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Application ID #

TOWN OF GUILFORD
PLANNING AND ZONING COMMISSION
APPLICATION FOR SITE PLAN APPROVAL

SUBMIT THE ORIGINAL & FIVE COPIES SEND DIGITAL PDF TO
planning.zoning@ci.guilford.ct.us

Date: 8-15-20

In accordance with §273-97.B. if the Zoning Code, application is hereby made for the approval of a Site Plan for **PROPERTY LOCATED AT:**
1350 Durham Road (Bittner Park)

As shown of Plan entitled: "Town of Guilford Bittner Park Pickleball Courts",

Sheets 1-1 of 10, Date: 8-1-20, Scales: As Noted, Prepared by: Summer Hill Civil Engineers, P.C. Dated: 8-1-20

Assessors Map #: 97 Lot#: 1D Zone District: R-5 Unique Id# 8699

Statement of Purpose (Including names of proposed tenants or types of use of the building): (use separate sheet if necessary) Construction of pickleball courts.

Applicant's Name: Town of Guilford

Address:

Department of Parks and Recreation

32 Church Street Guilford, Connecticut 06437

Telephone: 203-453-8068

E-mail: maynardr@ci.guilford.ct.us

Property Owner (if different from applicant): Town of Guilford

Address:

Selectmens Office

31 Park Street Guilford, Connecticut 06437

Telephone: 203-453-8015

Surveyor's Name: Michael J. Ott, P.E., L.S., Summer Hill Civil Engineers, P.C.

Address: 60 Wall Street P.O. Box 708 Madison, Connecticut 06443

Telephone: 203-245-0722

Engineer: Michael J. Ott, P.E., L.S., Summer Hill Civil Engineers, P.C.

Address: 60 Wall Street P.O. Box 708 Madison, Connecticut 06443

Telephone: 203-245-0722

Architect: _____ N/A _____

Telephone: _____

Landscape Architect: _____ N/A _____

Address: _____

Telephone: _____

If waiver of any of the requirements of §273-97.B. is requested, submit request in separate letter to the Guilford Planning & Zoning Commission.

If a letter is submitted please indicate by checking here:

Fee: _____ Paid

Application checklist submitted please indicate by checking here:

Project includes exterior work No Yes, if yes please complete LID checklist on page 8.

Signatures:

Applicant: _____ Owner: _____

Date: _____ Date: _____

Application checklist	Applicant	P&Z Office	Remarks
Property lines of the lot and any lines delineating a portion of the lot to be used under the application.	<input type="checkbox"/>	<input type="checkbox"/>	
Existing contours and proposed grading contours, at an interval not exceeding two feet, or equivalent ground elevations, based on mean sea level (National Geodetic Vertical Datum of 1929), Including identification of a benchmark at the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Buildings, structures and retaining wall	<input type="checkbox"/>	<input type="checkbox"/>	
Sign design plan	<input type="checkbox"/>	<input type="checkbox"/>	
Outdoor illuminations facilities, including the height and specifications for luminaries.	<input type="checkbox"/>	<input type="checkbox"/>	
Street rights-of-way adjoining or serving the lot.	<input type="checkbox"/>	<input type="checkbox"/>	
Street pavement, driveways, curbs, sidewalks and terraces and the specifications therefore.	<input type="checkbox"/>	<input type="checkbox"/>	
Off-street parking and loading spaces and access aisles and turning areas therefore.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Outside storage areas, including underground storage tanks, and provisions for solid and liquid waste disposal.	<input type="checkbox"/>	<input type="checkbox"/>	
All other paved areas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Water courses, water bodies, inland wetland, state-regulated tidal wetlands and the boundaries of United State Natural Resources Conservation Service soil types.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Storm drainage, sewage disposal and water supply facilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

