

KEY: W = withdrawn
C = completed
H = Hold
IP = In Progress
R = Requested

Projects	Status	Dept	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Funding	Comments
Replacement of 1987 WB14-B Loader	R	DPW	\$120,000												
P-1 2012 GMC EX Cab 4x4	R	DPW						\$45,000							
P-2 2006 F-350 SRW 4x4	R	DPW											\$45,000		Replaced 2016
P-3 2007 Dodge 3500 DRW 4x4	R	DPW					\$50,000								
P-4 2017 F-250 ex cab 4x4	R	DPW									\$50,000				
P-5 2006 F-350 SRW 4x4	R	DPW											\$45,000		Replaced 2016
M-2 2009 Sterling bullet	R	DPW							\$80,000						
M-3 2009 Sterling bullet	R	DPW						\$80,000							
M-5 2009 Sterling bullet	R	DPW							\$85,000						
M-6 2006 Ford F550	R	DPW				\$65,000									
M-7 2009 Sterling bullet	R	DPW									\$85,000				
D-1 2001 International Roll Off	R	DPW					\$160,000								
D-2 2015 Freightliner Dump	R	DPW													
D-3 1994 International Dump	R	DPW	\$140,000												Replacement of D3 - 1995 International Dump - requesting versatile truck with plow and salt spreader. D4 will not be replaced and will retire once no longer useable.
D-7 2008 International Dump	R	DPW										\$160,000			
2001 New Holand LW170 Loader	R	DPW				\$170,000									
1999 New Holand 555E- Backhoe	R	DPW			\$160,000										
1999 Case Tractor CX 70	R	DPW		\$60,000											
2003 McCormick CX 70	R	DPW							\$60,000						
Vermer chipper	R	DPW		\$50,000											
Bomford Mower Attachment	R	DPW		\$40,000											
1997 Grounds Master 325-D	R	DPW													Replaced 2016
1999 Grounds Master 325-D	R	DPW		\$12,000											
2007 Grounds Master Side Winder	R	DPW											\$20,000		
1999 John Deere 4500 Compact Tractor	R	DPW							\$35,000						
2004 Elgin Street Sweeper	R	DPW							\$200,000						
2001 Landscape Trailer	R	DPW						\$6,000							
2008 Landscape Trailer	R	DPW													
1988 7500LB Equipment Trailer	C	DPW	\$5,000												
Sub Total for DPW			\$265,000	\$162,000	\$160,000	\$235,000	\$210,000	\$131,000	\$140,000	\$320,000	\$135,000	\$160,000	\$110,000		

Replace Engine 6 - 1992 E-One Engine	R	Fire	\$450,000												
Replace Engine 1 1998 E-one Engine	R	Fire					\$500,000								
Rescue Tool Upgrade - New Car Technology	R	Fire	\$30,000												
Exhaust System for Apparatus (Cranberry and Lackawanna)	R	Fire	\$87,000												Request AFG Grant 2017
Radio Upgrades - Mobiles, Portables	R	Fire		\$35,000											
Apparatus Lighting Upgrades - Tender 7	R	Fire		\$8,000											
Apparatus Lighting Upgrades - Tender 5	R	Fire			\$8,000										
Upgrade to High Band Pagers	R	Fire			\$25,000										
SCBA Replacement - End Of Life	R	Fire						\$110,000							
Sub Total for Fire			\$567,000	\$43,000	\$33,000	\$0	\$500,000	\$110,000	\$0	\$0	\$0	\$0	\$0		

Replacement Patrol Vehicle	R	Police	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000								Operating Budget - Amount may need to increase based on Vehicle Cost.
Alcotest	R	Police	\$20,000												Most likely will not happen 2017 - State Mandate
License Plate Reader System	R	Police	\$20,000												Sparta has system - optional rental for portable unit
BEAST - Evidence Mgmt System	R	Police	\$25,000												2/3/15 - Based on meeting with subcommittee decided to move to 2016. Still needs to be determine if this is a supported item.
Window Replacement PD	R	Police	\$2,200												Note: If amount of evidence not reduced, requesting increase of current space (\$15,000)
Hallway/Identification Room Carpet PD	R	Police	\$5,000												11 Windows - \$200 per unit - Dependent on New Building
Replacement Chief's Vehicle	R	Police	\$30,000												Dependent on New Building
In Car Video Camera System	R	Police		\$27,000											NORMALLY THIS WOULD BE THE PD CAR THAT IS BUDGETED FOR THE YEAR TARGETED FOR REPLACEMENT
															5 Primary Patrol Cars - Dependent on current system being able to be maintained by vendor.

Electronic Fingerprint System	R	Police		\$30,000											Dependant on support existing for current system and new directives/policies/procedures
Sub Total for Police			\$132,200	\$87,000	\$30,000	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0		
Birch Parkway	R	Roads													Coordination required with Sparta - Lake Mohawk Club Requesting Status Our Roadway Improvement Plan has listed for Chip and Seal - 2021 = \$9500
North Shore Road Culvert Replacement	R	Roads	\$70,000											Resolution 205-2016 - authorized \$10,000 for engineering desing and NJDEP permitting.	
GRANT PROJECTS (Mill & Resurface): 2017 - Amity Road Phase 2 2018 - Mansfield Drive 2020 - Roseville Rd Phase 1	R	Roads	\$265,000	\$100,000	\$0	\$150,000	\$0	\$0	\$200,000	\$286,000	\$200,000	\$222,000		2017 - Requesting NJDOT Municipal Aid Grant (\$220,000)	Amith Road Phase 1 was completed in 2015
Lynn Drive & Associated Roadways (Mill & Resurface)	R	Roads	\$380,000											Ord. 18-2016 - \$138,000	
Cape Seal Projects: 2017 - Brookwood Road, Debbie, Briar, Joan and Ross, Carlisie and Catherine	R	Roads	\$267,000	\$284,000	\$79,000	\$0	\$0	\$0	\$0	\$168,000	\$395,000	\$0			
Chip and Seal Projects:	R	Roads	\$0	\$162,000	\$242,000	\$375,000	\$311,000	\$276,000	\$207,000	\$306,000	\$478,000	\$397,000			
Little Paint Way - Flood Improvement	R	Roads	\$165,000											Hazard Mitigation Grant (90%) = \$112,500 Town Match (10%) = \$12,500	
Sub Total for Roads			\$1,147,000	\$546,000	\$321,000	\$525,000	\$311,000	\$276,000	\$407,000	\$760,000	\$1,073,000	\$619,000	\$0		
Tamarack Park - Irrigation	R	Parks	\$110,000											Open Space Trust	Well Drilling = \$30,000 Installation of Pump = \$20,000 Storage Tank = \$60,000
Mountain Heights Park: 1. Basketball Court Paving - \$26,000 2. Allowance for Landscaping \$3,100	R	Parks	\$29,100											PSE&G Funding	
Tamarack Park - Parking Lot Paving/Surfacing	R	Parks	\$50,000											Open Space Trust	Bituminous Chip Seal = \$17,500
Sub Total for Recreation			\$189,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		

DPW	\$265,000	\$162,000	\$160,000	\$235,000	\$210,000	\$131,000	\$140,000	\$320,000	\$135,000	\$160,000	\$110,000
FIRE	\$567,000	\$43,000	\$33,000	\$0	\$500,000	\$110,000	\$0	\$0	\$0	\$0	\$0
Police	\$132,200	\$87,000	\$30,000	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0
Roads	\$1,147,000	\$546,000	\$321,000	\$525,000	\$311,000	\$276,000	\$407,000	\$760,000	\$1,073,000	\$619,000	\$0
Recreation	\$189,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$2,300,300	\$838,000	\$544,000	\$790,000	\$1,051,000	\$517,000	\$547,000	\$1,080,000	\$1,208,000	\$779,000	\$110,000

2017 Capital Requests

Requested By Michael Orgera
Superintendent of Public Works
Byram Township

1987 Case WB14-B Loader

- Machine is over 29 years old and past its life expectancy
- Primary machine for salt loading during winter events
- Has various mechanical and electrical issues
 - Electrical: No functioning lights/gauges and short that drains battery overnight
 - Mechanical: Trundle bushing worn/bakes failing/lift bushings worn/steering pistons leaking/tires worn/rust issues
- Replacement part sourcing/cost: Currently the machine is in need of \$10,000-\$15,000 in parts to repair and at least the same cost in labor. The other main issue with trying to repair is parts availability. Many of the parts are not manufactured anymore and other parts that are listed as backordered have been for over 2 years
- Machine value: We have been quoted \$6,000.00 for trade value
- Requesting \$120,000.00 to replace with a new loader of the same size



D-3 1995 International Dump

- Truck is over 21 years old
- Primary use is salting and snowplowing
- Truck of this size is needed to perform salting and plowing operations
- Also used for material hauling but due to rust no longer able to
- Has various mechanical and rust issues
 - Issues: Major rust- cab/dump body have multiple rust holes and frame has heavy rust and is separating /needs clutch work/various oil leaks/starting issues
- Costs to repair greatly exceed value of truck and frame has been repaired once and cannot be repaired again
- Plan to replace with a more versatile truck that can be used more then the current truck is.
- Requesting \$140,000 to replace truck, plow and salt spreader



