



Rose Tree Media School District Athletic Feasibility Study Summary Presentation

May 8, 2025









PROJECT GOALS

To develop a comprehensive master plan for RTMSD's athletic fields and outdoor facilities at Penncrest HS, Springton Lake MS and Indian Lane ES that will:

Identify the proper number of fields and facilities needed to accommodate current and future athletic programs.

- Identify design concerns with RTMSD facilities.
- Account for equity amongst facilities, in accordance with Title IX.
- Identify potential safety issues with the fields and facilities and establish budgets to address those items.
- Establish a phased approach to the recommendations.







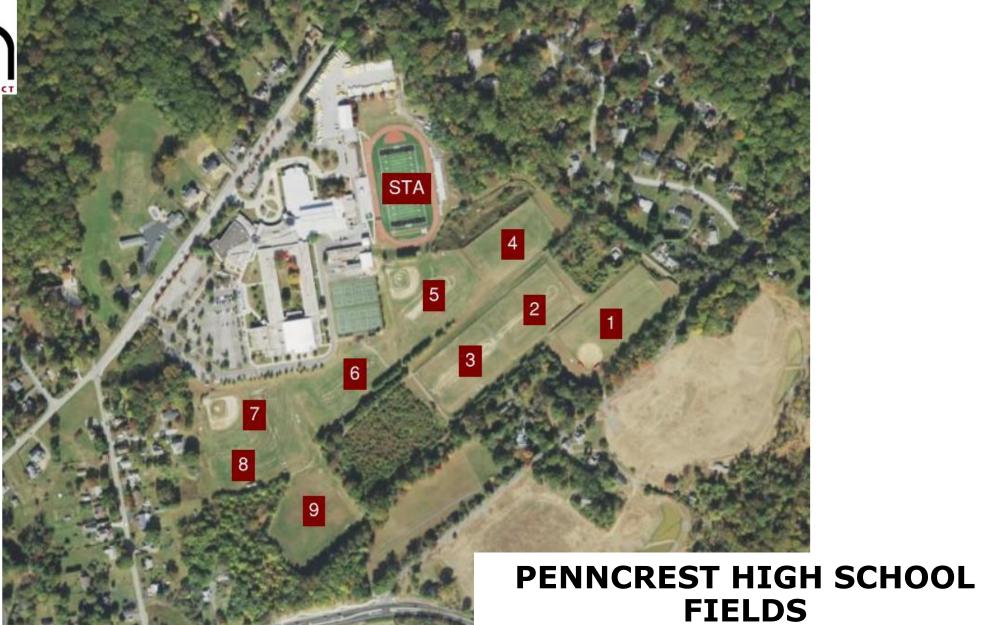


Field Investigation and Public Input









Softball Field w/ Overlay –Field #1

- Access to field is difficult for both students and spectators.

- Access is unpaved and non-ADA compliant.

No dedicated bull pens.

Due to limited use the grass cover is in good condition.

Field is sufficiently sized for a full- size soccer field (220' x 360') therefore other playing fields can fit in the space.
No scoreboard.

Solar orientation is good for the softball field (SW to NE) but not optimum for the multi-purpose field (Should be close to N-S as possible).

Field Condition: Good / Fair

Hummer Turf Comments

- The visible fabric and rocks lead us to believe that the infield doesn't have a consistent depth of infield mix.

- The presence of an irrigation reel connection point would allow for this field to be irrigated, either by a reel, or an automatic irrigation system in the future.





Multi-Purpose Fields (#2 & #3)

- Access to field is difficult for both students and spectators.

- Access is unpaved and non-ADA compliant.

- Fields appear both visually and from available survey data to be sloped too shallow in some areas which contributes to the water retention issues on the playing surface (see photos)

- We understand the subsoil is capped due to previous agricultural use on the property which likely a contributing factor to the drainage issues.

Solar orientation is not optimum for both fields (should be close to N-S as possible).

Field Condition: Fair / Poor

Hummer Turf Comments

- The shape of the field (crowned) is good; however the surface grade could be improved if there is a desire to take this field to another level of quality.

- The fields seem to have drainage issues based on observations and the feedback we received from the maintenance department so any potential renovation should take this into consideration.



