

To: Mr. Scott McCullough – Director of Planning  
From: Thomas D. Bracciano  
Re: SUP's for LHS and LFSHS Outdoor Athletic Facilities  
Date: August 11, 2008

Enclosed please find a brief narrative and supporting documentation regarding the application for special use permit for LFSHS and LHS outdoor athletic facilities. I hope this information will be useful to you and all those involved in this process.

Please feel free to contact me should you have any questions regarding the information contained herein or any other issues regarding these projects.

Thomas D. Bracciano  
Division Director Operations and Facility Planning  
Lawrence Public Schools  
146 Maine Street  
Lawrence, KS 66044  
[tbraccio@usd497.org](mailto:tbraccio@usd497.org)

Upon completion of the 2005 bond issue building additions at LHS and LFSHS that addressed indoor facility equity and Title IX issues, the Lawrence Public Schools Board of Education directed the district administration to complete a needs assessment to identify concerns and issues regarding the outdoor athletic facilities of LHS and LFSHS. A needs assessment was completed and presented in report form to the Board of Education on October 22, 2007 (copy enclosed).

Key areas of concern identified in this report were:

**Outdoor Facility Equity – between LHS and LFSHS and sports (boys and girls)**

LFSHS football, baseball, soccer, softball and tennis have regulation fields on site for practice and/or competition.

LHS football and tennis have regulation fields on site for practice and/or competition.

Baseball, soccer and softball must practice off site.

**Safety** – off site practices means off site travel for student athletes. Poor field conditions for off site competition venues have created serious discussions of cancellations of events by sports officials.

**Quality of Facilities:** extensive use of existing facilities by district and non-district entities diminishes the quality of the field turf on practice and competition fields. Lack of lighting limits schedules for practice and competition.

Referring to the city, county and district-funded P.L.A.Y. study, school district staff developed several concepts to address the high school outdoor facility needs. As noted in the P.L.A.Y. study, extensive repairs or replacement of the joint district/city tennis center located at LHS needed to be included in any proposed solution. After presenting several conceptual ideas to the Board of Education and high schools' administration, the current configuration depicted in the submitted site plans were finalized.

By using artificial turf on the proposed fields the district will be able to save expenses associated with watering, fertilization, pesticides, herbicides, mowing, seeding and many other operational areas. Installation of artificial turf will allow the district to eliminate fertilizer and pesticide runoff. In addition, the savings realized by not applying these products will be used to help pay for the installation of these fields. Artificial turf will also allow for a far more extensive use of these fields than a traditional turf grass surface with no sacrifice to the quality or safety of the venue.

The proposed improvements for the outdoor athletic facilities address the school district's areas of concern in the report of October 22, 2007. In addition, these improvements also present the opportunity for community use which maximizes taxpayer dollars and has the potential to provide additional recreational spaces for the community to use.

Representatives of Lawrence Public Schools have held three publicly-announced meetings with the Centennial Neighborhood Association to inform the neighborhood of the specifics of the proposed outdoor sports facility improvements and to obtain feedback regarding these improvements from the neighborhood. At all three meetings the major areas of concern presented by the neighborhood were; the effects of the proposed improvements on an inadequate existing storm water drainage system, an increase in noise associated with these improvements, concerns regarding new lighting versus existing and the potential for additional traffic in the neighborhood.

The neighbors concerns listed above have been noted by the district and are being addressed as follows:

Noise – School properties such as high schools typically generate noises from bands, students, sporting events and various other activities that occur on a school site. The only permanent change being proposed affecting the noise in the neighborhood is the installation of a sound system for the football field. This system is being contemplated for competition events – primarily soccer and football. Information regarding the proposed type of sound system to be used is enclosed.

Drainage – The City of Lawrence storm water engineer attended two of the public meetings with the Centennial neighborhood. District staff has had numerous discussions about this project with him. The city storm water engineer is in agreement with the district that these turf projects with their base system and drainage design actually add retention capacity and allow improved storm water drainage in this area significantly. This is especially true of the proposed changes to the Centennial site. The appropriate drainage studies have/will be completed and submitted.

Lighting – As with all other district school facilities, areas of the existing site are currently illuminated after dark. Existing parking areas, existing tennis courts and the existing softball field are several examples. As this project will eliminate lighting from certain areas and install in others the overall effect on the total lighting is difficult to assess. What we do know is that all existing lighting for fields and courts will be replaced with new technology, high efficiency lights that are designed to reduce energy consumption, focus the light and minimize infiltration to surrounding areas. The appropriate lighting plans and studies will be submitted and current city code as to time of usage will be followed. Information regarding the type of athletic field lighting to be used is enclosed. The appropriate lighting studies have/will be completed and submitted.

Traffic – The proposed plan for LHS provides more than 400 additional parking spaces (almost double the current amount) for use by students, staff and visitors at LHS. Removing this number of cars from the surrounding neighborhood every day can't help but reduce the amount of traffic congestion contiguous to LHS. The appropriate traffic studies have/will be completed and submitted.

Lawrence Public Schools is committed to providing safe, effective, efficient and equitable facilities for students. These proposed improvements for the outdoor athletic fields at LHS and LFSHS were designed to do just that.

## High School Outdoor Sports Facilities Report Fall 2007

### Current status at LHS and LFSHS:

**LHS Football** - regulation field with minimal seating on site, no lights  
Competition at Haskell - practice on site  
**LFSHS Football** - regulation field with minimal seating on site, no lights  
Competition at Haskell - practice on site

**LHS Baseball** - no baseball field on site  
Competition at Holcom – practice at Holcom  
C-Team Competition and practice YSI /Holcom (Not available this year)\*  
**LFSHS Baseball** - regulation field on site, minimal seating (needs improvements) Competition and practice on site

**LHS Soccer** – no soccer field on site  
Competition at YSI practice at District fields LAHS site  
**LFSHS Soccer** – regulation field on site, minimal seating no lights  
Competition and practice on site – no lights

**LHS Tennis** – regulation courts on site – shared facility w/city (needs improvements) Competition and practice on site  
**LFSHS Tennis** – regulation courts on site  
Competition and practice on site – no lights

**LHS Softball** – non regulation field on site  
Competition Holcom and practice at Holcom  
C-Team Competition and practice YSI /Holcom (Not available this year)\*  
**LFSHS Softball** – regulation field on site, minimal seating  
Competition and practice on site – no lights  
C-Team Competition and practice former Sport to Sport\*

\* Administration is currently working on a lease to secure former Sport to Sport fields for the upcoming season.

### Concerns:

**Facility Equity** – between schools and sports  
**Safety** – off site practices means travel for students  
**Quality of Facilities** – extensive use of existing on site facilities diminishes quality of field turf (practice and competition fields)  
Lack of lighting limits schedule for practice and competition

LHS 34.9 acres and Centennial 9.23 acres  
LFSHS 78 acres

# High School Outdoor Athletic Facility Comparison

10/22/2007

## Lawrence High School

	LHS Football	LHS Baseball	LHS Soccer	LHS Softball	LHS Tennis
Regulation field on site		no	no	no	
Practice on site		no	no	no	
Competition on site	no	no	no	no	
Lights	no	no	no	no	

## Lawrence Free State High School

	LFSHS Football	LFSHS Baseball	LFSHS Soccer	LFSHS Softball	LFSHS Tennis
Regulation field on site					
Practice on site					
Competition on site	no				
Lights	no		no	no	no


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## We Make It Happen®

### UPCOMING TELEVISED EVENTS

8/2 Reds vs. Nationals

### GLIAC and Musco Lighting Announce Partnership

The Great Lakes Intercollegiate Athletic Conference (GLIAC) and Musco Lighting are pleased to announce a new partnership agreement. Musco, a leader in sports lighting, is now the Official Lighting Partner of the GLIAC.

[Learn more](#)



### Musco's Newest Innovation...

**Light-Structure  
GREEN.**

**Still 5 Easy Pieces™**  
– from foundation to poletop –  
but with these major advantages:

#### For your budget

50% savings in operating costs

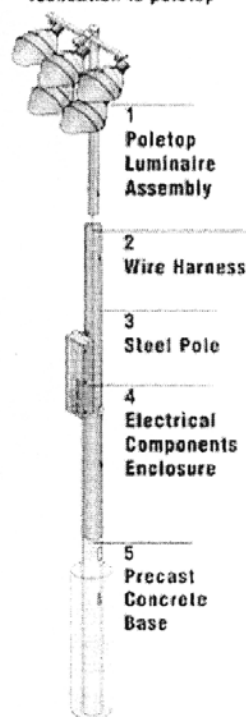
#### For the environment

50% reduction in offsite spill light  
Protects the beauty of the night skies

#### Unequaled performance

Built on 30 years of listening to  
our customer's needs

**5 Easy Pieces™**  
Designed and manufactured  
as a complete system from  
foundation to poletop



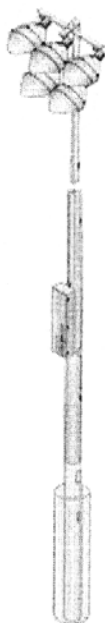
### Lighting projects made simple.