Other requests

Slide in Salter for P-1

- Currently truck does not have a Salter that will fit in bed
- No spare salters for small trucks that do Cranberry/Lackawanna area incase of breakdown
- Will allow for operator to stay in truck and not have to switch out to another truck if salt needed.
- Requesting \$6,000

Scan Tool

- Tool used to scan for trouble codes on vehicles
- Currently any time a check engine light or trouble code comes up we have to send the vehicle out to be diagnosed then we can make repair. Adds time and costs to every repair
- Would be able to address problems on vehicle before they become a costly repair
- Requesting \$10,000 for tool

Equipment Trailer

- Trailer is over 28 years old
- Used for hauling tractors/mowers/material to locations around town and also out of town for repair
- Trailer has rust issues
- Trailer is undersized for equipment we need to move
- Trailer brakes have failed and are no longer able to be used
- Currently the only trailer we have to move machines bigger then the lawnmowers
- Requesting \$5,000 to replace trailer with a larger trailer that will better suit the departments needs

[illegible]

Byram Township Fire Department
6 Year Capital Project Planning Tool 2017-2022

Project Priority	Capital Project / Purchases	Specific Use	Is This a Replacement	Total Cost	Source of Funding	2017	2018	2019	2020	2021	2022
	Replace Engine 6 - 1992 E-One Engine	Engine	Yes	\$450,000	Twp. Debt	450,000					
	Rescue Tool Upgrade - New Car Technology	Extrication	Yes	\$30,000	Twp Debt	30000					
	Exhaust System for Apparatus	PEOSHA	No	\$87,000	AFG Grant	87000					
	Radio Upgrades - Mobiles, Portables	Communications	Yes	\$35,000	Twp Dept		35,000				
	Exhaust System for Apparatus - if Not Received	PEOSHA	No	\$87,000	AFG Grant		87,000				
	Apparatus Lighting Upgrades - Tender 7						8,000				
	Upgrade to High Band Pagers	Communications	Yes	\$25,000	Twp Dept			25,000			
	Apparatus Lighting Upgrades - Tender 5	Apparatus					8,000				
	Replace Engine 1 1998 E-one Engine	Engine	Yes	\$500,000	Twp Debt					\$500,000	
	SCBA Replacement - End Of Life	PEOSHA			Twp Debt / AFG						110,000
	CAPITAL TOTAL COST			\$1,214,000		567,000	130,000	33,000		\$500,000	110,000

Peter Zabita <pzabita@byrampd.org>

Nov 25

to me

Joe,

Here is my proposed capital budget items for the next 5 years as requested.

2017

Replacement patrol vehicle \$30,000. Amount may need to be increased if vehicle price increases

Alcotest – most likely not going to happen in 2017 but there is always a possibility, State still in research phase \$20,000

License plate reader system (LPR), one vehicle four camera system, \$20,000

BEAST evidence management software system – possible purchase after evidence room 100% inventory conducted and items eligible for destruction is complete, may not be completed in 2017 if manpower is unavailable \$25,000

Evidence room expansion – if current evidence volume is not significantly reduced the urgent need for additional storage space will exist - \$15,000 to increase current space and bring evidence room up to current standards/requirements

Window replacement Police Station 11 windows estimating \$200 per window \$2,200 if installed by DPW (dependant on new building situation)

Hallway carpeting and identification room carpeting replaced with vinyl tile \$5,000 (dependant on new building situation)

Replacement vehicle for Chief of Police - if necessary \$30,000

2018

Replacement patrol vehicle \$30,000. Amount may need to be increased if vehicle price increases

In car video camera system, 5 primary patrol cars – dependant on current system being able to be maintained by vendor \$27,000

Electronic fingerprint system – dependant on support existing for current system and new directives/policies/procedures that may require updated system, \$30,000

All items listed above that are not purchased in 2017 and become necessary

2019, 2020, 2021

Replacement patrol vehicle \$30,000. Amount may need to be increased if vehicle price increases

All items listed above that are not purchased in previous years and become necessary

Please let me know if any further information is needed.

Pete

Chief Peter J. Zabita

Byram Township Police Department

[\(973\) 347-4008](tel:9733474008)

FBI NA 244

Byram Township Town Council
Byram Township Municipal Building
10 Mansfield Drive
Byram Township NJ 07874
Phone: (973) 347-2500

12/16/2015

RE: **Byram Recreation Committee recommendation to Byram Township for capital improvements to our town's recreational facilities. 4.01 FINAL DRAFT FOR REVIEW**

Dear Council,

The Byram Township Recreation Committee (BRC), on behalf of Byram Township residents would like to recommend to the Byram Town Council and other Town Departments and Committees the following prioritized plan for capital improvements to our town recreational facilities. We believe this plan not only represents the desire of the residents in Byram Township but it also improves the quality of life for our total population. It will act as a statement to all, residents and nonresidents that Byram is a desirable place to live, raise a family, visit, own a business and a town that is beneficial to be associated with both personally and economically.

The plan focuses around maintaining and improving our current recreational facilities (active and non-active). The plan requires a significant investment and funding for these capital improvements. The Recreation Committee prefers that all improvements are addressed in a single or two phased approach as this is a complete plan for the town. Leaving any part behind or delaying any part would affect the total plan and groups of individual's using these facilities. However, we understand that the town has limited resources and may need to put this plan into a multi-phased approach. For that reason we have prioritized each part of the plan into two levels. The first character in the priority key represents a suggested time-lined approach to implementing the plan. Under ideal circumstances we are recommending these dates be considered for the priority levels:

1. Priority Timing High 2017 or sooner
2. Priority Timing Strong, 2018 or sooner
3. Priority Timing Meaningful, 2019 or sooner

CO Johnson Park (COJ) has often been referred to as the "face of Byram" and our "recreational town center". It is our most used facility therefore much of this plan focuses on COJ. It is the BRC recommendation that the Township conducts a comprehensive assessment of these recommendations in the form of a professionally prepared master plan so that further priorities can be assigned in a realistic manner. We ask that this committee be actively involved with further discussions and prioritizing before, during and after a master plan is completed.

The second character in the priority key is placed on the need for the individual item. An outline of the priority levels is recorded below.

Sincerely,

The Byram Township Recreation Committee

Byram Recreation Committee recommendation to Byram Township for capital improvements to our town's recreational facilities.

Priority Level – First character (Timing):

1. Priority Timing High, Importance to the community is significant and high. Need is significant for number of people and groups requiring these items. Timeline is urgent.
2. Priority Timing Strong, Importance to the community is desirable and formidable. Need is significant for the number of people and groups requiring these item: as lack of having this improvement would affect additional town oriented organizations and groups. Timeline is important as it will affect users of this item and others while a Band-Aid solution remains in place.
3. Priority Timing Meaningful, Importance to the community is desired. Need is important for the number of people and groups requiring these item: as lack of having this improvement would affect additional town oriented organizations and groups. Timeline is not consequential as it will not significantly affect users of this item.

Priority Level – Second character (Needs & Wants):

- A. Priority Need High – Public opinion is strong and often heard without solicitation.
- B. Priority Need Strong – Public opinion is strong when topic is open to discussion.
- C. Priority Need Meaningful – Public has requested, when the topic is being discussed.
- D. Priority Need Useful - Public has requested, but there is an understanding of cost vs. benefit so it might not be a top priority.

The BRC total plan for capital improvement to our town focuses on the four most visible and used (or required) recreational areas of our town. CO Johnson, the new Tamarack Park, Waterloo Park and our current “groomed” trails. These areas have high exposure inside and outside of our town and we believe they represent “the face of Byram” to all that use it.

- (1A) CO Johnson – COJ has often been referred to as the face of Byram and our Recreational Town Center, is our most used facility.
 - o (1A) Field house upgrades
 - (1A) It is the RC opinion that the Field House, in its current condition is a detriment to our towns brand and it is nonfunctional to our community. It requires a complete overhaul. The question then becomes can it be gutted and renovated or should it be demolished and rebuilt. If renovation is not a feasible or cost effective alternative than a rebuild should include:
 - (1A) All items below
 - (1C) Possibly a larger multi-purpose room
 - (1C) Additional meeting rooms, possibly on a 2nd floor.
 - (1D) Roof top access to a safe and covered broadcast area.
 - o Line of site and PA addressing football field.
 - o Line of site and PA addressing baseball Field One (1).