Multi-Purpose Field (#4)

- Access to field is difficult for both students and spectators.
- Access is unpaved and non-ADA compliant.

- Field is crowned and drainage issues appear mostly on sidelines where compaction is occurring due to teams standing in those areas.

Field is of a smaller size (180' x 330') which is a smaller sized soccer field as well as lacrosse or field hockey size.
Due to location mostly used by youth organizations. Like Field #1 the turf growth pattern is healthier than the school used fields due to the lighter wear.

Field Condition: Good / Fair

Hummer Turf Comments

- This field also has an irrigation connection point.

- A surface renovation consisting of aggressive aeration, topdressing and overseeding in coordination with an increased maintenance plan would improve this field by significantly.



JV Baseball and Overlay Multi-Purpose Field (#5)

- Access is unpaved and non -ADA compliant.

- Overlay fields should be avoided if possible due the significant impacts on the surface which conflict with proper ballfield grading.

The infield has a significant "lip" around the edge of the infield which causes water to pond in the infield.

- Backstop is roughly 16' from home plate which is significantly less than the NFHS / PIAA recommended 60' (30' is most seen).

- Due to the infield mix lip a small drop behind home plate exists which impacts playability.

- No team shelters exist.

Field Condition: Good / Fair

Hummer Turf Comments

- The baseball infield needs to be renovated.

- The grade of the infield diamond is not allowing water to drain off the surface. This is common on baseball infields where years of infield mix additions have raised the grade of the infield mix .

-The outfield grass was thin and bumpy, partially because of the time of year and because of the lack of density in the stand of grass.



Practice / Youth Field (#6)

- This is an undersized field (180' x 260') that is primarily used for practice and youth sports. Has been used for overflow parking for stadium events therefore gets compacted.

- Field is crowned through midfield which directs surface water to endline areas which makes goal mouth areas tend to be wet and compact.

- Lawn growth is poor in areas due to compaction and poor soil put in place during construction back in 2002.

No scoreboard.

Field is not properly solar oriented (should be close to N-S as possible).

Field Condition: Fair / Poor

Hummer Turf Comments

- This field was set up for track throwing events so the bumpy, uneven surface can be explained.



Varsity Baseball / Overlay Field / Band Field (#7 and #8)

- Access is unpaved and non-ADA compliant.

- Due to programming needs the ballfield has two multipurpose overlays in the outfield. Overlay fields should be avoided if possible due the significant impacts on the surface which conflict with proper ballfield grading.

- Backstop is roughly 26' from home plate which is significantly less than the NFHS / PIAA recommended 60' (30' is most seen).

- Team areas have undersized shelters that provide limited coverage for the students.

- Field location is close to existing parking with no ball barrier netting.

Field Condition: Fair / Poor

Hummer Turf Comments

- The baseball infield on this field needs to be completely renovated.

- It is recommended to have more intensive regrading of the area including demolition and reconstruction of the dugout and backstop area to allow for better overall field conditions.



Louis Scott Stadium

-The existing synthetic turf field is being replaced in the Summer of 2026.

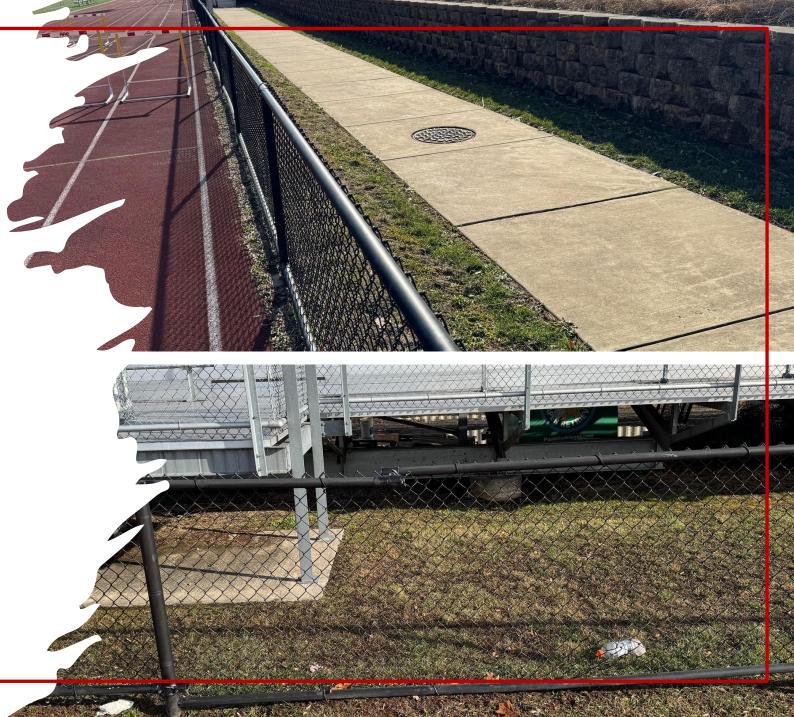
-The track was surfaced in 2015 and has not been top coated as of this date. Industry standard is to topcoat 10 years -There are areas of damage on runways that should be properly repaired to prevent further damage.

