

**RESOLUTION NO. 2016-58
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AWARDED TRAIL DESIGN SERVICES TO
CAMPBELL THOMAS FOR DESIGN, ADMINISTRATION AND
OVERSIGHT OF THE TOWNSHIP TRAIL PROJECT.**

WHEREAS, Radnor Township ("Township") owns and maintains an existing trail system within the Township; and

WHEREAS, the Township desires to expand that trail system through additional parts of the Township; and

WHEREAS, Campbell Thomas has submitted a proposal for design, administration and oversight of the planning and development of the expanded trail system.

NOW, THEREFORE, be it hereby **RESOLVED** that the Board of Commissioners of Radnor Township does hereby approve the March 23, 2016 proposal prepared by Campbell Thomas for Professional Services for design, administration and development of additional trails throughout the Township in the amount of \$249,385.00 as further described on the attached Exhibit "A".

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this 25th day of April, 2016.

RADNOR TOWNSHIP

By:


Name: Philip M. Ahl
Title: President

ATTEST: 

RAD-TIN2 – Radnor Trail Extension

Scope of Work – Revised 3/23/2016

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Members of the Consultant Team

Campbell Thomas & Co., Philadelphia, PA (CTC) w/ Jeff Case, PE

TPW Design Studios, York, PA (TPW)

Rettew Associates (RA) – Structures Design

Gilmore Associates (GA) – Survey and Phase I Environmental

I. Meetings and Coordination

Radnor Township – CTC will conduct monthly planning and design progress meetings with the township. These meetings will be in person at the township building or via telephone conference call during the course of the project planning, design and construction documentation.

PennDOT – An initial meeting will need to be conducted with PennDOT to essentially establish the parameters of how the project will proceed with regard to management, design and construction. CTC will conduct regular (schedule to be determined) planning and design progress meetings with the PennDOT project manager assigned to the project. These meetings will likely be via telephone conference call or in combination with the township meetings when possible during the course of the project planning, design and construction documentation.

Public Review – CTC will participate in two Public Meetings / Presentations open to township residents concerned or interested in the project. The first will be during the Preliminary Design Phase to present a schematic plan and solicit community input. The second will be during the Final Design Phase to present the Final Plan and receive comment. Radnor Township will schedule and arrange the meetings accordingly including the public notice and invitation process.

Adjacent Private Property Owners – During the design of the first phase of the Radnor Trail, a representative of the Township and Robert P. Thomas (CTC's partner in charge of the project) met with private property owners with lands immediately adjacent to the trail right-of-way, in small groups and/or in private in their homes, as best suited their schedules. Although much time was invested in this effort, it was invaluable in showing that the Township was interested in their concerns and convincing them they would be addressed to the fullest extent possible in the trail design. We propose that this approach be continued with the extension of the Radnor Trail through this next section of the right-of-way. We expect that the Township will take the lead in organizing, scheduling and conducting this effort. CTC will participate in the meetings and document the owner's concerns and the conclusions reached at the meetings. There are nine property owners the Township may want to consider meeting with.

Project Management – CTC as the prime consultant will be in charge of the overall management and coordination of the project for the consultant team. This includes being the primary contact for the consultant team, documenting meetings and review sessions, scheduling and managing the work of members and preparing invoices to the township.

II. Trail Planning and Preliminary Design

Trail Corridor Survey and Base Mapping – GA will have primary responsibility for performing an engineering survey of the proposed trail corridor and adjacent lands as noted below and preparing base survey mapping of the same for use on the preliminary and final design work of this project.

Survey Limits – There are essentially three areas or conditions that need to be surveyed as part of the work.

1. The primary survey area is the existing former Philadelphia and Western Railroad corridor, currently owned by PennDOT, between Radnor-Chester Road and I-476. To the extent that they are reasonably accessible, it's recommended that the lands 50 feet to each side of the corridor length be included in this section.
2. The second area is the lands within the same right-of-way to the west of Radnor-Chester Road as they impact the design of the proposed tunnel under Radnor-Chester Road. Specific limits of this area will need to be determined at the site.
3. The third area is the west side of Radnor-Chester Road and adjoining lands in Encke Park from the P&W/PennDOT right-of-way to Chew Lane as they relate to reconnecting the existing side path to the Radnor Trail with the new tunnel in place. Again specific limits of this area will need to be determined at the site.

Property Entry – GA will coordinate with the township and PennDOT for access to the right-of-way and adjacent privately owned lands.

