

Darien Board of Education

Proposed Darien High School Stadium Lighting Project SUMMARY REPORT

Introduction:

The proposal to install lights at the Darien High School stadium field has resulted in numerous public meetings and the production of numerous documents and reports. Given the upcoming informational presentation on the proposed project to the Representative Town Meeting, it was felt that a single summary report on the project be compiled. The purpose of this summary report is to provide a consistent representation of the proposed project's scope, rationale and the numerous concessions that have been made in order to address neighborhood concerns. Some information and components of the proposed project will be addressed in more detail than others. Additional information, such as the project cost and operating costs, is also provided. Finally, many of the documents that this summary report has been based on or references are included as attachments.

Project description:

The project description is relatively straightforward. It includes the installation of two (2) eighty foot tall poles with twelve (12) light fixtures on each and the installation of two (2) ninety foot tall poles with thirteen (13) light fixtures on each. These lights will provide enough light to enable the safe use of the stadium field for athletic practices and events in the early to mid-evening. In addition, supplemental parking lot lighting in limited areas of the existing parking lot and low pedestrian lighting fixtures would also be installed to provide for safe access to and from the field and bleachers. Finally, a new sound system would also be installed. The sound system will be designed to reduce the amount of noise currently directed toward the neighbors by the existing PA system. In its entirety, that is essentially what the project consists of – lights for the field, lights for pedestrian safety and a new sound system that will be much less intrusive on the neighborhood.

First, it is important to understand more about the tall poles with lights. A common initial reaction is that eighty to ninety foot tall light poles are surely going to illuminate a significant area beyond that of the field. The height of the poles is actually a key ingredient to **reducing** the amount of light "spillage" into surrounding areas. This is because the taller a pole is, the higher the fixture can be mounted and pointed directly down on the playing field. The shorter the pole, the more it will direct light across the field, resulting in increased light spillage onto surrounding areas. Once this is explained, the typical second reaction is to express concern over the glow that will be seen when viewing the higher poles from the distance. This "sky glow" is significantly reduced by the use of light fixtures that are hooded. In short, this project does not

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include the installation of multiple telephone poles with twenty to thirty flood lights mounted on each and aimed across the field. Rather, this project includes the installation of four poles with twelve hooded light fixtures on two and 13 hooded light fixtures on the other two – each of which are pointed directly down onto the field in order to limit light spillage. In fact, the horizontal light readings at one hundred and fifty feet around the perimeter of the field average just over 0.1 foot candle. 0.5 foot candles is the level that would require a flashlight to safely move around.

A new sound system will replace the current system, which consists of very large, high output and high dispersion speakers. As a result, the sound from the current system is not controlled in terms of direction. The new sound system will consist of highly directional, low output and low dispersion speakers that will be aimed directly at the stands and not toward neighboring properties. In addition, the system will be zoned so that certain speakers can be turned off for events that do not draw large crowds.

The additional parking lot lighting will be limited in nature and the primary objective will be to provide increased lighting for pedestrians in certain areas of the parking lot that are currently not illuminated. These added parking lot fixtures will be very similar in looks and in light output to the current parking lot lights.

Additional pedestrian lighting will also be installed along the sidewalks that lead to both the visitor and home bleachers. These light fixtures will be low (2' - 4') bollard type fixtures and will be directed away from neighbors to the greatest extent possible. The primary purpose of this lighting will be to allow for safe pedestrian access to the bleachers and field area. This pedestrian lighting will also allow for the main field lights to immediately be shut off at the conclusion of an event, as they will not be required to allow safe exiting from the bleachers due to the pedestrian lighting. It should be noted that the project does not include pedestrian lighting on the north side of the field or gymnasium complex.

Background information and history of the proposal:

This is not the first time that a proposal has been made to install lights at the high school stadium field. In 1994, youth sports groups proposed adding six (6) poles and lights at the field. The Town Planning and Zoning Commission denied the application for that proposed project. Since that time, there has been talk of again proposing to light the stadium field. This talk culminated in April, of 2006, when a group of citizens, led by Mr. Rusty Shriner, developed a proposal to install lights at the new high school field. Although there are significant differences between the 1994 proposal and the current proposal (6 light poles vs. 4 light poles, improvements in lighting technology, less research regarding the issues, etc.), there are two very distinct commonalities between the two proposals. First, both proposals focused on the ever increasing numbers of athletes and the shortage of fields to meet their needs. Second, there was neighborhood opposition to the 1994 proposal and there is opposition to the current proposal.

