

Plan On It

A Dutchess County Planning Federation eNewsletter



July/August 2016

How To Read a Site Plan: *What to Look For and Why It's Important*

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The Dutchess County Planning Federation welcomed Mary Beth Bianconi of Delaware Engineering this past spring for a [short course](#) on how to read site plans. This article showcases the highlights from her presentation in which she explained that site plans are uniquely positioned in their role as the basis for implementing zoning. As such, site plans are a fundamental tool of communication between applicants, local municipal boards, various regulatory agencies, planners, and the public. Not only should site plans reflect local regulations, but based on the kinds of applications that are received, they may demonstrate big-picture changes in development and land use patterns taking place within a community.

On a smaller scale, a site plan is the graphical representation of every aspect of a project. The intent of a site plan is to reflect how a site will function (or not function) in the real world. This entails an in-depth analysis of existing infrastructure, as well as proposed improvements. To that end, the role of our local planning board members is to review development proposals on a site by site basis, and assess their consistency with local zoning codes and comprehensive plans. By what means do we accomplish this goal? The site plan is our tool of choice. It is important to remember that the project as reviewed and approved is the project that will be built, so every detail counts.

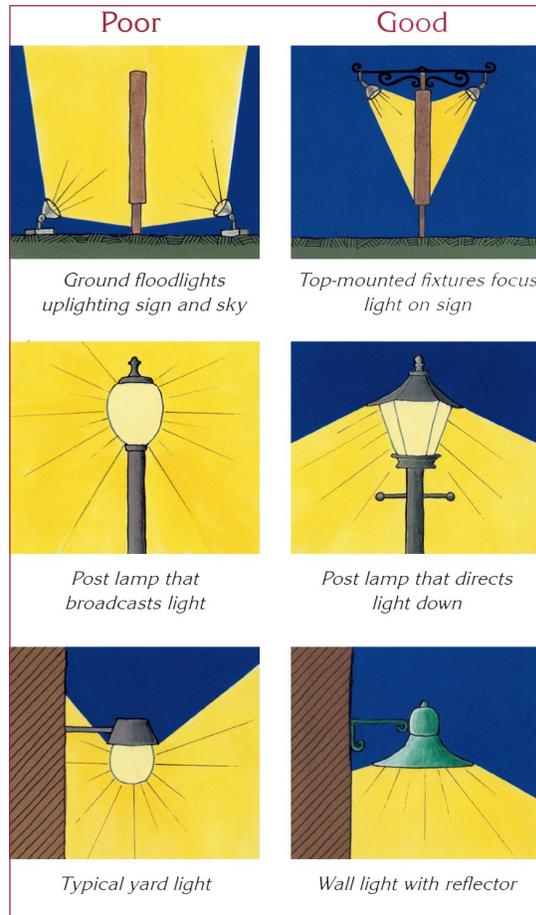
Elements of a Site Plan

Site plans come in all shapes and sizes, but there are some basic commonalities among them. The following is a list of the main elements that should be incorporated and reviewed on a site plan:

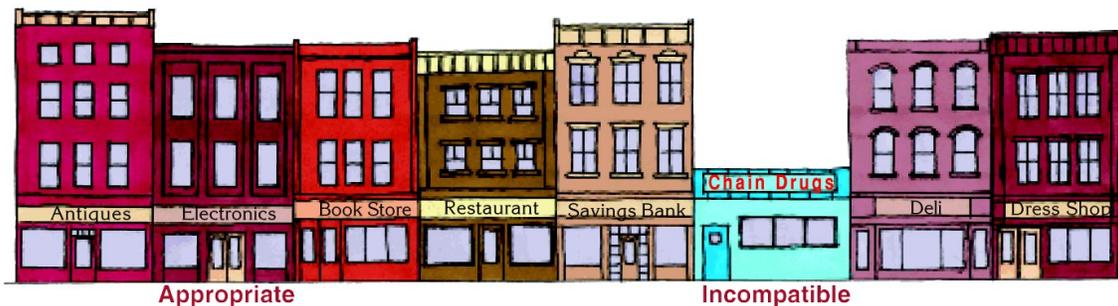
- ◆ **Parking:** Parking requirements are typically found in the municipality's zoning code, and are a use-specific element of a site plan. A restaurant and a self-storage center do not have the same traffic patterns or levels of usage, and thus may not require the same amount of parking. Parking standards between communities vary, but the general rule of planning is to use the least amount of parking that will accommodate the proposed use. If possible, coordination between adjacent sites and compatible uses to share parking is encouraged.
- ◆ **Lighting:** Similar to parking, the amount and spacing of lighting fixtures on a site is context-based. In general, downlighting and lower pole heights are preferred to reduce glare and light spillage; specific placement of lights, however, is dependent on when and how individuals will be using the site. Using the example above, a self-storage center will predominately be used during the day, while a restaurant will likely have customers during the day and into the evening. The restaurant will need pedestrian-scale lighting to guide people through the site at night, while the self-storage center might need light sensors that would turn on only as needed during evening hours.

- ◆ **Landscaping:** A properly landscaped site provides many useful benefits. Not only are street trees, landscaped islands and gardens aesthetically pleasing, they provide a number of other benefits such as heating/cooling and stormwater management. The design of the landscaping should reflect the desired purpose—for screening, it is best to stagger grouped plantings to obtain the best visual presence. To create shade in a parking lot, the variety and placement of trees is key. For heating and cooling benefits, a mix of both deciduous and evergreen trees help to moderate temperature on a site.

