

Stadium Lights Committee Report

to the

Board of Education

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Stadium Lights Committee

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Introduction

The Stadium Lights Committee was appointed by the Board of Education in September 2006. The purpose of the Committee was to study the stadium lights proposal presented in June 2006 by a group of Darien citizens and to gather information from the Darien community, surrounding communities, consultants, and the potential supplier to inform future consideration of the proposal.

Three members of the Board of Education were appointed to the Stadium Lights Committee. The Board of Education Chairman serves as an *ex officio* member.

This report provides a description of the work of the Stadium Lights Committee from September 2006 – October 2007. During this time, the Stadium Lights Committee:

- analyzed the 2006 Stadium Lights Proposal
- met with representatives of Darien youth athletic leagues
- prepared spreadsheets on field usage
- interviewed school athletic directors, principals, and park and recreation staff in neighboring towns
- listened to and documented neighborhood concerns
- reviewed Darien High School Educational Specifications
- met with the potential lighting supplier to discuss specifications

Recommendations made in the 2006 stadium lights proposal are summarized in this report. Excerpts from the report on the proposal done by the Administration have been included. Data on field availability and usage has been updated to reflect status as of October 2007.

Reports on previous efforts to add lights to the stadium field at Darien High School are provided as a reference on the Darien Board of Education website (www.darienps.org). Additional data and relevant information are included in the appendix and references.

Background

2006 Stadium Lights Proposal

- In April, 2006 a group of citizens led by Mr. Richard Shriner completed Stadium Field Lights: Analysis and Recommendations, a proposal for a privately funded light system at the stadium field at Darien High School (see www.darienps.org). The report was revised in June and presented to the Board of Selectman on June 5, 2006 and to the Board of Education on June 13, 2006.

- The report asserted that lighting of the stadium field would be the most cost effective means to increase the capacity of the field to accommodate the Darien High School athletic program and the Darien Youth Sports programs.
- The report stated that youth sports programs whose practices and games draw few spectators and therefore generate no noise and traffic would be among the beneficiaries of the lighted field.
- The report noted that many surrounding towns have installed field lights.
- The report sought to describe and address concerns of neighbors.
- Specifications for the lights proposed were:
 1. The lighting would involve four 80' light poles each with 12 bulbs (in a 3x4 configuration) to be installed at the corners of the track surrounding the stadium field, approximately 165' from the center of the field.
 2. The supplier recommended was Musco, a leading supplier of stadium and field lighting in the region. The report noted the improvements made in lighting systems recently such as: the Reflector System which reduces spillage; the Visor which reduces glare; the Control Link System in which a panel controls all of the lights and offers several methods of turning the lights off and on, as well as better warranty and reduced operating costs.
 3. The cost of the lights was to be \$300,000 raised by private donations.
 4. The four pole lighting system uses about \$12 worth of electricity per hour.
 5. A schedule of usage for the lights, the number of evening games and use of public address system was suggested in the proposal.
- On June 27, 2006 The Board of Education discussed the proposal and requested that the administration study the proposal and provide additional information on the following areas: (i) analysis of the current level of field usage at all fields including those controlled by the Board of Education and the Town Department of Parks and Recreation; (ii) explanation of the benefits to Darien High School if the stadium lights were installed; (iii) an outline of usage recommendations; (iv) considerations relative to security, traffic, parking and trash generation; and (v) status of the proposal regarding Town regulatory boards, including timelines.
- On August 29, 2006 the Administration presented to the Board of Education a Report on the Stadium Field Lighting Proposal (see www.darienps.org). Highlights of the report are listed below. Data on available field space was subsequently updated on September 21, 2007 by the Administration to reference field availability and usage as of September 2007. Spreadsheets are attached in the Appendix.
 - Current Athletic Field Usage Data was prepared using spreadsheets for every athletic field in Town over the course of one year. Specific days and times when fields are used and when fields are open during the week and weekends were outlined.

