallion. Medallion may incorporate Village logo.



HISTORIC CORE VISUALIZATION - BEFORE

Existing roadway lighting

RESIDENTIAL NEIGHBORHOOD AREAS

Residential neighborhood areas are beloved for their tree lined streets, quiet streets, and walkable charm. The lighting selection includes a full cutoff post top fixture. No attachments or pole amenities area contemplated for these areas. Given the close proximity between the historic neighborhoods and Historic Core area, the pole selections are intended to be the same, to establish a unified character throughout. The conceptual residential neighborhood area assembly diagram contemplates an 18'-0" height pole in keeping with typical pole heights along similar residential neighborhood areas. Recommended color is powder coated black.

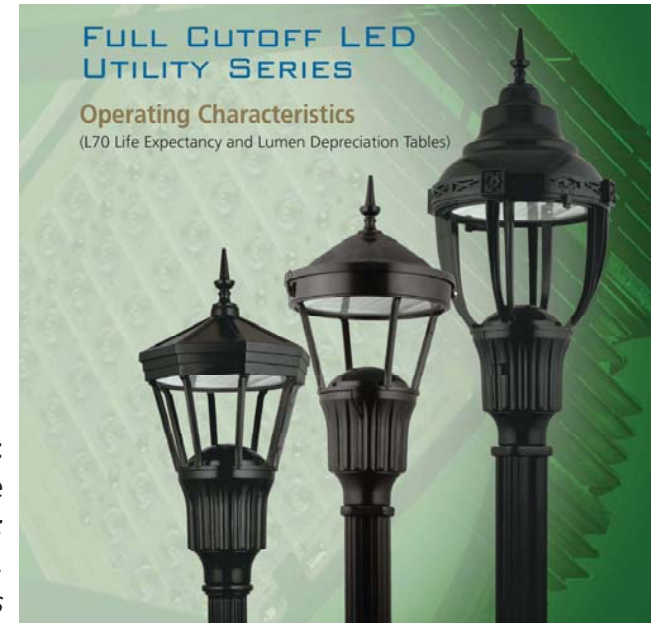
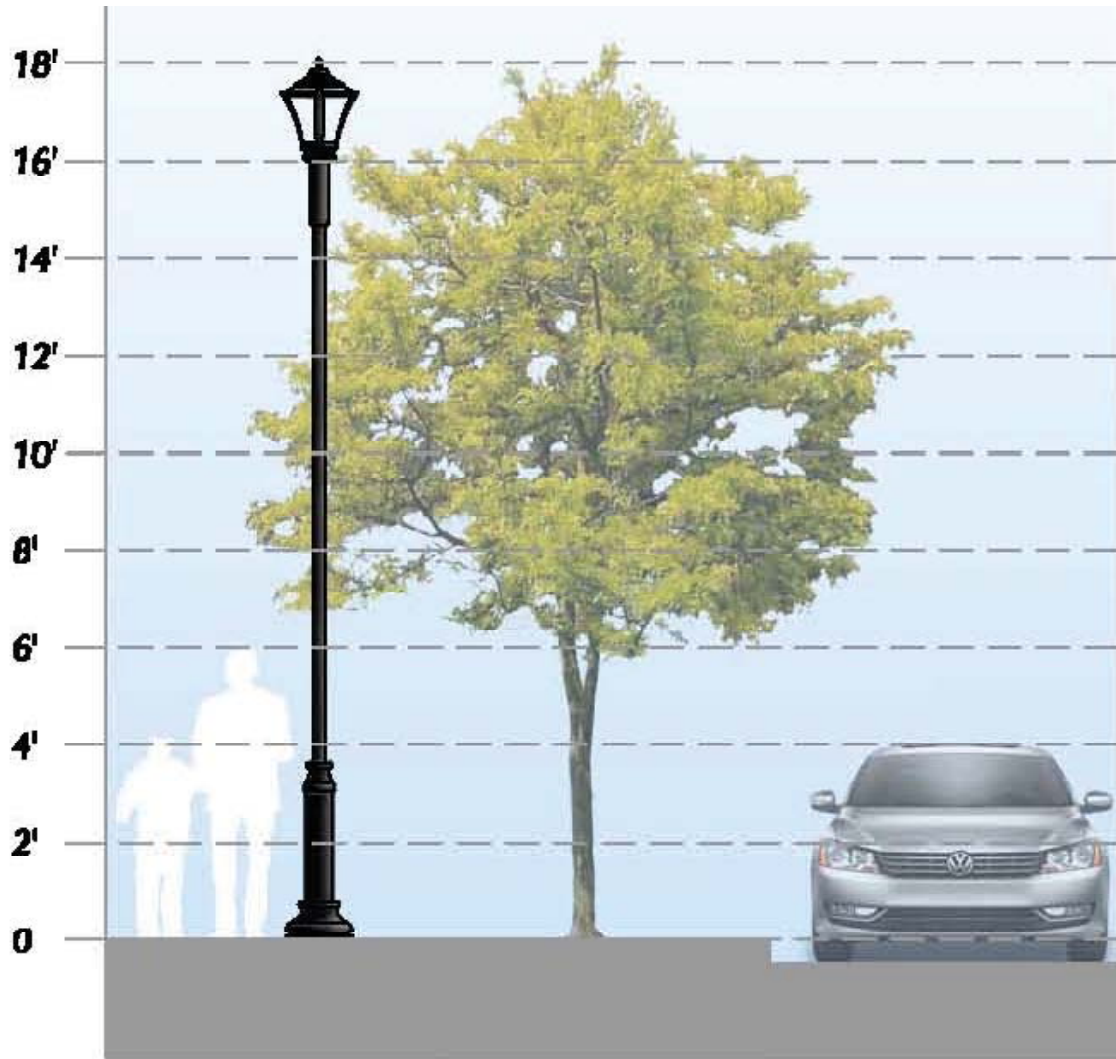