Our team is committed to making your lighting project a success. Musco's system approach makes sports lighting simple and



Happy Neighbors & Players

affordable to purchase, install and operate.



Effective environmental light control technology can help you keep neighbors and players happy, while reducing costs.

**Energy Savings**

Innovative solutions offer three simple ways to stretch your sports lighting energy dollars.

**Flexible Control,  
Solid Management**

Musco's new Control-Link® is a reliable, cost-effective system for controlling and managing your recreational facilities.

Specializing in the design and manufacture of sports floodlighting systems.

**800/825-6030**  
(1) 641/673-0411

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## Permanent Lighting

Keep neighbors and players happy  
while reducing costs



Musco's light control technology increases useable light on the playing surface while decreasing off-site spill light.

### Sports lighting systems can be cost-effective and environmentally sensitive

Planners and administrators of recreational facilities are often faced with the challenge of balancing the needs of their clients and the needs of their communities. This is most apparent when a lighted sports facility must meet community expectations of a good neighbor yet provide a cost-effective and superior playing experience for participants.

Lighting technology now allows both concerns to be addressed in a cost-effective manner. Learn more about how effective light control impacts:

#### Musco systems

- [Light-Structure Green™](#)  
A complete system from foundation to poletop that redirects wasted light onto the playing surface
- [Retrofit & Indoor Applications](#)  
The retrofit answer which redirects wasted light onto the playing surface

- [Community-friendly facilities](#)
- [Playability and safety](#)
- [Cost effectiveness](#)

You can also explore [success stories](#) regarding Musco's light control technology. Or [contact us](#) for more information.

### Community-friendly facilities

Choose sports lighting systems that **redirect wasted spill light, satisfy neighbors, and protect the night sky**

Communities continue to grow and require recreational opportunities. Lighting existing fields offers additional playing time for a fraction of the cost of developing new land. You want your



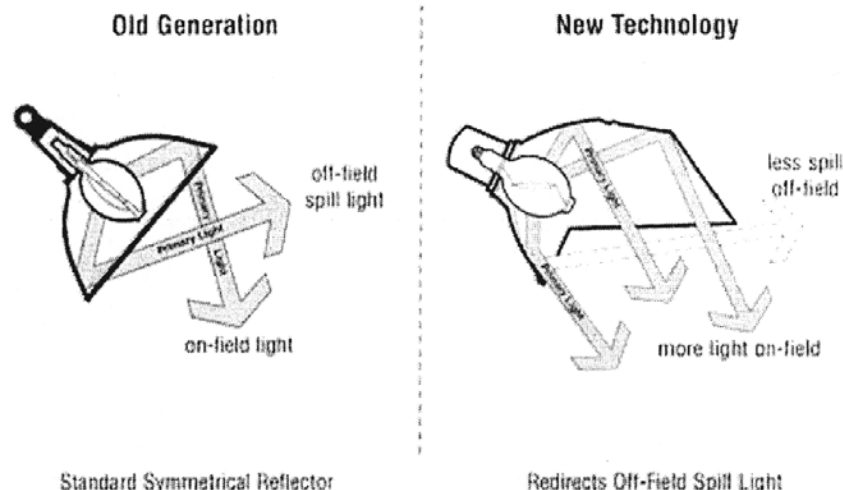
lighted facility to be a community asset, not a liability, now and for years to come.

Three keys essential to community approval of sports lighting are:

1. Keeping light on the field and away from neighboring properties (spill light)
2. Restricting light source visibility to comfortable levels (glare)
3. Maintaining the natural beauty of the night sky and stars (sky glow)

Musco provides:

- **Measurably reduced spill light** by redirecting potentially wasted light back onto the field
- **Improved neighbor and player satisfaction** by reducing glare that causes discomfort
- **Minimized sky glow**



#### Playability and Safety

**Specify measurable performance for the control of light** both on and off of the field. Seek written guarantees and on-site performance tests

You want to assure a superior playing experience for the people who use your facility. To do this, you'll need to provide the appropriate quantity (light levels) and quality (uniformity) of light on the playing surface. Both of these are important to a safe, well-lighted facility.

Lighting systems vary in their ability to control light on and off the field, with one usually sacrificed for the other. Look for a system which meets your spill and glare needs as well as provides a superior on-field experience for your players.

Musco provides:

- **More useable light on the playing surface** while decreasing off-site spill
- **Guaranteed performance** of both quantity and quality of light
- **Free lighting designs** that meet your specific participant, spectator and even television broadcast needs
- **Assistance** in developing written specifications to ensure the performance of your system

#### Cost Effectiveness

**Purchasing, installation, operating and maintenance costs are all relevant** when selecting a sports lighting system

You're going to use your sports lighting system for years to come. Decisions you make today will affect your budget and operating costs for the next 20 years.

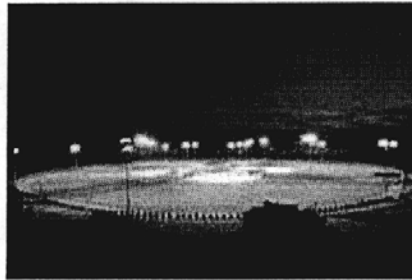
The more efficient the lighting system you choose, the fewer costs you will incur over the life of the system.

Because Musco's light control technology redirects wasted spill light onto the playing surface, Musco systems can provide up to 25 percent more light per fixture where it counts, on the field.

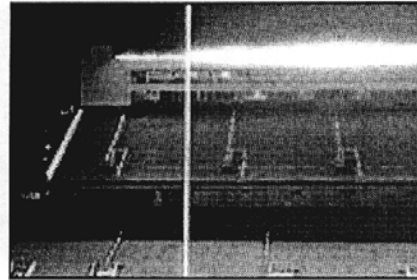
Musco provides:

- **Reduced energy costs** now and for the lifetime of your system
- **Fewer fixtures to buy and install** with no compromises in lighting quality or quantity
- **Fewer fixtures to operate and maintain** for the lifetime of your system

#### Success Stories



Belleville Softball Complex  
South Bend, Indiana



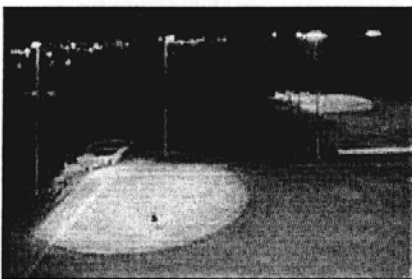
Boston College Alumni Stadium  
Boston, Massachusetts



Lockhart Stadium  
Home of Major League Soccer's  
Miami Fusion  
Ft. Lauderdale, Florida



Mankato East High School  
Mankato, Minnesota



Poway Community Park  
Poway, California



Rose Bowl  
Pasadena, California

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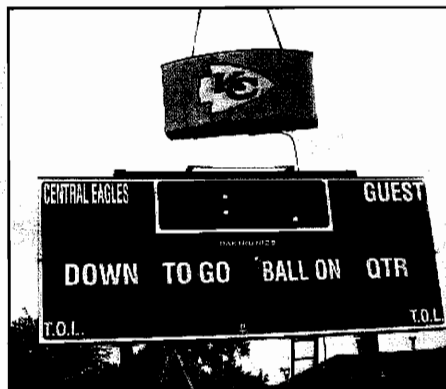
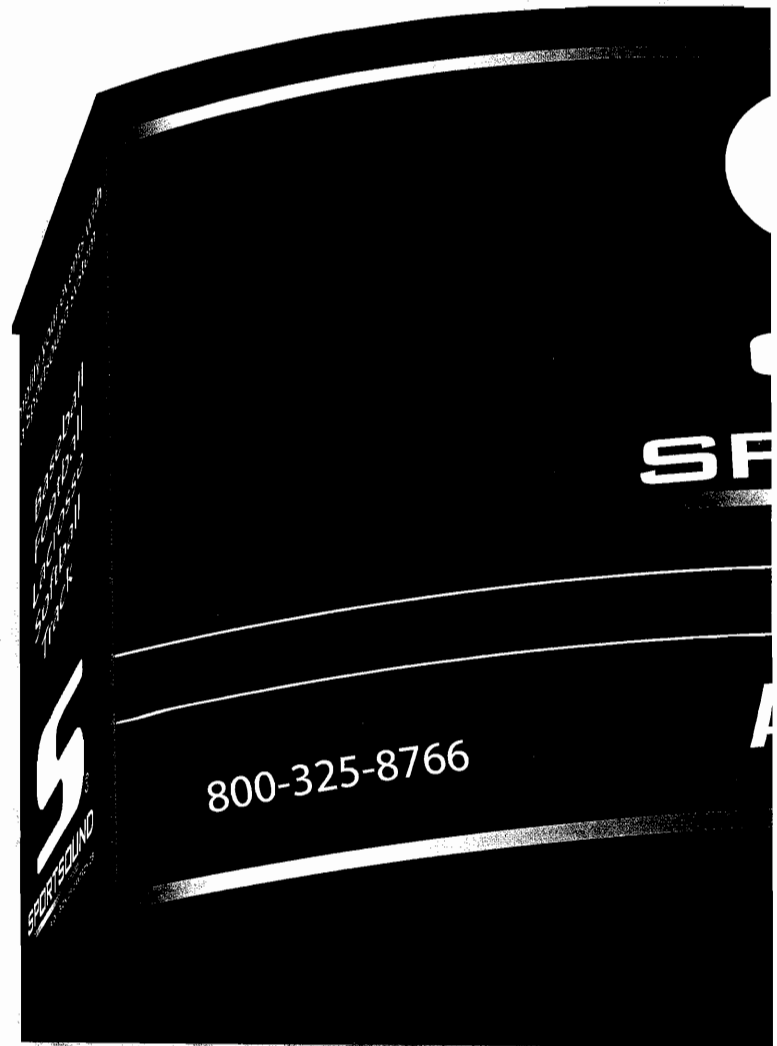