- Tokeneke field is projected to remain closed due to construction until fall 2009.
- DHS Baseball, Softball and Field 1 and 3 which were closed in fall, 2006 were open in fall, 2007.
- On weekdays all Darien High School fields are dedicated to school activities until 6:00 p.m. On Saturday and Sunday, DHS teams are given priority.
- Youth leagues use the DHS fields from 6:00 p.m. until dark during the week and are scheduled around DHS use on weekends.
- The administration favors allowing time to “rest” natural turf fields on a rotating basis every three years so that they will recover from heavy usage, and provide many years of service to the community. Ideally, a field will be taken off line to rest in the spring into summer.
- If approved, a lighted field would add field availability to the DHS stadium from 5- 8:30 p.m. weekdays, Monday through Thursday in the fall and from 5- 8:30 p.m. in early spring. (Note: This could add as many as 14 hours of additional playing time per week depending on the length of daylight hours available.)
- Use of a lighted Stadium Turf Field would produce an improvement for the Darien High School athletic program. Certain DHS teams would be able to schedule games in the evening hours. Specific benefits are:
 - 1) A lighted field would allow working parents, student athletes, community spectators, as well as college recruiting coaches to attend the games.
 - 2) Friday night games allow students time on Saturdays to visit colleges.
 - 3) The lighted field would allow Darien home team advantage for games and provide more availability of practice times.
 - 4) As members of FCIAC, Darien would be able to host up to 2 fall and spring night games involving non-Darien athletes.
 - 5) Shifting some games to the evening would free up field space for intramurals and club teams.
 - 6) Additional field space provided by the lighted field would provide relief for some of the over-used middle and elementary school fields.
- The Administration suggested guidelines for use of the stadium field if proposed lights were installed. These guidelines differ in scope and focus from the Shriner Stadium Lights Analysis and Recommendation to reflect the priority that the Administration would place on the high school program and its sensitivity to the neighbors’ concerns. The Administration’s guidelines are summarized below.
 - 1) Darien Schools will be given first priority for use.
 - 2) Events must begin no later than 7:00 p.m. and end by 9:00 p.m., although football games may end by 10:00 p.m. Exceptions may be made for home tournament playoff games when starting times are dictated by governing athletic conferences.

- 3) Sports teams allowed to schedule sanctioned night games would be: Football (4); Girls' Soccer (2) Boys' Soccer (2); Girls' Field Hockey (2); Boys' Lacrosse (2); Girls' Lacrosse (2) Boys' Track (2); Girls' Track (2).
 - 4) Music and Public address system will be used at the start of games only with the exception of football games in which the public address system maybe used throughout the games and the band may play through halftime.
 - 5) Use of the lighting system will not be permitted in the summer between the closing and opening of the regular school year.
 - 6) Other school activities, DHS practices or youth sports will be permitted to use the lighting system, but activities must be scheduled to end by 8:30 p.m.
 - 7) Marching band practice will be allowed until 8:30 p.m. but no other music and sound systems will be allowed.
 - 8) There would be no evening games on Sunday.
- On September 5, 2006 the Board of Education held a Joint Public Hearing with the Board of Selectmen on the proposal for lights on the Stadium Field at Darien High School. The purpose of the meeting was to provide information on the proposal to both town officials and the community and to provide an opportunity for the public to make comments. The meeting began with comments from First Selectwoman Evonne Klein. Mr. Fital summarized the Administration's proposal in a power point presentation. At the Public Hearing more than 35 people spoke including representatives of Darien youth sports leagues, neighbors, parents, students and other members of the community.
 - The Board of Education discussed the proposal at its regularly scheduled meetings on September 12 and September 26, 2006.
 - The Board asked that a committee be appointed to study the lights proposal and collect additional relevant information. The Stadium Lights Committee, comprised of three members of the Board of Education was appointed. The Board Chairman serves in an *ex officio* capacity.

Stadium Lights Committee Methodology

- The Stadium Lights Committee began meeting on October 4, 2006. The purpose of the committee was: i) to gather information from the Darien community on the need for lights, their potential use and impact; ii) to outline the specific lighting equipment needed and potential costs, iii) to learn about the experience of neighboring towns that have considered and/or installed lights on athletic fields, (iv) to evaluate the use of outside consultants to analyze the impact of lights on the community.
- Meetings were held during October 2006 through October 2007.
- In November 2006 the Committee visited Kristine Lilly Field in Wilton to observe a lighted field, which had been installed by Musco.

- A Lights Committee member drafted a spreadsheet detailing spring and fall use of fields by the Darien High School sports teams. Spreadsheets have been updated for fall, 2007 and are included in the attached appendix.
- The Committee met with representatives from Darien Youth Sports (Darien Junior Football League, Darien Field Hockey, Darien Soccer, Darien Youth Lacrosse, Darien Little League/ Darien Softball, Darien Babe Ruth) who provided data, and explained the growth in their programs and difficulties finding space to schedule games and practices.
- The Committee heard from interested members of the community who were invited to comment on our proceedings and express their concerns about increased use of the fields, possible security issues, noise, potential change in the residential character of the neighborhood and its impact on real estate values.
- Darien High School Educational Specifications relating to field space were reviewed.

