

KLEINFELDER

EXPECT MORE®

August 15, 2007

Mr. Paul Lusitani
Clough Harbour & Associates, LLP.
2139 Silas Deane Highway
Suite 212
Rocky Hill, CT 06067-2336

**RE: Wetland & Watercourse Delineation Report
Exeter Drive
Sterling, Connecticut**

Dear Mr. Lusitani:

Kleinfelder East, Inc. (Kleinfelder) completed an on-site investigation to determine the presence or absence of wetlands and/or watercourses on the above referenced property (Exeter Drive, Sterling, CT), as requested and authorized. This investigation involved a wetland/watercourse delineation that was completed by a qualified staff soil scientist and conducted in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) Soil Survey Manual (1993). The soil classification system of the National Cooperative Soil Survey was used in this investigation to identify the soil map units present on the project site.

INVESTIGATION

The project site was investigated on August 2, 2007, with a temperature in the mid-80s under partly sunny conditions. Soil types are identified by observing soil morphology (soil texture, color, structure, etc.). To observe the morphology of the soils, numerous test pits and/or hand borings (generally to a depth of at least two feet) are completed. Wetland and watercourse boundaries were identified with flags and hung from vegetation or small wire stakes if in fields or grass communities. These flags are labeled "Wetland Delineation" and generally spaced a maximum of approximately 50 feet apart. It is important to note that flagged wetland and watercourse boundaries are subject to change until verified by local, state, or federal regulatory agencies.

REGULATORY INFORMATION

Wetlands and watercourses are regulated by both state and federal law each with different definitions and regulatory requirements. Accordingly, the State regulates wetlands and watercourses that may fall outside of federal jurisdiction based on different technical criteria and parameters.

State Regulation

Wetland determinations are based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land. *Watercourses* are defined as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." *Intermittent watercourse* determinations are made based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus, (2) the presence of standing or flowing water for a duration longer than a

particular storm incident, and (3) the presence of hydrophytic vegetation. (See Inland Wetlands and Watercourses Act §22a-38 CGS.)

WETLAND AND WATERCOURSE SITE DESCRIPTION

Wetland classifications used to identify the type of wetland(s) occurring on the project site are based on guidance from the U.S. Fish and Wildlife Service (USFWS) (Cowardin et.al. 1979). These are further qualified with the Hydrogeomorphic Method of wetland classification (Brinson, 1993).

Wetland Description

Two on-site wetlands were delineated during the August 2nd, 2007 visit. Wetland 1 consisted of a palustrine broad-leaved deciduous forested wetland system (USFWS class: PFO1) that was delineated using sequentially numbered flags 1 through 10 with open ends on each end (See Figure 1 – Wetland Sketch Map). Wetland Area 1 is situated on the northern side of Exeter Drive heading east from the proposed tower location entrance. This wetland is fed by surface runoff and exists from the toe of slope on the eastern property boundary upslope for approximately 100 feet. During the delineation only the western edge of the wetland was flagged as no impact is expected within approximately 200 feet of the wetland. Water is slowed by vegetation, as well as, topographic depressions and hills. Within this wetland a spodosol of light gray soil existed near the toe of slope from approximately three inches below grade to approximately ten inches below grade.

Wetland 2 consisted of a palustrine broad-leaved deciduous forested wetland system and palustrine emergent persistent drainage swale (USFWS class: PFO1 and PEM1). This wetland was flagged using several different, but not necessarily connected flag lines. The flags that mark this wetland include flags 25 through 39 open ended, 50 through 54 with open ends on each end, 60 through 64 with open ends on each end, and 70 open ended through 74, which connects to flag 25 (See Figure 1 – Wetland Sketch Map). As indicated by its classification, this wetland is primarily set in a broad-leaved deciduous forest area that is fed by surface runoff water from the open area where the tower is proposed. A two-foot deep swale runs around approximately ¾ of the edge of the open area. On the western portion of the property this swale opens up into more persistent depression wetland area. On the northern edge of the swale is a larger forested wetland that heads offsite to the north in between flags 64 and 70. The vegetation within this forested wetland is very dense and consists of deciduous trees, woody shrubs, and herbaceous layer vegetation. During the delineation only the drainage swale northern line and portions of the swale southern line were flagged as no impact is expected to this wetland by the proposed project. Kleinfelder would request that silt fence be placed around this swale to keep project related sediment out of the wetland.

