Wallingford-Swarthmore School District

Athletic Feasibility Study
Final Version

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Athletic Feasibility Study

1 Executive Summary

1.A Executive Summary

In the fall of 2022, the Board of School Directors for the Wallingford Swarthmore School District (WSSD) requested a feasibility study be conducted on the District's outdoor athletic facilities. The scope of the study included athletic fields and outdoor facilities located on the Strath Haven High School / Middle School campuses as well as other sites in the District. These included Rutgers Avenue Fields, Nether Providence Elementary, Swarthmore Rutledge School, and Henderson Field. ELA Group, Inc. (ELA) was contracted in the Fall to guide the work, inclusive of project base mapping, site investigation, master planning, and conducting programming and planning workshops with a steering committee of stakeholders as well as meeting with the public and soliciting survey responses.

1.B Project Goals

To develop a comprehensive master plan for WSSD's athletic fields and facilities that will:

- Identify the proper number of fields and facilities needed to accommodate current and future athletic programs
- Identify design concerns with WSSD 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.

1.C Key Insights

- Based on the heavy field usage field conditions and programmatic needs WSSD should consider installation of a synthetic turf field complex on either the Middle School or High School campuses. Due to the existing layout of both campuses, the distant location of parking to the fields pedestrian accessibility, and team rooms and bathrooms, the construction of the facility will require improvements beyond the field itself to address those issues.
- Many of the maintenance issues on the facilities stem from the original construction. The grading of many of the fields is too flat to promote proper drainage or graded in a manner that areas of the fields get saturated. This leads to poor grass growth, unplayable conditions, and chronic problems that must be continually solved. In order to address this major field reconstruction should be considered for some fields which includes regrading and / or implementation of subdrainage systems such as "sand slit" type. This is called the "Cambridge Drainage System".
- In addition to the above; there appears to be a lack of a continuous, quality maintenance program over the years. The key words being continuous. To this writer's knowledge, no line item exists in the business office exclusively for tracking Field Maintenance costs. Currently Field Maintenance is combined with General Lawn Maintenance as a single line item where roughly $80,000 is expended on fields and $90,000 on lawn care. The school district must establish a line item in their accounting system, exclusively for field maintenance as a necessary tracking tool and discipline to implement an

on-going maintenance program. Best practices for public school field maintenance suggests (on average) at least $20,000 per year per field. Thus with basically 10 fields in the district, we recommend a line item budget of **$200,000 per year**, every year as the minimum necessary to maintain the District's field in a reasonable condition. This estimate does NOT include current field staff, capital improvements recommended in this report which in many cases are required to "catch-up" on deferred maintenance, such as poor drainage, or improved field safety such as dugouts or protective fencing, or other field enhancement.

- Subjective Rating System A system of GOOD, FAIR and POOR is established to best assess the general condition of the field or feature, based upon a visual observation only. If a field or feature is **not assigned** a rating, it is considered in good condition.
    - **Good** – localized minor defects or deterioration observed. The field or feature can adequately perform its function. No repairs are required to accommodate the field or feature's current use.
    - **Fair** – moderate defects or deterioration observed. Primary elements are sound; however, repairs should be completed in a recommended time frame, in order to bring the field or feature up to a minimum acceptable standard.
    - **Poor** – advanced defects or deterioration observed. Field conditions observed warrant immediate corrective measures to achieve a minimum acceptable standard for the field or feature observed recommendations to repair / replace the item or a portion thereof should be implemented within the timeframe estimated by the Director of Operations.
- Strath Haven Middle School Campus
    - Baseball / JV Soccer Field #1
        - Access to field is unpaved and non-ADA compliant.
        - Limited fencing and no ball barrier netting to protect parking area / spectators (plans in place to construction 100' of spectator fence along both foul lines).
        - No dedicated bull pen.
        - Hooded backstop not desirable for varsity level baseball (needed due to proximity to stadium).
        - No team shelters / low fence along benches.
        - No dedicated bleacher area.
        - Diversion ditch limits access to 3rd base side.
        - Outfield is relatively flat in areas, so drainage has limited places to run saturating soil impacting lawn growth habits.
        - Storage structure in very poor condition (currently being replaced).
        - Solar orientation for baseball is slightly off the preferred SW / NE alignment, same for soccer.
        - Soccer field appears undersized in the available documentation.
        - Water wheel irrigation has been used on the field; no subdrainage.
        - No team rooms or bathroom facilities close by.
        - **Field Condition: Fair / Poor**

- Middle School Soccer Fields (#2 & #3)
  - Access to fields is unpaved and non-ADA compliant.
  - Slight depression separates these fields from Field 1.
  - Fields are relatively flat in areas, so drainage has limited places to run saturating soil impacting lawn growth habits.
  - Compacted areas / low spots around field edges with limited grass cover.
  - Solar orientation is favorable for field sports; fields are undersized.
  - Rare to no irrigation; no subdrainage.
  - No team rooms or bathroom facilities close by.
  - **Field Condition: Fair / Poor**
- King Field / Stadium
  - Both grandstands lack proper ADA access and the visitor's grandstand needs mid-rails in the aisles (Both of these are currently considered). A code inspection should be done to catch any other possible code compliance matters. Code compliance is most important if renovating the structures.
  - Front walkway to the visitor's grandstand is not completely paved walk so likely muddy when wet weather occurs.
  - Access to the concession stand is uneven, not fully paved, and has possible tripping hazards.
  - Visitor walkway / storage building area along the visitor's side does not drain well based on siltation patterns and topsoil conditions. Suggest remedial stormwater drainage.
  - Solar orientation for the field is not optimum (N-S preferred / SW-NE acceptable)
  - Various lawn areas throughout the stadium have low spots and ponds. Remedial drainage work is recommended.

- Strath Haven High School Campus
  - Field Hockey / Lower Field #1
    - Grading is a concern with the slope going from side to side which makes the team area tend towards saturation during rain events.
    - The embankment on the school side of the field essentially drains onto the end line area potentially saturating it during rain events.
    - No pedestrian pathway access to the field.
    - No vehicular / emergency access to the field.
    - No close parking areas.
    - No bleacher area.
    - Solar orientation is favorable (N-S)
    - Field width is tight with limited run-out areas.
    - Water wheel irrigation but no subdrainage.
    - No team rooms or bathroom facilities close by.
    - **Field Condition: Fair**

- Practice Football Field / Softball Fields
  - The embankment on the school side of the field essentially drains onto the end line area potentially saturating it during rain events.
  - No pedestrian pathway access to fields.
  - No close parking areas.
  - No vehicular / emergency access to fields.
  - Grading is a concern with the slope going from side to side which makes the lower area of the field by the detention basin saturated during rain events.
  - The varsity softball infield is in good condition as is JV infield.
  - The fence and backstops on the JV field are in poor condition as is that of the SW softball field. No team shelters or significant storage adjacent to varsity field.
  - No bullpens or batting tunnels.
  - Solar orientation for practice football is not desirable (should be N-S); flipped for varsity softball (NE-SW not preferred SW-NE) and not favorable for JV softball (SE to NW)
  - Water wheel irrigation but no subdrainage.
  - No team rooms or bathroom facilities close by.
  - **Field Condition: Fair**
- MESA Field
  - No ADA access to field. Current pathway stops part way up slope.
  - Field is undersized limiting playing options. Runout areas beyond field are very limited due to grade drops and embankments.
  - Limited drainage exists along toe of slopes. Clogs frequently creating ponding.
  - Erosioin on some parts of the embankments should be stabilized.
  - Solar orientation is favorable (N-S)
  - No irrigation or subdrainage.
  - **Field Condition: Poor**

- Rutgers Avenue Fields
  - Track Field
    - No ADA access to field.
    - Old stadium with old field venues inside track. Since track events are no longer held here consideration should be made to remove them to allow more room for field.
    - Track is used by local residents for recreation. Consideration to maintaining it at some level is suggested.
    - The field must be reconstructed and due to its history, the restoration work involved will not be extensive as other fields in the District.
    - Solar orientation is not favorable (E-W should be N-S)
    - No irrigation or subdrainage.
    - No team rooms or bathroom facilities close by.

        - **Field Condition: Fair / Poor**
    - Soccer Field
        - **Field Condition: Poor**
- Nether Providence Elementary
    - Baseball / Soccer Field
        - No ADA access to field.
        - Field is small for school soccer but acceptable for youth.
        - Slopes are graded primarily for baseball (infield falling to outfield. Slopes are at 2% which allows for proper surface drainage.
        - No bullpens or batting tunnels.
        - Solar orientation is favorable (SW to NE) for baseball and soccer (ESE to WNW)
        - Irrigation exists which helps to sustain the grass coverage.
        - **Field Condition: Good**
- Swarthmore-Rutledge School
    - Baseball / Soccer Field
        - ADA access to field part way with adjacent walk.
        - Field is too small for school sports but acceptable for youth.
        - The field has a gradual slope to the east but as with other fields in the District flatter slopes tend to create wetter fields which result in chronic maintenance issues.
        - Trees are encroaching on the first base line.
        - Solar orientation is favorable (SW to NE) for baseball and not favorable for soccer (E to W in lieu of N to S).
        - No irrigation or subdrainage.
        - **Field Condition: Fair / Poor**
- Henderson Field
    - Baseball / Soccer Field
        - No ADA access to either field.
        - Left field line is too short for High School baseball (300’ desirable – have 240’)
        - As with other fields in the District flatter slopes tend to create wetter fields which result in chronic maintenance issues.
        - Field has severe flooding along 3rd base line.
        - Storage building on-site. Unclear what is in the building.
        - Unfavorable hooded backstop but proximity to road warrants usage. Fence along road could be enhanced with ball barrier netting to safeguard the road.
        - No bleacher area or team shelters.
        - No bullpen.
        - Solar orientation is favorable (SW to NE) for baseball and favorable for soccer (N to S).
        - No irrigation or subdrainage.
        - No team rooms or bathroom facilities close by.

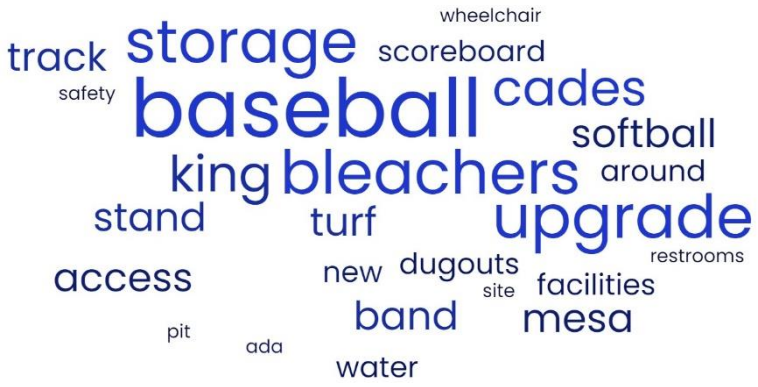
- **Field Condition: Fair / Poor**

1.D Public Input

During the process of the Study the general public was involved providing input through a meeting of approximately 35 residents on March 2, 2023. 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:



"Baseball" is the most common word with "bleachers", "storage" and "upgrade" tied for second most and "CADES" and "King" tied for third. What can be construed from these and in reading the responses is that there is much concern to address the baseball field at the Middle School, bleachers and storage are needed throughout and upgrade being self-explanatory.

The District then posted the following questions on-line as part of a public survey where over 100 people participated. The questions were:

- *What is good about the athletic fields?*
- *What needs improvements for the athletic fields?*
- *What is missing from the athletic fields?*

As with the March 2 meeting, we developed a "Word Cloud" for the answers to each of the questions and those are as follows:

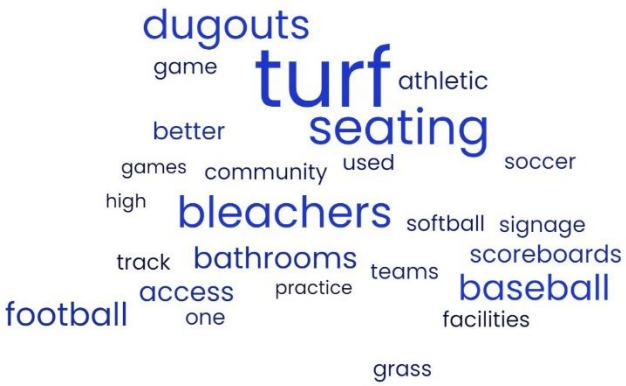
What is good about the athletic fields?

"Nothing" is the most common word and it's meaning is clear, both "School" and "Community" are second and third most respectfully. When reading the comments both of these words are used to indicate how fields are beneficial to both.

What is bad about the athletic fields?

"Fields" is the most common word, and the inference is clear. "Turf" is the second most common word which applies to the synthetic turf field which is being replaced this year. Most all the other words are essentially equal infrequency of use. It is fair to say the participations had a variety of opinions.

What is missing from the athletic fields?



"Turf" is the most common word, and is mostly intended to adding another synthetic turf field. "Seating" and "Bleachers" are second and mean there is a need for some type of spectator accommodations, while "Dugouts" is the third most common.

1.E Key Recommendations

Recommended Athletic Facility Improvements

Based on the inventory of the existing fields on the campus, our walkthrough of facilities and our experience in the following are the suggested improvements for each facility. These are not in order of priority simply formatted to align with the remainder of the report. A suggested priority of projects with phasing follows this table.

Please note with active athletic fields use of sod is recommended for if seeded the field must remain unused at least two growing seasons to achieve sufficient grass coverage prior to usage. Based on field demands in the District this is likely an unacceptable approach. With sod it is possible to not lose a season depending on timing of installation.

Note – For Natural Grass Fields the Following Apply:

- Major Renovations – Multiple aerations, topdressings, dragging and rolling to even the field surface.
- Major Renovations / Drainage – Install sand slit system, multiple aerations, topdressings, dragging and rolling to correct field planarity.
- Moderate Renovations – Limited aerations, topdressings and dragging.
- Minor Renovations – Address compacted or damaged areas.
- Drainage – Install Cambridge system with associated drainage improvements.
- Reconstruction – Includes kill existing grass, till and sod.
- Major Reconstruction – Includes rebuilding of field and installing sod.

Item No.	Field / Sports	Recommended Improvements / Alternatives	Schematic Budget Costs
Strath Haven Middle School Campus			
1	Baseball / JV Soccer Field #1 (Option 1)	1. Major Reconstruction – Add Bullpens Included 2. Dugouts (Prefab) 3. Fences 4. Paved Access 5. Bleacher Area 6. Team Rooms / Bathrooms	1. $ 2,635,000 2. $ 150,000 3. $ 80,000 4. $ 35,000 5. $ 35,000 6. $ 2,500,000 **$ 5,435,000 Total**
2	Baseball / JV Soccer Field #1 (Option 2)	1. Construct Synthetic Turf Facility w/ 6 Field Lights (includes field items under Option 1).	1. $ 4,100,000 (Field) $ 890,000 (Lights) **$ 4,990,000 Total**
3	Middle Field Soccer Fields (#2 & #3)	1. Major Renovations / Drainage (Sand Slit)	1. $ 330,000 (Reno) $ 190,000 (Drain) **$ 520,000 Total**
4	King Field	1. Address ADA accessibility for grandstands. 2. Renovate paving and accessibility around concession stand. 3. Address poor drainage around stadium. 4. Install shot put throwing sector. 5. Repair / replace fence along track. 6. New Press Box (modular)	1. $ 75,000 2. $ 90,000 3. $ 60,000 4. $ 25,000 5. $ 55,000 6. $ 330,000 **$ 635,000 Total**
Strath Haven High School Campus			
5	Field Hockey / Lower Field #1	1. Drainage (Sand Slit) 2. Provide paved pedestrian / service / emergency vehicular access	1. $ 120,000 2. $ 35,000 **$ 155,000 Total**
6	Practice Football Field / Softball Fields (Option 1)	1. Drainage (Sand Slit) 2. Provide paved pedestrian / service / emergency vehicular access / storm) 3. Dugouts (Prefab) 4. Batting Tunnels / Bullpens 5. Team Rooms / Bathrooms	1. $ 242,000 2. $ 95,000 3. $ 150,000 4. $ 135,000 5. $ 2,500,000 **$ 3,122,000 Total**
7	Practice Football Field / Softball Fields / Dog Leg (Option 2)	1. Construct Synthetic Turf Facility w/ 8 Field Lights (include dugouts / batting tunnel / bullpen) 2. Construct parking lot , pedestrian access, and service / emergency access / lights.	1. $ 3,290,000 (Field) $ 1,250,000 (Lights) 2. $ 500,000 **$ 5,040,000 Total**

8	MESA Field	1. Major Renovations / Drainage (Sand Slit) 2. Provide paved pedestrian / service / emergency vehicular access	1. $ 260,000 2. $ 100,000 **$ 360,000 Total**
9	Tennis Courts	1. Monitor Surface Conditions	$ 0
Rutgers Avenue Fields			
10	Track	1. Remove running and jumping venues and restore lawn.	$ 75,000
11	Track Field	1. Major Renovations / Drainage	$ 280,000
12	Soccer Field	1. Reconstruction	$ 130,000
Nether Providence Elementary			
13	Baseball / Soccer Field	1. Install ADA access 2. Install Batting Tunnel and Bullpens	1. $ 45,000 2. $ 135,000 **$ 180,000 Total**
14	Baseball / Soccer Field	1. Reconstruction	$ 130,000
Henderson Field			
15	Baseball / Soccer Field	1. Remedial drainage work for upland runoff. 2. Major Renovations / Drainage / Fence 3. Team Rooms / Bathrooms	1. Borough 2. $ 500,000 3. $ 2,500,000 **$ 3,000,000 Total**

Range of Planned Project Total Costs

The costs above also include line items for field house / bathroom / concession facilities at the Middle School, High School and Henderson Field totaling $7,500,000. When removing that cost the anticipated range of field and associated site improvements is between $6,522,000 to $10,495,000. Cost differential is mostly attributed to utilization of synthetic turf facilities with the highest amount reflecting that two different facilities would be built. The range would reduce if only one turf facility is constructed.

Implementation of Plan

Improvements of such a magnitude particularly when spread around multiple District campuses are anticipated to be implemented over a minimum 10 years and likely longer depending on the availability of funding. With synthetic turf having an average life of 10 years, construction of a second facility should be timed so that replacement does not coincide with that of King Field thereby spreading out replacement costs.

Phasing of Recommended Work

Phase 1 – Address Shortage of Multi-Purpose Fields

There is a shortage of up to eleven (11) fields based upon our analysis of which we recommend the need for seven (7) additional fields (see pages 46-48). The **biggest need** in the District is to provide additional/ better quality multi-purpose fields.

- New Synthetic Turf Field – Construct one of two options: On the Practice Football Field / Softball at the high school campus or Baseball / Soccer Field at the middle school campus.

Phase 2 – Address Remedial Work at King Field / Stadium

The Stadium is the most heavily used facility in the District and is need of renovation. Currently, there are upgrades planned with synthetic turf being replaced, fence repairs, a new scoreboard, visitor grandstand upgrades, and possible ADA modifications to one or (both) grandstands. There are additional upgrades needed such as, pave the front walkway to the visitor's grandstand, which is not a completely paved walk so likely muddy when wet weather occurs; renovate access to the concession stand, for it is uneven, not fully paved and has possible tripping hazards; and the visitor walkway / storage building area along visitor's side does not drain well based on siltation patterns and topsoil conditions. Remedial storm water drainage improvements needed.

- Renovations to King Field / Stadium

Phase 3 – Address Remedial Work on Varsity Ballfields

All ballfields have evidence of the need for remedial work. Both Varsity facilities are on overlay multi-purpose fields so remedial work encompasses that work as well.

- Middle School - Baseball / JV Soccer Field #1 (Option 1 if Option 2 Synthetic Turf is not selected)
- High School - Practice Football Field / Softball Fields (Option 1 if Option 2 Synthetic Turf is not selected)

Phase 4 – Address Remedial Work on Multi-Purpose Fields Primarily Used by District

Need to do repair work on all multi-purpose fields.

- MESA Field
- Henderson Field
- Nether Providence Elementary
- Rutgers Avenue (Track Field and Track)

Phase 5 – Address Remedial Work on Multi-Purpose Fields Primarily Used by Youth Organizations

Need to do repair work on all multi-purpose fields.

- Swarthmore-Rutledge School
- Rutgers Avenue (Soccer Field)

Athletic Feasibility Study

2 Introduction and Background

2A. Introduction

Athletics are recognized as an important component in the educational and extracurricular programs provided within school systems at both the primary and secondary grade levels. Not only do athletics provide opportunities for physical fitness, but it also inspires teamwork, promotes sportsmanship, builds a competitive spirit, and instills a sense of pride that can extend from the school to the community.

The intent of this Study is to review conditions of outdoor athletic facilities at both Strath Haven High School / Middle School campuses as well as other sites in the District. These findings are inventoried, facility usage analyzed then remedial steps recommended with budgetary estimates provided:

2B. Background

Strath Haven High School Campus

The Campus consists of approximately ± 38 acres located in the center part of Nether Providence Township, Delaware County, PA. Throughout the property lies five (5) natural grass athletic fields, and a battery of four (4) tennis courts. There are no fields with both proper field lighting and permanent seating. With some exceptions, the grass fields are in fair to poor shape with a limited maintenance program in place. The tennis courts are in good condition having been resurfaced in 2021. However, the battery is half of the recommended eight (8) courts needed to run timely tennis matches.

Strath Haven Middle School Campus

The campus consists of ± 26 acres and is also located in the center part of Nether Providence Township, Delaware County, PA. Throughout the property lies four (4) natural grass athletic fields (baseball, soccer overlay on baseball and two (2) multipurpose fields), one (1) synthetic turf field, an all-weather running track, and jumping and throwing venues. The main facility, King Field, is the only field with both proper field lighting and permanent seating. The latter has a home side grandstand with press box, visitor grandstand, concession stand, storage building and storage sheds under the visitor grandstands. With some exceptions, the grass fields are in fair to poor shape with a limited maintenance program in place. The synthetic turf field is proposed to be replaced this summer with the “D Areas” being renovated from grass to synthetic turf and running track surfacing. Other improvements (new fence, ADA seating and new scoreboard) are being contemplated. The track was last fully surfaced in 2017 and was recently repaired and cleaned.

The three (3) major youth associations, Nether Providence Athletic Association (NPAA) with baseball and softball and its affiliated soccer organization, Nether United FC (NUFC), and Swarthmore Recreation Association (SRA) use many of the fields on District campuses.

Rutgers Avenue Fields

The site consists of ± 12 acres located in Swarthmore Borough, Delaware County, PA. This is the old Swarthmore High School site which was subdivided (2008) into the building and ± 8 acres all parceled to CADES; while the School District retained the two fields and woods to the rear. There are two (2) natural grass athletic fields, a full size multi-purpose field and a youth size soccer pitch, with no permanent seating or lighting. The grass fields are in poor condition and the running track consists of concrete curbs and cinders. Old track throwing and jumping venues are still in place and overgrown. The track is not used by the District but is used by the public and by youth organizations. Youth organizations also use both fields on a regular basis. Two (2) storage buildings exist on site, one (1) owned by the School District, while the other we presume is by SRA.

Nether Providence Elementary School

The campus consists of ± 12 acres located in Nether Providence Township, Delaware County, PA. There are two (2) natural grass athletic fields consisting of a regulation baseball and overlay multi-purpose field with no permanent seating or lighting. These fields are irrigated which is a significant reason why they are in good condition. Both NPAA and NUFC use the fields as well.

Swarthmore-Rutledge School (SRS)

The campus consists of ± 9.3 acres located in Swarthmore Borough, Delaware County, PA. There are two (2) natural grass athletic fields consisting of a youth baseball and multi-purpose overlay field, with no permanent seating or lighting. A storage structure does exist on site. SRA uses the fields as well. The grass fields are undersized for Middle School and High School sports and in fair / poor shape.

Henderson Field

The site consists of ± 3.9 acres located in Swarthmore Borough, Delaware County, PA. There are two (2) natural grass athletic fields consisting of a regulation baseball and overlay multi-purpose field with no permanent seating or lighting. SRA uses the fields as well. A storage building exists as does a batting tunnel. The site has a history of flooding along the 3rd base line. The grass fields are in fair to poor shape.

2C. Campus Athletic Programs and Sports Field Overview

Strath Haven High School and Middle School Campuses

The District has 32 high school and middle school teams participating in outdoor sports on the ten (10) multi-purpose fields including football, both girls' and boys' teams for soccer, field hockey, lacrosse, ultimate frisbee, and marching band. There are other teams that use dedicated facilities including boys and girls track, tennis, cross country as well as baseball and softball fields.

Because of the extensive use of the existing facilities as demonstrated in Section 3 under Field Use, the District should consider future improvements and enhancements of the existing fields/facilities on both campuses as part of on-going planning efforts to improve the quality, safety, and athletic experience for the student athletes at the middle school and high school varsity and junior varsity level.

Practices and competition for all fall and spring field sports occur on athletic fields and facilities located on all campuses but Swarthmore-Rutledge School .

Rutgers Avenue Fields

At this campus, the main field is used for freshman football while the smaller soccer field is used by SRA, and uses they use the full size field as well. The track is primarily a public recreational facility with walkers and joggers using it as well as youth groups. It is not used by the District.

Nether Providence Elementary School

At this campus, the fields are used by the middle school baseball team and occasionally the varsity soccer teams. Both NPAA and NUFC use the fields as well and contributed to the installation of the irrigation system.

Swarthmore-Rutledge School

This is primarily a youth only facility used by SRA.

Henderson Field

At this campus, the fields serve the Junior Varsity baseball team, but SRA uses the fields as well.

2D. Athletic Program Growth and Sports Field Demand

As with many of the area school districts, enrollment growth has not only resulted in an increased demand on the existing educational facilities, but on the existing athletic facilities as well. The typical school enrollment increase normally leads to greater participation in competitive sports, a generally larger number of athletic programs being offered, and an increase in the number of students participating in athletic programs at all grade levels.

As demand and usage on the fields increases, so does the chance for field condition deterioration over time, resulting in inconsistent turf cover, marginal surface conditions, limited turf recovery, and other conditions that not only affect playability, but may also pose potential hazards to the participants. These are the resultant of the field use exceeding the baseline maximum use that the cultural and physical characteristics of that field can reasonably tolerate. A higher quality of construction

(irrigation/subdrainage) and more intensive maintenance programs create a premier facility and can help increase the baseline for maximum use and reduce turf stress. However, turf wear and deterioration should be expected and is common for all "high use" facilities, such as public recreation facilities, schools, and municipal parks, regardless of the quality of construction and extent of maintenance. The distinct advantage of quality construction and good maintenance practices is an increase in the effectiveness of field maintenance, leading to shorter recovery periods and more complete turf regeneration.

Public schools, municipal agencies, and public recreation organizations tend to face similar challenges of demand exceeding supply. The development of new athletic fields, or "high quality athletic fields", may also be influenced by limited or fixed funds available for construction and ongoing maintenance practices. Often a School District may not even have a premier natural turf field due to budgetary constraints or other limitations. The concern with natural turf is even the most carefully maintained field can be severely damaged if used when conditions are wet and the field saturated.

2E. Study Purpose and Goals

The primary goal of this study is to provide the Wallingford Swarthmore School District with recommendations that will enable them to provide the proper number of sports fields and facilities that are sized appropriately to accommodate the existing athletic programs and their future growth, while maintaining a level of field quality that is both safe and suitable for practice and competitive play.

Fields

This Athletic Field and Facility Master Plan includes an evaluation of all of the existing sports fields located on both the High School / Middle School campuses as well as other sites in the District. This evaluation considers the quality and condition of the athletic fields based on two (2) primary factors. These include physical factors, and factors related to the type and intensity of field use. Physical factors are those such as surface drainage, field grading/surface contour, construction quality and methods, and soil compaction.

Use factors are those associated with the intensity, type, or other user-based practices with result in excessive wear and turf stress and limits turf recovery on natural grass fields.

In order to realize the stated goal, this master plan will consider the facility needs, potential improvements as determined by the School District, and the expansion of athletic facilities to meet the growing demand in a single planning document while developing short- and long-range planning goals and implementation strategies for the District's consideration. The scope of the study will also consider the following:

- Visual inspection of each field to determine turf quality, physical characteristics (such as surface drainage, field slope, upslope drainage, compaction, and size) as well as general observations regarding the field condition.

- Identify the current usage type(s) and intensity of use (number of practices, games, or other “events”) for each field.
- Identify and establish an approximate baseline for maximum use based upon the intensity/type of field use, current condition, method of field construction, and maintenance practices.
- Develop alternatives (options) to address conditions leading to field deterioration and enhance turf recovery, including field use and maintenance practices, reconstruction and renovation of existing facilities, construction of additional (new) facilities, and consideration of synthetic turf athletic field surfacing.

Hardscape Facilities

The other athletic facilities we inspect are tennis courts running tracks, and trac and field venues. These facilities normally consist of some type of paving with or without surfacing that has a limited life requiring reapplication or replacement to repair. Depending on age of the venue, the base paving may be failing requiring more extensive repairs.

Grandstands

With this study we have teamed up with MM Architects to do an in-depth analysis of the existing grandstands at the High School Stadium. This is intended to take a review of the conditions of the structures to see how they could be renovated to allow for a modernization of the stadium. The most restrictive factor with stadium renovation is the narrow distance between the grandstands preventing widening of the field to proper dimensions. Prior studies only made assumptions of what could be done to the buildings. This Study intents to properly establish what could be done to make renovation possible.

The study has been developed based primarily upon the following:

- Meetings and conversations with District administrative and athletics staff and information provided by these parties regarding field use, maintenance program, and assignments for athletics, physical education, and community use;
- Site inspection/review of the athletic fields and facilities at the high school;
- Review of District field use practices, primarily related to scheduled field assignments, including type of sport/program and number of scheduled events (games and practices);
- Previous experience with athletic field construction, maintenance practices, and field use.

2F. Potential Growth/Decline in Sports Programs/Participation

Introduction

To determine the five-year participation trends locally, statewide, and nationwide, ELA researched two sources. We obtained local data from the Athletic Director, while the state and national data is from the National Federation of State High School Associations (NFHS), of which PIAA is a member. In all three databases there are some fluctuations from year to year where participation may have increased/decreased one year to only go back the next year to the original number two years prior. Our goal is to discover any long-term trends to identify the sports that are growing or declining. Please note that NFHS was unable to collect participation records for **2019/2021** due to the COVID-19 pandemic.

Boys Sports – Table 1

School Sports - Annual Participation / Number of Students Nationally						
	2016/17	**2017/18**	**2018/19**	**2019/21[1]**	**2021/22**	**TREND[2]**
Baseball	491,790	487,097	482,740	NR	481,004	-1.8%
Cross Country	266,271	270,095	269,295	NR	231,387	1.1%
Football	1,057,382	1,036,842	1,008,417	NR	973,792	-4.6%
Golf	141,466	144,024	143,200	NR	148,585	1.2%
Lacrosse	111,842	113,313	113,702	NR	107,865	1.7%
Soccer	450,234	456,362	459,077	NR	436,465	2.0%
Tennis	158,171	158,151	159,314	NR	145,858	0.7%
T&F Indoor	82,172	80,754	79,550	NR	65,316	-3.2%
T&F Outdoor	600,136	600,097	605,354	NR	569,262	0.9%
Ultimate Frisbee (Club Sport)	630	683	651	NR	951	3.3%
School Sports - Annual Participation / Number of Students in Pennsylvania						
	2016/17	**2017/18**	**2018/19**	**2019/21[3]**	**2021/22**	**TREND[4]**
Baseball	21,280	21,152	21,024	NR	20,704	-1.2%
Cross Country	11,460	11,440	11,440	NR	11,560	-0.2%
Football	25,740	25,605	25,515	NR	25,020	-0.9%
Golf	5,120	5,150	5,150	NR	5,010	0.6%
Lacrosse	6,624	6,656	6,688	NR	6,592	1.0%
Soccer	20,125	20,265	19,845	NR	19,740	-1.4%
Tennis	4,572	4,572	4,428	NR	4,320	-3.1%
T&F Indoor	2,580	2,560	2,580	NR	2,745	0%
T&F Outdoor	24,320	24,320	24,320	NR	24,280	0%

[1] No Numbers Gathered Due to COVID-19 Pandemic
[2] Does Not Include the 2021/22 Numbers. Those numbers are inserted for comparison purposes only
[3] No Numbers Gathered Due to COVID-19 Pandemic
[4] Does Not Include the 2021/22 Numbers. Those numbers are inserted for comparison purposes only

Ultimate Frisbee (Club Sport)	NR	NR	NR	NR		NR	NR
School Sports - Annual Participation / Number of Students at WSSD							
	2016/17	**2017/18**	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**TREND**
Baseball	35	34	33	34	36	35	0%
Cross Country	52	61	60	66	54	45	-13.46%
Football	69	62	64	76	72	81	17.39%
Golf	11	12	12	11	15	17	54.54%
Lacrosse	45	42	35	41	42	55	22.22%
Soccer	62	62	63	67	55	72	16.13%
Tennis	26	26	25	32	25	24	-7.69%
T&F Indoor	35	32	42	49	36	47	34.28%
T&F Outdoor	64	67	83	120	69	95	48.44%
Ultimate Frisbee (Club Sport)	NR	17	NR	NR	NR	42	147.06%
Includes number of students on freshman, junior varsity, and varsity teams							

National (2016 to 2022)

- Ultimate Frisbee is the largest growing sport with an increase of 3.3% with golf second at 2% and lacrosse third at 1.7%.
- Largest drop in participation is football at 4.6%.
- Although falling in participation, football by far is the largest participatory sport with nearly 1 million participants. The next largest is track and field with 569,262 student athletes.

Statewide (2016 to 2022)

- Only two sports are growing, which is Lacrosse at 1.0% and golf 0.6%.
- Largest drop in participation is Tennis at 3.1% with Soccer next at 1.4%.
- Although falling in participation, football is the largest participatory sport with nearly 25,020 participants. The next largest is track and field with 24,280 student athletes.

Wallingford Swarthmore School District (2016 to 2022)

- The largest growth is Ultimate Frisbee at 147.06% (25 students), Golf second at 54.54% (6 students), and Track and Field Outdoor third at 48.44% (31 student increase).

Summary

- At the local school level, varsity sports tend to fluctuate in numbers of participants for a variety of reasons. This includes, but is not limited to, class size, number of athletes, team success, and coaches and peer involvement. Looking at both state and nationwide statistics will provide a better idea of how the sport is doing demographically.

Girls' Sports – Table 2

School Sports - Annual Participation / Number of Students Nationally						
	2016/17	**2017/18**	**2018/19**	**2019/21[5]**	**2021/22**	**TREND[6]**
Cross Country	226,039	223,518	219,345	NR	191,323	-3.0%
Field Hockey	60,549	59,856	60,824	NR	55,829	0.5%
Lacrosse	111,842	113,313	113,702	NR	96,762	6.7%
Soccer	388,339	390,482	394,105	NR	374,773	1.5%
Softball	367,405	367,861	362,038	NR	340,923	-1.5%
Tennis	187,519	190,768	189,436	NR	176,185	1.0%
T&F Indoor	72,422	72,662	70,703	NR	61,109	-2.4%
T&F Outdoor	494,477	488,592	488,267	NR	456,697	-1.3%
Ultimate Frisbee (Club Sport)	262	547	442	NR	337	28.6%
School Sports - Annual Participation / Number of Students in Pennsylvania						
	2016/17	**2017/18**	**2018/19**	**2019/21[7]**	**2021/22**	**TREND[8]**
Cross Country	11,380	11,500	11,500	NR	11,600	1.1%
Field Hockey	9,800	9,800	9,625	NR	9,310	-1.8%
Lacrosse	7,168	7,200	7,328	NR	7,456	2.2%
Soccer	18,970	19,145	18,830	NR	18,725	-0.7%
Softball	19,530	19,530	19,380	NR	18,900	-0.8%
Tennis	4,740	4,740	4,620	NR	4,560	-2.5%
T&F Indoor	2,625	2,625	2,625	NR	2,790	0%
T&F Outdoor	24,360	24,360	24,400	NR	24,360	0.2%
Ultimate Frisbee (Club Sport)	NR	NR	NR	NR	NR	NR

School Sports - Annual Participation / Number of Students at WSSD							
	2016/17	**2017/18**	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**TREND**
Cross Country	85	64	63	55	41	50	-41.18%
Field Hockey	37	40	44	45	39	40	8.11%
Lacrosse	44	32	33	51	39	36	-18.18%
Soccer	34	34	33	35	35	39	14.70%
Softball	24	15	12	16	13	14	-41.67%
Tennis	23	30	26	35	26	26	13.04%
T&F Indoor	76	63	54	64	37	44	-42.11%
T&F Outdoor	99	99	82	89	74	69	-30.30%
Ultimate Frisbee (Club Sport)	NR	32	NR	NR	NR	25	-21.88%
Includes number of students on freshman, junior varsity, and varsity teams							

[5] No Numbers Gathered Due to COVID-19 Pandemic.
[6] Does Not Include the 2021/22 Numbers. Those numbers are inserted for comparison purposes only.
[7] No Numbers Gathered Due to COVID-19 Pandemic.
[8] Does Not Include the 2021/22 Numbers. Those numbers are inserted for comparison purposes only.

National (2016 to 2022)

- Ultimate Frisbee is the largest growing sport with an increase of 28.6%, with Lacrosse coming in second at an increase of 6.7%, and the third is Soccer at 1.5%.
- The largest drops are in Cross Country (3.0%) and Track and Field Indoor (2.4%)

Statewide (2016 to 2022)

- There is a downward trend in all but Cross Country, Lacrosse, and Track and Field Outdoor. The growth in these sports is minimal as is some of the decrease in other sports.

Wallingford Swarthmore School District (2016 to 2022)

- The largest growth is Soccer at 14.70% (5 students), Tennis at 13.04% (3 students), and Field Hockey at 8.11% (3 students).

Summary

- At the local school level, varsity sports tend to fluctuate in numbers of participants for a variety of reasons. This includes, but is not limited to, class size, number of athletes, team success, and coaches and peer involvement. Looking at both state and nationwide statistics will provide a better idea of how the sport is doing demographically.

Athletic Feasibility Study

3 Investigation of Existing Program and Conditions

- ◊ Existing Facilities Site Inspection
- ◊ Field Walkthrough / General Observation
- ◊ Athletic Programs and Field Use
- ◊ Options to Address Multi-Purpose Fields
- ◊ Synthetic Turf vs. Natural Turf Cost Analysis

3A. Existing Facilities Site Inspection

ELA and Hummer Turf has investigated the fields and athletic facilities throughout the School District over multiple weeks. When walking natural grass fields and other outdoor facilities we use the following criteria.

Evaluating a Natural Grass Athletic Field

When investigating a natural grass athletic field, the major points of consideration to evaluate the condition of the field are as follows:

- Field size - Does the space accommodate regulation-sized playing fields for each sport?
- Solar Orientation - Is the axis of play (goal to goal) in a direction where students are not looking into the sun?
- General Grass Health - Is grass cover consistent throughout field? Are the blades healthy with no noticeable stress? Are the roots deep?
- Grading - Are the slopes consistent with no low or high spots? Is top dressing done?
- Worn Areas - Are there any worn areas with no grass growth?
- Weeds - Any evidence of weeds? Is there a comprehensive weed management program in place?
- Pests - Any evidence of pest damage? Is there an Integrated Pest Management Program in place to control pests?
- Fertilization - Is soil testing done and followed up with a comprehensive fertilization plan?
- Aeration - Is the field regularly aerated?
- Irrigation - Is there an irrigation system in place? Is it a subsurface system or water wheel type?
- Overseeding - Is this done throughout the season to insure growth of turf grasses?
- Use Discipline - Is the field used during rain events? Is the field “rested” as much as possible to help promote recovery?
- Maintenance Program - Is there documentation of all maintenance records and is a comprehensive program in place to make sure work is consistent and proactive, not reactive?

If a field addresses each item above and successfully performs them, then it should be considered an excellent facility. If it only addresses a few, but the field remains playable and safe, it is a good facility. If little to no items are addressed and the field is uneven and mostly unplayable, then it is classified poor and in need of renovation.

Criteria for Evaluating a Synthetic Running Track, Track Venues and Tennis Courts

When investigating a synthetic running track and track venues, the major points of consideration to evaluate the condition of the facilities are as follows:

Running Track

- Surface
  - Is the surface level without bumps, bubbles, holes, or gaps?
  - Is the synthetic surface worn, delaminating, or failing in anyway?
  - Is the track clear of obstructions?
- Venue
  - Is there an obstacle-free zone on the inside and outside of the track at least one meter in width?
  - Is the track properly cordoned off to keep spectators from entering and to control entrance to venues?

Horizontal Jumps

- Pit
  - Is the sand raked, soft, and free of debris?
  - Is the area surrounding the landing area clear of obstructions?
- Take-off Board
  - If wooden, is it smooth and level with the runway, and is it secure?
- Runway
  - Is the length sufficient?
  - Is the surface level without bumps, bubbles, holes, or gaps?
  - Is the synthetic surface worn, delaminating, or failing in anyway?

Vertical Jumps

- Pit
  - Is the area surrounding the pit clear of obstructions?
- Apron or Runway
  - Is the area or runway of sufficient size?
  - Does the approach come off of the track, cross a drain, or change surface?
  - Is the surface level without bumps, bubbles, holes, or gaps?
  - Is the synthetic surface worn, delaminating, or failing in anyway?

Throws

- Venue
  - Are the circle, cage, and sector clear of all loose material?
  - Is the venue adequately marked with fencing/roping to keep spectators out?
- Circle
  - Is the rim rounded with no jagged edges?
  - Is the circle smooth?
  - Is the area outside the circle clear of obstructions?
- Javelin Runway
  - Is the runway smooth with no holes or bumps?

  - Is the area around the runway clear of obstructions?
  - Is the synthetic surface worn, delaminating, or failing in anyway?
- Throwing Sectors
  - Is there a possibility that thrown implements will land on track or unsafe areas?

Tennis Courts

- Surface seams are tight and flush.
- Surface is smooth with no cracks or birdbaths.
- Surface is bright and not faded.
- All hardware is corrosion free.
- All hardware is in place and tight.

The Summary of findings for the fields, track and tennis courts are as follows:

3B. Field Walkthrough / General Observations

In January and February 2023, Hugh Cadzow from ELA Sport and Matt Wimer from Hummer Turfgrass Systems, Inc. walked the fields on both campuses to observe their condition. Mr. Cadzow is a registered landscape architect with over 20 years of design experience with athletic facilities. Mr. Wimer is both a Certified Natural Turf Field Builder with the American Sports Builder Association as well as a Certified Sports Field Manager through the Sports Turf Managers Association and is well versed in athletic field design and maintenance. Their observations are noted below:

Strath Haven Middle School

Baseball / JV Soccer Field # 1

Turf Observations

The baseball field has some grass growing and performance challenges due to the grading of the field, it is flat with minimal pitch tilted toward the infield. Runoff onto the infield from the outfield and/or surrounding areas after a prolonged time will make infield preparation and playability an issue. We noted that the infield was recently renovated and edging, and lips are in good condition. The infield and surrounding grass that was sodded during that project is in good condition as well.