- (1B) efficient ventilation, heating and cooling.
- (1D) Ability to view a projected video both inside and outside.
- (1D) Covered picnic or table area
- Items below should be considered for an upgrade with or without rebuild of the Field House
 - (1A) ADA Compliant
 - (1A) Bathrooms Renovations:
 - o (1A) Accessible from both inside and outside the facility
 - o (1A) Easy to clean and maintain
 - o (1A) Open most if not all year long or at a minimum when park and facility is open
 - o (1A) No danger of leaking into basement storage areas.
 - o (1A) The BRC does not see the existing restroom as upgradeable and is recommending a complete modernization.
 - (1B) Kitchen Renovations
 - o (1B) Use accessible from inside
 - o (1B) Access accessibility from outside (same as current) with locking security window (upgraded from current).
 - o (1B) Electrical current upgraded for needs and use of community.
 - o (3C) Industrial and cost effective fundamental equipment (sink, oven {gas}, stove top, refrigerator).
 - (1A) Multi-purpose room upgrade.
 - o (1A) Meaningful and secure access
 - o (1A) Easy to clean and maintain and low maintenance design
 - o (1B) WiFi
 - (1A) Storage Upgraded (up and down stairs)
 - o (1A) Clean, well lit and safe
 - o (1A) Free from risk of plumbing issues or water damage.
 - o (1A) Meaningful and secure access
- o (2B) Athletic Field Upgrades: *The upgrade to COJ athletic field coincides with the upgrade of the new Tamarack Park as the sports and recreation centers of Byram. It has long been contested that we have too few athletic fields for the size and population of our town and the many youth and adult recreational sports/activities requiring use of these athletic fields. Today, all users are forced to share these limited resources, often limiting one or more organization to be left behind without appropriate facilities to use or limited times to use them. The overall plan focuses COJ fields as the football and baseball center for our town, and focuses Tamarack Park as the soccer, field hockey, and lacrosse centers of our town. Other sports and activities would of course have access and use of these fields as permitted and since COJ is our primary recreation park it should always be used as a multi-purpose venue for any major recreational or special event.
 - (2A) ADA Compliant
 - (2B) COJ should be equipped with electronic and automated lightning detection.

- (2B) Field 8 upgrade*
 - (2B) Upgrade to drainage system to make the field usable under normal weather conditions.
 - (2B) Addition of a walking/running track
 - (2B) Stands, score board, broadcast station, shed, and gear (goals) appropriate for a primary town football field but also usable for a semi multi-sport environment (soccer, lacrosse, field hockey, etc. Not baseball).
 - (3D) Lights adequate to play night games.
 - (3C) Additional parking
 - (3C) Field 4 and Field 6 upgrade*
 - (3C) F4 upgraded to accommodate 50/70 style baseball as well as standard 46/60 play
 - (3D) F4 Removable fence in outfield.
 - (3D) Lights adequate to play night games that accommodate both F4 (baseball) and F6 (multi-purpose).
 - (3D) Field 3 upgrade*
 - (3D) Lights adequate to play night games.
 - (3D) Safe and finished paths for walking to the field that also aid in appropriate drainage.
 - (3D) Field 1 Upgrade
 - (3D) Lights adequate to play night games.
 - (3D) Safe and finished paths for walking to and around the backstop (possibly connecting to the path behind F4) and approaching the field from the field house area. This path should also aid in appropriate drainage
- (2B) The new Tamarack Park (West)
 - o (1A) ADA Compliant
 - o (2B) Tamarack Park should be equipped with electronic and automated lightning detection.
 - o (2B) Athletic Field Upgrades
 - (2B) Field (large field) upgrade*
 - (2B) Stands, score board, broadcast station, shed, and gear (goals) appropriate for a primary town soccer, field hockey and lacrosse field but also usable for a semi multi-sport environment (Other recreational activities TBD)
 - (3D) Lights adequate to play night games
 - (3D) Addition of a walking/running track
 - (3D) Safe and finished paths for walking to and approaching the field that also aid in appropriate drainage
 - (3C) Field (smaller field) upgrade*
 - (3C) Stands, score board and gear (goals) appropriate for a primary town soccer, field hockey and lacrosse field but also usable for a semi multi-sport environment (Other recreational activities TBD)

- (3D) Lights adequate to play night games
 - (3D) Safe and finished paths for walking to the field that also aid in appropriate drainage
- o Field house requirements
 - (3A) Bathrooms:
 - (3A) Accessible from both inside and outside the facility
 - (3A) Easy to clean and maintain
 - (3A) Open most if not all year long or minimally when park and facility is open
 - (3B) Kitchen or Snack Stand
 - (3B) Accessible from inside
 - (3B) Accessible from outside (same as COJ) with locking security window
 - (3B) Electrical current for needs and use of community
 - (3C) Limited but Industrial and cost effective fundamental equipment (sink, oven {gas}, stove top, refrigerator)
 - (3D) Covered picnic or table area
- (3C) Outdoor Theater or Stage: The need to hold events in Byram (ex: Byram Day, etc.) at a resilient a location with an accessible, multi-purpose stage available for plays, speeches, bands and other public performances. This can be accomplished in one of 2 ways:
 - o Mobile Approach – if a venue is not deemed ideal for a permanent location the option of a stage on a trailer would be the preferred approach. Further details TBD. A few pictures and general examples can be seen on the follow web sites however the BRC is not endorsing these or any specific mobile-trailer-stage at this time.
 - <http://www.stageline.com/>
 - <http://www.apexstages.com/>
 - <http://www.wengercorp.com/acoustics/showmobile-mobile-stage-and-canopy.php>
 - o Permanent Approach – location open to discussion and TBD.
 - (1A) Disability access to all facilities
 - Because so many Byram residents consider COJ park the town’s recreational center, a possible location for this structure might be east Tamarack park (<https://www.google.com/maps/place/40%C2%B058'03.2%22N+74%C2%B043'13.1%22W/@40.967552,-74.720312,17z/data=!3m1!4b1!4m2!3m1!1s0x0:0x0>) Or more descriptively known as the property adjacent to Roseville and Tamarack.
Special considerations and concerns for this specific location include
 - o Residential approval
 - o Parking
 - o Sound and noise control
- Other Byram locations are certainly an option open to discussion. In any and all locations the following qualities should be considered:
 - (3C) Seating is natural (no permanent seats) but the seating area is leveled for better visual and auditory purposes.
 - (3C) Electrical access

- (3D) Covered stage
 - (3D) Natural, leveled or layered seating
 - (3C) Acoustically correct backdrop
- (1A) Upgrades and maintenance to Byram's many trails, paths and open space recreation areas. Byram Township is known as the "Gateway to New Jersey Trails" (Biking, Hiking and Sightseeing). There are many trails and open space properties that dot the Byram Township topography yet many of these properties are "islands", with no direct or indirect access and/or parking. Additionally, inclement weather and normal depreciation of existing trails and paths has left some unusable and many in desperate need of immediate maintenance. If we are to pride ourselves as being the Gateway to NJ trails then we need to expand and maintain these existing paths and trails properly and on an annual basis. If we cannot maintain what we have we should consider alternative solutions. However, the overwhelming consensus is part of Byram's allure is the ability to access the many open space locations for which we have invested. Our master plan recommendation would therefore include:
 - o (1A) ADA compliant where applicable
 - o (1A) Expansion of groomed trails or path to connect as many of the open space recreation areas as possible. Further conversations will be required to determine what locations are possible and a priority as well as what type of access (walking, hiking, bicycle, horses, etc.) should be permitted at each site and on each trail.
 - o (1A) Budgeted funding to maintain and upkeep these trails and open space locations.
 - o "Groomed" refers to graveled or vehicle maintained paths or trails, NOT trails or paths marked and with natural walking ways. "Walking" refers to paved or paths specifically designed for walking or running, NOT graveled or vehicle maintained paths or trails.
- (3C) Upgrades and maintenance to Byram's designated and official community parks and play areas. There are many neighborhoods and communities in Byram that have or should have a recreational community parks and play areas. Each community is distinct in their own way but these parks should be modernized with a town-wide design or theme. Each community should have at least one park or play area that can exhibit the individual character of the community and landscape, but with a master theme and similar resources applied to each and all the parks.
 - o The communities and parks identified by the BRC are as follows:
 1. West Brookwood/Riverside Park
 2. East Brookwood/Brookwood Park
 3. Forest Lakes/COJ Park
 4. Lackawanna/Neil Gylling Memorial Park
 5. Tomahawk/Mountain Heights Park
 6. Mohawk-Lee Hill/Mountain Heights Park
 7. Tamarack/Tamarack Park (east)
 8. Cranberry/ TBD
 - o Our master plan recommendation would therefore include for each of these parks:
 - (1A) ADA compliant where applicable
 - (3C) Picnic table(s)
 - (1A) Trash policy and resources
 - (3C) A TBD but minimal standard in playground resources so that they all look and play similarly.