and the soil test locations, results and engineering computations therefore.			
Docks, wharves, piers, bulkheads and navigable waters and navigation channels.	<input type="checkbox"/>	<input type="checkbox"/>	
Provisions and program for erosion and sedimentation controls. (see §273-89B(3), based on the datum specified in subsections B(2)(a)[2] of this section.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Landscaping, including lawn, seeding, fences and screening, as well as planting details for trees and shrubs by common name and size and the method by which landscaping work will be supervised and maintained during the first growth year.	<input type="checkbox"/>	<input type="checkbox"/>	
The location of natural terrain not to be disturbed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A schedule specifying the area of the lot; the amount of floor area, lot coverage and total coverage by building and paving, in square feet and as a percent of the lot; and the basis for computation of required off-street parking and loading spaces.	<input type="checkbox"/>	<input type="checkbox"/>	
A location map showing the lot in relation to streets and properties in the neighborhood.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A north arrow, the Assessor's Map, and Lot number, the Zoning Map district in which the lot is located and any zoning boundary within or near the lot.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
The words "Approved by the Guilford Planning and Zoning Commission", with a place for the signature of the chairperson and date of signing.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
When more than one sheet is used to show the layout features of a Site Plan, a master or composite sheet shall be provided at an appropriate scale.	<input type="checkbox"/>	<input type="checkbox"/>	
Architectural Plans (§273-97 B(3))	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic Study	<input type="checkbox"/>	<input type="checkbox"/>	
Schedule for grading and construction activities, including start and completion dates and sequence of grading and construction activities, sequence for installation and/or application of soil erosion and sediment control measures and sequence for final stabilization of the project site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Town Engineer	<input type="checkbox"/>	<input type="checkbox"/>	
Director of health	<input type="checkbox"/>	<input type="checkbox"/>	
Fire Chief	<input type="checkbox"/>	<input type="checkbox"/>	

Low Impact Development Zoning and Subdivision Code Amendments

Amend Zoning Code, Article IX Site Plan Review by adding the following;

§273-75 General Standards

R. Low Impact Development. Applicants for Site Plan review are encouraged to practice low impact development as described in "Guidance Document for Low Impact Development Best Management Practices", dated 12/15/09 and as it may be amended. Applicants shall complete "A Check List to Guide Low Impact Development Best Management Practices."

**GUIDANCE DOCUMENT FOR LOW IMPACT DEVELOPMENT
BEST MANAGEMENT PRACTICES FOR GUILFORD
March 11, 2010**

INTRODUCTION

Over the past 30 years, Guilford has seen an increase in balancing environmental conservation with human needs, community growth and land use practices. Low Impact Development is an approach to the use of land which utilizes a variety of innovative approaches to site planning, conservation design and storm water management. Overall, the goal of Low Impact Development is to make the fewest changes to the environment consistent with zero increase in storm water runoff, environmental protection and economic considerations.

As a result of this approach, studies have shown that construction costs are reduced¹, local property values are likely to rise², tax revenues increase and compliance with wetlands and other resource protection regulations is easier³.

Guilford's Storm Water Management regulations (adopted in 2005) require storm water management plans to be consistent with the latest version of Connecticut's Storm Water Quality Manual. In this document, Section 4 describes Low Impact Development (LID) Site Planning and Management Practices. Additional guidance is described in "The Practice of Low Impact Development" by the US Department of Housing and Urban Development Office of Policy Development and Research, dated July 2003.

LID Planning and Design Practices include Site Planning, Erosion and Sediment Control, Storm Water Management and Landscape Design principles. To highlight those LID Management Practices expected in Guilford, the following principles are suggested for review by designers and developers. The attached checklist is intended for designers and developers to complete in order to provide the Planning and Zoning Commission and staff an overview of the developer's efforts to protect natural resources wherever reasonable on any given site.

SITE PLANNING CONSIDERATIONS

Environmentally sensitive development is a prime importance in Guilford, as is preservation of those elements which represent the Town's historic and cultural heritage. A visually appealing site plan which will stabilize and/ or increase property values and encourage sustainable development and energy efficient design are important elements to be included in a Site Plan application wherever possible.

Site Plans should also respect unique natural and historic features such as stone walls and public view sheds. As a result of this approach to site planning, more aesthetically pleasing and naturally attractive landscapes, more pedestrian friendly neighborhoods, more open space for recreation, and safer residential streets can be expected⁴.

Site planning can be divided into a four step process.

1. Identification of Natural Resources
2. Locating buildings outside the natural resource area wherever possible

3. Lay out streets, driveways, parking areas and trails.

4. Creation of lot lines.

Step 1. Identification of Natural Resources

An initial site assessment is conducted to determine the location of all natural resources on a given site. These resources shall include wetlands, coastal resources, meadows, steep slopes, soil types, mature forest, significant trees, riparian corridors, wildlife corridors, view sheds, and the location of any endangered species. Most of these elements have already been identified in Guilford's 2005 Natural Resource Inventory and Assessment (NRIA) and they are illustrated in the NRIA Map Atlas. Other natural resource references are identified in Table 1.

After a document review of the site has been performed, a field survey should be conducted to locate hydrologic features such as streams, wetlands, floodplains and existing natural surface water drainage patterns. Once wetlands features have been identified, a surveyor needs to locate them on a site plan along with features such as site topography, limits of vegetation, exposed ledge and stone walls. Additional items required on a site plan are listed on the attached Low Impact Design Best Management Practices check list and in Table 1.