Stadium Lights Committee Findings

Darien High School Educational Specifications

- The Educational Specifications state that a regulation size field should be created for each team and current field layout issues should be eliminated.
- References to field space emphasize that, *“Every effort should be made to eliminate any overcrowded conditions on our playing fields. Overcrowding increases the chance of injury and limits the development of the team, individually and collectively.”*
- References to physical education and athletic facilities state that the new facility will support *a wide variety of group and individual activities, fitness, health and wellness programs for students and adults, and interscholastic and intramural facilities sufficient to accommodate students who have an interest in and commitment to those activities.* An assumption underlying this statement is *that levels of interscholastic and intramural sports will expand as student enrollment grows so that the school will maintain the current high level of student opportunities and actual participation.*
- The vision for the new Darien High School was that it become a place where students would thrive intellectually, socially and physically. Darien High School is a closed campus where students arrive at the beginning of the school day and remain until the end of the day. On campus choices as outlined in the Educational Specifications include opportunities for students to participate in informal team sports.

Darien Youth Sports Summary - Comments from representatives of the Darien Youth Sports (Darien Junior Football League Darien Field Hockey, Darien Soccer, Darien Youth Lacrosse, and Darien Little League/ Darien Softball, Darien Babe Ruth) are summarized below:

- A lighted field, if made available to the youth sports teams, would allow parent coaches who work full-time to schedule practices in the early evening. This would give 5-6 youth teams at least one hour of practice during the week
- All youth sports have had a significant increase in enrollment over the past five years. Many program numbers have doubled. Some sports have waiting lists and must strictly adhere to early registration deadlines. All youth organizations reported that teams must share practice fields with at least one other (and many times two or three other) teams due to inadequate field availability, which raises safety issues.
- Additional field space would allow teams to have full field practices, providing adequate time for warm ups, conditioning, etc. Many sports organizations noted that the children who practice on less than a full field do not have the endurance required for a full field game.
- Youth leagues specify number and duration of practice times for each age group. Excessive practices are not allowed. However, due to tight field availability many teams are not practicing as often as league rules would allow.
- Many teams have had to carry more team members than they can provide an effective practice for. Larger rosters affect practice and playing time. More space would allow more playing time for each child.
- Field size is mandated by state or national sports governing bodies. For example, Soccer U-11 players need the same size field as a high school student.
- With a lighted field, Darien youth teams would be able to schedule more home games, thereby reducing travel time.
- Not all fields can be used for all sports due to the need for large immobile equipment (e.g. soccer goals, practice tackles) on site, field size requirements, appropriate lining of fields, and priority given to school and after school activities.
- Additional field space would allow rotation of natural grass fields.
- Relocation of Darien High School Athletes to the Darien High School site would provide additional availability to youth sports particularly during peak afternoon and early evening hours.

Neighborhood Concerns

- A lighted stadium will interfere with the neighbors' enjoyment of their property at night.
- House values may decline.
- If field space is needed, it would be more cost effective to convert existing natural grass fields to turf.
- Evening games will bring noise, traffic and possibly vandalism to the neighborhood.
- Darien places too much emphasis on youth sports for young children. Additional practice time will intrude on family time and reduce homework time.
- Traffic control has been an issue when Darien High School hosts special events and a lighted stadium will make the situation worse.
- Limits on the number night games may not be upheld by future Boards of Education.
- Neighbors have already put up with Darien High School construction.
- Neighbors were "promised" no lights on stadium fields.
- Evidence of need is questionable.

- Neighborhood surrounding Darien High School is not similar to neighborhoods surrounding lighted fields in other area towns.

Interviews with Neighboring Towns

In an effort to learn about the use of lights on school playing fields in neighboring towns, members of the lights committee conducted telephone interviews with athletic directors, park and recreation directors, school principals and /or Board of Education members in Greenwich, Fairfield, New Canaan, Norwalk, Redding, Ridgefield, Stamford, Weston, Westport, and Wilton. Oversight of town fields, including the school fields, is handled by the park and recreation departments in some area towns and by the school district in others. Interviews were done during December, 2006 and January, February, and March 2007. Follow up calls were made to some towns during fall 2007. Respondents were asked about factors such as: the source of funding for the field lights projects; attendance numbers at events; crowd control, scheduling and restrictions of use; neighborhood relations; use by town sports leagues, and experiences with suppliers/ installers.