- ◆ **Setbacks and Buffers:** Setbacks and buffers relate to the proposed buildings/structures and their proximity to adjoining property lines, wetlands, or sensitive areas, among other things. They are based on the community’s zoning code, and are included in a bulk regulation table and/or shown directly on the site plan. Review of these regulations will help to determine if any area variances are necessary.

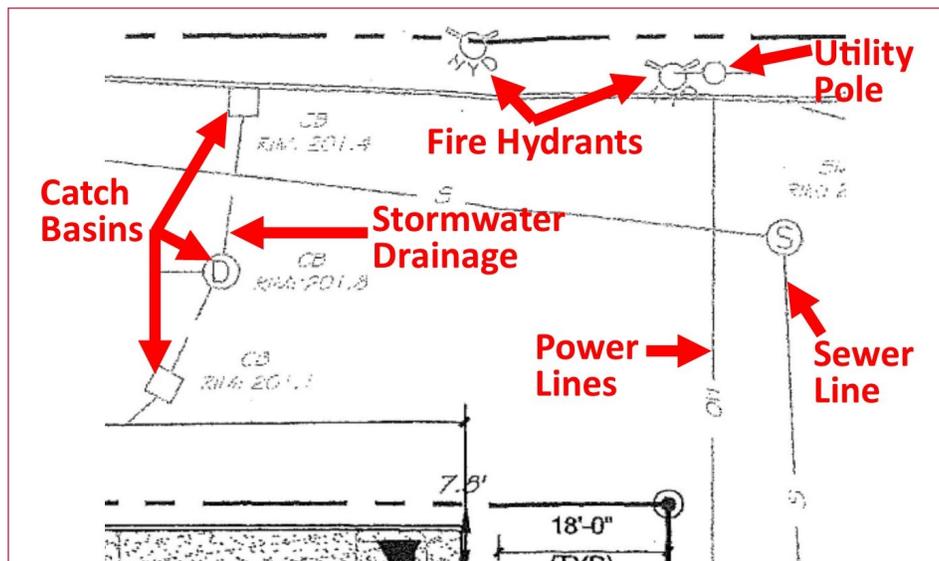


Best practice methods encourage downlighting, lower pole heights, and average site lighting levels of approximately one (1) footcandle. Shine the light on what matters! View the entire [Greenway Guide on Lighting here](#).



Always keep in mind the context of your community when reviewing a site plan. Building placement, height and architecture matter! View the entire [Greenway Guide on Building in Context here](#).

- ◆ **Grading and Drainage:** One item you will notice on a site plan is a series of irregular lines known as topographic lines. They denote existing and proposed elevation changes. Grading of the landscape is important because it demonstrates how water will move across the site, and which parts of the development are most vulnerable to flooding. In order to mitigate potential grading and drainage issues, one might suggest putting buildings on higher ground, incorporating porous pavement into the site design, or using bio-swales to retain water.
- ◆ **Stormwater:** When reviewing a site plan for stormwater issues, it is important to determine the soil type and drainage characteristics of the site, as well as look for steep or flat slopes. Both extremes present a challenge for stormwater catchment, as too great a slope will increase the rate of runoff and too small a slope will pool water and overflow the water table. It is crucial to treat stormwater at its source, through features such as landscaped islands in parking lots, raingardens by buildings, and porous pavement on sidewalks. The less the water has to travel, the less impact it will have on a site.
- ◆ **Utilities:** Utilities shown on a site plan may include gas, electric, communication towers, water, and sewer. The intensity of site development determines the varying degrees of utility usage and requirements. For example, a site plan for a larger building may need to demonstrate a sufficient number of fire hydrants and a fire suppression system before receiving site plan approval. It is important to remember that sites are built for people, and any development must be able to serve the community safely.



This example shows a portion of a site plan featuring typical utilities in a downtown area such as fire hydrants, power lines, and sewer and stormwater drainage.

In general, it is important to plan early and often. Coordination between agencies and applicants is best done in the concept phase when plans for a site are more flexible. Local communities also have the benefit of using our [Greenway Guides](#), Dutchess County’s design sourcebook, which provide guidance for various site design elements. Remember, the rule of logic guides site plan review; it is imperative to keep basic site functionality in mind during this review. Completeness and accuracy matter – this site plan could be the basis of development in a community that lasts for decades, so it should reflect the community’s long-term vision for the area.

Site Plan Review: The Big(ger) Picture

There is no “one size fits all” prescription for site planning. The elements of a site plan are decidedly context-based, and this variety is what makes the planning of each site and each community fundamentally significant. Every site plan represents the opportunity for local boards, planners, applicants, and the public to move their community vision one step closer to reality.

It is important to remember that site plans serve a dual purpose in community planning; they are both the technical analysis of a site’s functionality, but also the depiction of the site’s relationship to the larger community. When reviewing a site plan, it is easy to get lost in the details. While it is important to look at each element individually to assess its functionality and use on the site, one should also step back and look at the project on a larger scale. This entails reviewing the area adjacent to the site using tools such as [Parcel Access](#), [Aerial Access](#), and [Google Maps](#). Development does not occur in a bubble, so it is essential to evaluate the interconnections between each site plan element for congruence to one another, to local planning documents, and the community as a whole. When used to their full potential, site plans serve as the foundational tool in planning.

More Information

[How to Read a Site Plan](#) (PowerPoint presentation from Spring 2016 DCPF Short Course)

[Site Plan Review](#) (NYS DOS publication, James A. Coon Local Government Technical Series)

[Greenway Guides](#) (Section E, Site Specifics)

[New York eCode 360 Library](#) (online municipal zoning codes)

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This newsletter was developed by the Dutchess County Department of Planning and Development, in conjunction with the Dutchess County Planning Federation.

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