- (3D) Running water
- (3D) Electric
- (3D) Basketball or paddleball court/other
- (3D) TBD
- o Additional improvements should be made to the following parks and play areas:
 - (2B) Neil Gylling Memorial Park
 - Park should be equipped with electronic and automated lightning detection.
 - Improved access to water in back area for fishing purposes.
 - Boardwalk “style” access to environmental habitat.
 - Improved picnic area
 - Improved parking
 - Playground
 - Safe, finished paths for walking to the field that also aid in appropriate drainage
 - TBD
 - (1A if funds are available) Tomahawk/Mountain Heights Park
 - Picnic area
 - Parking
 - (3D) Basketball or paddleball court/other
 - Playground
 - TBD
 - (3C) Mohawk-Lee Hill/Mountain Ridge Park
 - Improved picnic area
 - Improved parking
 - Basketball or paddleball court/other
 - Playground
 - TBD

The Byram Township Recreation Committee

BYRAM TOWNSHIP - ROADWAY IMPROVEMENT PLAN
10 YEAR PLAN - 2017 to 2026

STREET NAME	Year	Length	Width	Area	Milling (Y/N),	2016 Asphalt	2016 O/S	2016	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	Last Paved	(Feet)	(Feet)	(SY)	Reclamation	Costs (\$/SY)	Costs (\$/SY)	Paving Costs	O&S or Cape Seal Costs										
ARTERIAL ROADWAYS																			
Roseville Road																			
Roseville Road - Section I	2009	3,550	24	9,467	Y	\$12	\$4.00	\$113,600.00	\$37,866.67				\$150,000.00						
Roseville Road - Section II	2011	3,350	24	8,933	Y	\$12	\$4.00	\$107,200.00	\$35,733.33							\$150,841.17			
Roseville Road - Section II (to Tunnel)	2012	1,000	26	2,889	Y	\$12	\$4.00	\$34,666.67	\$11,555.56							\$48,779.48			
Roseville Road - Section III	2012	6,050	24	16,133	Y	\$12	\$4.00	\$193,600.00	\$64,533.33								\$286,035.37		
Roseville Road - Section IV	2013	4,025	24	10,733	Y	\$12	\$4.00	\$128,800.00	\$42,933.33									\$199,811.07	
Mansfield Drive											\$100,000.00								
Tamarack Road																			
Tamarack Road - Section I	2000/2013	3,400	30	11,333	Y	\$12	\$4.00	\$136,000.00	\$45,333.33										\$221,529.67
Tamarack Road - Section II	2001/2014	4,485	30	14,950	Y	\$12	\$4.00	\$179,400.00	\$59,800.00										
Amity Road																			
Amity Road - Section I	2002/2015	24	3,500	9,333	Y	\$12	\$4.00	\$112,000.00	\$37,333.33										
Amity Road - Section II	2004	24	3,115	8,307	Y	\$12	\$4.00	\$99,680.00	\$33,226.67	\$120,000.00									
Amity Road - Section III	2006	24	3,405	9,080	Y	\$12	\$4.00	\$108,960.00	\$36,320.00	\$145,000.00									
Tomahawk Trail																			
Tomahawk Trail	2011	24	3,500	9,333	Y	\$12	NA	\$112,000.00	NA										
COLLECTOR ROADWAYS																			
Lake Lackawanna																			
Heminover Street	1999	860	22	2,102	N	\$9	\$6.00	\$18,920.00	\$12,613.33		\$13,906.20								
Lake Drive/Reis Avenue/Brown Dr	1999	7,250	22	17,722	N	\$9	\$6.00	\$159,500.00	\$106,333.33		\$117,232.50								
Forest Lakes																			
Forest Lakes Drive	2003	7,740	22	18,920	Y	\$12	\$6.00	\$227,040.00	\$113,520.00								\$167,720.74		
Cranberry Lake																			
North Shore Road - I	2004	2,400	24	6,400	Y	\$12	\$6.00	\$76,800.00	\$38,400.00		\$42,336.00								
North Shore Road - II	2007	2,900	24	7,733	Y	\$12	\$6.00	\$92,800.00	\$46,400.00		\$51,156.00								
North Shore Road - III	2008	3,370	24	8,987	Y	\$12	\$6.00	\$107,840.00	\$53,920.00		\$59,446.80								
East Brookwood																			
Brookwood Road - I	2009	2,000	28	6,222	Y	\$12	\$6.00	\$74,666.67	\$37,333.33										
Brookwood Road - II	2002	2,000	28	6,222	Y	\$12	\$6.00	\$74,666.67	\$37,333.33	\$39,200.00								\$57,916.25	
Brookwood Road - III	2005	2,400	28	7,467	Y	\$12	\$6.00	\$89,600.00	\$44,800.00	\$47,040.00								\$69,499.50	
Brookwood Drive	2009	3,410	30	11,367	Y	\$12	\$6.00	\$136,400.00	\$68,200.00										
Debbie Drive	2009	535	30	1,783	Y	\$12	\$6.00	\$21,400.00	\$10,700.00	\$11,235.00								\$16,599.21	
West Brookwood																			
Acorn Street	2010	2,555	22	6,246	Y	\$12	\$6.00	\$74,946.67	\$37,473.33										
River Road - Part II	2011	2,300	20	5,111	Y	\$12	\$6.00	\$61,333.33	\$30,666.67										
Route 206																			
Whitehall Hill Road	2003	2,065	24	5,507	N	\$9	\$6.00	\$49,560.00	\$33,040.00			\$38,247.93							
LOCAL ROADWAYS																			
Lake Lackawanna																			
	?	1,800	28	6,000	Y	\$12	\$2.75	\$72,000.00	\$16,500.00										
Bank Street	1999	800	20	1,778	N	\$9	\$2.75	\$16,000.00	\$4,888.89		\$5,390.00					\$6,879.16			
Carpenter Road	1999	245	12	327	N	\$9	\$2.75	\$2,940.00	\$898.33		\$990.41					\$1,264.05			
Lake Drive - Loop Roads	1999	6,850	22	16,744	N	\$9	\$2.75	\$150,700.00	\$46,047.22		\$50,767.06					\$64,793.07			
Partridge Road	2005	200	12	267	N	\$9	\$2.75	\$2,400.00	\$733.33		\$808.50					\$1,031.87			
Richmond Road	1999	2,650	22	6,478	N	\$9	\$2.75	\$58,300.00	\$17,813.89		\$19,639.81					\$25,065.93			
Orchard Street	???	400	15	667	N	\$9	\$2.75	\$6,000.00	\$1,833.33										
Forest Lakes																			
Conrad Strasse	2000	720	24	1,920	Y	\$12	\$2.75	\$23,040.00	\$5,280.00				\$6,417.87					\$8,191.01	
Crecent Drive North	2001/2002	3,085	24	8,227	Y	\$12	\$2.75	\$98,720.00	\$22,623.33			\$26,189.34					\$33,424.97		
Crecent Drive South	2001	2,455	24	6,547	Y	\$12	\$2.75	\$78,560.00	\$18,003.33				\$21,883.16					\$27,929.08	
Crows Nest Road	2000	1,185	24	3,160	Y	\$12	\$2.75	\$37,920.00	\$8,690.00				\$10,562.75					\$13,481.04	
Deer Run	2002	1,285	22	3,141	Y	\$12	\$2.75	\$37,693.33	\$8,638.06			\$9,999.63					\$12,762.34		
Glen Clove Road	2001	1,335	22	3,263	Y	\$12	\$2.75	\$39,160.00	\$8,974.17				\$10,908.16					\$13,921.88	
Harbor View Drive	2001	970	26	2,802	Y	\$12	\$2.75	\$33,626.67	\$7,706.11			\$8,920.79					\$11,385.44		
Hemlock Road	2001	1,860	22	4,547	Y	\$12	\$2.75	\$54,560.00	\$12,503.33			\$14,474.17					\$18,473.12		
Lake View Drive	2001	1,210	20	2,689	Y	\$12	\$2.75	\$32,266.67	\$7,394.44				\$8,987.99					\$11,471.21	
Old Stage Coach Road	2000	2,980	20	6,622	Y	\$12	\$2.75	\$79,466.67	\$18,211.11				\$22,135.72					\$28,251.41	
Peach Tree Street	2000	715	22	1,748	Y	\$12	\$2.75	\$20,973.33	\$4,806.39				\$5,842.20					\$7,456.29	
The Rotunda	2001	1,645	24	4,387	Y	\$12	\$2.75	\$52,640.00	\$12,063.33			\$13,964.82					\$17,823.04		
Sandy's Road	2000	1,025	22	2,506	Y	\$12	\$2.75	\$30,066.67	\$6,890.28				\$8,375.18					\$10,689.08	
Sherwood Forest Drive	2002	3,590	22	8,776	Y	\$12	\$2.75	\$105,306.67	\$24,132.78			\$27,936.71					\$35,655.10		
Sleepy Hollow Road	2000	5,805	26	16,770	Y	\$12	\$2.75	\$201,240.00	\$46,117.50				\$56,056.11					\$71,543.38	
Sunset Way	2000	150	28	467	Y	\$12	\$2.75	\$5,600.00	\$1,283.33				\$1,559.90					\$1,990.87	
Winding Way	2002	2,160	20	4,800	Y	\$12	\$2.75	\$57,600.00	\$13,200.00			\$15,280.65					\$19,502.41		
Woodlawn Drive	2001	185	20	411	Y	\$12	\$2.75	\$4,933.33	\$1,130.56			\$1,308.76					\$1,670.35		
Cranberry Lake																			

