

BOARD OF COMMISSIONERS

AGENDA

Monday, May 22, 2017 - 6:30 PM

Pledge of Allegiance

Notice of Executive Session preceding the Board of Commissioners meeting of May 22, 2017

1. Consent Agenda

- a) Disbursement Review and Approval: 2017-05A, 2017-05B
- b) Acceptance of Department Monthly Reports
- c) Approval of Meeting Minutes from the April 24, 2017 Board of Commissioners meeting
- d) Authorization to go out to Bid for the repair of the concrete wall at Radnor Chester Road and King of Prussia Road
- e) Motion for Authorization to Receive Sealed Bids for Custodial Services at the Radnor Township Municipal Building

2. QCI Update on Radnor Memorial Library Project

3. Public Participation

4. Committee Reports

PUBLIC SAFETY

- A. Ordinance 2017-08 (***Introduction***) changing the existing parking sign on Beatrice Drive from “No Parking, 8am - 6pm” to “No Parking Except Holidays.”
- B. Discussion of New Legislation – re: University reimbursement for student use of Emergency Services (***requested by Commissioner Booker***)

PERSONNEL & ADMINISTRATION

- C. Discussion of Draft Resolution #2017-65 - Establishing a Policy for Televising or Taping Public Meetings Within the Radnor Township Municipal Building
- D. Reconsideration of a Motion to Purchase the Recording of a Previous ZHB Meeting (***requested by Commissioner Curley***)

E. Set Meeting Dates for Special Board of Commissioner meetings to discuss the following:

Possible Dates - June 19, July 10, August 21 and September 18

- a. Capital Project Funding
- b. Stormwater Project Funding
- c. Sanitary Sewer Funding
- d. Pension Funding

PUBLIC WORKS & ENGINEERING

- F. Resolution #2017-71 - Authorizing the Award of MS4 Engineering Services
- G. Discussion: Stormwater Project Ranking Criteria

- H. Presentation and Possible Motion: The Repair and Cleaning of the North Wayne Field Basin and Possible Mitigation Projects, by CH2M
- I. 471 Glenmary Road GP#17-045 – Requesting a waiver from §245-22 the Stormwater Management Requirements for Groundwater Recharge
- J. Resolution #2017-72 - SALDO Application #2016-S-15 – Final Approval– Preliminary/Final Subdivision Plan – 106 & 110 Cambria Court

FINANCE & AUDIT

- K. Ordinance 2017-09 - (**Introduction**) - Amending the 2017 Budget by transferring appropriations in the Capital Improvement Fund #05 to reallocate appropriations from Parking Lot Infrastructure group to the Sidewalk Infrastructure group

COMMUNITY DEVELOPMENT

PARKS & RECREATION

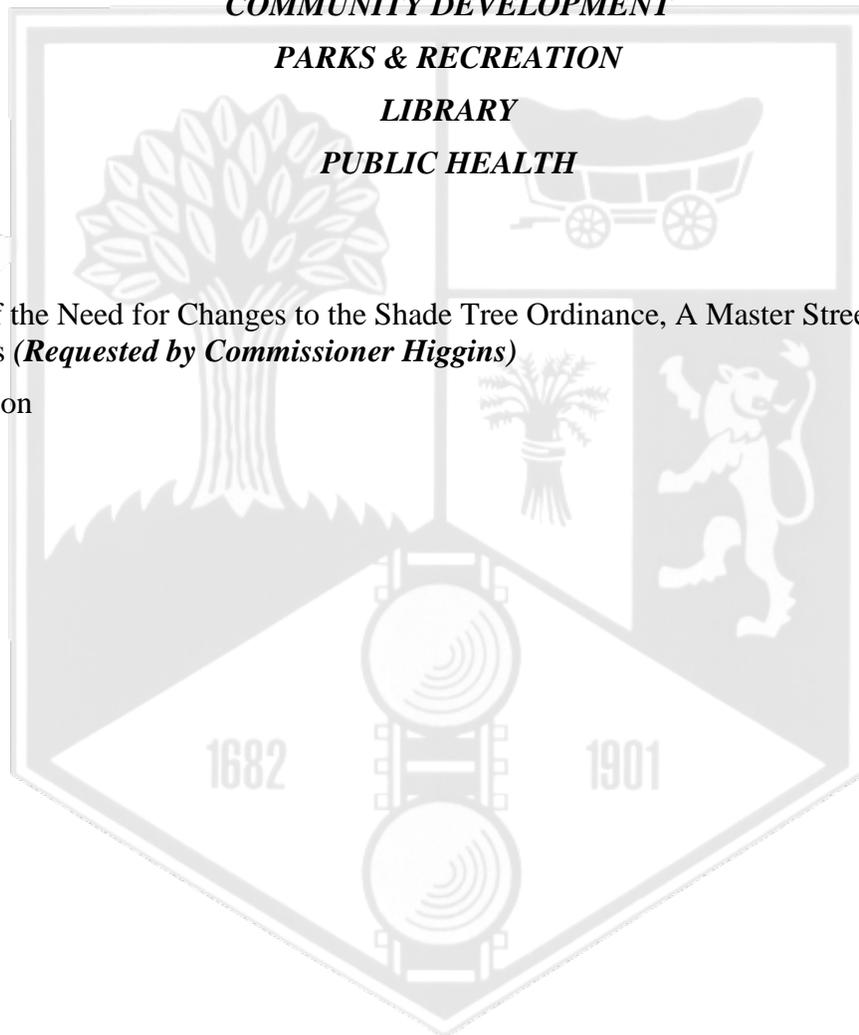
LIBRARY

PUBLIC HEALTH

Old Business
New Business

- Discussion of the Need for Changes to the Shade Tree Ordinance, A Master Street Tree Plan and Other Matters (**Requested by Commissioner Higgins**)

Public Participation
Adjournment



RADNOR TOWNSHIP
DISBURSEMENTS SUMMARY
May 22, 2017

The table below summarizes the amount of disbursements made since the last public meeting held on May 8, 2017. As approved by the Board, the Administration is now making weekly accounts payable disbursement batches and publishing those lists on the Township's web site at the following link. Please refer to those files for a detailed listing of the amounts paid by vendor by account code.

Link: <http://radnor.com/728/Disbursements-List>

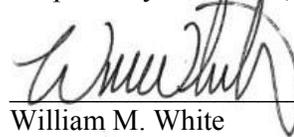
Fund (Fund Number)	2017-5A May 5, 2017	2017-5B May 12, 2017	Total
General Fund (01)	\$106,120.03	\$46,941.86	\$153,061.89
Sewer Fund (02)	665.57	8,793.95	9,459.52
Liquid Fuels Fund (03)	58.29	0.00	58.29
Capital Improvement Fund (05)	46,572.22	44,474.00	91,046.22
Police Pension Fund (07)	4,836.17	0.00	4,836.17
OPEB Fund (08)	827.87	10.30	838.17
Civilian Pension Fund (11)	4,310.17	0.00	4,310.17
Investigation Fund (12)	0.00	250.54	250.54
\$8 Million Settlement Fund (18)	11,548.88	17,034.51	28,583.39
The Willows Fund (23)	47.70	0.00	47.70
Library Improvement Fund (500)	0.00	53,439.30	53,439.30
Total Accounts Payable Disbursements	\$174,986.90	\$170,944.46	\$345,931.36
<i>Electronic Disbursements</i>	n/a	n/a	1,336,649.55
Grand Total	\$174,986.90	\$170,944.46	\$1,682,580.91

In addition to the accounts payable checks, the Township also has various electronic payments including payroll, debt service, credit card purchases and fees as well as others from time to time. The attached table reflects all of the electronic payments made since the last public Board meeting as well as those anticipated prior to the next Board meeting.

The Administration has adopted various internal control and processing procedures to insure that amounts obligated are within the budgetary limits established by the Board of Commissioners. Those procedures are monitored on a daily basis by members of the Finance Department and responsible employees of the various departments. The amounts included in the table above have been scrutinized as part of the internal control and processing procedures and have obtained the required approvals prior to disbursement.

If you should have any questions, please contact the Finance Department.

Respectfully Submitted,



William M. White
Finance Director

ELECTRONICALLY PAID DISBURSEMENT LISTING

Estimated Through June 12, 2017

Description	Account No.	Date	Purpose	Amount
Credit Card Revenue Fees - Estimated	Various Funds	6/10/2017	5/17 Credit Card Revenue Processing Fees	\$5,000.00 *
Payroll [Pension] Transaction - Estimated	07-492-4980	6/1/2017	6/17 Police Pension Payments	\$186,839.03
Payroll [Pension] Transaction - Estimated	11-495-4980	6/1/2017	6/17 Civilian Pension Payments	\$138,810.52
Payroll [Bi-Weekly] Transaction - Estimated	01-various	5/18/2017	Salaries and Payroll Taxes - General Fund	\$485,000.00
Payroll [Bi-Weekly] Transaction - Estimated	02-various	5/18/2017	Salaries and Payroll Taxes - Sewer Fund	\$17,500.00
Payroll [Bi-Weekly] Transaction - Estimated	17-various	5/18/2017	Salaries and Payroll Taxes - K-9 Fund	\$500.00
Payroll [Bi-Weekly] Transaction - Estimated	01-various	6/1/2017	Salaries and Payroll Taxes - General Fund	\$485,000.00
Payroll [Bi-Weekly] Transaction - Estimated	02-various	6/1/2017	Salaries and Payroll Taxes - Sewer Fund	\$17,500.00
Payroll [Bi-Weekly] Transaction - Estimated	17-various	6/1/2017	Salaries and Payroll Taxes - K-9 Fund	\$500.00
Period Total				\$1,336,649.55

Submitted:



* Credit card fees are charged to the Township's accounts on the tenth of the month

<u>Original Estimate</u>			<u>Actual Amount</u>
\$485,000.00	5/4/2017	Salaries and Payroll Taxes - General Fund	\$431,550.45
\$17,500.00	5/4/2017	Salaries and Payroll Taxes - Sewer Fund	\$15,478.95
\$500.00	5/4/2017	Salaries and Payroll Taxes - K-9 Fund	\$271.28
\$503,000.00			\$447,300.68

Radnor Township
Public Works Department
Monthly Report for April 2017

Building Maintenance *1 man*

Maintains & cleans facilities including trash and recycling removal – Administration and Police Building, Public Works Buildings and Radnor Activity Center. Currently being performed by Parks and Highway Staff.

Fleet *3 men*

- ❖ Daily routine checkups of police vehicles – 22 vehicles
- ❖ Vehicle safety inspections for all departments – 11 vehicles
- ❖ Major Repairs

Unit #L-1 – Replaced LR tail light with protective cage, replaced a/c compressor, dryer and expansion valve, new belts, charged system, replaced corner cutting edges on bucket.

Unit #12 – Replaced front brakes and rotors, replaced 4 tires, replaced 1 CV axle and replaced air filter. Road test.

Unit #43 – Removed and replaced rotted oil pan, replaced front differential by dealer, removed and replaced all brakes and rotors.

Unit #28 – Bad Steering Lockup – replaced power steering pump and filter, and new fluid installed.

Unit #29 – Replaced 1 rear tire and checked all pressures

Unit #29 – Replaced oil pressure sending unit, and checked operation

Unit #33 – Replaced muffler and clamps, replaced key switch

Unit #L-1 – Sanded and painted bottom of door and door frame

Unit #H-1– Replaced all brake pads and rotors. Road test.

Unit #L-2 – Replaced hydraulic line for bucket lock pin.

Unit #35 – Replaced 2 front tires, replaced rear safety light.

- ❖ Hydraulic Hose Assemblies – made 6 assemblies in house

- ❖ Scheduled Vehicle Maintenance

Unit #H-1	Unit #43
Unit #12	Unit #17
Unit #16	Unit #76
Unit #4	Unit #6
Unit #33	Unit #35

- ❖ Repair, Service and Maintain 118 pieces of equipment and vehicles

Highway *11 men*

- Attended All Staff meetings
- Installed new traffic signs
- Repaired meters for parking authority
- Installed speed boxes for police dept.
- Cleaned inlets throughout the Township
- Called Higgins Electric for Traffic Signal Concerns
- Reported Street Light outages to Higgins Electric
- Assisted with trash and recycling
- Washed All Highway Vehicles & Equipment
- Sweeper out cleaning bad spots

- Delivered Barricades for various events
- Assisted Sewer Department
- Repaired sink hole on Glenbrooke Avenue
- Replaced casting & lid on Spruce Tree
- Removed foliage blocking street signs
- Replaced and repaired signs as needed
- Operated the Tub Grinder at Skunk Hollow
- Met with AQUA
- Met with PECO
- Cleaned business district
- Cleaned Storm Sewer Lines with the Sewer Department
- Filled pot hole through the Township, including State Roads
- Installed generators for the Police Dept

- Set up Radnorshire Room for Meetings
- Completed cleaning inlets in the middle section of the township
- Delivered Mulch to EAC locations in parks
- Repaired concrete curb on Wooton
- Started cleaning inlets on south section of the township
- Assisted Mobile Dredging at the firehouse
- Removed all spreaders and snow plows
- Repaired trench in parking lot at Clem Macrone
- Cleaned the RAC every A.M.
- Repaired toilets in the Park Fieldhouses
- Installed top soil at all curb work
- Set up Detour for Wheels of Wayne
- Assisted with set-up and clean-up for Wheels of Wayne

Parks

11 men

- Attended all staff meetings
- Cleaned all Park Restrooms, 3 times per week
- Checked the Radnor Bike Trail after all storms
- Repaired benches and trash cans
- Repaired all fences in the parks
- Checked all park playground equipment
- Washed all Parks Dept Vehicles & Equipment
- Repaired swings at tot-lots
- Cleaned garages
- Cut and trimmed all township islands
- Cut all playing fields 2 x's a week
- Cut and trimmed all Township grass

- Pruned 15 trees in right of way
- Removed 9 trees in right of way
- Removed 2 trees in parks
- Removed 4 fallen trees from roads at night
- Cleared 2 tree from waterway
- Pruned 15 trees along roadway
- Repaired small equipment
- Setup and cleaned up after all Recreation Dept. events
- Assisted with trash and recycling
- Assisted with set-up and clean-up for Wheels of Wayne
- Cleaned Township Building – 4 men – every week day
- Cleaned Public Works Building – 1 man – 3 x's a week

Sewer

3 men

- Pumping Stations (5) check and maintain 5 times per week – 100 times per month
- PA One Call markouts – 298 for the month of April
- Cleaned 12 manholes
- Camared sewer lines
- Repaired 6 manholes
- Fueled generators at pumping stations
- 10 stoppages for the month of April

- Generators (4) - check and maintain 5 times per week – 80 times per month
- Jet Truck – cleaned 3,815 feet of sewer and storm lines
- Located 4 buried manholes
- Repaired 3 pumping stations
- Cleaned garages
- Assisted Highway Dept with Snow Removal – 4 men
- Washed all vehicles
- Assist trash department Monday and Tuesday

Solid Waste**19 full time and 0 part time men**

- Solid Waste and Recycling collections -7,500 collections 2 times per week
- 106 Open truck collections
- Washed all refuse vehicles
- Curbside Yard Waste Collection – Every Wednesday
- Cleaned road side on State Roads
- Picked up paint cans at residences as requested



RECREATION & COMMUNITY PROGRAMMING DEPARTMENT APRIL 2017 REPORT

Programs/Excursions/Community Events

Programs/Excursions

- After School Chess at Ithan Elementary School (29 participants)
- After School Science at Ithan Elementary School (Advanced Program/10 participants; Traditional Program/22 participants)
- Men's Pickup Basketball (28 participants)
- Little Hoop Stars with Jump Start Sports (Spring Session - 33 participants)
- Radnor Champions Wiffleball – NEW (6 participants)
- WCSA Junior Soccer at Warren Filipone Park (Spring Session - 30 participants)
- Soccer Shots at Dittmar Park (Spring Session - 79 participants)
- Spring Break Camp with Jump Start Sports at Radnor Activity Center (36 participants)
- Spring Break Soccer Camp with WCSA at Radnor Memorial Park (19 participants)
- Spring Tee-ball with Jump Start Sports at Bo Connor Park (118 participants)
- Spring Junior Tennis Lessons at Warren Filipone Park (19 participants)
- LL Bean/Radnor Conservancy Trail Hike at the Willows – (20 participants)
- Radnor Steps Community Walking Program along the Trail – (participation varies each week)
- Radnor Day Camp at (anticipated) Radnor High School (registration currently at 199 participants)

PRPS Discount Ticket Program

- Regal Movie Discount Ticket Program (79 sold to date 2017)
- PRPS Ski Destination Sales (65 sold to date 2017)

Community Events:

- Spring Eggstravaganza Event at Villanova University Stadium (approximately 3,000 in attendance)
- Chester Valley Sportsman's Association Youth Trout Derby at Saw Mill Park (registration closed with 60 participants per each of 3 sessions)
- Arbor Day Celebration at Ithan Valley Park (approximately 30 in attendance, 27 trees planted)
- Wheels of Wayne Car Show (approximately 3,000 in attendance; 123 vehicles including sponsor and Township vehicles)

Additional Programming Activity:

- Prepared season-end financial reporting and evaluation of programming, discount ticket program, community events, and projects.
- Met with spring/summer programming and event vendors/instructors, developed program details, contractual agreements, coordinated facility schedules, and disseminated communications.
- Developed and distributed Spring & Summer 2017 Recreation Activities Brochure and provided information for Summer/Spring 2017 Township Newsletter.
- Coordinated Radnor Day Camp 2017 registration, marketing, program structure, trip and special event schedules, facility usage, and the hiring and coordination of staff; this year's program will be for school-aged participants only (those who have completed Kindergarten and above) due to child care licensing requirements we have learned about under the Pennsylvania Department of Human Services (I have continued to meet with members of the PA Recreation and Parks Society to structure an operating protocol that addresses the concerns of DHS under which public recreation providers would operate for their future consideration); met with Radnor Township School District leadership to discuss camp location for 2017.
- Coordinated with Recreation/Public Works/Police/Fire Departments to prepare and plan for upcoming events including Spring Eggstravaganza, Arbor Day, Wheels of Wayne, Bike Rodeo, Great American Backyard Campout, Clem Macrone Park Grand Re-Opening and the new Wiffleball Classic; discussed logistics and set up, activities and entertainment, staffing, registration, promotions, and supplies relative to each event.

- Worked to further develop details for new Wiffleball Classic Event for children with special needs to benefit Special Olympics.
- Worked with Christ Church Ithan and Radnor Police Department to develop summer reading program.
- Met with representatives from Main Line School Night to discuss partnership wellness program.
- Continued sponsorship development by working with local businesses and organizations for current events and programs; conducted meetings with potential and current sponsors; continued soliciting sponsorship proceeds for 2017 for events and programs.
- Continued event and programming collaboration development with the Radnor Boy Scouts, Villanova University, Wayne Senior Center, the Wayne Business Association; the American Lung Association, Radnor Hotel, Radnor Conservancy, the Saturday Club, Christ Church Ithan, Main Line School Night, and with other prospective businesses and organizations within the community.

Administrative

- Processed daily phone and email communications in order to provide information on community sports, recreational activities, and events; coordinated registrations for programs; prepared purchase orders/invoices, deposited income; prepared program financial reports that include participation reconciliation, instructor payments, and performance analyses; distributed program evaluations to participants; coordinated locations and logistics for programming, scheduled facility reservations/submitted applications, maintained Outlook event calendars, met with instructors and vendors to develop program agreements and process background checks; continued utilization of PEN (Programmer's Exchange Network) listserv to obtain and share information to evaluate operations; updated all Department areas of the Township website and social media page and distributed seasonal e-newsletters; filmed monthly segment for the *Radnor 411* television show and prepared slides for the Radnor Cable Channel; coordinated marketing efforts; managed inventories and distributed supplies to programs; worked with Township solicitor on various pieces of Department legislation and matters
- Monitored Department budgetary line items and developed year-to-date performance analyses for program and service areas.
- Continued to work with Program Supervisor and Program Coordinator on daily planning, programming, events, operations, and Department projects for 2017.
- Continued working at the direction of the Finance Department on an Enterprise Resource Planning Project that will integrate each department's financial management system along with enabling online registration for recreation programming.
- Conducted interviews for Department Recreation Assistant position (Anna Carey is currently serving in the role on a part-time capacity through May).
- Conducted interviews for Radnor Day Camp Internship position.
- Attended monthly Board of Commissioners Meetings; attended and prepared reports for monthly Parks Board Meeting.
- Attended weekly staff meetings with the Township Manager and Department Heads.
- Attended meetings with Commissioner candidate.
- Attended monthly Wayne Senior Center Board Meeting.
- Attended monthly Sports Legends of Delaware County Museum Board Meeting.
- Attended Boards and Commissions Appreciation Dinner.
- Met with 2018 Aronimink BMW Golf Championship Representative to discuss impact and needs.
- Met with new president of Radnor Wayne Little League.

Parks & Facilities Usage

- **Athletic Fields:** Coordinated field scheduling and light schedules for spring 2017 with the community sports organizations, local schools, and programs - primary spring users are Radnor Wayne Little League; Radnor Boys/Girls Lacrosse; Radnor Soccer Club; St. Katharine of Siena School; Agnes Irwin School; and various other schools and organizations for rentals.
- **Park Areas:** Continued taking reservations for the 2017 season – rentals were as follows:
 - Bo Connor (0 rentals)
 - Clem Macrone Park (0 rentals)
 - Cowan (1 rentals)
 - Dittmar Park (0 rentals)
 - Fenimore Woods (11 rentals)
 - Friends of Radnor Trails Park (0 rentals)
 - Odorisio Park (0 rentals)
 - Willows Park (10 rentals)
- **Radnor Activity Center:** 13 rentals took place in April – the majority were for multiple days; coordinated busy spring schedule of seasonal programming for Little Hoops Stars, Spring Break Sports Camp, Radnor Middle School student-faculty basketball game, Futsal, Men’s Basketball, Men’s Soccer, Pickleball, and the Champions Wiffleball Program (for rain dates); continued working with a prospective group to renovate the unused portions of the building for crew training; coordinated padding installation for the north and south walls and backboard stanchions.

Parks & Facilities Meetings/Projects

- **Bleacher Replacement Project:** Replacement installation project was completed at Encke Park, Odorisio Park, Warren Filipone Park, and Clem Macrone Park - utilizes mix of 2017 Parks Capital Funding and bond proceeds per Ordinance 2015-16.
- **Eagle Scout Projects:** Coordinated three prospective scout projects – 1) Kiosk Replacement at the Willows picnic area and at the Skunk Hollow Garden entrance; Orienteering Course Markers at the Willows and Skunk Hollow.
- **Park Signage Replacement:**
 - Saw Mill Park sign has been put on hold as we evaluate the park traffic flow and logistics.
 - Clem Macrone Park, Fenimore Woods, Ithan Valley Park sign development is underway.
 - Radnor Skatepark Informational signage development is underway.
 - Park Informational Signage relative to dogs/pets – installation underway.
- **Park and Trail Improvements** – a bond ordinance was voted at the October 26, 2015 Board of Commissioners Meeting for the following parks and trails (\$5.75M - \$4.3M Parks/\$1.45M Trails); met with staff and continued working towards completion of the various park projects outlined –

Bo Connor Park
Cappelli Golf Range
Clem Macrone Park
Emlen Tunnel Park
Encke Park
Fenimore Woods
Ithan Valley Park
Petrie Park
Radnor Trail
Skunk Hollow
Warren Filipone Park
Ardrossan Trail
West Wayne Segment (8A-E, 1C, 1D)
Marth Brown Segment
Villanova – Chew Segment (16A, 9C, ½) - omitted
Radnor Station to Harford Park (9F)

- **Clem Macrone Park Master Planning:** Comprehensive park renovation project underway since mid-November with anticipated completion summer 2017 and a grand re-opening as part of the Garrett Hill 4th of July Celebration; project utilizes funding from several sources including grants, capital, and bond proceeds per Ordinance 2015-16.
- **Emlen Tunnell Park:** Continued to work with RWLL to redevelop batting cage area and convert them to temporary cage set ups; worked on comfort station design options with various vendors.
- **Encke Park:** Coordinated installation of new door locks for bathroom doors; fencing improvements at ballfields still underway – project is utilizing funding part of the bond proceeds per Ordinance 2015-16; conducted assessment of concession stand with Radnor Wayne Little League and the Township Health Inspector.
- **Fenimore Woods Rehabilitation Project:** Comprehensive park renovation project planning underway; park outbound site and topographical surveys have been prepared; preliminary/ conceptual park improvement plan #2 was reviewed with the Parks Board in March, preliminary review of this plan occurred with Township traffic engineer; working to further identify the improvement details and corresponding budget; coordinated pond study.
- **Odoriso Park Bench Replacement:** Coordinated replacement of 11 spectator benches at the park's ballfield.
- **Radnor Skatepark Improvements:** 2015 improvements to the skatepark entailed replacement and upgrades to structures along with resurfacing by utilizing funds received as part of the Township Building cell tower contract renegotiation. Due to a lack of adherence of the top color coating to the surface, the asphalt was milled and redone – this process was completed and the skatepark reopened in mid-June 2016 - subsequent to the recent process, surface delamination has occurred once again and the park was closed due to safety concerns in early August; after park structure modification and movement, the park reopened in mid-August; staff and council are pursuing a bond claim for the deficiencies that have occurred with a goal to repair the park commensurate to the expectations of the original scope of work.
- **Veterans Park Planning:** (formerly St. Davids Community Park) – a planning project is underway to honor Veterans, educate visitors, and improve various features of the site with the conceptual plan prepared by Simone Collins Landscape Architecture; fundraising is underway by the Township Manager for the project.
- **The Willows:** There is continued evaluation by the Board of Commissioners to find a viable use for the Mansion that will allow for its continued public use, public usage of the park with minimal impacts, building improvements to ensure code compliance consistent with intended use, and building updates. At the 1/23 BOC Meeting, the Board voted to authorize staff to obtain a business plan to determine feasibility of building renovations and ongoing operability for public use. The Board will continue its review and discussions into 2017.

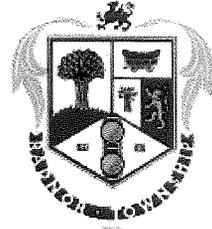
Respectfully Submitted,



Tammy S. Cohen
Director of Recreation & Community Programming

Interoffice Memorandum

TO: BOARD OF COMMISSIONERS
FROM: KEVIN KOCHANSKI, DIRECTOR
DEPARTMENT OF COMMUNITY DEVELOPMENT
SUBJECT: APRIL MONTHLY REPORT
DATE: MAY 1, 2017
CC: ROBERT A. ZIENKOWSKI, TOWNSHIP MANAGER



**Community Development
Department**

Attached for your review is the Community Development Monthly Report for the month of April 2017. Please note the following highlights:

- Building Permit Fee Revenue totaled \$66,785.00 with 66 permits issued
 - Electric Permit Fee Revenue totaled \$5,116.00 with 31 permits issued
 - Mechanical Permit Fee Revenue totaled \$4,293.00 with 23 permits issued
 - Plumbing Permit Fee Revenue totaled \$4,558.00 with 28 permits issued
 - Zoning Permit Fee Revenue totaled \$675.00 with 9 permits issued
 - Banner Permit Fee Revenue totaled \$50.00 with 1 permit issued
 - Design Review Board Application Fee Revenue totaled \$900.00 with 5 applications received
 - Historic and Architectural Review Board Revenue totaled \$150.00 with 3 applications received
 - Zoning Hearing Board Revenue totaled \$2,350.00 with 3 applications received
-
- Permit and application revenue for April 2017: \$ 84,877.00
 - Permit and application revenue year to date: \$1,804,312.00
-
- Permits and applications for April 2017: 169
 - Permits and applications year to date: 781
-
- Inspections conducted for April 2017: 665
 - Inspections conducted year to date: 2,614

TOWNSHIP OF RADNOR
Minutes of the Meeting of April 24, 2017

The Radnor Township Board of Commissioners met at approximately 6:30 PM in the Radnorshire Room in the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087

Commissioners Present

<i>Elaine Schaefer, President</i>	<i>Phil Ahr, Vice President</i>	<i>Donald Curley</i>	<i>Luke Clark</i>
<i>John Nagle</i>	<i>Richard F. Booker</i>	<i>James C. Higgins</i>	

Also Present: *Robert A. Zienkowski, Township Manager; John Osborne, Township Treasurer; John Rice, Township Solicitor; William White, Finance Director; Steve Norcini, Director of Public Works; William Colarulo, Superintendent of Police; Tammy Cohen, Director of Community Programming and Recreation; Roger Philips, Township Engineer; Amy Kaminski, Traffic Engineer and Jennifer DeStefano, Executive Assistant to the Township Manager.*

President Schaefer called the meeting to order

Notice of Executive Session on April 10, 2017 and preceding the Board of Commissioners meeting of April 24, 2017

There was an Executive Session held on April 10, 2017 where all commissioners attended and matters of personnel were discussed. All commissioners attended the April 24, 2017 executive session; where matters of personnel, real estate and litigation were discussed as well as a performance review of the Township Manager.

1. *Consent Agenda*

- a) *Disbursement Review and Approval: 2017-03D, 2017-03E, 2017-04A, 2017-04B*
- b) *Acceptance of Department Monthly Reports*
- c) *Approval of Meeting Minutes from the March 13, 2017 and March 27, 2017 Board of Commissioners meeting*
- d) *HARB:*
 - *HARB-2017-07 – 409 Oak Lane - Remove existing 1 story shed addition at rear of main house and remove existing garage and shed in rear yard. Add new 1 story and 2 story additions to main house and new garage. Restore exterior of main house including the front porch.*
 - *HARB-2017-08 – 233 Walnut Avenue - Demolish existing screened in porch, slab and portion of rear wall. Construct a 2-story rear addition including 2nd floor bathroom, kitchen addition off the rear of home.*
 - *HARB-2017-09 – 303 S Wayne Avenue - Renovation of existing home while restoring all existing windows facing front on home. Adding a family room to back of home and kitchen.*
- e) *Resolution #2017-55 - Amending the Consolidated Fee Schedule to include professional service pricing for inspection services*
- f) *Resolution #2017-60 - Amending the Consolidated Fee Schedule to include Chapter 150 Design Review Board fees*
- g) *Resolution #2017-62 - Authorizing the Sale of Surplus Vehicles and Equipment*
- ~~h) *Motion to Authorize Radnor Township to Partner with Haverford Township with our Comprehensive Plans and to Receive RFP's for Said Plans*~~
- i) *Motion to Authorize the Execution of the Radnor Township TAP Trail Easement Agreement*
- j) *Resolution #2017-61 – McGinley Subdivision – Sewage Facilities Planning Module*
- ~~k) *Motion to Authorize to receive Bids for the Painting & Repair of the Exterior of the Willows Cottage*~~

- l) Motion to authorize to receive Bids for the painting of the Matsonford Road Bridge
- m) Motion to Authorize to file a complaint for Building Code Violations at 200 S. Ithan Avenue

Commissioner Booker requested for item h & k to be removed from the consent agenda.

Commissioner Clark made a motion to approve the consent agenda excluding items h & k, seconded by Commissioner Nagle. Motion passed 7-0.

2. Commendations of Radnor Police Officers

Superintendent Colarulo presented Radnor Fire Personnel and Radnor Police Officers with Commendations for an incident which occurred on March 27, 2017.

3. Community Recognitions

Tammy Cohen, Director of Recreation and Community Programming, presented an award to Kathy Mair for her community leadership through in the development of the Radnor Committee for Special Education - <http://www.radnorcse.com/>, a 501c3 parent-led organization formed in 2015 that represents 500 families in Radnor Township that are living with special needs (K-12) along with her working with our Department to establish the first special needs basketball program this winter, dubbed “Radnor Champions”, and now part of a year-round offering for special needs structured programming. The recognition will be a celebration of Kathy’s efforts as a founder of the Committee along with the program. She also showed a short video as well from the program’s last game.

Mr. Zienkowski, Township Manager, presented an award to Mr. And Mrs. Gaskins for their Community Service as Residents of Radnor Township for Over 50 Years; Initially resided on Glenbrook Avenue ; Long Time Community Activists for Glenbrook Avenue in relation to student rentals restoring community relations and removing several unruly student house and landlords; Long time members of Bryn Rose Civic Association; Founding Members of the Radnor Town watch in 1976; Founding Members and Planners of the Radnor CommUNITY Breakfast (Founded in 2000); 2014 Main Line Martin Luther King Association Award Recipients for 25 years of Community Cohesiveness and Service to Bryn Mawr and Radnor Township. One of the founding residents of the Radnor Community Awareness Committee in 1998. Active members of Bethel African Methodist Episcopal Church in Bryn Mawr, Pa. Serving many roles in the church including and not limited to: The Church’s senior organizational leadership in education; Senior Ushers ; Human Resource Coordinators ; Church Choir. Mr. Gaskins - Original Member of the “White Hall” Gang on Glenbrook Avenue – (Based out of Ciro Iannota & Son, Expert Shoe Repair on Glenbrook Avenue).

4. Reappointment to Radnor Memorial Library Board – Heather Reilly

Commissioner Schaefer made a motion to appoint Heather Reilly and Missy Deck to serve as Township Representatives on the Radnor Memorial Library Board, seconded by Commissioner Clark. Motion passed 7-0.

5. Public Participation

Ken Taylor, Willow Avenue – He spoke in regards with the agenda item in regards to the Stormwater Advisory Committee as well as a potentially and future agenda item pertaining to N. Wayne Field Basin.

Marty Costello – He spoke in regards to a new program in the community called The Casket Flag Ceremony.

Michelle and Dan Skolnick – They announced the 6th Annual Carol H. Axelrod Blood Drive on May 9, 2017 7 am to 7 pm in the Radnorshire Room of the Township Building.

Roberta Winters – She commented in regards to a forum that the League of Women Voters sponsored about Promoting Public Participation through Civil Discourse within the past month. The video of the program can be found on the Township website.

6. Committee Reports

PERSONNEL & ADMINISTRATION

A. Resolution #2017-63 - Adoption of the Radnor Township Organization Chart

Commissioner Ahr made a motion to approve, seconded by Commissioner Schaefer.

Mr. Zienkowski discussed the proposed changes to the Organizational Chart and Mr. White discussed the financial impacts/savings to the Township. There was a brief discussion amongst the Commissioners.

Commissioner Schaefer called the vote, motion passed 7-0.

B. Resolution #2017-64 – Approval of the Salary Schedule

Commissioner Ahr made a motion to approve, seconded by Commissioner Clark. Motion passed 7-0.

C. Motion to Authorize for the Promotion of Deputy Superintendents and Lieutenant

Commissioner Schaefer made a motion to authorize promoting Lieutenant Block and Lieutenant Flanagan to Deputy Superintendent, and Sergeant Shawn Dietrich to Lieutenant, seconded by Commissioner Clark. Motion passed 7-0.

D. Administer Oath of Office to Deputy Superintendents and Lieutenant

Mr. Zienkowski and Superintendent said a few words in regards to each of the candidates. Superintendent Colarulo called for the presentation of the colors. The Honorable Ann Osborne swore in Andrew Block as Deputy Superintendent, Christopher Flanagan as Deputy Superintendent and Shawn Dietrich as Lieutenant. Superintendent Colarulo presented each Officer with their Police Badge to have pinned by a family member or close friend. Superintendent Colarulo called for the retiring of the colors. They each spoke a few brief words thanking their families and the Township. Superintendent Colarulo called for the retiring of the colors.

A. Ordinance #2017-06 (Introduction) – Approving a Three-Year Lease for the Philadelphia Area Independent School Business Officers Association (PAISBOA) For a Portion of the Radnor Township Municipal Building, Consisting of Approximately 2,730 Square Feet

Commissioner Ahr made a motion to introduce ordinance 2017-06, seconded by Commissioner Schaefer. Motion passed 6-0 with Commissioner Higgins not in the room for the vote.

B. Resolution #2017-66 - Re-Establishing a Stormwater Management Advisory Committee (SWMAC)

Commissioner Ahr made a motion to approve, seconded by Commissioner Higgins.

Commissioner Schaefer made a motion to amend the resolution to remove the clause in the resolution that states - *The Committee will act as the Radnor Township liaison to the surrounding local governments who are in the same watersheds as Radnor Township, including but not limited to Tredyffrin Township and Easttown Township.*, seconded by Commissioner Curley.

Public Comment

Ken Taylor, Willow Avenue – He spoke in regards to his concerns with the proposed amendment to the resolution.

Commissioner Schaefer called the vote on the amended motion, motion passed 6-1 with Commissioner Booker opposed.

There was a discussion amongst the Commissioners and Staff in regards to the proposed resolution.

Commissioner Schaefer called the vote on the original motion as amended, motion passed 6-1 with Commissioner Booker opposed.

C. Resolution #2017-65 - Establishing a Policy for Televising or Taping Public Meetings Within the Radnor Township Municipal Building

There was a discussion amongst the Commissioners whether to only discuss the above proposed resolution and not take action until they have financials provided on the cost it would be to televise all meetings or to take action on the resolution tonight.

Commissioner Curley made a motion to approve the resolution amending paragraph 3 to indicate that requirement would not apply for any Board or Commission including the Zoning Hearing Board, Rental Housing Board, Code Appeals Board and Planning Commission; seconded by Commissioner Booker.

Commissioner Nagle made a motion to table, seconded by Commissioner Schaefer. Motion passed 4-3 with Commissioners Booker, Clark and Curley opposed.

PUBLIC WORKS & ENGINEERING

D. Presentation & Update by T&M Associates for the Banbury Way Stormwater Management Project (A Recommendation from the SWMAC is Included in the Packet)

They made a brief presentation which can be found on the Township website at: <http://www.radnor.com/910/Board-of-Commissioners-Presentations>. There was an agreement that T&M would come back to the Board with more of the true costs of the options proposed in the presentation as well as the infrastructure that will need to be replaced as well as for staff to reach out the bank landowner.

h) Motion to Authorize Radnor Township to Partner with Haverford Township with our Comprehensive Plans and to Receive RFP's for Said Plans

Steve Norcini explained that in 2016, Lori Hanlon-Widdop, Assistant Township Manager of Haverford Township, approached Radnor Township in regards to a joint Comprehensive Plan. Radnor Township was invited to a presentation by David Schwartz, P.E., AICP, of CH Planning Ltd., outlining the benefits of a multi-municipal comprehensive plan between the neighboring Townships of Haverford and Radnor. As Haverford Township was ready to embark on a Comprehensive Plan, they felt this was the appropriate time to determine if Radnor Township would wish to partner with Haverford in this endeavor. In the CH Planning presentation (please see attached), they noted the many benefits of a Joint Comprehensive Plan. To

mention a few of those benefits: economies of scale, regional perspective, better opportunities for grants, multi-modal transportation/traffic management, stormwater management (let's not forget MS4!), and trail systems. The purpose of this legislation is to authorize staff to jointly issue a Request For Proposal to qualified planning firms, in regards to a multi-municipal comprehensive plan, between Radnor and Haverford Townships. Radnor Township's Comprehensive Land Use Plan was last updated in 2003.

There is no fiscal impact in regards to issuing the Request For Proposal. Should the Board of Commissioners wish to award the recommended firm to provide the Multi-Municipal Comprehensive Plan, the cost will be determined at that time. The attached CH Planning Power Point notes a possible total expense to the Township of \$75,000, which may be reduced to \$50,000 if a Municipal Assistance Program (MAP) Grant. Please use this information for an example of the magnitude of cost only. Once proposals are received, the actual cost will be known.

Commissioner Schaefer made a motion to authorize, seconded by Commissioner Ahr. Motion passed 6-1 with Commissioner Booker opposed.

k) Motion to Authorize to receive Bids for the Painting & Repair of the Exterior of the Willows Cottage

Commissioner Nagle made a motion to authorize, seconded by Commissioner Ahr. There was a brief discussion amongst the Commissioners and staff in regards to the motion. Commissioner Schaefer called the vote, motion passed 6-1 with Commissioner Booker opposed.

***FINANCE & AUDIT – None
PARKS & RECREATION***

Tammy Cohen, Director of Recreation and Community Programming reviewed all of the upcoming Parks and Recreation events which can be found on the Township website.

***COMMUNITY DEVELOPMENT – None
LIBRARY - None
PUBLIC HEALTH***

Commissioner Nagle encouraged everyone to watch the last Board of Health meeting as there was a presentation on ticks.

PUBLIC SAFETY - None

Old Business

Commissioner Curley commented in regards to the sign at Unkerfer Park and inquired why it didn't go through the Design Review Board. There was a brief discussion amongst the Commissioners and staff.

Commissioner Curley made a motion to have Design Review Board for review of the sign which was installed at Unkerfer Park, seconded by Commissioner Booker.

Public Comment

Sara Pilling – She commented in regards to the size of sign being out of scale, new plantings (spruce trees) being too many and out-of-scale and sign/plantings blocking the original plantings placed in this small triangular space that reflected our Welsh heritage.

Motion passed 6-1 with Commissioner Nagle opposed.

New Business

- Discussion and Possible Motion - Pennsylvania Department of Community and Economic Development (DCED) Grant Application; Eagle Rd.-N. Wayne Ave. Sidewalk and Authorization for Gilmore and Associates to complete the Grant Application with the Pennsylvania Department of Community and Economic Development (DCED) Grant Application; Eagle Rd.-N. Wayne Ave. Sidewalk (Requested by Commissioner Higgins)

The request before you will allow Gilmore & Associates, Inc. to revise (from the aforementioned Act 87 Grant Application) any documents, plans and estimates and prepare application documents for a DCED MTF Grant to construct sidewalks from the intersection of Woodsworth Court and North Wayne Avenue, on the east side to the intersection of Eagle Road and "North Wayne Avenue. The two curb ramps would be connected via a painted crosswalk. A pedestrian could then walk safely on sidewalks on North Wayne Avenue from Woodsworth Court to the Wayne Regional Rail Station, and beyond. Previous grant costs were identified and revised as follows; however, the below numbers may be revised as Gilmore & Associates reviews all required document submissions and adjust estimates as needed. A final resolution acknowledging that the Township will fund the project along with the grant amount requested will be provided to the Board of Commissioners once the cost estimates and grant request numbers are finalized as required by the grant application. This includes a fiscal impact of the \$5,100 grant application cost to Gilmore and Associates; however, the project includes an estimated fiscal impact of \$121,120, including the \$5,100 for the application. The 2017 Budget includes a line item for this project (page 238), however, no funds were identified. If this project is selected, the construction will not occur until 2018 or 2019 so the Board of Commissioners may elect to defer this expenditure to 2018.

There was a discussion amongst the Commissioners and staff in regards to the above. Commissioner Higgins made a motion to authorize staff to prepare a grant application to Department of Community and Economic Development for the engineering and construction of a sidewalk on N. Wayne Avenue from Eagle Road and the Township Line and we commit the Township to the application funds of \$5,100, seconded by Commissioner Schaefer. Motion passed 6-1 with Commissioner Booker opposed.

Public Comment

Jim Gingrich – He inquired if green streets would be considered?

- Discussion and Possible Motion Authorizing Gilmore and Associates to complete a Pennsylvania Department of Community and Economic Development (DCED) Grant Application for ADA Curb Ramps, Sidewalk Replacement, and Curb Replacement on the South Side of Lancaster Avenue, from Garrett Avenue to Barley (Requested by Commissioner Ahr and Township Manager)

The stretch of sidewalk noted above (+/- 1,500 LF), carries pedestrians from the Radnor House Condominium, Rosemont Plaza, Garrett Hill, Conestoga Village, Regional Rail customers, and Villanova University, to name a few. The current sidewalk is under-sized in width, does not comply with ADA requirements for curb cuts, does not have painted crosswalks, and the curb is so low as to cause concerns to pedestrians when vehicles pass by. The proposed project will entail addressing the aforementioned shortcomings of the existing sidewalk, and will connect with the newly installed sidewalk by Villanova University at Pike Field/future Performing Arts Center, and the wide sidewalk by Radnor House Condominiums. The proposed motion is to authorize Gilmore & Associates to provide a cost proposal to perform the requisite preliminary engineering for the grant application. As part of that work, an estimated project cost and Township's financial requirement will be provided. Gilmore & Associates will provide a cost estimate for this work.

There was a discussion amongst the Commissioners and staff and it was agreed that the above sidewalk as well as sidewalks on S. Devon, Glenmary and Roberts Road will be looked at and Amy Kaminski will bring more information back to the Board at the next meeting with initial assessments.

Public Comment

Sara Pilling, Garrett Avenue – She is in support of the above discussed sidewalk on Lancaster Avenue.

Public Participation

Ken Taylor, Willow Avenue – He spoke in regards to stormwater at N. Wayne Field.

Toni Bailey – She is in support of the proposed sidewalk on Lancaster Avenue.

Baron Gemmer – He commented in regards to televising of Township meetings as well as noting the location of the meetings.

There was a discussion amongst the Commissioners in regards to reimbursing John Haines for the recording of the last Zoning Hearing Board and the Township could place it on their website. Commissioner Curley made a motion to reimburse John Haines \$185.00 for the recording of the last Zoning Hearing Board meeting, seconded by Commissioner Booker. Commissioner Curley chose to table the motion until next meeting.

There being no further business, the meeting adjourned on a motion duly made and seconded.

Respectfully submitted,

Jennifer DeStefano

Authorization to go out to
Bid for the repair of the
concrete wall at Radnor
Chester Road and King of
Prussia Road

Radnor Township

PROPOSED MOTION

DATE: May 16th, 2017,

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Director of Public Works *SM*

CC: Robert A. Zienkowski, Township Manager
William R. White, Assistant Township Manager & Finance Director

MOTION: **Authorizing the Public Works Department to Receive Sealed Bids for Custodial Services at the Radnor Township Municipal Building.**

The Public Works Department is requesting authorization from the Board of Commissioners to receive sealed bids (via Penn BID e bidding site) for custodial services at the Radnor Township Municipal Building and the Radnor Activity Center at the Sulpizio Gymnasium.