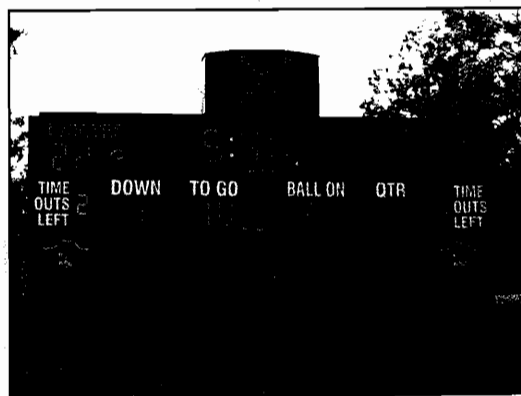
# Amplify your events with the Sportsound 1000



Sequoyah High School  
Canton, Georgia  
Sportsound 1000



Sportsound Installation



Branson High School  
Branson, Missouri  
Sportsound 1000



## Engineered for quality sound

As a division of Daktronics, Sportsound offers customers high-quality audio systems that can integrate with dynamic displays in indoor and outdoor sport venues. In fact, Sportsound has established itself as the finest contractor in the United States that can provide pre-manufactured, self-contained stadium sound systems. The refined engineering and unique installation convenience of the Sportsound 1000 audio system ensures high quality performance year after year.

## Professional installation

Customers get their needs for dynamic displays and integrated sound systems met from one manufacturer, which results in a smooth process from design to installation. If purchasing a Sportsound 1000 alone, Daktronics engineers are available for consultation on integration with the existing display system.



## Total integration



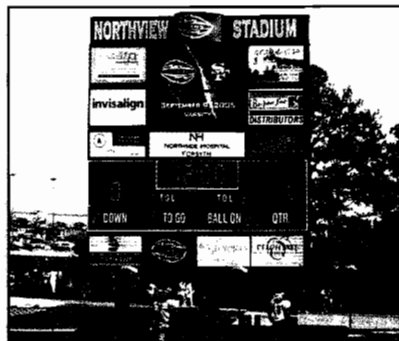
Wisconsin Lutheran College  
Milwaukee, Wisconsin  
Sportsound 1000

## Professionally designed system

The Sportsound 1000 is a sound system designed especially for high school facilities, smaller college football stadiums and municipal sports venues with seating capabilities up to 8,000. This system also works well for soccer, lacrosse, field hockey and track facilities. The Sportsound system provides a strong impact from day one and continues through years of quality sound performance.

## Training and support

From planning to training, the experienced and dedicated Sportsound team walks each customer through the entire sound system integration process. A Sportsound sales representative can assist in determining the sound system that will best suit the facility's needs. Customer support and technical assistance are available before and after installation.



Northview High School  
Duluth, Georgia  
Sportsound 1000



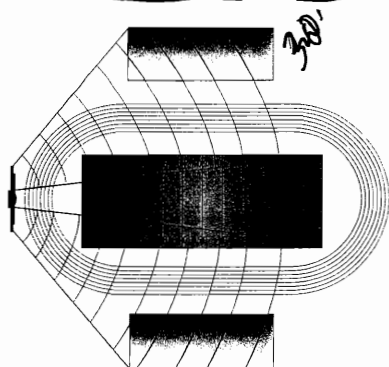
U.S. Naval Academy  
Annapolis, Maryland  
Sportsound 1000

SPORTSOUND.COM

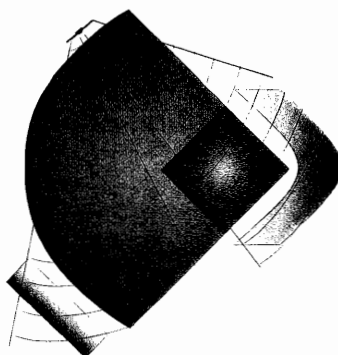
# Sportsound 1000 Series models

## 1000 Series Standard

The Sportsound 1000 standard directs sound both left and right, off-center, making it the ideal solution for venues with split seating, such as football and track stadiums, soccer complexes and many baseball fields.



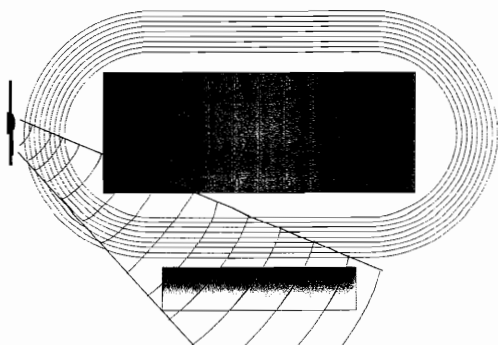
Overhead football stadium view



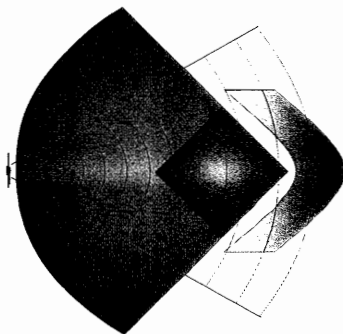
Overhead baseball field view

## 1000 Series 60 adjustable (single horn)

The Sportsound 1000 60 adjustable is designed to produce dynamic sound for single seating area facilities including football, baseball and track venues.



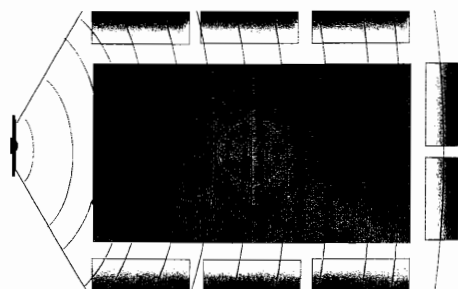
Overhead football stadium view



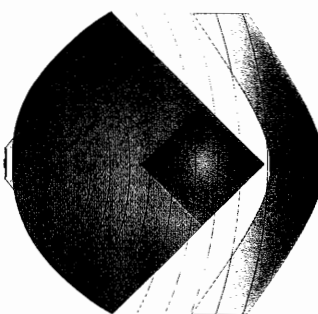
Overhead baseball field view

## 1000 Series 120 center (duo-horn)

The Sportsound 1000 120 center produces smooth, even coverage throughout the facility. This model brings dynamic sound to fans surrounding the entire playing area of full-time track facilities, soccer complexes and venues with one large grandstand.