TABLE 1: Representative vegetation within and adjacent to the wetlands (Common (*Scientific*) names)

TREES & SAPLINGS	
Eastern Cottonwood (<i>Populus deltoids</i>)	Sassafras (<i>Sassafras albidum</i>)
Gray Birch (<i>Betula populifolia</i>)	Sugar Maple (<i>Acer saccharum</i>)
Quaking Aspen (<i>Populus tremuloides</i>)	White oak (<i>Quercus alba</i>)
Red maple (<i>Acer rubrum</i>)	White pine (<i>Pinus strobus</i>)
Red oak (<i>Quercus rubra</i>)	
SHRUBS	
Highbush blueberry (<i>Vaccinium corymbosum</i>)	Northern spicebush (<i>Lindera benzoin</i>)
HERBS/VINES	
Green bullrush (<i>Scirpus atrovirens</i>)	Narrow-Leaf Cattail (<i>Typha angustifolia</i>)
*Denotes State non-native invasive species	

Upland Community

The Upland community within the project area appears to have been significantly disturbed from past activities and consists of Udorthents variable fill. From our investigation, it appears that excavating and filling has occurred in and around the Lease Area. Attached are pictures that depict the condition of this lease area as well as the edge of Wetland 2. This area is sparsely vegetated with typical early successional species such as birch, goldenrod and mugwort.

SOIL MAP TYPES

A brief description of each soil map unit identified on the project site is presented below including information from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil descriptions. Further information on these and other soils, please refer to the internet site at <http://soils.usda.gov/technical/classification/osd/index.html>.

Upland Soils

Udorthents (variable fill material)

This unit consists of areas that have been altered by cutting or filling. Slopes are mainly 0 to 25 percent. The material in these areas is mostly loamy, and in the filled areas it is more than 20 inches thick. Some of the filled areas are on flood plains, in tidal marshes, and on areas of poorly drained and very poorly drained soils. Included with this unit in mapping are small areas of soils that have not been cut or filled. Also included are a few larger urbanized areas and a few small areas containing material such as logs, tree stumps, concrete, and industrial wastes. A few areas have exposed bedrock. Included areas make up about 30 percent of this map unit. The properties and characteristics of this unit are variable, and the unit requires onsite investigation and evaluation for most uses. This unit is not assigned to a capability subclass.

Woodbridge fine sandy loam

The Woodbridge series consists of moderately well drained loamy soils formed in subglacial till. They are very deep to bedrock and moderately deep to a densic contact. They are nearly level to moderately steep soils on till plains, hills, and drumlins. Slope ranges from 0 to 25 percent. The soils formed in acid till derived mostly from schist, gneiss, and granite. Diagnostic horizons include an ochric epipedon from 0 to 7 inches (Ap horizon), and a cambic horizon from 7 to 30 inches (Bw horizons). Aquic features (low chroma iron depletions) may occur within a 24 inch depth (Bw2 horizon).

Wetland Soils

Ridgebury Complex (Rn) fine sandy loam

The Ridgebury complex is a very deep poorly drained soil that includes poorly drained Leicester, and very poorly drained Whitman soils formed in till derived mainly from granite, gneiss and schist. Ridgebury soils on the landscape are in slightly concave areas and shallow drainageways of till uplands with slopes that range from 0-8 percent. Depth to the perched seasonal high water table from November to May, or longer, is perched above the densic materials. The soils diagnostic horizons include an ochric epipedon (0 to 5 inches (A horizon)), aeric feature 100 percent of the zone from 5 to 9 inches (Bw1 horizon), and a cambic horizon (5 to 18 inches (Bw and Bg horizons)). Densic contact root limiting material begins at 18 inches (Cd). Endosaturation occurs within the zone from 9 to 18 inches and is saturated above the densic contact (Bw2 horizon).

Leicester Series

The Leicester series is an Aeric Endoaquept consisting of very deep, poorly drained loamy soils formed in friable till. The series is typically found on nearly level or gently sloping soils in drainageways and low-lying positions on hills with slopes ranging from 0 to 8 percent. Permeability is moderate or moderately rapid in the surface layer and subsoil and moderate to rapid in the substratum. Diagnostic horizons and features include an ochric epipedon from 1 to 7

inches (A horizon), cambic horizon from 7 to 23 inches (Bg and BC horizons), and low chroma colors in Bg horizon indicating an aquic moisture regime.