-The current track fence, aside from being damaged in many areas, is within the now required 1 meter (3.2') safety area along the outer lane.

-Both grandstands have ADA access. A code inspection should be done to catch any other possible code compliance matters. Code compliance is most important if ever renovating the structures.

-Fence repairs are needed for the track fence. Consideration should be given to relocating the fence to get in better compliance with the meter setback.

-Currently the visitor's grandstand stairs and ramps have concrete landing pads but no paved access to the pads. -It is noted based on discussions with staff and review of the site plan the parking close to the stadium is limited. This should be investigated as part of any campus master planning.









usaturf.com





SPRINGTON LAKE MIDDLE SCHOOL FIELDS

Springton Lake Middle School Stadium Field A

- Access is unpaved and non-ADA compliant.

- The track is to be replaced with an all-weather running track within the next year so the issues with the cinder track will be addressed.

- The existing field has uneven surfaces with compacted areas with limited grass growth. Evidence of invasive broadleaf weeds exists throughout the field. As part of the track installation consideration should be made to reconstruct the grass field.

Field Condition: Poor

Hummer Turf Comments

According to the maintenance staff, this field receives a lot of community use as well as football, soccer and lacrosse.
From walking the field our assessment is that if the desire is for this to be a high use field, it needs to be rebuilt.

- The surface grade is inconsistent, and the grass is not in good condition.





Springton Lake Middle School Baseball Multipurpose Overlay B and C

- Access is unpaved and non-ADA compliant.

- Both fields are heavily used as evident by field observation and photographic evidence.

- The existing fields have uneven surfaces with compacted areas with limited grass growth.

- Using overlay fields on baseball / softball fields leads to excessive wear and impacts playability for the ball sports so is not recommended.

- Having soccer or lacrosse fields change surface type (grass to infield mix) is not preferable and can lead to playability issues.

Field Condition: Poor for Both

Hummer Turf Comments

- Both infields could benefit from some level of infield renovation or intensive maintenance.

- The soccer field in the outfield of Field B needs some intensive aeration and overseeding to improve turf conditions.

- The middle of the field is getting below 50% grass coverage





Springton Lake Middle School Field D (Cage Field)

- Access is unpaved and non-ADA compliant.

- The existing field has uneven surfaces but not to the level of the other fields on campus but still significant. Evidence of invasive broadleaf weeds exists in the field. This impacts playability.

- Field is crowned which is the preferred method of field drainage.

- Field Condition: Fair / Poor

Hummer Turf Comments

- The shape of the crowned field is good; however, the planarity of the surface needs to be improved to take the field to the next level. Fixing the planarity would require removing the existing grass and light re-grading.

- The lacrosse goals should be sodded to repair those bare areas.









INDIAN LANE ELEMENTARY SCHOOL

Indian Lane Elementary School Baseball Field and Running Track Field

- Access is unpaved and non-ADA compliant to both facilities.
- Baseball field relatively new.
- Cinder track being used by community and students. Can use maintenance overhaul.
- Used mostly by community groups.
- Field is sufficiently sized for a football field (160' x 360') or smaller youth soccer and lacrosse fields. *Field Condition: Fair / Poor*

Hummer Turf Comments

Baseball Field

- -The infield needs some minor infield mix added (one load).
- I recommend aeration and overseeding to thicken the stand and improve the density of the stand.