The outfield is a mix of Ryegrass and Tall Fescue. The Tall Fescue is very prominent as clumped stands (natural growth habit) particularly during our visit. The other factor that made the fescue stand out was that there was a lot of overseeding from the previous Fall that was still developing. There must have been a fair amount of turf loss in the outfield, however, the overseeding was very successful and should

provide a good surface for Spring baseball. There are scattered bare areas that are either compacted high use areas (goal mouths) or low spots that pond water and do not promote good grass growth.

Facility Observations

- Access to field is unpaved and non ADA compliant.
- Limited fencing and no ball barrier netting to protect parking area / spectators (plans in place to construction 100' of spectator fence along both foul lines).
- No dedicated bull pen.
- Hooded backstop not desirable for varsity level baseball (needed due to proximity to stadium).
- No team shelters / low fence along benches.
- No dedicated bleacher area.
- Diversion ditch limits access to 3rd base side.
- Outfield is relatively flat in areas, so drainage has limited places to run saturating soil impacting lawn growth habits.
- Storage structure in very poor condition (currently being replaced).
- Solar orientation for baseball is slightly off the preferred SW/NE alignment; same for soccer.
- Soccer field appears undersized in available documentation.
- Water wheel irrigation has been used on field; no subdrainage.
- No team rooms or bathroom facilities close by.
- **Field Condition: Fair / Poor**

Photo 1 – Access to Varsity Baseball and Soccer Fields (Looking NE)
Uneven and non ADA compliant surface

Photo 2 – Access to Varsity Baseball and Soccer Field – (Looking SW)
Uneven and non ADA compliant surface

Photo 3 – Storage Building and Varsity Baseball Field (at Right)
Shed in poor condition; compacted grass area (left foreground); clumping grass pattern

Photo 4 – Varsity Baseball Field - Showing Maintenance Yard (at left)
Trees very close to field; no team shelter; limited fencing.

Photo 5 – Varsity Baseball Field
Undesirable hooded backstop; limited lower than desirable fencing; no dedicated bleacher area; no team shelter; no ADA access

Photo 6 – 1st Base Team Area
Drainage from bench area running onto home plate area (note erosion in foreground); no shelter; lower than desirable fence

Photo 7 – 3rd Base Team Area
No team shelter; limited lower than desirable fencing; diversion ditch at right limits access

Photo 8 – Varsity Baseball Field – Left Field Looking East
Clumping grass pattern; grading very level.

Middle Field Soccer Fields (#2 & #3)

Turf Observations

The grass growth habit is very similar to Baseball / JV Soccer with tall fescue clumps and ryegrass overseeding. There is a swale area between the baseball field and these fields that holds water and could be improved with grading work. Other undulations were visually evident and would need to be corrected by eliminating the grass and re-grading. As with the Baseball outfield the grade on these fields are very flat (under 1% to 1.5% approx.) with limited conveyance capability resulting in saturation of runoff into the ground.

Facility Observations

- Access to fields is unpaved and non ADA compliant.
- Slight depression separates these fields from Field 1.
- Fields are relatively flat in areas, so drainage has limited places to run saturating soil impacting lawn growth habits.
- Compacted areas / low spots around field edges with limited grass cover.
- Solar orientation is favorable for field sports; fields are undersized.
- Rare to no irrigation; no subdrainage.
- No team rooms or bathroom facilities close by.
- **Field Condition: Fair / Poor**

Photo 9 – Soccer Fields 2 & 3 (Looking S)
Clumping grass pattern; low compacted area (with ponding water); grading very level except for apparent low areas

Photo 10 – Soccer Fields 2 & 3 (Looking S)
Close up of compacted area; clumping grass growth pattern.

Photo 11– Soccer Field #3
Heavily compacted area.

Overall Turf Observations

The effort that was put forth to overseed and recover the areas on these fields was good. The question is why such dieback on the lawn. We believe there are two things that likely contributed to the loss of grass:

1. Lack of surface movement of water due to relatively flat grades. Water saturates the topsoil which is not a satisfactory growing medium. Excess water will do the following to grass plants:
    - Promote poor rooting and weak plants
    - Provide an environment where diseases thrive
    - High water content for prolonged periods in hot weather will kill grass and or set back roots
    - Wet soils during athletic events increase wear and damage to the fields.

2. Heavy usage compacts the soil particularly when it is wet. Compaction does not promote healthy grass growth.

The way to solve these problems is through proper grading and drainage installation. The primary reason for giving all these fields a **Fair / Poor** grade is the need for proper reconstruction of all facilities.

King Field / Stadium

Synthetic Turf Field

Synthetic Turf Observations

The turf is being replaced this summer. As part of the project the current natural grass D Areas are being replaced with synthetic turf. The natural / synthetic turf being next to one another is a maintenance problem and removal is favorable. Additional synthetic turf will require additional stormwater attenuation which is part of the remedial work.

Running Track

The original track was constructed in 2009. It was resurfaced in 2017 and recently repaired and power washed so appears in good shape. Life expectancy for track surfacing (including bituminous paving) is a maximum of 20 years so budgeting for a possible 2029 replacement is suggested. Removal of the synthetic surfacing and milling of the top paving wearing course is normally the minimal work unless there is a need for full depth replacement.

Throwing Venues

- The shot pot venue is in the southern end of the stadium with no dedicated gravel throwing sector. This makes for a compacted lawn area which collects water preventing proper lawn growth.
- The same applies to opposite side of the field. Additionally, the throwing pad partially lies on the walk, which is not favorable.
- Discus venue is located outside the stadium on Soccer Field #2. The throwing sector lies on the soccer fields which issues were raised previously.
- The javelin utilizes the running track chute for a runway with the throwing sector on the adjacent soccer fields.

Facility Observations

- Both grandstands lack proper ADA access and visitor's grandstand needs mid-rails in the aisles (Both of these currently considered). A code inspection should be done to catch any other possible code compliance matters. Code compliance is most important if renovating the structures.
- Front walkway to visitor's grandstand is not completely paved walk so likely muddy when wet weather occurs.
- Access to the concession stand is uneven, not fully paved and has possible tripping hazards.

- Visitor walkway / storage building area along visitor's side does not drain well based on siltation patterns and topsoil conditions. Suggest remedial storm water drainage.
- Solar orientation for field is not optimum (N-S preferred / SW-NE acceptable)
- Various lawn areas throughout stadium have low spots and ponds. Remedial drainage work is recommended.

Photo 12 – King Field – Synthetic Turf
Field Being Replaced

Photo 13 – King Field – Visitor's Bleachers
No ADA access; Incomplete walkway; No midrails;
Should be inspected for code compliance

Photo 14 – King Field – Home Bleachers
No ADA access; Should be code inspected;
Press Box not up to current IBC code (sufficient unless renovation occurs)

Photo 15 – King Field - Concession Stand
Uneven access; tripping concerns; paving needed.

Photo 16 – King Field - Concession Stand
Uneven access; tripping concerns; paving needed

Photo 17 – King Field – Storage Building
Poor drainage (note muddy areas on paving); Uneven grass (compaction / ponding)

Strath Haven High School

Field Hockey / Lower Field #1

Turf Observations

This field was overseeded in the Fall and has grown in very evenly and has good grass cover. The field slopes from side to side away from the road. This field had some of the best grass of any field that we visited.

Facility Observations

- Grading is a concern with the slope going from side to side which makes the team area tend towards saturation during rain events.
- The embankment on the school side of the field essentially drains onto the end line area potentially saturating it during rain events.
- No pedestrian pathway access to field.
- No vehicular / emergency access to field.
- No close parking areas.
- No bleacher area.
- Solar orientation is favorable (N-S)
- Field width is tight with limited run out areas.
- Water wheel irrigation but no subdrainage.
- No team rooms or bathroom facilities close by.
- **Field Condition: Fair**

Photo 18 – Lower Field / Field Hockey Field
Note better lawn growing pattern

Photo 19 – Lower Field / Field Hockey Field
Toe of embankment essentially at edge of field.

Photo 20 – Lower Field / Field Hockey Field
Elevational difference between Lower and Practice Football /Softball Fields

Practice Football Field / Softball Fields

Turf Observations

This field consists of the Varsity and Junior Varsity softball with practice football between the two infields. The damage that football practice typically inflicts on a field was evident and again major overseeding had taken place and was re-establishing that area. Because of this layout where a Fall Sport and a Spring sport overlap, overseeding following the football season is critical to maintain playability in the Spring. The warm winter this year has helped the seedlings. A consideration in an area like this would be to utilize turf blankets to cover the seeds and assist in growth and development ahead of Spring use.

Again, these fields sheet-drain, and as you get farther down the slope drainage issues begin to appear. This is a large area and a long way to move water in one direction. The Varsity and JV infields are in good condition at the top of the slope, however, the infield at the bottom of the slope is mostly abandon and likely hard to get ready for play. Installing Sand Grid Drainage (2" pipe, gravel, and sand) on a field like this would immediately help drainage, improve wear and increase playability.

Facility Observations

- The embankment on the school side of the field essentially drains onto the end line area potentially saturating it during rain events.
- No pedestrian pathway access to fields.
- No close parking areas.
- No vehicular / emergency access to fields.
- Grading is a concern with the slope going from side to side which makes the lower area of the field by the detention basin saturated during rain events.
- The varsity softball infield is in good condition as is JV infield.
- The fence and backstops on the JV field are in poor condition as is that of the SW softball field. No team shelters or significant storage adjacent to varsity field.
- No bullpens or batting tunnels.
- Solar orientation for practice football is not desirable (should be N-S); flipped for varsity softball (NE-SW not preferred SW-NE) and not favorable for JV softball (SE to NW)
- Water wheel irrigation but no subdrainage.
- No team rooms or bathroom facilities close by.
- **Field Condition: Fair**

Photo 21 – Varsity Softball Field
Toe of embankment essentially at edge of field; Undesirable hooded backstop.

Photo 22 – Varsity Softball Field
Outfield looking towards home plate.

Photo 23 – Practice Football Field
Looking east over practice football field area.

Photo 24 – SW Softball Field
Poor condition of backstop and fencing.

Photo 25 – SE Softball Field
Backstop in poor condition; infield mix over fence

"Dog Leg Field"

Turf Observations

Mostly a practice field due to size embankments around two sides essentially drain directly onto the field with limited diversion to carry the water away. Field slopes south from one end to the other saturating the end closest to the practice football field. Due to compaction and likely soil saturation recovery is limited leading towards infusion of broadleaf weeds. Solar orientation (N-S) is favorable.

Photo 26 – "Dog Leg Field"
Toe of embankment essentially at edge of field.

Photo 27 – "Dog Leg Field"
Toe of embankment essentially at edge of field.

Photo 28 – "Dog Leg Field"
Coverage mostly weeds due to compaction and lack of recovery.

MESA Field

Turf Observations

This field has a steep crown down the middle of the field. Of all the fields that we walked this had the most wear on the field surface with the exception of Rutgers Ave. There are visible surface undulations that need to be corrected through re-grading and re-grassing. In the interim, an overseeding program would help thicken the stand and repair the worn areas. Also, limiting access to goals in the off season / non-growing times will help limit wear when the grass cannot recover. When we visited the field there were multiple goals on the field which leads to people playing in concentrated areas when the grass cannot recover.

Facility Observations

- No ADA access to field. Current pathway stops part way up slope.
- Field is undersized limiting playing options. Runout areas beyond field are very limited due to grade drops and embankments.
- Limited drainage exists along toe of slopes. Clogs frequently creating ponding.
- Erosioin on some parts of the embankments should be stabilized.
- Solar orientation is favorable (N-S)
- No irrigation or subdrainage.
- **Field Condition: Poor**

Photo 29 – MESA Field
Non ADA compliant path leads partial way to field

Photo 30 – MESA Field
Sudden grade drop at edge of field.

Photo 31 – MESA Field
Embankment slope / edge of field; clumping grass pattern.

Photo 32 – MESA Field
Heavily compacted grass field; very poor growth.

Rutgers Avenue Fields (CADES)

This is a recreation level field that needs improvements to perform at a higher level. I mention that because the grading of the field needs some improvement to get water off the surface, the grass is thin and would need to be reestablished so that newer varieties that can handle wear could be established through seed or sod as well as drainage and irrigation systems installed depending on the level of play, amount of use and level of performance is desired. That was a long way of saying that there is potential for this field to be more than it is without a lot of earthmoving, it needs the main components of a natural grass sports field system:

1. Surface grading
2. Wear resistant / high use grass species
3. Irrigation
4. Drainage

The shape of the field is there, it just needs the other components to get it to the desired level of performance. For the field to play better without these improvements it would need a higher level of maintenance to encourage grass growth, overseed wear areas, etc. This method will only get the field to a recreation type level but would be an improvement over the current conditions.

Facility Observations

Track Field

- No ADA access to field.
- Old stadium with old field venues inside track. Since track events are no longer held here consideration should be made to remove them to allow more room for field.
- Track is used by local residents for recreation. Consideration to maintaining it at some level is suggested.
- The field must be reconstructed and due to its history, the restoration work involved will not be extensive as other fields in the District.
- Solar orientation is not favorable (E-W should be N-S)
- No irrigation or subdrainage.
- No team rooms or bathroom facilities close by.
- **Field Condition: Fair / Poor**

Photo 33 – Rutgers Avenue Fields
Existing cinder track; Track Playing field.

Photo 34 – Rutgers Ave. Fields
Heavily compacted track grass field; poor growth.

Soccer Field

The stand of grass on this field and the track field were two of the thinnest we walked. The soccer field needs to be overseeded immediately to repair and reestablish the grass stand. We estimate that it has 50% grass coverage currently. Small fields are tougher to maintain because even with smaller athletes the wear is concentrated, and the grass tends to get trampled and killed rather than creating divots and worn as it does on regular sized fields. We also understand this has become essentially local dog park for community residents. This use can contribute to compaction and other issues to the surface. Again, an increased level of maintenance is needed to maintain grass coverage on this field.

Facility Observations

- **Field Condition: Poor**

Photo 35 – Rutgers Ave. Fields – Soccer Field
Very heavily compacted grass field; very poor growth.

Nether Providence Elementary

Baseball / Soccer Field

The grass quality on this field was one of the best in the district. There was a tremendous amount of recess traffic on the field the day I was onsite, and the grass was holding up well. I must believe that the irrigation and proper surface grading has helped this field perform.

The baseball infield skin had some undulations that could be corrected with grading and the possible addition of some infield mix. The infield was being edged while onsite as well and assume that the infield mix will be graded and leveled following that work.

Facility Observations

- No ADA access to field.
- Field is small for school soccer but acceptable for youth.
- Slopes are graded primarily for baseball (infield falling to outfield. Slopes are at 2% which allows for proper surface drainage.
- No bullpens or batting tunnels.
- Solar orientation is favorable (SW to NE) for baseball and soccer (ESE to WNW)
- Irrigation exists which helps to sustain the grass coverage.
- **Field Condition: Good**

Photo 36 – NPE Field
Aerial View

Swarthmore-Rutledge School

The stand of grass on this field fair but there are various low spots that need to be attended to and a program put in place to reestablish cover. As noted at the Rutgers Soccer field small fields are tougher to maintain because even with smaller athletes the wear is concentrated, and the grass tends to get trampled and killed rather than creating divots and worn as it does on regular sized fields.

Facility Observations

- ADA access to field part way with adjacent walk.
- Field is too small for school sports but acceptable for youth.
- The field has a gradual slope to the east but as with other fields in the District flatter slopes tend to create wetter fields which result in chronic maintenance issues.
- Trees are encroaching on the first base line.
- Solar orientation is favorable (SW to NE) for baseball and not favorable for soccer (E to W in lieu of N to S).
- No irrigation or subdrainage.
- **Field Condition: Fair / Poor**

Photo 37 – SRS Field
Field compaction and clumping growth.

Photo 38 – SRS Field
Field compaction and clumping growth; close to school playground.

Photo 39 – SRS Field
Small baseball field.

Photo 40 – SRS Field
Hooded backstop and team areas.

Henderson Field

The stand of grass on this field fair to good in areas. There are various low spots scattered throughout that need to be attended to. The field has a gradual slope running from left field to right field (onto soccer pitch) with the flattest area going through midfield where foot traffic is the highest. That particular area is where we saw the barest areas. Baseball infield appears to be graded correctly although the back of the infield, based on photographic evidence, may need to be pushed back 12' or so (at 83' – should be 95')

Facility Observations

- No ADA access to either field.
- Left field line is too short for High School baseball (300' desirable – have 240')
- As with other fields in the District flatter slopes tend to create wetter fields which result in chronic maintenance issues.
- Field has severe flooding along 3rd base line.
- Storage building on-site. Unclear what is in the building.
- Unfavorable hooded backstop but proximity to road warrants usage. Fence along road could be enhanced with ball barrier netting to safeguard the road.
- No bleacher area or team shelters.
- No bullpen.
- Solar orientation is favorable (SW to NE) for baseball and favorable for soccer (N to S).

- No irrigation or subdrainage.
- No team rooms or bathroom facilities close by.
- **Field Condition: Fair / Poor**

Photo 41– Henderson Field
Hooded backstop and foul line fence (too low next to road)

Photo 42 – Henderson Field
Foul line / field fence (too low next to road).

Photo 43 – Henderson Field
Clumping growth pattern in left field.

Photo 44 – Henderson Field
Clumping growth pattern in outfield.

Photo 45 – Henderson Field
Clumping growth pattern; Compacted areas.

Overall Comments

Both ELA and Hummer Turfgrass walked the fields making observations of the natural grass turf, topography and existing facilities on the particular venues. We had the opportunity to interview staff to discuss maintenance practices, budgets and various remedial steps taken over the years. A summary of our findings are as follows.

1. Maintenance Program

   About 5 to 7 years ago what is called the “Penn State Method” of maintenance as prescribed by the University’s Department of Turf Grass Sciences was implemented. Due to staffing shortages and budgetary issues continuation of it has waned, staff and contractors are doing what they can but it requires coordination of responsibilities which can prove problematic at times. For a maintenance program to be most effective it must be consistently applied. Any deviations could result in unfavorable results. A recent example was when Lower Field #1 recently was overrun with crabgrass.

2. Field Construction

   Through research and site visits it is apparent that many of the maintenance issues are due to original construction of the playing fields. This primarily involves the grading since shallow slopes, end to end or side to side contouring pushes the water to areas where it concentrates and saturates the soil. This leads to poor grass growth, compaction, bare spots and unevenness. Proper grading directs water away into collection systems allowing for better growing medium (topsoil) and healthy roots, which leads to better grass coverage.

3. Public School Trends

   The major issue with many public schools is that athletic facility grounds maintenance is often underfunded and understaffed. School fields often serve community groups which add to the facility wear and tear. There should be sufficient targeted funds and / or staff available to implement a concise effective grounds maintenance program once the major remedial matters are addressed. A dedicated budget is suggested so Operations can apply directly to issues when needed.

3C. Athletic Programs and Field Use

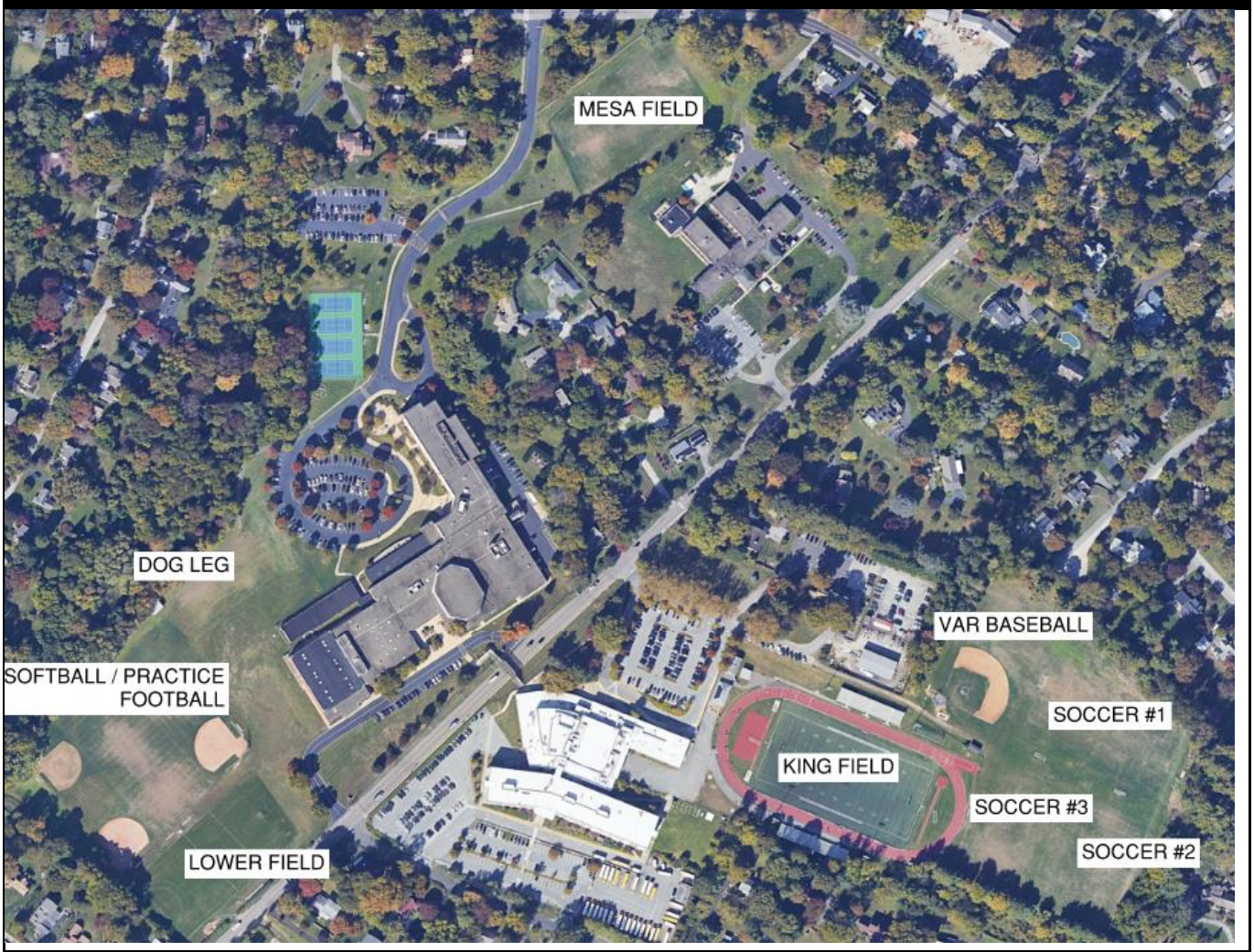
Field Use and Need Analysis

Determining the number of fields required to support public school district athletic programs and justifying the construction of additional fields can often prove difficult. Many diverse opinions exist among the various stakeholders, which are often shaped by the “expectation of quality” and do not consider the maintenance and recovery periods required for athletic fields, as well as the differences in field stress due to the varying intensities of multiple sports. The provision of additional athletic fields and/or synthetic turf fields will reduce turf stress by limiting the number of events to where deterioration is reduced, turf recovery is feasible, and appropriate maintenance can be performed.

When analyzing field use you analyze multi-purpose fields only since they are used for multiple sports. Dedicated baseball and softball fields are not factored in for they are normally considered unique facilities dedicated to one sport. Overlay fields (those multi-purpose fields on ballfields) are included in the analysis.

The outdoor field sports and current field assignments provided for both campuses are per the following Figures and Tables:

FIGURE 1



Existing Field Map – Strath Haven Middle School / High School

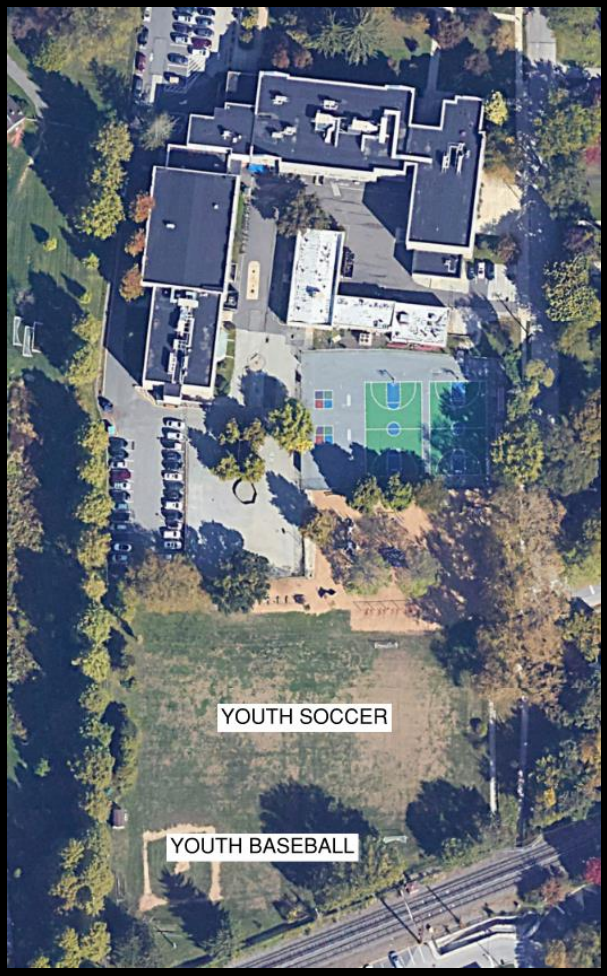
FIGURE 2

Existing Facility Map – Rutgers Avenue Fields

FIGURE 3

Existing Facility Map – Nether Providence Elementary

FIGURE 4



Existing Facility Map – Swarthmore Rutledge

FIGURE 5

Existing Facility Map – Henderson Field

TABLE A – WWSD Multi-Purpose Field Use Estimates			
VENUE	**Fall**	**Spring/Summer**	**TOTAL EVENTS**
King Field	283	285	568
Baseball/ JV Soccer	39	68	107
MS Soccer/ Lacrosse 1	68	28	96
MS Soccer/ Lacrosse 2	68	40	108
Lower Field/ Field Hockey	65	45	110
Practice Football/ Softball Fields/ Dog Leg	111	155	266
MESA Field	64	83	147
Rutgers Avenue Fields	65	0	65
Nether Providence Field	10	106	116
Swarthmore Rutledge Fields	30	0	30
Henderson Field	60	40	100

Field Need Analysis

ELA analyzed field requirements using two widely accepted methods as described below:

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

The following method used in determining field need is based upon the amount of activity (number of sporting events) that a natural turf field can be expected to recover from while undergoing a “normal” maintenance regimen over a period of three to four months (including reseeding, spot repair, aeration, and similar practices). This method requires certain assumptions regarding field conditions and maintenance practices and assumes that uses/activities will be reasonably distributed over a period of several months (such as a fall or spring sports season) and that the field will not be used when excessively wet. Special events use are not included in the analysis, as such usage is limited in time and not as intensive as high school sports.

It is widely accepted and documented that 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), depending on the type and level of play associated with the sport. However, in an effort to simplify the approach, all sporting activities will be assumed to have a similar impact. The yearly event baseline for each grass field shown in Figure 1 has been set at 50 for the fields with minimal maintenance and no irrigation or subdrainage. For those with some level of irrigation and/or subdrainage 75 annual events can be used. The highest number of events per year (100) is normally applied to fields with operating subdrainage, in-ground irrigation and a high level of maintenance.

Table B below illustrates how this method is applied to the Strath Haven Fields. These calculations factor in use by both the School District and local youth sports organizations.

TABLE B – Strath Haven High School / Middle School Multi-Purpose Field Use Estimates

VENUE	Fall	Spring/Summer	TOTAL EVENTS	BASELINE EVENTS	VARIANCE
King Field	283	285	568	568	0
Baseball/ JV Soccer	39	68	107	75	-57
MS Soccer/ Lacrosse 1	68	28	96	50	-46
MS Soccer/ Lacrosse 2	68	40	108	50	-58
Lower Field/ Field Hockey	65	45	110	75	-35
Practice Football/ Softball Fields/ Dog Leg	111	155	266	150	-116
MESA Field	64	83	147	50	-97
Rutgers Avenue Field	65	0	65	50	-15
Nether Providence	10	106	116	75	-41
Henderson Field	60	40	100	50	-50
				TOTAL EVENTS OVER	**515**

515 Events over Baseline / 47 Avg. Events per Field = 10.95 Fields Needed (Use 11)

Based on the above methodology field use on the campus exceeds the maximum use level by 515 events. Using an average baseline of 47 events per field, **an additional eleven (11) 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.

0.5 Multi-Purpose Field / Sport Team Ratio Method – Strath Haven High School and Middle School - School Teams Only

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 the Strath Haven High School / Middle School Teams are outlined in Table C below.

When calculating this many of the multi-purpose fields in the District are undersized for the recommended field dimensions. NFHS / PIAA regulations for each sport require the playing field sizes below. Add to this a preferred minimum of a 15' runout area (total 30') to provide the actual size:

Sport	Dimension
Girls Lacrosse	180' to 210' W x 320' to 420' L
Boys Lacrosse	180' W x 330' L
Field Hockey	180' W x 300' L
Soccer (Boys and Girls)	165' to 240' W x 300' to 360' L *
Football	160' W x 360' L

** - Preferred size is 225' W x 360' L*

The fields that are of sufficient size to serve as a game and practice field for same sport are:

Field	Dimension**	Sports
King Field	210' x 360'	All sports
Baseball / JV Soccer	165' x 330'	Soccer
MS Lax / Soccer #1	190' x 300'	Soccer
MS Lax / Soccer #2	190' x 300'	Soccer
Lower Field #1	180' x 300'	Field Hockey / Soccer
Softball / Practice Football	170' x 350'	Soccer
Rutgers Ave Track Field	210' x 360'	All sports
Henderson Field	200' x 325'	Soccer/G Lax/Field Hockey

*** - Dimensions Approximate. On overlay fields these dimensions do not extend over ballfield infields (not recommended)*

Based on the above there are eight (8) fields, based on available field area, can serve as practice and game field but only two (2) can host all sports. All others are limited to mostly to soccer and that is due to the varying dimensions the sport allows. MESA field (as well as the "Dog Leg" Field) are effectively practice only for school sports.

TABLE C - 0.5 Field/Sport Team Ratio Method			
Sport	**Teams**	**Ratio**	**Field Count**
Football	5 (Boys' Varsity, JV, 9th Grade, MS(2))	0.5	2.5
Field Hockey	4 (Girls' Varsity, JV, and MS (2))	0.5	2.0
Soccer - HS	5 (Boys' and Girls' Varsity, JV and Boys Fresh)	0.5	2.5
Soccer - MS	4 (Boys' and Girls' 7th & 8th)	0.5	2
Lacrosse	8 (Boys' and Girls' Varsity, JV and MS Boys (2) and Girls (2))	0.5	4
Band	1	0.5	0.5
Stadium	1 "Premier" Competition Multi-Purpose Field	1	1.0
Total Multi-Purpose Fields Needed			**14.5**
Total Existing Full Size Multi-Purpose Fields (Large Enough for Regulation Games)			**8**
Deficiency of Fields			**6.5 (7)**

*8 dedicated "full size" multi-purpose fields / 27 sports teams/band = 0.29 fields are provided per sports team.

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 exist for the particular teams if at all possible.

Summary

Strath Haven High School / Middle School Sports

The Baseline Method shows how heavily the fields are used when factoring in public use. The total number of events requires an additional eleven (11) fields to properly meet the current field capacity. The Field / Sport analysis is a less extreme method since it looks at school teams only. This approach

currently indicates a need for an additional seven (7) fields which is the number we recommend to consider.

Current usage combined with the condition of the majority of practice fields (limited irrigation, no subdrainage, and limited maintenance staff) creates excessive wear on the fields creating more maintenance work to keep safe and playable fields. Broadleaf weeds and clover will begin to replace the natural grass for they can establish better in such conditions.

Playing on wet fields, like so many School Districts were subject to in recent years, intensifies the damage by creating rutting, divots and compacting the topsoil. It only takes one rainy day game to do significant damage to a field. Constant use does not allow fields to get proper recovery time allowing grass to grow and develop a healthy root system. With the existing number of fields in place essentially at maximum capacity for school teams and the limitation on area to construct new fields to rotate usage, the facilities will continually need significant remedial work beyond the standard annual maintenance every five years or so. When factoring in community usage this only further illustrates that something must be done to address the usage issue.

3D. Options to Address Multi-Purpose Fields

Reconstruct / Renovate Existing Multi-Purpose Natural Grass Fields

There are three major contributing factors to establishing a good natural grass athletic field. The first in proper construction in order to build a solid foundation on to which safe playing conditions can be established. The second is proper maintenance to address the wear and tear fields are subject to. The third factor is to maintain a reasonable number of events on the field. If any of these three factors are not up to standard the field will deteriorate.

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 / MS Lax / Soccer Fields, Rutgers Ave. and Henderson. Other fields require a moderate amount of work while some even less. Depending on field type (game / practice) and maintenance practices once the fields are redone, they will need to be revisited every five years or so to deal with wear and compaction issues that annual maintenance cannot address.

Construct Synthetic Multi-Purpose Turf Fields

It is our experience that the significant majority of K-12 Schools do not have the budget or the staff to keep up the necessary maintenance on natural grass fields. Fields may be kept at fairly playable and relatively safe playing conditions for a few years then consideration must be made to reconstruct the field

by regrading and sodding for no level of maintenance can keep a grass field safe forever. Heavy usage allows for no possibility to rest fields properly to recover so they can naturally re-establish.

In the case of the Wallingford Swarthmore School District, the fields have been kept, (overall), in fair condition, considering the budget and manpower limitations that exist. However, it has reached a critical point where some level of reconstruction is needed to “reset” some of these fields and give them a sound foundation to make maintenance easier and provide a safer surface for users. Demand for the fields will only continue and increase due to community demands, all the more making it essential that a continuous and on-going maintenance program be diligently followed.

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 illustrated in Tables B and C above 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 amount of events per year than natural grass.

Recommendation

Most often when a school district decides to install a synthetic turf field it is done at the stadium for the infrastructure (grandstands, concessions, bathrooms, security, and field lighting) is in place which allows maximum use of the field both day and night. This is already in place at King Field and based on the number of events held there it is carrying more than its fair share of the event workload. Another option for synthetic turf will be to install a new synthetic turf at another location in the District. 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.

The availability of funding will dictate which of these two options the School District should consider first. While creation of an auxiliary stadium with synthetic turf is less involved and will cost less, the stadium grandstands, field and particularly the track are in significant need of renovations and should be done as soon as feasible.

In order to aid the district in the decision making process we are providing a Synthetic Turf vs. Natural Turf Cost Analysis in Subsection 3E below to understand the benefit of one type of field to another. In following Section 3 we have designs for these two options and schematic costs. We have also developed recommended remedial steps and budget costs for the other facilities on both campuses so the School District can plan future budgets.

3E. Synthetic Turf vs. Natural Turf Cost Analysis

To address the need to provide proper field rotation and recovery on the High School / Elementary School campuses additional fields are not an option. The only methods available are to reconstructed some of the natural grass fields to a higher-level field (with subdrainage and irrigation) or consider synthetic turf as an alternative approach. Where a natural turf field similar to the current fields can handle approximately 50 to 75 events per year (three seasons) it is generally accepted in the athletic industry a well-constructed natural grass field, on average, can support 100 events per year. A synthetic turf field can handle a minimum of 1,000 events per year when lighted and operating four seasons.

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 / SF[1]). Using a 100,000 SF field area for comparison the costs are shown on Table D below:

TABLE D - Installation Costs

Synthetic Turf			Natural Grass[1]			
Cost Per (SF)	Field Area (SF)	Total Cost	Cost Per (SF)	Field Area (SF)	Total Cost	Difference
$22.00	100,000	$2,200,000	$13.50	100,000	$1,350,000	$850,000

[1] 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 very 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 Table E below:

TABLE E - Seasonal Maintenance Comparison

Synthetic Turf (ST) / Natural Grass (NG)

Maintenance Item	Hours (ST)	Hours (NG)
Mowing	0.0	56.0
Brushing	56.0	0.0
Irrigation	0.0	32.0
Fertilization	0.0	16.0
Aeration/Seeding	0.0	24.0
Field Markings	12.0	48.0
Turf Repair	0.0	48.0
Total Hours	**68.0**	**224.0**

	Synthetic Turf	Natural Grass
Material Cost	$ 2,900.00	$ 7,200.00
Labor Rate	$ 60.00	$ 60.00
Total Labor	$ 4,080.00	$ 13,440.00
Total Cost	**$ 6,980.00**	**$ 20,640.00**

Maintenance hours estimated as follows (Typical Public High School or Municipal Agency):

1 Mowing/Brushing: 28 weeks x 1 mowing/brushing per week x 2 hours, Synthetic Turf includes adding rubber/infill and brushing in at (2) applications per year

2 Irrigation (Natural Grass): 16 weeks x 2 hours per week for water wheel transport and set-up

3 Fertilization (Natural Grass): Fall and Spring applications, pre/post emergent herbicide, (4) total maintenance events x 4 hours each

4 Aeration/Seeding: Core field, pulverize and drag plugs, drill, or slit seed, 3-person crew x 8 hours = 24 hours

5 Field Markings (Natural Grass): Line markings, 2 hours each application, applied bi-weekly each Fall (6) and Spring Season (6) x 2-person crew

6 Field Markings (Synthetic Turf): Line markings (Field Hockey Only), 2 applications x 2 hours each x 2-person crew + 4 hours each

7 Turf Repair (Natural Grass): Spot repair, resodding, topdressing, 2 hours per week x 2-person crew x 12 weeks each Spring/Fall

8 Turf Repair (Synthetic Turf): Turf repair included as part of Warranty (No Cost)

Note: Labor rates are approximate and assumes allowance for hourly rate plus benefits.

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

Table F - Synthetic Turf vs. Natural Grass Per Event Cost		
	Synthetic Turf	**Natural Grass**
Initial Cost Installation Cost / SF:	$22.00/SF = $2,200,000	$13.50/ SF = $1,350,000
Maintenance / Replacement Costs (10 years)	$404,671	$335,000
Total:	$2,604,671	$1,685,000
Annual Number of Events:	1000 x 10 Yrs. = 10,000 Events	100 x 10 Yrs. = 1,000 Events
Average Cost Per Event:	$260.47	$1685.00

[1] Square Foot Cost based on Sportsturf Managers Association publication “A Guide to Synthetic and Natural Turfgrass for Sports Fields” Current Edition adjusted for inflation.

[2] Id

[3] Mowing, maintenance, water, equipment at $30,000, over seeding at $600, fertilizer at $8000, wetting agents at $1200, weed treatment at $500

[4] Includes prorated sweeper cost, 30 turf sweepings, miscellaneous repairs

So, although valid concerns exist for the upfront and Life Cycle Cost of a synthetic field the cost per event proves to be significantly less. The increased number of events that can be handled by the synthetic field can lessen the event demand on natural grass fields allowing them to be rested and recover.

Athletic Feasibility Study

4 Development of Alternatives

- Strath Haven Middle School and High School Campus Site Limitations and Deficiencies
- Rutgers Avenue Fields Site Limitations and Deficiencies
- Nether Providence Elementary Site Limitations and Deficiencies
- Swarthmore-Rutledge School Site Limitations and Deficiencies
- Henderson Field Site Limitations and Deficiencies
- Master Plan Priorities
- Recommended Athletic Facility Improvements

4A. Strath Haven Middle School and High School Campus Site Limitations and Deficiencies

Although approximately ±38 acres in size, the site has limitations that have impacted field layout in the past and will continue to do so as the Master Plan is developed. These limitations include:

Existing Infrastructure – There are eight (8) existing multi-purpose fields, three (3) softball fields and one (1) baseball field on both campuses and no open space left for development of new fields if needed.

ADA Issues – Another impact to consider when developing a Master Plan is the need to incorporate ADA access to areas of the site where it currently does not exist. This includes ramps to grandstands, paths to fields, seating areas, and sufficient reserved parking. ADA Access throughout both campuses is very limited.

Field Usage – Based on field usage analysis, the number of field sports offered by both the high school and middle school requires at least one (1) new multi-purpose field in order to address the number of events. This will also provide the ability to let natural turf fields rest and properly recover and maintain playability better.

Utility Infrastructure – Current locker room facilities are distant from the majority of playing fields. Proximity of team rooms and bathroom should be closer for both players and spectators.* Currently, on the High School Campus there is an existing sewer running by the softball / practice football but no substantial water or electric. As for the Middle School electric service does exist at the stadium but no sewer or water on the eastern side of the stadium that is closest to the fields.

* The main reason is convenience but also safety during inclement weather, particularly in the Spring.

Aging Facilities – The grandstands at the Stadium have been upgraded over the years since their original construction circa late 1960's. Wood seating had been upgraded to aluminum circa 1980-90's, and the supporting steel framing structure has been painted over the years and is in good condition. Also the perimeter railing around the grandstands has also been maintained as recommended by the District's Insurance Risk Manager, over the years.

Storm Water Control – Current stormwater improvements were designed to meet the codes in place at the time of permitting. Any significant construction, including the installation of synthetic turf, will require stormwater attenuation. This is due more to soil disturbance than the addition of an impervious surface.

Summary

The major limitation provided on both campuses is a lack of available lot area for additional fields and facilities. This requires any remedial work to be a renovation of existing fields and infrastructure. The

other site limitations listed above do not present a major obstacle to facility renovations. Other issues such as ADA access and the renovation of existing grandstands and buildings have a limited impact on design options.

4B. Rutgers Avenue Fields Site Limitations and Deficiencies

ADA Issues – Currently no paved walkways exist that will allow ADA access to the fields. Existing parking areas are relatively close, and elevations are relatively similar so construction of walks should not be as costly at the High School / Middle School.

Aging Facilities – The field and track were constructed circa 1920's-30's. The existing track is cinder and outdated by today's standards. The throwing and jumping venues are undersized. Due to the community use of the track, it is suggested that it be maintained. It is the field venues that should be removed since they are not used and impact the available area for the playing field. Field restoration should be easier than other District multi-purpose fields since the original construction (crowned field) is a more standard field design. As for the soccer field, the shallow grades require reconstruction of the facility essentially from scratch.

Storm Water Control – Current stormwater improvements were designed to meet the codes in place at the time of permitting. Any significant construction, including the installation of synthetic turf, will require stormwater attenuation. This is due more to soil disturbance than the addition of an impervious surface.

Summary

Site limitations do not present major obstacles to facility renovations. Unlike the Middle School / High School Campus fields these are simply two fields in need of significant renovations, not additional fields or buildings.