Background

In 2017, the Public Works Department had three open positions authorized by the Board of Commissioners to be filled: 1.) Parks Maintenance laborer, 2.) Parks Maintenance laborer/arborist, and 3.) Solid Waste laborer. Currently, the Solid Waste Position is filled, and the Township is seeking candidates for the two Parks Maintenance positions.

The current method of custodial services for the two buildings is not cost effective, and the time required to perform the work, and level of service needed, provides the impetus to evaluate the use of a professional cleaning service.

The current cost of the employee who has been previously cleaning the building is as follows:

Base Hourly Wage	Payroll Liability/Hour	Benefits/Hour	Total Hourly Rate	Annual Cost
\$30.91	\$4.04	\$25.28	\$60.23	\$125,291

Staff is requesting to fill the open Parks Maintenance Laborer position with the employee currently performing the custodial duties. Subsequently, we request to receive sealed bids for Custodial Services at the Radnor Township Municipal Building and Radnor Activity Center at the Sulpizio Gymnasium, using the annual cost noted above to fund the service. We are still seeking candidates for the open Parks Maintenance laborer/arborist position.

QCI Update on
Radnor Memorial Library
Project

Public Participation

Radnor Township

PROPOSED LEGISLATION

DATE: 05/12/2017

TO: Robert A. Zienkowski, Township Manager

FR: William A. Colarulo, Police Superintendent

LEGISLATION: Ordinance 2017-XX is authorizing rescinding “No Parking, 8:00 AM – 6:00 PM, Except Saturday, Sunday and Holidays” on Beatrice Drive. The new parking requirements on Beatrice Drive are “No Parking Except Holiday.”

LEGISLATIVE HISTORY: None.

PURPOSE AND EXPLANATION: These changes are necessary to mitigate traffic conflicts on Beatrice Drive.

FISCAL IMPACT: None.

RECOMMENDED ACTION: The Police Department respectfully requests the Board to adopt the amendment at the regular Board of Commissioners Meeting on _____, 2017.

Discussion of New
Legislation – re: University
reimbursement for student
use of Emergency Services
*(requested by
Commissioner Booker)*

**RESOLUTION NO. 2017-65
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, ESTABLISHING A POLICY FOR TELEVISIONING
OR TAPING PUBLIC MEETINGS WITHIN THE RADNOR
TOWNSHIP MUNICIPAL BUILDING**

WHEREAS, the Radnor Township Board of Commissioners desires to establish a policy for televising or taping public meetings held within the Township Municipal Building; and

WHEREAS, the Township currently televises and/or tapes several public meetings for Township Advisory Boards and Commissions; and

WHEREAS, the Board desires to clarify and prioritize what Advisory Boards and Committees should be televised.

NOW, THEREFORE, be it hereby **RESOLVED** that the Radnor Township Board of Commissioners does hereby establish the following policy for televising or taping public meetings of Township Advisory Boards and Commissions:

1. All Township Board and Commission meetings shall be televised not including the Radnor-Haverford-Marple Sewer Authority or the Memorial Library of Radnor Board.

2. In the event that there is an irreconcilable conflict regarding Township meetings on the same date and/or a lack of the required technology to televise or tape multiple meetings, the Township may eliminate the following meetings from mandatory televising or taping:

- a. Citizens Communication Council
- b. Civil Service Commission
- c. Building Code Appeals Board
- d. Educational Service Agency
- e. Rental Housing Appeals Board

3. All other Board and Commission meetings not identified in the foregoing paragraph shall be televised. If televising is unavailable then the meeting must be rescheduled to the next available date where televising is available. This requirement would not apply for any Board or Commission meeting under a required time restraint mandating the necessity for a meeting.

4. All advisory Boards and Commissions have the right to meet in executive session provided that such meetings comply with the Pennsylvania Sunshine Act. Robert's Rules of Order shall apply and minutes shall be taken at all meetings.

5. The Township staff is directed to evaluate and report on the feasibility and cost of creating a second venue for televising advisory Board and Commission meetings.

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this ____ day of ____, 2017.

RADNOR TOWNSHIP

By: _____
Name: Elaine P. Schaefer
Title: President

ATTEST: _____

DRAFT

Reconsideration of a
Motion to Purchase the
Recording of a Previous
ZHB Meeting
*(requested by
Commissioner Curley)*

Set Meeting Dates for Special
Board of Commissioner meetings
to discuss the following:

Possible Dates - June 19, July 10,
August 21 and September 18

Capital Project Funding
Stormwater Project Funding
Sanitary Sewer Funding
Pension Funding

RESOLUTION NO. 2017-71
A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, AUTHORIZING MELIORA
DESIGN TO PROVIDE MS4 ENGINEERING SERVICES IN
THE AMOUNT OF \$124,195

WHEREAS, the Township is required to comply with the Department of Environmental Protection's Municipal Separate Storm Sewer System Program

WHEREAS, the Township solicited cost proposals, through a Request For Proposals for MS4 Engineering Services, that was posted on the Penn BID eBidding site

WHEREAS, the Stormwater Management Advisory Committee recommends the award of the contract to Meliora Design, in the amount of \$124,195

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby authorize Meliora Design to provide MS4 Engineering Services, as outlined in the Request For Proposals, in the amount of \$124,195.

SO RESOLVED this 22nd day of May, A.D., 2017

RADNOR TOWNSHIP

By: _____

Name: Elaine P. Schaefer

Title: President

ATTEST: _____

Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: May 15th, 2017

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Director of Public Works

CC: Robert A. Zienkowski, Township Manager
William R. White, Assistant Township Manager & Finance Director
Stormwater Management Advisory Committee

LEGISLATION: **Resolution #2017-71:** Authorizing the Award of MS4 Engineering Services

LEGISLATIVE HISTORY: Staff was given permission from the Board of Commissioners to solicit proposals for professional services, specifically MS4 Engineering Services, in February of this year.

PURPOSE AND EXPLANATION: The Township is required to submit its MS4 permit in the Fall of this year, and the Pollutant Reduction Plan is due late summer. The Pennsylvania Department of Environmental Protection (DEP) administers the State's Municipal Separate Storm Sewer System (MS4) program. The program contains the following Minimum Control Measures (MCMs): 1.) Public education and outreach, 2.) Public involvement and participation, 3.) Illicit discharge detection and elimination, 4.) Construction site runoff control, 5.) Post-construction stormwater management in new development and redevelopment, 6.) Pollution prevention and good housekeeping for municipal operations and maintenance. The required tasks for the consultant in terms of the MCMs are defined in the RFP. The second portion of the program is the Pollution Reduction Plan or PRP. This task entails determining the existing pollutant load in our streams, and the selection of BMPs to achieve the required reductions in pollutant loading. These BMPs will be put forth, with input from staff and the SWMAC, in the 5 year capital plan, for presentation to the Board of Commissioners. *(for more information on the MS4 program, please see the attached RFP or visit DEP's website: <http://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater/Pages/default.aspx>).*

The cost proposal tabulation is as follows:

Respondents to MS4 Request For Proposals	
Engineering Firm	Fee
Hanover Engineering	\$87,950
LandStudies, Incorporated	\$118,670
Mellora Design	\$124,195
Cedarville Engineering Group, LLC.	\$132,700
McCormick-Taylor, Incorporated	\$147,490

The Stormwater Management Advisory Committee has provided a memorandum (please see attached) recommending that the Board of Commissioners award the MS4 Engineering Services to Mellora Design, in the amount of \$124,195. The Mellora cost proposal is attached for your information.

Implementation Schedule: Pending Board of Commissioners approval, a purchase order will be processed, immediately. Concurrent with that process, the Solicitor will be provided the Meliora Professional Services Agreement for his review and comment. The intent is to have the project begin ASAP.

Fiscal Impact: The \$124,195 fee for MS4 Engineering Services will be funded by the Stormwater Fund.

Recommended Action: It is respectfully recommended that the Board of Commissioners authorize Meliora Design to complete the MS4 Engineering Project, in the amount of \$124,195.

Please note: the second paragraph of the SWMAC memorandum puts forth recommendations for four stormwater management projects.

Enclosures: Stormwater Management Advisory Committee Memorandum – “SWMAC 2017 Recommendations”
Meliora Design Cost Proposal
Radnor Township Request For Proposals - MS4 Engineering Services.

MEMORANDUM SWMAC-2017-03

TO: RADNOR BOARD OF COMMISSIONERS
FROM: RADNOR TOWNSHIP STORMWATER ADVISORY COMMITTEE
SUBJECT: SWMAC MAY 2017 RECOMMENDATIONS
DATE: MAY 11, 2017
CC: RADNOR TOWNSHIP ADMINISTRATION

At tonight's Radnor Township Stormwater Advisory Committee (SWMAC), we publicly discussed and made the following recommendations:

1. SWMAC voted 4-0 to recommend to the BOC that the Township select Meliora Associates for assisting the Township in MS4 compliance. This recommendation is based upon a detailed technical review by a SWMAC subcommittee over the last two weeks of the submitted RFPs. Due to Radnor's MS4 deadlines, this contract action should be taken as soon as possible.

2. Based upon a technical review of the recently delivered CH2M Radnor Township-wide Assessment, SWMAC voted 5-0 to recommend to the BOC that the following four stormwater capital improvement projects identified by CH2M be initiated: South Wayne Ave Inlet Pipes (A-03), West Ave Green Streets (I-03), Modified SEPTA Lot Retention System (I-13) and Radnor Trail (JK-06). We look forward to briefing the BOC at your earliest convenience. SWMAC recommends issuing an RFP for design of these four capital improvements projects, with construction planned for 2018.



Meliora Design

MS4 Services for Radnor
Township

submitted to

Radnor Township

April 26, 2017

MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

259 Morgan Street, Phoenixville, PA 19460

P: 610.933.0123 F: 610.933.0188

www.melioradesign.com

In Association with:

Stroud Water Research Center

Brandywine Conservancy

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MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

April 26, 2017

Stephen F Norcini, PE
Director of Public Works and Engineering
Township of Radnor
301 Iven Avenue
Wayne, PA 19087-5297

RE: MS4 Services for the Township of Radnor

Dear Mr. Norcini:

Meliora Design, in collaboration with the Environmental Resources Center of the Brandywine Conservancy (the Conservancy), and Stroud Water Research Center, is pleased to submit this proposal to provide MS4 services and to support Radnor Township in successfully meeting the requirements of the PAG 13 Stormwater Management Program.

We understand that this work effort has an aggressive timeline to meet the deadlines for submittal, and that, if selected, we must provide the services, information, and material for Radnor to fully comply with submittal requirements by September 15, 2017.

Meliora is a civil-engineering firm with a strong foundation in water resources engineering and sustainability. We have assembled a team that we believe can successfully achieve the permit requirements and support Radnor Township's active efforts to reduce stormwater flooding, improve water quality, and maintain quality of life for residents in a cost-effective manner.

A critical component of the PAG-13 Stormwater Management Program is the development of the Pollution Reduction Plan (PRP) to meet PaDEP requirements. The PRP must be technically robust and informed by strong communication with the Township officials, staff, SWMAC, residents and property owners to inform cost-effective decisions for maintainable stormwater management measures. The PRP and associated pollutant reduction goals are new requirements of the PAG-13 program, and we have assembled a team that is specifically familiar with the goals and requirements of this program.

The PRP requirement was initially developed during litigation settlement negotiations between PaDEP and Citizen's for Pennsylvania's Future (PennFuture) in 2014. Meliora was engaged by PennFuture to provide technical support in this settlement process, including participation in a series of working meetings with PaDEP technical and legal staff during which the PRP concept was established. We are familiar with the goals of PaDEP and the PRP intent and requirements, and will bring this understanding to this project.

We will be supported in this effort by Stroud and the Conservancy, both organizations with which Meliora has strong working relationships. For the past several years, Stroud has been developing a GIS-informed WikiWatersheds tool named "Model My Watershed" (<https://wikiwatershed.org/>), intended to graphically analyze both land use impacts and stormwater best management practices, and to convey this information in a visual, dynamic format for public understanding and decision making. Recently, with support from the William Penn Foundation and the National Science Foundation, this tool has been expanded from a simple education tool to include MapShed, PaDEP's analytical modeling tool for PAG-13, and a Delaware River Basin high resolution GIS. We believe this tool is a very powerful asset in developing the PRP and in effective communication with Radnor's decision-makers and stakeholders. We believe Model My Watershed can especially support public education and support of Township decisions.

MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

We are joined in this technical effort by the Brandywine Conservancy, providing expertise in public engagement and education, as well as planning and ordinance development specifically focused on protecting and improving water quality. Through their long history of working in many southeastern Pennsylvania municipalities, the Conservancy understands the challenges of creating ordinances that meet regulatory goals, and that are effective when implemented. They understand the importance of effective public education to establish public support. They will bring that experience and perspective to this effort.

We are excited by the challenge that this work effort represents, and look forward to the opportunity to support Radnor Township in successfully meeting the PAG-13 requirements with a plan that is understood throughout the Township, and that builds on the extensive stormwater program that Radnor has worked to develop. We thank you for your consideration, and if you have any questions or concerns, I can be reached at 610-933-0123, or at michelea@melioradesign.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'm-a', written in a cursive style.

Michele C. Adams, PE, LEED AP
Principal and Founder

1. Understanding of Project and Proposed Scope

1. Understanding of Project and Proposed Scope

Project Understanding

We understand that the goal of this project is to provide "turnkey" services to Radnor Township for preparation and submittal to PaDEP of the PAG-13 Notice of Intent (NOI), with all required supporting material including the Pollution Reduction Plan (PRP), by the required date of September 16, 2017. Following the September 16, 2017 NOI submission, we understand that the work effort includes providing services for Radnor to meet all six Minimum Control Measures, and to provide documentation for submission of the Annual MS4 Report due to PaDEP by September 30, 2018. Radnor is seeking a consultant to complete all tasks and provide all materials and information to assure that Radnor is compliant with PAG-13 and the MS4 program, and to meet all deadlines.

We understand that Radnor's goal is to meet the minimum requirements in a cost-effective manner, and since the PAG-13 process is evolving, the Township does not wish to go beyond the MS4 permit requirements. At the same time, Radnor has already invested significant planning, financial, and engagement resources into the issue of stormwater management. While cost-effectively meeting the basic MS4 requirements, it will be Meliora's goal to assure that all work products also provide the greatest possible benefits to Radnor and its residents.

Pollutant Reduction Plan (PRP)

The required "Pollution Reduction Plan" (PRP) is a new component of PAG-13. As indicated on the PaDEP stream map (Figure 1 PaDEP Map of Impaired Streams in Radnor Township), and in Table 1 PaDEP List of Impaired Streams and PRP Requirements for Radnor Township, many of the streams and tributaries in Radnor are currently impaired, primarily due to siltation. The PRP requirement applies to all drainage areas for municipal sewers that discharge to the listed streams that are impaired by siltation and/or nutrients. As can be seen in Table 1, there are thirteen (13) listed stream segments that are impaired by siltation, including one stream (Valley Run) that is impaired by both siltation and nutrients.

Under the new PRP requirement, Radnor must first quantify the existing pollutant loads of sediment and nutrients originating from the contributing drainage areas to the MS4 outfalls. Radnor must then develop a "pollutant reduction plan" to reduce the pollutant loads by 10% for sediment and by 5% for nutrients within the five-year permit period. Radnor is permitted to exclude areas that do not drain to MS4 outfalls, as well as excluding certain areas such as PennDOT roads and other

exemptions. The pollutant load reductions do not necessarily need to occur within each stream's drainage area, but can be implemented within Radnor's larger permitted MS4 area. But the challenge is to quantify the pollutant loads and define a cost-effective plan for pollutant reduction within the five-year permit term, and to develop this plan for review and approval within the Township and subsequent submittal to PaDEP by September 16, 2017. The schedule is aggressive.

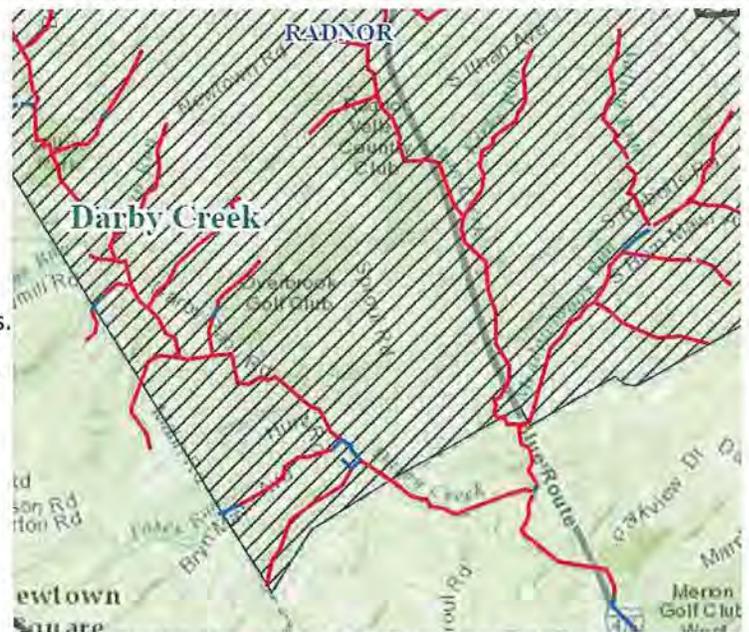


Figure 1-PaDEP Map of Impaired streams in Radnor Township

Some existing stormwater practices can be credited towards the PRP reduction goals in this permit term, but the larger PaDEP intent of the PRP process is to require implementation of water quality improvement measures until impaired streams are no longer impaired due to MS4 discharges. It is impossible to know how the PRP requirements will be imposed by PaDEP over time, but the permit requirements are not likely to become "easier" until the streams demonstrate water quality improvement. It will be important that the PRP recommendations and stormwater program meet permit requirements, but also cost-effectively provide longterm recommendations that are in Radnor's best interests.

Despite the aggressive schedule, we are confident that the work effort can be completed in a manner that is cost-effective and beneficial to Radnor. As described below in the Proposed Scope of Work, we are proposing to use PaDEP's approved MapShed model, which is also incorporated into Stroud's "Model My Watershed" application, for initial analysis, communication, and decision-making with Radnor regarding pollutant load sources and potential pollutant reduction practices to be documented in the PRP. The Model My Watershed

Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)	Other Cause(s) of Impairment
Gulph Creek	Appendix E-Siltation (5)	Water/Flow Variability (4c)
Schuykill River	Appendix C-PCB (4a)	
Saw Mill Run	Appendix C-PCB (5)	Cause Unknown (5), Water/Flow Variability (4c)
Mill Creek	Appendix E-Nutrients, Siltation (5)	Water/Flow Variability (4c)
Miles Run	Appendix C-PCB (5)	Cause Unknown (5), Water/Flow Variability (4c)
Meadowbrook Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Little Darby Creek	Appendix C-PCB (5)	Cause Unknown (5), Water/Flow Variability (4c)
Kirks Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Cobbs Creek	Appendix B-Pathogens (5), Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Hardings Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Abrahams Run	Appendix C-PCB (5)	Cause Unknown (5), Water/Flow Variability (4c)
Foxes Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Finn Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Doom Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Darby Creek	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Camp Run	Appendix C-PCB (5)	Cause Unknown (5), Water/Flow Variability (4c)
Browns Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Valley Run	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
Ithan Creek	Appendix C-PCB (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)

Table 1-PaDEP List of Impaired Streams in Radnor

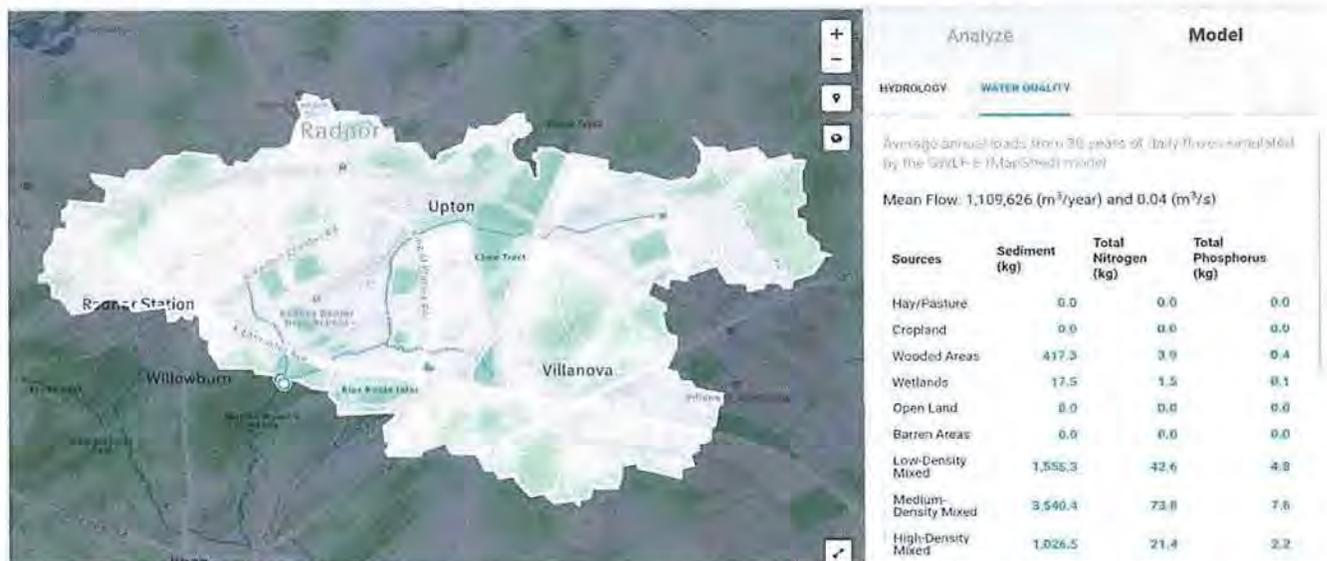


Figure 2-Model My Watershed Example Showing current land uses and pollutant loads for sediment

tool includes a high-resolution GIS for land use, which can be further updated and refined with information from the existing Township MS4 GIS map, and subsequently refined to exclude areas not subject to PAG-13 and the PRP requirements. The power of this tool is in its ability to quickly and visually explain current land use impacts to both

decision makers and the public, and to apply “what if” scenarios to the implementation of stormwater best management practices (BMPs) such as infiltration and bioretention, vegetated buffer strips, and streambank restoration. The Model My Watershed tool will greatly enhance Township and public understanding of the pollutant sources, as well as decision-making for the required pollutant reduction goals. We believe that using the Model My Watershed Tool will allow the Township to make well-informed decisions (in a very constrained time period) for the PRP. The PRP will broadly define actions that the Township must implement within the permit term to meet the 10% sediment and 5% nutrients (for Mill Creek only), regarding the type and amount of practices that must be implemented. The goal will be to meet the requirements of the PRP while providing Radnor with flexibility to cost-effectively meet the permit pollutant reduction requirements to be implemented over the next five years.

Proposed Scope of Work

There are three general components to this work effort:

1. **Coordination of the required information and data to document compliance with the six (6) Minimum Control Measures** Many components of the requirements have been completed by Radnor under the previous permit period but may require updating or additional information. Some updated MCM elements are needed for preparation of the NOI and PRP. **The first Annual Report** under this permit period documenting the MCM activities is due **September 30, 2018**.
2. **Preparation of the Notice of Intent** The completed NOI is due to PaDEP by September 16, 2017, with all supporting material and information.
3. **PRP Preparation** The PRP is also due **September 16, 2017**, and will require an aggressive work effort to prepare a Draft PRP that includes analysis of existing conditions, evaluation of potential pollutant reduction measures, and the necessary input from Radnor Township for review, modification, and approval by September 16, 2017. We see this as the most time-challenged component of the work effort, and believe that the use of Model My Watershed will greatly facilitate communication and decision making for this initial PRP in a manner that meets PaDEP permit requirements.



Figure 3-Model My Watershed BMP Options

With recognition of the aggressive schedule requirements, we are proposing a fairly straightforward and efficient approach to this project as described in detail further below, but summarized as follows:

- The Meliora Team will meet with the Township to obtain and review the available information, and to better understand the Township’s priorities, concerns, and planned upcoming stormwater activities. There is likely to be synergy between planned actions and activities and PRP requirements, and Radnor should maximize credit for all opportunities.
- We will prepare an initial analysis of existing conditions and potential upcoming activities using MapShed and Model My Watershed. We will meet with the Township to communicate results and recommendations including the type and extent of stormwater measures to be implemented, and locations. We will provide estimates of project costs and timing for funding purposes over the 5 year permit and based on the Five Year Plan. We will note the Responsible Parties for O&M, and will identify outside funding sources for practices such as riparian restoration. We will be prepared to present this information in a public format if desired. We will work with the Township to confirm the preferred approach to meeting the PRP requirements, and prepare a Draft PRP for review and approval by the Township prior to the September 16, 2017 submission date.
- We will also complete the NOI, including any tasks necessary to complete the NOI prior to the September

16, 2017 submission date. The Draft NOI will be prepared in a timely manner to allow for review by the Township, revisions, and submittal by September 16, 2017.

- In coordination with the PRP and NOI submittal, and in the twelve months following the initial preparation of the PRP and NOI, we will complete the work components necessary to update and meet the six MCMs within the permit period. We will provide ordinance, maintenance and policy recommendations to support a cost-effective stormwater MS4 program, and will identify potential grant funding sources for recommended activities. We will prepare the Annual Report for BOC approval and submission to PaDEP by September 30, 2018.

With this in mind, our proposed Work Effort and Deliverables are described below:

Task 1 Kickoff Meeting, Information Gathering and Review, and Initial Analysis for Draft PRP and NOI

4 weeks May 8 – June 2, 2017

The Meliora Team will begin by meeting with the Township representatives to review the goals, schedule, and deliverables for this work effort. At this time, we will seek to obtain all available information and data necessary for the work effort, and to understand the Township's goals and priorities. We will review the available information and identify any gaps or necessary actions to meet deadlines. Using MapShed and Model My Watershed, updated with available Township GIS information, we will do an initial analysis of the existing sources of pollutants and loads within the regulated MS4 area. We will provide the Township with a summary of this analysis, and our initial findings and recommendations. We anticipate a working meeting with Township representatives to review this information. We will use the Model My Watershed tool to communicate information regarding pollutant loads from different land uses and areas of the Township, and to evaluate different scenarios for proposed stormwater activities to meet the PRP reduction requirements. We will work with the Township to look at various "what if" options to confirm recommendations within the PRP and identify cost-effective approaches for Radnor.

During this time period, we will also begin assembling necessary materials and completing the NOI for coordination with the Township. We anticipate strong communication with the Township during this period through bi-weekly calls or web-based GoTo Meetings to coordinate materials, confirm information and/or recommendations, etc. We understand that it will be our responsibility to assemble all materials for permit deadlines, but we will strive to do this in coordination with the Township for accuracy and correctness.

Tangible Work Products:

- Kick-off Meeting with Township representatives and gathering of available information
- Review of available and updating of information and existing GIS for PRP development
- Initial MapShed analysis of existing conditions and pollutant loads for PRP
- Initial Mapshed Analysis of existing and potential pollutant reduction measures for PRP
- Three working conference calls or GoTo meetings to review findings and recommendations
- Summary of initial analysis, findings and recommendations
- Initial Draft NOI and PRP, with supporting materials for review and input by Township
- One (1) Working meetings with Township and SWMAC to review findings and initial recommendations for PRP, and NOI materials. Evaluation of different recommendations using Model My Watershed.

Task 2 PRP and NOI Preparation and 2017 Annual Report

7 weeks June 5-July 24, 2017

In this task, Meliora will refine and update the Mapshed analysis based on input from the Township and SWMAC to

confirm potential pollutant reduction activities and finalize the PRP. We will also update necessary materials for the NOI submission. It will be our goal to quantify the required pollutant reduction requirements and define activities and measures that will achieve these goals within the 5-year permit period. But we will strive to do this in a manner that provides the Township with maximum flexibility over the permit period, and the ability to “take credit” for pollutant reduction measures achieved through both public stormwater projects and private development projects.

The PRP and NOI must be submitted to PaDEP by September 16, 2017, and we understand that these documents must be presented to the Board of Commissioners three (3) meetings prior to submission. The materials will be presented to the BOC and two meeting later the Board can approve the materials for submission. Looking at the Township calendar, it appears that the we will need to present to the BOC by the July 24 meeting in order for the BOC to approve the NOI and PRP at the September 11 meeting.

Again, in this Task we will maintain close coordination with the Township through bi-weekly or as-necessary calls and GoTo meetings to assure timely preparation of the application materials and confirmation of all recommendations and decisions. We will meet with the Township to review the final materials (PRP, NOI, and supporting documents) prior to the July 24 BOC meeting.

Tangible Work Products:

- Three conference calls or GoTo meetings to review findings and recommendations
- One (1) Working Meeting with Township and SWMAC
- Final NOI, supporting materials, and PRP
- Presentation of PRP and relevant information to BOC for approval by September 11, 2017
- Annual Report for 2017

Task 3 Submission of NOI and PRP to PaDEP by September 16, 2017 and Annual Report for 2017

Following approval by the BOC on September 11, 2017, Meliora will submit all necessary material to PaDEP including the NOI, the Township Map, the PRP, and supporting information.

Tangible Work Products:

- Submission of all NOI, supporting materials, and PRP to PaDEP by September 16, 2017
- Submission of 2017 Annual Report

Task 4 Stormwater Management Program and Six (6) MCMs; Preparation of Annual Report for 2018

12 Months August 2017 through July 2018

Subsequent to the preparation of the NOI and PRP, the Meliora Team will undertake the various activities necessary to update and meet the requirements of the Stormwater Management Program and Six MCMs. Some materials and activities have been done under the previous permit coverage, including educational activities and MS4 map development, and some, such as the outfall screening and preparation of O&M plans for Township facilities, must occur in this permit period.

The work effort will include updating public education and engagement materials, updating the Public Involvement and Participation Plan (PIPP), and conducting inspections, mapping, and sampling necessary to meet Illicit Discharge Detection and Elimination Requirements. We will update the MS4 map with SALDO plans and other municipal projects as applicable, and provide a system for tracking information.

We will also work to provide any inputs or recommendations to the 2005 Stormwater Ordinance and other Township ordinances to maximize Radnor’s ability to meet PRP requirements cost-effectively. This may include recommendations to require stormwater management in new and redevelopment projects specifically to meet PRP goals. The City of Philadelphia has aggressively met its stormwater permit requirements in large part by requiring new or redevelopment projects to incorporate stormwater management that meets City pollutant reduction goals.

We will work with the Township to identify and evaluate the benefit of this approach in Radnor.

As appropriate, we will provide recommendations for Construction Site Stormwater Runoff Control, and we will review existing procedures for tracking of MCM requirements, including recommendations for improving accessibility to information and tracking. We will document the Pollution Prevention and Good Housekeeping operations for the three (3) facilities owned by the Township, including a written O&M program for each, with supporting training sessions for each facility.

We will also prepare the Annual Report for submission to PaDEP by September 30, 2018. Similar to the NOI and PRP preparation, we will work to have a Draft Annual Report prepared by June 2018 for review and input by the Township. The Final Annual Report will be prepared by late July 2018 for presentation and approval at the BOC meetings prior to submission to PaDEP by September 30, 2018.

Tangible Work Products:

- MCM #1 Public Education and Outreach–
 - Update program for public education and outreach plan
 - Support updated Contact list
 - Prepare annual flyer or pamphlet, and updated material for website
- MCM #2 Public Involvement
 - Update PIPP Plan, including measurable goals
 - Prepare materials for public outreach and tracking and documentation of feedback
 - Documentation of SWMAC or other measures as meeting MCM#2 requirement
- MCM #3 Illicit Discharge Elimination and Ordinance Recommendations
 - Prepare plan for dry weather testing
 - Update of MS4 map with relevant information as appropriate
 - Outfall screening (253 outfalls) including sampling and lab analysis – assume 10 sampling events per permit requirements
 - Recommendations for Stormwater Ordinance and compliance
 - Update Educational information for outreach regarding illicit discharges
- MCM #4 Construction Site Stormwater Runoff
 - Review of and recommendation to update Township’s requirements, including defining E&S goals
 - Recommendations for procedures to receive and track public inquiries.
- MCM #5 Post-Construction Stormwater in New and Redevelopment
 - Review of existing procedures related to tracking components of post-construction stormwater activities, in coordination with new Township software
 - Recommendations and process for tracking post-construction stormwater, including inspection forms and timeline recommendations
 - Recommendations to improve compliance with stormwater ordinance to meet PRP goals
- MCM #6 Pollution Prevention/Good Housekeeping
 - Written O&M program for three (3) Township facilities
 - Training sessions (3) for employees, 2 hours each. Guidance on handling different situations that may

arise and how to address.

- Six conference calls or GoTo meetings with Township for coordination of materials for MCMs, and preparation of Annual Report for 2018
- Two (2) Working Meetings with Township and/or SWMAC to review work products, deliverables, and Draft Annual Report
- Preparation of Annual Report and all supporting materials for approval by BOC and submission by September 30, 2018
- One (1) presentation to BOC
- PRP update and implementation recommendations

Task 5 Submission of Annual Report to PaDEP by September 30, 2018

Following approval by the BOC, Meliora will submit the Annual Report and all necessary material to PaDEP by September 30, 2018. We will strive to develop and document this material in a manner that can be easily updated in subsequent annual reports

Tangible Work Products:

- Submission of Annual Report and all supporting materials to PaDEP by September 30, 2018

2. General Statement of Qualifications

2. General Statement of Qualifications

Description of Roles

Meliora Design will be the Prime Contractor for this effort. Michele Adams will serve as Project Principal and Marc Henderson will serve as Project Manager. Michele will ensure that company resources are allocated to meet project deliverables on time and within budget and assure quality control for all deliverables. As Project Manager, Marc will serve as the point of contact and will develop, monitor and track budgets and schedules, prepare all progress reports and meeting agendas and minutes, coordinate project designs, and attend design meetings. Marc is a registered professional engineer with extensive experience as Project Manager in both stormwater design projects as well as regulatory compliance and stormwater planning, including serving as PM for the LID Manual and MS4 Program for the City of Chattanooga.

Marc will be supported by technical staff at Meliora for the various project components. He will be supported by John Rains for technical analysis and modelling using MapShed and Model My Watershed, as well as coordinating the outfall screening and sampling. Stuart Berg, PE will provide QA/QC for modelling analysis, PRP recommendations, and sampling, and oversight of the municipal training for O&M. Meliora will lead the coordination and preparation of all materials for the NOI and PRP submission in September 2017, and will lead and coordinate the subsequent efforts in 2018 for the Annual Report, including outfall inspection and sampling, public outreach materials, and recommendations for tracking of projects in the Township. We will also provide the O&M plans and training for the three municipal facilities.

The Stroud Water Research Center will support the application and use of Model My Watershed (and the embedded PaDEP MapShed Model) as a tool for evaluating current stormwater pollutant loads to meet the PRP requirements. Model My Watershed will be used to visually communicate to Township staff, SWMAC members, and others the current sources of pollutants in Radnor, and to actively evaluate "what if" scenarios of implementing different types of stormwater practices in different areas of the Township to meet the pollutant reduction goals over the 5-year permit period. Dr. Melinda Daniels will be the primary Stroud representative in model application and communication of analysis.

The Brandywine Conservancy will support several roles. Building on their extensive work on riparian buffer installation for MS4 requirements in the Chesapeake Bay Watershed, they will provide input on recommendations for meeting the PRP through restoration activities, including identifying sources for additional funding. They will review the recommended Stormwater Ordinance changes and other relevant ordinance components with specific focus on assuring that the ordinance facilitates the MS4 permit requirements. They will also support the preparation and coordination of materials for public outreach, including web content updates. Seung Ah Byun will be the primary Conservancy representative in these tasks.

Quality Control

Meliora Design has a two-part Quality Control Program. First, the Quality Requirements are defined by the Township and the design team, including all of the procedures, criteria, and standards required to produce a high quality end product.

After the Quality Requirements are determined, the second part our Quality Control procedure includes the planned and systematic engineering process to meet these requirements. We do this through checks and balances which ensure that designs are sound and that the work is free of mistakes.

Our Quality Assurance program is the planned and schematic process by which we demonstrate that the final design

MELIORA DESIGN

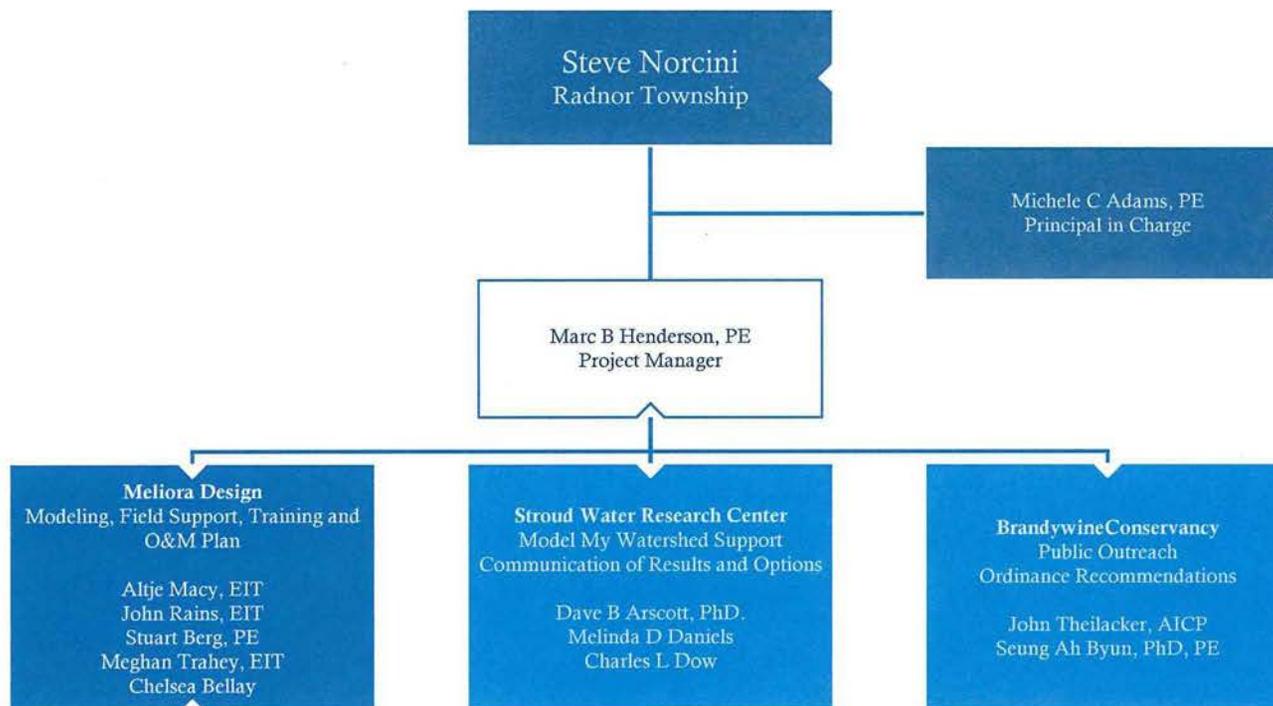
Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

product meets the quality requirements. We do this by reviewing check prints of calculations and drawings to ensure that the final drawings represent the design calculations and intent.

Organization Chart

Our proposed organization chart is including on the following page for your review..



Firm Profiles



Firm Profile



Committed to Sustainability Through Thoughtful Design

Founded in 2007 with a focus on sustainable site design and water resources management, Meliora Design's capabilities have expanded to provide a wide array of services to our clients. An award-winning engineering firm, Meliora specializes in *civil*, *structural*, and *water resources engineering*. Our commitment to sustainability, collaboration, and innovation spans across all disciplines and projects. Meliora Design's experienced team of engineers, scientists and planners value an integrated design process for creative and cost-effective solutions.

A Mission-Driven Organization Devoted to Finding Solutions for a Sustainable Future Meliora Design's Mission is to create better relationships with our environment by developing engineering solutions that build respectfully and enhance our communities by protecting and restoring our natural resources. We are privileged to serve a wide range of clients including government agencies, universities, commercial developers, institutions, community organizations, and advocacy groups. Meliora Design is a registered Woman's Business Enterprise (WBE) in the City of Philadelphia as well as Delaware, Georgia, New Jersey, New York, Ohio, and Pennsylvania.



Services Available

Civil Engineering and Sustainability

- Sustainable Site Design
- Stormwater Management
- Water and Sewer Infrastructure
- Permitting and Regulatory Compliance
- Alternative Wastewater and Water Reuse
- Environmental Site Assessment
- Educational Workshops, Charettes, and Community Engagement
- Construction Administration

Structural Engineering

- Institutional
- Educational
- Commercial
- Bridges
- Residential
- Railroad Electrification
- Construction Related Services

Water Resources Design and Planning

- Low Impact Development and Green Infrastructure
- Stormwater Plans and Manuals
- Stormwater Master Plans and MS4 Planning
- Resiliency Planning and Design
- Stream and Floodplain Management
- Stream Restoration and Modeling
- Water Quality Modeling and Monitoring

STROUD WATER RESEARCH CENTER

OUR FOCUS IS FRESH WATER

Since 1967, the Stroud Water Research Center's internationally acclaimed scientists and educators have been focused on one thing — fresh water.

While our research concentrates on streams and rivers — including how they function as a whole and the complex web of life that inhabits them — there's a much larger story behind our efforts. The health of these freshwater ecosystems is our first line of defense in preserving clean water — and clean water is essential to all life.

Only through knowing how healthy streams and rivers work, and what happens when they become polluted, can we determine how to protect and preserve this vital resource now and for generations to come.

Science Without Bias

We're not an advocacy group. We practice science without bias.

Our scientific rigor ensures the research integrity that is critical to building trust in the preventative and prescriptive measures that we recommend for water conservation and watershed stewardship.

Businesses, government policy makers, landowners, and community volunteers alike use the Center's research findings to make informed decisions about issues that affect water quality and availability — from land use planning and storm water management to water treatment and conservation.

The screenshot shows the top portion of the WikiWatershed website. At the top is a dark navigation bar with the 'Wiki Watershed' logo on the left and a menu of links: 'About', 'Model', 'Monitor', 'Manage', 'Help', 'News', and 'Donate'. Below the navigation bar is a dark banner with the tagline 'With each advancing knowledge and stewardship of fresh water' and social media icons for Facebook, Twitter, and YouTube. The main content area features the Stroud Water Research Center logo and a brief description of the center's mission. Below this is a section titled 'Explore the WikiWatershed Toolkit' which contains two large buttons: 'Model My Watershed' and 'Model Micro Site Runoff'. Each button includes a short description of the tool's capabilities and a 'Launch the App' button. To the right of these buttons is a 'NEWS' section with a photo of a group of students and a headline: 'Students Win National Competition Using Model My Watershed'.



**BRANDYWINE
CONSERVANCY**

SUMMARY OF QUALIFICATIONS

The Brandywine Conservancy's (Conservancy) mission is to conserve the natural and cultural resources of the Brandywine Creek watershed and other selected areas in southeastern Pennsylvania and northern Delaware with a primary emphasis on conservation of water quantity and quality. The mission is founded on a conviction that a healthy and secure natural environment is essential to meet the needs and aspirations of present and future generations.

Established in 1967, the Conservancy has permanently protected over 62,000 acres of critical resources and provided technical assistance to municipalities and landowners in Pennsylvania and Northern Delaware. The Conservancy has provided professional consulting services to over 50 municipalities in nine counties, protected over 221 miles of streams, and worked with over 1,200 property owners to permanently conserve land via 458 conservation easements.

Our Municipal Assistance Program has provided innovative planning and technical assistance to local governments and organizations for nearly 50 years through comprehensive planning, innovative regulatory ordinances, GIS mapping, natural/cultural resource inventories and analyses, and land development reviews.

Working closely with public and non-profit partners, our Land Conservation Program acquires and facilitates the permanent protection of farmland and critical natural and historic resources with agricultural and conservation easements. Our staff applies a whole farm approach to preservation, which includes the preparation of a conservation plan, as well as facilitating the implementation of Best Management Practices (BMPs).

Using an integrated approach that has achieved measurable results, the Conservancy continues to assist landowners in the voluntary conservation of their lands and helps municipalities use innovative tools that discourage suburban sprawl while supporting sustainable planning practices. To date, the Conservancy's work has resulted in better regulations, more preserved land, and more transparent decision making. In no specific order, our tools for technical assistance include:

- Comprehensive Planning
- Natural Resource and Open Space Planning
- Incentive-based Zoning and Conservation Design
- Transfer of Development Rights Programs
- Cost of Community Services Studies
- Stormwater Management
- BMP Implementation
- Reforestation Projects (using both contractors and volunteers)
- GIS Mapping and Analyses
- Source Water Protection
- Agricultural and Conservation Easements
- Whole Farm Conservation Plans

BRANDYWINE CONSERVANCY

P.O. Box 141 • Chadds Ford, Pennsylvania, 19317 • (610) 388-2700

Relevant Project Experience

Citizen's for Pennsylvania's Future (PennFuture), Harrisburg, PA PennFuture v. Commonwealth of Pennsylvania, DEP and Upper Gwynedd Township

Date: 2014–2015

Services Provided

- Expert Witness for Litigation
- Stormwater Technical Expertise
- Development of Programmatic Recommendations
- Working Meetings with PaDEP for Policy Development

Reference

Michael Helbing*
Staff Attorney
PennFuture
1500 Walnut Street, Suite 502
Philadelphia, PA 19102

P: 215.545.9694

*Formerly with PennFuture

Michele Adams of Meliora Design served as the Technical Expert for PennFuture in their 2013-2015 work effort with the Pennsylvania Department of Environmental Protection (PaDEP) to negotiate requirements related to Pennsylvania's current MS4 program and permitting process (known as PAG-13).

Through a series of amicable and productive working meetings between PennFuture and PaDEP technical and legal staff, the requirements for a revised MS4 permitting approach were developed, including methods for pollutant analyses, time frames for compliance, and agreements regarding important technical components of Pennsylvania's MS4 program. In November 2014, a Stipulation of Settlement outlining improvements to Pennsylvania's MS4 permitting system was filed. The stipulation included components for greater public engagement as well as technical agreements on a process for total maximum daily load (TMDL) reduction achievement and pollutant reduction plans for impaired streams without TMDLs. Through an collaborative process of technical cooperation and working meeting, an improved MS4 process was defined.