Overhead soccer field view



Overhead baseball field view

### Series Specifications

Power Requirements:  
Two dedicated 20 amp  
120 V circuits

Cabinet Dimensions:  
Height = 48"  
Width = 96"  
Depth = 48"

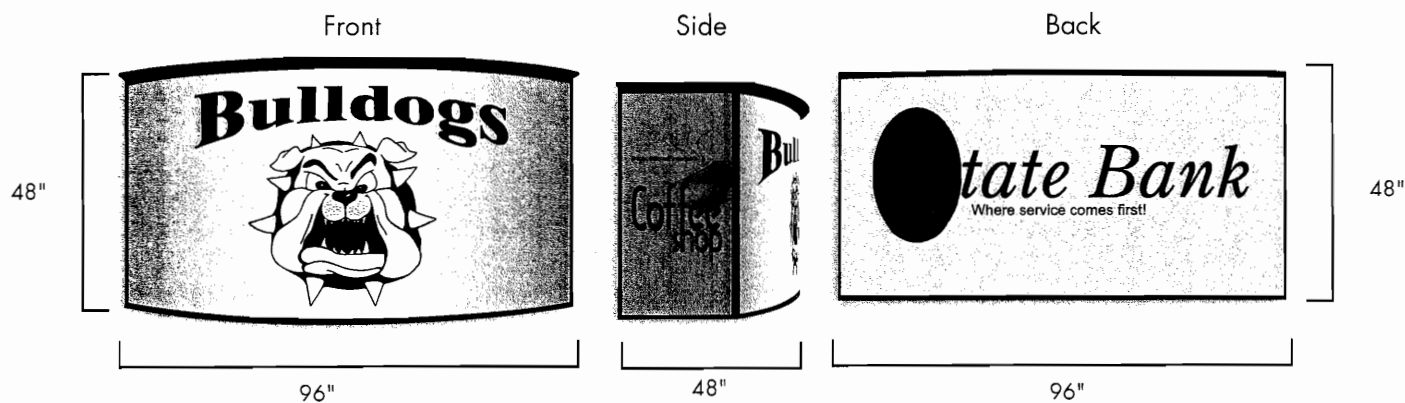
Approximate weight:  
1100 lb (499 kg)



# Custom graphics

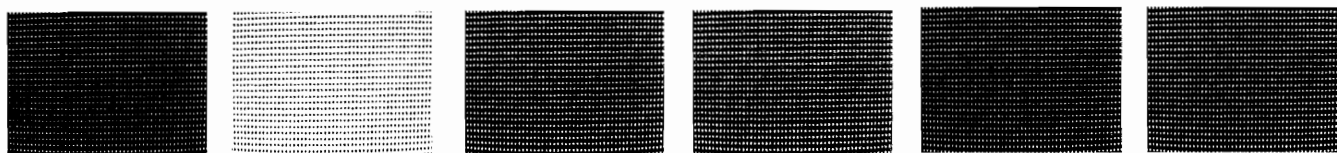
## Advertising advantages

Advertisements can be placed on all four sides of the Sportsound 1000 cabinet as shown below. Sponsorship of logo panels helps organizations fund a Sportsound 1000 audio system installation and can also be a great sales tool for sponsors.

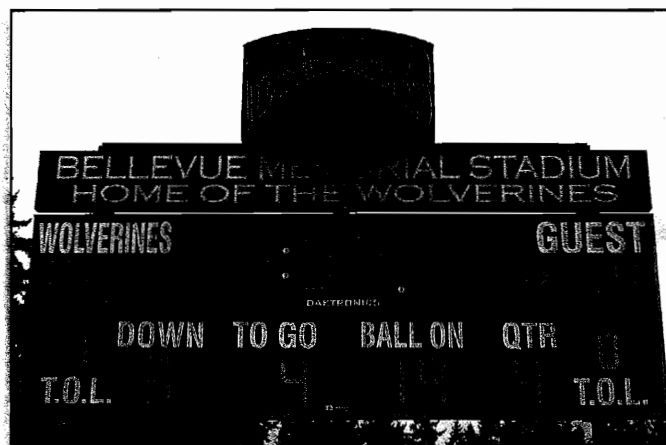


## Mesh examples

While allowing sound to easily flow through the mesh front grille, rain and snow are kept away from the Sportsound 1000's high quality components. The mesh grille is available in virtually any color.



Topeka Public Schools (Hummer Sports Complex)  
Topeka, Kansas  
Sportsound 1000



Bellevue High School  
Bellevue, Washington  
Sportsound 1000

# Powerful and portable

## Outstanding clarity and deep bass

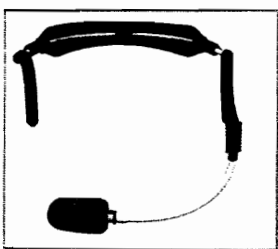
Sportsound 1000 consists of two self-contained main components; the speaker cabinet and the portable announcer's rack, each of which are fully assembled and tested before shipping. The cabinet houses weather-resistant, integrated speaker modules with premium energy efficient amplification equipment and digital sound processing. This quality ensures clear sound and intelligible speech. The Sportsound 1000 comes complete with the following:

- On-site training
- Installation supervision
- Warranty
- Speaker cabinet with:
  - A choice of more than 150 colors for the speaker cabinet
  - Applied vinyl graphics for sides and back
  - Weather resistant aluminum clad
  - Acoustically transparent printed mesh grille on front
  - Self diagnostic indicators
- Portable announcers rack complete with commercial grade components:
  - Eight channel microphone/line audio mixer
  - Professional CD playback deck and MP3 connection
- Accessories:
  - Accessory case
  - Wired low noise microphone with on/off switch
  - Desk mic stand
- Interconnection cable (up to 1000 feet)

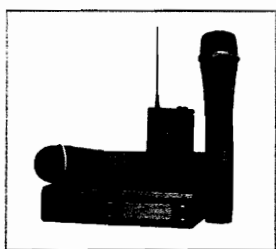
## Enhancements and options

Sportsound 1000 options:

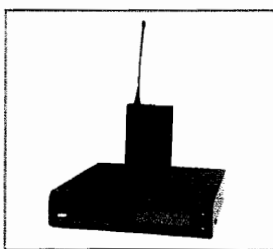
- Wireless handheld microphone system
- Wireless referee/headset microphone system
- Wireless in-ear monitor system for on-field talent
- FM Assistive Listening radio system
- Trailer mounted system powered by a low noise generator



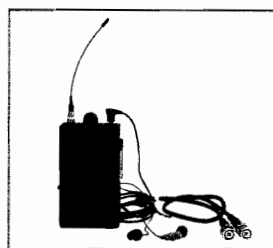
Referee headset



Handheld wireless microphone system



FM radio system



Wireless in-ear monitor system



Portable announcer's rack (front)



Portable announcer's rack (back)  
Dimensions: 18" x 22" x 23"  
Approximate weight: 65 lb

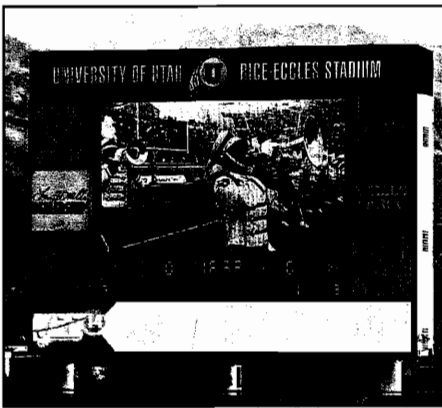
## Schedule a demonstration

A powerful sound system can make a lasting impression. Contact Sportsound to schedule a complete, on-site Sportsound 1000 demonstration. An experienced and knowledgeable sales representative can help determine the proper sound solution for any facility. Call **800-325-8766** or log onto **[www.sportsound.com](http://www.sportsound.com)** for more information.

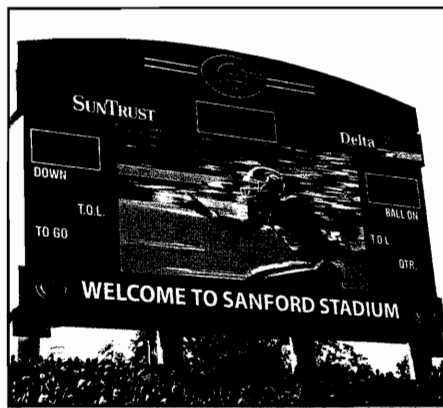


Sportsound 1000 trailer mounted option with onboard generator

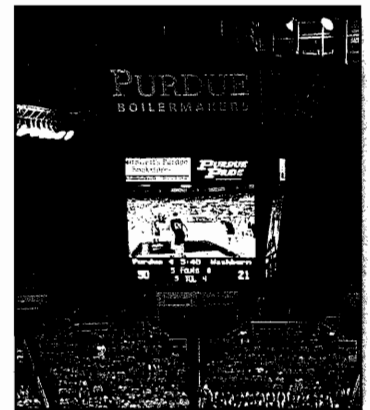
[www.sportsound.com](http://www.sportsound.com)