4C. Nether Providence Elementary Site Limitations and Deficiencies

The property was renovated / regraded within the past ten years to upgrade the fields and get them more playable. Expansion of the site was limited due to surrounding residential lots, floodplain and existing fire house. Therefore, the renovation optimized the available space.*

Further remedial work will be more along the line of installing accessary uses such as a batting tunnel, bull pen or walkway, which will require localized regarding and installation of improvements. Although space is limited, this should not be a major obstacle to getting this work done.

* Due to the need to provide as many fields as possible for youth sports this is an overlay field configuration, which requires use in multiple seasons never letting the grass recover. Normally not desirable the fact irrigation exists helps the grass recover as best as possible.

4D. Swarthmore-Rutledge School Site Limitations and Deficiencies

This site is a relatively small site that cannot be expanded due to adjacent college property, North Princeton Avenue and SEPTA rail likes. Because of this and the angular configuration of the lot, the fields are restricted to being sized for youth sports.

Like Nether Providence (NPE) this too is an overlay configuration to maximize usage. Unlike NPE, there is no irrigation, and the grading is relatively flat so the grass can never fully recover for it is consistently being used. Due to this, the need to reconstruct the field is important to help sustain better grass health.

4E. Henderson Field Site Limitations and Deficiencies

This facility has similar deficiencies to other fields in the District. These are shallow grades, ponding and dimensional issues. In addition, it is an overlay field that places continual use on the surface with recovery time limited to winter and summer when little to no recovery can occur. District and public needs require it to stay as an overlay field. Due to these major renovations are needed to allow the surface to recover as best as possible.

As for limitations, there are some for baseball (left field is short) being adjacent to two public streets places safety concerns with balls and the proximity of spectators / players.

4F. Master Plan Priorities

The Master Plan shall:

1. Be designed as a top-of-the-line facility that is aesthetically pleasing, easy to maintain, sustainable and provides the Student / Athletes the best and safest venues.
2. Provide as many multi-purpose fields as possible to meet the needs of the sports programs and community needs.
3. Allow access for all students, staff, and spectators to all venues on the complex.
4. Have the capability of being developed in phases allowing capital investment over a period of time.

4G. Recommended Athletic Facility Improvements Strath Haven High School Campus

Based on the inventory of the existing fields on the campus, our walkthrough of facilities and our experience in the following are the suggested improvements for each facility. These are not in order of priority simply formatted to align with the remainder of the report. A suggested priority of projects with phasing follows this table.

Please note with active athletic fields use of sod is recommended for if seeded the field must remain unused at least two growing seasons to achieve sufficient grass coverage prior to usage. Based on field demands in the District this is likely an unacceptable approach. With sod it is possible to not lose a season depending on timing of installation.

Note – For Natural Grass Fields the Following Apply:

- Major Renovations – Multiple aerations, topdressings, dragging and rolling to even the field surface.
- Major Renovations / Drainage – Install sand slit system, multiple aerations, topdressings, dragging and rolling to correct field planarity.
- Moderate Renovations – Limited aerations, topdressings and dragging.
- Minor Renovations – Address compacted or damaged areas.
- Drainage – Install Cambridge system with associated drainage improvements.
- Reconstruction – Includes kill existing grass, till and sod.
- Major Reconstruction – Includes rebuilding of field and installing sod.

Item No.	Field / Sports	Recommended Improvements / Alternatives	Schematic Budget Costs
Strath Haven Middle School Campus			
1	Baseball / JV Soccer Field #1 (Option 1)	1. Major Reconstruction – Add Bullpens Included 2. Dugouts (Prefab) 3. Fences 4. Paved Access 5. Bleacher Area 6. Team Rooms / Bathrooms	1. $ 2,635,000 2. $ 150,000 3. $ 80,000 4. $ 35,000 5. $ 35,000 6. $ 2,500,000 **$ 5,435,000 Total**
2	Baseball / JV Soccer Field #1 (Option 2)	1. Construct Synthetic Turf Facility w/ 6 Field Lights (includes field items under Option 1).	1. $ 4,100,000 (Field) $ 890,000 (Lights) **$ 4,990,000 Total**
3	Middle Field Soccer Fields (#2 & #3)	1. Major Renovations / Drainage (Sand Slit)	1. $ 330,000 (Reno) $ 190,000 (Drain) **$ 520,000 Total**
4	King Field	1. Address ADA accessibility for grandstands. 2. Renovate paving and accessibility around concession stand. 3. Address poor drainage around stadium. 4. Install shot put throwing sector. 5. Repair / replace fence along track. 6. New Press Box (modular)	1. $ 75,000 2. $ 90,000 3. $ 60,000 4. $ 25,000 5. $ 55,000 6. $ 330,000 **$ 635,000 Total**

Strath Haven High School Campus			
5	Field Hockey / Lower Field #1	1. Drainage (Sand Slit) 2. Provide paved pedestrian / service / emergency vehicular access	1. $ 120,000 2. $ 35,000 **$ 155,000 Total**
6	Practice Football Field / Softball Fields (Option 1)	1. Drainage (Sand Slit) 2. Provide paved pedestrian / service / emergency vehicular access / storm) 3. Dugouts (Prefab) 4. Batting Tunnels / Bullpens 5. Team Rooms / Bathrooms	1. $ 242,000 2. $ 95,000 3. $ 150,000 4. $ 135,000 5. $ 2,500,000 **$ 3,122,000 Total**
7	Practice Football Field / Softball Fields / Dog Leg (Option 2)	1. Construct Synthetic Turf Facility w/ 8 Field Lights (include dugouts / batting tunnel / bullpen) 2. Construct parking lot , pedestrian access, and service / emergency access / lights.	1. $ 3,290,000 (Field) $ 1,250,000 (Lights) 2. $ 500,000 **$ 5,040,000 Total**
8	MESA Field	1. Major Renovations / Drainage (Sand Slit) 2. Provide paved pedestrian / service / emergency vehicular access	1. $ 260,000 2. $ 100,000 **$ 360,000 Total**
9	Tennis Courts	1. Monitor Surface Conditions	$ 0
Rutgers Avenue Fields			
10	Track	1. Remove running and jumping venues and restore lawn.	$ 75,000
11	Track Field	1. Major Renovations / Drainage	$ 280,000
12	Soccer Field	1. Reconstruction	$ 130,000
Nether Providence Elementary			
13	Baseball / Soccer Field	1. Install ADA access 2. Install Batting Tunnel and Bullpens	1. $ 45,000 2. $ 135,000 **$ 180,000 Total**
14	Baseball / Soccer Field	1. Reconstruction	$ 130,000
Henderson Field			
15	Baseball / Soccer Field	1. Remedial drainage work for upland runoff. 2. Major Renovations / Drainage / Fence 3. Team Rooms / Bathrooms	1. Borough 2. $ 500,000 3. $ 2,500,000 **$ 3,000,000 Total**

Range of Planned Project Total Costs

The costs above also include line items for field house / bathroom / concession facilities at the Middle School, High School and Henderson Field totaling $7,500,000. When removing that cost the anticipated range of field and associated site improvements is between $6,522,000 to $10,495,000. Cost differential is mostly attributed to utilization of synthetic turf facilities with the highest amount reflecting that two different facilities would be built. The range would reduce if only one turf facility is constructed.

Implementation of Plan

Improvements of such a magnitude particularly when spread around multiple District campuses are anticipated to be implemented over a minimum 10 years and likely longer depending on the availability of funding. With synthetic turf having an average life of 10 years, construction of a second facility should be timed so that replacement does not coincide with that of King Field thereby spreading out replacement costs.

Phasing of Recommended Work

Phase 1 – Address Shortage of Multi-Purpose Fields

There is a shortage of up to eleven (11) fields based upon our analysis of which we recommend the need for seven (7) additional fields (see pages 46-48). The **biggest need** in the District is to provide additional/ better quality multi-purpose fields.

- New Synthetic Turf Field – Construct one of two options: On the Practice Football Field / Softball at the high school campus or Baseball / Soccer Field at the middle school campus.

Phase 2 – Address Remedial Work at King Field / Stadium

The Stadium is the most heavily used facility in the District and is need of renovation. Currently, there are upgrades planned with synthetic turf being replaced, fence repairs, a new scoreboard, visitor grandstand upgrades, and possible ADA modifications to both grandstands. There are more renovations needed.

- Renovations to King Field / Stadium

Phase 3 – Address Remedial Work on Varsity Ballfields

All ballfields have evidence of the need for remedial work. Both Varsity facilities are on overlay multi-purpose fields so remedial work encompasses that work as well.

- Middle School - Baseball / JV Soccer Field #1 (Option 1 if Option 2 Synthetic Turf is not selected)
- High School - Practice Football Field / Softball Fields (Option 1 if Option 2 Synthetic Turf is not selected)

Phase 4 – Address Remedial Work on Multi-Purpose Fields Primarily Used by District
Need to do repair work on all multi-purpose fields.

- MESA Field
- Henderson Field
- Nether Providence Elementary
- Rutgers Avenue (Track Field and Track)

Phase 5 – Address Remedial Work on Multi-Purpose Fields Primarily Used by Youth Organizations
Need to do repair work on all multi-purpose fields.

- Swarthmore-Rutledge School
- Rutgers Avenue (Soccer Field)

Other Remedial Steps to Be Considered

1. ADA Access Paths – Currently there is limited ADA accessibility on all campuses. Consideration should be made to construct ADA paths facilities wherever possible. These paths should be 6 to 8 feet wide to allow district golf carts and gators to use during heavy rain when access to the fields is needed. The schematic cost per linear foot of 6' wide path is $55.00.
2. Professional Field Construction – Proper athletic field and facility construction is a specialty. Often when athletic fields are constructed as part of a new school project, they are built by contractors unfamiliar with proper construction methods. Once the work is done problems often arise leaving the School District to seek professional help to properly maintain the fields which the District has done to a limited degree. No matter what level of maintenance over time the heavy usage simply is too much and reconstruction is needed. We recommend the School District consider retaining professional athletic turf contractors to reconstruct the fields when necessary. Doing so provides a properly constructed playing surface that will be better able to handle the usage requirements and require lower maintenance in the interim.

Athletic Feasibility Study

5 Appendix

- A Series - Staff Returned Athletic Questionnaires
- B Series - Student Participation Numbers since 2016
- C Series - Field Use Estimates
- D Series - Public Input (March 02 MTG and On-line Survey)
- E Series - Various Plans from Prior Athletic Projects
- F Series - Various Older Athletic Planning Documents

Athletic Feasibility Study

A Series
Staff Returned Athletic Questionnaires

SYNTHETIC TURF FIELD QUESTIONNAIRE

Project Name: Wallingford-Swarthmore School District
Project Number:
Questionnaire Completed By: Patrick Clancy **Date:** 11/29/2022

Synthetic Turf Field Items

1. Has the District done any research into a turf system / manufacturer? Yes If so what system / manufacturer has been looked into or may be is preferred? Spoke with FieldTurf, AstroTurf, and Shaw in fall 2021. No preference, but question the degradation of our FieldTurf.

2. Field Programming – What teams are going to be playing on the field? Field hockey, Football, Girls Soccer, Boys Soccer, Girls Lacrosse, Boys Lacrosse, Track & Field, PE Classes, and Ultimate Frisbee

3. Lines – Based on the planned teams what field lines does the District want on the field? Field Hockey, Football, Soccer, Girls Lacrosse, Boys Lacrosse

   Would the District consider “tick marks” at locations on the field so lines can be painted on with relative ease when needed? _____ This reduces the number of inlay seams and makes for a “less crowded” look. If so what fields would have “tick marks” Currently have "tick marks" for lacrosse. Would consider doing this for other sports as well, but prefer to have all sports marked with inlaid lines.

4. Is there a mid-field logo the District wants? Yes Can an electronic graphic of the file be provided? Yes. Either panther logo or SH monogram

5. Does the District wish to have end zone graphics or lettering? TBD If so what text /

images are desired? Would consider "STRATH HAVEN" in both endzones, preferably in Futura Extra Bold Condensed font. Would prefer Black endzones

6. Are there any other graphics or text that being contemplated? _____ If so what are they? Not at this time

7. Field color – What is the District contemplating? (All green / light and dark green every 5 yards / other) Would consider alternating shades of green, but okay with solid as well.

8. Conduits / Utilities – Does the District want any wiring / conduit / utilities on the field either related to the field or track events? Ideally would add electrical outlets and michrophone jacks on both sidelines and possibly electric outlets behind endzones

9. Infill – Based on current news reports questions have be raised about the recycled rubber infill normally used in synthetic fields. Is this a concern at the District? _____ There are alternative infills (manufactured rubber, organic and other) that are normally higher in cost but have been used in the industry. Does the District wish to consider those systems? Open to all infill options, including re-using current in-fill.

12. Notes: If there is a way to add tick marks or lines to encourage coaches to re-orient practice (sideline to sideline) while still being able to run plays and set-pieces, that might spare the goal mouths on either end. Would also be interested in pricing out permanant perimeter netting at 20' height in end zones for catching soccer and lacrosse shots.

TRACK AND FIELD VENUE QUESTIONNAIRE

Project Name: Wallingford-Swarthmore School District
Project Number:
Questionnaire Completed By: Patrick Clancy **Date:** 11/29/2022

Track and Field Items

1. What is the age of the track? Installed in 2009 (13 years old)
2. Was there subsequent resurfacing? Yes When was that done? 2017
3. Is there a preferred color? Red works, would consider silver/gray with black exchange zones
4. Is there a preferred surfacing system / manufacturer? Our coaches are happy with our current track surface. (I believe Benyon?) We wish to avoid Mondo tracks
5. Is there areas that paving failure exists? Unknown If not would the District consider milling/removal of the surfacing only which is much less expensive option? Yes If yes would the District consider repairing those areas only? (This also is a less expensive option) Yes
6. Are the jump venues to remain where they currently are located? _____ If not please indicate where they are preferred to go. We are okay with the current placement of the jump runways, but would be open to moving runways to the grass stretch near the shed and restrooms
7. Does the District wish to have fully paved “D Areas” with track surfacing? Yes. There are alternatives where only the runways / landing areas are hard surfaced while the remainder of the “D Area” is synthetic turf. This saves cost and helps reduce storm water runoff. Would the District consider this option? Yes

8. Does the District wish to remain with 6 lanes? _____. If yes does the District wish to add a longer straight away? Open to exploring 8 lanes, but 6 is probably most practical. Would be interested in adding another 100m start area on Turn 2 of current configuration.

9. It is recommended by track governing bodies that any obstructions be at least 1 meter outside the outer lane. It is not a requirement. The fence along the track is currently less than a meter. Does the District want to move the fence? _____. If so there will be a reduction in area behind the fence up to the grandstands and it would be a width that is less than desired (12'). Does the District wish to replace the fence along the track? The fence is probably due for replacement, and we would be willing to explore moving the fence. This may coincide with bleacher changes - deck on front for wheelchairs.

11. Has the Track Coach and Athletic Director been consulted on the possible changes to the track and venues? Track coaches are aware we are re-evaluating King Field

12. Notes: We probably should re-evaluate where the throwing events take place as well. The current set-up creates an unsightly shot-put area in a prominent location, and the discus and javelin area takes an entire lacrosse field out of commission. Shot put used to take place in the D area between turn3 and turn 4 prior to all-weather track. A gravel area here could coincide with portable bleachers for band in the fall season.

I would be happy to walk around the facility with you to discuss further.

ATHLETIC FIELD FEASIBILITY STUDY QUESTIONNAIRE

Project Name: Wallingford-Swarthmore School District
Project Number:
Questionnaire Completed By: Patrick Clancy **Date:** 11/29/2022

Feasibility Study Items

1. What are the inter-scholastic field sports on Campus and general enrollments?

Fall:

High School: Field Hockey (40), Football (80), Boys Soccer (75), Girls Soccer (40)

Middle School: Field Hockey (30), Football (80), Boys Soccer (40), Girls Soccer (35)

Spring:

High School: Track & Field (150), Baseball (35), Softball (15), Boys Lax (55), Girls Lax (45)

Middle School: Track & Field (150), Baseball (30), Softball (15), Boys Lax (40), Girls Lax(35)

2. Are any new inter-scholastic field sports being planned for or desired?

Adding 9th grade baseball this spring (3rd team)

3. What are the intramural / local sports on Campus and what fields area used?

Fall:

Ultimate Frisbee (school club) uses up to three fields from 5-7 PM
Nether Soccer uses up to two fields in evening, Youth Field Hockey uses one field two nights a week.

Spring:

Ultimate Frisbee (school club) uses up to three fields from 5-7 PM
Haven Youth lacrosse uses two or three fields in evening, NPAA baseball uses Henderson and Nether Providence Elementary

Summer:

Primarily HS off-season workouts and local camps/clinics

4. What are the local youth / public uses on Campus and what fields are used?

Fall:

Nether Soccer (MS Soccer/Lacrosse Fields)

Spring:

Haven Youth Lacrosse (MS Soccer/Lacrosse Fields, Mesa Field)
NPAA Baseball (Henderson Field, Nether Providence Elementary)

Summer:

NPAA Baseball (Henderson, NPE, Varsity Baseball field)

5. List the athletic fields / venues including name / type and list of facilities. Also note any known issues (drainage, etc.). *(List additional fields / venues on separate sheet if necessary)*

Field:

George L. King Field - Varsity stadium for field hockey, football, soccer, track & field, and lacrosse

Field

Baseball/JV Soccer Field on MS Campus:
JV Soccer in fall, Varsity/JV Baseball in spring
Drainage issues with water runoff from parking lot to home plate

Field:

MS Soccer Lacrosse Field:
MS Soccer in Fall, MS Girls Lacrosse and Track & Field (throws) in the spring.
Water ponds on heavily used areas with heavy rainfall.

Field:

Providence Road Field:
MS Field Hockey in Fall, JV/Varsity Girls Lacrosse in Spring
Best grass surface on campus

Field:

Softball/Football Practice Field:
Varsity/JV/9th Football in fall, Softball in Spring
Poor drainage with water runoff from hill and proximity to pond

6. What are the practice schedules for field sports?

Fall:

Most teams practice 3:15-5:15, with some teams coming later to get turf access.

Spring:

Track & Field, Baseball, and Softball practice after-school. Lacrosse generally practices later for turf access

Summer:

Football has workouts in the morning. Other teams use the stadium in the evening.

7. What are the maintenance schedules for the fields? (Summer / Fall / Spring) *(List additional fields / venues on separate sheet if necessary)*

Field:

Need to consult with operations department - specifically Rob Copple

Field

Field:

Field:

Field:

8. What athletic field maintenance equipment is owned by the school?

Lawn Mower, Tractor, Groomer (baseball/softball) aerator, liquid sprayer, seed sprayer, lining equipment

9. Are maintenance services contracted out? And if so, what is done?

Annual baseball/softball infield repairs, pesticide/fertilizer spraying, some field lining

10. What are the general spectator attendances for various events?

Most evening varsity events have 100-250 spectators, After-School contests have 50-100 spectators.

Varsity football sells approximately 1000-2000 tickets, plus bands, cheerleaders,

11. Are there any known building code issues with existing buildings and / or grandstands?

Grandstand is out of ADA compliance

12. Are there any Title IX issues?

We are working to bring softball field up to the same standard as the baseball field (batting cages, scoreboard)

13. What is the situation with storage?

We have storage sheds by stadium restrooms, baseball field, and football practice fields. Primitive storage under visiting bleachers for pole vault pads in off-season. Could use more storage near start line of 100m dash.

14. Other Concerns / Comments:

- Fencing along baseball field foul lines needed to protect spectators and pedestrians
- Pole Vault pads left out during spring due to lack of nearby storage. This leads to kids playing on it like a trampoline (attractive nuisance)
- Would like to move all middle school teams to the MS side of the campus.

TEAM HEAD COACH FEASIBILITY STUDY QUESTIONNAIRE

Project Name: Strath Haven HS
Project Number:
Questionnaire Completed By: TJ Adams - Girls Soccer **Date:** 11/15/22

Feasibility Study Items

1. What sports do you coach?

2. What levels are in your sport? ☑ Varsity ☐ JV ☐ 9th Grade ☐ Freshman

3. What is the average number of student athletes at tryouts for each level? 20ish

4. What is the average number of student athletes do you keep for each level? 16-20

5. Of this number, what is the average number on varsity? 18 On JV only? 18

6. What field(s) do you use for practice (list all levels)?
King Field, SHMS Fields, NPE Field

7. What field(s) do you use for games (list all levels)?
King Field, SHMS Fields

8. What are your typical practice dates and times (list all levels)?
August-End of October 3:15-5:00

9. What are your typical number of home games per season and what day(s) and time(s) do you have games?

Nine home games for Varsity and JV at 3:45, 5:00, and 7:00

10. Do you, when the practice plan allows, shift goals around the field to lessen the wear in high use areas such as goal mouths and penalty spots?

Yes

11. Have there been any issues with the playability of your fields (keep wet, divots etc.) over the years

I could wrote 10,000 words on this if I had the time. The turf on Kind Field was only appropriately maintained for its first few years and has been the consistency of Astro turf for years now. The grass fields throughout the district are an embarrassment. Always.

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

I have coached 47 seasons for four different athletic programs in the district and I have watched with frustration and disappointment as neighboring districts have invested in their athletic facilities while ours have fallen into neglectful disrepair. Here is what we need: (1) a complete renovation of King Field in terms of new turf, ADA-compliant stands, proper storage space for maintenance equipment and sports equipment, (2) two auxiliary turf fields with small stands for soccer, lacrosse, and field hockey, (3) an auxiliary gym for basketball and volleyball, (4) a baseball and softball complex (probably off-site at Henderson Field), and (5) teams rooms and an athlete-specific strength and conditioning center closer to King Field.

TEAM HEAD COACH FEASIBILITY STUDY QUESTIONNAIRE

Project Name: _____
Project Number: _____
Questionnaire Completed By: Jim Bender varsity softball **Date:** 11-22-22

Feasibility Study Items

1. What sports do you coach?

2. What levels are in your sport? ☑ Varsity ☑ JV ☐ 9th Grade ☐ Freshman

3. What is the average number of student athletes at tryouts for each level? 14

4. What is the average number of student athletes do you keep for each level? 14

5. Of this number, what is the average number on varsity? 14 On JV only? 0

6. What field(s) do you use for practice (list all levels)?
High school varsity and jv softball fields

7. What field(s) do you use for games (list all levels)?
High school varisty and jv softball fields

8. What are your typical practice dates and times (list all levels)?
varisty and jv practice at the same times
In season practice M-F 3:00 to 5:00
Off season open gym at the high school Sundays 1:00 to 3:00

9. What are your typical number of home games per season and what day(s) and time(s) do you have games?

10 home games M-F 3:45 start

10. Do you, when the practice plan allows, shift goals around the field to lessen the wear in high use areas such as goal mouths and penalty spots?

In the past we were forced to use the grass areas beside the infield due to the infield being unplayable with stones, divots, puddles....

11. Have there been any issues with the playability of your fields (keep wet, divots etc.) over the years

There has been plenty of issues over the years. Last year was the first time I saw new diamond-tex installed in the infield in 6 years. SHHS field crew did a great job with a sod cutter at the beginning of the season because the base path had grass growing in them.

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

I think an overall good look at the softball fields are needed:

- Is the right playing material being used on the infield.
- Is the right materials being used underneath the playing surface for drainage, pitching circle, batters boxes.
- Should there be more material added to the infield so there is not such a lip where the infield dirt meets the outfield grass and down the 1st and 3rd base paths.
- Home plate is sitting to high off the field surface and has been damaged by players sliding.
- The bases are sitting crooked from wear, one side of the base is higher than the other.
- The outfield is filled with divots, bare spots, and clumps of grass that make it impossible to

TEAM HEAD COACH FEASIBILITY STUDY QUESTIONNAIRE

Project Name: Wallingford-Swarthmore School District
Project Number:
Questionnaire Completed By: Pat Clancy, on behalf of Football **Date:** 11/29/22

Feasibility Study Items

1. What sports do you coach?

2. What levels are in your sport? ☑ Varsity ☑ JV ☑ 9th Grade ☐ Freshman

3. What is the average number of student athletes at tryouts for each level? 70-80

4. What is the average number of student athletes do you keep for each level? 70-80

5. Of this number, what is the average number on varsity? 55-60 On JV only? _____

6. What field(s) do you use for practice (list all levels)?

Softball Fields/Football Practice Fields

7. What field(s) do you use for games (list all levels)?

King Field for HS, Rutgers Avenue for MS Football

8. What are your typical practice dates and times (list all levels)?

Varsity/JV- Monday through Thursday 3:30-6:00 August 8 - November 20
Freshman - Mon, Tues, Thurs, Friday 3:15-4:45 August 15 - November 1

9. What are your typical number of home games per season and what day(s) and time(s) do you have games?

5 regular season games plus playoffs (varsity)
Varsity - Friday Nights, JV - Saturday Morning/Monday afternoon, Freshman - Wednesdays

10. Do you, when the practice plan allows, shift goals around the field to lessen the wear in high use areas such as goal mouths and penalty spots?

Individual period drills are spread around the field. Try to move team period around, but limited usable practice space.

11. Have there been any issues with the playability of your fields (keep wet, divots etc.) over the years

Field conditions have been problematic. Either soggy field conditions when rainy or extremely dry (poor drainage and limited irrigation)

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

The addition of a 3rd softball field in 2013 inhibited on practice space. We do not have a full-size regulation field, and field conditions make parts of the field unplayable.

With limited groundskeeping staff, our practice field is a lower priority for cutting/lining as other fields need to be prepared for games.

Football gets to practice on the turf during pre-season camp and playoff runs, but gets the least practice time in the stadium during the season.

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

I am emailing in regards to the varsity baseball field behind the Middle School. We have been trying for years to get dugouts put in along with a fence specifically down the 1st base line. This has been a safety hazard over the years. I have been the Head Coach for 21 years and have witnessed injuries happen during practice and games because of the lack of a fence guarding the fans watching games. For example, we have had a fan break their jaw watching the game, children get hit with batted balls and thrown balls, etc. Dugouts are also a natural part of baseball and do allow for safety as well during weather that arrives during games.

ATHLETIC FACILITIES DESIGN & CONSULTING

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TEAM HEAD COACH FEASIBILITY STUDY QUESTIONNAIRE

Project Name: _____

Project Number:

Questionnaire Completed By: Rigen Graham **Date:** 11/25/22

Feasibility Study Items

1. What sports do you coach? Varsity Women's lacrosse

2. What levels are in your sport? ☑ ~~Varsity~~ ☑ ~~JV~~ ☐ 9th Grade ☑ ~~Freshman~~

3. What is the average number of student athletes at tryouts for each level? 40

4. What is the average number of student athletes do you keep for each level? 40

5. Of this number, what is the average number on varsity? 18 On JV only? 22

6. What field(s) do you use for practice (list all levels)? Kingfield Turf Grass Field on providence road. MS back Fields

7. What field(s) do you use for games (list all levels)? Kingfield Turf, Grass Field On Providence Road

8. What are your typical practice dates and times (list all levels)? Monday - Friday 5-7 pm

9. What are your typical number of home games per season and what day(s) and time(s) do you have games? 7-8 5:00-7:00

10. Do you, when the practice plan allows, shift goals around the field to lessen the wear in high use areas such as goal mouths and penalty spots? Not very often

11. Have there been any issues with the playability of your fields (keep wet, divots etc.) over the years Yes. Turf is Uneven in spots and there is a ton of turf balls.

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

The Turf on king Field is extremely worn and Uneven. It is time for a new turf.

TEAM HEAD COACH FEASIBILITY STUDY QUESTIONNAIRE

Project Name: _____

Project Number: _____

Questionnaire Completed By: RYAN O'NEILL **Date:** 11/20/22

Feasibility Study Items

1. What sports do you coach? Boys Soccer

2. What levels are in your sport? ☒ Varsity ☒ JV ☒ 9th Grade ☐ Freshman

3. What is the average number of student athletes at tryouts for each level? 23-25

4. What is the average number of student athletes do you keep for each level? 23-24

5. Of this number, what is the average number on varsity? 24 On JV only? 24

6. What field(s) do you use for practice (list all levels)?
MESA - 9th MS Back Fields - JV/V NPE - V TURF - V

7. What field(s) do you use for games (list all levels)?
ALL ABOVE

8. What are your typical practice dates and times (list all levels)?
Monday - Wednesday - Friday
3 - 5 PM

9. What are your typical number of home games per season and what day(s) and time(s) do you have games?

9 games - Tuesday, Thursday -

10. Do you, when the practice plan allows, shift goals around the field to lessen the wear in high use areas such as goal mouths and penalty spots?

Only during pre-season as fields become worn quickly

11. Have there been any issues with the playability of your fields (keep wet, divots etc.) over the years

Too many issues to list

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

Turf burn on players

Pellets and turf grass all over players and gear

Rock hard turf surface condition

TEAM HEAD COACH FEASIBILITY STUDY QUESTIONNAIRE

Project Name: _____
Project Number: _____
Questionnaire Completed By: Carly Reid - Field Hockey **Date:** 11/22/22

Feasibility Study Items

1. What sports do you coach?

2. What levels are in your sport? ☑ Varsity ☐ JV ☐ 9th Grade ☐ Freshman

3. What is the average number of student athletes at tryouts for each level? 43

4. What is the average number of student athletes do you keep for each level? 38

5. Of this number, what is the average number on varsity? 16 On JV only? 22

6. What field(s) do you use for practice (list all levels)?
turf field V/JV

7. What field(s) do you use for games (list all levels)?
Turf field V/JV

8. What are your typical practice dates and times (list all levels)?
8/15- 10/20
5 days a week
3:15 - 5:30 PM

9. What are your typical number of home games per season and what day(s) and time(s) do you have games?

7

Mondays, Tuesday, Thursday

3:45 Varsity start, 5:15 JV start = afternoon games

10. Do you, when the practice plan allows, shift goals around the field to lessen the wear in high use areas such as goal mouths and penalty spots?

Every day we must move cages on and off the field.

11. Have there been any issues with the playability of your fields (keep wet, divots etc.) over the years

Yes, seam seperation, an unmatched turf material at the goal of our shooting area. When field gets dewy or rained on turns into an ice rink as the turf beads make the palying surface very slippery wearing turf sneakers. Officials have complained that the lines aren't visible

12. Is there any concerns or comments that you will like to make for the Feasibility Study?

Field hockey play is critical on a feasible playing area. Turf matters for our skill development and safety while executing this sport. It is imperative that we look at a means to support our many fall athletes who are on the turf for 2 practices a day and many games to follow. Safety is my first concern. I hope your study is reviewing this key component.

Athletic Feasibility Study

B Series
Student Participation Numbers since 2016

Strath Haven High School
ANNUAL STUDENT PARTICIPATION NUMBERS

5/4/2023

School Sports - Annual Participation / Number of Students

Includes number of students on freshman, junior varsity and varsity teams

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
GIRLS						
Cross Country	85	64	63	55	41	50
Field Hockey	37	40	44	45	39	40
Lacrosse	44	32	33	51	39	36
Soccer	34	34	33	35	35	39
Softball	24	15	12	16	13	14
Tennis	23	30	26	35	26	26
T&F Indoor	76	63	54	64	37	44
T&F Outdoor	99	99	82	89	74	69
Ultimate Frisbee (Club Sport)		32				25
BOYS						
Baseball	35	34	33	34	36	35
Cross Country	52	61	60	66	54	45
Football	69	62	64	76	72	81
Golf	11	12	12	11	15	17
Lacrosse	45	42	35	41	42	55
Soccer	62	62	63	67	55	72
Tennis	26	26	25	32	25	24
T&F Indoor	35	32	42	49	36	47
T&F Outdoor	64	67	83	120	69	95
Ultimate Frisbee (Club Sport)		17				42

Athletic Feasibility Study

C Series
Field Use Estimates

	King Field	Baseball / JV Soccer	Providence Road Field	Softball Fields / Dog Leg	MS Soccer / Lacrosse #1	MS Soccer / Lacrosse #2	Brookhaven Road Field	Nether Providence Elementary	Henderson Field	Rutgers Ave Field	Swarthmore Rutledge School
Fall Season											
Field Hockey Practices	30		2								
Football Practices	20			60							
Boys Soccer Practices	20	8						5			
JV Boys Soccer Practices		10									
Girls Soccer Practices	25							5			
JV Girls Soccer Practices		7									
Field Hockey Games	18										
Football Games	18									5	
Boys Soccer Games	11	7									
Girls Soccer Games	11	7									
Freshman Boys Soccer							28				
MS Field Hockey			28								
MS Boys Soccer					28						
MS Girls Soccer						28					
Ultimate Frisbee Club - Fall			5	21			21				
Spring Season											
Varsity Baseball		40									
Varsity Softball				35							
JV Softball				30							
JV Baseball		8							15		
9th Baseball							5		25		
V/JV Boys Lacrosse	40						20				
V/JV Girls Lacrosse	40		5								
Ultimate Frisbee Club - Spring			20	25							
MS Boys Lacrosse							28				
MS Girls Lacrosse					28						
MS Baseball								33			
MS Softball								33			
Track & Field	45					40					

	King Field	Baseball / JV Soccer	Providence Road Field	Softball Fields / Dog Leg	MS Soccer / Lacrosse #1	MS Soccer / Lacrosse #2	Brookhaven Road Field	Nether Providence Elementary	Henderson Field	Rutgers Ave Field	Swarthmore Rutledge School
Off-Season Workouts											
Field Hockey	5										
Football	20			10							
Boys Soccer	10										
Girls Soccer	10										
Boys Lacrosse	15										
Girls Lacrosse	15										
Baseball				5							
Softball				5							
Community Groups											
Nether Soccer	5			5	40	40	15				
Haven Youth Lacrosse	5						30				
SRA			10						60	60	30
NPAA Baseball		20						40			
SHHS/SHMS Phys. Ed.	250		40	50							
Total Uses	**613**	**107**	**110**	**246**	**96**	**108**	**147**	**116**	**100**	**65**	

Athletic Feasibility Study

D Series
Public Input
(March 02 MTG and On-line Survey)

Group 1 - BIG IDEAS

1. More than one (1) turf field
2. Limit use to all fields
3. Bigger bleachers with ADA Compliance
    a. Bleachers for the band only
4. More Ground Crews
5. New Scoreboard
6. New Dugouts varsity fields
7. Safety fencing baseball field
8. Replace the storage shed at the baseball field
9. New track
10. Upgrade areas around the snack bar
11. Replace the scoreboard at the field hockey field
12. Upgrade Cades track and football field – Middle School Players
13. Score Keeper stand for Lacrosse
14. Upgrade all practice fields
15. Bigger storage facilities at all field
16. Allow sponsorship to help offset cost
17. Signs for all athletic fields
18. Mesa Field all the shrubs, weeds to get removed
19. Restrooms for Mesa Field

Names:

Alicia Styer

Kelly Whitehead

Regina Nangle

Jason Sutherland

Nick Milligan

Alecia Styer

Kaly Whitehead

Kate Jones

Group 2

1. Good:
    a. Lights at King Field
2. Strath Haven High School (SHHS) / Strath Haven Middle School (SHMS)
    a. Needs:
        i. Bleachers inadequate
        ii. ***ADA** wheelchair access
        iii. ***Storage** / locker room
        iv. Promenade / walk around for fans
        v. Grass / backfields / poor shape district wide
        vi. Band – 2nd sliding gate
        vii. Baseball site / softball dugouts
        viii. ***Safety** around Panther Pit (concession stand) / landscaping / lighting
        ix. Tennis court
        x. Seating / Providence Road – Hill
        xi. Hard for fans to access
        xii. No operable scoreboards / softball
        xiii. Irrigation at Providence Road – Bleachers/seating
        xiv. ***Electric** / at all fields / AED
        xv. ***Water** for athletics and grass
        xvi. (NPE) / (SRS)
            1. SRS baseball field backstop
                a. Spaces too small for Varsity Athletes. No Facilities
        xvii. Cades – Super poor field
        xviii. Henderson – Water / Electric
            1. Shared Space
    b. Missing:
        i. ***More Turf Surfaces***
        ii. Turf overbooked
        iii. ADA / wheelchair accessible

iv. ***Storage** / locker room
v. Budget for maintenance / staff
vi. Guidelines on shutting down
vii. Enforcement / Security monitoring
viii. Fencing / Site security
ix. Lines / Chalk
x. Openness to advertise / outside money
    1. Revenue
    2. Sponsorships
xi. ***Tennis Court** inadequate to host
xii. Portable seating
xiii. Storage
xiv. ***Site Lighting Everywhere**
xv. Scheduling Fields / Transparency
xvi. ***Bathroom / Facilities / Access**

Names:

Kelly Dignazio, Coach

Terry Lynch

TJ Adams, Coach

Tim Styer, Coach / Parent

Dana Farabaugh, Parent

Group 3

1. What's Good
    a. Ourdoor water faucet, refillable station (Make sign)
    b. Tents
    c. Softball Scoreboard
    d. Mulit-purpose fields used by many in Community
    e. Possible Plans for the turf at Summit
    f. Bough trash cans

2. What Needs Improvement
    a. Drainage
    b. Scoreboard
    c. Cades / Mesa / Henderson – No Restrooms
    d. Upgrade King Restrooms
    e. Upgrade benches by Pit or get rid of
    f. Bleachers – handicap accessible
    g. Additional Bleachers because of large band
    h. Handrails on bleachers
    i. PA System
    j. Shed by Baseball fields
    k. More stands by Baseball Fields

3. Anything Else
    a. Shelter / Storage for personal equipment
    b. Special stand for band
    c. Storage containers eye sore
    d. Upgrade pickle ball
    e. Transport to other fields if upgraded
    f. Safety-egress - access for band and spectators
    g. Baseball 1st base safety fence
    h. Dugouts – Baseball
    i. Trash cans
    j. Providence Road field access
    k. Eliminate Cades track, make two (2) fields

Names:

Billy Hodges

Kelly Cagle-Barlow

Group 4

1. Accessibility to all fields (Need more parking in general at Strath Haven High School (SHHS) / Strath Haven Middle School (SHMS)
2. Shot put area – not too safe on the right when entering King Field (Water logged, stays wet for days, puddles)
3. Wheelchair accessibility for spectators (handicapped parking spaces)
4. Baseball / Softball – equal facilities (dugouts)
5. King Field (Two entrances for crowd control)
6. See bathroom from Panther Pit (Concession)
7. Nets around King field and Mesa
8. Mesa and Cades or Title 9 field **turf** or behind King field
9. Acquire Summit school field
10. Upgrade Cades track or take track out
11. Scheduling field time (online reservation system)
12. Tennis, softball (no places for spectators)
13. Another concession stand
14. New Lacrosse score keeper stand

Names:

Amy Caruso

Lia Reggie-Smith, Parent

Glen Venturini

Chelsea Burger, Parent

David Grande, Parent, School Board

Denise Disney, Parent, Booster President

Lex Smith, Parent

Big IDeas

1. More than 1 turf field
2. limit use to all fields
3. Bigger bleachers w/ ADA compliance
   a. bleachers for band only
4. More grounds crews
5. New Score board
6. New Dugouts varsity fields
7. Safety fencing baseball field
8. Replace storage shed at baseball field
9. New track
10. Upgrade areas around snack bar
11. Replace scoreboard field hockey field
12. Upgrade Cadets track and football field

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Alicia Styer
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Kelly Whitehead
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REGINA NAGLE

Sutherlandjc72@gmail.com
Gridiron club

JASON SUTHERLAND
NICK MILLIGAN
ALICIA STYER
KELY WHITEHEAD
KATE JONES

Scorekeeper
Stand for
Lacrosse

Kjones1@wssd.org
Kate Jones

middle school players

13. Upgrade all practice fields

14. Bigger storage facilities at all field

15. Allow sponsorships to help offset cost

16. Signs for all athletic fields

17. Mesa Field all the shrubs, weeds (Restrooms) to get removed

2 of 2

GOOD:

Lights @ King

SHHS/SPHMS

Needs/

- Bleachers inadequate
- ADA wheelchair access/ storage/ locker room
- promenade/walk around for fans
- grass/backfields | poor shape district wide
- BAND - 2nd sliding gate
- Baseball site / Softball dugouts.
- Safety around Panther Pit/ landscaping / lighting
- Tennis court
- Seating / Prov Road - Hill -
- Hard for fans to access →
- No operable scoreboards / softball
- Irrigation @ Prov RJ Bleachers / seating -
- Electric / @ all fields / AED's
- WATER → for athletics + grass

Missing:

- More turf surfaces
- turf overbooked
- ADA / W/C accessib.
- Storage / locker room
- budget for maintenance / staff
- guidelines on shutting down enforcement / security / monitory
- fencing / site security
- lines / chalk
- openness to AD / outside $
- Revenue: sponsorships

Add'l Missing

Scheduling fields/ TRANSPARENCY

BATHROOM Facilities / access

NPE - / SRS / spaces too small for Varsity athletes.

SRS baseball field - backstop

No facilities

CADES - super poor field /

HENDERSON - water/electric

Shared space

- Tennis court inadequate to host
- Portable seating

Storage

Lighting EVERYWHERE

Interference, Lynch@gmail.com

Terry Lynch / coach / Haven UHaven Band

Kelly Dignazio

TJ Adams Coach

Jim Styer Coach / parent

Dana Farabaugh parents

Kelly Dignazio
Kbellyfish@hotmail.com

What's Good...

- Outdoor refillable station water faucet (Make Sign)
- Tents
- Softball Scoreboard
- Multi-purpose fields used by many in Community
- Possible plans for turf @ Summit
- Bought Trash Cans

BILLY HODGES
billyhodges@duck.com
215.620.1160
Kelly Cagle-Barlow
610 733 5980
kmcagle60@gmail.com

What Needs Imp...

- drainage
- Scoreboard
- Cades/Mesa/Henderson No Restrooms
- Upgrade King Restrooms
- Upgrade benches by Pit OR Get rid of.
- Bleachers - handicap access
- Additional Bleachers b/c of large band.
- Hand Rails on bleachers
- PA system
- Shed by Baseball fields
- More stands by B-ball fields
- Safety - egress access for Band & spectators

Anything Else...

- ELIMINATE CADES TRACK, MAKE 2 FIELDS =

Shelter/

- Storage for student personal equipment
- Special Stand for Band
- Storage Containers Eye Sore
- Upgrade pickle ball
- Transport to other fields if upgraded
- Baseball 1st Base Fence Safety
- Dugouts - Baseball
- Trash Cans
- Providence Rd. Field Access

Lia Roggio-Smith	liaroggiosmith@yahoo.com	Parent
Glenn Venturini	TRACK coach gevxcshks@gmail.com	
Chelsea Burger	chelseamarieburger@gmail.com	parent
David Grande	davidgrande@yahoo.com	Parent/SB
Denise Disney	denisedisney@me.com	parent/booster president
AMY CARUSO	carusodrum@g	
Lex Smith	lexsmith@gmail.com	Parent

- Accessability to all fields
  - Need more parking in general at SHHS & SHMS
- Shot put area - not safe on Right when entering King Field
  waterlogged stays wet for days.
  puddle
- Wheelchair accessability for spectators
  - Handicapped parking spaces
- Baseball / Softball - equal facilities
  - Dugouts
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  - Two entrances for crowd control
- See bathroom from Panther pit?
- Nets around King field and Mesa
- Mesa or CADES or Title 9 field turf
  OR Behind king field
- Acquire Summit school field
- Upgrade CADES track?
  or take track out
- Scheduling field time
  - Online reservation system
- Tennis, softball
  - No places for spectators
- Another concession stand
- New lax scorekeeper stand

mariasteere@yahoo.com

Amy Carso carusodrum@gmail.com
baseball, softball

RESULTS FROM WSSD ONLINE SURVEY for the MASTER PLAN STUDY

WHAT IS GOOD ABOUT THE ATHLETIC FIELDS?