Step 2. Locating buildings outside the natural resource areas wherever possible

As a result of these initial steps, a site plan can be created showing areas of the site best suited for development and areas of the site that should be conserved. The developable areas are those locations on the site which will least disturb the natural resources and have the fewest regulator and zoning concerns. It may be advisable to cluster the development into one area of the site or into several smaller clusters that protect the site's natural features.

Conservation lands should include both inland and tidal wetlands, areas within the "A", "AE", or "V" flood zone as depicted on the flood Hazard Boundary Map or Flood Insurance Rate Map, steep slopes in excess of 25 percent (10 feet vertical in less than 40 feet horizontal), areas adjacent to open space, historic features such as stone walls, natural features such as fields, mature trees and forest, public view sheds, wildlife corridors, and site areas that contain threatened or endangered species.

Step 3. Lay out streets, driveways, parking areas and trails

The lay out of streets, driveways, and parking areas should be designed after the site analysis. These features should be laid out in a way that minimizes their overall length and width and cutting and filling to conform to natural contours. Shared parking and driveways need to be considered. Streets and driveways should conform to natural land formations in order to reduce impact on the natural resources where possible.

Step 4. Draw in the lot lines

Once the above steps have been completed, the lot lines (if any) can be drawn based on the location of buildings, driveways, septic systems, and wells. Due to the clustering of development, developers may be able to take advantage of an Open Space Subdivision or a Planned Residential Development.

EROSION AND SEDIMENT CONTROL

Erosion and storm water drainage plans should utilize natural topography wherever possible. To reduce erosion of exposed soils and prevent sedimentation of wetlands, water bodies and other sensitive areas, land disturbance should be minimized to the area necessary for construction. Proposed development projects on a previously undeveloped site should minimize clearing and grading, especially in areas of steep slopes, erosion-prone soils and sensitive vegetation. For redevelopment projects, the site plan should concentrate development on previously disturbed areas to the extent possible. Vegetation outside immediate construction areas should remain undisturbed. Any disturbed areas should be replanted or heavily mulched. Erosion and sedimentation control plans shall be constructed in accordance with The Town of Guilford Subdivision and Zoning Codes using principles outlined in the Connecticut Guidelines for Soil Erosion Sediment Control (2002), as the same maybe revised.

STORMWATER MANAGEMENT

Guilford's stormwater management regulations are designed to protect local and regional wetlands and water bodies, Long Island Sound and its tributaries from non-point sources of pollution and to maximize groundwater recharge on site. The goal of LID stormwater management is to mimic pre-development hydrologic conditions by utilizing natural topography and soils to detain, retain, percolate and evaporate source and use natural treatment systems instead of a centralized collection point. Non-structural stormwater management systems should be used, in part or in whole, only if the applicant can demonstrate that other systems are not feasible due to site conditions.

LANDSCAPE DESIGN

Demand for irrigation should be minimized and groundwater recharge from landscaped areas should be maximized to the extent possible. To reduce proliferation of invasive species, native plants should be used wherever possible. All disturbed areas should be replanted or mulched in accordance to the Erosion and Sedimentation Control plan. Plants on the 2004 Connecticut DEP Invasive Plant List (as the same maybe revised) should not be used.

The existing vegetation outside the immediate construction area should remain undisturbed. Significant existing trees within the proposed development area should be preserved where possible as per the following caliper size thresholds related to species:

- 4-6" for small trees such as dogwood and redbud
- 8-10" for medium species such as sassafras, cherry and water beech
- 12-14" for slow growing hardwoods (oak, maple, ash)
- 15-18" for fast growers such as tulip poplar, sycamore and conifers⁵

As a result of these practices, forests, wetlands, and wildlife habitat would be preserved.

Definitions:

Permanent Erosion & Sedimentation Control Measures- Long term devices placed, constructed on or applied to the landscape that prevents or curb the detachment of soil, the movement of water and or the deposition of sediment. Examples include detention basins, grass swales, level spreaders, and vegetation.

Steep slopes- A steep slope has a grade of more than 25% and an area of 1,000 square feet or more. The grade is measured along a line perpendicular to the lot contours established at intervals not exceeding two feet.

View Shed- Scenic views into and from the site and any other features that contribute to the landscape character of the property. Examples include meadows, notable trees ridgelines, rock outcrops, stone walls, beaches and dunes, Long Island Sound and its tributaries.