Based on this research, the Committee found that high schools in nine of ten area towns have installed lighted facilities on at least one field. In New Canaan, Weston and Wilton, the fields are fully accessible to town wide sports leagues. In most area towns, however, the use is limited to high school athletic events. Nearly all have placed restrictions on number of games scheduled per week and on game start and end times. In one town (Greenwich) lights are removed when not in use. Most do not allow play in summer months. Few allow play on Sunday evening. All are sensitive to neighborhood concerns and have made some accommodations. Nearly all lighting systems were privately funded. Nearly all have used Musco equipment. All have found that evening games expand field capacity and benefit their high school students, including expansion of school intramural programs. Specifically Wilton and Weston have found that a lighted field allows for scheduling practice times back to back and improves efficient use of fields for both school and community athletes.

Results of the interviews are described below. A summary table is included at the end of the narrative.

Fairfield Fairfield Ludlowe High School Fairfield Warde High School

Ludlowe High School installed lights three years ago. Town funds were used for the lighting system at Ludlowe. There are four 90' stanchions on a turf field. The field is used by the high school and by local youth athletic groups such as Pop Warner. There are no restrictions. There have been no issues for the neighbors.

Warde High School has had lights for ten years. There are four 75' stanchions on a turf field. The lighted field has allowed the school to run back to back practices in the afternoons and evenings. Lights are usually off by 9:00 p.m. Monday –

Thursday and by 10:00p.m.on weekends. At Warde the neighbors and the school have a “hand shake” agreement that the lights will be for school functions only. The field at Warde is rarely used for youth sports.

In Fairfield Yankee Illuminating installed the lights supplied by Musco.

In general, attendance has been higher at evening games than at daytime games. More trash is generated at evening games because the spectators make greater use of the concessions. There have been no problems and overall the lighted field has been a positive experience. Police coverage for day and evening games is reported to be five officers with one in a vehicle. It is important that the police monitor the parking lot during and after games. This is the same coverage used for daytime games.

According to information provided by United Illuminating, the cost of usage for four light poles is \$17 per hour for the Fairfield High Schools.

Greenwich Greenwich High School

At Greenwich High School four 70’ poles have been installed on the turf stadium field. There was significant neighborhood concern about the installation of lights at Greenwich High School stadium. As a result, Greenwich reached a compromise by which the retractable lighting fixtures must be removed from the poles at the end of each season within ten days of the last game.

Greenwich is restricted to a total of ten night games – five in the fall and five in the spring. Games must begin no later than 7:30 p.m. Six practices may be held at night; practice must begin by 7:00 p.m. and end no later than one hour later. No events other than athletic contests may be held. Greenwich High School may host a night conference game only if Greenwich is one of the teams involved in the contest. Town youth athletic groups do not use the lighted field.

The lighted field is considered a public / private partnership.

New Canaan New Canaan High School

The fields and lighted stadium were built in present location – Dunning Field which is adjacent to New Canaan High School. The field at the football stadium was built by private donations. The stadium was planned as a lighted field. Other locations in town had been considered, such as Saxe Middle School and the field near Waveny Park. However, the neighbors and Planning and Zoning did not support lights on the fields at these other locations. It was critical to the success of the project to have support for the selected site from town government and political groups. New Canaan also has “practice quality” lights on another field, Water Tower Field.

The committee searched for a place where the fields and lights would not bother anyone. The present location was identified and funding was completed. A new lighting system was installed in September 2007. The new system, designed by Musco, utilizes state of the art technology, which reduces spillage. The lighting system can be programmed and controlled remotely. There are four 70' poles containing a total of 56 fixtures with hoods. The new system was privately funded.

Youth Athletic groups use the field extensively. Crowd control can be an issue with big events. It is important to plan carefully for an event by knowing the number of people the event will attract. New Canaan has a 10 p.m. curfew, but no other restrictions

Norwalk Brien McMahon High School Norwalk High School

At both Norwalk High and Brien McMahon High, they worked to include neighbors in the process when they considered plans for lights at the two stadiums. They worked through Planning and Zoning. There have been no problems.

In Norwalk, the Board of Education pays for the facilities, the bleachers and the concessions. Park and Rec maintains the field and track. The fields are there chiefly for the schools. It was described as 99% school usage. There is no regular night usage by youth athletic groups, although there may be an occasional special event such as a youth league championship.

At Norwalk High there are no night games on Fridays because the field borders a Synagogue. There are no night games on Sundays at either Norwalk or Brien McMahon. There are no night games in the summer nor are they looking to rent out the field. The lights shine onto the field; there is not a lot of spillage. The kids are learning to play under the lights.

Installation was done by a local electrical contractor; they did not use Musco. There are 4 towers at each school. At Brien McMahon, the towers are 80 feet high. At Norwalk High, the towers are 70 feet high. There are 16 lights per tower and each is 1500 watts.