An important element of this work was the requirement for a Pollutant Reduction Plan, or PRP, intended to guide municipalities in developing a plan to improve water quality in impaired streams where a TMDL did not exist.

DEP > Businesses > Water > Bureau of Clean Water > Stormwater Management > Municipal Stormwater

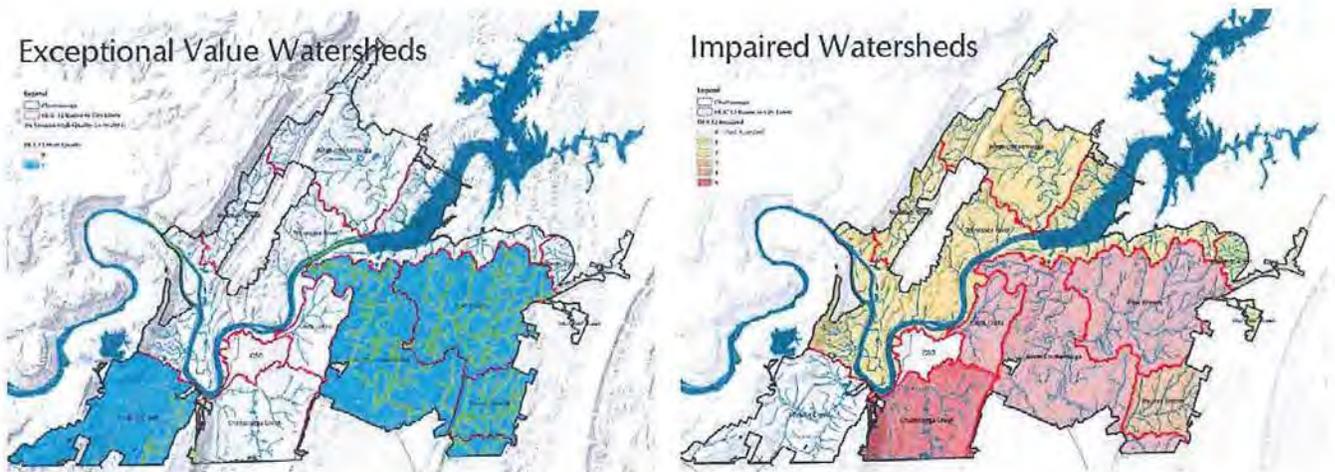
MUNICIPAL STORMWATER

WHAT'S NEW: MS4 PERMITTEES NOW PREPARING

- **POLLUTANT REDUCTION PLANS AND**
- **TMDL PLANS**

City of Chattanooga, Chattanooga, TN

Chattanooga Runoff Reduction Standards—Stormwater Manual and Urban Green Infrastructure



Date: 2011

Services Provided

- Urban Green Infrastructure
- NPDES Permitting
- Low Impact Development

Reference

Tony Kinder
Engineering Division Manager
Drainage and Flood Control Group
City of Chattanooga
1250 Market Street, Suite 2100
Chattanooga, TN 37402

P: 423.643.6022

E: kinder_t@chattanooga.gov

Because the City of Chattanooga has a high number of impaired streams, the City's recently issued MS4 permit imposed a requirement for green infrastructure and 1-inch volume capture for all new and redevelopment projects. The City is determined to meet that challenge and establish itself as the leader in sustainable water quality management.

Meliora assisted the City in developing a comprehensive stormwater management program and a Low Impact Development Manual. This will allow developers and their engineers to comply with the new stormwater management ordinance and implement green infrastructure and low impact development.

The work included:

- Providing technical guidance for city code updates consistent with new regulatory program;
- Developing design and review process and procedures for compliance with city stormwater regulations; and
- Supporting public outreach and education with technical summaries, developer tools, and coordination with design community.

The manual includes design criteria for green infrastructure projects within the right-of-way.

National Resources Defense Council (and Citizens for Pennsylvania's Future, Philadelphia, PA) Philadelphia Long-Term Control Plan—Policy and Technical Review



Date: 2011–2013

Services Provided

- Policy Review
- Technical Review
- Recommendations Development

Reference

Larry Levine
Senior Attorney
National Resources Defense Council
40 W 20th Street
New York, NY 10011

P: 212.727.4548

E: LLevine@nrdc.org

On behalf of the National Resources Defense Council (NRDC) and Citizens for Pennsylvania's Future (PennFuture), Meliora provided technical and policy review and recommendations on the 2011 City of Philadelphia Water Department (PWD) Office of Watersheds Long-Term Control Plan Green City Clean Waters, and the supporting appendices and technical documents.

The work was done collaboratively and in coordination with PWD, Pennsylvania's Department of Environmental Protection, and the U.S. Environmental Protection Agency to provide input and support in developing a technically rigorous plan that met regulatory and policy goals. Recommendations provided through the process were incorporated into the program and supporting documents, including recommendations for an adaptive management approach to plan implementation.

Meliora also provided technical and policy review and input on supporting documents and submissions, including the 2012 Implementation and Adaptive Management Plan and the 2013 Annual Reporting for COA and WQBEL Obligations.

MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

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New Jersey Future, Trenton, NJ

Green Infrastructure Advancement in New Jersey Highlands and Pinelands Municipalities



Date: 2016 – Ongoing

Services Provided

- Green Infrastructure Education
- Outreach and Engagement
- Ordinance Development
- GSI Policy Development

Reference

Louise C. Wilson
Green Infrastructure Manager
New Jersey Future
16 West Lafayette Street
Trenton NJ 08608

P: 609.393.0008 x109
E: LWilson@njfuture.org

Michele Adams of Meliora Design is currently supporting **New Jersey Future** in a series of workshops, municipal outreach efforts, and policy and design recommendations intended to advance wider green infrastructure implementation in the state.

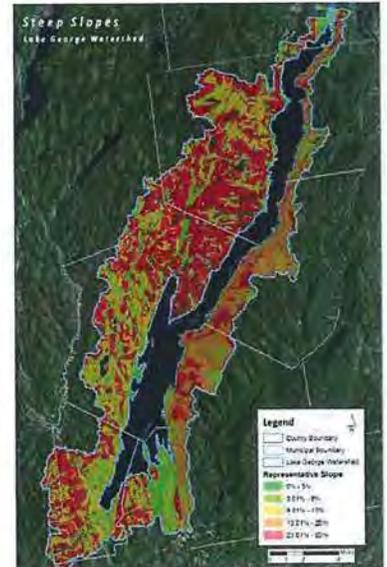
Focusing on municipalities located in the Highlands and Pinelands of New Jersey, the first effort included Green Stormwater Infrastructure (GSI) Workshops for municipal officials, followed by a detailed, day-long workshop for design professionals.

Following the workshops, Meliora has supported planning and ordinance efforts in three pilot municipalities as well as providing design support for demonstration projects.

Concurrent with the outreach efforts, Meliora is working with **New Jersey Future** and the **New Jersey Department of Environmental Protection** to recommend changes to the New Jersey Stormwater Ordinance to facilitate and encourage wider use of GSI throughout the state.



The Fund for Lake George and The Waterkeeper Network, Lake George, NY Low Impact Development Certification System



Date 2013-Ongoing

Services Provided

- Sustainability and LID Manual Development
- Land Management Practices
- Water Resources Planning
- Outreach and Education

Reference

Chris Navitsky, PE
Lake George Waterkeeper
P.O. Box 591
Lake George, NY 12845
P: 518.668.5913 x301

Meliora recently developed a Low Impact Development (LID) Manual and LID Certification System for protecting and restoring the water quality of Lake George, the 32 mile long flagship lake of the Adirondacks. The certification system is one of the first of its kind and intended to "raise the bar" of development standards and landscapes surrounding the lake and within the Adirondacks.

The exceptional water quality of Lake George is directly linked to the ecological health of the surrounding landscapes. The purpose of the Manual is to provide local communities, property owners, officials and developers the tools to implement practices that support a healthy landscape ecology and healthy lake.

Properties that successfully implement a required number of good landscape and land development practices can become "Lake George Certified", and certain municipalities have begun to offer tax or other incentives to encourage implementation and awareness. Practices fall into categories of site protection, built practices, site restoration, and maintenance practices.

The Manual is being developed in concert with the Jefferson Project, a \$4 million research effort funded by IBM to make Lake George "the smartest lake in the world". Thirty years of water quality data has identified alarming trends in the decline of lake water quality. These trends are directly related to land use practices that are adversely impacting the lake.

New York City Department of Parks and Recreation and Design Trust For Public Space, New York, NY
High Performance Landscape Guidelines — 21st Century Parks for NYC



Date: 2009

Services Provided

- Landscape Guidelines
- Stormwater Design Guidelines
- Urban Sustainability
- Urban Restoration Guidance

Award

- 2011 Best Green Design Initiative, Municipal Art Society

Reference

Nette Compton, RLA
Senior Director
The Trust for Public Land
224 Thompson Street
New York, NY 10012

P: 718.760.6874

E: Nette.Compton@tpl.org

As a fellow for the Design Trust for Public Space, Michele Adams was a co-author of *High Performance Landscape Guidelines— 21st Century Parks for New York City*. Published by the New York City Department of Parks and Recreation and the Design Trust for Public Space, the publication provided sustainable guidelines for the City's 29,000 acres of parkland. Principal and founder of Meliora Design, Michele's contribution focused on water issues and construction practices.

The third in a series of sustainability guidelines for the City—following *High Performance Building Guidelines* (1999) and *High Performance Infrastructure Guidelines* (2005)—the *High Performance Landscape Guidelines* (2010) set the stage for a paradigm shift in the way parks and stormwater management projects in New York City are designed and constructed, and provides designers and maintenance staff with information on sustainable site practices. Additional information can be found at www.designtrust.org/publications/hp-landscape-guidelines/.



Conservancy staff targets the methods of assistance to the audience involved in a particular project. We use community outreach and education, outreach directly to landowners, municipal meetings, workshops, public meetings, and site visits to accomplish our work.

RELEVANT EXPERIENCE

Selected projects are highlighted below to illustrate both the breadth and depth of the Conservancy's work.

MUNICIPAL PLANS, ORDINANCES, AND OTHER SPECIAL PROJECTS

The Conservancy has provided assistance to municipalities with their local plans and ordinances primarily in Chester County, Pennsylvania. The types of municipal assistance are listed below.

- **Comprehensive Plans:** Conservancy planners help municipalities form sustainable community development objectives through single- or multi-municipal comprehensive planning efforts tailored to local issues while remaining consistent with Pennsylvania planning law and relevant county planning goals. This effort includes community visioning, exhaustive land use and resource inventories and analyses, realistic growth projections, and achievable implementation actions.
- **Riparian Buffer Ordinances:** The Conservancy developed a model riparian buffer ordinance for the Pennsylvania Land Trust Association's Conservation Tools website to provide municipalities guidance to strengthen riparian buffer protection within local zoning codes. The Conservancy has assessed over a dozen municipal ordinances and written new riparian buffer protection language for municipal adoption.
- **Sustainable Communities Assessments:** Conservancy staff has conducted a focused assessment of municipal ordinances, plans, and policies as these pertain to community sustainability. Using the rapid assessment approach, the Conservancy has investigated each municipality's broad and complex sustainability framework, while yielding clear recommendations for future action.
- **Cost of Community Services Study:** Our Cost of Community Services studies for numerous Chester County municipalities show local taxpayers that farmland and open space protection preserve a township's agrarian and historic heritage, its natural and scenic resources, and environment by avoiding some of the fiscal costs of growth. Furthermore, this study demonstrates that initial municipal costs to preserve land are soon off-set due to a quick break-even period and long-term savings as a result of reduced municipal and institutional budget shortfalls.
- **Transferable Development Rights (TDR):** In 2008, the Conservancy published the Lancaster County TDR Practitioners Handbook on behalf of the Lancaster County Planning Commission. This handbook was provided to the County's 60 municipalities to help them preserve productive farms and woodlands while managing county growth. The Conservancy worked with three eastern Lancaster County municipalities and other county and land trust partners to develop first multi-municipal TDR program in the Commonwealth, where TDRs could be transferred from one municipality to another.

STORMWATER MANAGEMENT

The Conservancy approaches stormwater management, a core of our conservation programs, from a natural watershed system perspective. Conservancy programs have focused on both water quality and water quantity – total stream systems from their low base flows to peaking flood flows. As a consequence, the Conservancy argues for stormwater management programs which stress infiltration to natural vegetated areas and groundwater recharge to maintain the water cycle. Current stormwater initiatives have ranged from working to improve Pennsylvania's stormwater management program, as members of PADEP's committee to update the statewide stormwater BMP manual, to critiquing



PADEP's draft MS4 permitting strategy and model stormwater management ordinance with the Chesapeake Bay Foundation, American Rivers, and others. We are working with 20 Chester County municipalities lying within the Chesapeake Bay Watershed to assist them with the ever-evolving EPA/DEP Total Maximum Daily Load (TMDL) requirements through green infrastructure strategies.

Conservancy staff works in a variety of ways to improve understanding of stormwater issues, both their prevention and mitigation. The Conservancy worked with GreenTreks Network, Inc., to address technical issues in the StormwaterPA website. We are hired by both municipalities and private land developers to review and critique land development plans, their stormwater and overall site designs, as well as assessing local stormwater management ordinances. We are representing municipalities on CTIP, the Christina TMDL Implementation Plan partnership for Chester County.

OXFORD REGIONAL STORMWATER PROGRAM

As the states in the Chesapeake Bay continue to meet their TMDL goals for nutrient and sediment load reductions in the Watershed Implementation Plans (WIPs), Pennsylvania has drafted local planning targets for each county in the Bay Watershed. To help meet the local planning targets for Chester County, the municipalities in the Oxford Region have a unique opportunity, through the agreement made under the Oxford Region Multi-Municipal Comprehensive Plan, to collaboratively develop a regional stormwater management program. The Oxford Region is comprised of the Borough of Oxford and the townships of Elk, Lower Oxford, Upper Oxford, and West Nottingham. The Conservancy, as the technical assistance provider, is helping these five municipalities foster a collective and cost-effective program that will mitigate the harmful impacts of the stormwater within the Oxford Region. The ultimate goal of the project is to translate Pennsylvania's WIP recommendations and local planning targets into specific recommendations for the Oxford Region municipalities and provide a regional planning example for other communities in the Chesapeake Bay Watershed to utilize to meet water quality goals.

BRANDYWINE CREEK GREENWAY

Funded by the William Penn Foundation, the Conservancy is the lead organization of a multi-year regional planning initiative—the Brandywine Creek Greenway—that involves 25 municipalities along the Brandywine. The Greenway is envisioned as a 30-mile long conservation corridor of statewide significance, stretching from above the Delaware state line in Chadds Ford and Pennsbury Townships to Honey Brook Township in northern Chester County, Pennsylvania. The Conservancy completed a Concept Plan that outlines goals and objectives related to transportation, conservation, recreation, flood control, culture, aesthetics, and education. In 2014, Conservancy staff completed the Strategic Action Plan which lays out a 20+ year plan (started in 2015) for each of the 24 participating municipalities. Projects are already underway to connect open space, parks, river access points, and area attractions as well as link the Brandywine with Chester and Delaware County communities, and the Greenway is part of the Philadelphia Circuit.

THE BRANDYWINE CONSERVANCY'S REFORESTATION CAMPAIGN

Though the Conservancy's thousands of acres of conservation easements are a critical first step in forest conservation, much of this eased area has been cleared, is steeply sloped and/or characterized by other watershed sensitivities; additionally, most of this land is not in active cultivation or any other intensive economic use. Reforestation to restore essential watershed functions needs to occur. The Conservancy's watershed Reforestation Campaign involves working with partners such as Stroud Water Research Center and Pennsylvania Horticultural Society to undertake forest restoration on its own lands, eased lands, public lands, and private land developments. These plantings have been facilitated by hundreds of volunteers from private corporations, schools, and service groups. To date, nearly 50,000 trees now have been planted.

Resumes of Key Personnel

MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

Michele C. Adams, PE, LEED AP Principal/Founder

For over 30 years, Michele Adams' work has encompassed environmentally sensitive site design and sustainable water resources engineering. With a focus on regenerative design, her work includes both planning and engineering design for cities, urban and suburban restoration projects, campuses, research facilities, commercial, industrial and residential installations, parks, recreation centers, public facilities, non-profit headquarters, and environmental education centers. In all her work, Michele seeks to combine sound engineering science with an understanding of natural systems.

Michele has been designing low impact development and green infrastructure projects for nearly three decades, with successful installations of rain gardens, porous pavements, green roofs, and restorative landscapes dating back to the mid-1980s. She has extensive built experience in virtually every type of "best management practice," from bioretention and streetscape landscape measures, to water harvesting and reuse, to retrofitting traditional detention basins in the suburban environment to promote infiltration and evapotranspiration. Many of her projects encompass a holistic approach to water management and ecological restoration, recognizing that water in all its forms is a resource, and that a system approach to site design is often the most sustainable and cost-effective design. She has provided engineering design for multiple LEED certified projects, including several LEED Platinum and SITES pilot projects.

Michele was one of the principal authors of the Pennsylvania Stormwater Best Management Practices Manual and the award-winning NYC Department of Parks and Recreation High Performance Landscape Guidelines, as well as several other stormwater and LID manuals throughout the country. She served on the U.S. Green Building Council's Technical Advisory Group for Sustainable Sites, working to develop the Rainwater Management credits for LEED V4, and serves on American Rivers Science and Technical Advisory Committee. In 2011, Michele co-authored with Donald Watson *Design for Flooding: Architecture, Landscape, and Urban Design for Resilience to Climate Change* (Wiley Publishing), which presents best practices and lessons to create buildings and communities that are more resilient in the face of climate change.

Years of Experience: 30 +

Areas of Expertise

- Water Resources Engineering and Planning
- Civil/Site Engineering
- Green Infrastructure Planning and Design
- Watershed Management Planning
- Integrated Resource Management Planning
- Sustainable Stormwater Planning and Design Analysis
- Site Design for LEED and SITES Criteria
- Sustainability and LID Manual Development
- Alternative Wastewater Systems
- Stream Daylighting and Restoration
- Water Balance Analysis
- Hydrologic and Hydraulic Modeling
- Water Quality Modeling and Monitoring
- Development Impact Review and Analysis
- Stormwater Plan Review
- Expert Testimony
- Regulatory Review and Comment
- Water Resources Policy Review and Recommendations

Education

- B.S., Civil Engineering, The Pennsylvania State University, University Park, PA, 1984
- Graduate Coursework, Water Resource Engineering, Villanova University, Villanova, PA, 1997-2001

Registrations

- Professional Engineer in PA, DE, NY, MD and VA
- LEED Accredited Professional

Affiliations

- U.S. Green Building Council, Sustainable Sites Technical Advisory Group, Stormwater Expert
- Member, American Rivers Science and Technical Advisory Committee
- Member, American Society of Civil Engineers, Environmental Water Resources Institute
- Member, American Water Resources Association

Resume for Michele C. Adams, PE, LEED AP

Expert Analysis and Comment within Past Five Years

- **2009 - 2014 City of Philadelphia Longterm Control Plan, Monitoring Plan;** on behalf of Natural Resources Defense Council, review and development of recommendations for LTCP Monitoring Plan in compliance with PaDEP permit and EPA agreement.
- **2014 Pa Chapter 78 Proposed Regulation Changes;** on behalf of Earthjustice, review and preparation of comments.
- **2012 New York State Draft SGEIS and Draft SPDES Permit for High Volume Hydraulic Fracturing;** on behalf of Natural Resources Defense Council, review and technical recommendations related to hydraulic fracturing.
- **2011 Delaware River Basin Commission Oil Proposed Oil and Gas and Hydraulic Fracturing Regulations;** on behalf of Delaware Riverkeeper Network, technical review and analysis of DRBC Draft regulations for Hearing.
- **2011 Pennsylvania Environmental Regulations for Oil and Gas Industry and Hydraulic Fracturing;** on behalf of Delaware Riverkeeper Network, review, comment and testimony related to Pennsylvania water quality impacts and regulatory needs.
- **2009/2012 Pennsylvania Turnpike Expansion Project;** on behalf on National Park Service Valley Forge National Park and Valley Creek Coalition. Expert services related to review and comment of stormwater design and impacts on water quality and stream conditions.
- **2009/2012 City of Philadelphia Longterm Control Plan;** on behalf of Natural Resources Defense Council and PennFuture; review of technical reports, policy documents, and draft permit conditions on issues related to stormwater management, water quality, stream health, and compliance with Clean Water Act and EPA Longterm Control Policy.
- **2010 City of Chattanooga MS4 Permit –** For City of Chattanooga, providing technical guidance for incorporation of stormwater measures to address and restore impaired streams and meet TMDL requirements. Training sessions for municipal officials and program development.

Guest Lecturer

- Drexel University
- Pennsylvania State University
- Philadelphia University
- Temple University
- University of Pennsylvania

Publications: Available upon request

Select Relevant Experience

High Performance Landscapes, New York City Parks and Recreation – Ms. Adams served as one of five authors in development of the New York City's High Performance Landscapes document, specifically addressing the water issues within the document. This publication is the third in a series that began with High Performance Buildings, and is providing the framework for sustainability in NYC parks and public spaces.

Philadelphia Zoological Society, Philadelphia, PA

Multiple projects including:

- **Master Plan –** Development of sustainable stormwater recommendations for the Zoo Master Plan, with a focus on stormwater measures integrated into the Zoo's landscape to address flooding problems and reducing stormwater fees.
- **KidZooU –** Design of an integrated water system, including elements that provide educational opportunities, including green roofs, porous paths, rain gardens, and cisterns for toilet needs.
- **Treetop Trails –** Design of water and drainage utilities for the Zoo's new elevated chutes outside between trees for primates to explore.
- **Tiger Lot Green Infrastructure Retrofit**

MELIORA DESIGN

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Marc B. Henderson, PE Project Manager/Senior Site and Civil Engineer

Mr. Henderson is a Water Resources Engineer with 10 years of water resources and environmental engineering experience. His primary focus at Meliora is full site/civil design and project management for projects of all sizes. This includes low impact development and green infrastructure stormwater design, stormwater system retrofits, repair of erosive and poorly functioning drainage systems, utility service design and connection coordination, sanitary pump (lift) station design and permitting, stormwater and erosion and sediment permitting, and general utilities coordination for site improvements. Beyond design work, Mr. Henderson performs professional review of design, permitting, and/or policy issues and regulations related to stormwater and erosion and sediment controls for land development, oil and gas, or other related various environmental advocacy groups.

In the past, he has provided engineering support and guidance to interdisciplinary project teams for multiple large-scale wetland restoration, flood control, and water supply projects throughout Northeast and Central Florida. His graduate research focused on streambank stability and erosion processes.

Relevant Experience (partial listing)

Erdenheim Farm Stormwater Consultation Services, Lafayette Hill, PA — Consulting services for stormwater issues impacting Erdenheim Farm. These issues include review of Whitmarsh Township stormwater ordinances, design plan review of nearby proposed development, and provide technical analysis and comment for client presentation at various municipal hearings.

City of Seattle Stormwater Manual Update Review, Seattle, WA — Participated in review of Stormwater Manual revisions to provide Client with evaluation and comment of best management practice design, details, and standards.

Chesapeake Bay Foundation ESCGP-2 Permit Review and Site Study, Trout Run, PA — Selected, reviewed, and visited multiple sites of proposed unconventional natural gas well pads that require ESCGP-2 permit applications within High-Quality or Exceptional Value watersheds. Project focus was to identify sites for a document review and then follow up with site inspections to determine if construction practices follow permitted documentation. This study was intended to verify legal action and settlement obtained by Chesapeake Bay Foundation was being followed in practice.

Savery's Mill Pond Stormwater Assessment, Kennett Square, PA — Provided technical review and comment of roadway construction related to Rt. 52/US 1 expansion and relocation. Deliverables included the identification of

Years of Experience: 10

Areas of Expertise

- Water Resources Engineering
- Civil/Site Engineering
- Green Infrastructure Design
- Stormwater Design and Permitting
- Utility Plans (Water Supply, Sewer)
- Site Layout (Pavement, Parking, Grading)
- Erosion and Sediment Control
- Construction Administration
- Hydrologic and Hydraulic Modeling
- Water Quality Modeling and Monitoring
- Sustainability and LID Manual Development
- Engineering Analysis and Reports
- Development Impact Review and Analysis
- Stormwater Plan Review

Education

- M.S., Biological Systems Engineering, Virginia Tech, Blacksburg, VA, 2006
- B.S., Agricultural and Biological Engineering, University of Florida, Gainesville, FL, 2003

Registrations

- Professional Engineer in PA, DE, NJ, MD, NC, FL, GA

Affiliations

- Member, American Society of Civil Engineers

Publications

- Wynn, T.M., M.B. Henderson, and D.H. Vaughan. 2008. *Changes in streambank erodibility and critical shear stress due to subaerial processes along a headwater stream, southwestern Virginia, USA*. *Geomorphology* 97: 260-273.
- Wynn, T., S. Mostaghimi, J. Burger, A. Harpold, M. Henderson, and L.A. Henry. 2004. *Variation in root density along stream banks*. *Journal of Environmental Quality*. 33.

Resume for Marc B. Henderson, PE

numerous downstream impacts to existing stormwater conveyances due to land use changes, watershed alterations, BMP design specifications and methods of permit documentation. By analyzing modified conditions due to the new road condition, the client will be able to identify future work to improve conditions to Savory's Mill Pond and mitigate impacts of increased stormwater rates, volume, and degraded water quality.

Philadelphia Water Department, City Monitoring Plan, Philadelphia, PA — Provided technical review and comment of Philadelphia's Green Infrastructure Monitoring Plan. Evaluated the feasibility of the monitoring plan efforts to document and provide necessary best management practice performance data in support of green infrastructure implementation goals.

Vineyard Commons Development Plan Review, Concord Township, PA — Providing technical review of PAG-2 (NPDES Permit) for stormwater deficiencies of a proposed cluster neighborhood development on an environmentally sensitive site in Concord Township, PA. Project includes providing client with review and comment on stormwater management practices, erosion and sediment control practices, township ordinances, and project feasibility to inform future litigation due to project permit approvals.

Frozen Run ESCGP-2 Permit Review and Litigation Services, Wilkes-Barre, PA — Providing technical review of ESCGP-2 (NPDES Permit) for erosion and sediment control and stormwater deficiencies of an unconventional natural gas pad proposed in a High-Quality watershed in Northcentral Pennsylvania. Project includes providing client with review and comment on stormwater management practices, erosion and sediment control practices, and permit policy to inform future litigation due to project permit approvals. Services also include expert report and litigation support and testimony.

XTO Energy Cratty A Well Pad Permit Review, Franklin Township, PA — Providing technical review of ESCGP-2 (NPDES Permit) for stormwater deficiencies of an unconventional natural gas pad proposed in a High-Quality watershed in Western Pennsylvania. Project included providing client with review and comment on stormwater management practices to inform future negotiations or litigation.

Bivouac Swine Farm PAG-2 Permit Review and Litigation Support, Big Cove Tannery, PA — Provided technical review and comment of land development plans proposed for a large swine farm in Fulton County, PA. Review of stormwater facilities, stormwater calculations, feasibility, and constructability were provided to the client to inform discussions over that appropriateness of this development and effectiveness of the stormwater management plan design. Testimony before the PA EHB as the lead witness for ????

Pennsylvania Turnpike Expansion Review, Wayne, PA — Provided technical review and comment of expansion/reconstruction plans proposed for the PA Turnpike between Route 29 All-Electronic Interchange and the Valley Forge Interchange. Review of stormwater facilities, stormwater calculations, feasibility, and constructability were provided to the client to inform discussions over that appropriateness and effectiveness of the stormwater management design.

City of Chattanooga Low Impact Design Manual and Stormwater Program, Chattanooga, TN — Developed documentation of calculation procedures, design examples, and a calculation spreadsheet tool as part of the Manual to support best management practice design. Future work is to focus on training to support Manual implementation for both the City of Chattanooga and the local design community.

Ladew Topiary Gardens, Facilities Expansion and Site Design, Harford County, MD — Providing full site/civil engineering services for a new maintenance building located in existing woodland areas plus driveway to service the proposed structure and additional parking. The proposed landscape and stormwater design will reinforce the gardens as a classroom with restored landscape, protection of important natural features and woodlands, and stormwater management features. Stormwater design components include a new stream crossing, reinforced turf driveway, and micro-bioretenion stormwater practices. Project responsibilities also included obtaining necessary land development permits from Harford County and a Joint Federal/State permit through MDE.

MELIORA DESIGN

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Altje M. Macy, EIT, LEED AP Senior Water Resources Designer

Ms. Macy is a Senior Water Resources Designer at Meliora Design with experience in civil engineering, water resources management, and environmental science and policy. Altje specializes in green stormwater infrastructure planning and design, using her foundation in environmental science and policy to aid in decision making for sustainable water management. She develops sustainable site designs using green infrastructure for small- and large-scale projects throughout the country, and has served as the Project Manager for a number of projects, consistently meeting budget and schedule goals. She has extensive experience in water resources planning and design for parks, public spaces, and streetscapes, including public outreach and engagement, and has contributed to several manuals and publications for stormwater.

Relevant Experience — Green Infrastructure Planning

The Philadelphia Holocaust Remembrance Foundation, Holocaust Memorial Revitalization, Philadelphia, PA — Civil engineering and permitting services for a significant transformation of Philadelphia's Holocaust Memorial Plaza.

Chester County Department of Facilities and Parks, Wolf's Hollow Regional County Park Master Plan, Atglen, PA — Developed a water resources plan for this 569-acre park to enhance ecological function and ameliorate erosion and flooding issues.

Springside Chestnut Hill Academy, Lower School and Site Improvements, Philadelphia, PA — Provided site/civil engineering services and permitting requirements for a new school building. The project design includes porous parking areas and paths, rain gardens, cisterns for reuse, bioretention stormwater facilities, bus turnaround, pedestrian circulation improvements, and site utilities as well as other elements of outdoor learning.

Chesapeake Bay Foundation-Environmental Site Design — Design of sustainable stormwater concepts to illustrate low impact/environmental site design (LID/ESD) to be used for redevelopment projects. Wrote narrative, conducted stormwater calculations, and estimated costs for sustainable stormwater management techniques compared to conventional design for the Chesapeake Bay Foundation.

Mantua Greenway, Philadelphia, PA — Integrated design of stormwater management systems with street and public amenity improvements along a highly used corridor in a Philadelphia Promise Zone neighborhood. New community spaces will make stormwater management visible and accessible, providing beautification and educational opportunities.

Years of Experience: 10

Areas of Expertise

- Water Resource Management
- Environmental Science and Policy
- Regenerative Design
- Green Infrastructure Planning and Design
- Stormwater Design and Permitting
- Stormwater Master Planning for Campuses
- Sustainability and LID Manual Development
- Rainwater Collection and Reuse
- Sustainable Stormwater Planning and Design Analysis
- Site Design for LEED and SITES Criteria
- Site Layout (Pavement, Parking, Grading)
- Erosion and Sediment Control
- Soil Evaluation and Infiltration Testing
- Construction Administration
- Stormwater Billing Credit Evaluation
- Geographic Information Systems

Education

- M.S., Environmental Policy, Bard College, Annandale-on-Hudson, NY, 2008
- B.S., Environmental Science, Hawai'i Pacific University, Honolulu, HI, 2004

Registrations

- LEED Accredited Professional
- Engineer-in-Training, Delaware, 2014

Affiliations

- Member, Pennsylvania Association of Environmental Professionals (PAEP)

Recent Presentations

Available upon request.

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Stuart Berg, PE Water Resources Engineer

Stuart focuses on full site/civil design and is adept at modeling designs with multiple software applications. Prior to joining Meliora, he provided engineering and consulting services on green roof projects throughout the country, and provided civil engineering design on residential, institutional, and commercial land development projects throughout the Hawaiian Islands. Stuart is adept at coordinating permitting requirements in Philadelphia and elsewhere to meet project schedules and budgets, including Philadelphia Water Department, Streets Department, and Planning approvals.

Select Relevant Experience

Drexel University, Perelman Plaza, Philadelphia, PA — Designed stormwater management improvements for a pedestrian plaza within a former city street. Permitting challenges included maximizing stormwater management and impervious area disconnection within a utility and SEPTA right-of-way.

University City Science Center, Innovation Plaza, Philadelphia, PA — Creation of a new student commons area from a former city street. Design included art installations, upgraded lighting, park benches and moveable furniture, a porous paver stormwater system, utilities, and ADA ramps. Scope included permitting approvals from Philadelphia Streets and Water Departments as well as PennDOT.

Springside Chestnut Hill Academy, Lower School and Site Improvements, Philadelphia, PA — Currently providing full site/civil engineering services for the construction of the new Lower School building, additional parking, and associated site improvements. The project design includes porous parking areas and paths, rain gardens, cisterns for reuse, bioretention stormwater facilities, bus turnaround, pedestrian circulation improvements, and site utilities as well as other elements of outdoor learning, and all Philadelphia permitting requirements.

Woodlands Cemetery Site Improvements, Philadelphia, PA — Providing utility design for stormwater and wastewater for the historic Mansion and the Stable buildings. The stormwater improvements will prevent future damage to the historic structures, as well as contribute to the sustainability goals and initiatives outlined by the City of Philadelphia.

Wilmington Green Infrastructure Planning and Design, Wilmington, DE — Designed green infrastructure improvements to Wilmington City streets within the combined sewer district.

Years of Experience: 6

Areas of Expertise

- Water Resources Engineering
- Civil/Site Engineering
- Green Infrastructure Design
- Stormwater Design and Permitting
- Utility Design and Permitting (Water Supply, Sewer, Pump Station)
- Site Layout (Pavement, Parking, Grading)
- Erosion and Sediment Control
- Construction Administration
- Hydrologic and Hydraulic Modeling
- Water Quality Modeling
- Engineering Analysis and Reports
- AutoCAD Civil3D

Education

- M.S., Environmental Science, Drexel University, Philadelphia, PA, 2011
- B.S., Civil Engineering, Pennsylvania State University, University Park, PA, 2008

Registrations

- Professional Engineer in PA

Affiliations

- Member, American Society of Civil Engineers

Publications

- Miller, C., Weeks, K, Bass, B. Berghage, R. Berg, S. 2010. *Stormwater Policy As A Green Roof (Dis)Incentive For Retail Developers*. Cities Alive 8th Annual Green Roof and Wall Conference, Vancouver.
- Miller et al., 2011. *The Benefits and Challenges of Green Roofs on Public and Commercial Buildings: A report of the United States General Services Administration*.
- Weeks et al., 2013. *Green Roof Performance: A cost-benefit analysis based on Walmart's Chicago Store*.

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Civil, Water Resources, and Structural Engineering

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John Rains, EIT Water Resources Designer

John focuses on full site/civil design and is adept at modeling designs with multiple software applications. Prior to joining Meliora, he earned his Masters Degree from Auburn University where he specialized in Ecological Engineering. John's expertise includes: Inundation mapping and modeling using ArcGIS and FEMA FIS data as reference and Hydraulic modeling of small stream reaches using HECRAS to assess construction impacts on base flood elevation

Select Relevant Experience

Temple Old Medical School, Philadelphia, PA: Existing Resources and Site Analysis (ERSA) and CAD design support for the Temple University Old Medical School site design.

Philadelphia Protestant Home, Philadelphia, PA: Existing Resources and Site Analysis (ERSA), CAD design and construction specifications for parking lot improvements.

City of Lancaster, Lancaster, PA: J.L. Clark Parking Lot – NPDES permit review and CAD design for the de-paving and conversion of impervious surfaces to pervious grassed meadow.

Ladew Topiary Gardens, Facilities Expansion and Site Design, Harford County, MD — Providing Construction Administration services for a new maintenance building located in existing woodland areas plus driveway to service the proposed structure and additional parking. The proposed landscape and stormwater design will reinforce the gardens as a classroom with restored landscape, protection of important natural features and woodlands, and stormwater management features. Stormwater design components include a new stream crossing, reinforced turf driveway, and micro-bioretenion stormwater practices.

Springside Chestnut Hill Academy, Lower School and Site Improvements, Philadelphia, PA — Currently providing design support services for the construction of the new Lower School building, additional parking, and associated site improvements. The project design includes porous parking areas and paths, rain gardens, cisterns for reuse, bioretention stormwater facilities, bus turnaround, pedestrian circulation improvements, and site utilities as well as other elements of outdoor learning, and all Philadelphia permitting requirements.

Simon Mariner 2 Appeal, Pittsburgh, PA: GIS support and watershed modeling using Mapshed to evaluate pipeline construction on pre and post watershed hydrology.

Drexel Monitoring, Philadelphia, PA: Implementation of stormwater BMP monitoring in Drexel Perleman Plaza using Stroud Water Research Center EnviroDIY Mayfly data logger station.

Years of Experience: <1

Areas of Expertise

- Water Resources Engineering
- Civil/Site Engineering
- Green Infrastructure Design
- Stormwater Design and Permitting
- Utility Design and Permitting (Water Supply, Sewer, Pump Station)
- Environmental Microbiology
- Erosion and Sediment Control
- Hydrologic and Hydraulic Modeling
- Water Quality Modeling
- Engineering Analysis and Reports
- Graphical Information Systems

Education

- M.S., Biosystems Engineering, Auburn University, Auburn, AL 2016
- B.S., Biosystems Engineering, Auburn University, Auburn, AL 2010

Registrations

- Engineer-in-Training, AL

Publications

- Rains, J. D. and Blersch, D. M. (2015). **A re-circulating flow-lane photo-incubator for benthic algae experiments.** 2015 ASABE Annual International Meeting, 152188866

MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

Chelsea Bellay Water Resources Designer

Chelsea Bellay is a Water Resources Designer with supporting experience in wetland delineation and environmental management systems. She specializes in sustainable stormwater design, technical modeling, and community outreach. She has a unique background with an undergraduate degree from PennState in Environmental Resource Management and a Masters in Water Resources Engineering from Villanova.

Chelsea brings strong communication and visual documentation skills to her projects, which are reflected in the success of projects that include many community engagement, education, and outreach components. She uses her education, previous experience, and passion for sustainable water resources to guide her work at Meliora.

Select Relevant Experience

Lake George Low Impact Development Certification Program and Manual, Lake George, NY — Aided in developing the basis and criteria for a new certification program that will be used to promote low impact development for residential and commercial sites in the Lake George and Adirondacks area. Developed Manual and supporting documentation.

Pittsburgh Parks Conservancy, Pittsburgh, PA

- **McKinley Park Revitalization and Green Infrastructure Master Plan** — Developed project recommendations, concept designs, and community workshops for the green stormwater infrastructure components of an urban neighborhood revitalization and Park Master Plan. Goal of the plan is to develop an implementable vision for park improvements, guided by stormwater management while creating a respectful, beautiful, safe, active, accessible and sustainable park. Also developed materials for several grant applications.
- **Schenley Drive Green Street** — Supported the planning and design of streetscape retrofit. Presented concepts at community meetings to ensure all stakeholders were involved early in the onset of the project. Stormwater management to be incorporated in street improvements (bumpouts, bike lanes, pedestrian buffers) will improve safety and reduce ecological impacts of runoff from impervious surfaces through a system of bioswales and infiltration trenches.

Friends of Gorgas Park, Gorgas Park Stormwater Management Plan, Philadelphia, PA — Recommendations for 15-acre community park that provides stormwater retrofits as components of park amenities improving site aesthetics, use, circulation, and invasive species removal.

Schuylkill River Trail, Philadelphia, PA — Designed green stormwater management practices along a portion of the Schuylkill River Trail to manage runoff and mitigate erosion problems. The proposed design improved the trail users experience while ensuring stabilized slopes through erosion and sediment control measures and a terraced rain garden.

University City Science Center, Innovation Plaza, Philadelphia, PA — Design of porous paver stormwater system for new plaza walkway including utilities and ADA ramps, and permitting approvals (Streets, PWD, PennDOT).

Years of Experience: 3

Areas of Expertise

- Site Design
- Regenerative Design
- Green Infrastructure Design
- Stormwater Design
- Rainwater Collection and Reuse
- Sustainable Stormwater Design and Analysis
- Wetland Studies and Delineation
- Phase I and II Environmental Assessments
- Erosion and Sediment Control
- Environmental Compliance Audits

Education

- M.S., Water Resource and Environmental Engineering, Villanova University, Villanova, PA, 2015
- B.S., Environmental Resource Management, The Pennsylvania State University, University Park, PA, 2011

MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

Meghan K. Trahey, EIT Civil/Water Resources Designer

Meghan Trahey is a Civil/Water Resources Designer at Meliora Design with over four years of civil and water resources engineering experience. At Meliora Design, Ms. Trahey primarily aids in sustainable stormwater design, site drafting, and catenary/structural design. She helped develop Meliora's CAD standards and she is an invaluable part of the development of Meliora CAD details and drawings.

During her undergraduate studies, Ms. Trahey participated in a research project involving land development and sustainable subdivision design, where she created a neighborhood (grading, road layout, stormwater, utilities) based on the local SALDO and zoning. It involved several public meetings. The design focused on implementing LID practices such as Wildlife habitat and sensitive land preservation, wetland preservation to conserve the natural resources. She uses this experience in conservation to help inspire her sustainable focus in her work at Meliora.

Select Relevant Experience

Springside Chestnut Hill Academy, Lower School and Site Improvements, Philadelphia, PA — Currently providing design support services for the construction of the new Lower School building, additional parking, and associated site improvements. The project design includes porous parking areas and paths, rain gardens, cisterns for reuse, bioretention stormwater facilities, bus turnaround, pedestrian circulation improvements, and site utilities as well as other elements of outdoor learning, and all Philadelphia permitting requirements.

Stony Run Parking Lot Retrofit, Baltimore City, MD — Design of a parking lot stormwater retrofit to reduce runoff volume and improve runoff quality entering Stony Run from adjacent parking lots. Design utilizes a series of small landscape infiltration practices to infiltrate runoff volume and prevent erosion of an existing multi-use trail.

Ladew Topiary Gardens, Facilities Expansion and Site Design, Harford County, MD — Providing design support services for a new maintenance building located in existing woodland areas plus driveway to service the proposed structure and additional parking. The proposed landscape and stormwater design will reinforce the gardens as a classroom with restored landscape, protection of important natural features and woodlands, and stormwater management features. Stormwater design components include a new stream crossing, reinforced turf driveway, and micro-bioretention stormwater practices.

Tacony Creek Green Infrastructure, Philadelphia, PA: Provided design and drafting support, including profiles, for the stormwater design for green street infrastructure projects within the Tacony Creek Park for the Philadelphia Water Department. Designs include several bioretention areas within existing lawn, playfields, and adjacent to park gateway areas. Critical role played in stormwater design, bed sizing and grading.

Philadelphia Zoo Water and Sewer Drainage Upgrades, Philadelphia, PA: Provided design and drafting for an existing parking lot, the Tiger Parking Lot, the replacement of the outlet control structure at Bird Lake, and the replacement and upgrade of leaking water infrastructure a majority of the zoo buildings.