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STREET NAME	Year	Length	Width	Area	Milling (Y/N)	2016 Ashalt	2016 O/S	2016	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	Last Paved	(Feet)	(Feet)	(SY)	Reclamation	Costs (\$/SY)	Costs (\$/SY)	Paving Costs	O&S or Cape Seal Costs										
Allamuchy Trail	2006	1,290	18	2,580	Y	\$12	\$2.75	\$30,960.00	\$7,095.00				\$8,624.02					\$11,006.67	
Bald Rock Trail	2005	190	12	253	Y	\$12	\$2.75	\$3,040.00	\$696.67			\$806.48					\$1,029.29		
Birch Trail	1998	605	16	1,076	Y	\$12	\$2.75	\$12,906.67	\$2,957.78			\$3,424.00					\$4,369.98		
Boulder Trail	2006	260	17	491	Y	\$12	\$2.75	\$5,893.33	\$1,350.56			\$1,563.44					\$1,995.39		
Bridge Trail	2006	215	10	239	Y	\$12	\$2.75	\$2,866.67	\$656.94				\$798.52					\$1,019.14	
Brook Trail	2005	320	14	498	Y	\$12	\$2.75	\$5,973.33	\$1,368.89			\$1,584.66					\$2,022.47		
Cabin Spring Trail	2005	845	21	1,972	Y	\$12	\$2.75	\$23,660.00	\$5,422.08				\$6,590.58					\$8,411.43	
Cliff Drive	2005	200	12	267	Y	\$12	\$2.75	\$3,200.00	\$733.33			\$848.93					\$1,083.47		
Cranberry Ledge Road	1998	3,275	20	7,278	Y	\$12	\$2.75	\$87,333.33	\$20,013.89			\$23,168.58					\$29,569.63		
Dennis Hill Road	2006	880	19	1,858	Y	\$12	\$2.75	\$22,293.33	\$5,108.89				\$6,209.89					\$7,925.56	
Fox Trail	2004	515	16	916	Y	\$12	\$2.75	\$10,986.67	\$2,517.78			\$2,914.64					\$3,719.90		
Frenche's Grove Road	2006	1,210	24	3,227	Y	\$12	\$2.75	\$38,720.00	\$8,873.33				\$10,785.59					\$13,765.45	
Greywood Lane	2006	165	16	293	Y	\$12	\$2.75	\$3,520.00	\$806.67				\$980.51					\$1,251.40	
Grove Path	2006	215	10	239	Y	\$12	\$2.75	\$2,866.67	\$656.94				\$798.52					\$1,019.14	
Harding Road	2005	610	12	813	Y	\$12	\$2.75	\$9,760.00	\$2,236.67				\$2,718.68					\$3,469.80	
Hart Trail	1998	686	15	1,143	Y	\$12	\$2.75	\$13,720.00	\$3,144.17			\$3,639.77					\$4,645.37		
Hawthorne Trail	2004	785	18	1,570	Y	\$12	\$2.75	\$18,840.00	\$4,317.50			\$4,998.05					\$6,378.91		
Hickory Trail	2005	215	12	287	Y	\$12	\$2.75	\$3,440.00	\$788.33				\$958.22					\$1,222.96	
High-To-Ga Trail	2005	480	15	800	Y	\$12	\$2.75	\$9,600.00	\$2,200.00				\$2,674.11					\$3,412.92	
Hilltop Trail	2005	490	14	762	Y	\$12	\$2.75	\$9,146.67	\$2,096.11				\$2,547.84					\$3,251.76	
Ka-Ton-Ah Trail	2005	545	16	969	Y	\$12	\$2.75	\$11,626.67	\$2,664.44				\$3,238.65					\$4,133.43	
La-Bo-Ga Trail	2006	270	17	510	Y	\$12	\$2.75	\$6,120.00	\$1,402.50				\$1,704.75					\$2,175.74	
Lakeview Trail	2006	1,095	14	1,703	Y	\$12	\$2.75	\$20,440.00	\$4,684.17				\$5,693.63					\$7,266.68	
Landone Trail	2006	370	13	534	Y	\$12	\$2.75	\$6,413.33	\$1,469.72			\$1,701.39					\$2,171.45		
Laurel Trail	2006	775	16	1,378	Y	\$12	\$2.75	\$16,533.33	\$3,788.89				\$4,605.42					\$5,877.81	
Meteor Trail	2006	1,480	17	2,796	Y	\$12	\$2.75	\$33,546.67	\$7,687.78				\$9,344.54					\$11,926.27	
Maughtaug Trail	2005	345	12	460	Y	\$12	\$2.75	\$5,520.00	\$1,265.00				\$1,537.62					\$1,962.43	
North Shore Trail	2006	575	16	1,022	Y	\$12	\$2.75	\$12,266.67	\$2,811.11				\$3,416.92					\$4,360.96	
Oak Trail	1998	515	14	801	Y	\$12	\$2.75	\$9,613.33	\$2,203.06			\$2,550.31					\$3,254.92		
Opa Pass	2005	140	12	187	Y	\$12	\$2.75	\$2,240.00	\$513.33				\$623.96					\$796.35	
Overview	2005	175	14	272	Y	\$12	\$2.75	\$3,266.67	\$748.61				\$909.94					\$1,161.34	
Panther Pass	2005	495	17	935	Y	\$12	\$2.75	\$11,220.00	\$2,571.25				\$3,125.37					\$3,988.85	
Pathfinder Trial	2006	520	21	1,213	Y	\$12	\$2.75	\$14,560.00	\$3,336.67			\$3,862.61					\$4,929.78		
Raccoon Trail	2004	135	14	210	Y	\$12	\$2.75	\$2,520.00	\$577.50			\$668.53					\$853.23		
Rose Trail	2006	805	16	1,431	Y	\$12	\$2.75	\$17,173.33	\$3,935.56				\$4,783.69					\$6,105.34	
Saddle Lane	1998	180	22	440	Y	\$12	\$2.75	\$5,280.00	\$1,210.00			\$1,400.73					\$1,787.72		
Saugtaug Trail	2005	795	12	1,060	Y	\$12	\$2.75	\$12,720.00	\$2,915.00				\$3,543.20					\$4,522.12	
Side Hill Trail	2004	450	19	950	Y	\$12	\$2.75	\$11,400.00	\$2,612.50			\$3,024.30					\$3,859.85		
South Lake Trail	2004	400	12	533	Y	\$12	\$2.75	\$6,400.00	\$1,466.67			\$1,697.85					\$2,166.93		
South Shore Road	2005	4,160	20	9,244	Y	\$12	\$2.75	\$110,933.33	\$25,422.22				\$30,900.87					\$39,438.21	
South Shore Road	???	1,450	20	3,222	Y	\$12	\$2.75	\$38,666.67	\$8,861.11				\$10,770.74					\$13,746.49	
Spring Trail	2005	190	16	338	Y	\$12	\$2.75	\$4,053.33	\$928.89			\$1,075.31					\$1,372.39		
Spruce Trail	2005	495	17	935	Y	\$12	\$2.75	\$11,220.00	\$2,571.25			\$2,976.54					\$3,798.91		
Strawberry Point Drive	2004	2,840	24	7,573	Y	\$12	\$2.75	\$90,880.00	\$20,826.67				\$25,314.94					\$32,309.00	
Tote Road	2005	1,290	20	2,867	Y	\$12	\$2.75	\$34,400.00	\$7,883.33				\$9,582.24					\$12,229.64	
Weasaug Trail	2005	380	12	507	Y	\$12	\$2.75	\$6,080.00	\$1,393.33				\$1,693.61					\$2,161.52	
Weaver House Cove Road	2004	1,315	25	3,653	Y	\$12	\$2.75	\$43,833.33	\$10,045.14			\$11,628.50					\$14,841.25		
Wo-Ta-Ga Trail	2006	745	14	1,159	Y	\$12	\$2.75	\$13,906.67	\$3,186.94				\$3,873.75					\$4,944.00	
Tamarack																			
Manu Trail	2000	1,375	30	4,583	N	\$9	\$2.75	\$41,250.00	\$12,604.17			\$14,590.90					\$17,735.33		
Hunters Lane	2000	1,465	26	4,232	N	\$9	\$2.75	\$38,090.00	\$11,638.61			\$13,473.15					\$16,376.69		
Knute Drive	2002	375	19	792	N	\$9	\$2.75	\$7,125.00	\$2,177.08			\$2,520.25					\$3,063.37		
C.O. Drive	2002	755	18	1,510	N	\$9	\$2.75	\$13,590.00	\$4,152.50			\$4,807.04					\$5,842.98		
Colby Drive	2002	1,465	30	4,883	N	\$9	\$2.75	\$43,950.00	\$13,429.17				\$16,323.24					\$20,833.05	
Cross Trail	2002	220	21	513	N	\$9	\$2.75	\$4,620.00	\$1,411.67				\$1,715.89					\$2,189.96	
Little Paint Way	2002	1,440	22	3,520	N	\$9	\$2.75	\$31,680.00	\$9,680.00			\$11,205.81					\$13,620.73		
Old Indian Spring Road	2002	3,050	18	6,100	N	\$9	\$2.75	\$54,900.00	\$16,775.00				\$20,390.12					\$26,023.53	
Roger Drive	2002	560	20	1,244	N	\$9	\$2.75	\$11,200.00	\$3,422.22			\$3,961.65					\$4,815.41		
Ghost Pony Road	2002	1,960	21	4,573	N	\$9	\$2.75	\$41,160.00	\$12,576.67				\$15,287.02					\$19,510.54	
East Brookwood																			
Briar Lane	2005	1,775	30	5,917	Y	\$12	\$5.25	\$34,300.00	\$31,062.50	\$32,615.63								\$48,188.13	
Joan Drive	2006	2,445	30	8,150	Y	\$12	\$5.25	\$97,800.00	\$42,787.50	\$44,926.88								\$66,377.46	
Ross Road	2004	3,330	30	11,100	Y	\$12	\$5.25	\$133,200.00	\$58,275.00	\$61,188.75								\$90,403.65	
Dogwood Lane Road	2009	185	16	329	Y	\$12	\$2.75	\$3,946.67	\$904.44						\$1,212.04				
Mountain Avenue	2009	245	20	544	Y	\$12	\$2.75	\$6,533.33	\$1,497.22						\$2,006.42				
Pleasant Hill Road	2009	170	17	321	Y	\$12	\$2.75	\$3,853.33	\$883.06						\$1,183.38				
Sand Hill Road	2009	565	18	1,130	Y	\$12	\$2.75	\$13,560.00	\$3,107.50						\$4,164.35				
Sandy Brook Road	2009	330	13	477	Y	\$12	\$2.75	\$5,720.00	\$1,310.83						\$1,756.64				
Shady Brook Road	2009	320	22	782	Y	\$12	\$2.75	\$9,386.67	\$2,151.11						\$2,882.69				
Stony Brook Road	2009	1,210	20	2,689	Y	\$12	\$2.75	\$32,266.67	\$7,394.44						\$9,909.26				
Trout Brook Road	2009	355	17	671	Y	\$12	\$2.75	\$8,046.67	\$1,844.03						\$2,471.17				
Waterloo Road	2009	330	17	623	Y	\$12	\$2.75	\$7,480.00	\$1,714.17						\$2,297.15				
White Birch Road	2009	690	22	1,687	Y	\$12	\$2.75	\$20,240.00	\$4,638.33						\$6,215.81				
Wildwood Road	2009	445	22	1,088	Y	\$12	\$2.75	\$13,053.33	\$2,991.39						\$4,008.75				
Woods Edge Road	2009	1,320	22	3,227	Y	\$12	\$2.75	\$38,720.00	\$8,873.33						\$11,891.12				
West Brookwood																			
Adair Street	2010	1,195	21	2,788	Y	\$12	\$2.75	\$33,460.00	\$7,667.92						\$10,275.74				
Ash Street	2010	3,150	24	8,400	Y	\$12	\$2.75	\$100,800.00	\$23,100.00						\$30,956.21				
Avon Street	2010	800	20	1,778	Y	\$12	\$2.75	\$21,333.33	\$4,888.89						\$6,551.58				
Banker Drive	2010	620	18	1,240	Y	\$12	\$2.75	\$14,880.00	\$3,410.00						\$4,569.73				
Beech Street	2009	1,675	22	4,094	Y	\$12	\$2.75	\$49,133.33	\$11,259.72						\$15,089.10				