Redding Region 9 Joel Barlow High School

Joel Barlow is the Region 9 High School located on 100 acres in Redding. The area where the school is located is residential and several houses are close to the field. The property of the nearest house is less than 75 feet from school property.

Redding has been exploring ideas for renovation and/ or rebuilding of their high school fields. The current football field was built in 1981. There are lights on the field. The condition of the 1981 fields has deteriorated.

Falcon Pride, a private group of community members, wanted to replace and relocate the fields with a lighted stadium containing 2 fields and a walking path. The fields would be located at the front of the school. Falcon Pride spent approximately \$50,000 on plans. They did crowd and traffic studies and determined that access to the area would not be impeded. They presented their plan to Board of Education, in the fall, 2006, but the Board voted it down.

Falcon Pride, Joel Barlow High School neighbors and the athletic director met and agreed that a new master plan for all fields should be developed. A consulting firm was hired and expects to formally present the plan and receive feedback from the community on October 22. The proposal will include plans to renovate/ improve the existing stadium field and install a second field next to the stadium. Lights are planned for both fields.

The new proposal differs from the original Falcon Pride proposal in several ways. While the original plan was to put new fields in front of the school, the new plan involves use of field space in an area of the school property that is away from neighboring homes. The cost of the new fields is expected to be \$6- 7 million, funded primarily by the town. Falcon Pride is expected to help with the project but will not be the primary donor.

Ridgefield Ridgefield High

The stadium at Ridgefield High, known as Tiger Hollow Field, has had lights for at least 7 years. Installation was paid for by private donor group known as the Tiger Hollow Committee. A renovation with new generation lighting is scheduled for 2008, although there is some concern over what reception the Committee will get at Planning & Zoning. Ninety foot stanchions may be required this time around.

There are no use restrictions for Tiger Hollow. Ridgefield had 6 night games this fall. Attendance was excellent. Nighttime games add a special “spark” to the game atmosphere. Some issues with teen drinking despite increased supervision have been noted.

Stamford Stamford High

Lights are installed at Boyle Stadium, adjacent to Stamford High School. Specific use restrictions listed below were voluntarily agreed to by the school at the urging of then State Senator George Jepsen and State Representative Ann McDonald. Neighbors at Fountain Terrace, a residential and office complex next to Stamford High School were particularly concerned that restrictions be put into place.

On Sunday through Thursday (exclusive of school holidays), no event can start after 7:00 pm and the even must end by 10:30pm. On Fridays, Saturdays and school holidays, events must start by 7:30 p.m. and end by 11:00 p.m. During September, October, and November, night events (including practices) are limited to three per

week and no more than eight a month. During April, May and June, night events (including practices) are limited to two per week and no more than four a month, exclusive of graduation. During summer vacation, there will be no more than 5 events in total. Sports practices must end by 8:00 p.m. The Boyle Stadium PA system is the only sound system to be used during night events.

Non-school events must be sports only (no concerts) and 30 days notice will be provided to the Fountain Terrace residents for all such non-school events. There was a significant increase in attendance for night games and Saturday night games drew better than Friday nights.

Stamford noted a maintenance problem caused by birds nesting in the light towers. The birds have been known to attack the maintenance workers who climb up to change light bulbs.

Stamford Westhill High School

Westhill does not have stadium lights. Installation costs were previously budgeted, but removed by the city as part of a general budget-cutting initiative.

Wilton Wilton High School

Wilton installed field lights over four years ago on Lilly Field; the latest installation is being completed at the Wilton High Football Stadium (estimated seating capacity of 3000.) Installation and use are coordinated through the Wilton Parks & Rec Department, the owner of all Wilton HS fields. Wilton High School usage gets priority. The Musco electronic lighting controls allow for off-site activation of the lights and third-party billing for usage. Lights are off by 10:00 p.m. every weeknight and not used on Sundays. They noted the band does more damage to their natural grass fields than many of the sports teams due to repetitive formation practices. Wilton High uses the field lights during the week to increase back-to-back scheduling of practices – they allocate two teams approximately 2 hours per day – the Park & Rec schedules the remainder of the available time for 2-3 groups per day. There were no reports of neighborhood concerns about glare; Wilton noted the tennis court lights (which are angled directly outward) do generate significant concern. Wilton accommodates potential neighborhood noise concern by scheduling soccer, field hockey and lacrosse games earlier in the evening (no later than 6pm generally) and scheduling adult & town parks & rec users, which generate less noise, to the later time slots. They expect to schedule approximately 4 football games per year under the new lights; there is no limitation on lacrosse, field hockey or soccer due to their lower average attendance and earlier start time.