University of Utah  
Salt Lake City, Utah  
Sportsound custom series



University of Georgia  
Athens, Georgia  
Sportsound custom series



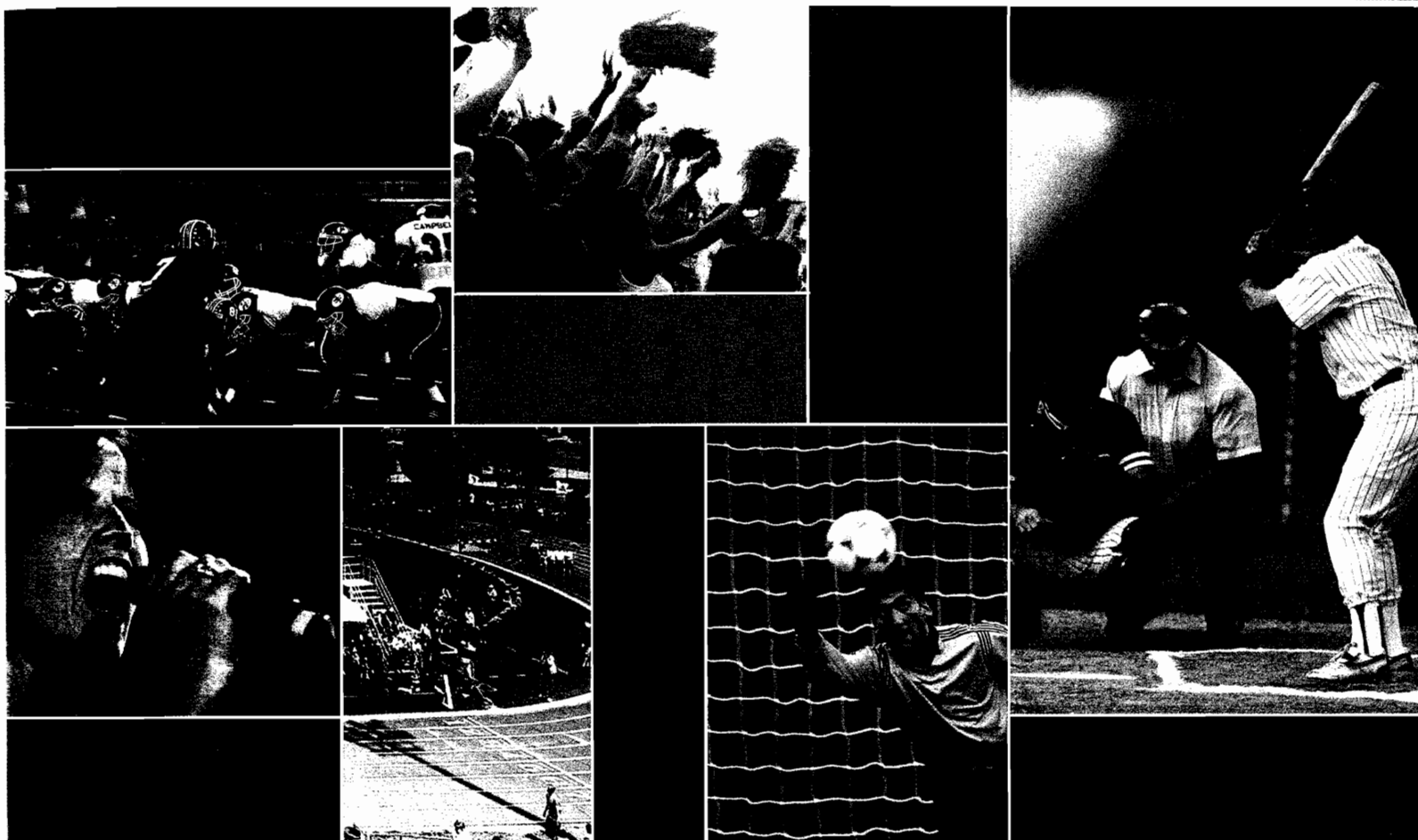
Purdue University  
West Lafayette, Indiana  
Sportsound custom series

## Sportsound Custom Systems

When sound needs to reach every part of a facility, Sportsound can provide a custom designed solution for use in indoor arenas, auditoriums and large outdoor stadiums. A Sportsound consultation includes a detailed site survey to determine acoustic characteristics, physical dimensions and desired operation modes of the system. The Sportsound design team then determines the best speaker selection and placement to achieve the desired coverage throughout the facility. Complete system installation and comprehensive testing by the Sportsound professional team will ensure that the system is installed and operating as expected.



**SPORTSOUND**  
A DIVISION OF DAKTRONICS



# Sportsound<sup>®</sup> 1000

Total Audio System



**DAKTRONICS**



Civil Engineering  
Landscape Architecture  
Community Planning  
Surveying

---

## Landplan Engineering, P.A.

1310 Wakarusa Drive  
Lawrence, Kansas 66049

tele 785.843.7530  
fax 785.843.2410  
email [info@landplan-pa.com](mailto:info@landplan-pa.com)

Sheila M. Stogsdill  
Assistant Planning Director  
City of Lawrence, Douglas County  
Planning & Development Services Department  
City Hall, 6<sup>th</sup> East 6<sup>th</sup> Street  
Lawrence, Kansas 66044-0708

August 18, 2008

RE: Lawrence High School  
Free State High School  
Virtual School

The following are responses to comments received on August 15, 2008 to the above referenced projects for the Special Use Permit.

### Lawrence High School Review Comments

- Where is main entrance to each of the competition facilities? Would be helpful to see diagram that illustrates the pedestrian travel patterns anticipated on-site. Need for sidewalk connections to 19<sup>th</sup> Street and along parking areas to provide safe pedestrian travel that does not force everyone to walk through parking lots. **(See Plan for Location of Entrance to each Sport Field)**
- What is height of bleachers at softball fields **(Varies between 10' and 12' depends on Manufacture see plan)**
- What happens to storm pipe on west side of softball field – any connection to west through 20<sup>th</sup> Street r/w or does it all drain to the east **(Proposed Storm sewer system connects to existing 48" Storm sewer under 21<sup>st</sup> Street)**
- Dimension from west property line to football bleachers does not match cross section **(Both plan and section match at 58')**
- Site plan shows separate restroom/concession buildings at the north and south ends of the football bleachers, but photos provided indicated the restroom/concession area would be underneath the bleachers (integral with stands) **(Option one would provide restroom/concession building under the grandstand. Option two as shown would provide a free standing restroom/concession stand. Option two was shown because of the greatest amount of impervious pavement)**
- Label [Proposed Restroom/Concession] at southwest end of football field points to nothing **(Removed)**
- Label [Existing Astroturf Softball Field] should be removed – this improvement was not part of SP-06-43-08 approval (only Astroturf for football field was approved) **(Updated Noted)**
- Existing concession building for tennis courts is shown at edge of new parking lot – is it remaining? If so, for what purpose. **(Existing Use Storage Building remains)**

- What is height of all new lighting? Wattage for light fixtures not provided. Hours for outdoor lighting not provided. Needs to be noted on plan. Need photometric plan (**See Photometric Plan**)
- Decibel levels not provided for proposed sound system (?)
- Notes regarding previous Variances approved for southern parking lots should include case number (B-10-35-05) and do not need to reference the zoning code sections (old code). Case number should also be added to General Notes 12 – 14. (**Updated Notes**)
- Floating notes on south side of 21<sup>st</sup> and east side of Louisiana (2 locations) state that existing sidewalks will be replaced to meet current code width requirements 'with future work' --- seems like these proposed improvements warrant that improvement now (**Sidewalk repaired as needed**)
- Note [existing greenhouse to be removed] and leader line south of existing science addition should be deleted since that occurred with the science addition construction (**Updated plan**)
- Proposed concession building northwest of proposed soccer field does not include water or sanitary sewer connections (**Shown on site plan**)
- Landscape schedule does not match plan (number of trees) (**Updated**)
- Plan does not match cross section at west property line (two rows of trees not shown on plan) (**Updated to show existing trees and proposed trees**)
- Type 3 bufferyard required along perimeters; requires a mix of shrubs and trees. Plans do not indicate any shrubs; if alternative compliance is proposed, applicant must request and propose justification. (**USD to request alternative compliance**)
- Label indicates proposed 3' berms along new parking lots along 21<sup>st</sup> Street, but no grading shown – how will this work (**Plans updated**)
- Around entire perimeter of site, the adjacent property zoning districts are incorrect (old code instead of new district labels) (**Updated plans**)
- General Notes 1, 5, 11 all need revision because of old code references (**Updated notes**)
- Do not understand the required parking calculation. NSF does not match NSF cited above (General Notes 4 & 5) (**Used requested for last site plan with a breakdown of NSF. Following required previous site plan request**)
- Parking requirements in Development Code would be ratio of teachers/staff + ratio of students + outdoor sports & recreation, participant ratio in 20-902 OR proposal to use Schedule D in 20-905 for community recreation use – applicant study required to be submitted to Planning Director for review. This study should assist staff in evaluating assumptions about multiple uses on site and reference attendance records from previous seasons for anticipated spectators. [What were number of spectators at home games at Haskell?]