Trail survey and base mapping work includes:

1. Field survey of existing conditions in areas noted above including physical features, structures, topography, vegetation and landscaping, utilities and existing stormwater management features/facilities.
2. PA Design One Call to determine extent of existing underground utilities that may impact the site.
3. Existing right-of-way verification and adjoining property ownership information.
4. Documentation of existing conditions for use in the work of this project in AutoCAD format.

It should be noted that the condition of the right-of-way is very overgrown in some areas, particularly at the east side of Radnor-Chester Road. Clearing work as needed for access and survey will need to be performed by the Township or its contractor before the survey work can start.

NOTE: A general estimate for the cost of the clearing work noted above is included in the revised cost spreadsheet. The work will be performed by Kee Landscaping and coordinated through GA as the survey sub-consultant. At this time this cost is a very rough estimate based on the overall area to be surveyed and the scope of work and cost will be "fine tuned" once the design team is under contract and the team has performed the first field view.

Trail Right-of-Way Evaluation – In preparation for developing the preliminary design the CTC consultant team will evaluate conditions in and around the trail right-of-way and in the additionally noted work areas along Radnor-Chester Road. This work includes:

1. Field views as needed to assess conditions along the right-of-way by all consultant team members.
2. At least one field view with representatives of the Township and Trail Committee.
3. Documentation of conditions with digital photography and field notes as needed.
4. Review of property ownership adjacent to the right-of-way, particularly in areas of encroachment.

Natural Environment Evaluation – TPW will take primary responsibility for evaluation of the natural environmental conditions along the right-of-way. This work generally consists of identification of wetlands and delineation if needed and an update of the PNDI environmental review through the new DCNR Pennsylvania Conservation Explorer tool (available as of November 2015).

Recognized Hazardous Materials – It is recommended that a Phase I Environmental evaluation be performed along the trail right-of-way and the tunnel work area at Radnor-Chester Road. This work is included as part of the revised scope of this proposal and will be performed by GA.

Preliminary Design – Trail Plan – CTC will take the lead in preparing the preliminary design phase trail alignment plan. This work includes:

1. Preparation of project base plans for use by all team members in developing their design work.
2. Developing a preliminary Trail Alignment Plan, including relinking the existing Radnor-Chester Road side path.
3. Identifying and planning local trail links to neighborhood streets and community parks and facilities along this section.
4. Developing recommendations for fencing and other appropriate trail amenities.
5. The design work will be in accordance with both PennDOT standard practices and guidelines and the *AASHTO Guide for the Development of Bicycle Facilities*.

Preliminary Design – Structures – CTC with Jeff Case, PE will prepare preliminary design plans for the proposed tunnel under Radnor-Chester Road and develop a preliminary Maintenance and Protection of Traffic Plan (MPT) related to the tunnel work. Subsurface investigations are recommended in this area, prior to the design of the tunnel, to determine what, if any, of the original P&W bridge for Radnor-Chester Road may still be in place. Subsurface investigations are included in this proposal as part of RA's structures design work.

Preliminary Design – E&S Plans – TPW will take the lead in preparing preliminary grading and stormwater management plans for the proposed trail and tunnel work including preliminary Erosion and Sedimentation Control Plans.

Preliminary Design – Landscape Plans – TPW will take the lead in developing recommendations for and preparing preliminary landscape plans for the trail corridor and tunnel area.

Preliminary Opinion of Probable Cost of Construction – Based on the Preliminary Design developed the consultant team will develop a preliminary opinion of probable cost for construction of the trail section and the tunnel for Radnor-Chester Road.

Preliminary Design – Agency Review – The CTC consultant team will coordinate preliminary design reviews as noted below:

1. TPW will lead a pre-application meeting with the Delaware County Conservation District to determine the necessary steps required to move forward with the Erosion and Sediment Pollution Control Plans, environmental approvals and permitting (if necessary) for the project. This meeting will also evaluate need for coordination with PADEP.
2. CTC and TPW will coordinate the preliminary design review process with PennDOT.
3. Hours have been included in the cost proposal spread sheet for TPW and CTC to coordinate review of requirements with PADEP, DCNR or other environmental agencies if needed.
4. CTC will coordinate reviews and permitting as needed with Radnor Township. At this time the following reviews have been taken into consideration:
 - a. No planning review is anticipated.
 - b. Review and coordination with Township Department of Parks and Recreation.
 - c. Review with the Township Shade Tree Commission
 - d. Application for and required review for a grading permit.

III. Final Design and Construction Documents

Final Design – Trail Plan – CTC will take the lead in preparing the final design trail alignment plans. This work includes:

1. Finalizing the trail alignment plans per the various reviews.
2. Developing and documenting trail construction methods and details per the various reviews including fencing and other amenities.
3. Developing trail direction and safety signage plans and details as needed.