Whitman Series

The Whitman series is a Typic Humaquept consisting of very deep, very poorly drained soils formed in glacial till derived mainly from granite, gneiss, and schist with a shallow densic contact. The series is typically found on sloping soils in depressions and drainageways on uplands. Permeability is moderate or moderately rapid in the solum and slow or very slow in the substratum. Diagnostic horizons and features include an umbric epipedon from the soil surface to a depth of 10 inches (Ap horizon), cambic horizon from 10 to 18 inches with low chroma colors indicating aquic conditions (Bg horizon), and densic contact at 18 inches (Cd1).

REFERENCES

1. Brinson, M.M. 1993. *A Hydrogeomorphic Classification for Wetlands*. Tech. Rpt.WRP-DE-4, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
2. Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. *Classification of Wetland and Deepwater Habitats of the United States*. US Government Printing Office. Washington D.C. GPO 024-010-00524-6. 103 pp.

SUMMARY CLOSING

The proposed tower development project reviewed is not anticipated to cause an adverse impact on the delineated wetlands noted in this report. Utilizing appropriate soil erosion and sedimentation controls will reduce, if not eliminate any risk of impact to the wetlands during construction. The area between the compound and the wetlands is a significantly disturbed area and appears to consist of gravel fill material. The composition of this fill material further reduces any risk of soil erosion. At the closest point from the nearest wetland proposed tower compound will be approximately 60 feet. Based upon the existing disturbed conditions of the project site, we do not expect any adverse impact to the adjacent wetlands/watercourses.

Thank for the opportunity to work with you on this project. Please contact me at (860) 683-4200 if you have any questions or require additional assistance.

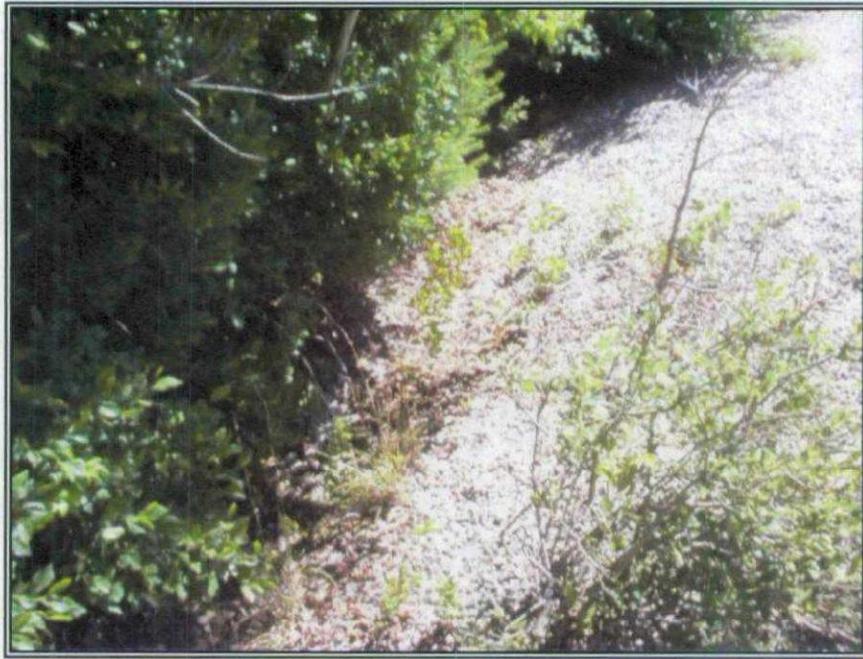
Very truly yours,
Kleinfelder East, Inc.