105 responses

- Not the turf
- Turf fast surface excellent for game play
- Most located on or near the schools' campuses.
- Most fields have parking nearby.
- Stands for King
- Rob does an excellent job with upkeep when properly supported. Overall, the fields are slightly above average compared to other districts in the area. Our fields are vital to the school and community.
- They are well located, and parking is generally accessible.
- They are all close to each other
- Honestly nothing. There is one employee responsible for all of the fields, he has a minimal budget and even with an unlimited budget he could not possible do all the work that is needed to keep the fields to the standard expected in such a high quality school district. The baseball and softball fields don't even have dugouts, probably the only school in the central league without dugouts, embarrassing. The stadium turf gets way to much use as it's the only turf in the district to practice on, not to mention that the youth teams use it, and a group of adult men play soccer on it whenever they want. There's no security or employees to enforce the policy in place to keep the public off of the field and track. The new turf will be ruined just like the current carpet.
- Generally convenient to school
- The location and how nice the grass is on the lacrosse/field hockey field.
- Open to the public after school hours so kids have a place to run around. Playgrounds are very important.
- The fact that we have them, and they are able to be used for many different things
- The amount of them
- Centrally located for both the MS and HS to use
- Close to school, easy to access
- Absolutely nothing.
- I think they are very high quality, and any extra money should be used to employ more teachers. Our class sizes are hurting us all.
- For the most part they are maintained
- Location and availability to the community
- All fields need improvement.
- Football field and track are in great shape
- Other leagues in the township can use them for games and practice.
- Availability throughout the district Community usage when school groups aren't on them Primarily grass, which is better for growing legs and the environment
- accessibility
- in the neighborhood/location and residents can use them when school is not using them.
- We have a gorgeous stadium.
- Location

- The turf field at the middle school is nice
- Multiple teams using the turf.
- field hockey / lacrosse field at HS is the best maintained field.
- That the whole community shows up for sporting events.
- There are a lot of them
- There are many open spaces for a variety of school activities
- Not much physically. Do appreciate that community (SRA in particular) able to use them.
- Turf field + number of other options around SHMS and SHHS for various sports
- Nothing
- We have some.
- We have them! And they are really close
- Numerous options
- Locations in the community, easy to get to.
- Their proximity to the school
- Having both turf and grass
- Their proximity to the school bldgs.
- There's several of them
- Easy access
- Parking, bleachers for king field
- See below.
- Overall, they all seem fine but not great.
- Some of them provide some green space
- Functional. Get the sports done.
- Close to school
- CADES and Henderson Field locations are not overscheduled/overused so the turf is in good condition and community members can use it for casual purposes.
- Not a whole lot.
- Not much aside from the privilege of having some
- A gathering place for community. From the parking lot to the field there are no steps, we need ramps for the fans to access the bleachers.
- A gathering place for community. From the parking lot to the field there are no steps, we need ramps for the fans to access the bleachers.
- Unfortunately very little…
- They are mowed routinely; *mostly* free of truly dangerous obstacles/impediments/ trash and protected from traffic. Spaces open and *mostly free of fences/barriers; this allows for flexibility of purpose.
- There are enough for ultimate frisbee
- There are lots of fields and facilities at different levels to choose from, and they are spread throughout the district.
- The bleachers
- The availability of the fields
- They are easily accessible

- Open areas for easy access. Area is good for playing.
- Too hard
- The WSSD fields bring the community together for various sporting events and serve as a central gathering spot. The WSSD fields also serve as a supplement fields owned and operated by Nether Providence Township and Swarthmore Borough.
- Good place to practice and play sports
- Generally, the locations are good, but not in all cases.
- Multiple fields allow for access by many different communities within our district
- Not much
- nothing
- Most are in close proximity to the high school and middle school.
- The fields do not live up to community standards.
- Nothing
- The title 9 field isn't too bad
- Open
- Our District has a decent number of athletic fields available. But that's about it.
- availability to public when teams not using
- The good thing is athletic fields are open to the public community.
- Not much. The baseball field is atrocious and dangerous.
- All the students coming together to use them.
- We seem to have a lot of space for fields.
- Public Use (everybody should be able to play, and it speaks volumes that our community accommodates all residents).
- Kept in good condition to be a valuable resource for the entire community, not just the school.
- The athletics fields are valuable for the community to use. It is a free resourceful community asset that promotes positive organic multigenerational multicultural interaction while enhancing physical, social, and mental wellbeing.
- No comment
- Quality and public accessibility. Important that taxpayers have access to use playing fields for pickup games. All sports.
- Brings the community together, it's a great place for people nearby to have access to and be able to use the grounds as a supplementary health improvement facility, without intimidation.
- I have been using Strath Haven Middle School since 2016. So far it has been a great place to play soccer with some good friends after a long day or a long week of stressful work environment. I enjoy every moment spent on the field. The field is always in great shape and also very clean. If the field could stay open to individual like me who work weekdays and use it for a couple of hours on weekends, that would be great.
- A great resource for organized and spontaneous sport/recreational activities
- Very Well maintained
- The fields are in good shape, a great place to play with kids and family, and give the community time to interact with one another in sports or leisure

- They are open to open to public.
- I play soccer. Without athletic fields, we could not play.
- Very accessible
- Convenient to parking (though parking itself may be inadequate)
- Location next to schools
- The grounds are well furnished and maintained
- As a township taxpayer I appreciate having use of the fields for recreational purposes, particularly adult pickup soccer games.
- proximity to school

RESULTS FROM WSSD ONLINE SURVEY for the MASTER PLAN STUDY

WHAT NEEDS IMPROVEMENT FOR THE ATHLETIC FIELDS?

- The turf
- Turf, track, baseball fields, all other grass field
- Proper year round care not just last minute fixes or band aids. The lower fields around the high school are poorly maintained and underutilized. This area could be better developed. The same for the “mesa” field on Brookhaven. This is a spot that could be beautifully developed.
- Improve quality of grass/sod. Would be great to add another turf field.
- Dugouts and bleachers for baseball
- Over the last 16 years, I have watched our fields deteriorate. Either budget or personnel cutbacks has led to an unreasonable workload for a limited crew. Keeping up with cutting grass, lining fields, moving and preparing soccer goals, seeding and preventative maintenance have all suffered. WSSD was known for their immaculate fields when I first arrived. I would argue we were top in the area as far as middle school soccer fields go. The grass was perfect, the length was well-kept, fields always lined prior to games. Over the last 5 years or so, this has fallen off. We often did not have cut grass, it would get so bad we could barely practice, let alone play a game! Lines being painted as we warm up for a game. Both teams avoiding the workers. We now have dirt patches that never fill in. There are ditches that players need to avoid as to not step in and twist an ankle or knee. As for the turf, we desperately need to update. The turf is literally falling apart. The rubber turf pellets are normal, however thousands and thousands of artificial blades of turf sticking to everything as the turf comes apart is not.
- Maintenance!
- Besides the turf needing repair, the quality of the grass on the fields is not great. The back fields where JV soccer plays are full of divots.
- Need to take the lower high school fields and two softball fields and make them all turf as well. This will create a practice condition close to the game field condition without ruining the stadium field. There should also be major improvements to the facilities department to help with the maintenance of the current fields. Give Rob the budget and manpower to keep up with the fields. Our athletic fields are the laughing stock of the central league. Teams don't want to play away games here for fear that their student athletes may suffer injuries.
- Back fields need work (behind stadium). Turf at stadium needs to be replaced. Certain sports claiming fields and not allowing other sports to utilize them. We don’t know have enough space to allow this.
- The softball field needs dugouts and scoreboard to make it a “real” field and not just part of the football training space.
- Habitat for wildlife, especially trees for shade and living turf to improve drainage and biodiversity.
- The field itself needs to be replaced, it is set ups for injury after injury for our athletes and for opposing teams
- Npe needs better drainage. Mesa needs some work.
- More stadium seating, updated quality of the turf, love to see the track get a real shot put space, and improve surrounding fields to give both club sports like Ultimate a place to play and give MS teams more space to play. Also, better lighting around the field to avoid students going to not well-lit areas to get into trouble

- More fields, new turf, regulation track for large meets, bathrooms/portapotties at satellite fields (NPE baseball field, CADES)
- Field maintenance at satellite fields (cut grass, even field, remove large masses of dirt)
- Everything
- Nothing
- Real dug outs for both softball and baseball. Batting cages for softball.
- The fields off site need maintenance too. They do not get attention that the fields closest to the school get. Rutgers and Henderson could us a weed and feed and the trash should be collected on a regular basis. The track at Rutgers field is overgrown and not maintained. If the district can't maintain it, they should sell it back to the Swarthmore borough.
- A second turf field and track is desperately needed to support the number of teams that use it. The number of combined students running and jumping on the track between MS and HS practices is unsafe. The track surface is crumbling and has lost its “give.”
- Softball fields are a mess. Bags are sunk into fields. Lip between infield and outfield needs to be cut down. 2 fields for 4 teams
- Drainage they become slippery and dangerous when wet. Pretty much unusable. I know the HS field where hockey is played is not smooth. So it is challenging playing FH on it.
- Not enough of them
- Transportation to and from the ones not adjacent to high school and middle school
- Upkeep—the track at Cades had a makeover about a decade ago and then was not maintained and is sliding back to where it was before
- the track itself. the surface badly needs to be redone as it's falling apart. we can't host/attract the best teams when our track is in such terrible shape
- safety and quality of the grass fields at HS/MS are not safe to play on, other than title 9 field. Grass fields are not maintained enough to have a decent playing surface. Irrigation is not available. Football team DESTROYS the field and needs to learn to rotate usage as they absolutely wreck the grass fields and they're not cared for to be able to recover.
- turf field - is never maintained with new rubber pellets, brushed and/or cleaned like other school turf fields. It's left on its own and that has caused a significant amount of wear and damage. If the field was maintained, it would last longer.
- Continue to leave the turf field open to community groups as we helped fund it at the onset (Team up for Turf) and our tax dollars continue to support it.
- It feels like the practice fields are often in terrible shape.
- New turf, seeding, consistent maintenance, trash removal, seating, safety ramps and measures, trash removal again.
- We need more turf fields
- Need more turf fields. That way with bad weather we aren’t chewing up the grass fields.
- Working Scoreboards, cleanliness & appearance of GLK complex (trash, fencing, areas of blacktop, in front of Panther Pit, clean bleacher seats), dugouts for baseball and softball, seating areas/bleachers at all fields, bleachers for band, water runoff fix for baseball, proper lining of fields and consistency before they disappear, quality of grass - need more fertilizer & weed treatment, ADA at GLK, handrails at GLK, fencing at baseball field for fan and walkway protection to rear lacrosse fields. removing old goals and piles of dirt that get piled up around fields. cleanup /maintenance of areas surrounding MS fields, paved or rocked walkway from spencer house to back fields. Not allowing use of fields except for community permits - no more random men’s soccer or random use by other schools

- Multiple turf fields so the kids can practice in questionable weather. Like Springfields new compass
- The Mesa field is typically in pretty bad condition
- Handicapped accessible paths to baseball and back fields
- Maintenance, turf needs to be improved as contributes to injury among many players.
- We need more turf fields because stadium is overused, and grass fields aren't holding up well in most weather conditions
- They all need to be replaced
- Updated technology. Updated stands.
- Grading
- Turf
- Cleaner/more bathrooms. There is no toilet at some of the middle school fields, except a porta potty.
- Almost everything. The turf is almost unplayable, we don't have enough space for all of our teams, the grass field space needs to be utilized differently.
- Turf is too worn out and the grass fields are uneven and patchy
- The quantity of them and their overall functionality (drainage, bare spots, leveling)
- Turf and seating needs improvement. Specifically better surfaces and more seating.
- SRS baseball field needs better maintenance
- The field right behind the soccer field (elevated) stains shoes and clothes. Can it be turfed? King field needs to be returfed but already planned. Jv soccer fields in terrible condition, dangerous for players.
- The track.
- The turf field needs improvement.
- The cost needs to be lowered, our taxes go up every year and the need a less costly more sustainable plan. They are used so much local residents rarely get a chance to use them.
- More access for ALL teams. Not priority access. Obviously….games come first.
- Condition and quality of softball fields
- drainage/stormwater management
- The actual turf needs to be replaced. My daughter has been injured a few times due to the condition. The home stands are way too small. The band needs their own set of stands. Parking and walking to the Providence Road field is dangerous. The field conditions there are terrible as well. So many divots. The bathrooms at the Turf field need an update.
- Turf quality/ upkeep, all items listed in what's missing, not enough fields, to accommodate all sports and maintain fields properly
- Accessibility for fans. New turf so the athletes are not injuring themselves.
- Turf needs replacing. Need a second turf field. Grass fields are in very poor shape (practically unusable). Very expensive to maintain a quality grass field, and with the volume of use, grass is never going to be a good option.
- Maintenance and upkeep; the department is under-resourced. Fields not near SHMS/SHHS receive no attention beyond mowing, and even then, can at times be an issue (like SRS during the spring baseball season). There is very little to no transparency and coordination of field availability, openings/closings among operations, athletics, and community stakeholder organizations. No publicly visible reservation system or schedule. (e.g., Haven Ultimate has booked fields multiple times using proper channels and procedures only to be chased off of them by WSSD Operations. Not only is it hugely

aggravating and disrespectful to district kids and families - how would you feel after respecting this request only to see other groups using the same spaces later?) So-consistency, coordination, enforcement. I understand resources are limited and fields need rest. I don't understand unfairness.

- Drainage
- Fields that don't serve high school sports competition need significant maintenance and easier/open/affordable access for the community. The only open space, playing fields, and youth athletic facilities in our district are owned by WSSD (or Swarthmore College).
- The turf and soccer nets
- The turf needs to be redone, it is outdated and is dangerous for injuries and chemicals if it's not replaced soon
- The turf is very over due for a new one and there are holes in it. If you get your foot stuck in the hole it is very easy to tear something in your knee.
- The turf needs to be redone. It is old and broken.
- Needs to be softer
- Maintenance (grass cutting, cleaning of litter, etc.) needs improvement. The HS bleachers are undersized. The baseball fields at the HS and MS need improvement including dugouts and bleachers. The condition of the grass is poor at the MS, HS and the elementary schools.
- The turf isn't very good and gets all over your clothes and hurts
- 1) Storage buildings are a disgrace; 2) the turf on most fields is poor; 3) baseball needs reasonable seating for each team (soccer, too, except for varsity); 4) some fields need grading (Henderson is terrible for grade and turf.) 5) Scoreboards for all the high school teams, not just King Field.
- Long jump/high jump access (King), consider ADA accessibility, safety of existing seating (King), better access to restrooms
- Definitely parking. On Friday nights during football season, cars are parked on people's grass in the surrounding neighborhood. Bleachers could use some updating. The football field itself is a mess. I'm tired of my son bringing home little black beads that stay on or in his shoes. The fencing around the track is awful; definitely needs replacing. The back field of SHMS is a muddy mess.
- Turf pieces are way too small, feels like concrete, additional turf needed, Bathrooms needed on HS side, Pit needs improvements, back fields need lighting, dugout
- Drainage is an issue for many of the fields. Many of the grass fields have divots and holes that are dangerous for athletes. Making these fields safer should be a priority.
- Accessibility. Quality.
- Everything! They are an embarrassment to our school! Trash everywhere
- The jv soccer grass fields need an irrigation system or turf, the middle school fields are back fill from 476, I doubt you can turf that area, they need an irrigation system, king field needs new turf, a track, a score board, they need to keep nets up around the turf year round like they do at Springfield high school, they shouldn't put the nets out just for lacrosse, the messa field needs turf or an irrigation system, the dog leg floods and is a waste, the softball and baseball fields over by the football practice field are laid out wrong, sun is in eyes, the football practice field puddles, the title 9 field isn't bad.
- Baseball field

- While we have numerous fields available, they are all in terrible shape. Given that King Field is being replaced this year, I am not focusing on that but rather focusing on the other grass fields at the MS, HS, Cades and Swarthmore. Our fields are in a terrible state. They need to better maintained -- seeded and watered consistently. Most of our "grass" fields are nothing but weeds and hard dirt which makes them unsafe for all of our athletes. If you maintained these fields and had them in good shape, then there would not be such a demand for King (and thus it would not need to be replaced as frequently. Ideally, we could add a second turf field. Regardless you need to add more groundskeepers -- one person cannot maintain all of these fields. Add a crew so they can keep our grass fields in good, usable shape for our teams. That should be a huge priority! Additionally , most of our fields are lacking score boards (or functioning score boards).
- do not make unorganized groups of adults or kids who want to play on the field around school team usage something that requires registration. Many groups including soccer, football, lacrosse community residents come up and play pick up, train, use the fields and immediately leave if a school team or group needs it without question. Do not hinder exercise and community spirit for these people who are just training and playing pick-up games and are not part of a group such as SRA, Nether, etc.
- Some management always ask pick up gamers to get a permit to play on the field. I don't know if those guys want to earn money from neighbors or something else. I don't like it. We pay tax here, we should have the right to play on the fields with our kids, friends for soccer, football, frisbee, and so on if the fields have no organized events on. Why are these management forcing us to pay for it?
- Baseball field needs dugouts, new batting cage, better stands for fans.
- Everything: turf, scoreboard, the stands not ADA, the overgrown weeds etc.
- We need to make the most of the space we have for all fields. .
- Leveling
- Not much, maybe some of the grass could be "off limits" for a while to allow health to return.
- Tuff and running track needs recarpeting.
- The grass fields are significantly bumpy and uneven, making them hazardous and injury prone to the lacrosse, soccer and frisbee, players.
- Consideration for bathrooms being opened when during peak usage.
- The basics aren’t even there. Safety for the athletes and the parents/ spectators. We don’t have enough fields in general. We need more. The locations aren’t good. We have to drive all around the school district to get to the fields. I think the lack of care of the fields from the district shows us the parents and spectators how little the district values athletics. We pay these high school taxes, and the district has NO idea how much MORE money we put towards SCHOOL sponsored sports for our kids. Enough is enough, we aren’t all made of money in this district!
- Na
- Ability to use to the field for pick-up games with respect and without interference for the main teams that already have games and training scheduled for the field,
- I don’t think there’s any improvement that needs to be done in the field.
- Maintenance at some locations
- Accessibility for use by area residents who are not part of large organized groups for recreational sports

RESULTS FROM WSSD ONLINE SURVEY for the MASTER PLAN STUDY

- The turf needs to be redone and the grass fields are not as level as they could be.
- If the schedule is open to public, it could be used with more efficiency.
- To provide more access to public.
- Varsity baseball field
- King Field - not accessible at all to people with disabilities! Turf is a disaster. Overall facilities are in disrepair.
- Baseball field needs safety netting and dugouts--it is way behind other district baseball fields
- Allowing informal community groups to use the fields (when not in use by any school teams or other groups) - as long as the community groups are not part of any professionally managed groups
- The fields are mostly in good condition. I can't think of a specific area for improvement.
- lack of good seating area for attendees, poor quality of athletic fields, the location of the high school varsity field in the middle school campus is not an intuitive location and is very confusing for visiting teams, make-shift snack bar area is sad
- What is missing from the athletic fields?

RESULTS FROM WSSD ONLINE SURVEY for the MASTER PLAN STUDY

WHAT IS MISSING FROM THE ATHLETIC FIELDS?

- See above.
- A second turf to utilize all teams to get down on late night practices
- One more lit turf field would allow for much more flexibility. Nicer and more consistent branding on all fields. Locker rooms near fields are needed as are bathrooms for the high school campus fields/courts. Not enough tennis courts.
- More accessible for handicapped. More seating/shade for players. Would be great to have more access to bathrooms. Would be nice to have another turf field. Some fields need better drainage.
- Dugouts and bleachers for baseball
- I'd like to see walkways (or popular paths of travel) given some attention. Maybe gravel or something to help with the often muddy / treacherous walkway conditions. There should be trash cans and recycling bins fixed to a fence or post. Another idea is an equipment box near each field, like most baseball fields have. At SHMS the sheds are quite literally falling down and anything but secure. Signage would be a nice touch and bring the school spirit outside the building. Team benches are often scarce and spectator bleachers are few and far between. Specifically for soccer, the corner flags are mostly broken and not functional. And the soccer goals are dangerous! Broken at the corners or built upside down. Storing them in the woods during the offseason makes no sense.
- Restrooms at all fields, true security and control at football games (drinking, drugs, alcohol, fighting all go on in the stadium during games)
- Better signage. Better score boards. Fresh lines on the fields for game day.
- Where to start, terrible infields for both softball and baseball, no dugouts for anyone, terrible or no working scoreboards for any sports. The stadium scoreboard failed during Friday night football and who knows how many other times during the fall sports season. For such an elite school district this is flat out embarrassing. There are little to no bleachers for families to enjoy their child's games..... the list goes on and on.
- Accessibility and viewing is poor. Lack of signage
- Bleachers for the softball field.
- Living grass and trees.
- A good set of speakers to be used prior to games for warm ups
- Idk
- The biggest is more seating, our band takes up all of the seats. Better upkeep of turf and grass fields.
- Seating at baseball, softball fields;
- Safety fencing at baseball fields
- Storage sheds for each outdoor program
- Handicap assessable
- Nothing
- Handicap accessible options for all fields. Install sidewalks and steps and ramps, you name it. It all needs to be installed. Trying to watch a softball game if someone falls down that hill there will be a huge issue for the school. It is in no way safe for coaches, players, parents, umpires, kids, grandparents. And even emergency responders. This needs to be addressed for the entire school property. We are the only school in the areas to not fix this.

RESULTS FROM WSSD ONLINE SURVEY for the MASTER PLAN STUDY

- Benches - all fields need seating. Rutgers field has broken benches and broken stadium seating that is dangerous for the community.
- Community sponsorship opportunities. A second turf field and track. A new track surface. Additional storage container for track and other sport supplies.
- Dugouts, bullpen, removable bags, an entire field that cannot be used because it has not been maintained.
- Smooth flat surfaces
- Seating (for spectators and athletes)
- Wheelchair access
- Bathrooms
- Scoreboards
- Lights for late fall/early spring practice and games
- Shade for the athletes on hot days on the softball field and Providence Road field (and probably others but those are the ones I'm most familiar with)
- update score board, big screen, etc.
- More practice fields, improved irrigation systems.
- Seating, signage on fences, advertising to raise money, cleanliness, locker rooms, scoreboards are awful, lacrosse field doesn't get used, dugouts
- Turf fields
- Better press box, too small, need to expand.
- working scoreboards (new one on side of school where it was previously, with visible advertising and championship years for football, soccer, lacrosse), working scoreboard for field hockey grass field and baseball, dugouts, play clock for football/lacrosse, handrails on visitor bleachers GLK, bleachers at all fields. empty trash, proper maintenance of fields. Don't purchase any marquee signs for providence road until we have a NEW scoreboard at GLK. marquees can be maintained by students with letters (waste of money), we have plenty of other communication outlets. School spirit - flags, banners. Allow Advertising on fencing to support teams for non-funded equipment or improvements. Bring in NIKE, UA, or Pepsi/Coke...for $$$$
- More seating, parking modern facilities
- There is not enough seating for spectators at ANY of the fields including the football field! The band should have their own set of bleachers, they take up 1/2 of the bleachers leaving little for parents and families of both athletes and band members to enjoy the game. And the adults that "secure" those spots are extremely rude. Parents and caregivers including elderly, and children should have a place to sit to see the game, especially since the band members do not stay in their seats after half time. The limited seating is a major problem!
- Field names & Signage for be helpful for visitors. Handicap accessible bleachers at the football field
- Bathrooms at fields other than King. Please also assess the pool and make sure to include in maintenance plan. This used to be used quite a lot by community as well and disrepair and other reasons have contributed to it not being used as much. Very important to our swimmers and divers!
- 2 more turf fields — see recent Unionville project as an example
- Grass, smooth surfaces.
- We need more of them.

- Maintenance; natatorium also needs to be addressed. It's worse than the fields - clogged pool deck drains, standing water, tiles falling off - district is about to lose a pool if it isn't addressed soon as it's not been maintained since being built 50+ years ago
- Please ensure we are looking at upgrading the pool prior to many of the fields -- as the pool is in worst shape
- Nicer bathrooms, More handicap parking.
- Good lines, decent turf, shelter on the sidelines, a decent scoring area, scoreboards with all of their lightbulbs, scoreboards that don't Fritz out mid game.
- Need another turf option. It doesn't need to be a stadium field but at least one other field to be turf and then improve our grass fields and their maintenance. The broken down shed and piles of poorly stored goals in the back middle school fields makes for a sad site.
- Spectator seating, functioning score boards, ADA accessibility, dugouts, adequate storage.
- More seating. Shaded areas. Proper drainage and pathways to access them.
- Better maintenance
- We need another turf field. Only one field is not for a school with such high caliber football, soccer, lacrosse teams. The backfields get muddy and not usable. Could we put a second turf field on the high school side (for lax, field
- Hockey)
- A second turf field. More bleachers - the band takes away too much space on game days.
- Sound abatement for games
- Seating. Just regular aluminum seating.
- More tennis courts, bleachers and dugouts for baseball and softball fields
- n/a
- Bathrooms close to the Providence Ave Field.
- Bathrooms, water fountains, seating, shade for athletes, accessibility for people with mobility challenges, decent dugouts
- Ramps into the bleachers creating access for people who don't navigate steps with areas designated for wheelchair users and free standing seats for people who are not able to get into the stands. Additional bleacher space for Haven section.
- Big speakers for before the football game
- See above…need more lit turf. This would also reduce the wear on the grass you do have. Cost could be offset by a more robust rental system with community programs.
- Bathroom/porta johns, water (for fields and kids) electricity, scoreboards, seating for fans in many auxiliary fields. Shade. Baseball/softball dugouts could be much better. Grass field spaces in spring/fall school seasons are at a premium; district has only one turf lit space that can be used for off peak/offseason practices, and that shares a track which understandably has to close it during their meets/practices for safety. Storage for equipment is either altogether missing or simply a mystery of how to access. There is no ADA compliance at King Stadium for spectators; no switchback ramps on either sets of bleachers; fan flow is poor and unsafe for crowds >1000; only one large sliding gate in front of the home stands impedes flow of the band and everyone else who needs to get to the track and field. Fans can't walk all the way around the track during football games. The footing and hardscaping around the Panther Pit is dangerous and poorly lit.
- Bathrooms and drinking fountains

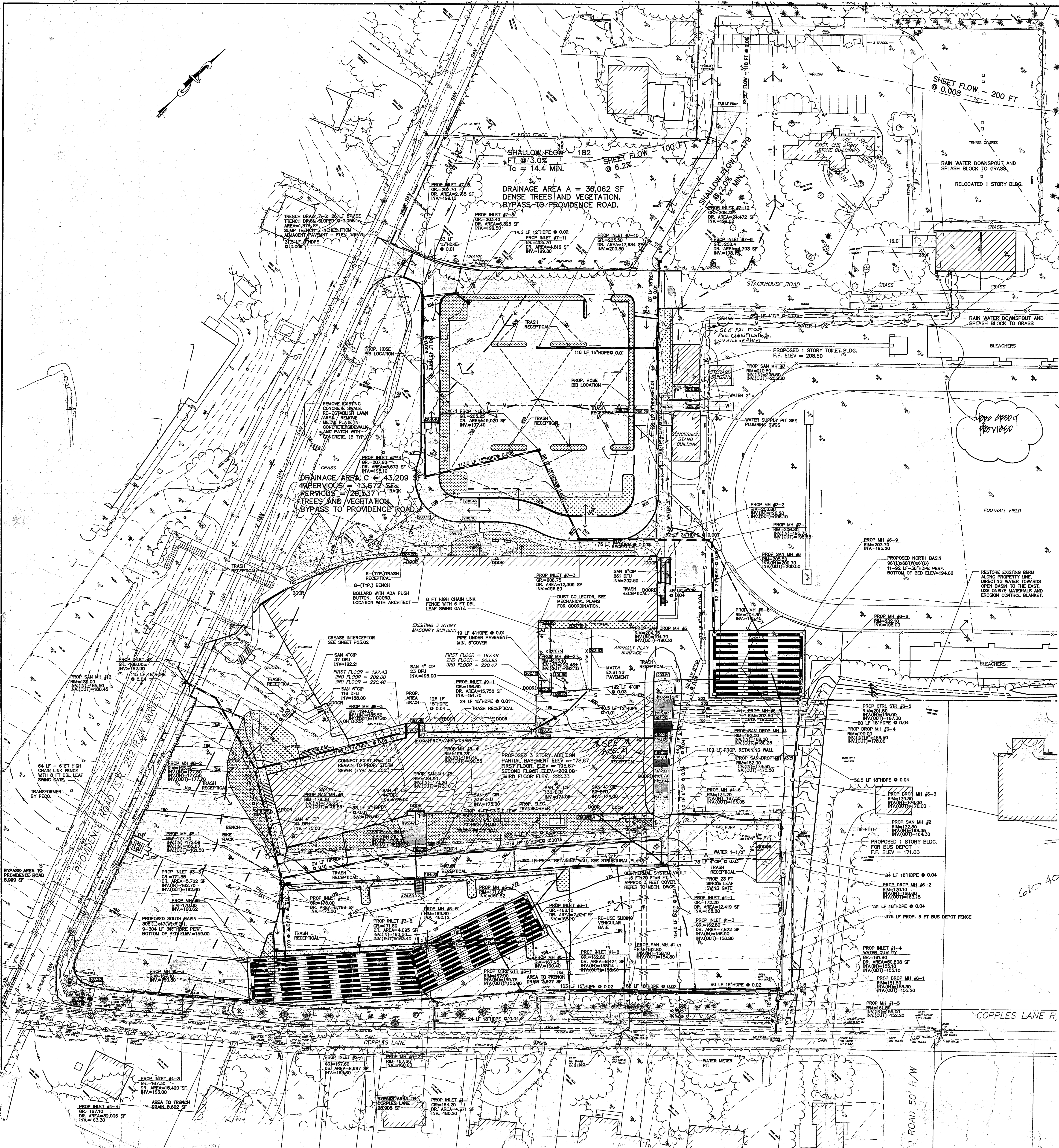
- A regular maintenance plan that includes all athletic facilities; very accessible spectator viewing at all athletic facilities; preplanned (not last minute) replacement/renovation for all athletic facilities; improved aesthetic and sustainable cohesion with the immediate environment and community surrounding each facility.
- A net behind the turf for stray balls like soccer balls or lacrosse balls
- I can't think of anything
- Nothing much I think everything is there
- Nothing besides the new turf.
- Good turf
- Good turf
- There needs to be an additional turf field with lighting. A turf field could be added at the HS. Additional tennis courts would be a nice addition.
- Water stations during summer preseason
- Seating for players and fans. At Henderson, reasonable parking is missing. No dependable, available basketball courts throughout the district. (see above re: improvements)
- Understanding that cost will always be a consideration, I would like any and all decisions made with regards to facilities to keep sustainability at the forefront
- Signage for the fields would help. There are so many fields, it can be confusing.
- Bathroom improvements (mesa field), additional turf, decent concession stand, additional lighting
- Changing/locker rooms near King Field and the other fields at the middle school that can be used by teams who practice there so they can change and safely store their personal belongings (track, cross country, soccer, lacrosse, etc.). In particular, it would be helpful to student musicians to have a place to store instruments safely and securely near their practice site. Also more designated team storage is needed for necessary team equipment.
- Indoor facilities. Nighttime accessibility/Lights.
- Signage/dugouts/CLEANLINESS!
- The jv soccer grass fields need an irrigation system or turf, the middle school fields are back fill from 476, I doubt you can turf that area, they need an irrigation system, king field needs new turf, a track, a score board, they need to keep nets up around the turf year round like they do at Springfield high school, they shouldn't put the nets out just for lacrosse, the messa field needs turf or an irrigation system, the dog leg floods and is a waste, the softball and baseball fields over by the football practice field are laid out wrong, sun is in eyes, the football practice field puddles, the title 9 field isn't bad.
- Bleachers
- The basics -- functioning score boards, dugouts, fences for safety, enough bleachers. I know our athletic facilities are in a major state of disrepair. We need everything it seems. Obviously, we don't have the money to do it all at once. One way you could increase the amount of money that we have available for these improvements is to add sponsorships to our fields and our scoreboards. We are leaving money on the table by not doing this. Every other field in the Central League has sponsorships. Most are done very tastefully and do not detract at all from the look of the field. They also have sponsored scoreboards. The Administration and the athletic department need to work together to make this

happen. With all of the things we need for our athletic facilities, sponsorships could help cover these improvements.

- more openness/transparency about game and practice schedules of school teams so residents can watch our teams in action as well as schedule their own time to come and use the fields if they're open
- More turf Fields.
- Dugouts for baseball fields. Bathrooms near the fields.
- We need multi turf fields
- Dugouts and fences for baseball. Better seating for spectators all around
- Bathrooms
- Nothing. Please keep the fields available to people who pay high taxes for the school system but have no children in the actual schools.
- High tech video equipment to capture sports teams performance at a high level.
- More intentional welcoming approach and outreach to community to embrace athletic fields as a melting and bonding pot for the many diverse community stakeholders.
- Would be wonderful to see more community members of all ages, races, genders harmoniously using the different fields for frisbee, lacrosse, walking, soccer, football, running and other events.
- Fences, safety netting, dug outs, better bleachers stands, more fields, shed (the one we have now is embarrassing).
- Na
- Simple communication and understanding between faculty and pick up teams, on when to use the field,
- So far so good! The field is in good shape
- With the understanding that priority goes to schools and organized sport, the fields should be available for individuals or informal small groups for recreational sports
- Nothing I can think of right now
- More access to turf fields and openness to unorganized groups using the fields when they aren't being rented.
- Maybe few more benches. Some athletics have some constraints, those constraint might need to be removed. And just post the schedule, so everything is aware when they are free.
- access, access, access
- Dugouts and safety netting/fencing for spectators at varsity baseball field
- Ramps!
- Baseball safety screens and dugouts, and also pathways to access fields
- Nothing I can think of
- I would like to see a stronger culture of inclusion for the athletic fields. Even though we are taxpaying residents that only use the fields when they are free, we have been made to feel unwelcome by staff that sometimes come around and ask us to leave.
- covered designated snack bar, lighting, colorful signage about the home team to create a sense of history and school pride, bathrooms, adequate parking away from fly balls

Athletic Feasibility Study

E Series
Various Plans from Prior Athletic Projects



NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW GRADING, DRAINAGE, AND STORMWATER MANAGMEMENT.
2. SLOPE OF FINISH GRADE ON PAVED SURFACES SHALL BE 0.01 FT/FT MINIMUM DOWN TOWARD DRAINAGE STRUCTURES.
3. UTILITY TRENCHES WITHIN THE CARTWAY OF EXISTING ROADS SHALL BE RESTORED IN ACCORDANCE WITH UTILITY COMPANY STANDARDS (SEE DETAILS SHEETS).
4. FOR GENERAL NOTES, SEE SHEET C100.
5. FOR STORM AND SANITARY STRUCTURE COORDINATE TABLES, SEE SHEET C102
6. FOR E&S NOTES, SEE SHEET C304.
7. COORDINATE INSTALLATION OF UTILITIES WITH GEOTHERMAL WELL DRILLING. REFER TO MECHANICAL DRAWINGS FOR WELL FIELD LAYOUT INFORMATION. SEE BACK OF PAGE FOR DETAILS

STORMWATER NOTES:

1. THE STORMWATER MANAGEMENT SYSTEM FOR THIS PROJECT INCLUDES TWO UNDERGROUND PIPE STORAGE DETENTION FACILITIES, A STORMWATER COLLECTION SYSTEM (INLETS AND PIPING), AN OPEN DETENTION BASIN, AND PERMANENT VEGETATIVE COVER.
2. DURING ANY STAGE OF THE WORK, IF THE MUNICIPAL INSPECTOR OR OTHER PERMITTING AUTHORITY DETERMINES THAT THE PERMANENT STORMWATER MANAGEMENT FACILITIES ARE NOT BEING INSTALLED IN ACCORDANCE WITH THE PERMIT, SAID INSPECTOR MAY REVOKE ANY PERMITS AND ISSUE A STOP WORK ORDER.
3. FOR DETAILS OF STORMWATER MANAGMENT FACILITY INSTALLATION NOTES, SEE SHEET C-305.
4. FOR STORM AND SANITARY PIPE PROFILES SEE SHEETS C-201 THRU C-207.

Pennsylvania One Call System, Inc.

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PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE – STOP CALL

DATE: 2/22/2006
SERIAL NO. 346314

EXCAVATIONS, TRENCHING, AND SHORING

ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF ALL UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) PUBLICATIONS OF THE LATEST REVISION.

LEGEND

EXISTING		PROPOSED
— — —	PROPERTY LINE	N/A
—o—	CHAIN LINK FENCE	—x—
	BUILDING	
CONC.	CONCRETE SIDEWALK	
BIT.	BITUMINOUS PAVEMENT	REGULAR / HEAVY DUTY
N/A	LANDSCAPE AREA (SEE LANDSCAPE PLANS)	
	CONCRETE CURB	
	OVERHEAD LIGHT & POLE	
BT	BELL TELEPHONE MANHOLE (VERIZON)	N/A
E	ELECTRIC MANHOLE	N/A
S	SANITARY/COMBINATION SEWER MANHOLE	O
W	WATER MANHOLE	N/A
WV	WATER VALVE	O V
GV	GAS VALVE	N/A
V	VENT BOX (SEWER SERVICE)	N/A
O V	FRESH AIR INLET W/TRAP	O FAI
	GRATE INLET	
	UTILITY POLE	N/A
FH	HYDRANT	
—x—	FENCE	—x—
B	BOLLARD	N/A
	TREE WITH SIZE	SEE LANDSCAPE PLAN
— W —	WATER	— W —
— W —	WATER – FIRE SERVICE	— F —
— G —	NATURAL GAS	— G —
— E —	ELECTRIC UNDERGROUND	— E —
— T —	TELECOMM. UNDERGROUND	— T —
—SAN—	SANITARY SEWER	—SAN—
— S —	STORM SEWER	
+80.00	SPOT ELEVATION	80.00 x
— 50 —	INDEX CONTOURS	50
— 49 —	CONTOURS	49
N/A	DRAINAGE DIVIDE	

POST CONSTRUCTION STORMWATER MANAGEMENT OPERATION AND MAINTENANCE

LONG-TERM OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM IS THE RESPONSIBILITY OF THE PARCEL OWNER.

1. STORMWATER COLLECTION SYSTEM: ALL INLETS AND STORM SEWERS SHALL BE INSPECTED AND CLEANED OUT AFTER EVERY 2 YEAR STORM EVENT TO MAINTAIN DRAINAGE AND MINIMIZE AMOUNT OF SEDIMENT ENTERING STORMWATER INFILTRATION SYSTEMS. ONE YEAR AFTER CONSTRUCTION, AND EVERY FIVE YEARS THEREAFTER, THE SEWERS SHALL BE TELEVISED AND INSPECTED.
2. VEGETATIVE COVER: VEGETATIVE COVER SHOULD BE MAINTAINED TO PREVENT EROSION AND DEPOSITION OF MATERIAL INTO THE STORMWATER MANAGEMENT FACILITIES.
3. UNDERGROUND STORAGE BEDS AND PIPE BASIN: ON A SEMI-ANNUAL BASIS, INSPECT THE OUTLET STRUCTURES, EXCERSISE THE EMERGENCY DRAW DOWN VALVES, AND EVALUATE THE DRAW-DOWN TIME OF THE FACILITY. IF THE THE DRAW-DOWN TIME IS LESS THAN 24 HOURS OR MORE THAN 72" HOURS AFTER A MAJOR PRECIPITATION EVENT (1" OR MORE), CORRECTIVE ACTION MAY BE REQUIRED. MAINTENANCE VALVES SHALL BE NORMALLY CLOSED.

   NORTH INFILTRATION BASIN – MONITOR CONDITION AND STABILIZATION OF SLOPE DOWNGRADIENT FROM THE BASIN. TAKE CORRECTIVE ACTION IF SLOPE STABILITY IS DEGRADED.
4. OPEN DETENTION BASIN: REMOVE TRASH, DEBRIS AND INVASIVE PLANTS AS NEEDED. MOW AND FERTILIZE GRASS TO MAINTAIN A UNIFORM VEGETATED COVER. INSPECT OUTLET CONTROL STRUCTURE FOR CLOGGING 4 TIMES EACH YEAR AND AFTER EVERY STORM EVENT GREATER THAN 1 INCH. REMOVE SEDIMENT FOM THE BASIN AT LEAST ONCE EVERY 5 YEARS OR WHEN THE DEPTH OF SEDIMENT REACHES 24 INCHES. ANNUALLY INSPECT BASIN FOR EROSION, SUBSIDENCE, CRACKING OR TREE GROWTH ON THE EMBANKMENT, DAMAGE TO THE EMERGENCY SPILLWAY, SEDMINET ACCUMULATION AROUND THE OUTLET STRUCTURE. PERFORM ANY NECESSARY REPAIRS AND MAINTENANCE TO MAINTAIN BASIN OPERATION.
5. WATER QUALITY INLET: DURING THE FIRST YEAR INSPECT ON A QUARTERLY BASIS. USING A VACUUM TRUCK REMOVE OIL, FLOATABLES AND SEDIMENT, THROUGH THE OUTLET RISER PIPES, AT A MINIMUM ANNUALLY AND MORE FREQUENTLY AS INSPECTIONS REVEAL BASED UPON SITE CONDITIONS.

SUBMIT AN INSPECTION REPORT OF THE STORMWATER MANAGMENT FACILITIES TO THE TOWNSHIP OFFCIE AFTER EACH INSPECTION, AT A MINIMUM ON ANNUAL BASIS.

OPERATION AND MAINTENANCE AGREEMENT:

LONG TERM OPERATION AND MAINTENANCE FOR THE STORWATER MANAGEMENT FACILITIES SHOWN ON THIS PLAN ARE THE OWNERS RESPONSIBILITY IN PERPETUITY. MAINTENANCE INCLUDES THE ACTIONS LISTED ON THIS PLAN PERTAINING TO SPECIFIC STORMWATER MANAGEMENT FACILITIES AS WELL AS ITEMS INCLUDED IN THE AGREEMENT SIGNED WITH THE NETHER PROVIDENCE TOWNSHIP.

