



*GIS Mapping of Laurel Park*



*Eagle Fire Company Substation*



*Laurel Park Entrance from Laurel Road*

### Site Analysis

#### Data Collection / Methodology

Base-mapping information was compiled from the best available information. GIS tax map parcel information was obtained from Solebury Township along with previously approved land development plans for the new municipal building complex and land development plans for the previously constructed field underdrainage improvements. Additionally, land development plans were provided for the recently approved Lower Elementary School renovations and future gymnasium. This information was compiled along with aerial photos and various boundary surveys for use as a base map for the master plan. A full topographic site survey of the park must be completed to ensure accurate data is available for the future completion of design development/construction drawings.

Base mapping data was supplemented by information gathered by the consultants from several site visits over the course of the master planning process.

#### Existing Land Use and Zoning

Laurel Park is primarily located within the Solebury Township RB Residential Agricultural zoning district. Park and recreation facilities are defined as a Municipal Use which is a permitted principal use within the RB District. The municipal building complex, with frontage on Sugan Road, is located within the Solebury Township VR Village Residential district. Similar to the RB District, Municipal Use is a permitted principal use. Laurel Park is surrounded by a variety of land uses including Lower Elementary School to the east. A communications tower is located at the northeast corner of the site on property that is owned and leased by the township. Also, a small fire substation is located at the northwest corner of the property on property that is owned and leased by the township. The park immediately adjoins residential properties to the north and along the western boundary of the park. Additional residences are located across from the park on the opposite side of Laurel Road and Sugan Road. The proximity of these residential areas must be considered in the master plan to ensure that adequate buffering and screening are provided.

#### Site Access

The main access to Laurel Park is approximately 600' north of the Laurel Road intersection with Sugan Road. Laurel Road is classified as a township road and in its existing condition is narrow for two-way traffic. The narrowness of Laurel Road limits convenient access to Laurel Park, especially when the park experience high levels of use.



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Two entry points to the township municipal complex are located on Sugan Road, a state route. As part of the land development process for the municipal building expansion, new Highway Occupancy Permits (HOP) were reviewed and approved by PennDOT. The existing entries are classified as low volume driveways which permit less than 750 vehicles per day.

An existing woodland trail located at the northeast edge of the site contains planks over wet areas to allow pedestrian circulation between the adjacent Lower Elementary School and Laurel Park.

## Vehicular Circulation and Parking

All vehicular traffic that enters the park from Laurel Road must also exit from the same driveway. Given the fact that Laurel Road is very narrow, vehicular circulation is often further complicated by the fact that there is not adequate room for vehicles to turn around within the park, especially when the park is very busy. It is estimated that there are approximately 165 existing parking spaces in Laurel Park, however many of these spaces are not formalized and exist as gravel lots or lawn areas used for overflow parking. The master plan also examines available parking space at the Lower Elementary School as there is an opportunity to share parking facilities if enhanced pedestrian connections between the two sites can be provided.

## Utilities

Laurel Park is located outside of public sanitary sewer and water service areas. There are two existing wells located on the property to provide water to the existing concession building and the township municipal building. The well at the concession building is used for watering fields and maintenance as the concession building does not contain running water or restroom facilities. A subsurface drip field sanitary system was installed as part of the township building expansion and is shown on the existing conditions plan. The drip field system was sized to accommodate additional capacity however the “Microfast” unit that was installed limits the system to handling only the municipal building complex. If a future connection point is needed, installation of a larger “Microfast” unit will be required. The approved drip system plans indicate that such a change would require agency review and approval. Underground electric is provided to the municipal building complex from an existing pole along Sugan Road. Additionally, underground electric service is provided to the concession building.



*Existing Woodland Trail*



*Entrance Drive and Parking*



*Well adjacent to the Concession Building*





*Mature Hedgerow located within the Park*

### Views

There are no prominent views to or from the site as areas of existing woodland and mature vegetation limit views to and from the park. Existing buffers along adjoining residential can be enhanced to screen views and provide privacy. One view that that could be accentuated is the view from the western Sukan road entry towards the area of the existing concession building. A hedgerow of mature vegetation directs views towards this central area of the park.