Date: 2007.08.16
16:25:02 -04'00'
Paul Wheeler
Project Wetland Scientist

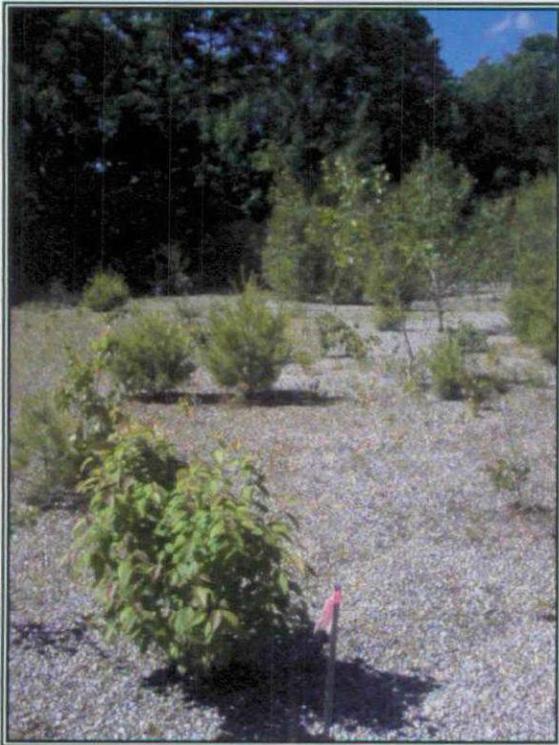

Date: 2007.08.16
16:25:18 -04'00'
Jeffrey R. Shamas, CE, SS, PWS
Natural Resources Program Manager

Attachments

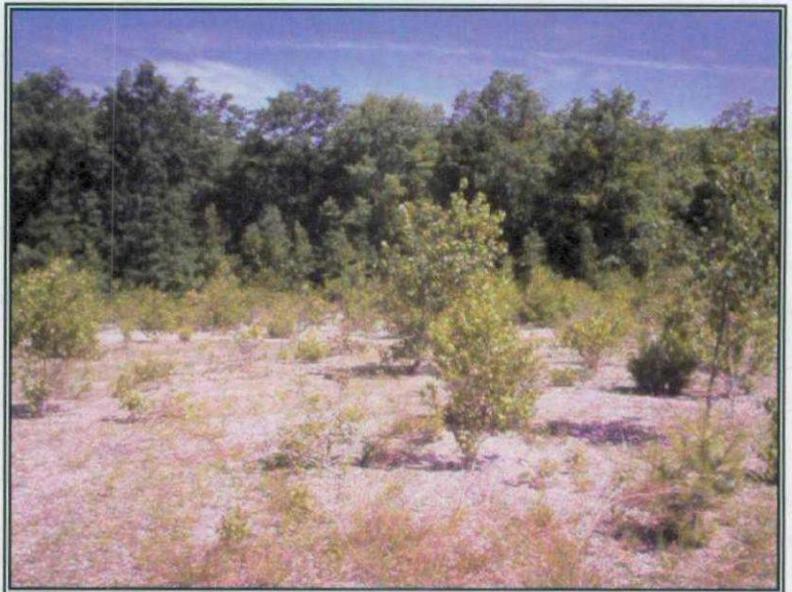
PHOTOGRAPHS



Photograph 1 – Viewing easterly of edge of fill sloping down 2 feet to the edge of Wetland 2



Photograph 2- Viewing northeast at the northwest edge of the proposed compound area.



Photograph 3- Viewing easterly within the proposed compound area.