Weston Weston High School

Musco lights were installed on the Varsity turf field (not at the football stadium) this past summer. Monies were privately raised from the sports clubs in town (LAX, soccer, field hockey). The turf field was installed approximately 3 years previously.

The lights allow the high school to schedule back-to-back practices from 2:30-4:30 and 4:30-6:30 during the week. Access from 6:30 pm until approximately 10pm is allocated to the town sports clubs unless there is a high school game scheduled. Games are regularly scheduled on Friday & Saturday nights (kickoff at 7:00 p.m). The high school also uses the field until 12 noon on Saturdays. The lights have enabled the high school to expand its intramural program from mostly indoor sports to outdoor sports in the early evenings. In addition, it gives them the flexibility to schedule creative events like a powder-puff football game during homecoming week. Both contacts indicated the lights were very close to neighbors with one visible house with only a small ditch/hill between the fields. No light spillage past 100'. Staffing at night games included approximately 5 police/administrators; football generated the largest attendance. Boys' soccer on a Friday/Saturday night has less than 300 spectators, girls' soccer is generally held during the week with 60-75 in attendance. Over 90% of the attendees are Weston high school students. They charge \$5 adult admission for football; \$3 for students and under 10 years are free. Other sports played under the lights are charged \$3/\$2 respectively – under 13 free.

Westport Staples High School

Westport is currently in the process of installing four turf fields. Planning & Zoning restrictions implemented over 12 years ago restrict field lights (which fall under parking lot control regulations) at 25'. Westport is working with Musco to design a retractable light system to meet P&Z restrictions. P&Z has regularly approved without issue the use of portable lighting systems (estimated cost \$18,000 per event) for FCIAC semifinals. Such lighting is approved as a "hardship" under P&Z regulations.

Westport noted they have an extensive intramural program (LAX, Tennis & Badminton in the Fall, Basketball, Open gym & bowling in the winter and water polo, flag football and volleyball in the spring), to deal with a significant growth in enrollment, which could benefit from the installation of the lights.

There is a hill & tree buffer between the neighbors who might not be able to actually see the light poles; speakers have been installed to focus sound on the bleachers & away from the neighbors.

Data from Neighboring Towns

<u>School</u>	<u>Regulations/ Guidelines</u>	<u>Funding</u>	<u>Supplier Specifi- cations</u>	<u>Neighbor accommodations</u>	<u>Notes</u>
Brien McMahon High School (Norwalk)	No Sunday night games. No summer games; no youth sports	Town BOE pays for facilities, bleachers, concession P&R maintains fields and track	Local electrical contractor 4 towers 80'; 16 lights per tower	Included neighbors in planning	
Fairfield Ludlowe High School	No restrictions	Town	4 90' Stanchions		Cost \$17 per hour
Fairfield Warde High School	Monday – Thursday off by 9:00; Friday off by 10:00	Private	Musco/ Yankee Illuminating 4 75' stanchions	Handshake agreement Warde use primarily	Cost:\$17 per hour
Greenwich High School	Retractable lights Limit to 5 games in fall; 5 in spring and 6 short practices	Public / Private	4 70' poles. Light fixtures must be removed in off season	Neighbors' concerns resulted in compromise	
Joel Barlow High School (Redding)	Old field has lights on wood poles. New stadium w/ lights proposed.	Public / Private proposed	Not yet available	First proposal voted down by BOE due to neighbor concerns.	
New Canaan High School	10 p.m. curfew; used by youth sports	Private	Musco 4 70' poles; 56 fixtures New in 2007	Other locations considered & rejected by P&Z	Remote/ off site programming and control. Reduced spillage in 2007 system
Norwalk High School	No night games on Fridays or Sundays. No summer games; 99% school use; no youth sports, except special occasions.	Town BOE pays for facilities, bleachers, concession P&R maintains fields and track	Local electric contractor 4 towers 70'; 16 lights per tower	Included neighbors in planning	
Ridgefield High School	None 6 night games this year	Private Tiger Hollow Ctte.	May use 90' stanchins in renov.		
Stamford High School	Sun. – Thurs. no event after 7pm; over by 10:30; Fri/Sat end by 11; Sept- Nov no more than 3 events /week or 8/month; April- June 2/week, 4/month/total of 5 summer events; no concerts.				