Years of Experience: 4

Areas of Expertise

- Site Design
- Civil Design
- Site Design
- Regenerative Design
- Green Infrastructure Design
- Stormwater Design
- Rainwater Collection & Re-use
- Sustainable Stormwater Design & Analysis
- Erosion & Sediment Control

Education

- B.S., Civil Engineering, The Pennsylvania State University, University Park, PA, 2012

Registrations

- Engineer-in-Training, PA

Affiliations

- Society of Women Engineers
- Score for the Cure

DAVID B. ARSCOTT, Ph.D., Executive Director, Vice President, Research Scientist
 Stroud Water Research Center, 970 Spencer Road, Avondale, PA 19311
 Email: darscott@stroudcenter.org; Tel (o): 610-268-2153 x 278; Tel (c): 484-885-5225
 Web: <http://www.stroudcenter.org/about/arscott.shtm>

Professional Experience

- 2017-Present Executive Director, **Stroud Water Research Center**
- 2011-Present Vice President, **Stroud Water Research Center**
- 2011-Present Adjunct Faculty, Dept. Biology, **University of Pennsylvania**
- 2009-2016 Assistant Director, Research Scientist, **Stroud Water Research Center**
Administrative: manage, coordinate, and facilitate scientific research; public outreach; develop and oversee institutional budgets; fundraising; marketing; develop and oversee human resource policies; assist with center-wide grant reporting requirements
Research: aquatic invertebrate ecology; water resource monitoring program development; tropical river ecology; riparian and wetland ecology; ecohydrology; landscape ecology; surface-groundwater interactions;
- 2006-2009 Freshwater Ecologist, **National Institute for Water and Atmospheric Research (NIWA)**, Christchurch, New Zealand
Research: aquatic invertebrate ecology of gravel-bed rivers and riparian wetlands, water allocation, ecohydrology (flow-biota relationships in rivers), landscape ecology, surface-groundwater interactions, Antarctic ecology
Supervisor: Dr. Brian Sorrell
- 2003-2006 Research Scientist/Project Coordinator, **Stroud Water Research Center**
Research: water quality research for New York City's water supply, invertebrate ecology, riparian and wetland ecology, water resources management
Supervisors: Dr. Charles L. Dow and Dr. Bernard W. Sweeney
- 2002-2003 Research Assistant Professor at the **University of Minnesota, Crookston**, Center for Agriculture and Natural Resources, Crookston, MN, USA
Research and Teaching Topics: sustainable development of NW Minnesota natural resources, conservation and management of freshwater ecosystems, riparian and wetland ecology and management, fisheries management
Supervisor: Dr. John P. Loegering
- 1994-1995 **Student Conservation Association** Resource Assistant Internship with the US Forest Services Fisheries and Wildlife Division, Ketchikan Rangers District, Alaska
Activities: Basin-wide fish habitat surveys, stream water quality determinations for timber harvest, fish ladder handler

Education

- 1998-2001 Ph.D. in Natural Sciences, **Swiss Federal Institute of Environmental Science and Technology (ETH/EAWAG)** in Zurich, Switzerland
Dissertation Title: Habitat heterogeneity & aquatic invertebrates along an Alpine floodplain river
Supervisors: Prof. Dr. James V. Ward and Dr. Klement Tockner
- 1995-1997 M.S. in Water Resources Management, **University of New Hampshire**
Thesis Title: Primary production in a 4th order arctic stream
Supervisor: Dr. William Breck Bowden
- 1989-1994 B.S. in Biology with minors in Chemistry and Conservation, **Central Michigan University**

Teaching and Teaching Assistantships

- 2010-present University of Pennsylvania – Course coordinator and lecturer - Introduction to Freshwater Ecology (Department of Biology, Bio 415)
- 2003-2006 University of Pennsylvania – Guest Lectures for Primer in Stream Ecology and Introduction to Freshwater Ecology (Environmental Studies Program)
- 2002-2003 University of Minnesota, Crookston – Assistant Professor, Dept. of Natural Resources – Wetland and Riparian Ecology and Management; Principles of Fisheries Management; Water Resources Management: Special Topics Seminar Series
- 1998-2001 Swiss Federal Institute for Science and Technology – Teaching Assistant in the Dept. of Limnology, EAWAG – Biostatistics; Aquatic Invertebrate Ecology and Taxonomy
- 1995-1997 University of New Hampshire – Teaching Assistant in the Dept. of Natural Resources – Introduction to Water Resources Management; Conservation of Natural Resources

Publications <http://scholar.google.com/citations?user=rmv4aUoAAAAJ&hl=en>

- Richardson, D.C., I.A. Oleksy, T.J. Hoellein, **D.B. Arscott**, C.A. Gibson, S.M. Root. 2014. Spatial distribution and ecosystem effects of a nuisance, bloom-forming diatom (*Didymosphenia geminata*) in Catskill Mountain streams, New York. *Freshwater Science*.
- Gallardo, B., S. Dolédec, A. Paillex, **D.B. Arscott**, F. Sheldon, F. Zilli, S. Merigoux, E. Castella, F.A. Comín. 2014. Response of benthic macroinvertebrates to gradients in hydrological connectivity: a comparison of temperate, subtropical, Mediterranean and semiarid river floodplains. *Freshwater Biology*. 59:630-648. DOI:10.1111/fwb.12292.
- Lessard, J., D.M. Hicks, T.H. Snelder, **D.B. Arscott**, S.T. Larned, D. Booker, A.M. Suren. 2013. Dam design can impede adaptive management of environmental flows: a case study from the Opuha Dam, New Zealand. *Environmental Management*. 51(2):459-473, DOI 10.1007/s00267-012-9971-x.
- Datry T., **D.B. Arscott**, S. Sabater. 2011. Recent Perspective on temporary river ecology. *Aquatic Sciences* 73(4): 453-457.
- Hawes, I., K. Safi, B. Sorrell, J. Webster-Brown, **D.B. Arscott**. 2011. Summer-winter transitions in Antarctic ponds: I. The physical environment. *Antarctic Science*. 23(3):235-242.
- Hawes, I., K. Safi, J. Webster-Brown, B. Sorrell, **D.B. Arscott**. 2011. Summer-winter transitions in Antarctic ponds: II. Biological responses. *Antarctic Science*. 23(3):243-254.
- Arscott, D.B.**, S.T. Larned, M. Scarsbrook, P. Lambert. 2010. Aquatic invertebrate community structure along an intermittence gradient: Selwyn River, New Zealand. *Journal of the North American Benthological Society*. 29(2):530-545.
- Larned, S.T., **D.B. Arscott**, J. Schmidt, J.C. Diettrich. 2010. A framework for analyzing longitudinal and temporal variation in river flow and developing flow-ecology relationships. *Journal of the American Water Resources Association (JAWRA)*. 1-13. DOI:10.1111/j.1752-1688.2010.00433.x
- Larned, S.T., T. Datry, **D.B. Arscott**, K. Tockner. 2010. Emerging concepts in temporary-river ecology. *Freshwater Biology*. 55(4):717-738
- Schmidt, J., S.T. Larned, **D.B. Arscott**, J.C. Diettrich. 2009. Hydrological indices for quantifying ecologically relevant flow conditions in intermittent alluvial plain rivers. Pages 94-102 in M. Thoms, K. Heal, E. Bogh, A. Chambel, V. Smakhtin (editors). *Ecohydrology of Surface and Groundwater Dependent Systems: Concepts, Methods, and Recent Developments*. Proceedings of symposium JS1 held at the Joint IAHS & IAH Convention, Hyderabad, India, 6-12 September 2009. IAHS Publ. 328, 2009, 94-102.
- Larned, S.T., D.M. Hicks, J. Schmidt, A.J.H. Davey, K. Dey, M. Scarsbrook, **D.B. Arscott**, R.A. Woods. 2008. The Selwyn River of New Zealand: A benchmark system for alluvial plain rivers. *River Research and Applications*. 24:1-24.
- Rupp, D.E., S.T. Larned, **D.B. Arscott**, J. Schmidt. 2008. Reconstruction of a longitudinally-continuous daily flow record for a mid-reach drying river. *Journal of Hydrology* 359:88-104.
- Arscott, D.B.**, J.K. Jackson, E.B. Kratzer. 2006. Role of rarity and taxonomic resolution in a regional and spatial analysis of stream macroinvertebrates. *Journal of the North American Benthological Society* 25:977-997.
- Arscott, D.B.**, C.L. Dow, B.W. Sweeney. 2006. Landscape template of New York City's drinking-water-supply watersheds. *Journal of the North American Benthological Society* 25:867-886
- Aufdenkampe, A.K., L.J. Standley, C.L. Dow, **D.B. Arscott**. 2006. Molecular tracers of soot and sewage contamination in streams supplying NYC drinking water. *Journal of the North American Benthological Society* 25:928-953.
- Blaine, J.G., B.W. Sweeney, **D.B. Arscott**. 2006. Enhanced source-water monitoring for New York City: historical framework, political context, and project design. *Journal of the North American Benthological Society* 25:851-866.

- Bott, T.L., J.D. Newbold, **D.B. Arscott**. 2006. Ecosystem metabolism in Piedmont streams: The influence of riparian vegetation is modulated by reach geomorphology. *Ecosystems* 9:398-421.
- Bott, T.L., D.S. Montgomery, **D.B. Arscott**, C.L. Dow. 2006. Primary productivity in receiving reservoirs: links to influent streams. *Journal of the North American Benthological Society* 25:1045-1061.
- Bott, T.L., D.S. Montgomery, J.D. Newbold, **D.B. Arscott**, C.L. Dow, A.K. Aufdenkampe, J.K. Jackson, L.A. Kaplan. 2006. Ecosystem metabolism in streams of the Catskill Mountains (Delaware and Hudson River watersheds) and Lower Hudson Valley. *Journal of the North American Benthological Society* 25:1018-1044.
- Dow, C.L., **D.B. Arscott**, & J.D. Newbold. 2006. Relating major ions and nutrients to watershed conditions across a mixed-use, water-supply watershed. *Journal of the North American Benthological Society* 25:887-911.
- Kratzer, E.B., J.K. Jackson, **D.B. Arscott**, A.K. Aufdenkampe, C.L. Dow, L.A. Kaplan, J.D. Newbold, B.W. Sweeney. 2006. Macroinvertebrate distribution in relation to land use and water chemistry in New York City drinking-water-supply watersheds. *Journal of the North American Benthological Society* 25:954-976.
- Sweeney, B.W., **D.B. Arscott**, C.L. Dow, J.G. Blaine, A.K. Aufdenkampe, T.L. Bott, J.K. Jackson, L.A. Kaplan, J.D. Newbold. 2006. Enhanced source-water monitoring for New York City: summary and perspective. *Journal of the North American Benthological Society* 25:1062-1067.
- Arscott, D.B.**, K. Tockner, J.V. Ward. 2005. Lateral organization of aquatic invertebrates along the continuum of a braided-floodplain river (Tagliamento River, NE Italy). *Journal of the North American Benthological Society* 24:934-945.
- Kaiser, E., **D.B. Arscott**, K. Tockner, B. Sulzberger. 2004. Transformations and discharge of organic carbon and nitrogen in the Tagliamento River, Italy. *Aquatic Sciences – Research Across Boundaries* 66:103-116.
- Arscott, D.B.**, K. Tockner, J.V. Ward. 2003. Spatio-temporal patterns of benthic invertebrates along the river continuum of a braided Alpine river (Tagliamento River, NE Italy). *Archiv für Hydrobiologie* 158:431-460.
- Arscott, D.B.**, B. Keller, K. Tockner, J.V. Ward. 2003. Habitat structure and Trichoptera diversity in 2 headwater flood plains, N.E. Italy. *International Review of Hydrobiology* 88: 255-273.
- Tockner, K., J.V. Ward, **D.B. Arscott**, P.J. Edwards, J. Kollmann, A.M. Gurnell, G.E. Petts, B. Maiolini. 2003. The Tagliamento River: A model ecosystem of European importance. *Aquatic Sciences* 65:239-253.
- Arscott, D.B.**, R. Glatthaar, K. Tockner, J.V. Ward. 2002. Larval blackfly distribution and diversity along a braided floodplain river in the Alps (Tagliamento River, Italy). *Verhandlungen Internationale Vereinigung Limnologie* 28:524-531.
- Arscott, D.B.**, K. Tockner, D. van der Nat, J.V. Ward. 2002. Geomorphic dynamics and aquatic habitat structure along a braided Alpine river (Tagliamento River, N.E. Italy). *Ecosystems* 5:802-814.
- Ward, J.V., K. Tockner, **D.B. Arscott**, C. Claret. 2002. Riverine landscape diversity. *Freshwater Biology* 47: 517-539.
- Arscott, D.B.**, K. Tockner, J.V. Ward. 2001. Thermal heterogeneity along a braided floodplain river in the Alps (Tagliamento River, N.E. Italy). *Canadian Journal of Fisheries and Aquatic Sciences* 58: 2359-2373.
- Wollheim, W.M., B.J. Peterson, L.A. Deegan, J.E. Hobbie, B. Hooker, W.B. Bowden, K.J. Edwardson, **D.B. Arscott**, A.E. Hershey. 2001. Influence of stream size on ammonium and suspended particulate nitrogen processing. *Limnology and Oceanography* 46: 1-13.
- Arscott, D.B.**, K. Tockner, J.V. Ward. 2000. Aquatic habitat diversity along the corridor of an Alpine floodplain river (Fiume Tagliamento, Italy). *Archiv für Hydrobiologie* 49: 679-704.
- Arscott, D.B.**, W.B. Bowden, J.C. Finlay. 2000. Effects of desiccation and temperature/irradiance on the metabolism of 2 arctic stream bryophyte taxa. *Journal of the North American Benthological Society* 19: 263-273.
- Stream Bryophyte Group. 1999. Roles of bryophytes in stream ecosystems. *Journal of the North American Benthological Society* 18:151-184.
- Arscott, D.B.**, W.B. Bowden, J.C. Finlay. 1998. Comparison of epilithic algal and bryophyte metabolism in an arctic tundra stream, Alaska. *Journal of the North American Benthological Society* 17: 210-227.

Grants and Contracts

- WikiWatershed: A web toolkit for advancing water quality restoration in the Delaware River Basin. Funded by: William Penn Foundation. Grant # 12-17. \$1.59 million. Principal Investigators: **D.B. Arscott**, A.K. Aufdenkampe, S. Kerlin. 2017-2018
- Greening STEM technologies: A model for advancing do-it-yourself (DIY) environmental sensing. Funded by: US EPA. Grant # NE-83675001-0. \$256,360. Principal Investigators: **D.B. Arscott**, A.K. Aufdenkampe, T. Muenz, S. Hicks. 2016-2018.
- Scientific Expert Witness: Physical, Chemical, & Biological Connections between Ephemeral streams and downstream waters in West Virginia. Contract: U.S. Department of Justice. 2015-present. Principal Investigators: **D.B. Arscott**, C.L. Dow
- Improving Infrastructure for Data Access, Storage and Recovery, and Network Communication at Stroud Water Research Center. Funded by: National Science Foundation. Grant # 1522479. \$54,745. Principal Investigators: **D.B. Arscott**, C.L. Dow. 2015-2016.

Supporting Citizen Science Within the Delaware River Watershed Initiative Cluster Teams. Funded by: William Penn Foundation. Grant # 158-15. \$2.5 million. Principal Investigators: M.J. Ehrhart, J.K. Jackson, and **D.B. Arscott**. Collaborators: B.W. Sweeney, J. Kan, M.D. Daniels, and A.K. Aufdenkampe. 2015-2017.

Brandywine Stream Stewards: Community Action in Support of Healthy Waters. Funded by: William Penn Foundation. Principal Investigators: J.K. Jackson and M.J. Ehrhart. Collaborators: J. Kan, M.D. Daniels, **D.B. Arscott** and A.K. Aufdenkampe; The Nature Conservancy – Delaware Chapter. 2015-2017.

2015 Brandywine Trek at Point Lookout. Funded by: Point Lookout Foundation. \$5,000. Project Lead: **D.B. Arscott**. Collaborators: T. Muenz; J. Berry (Coatesville Youth Initiative); S. Prestowitz (UrbanPromise, Wilmington)

Collaborative Research: Introducing Critical Zone Observatory (CZO) science to students and teachers. Funded by: National Science Foundation. PIs: A.K. Aufdenkampe; T.S. White (The Pennsylvania State University), S. Gill. Collaborators: T. Muenz, **D.B. Arscott**, J. Kan, M. Daniels, and H. Brooks (Stroud Water Research Center); H. Michael (University of Delaware); J. Pizzuto (University of Delaware). 2014-2016.

Consortium for Scientific Assistance to Watersheds (C-SAW). Funded by: Pennsylvania Department of Environmental Protection's Growing Greener Program. Project Leads: **D. Arscott** and T. Muenz. Collaborators: Alliance for Aquatic Resource Monitoring at Dickinson College; Conemaugh Valley Conservancy; Delaware Riverkeeper Network; Pennsylvania Lake Management Society; United States Geological Survey; Pocono Northeast Resource Conservation and Development Council

Expert Report and Witness: Characterizing Stream Connections and Physical, Chemical, Biological Influences on Downstream Navigable Waters. Funded by: U.S. Department of Justice. U.S. Dept. of Justice in the matter of Foster et al. v. EPA et al., No. 2:12-cv-16744 (S.D.W.V.). \$42,020 over 1 year. Addendum \$14,442 for 6 months. PIs: **D.B. Arscott** and C.L. Dow.

Long-Term Research in Environmental Biology (LTREB): Trajectory for the Recovery of Stream Ecosystem Structure and Function During Reforestation. Funded by: National Science Foundation DEB 1052716. Principal Investigators: B.W. Sweeney, A.K. Aufdenkampe, J.K. Jackson, J. Kan, and M. Daniels. Collaborators: J.D.. Newbold, **D.B. Arscott**, C.L. Dow, S.E. Gill, L.A. Kaplan, and W.H. Eldridge. \$900,000. 2010-2020.

Pathogen and Water-Quality Monitoring at White Clay Creek. Funded by: United Water Delaware and Suez Environment. Principal Investigators: J. Kan and D.B. Arscott. \$220,000. 2015-2016. Collaborators: J.K. Jackson; K. Jellison (Lehigh University); J. Dyksen (United Water Delaware).

Restoring Flood Attenuation and Ecological Resiliency in the Mid-Atlantic Piedmont. Funded by: National Fish and Wildlife Foundation. Principal Investigator: M.D. Daniels. Collaborators: B.W. Sweeney, **D.B. Arscott**, M.J. Ehrhart, W.H. Eldridge, J.K. Jackson, and S.E. Gill

Improving Stream Water Quality and Reducing Runoff by Improving Farm Soil Health Through Permanent Cover Cropping. Funded by: U.S. Department of Agriculture. Principal Investigator: B.W. Sweeney. Collaborators: M.J. Ehrhart, A.K. Aufdenkampe, and **D.B. Arscott**. 2015-2017.

Greening STEM Technologies: A model for advancing do-it-yourself (DIY) environmental sensing networks to support citizen science and primary and secondary education. United States Environmental Protection Agency. Grant writers: **D.B. Arscott**, T. Muenz. \$192,175. Awarded in late 2015 or early 2016.

Improving Infrastructure for Data Access, Storage and Recovery, and Network Communications at the Stroud Water Research Center. United States National Science Foundation. \$54,745. PIs: **D.B. Arscott**, C.L. Dow. 2015-2016. Award No. 1522479.

Stroud Water Research Center Streamside Classroom Project. E. Kneale Dockstader Foundation \$15,000. Grant writers: **D.B. Arscott**, Y.L. Arscott, T. Muenz. Project manager: **Arscott**. 2015-2016.

Creating a Water Quality Monitoring Network and an Online Water Atlas for the ACOSA Region. Blue Moon Fund \$250,000. PIs: W.H. Eldridge; Co-PI: B.W. Sweeney, **D.B. Arscott**. 2013-2015.

Evaluating threats to humans and aquatic ecosystems posed by agriculture around the Rio Sierpe, Costa Rica. Blue Moon Fund \$150,000. (PI: W.H. Eldridge; Co-PI: B.W. Sweeney, **D.B. Arscott**). 2011-2013

Christina River Basin Critical Zone Observatory (CRB-CZO): Quantifying Carbon Sequestration Resulting From Human-Induced Erosion. Funded by: National Science Foundation EAR 0724971 and 1331856. Principal Investigators: A.K. Aufdenkampe and L.A. Kaplan; J. Pizzuto and H. Michael (University of Delaware); K. Yoo (University of Minnesota). Collaborators: J. Kan, M.D. Daniels, **D.B. Arscott**, C.L. Dow, and S.E. Gill (Stroud Water Research Center); R. Aalto (University of Exeter, United Kingdom); L. Slater (Rutgers University); R. Vargas, C. Chan and D.L. Sparks (University of Delaware). 2010-2015.

Expert Report and Witness to determine the physical, chemical, and biological connections between a headwater wetland complex and downstream waters near Painesville, OH. Awarded to the Stroud Water Research Center. The Environmental Defence Section of the U.S. Department of Justice. United States vs. R.M. Osborne, Sr., DJ# 90-5-1-1-18628. PI: **D.B. Arscott**, B.W. Sweeney. 2011-2013.

Ashokan Watershed Stream Management Program mini grant program. 2011-2012. *Didymosphenia geminata* in Esopus Creek: Identification of bloom locations and dissemination of decontamination methods to citizens and scientists. PI: D. Richardson (SUNY New Paltz) Collaborators: T. Hoellein (Baruch College); **D.B. Arscott** (Stroud Water Research Center); Catherine Gibson (Skidmore College). \$5,000.

Water Resources Research Grant, NYS Water Resources Institute 2010-2011. Rock snot in sick rivers: What are the environmental drivers controlling blooms of the invasive diatom *Didymosphenia geminata* in the Northeastern and Mid-Atlantic United States? PI: D. Richardson (SUNY New Paltz) Collaborators: T. Hoellein (Baruch College); **D.B. Arscott** (Stroud Water Research Center); Catherine Gibson (Skidmore College). \$20,000

Statement of Work: Development of an educational tool to better understand the physical, chemical, and biological connections between wetlands and downstream waters. The Environmental Defense Section of the U.S. Department of Justice. United States vs. Roberts, DJ# 90-5-1-1-18184. PI: **D.B. Arscott**. \$62,438 over 8 months.

Statement of Work: Stroud Water Research Center Expert Report on the Proposed Rulemaking by the Pennsylvania Environmental Quality Board [25 PA. CODE CH. 93] for Ambient Water Quality Criterion; Chloride (Ch) [40 Pa.B. 2264] [Saturday, May 1 2010]. The School of Law, Environmental Law Clinic at the University of Pittsburgh. \$15,069 over 45 days.

Water quality in the Rio Sierpe watershed (Costa Rica). Awarded to the Stroud Water Research Center, Avondale, PA. March 2009. A planning grant from the Blue Moon Foundation. \$30,000 over one year. Co-authors (**Arscott**, Sweeney and Eldridge) and carried out research.

Expert Report and Witness to determine the physical, chemical, and biological connections between a headwater wetland complex and downstream waters in New Castle County, DE. Awarded to the Stroud Water Research Center, Avondale, PA. April 2009. The Environmental Defense Section of the U.S. Department of Justice. United States vs. David Donovan, No. 96-484. \$360,000 over 9 months. Co-authored and carried out research with collaborators (Arscott, Sweeney, Kaplan, Aufdenkampe, Eldridge, Jackson, Newbold, Bott).

Benthic and drifting macroinvertebrate community response to the incursion of *Didymosphenia geminata* in the Opuha River (2006-2008). Awarded to **D. Arscott** (SWRC). March 2009. Subcontract in collaboration with Cathy Kilroy at the National Institute for Water and Atmosphere (NIWA), Christchurch, NZ. \$10,000 over 6 months.

Measuring Watershed Health: training conservation planners how to use biophysical tools for monitoring streams in temperate and neo-tropical ecosystems – Awarded to the Stroud Water Research Center, Avondale, PA. February 2006. The Gordon and Betty Moore Foundation. \$446,527 over one year. Assisted in developing, writing, and submitting research proposal.

Nature Northwest Program Supplement – Awarded to D.B. Arscott and J.P. Loegering. Department of Natural Resources, University of Minnesota, Crookston. December 2002. Northwest Minnesota Foundation. \$30,450 over two years. Authored, submitted, and participated in project.

Red Lake River Corridor Enhancement Project – Awarded to the Red Lake River Corridor Enhancement Workgroup (Project Manager: D.B. Arscott). October 2002. Northwest Regional Sustainable Development Partnership. \$40,000 matching. Northwest Minnesota Foundation. \$40,000. Red Lake Watershed District. \$10,000. Project collaboration with Red Lake River Communities, the College of Architecture and Landscape Architecture and the College of Natural Resources at the University of Minnesota, St. Paul, and the Natural Resources Department at the University of Minnesota, Crookston. Authored, submitted, and participated in project.

MELINDA D. DANIELS

Stroud Water Research Center, 970 Spencer Road, Avondale, PA 19311
 Tel: (610) 268-2153 (x268) FAX: (610) 268-0490, mdaniels@stroudcenter.org

PROFESSIONAL PREPARATION

Cornell University	Natural Resources and Environmental Science	B.S., 1996
University College London	Environmental Science	M.Res., 1997
University of Illinois	Physical Geography	Ph.D., 2003

APPOINTMENTS

2013 - Present: Associate Research Scientist, Stroud Water Research Center
 2013 - Present: Ancillary Associate Professor, University of Delaware
 2010 - 2013: Associate Professor, Dept. of Geography, Kansas State University
 2008 - 2010: Assistant Professor, Dept. of Geography, Kansas State University
 2002 - 2008: Assistant Professor, Dept. of Geography, University of Connecticut

RECENT PUBLICATIONS (2012-, *student coauthor)

1. Albertson, L. K. and Daniels, M. D. 2016. Resilience of aquatic net-spinning caddisfly silk structures to common global stressors. *Freshwater Biology*, 61: 670–679. doi:10.1111/fwb.12737
2. Albertson, L. K., and M. D. Daniels. 2016. Effects of invasive crayfish on fine sediment accumulation, gravel movement, and macroinvertebrate communities. *Freshwater Science*, 35:2, 644–653.
3. Rüegg, J., W. K. Dodds, M. D. Daniels, K. R. Sheehan, C. L. Baker, W. B. Bowden, K. J. Farrell, M. B. Flinn, T. K. Harms, J. B. Jones, L. E. Koenig, J. S. Kominoski, W. H. McDowell, S. P. Parker, A. D. Rosemond, M. T. Trentman, M. Whiles, W. M. Wollheim. 2016. Baseflow physical characteristics differ at multiple spatial scales in stream networks across diverse biomes. *Landscape Ecology* 31(1): 119–136. doi:10.1007/s10980-015-0289-y
4. Caldas M.M., M.R. Sanderson, M. Mather, M. D. Daniels, J. S. Bergtold, J. Aistrup, J. L. Heier Stamm, D. Haukos, K. Douglas-Mankin, A. Y. Sheshukov, and D. Lopez-Carr. 2015. Opinion: Endogenizing culture in sustainability science research and policy. *Proceedings of the National Academy of Science of the United States of America* 112(27): 8157–8159.
5. Fencel* J. S., M.E. Mather, K. H. Costigan, M. D. Daniels. 2015. How Big of an Effect Do Small Dams Have? Using Geomorphological Footprints to Quantify Spatial Impact of Low-Head Dams and Identify Patterns of Across-Dam Variation. *PLoS ONE* 10(11): e0141210.
6. Ruffing*, C. M., K. A. Dwire, and M. D. Daniels. 2015. Carbon pools in stream-riparian corridors: legacy of disturbance along mountain streams of southeastern Wyoming. *Earth Surface Processes and Landforms*. DOI: 10.1002/esp.3830
7. Grudzinski*, B. P., Daniels, M. D., Anibas, K., & Spencer, D. (2015). Bison and cattle grazing management, bare ground coverage, and links to suspended sediment concentrations in grassland streams. *JAWRA Journal of the American Water Resources Association*, n/a-n/a. doi: 10.1111/1752-1688.12364
8. Dodds, W.K., Gido, K., While, M.R., Daniels, M.D., Grudzinski*, B.P. 2015. The stream biome gradient concept: controlling factors of streams across broad biogeographic scales. *Freshwater Science*, 34(1):1–19.
9. Ruffing*, C., M. Daniels, and K. A. Dwire. 2015. Disturbance legacies of historic tie-drives persistently alter geomorphology and large wood characteristics in headwater streams, southeast Wyoming. *Geomorphology*, 231:1–14.
10. Costigan*, K.H., M.D. Daniels, W.K. Dodds. 2015. Fundamental spatial and temporal disconnections in the hydrology of an intermittent prairie headwater network. *Journal of Hydrology*, 522: 305–316.

11. Costigan* K. H., Ruffing* C. M., Daniels M. D. and Perkin* J. S. 2014. Rapid response of a sand-dominated river to installation and removal of a temporary run-of-the-river dam. *River Research and Applications*, DOI: 10.1002/rra.2843
12. Burchsted*, D., & Daniels, M. D. 2014. Classification of the alterations of beaver dams to headwater streams in northeastern Connecticut, USA. *Geomorphology*, 205, 36-50. doi: 10.1016/j.geomorph.2012.12.029
13. Costigan*, K. H., Daniels, M.D., Perkin, J. S., & Gido, K. B. 2014. Longitudinal variability in hydraulic geometry and substrate characteristics of a Great Plains sand-bed river. *Geomorphology*, 210, 48-58. doi: 10.1016/j.geomorph.2013.12.017
14. Perkin*, J. S., Gido, K. B., Costigan*, K. H., Daniels, M.D., & Johnson, E. R. 2014. Fragmentation and drying ratchet down Great Plains stream fish diversity. *Aquatic Conservation: Marine and Freshwater Ecosystems*, n/a-n/a. doi: 10.1002/aqc.2501
15. Fischer*, J., Paukert, C., & Daniels, M.D. 2014. Influence of riparian and watershed alterations on sandbars in a Great Plains river. *River Research and Applications*, doi: 10.1002/rra.2811
16. Larson* DM, Grudzinski* BP, Dodds WK, Daniels M, Skibbe A, Joern A. 2013. Blazing and grazing: influences of fire and bison on tallgrass prairie stream water quality. *Freshwater Science* 32(3):779–791.
17. Chin, A., Laurencio, L., Wohl, E., Daniels, M.D., Urban, M., Boyer, K., Butt, A., Piegay, H., and Greory, K. 2012. The significance of perceptions and feedbacks for effectively managing wood in rivers, *River Research and Applications*, DOI: 10.1002/rra.2617
18. Fischer*, J., Paukert, C. and Daniels, M.D. 2012. Fish community response to habitat alteration: impacts of sand dredging in the Kansas River, *Transactions of the American Fisheries Society*, 141:6, 1532-1544
19. Costigan*, K.H. and Daniels, M.D., 2012. Damming the prairie: Human alteration of Great Plains river regimes. *Journal of Hydrology*, 444-445, 90-99.
20. Costigan*, K.H. and Daniels, M.D., 2012. Spatial pattern, density, and characteristics of large wood in Connecticut streams: Implications for stream restoration priorities in southern New England. *River Research and Applications*, In Press, available online, DOI: 10.1002/rra.158.

RECENT GRANTS

1. M. Daniels (PI), with L. Kaplan, M. Erhart, and A. Aufdenkampe. Transforming Water Quality in the Sharitz Run Headwaters of Brandywine Creek, PA DEP Growing Greener, 2015-2020, \$1,789,571
2. M. Daniels (PI), with B. Sweeney, D. Arscott, M. Erhart, W. Eldridge, J. Jackson, S. Gill, Restoring Flood Attenuation and Ecological Resiliency in the Mid-Atlantic Piedmont, 2014-2016, National Fish and Wildlife Foundation, \$3,030,000
3. M. Daniels (PI), with J. Aistrup, J. Bergtold, M. Caldas, K. Douglas-Mankin, D. Haukos, J. Hierr-Stamm, M. Mather, and A. Sheshukov, CNH: Coupled Climate, Cultivation, and Culture in the Great Plains: Understanding Water Supply and Water Quality in a Fragile Landscape, 2013-2016, NSF CNH, \$1,450,000
4. S. Kerlin, M. Daniels (co-PI), A. Aufdenkampe, N. Dietrich, C. Staudt. Collaborative Research: Teaching Environmental Sustainability - Model My Watershed, 2014-2016, NSF DRK-12, \$1,588,886

SYNERGISTIC ACTIVITIES

1. Environmental Review Board, U.S. Army Corps of Engineers, Appointed by the Secretary of Defense, Reporting directly to the Chief Engineer of the United States
2. Editorial Board Member, *Geomorphology*; National Science Foundation Panelist, Water Sustainability and Climate Program, Geography and Spatial Sciences Program, Hydrologic Sciences Program, Ecosystems Program

CHARLES L. DOW

Stroud Water Research Center, 970 Spencer Road, Avondale, PA 19311
Phone: (610) 268-2153 ext.259; Fax: (610) 268-0490; cdow@stroudcenter.org

EXPERIENCEDirector of Information Services /Research Scientist

Stroud Water Research Center; July 2002 to present

Manage staff and resources related to Center-wide computing resources and data analysis\management. Conduct data analyses in cooperation with and provide GIS services for SWRC Scientists and outside colleagues/collaborators.

Project Coordinator/ Project Manager /Research Scientist

NY Watersheds Project - Stroud Water Research Center; May 2000 – Dec 2006

Coordinated/participated in field work, data analysis/management, report writing, and producing peer-reviewed publications for a multi-year, multi-discipline project focused on stream health and condition within New York City's drinking water-supply watersheds.

Research Scientist

The Pinelands Commission, New Lisbon, NJ; Sept 1996 - May 2000

Conducted environmental research, including field work, data analysis, results interpretation and presenting those analyses and results in reports and peer-review publications in support of the mission of the Pinelands Commission to protect and preserve the Pinelands National Preserve.

Graduate School: Research /Teaching Assistant

Pennsylvania State University, University Park, PA

June 1994 – Dec 1995; June 1996 - Aug 1996 (School of Forest Resources)

Jan 1992 - May 1994 (U.S. EPA Long-Term Monitoring Project)

Aug 1990 - Dec 1991 (Environmental Pollution Control Program)

Jan 1996 to May 1996 (as Teaching Assist. - School of Forest Resources)

Laboratory Technician

E.I. Dupont de Nemours and Co., Agricultural Products Department,
Stine-Haskell Research Center, Newark, DE; Oct 1988 – Aug 1990

EDUCATION

Ph.D. Forest Resources, Pennsylvania State University - 1997

Major: Forest Hydrology

Minor: Statistics

Dissertation: *Long-term trends in annual watershed evaporation and Bowen Ratio due to urbanization in the eastern United States.*

M.S. Environmental Pollution Control, Pennsylvania State University - 1992

Thesis: *Sulfur and nitrogen budgets on five forested Appalachian Plateau Basins.*

B.S. Chemistry, DeSales University - 1988

PUBLICATIONS (selection)

Kan, J., S. Clingenpeel, **C.L. Dow**, T.R. McDermott, R.E. Macur, W.P. Inskeep, and K.H. Nealson. (2016). Geochemistry and mixing drive the spatial distribution of free-living Archaea and Bacteria in Yellowstone Lake. *Frontiers in Microbiology* 7(210):1-13.

Dow, C. L. (2007). Assessing regional land-use/cover influences on New Jersey Pinelands streamflow through hydrograph analysis. *Hydrological Processes* 21:185-197.

Arcscott, D. B., **C. L. Dow**, and B. W. Sweeney. (2006). Landscape template of New York City's drinking-water-supply watersheds. *J. of the North American Benthological Society* 25:867-886.

Dow, C.L. and D.R. DeWalle (2000). Trends in evaporation and Bowen Ratio on urbanizing watersheds in eastern United States. *Water Resources Research*. 36(7):1835-1843.

Dow, C.L. and R.A. Zampella (2000). Specific conductance and pH as watershed disturbance indicators in streams of the New Jersey Pinelands, U.S.A. *Environmental Management*. 26(4):437-445.

GRANTS and CONTRACTS

Expert Report and Witness: Physical, Chemical, & Biological Connections between Ephemeral streams and downstream waters in West Virginia. Contract: U.S. Department of Justice Justice in the matter of Ron Foster et al. v. EPA et al., No. 2:14-cv-16744 (S.D.W.V.). 2015-present. Principal Investigators: D.B. Arcscott, **C.L. Dow**

Improving Infrastructure for Data Access, Storage and Recovery, and Network Communication at Stroud Water Research Center. Funded by: National Science Foundation. Grant # 1522479. \$54,745. Principal Investigators: D.B. Arcscott, **C.L. Dow**. 2015-2016.

Long-Term Research in Environmental Biology (LTREB): Trajectory for the Recovery of Stream Ecosystem Structure and Function During Reforestation. Funded by: National Science Foundation DEB 1052716. Principal Investigators: B.W. Sweeney, A.K. Aufdenkampe, J.K. Jackson, J. Kan, and M. Daniels. Collaborators: J.D. Newbold, D.B. Arcscott, **C.L. Dow**, S.E. Gill, L.A. Kaplan, and W.H. Eldridge. \$900,000. 2010-2020.

Christina River Basin Critical Zone Observatory (CRB-CZO): Quantifying Carbon Sequestration Resulting From Human-Induced Erosion. Funded by: National Science Foundation EAR 0724971 and 1331856. Principal Investigators: A.K. Aufdenkampe and L.A. Kaplan; J. Pizzuto and H. Michael (University of Delaware); K. Yoo (University of Minnesota). Collaborators: J. Kan, M.D. Daniels, D.B. Arcscott, **C.L. Dow**, and S.E. Gill (Stroud Water Research Center); R. Aalto (University of Exeter, United Kingdom); L. Slater (Rutgers University); R. Vargas, C. Chan and D.L. Sparks (University of Delaware). 2010-2015.



John E. Theilacker, AICP

EXPERIENCE

Associate Director

Brandywine Conservancy 1999 – Present
Directs the Center’s Municipal Assistance Program (MAP) that provides innovative consulting services to southeastern Pennsylvania and northern Delaware municipalities in the areas of natural and cultural resource protection and growth management. Oversees MAP projects: municipal comprehensive plans, open space and recreation plans, natural resource management plans, community-wide trail plans, zoning ordinances, subdivision and land development ordinances, conservation design for land development and stormwater management, and publications, including the Conservancy’s 2003 publication *Transfer of Development Rights Manual* and 2008 *Lancaster County TDR Practitioner’s Handbook*. Management responsibilities include personnel management; developing and implementing MAP strategic plan elements and operating budget; administration of the MAP Subscriber program, including publication of its Environmental Currents e-newsletter, conduct of Subscriber meetings; and MAP program outreach. Mr. Theilacker combines over 30 years’ professional planning experience at the local level in the public and private sectors with land use and environmental education, insuring practical and effective approaches to municipal planning and resource conservation.

Community Development Director

City of Florence, OR 1995-1998

Planning Intern

Maryland Environmental Trust, Crownsville, MD 1994-1995

Project Manager and Director of Planning and Landscape Architecture

William H. Gordon Associates, Inc., Reston, VA 1987-1994

Zoning Coordinator II

Zoning Evaluation Division, Office of Comprehensive Planning
Fairfax County, VA 1985-1987

EDUCATION

Master of Regional Planning

Washington State University, Pullman, WA 1981

Master in Environmental Sciences

Washington State University, Pullman, WA 1979

**PROFESSIONAL
AFFILIATIONS**

American Planning Association
Pennsylvania Planning Association
American Institute of Certified Planners



**BRANDYWINE
CONSERVANCY**

Seung Ah Byun, PhD, PE

EXPERIENCE

Senior Planner for Water Resources

Brandywine Conservancy 2014 – Present
Dr. Byun is the Senior Planner for Water Resources with the Brandywine Conservancy's Municipal Assistance Program. Her responsibilities involve developing and managing innovative stormwater management practices, green infrastructure tools, and source water protection projects at the watershed and site levels. She also provides technical expertise to municipalities on compliance with state and federal water quality regulations such as MS4 and TMDL requirements.

Water Resources Engineer

2000 – 2005

CDM Smith, Philadelphia, PA

Dr. Byun developed watershed management plans for Philadelphia watersheds, conducted source water assessments for drinking water intakes throughout Pennsylvania, and developed hydrologic and hydraulic computer models of Philadelphia's watersheds, waterways, and wastewater collection system.

Water Resources Engineer

1998 – 2000

D.S. Winokur Associates, Langhorne, PA

Systems Analyst

1997 – 1998

Booz Allen & Hamilton, Philadelphia, PA

EDUCATION

Doctorate in City and Regional Planning

2014

University of Pennsylvania, School of Design, Philadelphia, PA

Masters of Science in Environmental Engineering

1999

Drexel University, Philadelphia, PA

Bachelor of Science in Systems Engineering

1997

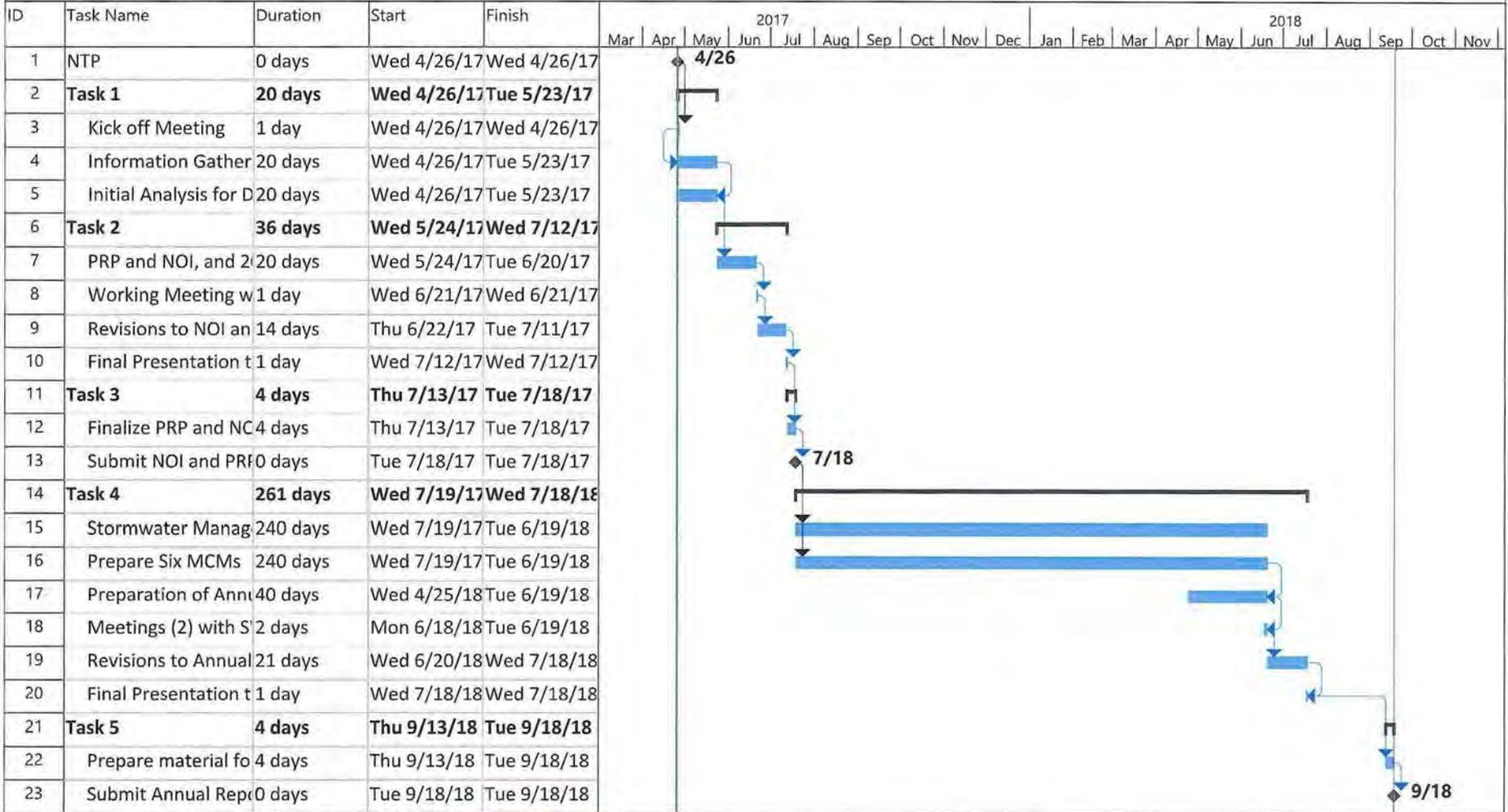
University of Pennsylvania, Philadelphia, PA

**PROFESSIONAL
AFFILIATIONS**

American Planning Association
American Planning Association-PA
American Water Resources Association-PA
Water Environment Federation

3. Schedule

Meliora Design Proposed MS4 Permitting Schedule



Project: Radnor MS4
Date: Wed 4/26/17

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

4. Fee

Radnor Township MS4 Proposal
 Meliora Detailed Fee Estimate
 Prepared for Radnor Township Mr. Steve Norcini
 April 26, 2017

Meliora Design - Fee Estimate - Summary

Task 1 Kickoff, Information Gathering, Draft PRP and NOI	Hours	Labor	Expenses	Total Fee
Task 1 Kickoff, Information Gathering, Draft PRP and NOI Total	321	\$ 31,956	\$ 640	\$ 32,596
Task 2 PRP and NOI				
Task 2 PRP and NOI Total	191	\$ 19,654	\$ 400	\$ 20,054
3 Task 3 Submission of PRP and NOI, Sept 16, 2017				
Task 3 Submission of PRP and NOI, Sept 16, 2017 Total	21	\$ 1,841	\$ 40	\$ 1,881
4 Task 4 Stormwater Management and Six MCMs; PRP Update and Implementation; Draft Annual Report				
Task 4 Stormwater Management and Six MCMs; PRP Update and Implementation; Draft Annual Report Total	754	\$ 64,342	\$ 1,290	\$ 65,632
5 Task 5 Annual Report Submission Sept 30, 2018				
Task 5 Annual Report Submission Sept 30, 2018 Total	20	\$ 1,742	\$ 40	\$ 1,782
Subconsultants				
Per Outfall			\$ -	\$ -
Number of Outfall Sampled			\$ 2,250	\$ 2,250
N/A			\$ -	\$ -
Sampling Analysis			\$ 2,250	\$ 2,250
Totals	Hours	Labor	Expenses	Total Fee
Totals	1307	\$ 119,535	\$ 4,660	\$ 124,195

Radnor Township MS4 Proposal
 Melliora Detailed Fee Estimate
 Prepared for Radnor Township Mr. Steve Norcini
 April 26, 2017

Melliora Design - Fee Estimate - Detailed

Title	Principal Engineer	Senior Engineer	Staff Engineer	GIS Specialist/Eng Tech	Stroud Scientist	Conservancy Planner	Total Hours	Total Fee
Billing Rate	\$144.77	\$98.92	\$86.86	\$63.94	\$140.00	\$75.00		
Task 1 Kickoff, Information Gathering, Draft PRP and NOI								
Kickoff meeting and gather and review available information and material	2	8	16		2	2	30	\$ 2,901
Review and update GIS for PRP analysis		4	16	40	16		76	\$ 6,583
Initial MapShed analysis and pollutant loads, including Model My Watershed analysis for communication		16	40		16		72	\$ 7,297
Three (3) working calls or GoTo meetings with Township	3	3			3		9	\$ 1,151
Summary report of initial analysis, findings, and recommendations for PRP	2	16	16		16		50	\$ 5,502
One (1) working meeting with Township to review findings and initial recommendations for PRP and NOI. Evaluation of different recommendations using Model My Watershed	4	4			4		12	\$ 1,535
One (1) working meeting with SWAAC		4			4		8	\$ 956
Draft PRP	4	20	40				64	\$ 6,032
							0	\$ -
Task 1 Kickoff, Information Gathering, Draft PRP and NOI Hours	15	75	128	40	61	2	321	
Task 1 Kickoff, Information Gathering, Draft PRP and NOI Total	\$ 2,172	\$ 7,419	\$ 11,118	\$ 2,558	\$ 8,540	\$ 150		\$ 31,956
Task 2 PRP and NOI								
Three (3) working calls or GoTo meetings with Township	2	3	3		3		11	\$ 1,267
One (1) working meeting with Township and SWMACC		4			4		8	\$ 956
Final NOI and PRP, with supporting materials	8	40	60	16	24		148	\$ 14,710
Presentation of PRP and relevant information to BOC	4	8			4		16	\$ 1,930
Prepare 2017 Annual Report		8					8	\$ 791
							0	\$ -
Task 2 PRP and NOI Hours	14	63	63	16	35	0	191	
Task 2 PRP and NOI Total	\$ 2,027	\$ 6,232	\$ 5,472	\$ 1,023	\$ 4,900	\$ -		\$ 19,654
3 Task 3 Submission of PRP and NOI, Sept 16, 2017								
Submission of NOI and PRP with all supporting materials to PaDEP by Sept 16, 2017		8	8	4			20	\$ 1,742
Submit 2017 Annual Report		1					1	\$ 99
							0	\$ -
Task 3 Submission of PRP and NOI, Sept 16, 2017 Hours	0	9	8	4	0	0	21	
Task 3 Submission of PRP and NOI, Sept 16, 2017 Total	\$ -	\$ 890	\$ 695	\$ 256	\$ -	\$ -		\$ 1,841
4 Task 4 Stormwater Management and Six MCMs; PRP Update and Implementation; Draft Annual Report								
MCM#1 Updating of Public Education Material and preparation of flyer and material for website		1			2	16	19	\$ 1,579
MCM#2 Update of PIPP, tracking of any outreach efforts and SWMAC for meeting requirements		1				16	17	\$ 1,299
MCM#3 Updating of MS4 map and discharges if needed		8	140	140		8	296	\$ 22,503
Outfall screening for 253 outfalls							0	\$ -
Dry weather screening and sampling (10) outfalls if needed per permit requirements							0	\$ -
Prepare Outreach materials for businesses, property owners, etc.						8	8	\$ 600
MCM#4 Review and provide recommendations for BMP#4 related to tracking system (covered under MCM#5)							0	\$ -
MCM#5 Review existing procedures for tracking and crediting projects toward MS4, provide recommendations and draft ordinance amendments.	8	40	24	40	16	40	168	\$ 14,997
BMP#6 Develop process for O&M of BMPs, including inventory, tracking measures, written plan, forms, etc.							0	\$ -
MCM#6 Prepare written O&M plans for 3 township facilities, with training session for each facility (3, 2-hour training sessions)		30	16	16			62	\$ 5,380
Six (6) conference calls or GoTo with Township and/or SWMAC to review work products, deliverables, etc.	2	6			4	4	16	\$ 1,743
Two (2) working meetings with Township and/or SWMAC to review work products, deliverables, and Draft Annual Report		4			4	4	12	\$ 1,256
Preparation of Draft Annual Report and all supporting materials for submission to PaDEP		24	24		16		64	\$ 6,699
PRP Update & Implementation Recommendations	8	24	40	20			92	\$ 8,285
							0	\$ -
Task 4 Stormwater Management and Six MCMs; PRP Update and Implemen	18	138	244	216	42	96	754	
Task 4 Stormwater Management and Six MCMs; PRP Update and Implemen	\$ 2,606	\$ 13,651	\$ 21,194	\$ 13,811	\$ 5,880	\$ 7,200		\$ 64,342
5 Task 5 Annual Report Submission Sept 30, 2018								
Submission of Annual Report and all supporting materials to PaDEP by Sept 30, 2018		8	8	4			20	\$ 1,742
							0	\$ -
Task 5 Annual Report Submission Sept 30, 2018 Hours	0	8	8	4	0	0	20	
Task 5 Annual Report Submission Sept 30, 2018 Total	\$ -	\$ 791	\$ 695	\$ 256	\$ -	\$ -		\$ 1,742

Radnor Township MS4 Proposal
 Meliora Detailed Fee Estimate
 Prepared for Radnor Township Mr. Steve Norcini
 April 26, 2017

Meliora Design - Fee Estimate - Detailed									
Title	Principal Engineer	Senior Engineer	Staff Engineer	GIS Specialist/Eng Tech	Stroud Scientist	Conservancy Planner	Total Hours	Total Fee	
Billing Rate	\$144.77	\$98.92	\$86.86	\$63.94	\$140.00	\$75.00			
Project Hours Total	47	293	451	280	138	98	1,307		
Project Labor Total	\$ 6,804	\$ 28,984	\$ 39,174	\$ 17,903	\$ 19,320	\$ 7,350		\$ 119,535	
Reimbursables									
Expense Estimated at	2%	of fee (includes mileage, printing, etc.)							\$ 2,410
Laboratory Testing for Dry Weather all reqd PaDEP Parameters									
Laboratory Testing for Dry Weather all reqd PaDEP Parameters									
Per Outfall		\$225						\$ -	
Number of Outfall Sampled		10						\$ 2,250	
N/A								\$ -	
Sampling Analysis								\$ 2,250	
Total Fee								\$ 124,195	



M.J. Reider Associates, Inc.

