# Regional School District No. 18 Lyme Street Campus Multipurpose Field BOARD OF EDUCATION MEETING

DECEMBER 4, 2019







#### AGENDA

- Athletic Fields Ad Hoc Committee
- Existing Multipurpose Fields
  - Investigation and Analysis
- Athletic Fields Ad Hoc Committee Recommendation
- Project Considerations
- Synthetic Turf
- Project Budget
- Next Steps & Schedule



# ATHLETIC FIELDS AD HOC COMMITTEE CHARTER

Evaluate the three multi-purpose athletic fields and develop a Board of Education recommendation for facility improvements which best serves the long-term needs of the school district and community.







# AD HOC ATHLETIC FIELD COMMITTEE MEMBERS

- David Brown Lyme BOF
- Donald Bugbee OL P&R Director
- Rick Caulkins Facilities Committee
- Glenn Fergione Asst. Dir. of Fac.
- Kevin Fuselier MMI Lead Designer
- Brian Greenho Lacrosse Club
- David Kelsey OL BOF
- Rich Goulding BOE
- Hilda Heck Athletic Director
- Nancy Lucas BOE
- Phil Neaton Facilities Committee

- Ian Neviaser Superintendent
- Patrick Pryor Parent
- John Rhodes Dir. Of Fac. & Tech.
- Tom Risom OL Zoning & Fire Chief
- Michelle Roche BOE
- Tom Sherer Facilities Committee
- Jason Thornton Lyme P&R Director
- Marc Vendetti HS Boys Soccer Coach
- Jean Wilczynski BOE
- Stacy Winchell BOE



### EXISTING MULTIPURPOSE FIELDS



#### Track Field

- Soccer and Lacrosse
- Irrigated
- Under Field Drainage
- HS/MS Physical Education

#### Soccer/Lacrosse Field

- Soccer and Lacrosse
- Irrigated
- HS/MS Physical Education

#### Practice Field

- Practice field for Soccer, Lacrosse and Baseball
- Not Irrigated
- HS Physical Education



# CURRENT ATHLETIC FIELD CHALLENGES

- Insufficient irrigation water supply
- Pesticide ban
- Usable field space during early spring
- Repair of field damage following lacrosse season
- Summer month shut down
- 'Regrow' of practice field following each summer season
- Baseball and softball practice areas
- Facilities staff workload and field maintenance costs
- Maintenance interruptions in physical education programs
- Weather dependent use



# ATHLETIC PROGRAM CONFLICTS REMEDIED WITH ALL-WEATHER MULTIPURPOSE FIELD

- Spring Sports
  - Starts 3<sup>rd</sup> weekend of March
  - Fields too wet and muddy for practices 1-2 weeks beginning of Spring season
  - Rain closes fields
  - Varsity, JV and MS baseball one baseball field
  - Varsity and MS softball one softball field (CS field used by track team)
  - Varsity & JV on practice field minimize damage to track field & track team usage
- Summer all fields shut down due to lack of water
- Semi finals and finals played on artificial turf
- Soccer/lacrosse School district must have a backup game field if our fields are too wet
- Fall Sports
  - Practice field grass is dead due to lack of water



# MULTIPURPOSE FIELD USAGE

	Track Field	Soccer/Lacrosse Field	Practice Field
FALL SPORTS (Aug 25-Nov 18)			
High School Boys Soccer	12	2	12
High School Girls Soccer	8	12	0
Middle School Boys Soccer	0	2	8
Middle School Girls Soccer	0	2	8
High School PE	0	30	15
Middle School PE	5	20	0
AVG PER WEEK	25	68	43
High School PE			60
Football* (only used once per season)	4		
TOTAL AVG HRS PER SEASON	304	816	576
SPRING SPORTS (Mar 18 - June 10)			
High School Boys Lacrosse	10	0	12
High School Girls Lacrosse	0	20	0
HS Baseball	0	0	15
Track & Field	0	0	5
Middle School Baseball	0	0	10
High School PE	0	30	15
Middle School PE	15	15	0
AVG PER WEEK	25	65	57
TOTAL AVG HRS PER SEASON	300	780	684
TOTAL AVG HRS PER YEAR	604	1596	1260