Running Track Field

-Per the maintenance staff, this field receives no maintenance input. The condition of the field is poor, there are issues with the grading and surface smoothness that would require full renovation to improve.





Public Input

During the process of the Study the public was involved providing input through a meeting of approximately 60 residents on February 20, 2024. Those attending were broken out into groups to brainstorm ideas based on the following questions:

- 1. What's Good?
- 2. What Needs Improvement?
- 3. Anything Else?

From their responses we developed a graphic called a "Word Cloud" that analyzes the frequency of words used in the responses. The larger the word the more frequently it was mentioned. The following were the results:



"Field" is the most common word with "turf" (i.e. synthetic turf) next, then "softball" and "Springton" fourth. What can be construed from the term "field" and reading the responses from the public is that there is a desire to address all fields at all sites due to the conditions as noted above.

As for "Turf" it was mostly used in the context of adding another synthetic turf field to the high school campus. "Softball" is indicative of the desire to bring the Girls varsity and JV softball to the high school campus. And the term "Springton" was often used citing concerns with the fields at the school since they are so heavily used.

athletic





the advisor of the second





Baseline Field Use/Turf Recovery Method – Natural Grass Field – Including Public Use

Certain sports, such as football and lacrosse have a far greater impact on turf stress than other sports and generally result in greater damage to natural turf fields. Also, higher levels of competition, such as high school varsity sports (in contrast to junior high sports), can have a higher level of impact. These variances can be considered in establishing the maximum baseline use number, which generally averages between 25 to 50 events per season (50 – 100 per year). To simplify the approach, all sporting activities will be assumed to have a similar impact. The yearly event baseline for a standard grade 7-12 natural grass field is set at 50 for the fields with minimal maintenance and no irrigation or subdrainage. For those with some level of irrigation and/or subdrainage, in-ground irrigation and a high level of maintenance.

Based on this methodology multi-purpose field use on the campus exceeds the maximum use level by 925 events. Using an average baseline of 103 events per field, an additional eleven (9) fields are required to support the sports programs (both games and practices) and community use. This clearly illustrates the heavy usage currently occurring on the fields.

Baseline Field Use/Turf Recovery Method – Natural Grass Field – Including Public Use

TABLE B – Penncrest High School Multi-Purpose Field Use Estimates					
VENUE	Fall	Spring/Summ er	TOTAL EVENTS	BASELINE EVENTS	VARIANCE
Stadium (Synthetic Turf)	145	175	406	406	0
Penncrest #1	52	0	52	50	-2
Penncrest #2	52	91	143	75	-68
Penncrest #3	52	178	230	75	-155
Penncrest #4	2	95	97	50	-47
Penncrest #5	52	99	151	50	-101
Penncrest #6	109	111	220	50	-170
Penncrest #7/8	250	207	457	75	-382
			ΤΟΤΑΙ	EVENTS OVER	925

925 Events over Baseline / 103 Avg. Events per Field = 8.9 Fields Needed (Use 9)

Based on the above methodology field use on the campus exceeds the maximum use level by 925 events. Using an average baseline of 103 events per field, an additional nine (9) fields are required to support the sports programs (both games and practices) and community use.

Baseline Field Use/Turf Recovery Method – Natural Grass Field – Including Public Use

Another approach to analyzing multi-purpose field use and need analysis for a school campus includes providing one (1) "premier" field (stadium facility) plus one (1) field per school team (ether a competition field and a practice field or a practice field and use of the stadium field). In most cases, all fields are scheduled for both fall and spring use, resulting in a common ratio of 0.5 fields for each team/sport. *Based upon this methodology, the total multi-purpose fields needed for Penncrest High School are seven (7)*.