- What is provision for fly balls from softball field ending up in residential yards to west or south? Is backstop shown? **(Softball Fence to Property line is 75 feet, the required distance between fields is between 120 feet to 140 feet from foul line to foul line for multi-field complex. This is from Time saver Standards for Landscape Architecture.**
- What is provision for soccer balls that might end up in adjacent parking lots to the east, south and west? **(A four foot fence shall be on all sides of the fields and on the east and west side shall be a 30' screen fence provided during the regular season.)**
- It would be helpful to be able to show examples of other football stadiums that have been built within 50' of residential yards to demonstrate that what is being proposed has been developed in other communities. **(Enclosed)**
- What provisions are being made for litter control (especially along areas adjacent to the residential lots on the west and south? **(Litter shall be pick up as needed)**
- Traffic and downstream sanitary sewer reviews **(Both documents provide on the requested date July 30, 2008 to your office)**

**08/14/08 -- Unresolved Issues or Additional Info needed:**

**Lawrence Virtual School/Centennial –**

- Legal description is incomplete; three platted lots in Meadows Acres AND unplatted tracts in 1-13-19 **(Updated)**
- Existing utility easement with existing sanitary sewer along west property line not shown **(Updated)**
- Bufferyard and screening required along perimeters; landscaping along west and north sides not shown **(Retaining wall provided)**
- Label indicates proposed 3' berm along new parking lots along Greever Terrace, but no grading shown – how will this work **(Updated)**
- Height and wattage for new lights not provided; hours of operation; photometric plan **(See Photometric Plan)**
- No detail provided for tennis bleachers, height? **(Updated plans)**
- No note regarding type/height of fencing used to keep tennis balls inside courts **(Updated plans)**
- No dimension from baseball bleachers to south property line **(Updated plans)**
- What type of fencing will be installed to manage baseball field? Balls into Louisiana? **(Six foot outfield fence. The distance from home plate to back of curb is 406 feet.)**

- Off-site grading shown along south property line. Will need permission from adjacent property owner. **(Updated grading plan to stay on school property)**
- Perimeter sidewalks are not labeled. If width does not meet code, will need to be upgraded with these improvements **(Existing sidewalk repair as needed)**
- Two existing curb cuts along Louisiana Street (south of school entrance) need to be closed and aprons removed with this project **(Existing curb shall remain)**
- Relocated force main will require dedication of utility easement **(shall be dedicate by separate instrument with approved public improvement plans)**
- What happens to the surface between the school building and the rebuilt parking lot? Plan shows trees at east end; is area between lot and building to be turf? **(Existing surface is asphalt paving shall remain asphalt pavement)**
- Need sidewalks along Virginia Street to provide safe pedestrian connection between LHS and this site **(Owner notified)**
- Note 15 indicates existing tree protection; should be illustrated on a separate landscape sheet **(Existing trees not in the construction zone. If trees are in construction zone shall be protected per city standard)**
- Landscape schedule does not match plan (number of trees) **(Updated)**
- Street trees required to fill in along Louisiana Street and along Greever Terrace in front of tennis courts **(Shown)**
- No sewer or water connection shown for new concessions stand **(Updated plan)**
- No dimensions for tennis courts to perimeter property lines provided **(Updated)**
- Vicinity map is incorrect **(Updated)**
- Parking information does not recognize school usage (JoCo classes in building) **(?)**
- Traffic and downstream sanitary sewer reviews **(Both documents provide on the requested date July 30, 2008 to your office)**

### Free State High School

- Legal description is incomplete; property includes unplatted tract **(Updated)**
- Landscape schedule does not match plan (number of trees) **(Updated)**
- Label indicates proposed 3' berm along new parking lots along Overland Drive, but no grading shown – how will this work **(Updated)**



- No landscaping shown along perimeter (including street trees); bufferyard requirements (?)
- Parking summary does not include school requirements (?)
- Note 12 indicates existing tree protection; should be illustrated on a separate landscape sheet (?)
- No information regarding height or wattage of lights; hours of operation; photometric plan **(See Photometric Plan)**
- Decibel levels not provided for proposed sound system
- Plans indicate restroom/concessions below football field stands AND separate restroom/concession buildings at each end of stands? Additional building shown at north end of east side of field (not labeled, appears to be existing storage building, is it to remain) Several other existing buildings are not labeled on plan **(Option one would provide restroom/concession building under the grandstand. Option two as shown would provide a free standing restroom/concession stand. Option two was shown because of the greatest amount of impreviuos pavement)**
- Pedestrian connections to soccer fields? **(Shown)**
- Dimensions to perimeter property lines along north? **(Updated Plan)**
- Dimensions of new parking lot to west and south property lines? **(Updated Plan)**
- Pedestrian connections from new parking lot to activity areas to the north so that they are not walking in vehicular drive aisles? **(Sidewalk provided on north side of parking lot and large center area)**
- Plan shows softball and baseball fields with Astroturf as existing (not clear that this was approved with previous site plan – seemed to limit it to only football field – need to check with Paul) **(Updated Plan)**
- Traffic and downstream sanitary sewer reviews **(Both documents provide on the requested date July 30, 2008 to your office)**

If needed, please call me at 785-843-7530 to schedule an appointment to review any comments and answer any questions regarding these responses.

Sincerely,

C.L. Maurer, RLA, ASLA  
Landplan Engineering, P.A.

**Addendum  
to  
Traffic Impact Data  
for  
Proposed  
Lawrence High School Track & Field Expansion  
(West of Louisiana Street, Between 19<sup>th</sup> Street & 21<sup>st</sup> Street)**

City of Lawrence,  
Kansas

Prepared  
for  
Landplan Engineering, P.A.



Mehrdad Givechi, P.E., P.T.O.E.

July 2008

## **Project Description**

USD 497 is proposing to make improvements to the track and fields at the Lawrence High School site. The site is located west of Louisiana Street, between 19<sup>th</sup> and 21<sup>st</sup> Streets. These improvements would consist of the following components:

- The existing soccer field will be re-graded at its current location and will have new astro-turf installed. The capacity of bleachers will remain at its current number of 100 seats.
- The existing 8 tennis courts, located west of the soccer field, will be removed and relocated to a different site (one block south of its current location at the Virtual High School site). A new parking lot with 277 parking spaces will be constructed at this location having access onto 21<sup>st</sup> Street in line with Virginia Street to the south. This can be achieved by relocation of existing access drive approximately 15' to the east.
- The existing parking lot on the northwest corner of Louisiana Street & 21<sup>st</sup> Street will be expanded west to provide for 123 additional spaces. The access on 21<sup>st</sup> Street will remain at its current location, but the access on Louisiana Street will be relocated approximately 25' to the north.
- The track and football field will be moved approximately 50' to the west and will have new astro-turf and bleachers installed. The capacity of bleachers will increase from 500 to 4000 seats. It is anticipated that the frequency and type of activities for this field will remain unchanged with addition of bleachers providing accommodation for current spectators.
- A new softball field will be constructed south of the existing track, where currently used for band practices. The capacity of bleachers will remain at its current number of 200 seats. This facility will be served by newly proposed parking lots mentioned above.

Sports activities for Lawrence High School's calendar year 2008 are summarized in Appendix. As shown on this calendar, critical peak period for concurrent activities (football, soccer and tennis) will be from 3:00 to 9:00 p.m. of a typical weekday.

Proposed improvements as mentioned above will eliminate tennis activities from the site and replace them with softball activities.

## **Evaluation Of Existing Operating Conditions**

At the time this study was conducted (summer 2008), school was not in session and both Louisiana Street and 19<sup>th</sup> Street around the site were under construction causing traffic flow around the site to be skewed and not representative of normal conditions. It is, therefore, not feasible to evaluate existing operating conditions at this time.

## **Trip Generation**

The trip generation of a proposed land development project is typically estimated using trip generation rates from *Trip Generation Manual, 7<sup>th</sup> Edition* (Institute of Transportation Engineers, 2003). However, *Trip Generation Manual* does not provide trip generation information for a sports complex such as the proposed site having track, football and softball fields, but does provide data for “Tennis Courts” (ITE Land Use Code 490) and “Soccer Complex” (ITE Land Use Code 488). In order to estimate “**net change**” in number of trips generated as the result of proposed improvements to this site, available trip rates from both *Trip Generation Manual* and trip generation studies performed by Fehr & Peers Associates in October 2000 (with assumptions related to the number of players, coaches, officials, and average vehicle occupancy) were utilized with results summarized below (See Appendix for detail information on the rates by Fehr & Peers Study):

### **Trip Reductions (8 Tennis Courts @ 3.88 trip-ends/court)**

- On average, 31 trip-ends (18 inbound and 13 outbound) during the afternoon peak-hour of a typical weekday.

### **Added New Trips (1 Softball Field @ 20 trip-ends/game)**

(Assuming each game lasting at least one hour, the rate mentioned for this type of activity can be used for the peak-hour.)

- On average, 20 trip-ends (20 inbound and 0 outbound) during the afternoon peak-hour of a typical weekday.

Review of the results indicates that there may potentially be an insignificant reduction in number of trips generated as a result of this improvement. It is, therefore, concluded that no new trips are added to the street network as a result of the proposed improvements.