Final Design – Structures – CTC with Jeff Case, PE will finalize the plans for the proposed tunnel under Radnor-Chester Road and the Maintenance and Protection of Traffic Plan (MPT) per the various reviews.

Final Design – E&S Plans – TPW will finalize the grading, stormwater management and E&S plans and related details, including an E&S narrative for final review and approval by the county conservation district.

Final Design – Landscape Plans – TPW will finalize the landscape plans for the trail corridor and tunnel area per the various reviews.

Final Design – Specifications – The CTC team will develop construction specifications for the work of the project based on the PennDOT 408 specification including any special provisions required.

Design and Documentation Standards – All design and documentation for the project will generally conform to PennDOT standards and documentation practices. **Based on our understanding of how the project will be managed (Meeting March 14, 2016) the project will not be bid on a unit cost basis and work to develop tabulations and summary tabulations of quantities is not included.**

Final Design – Agency Review – The CTC consultant team will coordinate final design reviews and approvals with agencies as noted below:

1. TPW will coordinate the final review and approval of the grading, stormwater management and E&S plans with the Delaware County Conservation District.
2. CTC and TPW will coordinate the final review process with PennDOT and revise the final design package per their final review comments.
3. CTC will coordinate final reviews and approvals by Radnor Township.

PennDOT ECMS System – Based on the meeting with a representative from PennDOT on March 14, 2016 it is our understanding that the project will not need to be bid through the PennDOT ECMS system. **No work is included in this proposal for working the project through the ECMS system.**

IV. Construction Phase Services

In accordance with the meeting held on March 14, 2016, the base scope for construction phase services assumes the project will not be bid nor constructed through the PennDOT system. The scope is based on the project being bid and managed as a conventional “lump sum” construction contract through the Township unless otherwise requested by the Township or required by specific sources of funding. Other bid and management options may require modifications to this scope of work

Construction Contract Bidding and Negotiation – The CTC consultant team will assist the Township in the following tasks for construction contract bidding and negotiation:

1. The Township will prepare and coordinate the advertisement for bids. If appropriate the CTC team will assist the Township in assembling a “short-list” of qualified bidders.
2. The CTC team will prepare the bid package, adding standard instruction and procedural materials supplied by the Township.

3. The CTC team will conduct a pre-bid conference. The Township will schedule the time and provide a location for this meeting.
4. The CTC team will oversee and manage the bid process, fielding questions and issuing notices addenda as appropriate.
5. The CTC team will review the bid proposals and make a recommendation on the contractor selection.
6. The Township will negotiate and prepare the construction contract. The CTC team will assist offering consultation during the negotiations, reviewing the contract and providing appropriate construction document attachments for the final contract.

Construction Observation – The CTC team will monitor and observe construction during the course of the work to advise on general conformance with the construction documents. This work will include:

1. The CTC team will conduct a pre-construction conference. The Township will schedule the time and provide a location for this meeting.
2. During the first three months of work the CTC team will conduct weekly construction progress meetings at the site with the contractor and the Township to review the work to date. CTC will prepare meeting minutes to document the discussion of these meetings.
3. After the first three months the CTC team will conduct bi-weekly progress meetings at the site and prepare minutes of these meetings through completion.
4. The CTC team will provide written clarification of any document questions that arise during the course of construction. The team will also review contractor construction submittals as needed.
5. The CTC team will provide on-site field consultations as needed should conditions arise that need to be addressed in between regular construction progress meetings. These meetings will be documented with separate field memos or included in the next issued construction progress meeting minutes.
6. The CTC team will review and process contractor submittals during construction as needed.
7. The CTC team will review the contractor's applications for payment and submit them to the Township for review and processing.
8. The CTC team will assist the Township in performing a substantial completion inspection and preparing a punch-list of final items of work to be completed.
9. The CTC team will assist the Township with project close-out procedures at the completion of construction.

Project Management – As the proposal is to bid the project as a conventional lump sum general contract the daily management, cost accounting and coordination of the work will be the responsibility of the selected contractor. Daily review by a field engineer as generally performed in a typical unit price PennDOT contract is not included as part of this proposal.

