



Civil Engineers, Surveyors & Land Development Consultants

February 10, 2021

Westtown Township
John Altshul, Township Manager
1039 Wilmington Pike
West Chester, PA 19395

**Re: Sawmill Court
Preliminary/Final Land Development
Response to Albert Federico Consulting, LLC Review letter dated January 4, 2021
Inland Design Project No. 11541**

Mr. Altshul:

We are in receipt of the review letter from Albert Federico Consulting, LLC dated January 4 2021, for the above referenced project. Based on the comments contained in that letter we have revised the plans and offer the following responses:

1. Provide an illustration demonstrating that required parking is provided for each dwelling unit. {§170-1705A(1)}

A typical parking detail has been added to the plans showing 2 garage spaces and 2 driveway spaces for each lot.

2. The paved cartway of Sawmill Court is proposed to be 24'. Verify if it is proposed to permit on-street parking. {§170-1705A(1)}

As discussed with the Planning Commission, It is proposed to restrict parking to the inner side of the roadway. This is noted in the plans and will be memorialized in the Homeowners Association Documents.

3. Widening along the South Concord Road frontage should be completed at a consistent width. {§149-903A(2)}

Widening along South concord road has been added to the plans to a width of 14 feet from centerline.

4. Amend General Note 2 to:

- a. Provide separate offers of dedication for right-of-way associated with South Concord Road and Sawmill Court.

General Notes 9 & 10 have been modified to include separate offers of dedication for South Concord Road and Sawmill Court

- b. Indicate a perpetual offers of dedication until such time the Board of Supervisors determines the right-of-way is needed. {§149-903C(1)}

The offer of dedication has been clarified to be perpetual until such a time as the board of Supervisors determine that the right-of-way is needed.

5. Provide design documentation, including design speed and exhibit, demonstrating that a minimum 200' sight distance is provided through the proposed Sawmill Court sag vertical curve. {§149-906A}

Documentation of the design for the Vertical Curves is attached to this email. The road profile has been modified to provide the required 200' sight distance.

6. Sawmill Court is proposed to be constructed with a minimum (150') horizontal radius and significant sag vertical curve. Sharp horizontal curvature should not be introduced near the bottom of a steep grade approaching or near the low point of a pronounced sag vertical curve.

As discussed at the planning commission, the road layout as proposed out is the best case for the development of this site. It is also consistent with the roadways in the adjoining developments along South Concord Road.

7. Illustrate stationing along Sawmill Court consistent with the vertical profile.

Stationing has been provided along Sawmill Court as requested.

8. Extend the limits of the vertical profile of Sawmill Court to the centerline of South Concord Road.

The vertical profile extends to show the full length from centerline of South Concord Road to centerline of South Concord Road.

9. Provide a minimum clear sight triangle of 100 feet at the intersections of Sawmill Court and South Concord Road. {§149-908A}

100' clear sight triangles have been provided at the intersections of Sawmill Court and South Concord Road.

10. Amend the building setback line as appropriate considering the revised clear sight triangle. {§149-908B}

The building setback lines do not need to be modified based on the clear sight triangles.

11. Illustrate PennDOT stopping sight distances at the intersections of Sawmill Court and South Concord Road. {§149-908C}

PennDOT Stopping Sight Distances are shown at the intersections of Sawmill Court and South Concord Road.

12. Provide a vertical profile of South Concord Road illustrating adequate sight distance for vehicles turning left to Sawmill Road. {§149-908C}

A vertical profile of South Concord Road showing sight distance for vehicles turning left onto Sawmill has been provided on Sheet 17.

13. Additional information should be provided documenting alternatives that were considered to restrict access to South Concord Road. {§149-909A}

The waiver request for the block length waiver indicates the options that were explored with a cul-de-sac and the lack of access of off adjoining parcels.

14. Where practicable, blocks along collector streets shall not be less than 1,000' long.

{§149-913D}

A waiver request has been added to the plans to request a waiver based on the agreement of township staff and planning commission that a layout with a through street is preferable to a cul-de-sac.

15. Measure "block" lengths from right-of-way to right-of-way.

No additional comment required.

16. Illustrate adequate driveway sight distance for Lot 17, looking to the right, and Lot 19, looking to the left. {§149-915K(5)}

A clear sight triangle has been shown for these lots and all Landscaping has been kept out of these triangles.

17. Provide an exhibit demonstrating that pedestrian crossings of Sawmill Court can be constructed in accordance with applicable accessibility standards. {§149-916B}

The pedestrian pathway is for the private use of the residents of the dedevelopment and it is not proposed to be handicapped accessible.

18. Pedestrian crossings of Sawmill Court should be:

- a. Relocated closer to the intersections to ensure that pedestrians will be reasonably visible from turning vehicles.
- b. Marked with 6' wide crosswalks. Consideration should be given to textured pavement surfaces.