photo example:
full cutoff post top fixture
image credit:
Holophane Lighting,
Full Cutoff LED Utility Series



photo example:
full cutoff post top fixture
image credit:
Holophane Lighting,
Full Cutoff LED Utility Series



RESIDENTIAL NEIGHBORHOOD ASSEMBLY DIAGRAM

Full cutoff LED post top fixture



RESIDENTIAL NEIGHBORHOOD VISUALIZATION - BEFORE

Existing roadway lighting and wayfinding signage



RESIDENTIAL NEIGHBORHOOD VISUALIZATION - AFTER

Proposed roadway lighting; Wayfinding sign modified with new decorative pole to match light poles

POLES AND APPURTENANCES

An opportunity exists to unify light pole style and color with other pole mounted elements found throughout the City. Pole mounted elements such as bollards, stop signs, traffic signal poles, street signs and speed limit signs may continue the treatment of quality design and coordinated post features throughout the City.

It should be noted that some manufacturers offer integrated mounting equipment that allows future pole appurtenances to be applied without the need for unsightly aluminum straps.



photo example: coordinated pole styles for street signs, directional signs and traffic signal poles
image credit: Holophane Lighting, Site Link Poles



photo example: coordinated pole styles and features
image credit: Holophane Lighting, Site Link Poles