# **APPENDIX**

- Lawrence High School Sport Events' Schedule
- Trip Generation Rates for Similar Sport Events Conducted by Fehr & Peers Associates, 2001, for City of Lodi, California

# Lawrence High School - August 2008

Sun	Mon	Tue	Wed	Thur	Fri	Sat
	28 Band 7-9:30am	29 Band 9-12:00	30 Band Practice 8-3:30	31 Band 8-3:30	1 Band 8-3:30	2 Band 8-12:00
3	4 Band 8-3:30	5 Band 8-3:30	6 Band 8-3:30	7 Band 8-3:30	8 Band 8-3:30	9
10	11	12 Band 6-8pm	13	14 Band 2-3pm	15 Band 2-3pm	16
17	18 First Day Fall Practices Band 2-3pm FB - 21st St 3-4pm Soccer - Holcom Tennis - LHS Courts	19 Band 2-3pm 6-8pm FB - 3-9pm Soccer - Holcom Tennis - 3-6pm	20 Band 9:35-11:05 FB 3-9pm	21 Band 1-2:30 FB 3-9pm	22 Band 2-3pm FB - 3-9pm	23 FB - 8-12:00
24	25 Band 2-3pm FB - 3-6	26 Band 2-3pm 6-8pm FB - 3-6	27 Band 8-9am FB - 3-5 Jamboree	28 Band 1-2:30 FB 3-6	29 Band 2-3 FB 3-6	30 FB 8-12:00
31						

# Lawrence High School - September 2008

Sun	Mon	Tue	Wed	Thur	Fri	Sat
	1 Band 2-3pm FB 3-6	2 Band 2-3pm 6-8pm FB 3-6	3 Band 2-3pm FB 3-6	4 FB-Soph-Away 4:15-5:30 Band 2-3pm FB 3-6	5 FB-V-Away 4:15-5:30 Band 2-3pm	6 FB-JV-Home 10:00-10:30 LHS
7	8 Band 2-3pm FB 3-6	9 Band 2-3pm 6-8pm FB 3-6	10 Band 4:35-11:05 FB 3-6	11 FB-Soph-Home 4:15-5:30 Band 1:10-2:35 FB 3-6	12 FB-V-Home 7:30-8:30 Band 2-3pm	13 FB-JV-Away 10:00-10:30 SMC
14	15 Band 2-3pm FB 3-6	16 Band 2-3pm 6-8pm FB 3-6	17 Band 9:35-11:05 FB 3-6	18 FB-Soph-Home 4:15-5:30 Band 1:10-2:35 FB 3-6	19 FB-V-Home 7:30-8:30 Band 2-3pm	20 FB-JV-Away 10:00-10:30 SMC
21	22 Band 2-3pm FB 3-6	23 Band 2-3pm 6-8pm FB 3-6	24 Band 8-9am FB 3-6	25 FB-Soph-Away 4:15-5:30 Band 1:10-2:35 FB 3-6	26 FB-V-Away 7:00-8:00 Band 2-3pm	27 FB-JV-Home 10:00-10:30 LHS
28	29 Band 2-3pm FB 3-6	30 Band 2-3pm 6-8pm FB 3-6				



# Lawrence High School - October 2008

Sun	Mon	Tue	Wed	Thur	Fri	Sat
			<sup>1</sup> FB-Soph Home 4:15 LHS Band 9:35-11:05 FB 3-6	<sup>2</sup> FB-V-Home-7:30 Haskell Band 1:10-2:35 FB 3-6	<sup>3</sup> FB-JV-AWAY 4:15 ON Band 2-3pm FB 3-6	
5	<sup>9</sup> Band 2-3pm FB 3-6	<sup>7</sup> Band 2-3pm 6-8pm FB 3-6	<sup>8</sup> Band 9:35-11:05 FB 3-6	<sup>9</sup> FB-Soph AWay 4:15 OS Band 1:10-2:35 Tennis-Regional LHS Host 8-6pm FB 3-6	<sup>10</sup> FB-V-AWAY-7:00 OBAC Band 2-3pm	<sup>11</sup> FB-JV-Home-10:00 LHS
12	<sup>13</sup> Band 2-3pm FB 3-6	<sup>14</sup> Band 2-3pm 6-8pm FB 3-6	<sup>15</sup> Band 2-3pm FB 3-6	<sup>16</sup> FB-Soph Home 4:15 LHS Band 2-3pm FB 3-6	<sup>17</sup> FB-V-Home-7:30 Haskell Band 2-3pm	<sup>18</sup> FB-JV-AWAY-10:00 ONV Tennis- State-AWAY
19	<sup>20</sup> Band 2-3pm FB 3-6	<sup>21</sup> Band 2-3pm 6-8pm FB 3-6	<sup>22</sup> Band 2-3pm FB 3-6	<sup>23</sup> FB-Soph Home 4:15 LHS Band 2-3pm FB 3-6	<sup>24</sup> FB-V-Home-7:30 Haskell Band 2-3pm	<sup>25</sup> FB-JV-AWAY 10:00 FS
26	<sup>27</sup> Band 2-3pm FB 3-6	<sup>28</sup> Band 2-3pm 6-8pm FB 3-6	<sup>29</sup> Band 8-9am FB 3-6	<sup>30</sup> FB-Soph AWay 4:15 LHS Band 1:10-2:35 FB 3-6	<sup>31</sup> FB-V-AWAY-7:00 LHS Band 2-3pm	

# Lawrence High School - November 2008

Sun	Mon	Tue	Wed	Thur	Fri	Sat
						1
2	3 FB 3-6	4 FB 3-6	5 Band 9:35-11:05 FB 3-6	6 Band 1:10-2:35 FB 3-6	7 FB-V-Playoff	8
9	10 FB 3-6	11 FB 3-6	12 Band 9:35-11:05 FB 3-6	13 Band 1:10-2:35 FB 3-6	14 FB-V-Playoff	15
16	17 FB 3-6	18 FB 3-6	19 Band 8-9 FB 3-6	20 Band 1:10-2:35 FB 3-6	21 FB-V-Playoff	22
23	24 FB 3-6	25 FB 3-6	26 FB 3-6	27 FB 8-12	28 FB 8-12	29 FB-V- Away
30						

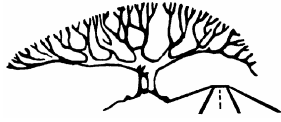
### Trip Generation – Scenario 1 (Weekday P.M. Peak Hour)

Individual Use	Amount	Scenario 1 (Typical Weekday P.M. Peak Hour Activities)				Notes
		Trip Rate	Inbound Trips	Outbound Trips	Total Trips	
Youth Soccer Games	8 games	23 inbound trips/game <sup>1</sup>	184	0	184	Games begin at 5:30 p.m.
Youth Soccer Practice	10 teams	8 inbound trips/team <sup>2</sup>	80	40	120	15 players @ 2.5 players per vehicle
Basketball Leagues / Practices	100 players	0.40 inbound trips/player <sup>2</sup>	40	20	60	2.5 players per vehicle
Swimming/Water Polo Practices	Not Applicable <sup>3</sup>		71	65	136	See footnote (3) below
Ice Hockey	Not Applicable <sup>4</sup>		44	45	89	See footnote (4) below
Adult Softball	9 games	20 inbound trips/ game <sup>5</sup>	180	0	180	Games begin at 6:00 p.m.
Tennis Courts	9 courts	3.88 total trips/ court <sup>6</sup>	20	15	35	All nine courts used
Weight Room/ Training Center	50 persons	0.80 total trips/ person	20	20	40	1.25 persons per vehicle
Offices	25 employees	0.46 total trips/ employee <sup>6</sup>	2	10	12	--
Medical Clinic	34 ksf	3.66 total trips/ ksf <sup>6</sup>	33	91	124	--
Retail	48 ksf	2.59 total trips / ksf <sup>6</sup>	53	71	124	--
Hotel	420 occ. rooms <sup>7</sup>	0.61 total trips / room <sup>6</sup>	136	120	256	--
Gross Trips			863	497	1,360	--
Internal Trips <sup>8</sup>			- 50	- 50	- 100	--
External Trips			<b>813</b>	<b>447</b>	<b>1,260</b>	--

Source: Fehr & Peers Associates, 2001.

**Notes:**

1. Based on attendance of 68 persons per game (for 16 & under game) as observed at Blaine Minnesota Sports Complex with average of 3 persons per vehicle.
2. 50 percent of parents assumed to depart site after dropping off children for practice.
3. Based on October 24, 2000 trip generation study by Fehr & Peers at Roseville Aquatics Complex. During the count period, simultaneous swimming and water polo practices were held.
4. Based on October 24, 2000 trip generation study by Fehr & Peers at Roseville Skatetown. During the counts, one rink was used for youth hockey practice and the other rink was used for "free skating".
5. Based on attendance of 30 persons per game (players, spectators, referees) with average of 1.5 persons per vehicle.
6. Based on trip generation rates for Tennis Courts (Code 491), General Office (Code 710), Medical- Dental Office Building (Code 720), Specialty Retail Center (Code 814), and Hotel (Code 310) from *Trip Generation*, ITE, 1997.
7. 70 percent of the 600 rooms (i.e., 420 rooms) assumed to be occupied for analysis purposes consistent with occupancy rates in other hotels/motels in Lodi.
8. 10 percent of outbound trips from individual uses assumed to remain within the site (e.g., trips from the medical clinic to the hotel).



