AGENDA ITEM # _____

GLENBROOK HIGH SCHOOLS
Regular Meeting – Monday March 9, 2009
District Business Office

TO: **Dr. Craig A. Schilling**

FROM: **Kimberly L. Ptak**

DATE: **March 9, 2009**

RE: **DISCUSSION/ACTION: GBN Main Athletic Field**

It is recommended that the Board of Education

Approve installing a new natural grass field at Glenbrook North at an estimated cost of $300,000.

Background

Due to poor drainage, poor soil, lack of crown and POA (diseased grass) the main field at Glenbrook North is no longer playable. The following options have been considered, however given the cost, creating a new natural grass field (option #2) is our best option at this point.

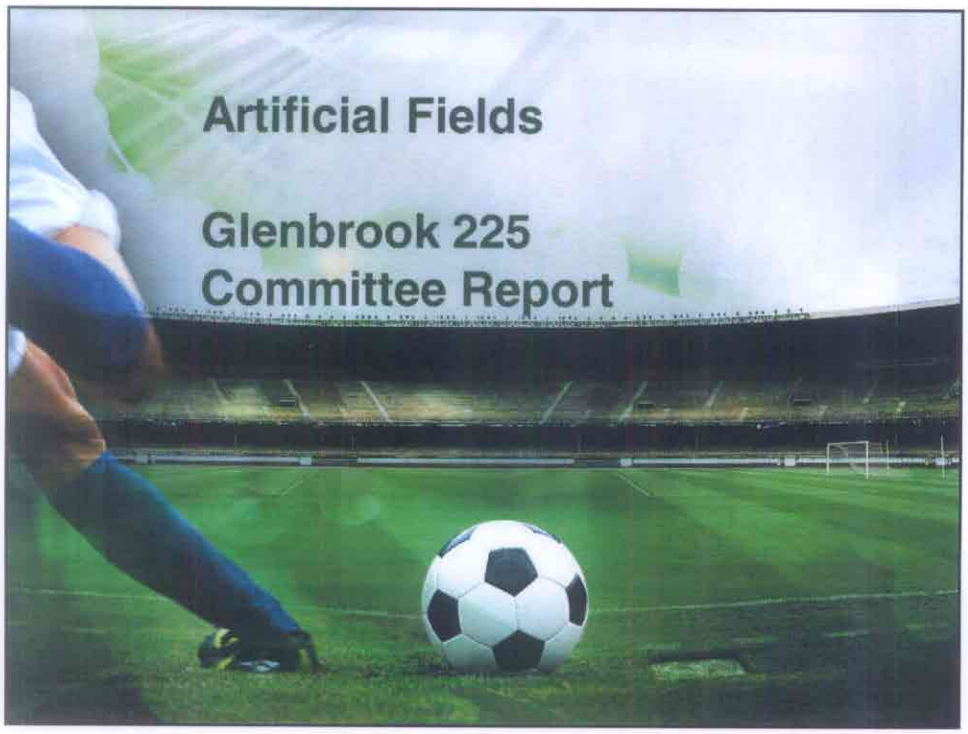
OPTIONS CONSIDERED

1. 1 year solution – Kill grass to solve POA, top-dress and resod. Cost $90,000
   This solution is not guaranteed to make it through an entire season. At end of the season we would be in the same position we are now.

2. Long-term solution – Natural Grass Field. Cost $300,000
   This solution includes removing the top soil, putting in new drainage, irrigation, new seed and/or sod.

3. Long-term solution – Artificial Field. Cost $1.2 - $1.4M
   This solution includes site work, drainage, detention, irrigation and the synthetic surface.

See attached for artificial field committee report.



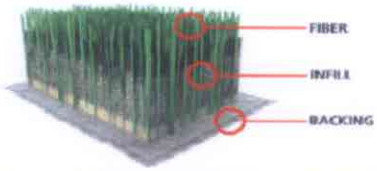
- **Focus**: Research the viability of artificial surfaces at Glenbrook North and Glenbrook South HS

- **Committee representation**:
  - Architect/Engineer
  - Plant Operators
  - Athletics/PE/Band
  - Building/District Personnel

- **Committee Focus**:
  - Usage
  - Safety/Environmental
  - Maintenance/Cost

Synthetic Turf Systems

- ✓ What is synthetic turf?