Ideally using softball or baseball fields as an overlay facility for practice of a field sport is not recommended since additional compacted areas are created in the outfield and often those field sports must play on the infield mix which is unsafe. It is recommended that dedicated multi-purpose fields exist for the particular teams if at all possible

0.5 Multi-Purpose Field / Sport Team Ratio Method -- School Teams Only

TABLE C - 0.5 Field/Sport Team Ratio Method					
Sport	Ratio	Field Count			
Football	3 (Boys' Varsity, JV, 9th Grade)	0.5	1.5		
Field Hockey	3 (Girls' Varsity, JV, 9th Grade)	0.5	1.5		
Soccer - HS	6 (Boys' and Girls' Varsity, JV and 9 th Grade)	0.5	3		
Lacrosse 6 (Boys' and Girls' Varsity, JV and 9 th Grade)		0.5	3		
Band	Band 1		0.5		
Stadium	1 "Premier" Competition Multi-Purpose Field	1	1.0		
Total Multi-Purpo		10.5			
Total Existing Fu (Large Enough fo		4			
Deficiency of Fiel		6.5 (7)			

Options to Address Multi-Purpose Fields

Reconstruct / Renovate Existing Multi-Purpose Natural Grass Fields

Some of the natural grass fields need reconstruction and doing so will aid to some degree in supporting the usage demands on the fields. The fields requiring the most work in no particular order are the baseball / soccer field / band field / Fields 2/3 and the MS stadium, Other fields require a moderate amount of work while some even less.

Construct Synthetic Multi-Purpose Turf Fields

There are two ways to address this anticipated increase in use: construct the proper number of natural grass fields or consider installation of synthetic turf fields. As previously noted, there is a significant shortage of multi-purpose fields, and more are needed. Currently there is no space available in the District to accommodate that many new grass fields and land must be purchased. The other option, construction of synthetic turf fields on existing venues, will address the overage of events since turf can accept a much higher number of events per year than natural grass.

Since the primary users are middle school and high school students the location should be on either campus. Installation of synthetic turf will allow the School District to "shut down" some fields so they can naturally recover and prolong natural grass field life. With many other School Districts having synthetic turf fields having some student athletes in the District practice only on grass places them at a competitive disadvantage.





Synthetic Turf v Natural Grass Costs





Installation Cost

When synthetic turf is considered as an option the concern is the upfront cost to install the field compared to a natural turf field. For fields of comparable size synthetic always costs more primarily due to the stone subbase, turf, and infill (Approx. \$22.00 / SF). Installation of a higher quality natural grass native soil field as currently exists on the complex will fall in the higher range of cost of natural grass construction (Approx. \$10.50 / SF1). Using a 100,000 SF field area for comparison the costs are shown in the Table below:

TABLE - Installation Costs						
Synthetic Turf			Natural Grass ¹			
Cost Per	Field Area	Total Cost	tal Cost Cost Per Field Area Total Cost Diffe			Difference
(SF)	(SF)		(SF) (SF)			
\$22.00	100,000	\$2,200,000	\$13.50	100,000	\$1,350,000	\$850,000

Premiere natural grass having prepared subgrade, 6" topsoil, sodded, sand grid underdrain system, irrigation system. Unit cost/total are based on renovation of existing field area with limited bulk earthmoving. Costs may vary based upon actual field conditions.

Seasonal Maintenance Cost

Premier natural grass fields require a significant amount of maintenance compared to a synthetic turf field. Mowing is the most intense, followed by lining, repairs, and irrigation. Synthetic turf requires grooming and maybe lining. Comparison of maintenance costs are shown on the Table below:

TABLE - Seasonal Maintenance Comparison					
	Sy	nthetic Tu	rf (ST) / Natural G	irass (NG)	
Maintenance Item	Hours (ST)	Hours (NG)		Synthetic Turf	Natural Grass
Mowing	0.0	56.0	Material Cost	\$ 2,900.00	\$ 7,200.00
Brushing	56.0	0.0			
Irrigation	0.0	32.0	Labor Rate	\$ 60.00	\$ 60.00
Fertilization	0.0	16.0			
Aeration/Seeding	0.0	24.0	Total Labor	\$ 4,080.00	\$ 13,440.00
Field Markings	12.0	48.0	Total Cost	\$ 6,980.00	\$ 20,640.00
Turf Repair	0.0	48.0	Total Cost	• 0,980.00	φ 20,040.00
Total Hours	68.0	224.0			

Per Event Cost Comparison

To properly **compare** the per-event cost a well-maintained premier natural grass field is considered since that will provide a better and safer playing surface for student-athletes and be better capable of withstanding heavier use. This type of field can be expected to support 100 events per year.