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Analytical Services Quotation

Quotation Date: 04/25/2017

Pricing Expires: 04/25/2018

Lab Contact: Bradley Griffiths

Attention: John Rains
Meliora Design
259 Morgan Street
Phoenixville, PA 19460

Bid: Stormwater

Analytical Pricing Summary

Parameter	Method	Qty	TAT (Bus. days)	Unit Price	Extended Price
Non-Potable Water					
<i>General Chemistry</i>					
Ammonia Nitrogen, Total	ASTM D6919-03	1	5	\$20.00	\$20.00
Biochemical Oxygen Demand, Total	SM 5210 B	1	5	\$30.00	\$30.00
Chemical Oxygen Demand, Total	HACH 8000	1	5	\$25.00	\$25.00
Chlorine, Residual	SM 4500-Cl G	1	5	\$20.00	\$20.00
Oil and Grease	EPA 1664 Rev A	1	5	\$40.00	\$40.00
pH	SM 4500-H+ B	1	5	\$15.00	\$15.00
Specific Conductivity	SM 2510 B	1	5	\$15.00	\$15.00
Total Dissolved Solids	SM 2540 C	1	5	\$15.00	\$15.00
Total Suspended Solids	SM 2540 D	1	5	\$15.00	\$15.00
<i>Microbiology</i>					
Fecal Coliform	SM 9222 D	1	5	\$30.00	\$30.00

Analytical Total: \$225.00

Total: \$225.00



107 Angelica Street □ Reading, PA 19611 □ www.mjreider.com □ (610) 374-5129 □ fax (610) 374-7234

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NELAC accreditations for various drinking water, wastewater and solid & chemical materials analytes.



Radnor Township Engineering Department

Request For Proposals

Radnor Township is soliciting proposals from qualified firms to provide MS4 services for Radnor Township.

The time line for submittal of proposal is as follows:

Request For Proposals Timeline		
Item	Time	Date
RFP Posted to Penn Bid	4:30 PM	Friday, March 17th, 2017
Pre-Proposal Meeting	10:00 AM	Tuesday, March 28th, 2017
Close of Questions (on Penn BID)	4:00 PM	Wednesday, April, 12th, 2017
Responses to Questions	4:00 PM	Thursday, April, 20th, 2017
Proposals Due, on Penn BID	4:00 PM	Wednesday, April, 26th, 2017
Potential Award by the Board of Commissioners	6:30 PM	Monday, May 8th, 2017

It is understood that this is a very aggressive timeline to meet the required deadlines for submittal. In Section 1, all are to note that paraphrasing was used for the sake of brevity. **The firm's proposal must provide the services, information, and material to have Radnor Township fully comply with all MCMs and BMPs, the NPDES PRP, and NOI.**

Radnor Township's Stormwater Management Advisory Committee (SWMAC) will play an integral role in reviewing and commenting on the various proposed MCMs, PRP, and NOI. The consultant should note that they will make presentations to the SWMAC, staff, and the Board of Commissioners. The numbers of meetings, ad their duration are specified the deliverables section.

SECTION 1:

PAG 13 APPENDIX A, STORMWATER MANAGEMENT PROGRAM.

MCM #1: Public Education and Outreach on Stormwater Impacts. Meet MCM#1 requirements.

BMP #1: Develop, implement, and maintain a written Public Education and Outreach Program. Meet the measurable goal; provide all necessary material, and written plan, for Public Education and Outreach Program (PEOP).

BMP #2: Develop and maintain a list of target audience groups that are present within the area served by your regulated small MS4s. Meet the measurable goal; develop and maintain the list.

BMP #3: Annually Public one newsletter, pamphlet, flyer, or website that includes general stormwater information. Update the Township's website to meet the requirement, design/author newsletter, pamphlet, or flyer. Meet the measurable goal for renewal permittees.

BMP #4: Distribute stormwater educational materials to the target audience, using a variety of distribution methods. Meet the required measurable goal of tow distribution methods each permit year.

MCM #2 Public Involvement/Participation. Meet the MCM #2 requirements, as included in the Federal Regulations.

BMP #1: Develop, implement, and provide a written Public Involvement and Participation Plan (PIPP), meeting the measurable goal. Meet the measurable goal for renewals.

BMP #2: Provide adequate public notice required. Prepare public notice, and monitor feedback. Meet measurable goal in regards to advertising, public comment, and feedback. Advertise per Township and DEP requirements, meeting required goals. Provide methods for receiving, tracking, and documenting feedback.

BMP #3: Regularly solicit public involvement and participation. Take note of Radnor Township's Stormwater Management Advisory Committee (SWMAC), as the formation and meeting of the SWMAC may meet some, or all, of these goals. Provide any additional requirements for compliance.

MCM #3: Illicit Discharge Detection and Elimination (IDD&E). Meet Federal Regulation for this MCM; prepare the program, update the Township's storm sewer map (as required by following MCMs), prepare an ordinance, or amend existing ordinances, prepare information for informing entities of the hazards of illegal discharges, and improper disposal of waste (see existing Township Code).

BMP #1: Prepare "procedures" as noted, and perform actual testing as required to comply with measurable goals for renewals.

BMP #2: Develop and maintain a map of the regulated small MS4. Update the Township's current GIS map to comply, meeting measurable goal.

BMP #3: Update existing map created for BMP #2. Using SALDO plans (for new developments), and updates from staff, to meet measurable goals.

BMP #4: Conduct outfall screening, in accordance with measurable goals, including lab work.

BMP #5: Review the Township's 2005 Stormwater Ordinance, and provide recommended amendments to comply.

BMP #6: Using the methods outlined in MCM #1, provide educational outreach to Township employees, business owners and employees, property owners, and the public concerning the program to detect and eliminate illegal discharges.

MCM #4: Construction Site Stormwater Runoff Control. Examine the Township's current requirements for compliance. If needed, suggest changes to come into compliance, provide draft ordinance amendments, in compliance with the Federal Regulations listed under MCM #4.

BMP #1: Develop program (review existing) and provide amendments, as needed, to meet the measurable goals.

BMP #2: Enact, implement, and enforce the ordinance for E&S controls.

BMP#3: Develop and implement requirements for construction site operators to control waste at sites that may inadvertently affect water quality. Review current standards, and provide necessary changes/amendments to comply with measurable goals.

BMP #4: Develop and implement procedures for receipt and consideration of public inquiries. Review existing format, provide recommendations, along with appropriate forms, creating tracking system, in compliance with measurable goals.

MCM #5: Post-Construction Stormwater Management (PCSM) in New and Re-Development Activities. Review existing requirements, and provide suggested changes to comply with the Federal Regulations.

BMP #1: Develop a written procedure that describes how the permittee shall address all required components of this MCM. Provide recommendations based on current methods, provide tracking method.

BMP #2: Require implementation of a combination of structural and/or non-structural BMPs that are appropriate to the community, that minimize water quality impacts, and maintain pre-development run-off conditions. Review existing measures, and provide necessary changes to meet the measurable goal. Provide tracking system as required.

BMP #3: Ensure that controls are installed that shall prevent or minimize water quality impacts. Review existing inspection format., provide suggestions, if needed, to comply with the measurable. Provide necessary inspection forms to do so.

BMP#4: The permittee shall enact, implement, and enforce the ordinance or other regulatory mechanisms to address post construction stormwater runoff. Review existing procedures, provide any necessary changes if needed to comply, and draft letter.

BMP#5: Develop and implement measures to promote Low Impact Development (LID). Meet measurable goals for the inventor of construction since March 10, 2003, indicating which projects incorporated LID practices. Provide tracking for past and current projects. Review existing ordinances to comply with measurable goals, provide recommendations to do so, and draft ordinance amendments.

BMP #6: Ensure adequate operation and maintenance of all post-construction stormwater management BMPs. Provide inventory, tracking measures, written plan for said actions, to comply with measurable goals.

MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations. Prove written plan, provide training to staff (assume 2-hour training session), in compliance with the noted federal regulations.

BMP #1: Identify and document all facilities (Township Building Public Works Building, Skunk Hollow Leaf Composting Center) that are owned and operated by the permittee

BMP #2: Develop, implement, and maintain a written O&M program for all noted facilities. Provide draft O&M program, including any resolutions that may be required. Work with staff to determine if an all-encompassing plan, or single plans best meet the requirements.

BMP #3: Develop and implement the employee training program. Provide training material, and training for staff as noted. Assume three, 2-hour training sessions, on-site at Radnor Township, with content and documentation to comply with measurable goals.

SECTION 2:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS, POLLUTANT REDUCTION PLAN (PRP).

PAG-13 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS NOTICE OF INTENT (NOI) CHECKLIST

The consultant will perform all tasks to have Radnor Township in compliance with the requirements for the PRP. The consultant shall provide all services to comply with the **Public Participation** element of the PRP (provide advertisement of the meeting, *note: the consultant should consider using the SWMAC meeting, accept, document, and track comments*)

The consultant shall provide the **Map**, meeting all requirements as noted, as well as identifying the **Pollutants** of concern.

The **Determination of Existing Loading of Pollutants of Concern** will be provided on the most economical basis which meets the requirements. The Selection of BMPs to Achieve the Minimum Required Reductions in Pollutant Loading will be done with input from the SWMAC, and be brought before the Board of Commissioners for approval. The **Identifying of Funding Mechanisms** shall be the Radnor Township Stormwater Fund and grants put forth by the consultant. The consultant will be required to show how the projects would be funded, based on the current Stormwater Five Year Plan. This process will be done in conjunction with the SWMAC. Upon a recommendation of the SWAMC, this will be brought to the Board of Commissioners. The consultant will note the **Responsible Parties for Operation and Maintenance**. Once approved by the Board of Commissioners, the consultant will complete the NOI for submission by the Township. The consultant will perform all necessary tasks and provide required documentation to complete and submit the PRP and NOI.

END OF SECTION

SECTION 3:

Information & Documentation

The following documents are included as part of this solicitation:

- Radnor Township 2016 Report
- Radnor Township Stormwater Map
- 2005 Stormwater Ordinance
- 2005 Stormwater Ordinance Appendices
- Subdivision and Land Development Ordinance
- Grading Permit Application
- Clearing Permit Application
- MS4 Program Requirements
- Pollution Reduction Plan Requirements
- Notice of Intent Checklist and Application

The consultant will have access to the Township's GIS system, access database, laser fiche, and plan archives.

It is strongly recommended that the consultant view the entire Radnor Township website at www.radnor.com.

The following links are also provided:

Planning Commission: <http://pa-radnor.civicplus.com/426/Planning-Commission>

Stormwater: <http://pa-radnor.civicplus.com/219/Stormwater>

Stormwater Management Advisory Committee: <http://pa-radnor.civicplus.com/431/Stormwater-Management-Advisory-Committee>

DEP:

<http://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater/Pages/default.aspx>

END OF SECTION

SECTION 4:

DELIVERABLES

SECTION 1:

- Public Education and Outreach Program, and the Public Involvement Program
Assume one, three-hour meeting to present the programs to SWMAC and Staff.
Consultant to include meeting time, tasks, and materials as necessary to host (at Radnor Township) both meetings.
- The consultant will provide the IDDE&I plan, and present to staff. Upon approval of the draft, the consultant will perform the requisite testing and laboratory analysis, and prepare a report on the findings.
- Develop, implement, and maintain a written O&M program for all noted facilities.
Provide draft O&M program, including any resolutions that may be required. Work with staff to determine if an all-encompassing plan, or single plans best meet the requirements. Assume one, three-hour meeting presentation to SWMAC and staff.
Develop and implement the employee training program. Provide training material, and training for staff as noted. Assume three, 2-hour training sessions, on-site at Radnor Township, with content and documentation to comply with measurable goals.
- Develop and implement requirements for construction site operators to control waste at sites that may inadvertently affect water quality. Review current standards, and provide necessary changes/amendments to comply with measurable goals. Interviews with staff will be required for this deliverable, to determine current methods and documentation.
- Develop a written procedure that describes how the permittee shall address all required components of this MCM. Provide recommendations based on current methods, provide tracking method. Review existing measures, and provide necessary changes to meet the measurable goal. Provide tracking system as required. Review existing inspection format., provide suggestions, if needed, to comply with the measurable. Provide necessary inspection forms to do so. Develop measures to promote Low Impact Development (LID). Meet measurable goals for the inventor of construction since March 10, 2003, indicating which projects incorporated LID practices. The consultant will have access to the Township's GIS system, access database, laser fiche, and plan archives. Provide tracking for past and current projects. Review existing ordinances to comply with measurable goals, provide recommendations to do so, and draft ordinance

amendments. Ensure adequate operation and maintenance of all post-construction stormwater management BMPs. Provide inventory, tracking measures, written plan for said actions, to comply with measurable goals.

- Prepare draft O&M manual, review for comment an input wit staff. Upon approval, assume three, 2-hour training sessions, on-site at Radnor Township, with content and documentation to comply with measurable goes.
- Consultant to prepare and provide all mapping, as required, to update the Township's current stormwater map (sewer shed delineations, outfall drainage areas, etc.). The consultant shall be provided access to the Township's GIS system. The maps must be compatible with, and installed on the Township's computers.
- Prepare NOI and PRP, as noted above. Assume four, three hour meetings with SWMAC and staff (staff to include the Township Manager and Finance Director). Upon recommendation of SWMAC and staff for the PRP, present to the Board of Commissioners (tow, three hour meetings).

This solicitation is for the consultant to provide all material, services, programming, meetings, documentation, training, training material, testing, ordinance amendments, etc., all, to bring Radnor Township into compliance, in accordance with the NOI, SWM Program, and PRP.

The consultant shall provide pricing for Items 1 & 2, along with the hours put forth for each task, and by whom.

The consultant must provide a schedule putting forth how they will perform the required work and meet the following deadlines:

Notice of Intent: September 16th, 2017 Pollutant Reduction Plan: September 16th, 2017
Permit Coverage March 16th, 2018

END OF SECTION

Stephen F. Norcini, PE
Director of Public Works
Radnor Township
March 7th, 2017

Links

Planning Commission: <http://pa-radnor.civicplus.com/426/Planning-Commission>

Stormwater: <http://pa-radnor.civicplus.com/219/Stormwater>

Stormwater Management Advisory Committee: <http://pa-radnor.civicplus.com/431/Stormwater-Management-Advisory-Committee>

Radnor Township

Discussion Topic: Stormwater Project Ranking Criteria

DATE: May 16th, 2017,
TO: Radnor Township Board of Commissioners
FROM: Stephen F. Norcini, P.E., Director of Public Works *SN*
CC: Robert A. Zienkowski, Township Manager
William R. White, Assistant Township Manager & Finance Director

Discussion Topic: Stormwater Project Ranking Criteria

In the Township Wide Study, performed by CH2M, an "Ownership Scoring Approach" and "Prioritization Criteria Scoring and Weighting Approach" (please see attached) were presented. Subsequent to CH2M's presentation, the Board of Commissioners directed staff to submit a draft project ranking plan (please see attachment #A).

The scoring matrix presented is designed to combine both documents as presented by CH2M, into one, easier to use method for scoring and ranking stormwater management projects. Please note that the scoring criteria in the draft are weighed differently than that of the previous documents. Each category allows the user to encompass one or more criteria, so that on a project by project basis, an objective approach (albeit the matrix in and of itself is subjective) can be had for choosing to move forward on a project. For example, the Cost/Benefit section can encompass flood extent reduction cost, flood depth reduction cost, storage volume cost, easements, etc. There is inherent flexibility in the matrix to provide a customized, yet not cumbersome, approach to project selection.

We hope that the Board can use the attached Draft Scoring Methodology for Stormwater Management Projects as a basis for future stormwater management project selection, and welcome the discussion that will provide a final version of the Board of Commissioners project ranking criteria.

Enclosures: (Draft) Scoring Methodology for Stormwater Management Projects.
CH2M Prioritization Scoring and Weighting Approach and Ownership Scoring Approach

Attachment #A

(DRAFT) Scoring Methodology for Stormwater Management Projects			
Scoring Criteria	Criteria Description	Explanation/Example	Total Possible Points Per Category
Threat to Person and Property	Encompasses flooding events that may cause physical harm to residents, and/or damage property. Includes depth of floodwater, which affects both items.	Areas where floodwaters could cause harm to a resident, or real property is damaged by floodwaters. A lower depth floodwater height may be more damaging to one area, than higher depth of floodwaters in another.	30
Delay of Emergency Response	Flooded streets cause delay in emergency responders (Police, Fire, Ambulance) accessing a residence or business. Includes depth of flood waters, which may hinder the emergency responders.	Threat to residents due the fact that an ambulance may not be able to reach a dwelling for a time, that would endanger that resident. Flooding that occurs at a Police Station or Fire House, and hinders access/egress of emergency vehicles, may affect the entire service area.	15
Cost/Benefit	The ratio of total cost: design, construction, and possible easements to the frequency of storm managed.	The cost of the project versus the benefit provided. For instance, a high cost of design, construction, and possible easements for a SWM project that only manages a very small frequency storm would score on the lower end of the scale.	25
MS4	Projects that include pollution load reduction, water quality, BMPs.	The DEP MS4 program requires pollution load reductions, and water quality BMPs. The Township is required to design a PRP (Pollution Reduction Plan) to comply with MS4; these projects should include some aspect of Pollution Reduction or Water Quality. Those that do would rank higher than those that do not.	15
Ownership	To be addressed on a site by site basis	Township owned property would rank highest. Partnership with other landowners (government, transportation, school districts, private property) ranks favorably in obtaining grants, but the possible cost may negate that, hence the case by case basis.	10
Maintenance Costs	The annual and lifetime costs to ensure proper operation of the SWM system.	A SWM system that requires frequent maintenance to keep the system operating as designed would rank lower than one that perhaps needs only annual maintenance. The accessibility of maintenance crews must also be considered.	5
Maximum Possible Points - Aggregate of all categories.			100

Prioritization Criteria Scoring and Weighting Approach

Criteria	Scoring Approach	Description	Assigned Weight
Flood Extent Reduction/Cost (SF/\$M)	0-10 (Low to High)	Based on modeled reduction in flooded area divided by estimated cost; ranked either by individual priority problem area or by all priority problem areas combined	90%
Flood Depth Reduction/Cost (IN/\$M)	0-10 (Low to High, by either individual priority problem area or overall)	Based on modeled reduction in flooded depth divided by estimated cost; ranked either by individual priority problem area or by all priority problem areas combined	100%
Storage Volume/Cost (CF/\$M)	0-10 (Low to High, by either individual priority problem area or overall)	Based on assumed storage volume divided by estimated cost; ranked either by individual priority problem area or by all priority problem areas combined	40%
Ownership	0-10 (Low to High)	See ownership scoring table; preference is given to publicly owned sites	80%
Water Quality	High=10, Med=5, Low=0	Based on assumed pollution reduction capacity by project type (aligns with new MS4 permit requirements); For example, a bioretention facility would score higher than a new pipe project	70%
Cost Sharing and/or Partnership Opportunities	High=10, Med=5, Low=0	Projects scored higher if there is an apparent opportunity to share costs with an entity other than Radnor Township (PennDOT, commercial site owners, etc.)	20%
O&M Needs	Low=10, Med=5, High=0	Based on assumed O&M requirements, frequencies, and costs	40%
Public Amenity	High=10, Med=5, Neutral=0, Low=-5	Includes recreational value, aesthetics, enhancing community assets; For example, pipe upsizing would be scored lower than vegetated curb extensions	70%
Public Safety	High=10, Med=5, Low=0	Projects scored higher if they improve public safety conditions; For example, green street projects often have traffic calming and pedestrian safety benefits	20%
Constructability	Most Difficult=0, Med Difficult=5, Least Difficult=10	Potential impacts on local businesses, traffic, pedestrians, utilities, etc.; For example, a project in a park would score likely higher than a project along Rt 30	50%

Ownership Scoring Approach

Owner	Score
Township	10
School District	8
PADOT	7
Amtrak	7
SEPTA	7
Private - Commercial	6
Private - Educational	6
Private - Religious	5
Private - Residential	4
Tredyffrin Township	2

Radnor Township

PRESENTATION & POSSIBLE MOTION

DATE: May 1, 2017

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Director of Public Works *SN*

CC: Robert A. Zienkowski, Township Manager
William R. White, Assistant Township Manager & Finance Director
Daniel Wible, PE CH2M

PRESENTATION & POSSIBLE MOTION: CH2M Presentation on the North Wayne Field Basin

As a part of the Township Wide Study (TWS), CH2M was directed to model the North Wayne Field Basin, specifically, in its current state of disrepair, and if it were to be cleaned and repaired. In the preliminary portion of the TWS presented last fall, the 2,5, 10, and 25-year frequency storms were modeled for the basin in the current state of disrepair, and if were to be cleaned and repaired. It was shown that in certain frequency storms, there would be a slight increase in flood water depth at Plant Avenue and Willow Avenue. This obviously caused consternation for residents in that area of North Wayne. In the final version of the study, only the 10-year event was modeled; this showed a marginal benefit to the area noted. We still do not have "final version" data for the other storm events. In the 2017 Stormwater Fund Budget, \$185,000 was slated for the cleaning and repair of the basin. To provide more data for proper decision making, and to ensure that no project will lessen one problem and worsen another, and to mitigate possible deleterious effects of the cleaning and repairing of the North Wayne Field Basin, Dan Wible will be presenting the following:

1. CH2M will use the refined model (final model), as was presented to the Board of Commissioners, to evaluate the 2, 5, 10, and 25-year frequency event, for the basin in its current state (in need of repair and cleaning), and the basin if were operating as originally constructed. Based on the information at hand, this will provide data showing the effects, beneficial or detrimental, of what would occur if the North Wayne Field Basin was cleaned, in the noted storms.
2. To mitigate any possible increase in flood water depth downstream of the basin (Plant Avenue, Willow Avenue), projects will be put forth that will reduce stormwater runoff to the basin, thereby reducing flow from the basin outfall. For instance, if the West Avenue Green Streets Project was constructed, and others upstream in the drainage area, the stormwater runoff reduction (through volume control), could alleviate any increased output from the cleaned and repaired basin. The upstream projects would have to be constructed prior to any basin work.

Clearly, no movement in any direction could take place without explicit direction of the Board of Commissioners. The intent of the CH2M presentation is to provide the Board of Commissioners the most relevant data on hand, to be able to make informed decisions. Please note the additional modeling will most likely not be complete prior to the Board's meeting. If that occurs, I will provide the information to the Board ASAP, and hard copies will be at the dais for the Commissioners, and at the table for our residents. It will then be posted on the website.



*Excellence Delivered **As Promised***

Date: May 15, 2017

To: Radnor Township Board of Commissioners

From: Roger Phillips, PE

cc: Robert Zienkowski – Township Manager
Stephen Norcini, P.E. – Director of Public Works
Kevin W. Kochanski, RLA, CZO – Director of Community Development
John Rice, Esq – Grim, Biehn, and Thatcher
Amy Kaminski, PE – Gilmore and Assoc.
Steve Gabriel - Rettew

RE: 471 Glenmary Lane – Stormwater Waiver Request
Grading Permit Application – GP 17-045

The applicant is requesting a waiver of §245-22 of the Townships Stormwater Management Ordinance which requires the maximizing of the ground water recharge capacity of the area being developed.

The applicant has conducted soil testing at three (3) locations on the site, and the required percolation was not feasible due to redoximorphic features which is indicative of a high groundwater table. No permeability testing could be conducted as per PA DEP guidance due to the shallow depth of observed groundwater (6”-9” from ground surface).

In addition to the above mentioned issues, the applicant must address the following items prior to the issuance of the Grading Permit:

1. All plans submitted to the Township are scaled for impervious surfaces. We are unable to identify all areas of removed impervious surface. Please revise the plans to show the existing areas to be removed. Currently, we are only able to verify approximately 380 SF of removed driveway area. The application indicates 834 SF of area is removed.
2. §175-6(A).(2) – states that plans must be prepared by a registered engineer or surveyor in the Commonwealth of Pennsylvania. Additionally, the grading permit application checklist indicates that for plans over 1,000 SF of impervious coverage must include the name, address and seal of a PA Engineer or Surveyor. Resubmit the plans with the required stamp and seal.



Gannett Fleming

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



All County & Associates, Inc.
1-800-220-9165
P.O. Box 472
St. Peters, PA 19470
(610) 469-3830

Board of Commissioners
Radnor Township
301 Iven Avenue
Wayne, PA 19087

May 11, 2017

**RE: Donnell Residence – 471 Glenmary Lane
Radnor Township, Delaware County, PA.
Waiver Request Letter**

Dear Members of the Board:

On behalf of Courtney & Bill Donnell, owners of 471 Glenmary Lane, we are formally requesting a waiver from Section 245-22 of the Radnor Township Stormwater Management Ordinance. The intent of this section of the ordinance, titled Groundwater Recharge, is to maximize the groundwater recharge capacity of the proposed development area. Specifically, the minimum infiltration requirement of 0.5 inches cannot be achieved on this site due to soil constraints and a waiver is sought in accordance with Section 245-22.A(2)(c)[2].

The project proposes to remove 834 s.f. of existing driveway area and construct 888 s.f. of new addition/covered porch and 597 s.f. of new driveway area. The total proposed impervious surface will be 1,485 s.f. and the project proposes less than 5,000 s.f. of land disturbance. In accordance with Table 105.1, referenced in Section 245-5.F, of the Radnor Township Stormwater Management Ordinance, groundwater recharge is required for this project since the total added impervious surface is between 500 s.f. and 1,500 s.f. and the area of earth disturbance is less than 5,000 s.f.

Soils testing was conducted on May 1, 2017 by a Pennsylvania Registered Soils Scientist, Paul D'Agostino and observed by a Radnor Township Official. A series of three (3) deep hole soil probes were conducted across the site. The soil test pits have been displayed on the accompanying Site Design Plan. Each test pit exhibited redoximorphic features, indicative of a high-water table, at depths ranging from 6" - 9" from ground surface. Mr. D'Agostino determined that no permeability testing could be conducted per PA DEP guidance due to the shallow depth of observed groundwater.

The Radnor Township Stormwater Management Ordinance states that infiltration may not be feasible on every site due to site-specific limitations such as soil type and states that the design

professional is responsible to show that this cannot be physically accomplished. It is our professional opinion that the accompanying soils testing results clearly prove that this site is not able to meet the intent of the Groundwater Recharge section of this ordinance.

Thank you for your consideration.

Regards,



Stephen Tabakelis,
All County and Associates, Inc.

Attachment:

Groundwater Recharge Soils Testing Results



ALL COUNTY AND ASSOCIATES, INC.
1-800-220-9165
P.O. BOX 472
ST. PETERS, PA 19470
(610) 469-3830

May 8, 2017

Mr. Stephen P. Tabakelis, EIT, CPSWQ, CPESC
All-County and Associates, Inc.
P.O. Box 472
St. Peters, Pa 19470

Re: Groundwater Recharge Soils Testing Results
471 Glenmary Road, Radnor Township, Pa

Dear Mr. Tabakelis,

Soil test probe investigations were evaluated at the above captioned property to find a potential suitable area for storm water retention. These probes were conducted on May 1, 2017 and a total of three soil probes were excavated open within 10 feet of a proposed locations. The property is situated downslope from adjoining parcels and small rills/gully's were noticeable running downslope towards an existing channel.

All three areas selected for potential sites are located in the GnB-Glenville 3-8 percent soil mapping unit. These soils are described by the NRCS Soil Survey as being somewhat poorly drained to moderately well drained with a depth to water table between 6 and 36 inches. The soil at this location has a silt loam Ap horizon with granular texture and friable consistence. The upper Bt horizons all had seasonal high water table with the presence of redoximorphic features present between the shallow depths of 6-9 inches below the ground surface. The lower Bt horizons were extremely firm in consistence with strong sub angular/prismatic structure, many prominent mottling which is typically an indication of an impermeable fragipan. The test probe in the upper right corner of the property off of the existing driveway has a gleyed horizon at approximately 56 inches with visible water seeps.

Considering the very shallow depths to redoximorphic features combined with the extremely firm restrictive layers observed in the three test probes, it is the opinion of the below signed that the soils referenced above do not meet the site requirements of section 245-22.A(1)(a): a minimum depth of 24 inches between the bottom of the BMP and the top of the limiting zone and therefore are not suitable for a typical storm water infiltration.

Respectfully,

Paul DAgostino
PAPSS soil scientist



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SITE INVESTIGATION AND PERCOLATION
TEST REPORT F**

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. Favinger TP2 back right Municipality Radnor Township County Delaware

Site Location 471 Glenmary Road Subdivision Name _____

- SUITABLE Soil Type GnB Slope 3 8% Depth to Limiting Zone 6 inches Ave. Perc. Rate N/A
 UNSUITABLE Mottling Seeps or Poned Water Bedrock Fractures Coarse Fragments
 Perc. Rate Slope Unstabilized Fill Floodplain Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Paul DAgostino-PAPSS  Date: 05/01/17

Inches	Description of Horizon
<u>0</u> TO <u>6</u>	<u>10 yr 3/4, silt loam, mod granular, very friable</u>
<u>6</u> TO <u>14</u>	<u>10 yr 4/6, silt loam, mod subangular blocky, friable common distinct mottles</u>
<u>14</u> TO <u>26</u>	<u>10 yr 4/6, silty clay loam, mod subangular blocky, friable, common prominent</u>
<u>26</u> TO <u>33</u>	<u>7.5 yr 4/4 silt loam, strong sub angularblocky/prismatic, firm, many, prominent</u>
<u>33</u> TO <u>56</u>	<u>7.5 yr 4/4 silt loamprismatic, very firm, many prominent</u>
<u>56</u> TO _____	<u>Gleyed silt loam, massive, firm</u>

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: Below 40°F 40°F or above Dry Rain, Sleet, Snow (last 24 hours)

Soil Conditions: Wet Dry Frozen

Hole No.	***		Reading Interval	Reading No. 1:	Reading No. 2:	Reading No. 3:	Reading No. 4:	Reading No. 5:	Reading No. 6:	Reading No. 7:	Reading No. 8:
	Yes	No		Inches of drop							
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
_____	_____ "	_____	_____ "
TOTAL OF MIN / IN →	_____	=	_____ ^{Min} / _{Inch}
TOTAL NO. OF HOLES →	_____		

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by DEP.
 (S) _____
 Sewage Enforcement Officer



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SITE INVESTIGATION AND PERCOLATION
TEST REPORT**

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE SIDE

Application No. Favinger TP3 front left Municipality Radnor Township County Delaware

Site Location 471 Glenmary Road Subdivision Name _____

SUITABLE Soil Type GnB Slope 3 8% Depth to Limiting Zone 9 inches Ave. Perc. Rate N/A
 UNSUITABLE Mottling Seeps or Poned Water Bedrock Fractures Coarse Fragments
 Perc. Rate Slope Unstabilized Fill Floodplain Other _____

SOILS DESCRIPTION:

Soils Description Completed by: Paul DAgostino-PAPSS  Date: 05/01/17

Inches	Description of Horizon
<u>0</u> TO <u>9</u>	<u>10 yr 3/2, silt loam, mod granular, very friable</u>
<u>9</u> TO <u>19</u>	<u>10 yr 5 3/4, silt loam, mod subangular blocky, friable common faint mottles</u>
<u>19</u> TO <u>29</u>	<u>7.5yr 5/8, silty loam, mod subangular blocky, firm, many prominent</u>
<u>29</u> TO <u>48</u>	<u>7.5 yr 4/4 silt loam, strong sub angularblocky/prismatic, firm, many, prominent</u>
<u>48</u> TO <u>64</u>	<u>7.5 yr 4/4 silt loam, massive, firm, many, prominent</u>
_____ TO _____	_____

PERCOLATION TEST:

Percolation Test Completed by: _____ Date: _____

Weather Conditions: Below 40°F 40°F or above Dry Rain, Sleet, Snow (last 24 hours)

Soil Conditions: Wet Dry Frozen

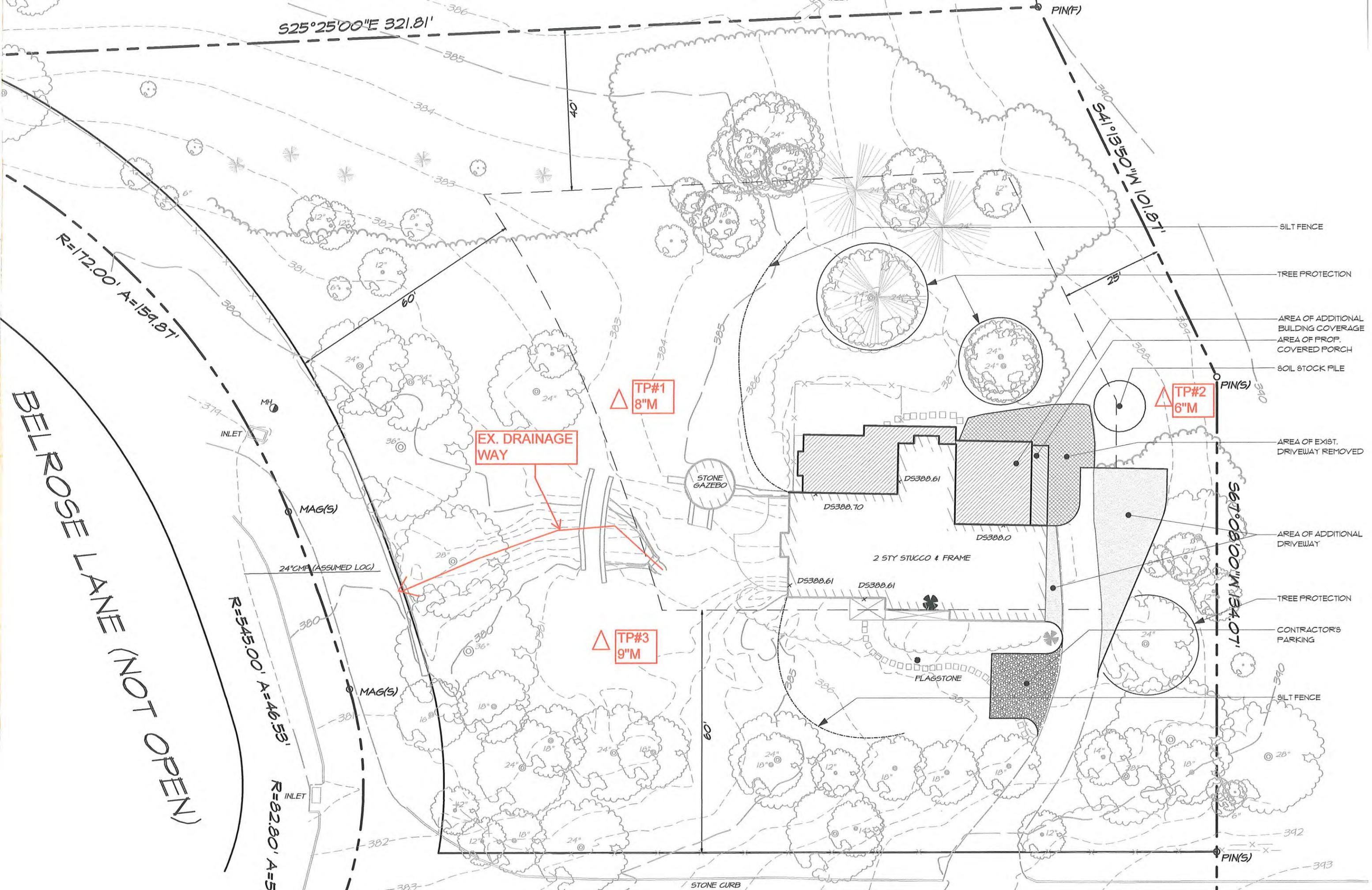
Hole No.	***		Reading Interval	Reading No. 1:	Reading No. 2:	Reading No. 3:	Reading No. 4:	Reading No. 5:	Reading No. 6:	Reading No. 7:	Reading No. 8:
	Yes	No		Inches of drop							
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								
			<u>10 / 30</u>								

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
TOTAL OF MIN / IN →	_____	=	_____
TOTAL NO. OF HOLES →	_____		_____

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by DEP.
 (S) _____
 Sewage Enforcement Officer



S25°25'00"E 321.81'

PIN(F)

S41°18'50"N 101.87'

R=172.00' A=159.87'

BELROSE LANE (NOT OPEN)

R=545.00' A=46.53'

R=82.80' A=5

TP#1
8"M

TP#2
6"M

TP#3
9"M

EX. DRAINAGE
WAY

STONE
GAZEBO

2 STY STUCCO & FRAME

FLAGSTONE

STONE CURB

SILT FENCE

TREE PROTECTION

AREA OF ADDITIONAL
BUILDING COVERAGE

AREA OF PROP.
COVERED PORCH

SOIL STOCK FILE

AREA OF EXIST.
DRIVEWAY REMOVED

AREA OF ADDITIONAL
DRIVEWAY

TREE PROTECTION

CONTRACTORS
PARKING

SILT FENCE

S67°08'00"W 134.07'

PIN(S)

393

392

PIN(S)

388

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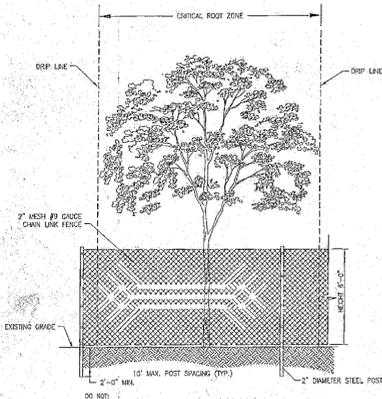
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TREE PROTECTION SPECIFICATIONS

1. A 2" layer of coarse sand or woodchips is to be placed beneath the crown link fence.

2. A protective barrier of 2" crown link fence shall be installed around the drip line of protected trees. The barrier can be raised within the drip line & supported by 2" x 2" wooden posts set every 2' from the trunk of any tree. Fence posts shall be 2" x 2" in diameter and set in the ground 2" from the trunk. The distance between posts shall not be more than 2'.

3. Where the crown link fence is installed around a tree trunk, it shall be installed on a 2" x 2" wooden post set in the ground 2" from the trunk. The distance between posts shall not be more than 2'.

4. Where the crown link fence is installed around a tree trunk, it shall be installed on a 2" x 2" wooden post set in the ground 2" from the trunk. The distance between posts shall not be more than 2'.

ROCKWELL ASSOCIATES, LLC
 Arboriculture • Urban Forestry • Horticulture
 Consulting • Planning • Management

P.O. Box 542, Ridley Park, PA 19078
 Phone: (610) 731-7969
 Fax: (610) 522-0108
info@rockwell.com
www.rockwell.com

LANDS W/F
 MICHAEL & SUSAN SELVERIAN
 DB 2475, PG 785
 36-14-74

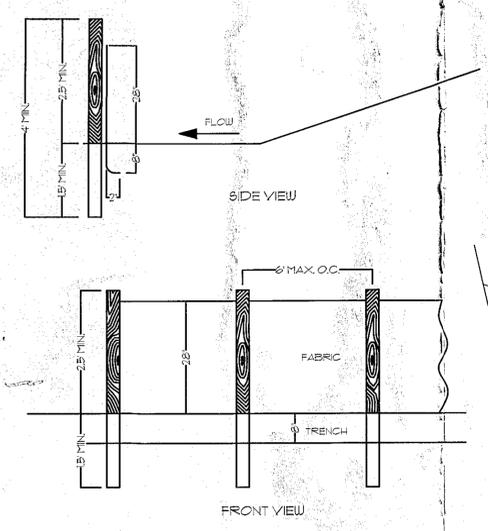
ZONING SCHEDULE:

ZONING DISTRICT: R-1 (RESIDENTIAL DISTRICT)

MINIMUM LOT AREA:	43560 S.F.
MINIMUM LOT WIDTH:	120 FT.
MINIMUM SETBACKS:	
FRONT:	60 FT.
SIDE:	25 FT. (60 FT. AGG.)
REAR:	40 FT.
MAXIMUM BUILDING HEIGHT:	35 FT.
MAXIMUM BUILDING COVERAGE:	15%
MAXIMUM IMPERVIOUS COVERAGE:	22%

SITE IMPERVIOUS CALCULATIONS:

TOTAL GROSS LOT AREA:	53365 S.F.
TOTAL NET LOT AREA:	44641 S.F.
EXISTING BUILDING COVERAGE:	2005 S.F. (3.75%)
EXISTING TOTAL IMPERVIOUS COVERAGE:	4432 S.F. (8.30%)
EXIST. IMPERVIOUS COVERAGE REMOVED:	
EXIST. DRIVEWAY TO BE REMOVED:	443 S.F.
EXIST. DRIVEWAY W/ NEW BUILDING COVERAGE:	39 S.F.
TOTAL EXIST. DRIVEWAY REMOVED:	884 S.F.
PROPOSED NEW IMPERVIOUS COVERAGE:	
NEW ADDITION:	805 S.F.
NEW COVERED PORCH:	83 S.F.
TOTAL NEW BUILDING AREA:	888 S.F.
NEW DRIVEWAY:	531 S.F.
TOTAL NEW IMPERVIOUS COVERAGE:	1425 S.F.
TOTAL PROPOSED BUILDING COVERAGE:	
EXISTING:	2005 S.F.
NEW:	888 S.F.
TOTAL:	2893 S.F. (6.42%)
TOTAL PROPOSED IMPERVIOUS COVERAGE:	
EXISTING:	4432 S.F.
NEW:	651 S.F.
TOTAL:	5083 S.F. (9.52%)



NOTES:

1. 2" OF FILTER FABRIC TO BE KEYED IN AND BACKFILLED, TAMPED AND COMPACTED

2. SILT FENCING MUST BE INSTALLED PARALLEL TO EXISTING CONTOURS OR CONSTRUCTED LEVEL ALIGNMENTS. ENDS OF FENCING MUST BE EXTENDED 10 FEET, TRAVELLING UPSLOPE AT A 45 DEGREE ANGLE TO THE ALIGNMENT TO THE MAIN FENCING SECTION.

3. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SILT FENCING.