SIGNED: ______________________

TITLE: ______________________

ON THIS DATE ______________, 2007

DESIGN ENGINEER:

I, ______________________, ON THIS DATE __________, 2007, HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE NETHER PROVIDENCE TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

AGOOS/LOVERA ARCHITECTS
Architectural Design
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Interior Design
Planning and Historic Preservation
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Princeton Junction, NJ 08550
T: 609-716-1900
F: 609-716-6464

Project / Client Name:

STRATH HAVEN MIDDLE SCHOOL
ADDITION/RENOVATION

200 S. Providence Road
Wallingford, PA 19086

Client/Owner:
Wallingford-Swarthmore School District
200 S. Providence Road
Wallingford, PA 19086

Seal: COMMONWEALTH OF PENNSYLVANIA – REGISTERED PROFESSIONAL ENGINEER – DEBORAH NADINE NEMIROFF – 52028-E

Issue No.	Issue Date	Issue Description
1	05/30/07	BID SET
2	06/11/07	ADDENDUM #1
3	06/29/07	ADDENDUM #5
4	07/06/07	REV TO DCCD
5	08/10/07	REV TO DCCD
6	8/20/07	REV TO DCCD
7	9/21/07	CONFORMED SET
8	1/17/08	REV SWALE

Job Number: 2052023

PM: PA:

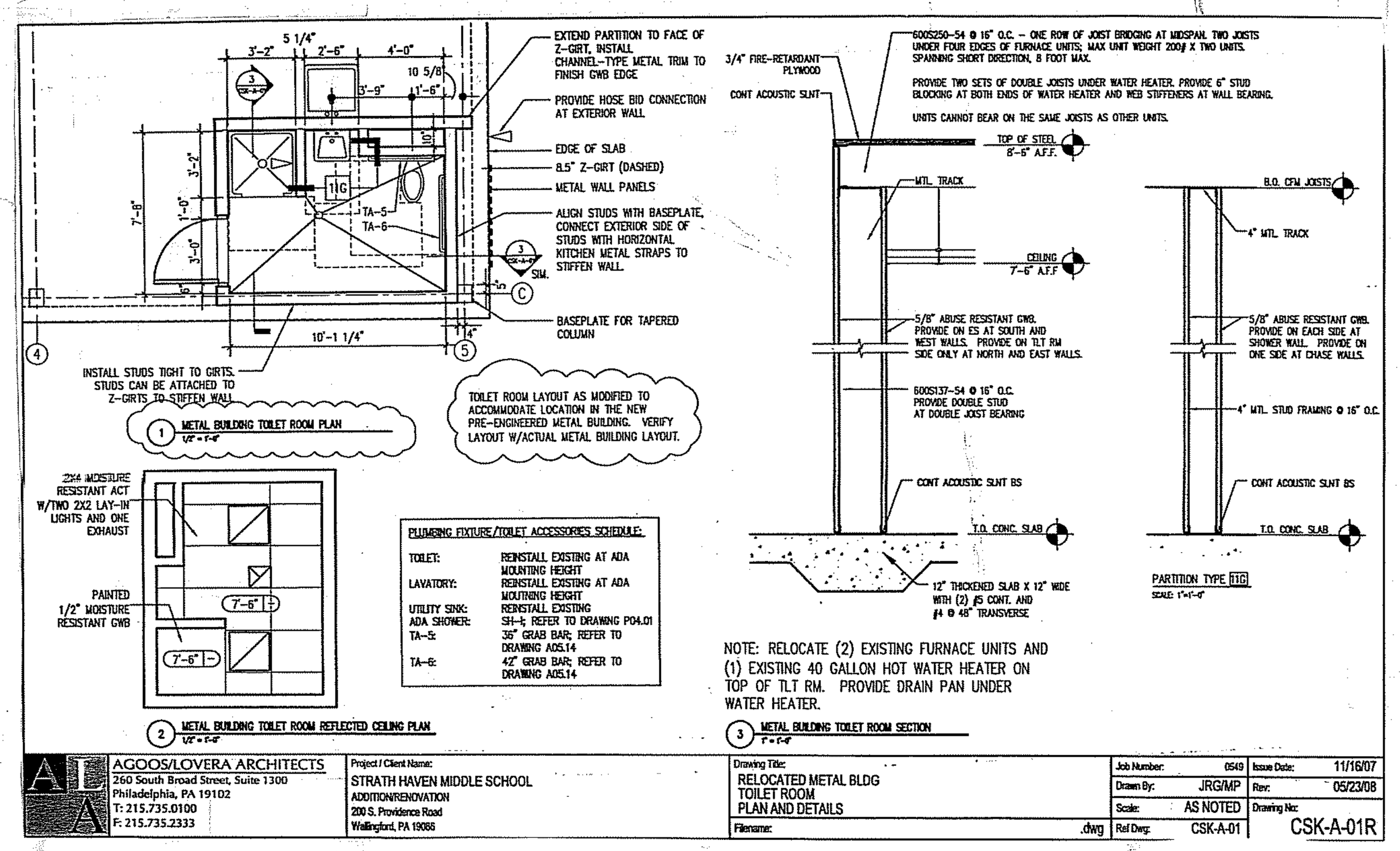
Drawn By: DNN Checked By: BW

Scale: as shown

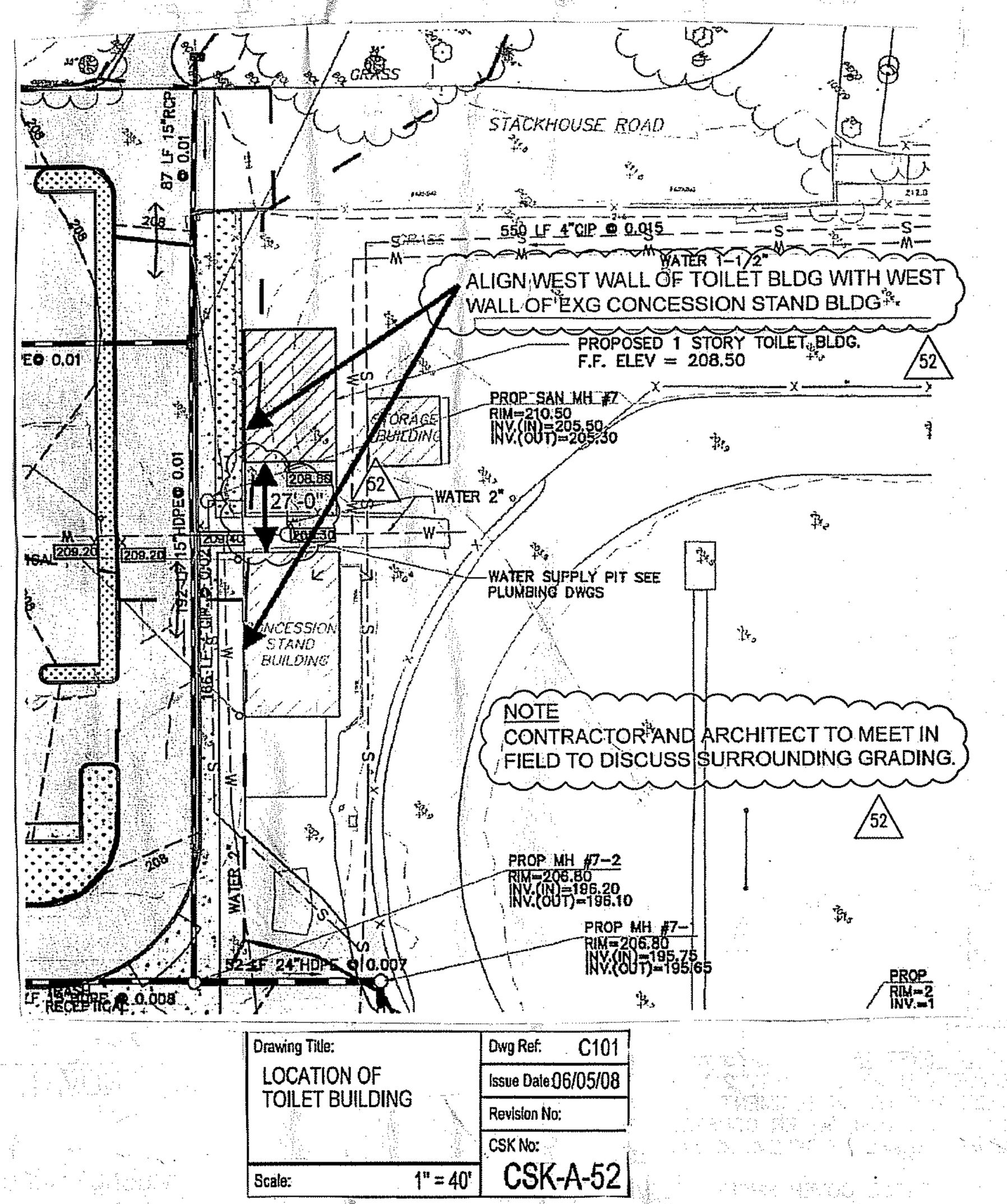
Filename: .dwg

Drawing Title:
GRADING, DRAINAGE AND UTILITY PLAN - 1 AND PCSM PLAN

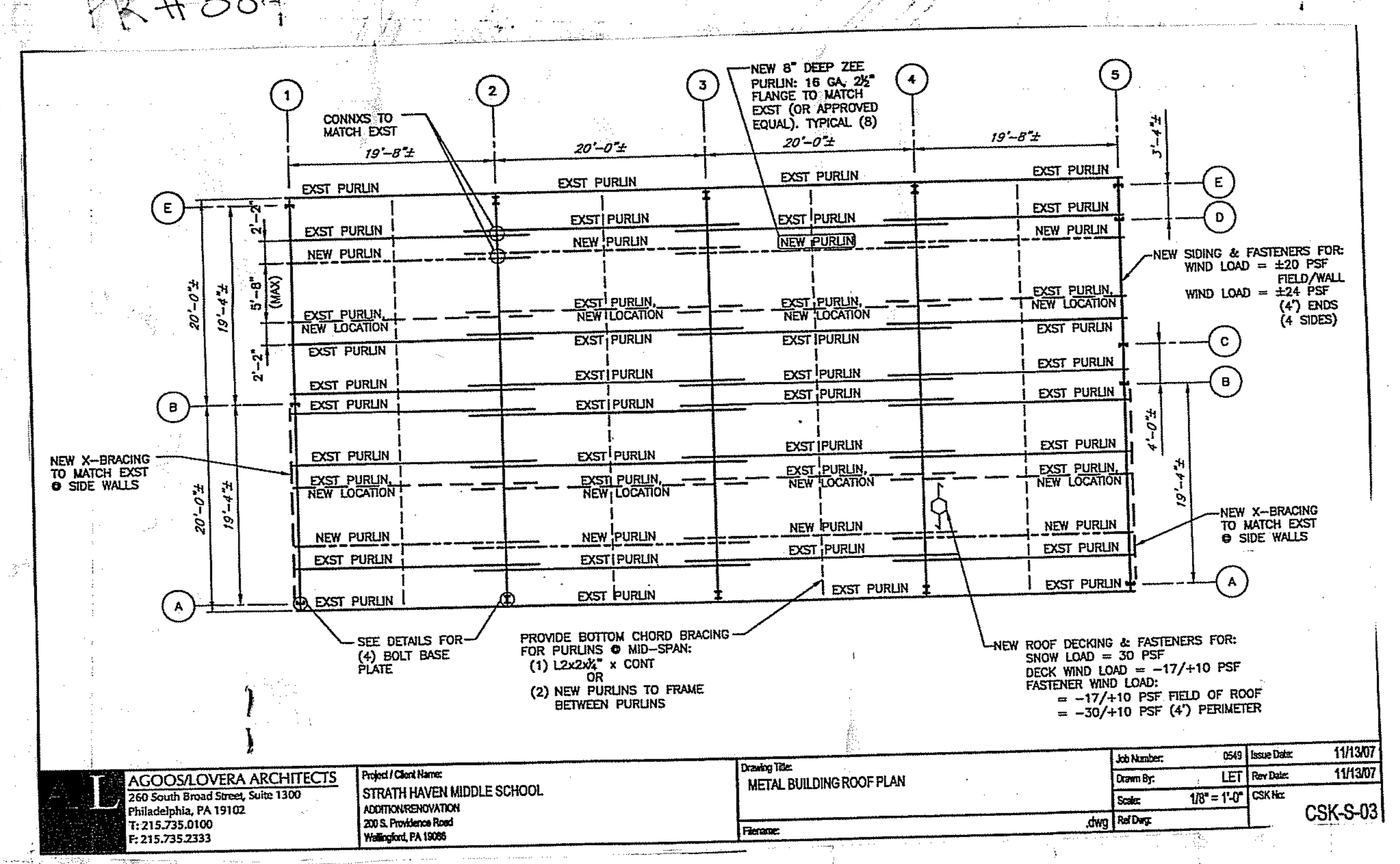
Drawing No:
C-101

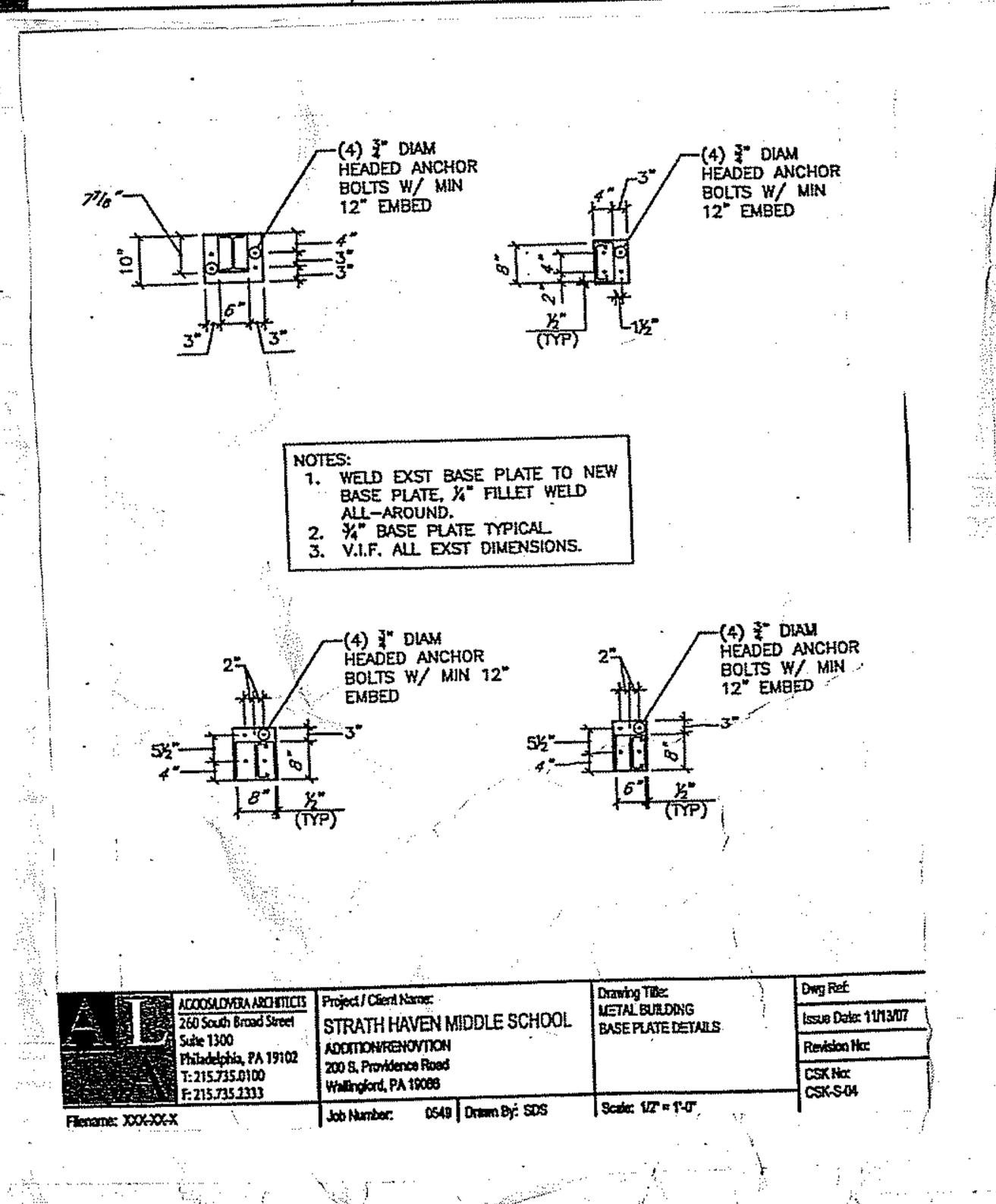

EXTEND PARTITION TO FACE OF Z-GIRT, INSTALL CHANNEL-TYPE METAL TRIM TO FINISH GWB EDGE
PROVIDE HOSE BID CONNECTION AT EXTERIOR WALL
EDGE OF SLAB
8.5" Z-GIRT (DASHED)
METAL WALL PANELS
ALIGN STUDS WITH BASEPLATE, CONNECT EXTERIOR SIDE OF STUDS WITH HORIZONTAL KITCHEN METAL STRAPS TO STIFFEN WALL.
BASEPLATE FOR TAPERED COLUMN
INSTALL STUDS TIGHT TO GIRTS. STUDS CAN BE ATTACHED TO Z-GIRTS TO STIFFEN WALL
TOILET ROOM LAYOUT AS MODIFIED TO ACCOMMODATE LOCATION IN THE NEW PRE-ENGINEERED METAL BUILDING. VERIFY LAYOUT W/ACTUAL METAL BUILDING LAYOUT.
1 METAL BUILDING TOILET ROOM PLAN
2X4 MOISTURE RESISTANT ACT W/TWO 2X2 LAY-IN LIGHTS AND ONE EXHAUST
PAINTED 1/2" MOISTURE RESISTANT GWB
PLUMBING FIXTURE/TOILET ACCESSORIES SCHEDULE:
TOILET: REINSTALL EXISTING AT ADA MOUNTING HEIGHT
LAVATORY: REINSTALL EXISTING AT ADA MOUNTING HEIGHT
UTILITY SINK: REINSTALL EXISTING
ADA SHOWER: SH-4 REFER TO DRAWING PO4.01
TA-5: 36" GRAB BAR, REFER TO DRAWING A05.14
TA-6: 42" GRAB BAR, REFER TO DRAWING A05.14
2 METAL BUILDING TOILET ROOM REFLECTED CEILING PLAN
3/4" FIRE-RETARDANT PLYWOOD
CONT ACOUSTIC SLNT
TOP OF STEEL 8'-6" A.F.F.
CEILING 7'-6" A.F.F.
MTL TRACK
5/8" ABUSE RESISTANT GWB. PROVIDE ON ES AT SOUTH AND WEST WALLS. PROVIDE ON TLT RM SIDE ONLY AT NORTH AND EAST WALLS.
600S137-54 @ 16" O.C. PROVIDE DOUBLE STUD AT DOUBLE JOIST BEARING
CONT ACOUSTIC SLNT BS
T.O. CONC. SLAB
12" THICKENED SLAB X 12" WIDE WITH (2) #5 CONT. AND #4 @ 48" TRANSVERSE
B.O. CFM JOISTS
4" MTL TRACK
5/8" ABUSE RESISTANT GWB. PROVIDE ON EACH SIDE AT SHOWER WALL. PROVIDE ON ONE SIDE AT CHASE WALLS.
4" MTL STUD FRAMING @ 16" O.C.
PARTITION TYPE B1G
NOTE: RELOCATE (2) EXISTING FURNACE UNITS AND (1) EXISTING 40 GALLON HOT WATER HEATER ON TOP OF TLT RM. PROVIDE DRAIN PAN UNDER WATER HEATER.
3 METAL BUILDING TOILET ROOM SECTION
AGOOS/LOVERA ARCHITECTS
260 South Broad Street, Suite 1300
Philadelphia, PA 19102
T: 215.735.0100
F: 215.735.2333
STRATH HAVEN MIDDLE SCHOOL
ADDITION/RENOVATION
200 S. Providence Road
Wallingford, PA 19086
RELOCATED METAL BLDG
TOILET ROOM
PLAN AND DETAILS
Job Number: 0549
Issue Date: 11/16/07
Drawn By: JRG/MP
Rev: 05/23/08
Scale: AS NOTED
Ref Dwg: CSK-A-01
CSK-A-01R

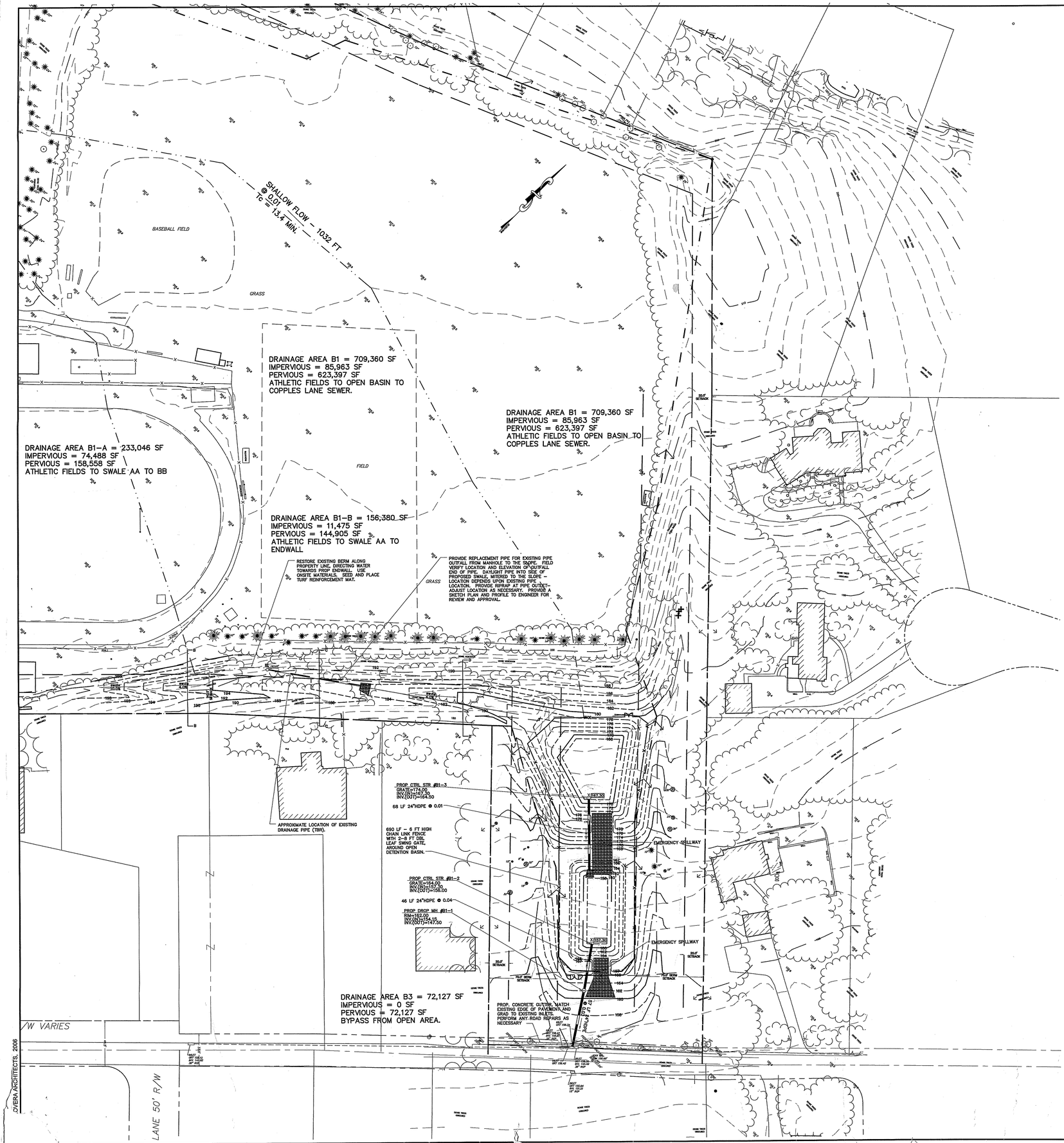
ASI #19


STACKHOUSE ROAD
550 LF 4"CIP @ 0.015
WATER 1-1/2"
ALIGN WEST WALL OF TOILET BLDG WITH WEST WALL OF EXG CONCESSION STAND BLDG.
PROPOSED 1 STORY TOILET BLDG. F.F. ELEV = 208.50
PROP SAN MH #7 RIM=210.50 INV.(IN)=205.60 INV.(OUT)=205.50
WATER 2"
27'-0"
WATER SUPPLY PIT SEE PLUMBING DWGS
CONCESSION STAND BUILDING
STORAGE BUILDING
NOTE
CONTRACTOR AND ARCHITECT TO MEET IN FIELD TO DISCUSS SURROUNDING GRADING.
PROP MH #7-2 RIM=206.80 INV.(IN)=186.20 INV.(OUT)=196.10
PROP MH #7-1 RIM=206.80 INV.(IN)=195.75 INV.(OUT)=195.65
87 LF 15"RCP @ 0.01
Drawing Title: LOCATION OF TOILET BUILDING
Dwg Ref: C101
Issue Date 06/05/08
Revision No:
CSK No: CSK-A-52
Scale: 1" = 40'

PR#004


CONNXS TO MATCH EXST
NEW 8" DEEP ZEE PURLIN: 16 GA, 2½" FLANGE TO MATCH EXST (OR APPROVED EQUAL). TYPICAL (8)
EXST PURLIN
NEW PURLIN
NEW LOCATION
NEW SIDING & FASTENERS FOR: WIND LOAD = ±20 PSF FIELD/WALL WIND LOAD = ±24 PSF (4') ENDS (4 SIDES)
NEW X-BRACING TO MATCH EXST @ SIDE WALLS
SEE DETAILS FOR (4) BOLT BASE PLATE
PROVIDE BOTTOM CHORD BRACING FOR PURLINS @ MID-SPAN: (1) L2x2x⅜" x CONT OR (2) NEW PURLINS TO FRAME BETWEEN PURLINS
NEW ROOF DECKING & FASTENERS FOR: SNOW LOAD = 30 PSF DECK WIND LOAD = -17/+10 PSF FASTENER WIND LOAD: = -17/+10 PSF FIELD OF ROOF = -30/+10 PSF (4') PERIMETER
AGOOS/LOVERA ARCHITECTS
STRATH HAVEN MIDDLE SCHOOL
ADDITION/RENOVATION
METAL BUILDING ROOF PLAN
Job Number: 0549
Issue Date: 11/13/07
Drawn By: LET
Rev Date: 11/13/07
Scale: 1/8" = 1'-0"
CSK-S-03


(4) ¾" DIAM HEADED ANCHOR BOLTS W/ MIN 12" EMBED
NOTES:
1. WELD EXST BASE PLATE TO NEW BASE PLATE, ¼" FILLET WELD ALL-AROUND.
2. ¾" BASE PLATE TYPICAL.
3. V.I.F. ALL EXST DIMENSIONS.
(TYP)
STRATH HAVEN MIDDLE SCHOOL
METAL BUILDING BASE PLATE DETAILS
Issue Date: 11/13/07
CSK-S-04
Job Number: 0549
Drawn By: SDS
Scale: 1/2" = 1'-0"



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PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE – STOP CALL

DATE: 2/22/2006
SERIAL NO. 346314

EXCAVATIONS, TRENCHING, AND SHORING

ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF ALL UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) PUBLICATIONS OF THE LATEST REVISION.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	N/A
	CHAIN LINK FENCE	
	BUILDING	
CONC.	CONCRETE SIDEWALK	
BIT.	BITUMINOUS PAVEMENT	REGULAR / HEAVY DUTY
N/A	LANDSCAPE AREA (SEE LANDSCAPE PLANS)	
	CONCRETE CURB	
	OVERHEAD LIGHT & POLE	
BT	BELL TELEPHONE MANHOLE (VERIZON)	N/A
E	ELECTRIC MANHOLE	N/A
S	SANITARY/COMBINATION SEWER MANHOLE	
W	WATER MANHOLE	N/A
WV	WATER VALVE	V
GV	GAS VALVE	N/A
V	VENT BOX (SEWER SERVICE)	N/A
V	FRESH AIR INLET W/TRAP	FAI
	GRATE INLET	
	UTILITY POLE	N/A
FH	HYDRANT	
X	FENCE	
B	BOLLARD	N/A
	TREE WITH SIZE	SEE LANDSCAPE PLAN
W	WATER	W
W	WATER – FIRE SERVICE	F
G	NATURAL GAS	G
E	ELECTRIC UNDERGROUND	E
T	TELECOMM. UNDERGROUND	T
SAN	SANITARY SEWER	SAN
S	STORM SEWER	
+80.00	SPOT ELEVATION	80.00 X
50	INDEX CONTOURS	50
49	CONTOURS	49
N/A	DRAINAGE DIVIDE	

Drainage Structures

Structure No.	Easting	Northing	Type
#1-1	2636460.3771'	213471.3535'	INLET
#1-2	2636532.6982'	213544.6171'	INLET
#1-3	2636583.7914'	213596.3035'	INLET
#1-4	2636642.9726'	213656.5809'	INLET
#1-5	2636649.8950'	213649.8465'	MANHOLE
#2-1	2636344.0452'	213339.2153'	INLET
#3-1	2636422.1722'	213513.2208'	INLET
#3-2	2636313.9270'	213389.7602'	INLET
#3-3	2636258.3198'	213327.9340'	INLET
#4-1	2636470.6815'	213663.7324'	INLET
#4-2	2636219.7364'	213383.9597'	INLET
#4-3	2636225.2292'	213230.0003'	INLET
#4-4	2636186.7782'	213197.3991'	INLET
#4-5	2636267.1148'	213467.1881'	MANHOLE
#4-6	2636453.4373'	213679.9906'	MANHOLE
#5-1	2636409.5853'	213401.4521'	CTRL STR
#5-2	2636389.9875'	213400.8799'	MANHOLE
#5-3	2636278.2927'	213275.8128'	MANHOLE
#5-4	2636249.3474'	213301.9134'	MANHOLE
#5-5	2636356.4018'	213421.0815'	MANHOLE
#5-6	2636398.1004'	213542.5906'	MANHOLE
#5-7	2636435.0394'	213529.4907'	MANHOLE
#6-1	2636654.3252'	213665.9718'	MANHOLE
#6-2	2636566.0379'	213754.5022'	MANHOLE
#6-3	2636504.2964'	213816.2621'	MANHOLE
#6-4	2636470.0570'	213858.3000'	MANHOLE
#6-5	2636454.5645'	213877.0715'	CTRL STR
#6-6	2636449.2866'	213883.3685'	MANHOLE
#6-7	2636387.4271'	213822.1429'	MANHOLE
#6-8	2636344.8782'	213864.4497'	MANHOLE
#6-9	2636406.8754'	213926.1624'	MANHOLE
#7-1	2636274.9766'	213930.4572'	MANHOLE
#7-2	2636235.6920'	213891.1726'	MANHOLE
#7-3	2636180.5626'	213836.5740'	INLET
#7-4	2636026.1399'	213772.1137'	INLET
#7-5	2635895.4250'	213898.4033'	INLET
#7-6	2635862.6810'	213910.5236'	TRENCH DRAIN
#7-7	2636087.4515'	213871.3626'	INLET
#7-8	2635917.2403'	213925.2812'	INLET
#7-9	2636098.5893'	214028.6094'	INLET
#7-10	2636014.0440'	213944.1202'	INLET
#7-11	2635932.2667'	213926.8920'	INLET
#7-12	2636038.3951'	214092.2280'	INLET
#8-1	2636210.8921'	213382.4149'	MANHOLE
#8-2	2636114.4580'	213441.8082'	MANHOLE
#8-3	2636192.7166'	213571.9767'	MANHOLE
#8-4	2636283.7241'	213665.1571'	MANHOLE
#9-1	2636290.8533'	213891.3823'	INLET
#9-2	2636294.3410'	213734.6079'	MANHOLE
#B-1	2142850988'	2637222.9725'	MANHOLE
#B-2	2143164164'	2637199.6184'	CTRL STR
#B-3	2144105843'	2637110.9387'	CTRL STR

Sanitary

Structure No.	Easting	Northing
MH #1	2636566.9767'	213591.7521'
MH #2	2636454.7537'	213702.8140'
MH #3	2636415.5295'	213743.4223'
MH #4	2636384.0320'	213779.7901'
MH #5	2636356.9990'	213837.5321'
MH #6	2636302.4837'	213892.1283'
MH #7	2636135.9666'	213997.9923'
MH #8	2636299.0667'	213521.6838'
MH #9	2636186.2833'	213388.3385'
MH #10	2636105.1439'	213440.7766'

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

AGOSS/LOVERA ARCHITECTS
Architectural Design
Programming and Project Feasibility
Interior Design
Planning and Historic Preservation
www.agosslovera.com

Project Team:

PROJECT MANAGER / OWNER'S REPRESENTATIVE
Reynolds Construction
1265 Drummers Lane
Suite 104
Wayne, PA 19087
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F: 610-688-6020

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260 South Broad Street, Suite 1300
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F: 215.735.2333

MECHANICAL / ELECTRICAL / PLUMBING / FIRE PROTECTION / TECHNOLOGY / AV ENGINEER
H.F. Lenz Company
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F: 814-269-9301

CIVIL / STRUCTURAL / GEOTECHNICAL ENGINEER
Hunt Engineering
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22 East King Street
Malvern, PA 19355
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F: 610-644-2466

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Berywn, PA 19312
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F: 610-889-7521

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Renald M. Corsi and Associates
1 North Belfield Avenue
Havertown, PA 19083
T: 610-446-6440
F: 610-446-7699

ACCOUSTICAL CONSULTANT
Shen Milsom & Wilke, Inc.
44 Princeton Hightstown Road
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Project / Client Name:

STRATH HAVEN MIDDLE SCHOOL
ADDITION/RENOVATION

200 S. Providence Road
Wallingford, PA 19086

Client/Owner:
Wallingford-Swarthmore School District
200 S. Providence Road
Wallingford, PA 19086

Seal:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DEBORAH NADINE NEMIROFF
ENGINEER
032028-E

Issue No.	Issue Date	Issue Description
1	05/30/07	BID SET
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8	1/17/08	REV SWALE

Job Number: 2052023

PM: PA:

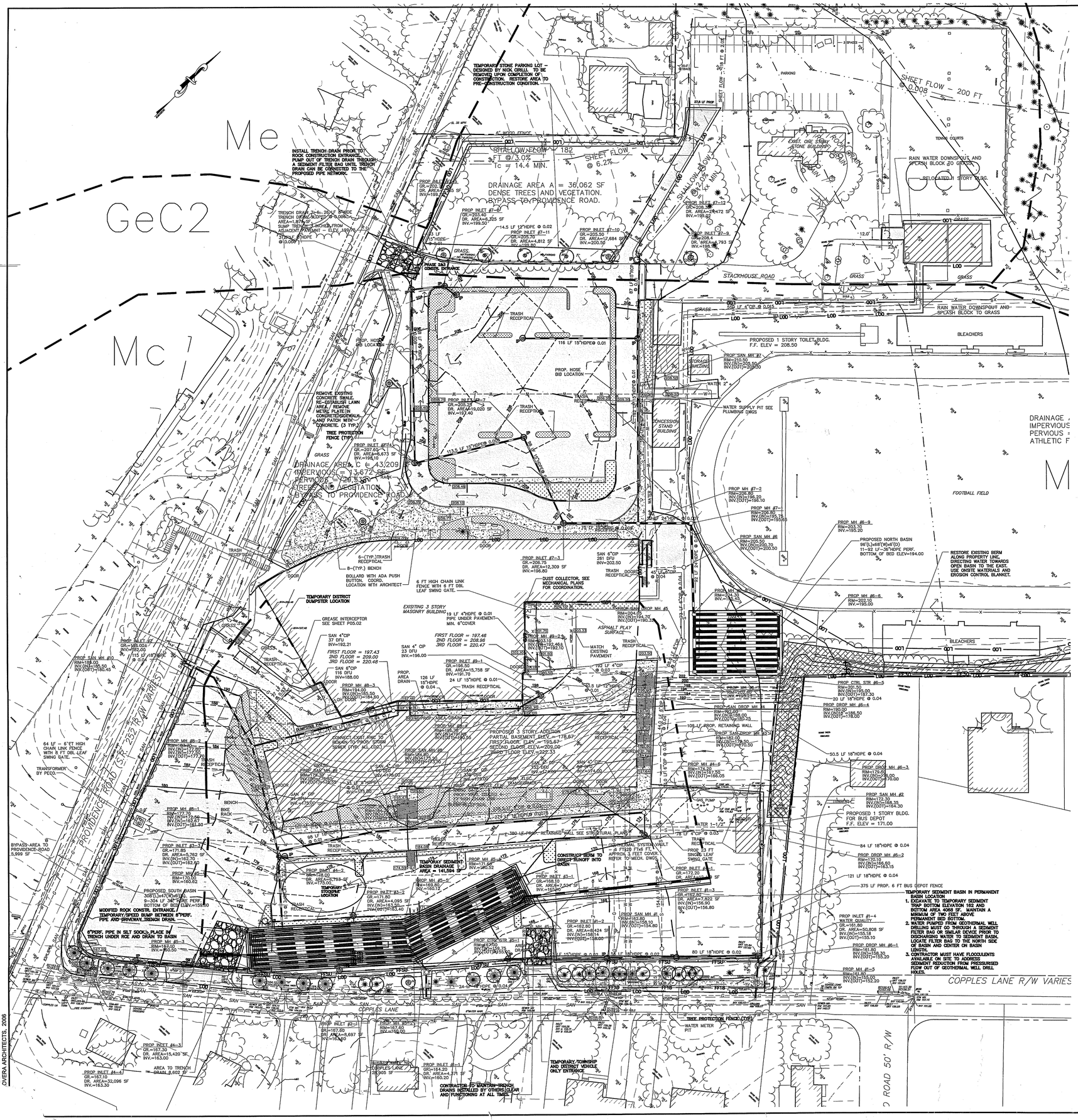
Drawn By: DNN Checked By: BW

Scale: as shown

Filename: .dwg

Drawing Title:
GRADING, DRAINAGE AND UTILITY PLAN - 2 AND PCSM PLAN

Drawing No:
C-102



Pennsylvania One Call System, Inc.