### **Natural Features**

#### Topography

The site is generally flat draining from Sukan Road toward the north side of the property. The highest site elevation of 419' is located at the eastern Sukan Road entry to the municipal building complex while the lowest point of 388' is located along the northern property boundary. There is a small area of steep slope located around the public works area of the site however this is the result of the placement of fill material and not an existing "natural" condition.

#### Hydrology

There are no watercourses or areas of floodplain located within the park. The park soils are considered to be poorly drained and wetlands are believed to be present at the northern end of the recently acquired residential properties. A formalized wetland delineation must be completed prior to the beginning design development and construction document preparation for proposed improvements.

All existing baseball and softball fields have an underdrainage system that was installed to facilitate drainage and increase field availability in early spring and after rainfall events. Water is conveyed through underground piping and an overland swale to a small stormwater detention facility along the northern park property line. A similar stormwater management facility is located at the southern end of the site to collect surface water into the underdrainage system so that this water does not flow across the ballfield playing areas.



*Existing Stormwater Management Facility*

The new municipal building expansion and associated parking areas were designed using innovative stormwater management techniques to provide groundwater recharge. There are numerous stormwater infiltration trenches provided along the edges of parking lots and two rain gardens. One rain garden is located along the Sukan Road frontage at the front entry to the Municipal Building. This garden demonstrates that innovative stormwater management

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facilities can be used as a site amenity that does not have to be placed out of sight as is typically the case with traditional stormwater detention basin placement.

## Vegetation

The majority of the park site is comprised of open lawn areas with a hedgerow of mature vegetation located through the center of the site running in roughly a north/south direction. The recently acquired residential parcels, located along Sugan Road, contain areas of mature woodland which separate the open areas of the park from the adjacent Lower Elementary School.

There are a few shade trees planted throughout the park site which should be supplemented by additional plantings. Additionally, the existing vegetation along the western boundary of the park is insufficient to provide privacy and an adequate landscape buffer between the park and the adjoining residences. Areas around the municipal building complex and parking areas have recently been landscaped with native plant materials.

## Soils

The 2002 Bucks County Soil Survey indicates that there are five soils classifications present at the Laurel Park site. The following descriptions are generally characteristic of the identified soils. Prior to constructing improvements, site-specific testing will be required to determine the exact properties of the soils so that stormwater management facilities, sanitary sewer facilities, and building foundations can be designed accordingly. Soil mapping information is shown on the Base Map located at the end of Chapter 2.

An area of Chalfont silt loam (CbA) is located in the center of the site extending from the southwest corner of the site to the northern park boundary line. CbA has slopes ranging from 0-3%. It is considered to be somewhat poorly drained soil with no potential for flooding. The depth to bedrock is deep however one potential limiting factor is the presence of a seasonal water table that is from 6-18" deep. Chalfont silt loam is considered a farmland soil of statewide importance.

To the west of the CbA soil type, an area of Lansdale loam (LgB) extends to the northern park boundary. An additional area of LgB soil is located along the Sugan Road frontage of the recently acquired properties located between the municipal building complex and Lower Elementary School. The LgB soil type has slopes ranging from 3-8% and the soil is considered to be well drained. The depth to bedrock is deep and the seasonal high water table is greater than 60". All areas of Lansdale loam are considered prime farmland.

Doylestown silt loam soil (DdB) slope ranges from 3-8% and the soil is considered poorly drained. There is no potential for flooding however the depth to seasonal high water table is very shallow, from 0 – 6" below the surface. The soil is therefore considered a major hydric soil which may indicate the presence of wetlands. Lawrenceville silt loam is not considered to be prime farmland.