Staples High School (Westport)	P&Z approves without issue portable lighting systems for temporary use as hardship for semifinals		Musco working with them on acceptable/retract. system		
Westhill High School	No lights	Budget cut			
Weston High School	Weekday access 6:30 – 10:00 p.m. for youth sports	Private / Sports Clubs	Musco No spillage past 100'	Close to some homes. separated by hill	Capacity to expand intra-murals Back to Back schedule for school practices helpful.
Wilton High School	Lights off by 10:00p.m. No Sundays Four football games per year. Park and Rec schedules open time to youth.	Private Funds/ Use Coordinated by Park and Rec	Musco Off site activation and controls	Games with lower attendance scheduled earlier in evening. Later evening for adults. Reduces noise	Back to Back schedule for school practices helpful.

Impact of Day Games on Area Streets.

To determine the effect of high school games on the noise level in the neighborhood, committee members walked through the streets surrounding Darien High School during several games during the fall 2006 season. Both weekday and weekend games in soccer, football and field hockey were observed from the surrounding streets.

From our personal observations, in early fall, 2006 the High School field was well screened from Linda Lane, Hummingbird and Middlesex Road. Leaves had not yet fallen from the trees. There was little noise from the late weekday afternoon field hockey game. A mid - fall Saturday football game (Newington) could be heard on Linda Lane in the area nearest the field. The High School field was more visible from Linda Lane at the back of the cul-de-sac as leaves dropped from trees later in the fall. Hummingbird Lane appeared to be well screened into late fall. In addition, photographs of the area in early and late fall were taken and recorded on a CD (see www.darienps.org).

Darien Community Interviews

Security and Traffic Control

Darien Police Department

To follow up on the Administration's discussions, the Stadium Lights Committee contacted the Darien Police Department to discuss security and traffic control. The Darien Police Department stated that the Department has no position favoring or opposing the lights, but is willing to work with the school district to identify issues and plans to address them. Results of our discussions are described below.

- Potential issues relating to evening events were identified; however it was felt that if appropriate security were provided, evening events could safely be held.
- When scheduling any event, the most important part is the preparation. When the Police have adequate notice about the number of people to expect, they can prepare accordingly. It is important to be aware of the capacity of the stadium and parking area and avoid scheduling events that exceed that capacity.
- As long as adequate police coverage is provided there should be no significant traffic impact on the neighborhood streets. They cannot impose permanent parking restrictions selectively. For example, one cannot have "No Parking" signs put up on a neighboring street unless the residents understand that the restrictions would apply to their guests, as well as to visitors to the area.
- Based on recent attendance the department would schedule a minimum of five officers for a regular daytime football game. A Homecoming game would require seven to nine officers; for special events, with higher expected attendance, such as a State championship they would use up to 11 –15 officers. Officers would be in the parking lot and in the stadium. The same staffing would be used at a night game; however an additional officer in a car might be used in the parking lot at night. The current charge to the customer is \$50 - \$55 per hour, per person. The officers need to be there 30 minutes before, and 30 minutes after an event.

- There have been no recent reports of vandalism or rowdy behavior among spectators during Darien High School games.

Osprey in Area

In light of the problems experienced in Stamford with nesting osprey, Committee members checked the Darien Audubon Society website to determine whether Osprey inhabit this area. The Committee found that the Osprey like the shore, so would be more likely to be found in the area around the beach. They depend on fish as their main source of food and nest near their hunting grounds. They have been found to nest in Cos Cob Harbor and Sherwood Island State Park. Furthermore, in our discussions with Musco we learned that the osprey nest on the maintenance platform not the luminary assembly. Our installation proposal does not call for a maintenance platform similar to the one at Stamford High School due to the 3x4 configuration of the DHS lighting.

Consultant Interviews

Albert W. Franke Associates, Inc.

AKRF, Environmental Planning and Engineering Consultants

During June and July the Stadium Lights Committee met with Albert W. Franke of Albert W. Franke Associates, Inc. Real Estate Valuation and Consulting and Susan Roth and Anthony Russo of AKRF, Environmental Planning and Engineering Consultants to learn about how their services might be of value should the Board of Education wish to engage the services of outside consultants. The committee decided not to seek funding to engage these consultants at this time.