# LIMITATIONS OF NATURAL GRASS

- Susceptible to Weather Conditions
  - Increase in Cancellation/Rescheduling Practices & Games
- Irrigation required to maintain healthy grass
- Limited Usage
  - For Good Quality Grass Fields Max Usage is 15-20 Hours/Week
    - Synthetic Turf Used ±50 Hours/Week (with lighting)
  - Rule of Thumb: 3 Grass Field = 1 Turf Fields





#### ANNUAL FIELD MAINTENANCE COSTS EXISTING FIELDS

	Baseball Field	Softball Field	Practice Field	Track Field	Soccer/ Lacrosse Field	Total
Total	\$3,208	\$1,319	\$11,228	\$30,585	\$27,283	\$73,624

\*Total includes: Soil testing, liquid fertilizing, granular fertilizing, seeding/top dressing, slit seeding, deep tine aeration

Item	Baseball Field	Softball Field	Practice Field	Track Field	Soccer/ Lacrosse Field	Total
Mowing Hours						
(Maintenance Staff)	132	88	220	132	132	
Field Lining Set Up Hours	2	2	48	32	32	
Field Lining						
Maintenance/Year	8	8	40	40	40	
Infield Preps/Year	66	66				
Maintenance Hours Total	208	164	308	204	204	1088



### FIELD MAINTENANCE SYNTHETIC TURF MULTIPURPOSE FIELD

- Periodic grooming and sweeping
  - Towing vehicle required
- Weekly inspection by staff
- Annual inspection by synthetic turf vendor
- Depending on synthetic turf system, annual performance testing
- Lower maintenance costs offset by replacement cost in 10 to 12 years
- Not required: mowing, fertilization, line striping



Field Groomer



Field Sweeper & Magnet



# ATHLETIC FIELDS ANALYSIS

- Site examination by hydrologist
- Irrigation needs versus irrigation supply
- Field usage
- Ad Hoc Committee survey
- Athletic field test pits
- Existing maintenance costs and staffing requirements
- Soccer and Lacrosse layouts on each existing multi purpose field



# IRRIGATION DEMAND VERSUS WATER SUPPLY

- Track and soccer/lacrosse fields irrigated using Lyme Street campus potable water system
- Lyme Street Campus water system supplies:
  - High School, Middle School, Center School, Town Hall, Fire House, LYSB & OL Historic Society
- Added new well Winter 2017 due to diminishing well field yield
- Lyme Street campus water system output = 100,296 gallons/week
- Existing irrigation system demand (1" water/week)
  - Track + soccer/lacrosse fields = 106,072 gallons/week
- Estimated irrigation system demand (1" water/week)
  - Track + soccer/lacrosse + practice fields = 195,208 gallons/week
- Water purchases Summer 2015 & 2016 to keep up with irrigation demands



# AD HOC COMMITTEE RECOMMENDATION

- Install a dedicated irrigation system water supply Completed 2019
- Install artificial turf on practice field
  - Configuration to accommodate Soccer, Lacrosse, Baseball, & Softball







# WHY ARTIFICIAL TURF ON PRACTICE FIELD

- Minimizes irrigation demands providing long term Lyme Street Campus water supply protection
- Addresses all athletic program field challenges:
  - 1. Simultaneous athletic program usage
  - 2. Weather independent
  - 3. Early spring season use
  - 4. Baseball and softball practice areas
  - 5. Reduces field maintenance impact on physical education program
  - 6. Preserves community investment in track and soccer/lacrosse fields
  - 7. Preserves track and soccer/lacrosse field grass
  - 8. Size limitations of the soccer/lacrosse field
- Athletic field available during winter and summer seasons
- Expands athletic field usage to outside groups
- Reduces overall maintenance burden
  - Eliminates need to 'regrow' practice field grass at the end of each Summer
  - Protects grass fields during early spring usage