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STREET NAME	Year	Length	Width	Area	Milling (Y/N)	2016 Ashalt	2016 O/S	2016	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	Last Paved	(Feet)	(Feet)	(SY)	Reclamation	Costs (\$/SY)	Costs (\$/SY)	Paving Costs	O&S or Cape Seal Costs										
Belton Road	2010	3,600	20	8,000	Y	\$12	\$2.75	\$96,000.00	\$22,000.00						\$29,482.10				
Broad Avenue	2010	1,500	20	3,333	Y	\$12	\$2.75	\$40,000.00	\$9,166.67						\$12,284.21				
Byram Avenue	2010	330	24	880	Y	\$12	\$2.75	\$10,560.00	\$2,420.00						\$3,243.03				
Cascade Avenue	2010	240	24	640	Y	\$12	\$2.75	\$7,680.00	\$1,760.00						\$2,358.57				
Chestnut Street - Part I	2008	500	22	1,222	Y	\$12	\$2.75	\$14,666.67	\$3,361.11						\$4,504.21				
Chestnut Street - Part II	2009	1,100	22	2,689	Y	\$12	\$2.75	\$32,266.67	\$7,394.44						\$9,909.26				
Chestnut Street - Part III	???	900	22	2,200	Y	\$12	\$2.75	\$26,400.00	\$6,050.00						\$8,107.58				
Drain Way	2010	210	16	373	Y	\$12	\$2.75	\$4,480.00	\$1,026.67						\$1,375.83				
Glen Brook Street	???	250	20	556	Y	\$12	\$2.75	\$6,666.67	\$1,527.78						\$2,047.37				
Lockwood Avenue	2008	1,725	20	3,833	Y	\$12	\$2.75	\$46,000.00	\$10,541.67						\$14,126.84				
Mayne Avenue	2008	1,960	22	4,791	Y	\$12	\$2.75	\$57,493.33	\$13,175.56						\$17,656.50				
Newton Avenue	2010	850	16	1,511	Y	\$12	\$2.75	\$18,133.33	\$4,155.56						\$5,568.84				
River Road - Part I	2010	1,825	20	4,056	Y	\$12	\$2.75	\$48,666.67	\$11,152.78						\$14,945.79				
River Road - Part II	???	2,300	20	5,111	Y	\$12	\$2.75	\$61,333.33	\$14,055.56						\$18,835.79				
Spring Brook Street	???	275	18	550	Y	\$12	\$2.75	\$6,600.00	\$1,512.50						\$2,026.89				
Sussex Street	2010	685	18	1,370	Y	\$12	\$2.75	\$16,440.00	\$3,767.50						\$5,048.81				
Union Street	2009	1,010	16	1,796	Y	\$12	\$2.75	\$21,546.67	\$4,937.78						\$6,617.09				
Lauren Court	???	1,010	30	3,367	Y	\$12	\$2.75	\$40,400.00	\$9,258.33	\$10,207.31						\$13,027.40			
Robert Street	???	585	30	1,950	Y	\$12	\$2.75	\$23,400.00	\$5,362.50	\$5,912.16						\$7,545.58			
Jefferson Lake Road	???	1,750	18	3,500	N	\$9	\$2.75	\$31,500.00	\$9,625.00	\$10,611.56						\$13,543.34			
Route 206																			
Jans Way	2000	405	18	810	N	\$9	\$2.75	\$7,290.00	\$2,227.50										
Rosemaire Lane	2000	520	18	1,040	N	\$9	\$2.75	\$9,360.00	\$2,860.00										
Maple Road	2000	715	18	1,430	N	\$9	\$2.75	\$12,870.00	\$3,932.50	\$4,335.58						\$5,533.42			
Birch Road	2000	1,360	20	3,022	N	\$9	\$2.75	\$27,200.00	\$8,311.11	\$9,163.00						\$11,694.57			
Willor Drive	2000	700	20	1,556	N	\$9	\$2.75	\$14,000.00	\$4,277.78	\$4,716.25						\$6,019.26			
Jones Lane	?	690	18	1,380	N	\$9	\$2.75	\$12,420.00	\$3,795.00										
Drexel Drive	2001	710	23	1,814	N	\$9	\$2.75	\$16,330.00	\$4,989.72	\$5,501.17						\$7,021.04			
Francis Terrace	2001	370	22	904	N	\$9	\$2.75	\$8,140.00	\$2,487.22	\$2,742.16						\$3,499.77			
Hi Glen Drive	2001	320	31	1,102	N	\$9	\$2.75	\$9,920.00	\$3,031.11	\$3,341.80						\$4,265.08			
Whitehall Hill Road	2003	2,065	24	5,507	N	\$9	\$2.75	\$49,560.00	\$15,143.33	\$16,695.53						\$21,308.19			
Pierson Drive	2002	700	22	1,711	N	\$9	\$2.75	\$15,400.00	\$4,705.56	\$5,187.88						\$6,621.19			
Ridge Place	2002	190	18	380	N	\$9	\$2.75	\$3,420.00	\$1,045.00	\$1,152.11						\$1,470.42			
Johnson Boulevard	2002	700	20	1,556	N	\$9	\$2.75	\$14,000.00	\$4,277.78	\$4,716.25						\$6,019.26			
Lake Mohawk/Tomahawk Lake																			
Lynn Drive	???	6,160	30	20,533	Y	\$12	\$6.00	\$246,400.00	\$123,200.00	\$90,000.00									
Susan Lane	???	635	30	2,117	Y	\$12	\$6.00	\$25,400.00	\$12,700.00	\$30,000.00									
Douglas Terrace	???	1,055	30	3,517	Y	\$12	\$6.00	\$42,200.00	\$21,100.00	\$50,000.00									
Catherine Terrace	???	620	30	2,067	Y	\$12	\$6.00	\$24,800.00	\$12,400.00	\$13,020.00							\$19,236.47		
Carlisle Drive	???	850	30	2,833	Y	\$12	\$6.00	\$34,000.00	\$17,000.00	\$17,850.00							\$26,372.58		
Tartan Court	???	400	30	1,333	N	\$9	\$6.00	\$12,000.00	\$8,000.00			\$9,261.00							
Braemar Court	???	700	30	2,333	N	\$9	\$6.00	\$21,000.00	\$14,000.00			\$16,206.75							
Elizabeth Lane	???	670	30	2,233	N	\$9	\$6.00	\$20,100.00	\$13,400.00			\$15,512.18							
Ascot Lane	???	1,250	28	3,889	N	\$9	\$2.75	\$35,000.00	\$10,694.44					\$13,649.12				\$17,420.12	
Mara Lane	???	185	28	576	N	\$9	\$2.75	\$5,180.00	\$1,582.78					\$2,020.07				\$2,578.18	
Anderson Lane	???	250	30	833	N	\$9	\$2.75	\$7,500.00	\$2,291.67					\$2,924.81				\$3,732.88	
Birch Parkway	???	980	24	2,613	N	\$9	\$2.75	\$23,520.00	\$7,186.67					\$9,172.21				\$11,706.32	
Bridget Way	???	1,415	30	4,717	N	\$9	\$2.75	\$42,450.00	\$12,970.83					\$16,554.44				\$21,128.12	
Camelot Drive	???	1,500	24	4,000	N	\$9	\$2.75	\$36,000.00	\$11,000.00					\$14,039.10				\$17,917.84	
Carlson Lane	2004	480	22	1,173	N	\$9	\$2.75	\$10,560.00	\$3,226.67					\$4,118.14				\$5,255.90	
Circle Drive	???	350	28	1,089	N	\$9	\$2.75	\$9,800.00	\$2,994.44					\$3,821.75				\$4,877.63	
Deer Hill Run North	???	430	30	1,433	N	\$9	\$2.75	\$12,900.00	\$3,941.67					\$5,030.68				\$6,420.56	
Deer Hill Run South	???	830	30	2,767	N	\$9	\$2.75	\$24,900.00	\$7,608.33					\$9,710.38				\$12,393.17	
Manor Drive	2006	3,900	30	13,000	N	\$9	\$2.75	\$117,000.00	\$35,750.00					\$45,627.07				\$58,232.98	
Fieldstone Trail	???	5,440	30	18,133	N	\$9	\$2.75	\$163,200.00	\$49,866.67					\$63,643.91				\$81,227.55	
Matthew Drive	???	720	28	2,240	N	\$9	\$2.75	\$20,160.00	\$6,160.00					\$7,861.89				\$10,033.99	
Mayfair Lane	???	700	22	1,711	N	\$9	\$2.75	\$15,400.00	\$4,705.56					\$6,005.61				\$7,664.85	
Mountain Heights	2004	2,400	24	6,400	N	\$9	\$2.75	\$57,600.00	\$17,600.00					\$22,462.56				\$28,668.55	
Mountain View Terrace	2004	300	24	800	N	\$9	\$2.75	\$7,200.00	\$2,200.00					\$2,807.82				\$3,583.57	
Sandra lane	???	1,555	30	5,183	N	\$9	\$2.75	\$46,650.00	\$14,254.17					\$18,192.33				\$23,218.54	
Seneca Lake Road	???	350	25	972	N	\$9	\$2.75	\$8,750.00	\$2,673.61					\$3,412.28				\$4,355.03	
Stag pond Road	???	365	14	568	N	\$9	\$2.75	\$5,110.00	\$1,561.39					\$1,992.77				\$2,543.34	
Stone Hedge Lane	???	4,950	30	16,500	N	\$9	\$2.75	\$148,500.00	\$45,375.00					\$57,911.28				\$73,911.09	
	???	335	24	893	N	\$9	\$2.75	\$8,040.00	\$2,456.67										
Total Paving Costs:										\$702,076.25	\$545,956.04	\$321,396.09	\$524,795.61	\$310,958.20	\$275,579.87	\$406,223.25	\$759,758.24	\$1,072,749.06	\$618,399.89
Minus Grants:										-\$250,000.00	\$0.00	-\$100,000.00	-\$150,000.00	\$0.00	\$0.00	-\$150,000.00	-\$250,000.00	-\$150,000.00	
Budget Amount:										\$452,076.25	\$545,956.04	\$221,396.09	\$374,795.61	\$310,958.20	\$275,579.87	\$256,223.25	\$509,758.24	\$922,749.06	\$618,399.89