1-800-242-1776
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE – STOP CALL
DATE: 2/22/2006
SERIAL NO. 346314

EXCAVATIONS, TRENCHING, AND SHORING

ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF ALL UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) PUBLICATIONS OF THE LATEST REVISION.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	N/A
	CHAIN LINK FENCE	
	BUILDING	
CONC.	CONCRETE SIDEWALK	
BIT.	BITUMINOUS PAVEMENT	REGULAR / HEAVY DUTY
N/A	LANDSCAPE AREA (SEE LANDSCAPE PLANS)	
	CONCRETE CURB	
	OVERHEAD LIGHT & POLE	
BT	BELL TELEPHONE MANHOLE (VERIZON)	N/A
E	ELECTRIC MANHOLE	N/A
S	SANITARY/COMBINATION SEWER MANHOLE	
W	WATER MANHOLE	N/A
WV	WATER VALVE	
GV	GAS VALVE	N/A
V	VENT BOX (SEWER SERVICE)	N/A
	FRESH AIR INLET W/TRAP	FAI
	GRATE INLET	
	UTILITY POLE	N/A
HY	HYDRANT	
X	FENCE	X
B	BOLLARD	N/A
	TREE WITH SIZE	SEE LANDSCAPE PLAN
W	WATER	W
W	WATER – FIRE SERVICE	F
G	NATURAL GAS	G
E	ELECTRIC UNDERGROUND	E
T	TELECOMM. UNDERGROUND	T
SAN	SANITARY SEWER	SAN
S	STORM SEWER	S
+80.00	SPOT ELEVATION	80.00
50	INDEX CONTOURS	50
49	CONTOURS	49
N/A	DRAINAGE DIVIDE	
N/A	ROCK CONSTRUCTION ENTRANCE	
N/A	TREE PROTECTION FENCE	x x
N/A	SILT FENCE 18" HIGH	FF18
N/A	SILT FENCE 30" HIGH	FF30
N/A	SUPER SILT FENCE	FFSU
N/A	LIMIT OF EARTH DISTURBANCE LINE	LOD
N/A	EXISTING SOIL TYPE	UdB
	TURF REINFORCEMENT MAT & SEEDING	
	EROSION CONTROL BLANKET	

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW EROSION AND SEDIMENT POLLUTION CONTROL MEASURES.
2. FOR E&S NOTES AND DETAILS, SEE SHEET C304.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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Project / Client Name:

STRATH HAVEN MIDDLE SCHOOL ADDITION/RENOVATION

200 S. Providence Road
Wallingford, PA 19086

Client/Owner:
Wallingford-Swarthmore School District
200 S. Providence Road
Wallingford, PA 19086

Seal:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DEBORAH NADINE NEMKOFF
ENGINEER
032628-E

Issue No.	Issue Date	Issue Description
1	05/30/07	BID SET
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4	07/06/07	REV TO DCCD
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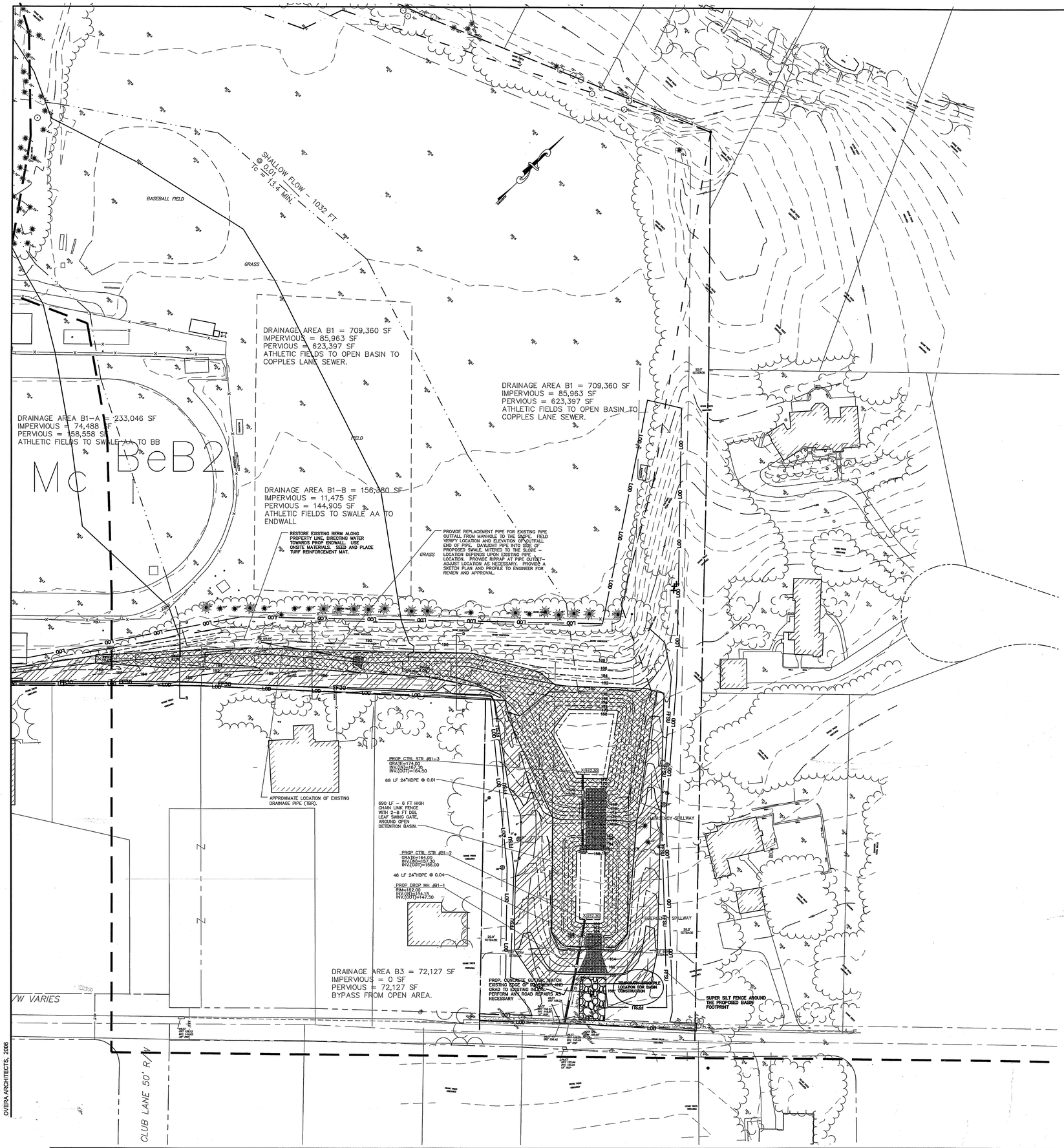
8	1/17/08	REV SWALE

Job Number: 2052023
PM: PA:
Drawn By: DNN Checked By: BW
Scale: as shown
Filename: .dwg

Drawing Title:
EROSION AND SEDIMENT CONTROL PLAN - 1

Drawing No:
C-103



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LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	N/A
	CHAIN LINK FENCE	
	BUILDING	
CONC.	CONCRETE SIDEWALK	
BIT.	BITUMINOUS PAVEMENT	REGULAR / HEAVY DUTY
N/A	LANDSCAPE AREA (SEE LANDSCAPE PLANS)	
	CONCRETE CURB	
	OVERHEAD LIGHT & POLE	
BT	BELL TELEPHONE MANHOLE (VERIZON)	N/A
E	ELECTRIC MANHOLE	N/A
S	SANITARY/COMBINATION SEWER MANHOLE	
W	WATER MANHOLE	N/A
WV	WATER VALVE	V
GV	GAS VALVE	N/A
V	VENT BOX (SEWER SERVICE)	N/A
	FRESH AIR INLET W/TRAP	FAI
	GRATE INLET	
	UTILITY POLE	N/A
	HYDRANT	
X	FENCE	X
	BOLLARD	N/A
	TREE WITH SIZE	SEE LANDSCAPE PLAN
W	WATER	W
W	WATER – FIRE SERVICE	F
G	NATURAL GAS	G
E	ELECTRIC UNDERGROUND	E
T	TELECOMM. UNDERGROUND	T
SAN	SANITARY SEWER	SAN
S	STORM SEWER	
+80.00	SPOT ELEVATION	80.00 X
50	INDEX CONTOURS	50
49	CONTOURS	48
N/A	DRAINAGE DIVIDE	
N/A	ROCK CONSTRUCTION ENTRANCE	
N/A	TREE PROTECTION FENCE	X X
N/A	SILT FENCE 18" HIGH	FF18
N/A	SILT FENCE 30" HIGH	FF30
N/A	SUPER SILT FENCE	FFSU
N/A	LIMIT OF EARTH DISTURBANCE LINE	LOD
N/A	EXISTING SOIL TYPE	UdB
	TURF REINFORCEMENT MAT & SEEDING	
	EROSION CONTROL BLANKET	

GRAPHIC SCALE

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

AGOOS/LOVERA ARCHITECTS
Architecture Design
Programming and Project Feasibility
Interior Design
Planning and Historic Preservation
www.agooslovera.com

Project Team:

PROJECT MANAGER / OWNER'S REPRESENTATIVE
Reynolds Construction
1265 Drummers Lane
Suite 104
Wayne, PA 19087
T: 610-688-6010
F: 610-688-6020

ARCHITECT:
Agoos/Lovera Architects
260 South Broad Street, Suite 1300
Philadelphia, PA 19102
T: 215.735.0100
F: 215.735.2333

MECHANICAL / ELECTRICAL / PLUMBING / FIRE PROTECTION / TECHNOLOGY / AV ENGINEER
H.F. Lenz Company
Johnstown, PA 15904-3329
T: 614-269-9300
F: 814-269-9301

CIVIL / STRUCTURAL / GEOTECHNICAL ENGINEER
Hunt Engineering
P.O.Box 537
22 East King Street
Malvern, PA 19355
T: 610-644-4600
F: 610-644-2466

LANDSCAPE ARCHITECT
Simone Collins
511 Old Lancaster Road
Berwyn, PA 19312
T: 610-889-0348
F: 610-889-7521

FOOD SERVICE CONSULTANT
Renald M. Corsi and Associates
1 North Belfield Avenue
Havertown, PA 19083
T: 610-446-6440
F: 610-446-7699

ACCOUSTICAL CONSULTANT
Shen Milsom & Wilke, Inc.
44 Princeton Hightstown Road
Princeton Junction, NJ 08550
T: 609-716-1900
F: 609-716-6464

Project / Client Name:

STRATH HAVEN MIDDLE SCHOOL
ADDITION/RENOVATION

200 S. Providence Road
Wallingford, PA 19086

Client/Owner:
Wallingford-Swarthmore School District
200 S. Providence Road
Wallingford, PA 19086

Seal:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DEBORAH NADINE NEMKOFF
ENGINEER
52029-E

Issue No.	Issue Date	Issue Description
1	05/30/07	BID SET
2	06/11/07	ADDENDUM #1
3	06/29/07	ADDENDUM #5
4	07/06/07	REV TO DCCD
5	08/10/07	REV TO DCCD
6	8/20/07	REV TO DCCD
7	9/21/07	CONFORMED SET
8	1/17/08	REV SWALE

Job Number: 2052023

PM: PA:

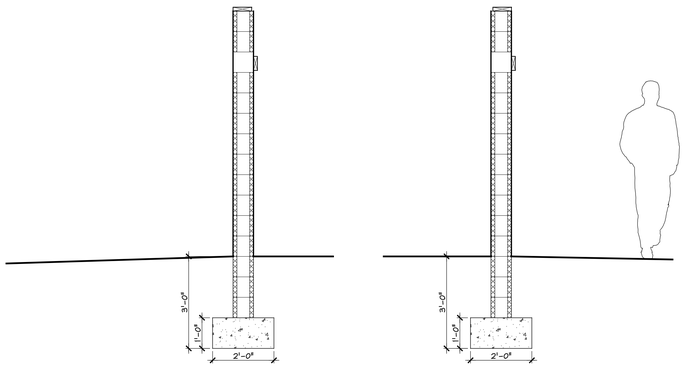
Drawn By: DNN Checked By: BW

Scale: as shown

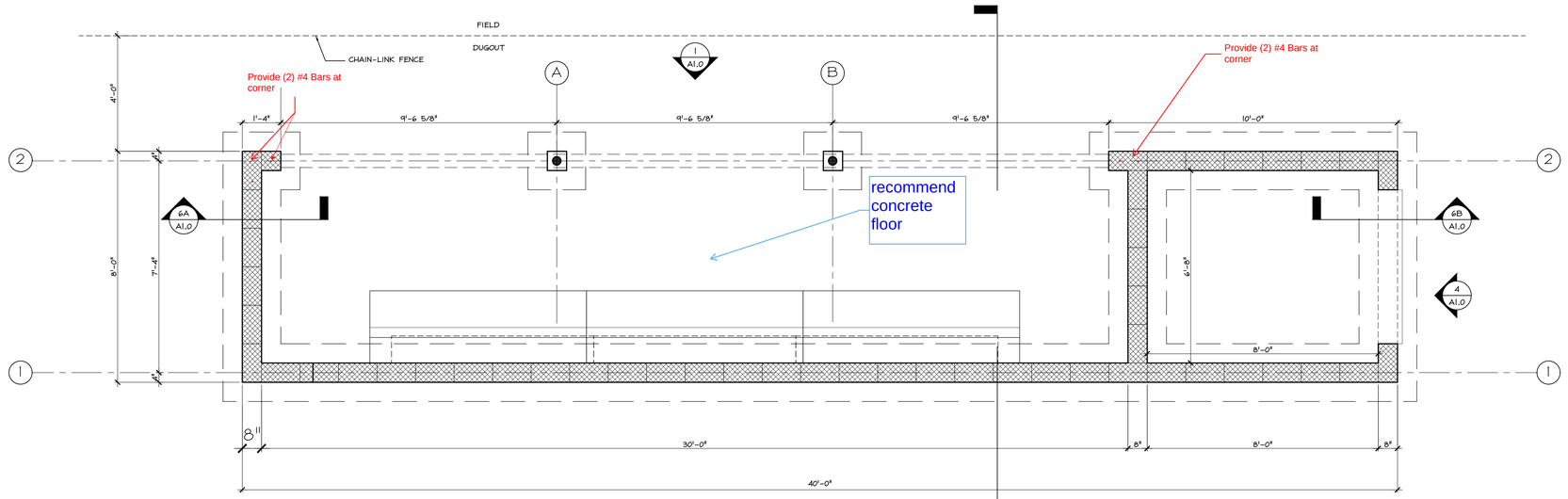
Filename: .dwg

Drawing Title:
EROSION AND SEDIMENT CONTROL PLAN - 2

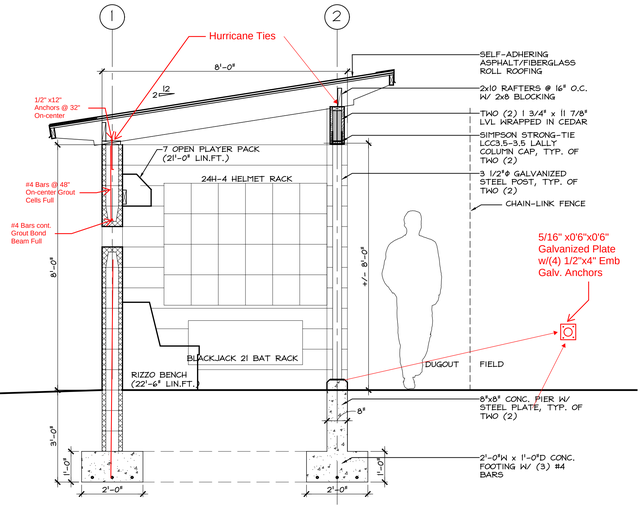
Drawing No:
C-104



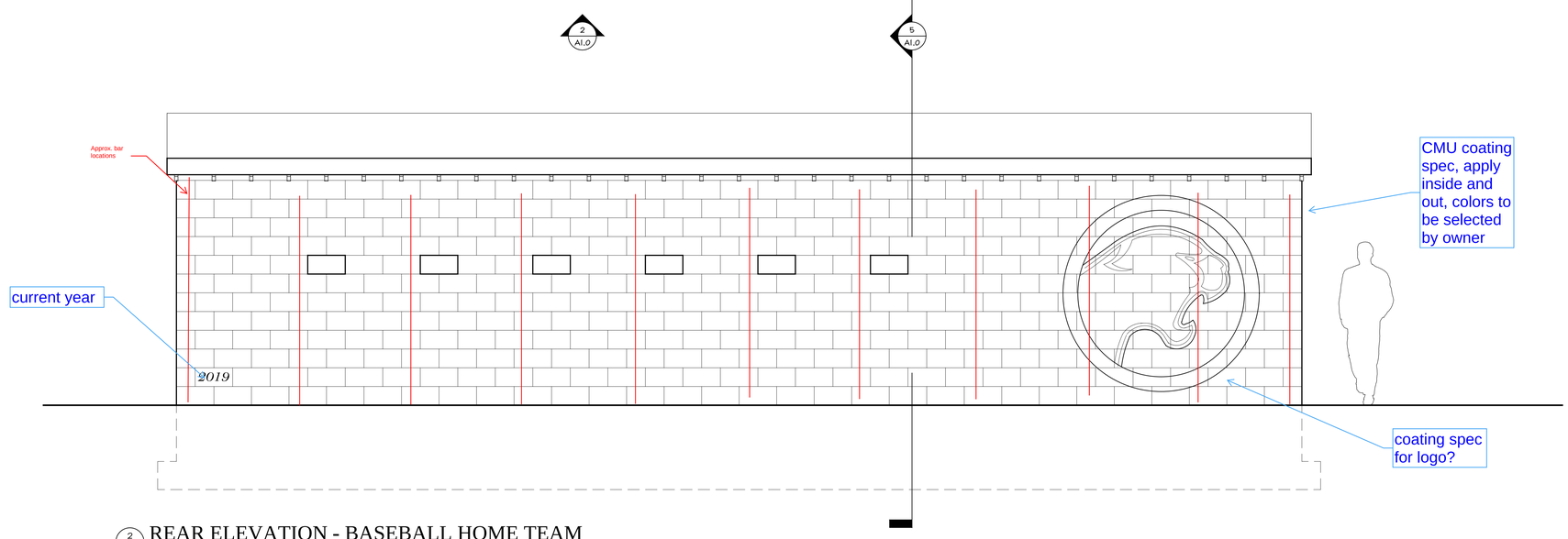
6A-B / A1.0 SECTION
SCALE: 1/2" = 1'-0"



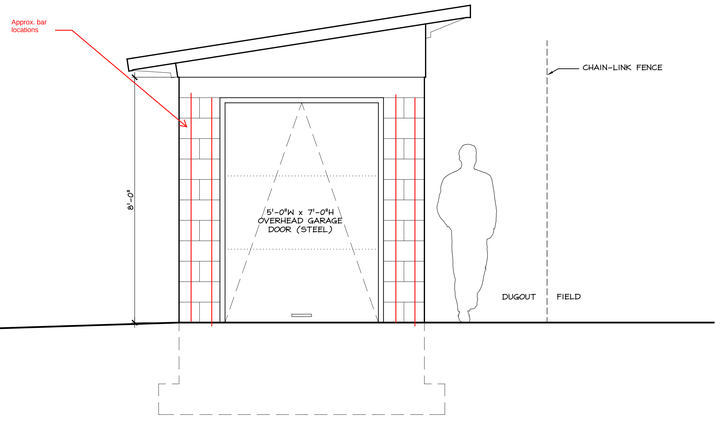
3 / A1.0 PLAN - BASEBALL HOME TEAM
SCALE: 1/2" = 1'-0"



5 / A1.0 SECTION
SCALE: 1/2" = 1'-0"



2 / A1.0 REAR ELEVATION - BASEBALL HOME TEAM
SCALE: 1/2" = 1'-0"



4 / A1.0 STORAGE END ELEVATION
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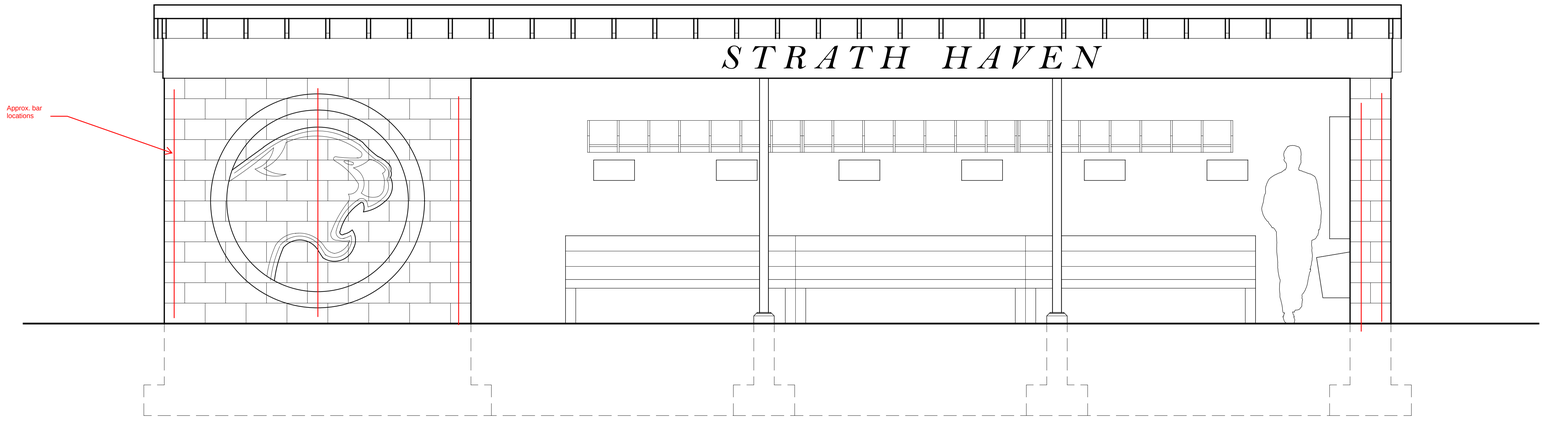
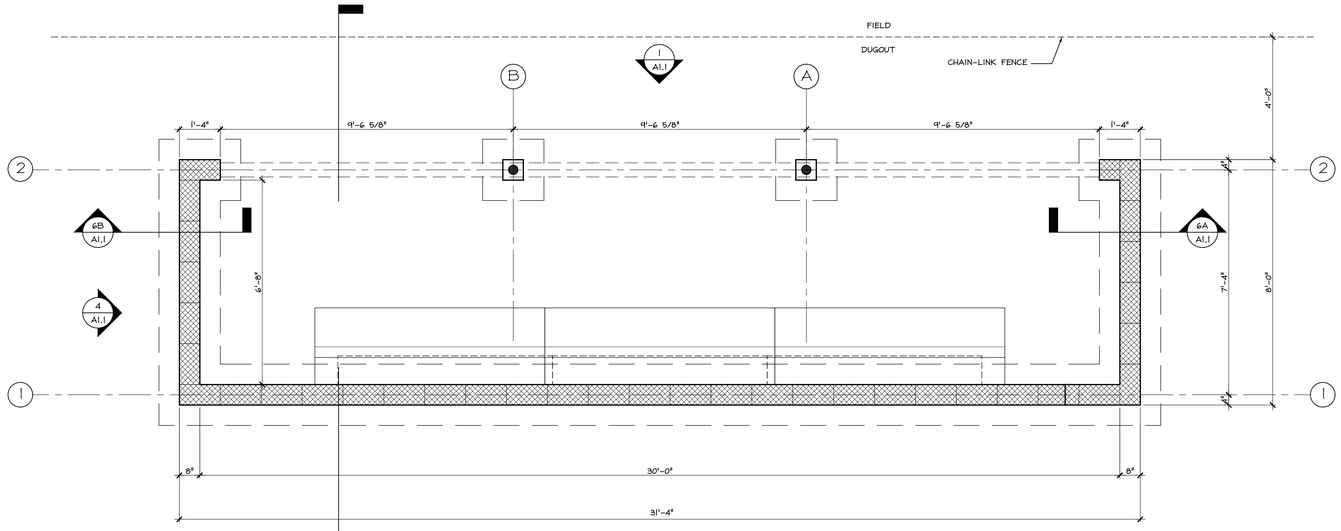
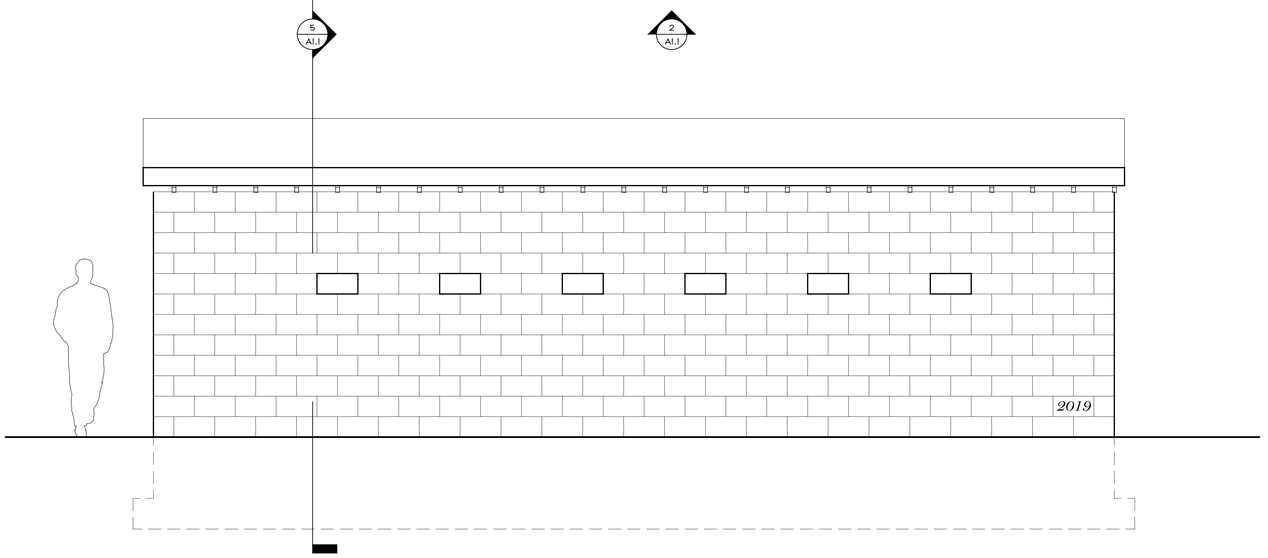


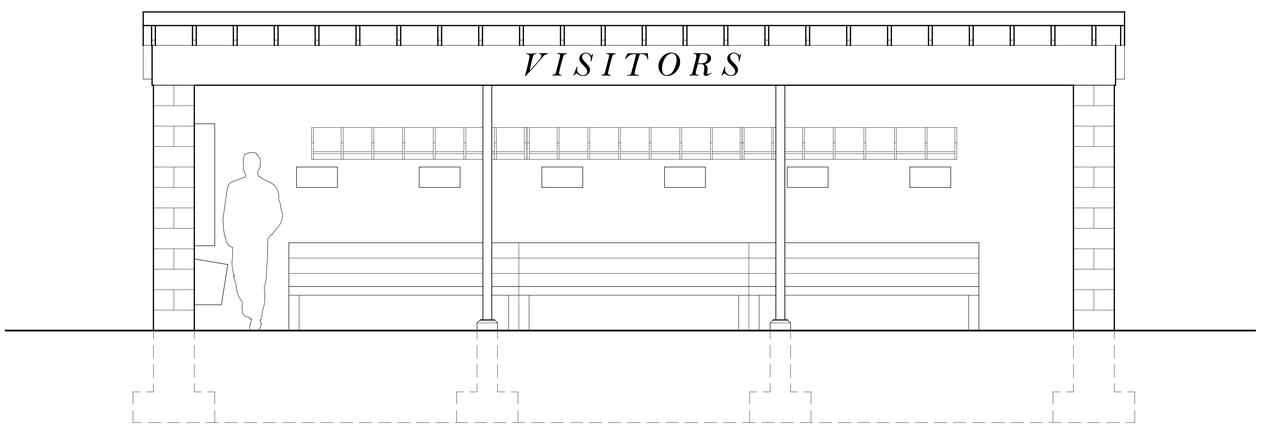
1 / A1.0 FRONT ELEVATION - BASEBALL HOME TEAM
SCALE: 1/2" = 1'-0"



3 A1.1 PLAN - BASEBALL VISITING TEAM
SCALE: 1/2" = 1'-0"

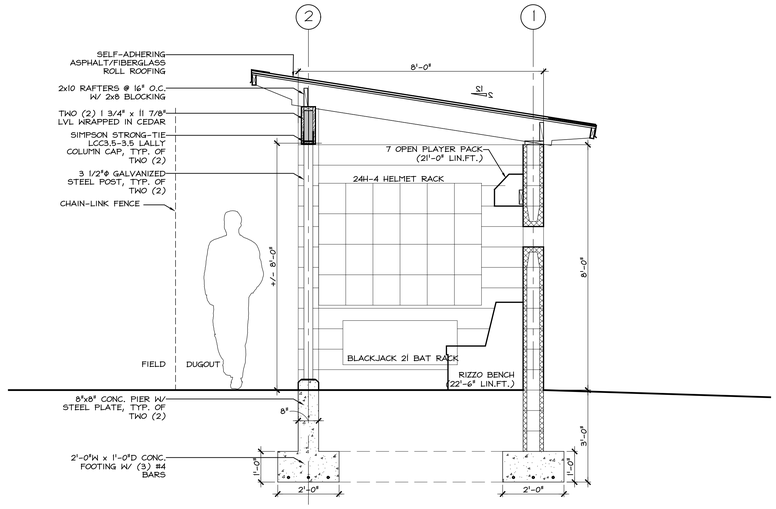


2 A1.1 REAR ELEVATION - BASEBALL VISITING TEAM
SCALE: 1/2" = 1'-0"

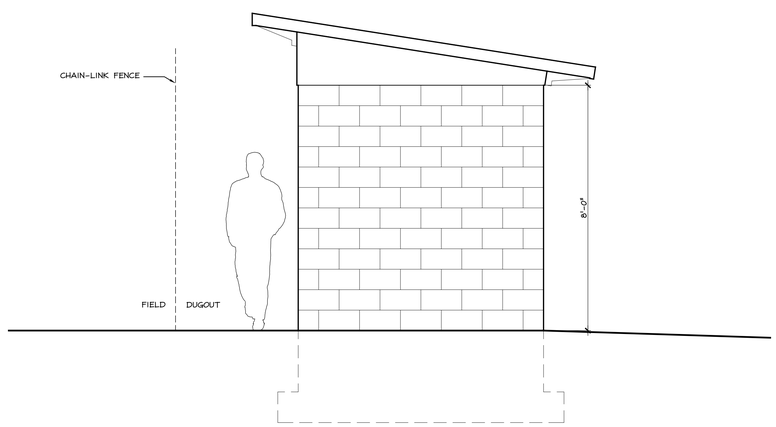


1 A1.1 FRONT ELEVATION - BASEBALL VISITING TEAM
SCALE: 1/2" = 1'-0"

6A-B A1.1 SECTION
SCALE: 1/2" = 1'-0"



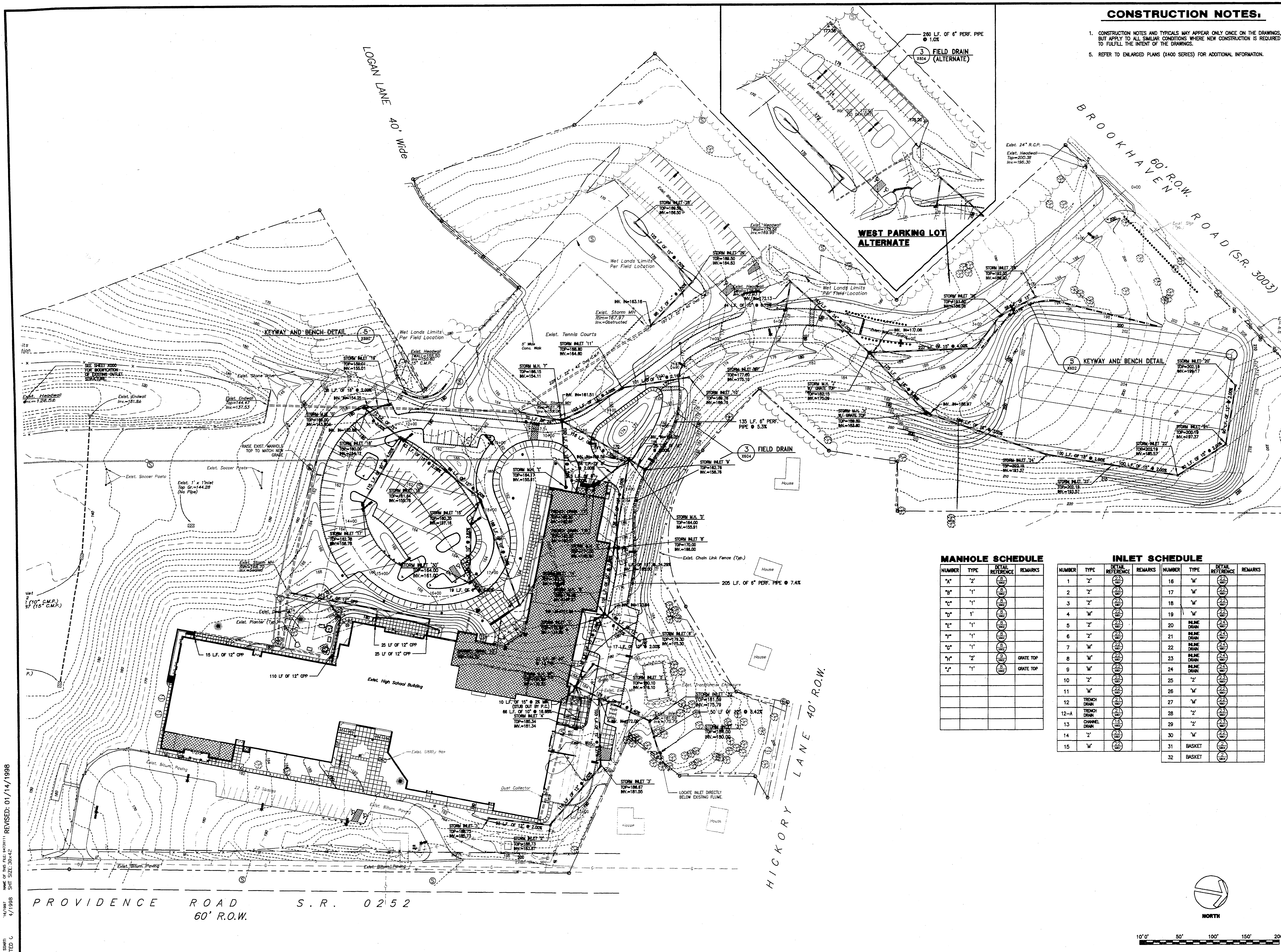
5 A1.1 SECTION
SCALE: 1/2" = 1'-0"



4 A1.1 END ELEVATION
SCALE: 1/2" = 1'-0"

CONSTRUCTION NOTES:

1. CONSTRUCTION NOTES AND TYPICALS MAY APPEAR ONLY ONCE ON THE DRAWINGS, BUT APPLY TO ALL SIMILIAR CONDITIONS WHERE NEW CONSTRUCTION IS REQUIRED TO FULFILL THE INTENT OF THE DRAWINGS.
5. REFER TO ENLARGED PLANS (X400 SERIES) FOR ADDITIONAL INFORMATION.



MANHOLE SCHEDULE

NUMBER	TYPE	DETAIL REFERENCE	REMARKS
"A"	'2'	8/X802	
"B"	'1'	8/X802	
"C"	'1'	8/X802	
"D"	1'	8/X802	
"E"	'1'	8/X802	
"F"	'1'	8/X802	
"G"	'1'	8/X802	
"H"	'2'	9/X802	GRATE TOP
"J"	'1'	8/X802	GRATE TOP

INLET SCHEDULE

NUMBER	TYPE	DETAIL REFERENCE	REMARKS	NUMBER	TYPE	DETAIL REFERENCE	REMARKS
1	'2'	23/X801		16	'M'	22/X801	
2	'2'	23/X801		17	'M'	22/X801	
3	'2'	23/X801		18	'M'	22/X801	
4	'M'	22/X801		19	'M'	22/X801	
5	'2'	23/X801		20	INLINE DRAIN	24/X801	
6	'2'	23/X801		21	INLINE DRAIN	24/X801	
7	'M'	22/X801		22	INLINE DRAIN	24/X801	
8	'M'	22/X801		23	INLINE DRAIN	24/X801	
9	'M'	22/X801		24	INLINE DRAIN	24/X801	
10	'2'	23/X801		25	'2'	23/X801	
11	'M'	22/X801		26	'M'	22/X801	
12	TRENCH DRAIN	21/X801		27	'M'	22/X801	
12-A	TRENCH DRAIN	21/X801		28	'2'	23/X801	
13	CHANNEL DRAIN	16/X802		29	'2'	23/X801	
14	'2'	23/X801		30	'M'	22/X801	
15	'M'	22/X801		31	BASKET	2/X804	
				32	BASKET	2/X804	

PROJ. NO: 9473
ISSUED: 20 JAN 1998
REVISION DATES:

FOREMAN ARCHITECTS ENGINEERS
P.O. BOX 189
525 W. NEW CASTLE STREET
ZELIENOPLE, PA 16063
PHONE NO. (724) 452-9690
FAX NO. (724) 452-0136
P.O. BOX 189
2685 HOSSLER ROAD
MANHEIM, PA. 17545
PHONE NO. (717) 653-0589
FAX NO. (717) 653-9427

I.O. 2180

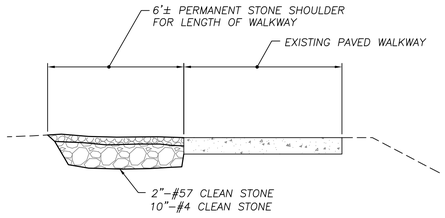
ADDITIONS AND RENOVATIONS TO:
STRATH HAVEN HIGH SCHOOL
205 SOUTH PROVIDENCE ROAD
WALLINGFORD, PENNSYLVANIA 19086-6396
NETHER PROVIDENCE TOWNSHIP
DELAWARE COUNTY
WALLINGFORD-SWARTHMORE SCHOOL DISTRICT
200 SOUTH PROVIDENCE ROAD
WALLINGFORD, PENNSYLVANIA 19086-6396

GRADING & STORM DRAINAGE PLAN
SCALE: 1" = 50'-0"

X111

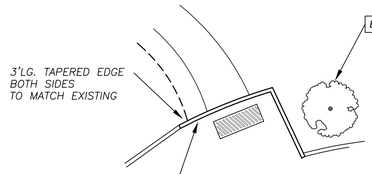
FIRST START: '16/1997 NAME OF THIS FILE: 9473X111 REVISED: 01/14/1998
PLOTTED: 4/1998 SHT SIZE: 30x42

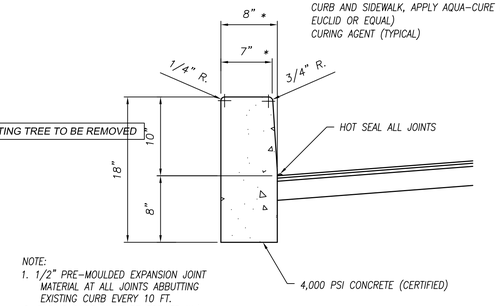
N



SECTION A–A

SCALE: NONE



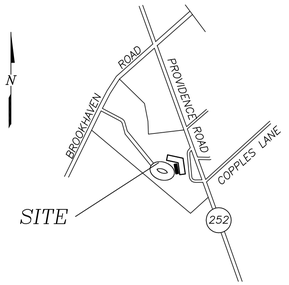


NOTE:
UPON COMPLETION OF FINAL FINISHING RUB FOR CURB AND SIDEWALK, APPLY AQUA-CURE VOX (BY EUCLID OR EQUAL) CURING AGENT (TYPICAL)

NOTE:
1. 1/2" PRE-MOULDED EXPANSION JOINT MATERIAL AT ALL JOINTS ABBUTTING EXISTING CURB EVERY 10 FT.
2. RADIUS CURB MUST BE FORMED W/ UNIFORM CURVE. NO TANGENT BREAKS PERMITTED.

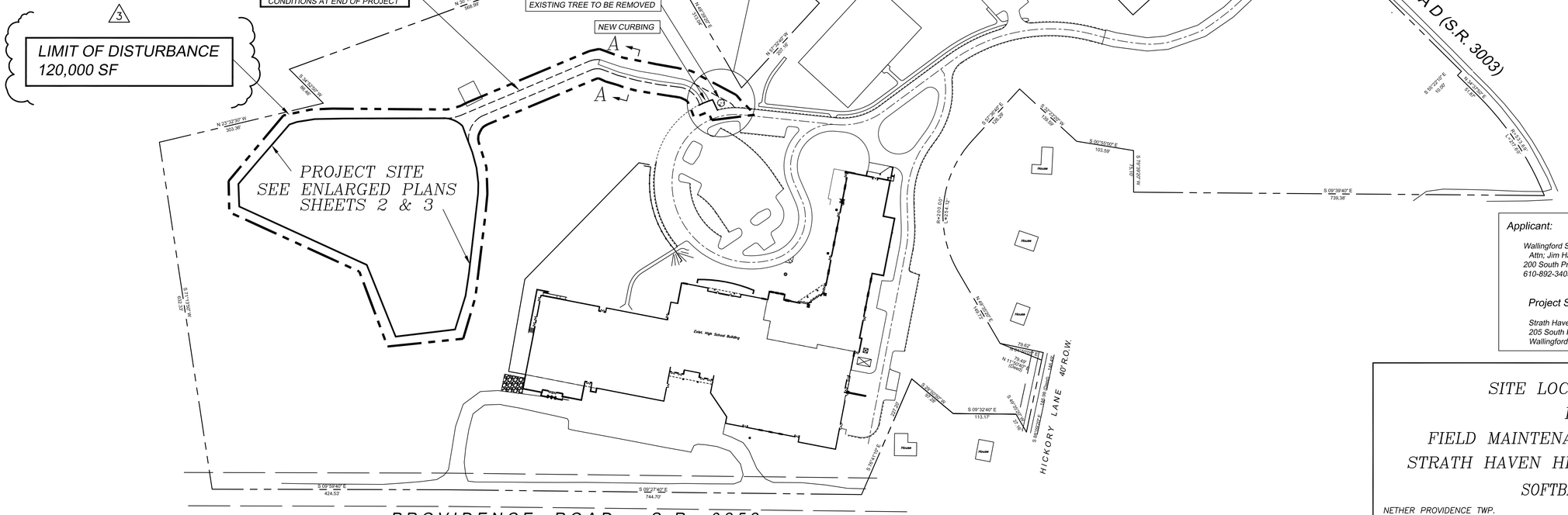
* – OR MATCH EXISTING CONDITIONS AS APPROVED BY ENGINEER

CONCRETE CURB IN PARKING LOT



LOCATION PLAN

SCALE 1"=1000'



SITE PLAN

0 50' 100' 200'

SCALE: 1"=100'-0"

Applicant:

Wallingford Swarthmore School District
Attn; Jim Hardy, Director Facilities
200 South Providence Road, Wallingford, PA 19086
610-892-3405 ext 1601, 610-892-3496 fax

Project Site Location

Strath Haven High School
205 South Providence Road
Wallingford, PA 19086

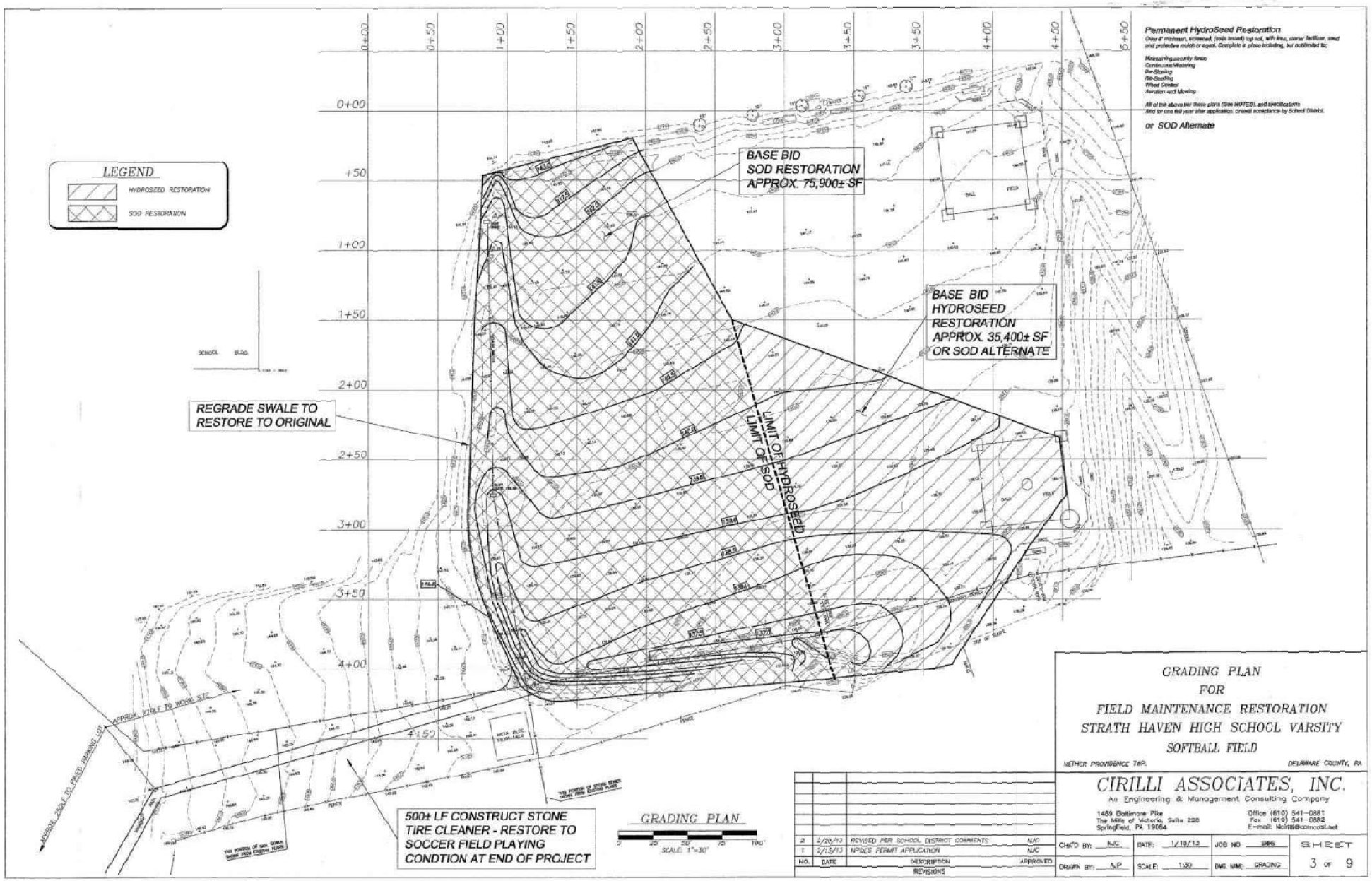
SITE LOCATION PLAN FOR FIELD MAINTENANCE RESTORATION STRATH HAVEN HIGH SCHOOL VARSITY SOFTBALL FIELD

NETHER PROVIDENCE TWP. DELAWARE COUNTY, PA

NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	
3	4/1/13	REVISED PER DELCO CONSERVATION DISTRICT COMMENTS	NJC
2	2/20/13	REVISED PER SCHOOL DISTRICT COMMENTS	NJC
1	2/13/13	NPDES PERMIT APPLICATION	NJC

CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, PA 19064
Office (610) 541-0881
Fax (610) 541-0882
E-mail: Ncirilli@comcast.net

CHK'D BY: NJC	DATE: 1/18/12	JOB NO: SHHS	SHEET 1 OF 9
DRAWN BY: AJP	SCALE: 1:100	DWG. NAME: SITE	



GRADING PLAN
FOR
FIELD MAINTENANCE RESTORATION
STRATH HAVEN HIGH SCHOOL VARSITY
SOFTBALL FIELD

NETHER PROVIDENCE TWP. DELAWARE COUNTY, PA

NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	
2	2/26/13	REVISED PER SCHOOL DISTRICT COMMENTS	NJC
1	2/13/13	NPDES PERMIT APPLICATION	NJC

CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
1489 Baltimore Pike
The Mills of Victoria, Suite 220
Springfield, PA 19064
Office (610) 541-0881
Fax (610) 541-0882
E-mail: Nclmls@comcast.net

CHK'D BY: NJC | DATE: 1/18/13 | JOB NO. 2965 | SHEET
DRAWN BY: NJP | SCALE: 1:30 | DWG. NAME: GRADING | 3 OF 9

LEGEND

HYDROSEED RESTORATION

SOD RESTORATION

Permanent HydroSeed Restoration

Over 4" minimum, screened, (soils tested) top soil, with lime, starter fertilizer, seed and protective mulch or equal. Complete in place including, but not limited to;

Maintaining security fence
Continuous Watering
De-Stoning
Re-Seeding
Weed Control
Aeration and Mowing

All of the above per these plans (See NOTES), and specifications
And for one full year after application, or until acceptance by School District.

or SOD Alternate

BASE BID
SOD RESTORATION
APPROX. 75,900± SF

BASE BID
HYDROSEED
RESTORATION
APPROX. 35,400± SF
OR SOD ALTERNATE

REGRADE SWALE TO RESTORE TO ORIGINAL
SEE SHEET 5 (3)

LIMIT OF HYDROSEED
LIMIT OF SOD

SCHOOL BLDG.
ELEV. = 180.2

APPROX. 270LF TO WORK SITE

APPROX. 250LF TO PAVED PARKING LOT

MACADAM PATH

BALL FIELD

FENCE

CONC.