The following Table illustrates the average costs that can be anticipated for a 100,000 SF field:

Table - Synthetic Turf vs. Natural Grass Per Event Cost					
	Synthetic Turf	Natural Grass			
Initial Cost Installation	\$22.00/SF =	\$13.50/ SF =			
Cost / SF:	\$2,200,000	\$1,350,000			
Maintenance /					
Replacement Costs	\$ 404,671	\$ 335,000			
(10 years)					
Total:	\$2,604,671	\$1,685,000			
Annual Number of	1000 x 10 Yrs. =	100 x 10 Yrs. =			
Events:	10,000 Events	1,000 Events			
Average Cost Per Event:	\$260.47	\$1,685.00			

Key Recommendations – Cost and Phasing of Recommended Work <u>Penncrest High School Campus</u>

Item No.	Field / Sports	Recommended Improvements / Alternatives	Schematic Budget Costs
Pennci	est High School Campus		
1	Field 1	 Minor Renovations Provide paved access to field. Investigate proposing parking lots at the rear of the K-1 school to serve this and Fields 2 and 3. 	1. \$60,000 2. \$130,000 3. N/A \$190,000
2	Fields 2 and 3 (Option 1)	 Major Renovations Subdrainage Provide paved access. 	1. \$325,000 2. \$322,000 3. \$75,000 \$725,000
3	Fields 2 and 3 (Option 2)	 Construct Synthetic Turf Facility Eight (8) Field Lights. Provide paved access. 	1. \$4,120,000 2. \$1,040,000 3. \$75,000 \$5,445,000
4	Field 4	 Moderate Renovations Provide paved access to field. 	1. \$90,000 2. \$75,000 \$165,000
5	Field 5 (Option 1 – w/ No New Synthetic Turf on Campus)	 Major Renovations Subdrainage (Optional) Reconstruct / regrade infield. Provide paved access to field. 	1. \$185,000 2. \$200,000 3. \$65,000 4. \$50,000 \$500,000

Key Recommendations – Cost and Phasing of Recommended Work <u>Penncrest High School Campus</u>

Item No.	Field / Sports	Recommended Improvements / Alternatives	Schematic Budget Costs
enncre	est High School Campus		•
6	Field 5 (Option 2 – Dedicated Ballfield w/ New Synthetic Turf on Campus)	 Major Renovations Subdrainage Reconstruct / regrade infield. Team Shelters Scoreboard Provide paved access to field. 	1. \$185,000 2. \$200,000 3. \$65,000 4. \$80,000 5. \$35,000 6. \$50,000 \$615,000
7	Field 6 (Option 1 - Remains Grass)	 Major Renovations Subdrainage (Optional) 	1. \$100,000 2. \$110,000 \$210,000
8	Field 6 (Option 2 – w/ Field 7/8 as New Turf Complex)	 Convert to parking lot. (Paving) Stormwater Concrete Sidewalk 	1. \$165,000 2. \$140,000 3. \$75,000 \$380,000
9	Field 7 / 8 (Option 1)	 Construct Synthetic Turf Facility Twelve (12) Field Lights Scoreboards Construct parking lot Bathroom / Storage Facility (Small) 	1. \$5,100,000 2. \$1,560,000 3. \$90,000 4. See Item #8 5. 850,000 \$7,600,000
10	Field 7 / 8 (Option 2 – If Item 3 is taken)	1. Major Renovations 2. Subdrainage 3. New dugouts 4. Add ball barrier netting / fencing 5. Paving 6. New scoreboard 7. Limited Stormwater	\$250,000 \$270,000 \$80,000 \$125,000 \$35,000 \$45,000 \$140,000 \$945,000
11	Louis Scott Stadium	 Replace synthetic turf. Topcoat track surfacing. Paved paths to visitor's grandstand. Relocate track fencing. More parking spaces. 	\$580,000 \$135,000 \$25,000 \$150,000 See Item #8 \$890,000

Key Recommendations – Cost and Phasing of Recommended Work Springton Lake Middle School Campus