Project Responsibility & Costs – Radnor Trail Extension

Campbell Thomas & Co., Principal Consultant
 Contact: Robert P. Thomas, AIA, Partner-in-Charge, 215-985-4354 rthomas@campbellthomas.com

Revised: 3/23/2016

P= Primary Responsibility
 S= Secondary Responsibility
 X= Participant

Work Element	Radnor Township Responsibility				Campbell Thomas & Co.				TPW Design Studios	Gilmore & Assoc., Inc.	Retrow Assoc., Inc.			
	Radnor Township	Township Trail Com	Township Engineer	Township Consultant	Partner Admin.	Trail Architect	Civil Engineer	Planner	L'escape Architect	Survey	Structures			
					Robert P. Thomas, AIA	Harry S. Murray, NCARB	Jeff Case, PE	Doug Maisey	Responsibility	Tim Wilson, R/A	Responsibility	Price Proposal 1 Estimated Add'l Price Proposal 2	Responsibility	Price Proposal 2
Avg Hourly Rates					\$ 195	\$ 100	\$ 100	\$ 90	\$ 105					
Meetings / Coordination														
Meetings / Coordination with Township	X	X		P	12	12		12						
Planning meetings with PennDOT	P	X		S	8	8	3		X					
Community Meetings / Public Review Process	P	X		S	8	8		8	X					
Meetings with adjacent Property Owners	P	X		S	14		3							
Project management & Coordination	X			P	12	8	2	8	S	8				
SUB TOTAL HOURS					54	36	8	28		8				
SUB TOTAL FEES					\$ 7,290	\$ 3,600	\$ 800	\$ 2,520		\$ 840				
Trail Planning & Preliminary Design														
Trail Corridor Survey & Base mapping														
Site Clearing for survey access														
Engineering Field Survey							2			P				
Physical Features - Structures - Topography - Vegetation - Landscaping - Utilities - Exist. Stormwater Management (Survey Limits - existing PennDOT owned former P&W R/W + 50 Feet ea. Side from and including both sides of Radnor-Chester Rd. to S.R. 476, Encke Park side path along Radnor-Chester Rd.)														
PA Design One Call										P				
Property Entry	X									P				
Verify R/W and Adjoining Property Data										P				
Prepare existing condition base maps										P				
Document existing survey data - AutoCAD format										P				
Coord. Work of survey team	X			S		8				P				
Trail R/W Evaluation														
Field Views	X	X		P	4	8		8	S	8	S			
Property / Ownership Evaluation	X			P	2	8								
R/W acquisition / descriptions (none anticipated)	X			NIC										
Environmental - Natural														
Wetlands Presence / Absence						2			P	8				
Wetlands Delineation						2			P	14				
PNDI Update						2			P	1				
Environmental - Recognized Environmental Contaminants														
Phase I Environmental Analysis and Report														
				S	2	2								
Preliminary Design - Trail Plan														
Prepare Project Base Plans				P	2	8		16						
Develop Preliminary Trail Alignment Plan	X	X		P	4	16		8	S	3				
Develop Proposed Trail Construction Details	X	X		P	2	16			S	4				
Preliminary Design - Structures - Radnor-Chester Rd. Tunnel														
Geo-Tech / Sub-surface Investigation at Radnor-Chester Rd				S		1							P	\$ 12,000
Develop Tunnel Preliminary Design Plan	X	X		S	2	4							P	\$ 15,000
Develop Preliminary MPT Plan				P	4	30		12						
Coord w/PECO on Gas Pipe Relocation				P	2	16		8						
Preliminary E&S Plan														
Develop Preliminary Grading & Stormwater Mngmt. Plan	X	X		S	1	2			P	12				
Develop Preliminary E&S Plans				S	1	2			P	24				
Preliminary Design - Landscape Plan														
Develop Preliminary Trail Landscape Plan	X	X		S	1	2			P	4				
Develop Preliminary Tunnel Area Landscape Plan	X	X		S	1	2			P	4				
Develop Preliminary Planting Materials List	X	X				1			P	1				
Preliminary Opinion of Probable Cost														
				P	4	8			S	2				
Preliminary Design - Agency Review														
Review Mfg. County Soils Conservation District						2			P	4				
PA DCNR (if needed)				S										
Coord. w/ PA Fish & Boat Commission (if needed)				S										
Review Mfg. PA DEP (if needed)				S										
Coordinate Preliminary Design Review with PennDOT	X	X		P	8	8		8	S	4				
Township Planning Review	X	X		P	4	4								
SUB TOTAL HOURS					44	151	22	40		103				
SUB TOTAL FEES					\$ 5,940	\$ 15,100	\$ 2,200	\$ 3,600		\$ 10,815				\$ 27,000
Final Design / Construction Documentation														
Final Design - Trail Plans														
Finalize Trail Alignment Plan per review	X	X		P	4	16		8	S	2				
Finalize Trail Construction Details per review				P	4	16		8	S	4				
Prepare Trail Direction & Safety Signage Plan				P	4	8		8						
Final Design - Structures - Radnor-Chester Rd. Tunnel														
Finalize Tunnel Const. Plans and Details per review				S									P	\$ 30,000
Finalize MPT Plan per review				P		24		16						
Final Design - E&S Plan														