Stormwater Detention- Control measures that temporarily holds and gradually releases a volume of stormwater runoff to attenuate and delay stormwater runoff peaks.

Stormwater Best Management Practices- practices designed to mitigate the effects of stormwater runoff to attenuate flooding, reduce erosion, and reduce pollution.

Reference:

1. Reducing Stormwater Costs through Low Impact Development (LID), Strategies and Practices, EPA Publication number 841-F07-006, December 2007
2. The Economic Value of Open Space: A review and Synthesis, CJ Fausold and RJ Lillieholm, Environmental Management Volume 23 (3):307-320,1999
3. The Practice of Low Impact Development by the U.S. Department of Housing and Urban Development, July.
4. 2004 Connecticut Stormwater Quality Manual prepared by the Connecticut Department of Environmental Protection.
5. Conservation Subdivision Design: A Brief Overview by Randall Arendt, FRTPI, ASLS (Hon.)

Table 1
LID/BMP Resource Requirements and Resources

Natural Resource Regulatory Requirements			Natural Resource Reference Sources	
Natural Resource Elements	PZC Site Plan map reqt.	Inland Wetlands app	Natural Resource Inventory	Other References
Contours and slopes >25%	Already required	#5		Site survey already required
Watercourse boundaries @100'	Already required	#6		Site survey already required
Soil mapping		#16.D	Map A-4 Prime soils	USDA map/ wetland soils
Wetlands and watercourses		IWC jurisdiction	Map J-2	IWC regulations –Appx A
Stone walls	Already required			Site survey already required
Ledge and rock outcroppings	Often already included			Site survey required
Logging roads and trails	Often already included			Site survey required
Flood hazard areas			Map C-2	FEMA maps
Aquifers and watersheds			Map C-1 for watersheds	Zoning map for aquifers
Natural drainage areas-swales		#9A (for regulated area only)		Inferred from contours

Impervious surface % whole site	Commercial and Industrial Zones VLB & proposed CAM regs		Map of 10% VLBs at build out	Storm water regs
Rare and endangered species			Map J-3 and THS wall map	CT DEP NDDB maps
Significant forests & Grasslands			Map J-1	Property survey already reqd
Significant Natural Resource Areas (SNRAs)			Map J-6	
Wildlife movement corridors			Map J-4	CT DEP NDDB maps
Viewsheds	Cam Regulations Only		Section G, Map G Appx G1&2	Site survey required
Significant trees (in proposed development area only)				See definitions in BMP text Site survey required
Contiguity of site with protected open space, unbuilt land, wetlands & ridgelines				USGS, NRI Map H-3, GIS plus aerial photos

A CHECK LIST TO GUIDE LOW IMPACT DEVELOPMENT – BEST MANAGEMENT PRACTICES

Date: 8-1-20

Assessor Map No. 97 Lot No. 1D

Location of Property: 1350 Durham Road (Bittner Park)

Applicant: Town of Guilford Parks and Recreation Department

Items listed below should be considered by developers in the creation of site plans. Due to individual site constraints not all items will apply to each individual property. CHECK ALL ITEMS THAT HAVE BEEN ADDRESSED IN THE SITE PLAN APPLICATION. Applicants should indicate by writing Yes, No, or N/A (not applicable). Additional comments are to be attached on a separate sheet of paper with project name and address.

A. SITE PLAN CONSIDERATIONS

1. Site Assessment of Natural Resources	Applicant	Staff Comments
a. Natural Resources and constraints have been indicated and are identified on the plans (wetlands, rivers, streams, flood hazard zones, meadows, agricultural land, tree lines, slopes [2 foot contours], soil types, exposed ledge & stone walls).	X	
b. Is the property shown on the latest copy of CT DEP State and Federal Listed Species and Significant Natural Communities Map as property listed in the Natural Diversity Data Base (NDDB)? If yes, provide a copy of the CT-DEP NDDB request form and CT-DEP reply letter.	NO	
c. Development is designed to avoid critical coastal resources, water courses, wetlands and steep slopes.	X	
d. Soils Suitable for septic & stormwater infiltration have been identified	N/A	
e. Natural existing drainage patterns have been delineated on the plan and are proposed to be preserved or impacts minimized.	X	
f. Significant trees/ tree clusters in proposed development areas have been identified. Removal avoided and or protection in conservation easement suggested. (See guidance document).	X	

g. View sheds have been recognized/ maximized	N/A	
h. A copy of the latest USGS Quad map along with an aerial photograph showing the site and adjacent properties is attached.	N/A	