Item No.	Field / Sports	Recommended Improvements / Alternatives	Schematic Budget Costs			
Springton Lake Middle School Campus						
1	Stadium Field (Option 1)	 Construct Synthetic Turf Field Four (4) Field Lights. Provide paved access to field. Fence stadium complex. 	1. \$1,600,000 2. \$540,000 3. \$30,000 4. \$125,000 \$2,295,000			
2	Stadium (Option 2)	 Major Renovations / Drainage Provide paved access to field. 	1. \$170,000 2. \$30,000 \$200,000			
3	Baseball / Overlay Field B	 Major Renovations Reconstruct infield. Install improved ball barrier netting. Provide paved access to field. 	1. \$150,000 2. \$65,000 3. \$55,000 4. \$75,000 \$345,000			
4	Baseball / Overlay Field C	 Major Renovations Reconstruct infield. Install improved ball barrier netting. Provide paved access to field. 	1. \$160,000 2. \$65,000 3. \$55,000 4. \$75,000 \$355,000			
5	Multi-Purpose Field D	 Moderate Renovations – Limited aerations, topdressings and dragging. Provide paved access to field. 	1. \$95,000 2. \$75,000 \$170,000			

Key Recommendations – Cost and Phasing of Recommended Work Indian Lane Elementary Campus

Item No.	Field / Sports	Recommended Improvements / Alternatives	Schematic Budget Costs	
Indiar	Lane Elementary			
1	Baseball Field	 Moderate Renovations - Limited aerations, topdressings and dragging. Reconstruct Infield Provide paved access to field 	1. \$50,000 2. \$40,000 3. \$50,000 \$140,000	
	•		•	
2	Multipurpose Field / Cinder Track	 Major Renovations Renovate cinder track. Provide paved access to field 	1. \$160,000 2. \$50,000 3. \$30,000 \$240,000	

Key Recommendations – Phasing of Recommended Work

Immediate Implementation

Provide Budgeting for and implement <u>Maintenance Program District Wide</u> – Doing so will establish a consistent "behavior" and eventually a culture of maintaining quality fields. Construction of a synthetic turf facility will allow the fields to be available on an as needed basis or allow access for suggested.

Phasing of Recommended Work

Scheduled Work

- Replacement of Synthetic Turf at Louis Scott Stadium
- New all weather track at Springton Lake.

Phase 1A – Penncrest Campus - Multi-Purpose Fields

Address the shortage of multi-purpose fields on the Penncrest campus. Since additional land for fields is not available the only way to address the number of events on campus is by installing synthetic turf.

- a. New Synthetic Turf Field Construct Multi-Sport Synthetic Turf Complex on Fields 7 and 8. This adds a synthetic turf multi-purpose field which can help alleviate the usage of the grass multi-purpose fields. This will also address the need to upgrade the varsity baseball field, construct a softball field on campus and provide additional parking. OR
- a. New Synthetic Turf at Fields 2 and 3 This addresses the need to increase the amount of events for multi-purpose fields but does not address the need for improvements to the varsity baseball field or bringing softball to campus. To address the latter Option 1B.b must be constructed concurrently.

Key Recommendations – Phasing of Recommended Work

Phase 1B – Softball on High School Campus

One of the important items to be addressed with the teams is to bring softball to the campus. There are two ways to address this.

- a. Construct Multi-Sport Synthetic Turf Complex on Fields 7 & 8 OR
- a. Construct new natural grass Baseball and Softball Fields based on the layout of the Multi-Sport Synthetic Turf Complex. This will lessen the availability of multi-purpose fields so should only be considered if Option 1A.b is also proposed.

Phase 2 – Address Remedial Work at Springton Lake Campus

The most significant issue at this Campus is the overuse of the baseball / overlay fields. These facilities are in continuous use and never are rested. The only way to address this is to either increase the number of multipurpose fields or construct a synthetic turf field. The former requires additional land (which is an unlikely option) the latter is a possibility with the new track construction.

a. New Synthetic Turf Field – Construct new synthetic turf field inside the new running track. This will help to rest the grass fields.

Phase 3 – Address Remedial Work on Multi-Purpose Fields Primarily Used by District

Need to do repair work on all multi-purpose fields. In no particular order:

- Penncrest Fields 2 & 3 (If not converted to synthetic turf)
- Penncrest Field 5
- Penncrest Field 6 (If not converted to synthetic to parking lot)
- Springton Field D
- Springton Field B
- Springton Field C

Phase 4 – Address Remainder of Remedial Work



Rose Tree Media School District Facilities Master Plan







Multipurpose Field