WATER

SANITARY SEWER

STORM SEWER

INLET GRATE

METAL BLDG. FLOOR=142.6

TOP OF SLOPE

DOWN

BOTTOM OF EARTH BERM

THIS PORTION OF STORM SEWER SHOWN FROM EXISTING PLANS

THIS PORTION OF SAN. SEWER SHOWN FROM EXISTING PLANS

(3) FLOWS TO EXISTING STORM WATER RETENTION BASIN REMAINS UNCHANGED

500± LF CONSTRUCT STONE TIRE CLEANER - RESTORE TO SOCCER FIELD PLAYING CONDTION AT END OF PROJECT

GRADING PLAN
0' 25' 50' 75' 100'
SCALE: 1"=30'

GRADING PLAN
FOR
FIELD MAINTENANCE RESTORATION
STRATH HAVEN HIGH SCHOOL VARSITY
SOFTBALL FIELD

NETHER PROVIDENCE TWP. DELAWARE COUNTY, PA

NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	
3	4/1/13	REVISED PER DELCO CONSERVATION DISTRICT COMMENTS	NJC
2	2/20/13	REVISED PER SCHOOL DISTRICT COMMENTS	NJC
1	2/13/13	NPDES PERMIT APPLICATION	NJC

CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, PA 19064
Office (610) 541-0881
Fax (610) 541-0882
E-mail: Ncirilli@comcast.net

CHK'D BY: NJC | DATE: 1/18/13 | JOB NO: SHHS | SHEET 3 OF 9
DRAWN BY: AJP | SCALE: 1:30 | DWG. NAME: GRADING

LIMIT OF 4' HIGH BRIGHT ORANCE SAFETY FENCE

TEMPORARY INLET SEDIMENT BARRIER

LIMIT OF DISTURBANCE 120,000 SF

3

LEGEND

- PHASE 1
- PHASE 2
- E&S BLANKET
- 18" SILT FENCE
- 30" SILT FENCE
- 48" ORANGE SAFETY FENCE
- INLET PROTECTION

SCHOOL BLDG.

ELEV. - 180.2

3 TEMPORARY STOCKPILE W/ 18" SILT FENCE, RELOCATE AS WORK PROGRESSES

ROCK FILTER BERM PHASE 1

TIRE CLEANER

LIMIT 30" HIGH SILT FENCE

APPROX. 270LF TO WORK SITE

APPROX. 250LF TO PAVED PARKING LOT

MACADAM PATH

3 FOR CONTINUATION SEE SHEET 1

TEMPORARY CONSTRUCT TIRE CLEANER ENTRANCE SEE SHEET 1 OF 9

LIMIT OF DISTURBANCE 510± LF 4' HIGH BRIGHT ORANCE SAFETY FENCE

PHASE 1 REGRADE & SOD

LIMIT OF 4' SAFETY FENCE

LIMIT OF 30" HIGH SILT FENCE

SEE ADD/ALTERNATE FOR SUPER SILT FENCE INSTEAD OF 30" SILT FENCE IN FORM OF PROPOSAL

LIMIT OF HYDROSEED

LIMIT OF SOD

30" SILT FENCE

SEE SHEET 1 FOR SOFTBALL FIELD RESTORATION

BIODEGRADABLE E&S BLANKET OR SOD

18" SILT FENCE PHASE 2

STONE ROCK FILTER BERM (IF NEEDED)

PHASE 2 - AFTER SOD PLACEMENT RESTORE EXISTING SWALES & IMMEDIATELY SOD

EROSION & SEDIMENTATION PLAN

0' 25' 50' 75' 100'

SCALE: 1"=30'

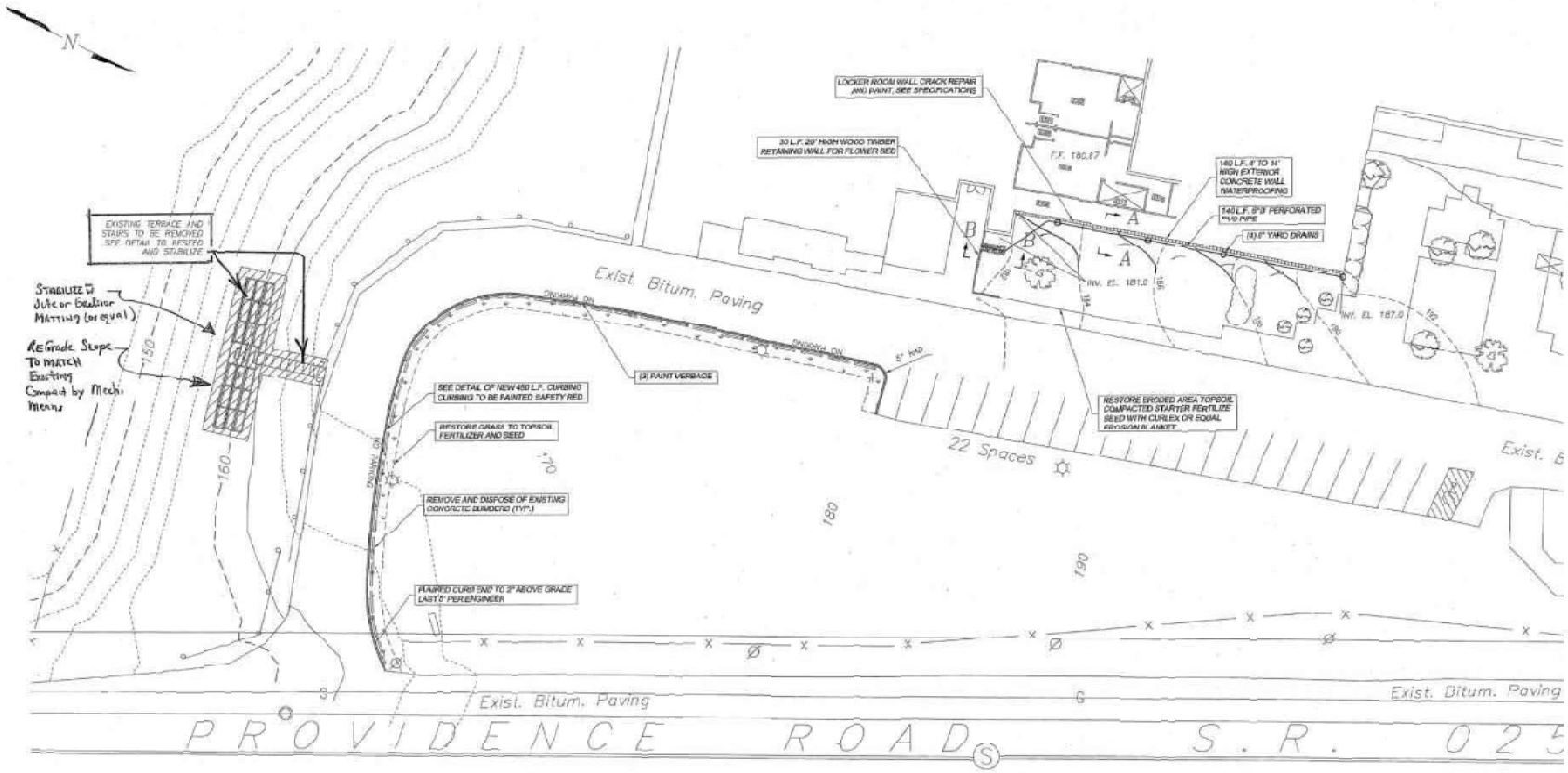
NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	
3	4/1/13	REVISED PER DELCO CONSERVATION DISTRICT COMMENTS	NJC
2	2/20/13	REVISED PER SCHOOL DISTRICT COMMENTS	NJC
1	2/13/13	NPDES PERMIT APPLICATION	NJC

EROSION AND SEDIMENTATION PLAN FOR FIELD MAINTENANCE RESTORATION STRATH HAVEN HIGH SCHOOL VARSITY SOFTBALL FIELD

NETHER PROVIDENCE TWP. DELAWARE COUNTY, PA

CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, PA 19064
Office (610) 541-0881
Fax (610) 541-0882
E-mail: Ncirilli@comcast.net

CHK'D BY: NJC	DATE: 1/18/13	JOB NO: SHHS	SHEET 4 OF 9
DRAWN BY: AJP	SCALE: 1:30	DWG. NAME: EROSION	



LOCATION PLAN
SCALE: 1"=1000'

0' 20' 40' 60'
SCALE: 1"=20'-0"

CONTRACTOR RESPONSIBLE FOR
PA ONE CALL
1-800-242-1776

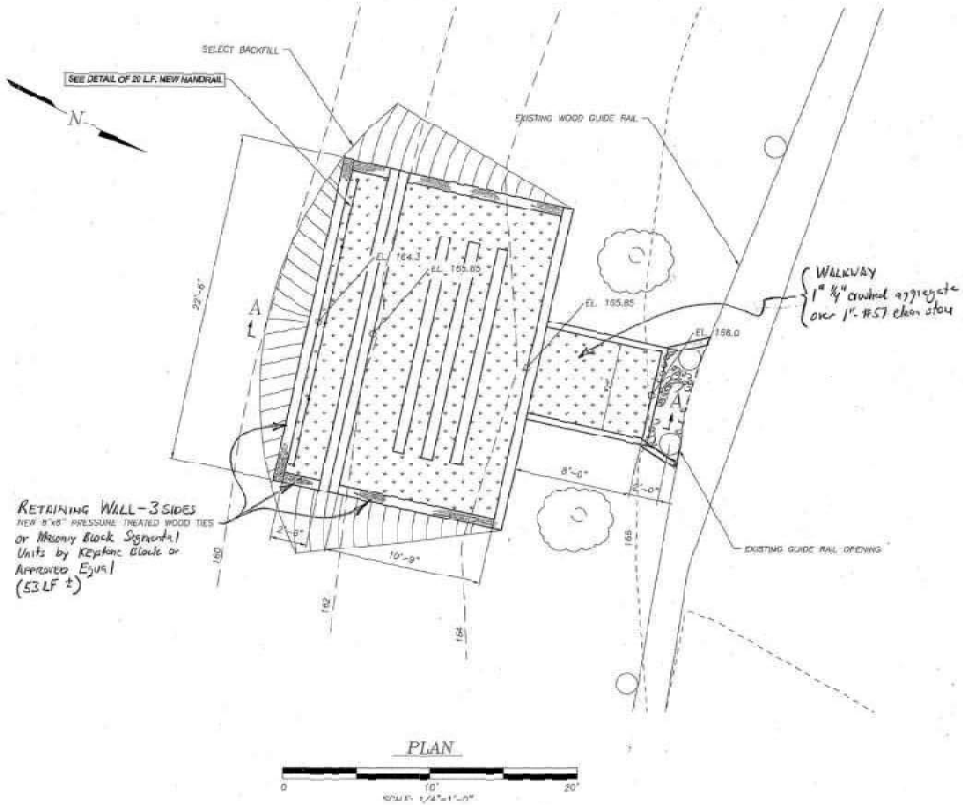
LEGEND
100 EXISTING CONTOUR
NEW CONTOUR
DRAINAGE ARROW

2005 SITE IMPROVEMENTS
FOR
STRATH HAVEN HIGH SCHOOL
THE WALLINGFORD-SWARTHMORE SCHOOL DISTRICT
NETHER PROVIDENCE TOWNSHIP DELAWARE COUNTY, PENNA

NO.	DATE	DESCRIPTION REVISIONS	APPROVED

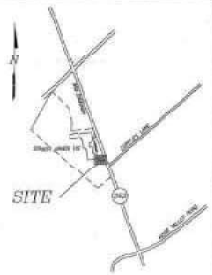
CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
1439 Baltimore Pike
The Mills of Victoria, Suite 22B
Springfield, PA 19064
Office (610) 541-0881
Fax (610) 541-0882
E-mail: Nolan@Cirilliassoc.net

CHK'D BY: N.J.C.	DATE: 5/25/05	JOB NO: 2005 SITE	SHEET
DRAWN BY: A.J.C.	SCALE: 1"=20'-0"	DWG. NAME: STRTH	1 of 5



PLAN

SCALE: 1/4"=1'-0"



LOCATION PLAN

SCALE 1"=1000'

TEMPORARY SEEDING

(FOR OCTOBER THROUGH FEBRUARY CONSTRUCTION STABILIZATION)

IF SITE IS TO BE LEFT INACTIVE FOR 20 DAYS OR MORE, APPLY ANNUAL RYEGRASS AT THE RATE OF 40 LBS PER ACRE (OR 1 LB PER 1000SF). UNDER HAY OR STRAW MULCH COVERING. IF SITE IS TO BE LEFT INACTIVE FOR SIX MONTHS OR MORE, MUST APPLY PERMANENT SEED SPEC.

IF TEMPORARY SEEDING IS NECESSARY, DIVIDE THE FERTILIZER AND LIME RECOMMENDATIONS. APPLY THE FOLLOWING AS PART OF THE TEMPORARY SEEDING:

LIME: 1 TON PER ACRE	50 LBS PER 1000 SF	
FERTILIZER:	150 LBS PER ACRE	5 LBS PER 1000 SF

THEN APPLY THE REMAINDER OF THE RECOMMENDED RATES DURING THE FINAL SEEDING PROCESS.

PERMANENT SEEDING

(SPRING TO FALL PLANTING TIME)

RAKE TOPSOIL FREE OF ALL STONES, CLAY CLUMPS & DEBRIS, THEN SCARIFY TO A DEPTH OF NOT LESS THAN 4". APPLY THE FOLLOWING

LIME:	4 TONS PER ACRE	OR	180 LBS PER 1000 SF
FERTILIZER (10-20-20)	930 LBS PER ACRE	OR	25 LBS PER 1000 SF

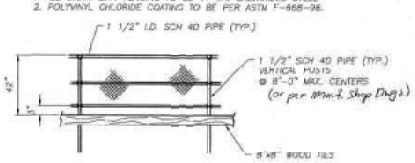
THEN SEED IN ACCORDANCE WITH THE FOLLOWING:

PENNLAWN-FINE FESCUE	16 OZ PER 1000 SF
REDTOP	2 OZ PER 1000 SF
PERENNIAL RYEGRASS	8 OZ PER 1000 SF

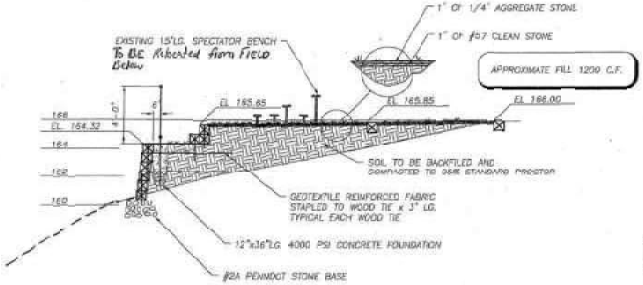
APPLY A JUTE, CURLEX, OR EXCELSIOR (OR EQUAL) NETTING OVER THE AREAS. APPLICATION ON ALL SLOPES STEEPER THAN 4:1 AND / OR OVER **DRAINAGE SWALES**. MAINTAIN WITH WATER UNTIL 90 % ESTABLISHMENT.

MAXIMUM PROPOSED SLOPES SHALL NOT EXCEED 3:1 (HORIZ. TO VERT.) AND SHALL BE STABILIZED WITH JUTE OR EXCELSIOR NETTING OVER PERMANENT SEEDING.

FENCING SPECIFICATIONS
1. ALL CHAIN LINK FENCING TO BE 11 GA. GALVANIZED STEEL
2. POLYVINYL CHLORIDE COATING TO BE PER ASTM F-668-96.



ELEVATION OF HANDRAIL



SECTION A-A

LEGEND

100 — — — — EXISTING CONTOUR

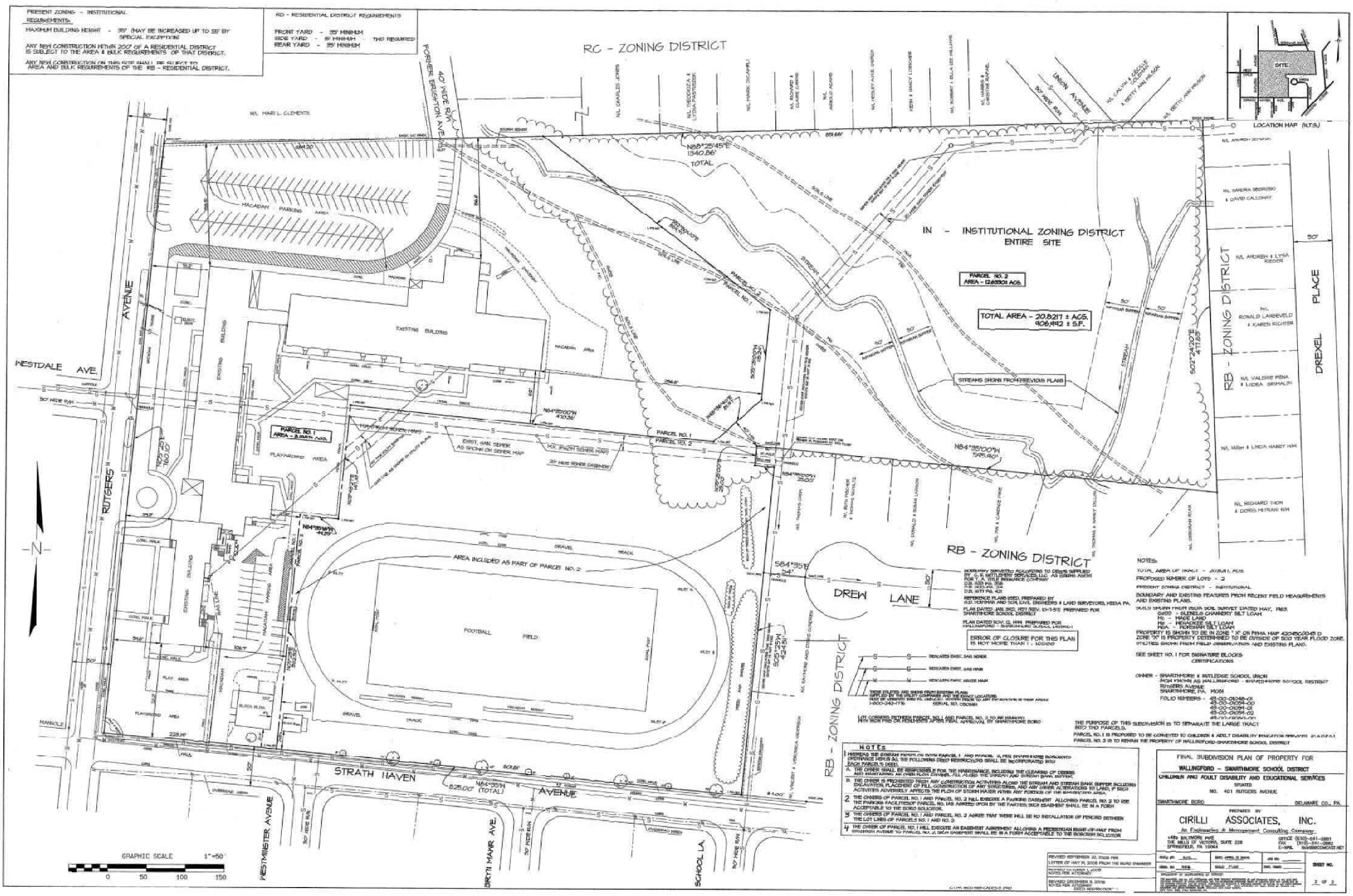
NO.	DATE	DESCRIPTION REVISIONS	APPROVED

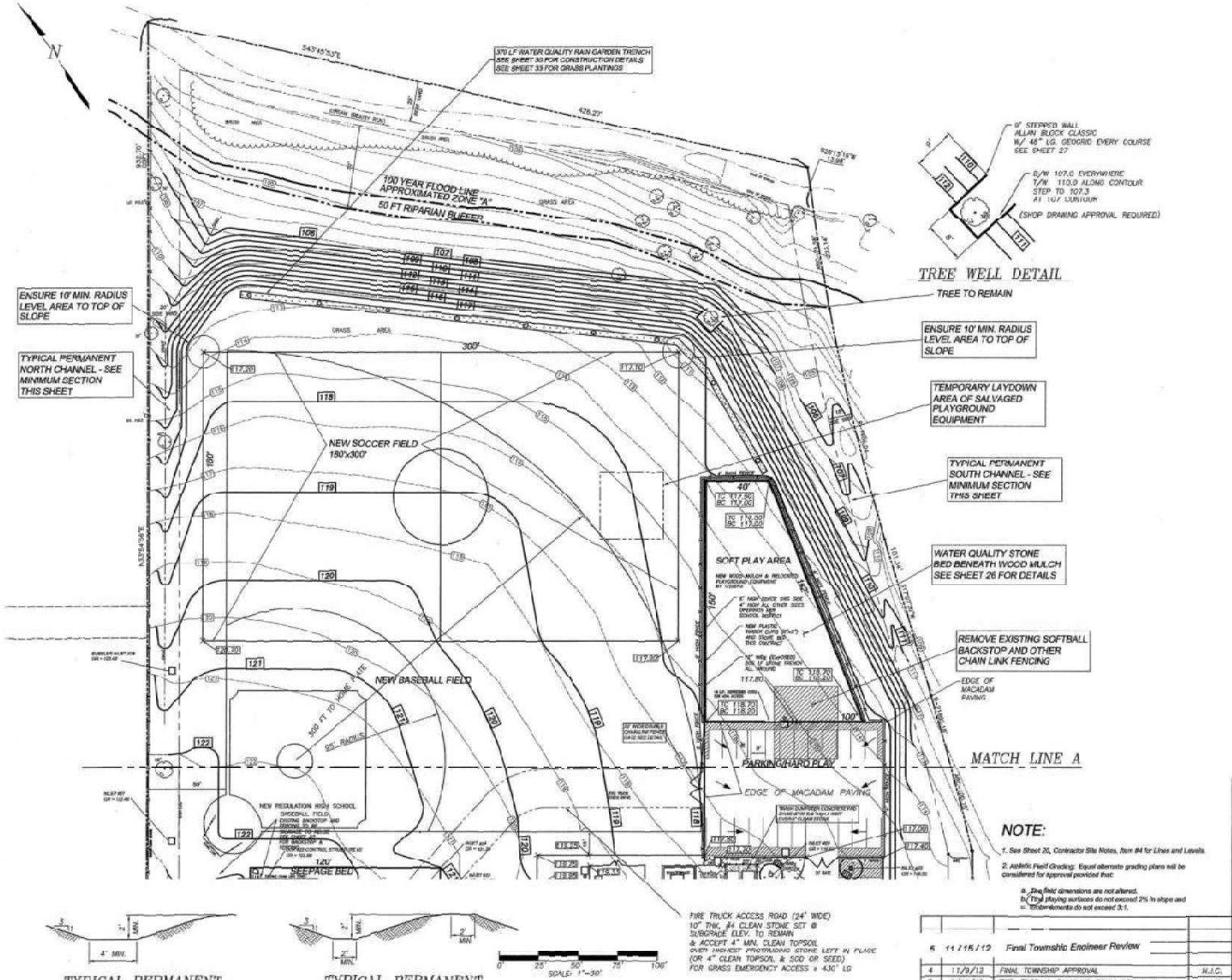
2005 SITE IMPROVEMENTS
LACROSSE FIELD
SPECTATOR VIEWING AREA
STRATH HAVEN HIGH SCHOOL
THE WALLINGFORD-SWARTHMORE SCHOOL DISTRICT

NETHER PROVIDENCE TOWNSHIP — DELAWARE COUNTY, PENNA.

CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, PA 19064
Office (610) 541-0881
Fax (610) 541-0882
E-mail: hcirilli@comcast.net

CHK'D BY: H.J.C.	DATE: 11/22/05	JOB NO: 2005.01C	SHEET
DRAWN BY: A.J.P.	SCALE: AS NOTED	DWG. NAME: SPECTATOR	1 OF 1


PRESENT ZONING - INSTITUTIONAL
REQUIREMENTS:
MAXIMUM BUILDING HEIGHT - 35' (MAY BE INCREASED UP TO 55' BY SPECIAL EXCEPTION)
ANY NEW CONSTRUCTION WITHIN 200' OF A RESIDENTIAL DISTRICT IS SUBJECT TO THE AREA & BULK REQUIREMENTS OF THAT DISTRICT.
RD - RESIDENTIAL DISTRICT REQUIREMENTS
FRONT YARD - 35' MINIMUM
SIDE YARD - 15' MINIMUM - TWO REQUIRED
REAR YARD - 35' MINIMUM
RC - ZONING DISTRICT
FORMER BRIGHTON AVE
40' WIDE R/W
N/L MARI L. CLEMENTS
N/L CHARLES JONES
N/L THEODOZA & LYDIA PASTUSZEK
N/L MARK DICAMPLI
N/L RICHARD & CLAIRE CARINO
N/L ARNOLD ADAMS
N/L WESLEY A.M.E. CHURCH
KEITH & NANCY LOESCHER
N/L ROBERT & ELLA LEE WILLIAMS
N/L HARRIS & CHRISTINE RAFAEL
UNION AVENUE
50' WIDE R/W
N/L CALVIN & CECILE COLEMAN & BETTY ANN WILSON
N/L BETTY ANN WILSON
LOCATION MAP (N.T.S.)
SITE
N88°25'45"E
1340.86'
TOTAL
MACADAM PARKING AREA
EXISTING BUILDING
MACADAM AREA
IN - INSTITUTIONAL ZONING DISTRICT
ENTIRE SITE
PARCEL NO. 2
AREA - 12.6530 ACS.
TOTAL AREA - 20.8217 ± ACS.
906,992 ± S.F.
STREAM
STREAMS SHOWN FROM PREVIOUS PLANS
PARCEL NO. 1
PARCEL NO. 2
PARCEL NO. 1
AREA - 8.1687 ACS.
EXIST. SAN. SEWER AS SHOWN ON SEWER MAP
20' WIDE SEWER EASEMENT
PLAYGROUND AREA
N84°35'00"W
410.38'
N84°35'00"W
545.40'
S02°24'20"E
417.65'
N/L ANDREW & LYSA RIEGER
N/L SANDRA SBORDONE & DAVID CALLOWAY
N/L RONALD LANGEVELD & KAREN RICHTER
N/L VALERIE PENA & LUDEA GRIMALDI
N/L HUGH & LINDA HANEY H/W
N/L RICHARD THOM & DORIS HITRANI H/W
RB - ZONING DISTRICT
DREXEL PLACE
50'
WESTDALE AVE.
50' WIDE R/W
RUTGERS AVENUE
N05°25'E
160.10'
-N-
AREA INCLUDED AS PART OF PARCEL NO. 2
FOOTBALL FIELD
GRAVEL
TRACK
GOAL POST
S84°35'E
DREW LANE
50'
S05°25'W
424.51'
RB - ZONING DISTRICT
N/L THOMAS CHEN
N/L RUTH FISCHER & THOMAS SCHULTZ
N/L DONALD & SUSAN LARSON
N/L IAN & CANDACE PIKE
N/L THOMAS & NANCY DILLON
N/L DEBORAH RYAN
N/L RAYMOND AND DORIS GOODREN
N/L VINCENT & VERONICA ANDERSON
ERROR OF CLOSURE FOR THIS PLAN IS NOT MORE THAN 1 : 10,000
NOTES:
PROPOSED NUMBER OF LOTS - 2
PRESENT ZONING DISTRICT - INSTITUTIONAL
BOUNDARY AND EXISTING FEATURES FROM RECENT FIELD MEASUREMENTS AND EXISTING PLANS.
PROPERTY IS SHOWN TO BE IN ZONE "X" ON FEMA MAP 42045C0045 D
ZONE "X" IS PROPERTY DETERMINED TO BE OUTSIDE OF 500 YEAR FLOOD ZONE.
UTILITIES SHOWN FROM FIELD OBSERVATION AND EXISTING PLANS.
SEE SHEET NO. 1 FOR SIGNATURE BLOCKS CERTIFICATIONS
OWNER - SWARTHMORE & RUTLEDGE SCHOOL UNION
RUTGERS AVENUE
SWARTHMORE, PA 19081
THE PURPOSE OF THIS SUBDIVISION IS TO SEPARATE THE LARGE TRACT INTO TWO PARCELS.
NOTES
FINAL SUBDIVISION PLAN OF PROPERTY FOR
WALLINGFORD - SWARTHMORE SCHOOL DISTRICT
CHILDREN AND ADULT DISABILITY AND EDUCATIONAL SERVICES
SITUATED
NO. 401 RUTGERS AVENUE
SWARTHMORE BORO
DELAWARE CO., PA.
PREPARED BY
CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
SHEET NO.
2 OF 2
STRATH HAVEN AVENUE
N84°35'W
825.00' (TOTAL)
WESTMINSTER AVENUE
BRYN MAWR AVE.
SCHOOL LA.
50' WIDE R/W
GRAPHIC SCALE 1"=50'
0 50 100 150



TYPICAL PERMANENT NORTH CHANNEL

TYPICAL PERMANENT SOUTH CHANNEL

NOTE:

1. See Sheet 20, Contractor Site Notes, Item #4 for Lines and Levels.
2. Athletic Field Grading: Equal alternate grading plans will be considered for approval provided that:
   a. The field dimensions are not altered.
   b. The playing surfaces do not exceed 2% in slope and
   c. Embankments do not exceed 3:1.

Unforeseen Subsurface Conditions

Cirilli Associates, Inc's scope of services is limited to site development engineering including the design of storm water management systems in accordance with Nether Providence Township's storm water ordinances. **It does not include services related to hazardous or toxic materials or chemicals, or products (if any exist on the site).**

Cirilli Associates, Inc. shall be without liability for consequential damages for services rendered or designs constructed in the event hazardous or toxic materials or chemicals or products are discovered. Should any party encounter hazardous or toxic materials or chemicals at the job site, or should it become known in any way that such materials may be present at the jobsite, or adjacent areas that may affect the performance of Cirilli Associates, Inc.'s services, the client shall retain appropriate specialists or contractor(s) to identify, abate and/or remove the materials, and warrant that the jobsite is in full compliance with applicable laws and regulations.

Permanent HydroSeed Restoration

Over 4" minimum, screened, (soils tested) top soil, with lime and starter fertilizer, seed and (un)biodree mulch or equal. Complete in place including, but not limited to;

Maintaining Security Fence
Continuous Watering
De-stoning
Re-seeding
Weed Control
Aeration and Mowing

For one full year or until acceptance by School District. See Sheet 15 and technical specifications for requirements

Add/Deduct Alternative

Alternate #1 Sod Alternate to Hydroseeding

Over 4" minimum, screened (soils tested) top soil, with lime and starter fertilizer (per Sod supplier), over gradation (plan) only. Hydroseed application permitted over stockpile and staging areas.

Complete in place, including but not limited to; mechanical rolling (or as recommended by Sod supplier), security fence maintenance, continuous watering and mowing for a period of approximately 1 month, or until acceptance by School District. (Does not include warranty period)

NOTE:

1. See Sheet for the **Post Construction Storm Water Management Operation and Maintenance** Requirements
2. See Sheet 20, Contractor Site Notes, Item #4 for Lines and Levels.
3. Athletic Field Grading: Equal alternate grading plans will be considered for approval provided that:
   a. The field dimensions are not altered.
   b. The playing surfaces do not exceed 2% in slope.
   c. Embankments do not exceed 3:1.
4. See Sheet 32 for Curb, Sidewalk & Paving Plan.

LEGEND

- PROPERTY LINE
- YARD LINE
- 425 EXISTING CONTOUR LINE
- 125 NEW CONTOUR LINE
- ×Shed EXISTING ELEVATION REFER TO EXISTING FEATURES PLAN
- 130.00 NEW SPOT ELEVATION
- NEW CURBING
- GRASS – UNLESS INDICATED OTHERWISE ON LANDSCAPE PLAN SHT. 33
- INLETS W/ OR W/O GRATES/COVERS
- EXISTING PIPE OR MH
- DRAINAGE ARROW
- CHAIN LINK FENCE

FINAL

NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	
5	11/15/12	Final Township Engineer Review	
4	11/9/12	FINAL TOWNSHIP APPROVAL	N.J.C.
3	9/11/12	TWP. ENGR. & PLANNING COMM COMMENTS	N.J.C.
2	8/17/12	SUBMIT NPT PLANNING COMMISSION	N.J.C.
1	7/12/12	SUBMIT DELCO PLANNING ACT 247	N.J.C.

GRADING PLAN – NORTH
FOR
THE WALLINGFORD-SWARTHMORE SCHOOL DISTRICT
NETHER PROVIDENCE ELEMENTARY SCHOOL
ADDITION & RENOVATION PROJECT

NETHER PROVIDENCE TOWNSHIP — DELAWARE COUNTY, PA

CIRILLI ASSOCIATES, INC.
An Engineering & Management Consulting Company
www.Cirilliassoc.com
1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, PA 19064
Office 610 541-0881
Fax 610 541-0882
E-mail: Ncirilli@Comcast.net

CHK'D BY: R.A.C.	DATE: 7/16/12	JOB NO: NPE	SHEET
DRAWN BY: A.J.P.	SCALE: 1:30	DWG NAME: GRADING N	10 OF 37

PDE PROJECT #3694

Cirilli Associates, Inc.

an engineering & management consulting company
www.cirilliassoc.com

1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, Pa., 19064

610-541-0881
610-541-0882 fax
NCirilli@comcast.net

September 24, 2013

To: Jim Hardy, Facilities Supervisor
Wallingford Swarthmore School District
200 S. Providence Road
Wallingford, Pa., 19086

From: Nick Cirilli, PE

(5 sheets total)

RE: Nether Providence Elementary School Soccer Field Irrigation System Installation

Our estimate to install the irritation system with materials donated by others and based upon Prevailing Wage labor rates is as follows:

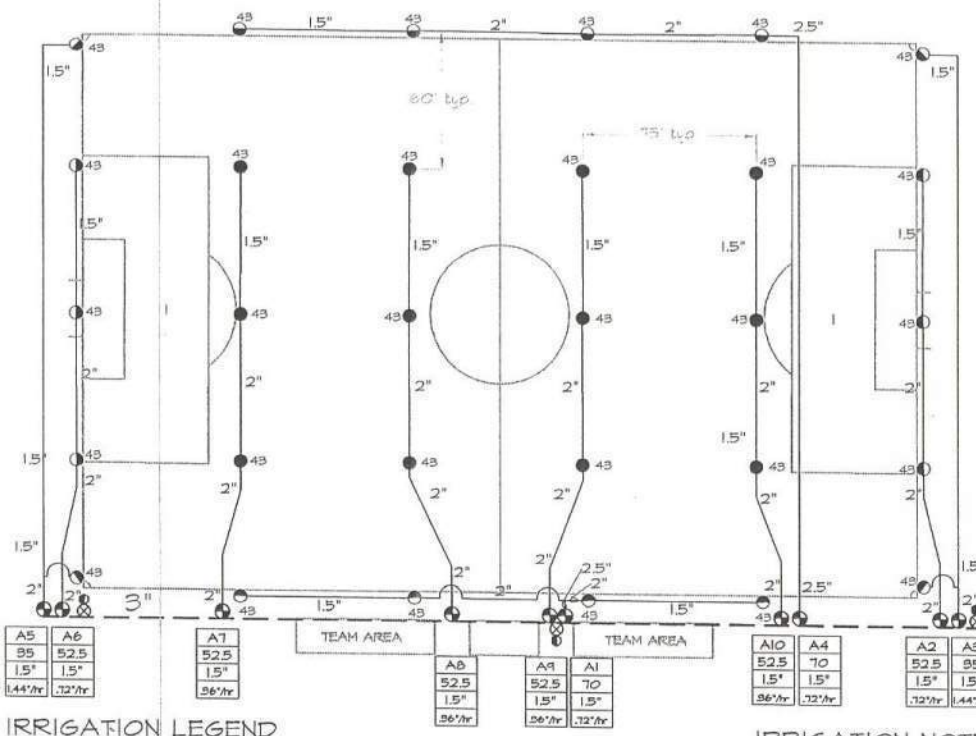
1. Piping (2" & 1.5") 1700LF @ $10/LF.....$17,000.00
   complete in place includes pipe material
   excavate & backfill (NO RESTORATION)

2. Main feed pipe (3") 500 Lf @ $15/LF.....$7,500.00
   Complete in place includes pipe material
   excavate & backfill (NO RESTORATION)

3. Installation of all heads, fittings, (LUMP SUM).....$8,000.00
   Tie-in, valves, meter, appurtenances, testing

Total.....$32,500.00

Based upon a bidding environment, we would estimate a price range between $25,000 and $35,000.



SYSTEM PERFORMANCE DATA

ZONE	SIZE	FLOW	PR	DU%	SCOTTS PRECISE
A1	1.5"	70	.72"	88	LL
A2	1.5"	52.5	.72"	88	LL
A3	1.5"	55	1.44"	88	LL
A4	1.5"	70	.72"	88	LL
A5	1.5"	55	1.44"	88	LL
A6	1.5"	52.5	.72"	88	LL
A7	1.5"	52.5	.96"	88	LL
A8	1.5"	52.5	.96"	88	LL
A9	1.5"	52.5	.96"	88	LL
A10	1.5"	52.5	.96"	88	LL

VALVE ID GUIDE

A1	STATION NUMBER
55	GPM
1.5"	VALVE SIZE
.50"/hr	PRECIPITATION RATE

IRRIGATION LEGEND

PRODUCT DESCRIPTION

- HUNTER I-40-04-SS-XX/I-40-06-SS-XX, NOZZLE AS SHOWN
- HUNTER I-40-04-SS-XX/I-40-06-SS-XX, NOZZLE AS SHOWN

NOZZLE PERFORMANCE:
#43 @ 80 PSI - 17.5 GPM 61' RADIUS

- HUNTER ICV/IBV ELECTRIC CONTROL VALVE SIZE AS SHOWN
- HUNTER HQ-44-XX-AW QUICK COUPLER VALVE (OPTIONAL)
- A HUNTER ICC-1200 SOLID STATE METAL CABINET CONTROLLER
- RS HUNTER WRFC WIRELESS RAIN FREEZE SENSOR
- M WATER METER MINIMUM SIZE @ 70 GPM IS 2.0"
- BP BACKFLOW PREVENTER SIZED TO SYSTEM GPM
- MAINLINE PIPE
- LATERAL PIPE
- SLEEVING
- ISOLATION VALVE LINE SIZED

Hunter Industries offers this plan as a general guide for estimating purposes and offers no indemnity, expressed or implied, for projects installed from this plan. Because of the many variables of every system and of every site we recommend that a qualified irrigation designer be consulted.

IRRIGATION NOTES

1. SPRINKLER LOCATIONS ARE TO SCALE
2. PIPE LOCATIONS ARE DIAGRAMMATIC
3. ALL SPRINKLERS TO BE INSTALLED ON 1" SCH 80 SWING JOINTS
4. ALL COMPONENTS TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS
5. MAINLINE DEPTH TO BE NO LESS THAN 18"
6. LATERAL DEPTH TO BE NO LESS THAN 16"
7. ELECTRIC CONTROL VALVES TO BE COVERED WITH 12" VALVE BOX
8. LOCATE VALVES/QCV'S OUT OF HIGH TRAFFIC AREAS
9. WIRE SPLICE CONNECTIONS TO BE WATERPROOF
10. QCV TO BE LOCATED IN 10" VALVE BOX
11. ALL SLEEVES TO BE 2X PIPE RUN THROUGH THEM
12. INSTALL ALL COMPONENTS AS PER LOCAL, STATE, FEDERAL CODES
13. REFER TO HUNTER INSTALLATION DETAILS
14. REFER TO HUNTER CATALOG FOR PERFORMANCE SPECIFICATIONS
15. ADD HUNTER "FS" FOR DIRTY WATER VALVE
16. ADD HUNTER "AS" FOR PRESSURE REGULATED VALVE

WATER REQUIREMENT AT
-FIELD ELEVATION
-WITHIN 100' OF FIELD
-DOWNSTREAM OF
BACKFLOW IS 70 GPM
@ 90 PSI

0 50' 100'
25' 75'
SCALE: 1" = 50'0"

Hunter

SOCCER FIELD 360 X 240

I-40 FIVE ROW DESIGN

Hunter Industries
1940 Diamond Street
San Marcos, California 92078
SpecPro Technical Assistance
1-800-344-4746
www.hunterindustries.com

SHEET
1 OF 1

(2)

Jim Hardy

From: John Brennan <jbrennan@nvga.com>
Sent: Thursday, September 12, 2013 5:20 PM
To: Lisa Palmer
Cc: Jim Hardy; Richard Noonan; 'Rob Wright'; johnlenart2003@yahoo.com
Subject: RE: NPE Soccer Field Irrigation System

They can certainly do that if you want them to do it. That is their business. What we are donating is the equipment. Jim might be able to install it with WSSD staff as well. Not very complicated at all but must be done prior to sod installation.