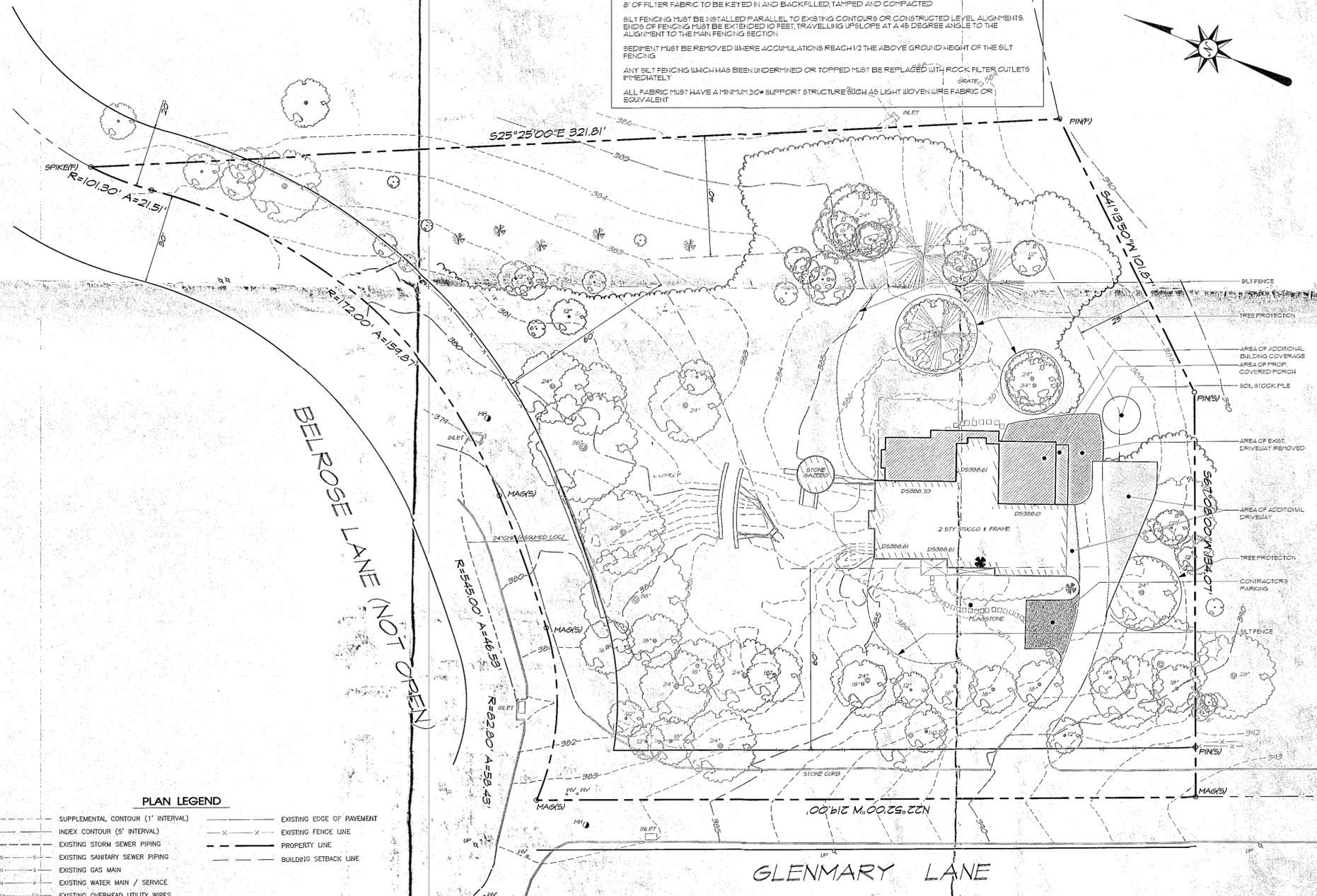
4. ANY SILT FENCING WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.

5. ALL FABRIC MUST HAVE A MINIMUM 30" SUPPORT STRUCTURE SUCH AS LIGHT WOVEN WIRE FABRIC OR EQUIVALENT.



NOTE:
 THE EXISTING DRIVEWAY IS PROPOSED TO BE USED AS THE CONSTRUCTION ENTRANCE. IF, AT ANY POINT, THE CONTRACTOR FAILS TO PROPERLY WASH THE TIRES OF CONSTRUCTION VEHICLES PRIOR TO LEAVING THE SITE, THE CONTRACTOR WILL BE REQUIRED TO INSTALL A TIRE SCRUBBER/CONSTRUCTION ENTRANCE. AT NO POINT IS SEDIMENT OR DEBRIS TO LEAVE THE SITE.

LANDS W/F
 JORGE & CARMEN PELAEZ
 DB 2034, PG 1032
 36-14-72



PLAN LEGEND

--- SUPPLEMENTAL CONTOUR (1' INTERVAL)	--- EXISTING EDGE OF PAVEMENT
--- INDEX CONTOUR (5' INTERVAL)	--- EXISTING FENCE LINE
--- EXISTING STORM SEWER PIPING	--- PROPERTY LINE
--- EXISTING SANITARY SEWER PIPING	--- BUILDING SETBACK LINE
--- EXISTING GAS MAIN	
--- EXISTING WATER MAIN / SERVICE	
--- EXISTING OVERHEAD UTILITY WIRES	
--- EXISTING UNDERGROUND TELEPHONE	
--- EXISTING SOIL SERIES LIMITS	
--- EXISTING EDGE OF WOODS	
--- EXISTING PLANTING BED	

ADDITION AND RENOVATIONS FOR THE:
DONNELL RESIDENCE
 47 GLENHART LANE
 ST. DAVID, PA 19081

WARREN CLAYTOR ARCHITECTS
 144 NORTH WAYNE AVENUE | P.O. BOX 896
 WAYNE, PENNSYLVANIA 19087
 TELEPHONE: 610-688-1744
 FACSIMILE: 610-688-1743
 WCARCH@MSK.COM



COPY # 16028
 ISSUE DATE 3/10/2017
 REVISIONS

SITE PLAN

RECEIVED
 MAR 29 2017

17-45
ISSUED FOR PERMIT
 3/10/2017

**RESOLUTION NO. 2017-72
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, APPROVING THE FINAL MINOR SUBDIVISION
DEVELOPMENT PLAN FOR LOMBARDI RESIDENTIAL FOR
PROPERTY LOCATED AT 106 & 110 CAMBRIA COURT**

WHEREAS, Lombardi Residential (“Applicant”) submitted Final Land Development Plans for 106 & 110 Cambria Court, prepared by Momenee & Associates, Inc. dated March 1, 2017; and

WHEREAS, the plan has been reviewed by both the Radnor Township Planning Commission and the Delaware County Planning Commission; and

WHEREAS, the Board of Commissioners now intends to approve the Final Land Development Plan for Lombardi Residential subject to certain terms and conditions.

NOW, THEREFORE, it is hereby **RESOLVED** that the Radnor Township Board of Commissioners does hereby approve the Final Land Development Plans for Lombardi Residential, prepared by Momenee, Inc., dated March 1, 2017, consisting of six (6) sheets, subject to the following conditions:

1. The Applicant shall comply with the April 28, 2017 Gannett Fleming review letter, a copy of which is attached hereto as *Exhibit “A”*.
2. The Applicant shall comply with the March 14, 2017 Gilmore & Associates review letter, a copy of which is attached hereto as *Exhibit “B”*.
3. The Applicant shall comply with all other applicable ordinances with respect to sewage, stormwater management, zoning and building, and all county, state, federal rules, regulations and statutes.
4. The Applicant shall execute Development Agreement and Financial Security Agreements in a form and manner to be approved by the Township Solicitor.
5. The Applicant shall relocate the large canopy tree on 106 Cambria Court and shall plant nine large replacement street trees not eight as indicated on the Plan. Applicant shall also revise the selected tree species to the satisfaction of the Township Engineer.

In addition to the foregoing conditions of Final plan approval, the following Subdivision and Land Development Ordinance waivers are resolved as follows:

a. Subdivision and Land Development Sections 255-27.C (1), 255-27.C(2), and 255-27.C(4) regarding road widening and right-of-way width.

 X Approved Denied

b. Subdivision and Land Development Sections 255-37.A and 255-51 as to installing sidewalks and pedestrian paths within Cambria Court.

 X Approved Denied

c. Subdivision and Land Development Section 255-49 as to installing streetlights.

 X Approved Denied

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this _____ day of _____, 2017.

RADNOR TOWNSHIP BOARD OF COMMISSIONERS

By: _____
Name: Elaine P. Schaefer
Title: President

ATTEST: _____



*Excellence Delivered **As Promised***

Date: April 28, 2017

To: Radnor Township Board of Commissioners

From: Roger Phillips, PE

cc: Robert Zienkowski – Township Manager
Stephen Norcini, P.E. – Director of Public Works
Kevin W. Kochanski, RLA, CZO – Director of Community Development
John Rice, Esq – Grim, Biehn, and Thatcher
Amy Kaminski, PE – Gilmore and Assoc.
Steve Gabriel - Rettew

RE: 106 & 110 Cambria Court – Minor Final Subdivision Plan
Lombardi Residential – Applicant

Date Accepted: December 5, 2016
90 Day Review: March 5, 2017, extended indefinitely

Gannett Fleming, Inc. has completed a review of the Minor Final Subdivision Plans for compliance with the Radnor Township Code. These Plans was reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to subdivide 106 Cambria Court into 2 parcels and construct 1 home on each lot. The applicant is proposing to also adjust the lot line for 110 Cambria Court. This project is located in the R-3 district of the Township.

The applicant has requested waivers for the following items as outlined in the March 22, 2017 letter:

1. §255.27.C(1) – The applicant is requesting a waiver not to increase the right of way from 40 feet to 60 feet and the cartway from 22 feet to 28 feet. The applicant requesting a waiver from installing curbing and sidewalks along the site frontage.
2. §255.27.C(2) – The applicant is requesting a waiver not to increase the right of way from 40 feet to 60 feet and the cartway from 22 feet to 28 feet.
3. §255.27.C(4) – The applicant is requesting a waiver not to increase the right of way from 40 feet to 60 feet and the cartway from 22 feet to 28 feet.



4. §255.37.A – The applicant is requesting a waiver from installing sidewalks and pedestrian paths. Currently there are no sidewalks or walking paths within Cambria Court.
5. §255-49 – The applicant is requesting a waiver from installing streetlights. Currently there are not streetlights within Cambria Court.
6. §255-51 – The applicant is requesting a waiver from installing sidewalks and pedestrian paths. Currently there are no sidewalks or walking paths within Cambria Court.

Minor Final Subdivision Plans – 106 & 110 Cambria Road

Plans Prepared By: Momenee, Inc.

Dated: 12/01/2016, revised 03/01/2017

I. Sewage Facilities Planning

1. Final plan approval will not be granted until Planning Approval is received from the PA DEP.

II. Zoning

1. §280.27.C – Accessory structures are permitted in the rear yard or side yard of a lot, in which case they shall not be located closer than 10 feet from the side or rear property lines. The detached garages are accessory structures. The garage on Lot #1 appears to be approximately 8 feet from the side and rear setback lines and the garage on Lot #2 appears to be 8 feet from the side setback and 11 feet from the rear setback line. This must be revised or a variance received from the Zoning Hearing Board.

III. Subdivision and Land Development

1. §255.27.C(1) – Culs-de-sac streets must have a right of way of 60 feet, a cartway of 28 feet, curbing and sidewalks. The applicant is requesting a waiver not to increase the right of way from 40 feet to 60 feet, not increase the cartway width and to not installing curbing and sidewalks along the site frontage.
2. §255.27.C(2) – Additional right-of-way and/or cartway widths may be required by the Board of Commissioners in order to lessen traffic congestion, to secure safety from fire, panic and other dangers, to facilitate adequate provisions for the transportation and other public requirements and to promote general welfare. The applicant is requesting a waiver to not provide additional right-of-way or increase the cart way width.
3. §255.27.C(4) – Where a subdivision abut or contains an existing street of inadequate right-of-way width, the Board of Commissioners may require the reservation or dedication of



rights-of-way to conform with the required standards. The applicant is requesting a waiver to not provide additional right-of-way or increase the cart way width.

4. §255-37.A – Sidewalks and pedestrian paths shall be provided when required by the Board of Commissioners. The applicant was requested a waiver from this requirement.
5. §255-38 – The applicant has indicated on the landscape plan that street trees will be provided. The landscape plan must be incorporated as part of the entire plan set.
6. §255-38.B – The applicant has indicated on the landscape plan that street trees will be provided. The landscape plan indicates that large street trees and small street trees will be provided. The calculation for the small street trees appears to be incorrect. The required number shown on the plan is 8, but the actual calculation is 8.5 (255 LF Street/ 1 tree per 30 LF). Nine trees must be provided.
7. §255-42.B – The applicant has indicated on the landscape plan that Class A Buffer will be required for this project. In accordance with 255 attachment 2, this appears to be incorrect. Since the adjacent land use is non-residential off-street parking, Class B Buffer must be provided.
8. §255-49 – Where appropriate, the developer shall install or cause to be installed, at the developer's expense, metal or fiberglass pole streetlights serviced by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Board of Commissioners and the Philadelphia Electric Company. The applicant has requested a waiver from this requirement.
9. §255-51.A. – Sidewalks shall be constructed as required by §255-27C. These standards shall apply on all new streets and on existing streets, unless in the opinion of the Board of Commissioners they are unnecessary for public safety and convenience. The applicant has requested a waiver from this requirement.

III. Stormwater

1. §245-26(C).(2) – For development and redevelopment sites, the ground cover used in determining the existing conditions' flow rates for the developed portion of the site shall be based upon actual land cover conditions. The Pre-Developed Drainage Area plans and the Existing Conditions plan show that the existing site conditions do not contain impervious surfaces. We note that the impervious areas at this site was previously demolished as part of an approved grading permit. The stormwater report appears to include existing impervious surfaces in the supporting calculations. Please revise the stormwater calculations to be consistent with the existing land cover conditions.
2. Please show location of infiltration test pit on the plans.

3. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at that time.

IV. General

1. New deeds must be prepared and recorded at the Delaware County Court house at the time of plan recording.

The applicant was scheduled to appear before the Shade Tree Commission on April 26, 2017. The Shade Tree meeting was cancelled. The applicant will appear at the next available Shade Tree Commission meeting.

The applicant appeared before the Planning Commission on April 3, 2017. The Planning Commission recommended approval of the preliminary/final plans and waivers conditioned on the applicant complying with all staff comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager





Gannett Fleming

*Excellence Delivered **As Promised***

Date: March 28, 2017

To: Radnor Township Planning Commission

From: Roger Phillips, PE

cc: Stephen Norcini, P.E. – Director of Public Works
Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Ray Daly – Radnor Township Codes Official
Steve Gabriel - Rettew

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Dated: 12/01/2016, revised 03/01/2017

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2. Please show location of infiltration test pit on the plans.

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IV. General

1. New deeds must be prepared and recorded at the Delaware County Court house at the time of plan recording.

Should the Planning Commission consider recommending approval of this project, we suggest that the recommendation be conditioned on requiring the applicant to satisfactorily address the above comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM-

Date: March 14, 2017

To: Steve Norcini, P.E.
Radnor Township Public Works Director

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: Roger Phillips, P.E., Senior Project Manager, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.
Leslie Salsbury, E.I.T., Gilmore & Associates, Inc.

Reference: 106, 108 & 110 Cambria Ct
Subdivision & Lot Line Change Plan Review 2
Radnor Township, Delaware County, PA
G&A 16-12037

Gilmore & Associates, Inc. (G&A) has completed a transportation review for the above referenced project and offers the following transportation comments for Radnor Township consideration:

A. BACKGROUND

The subject parcels located at 106 & 110 Cambria Court are situated in the R-3 Residential Zoning District and take access to Lancaster Avenue, west of Radnor-Chester Road in Radnor Township, Delaware County. The applicant intends on subdividing 106 Cambria Ct in order to provide two single-family dwelling units, thus creating 106 and 108 Cambria Ct. A lot line adjustment will also be required at 110 Cambria Ct.

B. DOCUMENTS REVIEWED

1. Subdivision & Lot Line Change Plans for 106 & 110 Cambria Court, prepared by Momenee, Inc., prepared for Lombardi Residential; consisting of 6 sheets, dated March 1, 2017.
2. Submission letter prepared by Momenee, Inc., prepared for Radnor Township, dated March 3, 2017.
3. Landscape Plan for 106 & 110 Cambria Court, prepared by Momenee, Inc., prepared for Lombardi Residential; consisting of 1 sheet, dated March 1, 2017.

C. SUBDIVISION AND LAND DEVELOPMENT COMMENTS

1. §255-27.C(1) – Cambria Court along the site frontage is required to provide the following standards.
 - a. 60' Right of Way (30' Half Width)
 - b. 28' Cartway (14' Half Width)
 - c. Curbing along the site frontage
 - d. 4' sidewalk along the site frontage

The Applicant has indicated pursuit of a waiver from providing the required right of way, cartway and sidewalk along the site frontage.

2. §255-27.C(4) – Where a subdivision abuts or contains an existing street of inadequate right-of-way width, the Board of Commissioners may require the reservation or dedication of right-of-way to conform to the above standards. The center line of the ultimate right-of-way shall be the same center line as the existing right-of-way. The Applicant has indicated pursuit of a waiver from this requirement.
3. §255-27.H(6) – Although the applicant's submission letter indicates this section was addressed in the plan set, the radius was still not provided on the plans. Revise the plans to include the proposed driveway radii for review and construction purposes.
4. §255-35 – Although the applicant's submission letter indicates this section was addressed in the plan set, a portion of the radius for the existing driveway for 110 Cambria Ct. continues to encroach upon the 108 Cambria Ct. property lot line.

If you have any questions regarding the above, please contact this office.

March 23, 2017

Mr. Roger A. Phillips, PE
Radnor Township Engineer
Township of Radnor
301 Ivan Avenue
Wayne, PA 19087

**Re: 106 and 110 Cambria Court – Minor Final Subdivision Plan
Lombardi Residential**

Momenee No. 16084

Dear Mr. Phillips:

Our firm, Momenee, Inc. represents Mr. Matt Lombardi, Lombardi Residential (“Applicant”), owner of properties located at 106 and 110 Cambria Court. As you are aware, 106 Cambria Court is proposed to be subdivided into two separate lots 106 and 108 Cambria Court. To accommodate this subdivision, the property located at 110 Cambria Court will require a lot line revision along the western side.

We respectfully request the following waivers as noted in the December 19, 2016 Traffic Engineer’s review letter and the December 23, 2016 Township Engineer’s review letter be granted from the Board of Supervisors,

- §255.27.C (1) *Cambria Court along the site frontage is required to provide the following standards.*
- a. *60’ Right of Way (30’ Half Width)*
 - b. *28’ Cartway (14’ Half Width)*
 - c. *Curbing along the site frontage*
 - d. *4’ sidewalk along the site frontage*

The applicant requests a waiver not to increase the right of way from 40 feet to 60 feet and the cartway from 22 feet to 28 feet. The applicant requests a waiver from installing curbing and sidewalks along the site frontage.

§255.27.C (2) *Where a subdivision about or contains an existing street of inadequate right of way width, the Board of Commissioners may require the reservation or dedication of rights of way to conform with the required standards. Cul-de-sac streets must have a right of way of 60 feet and a cartway of 28 feet.*

The applicant requests a waiver not to increase the right of way from 40 feet to 60 feet and the cartway from 22 feet to 28 feet.

§255.27.C (4) *Where a subdivision abuts or contains an existing street of inadequate right of way width, the Board of Supervisors may require the reservation or dedication of right of way to conform to the above standards. The center line of the ultimate right of way shall be the same center line as the existing right of way.*

The applicant requests a waiver not to increase the right of way from 40 feet to 60 feet and the cartway from 22 feet to 28 feet.

Page 2 - 106 and 110 Cambria Court – Minor Final Subdivision Plan
Lombardi Residential

§255.37. A *Sidewalks and pedestrian paths shall be provided when required by the Board of Commissioners.*

The applicant requests a waiver from installing sidewalks and pedestrian paths. Currently there are no sidewalks or walking paths within Cambria Court. Adding sidewalks would create discontinuity in the neighborhood and possible safety issues at the transition points where sidewalks start and end.

§255-49 *Where appropriate, the developer shall install or cause to be installed, at the developer's expense, metal or fiberglass pole streetlights services by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Board of Commissioners and the Philadelphia Electric Company.*

The applicant requests a waiver from installing streetlights. Currently there are no streetlights within Cambria Court.

§255-51.A *Sidewalks shall be constructed as required by §255-27 C. These standards shall apply on all new streets and on existing streets, unless in the opinion of the Board of Commissioners they are unnecessary for public safety and convenience.*

The applicant requests a waiver from installing sidewalks and pedestrian paths. Currently there are no sidewalks or walking paths within Cambria Court. Adding sidewalks would create discontinuity in the neighborhood and possible safety issues at the transition points where sidewalks start and end.

If you have any questions or concern, please contact me.

Very truly yours,
MOMENEE, INC.



Joseph C. Mongeluzi, Jr. PE
Senior Civil Engineer/Project

Cc: Matt Lombardi, Lombardi Residential

JCM
16084 Letter of Waivers 3-23-17

March 3, 2017

Radnor Township Planning Commission
Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297

Re: 106, 108 & 110 Cambria Court
Minor Final Subdivision Plan
Township File No. 2016-S-15
Momenee File No. 16-084

Dear Planning Commission,

Our office is receipt of engineering comments dated December 23, 2016 from Mr. Rodger Phillips, Senior Project Manager, Gannett Fleming for the above-mentioned project. For your consideration, we are submitting this engineering response letter, revised plans and stormwater calculations.

Since our original submission and presentation to the Planning Commission on January 3, 2017, our client has met almost all the neighbors on Cambria Court. Based on this meeting the homes proposed for 106 and 108 Cambria Court have been revised. In addition, a landscape plan has been included for consideration. Below are our responses to the comments enumerated in Mr. Phillips' letter.

Zoning:

1. The deck on Lot # 1 has been removed. The proposed homes at 106 and 108 have been redesigned to use patios on grade instead of elevated decks.
2. The zoning table on the plans has been revised. The gross area for Lot #2 has been added to the zoning table. The net lot areas have been checked and displayed on the plans. The zoning table for 110 Cambria court has been checked and displayed on the plans.

Subdivision and Land Development:

1. We have prepared a plan titled "Vicinity Plan" with satellite image and all physical features within 500 feet of the project site.
2. The cart way has been labelled. Curbing will be provided.

Page 2 – 106, 108 & 110 Cambria Court
Minor Final Subdivision Plan
Township File No. 2016-S-15
Momenee File No. 16-084

3. We are requesting a waiver from §255-37. A to not install sidewalks. Cambria Court currently does not have either sidewalk. Adding sidewalks on the project site would be inconsistent with the character of the street.
4. We are requesting a waiver from §255-49 to not install streetlights. Cambria Court currently does not have either streetlight. Adding streetlights on the project site would be inconsistent with the character of the street.
5. We are requesting a waiver from §255-27.C for the construction of sidewalks.

Stormwater:

1. Infiltration testing has been completed since our original submission. Copies of the test results are included in the stormwater calculations.
2. Based on our infiltration testing we have revised our stormwater management locations to comply with the infiltration requirements.

General:

1. New deeds will be prepared and recorded at the Delaware County Court House at the time of plan recording.

I trust that these revisions will be sufficient for you to approve our minor final subdivision plan. Should you have any questions or require any additional information, please feel free to contact me.

Very truly yours,
MOMENEE, INC.



Joseph C. Mongeluzi, Jr., P.E.
Senior Civil Engineer/ Project Manager

JCM – Enclosures

Township Engineering Response Letter 3-3-17.doc

cc: Mr. Matthew Lombardi, Property Owner

March 3, 2017

Mr. Steve Norcini, PE
Radnor Township Public Works Director
Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297

Re: 106, 108 & 110 Cambria Court
Minor Final Subdivision Plan
G&A File No. 16-12037
Momenee File No. 16-084

Dear Mr. Norcini,

Our office is receipt of engineering comments dated December 23, 2016 from Ms. Amy Kaminski, PE, PTOE, Transportation Services Manager of Gilmore and Associates, Inc. for the above-mentioned project. For your consideration, we are submitting this engineering response letter, revised plans and stormwater calculations.

Since our original submission and presentation to the Planning Commission on January 3, 2017, our client has met almost all the neighbors on Cambria Court. Based on this meeting the homes proposed for 106 and 108 Cambria Court have been revised. In addition, a landscape plan has been included for consideration. Below are our responses to the comments enumerated in Ms. Kaminski's letter.

Subdivision and Land Development Comments:

1. The cart way has been labelled on the plans.
2. We are requesting a waiver from §255-27.C (1) to not provide the right of way, cart way or installation of sidewalks. Curbing will be replaced due to damage from any construction.
3. We are requesting a waiver from §255-27.C (4) to not provide the right of way.
4. Plans have been revised to identify the radius on the proposed driveway.
5. The plans have been revised to remove the portion of driveway radius that appeared on 110 Cambria Court. No easement will be necessary.

Page 2 - 106 & 110 Cambria Court
Minor Final Subdivision Plan
G&A File No. 16-12037
Momenee File No. 16-084

I trust that these revisions will be sufficient for you to approve our minor final subdivision plan. Should you have any questions or require any additional information, please feel free to contact me.

Very truly yours,
MOMENEE, INC.



Joseph C. Mongeluzi, Jr., P.E.
Senior Civil Engineer/ Project Manager

JCM – Enclosures

Traffic Engineering Response Letter 3-3-17.doc

cc: Mr. Matthew Lombardi, Property Owner

MI MOMENEE, INC.

a Karins Company

ENGINEERING | PLANNING | SURVEYING

924 County Line Road • Bryn Mawr, PA 19010
 Phone: (610) 527-3030 • Fax: (610) 527-9008

From:	Joseph C. Mongeluzi, Jr., PE jmongeluzi @momenee.com	Date: 5/12/17	Job No: 16084
		Attention: John Hosbach, Township Arborist	
To:	Radnor Township 301 Iven Avenue Wayne, PA 19087	Phone: 610-688-5600	
		Re: 106, 108 and 110 Cambria Court Subdivision	

We are sending you the attached:

- | | | | |
|---|--|---|---------------------------------------|
| <input checked="" type="checkbox"/> Plans | <input type="checkbox"/> Computer Disk | <input type="checkbox"/> Specifications | <input type="checkbox"/> Calculations |
| <input type="checkbox"/> Copy of Letter | <input type="checkbox"/> Change Order | <input type="checkbox"/> Shop Drawings | <input type="checkbox"/> Other |

Copies	Date	No.	Description
2	5-12-17	1	24" x 36" Landscape Plan

These are transmitted as checked below:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> For Approval | <input type="checkbox"/> Approved as Submitted | <input type="checkbox"/> Resubmit _____ Copies for Approval |
| <input checked="" type="checkbox"/> For Your Use | <input type="checkbox"/> Approved as Noted | <input type="checkbox"/> Submit _____ Copies for Distribution |
| <input type="checkbox"/> As Requested | <input type="checkbox"/> Returned for Corrections | <input type="checkbox"/> Return _____ Corrected Prints |
| <input type="checkbox"/> For Review and Comment: | _____ | |
| <input type="checkbox"/> For Bids Due: | <input type="checkbox"/> Prints Returned After Loan to Us | |

Remarks: Attached please find our revised landscape plan per comments from the Shade Tree Commission meeting on May 10, 2017. For your information, we added an additional small street tree and revised the plantings along the southern property line from Class A to Class B buffer (per the Township Engineer review letter April 28, 2017), revised the tree species, and relocated trees in northwest corner of 106 Cambria to avoid the 22" Poplar (per the Shade Tree review). If you have questions or comments please contact me. Joe

Copy To:	Lombardi Residential, LLC Patti Kaufmann, Gannett Fleming	Signed:	Joseph C. Mongeluzi, Jr., PE
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MI MOMENEE, INC.

a Karins Company

ENGINEERING | PLANNING | SURVEYING

924 County Line Road • Bryn Mawr, PA 19010
 Phone: (610) 527-3030 • Fax: (610) 527-9008

From:	Joseph C. Mongeluzi, Jr., PE jmongeluzi @momenee.com	Date: 3/3/17	Job No: 16084
To:	Radnor Township 301 Iven Avenue Wayne, PA 19087	Attention: Hollye Wagner	Phone: 610-688-5600
		Re: 106, 108 and 110 Cambria Court Subdivision	

We are sending you the attached:

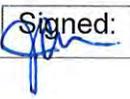
- Plans Computer Disk Specifications Calculations
 Copy of Letter Change Order Shop Drawings Other

Copies	Date	No.	Description
26	3-1-17	6	24" x 36" plans of the project (record plan, existing conditions, vicinity plan, grading plan, E&S, construction details)
10	3-1-17	6	11" x 17" reduced plan set
2	3-1-17	Book	Hydrological Study for 106 Cambria Court
2	3-1-17	Book	Hydrological Study for 108 Cambria Court
10			Thumb drive containing electronic copies of documents in this submission
10	3-1-17	1	11" x 17" Landscape Plan LP1
26	3-1-17	1	24" x 36" Landscape Plan LP1

These are transmitted as checked below:

- For Approval Approved as Submitted Resubmit _____ Copies for Approval
 For Your Use Approved as Noted Submit _____ Copies for Distribution
 As Requested Returned for Corrections Return _____ Corrected Prints
 For Review and Comment: _____
 For Bids Due: Prints Returned After Loan to Us

Remarks: Attached please find revised information concerning this project for your use. Please schedule us for the next available Shade Tree and Planning Commission meetings. Thank you.

Copy To:	Lombardi Residential, LLC	Signed:		Joseph C. Mongeluzi, Jr., PE
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February 23, 2017

Mr. Joseph Mongeluzi, Jr.
Momenee, Inc.
924 County Line Road
Bryn Mawr, PA 19010

Re: Application for Planning Modules
Checklist Letter – Component 3
106 & 108 Cambria Court
DEP Code No. 1-23013-261-3J
Radnor Township
Delaware County

Dear Mr. Mongeluzi:

In response to your application mailer, this checklist letter outlines what is required to be submitted to the municipality and the Department of Environmental Protection (DEP) as a complete module packet for the proposed development. Your development proposes a 2-lot residential subdivision that will be served by a connection to public sewers.

Sewage Facilities Planning Module forms are available online at www.dep.pa.gov. At the top of the page, select *Businesses*, then *Water*. On the right-side of the page, select the following: *Bureau of Clean Water; Wastewater Management; Act 537*; and *Sewage Facilities Planning*. Select the appropriate forms from the center of the page. Please select the following forms for this project and enter the above-referenced DEP Code Number on the first page of each form:

Sewage Facilities Planning Module Transmittal Letter, Form 3800-FM-BPNPSM0355
Sewage Facilities Planning Module Resolution, Form 3800-FM-BPNPSM0356
Sewage Facilities Planning Module Component 3, Form 3800-FM-BPNPSM0353

- Instructions
- Form

Sewage Facilities Planning Module Component 4

- 4A-Municipal Planning Agency Review, Form 3800-FM-BPNPSM0362A
- 4B-County Planning Agency Review, Form 3800-FM-BPNPSM0362B

Please submit the completed planning modules and supporting information to the municipality or municipalities in which the project is located. DEP must receive 1 copy of the completed planning module. Please answer all questions within the planning module. Do not simply

answer "N/A" or "Not Applicable". If you feel a question does not apply, explain all reasons to support that answer. For this project, optional Section J must be completed.

Please refer to the Standard Operating Procedures (SOP) that govern Act 537 sewage facilities planning module reviews. The SOPs can be found on the DEP website at http://www.portal.state.pa.us/portal/server.pt/community/Permit_Decision_Guarantee/21215/SOPs/1294992 . Consistent with the SOP, DEP may disapprove an administratively incomplete planning module submission. Please use the checklist provided in this letter below to guide both you and the municipality in providing an administratively complete planning module submission to DEP for review.

A copy of this letter should be attached to the planning module when submitted through the municipality to DEP. This letter is to be used by the applicant (or the applicant's authorized representative) as a checklist and guide to completing the planning modules and does not supersede the rules and regulations found in Chapter 71. The municipality must submit a complete module package. (See end of letter for applicant and municipal certification statements.)

In all cases, address the immediate and long range sewage disposal needs of the proposal and comply with 25 Pa. Code, Chapter 71, Subchapter C relating to New Land Development Plan Revisions.

If you have any questions concerning the information required, please contact me at 484.250.5186 or at SteRittenh@pa.gov and refer to the project name and DEP Code No. as referenced above.

Sincerely,



Stefanie Rittenhouse
Sewage Planning Specialist 2
Clean Water

cc: Delaware County Planning Department
Lombardi Residential
Mr. Zienkowski - Radnor Township
RHM
Mr. Fulton - Springfield Township
Mr. Lutz - Upper Darby Township
DCJA
DELCORA
Mr. Ponert-City of Philadelphia Water Department
Planning Section
Re 30 (GJE17CLW)054-6

Applicant Checklist (✓ or N/A)	Materials Required to be Included in the Planning Package	DEP Completeness Review
DEP Checklist Letter		
	DEP checklist letter is attached with items checked off by the applicant (or applicant's authorized representative) as included	
	DEP checklist letter certification statement completed and signed	
Transmittal Letter (Form 3800-FM-BPNPSM0355)		
	Transmittal Letter is attached, completed and the appropriate boxes in Section (i) are checked.	
	Transmittal Letter is signed by the municipal secretary	
Resolution of Adoption (Form 3800-FM-BPNPSM0356)		
	Resolution of Adoption is attached and completed	
	Resolution of Adoption is signed by the municipal secretary	
	Resolution of Adoption has a visible municipal seal	
Component 4A - Municipal Planning Agency Review (Form 3800-FM-BPNPSM0362A)		
	Component 4A is attached, completed and signed	
	Municipal Responses to Component 4A comments are included	
Component 4B - County Planning Agency Review (Form 3800-FM-BPNPSM0362B)		
	Component 4B is attached, completed and signed	
	Municipal Responses to Component 4B comments are included	
Component 4C - County or Joint Health Department Review (Form 3800-FM-BPNPSM0362C)		
	Component 4C is attached, completed and signed	
	Municipal Responses to Component 4C comments are included	
Component 3 Sewage Facilities Planning Module (Form 3800-FM-BPNPSM0353)		
<i>Section A: Project Information</i>		
	Section A.1. The Project Name is completed	
	Section A.2. The Brief Project Description is completed	
<i>Section B: Client Information</i>		
	Client Information is completed	
<i>Section C: Site Information</i>		
	Site Information is completed	
	A copy of the 7.5 minute USGS Topographic map is attached with the development site outlined, as required by the instructions and the checklist	
<i>Section D: Project Consultant Information</i>		
	Project Consultant Information is completed	

<i>Section E: Availability of Drinking Water Supply</i>		
	The appropriate box is checked in Section E	
	For existing public water supplies, the name of the company is provided	
	For public water supplies, the certification letter from the public water company is attached	
<i>Section F: Project Narrative</i>		
	The Project Narrative is attached	
	All information required in the module directions has been addressed	
<i>Section G: Proposed Wastewater Disposal Facilities</i>		
	Section G.1.a. The collection system boxes are checked	
	The Pennsylvania Clean Streams Law (CSL) permit number is provided for existing systems	
	Section G.1.b. The questions on the collection system are completed	
	Section G.2.a. The appropriate treatment facility box is checked	
	For existing treatment facilities, the name is provided	
	For existing treatment facilities, the NPDES permit number is provided	
	For existing treatment facilities, the CSL permit number is provided	
	For new treatment facilities, the discharge location is provided	
	Section G.2.b. The certification statement has been completed and signed by the wastewater treatment facility permittee or their representative	
	Section G.3. The plot plan is attached and contains all items in the module instructions under Section G.3	
	The plot plan will show the proposed sewer facilities, sewer extension and/or point of connection to the existing sewer line or point of discharge	
	Copies of easement(s) or right-of-way(s) are attached	
	Section G.4. The boxes are checked regarding Wetland Protection	
	Section G.5. The boxes are checked regarding Primary Agricultural Land	
	Section G.6. The boxes are checked confirming consistency with the Historic Preservation Act	
	The Cultural Resources Notice (CRN) (Form 0120-PM-PY0003) is attached	
	A return receipt for its submission to the PHMC is attached	
	The PHMC review letter is attached	

<i>Section G: Proposed Wastewater Disposal Facilities</i>		
	Section G.7. The boxes are checked regarding Pennsylvania Natural Diversity Inventory (PNDI)	
	PNDI Project Environmental Review Receipt is attached	
	PNDI Review Receipt, if no potential impacts identified, is not older than 2 years	
	All supporting resolution documentation from jurisdictional agencies (when necessary) is attached and not older than 2 years	
	A completed PNDI Large Project Form (PNDI Form) (Form 8100-FM-FR0161) is attached with all supplemental materials and DEP is requested to complete the search.	
<i>Section H: Alternative Sewage Facilities Analysis</i>		
	The Alternative Sewage Facilities Analysis is attached	
	All information required in the module directions has been addressed	
<i>Section I: Compliance with Water Quality Standards and Effluent Limitations</i>		
	The box is checked regarding Waters Designated for Special Protection	
	The Social or Economic Justification is attached	
	The box is checked regarding Pennsylvania Waters Designated As Impaired	
	The box is checked regarding Interstate and International Waters	
	The box is checked regarding Tributaries to the Chesapeake Bay and the required information is provided	
	The Name of Permittee Agency, Authority, Municipality and the Initials of Responsible Agent are provided	
	If discharge to an intermittent stream, dry swale or manmade ditch is proposed, provide evidence that a certified letter has been sent to each owner of property over which the discharge will flow until perennial conditions are met	
<i>Section J: Chapter 94 Consistency Determination</i>		
	A map showing the path of the sewage to the treatment facility and the location of the discharge is provided	
	Section J.1. The Project Flows are provided	
	Section J.2. The permitted, existing, and projected average and peak flows are provided in the table for collection, conveyance and treatment facilities	
	Section J.3.a. The appropriate box is checked indicating capacity in the Collection and Conveyance Facilities	
	Section J.3.b. The Collection System information is completed, signed and dated	

<i>Section J: Chapter 94 Consistency Determination</i>		
	Section J.3.b. The Conveyance System information is completed, signed and dated	
	Section J.4.a. The appropriate box is checked regarding projected overloads at the Treatment Facility	
	Section J.4.b. The Treatment Facility information is completed, signed and dated	
	The Permittee of the wastewater treatment facility has submitted a Chapter 94 Wasteload Management Report, which includes the information for the collection and conveyance system to serve this project	
	An acceptable Wasteload Management Report Corrective Action Plan (CAP) and schedule has been submitted, as well as a connection management plan	
	A letter from the permittee, which grants allocations to the project consistent with the CAP, and a copy of the connection management plan has been submitted	
	Letter indicating the treatment plant is an interim regional treatment facility is attached	
<i>Section K: Treatment and Disposal Options</i>		
	For proposed treatment facilities, the appropriate box is checked indicating the selected Treatment and Disposal Option	
<i>Section L: Permeability Testing</i>		
	The Permeability Testing information is attached	
<i>Section M: Preliminary Hydrogeologic Study</i>		
	The Preliminary Hydrogeologic Study is attached	
	The Preliminary Hydrogeologic Study is signed and sealed by a Professional Geologist	
<i>Section N: Detailed Hydrogeologic Study</i>		
	The Detailed Hydrogeologic Study is attached	
	The Detailed Hydrogeologic Study is signed and sealed by a Professional Geologist	
<i>Section O: Sewage Management</i>		
	Section O.1. The box is checked indicating municipal or private facilities	
	If municipal, the remainder of Section O is not applicable	
	If private, the required analysis and evaluation of sewage management options is attached	
	Section O.2. The appropriate box is checked regarding the use of nutrient credits or offsets	
	Section O.3. The Project Flows for the private facilities are provided	

<i>Section O: Sewage Management</i>		
	Section O.4.a. The appropriate box is checked indicating capacity in the existing private Collection and Conveyance Facilities	
	Section O.4.b. The private Collection System information is completed, signed and dated	
	Section O.4.c. The private Conveyance System information is completed, signed and dated	
	Section O.5.a. The appropriate box is checked regarding projected overloads at the private Treatment Facility	
	Section O.5.b. The private Treatment Facility information is completed, signed and dated	
	Section O.6. The box is checked indicating the municipality will assure proper operation and maintenance of the proposed private facilities	
	The required documentation of sewage management is attached	
<i>Section P: Public Notification Requirement</i>		
	All Public Notification boxes in this section are checked	
	The public notice is attached, if public notification is necessary	
	All comments received as a result of the notice are attached	
	The municipal responses to these comments are attached	
	The box is checked indicating that no comments were received, if valid	
<i>Section Q: False Swearing Statements</i>		
	The planning module preparer's false swearing statement is completed and signed	
<i>Section R: Planning Module Review Fee</i>		
	The correct fee has been calculated	
	The correct fee has been paid	
	The request for fee exemption has been checked	
	The deed reference information is provided to support the fee exemption	
<i>Completeness Checklist</i>		
	The module completeness checklist is included	
	All completeness items have been checked as included by the municipality, as appropriate	
	The Municipal Official has signed and dated the checklist	

CERTIFICATION STATEMENT

I certify that this submittal is complete and includes all requested items. I understand that failure to submit a complete module package may result in a denial of the application.

Signed: _____

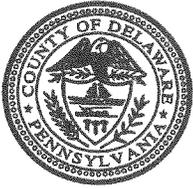
Date: _____

Applicant (or Applicant's authorized representative)

Signed: _____

Date: _____

Municipal Secretary



DELAWARE COUNTY PLANNING COMMISSION

COURT HOUSE/GOVERNMENT CENTER
201 W. Front St. Media, PA 19063

COUNCIL

MARIO J. CIVERA, JR.
CHAIRMAN

COLLEEN F. MORRONE
VICE CHAIRMAN

JOHN P. McBLAIN
DAVID J. WHITE
MICHAEL F. CULP

Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 **FAX:** (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

PLANNING COMMISSION

WILLIAM C. PAYNE
CHAIRMAN

THOMAS J. JUDGE
VICE CHAIRMAN

KENNETH J. ZITARELLI
SECRETARY

LINDA F. HILL
DIRECTOR

January 19, 2017

Mr. Robert A. Zienkowski
Radnor Township
301 Iven Avenue
Wayne, PA 19087

RE: Name of Dev't: 106 and 110 Cambria Court
DCPD File No.: 34-7225-17
Developer: Matt Lombardi c/o Lombardi Residential
Location: South side of Cambria Court,
approximately 100' west of its terminus
Recv'd in DCPD: December 7, 2016

Dear Mr. Zienkowski:

In accordance with the provisions of Section 502 of the Pennsylvania Municipalities Planning Code, the above described proposal has been sent to the Delaware County Planning Commission for review. At a meeting held on January 19, 2017, the Commission took action as shown in the recommendation of the attached review.

Please refer to the DCPD file number shown above in any future communications related to this application.

Very truly yours,

Linda F. Hill
Director

cc: Matt Lombardi c/o Lombardi Residential
Momenee and Associates, Inc.



DCPD

DELAWARE COUNTY PLANNING DEPARTMENT

Court House/ Government Center , 201 W. Front St., Media, PA 19063
Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

Date: January 19, 2017
File No.: 34-7225-17

PLAN TITLE: 106 and 110 Cambria Court

DATE OF PLAN: December 1, 2016

OWNER OR AGENT: Matt Lombardi,
c/o Lombardi Residential

LOCATION: South side of Cambria Court,
approximately 100' west of its
terminus

MUNICIPALITY: Radnor Township

TYPE OF REVIEW: Subdivision

ZONING DISTRICT: R-3 Residential

SUBDIVISION ORDINANCE: Local

PROPOSAL: Subdivide 1.16 acres into three lots

UTILITIES: Public

RECOMMENDATIONS: Proceed to Final, with
consideration given to staff
comments

STAFF REVIEW BY: Michael A. Leventry

REMARKS:

CURRENT PROPOSAL

The applicant proposes subdivide two lots into three, creating two developable lots, and retaining an existing dwelling on Lot 3.



Date: January 19, 2017
File No.: 34-7225-17

REMARKS (continued):

SITE CHARACTERISTICS

The site is located within a residential neighborhood and neighbored by single-family dwellings.

APPLICABLE ZONING

The proposed development is located within the R-3 Residential district and is subject to applicable regulations set forth in the Township's zoning code.

NONCONFORMITIES

The site's existing dwelling does not appear to comply with the setback regulations as established within the Township zoning code.

Where zoning requires a 35' front yard setback, the existing dwelling has an approximate setback of 25'. It should be noted that the plan does not exacerbate the nonconformity.

COMPLIANCE

With exception to the existing non-conforming structure, the proposal appears to comply with the R-3 Residential district provisions.

SITE DESIGN

It is suggested that the side yard setbacks between Lots 1 and 2 be adjusted to 20' and the outer setbacks be reduced to 15', in order to provide more buffer space between the two proposed dwellings.

Date: January 19, 2017
File No.: 34-7225-17

REMARKS (continued):

ENVIRONMENTAL

The developer should contact the Pennsylvania Department of Environmental Protection regarding the need for sewage facilities planning approval.

The Township should confirm receipt of any necessary Pennsylvania Department of Environmental Protection planning approval prior to final approval.

STORMWATER MANAGEMENT

The Township Engineer must verify the adequacy of all proposed stormwater management facilities.

RECORDING

In accordance with Section 513(a) of the Pennsylvania Municipalities Planning Code (MPC), final plans must be recorded within ninety (90) days of municipal approval.



Date: December 23, 2016

To: Radnor Township Planning Commission

From: Roger Phillips, PE

cc: Stephen Norcini, P.E. – Director of Public Works
Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Hollye Wagner – Radnor Township Engineering Department
Ray Daly – Radnor Township Codes Official
Steve Gabriel - Rettew

RE: 106 & 110 Cambria Court – Minor Final Subdivision Plan
Lombardi Residential – Applicant

Date Accepted: December 5, 2016
90 Day Review: March 5, 2017

Gannett Fleming, Inc. has completed a review of the Minor Final Subdivision Plans for compliance with the Radnor Township Code. These Plans was reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to subdivide 106 Cambria Court into 2 parcels and construct 1 home on each lot. The applicant is also proposing to adjust the lot line for 110 Cambria Court. This project is located in the R-3 district of the Township.