1. Grass-like fibers/blades
2. Infill system composed of sand and/or rubber
3. Drainage layer backing system

- ✓ How does it compare to astro-turf?

"Glorified carpet over concrete"

- ✓ What are the benefits?

Ready for 24/7 usage and hold up for frequent use

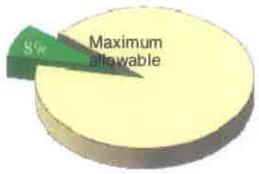
Little to no "down time" due to snow or rain

Maximize Field Space - GBN

Maximize Field Space - GBS

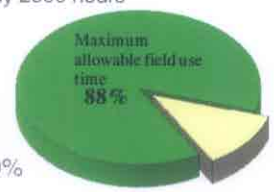
Stadium Field Usage - Current

- Current under-utilization of main field (used about 8% of allowable time) approximately 170 hours/year
- Currently used for athletic games – no practice!
  - 20 Varsity/JV Boys-Girls Soccer
  - 5 Varsity/JV Boys Football
  - 12 Varsity Boys-Girls Lacrosse
- Physical education excluded
- Band and Spirit groups limited (about 15 hours/year)



Stadium Field Usage - Projected

- Increase usage of main field to 88% of allowable time – approximately 2000 hours



- Projected use %s –
  - Physical education 35%
  - After school and summer athletics 40%
  - Band/spirit groups 15%
  - Summer park district and feeder 10%
- Hours increase from approximately 170 to 2000

Environmental Benefits

- Water conservation
- Elimination of fertilizer and pesticides – also lessens the chance of groundwater contamination.
- EPA considers synthetic turf to be non-hazardous
- Product is environmentally friendly
  - Blades recycled plastic
  - Infill recycled tires (20,000 per field) or other recycled products
  - Infill is continuously reused

Safety & Health Considerations

Recent Concerns in Media

1. Illness due to inhalation, ingestion or contact with artificial turf
2. Higher likelihood of sports related injuries on artificial turf
3. Harmful to environment
4. Infill is carcinogenic
5. Reduction of natural grass contributes to global warming
6. MRSA/Staph infections are caused by bacteria on turf fields
7. Artificial fields can cause silicosis
8. Heat index can get too high on artificial fields
9. Lead is found in artificial fields

New Artificial Field - $1,179,400 -$1,385,371

Site Work/Drainage	$440,000
Detention System	$300,000 - $500,000
Irrigation System	$25,500
Synthetic Surface	$410,000
Grooming/Equipment	$3,900

Full Track Replacement - $350,000

Life Cycle Cost of Artificial Fields

Initial Capital Cost

Excavation, paving, drainage and installation of synthetic turf - $1,179,400 - $1,379,400

Future Capital Replacement Cost

The "carpet" backing and artificial blades need to be replaced every 8-10 years. The infill is removed, cleaned and reused.

$550,000

Annual Operating Cost

- ✓ Remove leaves/debris with mechanical sweeper 3x year
- ✓ Loosen infill with mechanical groomer 6x year

$3,000

Ten Year COST: $1,859,200 $93/hour

GLENBROOK NORTH

CURRENT FIELD CONCERNS

GBN Current Field

Current Issues with GBN Field

- New sod is torn up between hash marks
- Entire field torn up side line to side line
- Poor drainage, poor soil
- POA – diseased grass

1 year solution – Not certain if it will make it through entire season

- $90,000
  Kill grass to solve POA, top-dress, resod

Long Term Solution – Not certain will be ready for Fall 09

- Natural grass field - $300,000
  Remove top soil, new drainage, irrigation, seed or sod

Life Cycle Cost of Natural Grass Field

Initial Capital Cost
$300,000

Future Capital Replacement Cost
N/A - annual maintenance to keep field in good condition

Annual Operating Cost

.7 FTE	$35,000
Sod	$10,000
Water	$5,000
	$50,000

.7 grounds FTE – restriping, fertilization, weed control, mowing, aeration, watering, seeding, topdressing

Ten Year Cost $800,000 $470/hour