2. Preservation of Open Space	Applicant	Staff Comments
a. An open space subdivision or planned residential development (PRD) has been considered.	N/A	
b. Open space/ common areas are delineated.	N/A	
c. Open space is retained in a natural condition.	N/A	
d. Proposed open space is located adjacent to open space areas, trail systems, and / or wild life corridors. (See Town of Guilford Natural Resource Inventory)	N/A	
e. Coastal Public access should be evaluated for properties with non water-dependent uses on waterfront sites.	N/A	
f. Street line setbacks are minimized to reduce impervious surface and to optimize open space.	N/A	

3. Minimization of Land Disturbance	Applicant	Staff Comments
a. The proposed building is located where development can occur with the least environmental impact.	N/A	
b. Buildings designed for maximum solar gain. (Window exposure, are oriented to the sun for maximum energy efficiency).	N/A	
c. Clustered development has been considered.	N/A	
d. Disturbance areas have been delineated to avoid unnecessary clearing or grading,	X	
e. Sanitary systems should be setback from water bodies to maximum extent possible.	N/A	
f. Native Vegetation outside the immediate construction areas remains undisturbed or will be restored.	X	

4. Street and Driveway Sizes	Applicant	Staff Comments
a. The design provides an efficient layout to minimize the overall length and width of streets.	N/A	
b. Roadways and driveways conform to natural land formations.	N/A	
c. Design features to reduce impervious surfaces such as shared parking & Driveways have been considered.	N/A	
d. Proposed drainage systems utilize existing topography.	X	

B. EROSION AND SEDIMENT CONTROL

EROSION AND SEDIMENT CONTROL	Applicant	Staff Comments
a. Erosion and Sedimentation control plan is designed in accordance to Guilford Subdivision and Zoning Regulations.	X	
b. Permanent erosion control measures are to be utilized.	N/A	
c. Development does not create steep slopes subject to erosion	X	
d. Vegetated buffers are provided for riparian areas, intermittent streams, and wetlands.	X	
e. Cleared areas will be replanted and/ or heavily mulched.	N/A	

C. MANAGING STORMWATER

MANAGING STORMWATER	Applicant	Staff Comments
a. Efforts have been made to retain or infiltrate water on site.	X	
b. Outfalls are stabilized and receiving streams are protected from sediment scour potential velocity.	N/A	
c. Level spreaders or dispersed flow methods are used only where natural dispersal is not possible	N/A	
d. Maximum use is made of vegetated ditches/ swales, especially along driveways, parking areas and roads.	N/A	
e. Cul-de-sacs include a landscape island for bio-retention.	N/A	
f. Sheet flow is used to the maximum extent possible to avoid concentrating runoff.	X	
g. Rooftop drainage is discharged into bio-retention areas or rain gardens.	N/A	
h. Innovations like collecting/ reusing rainwater, green roofs, or porous pavement have been considered.	N/A	
i. Grass swales are used beside roads instead of curbs and gutters.	N/A	
j. Parking medians are designed for bio-retention to allow infiltration.	N/A	
k. Infiltration structures have been included –e.g. drywells and infiltration trenches.	N/A	
l. Best Management Practices to provide water quality treatment to remove existing and expected pollutants generated to be the proposed use.	N/A	
m. Impervious surfaces are disconnected and stormwater is treated locally.	X	
n. Proposed construction of the storm water management system is designed in compliance with the Guilford Town Codes and Connecticut Stormwater Manual.	N/A	
o. Onsite soil infiltration/ permeability has been measured.	N/A	
p. Onsite soils are suitable for stormwater detention/ infiltration.	N/A	
q. Sufficient areas of infiltration (if present) are being utilized to maximize onsite stormwater retention.	X	

D. LANDSCAPE PLAN

LANDSCAPE PLAN	Applicant	Staff Comments
a. Clearing and grading have been minimized.	X	
b. Irrigation with automatic sensors have been considered.	N/A	
c. Landscaped areas retain water such as in water gardens, vegetated swales, etc.	N/A	
d. Habitat-enhancing native plant species are used.	N/A	
e. Species appropriate to soil, site, wetlands and microclimate conditions have been considered.	N/A	
f. Indigenous plants suitable for vegetated buffers, stream corridors and wetlands are included.	N/A	
g. Plants on the 2004 CT DEP Invasive Plant List are not included in the landscape design plan.	N/A	
h. Invasive species removal and maintenance control plan has been considered.	N/A	
i. Underground utilities have been considered.	N/A	