Minor Final Subdivision Plans – 106 & 110 Cambria Road

Plans Prepared By: Momenee, Inc.
Dated: 12/01/2016

I. Zoning

1. §280.25.D(1) – For every single-family detached dwelling, there shall be two side yards, which shall not be less than 35 feet in aggregate width and neither of which shall be less than 15 feet in width. It appears that the deck for Lot#1 is encroaching in the side yard setback. This must be revised or a variance obtained.
2. §280.25 – The zoning table shown on the plans is incomplete. The gross area for Lot #2 must be shown on the zoning table. The applicant should verify the net areas for all lots as they are all shown on the plans to be exactly the same size. Also the proposed information



shown on the zoning compliance table for 110 Cambria does not match what is shown in the lot areas table for the corresponding lot.

II. Subdivision and Land Development

1. §255.22.B(1)(k) – Existing principal buildings and their respective uses, and driveways on the adjacent peripheral strip; sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroads and other significant man-made features within 500 feet of and within the site (this includes properties across streets). This information must be shown on the plans or a waiver requested.
2. §255.27.C(2) – Where a subdivision abut or contains an existing street of inadequate right-of-way width, the Board of Commissioners may require the reservation or dedication of rights-of-way to conform with the required standards. Culs-de-sac streets must have a right of way of 60 feet and a cartway of 28 feet. The right-of-way shown on the plans for Cambria Court is 40 feet and the cartway is not labeled. Curbing and sidewalks must be provided in accordance with this section.
3. §255-37.A – Sidewalks and pedestrian paths shall be provided when required by the Board of Commissioners.
4. §255-49 – Where appropriate, the developer shall install or cause to be installed, at the developer’s expense, metal or fiberglass pole streetlights serviced by underground conduit in accordance with a plan to be prepared by the developer’s engineer and approved by the Board of Commissioners and the Philadelphia Electric Company.
5. §255-51.A – Sidewalks shall be constructed as required by §255-27C. These standards shall apply on all new streets and on existing streets, unless in the opinion of the Board of Commissioners they are unnecessary for public safety and convenience. The applicant has requested a waiver from this requirement.

III. Stormwater

1. §245-22(A).(1).(b) – The infiltration BMPs shall have an infiltration rate sufficient to accept the additional stormwater load and dewater completely as determined by field tests conducted by the applicant's design professional. At this time it appears that the applicant’s engineer assumed an infiltration rate of 1.63 inch per hour for Stormwater Management System #1 and #2. The applicant must submit infiltration testing results supporting this assumption.
2. Final approval of the stormwater management plan for 106 and 108 Cambria Court will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at that time.



IV. General

1. New deeds must be prepared and recorded at the Delaware County Court house at the time of plan recording.

Should the Planning Commission consider recommending approval of this project, we suggest that the recommendation be conditioned on requiring the applicant to satisfactorily address the above comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM-

Date: December 19, 2016

To: Steve Norcini, P.E.
Radnor Township Public Works Director

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: Roger Phillips, P.E., Senior Project Manager, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.
Leslie Salsbury, E.I.T., Gilmore & Associates, Inc.

Reference: 106 & 110 Cambria Ct
Subdivision & Lot Line Change Plan Review 1
Radnor Township, Delaware County, PA
G&A 16-12037

Gilmore & Associates, Inc. (G&A) has completed a transportation review for the above referenced project and offers the following transportation comments for Radnor Township consideration:

A. BACKGROUND

The subject parcels located at 106 & 110 Cambria Court are situated in the R-3 Residential Zoning District and take access to Lancaster Avenue, west of Radnor-Chester Road in Radnor Township, Delaware County. The applicant intends on subdividing 106 Cambria Ct in order to provide two single-family dwelling units, thus creating 106 and 108 Cambria Ct. A lot line adjustment will also be required at 110 Cambria Ct.

B. DOCUMENTS REVIEWED

1. Subdivision & Lot Line Change Plans for 106 & 110 Cambria Court, prepared by Momenee, Inc., prepared for Lombardi Residential; consisting of 6 sheets, dated December 1, 2016.
2. Submission letter prepared by Momenee, Inc., prepared for Radnor Township, dated December 1, 2016.
3. Subdivision and Land Development Application
4. Application for ACT 247 Review

C. SUBDIVISION AND LAND DEVELOPMENT COMMENTS

1. §255-21.B.(1)(o)[1] – Revise the plans to clearly label the cartway width for Cambria Court.
2. §255-27.C(1) – Cambria Court along the site frontage is required to provide the following standards.
 - a. 60' Right of Way (30' Half Width)
 - b. 28' Cartway (14' Half Width)
 - c. Curbing along the site frontage
 - d. 4' sidewalk along the site frontage
3. §255-27.C(4) – Where a subdivision abuts or contains an existing street of inadequate right-of-way width, the Board of Commissioners may require the reservation or dedication of right-of-way to conform to the above standards. The center line of the ultimate right-of-way shall be the same center line as the existing right-of-way.
4. §255-27.H(6) – Revise the plans to include the proposed driveway radii for review and construction purposes.
5. §255-35 – It appears that a portion of the radius for the existing driveway 110 Cambria Ct driveway is enclosed within the proposed adjusted property lot line for 108 Cambria Ct. The radius does appear within the ROW for Cambria Court. We will defer to the Solicitor regarding if an easement is required.

If you have any questions regarding the above, please contact this office.



924 County Line Road • Bryn Mawr, PA 19010
Phone: (610) 527-3030 • Fax: (610) 527-9008

From:	Joseph C. Mongeluzi, Jr., PE jmongeluzi @momenee.com	Date: 12/1/2016	Job No: 16084
To:	Radnor Township 301 Iven Avenue Wayne, PA 19087	Attention: Hollye Wagner	Phone: 610-688-5600
		Re: 106 & 108 Cambria Court Subdivision	

We are sending you the attached:

- Plans Computer Disk Specifications Calculations
 Copy of Letter Change Order Shop Drawings Other

Copies	Date	No.	Description
26	12-1-16	6	24" x 36" plans of the project (record plan, existing conditions, vicinity plan, grading plan, E&S, construction details)
7	12-1-16	6	11" x 17" reduced plan set
2	12-1-16	Book	Hydrological Study for 106 Cambria Court
2	12-1-16	Book	Hydrological Study for 108 Cambria Court
10			Thumb drive containing electronic copies of documents in this submission
2	7-29-16	2	106 Cambria Court Held Open Policy
2	6-30-16	5	106 Cambria Court Deed
3	11-29-16	3	Check to Radnor Twp. for Subdivision Application \$1,250.00, check to Radnor Twp. for \$7,000.00 for professional services agreement, and check to Treasurer of Delaware County \$170.00.

These are transmitted as checked below:

- For Approval Approved as Submitted Resubmit _____ Copies for Approval
 For Your Use Approved as Noted Submit _____ Copies for Distribution
 As Requested Returned for Corrections Return _____ Corrected Prints
 For Review and Comment: _____
 For Bids Due: Prints Returned After Loan to Us

Remarks: Attached please find the above referenced information for your use.

Copy To: Lombardi Residential, LLC

Signed: Joseph C. Mongeluzi, Jr., PE

RADNOR TOWNSHIP
301 IVEN AVE
WAYNE PA 19087
P) 610 688-5600
F) 610 971-0450
WWW.RADNOR.COM

SUBDIVISION ~ LAND DEVELOPMENT

Location of Property 106 CAMBRIA COURT

Zoning District R-3

Application No. _____
(Twp. Use)

Fee _____ Ward No. 2-1 Is property in HARB District NO

Applicant: (Choose one) Owner X Equitable Owner _____

Name MATT LOMBARDI c/o LOMBARDI RESIDENTIAL

Address 406 MANTOLOKING ROAD, BRICK, NJ 08723

Telephone 908-705-1074 Fax _____ Cell 908-705-1074

Email matt@lombardiresidential.com

Designer: (Choose one) Engineer X Surveyor _____

Name JOSEPH C. MONGELUZI JR, PE c/o MOMENCE, INC.

Address 924 COUNTY LINE ROAD, BRYN MAWR, PA 19010

Telephone 610 527 3030 Fax 610 527 9008

Email jmongeluzi@momence.com

Area of property 50,509 SF Area of disturbance 24,293 SF

Number of proposed buildings 2 Proposed use of property RESIDENTIAL

Number of proposed lots 2

Plan Status: Sketch Plan _____ Preliminary _____ Final X Revised _____

Are there any requirements of Chapter 255 (SALDO) that are not in compliance with?

Are there any requirements of Chapter 255 (SALDO) not being adhered to?
Explain the reason for noncompliance.

No

Are there any infringements of Chapter 280 (Zoning), and if so what and why?

No

Individual/Corporation/Partnership Name

MATT LOMBARDI, LOMBARDI RESIDENTIAL

I do hereby certify that I am the owner, equitable owner or authorized representative of the property which is the subject of this application.

Signature

Matt Lombardi

Print Name

Matt Lombardi

By filing this application, you are hereby granting permission to Township officials to visit the site for review purposes.

NOTE: All requirements of Chapter 255 (Subdivision of Lane) of the Code of the Township of Radnor must be complied with whether or not indicated in this application.

DELAWARE COUNTY PLANNING COMMISSION

APPLICATION FOR ACT 247 REVIEW

Incomplete applications will be returned and will not be considered "received" until all required information is provided.

Please type or print legibly

DEVELOPER/APPLICANT

Name Matt Lombardi c/o Lombardi Residential E-mail matt@lombardiresidential.com

Address 406 Mantoloking Road, Brick, NJ 08723 Phone _____

Name of Development 106 and 110 Cambria Court

Municipality Wayne, Radnor Township

ARCHITECT, ENGINEER, OR SURVEYOR

Name of Firm Momenee, Inc. Phone 610-527-3030

Address 924 County Line Road, Bryn Mawr, PA 19010

Contact Joseph C. Mongeluzi, Jr., PE E-mail jmongeluzi@momenee.com

Type of Review	Plan Status	Utilities		Environmental Characteristics
		Existing	Proposed	
<input type="checkbox"/> Zoning Change	<input type="checkbox"/> Sketch	<input checked="" type="checkbox"/> Public Sewerage	<input checked="" type="checkbox"/> Public Sewerage	
<input type="checkbox"/> Land Development	<input checked="" type="checkbox"/> Preliminary	<input type="checkbox"/> Private Sewerage	<input type="checkbox"/> Private Sewerage	<input type="checkbox"/> Wetlands
<input checked="" type="checkbox"/> Subdivision	<input type="checkbox"/> Final	<input checked="" type="checkbox"/> Public Water	<input checked="" type="checkbox"/> Public Water	<input type="checkbox"/> Floodplain
<input type="checkbox"/> PRD	<input type="checkbox"/> Tentative	<input type="checkbox"/> Private Water	<input type="checkbox"/> Private Water	<input type="checkbox"/> Steep Slopes

Zoning District R3

Tax Map # 14 / 163 / 000 **106 Cambria**

Tax Folio # 36 / 02 / 00857 / 000 **106 Cambria**

Tax Map 14/162/000 110 Cambria

Tax Folio 36/02/00858/000 110 Cambria

STATEMENT OF INTENT

WRITING "SEE ATTACHED PLAN" IS NOT ACCEPTABLE.

Existing and/or Proposed Use of Site/Buildings:

Applicant would like to subdivide 106 Cambria Court from one lot to two lots thus creating 106 and 108 Cambria Court. In addition, a lot line adjustment will be required at 110 Cambria Court. Both 106 and 110 Cambria Court are owned the applicant.

The applicant would like to construct single family homes on the lots.

Total Site Area 1.16 Acres
Size of All Existing Buildings 3,677 (110 Cambria) Square Feet
Size of All Proposed Buildings 4,595 (16 & 108 Cambria) Square Feet
Size of Buildings to be Demolished NA Square Feet

Matt Lombardi
Print Developer's Name

[Signature]
Developer's Signature

MUNICIPAL SECTION

ALL APPLICATIONS AND THEIR CONTENT ARE A MUNICIPAL RESPONSIBILITY.

Local Planning Commission Regular Meeting 1/3/2017

Local Governing Body Regular Meeting _____

Municipal request for DCPD staff comments prior to DCPC meeting, to meet municipal meeting date:

Actual Date Needed _____

IMPORTANT: If previously submitted, show assigned DCPD File # _____

Roger A. Phillips PE Township Engineer
Print Name and Title of Designated Municipal Official

610-688-5600
Phone Number

[Signature]
Official's Signature

Date

FOR DCPD USE ONLY

Review Fee: Check # _____ Amount \$ _____ Date Received _____

Applications with original signatures must be submitted to DCPD.

DEED

Grantor:

John Franklin Haws and Doris S. Haws, his wife

TO

Grantee:

Lombardi State Realty, LLC, a Pennsylvania
Limited Liability Company

PREMISES

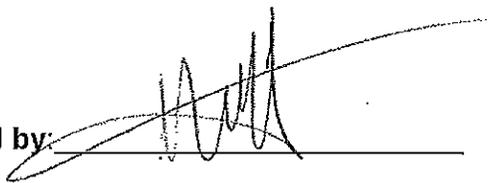
106 Cambria Court
Radnor Township
Delaware County, Pennsylvania

Folio No. 36-02-00857-00

GRANTEE ADDRESS

406 Mantoloking Road
Brick Twp., NJ 08723

Certified by: _____

A handwritten signature in black ink, appearing to be 'JFH', is written over a horizontal line.

Record & Return To:
Homestead Abstract Settlement Services
2327 West Chester Pike
Broomall, PA 19008
(610) 353-4755

Prepared by:
Homestead Abstract Settlement Services

Record & Return To:
Homestead Abstract Settlement Services
2327 West Chester Pike
Broomall, PA 19008
(610) 353-4755

RD BK05834-1395 OT-DEED
2016034056 07/01/2016 11:03:36 AM:3
RCD FEE: \$100.50 POL SUB TAX: \$6,375.00 ST TAX: \$4,250.00
36-RADNOR \$6,375.00 THOMAS J. JUDGE SR. ROD
DELAWARE COUNTY

Folio No. 36-02-00857-00

This Indenture made this 30th day of June, 2016,

Between

John Franklin Haws and Doris S. Haws, his wife

(hereinafter called the Grantor),

AND

Lombardi State Realty, LLC, a Pennsylvania Limited Liability Company

(hereinafter called the Grantee),

Witnesseth that the said Grantor for and in consideration of the sum of:

FOUR HUNDRED TWENTY-FIVE THOUSAND and 00/100 DOLLARS (\$425,000.00) lawful money of the United States of America, unto Grantor well and truly paid by the said Grantee and at or before the sealing and delivery hereof, the receipt whereof is hereby acknowledged, has granted, bargained and sold, released and confirmed, and by these presents does grant, bargain and sell, release and confirm unto the said Grantee and Grantee's heirs, successors and assigns the following in fee simple:

See Legal Description Attached Hereto and Made a Part Hereof as Schedule "A".

SCHEDULE "A"
Legal Description

ALL THAT CERTAIN tract of piece of ground, situate in St. Davids, Radnor Township, Delaware County, Pennsylvania, bounded and described in accordance with a Map of Cambria Court, by E. J. Wendell, dated May 5, 1922, as follows, to wit:

BEGINNING at a point in the middle line of Cambria Court at a corner of land now or late of H. K. Mulford, Jr., said point of beginning being measured the 4 following courses and distances along said middle line of Cambria Court from its intersection with the middle line of Lancaster Avenue; (1) North 19 degrees 16 minutes 45 seconds East 179.39 feet (2) on the arc of a circle curving to the right with a radius of 190.42 feet (the chord of which bears North 20 degrees 37 minutes 2 seconds East 8.60 feet) the arc distance of 8.60 feet to a spike; (3) on the arc of a circle curving to the right with a radius of 190.42 feet (the chord of which bears North 48 degrees 52 minutes 3 seconds East 172.64 feet) the arc distance of 179.18 feet to a spike; (4) on the arc of a circle curving to the right in a Northeasterly direction the arc distance of 57.631 feet; thence extending from said point and place of beginning along the middle line of Cambria Court on the arc of a circle curving to the right in a Southeasterly direction of the arc distance of 30.57 feet to a spike and South 77 degrees 38 minutes 15 seconds East 108 feet to an iron pin; and on the arc of a circle curving to the left with a radius of 444.42 feet (the chord of which arc bears South 80 degrees 5 minutes 20 seconds East) the arc distance of 15.38 feet to a point in line of land now or late of Henry Pleasants; thence extending along same South 6 degrees 15 minutes West 196.58 feet to an iron pin; thence extending North 75 degrees 1 minute 20 seconds West 101.76 feet to an iron pin; thence extending North 81 degrees 31 minutes West 13.24 feet to a point; thence extending along land now or late of H. K. Mulford, Jr., North 5 degrees 16 minutes West 198.30 feet to the first mentioned point and place of beginning.

BEING Folio No. 36-02-00857-00.

BEING the same premises which Charles E. Alexander and Eleanor H. Alexander, his wife and William V. Alexander, Jr. and Isabelle F. Alexander, his wife by Deed dated 2/8/1954 and recorded 2/19/1954 in Delaware County in Deed Book 1676 Page 549 conveyed unto John Franklin Haws and Doris S. Haws, his wife, in fee.

AND the said John Franklin Haws is also known as J. Frank Haws, John F. Haws and J. F. Haws.

Together with all and singular improvements, ways, streets, alleys, driveways, passages, waters, water-courses, rights, liberties, privileges, hereditaments and appurtenances, whatsoever unto the hereby granted premises belonging, or in any wise appertaining, and the reversions and remainders, rents, issues, and profits thereof; and all the estate, right, title, interest, property, claim and demand whatsoever of the said Grantor and Grantor's heirs, successors and assigns, as well at law as in equity, of, in and to the same.

To have and to hold the said lot(s) or piece(s) of ground above described with the hereditaments and premises hereby granted, or mentioned, and intended so to be, with the appurtenances, unto the said Grantee and Grantee's heirs, successors and assigns to and for the only proper use and behoof of the said Grantee and Grantee's heirs, successors and assigns, forever, in fee simple.

And the said Grantor and Grantor's heirs, successors and assigns do by these presents, covenant, grant and agree, to and with the said Grantee and Grantee's heirs, successors and assigns, that the said Grantor and Grantor's heirs, successors and assigns all and singular the Hereditaments and premises herein above described and granted, or mentioned and intended so to be with the Appurtenances unto the said Grantee and Grantee's heirs, successors and assigns, against the said Grantor and Grantor's, successors and assigns all and every Person or Persons whomever lawfully claiming or to claim the same or any part thereof, by from, or under Grantor and Grantor's heirs, successors and assigns shall and will **WARRANT and FOREVER DEFEND.**

The remainder of this page is intentionally left blank

In Witness Whereof, the said Grantor has caused these presents to be duly executed dated the day and year first above written.

Sealed and Delivered

IN THE PRESENCE OF US

[Signature]
WITNESS

John Franklin Haws
John Franklin Haws, GRANTOR

[Signature]
WITNESS

Doris S Haws
Doris S. Haws, GRANTOR

COMMONWEALTH OF PENNSYLVANIA :
: SS
COUNTY OF DELAWARE :

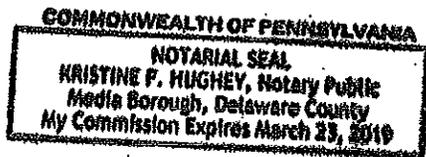
On this, the 30th day of June, 2016, before me, a notary public the undersigned officer, personally appeared:

John Franklin Haws and Doris S. Haws

known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In Witness Whereof, I hereunto set my hand and official seal.

Kristine F. Hughey
Notary Public



Homestead Abstract and Settlement Services, Inc.
2327 West Chester Pike
Broomall, PA 19008
Phone: (610)353-4755 Fax: (610)353-6454
homesteadabstract@verizon.net

July 29, 2016

Chris Lombardi
Lombardi State Realty, LLC
406 Mantoloking Road
Brick Township, NJ 08723

Purchaser: Lombardi State Realty, LLC, a Pennsylvania Limited Liability Company
Address: 110 Cambria Court, Radnor Township, Delaware County, PA
Held Open Owner's Policy

Dear Chris,

Enclosed please find the following documents in reference to the above property which should be maintained with your permanent records:

 X Copy Held Open Request
 X Original Recorded Deed

Our thanks for selecting us to be part of your real estate transaction and please do not hesitate to contact us if you have any questions or need title insurance or closing services in the future.

Best regards,

Michael K. Molinaro

Michael K. Molinaro

MKM/jg
enc.

Homestead Abstract and Settlement Services, Inc.
2327 West Chester Pike
Broomall, PA 19008
Phone: (610)353-4755 Fax: (610)353-6454
homesteadabstract@verizon.net

June 30, 2016

Chris Lombardi
Lombardi State Realty, LLC
406 Mantoloking Road
Brick Township, NJ 08723

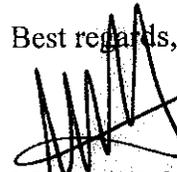
Purchaser: Lombardi State Realty, LLC, a Pennsylvania Limited Liability Company
Address: 110 Cambria Court, Radnor Township, Delaware County, PA
Held Open Owner's Policy

Dear Chris,

Per your request, the Owner's Policy on the above premises will be held open for a period of 12 months from the date of recording of the Deed. If during the 12 month period a mortgage is placed on the premises, an additional charge due for a Loan Policy in an amount in excess of the Owner's Policy, if any, will be charged for the issuance of the Owner's and Loan Policies. However, a work charge for conducting the loan closing and issuance of an updated Title Commitment, if required, will be made which shall not exceed 25% of the sale rate for such Loan Policy. An Owner's Policy will issue if requested at any time or if no mortgage is placed on the premises during this time, whichever is first to occur.

Please sign below if this meets with your understanding and our thanks for selecting us to be part of your real estate transaction and please do not hesitate to contact us if you have any questions or need title insurance or closing services in the future.

Best regards,

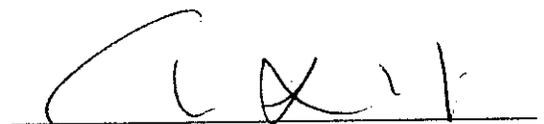


Michael K. Molinaro

MKM/jg

enc.

Acknowledged and Approved By:


Christopher J. Lombardi, Member, Buyer

Prepared by:
Homestead Abstract Settlement Services

Record & Return To:
Homestead Abstract Settlement Services
2327 West Chester Pike
Broomall, PA 19008
(610) 353-4755

Folio No. 36-02-00858-00

RD BK05834-1400 DT-DEED
2016034057 07/01/2016 11:03:36 AM:4
RCD FEE: \$100.50 POL SUB TAX: \$6,375.00 ST TAX: \$4,250.00

36-RADNOR \$6,375.00 THOMAS J. JUDGE SR. ROD
DELAWARE COUNTY

This Indenture made this **30th** day of **June**, **2016**,

Between

J. Frank Haws and Doris S. Haws, husband and wife

(hereinafter called the Grantor),

AND

Lombardi State Realty, LLC, a Pennsylvania Limited Liability Company

(hereinafter called the Grantee),

Witnesseth that the said Grantor for and in consideration of the sum of:

FOUR HUNDRED TWENTY-FIVE THOUSAND and 00/100 DOLLARS (\$425,000.00) lawful money of the United States of America, unto Grantor well and truly paid by the said Grantee and at or before the sealing and delivery hereof, the receipt whereof is hereby acknowledged, has granted, bargained and sold, released and confirmed, and by these presents does grant, bargain and sell, release and confirm unto the said Grantee and Grantee's heirs, successors and assigns the following in fee simple:

See Legal Description Attached Hereto and Made a Part Hereof as Schedule "A".

SCHEDULE "A"
Legal Description

ALL THAT CERTAIN message and garage and lot or piece of ground, situate in the Township of Radnor, County of Delaware and Commonwealth of Pennsylvania, bounded and described as follows, to wit:

BEGINNING at a point on the middle line of Cambria Court 578.73 feet Northeastwardly measured along the middle line of said Court from the middle line of Lancaster Avenue.

CONTAINING in front along the middle line of Cambria Court, aforesaid, 101.84 feet and extending Southeastwardly 225.16 feet on the East side and 196.58 feet on the West side of land now or late of Elizabeth Moorehouse.

BEING Folio No. 36-02-00858-00.

BEING the same premises which Alex A. Fulton and Barbara L. Fulton by Deed dated 02/28/1973 and recorded 03/02/1973 in Delaware County in Deed Book 2461 Page 830 conveyed unto J. Frank Haws and Doris S. Haws, husband and wife, in fee.

AND the said J. Frank Haws is also known as John Franklin Haws, John F. Haws and J. F. Haws.

Together with all and singular improvements, ways, streets, alleys, driveways, passages, waters, water-courses, rights, liberties, privileges, hereditaments and appurtenances, whatsoever unto the hereby granted premises belonging, or in any wise appertaining, and the reversions and remainders, rents, issues, and profits thereof; and all the estate, right, title, interest, property, claim and demand whatsoever of the said Grantor and Grantor's heirs, successors and assigns, as well at law as in equity, of, in and to the same.

To have and to hold the said lot(s) or piece(s) of ground above described with the hereditaments and premises hereby granted, or mentioned, and intended so to be, with the appurtenances, unto the said Grantee and Grantee's heirs, successors and assigns to and for the only proper use and behoof of the said Grantee and Grantee's heirs, successors and assigns, forever, in fee simple.

And the said Grantor and Grantor's heirs, successors and assigns do by these presents, covenant, grant and agree, to and with the said Grantee and Grantee's heirs, successors and assigns, that the said Grantor and Grantor's heirs, successors and assigns all and singular the Hereditaments and premises herein above described and granted, or mentioned and intended so to be with the Appurtenances unto the said Grantee and Grantee's heirs, successors and assigns, against the said Grantor and Grantor's, successors and assigns all and every Person or Persons whomever lawfully claiming or to claim the same or any part thereof, by from, or under Grantor and Grantor's heirs, successors and assigns shall and will **WARRANT and FOREVER DEFEND**.

The remainder of this page is intentionally left blank

In Witness Whereof, the said Grantor has caused these presents to be duly executed dated the day and year first above written.

Sealed and Delivered
IN THE PRESENCE OF US

[Signature]
WITNESS

J. Frank Haws
J. Frank Haws, GRANTOR

[Signature]
WITNESS

Doris S. Haws
Doris S. Haws, GRANTOR

COMMONWEALTH OF PENNSYLVANIA :
COUNTY OF DELAWARE : SS
:

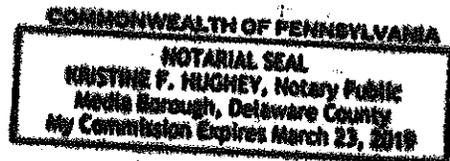
On this, the 30th day of June, 2016, before me, a notary public the undersigned officer, personally appeared:

J. Frank Haws and Doris S. Haws

known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In Witness Whereof, I hereunto set my hand and official seal.

Kristine F. Hickey
Notary Public



DEED

Grantor:

J. Frank Haws and Doris S. Haws, his wife

TO

Grantee:

Lombardi State Realty, LLC, a Pennsylvania
Limited Liability Company

PREMISES

110 Cambria Court
Radnor Township
Delaware County, Pennsylvania

Folio No. 36-02-00858-00

GRANTEE ADDRESS

406 Mantoloking Road
Brick Twp., NJ 08723

Certified by: _____

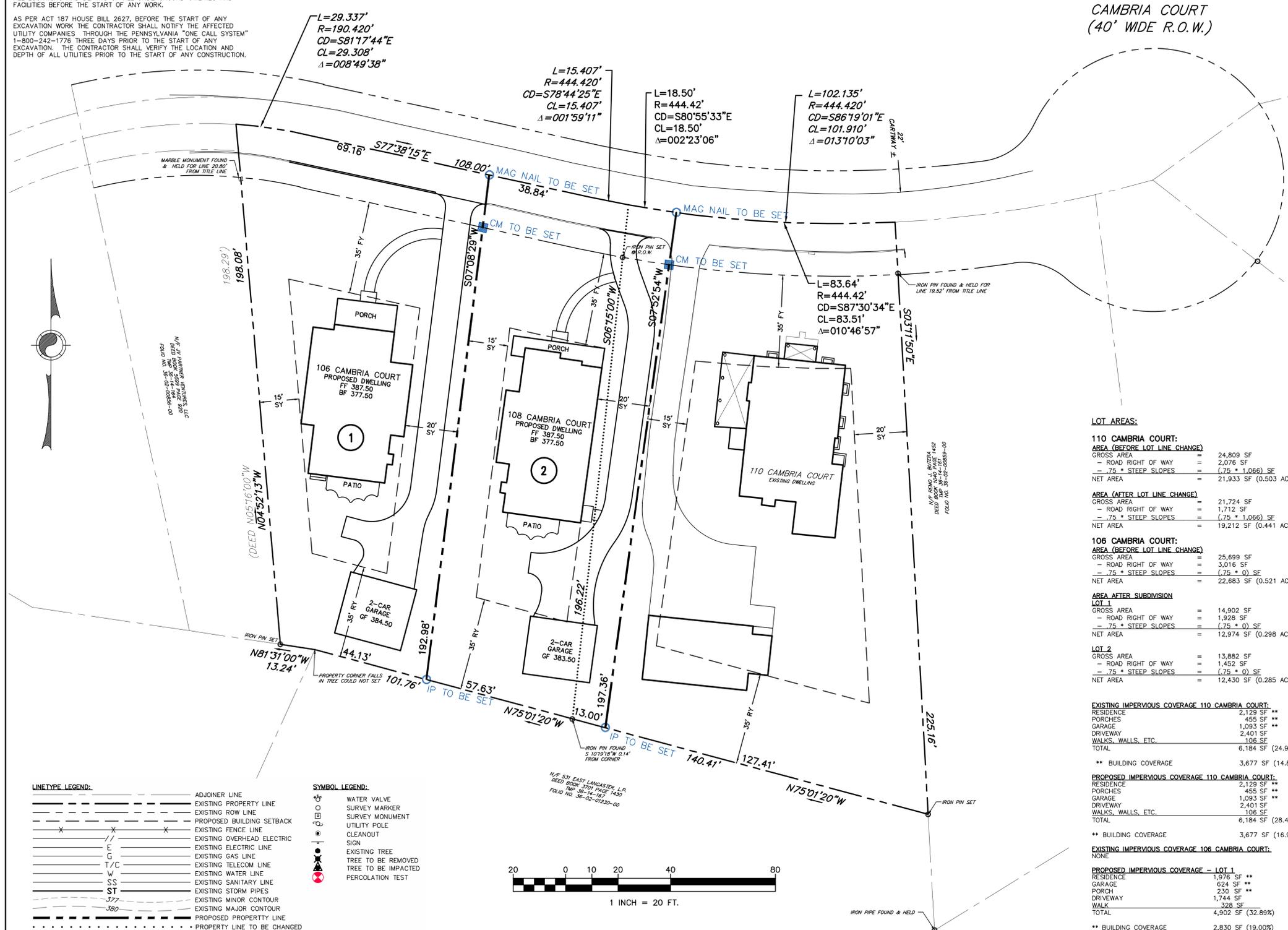
A handwritten signature in black ink, appearing to be 'J. Frank Haws', written over a horizontal line.

Record & Return To:
Homestead Abstract Settlement Services
2327 West Chester Pike
Broomall, PA 19008
(610) 353-4755

ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES.

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AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.



LINE TYPE LEGEND:

---	ADJOINER LINE
---	EXISTING PROPERTY LINE
---	EXISTING ROW LINE
---	PROPOSED BUILDING SETBACK
X-X-X	EXISTING FENCE LINE
///	EXISTING OVERHEAD ELECTRIC
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
T/C	EXISTING TELECOM LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	PROPOSED PROPERTY LINE
---	PROPERTY LINE TO BE CHANGED

SYMBOL LEGEND:

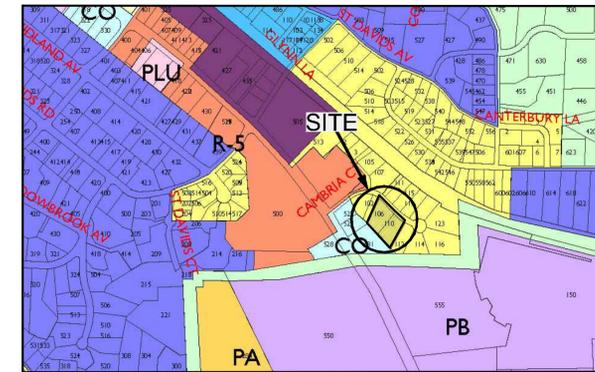
+	WATER VALVE
○	SURVEY MARKER
□	SURVEY MONUMENT
○	UTILITY POLE
○	CLEANOUT
+	EXISTING TREE
+	TREE TO BE REMOVED
+	TREE TO BE IMPACTED
+	PERCOLATION TEST

ZONING COMPLIANCE TABULATION

R-3 ZONING DISTRICT -- SINGLE-FAMILY DWELLING

ITEM	REQUIREMENT	EXISTING 110	EXISTING 106	PROPOSED 110	PROPOSED LOT 1	PROPOSED LOT 2
LOT AREA	10,000 SF	24,809 SF GROSS	25,699 SF GROSS	21,724 SF GROSS	14,902 SF	13,882 SF
NET OF R/W		21,933 SF NET OF R/W & STEEP SLOPES	22,683 SF NET OF R/W & STEEP SLOPES	19,212 SF NET OF R/W & STEEP SLOPES	12,974 SF NET OF R/W & STEEP SLOPES	12,430 SF NET OF R/W & STEEP SLOPES
LOT WIDTH (BSL)	70' MIN	111'	141'	83'	72'	94'
BUILDING AREA	25% ALLOWED	3,677 SF (14.82%)	0 SF (0%)	3,677 SF (16.93%)	2,830 SF (19.00%)	2,756 SF (19.85%)
FRONT YARD	35 FEET MIN.	31.13'	35'	35'	35'	35'
SIDE YARD	35 FEET AGG. (15 FEET MIN)	35' AGG. (15' MIN)	35' AGG. (15' MIN)	35' AGG. (15' MIN)	35' AGG. (15' MIN)	35' AGG. (15' MIN)
REAR YARD	35 FEET MIN	35'	35'	35'	35'	35'
IMPERVIOUS SURFACES	35% MAXIMUM	6,184 SF (24.93%)	0 SF (0%)	4,902 SF (28.47%)	4,850 SF (34.94%)	4,850 SF (34.94%)
BUILDING HEIGHT	3 STORIES/35 FEET MAX	2.5 STORIES	2.5 STORIES	35' MAX	35' MAX	35' MAX

CAMBRIA COURT
(40' WIDE R.O.W.)



LOCATION MAP
SCALE: 1" = 600'

ZONING DISTRICT R-3 REGULATIONS

LOT AREA	10,000 S.F. MIN.
BLDG. AREA	70 FEET MIN. 25% MAX.
FRONT YARD	35 FEET MIN.
SIDE YARD	35 FEET AGG. (15 FEET MIN.)
REAR YARD	35 FEET MIN.
HEIGHT	35 FEET MAX.
IMPERVIOUS SURFACE	35% MAX.
RIPARIAN BUFFER SETBACK	30' MIN.

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

GENERAL NOTES:

- OWNER/APPLICANT: LOMBARDI RESIDENTIAL 406 MANTOLOKING ROAD BRICK, NJ 08723
- BOUNDARY AND IMPERVIOUS DATA TAKEN FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY - 106 AND 110 CAMBRIA COURT" PREPARED BY MOMENEE SURVEY GROUP INC., FILE NO. 16-084, DATED APRIL 20, 2016.
- SURVEY NOTES:
 - THIS PLAN REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED ON THE PREMISES ON APRIL 13, 2016 AND DEPICTS CONDITIONS ON THAT DATE.
 - THE EXISTENCE AND/OR LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY ALL CONTRACTORS PRIOR TO CONSTRUCTION.
 - PA. ONE CALL NUMBER FOR THIS SITE IS 20160902450.
 - THE VERTICAL DATUM SHOWN ON THIS PLAN IS PER NAVD 1988 OBTAINED VIA VRS NETWORK.
 - THIS SURVEY AND PLAN WAS SUBMITTED WITHOUT THE AVAILABILITY OF A CURRENT TITLE REPORT AND SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED IN A FULL AND ACCURATE TITLE REPORT.
 - IN ACCORDANCE WITH FEMA PANEL NUMBER 42045C0036F EFFECTIVE DATE NOVEMBER 18, 2009, PREMISES IS LOCATED IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.
- TAX PARCEL I.D. ADDRESS 106 CAMBRIA: 36-02-00857-00, BLOCK: 14 UNIT NO. 163:000 ADDRESS 110 CAMBRIA: 36-02-00858-00, BLOCK: 14 UNIT NO. 162:000
- SOURCE OF TITLE: ADDRESS 110 CAMBRIA: DEED BOOK 1676 PAGE 549 ADDRESS 110 CAMBRIA: DEED BOOK 2461 PAGE 830
- SOIL DATA RETRIEVED VIA THE WEB SOIL SURVEY PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.NRCS.USDA.GOV/.
- THE INTENT OF THESE PLANS IS TO DEPICT THE ALTERATION OF THE LOT LINE BETWEEN 106 AND 110 CAMBRIA COURT AND THE SUBDIVISION OF 106 CAMBRIA COURT TO CREATE ONE ADDITIONAL LOT AND REMOVAL/GRADING NEEDED TO FACILITATE THE PROPOSED DWELLINGS, DRIVEWAYS, WALKS, UTILITIES, STORMWATER MANAGEMENT, AND OTHER RELATIVE SITE IMPROVEMENTS IN CONJUNCTION WITH EROSION AND SEDIMENTATION CONTROL.
- BOTH LOTS ARE CURRENTLY SERVED BY PUBLIC WATER. NEW PUBLIC WATER AND SEWER CONNECTION IS PROPOSED FOR THE NEW LOT.
- THE STORMWATER MANAGEMENT DETENTION/COLLECTION SYSTEMS AND INLETS ARE TO BE OWNED AND MAINTAINED BY THE HOME OWNERS. ROOF DRAINS ARE TO BE TIED INTO THE STORMWATER MANAGEMENT DETENTION SYSTEMS.
- A PLANNING MODULE OR EXEMPTION IS REQUIRED FROM DEP.
- A GENERAL EASEMENT IS HEREBY CREATED OVER THE STORMWATER MANAGEMENT SYSTEMS THAT PERMITS INGRESS AND EGRESS BY RADNOR TOWNSHIP.
- AN INDIVIDUAL GRADING PLAN AND EROSION SEDIMENT AND CONTROL PLAN WILL BE REQUIRED TO BE SUBMITTED AND APPROVED PRIOR TO ISSUING ANY BUILDING PERMITS. ANY REVISIONS TO THE SIZE OR LOCATION OF THE INDIVIDUAL STRUCTURES OR OTHER FEATURES WILL NEED TO BE ADDRESSED AT THAT TIME, AND A FINAL APPROVAL OF THE STORMWATER MANAGEMENT PLAN WILL BE REQUIRED AS PART OF THE GRADING PERMIT PROCESS.

LOT AREAS:

110 CAMBRIA COURT:

AREA (BEFORE LOT LINE CHANGE)

GROSS AREA	=	24,809 SF
- ROAD RIGHT OF WAY	=	2,076 SF
- .75 * STEEP SLOPES	=	(.75 * 1,066) SF
NET AREA	=	21,933 SF (0.503 AC)

AREA (AFTER LOT LINE CHANGE)

GROSS AREA	=	21,724 SF
- ROAD RIGHT OF WAY	=	1,712 SF
- .75 * STEEP SLOPES	=	(.75 * 1,066) SF
NET AREA	=	19,212 SF (0.441 AC)

106 CAMBRIA COURT:

AREA (BEFORE LOT LINE CHANGE)

GROSS AREA	=	25,699 SF
- ROAD RIGHT OF WAY	=	3,016 SF
- .75 * STEEP SLOPES	=	(.75 * 0) SF
NET AREA	=	22,683 SF (0.521 AC)

AREA AFTER SUBDIVISION

LOT 1

GROSS AREA	=	14,902 SF
- ROAD RIGHT OF WAY	=	1,928 SF
- .75 * STEEP SLOPES	=	(.75 * 0) SF
NET AREA	=	12,974 SF (0.298 AC)

LOT 2

GROSS AREA	=	13,882 SF
- ROAD RIGHT OF WAY	=	1,452 SF
- .75 * STEEP SLOPES	=	(.75 * 0) SF
NET AREA	=	12,430 SF (0.285 AC)

EXISTING IMPERVIOUS COVERAGE 110 CAMBRIA COURT:

RESIDENCE	=	2,129 SF **
PORCHES	=	455 SF **
GARAGE	=	1,093 SF **
DRIVEWAY	=	2,401 SF
WALKS, WALLS, ETC.	=	106 SF
TOTAL	=	6,184 SF (24.93%)

** BUILDING COVERAGE 3,677 SF (14.82%)

PROPOSED IMPERVIOUS COVERAGE 110 CAMBRIA COURT:

RESIDENCE	=	2,129 SF **
PORCHES	=	455 SF **
GARAGE	=	1,093 SF **
DRIVEWAY	=	2,401 SF
WALKS, WALLS, ETC.	=	106 SF
TOTAL	=	6,184 SF (28.47%)

** BUILDING COVERAGE 3,677 SF (16.93%)

EXISTING IMPERVIOUS COVERAGE 106 CAMBRIA COURT:

RESIDENCE	=	1,976 SF **
PORCH	=	624 SF **
PORCH	=	230 SF **
DRIVEWAY	=	1,744 SF
WALK	=	328 SF
TOTAL	=	4,902 SF (32.89%)

** BUILDING COVERAGE 2,830 SF (19.00%)

PROPOSED IMPERVIOUS COVERAGE - LOT 1

RESIDENCE	=	1,976 SF **
GARAGE	=	624 SF **
PORCH	=	230 SF **
DRIVEWAY	=	1,744 SF
WALK	=	303 SF
TOTAL	=	4,850 SF (34.94%)

** BUILDING COVERAGE 2,756 SF (19.85%)

PROPOSED IMPERVIOUS COVERAGE - LOT 2

RESIDENCE	=	1,987 SF **
GARAGE	=	567 SF **
PORCH	=	202 SF **
DRIVEWAY	=	1,791 SF
WALK	=	303 SF
TOTAL	=	4,850 SF (34.94%)

** BUILDING COVERAGE 2,756 SF (19.85%)

STATE OF PENNSYLVANIA
COUNTY OF DELAWARE SS

ON THIS _____ DAY OF _____, 20____, BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED HIMSELF TO BE THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THE SUBDIVISION PLAN THEREOF WAS MADE AT HIS DIRECTION AND THAT HE ACKNOWLEDGES THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

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

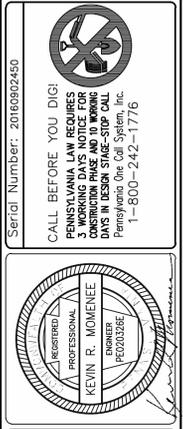
(SIGNATURE)

NOTARY PUBLIC OR OTHER OFFICER

MY COMMISSION EXPIRES: _____

Serial Number: 20160902450

CALL BEFORE YOU DIG:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
Pennsylvania One Call System, Inc.
1-800-242-1776



MOMENEE, INC.
a Kairns Company

ENGINEERING | PLANNING | SURVEYING

RECORD PLAN: (SHEET 1 OF 1 FOR RECORDING)

SUBDIVISION / LOT LINE CHANGE PLAN

106 & 110 CAMBRIA COURT

RADNOR TOWNSHIP - DELAWARE COUNTY - PENNSYLVANIA

OWNER/APPLICANT: LOMBARDI RESIDENTIAL 406 MANTOLOKING ROAD BRICK, NJ 08723

ONE-CALL: 20160902450

DRAWN BY: SWB

CHECKED BY: JCM

FILE NO.: 16-084

SHEET 1 OF 6

DATE: DECEMBER 1, 2016

SCALE: 1" = 20'

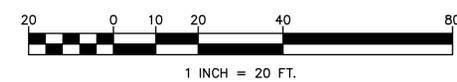
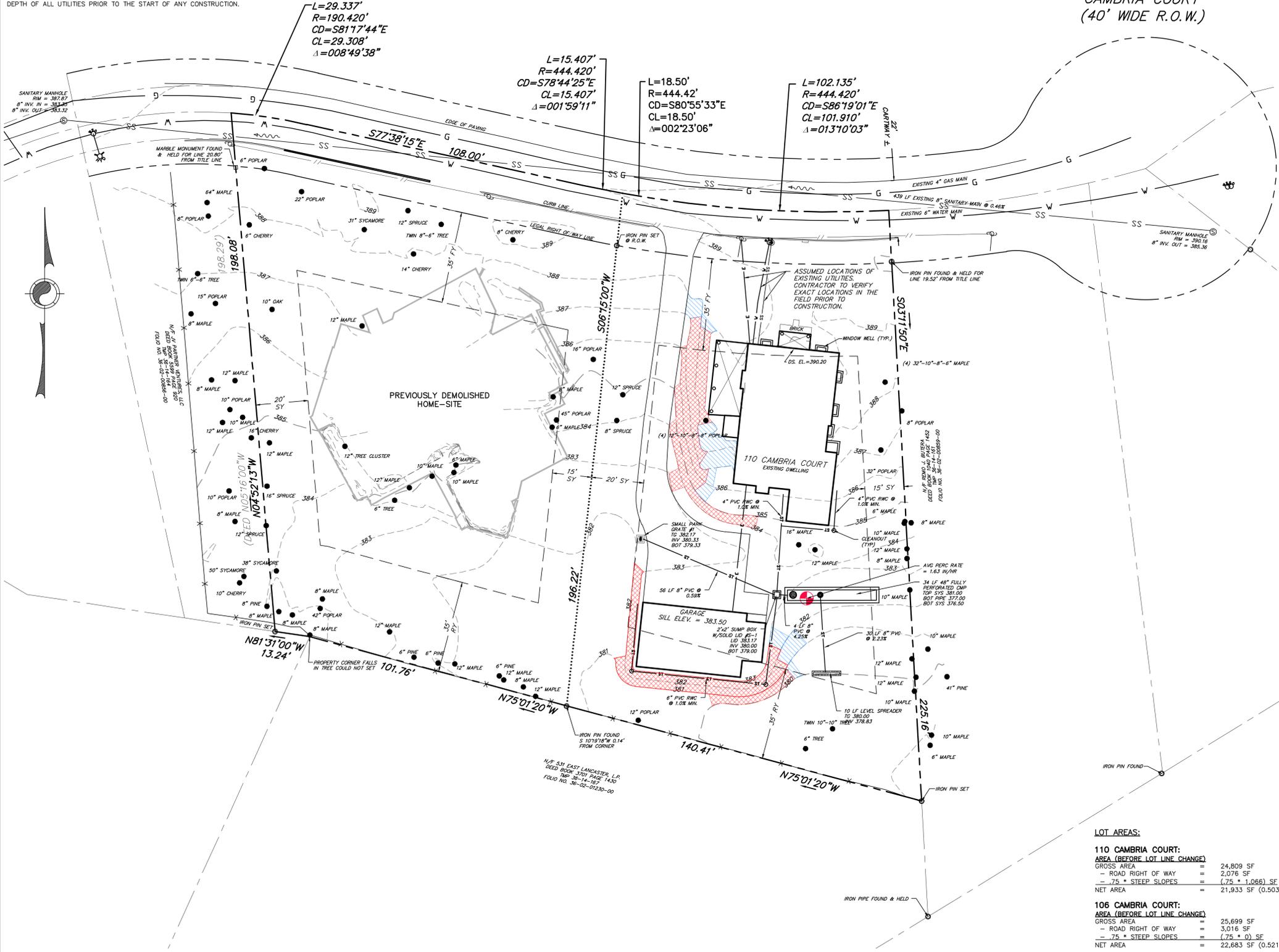
PRELIM TWP COMMENTS

REV. DATE

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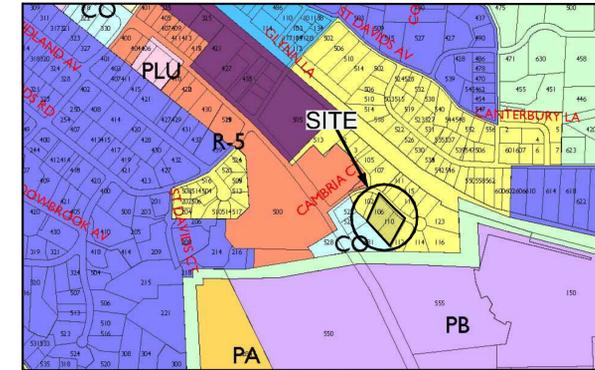
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I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE EXISTING CONDITIONS ARE AS SHOWN AND THAT THIS DRAINAGE PLAN COMPLIES WITH ALL THE DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

KEVIN R. MOMENE, P.E., P.L.S.
DATE: 02/28/17



ZONING DISTRICT R-3 REGULATIONS

LOT AREA 10,000 S.F. MIN.
LOT WIDTH AT BLDG. LINE 70 FEET MIN.
BLDG. AREA 25% MAX.
FRONT YARD 35 FEET MIN.
SIDE YARD 35 FEET AGG. 15 FEET MIN.)
REAR YARD 35 FEET MIN.
HEIGHT 35 FEET MAX.
IMPERVIOUS SURFACE 35% MAX.
RIPARIAN BUFFER SETBACK 30' MIN.