From: Lisa Palmer [mailto:lpalmer@wssd.org]
Sent: Thursday, September 12, 2013 4:49 PM
To: 'John Brennan'; 'Mark Burkholder'
Cc: Jim Hardy; Richard Noonan; 'Rob Wright'; johnlenart2003@yahoo.com
Subject: RE: NPE Soccer Field Irrigation System

John – please refresh my memory. Would Mark's company do the actual install for the project?

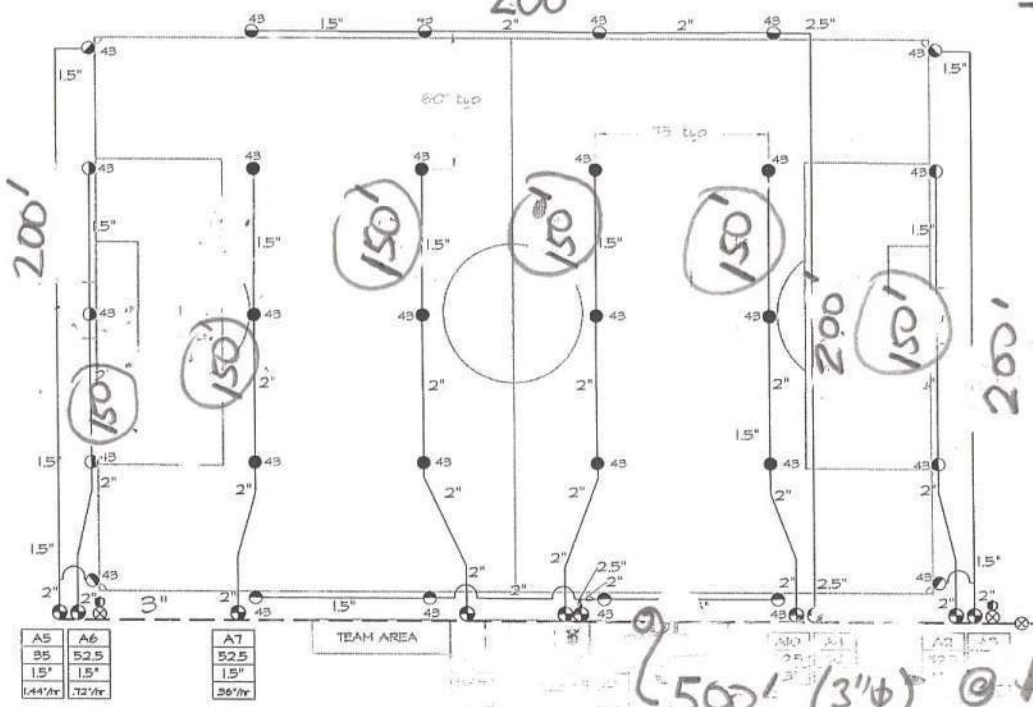
From: John Brennan [mailto:jbrennan@nvga.com]
Sent: Thursday, September 12, 2013 3:43 PM
To: 'Mark Burkholder'
Cc: Jim Hardy; Lisa Palmer; Richard Noonan; 'Rob Wright'; johnlenart2003@yahoo.com
Subject: NPE Soccer Field Irrigation System

Lisa / Jim:

This is a list of the parts we have at Mark's warehouse that we want to donate to WSSD to be used to install irrigation at NPE. The schematic I sent over is a general idea of a layout that would be used for an 11 v 11 soccer field. If Jim meets with Mark they can go over the specifics after Mark has an opportunity to see the proposed installation site.

Quantity	Model	Description	List Each	Total
45	I40-06-SS	I40 Sprinkler FC/PC, stainless riser with check valve	$ 115.00	$ 5175.00
18	ICV-151-G	1.5" control valve with flow control	$ 145.00	$ 2610.00
2	HQ-44-LRCAW	1" quick coupler valve	$ 175.00	$ 350.00
2	HK-44A	1" quick coupler key	$ 81.00	$ 162.00
2	HS1	1" x ¾" quick coupler hose swivel	$ 54.00	$ 108.00
2	IC-600-M	I Core Controller – 6 station – metal cabinet	$ 825.00	$ 1650.00
2	ICM-600	I Core Controller 6 station module	$ 99.00	$ 198.00
2	WR-CLIK	Wireless Rain Sensor	$ 105.00	$ 210.00
		TOTAL		**$ 10,463**

3



1½" - 2"

150 x6 = 900LF

200 x4 = 800LF

900LF + 800LF = 1700LF @ $10/LF

$17,000 Install + Back Fill

500' (3"ϕ) @ $15/LF = $7500

SubTotal $24,500

INSTALL ALL Heads/Fittings Tie-In, Valves Meter $8,000

$32,500

Not Including Grass or Paving Restoration

IRRIGATION LEGEND

PRODUCT DESCRIPTION

- HUNTER I-40-04-SS-XX/I-40-06-SS-XX, NOZZLE AS SHOWN
- HUNTER I-40-04-SS-XX/I-40-06-SS-XX, NOZZLE AS SHOWN

NOZZLE PERFORMANCE:
#43 @ 80 PSI - 17.5 GPM 61' RADIUS

- HUNTER ICV/IBV ELECTRIC CONTROL VALVE SIZE AS SHOWN
- HUNTER HQ-44-XX-AH QUICK COUPLER VALVE (OPTIONAL)
- HUNTER ICC-1200 SOLID STATE METAL CABINET CONTROLLER
- RS HUNTER WRFC WIRELESS RAIN FREEZE SENSOR
- M WATER METER MINIMUM SIZE @ 70 GPM IS 2.0"
- BF BACKFLOW PREVENTER SIZED TO SYSTEM GPM
- — — MAINLINE PIPE
- —— LATERAL PIPE
- = = SLEEVING
- ⊗ ISOLATION VALVE LINE SIZED

Hunter Industries offers this plan as a general guide for estimating purposes and offers no indemnity, expressed or implied, for projects installed from this plan. Because of the many variables of every system and of every site we recommend that a qualified irrigation designer be consulted.

3. ALL SP[illegible] INSTALLED ON 1" SCH 80 SWING JOINTS
4. ALL COMPONENTS TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS
5. MAINLINE DEPTH TO BE NO LESS THAN 18"
6. LATERAL DEPTH TO BE NO LESS THAN 16"
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8. LOCATE VALVES/QCV'S OUT OF HIGH TRAFFIC AREAS
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11. ALL SLEEVES TO BE 2X PIPE RUN THROUGH THEM
12. INSTALL ALL COMPONENTS AS PER LOCAL STATE FEDERAL CODES
13. REFER TO HUNTER INSTALLATION DE
14. REFER TO HUNTER CATALOG FOR P SPECIFICATIONS
15. ADD HUNTER "FS" FOR DIRTY WATER
16. ADD HUNTER "AS" FOR PRESSURE RE

Hunter®

SOCCER FIELD 360 X 240

I-40 FIVE ROW DESIGN

Hunter Industries
1940 Diamond Street
San Marcos, California 92078
USA
Pro Technical Assistance
1-800-383-4746
www.hunterindustries.com

4

PRODUCTS

IRRIGATION PRODUCTS

ROTORS

ROTOR OVERVIEW

PGJ

SRM

PGP-ADJ

PGP ULTRA

I-20

I-25

I-40

I-60

I-90

ST SYSTEM

NOZZLES

SPRAY BODIES

I-40

LANGUAGE ▾ SHARE +

FOR SPORTS FIELDS AND PARKS, I-40 DELIVERS PROFESSIONAL RESULTS

The I-40 is a tough commercial rotor that delivers water with accuracy and efficiency at distances up to 70 feet. Featuring diverse three-port nozzle options, a non-strippable drive, and a thick rubber cover built to prevent injury; it's no wonder this rotor is found in more stadiums than any other in the world. With the strength of stainless steel, the I-40 is built to last in the harshest

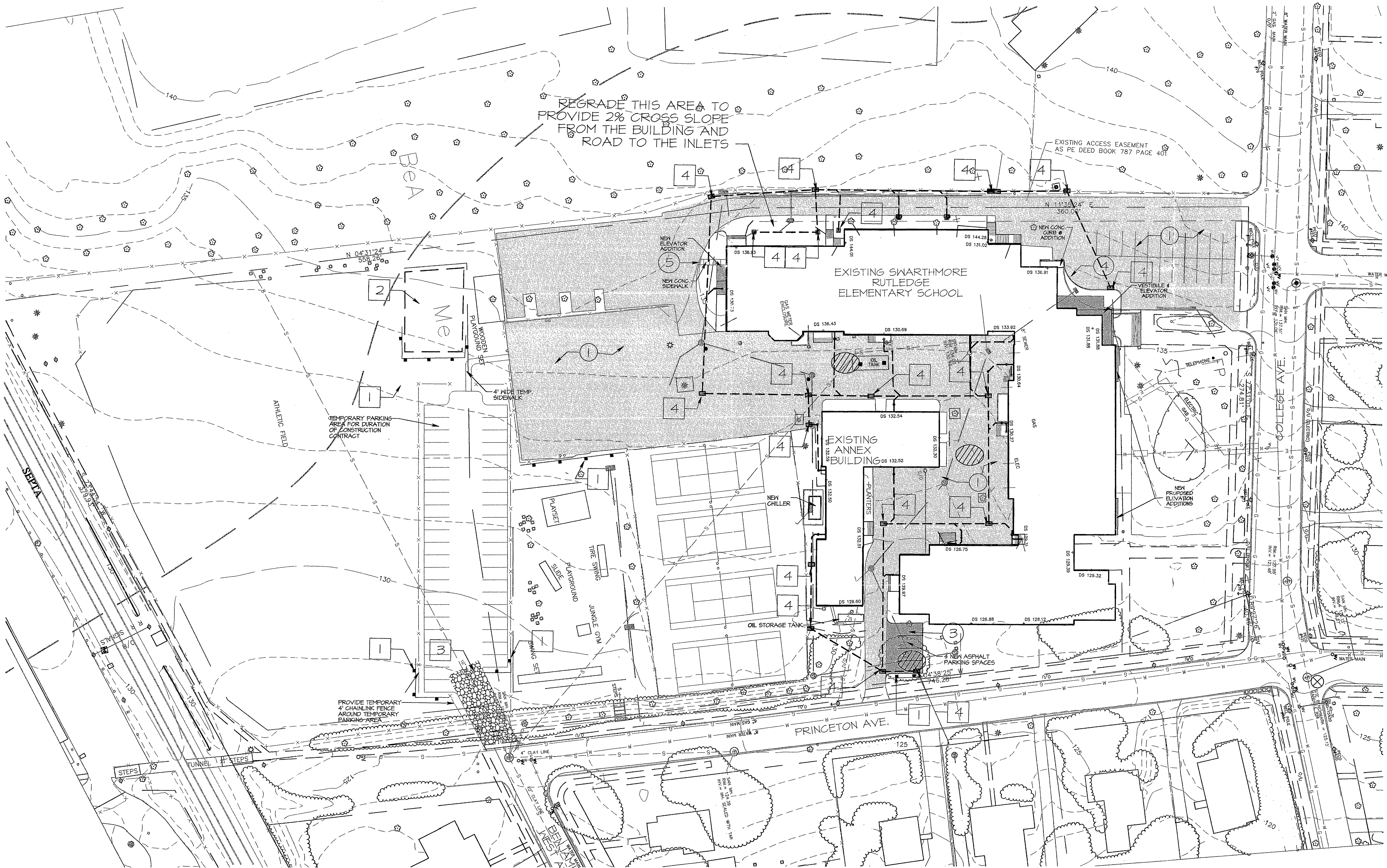
QUICK SPECS

Application: Commercial/Municipal

Radius: 44' to 69'

Flow: 7.6 to 29.5 GPM

Inlet Size: 1" NPT


REGRADE THIS AREA TO PROVIDE 2% CROSS SLOPE FROM THE BUILDING AND ROAD TO THE INLETS
EXISTING ACCESS EASEMENT AS PE DEED BOOK 787 PAGE 401
N 11°35'24" E 360.00'
N 04°31'24" E 558.26'
EXISTING SWARTHMORE RUTLEDGE ELEMENTARY SCHOOL
EXISTING ANNEX BUILDING
NEW ELEVATOR ADDITION
NEW CONC. SIDEWALK
NEW CONC. CURB @ ADDITION
VESTIBULE & ELEVATOR ADDITION
NEW PROPOSED ELEVATION ADDITIONS
GAS METER ENCLOSURE
OIL TANK
OIL STORAGE TANK
NEW CHILLER
PLANTERS
4 NEW ASPHALT PARKING SPACES
S 04°38'25" W 746.28'
4' WIDE TEMP. SIDEWALK
WOODEN PLAYGOUND SET
TEMPORARY PARKING AREA FOR DURATION OF CONSTRUCTION CONTRACT
PROVIDE TEMPORARY 4' CHAINLINK FENCE AROUND TEMPORARY PARKING AREA
ATHLETIC FIELD
PLAYSET
PLAYGROUND
SLIDE
TIRE SWING
JUNGLE GYM
SWING SET
SEPTA
S 73°44'54" W 379.93'
O/H SIGNALS
R R
TUNNEL
STEPS
PRINCETON AVE.
COLLEGE AVE.
BENJAMIN WEST AVE.
S 77°31'01" E 274.81'
TELEPHONE
ELECTRIC
GAS
WATER MAIN
8" WATER MAIN
6" GAS MAIN
4" CLAY LINE
10" CLAY LINE
8" SEWER
SAN MH. RIM = 124.39 INV.= MH. SEALED WITH TAR
SAN MH. RIM = 137.51' INV = 131.06'
RIM = 127.98' INV = 121.48'
SITE BENCHMARK = 125.15'
BeA
Me
PLAN NORTH

OVERALL LEGEND

———	EXISTING CURB
———	EXISTING EDGE OF PAVING
———	EXISTING BOUNDARY LINE
— — —	BOUNDARY LINE TO BE REMOVED
— - - —	LEGAL RIGHT-OF-WAY LINE
—x—x—	EXISTING FENCE LINE
⌒⌒⌒	EXISTING TREE LINE
- - - -	EXISTING 1' CONTOUR LINE
— 220 —	EXISTING 5' CONTOUR LINE
	EXISTING INLET
	EXISTING UTILITY POLE
	EXISTING YARD INLET
	EXISTING SIGN
	EXISTING DECIDUOUS TREE
———	PROPOSED CONCRETE CURB
— — —	PROPOSED STORM SEWER LINE
—S—S—	PROPOSED SANITARY SEWER LINE
	CONSTRUCTION FENCE
	PROPOSED STORM INLET
	PROPOSED STORM / SANITARY MANHOLES
	TEST PIT LOCATION

NOTE:
TEST PIT TO BE PERFORMED BY THE CONTRACTOR PRIOR TO INITIATING WORK ON THE UTILITIES TO VERIFY LOCATIONS AND DEPTHS.

Erosion & Sediment Control Schedule

1. Filter fabric fence
2. Soil stockpile area
   Note: Contractor to coordinate exact location with owner. Stockpile location shall not interfere with or block access to school playfields.
3. Stabilized construction entrance
4. Inlet protection

Paving Schedule

(1) Bituminous concrete 1" overlay (Shaded)
(2) Parking stall striping
(3) Standard bituminous concrete paving
(4) Concrete curb
(5) New concrete sidewalk

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE BEFORE PROCEEDING WITH THE WORK

GILMORE & ASSOCIATES INC.
CONSULTING ENGINEERS & LAND SURVEYORS
184 WEST MAIN STREET, SUITE 300, TRAPPE, PA 19426 (610) 444-9006
350 BUTLER AVENUE, NEW BRITAIN, PA 18901 (215) 345-4330
701 EAST BALTIMORE PIKE, SUITE F, KENNETT SQUARE, PA 19348 (610) 489-4949

REESE LOWER PATRICK & SCOTT
ARCHITECTS, LTD.
1910 HARRINGTON DRIVE LANCASTER, PA. 17601 •717 560-9501
REESE, LOWER, PATRICK & SCOTT, LTD.

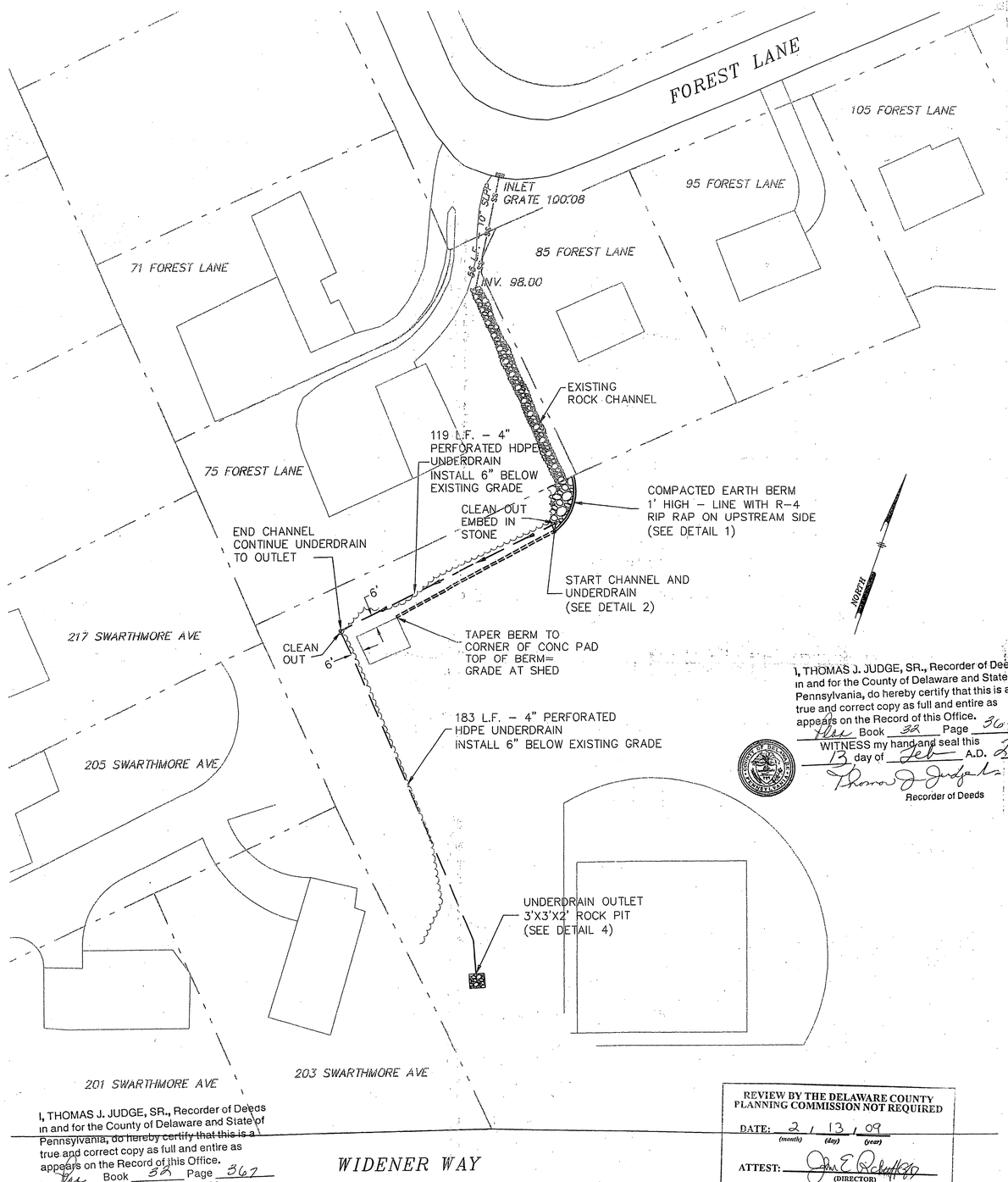
RENOVATIONS TO SWARTHMORE-RUTLEDGE E.S.
FOR
WALLINGFORD-SWARTHMORE SCHOOL DISTRICT
200 SOUTH PROVIDENCE ROAD WALLINGFORD, PA 19086

DRAWN BY: | CHECKED BY: | APPROVED BY:

REVISIONS		
NO.	DATE	DESCRIPTION

CIVIL SITE PLAN

DRAWING NO.: C-103
COMMISSION NO.: 2001015
SCALE: 1" : 30'
DATE: APRIL 12, 2002



I, THOMAS J. JUDGE, SR., Recorder of Deeds in and for the County of Delaware and State of Pennsylvania, do hereby certify that this is a true and correct copy as full and entire as appears on the Record of this Office.
Book 32 Page 367
WITNESS my hand and seal this 13 day of February A.D. 2009
Thomas J. Judge Sr.
Recorder of Deeds

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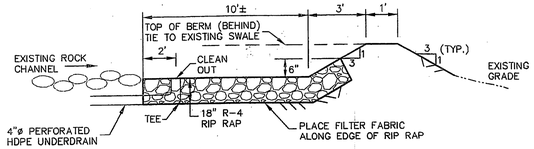
REVIEW BY THE DELAWARE COUNTY PLANNING COMMISSION NOT REQUIRED
DATE: 2 / 13 / 09 (month) (day) (year)
ATTEST: (DIRECTOR)
DCPD NO.: n/a (if applicable)

LEGEND
4" UNDERDRAIN
DRAINAGE CHANNEL & UNDERDRAIN

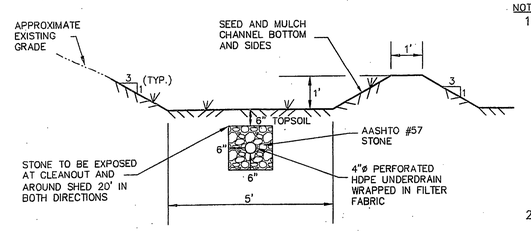
PLAN: HENDERSON FIELD
Scale: 1"=30'

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

PL BK00032-0367 PL-SUBDIVISION PLAN
2009008225 02/13/2009 09:17:56 AM:1
RCD FEE: $40.00
DELAWARE COUNTY COPY
THOMAS J. JUDGE SR. RCD



1 EARTH BERM
N.T.S.



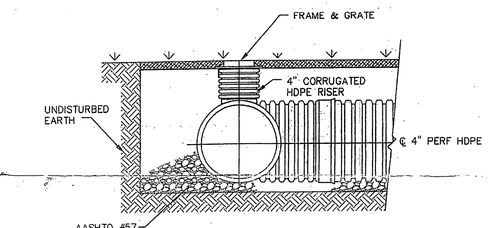
2 DRAINAGE CHANNEL & UNDERDRAIN
N.T.S.

NOTES:
1. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 6-INCHES OF TOPSOIL INSTALLED. THE AREAS SHALL THEN BE SEEDED WITH THE FOLLOWING MIXTURE:

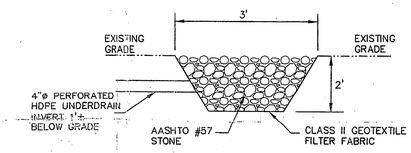
45%	LOLIUM PERENNE	PERENNIAL RYEGRASS, DELAWARE DWARF
30%	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS
12%	FESTUCA RUBRA	CREEPING RED FESCUE
11%	POA PRATENSIS, ALENE	ALENE KENTUCY BLUEGRASS
2%	TRIFOLIUM REPENS	CLOVER, WHITE DUTCH

SEED AT A RATE OF 75 TO 150 BULK LBS PER ACRE OR 3LBS PER 1000 SQ FT

2. ALL DISTURBED AREAS SHALL BE COVERED WITH S75 EROSION CONTROL FABRIC, OR APPROVED EQUAL. ALL FABRIC IS TO BE INSTALLED AND SECURED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.



3 CLEAN OUT
N.T.S.



4 ROCK BASIN
N.T.S.

43-00-00981-00
MSL 2/13/09

CERTIFICATE OF OWNERSHIP AND ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF DELAWARE

ON THIS 11th DAY OF February 2008 BEFORE ME THE SUBSCRIBER A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY DEPOSES AND SAYS THAT THE WALLINGFORD-SWARTHMORE SCHOOL DISTRICT ("WSSD") IS THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE DRAINAGE IMPROVEMENTS WERE MADE AT THE DIRECTION OF THE WSSD AND THAT WSSD ACKNOWLEDGES THE SAME TO BE ITS LOT AND PLAN AND DESIRES THE SAME TO BE DULY RECORDED.

AND THAT THE WSSD DULY GRANTS THE BOROUGH OF SWARTHMORE THE RIGHT OF ENTRY ONTO THE PROPERTY TO PERFORM AND INSTALL SAID DRAINAGE IMPROVEMENTS, AS DESCRIBED ON THE PENNONI ASSOCIATES, INC. PLAN TITLED "HENDERSON FIELD – FIELD DRAINAGE IMPROVEMENTS", REVISION #1, DATED DECEMBER 17, 2007, AND THEREAFTER TO INSPECT AND MAINTAIN SUCH DRAINAGE IMPROVEMENTS. THE BOROUGH OF SWARTHMORE'S RIGHT OF ENTRY FOR PURPOSES OF INSPECTING AND MAINTAINING THE DRAINAGE IMPROVEMENTS SHALL BE IN PERPETUITY.

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.

Michael P. Reilly
MICHAEL P. REILLY, SCHOOL BOARD PRESIDENT
WALLINGFORD-SWARTHMORE SCHOOL DISTRICT

Rudolph Rubeis
DR. RUDOLPH RUBEIS, SUPERINTENDENT OF SCHOOLS
WALLINGFORD-SWARTHMORE SCHOOL DISTRICT

Denise A. Basquill
SIGNATURE OF NOTARY

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Denise A. Basquill, Notary Public
Nether Providence Twp., Delaware County
My Commission Expires July 14, 2011
Member, Pennsylvania Association of Notaries

I CERTIFY TO THE ACCURACY OF THESE PLANS AND DETAILS THAT SUCH PLANS WERE PREPARED IN ACCORDANCE WITH ACT 367, KNOWN AS THE PROFESSIONAL ENGINEERS REGISTRATION LAW (P.L. 913, NO. 367), (P.S. SECTION 151), AS AMENDED.

J. Mastronardo
JOSEPH A. MASTRONARDO, P.E.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH A. MASTRONARDO ENGINEER No. PE040691

STORM WATER MANAGEMENT FACILITIES MAINTENANCE AGREEMENT

THE BOROUGH OF SWARTHMORE ATTESTS AND AGREES:

1. THAT STORM WATER IMPROVEMENTS AS INDICATED ON THE PLAN TITLED "HENDERSON FIELD – FIELD DRAINAGE IMPROVEMENTS", PREPARED BY PENNONI ASSOCIATES, INC., REVISION #1, DATED DECEMBER 17, 2007, WHICH INCLUDES CLEANOUTS, PIPES, BERMS, CHANNELS AND AN UNDERDRAIN OUTLET (THE "DRAINAGE IMPROVEMENTS"), SHALL BE MAINTAINED IN GOOD WORKING ORDER IN PERPETUITY.

2. THAT THE MAINTENANCE OF ALL OF THE ABOVE MENTIONED DRAINAGE IMPROVEMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE BOROUGH OF SWARTHMORE.

APPROVED THIS 14TH DAY OF JANUARY, 2008 BY THE BOROUGH COUNCIL OF THE BOROUGH OF SWARTHMORE.

BY: TOM HUESTIS, COUNCIL PRESIDENT

APPROVED: ELRIC C. GERNER, MAYOR

ATTEST: JANE C. BILLINGS, BOROUGH MANAGER

THIS MAINTENANCE AGREEMENT SHALL BE DULY RECORDED WITH THE PROPERTY IN THE DEED FOR FOLIO 43-00-00981-00 ALONG WITH THE REFERENCED PLAN PREPARED BY PENNONI ASSOCIATES, INC. TITLED "HENDERSON FIELD – FIELD DRAINAGE IMPROVEMENTS", REVISION #1, DATED DECEMBER 17, 2007.

DELAWARE COUNTY RECORDER OF DEEDS

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 IRWIN RUN ROAD
WEST MIFFLIN, PENNSYLVANIA
15122-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

Pennoni

Pennoni Associates Inc. Consulting Engineers
One Drexel Plaza, 3001 Market Street Phila., Pa. 19104

DATE	NO.	REVISIONS	BY
12/17/07	1	REVISED PER ENGINEER'S COMMENTS	B.B.H.

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK

NORTH

JOB NO. SWAB 0703
SHEET 1 OF 1

SCALE 1"=30'
DRAWN BY B.B.H.
DATE 9/26/07
APPROVED J.A.M.

DRAWING NO. ST-1

HENDERSON FIELD
FIELD DRAINAGE IMPROVEMENTS

BOROUGH OF SWARTHMORE
DELAWARE COUNTY, PENNSYLVANIA
121 PARK AVENUE
SWARTHMORE, PA 19081

Athletic Feasibility Study

F Series
Various Older Athletic Planning Documents

Cirilli Associates, Inc.

an engineering & management consulting company
www.cirilliassoc.com

1489 Baltimore Pike
The Mills of Victoria, Suite 228
Springfield, Pa., 19064

610-541-0881
610-541-0882 fax
NCirilli@comcast.net

October 23, 2014

To: Jim Hardy, Supervisor Operations
200 S. Providence Rd
Wallingford, Pa., 19086

From: Nick Cirilli, PE

RE: Order of Magnitude Assessment to switch The Home and Visitor Sides - King Field Grandstands

This Order of Magnitude Cost Estimate reflects a scope of work to relocate the HOME Grandstands to the Visitor's side, and vice-versa. Please note that Preliminary Engineering and Code reviews were **not** done to develop this estimate.

1. Current Conditions

Home Side Grandstands (163 ft long x 15 rows)
Estimated Home side capacity..... = 920 spectators
Plus separate Press Box structure

Visitors Side Grandstands (150 ft long x 15 rows)
Estimated Visitors side capacity..... = 846 spectators

2 Proposal to Switch Home and visitors Side will require:

a. Removing approximately 13 feet of grand stands from the Home side reducing the number of spectators to approximately 846.

b. Adding approximately 13 feet of grandstands to the Visitors side increasing the number of spectators to approximately 920.

c. Current Press Box must be relocated to the New Home Side

d. Current codes will require ADA compliance at least for the Home Side.

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Springfield, Pa., 19064

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NCirilli@comcast.net

Order of Magnitude Assessment to switch
The Home and Visitor Sides
King Field Grandstands (continued)

4. **Order of Magnitude Cost Estimates**

Remove section of Home Side and restore site.... $25,000
Remove Press Box and restore site: $15,000

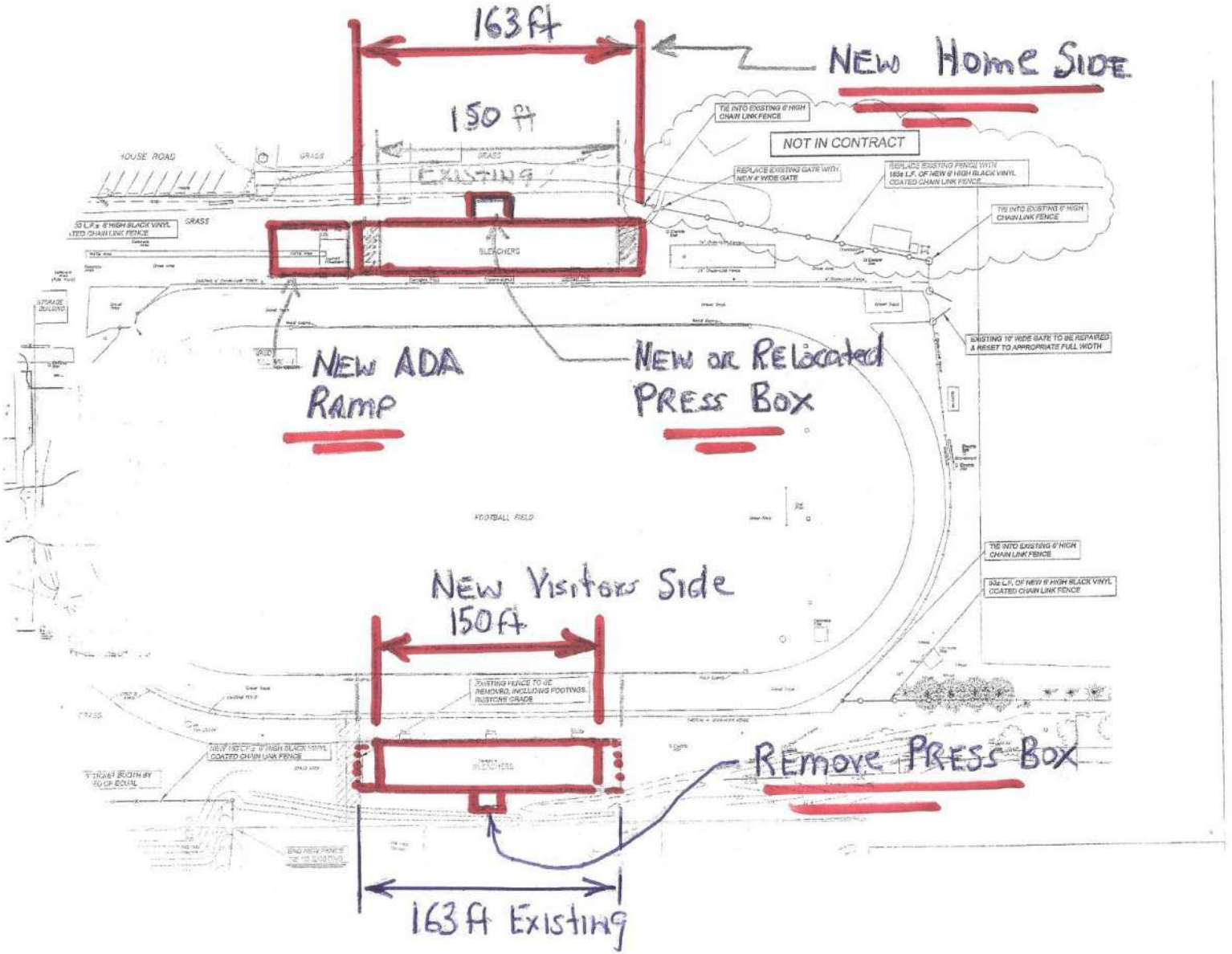
Add sections to Visitors Side: $75,000
Relocate or Build New Press Box:..... $100,000

Add new HOME Side Only
ADA compliant RAMP system: $100,000

Subtotal.....$250,000
Contingency @ 20%.....$50,000

Architecture &Engineering & Soil Borings..... ..$45,000
Construction Management.....$25,000

Total Order of Magnitude.....$370,000


163 ft
NEW Home SIDE
150 ft
NOT IN CONTRACT
EXISTING
TIE INTO EXISTING 6' HIGH CHAIN LINK FENCE
REPLACE EXISTING GATE WITH NEW 4' WIDE GATE
REPLACE EXISTING FENCE WITH 165± L.F. OF NEW 6' HIGH BLACK VINYL COATED CHAIN LINK FENCE
TIE INTO EXISTING 6' HIGH CHAIN LINK FENCE
HOUSE ROAD
GRASS
BLEACHERS
EXISTING 10' WIDE GATE TO BE REPAIRED & RESET TO APPROPRIATE FULL WIDTH
NEW ADA Ramp
NEW or Relocated PRESS Box
FOOTBALL FIELD
TIE INTO EXISTING 6' HIGH CHAIN LINK FENCE
932 L.F. OF NEW 6' HIGH BLACK VINYL COATED CHAIN LINK FENCE
NEW Visitor Side
150 ft
EXISTING FENCE TO BE REMOVED, INCLUDING FOOTINGS, RUSTICNS GRADE
REMOVE PRESS BOX
163 ft Existing


Home Grandstands (Current)
15 rows x 163 ft Long
Approx Capacity = 920
GO PANTHERS!
10/21/2014


Visitors Grandstands (Current)
15 Rows x 150 ft long
Approx Capacity = 846
10/21/2014

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an Engineering & Management Consulting Company
www.cirilliassoc.com

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ncirilli@comcast.net

October 4, 2012

To: Dr. Lisa Palmer, Business Administrator
Jim Hardy, Operation & Facilities Supervisor
Wallingford Swarthmore School District
200 S. Providence Road, Wallingford, Pa., 19086

From: Nick Cirilli, P.E.

RE: SRS Site Utilization as Regulation Baseball Field for 7th & 8th Grade Teams

1. Site can accommodate a regulation field if relocated adjacent to the existing wood play structure (see sketch)

2. Minimum distance would be right field at approx. 270 ft.

Temporary Field (minimum) Costs (possible hi/lo bidding range)

Layout and construct regulation infield……$15M to $20M
Minimal unspecified dirt infield
Backstop: salvage backstop, benches from NPE …$10M to $15M
Prepare Bidding document and field assistance… ..$5M to $5M

Total……$30,000 to $40,000

Permanent Field Costs (possible hi/lo bidding range)

Layout & construct infield……$25M to $30M
Quality specified dirt infield
New Backstop, benches……$22M to $25M
New Fence along 3rd base line ……$6M to 8M
Prepare bidding docs and field assist… …..$6M to $7M

Total……$59,000 to $70,000

October 4, 2012
SRS Site Utilization as Regulation
Baseball Field for 7th & 8th Grade Teams (continued)

Site Items to be addressed

1. Site parking along Princeton Ave will be limited

2. Spectator area limited; no grandstands included in cost estimates

3. Grass surface is fair to poor condition.
   No grading or re-seeding is included in above estimates.
   Drainage appears adequate (not good), but no
   improvements necessary

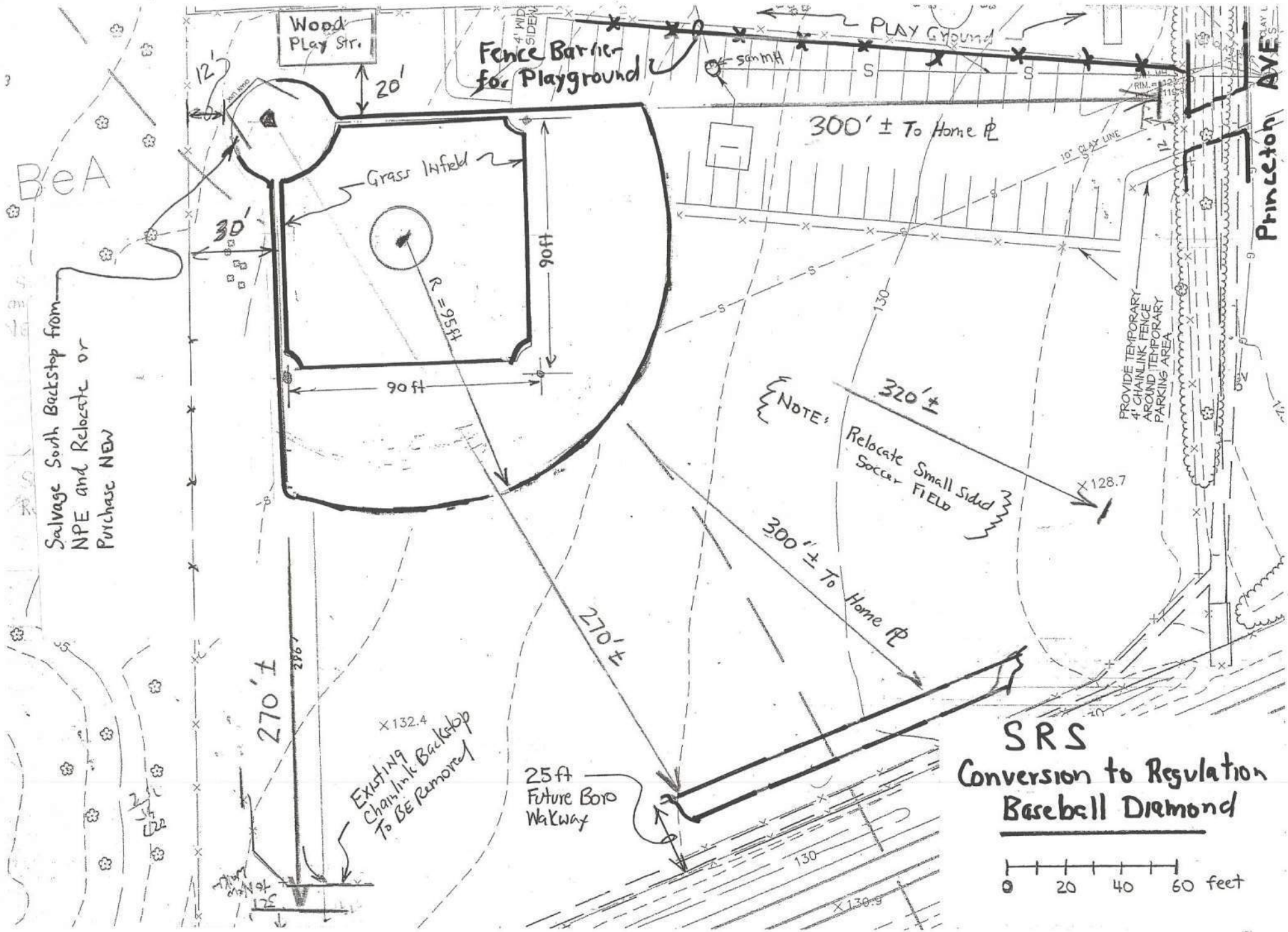
4. Proper fence barrier must be evaluated to protect existing
   playground area

5. Current soccer field must be relocated to fit new grass space

6. Must consult w/ Middle Sch coaches to see if the outfield
   dimensions are adequate for their teams' level of play

End of Memo

Attachment:
SRS Conversion to Regulation Baseball Diamond Sketch


Wood Play Str.
Fence Barrier for Playground
PLAY GROUND
4' WIDE SIDEW
SAN MH
20'
12'
30'
Grass Infield
90ft
R = 95ft
90 ft
300' ± To Home Pl
10' CLAY LINE
Princeton AVE
130
PROVIDE TEMPORARY 4' CHAINLINK FENCE AROUND TEMPORARY PARKING AREA
Salvage South Backstop from NPE and Relocate or Purchase NEW
NOTE:
320'±
Relocate Small Sided Soccer Field
X 128.7
300' ± To Home Pl
270'±
270'±
X 132.4
Existing Chain link Backstop To Be Removed
25 ft Future Boro Walkway
130
X 130.9
SRS
Conversion to Regulation Baseball Diamond
0 20 40 60 feet