2017 Oil & Stone Cost per SY :		\$2.75	48.31 Miles		MILL & PAVING :		\$435,000.00	\$100,000.00	\$0.00	\$150,000.00	\$0.00	\$0.00	\$199,620.65	\$286,035.37	\$199,811.07	\$221,529.67
2017 Milling & Resurfacing per SY:		\$12.00			CAPE SEAL:		\$267,076.25	\$284,077.50	\$79,227.86	\$0.00	\$0.00	\$0.00	\$0.00	\$167,720.74	\$394,593.26	\$0.00
2017 Resurfacing Only per SY:		\$9.00			OIL & STONE:		\$0.00	\$161,878.54	\$242,168.24	\$374,795.61	\$310,958.20	\$275,579.87	\$206,602.60	\$306,002.13	\$478,344.73	\$396,870.22
2017 Microsurfacing Cost per SY :		\$4.00			TOTALS:		\$702,076.25	\$545,956.04	\$321,396.09	\$524,795.61	\$310,958.20	\$275,579.87	\$406,223.25	\$759,758.24	\$1,072,749.06	\$618,399.89
2017 Cape Seal Cost per SY :		\$6.00														



HAROLD E. PELLOW & ASSOCIATES, INC.

CONSULTING ENGINEERS · PLANNERS · LAND SURVEYORS

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November 28, 2016

Via Email (jsabatini@byramtwp.org)

MEMORANDUM TO: Mr. Joseph Sabatini, Byram Township Manager

FROM: Cory L. Stoner, P.E., C.M.E., Byram Township Engineer

SUBJECT: Engineering & Construction Projects for 2017
Byram Township, Sussex County

Dear Joe:

As requested, I have put together a list of projects and engineering activities that may be considered in the 2017 Byram Township Budget. The list of these projects and activities is as follows:

1. Improvements to Amity Road – Phase II/III

The first phase of Amity Road (between Roseville Road and Stag Pond Road) was milled and resurfaced in 2015. The length of this project was approximately 0.55 mile. The remaining portion of Amity Road (between Stag Pond Road and Lee Hill Road) was last improved in 2004 and 2006 and is approximately 1.45 mile in length. It is recommended that this last section of Amity Road be targeted for improvement in 2017. A 2017 NJDOT Municipal Aid Grant application will be submitted for this project in the amount of \$220,000.00.

Construction Costs	\$250,000.00
Contract Bidding, Construction Inspection & Management	\$ 15,000.00
Total Estimated Costs	\$265,000.00

2. Improvements to Lynn Drive & Associated Roadways – Phase I

Due to the degree of deterioration and amount of utility work that has occurred in the Lynn Drive section of the Township, it is recommended that improvements also be considered for 2017. The roadways that I recommend for improvements are: Lynn Drive, Susan Lane, Douglas Terrace, Carlisle Drive and Catherin Terrace.

Due to the poor conditions of Lynn Drive, Susan Lane and Douglas Terrace and the fact that these roadways are connecting roadways within the residential community, I recommend that those roadways be milled and resurfaced. I then recommend that cul-de-sac streets of Carlisle Drive and Catherine Terrace be improved by using the cape seal

process that we utilized this year on Forest Lake Drive. These roadways are lower volume roadways and are in better condition than the other roadways prior referenced. A review of costs of these improvements is as follows

Milling & Resurfacing – Lynn Drive:	\$270,000.00
Milling & Resurfacing – Susan Lane:	\$ 30,000.00
Milling & Resurfacing – Douglas Terrace:	\$ 50,000.00
Cape Sealing – Catherine Terrace:	\$ 13,000.00
Cape Sealing – Carlisle Drive:	<u>\$ 17,000.00</u>
	\$380,000.00

As shown above, the total costs for improvements to the roadways referenced above would be **\$380,000.00**. It is my understanding that \$180,000 was assigned to these improvements in 2016. These improvements, however, were not constructed in 2016 due to the waterline utility work that was being completed by Aqua NJ.

3. **Improvements in East Brookwood**

In 2017, I also am recommending that the Township consider improvements in the East Brookwood community. A number of the roadways in this section of the Township were last resurfaced back in the mid 2000's and are beginning to quickly deteriorate. These roadways are approximately 30 feet in width and will be very costly to mill and resurface. In order to preserve these roadways as cost efficiently as possible, it is my recommendation that the Township consider complete base repairs in various locations and then cape sealing some of the older roadways in 2017.

The roadways that I recommend for repairs and cape sealing in the East Brookwood community are listed below:

Cape Sealing – Brookwood Road (Phase 2 & 3):	\$ 80,000.00
Cape Sealing – Debbie Drive:	\$ 12,000.00
Cape Sealing – Briar Lane:	\$ 33,000.00
Cape Sealing – Joan Drive:	\$ 45,000.00
Cape Sealing – Ross Road:	<u>\$ 65,000.00</u>
Total Estimated Costs	\$235,000.00

It should be noted that in order to mill and resurface the roadways listed above, the cost to the Township would be approximately \$455,000 and the anticipated life cycle would be approximately 12 years before additional improvements would be needed. The anticipated life cycle for this cape seal procedure is approximately 8 years.

4. **North Shore Road Culvert Replacement**

A 60" corrugated metal culvert pipe exists along North Shore Road near the intersection with Weaver House Road. This corrugated metal culvert pipe has corroded over the years and has limited to no bottom of the pipe remaining. The compromising of the pipe has resulted in the pipe slowly buckling and the roadway settling above. The Byram Township Road Department has recently patched the roadway in this area to address settlement of the roadway over the pipe.