Before focusing on those two aspects of the current proposal, a chronology of events relative to the current proposal is provided in order to allow people to understand what has transpired to date and where the proposal stands at this point in time.

- April, 2006: A proposal for the stadium lights was developed by a group of citizens.
- June 5, 2006: The proposal was presented to the Board of Selectmen
- June 13, 2006: The proposal was presented to the Board of Education
- June 27, 2006: The Board of Education discussed the proposal in more detail and asked that the school district administration study the proposal and provide additional information. Specifically, the administration was asked to:
 - Conduct an analysis of current field usage
 - Explain the benefits that a lighted field would provide the high school.
 - Develop recommended usage guidelines for a lighted field.
 - Study issues relative to traffic, parking, security and trash generation.
 - Outline the necessary regulatory and zoning steps that would be required for gaining approvals to install the lights.
- August 29, 2006: The school district presented their report to the Board of Education. The report was subsequently updated on September 21, 2007.
- September 5, 2006: The Board of Education and Board of Selectmen held a joint public hearing on the proposal. The purpose of the hearing was to provide information on the proposed project and to allow members of the general public to comment.
- September 12 & September 26, 2006: The Board of Education discussed the proposed project at their regular meetings. A subcommittee of the Board of Education was established to further study the proposal and to collect additional information. The subcommittee was called the "Stadium Lights Committee".
- October 2006 to November 2007: The Stadium Lights Committee met several times. The committee met with representatives of the district administration, the high school athletic department and Darien youth sports organizations. The committee also visited nearby athletic fields that were lighted for night use.
- November 13, 2007: The Stadium Lights Committee presented their report to the Board of Education (copy attached).
- February 13, 2008: The Board of Education held a public hearing on the stadium lights.
- March 25, 2008: The Board of Education voted to accept a donated amount up to \$550,000 to be used for lights at the stadium field and for additional parking lot and pedestrian lighting and for a new sound system. The Board of Education also requested that the Board of Selectmen, the Board of Finance and the Representative Town Meeting accept the donating funds and appropriate the funds for the implementation of the project.
- March 25, 2008: The Board of Selectmen voted on the Board of Education's request. They also voted to accept the donated funds and to make those

funds available for the project once approved by the Board of Finance and the RTM.

- April 3, 2008: The Board of Finance also acted on the Board of Education's request and voted to accept the donated funds and to make those funds available for the project once approved by the RTM.
- May 13, 2008: In accordance with CGS Section 8-24, a Mandatory Referral on the proposed project was made to the Town Planning and Zoning Commission. The Commission voted that the proposed project was not consistent with the Town Plan of Development.
- May 27, 2008 – The Board of Education voted to withdraw from consideration by the RTM the request for a capital appropriation to fund the project, while also requesting time on the RTM's June 9, 2008 agenda to make an informational presentation on the proposal.

Project rationale:

The primary rationale for the project is quite simple. Participation in Darien's athletic programs, both at the youth level and the high school level, has grown enormously over the past several years while the amount of available field space has not. As a result, the singular experience that sports offers to young children and high school students is being diluted. Making the stadium field available for play after daylight will increase the availability of field space and help to strengthen the experience of participating in a sport. The addition of stadium lighting will not change the use of the field. Rather, it will simply allow more of the same use. The youth sports and the high school sports can be examined separately.

High school sports:

The high school sports program will be a clear beneficiary of lights on the stadium field. The increased high school enrollment over the past several years, from 875 in 2001 to 1,202 in 2007, has been reflected in increased participation in high school sports programs. In addition, new sports programs have been added and intramural sports programs have increased as well. This has resulted in an increased demand for field time. The ability to have even a single field available for an additional three and half hours in the early spring and late fall will help meet that demand.

There is another benefit associated with being able to utilize a field later in the evening – it will allow for greater attendance by parents. Many parents work late into the day and are unable to attend their children's games or practices. Having evening games will provide those parents a better opportunity to attend a child's game.

School spirit is a strongly held concept among the high school community and the community at large. There is no denying that offering a limited number of

night sporting events will not only foster, but will heighten, that spirit. Other nearby communities that have lighted stadium fields, of which there are many, have reported an increase in spirit and pride.

Youth sports:

The growth of youth sports in Darien has exploded. In the last five years alone, registration for youth soccer, youth lacrosse and youth football has increased by 60% to a total participation of over 3,000 youths. Although converting three natural turf fields to synthetic turf has helped with the tremendous demand for field space due to this massive increase in youth sports participants, it has nowhere near solved the problem. As a result, teams are larger than they should be; practices are fewer and practice times are shorter. All of this greatly diminishes the overall experience of youth sports participants. Lighting the stadium field will allow up to an additional three and one half hours of use per day in the critical early spring and late fall seasons, and increase the safety of those participating under less than optimal lighting conditions at these times.