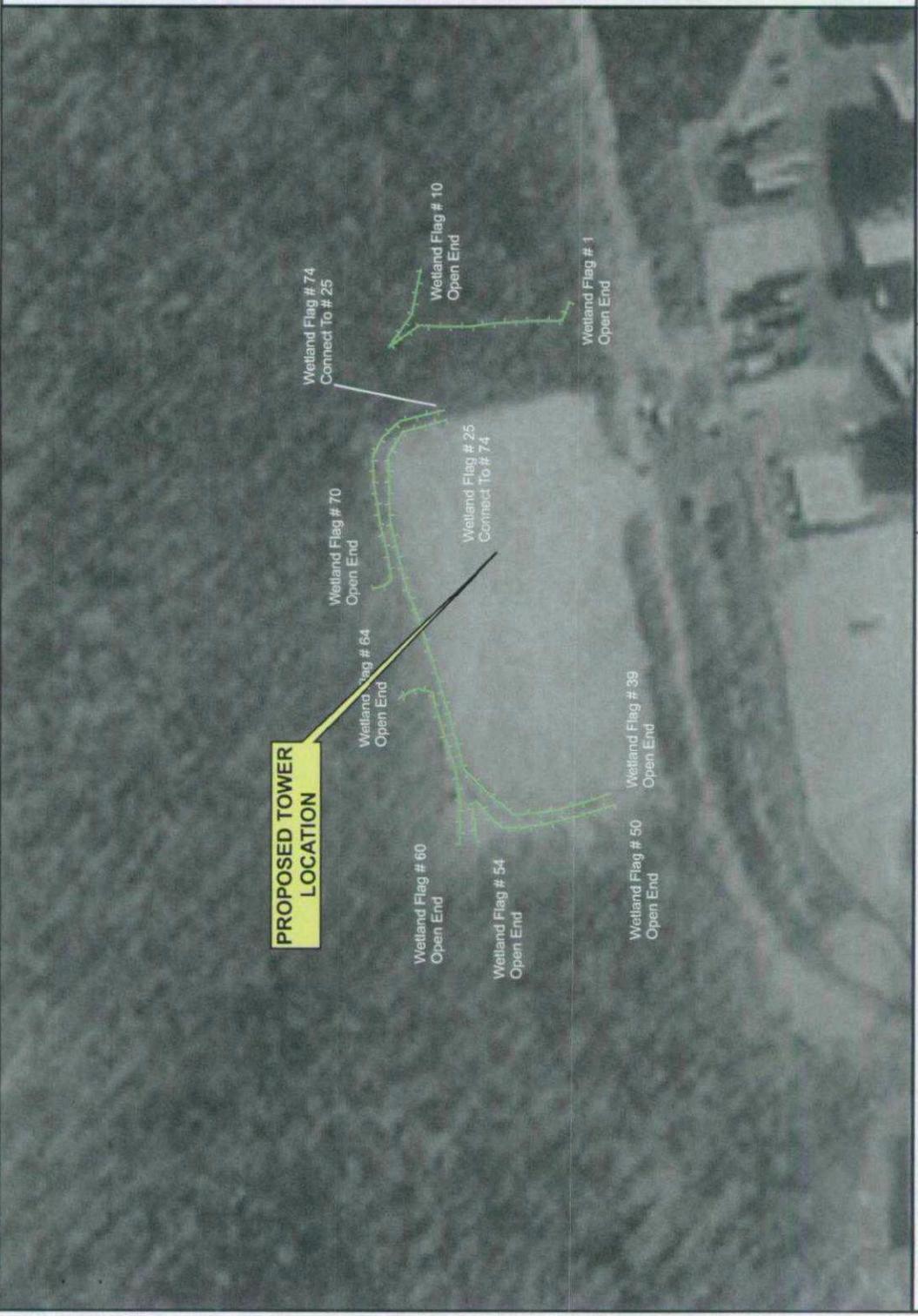
LEGEND

SCALE IN METERS: 0, 15, 30, 100

SCALE IN FEET: 0, 50, 100

LATITUDE: 41° 42' 50.72" N
LONGITUDE: 71° 49' 24.69" W

SITE LOCATION



WETLAND SKETCH MAP

STERLING SITE
EXETER DRIVE
TOWN OF STERLING
WINDHAM COUNTY, CONNECTICUT

FIGURE **1**

KLEINFELDER

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SOURCE: CT DEP GIS DATA

DRAWN BY:	PW
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NOTES

1. PHOTOS FROM ONECO, CT QUAD MAP

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Town of Sterling

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COPY

Selectmen: 860-564-2904
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Assessor: 860-564-3030

Town Clerk: 860-564-2657
Development Office: 860-564-4752
Building Inspector: 860-564-2275
Wetlands Agent: 860-564-2275
Registrars: 860-564-2654

July 16, 2007

Mr. S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

**Re: Proposed Development of a Telecommunications Facility
Exeter Drive, Sterling, Connecticut**

Dear Mr. Phelps:

The Town of Sterling has received and reviewed a technical report from MCF Communications bg, Inc. ("MCF") that proposes a wireless telecommunications tower on a parcel of property, owned by the Town of Sterling, located at Exeter Drive, Sterling, Connecticut. Sterling received this report in satisfaction of the notice requirement contained in C.G.S. §16-50(e) which requires that host municipalities receive information regarding the public need, site selection process and environmental effects of the proposed facility.

As the First Selectman and as agent for the Town, please accept this correspondence as the Town of Sterling waiver of the 60 day review period provided by C.G.S. §16-50(e). We support the proposed facility in the Sterling Industrial Park on Exeter Drive.

Please contact me if you have any questions.

Yours Truly,

Russell M. Gray - First Selectman

cc: Kenneth Baldwin - Robinson & Cole LLP, 280 Trumbull Street, Hartford, CT 06103
cc: Brad Gannon - MCF Communications, 42 Wicklow Road, Westerly, RI 02891