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August 12, 2008

Philip E. Ciesielski, P.E.  
Utility Engineer  
City of Lawrence Utility Department  
P.O. Box 708  
Lawrence, KS 66044

RE: Lawrence High School Sports Facility (SUP)

Mr. Ciesielski:

The letter references the proposed site improvements to the Lawrence High School site located west of Louisiana Street and south of 19<sup>th</sup> Street. The proposed improvements to the site will include construction of several artificial turf and synthetic field grass sports fields, bleachers, a concession stand, and bathroom facilities. The events at these proposed facilities will mainly occur when school is not in session and when it is not raining. This should result in no additional sanitary sewer flow to the downstream system during times of peak wastewater flow.

Please call me at (785) 843-7530 if you have any questions or comments regarding this letter.

Sincerely,

Christopher M. Storm, P.E.  
Landplan Engineering, P.A.



## Lawrence, Kansas

NOTE:  
1. PER SECTION 20-1103(e)(3), THE BALL FIELD LIGHTS MAY NOT BE

DATE:	08.21.08
PROJECT NO.:	2007,650.11
DWG ID:	076501p- <i>Lawrence Height</i>
DESIGNED BY:	LPE
DRAWN BY:	LPE
CHECKED BY:	CLM
SHEET NO.	

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**Civil Engineering**  
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1600 Genessee, Suite 400  
Kansas City, Missouri 64102  
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fax (816)221-2644  
email: [kclandplan@andplan-pa.com](mailto:kclandplan@andplan-pa.com)

# LAWRENCE HIGH SCHOOL SPORTS COMPLEX LIGHTING PLAN LAWRENCE, KANSAS

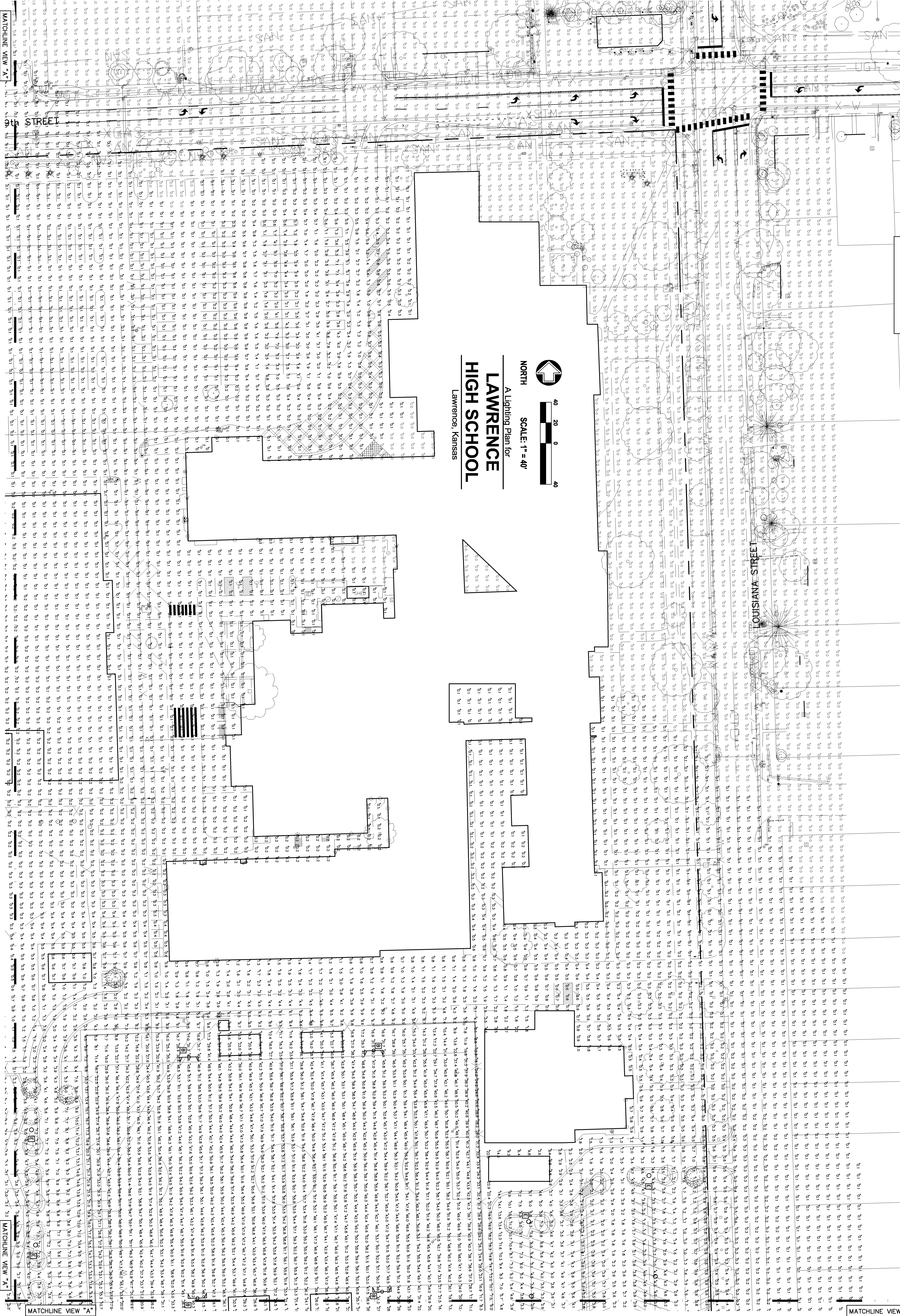


NOTE:  
1. PER SECTION 20-1103(G)(3), THE BALL FIELD LIGHTS MAY NOT BE  
ILLUMINATED AFTER 11:30pm

VIEW "B"

  
NORTH  
SCALE: 1" = 40'  
40 20 0 40

A Lighting Plan for  
**LAWRENCE**  
Lawrence, Kansas

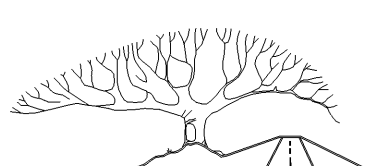


**LAWRENCE HIGH SCHOOL  
SPORTS COMPLEX  
LIGHTING PLAN  
LAWRENCE, KANSAS**

Civil Engineering  
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REVISIONS

DATE: 08/21/08  
PROJECT NO.: 2007-069-11  
DRAWING: Landscape-Engineering  
DESIGNED BY: LPE  
CHECKED BY: CLM  
DRAWN BY: CLM

SHEET NO. 2 OF 4 SHEETS



Civil Engineering  
Landscape Architecture  
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Sheila M. Stogsdill  
Assistant Planning Director  
City of Lawrence, Douglas County  
Planning & Development Services Department  
City Hall, 6<sup>th</sup> East 6<sup>th</sup> Street  
Lawrence, Kansas 66044-0708

August 21, 2008

RE: Lawrence High School  
Free State High School  
Virtual School

Sheila,

At our meeting on Tuesday August 18, 2008 I provided to you copies of aerial photographs of area school for seating and parking and relationship to the property line. The following is more information on the schools with the seating of the football grandstands and the parking on site for each school.

Springhill Kansas High School  
Grandstand seating 1200 Home 600 Visitors  
Parking Lot – 600 Cars  
Use for High School Graduation also.

Seaman High School  
Grandstand Seating 3000 Home 1500 Visitors  
Parking Lot – 650 – 700 Cars  
Off-Site Parking Lot 250 – 300 Cars

Olathe North High School  
Grandstand Seating 3000 Home 2000 Visitors  
Parking Lot – 1000 Cars

Hope this helps you on the school projects.

Sincerely,

C.L. Maurer, RLA, ASLA  
Landplan Engineering, P.A.



Spring Hill High School



E South St

St Race St

Dunstable Ct

Bronco Blvd

Main St

© 2008 Tele Atlas

Google

38°44'15.07" N 94°49'13.27" W


elev 318 m

Jun 20, 2005

Eye alt 960 m





 Seaman High School, Topeka, Kansas

31 ft from property line

NW Haven Rd

© 2008 Axiom

Image © 2008 DigitalGlobe  
© 2008 Tele Atlas

©2008 Google™

39°08'04.39" N 95°40'10.61" W

elev 971 ft

Aug 11, 2005

Eye alt 2017 ft





E Whitney St

E Whitney Ave

33' From PL to Grandstand

N Curtis St

N Nelson Rd

A Olathe North High School

© 2008 Tele Atlas

Google

38°53'20.99" N 94°48'31.07" W

elev 317 m

Jun 20, 2005

Eye alt 720 m