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	Radnor Township Responsibility				Campbell Thomas & Co.				TPW Design Studios	Gilmore & Assoc., Inc.	Rettew Assoc., Inc.	
	Radnor Township	Township Trail Com	Township Engineer	Township Consultant	Responsibility	Partner Admin.	Trail Architect	Civil Engineer	Planner	Landscape Architect	Survey	Structures
						Robert P. Thomas, AIA	Harry S. Murray, NCARB	Jeff Case, PE	Doug Maisey	Tim Wilson, RLA		
Finalize Stormwater Mgmt. / E&S plans & dils per review					S	1	2			P	8	
Prepare E&S Narrative					S					P	12	
Final Design - Landscape Plan												
Finalize Trail Landscape Plan per review	X	X			S	1	1			P	3	
Finalize Tunnel Area Landscape Plan per review	X	X			S	1	1			P	2	
Final Design Specifications - PennDOT 408												
List of Standard Provisions					P	1	4	2		S	3	
Prepare Special Provisions					P	4	24	6		S	3	
Summary Tabulation					P	2	16	4		S	6	
Final Design Review & Permits												
County E&S Permit						1	2			P	8	
PA DEP (if needed)										P		
Prepare General Permit Applications					S		1			P	3	
Coordinate Review					S		2			P	4	
Final Design - PennDOT Review					P	8	8		8	S	3	
Revise Final Design Package per review						2	12					
Township Review & Permit (if needed)	X	X			P	4	8		4			
PennDOT ECMS Package					NIC					NIC	NIC	
SUB TOTAL HOURS						37	147	28	36	65		
SUB TOTAL FEES						\$ 4,995	\$ 14,700	\$ 2,800	\$ 3,240	\$ 6,825		\$ 30,000
Construction Phase Services												
Construction Contract Bidding & Negotiation												
Advertisement for bid	P				S	1	2					
Bid Package Prep & Assembly	S				P	1	6	2	5	X	3	
Pre-Bid Conference	S				P	1	1	1		X	1	
Bidding	S				P	1	4	2		X	1	
Bid Review and Selection Recommendation	S				P	1	1	2		X	2	
Contract Negotiation	P				S	1	1					
Construction Contract	P				S	1	8					
Documentation												
Interpret / Clarification Construction Docs					P	8	12	8		S	4	
Submittal Review					P	4	8	12		S	2	
Construction Observation												
Pre-Construction Conference	S				P	1	6	2		X	1	
Weekly Construction Meetings & Minutes (First 3 mths)	X				P	36	72			X	10	
Bi-weekly Construction Meetings & Minutes (to complete)	X				P	18	36					
As needed field consultation & reports					P	9	18	10		X	10	
Substantial Completion Inspection	X				P	1	8	2		X	5	
Project close-out	X				P	1	8					
Project Management (General Contractor)					NIC					NIC	NIC	
SUB TOTAL HOURS						108	200	41	8	54		
SUB TOTAL FEES						\$ 14,580	\$ 20,000	\$ 4,100	\$ 720	\$ 5,670		\$ -
TOTALS						243	534	99	112	230		
Hours						\$ 135	\$ 100	\$ 100	\$ 90	\$ 105		
Avg Hourly Rates						\$ 32,805	\$ 53,400	\$ 9,900	\$ 10,080	\$ 24,150	\$ 50,150	\$ 57,000
Fees												

Total estimated Hours and Fee	Campbell Thomas & Company	Hours	988	Fee	\$106,185
Total estimated Hours and Fee	TPW Design Studios	Hours	230	Fee	\$ 24,150
Price Proposal 1	Gilmore & Associates, Inc.	Engineering Field Survey & Existing Conditions base mapping			\$ 26,400
Estimated ADD 1	Gilmore & Associates, Inc.	Clearing and Grubbing 1.5 to 1.75 acres - \$17K to \$20K			\$ 20,000
Price Proposal 2	Gilmore & Associates, Inc.	Phase I Environmental			\$ 3,750
Price Proposal 2	Rettew Associates, Inc.	Engineering - Structures Design			\$ 57,000

Reimbursable Expenses

Note: Reimbursable expenses will be billed at 1.2 times the direct costs to CTC to cover administrative costs. The cost below is an estimate of what those costs may be offered for budgeting purposes at this time.

Estimate of Reimbursable Expenses	\$ 11,800
GRAND TOTAL, Fees and Reimbursable Expenses	\$249,385