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

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- SOURCE OF TITLE: ADDRESS 110 CAMBRIA: DEED BOOK 1676 PAGE 549 ADDRESS 110 CAMBRIA: DEED BOOK 2461 PAGE B30
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LINE/TYPE LEGEND:

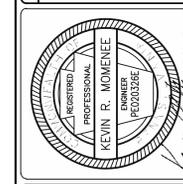
---	ADJOINER LINE
---	EXISTING PROPERTY LINE
---	EXISTING ROW LINE
---	EXISTING BUILDING SETBACK
---	EXISTING FENCE LINE
X X X	EXISTING OVERHEAD ELECTRIC
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T/C	EXISTING TELECOM LINE
---	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	PROPERTY LINE TO BE CHANGED
---	EXISTING SLOPES 14-20%
---	EXISTING SLOPES ≥20%

SYMBOL LEGEND:

⊕	WATER VALVE
○	SURVEY MARKER
⊗	SURVEY MONUMENT
⊙	UTILITY POLE
⊕	CLEANOUT
⊕	SIGN
⊕	EXISTING TREE
⊕	TREE TO BE REMOVED
⊕	TREE TO BE IMPACTED
⊕	PERCOLATION TEST

CONTRACTOR: MOMENE, INC. CONSULTING ENGINEERS AND SURVEYORS
1000 W. MARKET STREET, SUITE 200
BRICK, NJ 08723
TEL: 856-834-1111
FAX: 856-834-1112
WWW.MOMENEINC.COM

Serial Number: 20160902450
CALL BEFORE YOU DIG:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
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1-800-242-1778



MOMENE, INC.
a Kairns Company
ENGINEERING | PLANNING | SURVEYING

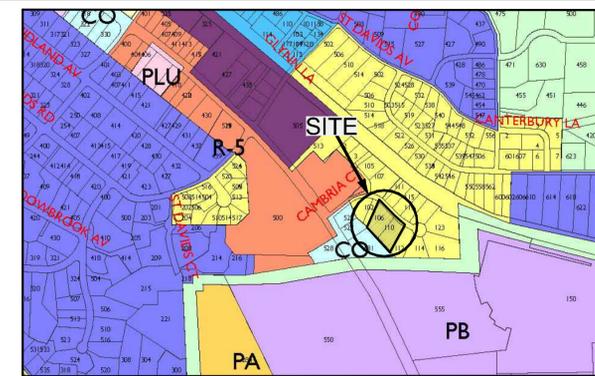
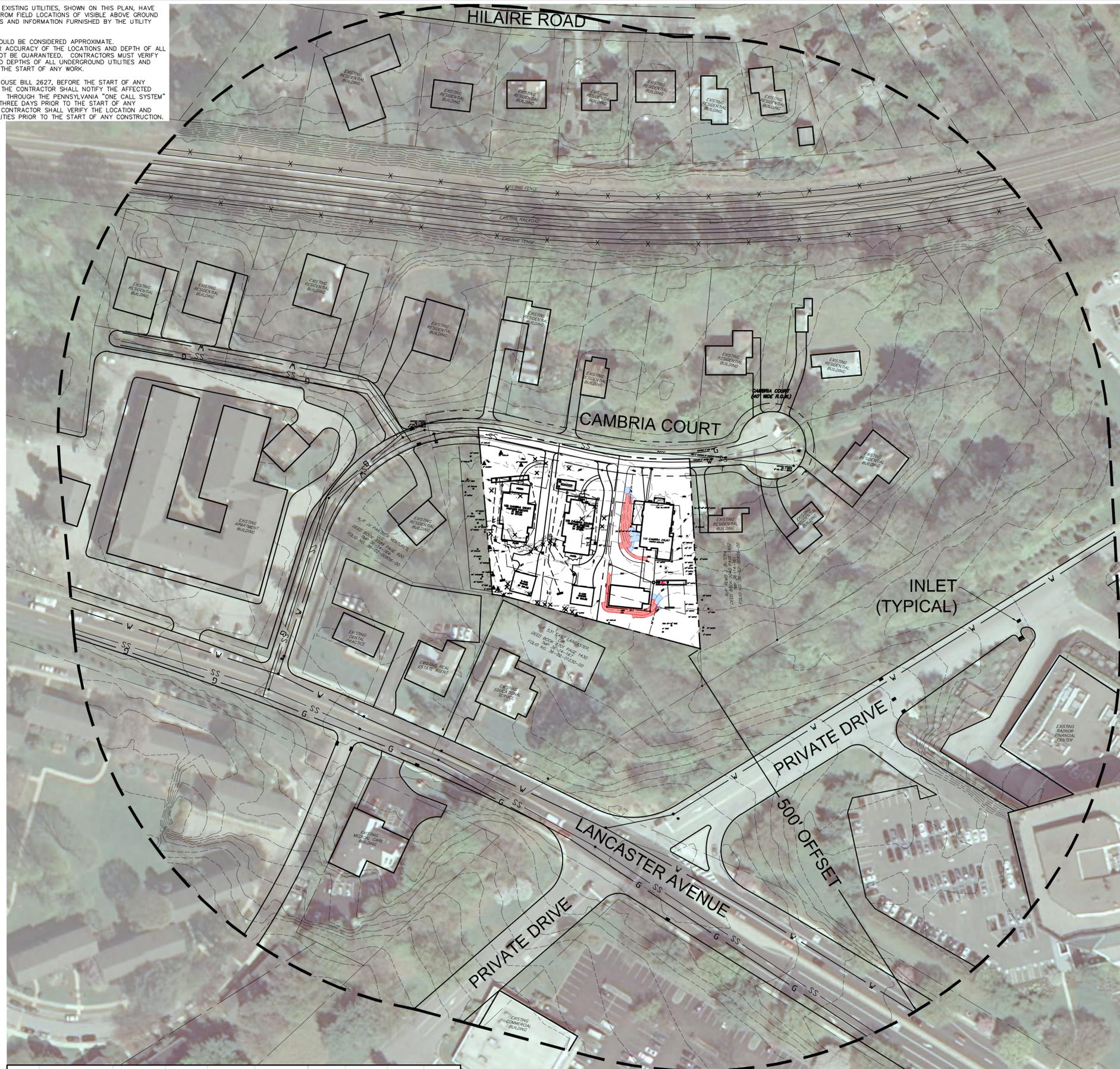
EXISTING CONDITIONS PLAN
SUBDIVISION / LOT LINE CHANGE PLAN
106 & 110 CAMBRIA COURT
RADNOR TOWNSHIP - DELAWARE COUNTY - PENNSYLVANIA
OWNER/APPLICANT: LOMBARDI RESIDENTIAL, 406 MANOLOKING ROAD, BRICK, NJ 08723
ONE-CALL: 20160902450
DRAWN BY: SWB
CHECKED BY: JCM

FILE NO.: 16-084
SHEET 2 OF 6
DATE: DECEMBER 1, 2016
SCALE: 1" = 20'

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LOCATION MAP
SCALE: 1" = 600'

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IMPERVIOUS SURFACE	35% MAX.
RIPARIAN BUFFER SETBACK	30' MIN.

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

GENERAL NOTES:

- OWNER/APPLICANT:
Lombardi Residential
406 Mantoloking Road
Brick, NJ 08723
- BOUNDARY AND IMPERVIOUS DATA TAKEN FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY - 106 AND 110 CAMBRIA COURT" PREPARED BY MOMENEE SURVEY GROUP INC., FILE NO. 16-084, DATED APRIL 20, 2016.
- SURVEY NOTES:
 - THIS PLAN REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED ON THE PREMISES ON APRIL 13, 2016 AND DEPICTS CONDITIONS ON THAT DATE.
 - THE EXISTENCE AND/OR LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY ALL CONTRACTORS PRIOR TO CONSTRUCTION.
 - PA. ONE CALL NUMBER FOR THIS SITE IS 20160902450.
 - THE VERTICAL DATUM SHOWN ON THIS PLAN IS PER NAVD 1988 OBTAINED VIA VRS NETWORK.
 - THIS SURVEY AND PLAN WAS COMPLETED WITHOUT THE AVAILABILITY OF A CURRENT TITLE REPORT AND SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED IN A FULL AND ACCURATE TITLE REPORT.
 - IN ACCORDANCE WITH FEMA PANEL NUMBER 42045C0036F EFFECTIVE DATE NOVEMBER 18, 2009, PREMISES IS LOCATED IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.
- TAX PARCEL I.D.
ADDRESS 106 CAMBRIA: 36-02-00857-00, BLOCK: 14 UNIT NO. 163.000
ADDRESS 110 CAMBRIA: 36-02-00858-00, BLOCK: 14 UNIT NO. 162.000
- SOURCE OF TITLE:
ADDRESS 110 CAMBRIA: DEED BOOK 1676 PAGE 549
ADDRESS 110 CAMBRIA: DEED BOOK 2461 PAGE 830
- SOIL DATA RETRIEVED VIA THE WEB SOIL SURVEY PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE AVAILABLE ONLINE AT [HTTP://WEBSOILSURVEY.NRC.S.USA.GOV/](http://websoilsurvey.nrcs.usda.gov/)
- THE INTENT OF THESE PLANS IS TO DEPICT THE ALTERATION OF THE LOT LINE BETWEEN 106 AND 110 CAMBRIA COURT AND THE SUBDIVISION OF 106 CAMBRIA COURT TO CREATE ONE ADDITIONAL LOT AND REMOVAL/GRADING NEEDED TO FACILITATE THE PROPOSED DWELLINGS, DRIVEWAYS, WALKS, UTILITIES, STORMWATER MANAGEMENT, AND OTHER RELATIVE SITE IMPROVEMENTS IN CONJUNCTION WITH EROSION AND SEDIMENTATION CONTROL.
- BOTH LOTS ARE CURRENTLY SERVED BY PUBLIC WATER. NEW PUBLIC WATER AND SEWER CONNECTION IS PROPOSED FOR THE NEW LOT.
- THE STORMWATER MANAGEMENT DETENTION/COLLECTION SYSTEMS AND INLETS ARE TO BE OWNED AND MAINTAINED BY THE HOME OWNERS. ROOF DRAINS ARE TO BE TIED INTO THE STORMWATER MANAGEMENT DETENTION SYSTEMS.
- A PLANNING MODULE OR EXEMPTION IS REQUIRED FROM DEP.
- A GENERAL EASEMENT IS HEREBY CREATED OVER THE STORMWATER MANAGEMENT SYSTEMS THAT PERMITS INGRESS AND EGRESS BY RADNOR TOWNSHIP.
- AN INDIVIDUAL GRADING PLAN AND EROSION SEDIMENT AND CONTROL PLAN WILL BE REQUIRED TO BE SUBMITTED AND APPROVED PRIOR TO ISSUING ANY BUILDING PERMITS. ANY REVISIONS TO THE SIZE OR LOCATION OF THE INDIVIDUAL STRUCTURES OR OTHER FEATURES WILL NEED TO BE ADDRESSED AT THAT TIME, AND A FINAL APPROVAL OF THE STORMWATER MANAGEMENT PLAN WILL BE REQUIRED AS PART OF THE GRADING PERMIT PROCESS.

LINE/TYPE LEGEND:

---	ADJOINER LINE
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---	EXISTING ROW LINE
---	PROPOSED BUILDING SETBACK
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---	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
T/C	EXISTING TELECOM LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	PROPOSED PROPERTY LINE
---	EXISTING SLOPES 14-20%
---	EXISTING SLOPES ≥20%

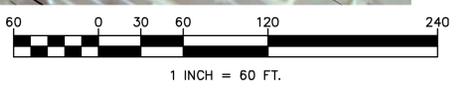
SYMBOL LEGEND:

⊕	WATER VALVE
○	SURVEY MARKER
⊠	SURVEY MONUMENT
⊙	UTILITY POLE
○	CLEANOUT
⊙	SGN
●	EXISTING TREE
⊗	TREE TO BE REMOVED
⊗	TREE TO BE IMPACTED
⊗	PERCOLATION TEST

SYMBOL	NAME	%SLOPE	ERODIBILITY INDEX	HYDROLOGIC GROUP	AGRICULTURAL CAPABILITY CLASS	DRAINAGE	LOAD-BEARING CAPACITY	DEPTH TO SH	DEPTH TO BEDROCK
Md	Made land gabra and diabase materials	Not rated	Not rated	C	6e	Well drained	Not rated	6.6+	6.6+

NOTE: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

THE ENTIRE SITE IS M_d SOIL TYPE.



Serial Number: 20160902450

CALL BEFORE YOU DIG:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER
KEVIN R. MOMENEE
PA. REG. NO. PE0030356

MOMENEE, INC.
a Kairns Company
ENGINEERING | PLANNING | SURVEYING

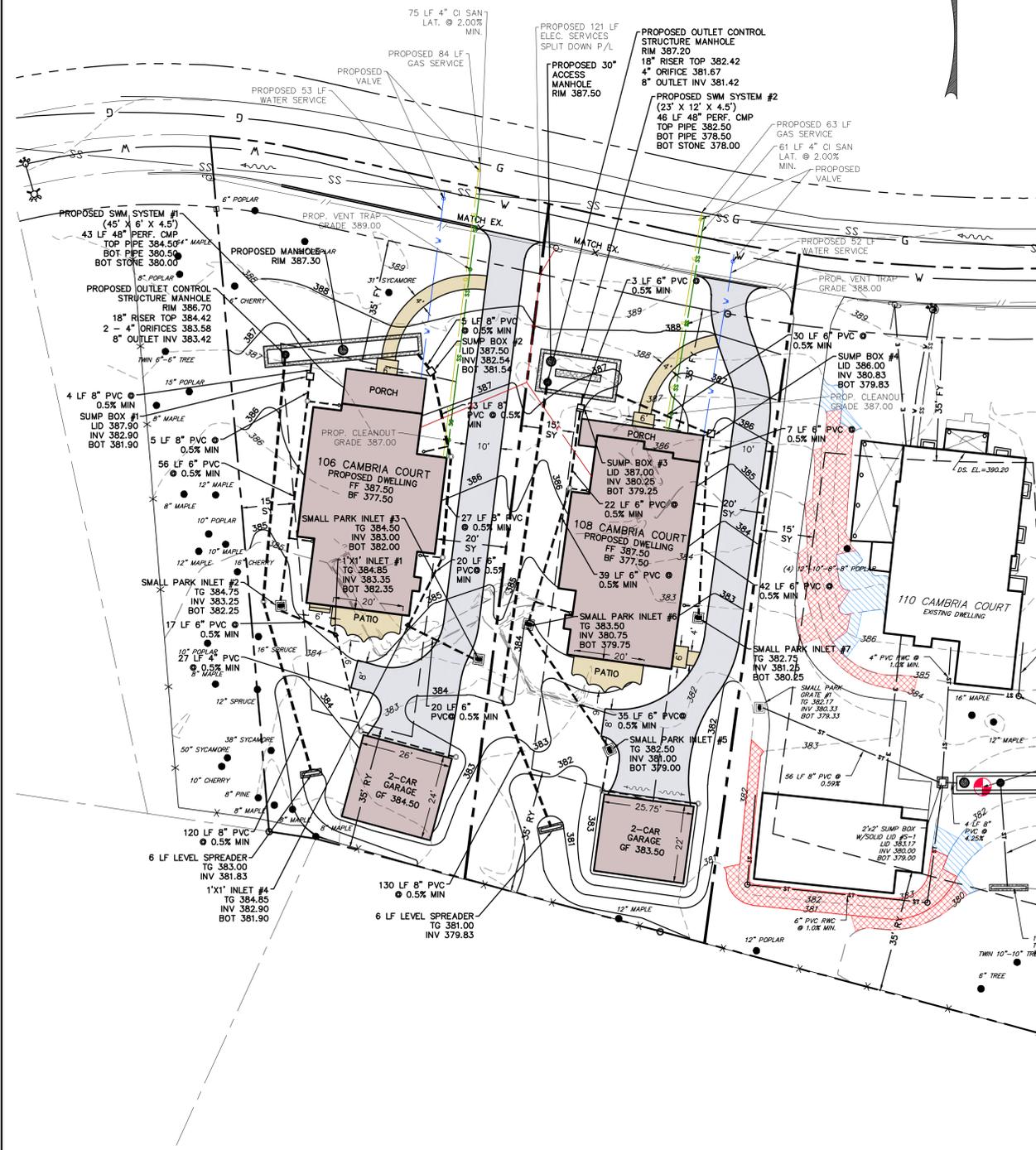
VICINITY PLAN
SUBDIVISION / LOT LINE CHANGE PLAN
106 & 110 CAMBRIA COURT
RADNOR TOWNSHIP - DELAWARE COUNTY - PENNSYLVANIA
OWNER/APPLICANT
Lombardi Residential
406 Mantoloking Road
Brick, NJ 08723
ONE-CALL: 20160902450
DRAWN BY: SNB
CHECKED BY: JCN
PRELIM TWP COMMENTS
DATE: 10/07/17

FILE NO.: 16-084
SHEET **3** OF 6
DATE: DECEMBER 1, 2016
SCALE: 1" = 60'

ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES.

ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.



SYMBOL LEGEND:

- WATER VALVE
- SURVEY MARKER
- SURVEY MONUMENT
- UTILITY POLE
- CLEANOUT
- SIGN
- EXISTING TREE
- TREE TO BE REMOVED
- TREE TO BE IMPACT
- PERCOLATION TEST

AS THE APPLICANT, I HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE TOWNSHIP, AND THAT A REVISED EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED FOR A DETERMINATION OF ADEQUACY.

APPLICANT: _____ DATE: 02/28/17

CONTRACTOR/TWP. NOTES:

- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE REFERENCED SURVEYOR'S BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUNDBREAK.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
- THE OWNER/CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR ANY/ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR SIGN-OFF AND CERTIFICATE OF OCCUPANCY ISSUANCE, INCLUDING BUT NOT LIMITED TO PROCUREMENT OF SERVICES. CONTRACTOR IS RESPONSIBLE TO COORDINATE CERTIFICATIONS, SIGN-OFFS, ETC. NECESSARY FOR JOB CLOSEOUT AND ISSUANCE OF CERTIFICATE OF OCCUPANCY.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
- THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCY BETWEEN SOILS REPORT & PLANS, ETC.
- THE PROPERTY SURVEY SHALL BE CONSIDERED A PART OF THESE PLANS.
- THESE PLANS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD-VERIFY EXISTING CONDITIONS AND NOTIFY OUR OFFICE IF ACTUAL SITE CONDITIONS DIFFER FROM THAT SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.
- ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD-VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY. THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS AND SITE LIGHTING ELECTRICAL DESIGN AND LAYOUT.
- DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES. CONTRACTOR SHALL PROPERLY REMOVE & DISPOSE OF HAZARDOUS/UNUSABLE MATERIAL OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES & LAWS.
- CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
- CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ADJACENT TO PAVEMENT, STRUCTURE, ETC. TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES AS NECESSARY TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT TO REMAIN, AND PROVIDE A SAFE WORK AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ALL SIGNAL INTERCONNECT CABLE, CONDUITS AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIR SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE NOTIFY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
- ALL CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS INDICATED IN SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
- ENGINEER NOT RESPONSIBLE FOR CONSTRUCTION METHODS/MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS, NOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONSTRUCTION TIMING AND SEQUENCE IS TO BE USED AS A GUIDELINE FOR PROJECTS OF THIS GENERAL NATURE. CONTRACTOR RESPONSIBLE FOR DETERMINING METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND NOTIFICATION OF OWNER AND ENGINEER OF RECORD WHEN A CONFLICT IS IDENTIFIED.
- ENGINEER OF RECORD HEREIN IS NOT RESPONSIBLE FOR JOB SITE SAFETY, NOR HAS HE BEEN RETAINED FOR SUCH PURPOSES.
- ALL CONTRACTORS MUST CARRY STATUTORY WORKERS COMPENSATION, EMPLOYERS LIABILITY INSURANCE AND APPROPRIATE LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) ALL CONTRACTORS MUST HAVE THEIR CGL.
- MINIMIZE COMPACTION WHEREVER POSSIBLE, DO NOT PLACE BUILDING MATERIALS ON AREAS WITH UNIDENTIFIED SUBTERRANEAN FEATURES.
- SANITARY LINES ARE TO BE ENCASED IN CONCRETE WHEN ABOVE STORMPIPES OR CLOSER THAN 10 FEET HORIZONTALLY.
- WATER LINES ARE TO BE ENCASED IN CONCRETE WHEN CLOSER THAN 10 FEET TO SANITARY LINES HORIZONTALLY.
- CONCRETE ENCASUREMENT ON SANITARY LINES IS REQUIRED FOR WATER/SEWER CROSSINGS THAT HAVE LESS THAN 18" VERTICAL SEPARATION OR WHEN WATER LINES ARE BELOW SANITARY LINES. THE ENCASUREMENT IS REQUIRED 5' IN EACH DIRECTION OF THE CROSSING.
- WATER LINES ARE TO BE 10' AWAY FROM ALL UTILITIES HORIZONTALLY.
- ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.

CARE OF EXISTING TREES:

- TREE PROTECTION FENCING SHALL BE INSTALLED TO PROTECT ALL EXISTING TREES FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND OTHERS. MAINTAIN PROTECTION FENCING FOR THE DURATION OF PROJECT.
- SELECTIVELY PRUNE EXISTING TREES AT THE EDGE OF ALL TREE PROTECTION ZONES, AND OTHER EXISTING TREES AFFECTED BY CONSTRUCTION, UNDER LANDSCAPE ARCHITECT'S DIRECTION. REMOVE SUCKER SHOOTS, DEAD, RUBBING AND DAMAGED BRANCHES.
- ANY EXCAVATION NEAR ADJACENT ROOT SYSTEMS WILL REQUIRE ROOT PRUNING OF AFFECTED TREE(S).
- FERTILIZE PRUNED EXISTING TREES WITH 3 TO 4 LBS. OF LIQUID FERTILIZER PER 1,000 SQUARE FEET OF DRIP AREA, OR 5 GALLONS OF LIQUID FERTILIZER PER CALIPER INCH OF TRUNK DIAMETER.
- FERTILIZE IN EARLY SPRING BEFORE GROWTH BEGINS.
- FERTILIZE BEGINNING 2' FROM TRUNK AT INTERVALS 2' TO 3' ON CENTER IN A GRID-LIKE PATTERN TO A DEPTH OF 6-18" WITHIN THE DRILIPE AND BEYOND WHERE POSSIBLE. INJECTION FERTILIZATION METHOD SHALL BE ACCEPTABLE SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.

OPERATION AND MAINTENANCE NOTES:

- THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AND OTHER DRAINAGE FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.
- THE PROPERTY OWNER SHALL NOT ALTER OR REMOVE THE STORMWATER FACILITIES ON THE SITE.
- GENERAL OBJECTIVES OF MAINTENANCE ARE TO PREVENT CLOGGING OF THE INLETS, OUTLETS, PERMANENT STANDING WATER, AND PREVENT THE GROWTH OF WEEDS AND NOXIOUS PLANTS.
- REGULAR INSPECTIONS SHOULD BE MADE OF INFILTRATION FACILITIES ESPECIALLY DURING WET WEATHER TO ENSURE THAT THE FACILITY IS MAINTAINING DESIRABLE RETENTION TIMES.
- ANNUALLY ASSESS THE VARIOUS SPECIES OF THE PLANT COVER. IT MAY BE REQUIRED TO SUBSELEND AND/OR REMOVE VARIOUS SPECIES DUE TO THEIR GROWING PATTERNS.
- AFTER ANY STORM RAINFALL EVENT OF A 2-YR OR GREATER MAGNITUDE, THE INFILTRATION BED AND ASSOCIATED OUTLET WORKS SHOULD BE INSPECTED. ANY DAMAGE OR BLOCKAGE TO THE OUTLET STRUCTURES SHOULD BE REPAIRED OR REMOVED IMMEDIATELY. ANY ERODED AREAS SHOULD BE TOPSOILED AND PERMANENTLY SEEDED AND MULCHED.

STORMWATER MANAGEMENT FACILITY MAINTENANCE PLAN

THE STORMWATER MANAGEMENT SYSTEM ON THIS LOT CONSISTS OF ONE SUBSURFACE DETENTION/RECHARGE BASIN. THE BASIN IS COMPOSED OF FULLY PERFORATED CORRUGATED METAL PIPE WITHIN A STONE BED SURROUNDED BY FILTER FABRIC. AN INTERNAL CONTROL RISER ALLOWS CONTROLLED DISCHARGE OF FLOWS FROM THE SYSTEM. WATER RUNOFF IS DIRECTED TO THE INFILTRATION BED VIA A ROOF RAINWATER COLLECTION SYSTEM, SMALL PARK GRATE, AND PIPING WHICH CAPTURE AND COLLECT RUNOFF FROM THE NEW ROOF AREAS, PORTIONS OF THE DRIVEWAY, AND SOME OTHER AREAS ON THE PROPERTY. THE INLETS ARE PROVIDED WITH A ONE FOOT SUMP ABOVE THE INLET AND OUTLET PIPES SO THAT DEBRIS CAN BE COLLECTED PRIOR TO FLOWING INTO THE SUBSURFACE INFILTRATION BED.

THE SYSTEM IS DESIGNED TO PROMOTE GROUNDWATER RECHARGE. A CONTROL STRUCTURE WITHIN THE SYSTEM DISCHARGES TO A PROPOSED LEVEL SPREADER WHERE THE RUNOFF MAY BE DISSIPATED TO GRADE IN AN UN-CONCENTRATED MANNER. AN ACCESS MANHOLE WITH A LADDER IS PROVIDED AT THE CONTROL STRUCTURE TO FACILITATE ACCESS AND MAINTENANCE OF THE SYSTEM.

THE RESPONSIBILITY FOR THE CONTINUED OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES ON THIS LOT IS THAT OF THE PROPERTY OWNER.

MAINTENANCE OF THE FACILITIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

- THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT IMPEDE THE FLOW OF WATER DRAINING TO THE STORMWATER MANAGEMENT BASIN.
- ALL ROOF DOWNSPOUTS, INLETS, CURB OPENINGS AND OTHER WATER WAYS SHALL BE KEPT OPEN AND OPERATION TO PASS THE FLOW OF WATER TO THE BASIN AS INTENDED.
- GRASS AND LANDSCAPING IN THE VICINITY OF ALL INLETS SHALL BE KEPT TRIM AND FREE FROM DEBRIS ACCUMULATION, AND DOWNSPOUTS AND INLETS SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER TO AND WITHIN THEM.
- INLET SUMPS SHALL BE CLEANED OF ACCUMULATED DEBRIS BEFORE ANY DEBRIS CAN BE DISCHARGED INTO THE SYSTEMS. INLET STRUCTURES SHALL BE INSPECTED AT LEAST MONTHLY TO INSURE THAT THEY ARE CLEAN AND REMAIN OPERATIONAL.
- SUBSURFACE PIPES SHALL BE INSPECTED ON AN ANNUAL BASIS TO INSURE THAT THEY ARE CLEAN AND OPERATIONAL. ANY ACCUMULATED DEBRIS AND SILT SHALL BE REMOVED IN A TIMELY MANNER. THE SUBSURFACE PIPES SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER WITHIN THEM.
- PROMPT REMEDIAL MEASURES ARE TO BE TAKEN IN THE EVENT OF ANY BLOCKAGE OR MALFUNCTION OF THE SYSTEM.

THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT TAKE ANY MEASURES TO DISRUPT OR IN ANY WAY IMPAIR THE EFFECTIVENESS OF THE BASIN OR ITS CONTROLS. THIS INCLUDES ALTERATION OF GRADES IN ANY MANNER THAT WOULD DIVERT RUNOFF AWAY FROM INLET COLLECTION POINTS.

NOTES:

- THE STORMWATER MANAGEMENT FACILITIES ARE DESIGNED FOR THE NEW AND/OR REPLACEMENT IMPERVIOUS COVER ON-SITE AS SHOWN PER LOT.
- THE MAINTENANCE OF THE ON-SITE STORMWATER MANAGEMENT FACILITIES IS THE RESPONSIBILITY OF THE OWNER.
- THE TOWNSHIP ENGINEER'S OFFICE SHALL BE NOTIFIED 48 HOURS PRIOR TO THE CONSTRUCTION OF THE SEEPAGE BED AND PRIOR TO THE START OF EARTHMOVING ACTIVITIES.
- ON-SITE TREES ARE TO BE SAVED AND PRESERVED WHEREVER POSSIBLE.
- ALL WOODY VEGETATION TO BE RETAINED WITHIN TWENTY-FIVE FEET OF A BUILDING SITE OR DISTURBED AREA SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING PLACED AT THE DRILIPE.
- GRADE CHANGES AROUND THE DRILIPE OF TREES TO BE RETAINED SHALL BE MINIMIZED. TREATMENT OF THE TREES PRIOR TO CONSTRUCTION TO PROTECT THE ROOT SYSTEM SHALL BE PERFORMED.
- ALL DISTURBED ROOTS MUST BE CUT AS CLEANLY AS POSSIBLE. THE TRENCH MUST BE BACKFILLED AS QUICKLY AS POSSIBLE, AVOIDING COMPACTION. TREE LIMBS MUST BE CUT BACK IN PROPORTION TO THE ROOT AREA LOSS.
- ON-SITE TREES TO BE SAVED SHALL BE PREPARED FOR CONSTRUCTION BY APPROPRIATE FERTILIZATION AND PROTECTED BY APPROPRIATE FENCING. ALL TREES ARE TO BE DEEP ROOT FERTILIZED USING 16-32-16 SLOW RELEASE, WATER DISPERSIBLE @ 15 LBS. PER 1000 GALLON OR EQUAL.
- A GENERAL EASEMENT IS HEREBY CREATED OVER THE STORMWATER MANAGEMENT SYSTEM THAT PERMITS INGRESS AND EGRESS BY RADNOR TOWNSHIP.

GENERAL NOTES:

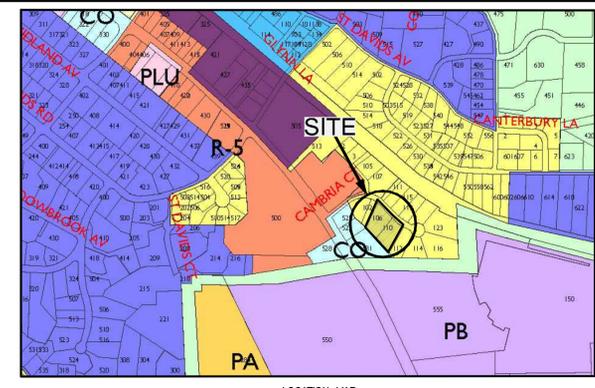
- OWNER/APPLICANT: LOMBARDI RESIDENTIAL 406 MANTOLKING ROAD BRICK, NJ 08723
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- THE INTENT OF THESE PLANS IS TO DEPICT THE ALTERATION OF THE LOT LINE BETWEEN 106 AND 110 CAMBRIA COURT AND THE SUBDIVISION OF 106 CAMBRIA COURT TO CREATE ONE ADDITIONAL LOT AND REMOVAL/GRADING NEEDED TO FACILITATE THE PROPOSED DWELLINGS, DRIVEWAYS, WALKS, UTILITIES, STORMWATER MANAGEMENT, AND OTHER RELATIVE SITE IMPROVEMENTS IN CONJUNCTION WITH EROSION AND SEDIMENTATION CONTROL.
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---	EXISTING FENCE LINE
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---	EXISTING MAJOR CONTOUR
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---	PROPOSED STORM PIPES
---	PROPOSED SANITARY LATERAL
---	PROPOSED WATER SERVICE
---	PROPOSED GAS SERVICE
---	PROPOSED ELECTRIC SERVICE
---	PROPOSED BUILDING
---	PROPOSED DRIVE
---	PROPOSED WALK
---	EXISTING SLOPES 14-20%
---	EXISTING SLOPES ≥20%

SCALE: 1" = 20 FT.

LOCATION MAP: SCALE 1" = 600'



ZONING DISTRICT R-3 REGULATIONS

LOT AREA	10,000 S.F. MIN.
LOT WIDTH AT BLDG. LINE	70 FEET MIN.
BLDG. AREA	25% MAX.
FRONT YARD	35 FEET MIN.
SIDE YARD	35 FEET AGG. 15 FEET MIN.)
REAR YARD	35 FEET MIN.
HEIGHT	35 FEET MAX.
IMPERVIOUS SURFACE	35% MAX.
RIPARIAN BUFFER SETBACK	30' MIN.

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

GENERAL NOTES:

- OWNER/APPLICANT: LOMBARDI RESIDENTIAL 406 MANTOLKING ROAD BRICK, NJ 08723
- EXISTENCE AND IMPERVIOUS DATA TAKEN FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY - 106 AND 110 CAMBRIA COURT" PREPARED BY MOMENEE SURVEY GROUP INC., FILE NO. 16-084, DATED APRIL 20, 2016.
- THIS PLAN REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED ON THE PREMISES ON APRIL 13, 2016 AND DEPICTS CONDITIONS ON THAT DATE.
- THE EXISTENCE AND/OR LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY ALL CONTRACTORS PRIOR TO CONSTRUCTION.
- PA ONE CALL NUMBER FOR THIS SITE IS 20160902450.
- THE VERTICAL DATUM SHOWN ON THIS PLAN IS PER NAVD 1988 OBTAINED VIA VRS NETWORK.
- THIS SURVEY AND PLAN WAS COMPLETED WITHOUT THE AVAILABILITY OF A CURRENT TITLE REPORT AND SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED IN A FULL AND ACCURATE TITLE REPORT.
- IN ACCORDANCE WITH FEMA PANEL NUMBER 42045C0036F EFFECTIVE DATE NOVEMBER 18, 2009, PREMISES IS LOCATED IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.
- TAX PARCEL I.D. ADDRESS 106 CAMBRIA: 36-02-00857-00, BLOCK: 14 UNIT NO. 163:000 ADDRESS 110 CAMBRIA: 36-02-00858-00, BLOCK: 14 UNIT NO. 162:000
- SOURCE OF TITLE: ADDRESS 110 CAMBRIA: DEED BOOK 1676 PAGE 549 ADDRESS 110 CAMBRIA: DEED BOOK 2461 PAGE 830
- SOIL DATA RETRIEVED VIA THE WEB SOIL SURVEY PROVED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE AVAILABLE ONLINE AT [HTTP://WEBSOILSURVEY.NRC.SUSA.GOV/](http://websoilsurvey.nrcs.usda.gov/).
- THE INTENT OF THESE PLANS IS TO DEPICT THE ALTERATION OF THE LOT LINE BETWEEN 106 AND 110 CAMBRIA COURT AND THE SUBDIVISION OF 106 CAMBRIA COURT TO CREATE ONE ADDITIONAL LOT AND REMOVAL/GRADING NEEDED TO FACILITATE THE PROPOSED DWELLINGS, DRIVEWAYS, WALKS, UTILITIES, STORMWATER MANAGEMENT, AND OTHER RELATIVE SITE IMPROVEMENTS IN CONJUNCTION WITH EROSION AND SEDIMENTATION CONTROL.
- BOTH LOTS ARE CURRENTLY SERVED BY PUBLIC WATER. NEW PUBLIC WATER AND SEWER CONNECTION IS PROPOSED FOR THE NEW LOT.
- THE STORMWATER MANAGEMENT DETENTION/COLLECTION SYSTEMS AND INLETS ARE TO BE OWNED AND MAINTAINED BY THE HOME OWNERS. ROOF DRAINS ARE TO BE TIED INTO THE STORMWATER MANAGEMENT DETENTION SYSTEMS.
- A PLANNING MODULE OR EXEMPTION IS REQUIRED FROM DEP.
- A GENERAL EASEMENT IS HEREBY CREATED OVER THE STORMWATER MANAGEMENT SYSTEMS THAT PERMITS INGRESS AND EGRESS BY RADNOR TOWNSHIP.
- AN INDIVIDUAL GRADING PLAN AND EROSION SEDIMENT AND CONTROL PLAN WILL BE REQUIRED TO BE SUBMITTED AND APPROVED PRIOR TO ISSUING ANY BUILDING PERMITS. ANY REVISIONS TO THE SIZE OR LOCATION OF THE INDIVIDUAL STRUCTURES OR OTHER FEATURES WILL NEED TO BE ADDRESSED AT THAT TIME, AND A FINAL APPROVAL OF THE STORMWATER MANAGEMENT PLAN WILL BE REQUIRED AS PART OF THE GRADING PERMIT PROCESS.

LINE TYPE LEGEND:

---	ADJONER LINE
---	EXISTING PROPERTY LINE
---	EXISTING ROW LINE
---	PROPOSED BUILDING SETBACK
---	EXISTING FENCE LINE
---	EXISTING OVERHEAD ELECTRIC
---	EXISTING ELECTRIC LINE
---	EXISTING GAS LINE
---	EXISTING TELECOM LINE
---	EXISTING WATER LINE
---	EXISTING SANITARY LINE
---	EXISTING STORM PIPES
---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	PROPOSED PROPERTY LINE
---	PROPOSED GRADING
---	PROPOSED STORM PIPES
---	PROPOSED SANITARY LATERAL
---	PROPOSED WATER SERVICE
---	PROPOSED GAS SERVICE
---	PROPOSED ELECTRIC SERVICE
---	PROPOSED BUILDING
---	PROPOSED DRIVE
---	PROPOSED WALK
---	EXISTING SLOPES 14-20%
---	EXISTING SLOPES ≥20%

SCALE: 1" = 20 FT.

LOCATION MAP: SCALE 1" = 600'

Serial Number: 20160902450

CALL BEFORE YOU DIG!
 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE STOP CALL
 Pennsylvania One Call System, Inc.
 1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER
 KEVIN R. MOMENEE
 PE00303056

MOMENEE, INC.
 a Kairns Company
 ENGINEERING | PLANNING | SURVEYING

GRADING & UTILITIES PLAN
 SUBDIVISION / LOT LINE CHANGE PLAN
106 & 110 CAMBRIA COURT
 RADNOR TOWNSHIP - DELAWARE COUNTY - PENNSYLVANIA
 ONE-CALL: 20160902450
 DRAWN BY: SWB
 CHECKED BY: JCM

PRELIM TWP COMMENTS
 1 03/07/17
 FILE NO.: 16-084
 SHEET 4 OF 6
 DATE: DECEMBER 1, 2016
 SCALE: 1" = 20'

**ORDINANCE 2017-09
RADNOR TOWNSHIP, PA**

**AN ORDINANCE OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, AMENDING THE 2017 CAPITAL
BUDGET FOR THE TOWNSHIP CAPITAL IMPROVEMENT
FUND BY TRANSFERRING APPROPRIATIONS**

WHEREAS, the 2017 Capital Plan was adopted by the Board of Commissioners on December 12, 2016 as part of Ordinance 2016-15; and

WHEREAS, Radnor Township’s Home Rule Charter Chapter §7.08(E) stipulates that the Board may, by Ordinance, transfer part or all of any unencumbered appropriation balance from one department or office to another; and

WHEREAS, the Board of Commissioners passed a motion at their May 8, 2017 meeting authorizing the expenditure of funds for various sidewalk projects; and

WHEREAS, The Board of Commissioners agreed during the May 8, 2017 meeting to transfer appropriations from the North Wayne Parking Lot project in the amount of \$200,000 to the Infrastructure: Sidewalks capital group to provide funding for the various sidewalk projects approved.

NOW, THEREFORE, be it hereby **ENACTED** and **ORDAINED** as follows:

That the following appropriation transfers be incorporated into the 2017 Board Adopted Comprehensive Budget as Amendment #1:

Fund	Description	Account#	Increase/ (Decrease)
Capital Improvement Fund #05	Building & Grounds Parking Lots	05.403.4822	\$(200,000)
Capital Improvement Fund #05	Infrastructure Constr Sidewalks	05.439.4850	\$ 200,000

EFFECTIVE DATE: This ordinance shall take effect in accordance with the Radnor Home Rule Charter

REPEALER: That any Ordinances, or parts of Ordinances, conflicting with this Ordinance is hereby repealed to the extent of such inconsistency.

SEVERABILITY: If any sentence, clause, section or part of this Resolution is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this Ordinance. It is hereby declared as the intent of the Radnor Township that this Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included herein.

ENACTED and **ORDAINED** this twelfth day of June, 2017.

RADNOR TOWNSHIP

By: _____
Name: Elaine P. Schaefer
Title: President

ATTEST: _____
Name: Robert A. Zienkowski
Title: Township Manager / Secretary

Radnor Township



PROPOSED LEGISLATION

DATE: May 16, 2017

TO: Board of Commissioners

FROM: William M. White, Finance Director

A handwritten signature in black ink, appearing to read "William M. White".

LEGISLATION: An Ordinance amending the 2017 Board Approved Comprehensive Budget by transferring appropriations from parking lot construction to sidewalk construction within the Capital Improvement Fund #05

LEGISLATIVE HISTORY: The 2017 Budget was adopted by the Board on December 12, 2016 with Ordinance 2016-15. Further, the Board passed a motion at their May 8, 2017 meeting authorizing the grant application and necessary funding for four sidewalk projects. During the discussion, the Board agreed to transfer the appropriations from the South Wayne Parking lot project to the sidewalk group to adequately fund these sidewalk projects.

PURPOSE AND EXPLANATION: The purpose of this Ordinance is to comply with §7.08(E) regarding the process by which the Board is permitted to officially transfer appropriations from one department, office or project to another. Additionally, the purpose of this Ordinance is to properly and adequately allocate the necessary funds to pay for these projects.

FISCAL IMPACT: Being that the Board is merely transferring appropriations, there is no change in to spending approved in the 2017 Budget. The North Wayne Parking Lot resurfacing project will need to be reappropriated in a future period, once the Library improvement project is complete. Also, to the extent that the actual costs of the four sidewalk projects are less than the \$200,000 appropriated, the savings will lapse into the Capital Improvement Fund and be available for other projects.

IMPLEMENTATION SCHEDULE: Since this is an Ordinance, it will need to be introduced at the May 22, 2017 meeting. Then, proper advertising will need to occur prior to an anticipated public hearing / adoption at the Board's June 12, 2017 meeting.

RECOMMENDED ACTION: The Administration respectfully recommends that the Board introduce this Ordinance at their May 22, 2017 meeting with an anticipated adoption at their June 12, 2017 meeting.

New Business

Discussion of the Need for
Changes to the Shade Tree
Ordinance, A Master Street Tree
Plan and Other Matters
*(Requested by Commissioner
Higgins)*