The same issue that exists with parents of high school athletes being able to attend games exists with the parents of youth sports participants as well. Many parents are unable to make it to practices or games on time due to work conflicts. Allowing for later starting times will help to ease this issue. In addition, at the youth level many coaches are parent coaches. Often times work prevents these coaches from attending practices. Having more flexibility in scheduling practice and game times will help alleviate this. Providing a greater opportunity for parent participation in youth sports is a fundamental component of our youth sports programs.

There has been a tremendous increase in sporting activities within Darien. Ironically, because there has not been a corresponding increase in field availability, this increase in sports participation has actually resulted in decreased opportunities for youth and high school sports participants. The installation of lights on the stadium field will certainly not solve this problem. However, it will help alleviate it.

Neighborhood concerns and project concessions in response:

From the advent of the proposal to light the stadium field, neighborhood concerns have been very much a part of the decision making process. The initial proposal, first presented in 2006, included limitations on the operating hours of the lights. Nonetheless, the Board of Education, in recognizing neighborhood concerns, proposed further limitations on those hours of operations. The proposed limitations on the operating hours are as follows:

- No more than 12 Darien High School interscholastic games (including playoffs) will be held in the evening in the fall on the Stadium Field.

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- No more than 10 Darien High School interscholastic games (including playoffs) will be held in the evening in the spring on the Stadium Field.
- During the school year, there will be no evening games or practices on the Stadium Field from the end of the CIAC fall season until the beginning of the CIAC spring season.
- There will be no lights on Sundays.
- There will be no lights used during the summer months from the end of the CIAC spring season to the beginning of the CIAC fall season.
- For practices and other activities (Monday through Saturday) lights will be out by 8:00 p.m.
- For Darien High School interscholastic games (Monday through Saturday) lights will be out by 9:00 p.m. with the exception of football games where lights will be out by 10:00 p.m.
 - Games may be scheduled on only one evening a weekend, within the time parameters outlined above. Games will not be scheduled on both Friday and Saturday evenings of the same weekend.
 - Football games are permitted on Fridays only, within the time parameters outlined above.

The Board of Education plans to propose that these guidelines become part of the Special Permit from the Planning & Zoning Commission, to ensure that changes cannot be made by future Boards without the Commission's consent.

In response to neighborhood concerns about noise, the installation of a new sound system will be included in the project scope of work at a cost of approximately \$40,000. The new sound system will allow for sound to be directed more toward the bleachers and field and less toward the neighbors. The current sound system is more of a public address system that simply blasts the sound across the field and directly toward the neighbors. The new sound system will help to correct that situation.

Will it be possible to alleviate all of the concerns expressed by neighbors? Unfortunately not. Having an active and vibrant high school and athletic complex adjacent to a neighborhood for several decades will inherently create usage concerns. However, the Board of Education has recognized these concerns and has acted to address them through the considerable concessions made regarding the usage guidelines. In addition, the donor group has generously committed to address the noise issue through the purchase of a new sound system.

Event Management:

Neighbors have also expressed concerns about increased litter, traffic and parking and an array of other issues that would be associated with events in general and are not solely associated with events held during the evening. As a result, an event management plan has been developed and consists of the following:

Traffic and parking:

The high school administration and the Darien Police Department have cooperatively developed a traffic and parking logistics plan that has been used for large events that attract 1,000 people. This same plan would be put into place for night events at the stadium field and consists of the following components:

- One hour prior to the start of the event, access to Darien High School is limited to Noroton Avenue only. At this point, all access to the school via Nutmeg Lane and High School Lane is prohibited.
- Parking will be supervised cooperatively by DHS Campus Monitors and the Darien Police Department. Normal campus parking spaces will first be utilized. Next, other on-campus options will be utilized. This includes the building, the bus loop and the oval.
- Once all on-campus parking spaces have been filled, vehicles will be directed to off-campus parking, beginning with Nutmeg Lane and High School Lane. A one-way parking pattern with vehicles faced to exit away from the campus will be utilized.