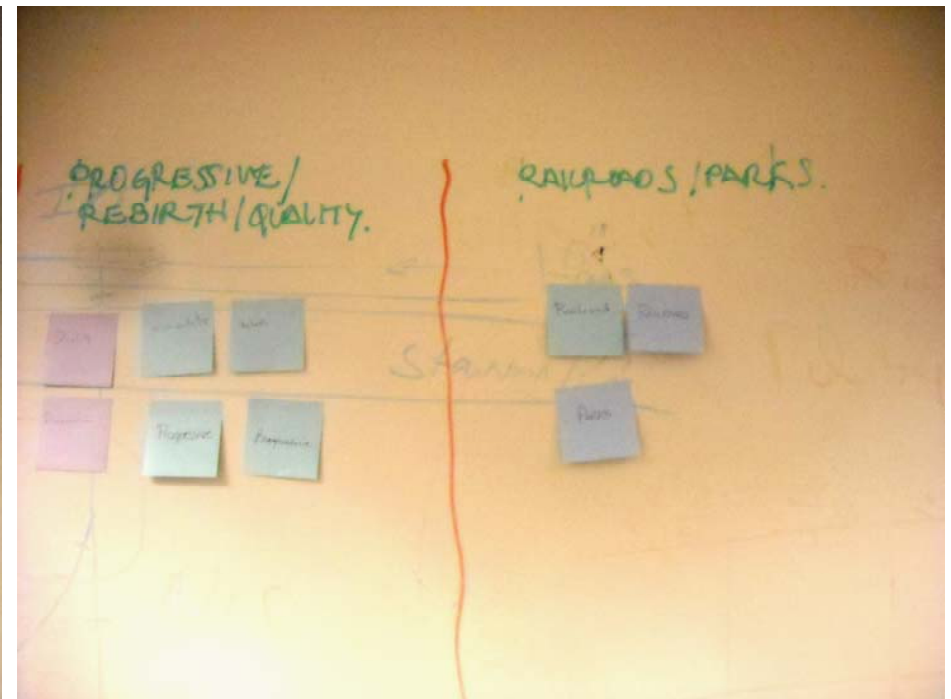
photo example: integrated mounted equipment allows for future pole mountings without the need for aluminum straps
image credit: Holophane Lighting, Site Link Poles



APPENDIX

Meeting materials and documents:

- Design Workshop Meeting Exercise
- Meeting Agenda
- Goals and objectives
- Photographs of existing light standards



HISTORIC / QUAINT

**COMMUNITY /
FAMILY
FRIENDLY**

**PROGRESSIVE /
REBIRTH / QUALITY**

**RAILROADS /
PARKS**

DESIGN WORKSHOP COMMITTEE EXERCISE

Committee members were asked to describe the image/design theme that best represents Rochelle now and into the future. Comments were recorded and organized by theme

**Corridor Lighting Design Meeting Agenda
City of Rochelle
May 8th 2012
10am**

- 10:00 Overview of meeting agenda
- 10:05 Discussion of the purpose of the corridor lighting planning assignment
- 10:10 Review of Rochelle's Corridors
- Review an overall Map of the City's major roadway corridors and discuss the characteristics of each: (e.g. Lincoln Hwy; Rte 251; Rte 38)
- 10:20 Teska presentation of other community lighting projects;
Discussion of how lighting materials and forms can evoke municipal character and identity along a corridor.
- 10:40 Teska review of Rochelle Route 251 South Corridor Concept Plan (2007)
- 10:50 What thematic characteristics should be included in roadway lighting?
- The anatomy of a light fixture (overview of possible design components)
 - Committee members share their research/preferences
- 11:20 What is your image of Rochelle? Exercise
- Committee members describe the image/design theme that best represents Rochelle now and into the future.
 - Discussion of common themes/ideas
 - Group voting to establish consensus
- 11:40 Discussion of Draft Goals for Roadway Lighting Plan
- Summarize Committee consensus on design approach
- 11:55 Next Steps
- Presentation of Preliminary Design(s)
 - Meeting Date? (to include public open house on same day)
- 12:00 Adjourn



**Corridor Lighting Design
City of Rochelle
Goals and Objectives
04 June 2012**

The City of Rochelle's Corridor Lighting Plan should be:

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- 3) Sustainable in its use of energy resources.**

Goal 1: Safe, efficient and considerate of applicable design standards for lighting along City roadways and sidewalks

- a) Design standards as per IDOT, including but not limited to:
 - i. Breakaway pole mounting; Photometrics; Full cut-off lighting.

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- a) Develop a hierarchy of lights that are coordinated with City corridors & districts.
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Goal 3: Sustainable in its use of energy resources

- a) Dark Skies compliant fixtures;
- b) LED technology; shall be considered only as practical to quantities and spacing;
- c) Recycled material content as appropriate.



Squire's Landing



Tilton Park Drive



Tilton Park Drive



Willis Avenue



Willis Avenue



Willis Avenue



PHOTO INVENTORY OF EXISTING CITY LIGHT STANDARDS PROVIDED BY CITY STAFF



Downtown



Downtown



City Hall



City Hall



Squire's Landing



Squire's Landing





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