### EXISTING CONDITIONS





### CONCEPT PLAN





### CONCEPT PLAN





### CONCEPT PLAN





# **PROJECT CONSIDERATIONS**

#### Project Scope

- Synthetic Turf Multipurpose Athletic Field
  - Lacrosse
  - Soccer
  - Baseball
  - Softball
  - Physical Education
- Perimeter Treatments
  - Chain Link Fencing
  - Ball Safety Netting
- Field Access
  - Walkway and Driveway Improvements

# Project Considerations

#### Not in Current Scope

- Scoreboard
- Spectator Improvements
- Lighting (Infrastructure only)























MILONE & MACBROOM

# MATERIALS – SYNTHETIC TURF "CARPET"







#### MATERIALS - INFILL







# INFILL MATERIAL OPTIONS

#### Crumb (SBR) Rubber

- Pros:
  - Proven infill
  - Resilient (Does not require a shock pad)
  - Low cost
  - Can be color coated green for additional cost
- Cons:
  - Public perception
  - Post-consumer product
  - Contributes to elevated temperatures

#### EPDM Rubber

- Pros:
  - Resilient (Does not require a shock pad)
  - Non-recycled
  - Can come in a variety of colors
- Cons:
  - Similar composition to Crumb Rubber
  - High quality and/or special colors = high cost

#### TPE Plastic

- Pros:
  - Non-abrasive
  - Closely resembles playability of rubber Infill
  - Non-recycled
- Cons:
  - High quality = high cost







# INFILL MATERIAL OPTIONS

#### Coated Sand

- Pros:
  - 16-year warranty
  - Fast surface
- Cons:
  - Very firm and abrasive feel
  - High cost

#### Sand (Silica)

- Pros:
  - Infill can be repurposed at time of future replacement
  - Low cost
- Cons:
  - High cost for dense-fiber carpet
  - Firm

#### Cork & Coconut Husk Blends

- Pros:
  - Cooler temperature
  - Natural material
- Cons:
  - Prone to freezing
  - Irrigation required to maintain moisture content
  - Requires periodic replenishment
  - Increased maintenance cost









# INFILL MATERIAL OPTIONS

#### Walnut Shells

- Pros:
  - Natural material
  - Fast surface
- Cons:
  - Allergy concerns
  - Very firm and abrasive feel
  - High cost
  - Limited local installations

#### Wood Derivative

- Pros:
  - Natural material
  - Low cost
- Cons:
  - Limited local installations
  - Proprietary







# MATERIALS – SHOCK/DRAINAGE PAD







# MATERIALS - SHOCK/DRAINAGE PAD

- Improved Drainage
- Resilient Shock Absorption
- Added Player Safety
- Ease of Installation









# PROPOSED BUDGET

- Artificial turf practice field
  - Town of Old Lyme commission approvals and associated design details \$23,800 – BOE approved and contracted
  - Design, bidding and construction administration \$64,500
  - Turf field installation with crumb rubber infill and no options \$2,280,000.

#### \*Alternate infill material additional cost range \$350,000 - \$500,000.

# PROJECT FUNDING PLAN

- Utilize School District's Undesignated Fund
- Current balance: **\$1,773,157**
- School district can reserve up to 1%/fiscal year
- Projected balance 2021: **\$2,500,000**



### **NEXT STEPS**

- Ad Hoc Committee Meeting(s) to **Discuss Turf and Infill Options**
- Multipurpose Field Community Forum(s) ٠
- Inlands Wetlands Commission Application ٠
- Planning and Zoning Commission Application ٠
- **Final Design** ٠
- Bidding •
- Award and Construction (Earliest) ٠

December 2019

Winter 2019/2020

Spring 2020

Spring 2020

Fall 2020

Winter 2021

Summer 2021

# QUESTIONS