If left alone, this pipe will continue to deteriorate and will eventually fail to a point that the roadway will need to be closed. I, therefore, recommend that this pipe be scheduled for replacement in 2017. Due to the size of this pipe and the construction activities involved with its replacement, it is recommended that this project be bid out to an outside contractor. The estimated costs for the replacement of this pipe are as follows:

Construction Costs	\$ 45,000.00
Engineering Design & NJDEP Permitting	\$ 10,000.00
Construction Engineering, Inspection & Management	<u>\$ 10,000.00</u>
Total Estimated Costs	\$ 65,000.00

5. **Improvements to Little Paint Way**

A FEMA Hazard Mitigation Grant was originally submitted in 2013 for the construction of improvements to Little Paint Way that would address flooding that occurs along this roadway during large storm events. An approval of this grant was obtained on April 26, 2016. The improvement project as proposed included the reconstruction of approximately 250 feet of Little Paint Way in order to raise the roadway approximately 2 feet which would be higher than the flood waters that now cross over Little Paint Way during large storm events. The project would also include the construction of retaining walls to minimize fill in the flood plain areas, the construction of additional drainage pipes to convey water under Little Paint Way, guide rail and other improvements.

The original estimated cost for this project was \$125,000. The grant for the project is for \$112,500 and the remaining \$12,500.00 would be paid by the Township as a local match to this grant. Since the date of this grant submission, my office has performed preliminary engineering work to prepare the project for permitting and construction. During this preliminary engineering phase, we have determined that the estimated construction costs and permit fees have increased since originally estimated. The estimated cost for engineering, permitting, and construction is now \$165,000. Below is a breakdown of these costs:

Construction Costs	\$125,000.00
Engineering Design & Permit Application Preparation	\$ 15,000.00
NJDEP & SCSCD Permit Fees	\$ 10,000.00
Construction Engineering, Inspection & Management	<u>\$ 15,000.00</u>
Total Estimated Costs	\$165,000.00

The FEMA Hazard Mitigation Grant is a reimbursable grant and will require that the Township bid and construct the project with its own funds. Reimbursement for all eligible activities will be capped at \$112,500.00 under the current agreement. The remaining \$52,500.00 will need to be covered by the Township.

6. **Additional Improvements at Tamarack Park**

a. **Parking Lot Paving/Surfacing at Tamarack Park**

In order to keep construction costs down, the parking lots constructed as part of the Tamarack Park project consist of gravel base material. This material provides a good stable base for the parking lot and will be sufficient for vehicle traffic that will enter the two parking areas. The problem with a gravel base is that the repeated use of the parking lot will eventually result in a rough and uneven surface. This occurred within the large gravel lot at Carl O. Johnson Park and the Township surfaced this parking lot with millings and bituminous chip seal a few years ago to address this issue.

Before the park begins to be used for recreational purposes, I recommend that the Township consider paving or bituminous chip seal surfacing these parking lots. A review of the costs that would be incurred for either of these options is as follows:

Asphalt Paving (with parking space striping)\$ 50,000.00

Or

Bituminous Chip Seal (no striping).....\$ 17,500.00

The advantage of the asphalt paving of the parking lots is that the parking lots can also be striped to control the location of parking within the Park property. The bituminous chip seal process will not allow for parking space striping but will provide a more stable parking lot surface that will guard against the parking lots from being rough and uneven.

b. **Capping Existing Well**

The well for the former dwelling that existed on the property will need to be capped in accordance with State regulations. In 2013, our office tested the existing well and found that it was not capable of providing adequate water volumes for the irrigation of the two new fields. Therefore, it is recommended that this well be capped and a new well be drilled. The cost to cap the existing well is estimated at **\$3,000.00**.

c. **Drilling of New Well**

Prior to capping the existing well, it is recommended that a hydrogeologic study be performed to determine the best location of a new well. Once a suitable location is determined, a new well can be drilled to replace the existing well. It is estimated that the following costs would be incurred for the study and the drilling of a new well:

Hydrogeologic Investigation	\$ 6,000.00
Well Drilling (Bidding and Construction Management)	\$ 24,000.00
Total Estimated Costs	\$ 30,000.00

These costs do not include the cost of well pumps or tanks that may be required for the final irrigation of the new fields. The scope of these items will not truly be known until the hydrogeologic investigation is completed and the new well is drilled. At that time, the capacity of the new well will be known and the final design of the irrigation system can be completed.

NOTE: The final cost of irrigation for this facility will depend on the capacity of the new well. If the pump is found to have significant yield and capable of handling the direct connect to an irrigation water reel, then the irrigation system would consist of the installation of appropriate sized well pump and the connection into the irrigation pipe that was installed with the park project. The estimated additional costs would be approximately \$20,000 under this scenario. If the yield is not sufficient, then a system utilizing an irrigation storage tank will be required. The estimated additional costs would be in the \$40,000 to \$60,000 range for this scenario.

7. **Drainage System Improvements:**

a. **Jet Vac Stormwater Cleaning Services**

In 2014, 2015 and 2016, the Township had an outside company perform jet vac stormwater basin/pipe cleaning in order to remove silt and sediment from various drainage systems in the Township. The cleaning of these basins and pipes has allowed the Road Department to identify basins to be repaired and has helped reduced the silt and sediment that is washing into various streams and lakes within the Township.

With approximately 850 catch basins under Township jurisdiction, I recommend that this process be continued in 2017. Assuming 5 days of jet vac services similar to what was completed this year, it is recommended that **\$10,000.00** be budgeted for this work.

b. **Lake Community Inlet Retrofits**

An on-going concern in Byram Township is the runoff of silt and sediment into the lakes. There are a number of structural methods that serve to help address this issue. Many methods, however, include filter systems that are very expensive and hard to maintain. I

therefore recommend that the Township consider starting an inlet retrofit program that would replace drainage basins with structures that would include sump or baffled bottoms that would be easy to maintain over time.

A sump bottom structure is simply a drainage basin with a bottom elevation that is position at a certain depth below the invert of the outlet pipe. With this type of structure, stormwater would plunge into the structure, silt to settle on the bottom, and stormwater would flow out of the structure with a reduced concentration of silt and sediment. An approximate cost would be \$1,200 per structure. A baffled bottom structure would be an oversized catch basin that would include two chambers separated by a concrete baffle or weir. The purpose of this structure would be the same as the sump but would include a second chamber separated by a baffle or weir. This structure would increase the level of sediment removal, would reduce the outflow of floatable solids and would cost approximately \$3,000 per structure.

The above costs assume that the Byram Township Road Department will assist in the installation of the catch basin structure. If such a program is desirable, I would recommend that the Township budget **\$15,000.00** in 2017 for the start of such a program.

c. **Engineering Study of East Brookwood Estates Drainage Issues**

The Council may want to consider a detailed study of the drainage problems that exist within the East Brookwood Estates section of the Township. This study would specifically review the drainage system that collects stormwater above Ross Road and conveys the stormwater toward Lubbers Run below Brookwood Drive. The study would involve a detailed review of the existing drainage network, field visits to review drainage areas, preparation of potential improvement concepts and cost estimates for budgeting purposes. It is estimated that this study will cost **\$10,000.00**.

I have reviewed the drainage issues several times and I believe that a portion of the drainage areas above Ross Road may be able to be redirected to other drainage discharge locations to the east. The study will determine whether redirecting stormwater will be practical, determine what impacts to other properties will occur, outline what environmental permits may be required, outline what work items can be completed by the Township Road Department, and provide cost estimates for future work activities.

8. **Miscellaneous Engineering & Surveying**

a. **NJDEP Municipal Stormwater Permit**

Work will be continued to aid the municipality in fulfilling the requirements of the Municipal Stormwater permit. It is estimated that work performed by HPA to aid the Township in fulfilling the permit requirements will be approximately **\$2,000.00**.

b. **Stormwater Inlet & Outfall Mapping**

The Township's Municipal Stormwater Permit requires that all inlets and outfalls be shown on mapping to be used by the Township Road Department during the year as they clean and maintain the approximately 850 structures that exist today. My office has been including these inlets on base maps over the years but does not a fully prepared map for the Township Road Department's use. It is recommended that funding be secured so that this map can be prepared in 2017. The work to be performed will include the preparation of a GIS map with all drainage structures, outfall structures and drainage pipes located with the Township. It is estimated that work performed by HPA in order to prepare the stormwater inlet and outfall maps for the Township is **\$3,000.00**.

c. **Miscellaneous Roadway & Drainage Issues**

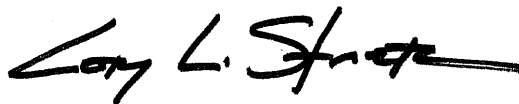
A number of roadway and drainage issues come up each year which I assist that Township Manager and the Road Department Supervisor with. It is recommended that **\$5,000.00** be set aside for miscellaneous work items that may come up during the year related to roadway and drainage problems in the Township.

d. **Tax Map Maintenance**

In order to continue with the maintenance of the tax maps, it is recommended that **\$4,000.00** be budgeted in 2017 for miscellaneous tax map changes.

I trust this list that will aid the Mayor and Council in establishing the municipal budget for 2017. If you have any questions regarding any of the above listed items or would like to meet to discuss any of the proposed work activities in greater detail, please do not hesitate to contact me.

Very truly yours,



Cory L. Stoner, P.E., C.M.E.
HAROLD E. PELLOW & ASSOCIATES, INC.
Byram Township Engineer