Event supervision:

For basic night football games, two additional Darien police officers will be assigned to the game for a total of seven officers. For a night game expected to draw a large crowd, up to nine more officers will be added for a potential total of 16 officers. In addition, an extra administrator and an additional teacher will also be utilized for greater supervision. Additional coverage beyond that provided for day lacrosse games will also be provided for night lacrosse games. Although crowds are anticipated to be fairly minimal (200) for night soccer and field hockey games, there will be at least one police officer, one administrator and one teacher on site for supervision.

Trash and litter:

Unfortunately, the generation of trash and litter occurs regardless of whether an event is held at night or during the day. On a routine basis, trash barrels are emptied on either Monday, Friday or on both days depending on the extent of litter. Litter in the general vicinity is also picked up on a routine basis. For night games, three custodians will be assigned to work. Along with setting up for the game, they will also patrol the grounds picking up litter during the game. Since the goal will be to shut the field lights off immediately after the game, the custodians will return the following morning to complete the litter pickup in the day light.

It should be noted that the costs associated with providing this event management for night games will be recouped through gate receipts. Therefore, the impact on the Board of Education operating budget will be minimized.

Project cost:

The total estimated project cost is \$550,000 and is broken down as follows:

▪ Soft costs (engineering)	\$ 30,000
▪ Stadium lighting system	\$360,000
▪ Replacement of sound system	\$ 40,000
▪ Pedestrian lighting	\$ 20,000
▪ Added potential future escalation	\$ 50,000
▪ Project contingency	<u>\$ 50,000</u>
	\$550,000

The initial cost estimate that was developed in 2006 was approximately \$300,000. Since that time, however, there has been an approximate 20% increase in the cost of the lights. In addition, the pedestrian lighting and new sound system were not in the scope of work. In order to insure for the absolute proper and most effective design of these systems and the stadium lights and for obtaining the necessary regulatory approvals, engineering work is also required. Finally, the current budget accounts for potential escalation in costs and a project contingency. The fund raising group feels confident that the full funding will be raised.

Operating costs:

Due to significant improvements in technology and energy efficiency, the electrical consumption of the lights has been reduced significantly from previous field lighting systems. In fact, the “Light Structure Green” system that will be used for the proposed project will provide a 40% reduction in the average kW usage. This is a significant reduction in energy consumption from that of the older generation lighting systems. In addition, the “Smart Lamp” operating system for controlling the lights’ on/off schedule will result in a 66% increase in operating efficiency. Given the cost of energy and the increased focus on “going green”, these two features were an important consideration in the development of this proposed project.

Due to this increased energy efficiency and operating efficiency, the electrical costs to operate the lights are approximately \$25.00 per hour in total for all of the stadium lights. This totals approximately \$100.00 per night football game and will easily be offset by gate receipts. Consideration will be given to charging youth groups for electrical costs incurred as a result of their use of the lights.

There should be very little, if any, maintenance costs associated with the stadium lights as well. Musco, the lighting manufacturer, provides a twenty-five year full warranty on the lights. If a light burns out, it is their responsibility to replace it. This warranty is

based on 300 hours of use per year, which far exceeds the hours that the lights will actually be used.

Finally, the impact on insurance costs should also be minimal. CIRMA, the Town's current insurance carrier, has directly indicated that there would be no increase in the liability insurance rates due to having lights on the field. In addition, there would be a minimal, \$400 per year, increase in property insurance rates due to the value of the lights. It is also important to note that CIRMA, who arguably insures over 90% of the lighted municipal and school district fields in the state that are not self-insured, stated that they could not recall any liability claims of note involving events held on fields with lights.

Conclusion:

There are clear benefits to installing lights at the Stadium Field. Primary among these benefits is increased practice and playing time for thousands of Darien youth and high school students. Another primary benefit is the sense of pride and spirit that playing "under the lights" will provide for student athletes, their parents and the community at large. Also of significant importance is the enhanced safety the lights will provide for athletes using fields as daylight begins to diminish and visibility is impacted.

It is understandable that neighbors have concerns. The proposal to install lights clearly recognizes those concerns and strict limitations on field usage are a key component of the proposal. The proposal also makes a financial commitment to further address neighborhood concerns regarding noise. It is also important to remember that much of the focus has been placed on the impact of large events, such as football games. However, in reality, the majority of the lights' usage will be for low impact practices and games that will be sparsely attended by spectators and will not involve the use of the sound system.

This proposal has yielded to neighborhood concerns as much as reasonably possible and was not developed in a "winner take all" manner. Rather, it was developed with clear concessions in mind in order to address important neighborhood concerns while, at the same time, addressing the vital needs of the ever increasing youth and high school sports programs in Darien.