Musco Lighting

In September, the Committee met with Musco representative Don Rhuda. With the exception of Norwalk and Brien McMahon, all high schools we spoke to reported using Musco Lighting systems. Don Rhuda, identified the following local schools as having recently installed their newest generation lighting system (Light-Structure Green) as outlined in the Stadium Field Lights gift proposal:

Town	Location	# Lighting Poles	Pole Height	Average Illumination
Wilton	Kristine Lilly Soccer Field	4	70'	50 fc
	HS Football LAX Field	4	70'	50 fc
Wallingford	Woodhouse Soccer Field	4	70'	30 fc
West Haven	Nike Soccer Football Field	4	80'	30 fc
Brookfield	Soccer Field by Town Hall	4	70'	30 fc
New Haven	Augustine Park	4	80'	40 fc
	East Shore Soccer	8	50'	30 fc
Weston	HS Soccer Field	4	2-70' 2-80'	50 fc

According to Mr. Rhuda, taller poles permit the aiming angle of the lights to be more vertical (focusing the light downward onto the field versus outward toward the stadium, neighbors etc.) Musco confirmed the issue of pole height is further driven by available pole sighting location and any unique required out of glare zones. The 1994 lights proposal included six lights located on both sides of the field at center field and the 10-yard line. Due to subsequent construction of the new high school the only area for poles to be installed on the building side of the field is the area beyond the end of the track. This further limits the placement of the light poles to the four corners of the field in order to provide adequate average illumination of the field. Both of these designs vary from Musco's traditional design, which locates four light poles on the 15-yard line.

Although the required foot-candle illumination varies by sport, Musco confirmed their newer installations are mostly 50 foot-candle averages, which provide the most flexibility for field utilization by all sports (lacrosse, football, soccer, and field hockey). Lacrosse, which uses a small ball traveling at a higher rate of speed through the air, requires more light intensity than football, soccer or field hockey. Musco indicated the current proposal does not meet lighting requirements for hosting an evening track meet although the addition of 2 fixtures per pole (or 8 total) could provide sufficient light intensity to allow personal use of the DHS track in the evening for running/walking. Musco estimated we would need approximately 20% more lights (e.g. 15-16 versus 12 lights per pole) to adequately light the track for competition.

The position of the poles around the field and the required light intensity essentially drives the pole height – a taller pole casts light at a steeper (more vertical) angle onto a fixed field site – thereby reducing the spillage on the opposite side of the field. Light spillage is also affected by the distance between the edge of the field and the midpoint of the field. Committee members physically measured the site and verified that the placement of the light poles at 165 feet from the center of the field (as referenced in Exhibit 2 of Mr. Shriner's Field Light Summary) would not interfere with any subsequently built athletic fields (JV Baseball, Varsity Baseball or Track & Field) on the side of the field opposite the school building. If

placed at 165 feet from the center of the field, the two poles on the side opposite the school would be installed on or close to the walking path that runs between the stadium field and the JV baseball field. Committee members also noted that the DHS stadium field is approximately 224 feet wide not 160 feet as referenced in Exhibit 7 and 8 of the Stadium Lights Proposal. This width difference may reduce the spillage distance on the opposite side of the field. Musco would have to conduct further calculations and measurements to verify these conclusions.

According to Musco, spillage can be further mitigated by adjusting individual lights and pre-shaped inserts (which come standard with the installation) once the lights are installed. These adjustments will further focus light intensity toward the center not the outside the edge of the field. “Sky glow” is eliminated by the hooding of fixtures, which also reduces the number of light bulbs needed on each pole. The poles can be colored for aesthetic purposes or to limit the visual impact on the specific site. Spillage can also be affected by the elevations surrounding the field. If neighboring houses are lower than the field level, they may experience more visual impact; if houses are higher – less impact.

Musco’s 25 year parts & labor warranty covers all equipment supplied by Musco including the lamps. The owner does not need to purchase/rent any specialized maintenance equipment, pay any additional maintenance costs nor hire specialized servicemen for the maintenance and/or repair of the lighting system except if damaged by vandalism, lightning or other acts not associated with normal use. The luminary assembly can be designed with up to nine lights across. With this 3-across light configuration, Musco is able to service the system without the installation of a service platform (note: the Stamford installations have 5 and 6 across which requires a service platform – this platform is where the osprey nest, not on the luminary assembly).

Mr. Rhuda made clear that the proposal as presented is tentative and would require refinement of specifications if it were to be implemented. He also indicated that Musco undertakes a number of other mitigating adjustments to the lights assemblies once a lighting system is installed on a specific site to further reduce spillage.

Appendix

Stadium Lights Analysis and Recommendations -April & June 2006 (website)

Reports on Stadium Lights proposal from Administration – August 29, 2006 (website) and June 5, 2007 (attached)

Board of Education Field Schedule - Fall 2007 (attached)

Board of Education Field Schedule – Projected Spring 2008 (attached)

DHS Fall 2007 and Spring 2007 Sports Summaries (attached)

References

1994 Proposal to Add Stadium Lights (website)

1994 Documentation from Planning and Zoning (website)

Pictures of neighborhood (website)

Google Earth Aerial View of DHS (website)