Duncannon silt loam (DuA) soils are located along the Sugan Road frontage. The slope range for this soil is 0-3% and the soil is considered well drained with no potential for flooding. The depth to seasonal high water table is greater than 60". Additionally, the depth to bedrock is classified as very deep. All areas of Duncannon silt loam are classified as prime farmland.



*Solebury Township Municipal Building*

An area of Lawrenceville silt loam (LkA) is located at the northeast corner of the site in the general vicinity of the existing soccer field and communications tower. This soil type also extends across the northern end of the two recently purchased residential properties located between the municipal building complex and Lower Elementary School. LkA is considered a moderately well drained soil with a seasonal high water table of 18-36". The soils are generally located on flat areas ranging in slope from 0-3%. The depth to bedrock is classified as very deep. All areas of Lawrenceville silt loam are classified as prime farmland.

None of the soil classifications above are associated with karst geology and Laurel Park is located outside of the Carbonate Geology District of Solebury Township.

### Existing Facilities Analysis

#### Municipal Building Complex

The municipal building complex contains an existing municipal building with recently completed building addition and associated parking lot, stormwater, and planting improvements. Long term plans for the original municipal building include demolition of the old northern wing of this structure.



*Public Works Department*

The municipal building complex also includes a public works area which contains a one story metal building, approximately 40'x165', located behind the township building. The public works area also contains an above ground fueling station, storage areas, and associated parking. The potential for relocating the public works department is considered in this master plan study.

#### Sports Fields

The existing sports fields and associated bleachers, dugouts, fencing, etc. are generally in good condition and well maintained. All active recreation fields within the park experience high levels of use. To increase field availability, an underdrainage system was installed to improve drainage of the existing baseball and softball fields.



*Existing Baseball Field*

With the exception of the existing softball field located at the northwestern corner of the site, all existing baseball field have been constructed with an incorrect solar orientation. The reorientation of these fields should be considered to provide optimal playing conditions which limit conflicts between sunlight and those engaged as spectators or



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players. Additionally, any state funding for improvements to the park require that play fields have correct solar orientation.

## Playground

The existing playground contains relatively new equipment with a wood chip safety surface. The play equipment is intended for children from 2-12 years of age. One drawback to the location of the current playground is that children must cross through the parking area to reach the existing concession stand and portable restrooms.

## Concession Building

Laurel Park contains an existing one story, block building in the center of the park which provides a snack bar, small covered seating area, and interior storage area for equipment and supplies. There is a well located at the concession building for field watering and maintenance however there currently is no running water within the building. The need for a structure with indoor restroom facilities was identified as the most pressing improvement needed at Laurel Park.

## **Opportunities and Constraints**

The existing conditions at Laurel Park offer many opportunities for future development and enhancement of the park. One of the major opportunities is associated with the park's location in proximity to the New-Hope Solebury School District Lower Elementary School. The master plan should explore opportunities to provide shared use of facilities such as parking areas and recreation facilities. Shared use will require increased dialogue and cooperation between the township and school district however the integration of park and school facilities will ultimately result in a mutually beneficial relationship for both parties.

Laurel Park also offers opportunities for incorporating innovative stormwater management strategies and best management practices to infiltrate runoff back into the ground and water table. These strategies may include the use of porous pavements, bioswales, infiltration basins and rain gardens planted with native plant species. Incorporation of such features demonstrates commitment to furthering the township's vision of protecting and preserving the beauty, unique character and natural resources of Solebury Township

One of the constraints of the site is that it there are a large amount of existing facilities within a relatively small area of park land. When considering proposed improvements, it is important that non-programmed park space for passive use is provided as the majority of the existing improvements are



*Existing Ballfields*



*Laurel Park Playground*



*Existing Concession Building*

geared towards active recreation. Additionally, there must be adequate land area to provide stormwater management facilities and sanitary sewage treatment. The soils at the site present additional constraints in that many areas of the park are not well drained. These conditions may require additional investment to provide mitigation measures as was the case with the field underdrainage system that has been installed at the park.

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