The walking trail crossings of Sawmill Court have been re-located to be closer to the intersection with South Concord Road and have been striped with 6' wide crosswalks. Textured pavement surfaces are not being proposed at this time.

19. Verify the materials for the proposed walking trail.

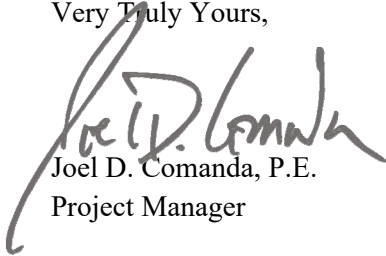
A detail has been provided for the walking trail.

20. Provide 5' x 5' passing spaces at 200' intervals along the walking trail

The walking trail has been widened at key points to provide passing areas.

We trust that the plans adequately address the comments of the Township Consultants. Please feel free to contact me with any questions or comments regarding this matter.

Very Truly Yours,



Joel D. Comanda, P.E.
Project Manager

C: file

Vertical Curve Calculation Worksheet

Project: Sawmill Court
Job Number: 11541
Date: 2/8/2021

Known Variables:

Input Vertical Curve Information:	
Design Speed:	30 mph
Sta of Point of Vertical Inflection (PVI):	1+25.00
Elevation of PVI:	372.38
Length of Vertical Curve:	60.00
Grade into Curve (g1):	-4.00%
Grade out of Curve (g2):	-7.00%

Calculated Variables:

Algebraic Difference Between Slopes (G):	-3.00%
Design K Value for the Crest Vertical Curve	19
K Value of Prop. Curve:	20.0
e Value:	-0.23
Elevation of Curve at PVI:	372.16
Sta of Point of Vertical Curvature (PVC):	0+95.00
Elevation of PVC:	373.58
Sta of Point of Vertical Tangency (PVT):	1+55.00
Elevation of PVT:	370.28

Note: If the K Value is below that required for Design Stopping Sight Distance, the warning "K Value does not meet AASHTO Design Standards" will appear beside the K Value.

Stationing and Elevations:		
Station	Curve Elevation	Description
0+95.00	373.58	PVC
1+00.00	373.37	
1+50.00	370.62	
1+55.00	370.28	PVT

Note:

Vertical Curve Calculation Worksheet

Project: Sawmill Court
Job Number: 11541
Date: 1/21/2021

Known Variables:

Input Vertical Curve Information:	
Design Speed:	30 mph
Sta of Point of Vertical Inflection (PVI):	3+88.00
Elevation of PVI:	353.97
Length of Vertical Curve:	465.00
Grade into Curve (g1):	-7.00%
Grade out of Curve (g2):	4.46%

Calculated Variables:

Algebraic Difference Between Slopes (G):	11.46%
Design K Value for the Sag Vertical Curve	37
K Value of Prop. Curve:	40.6
e Value:	6.66
Elevation of Curve at PVI:	360.63
Sta of Point of Vertical Curvature (PVC):	1+55.50
Elevation of PVC:	370.25
	6+20.50
Sta of Point of Vertical Tangency (PVT):	364.34
Elevation of PVT:	364.34
Sta of Low Point of Vert. Curve	4+39.53
Elev of Low Point of Vert. Curve	360.30

Note: If the K Value is below that required for Design Stopping Sight Distance, the warning "K Value does not meet AASHTO Design Standards" will appear beside the K Value.

Stationing and Elevations:		
Station	Curve Elevation	Description
1+55.50	370.25	PVC
2+00.00	367.37	
2+50.00	364.73	
3+00.00	362.70	
3+50.00	361.29	
4+00.00	360.50	
4+50.00	360.32	
5+00.00	360.75	
5+50.00	361.81	
6+00.00	363.48	
6+20.50	364.34	PVT

Note:

Vertical Curve Calculation Worksheet

Project: Sawmill Court
Job Number: 11541
Date: 1/21/2021

Known Variables:

Input Vertical Curve Information:	
Design Speed:	30 mph
Sta of Point of Vertical Inflection (PVI):	6+50.00
Elevation of PVI:	365.66
Length of Vertical Curve:	40.00
Grade into Curve (g1):	4.46%
Grade out of Curve (g2):	4.00%

Note: If the K Value is below that required for Design Stopping Sight Distance, the warning "K Value does not meet AASHTO Design Standards" will appear beside the K Value.

Calculated Variables:

Algebraic Difference Between Slopes (G):	-0.46%
Design K Value for the Crest Vertical Curve	19
K Value of Prop. Curve:	87.0
e Value:	-0.02
Elevation of Curve at PVI:	365.64
Sta of Point of Vertical Curvature (PVC):	6+30.00
Elevation of PVC:	364.77
Sta of Point of Vertical Tangency (PVT):	6+70.00
Elevation of PVT:	366.46

Stationing and Elevations:			Note:
Station	Curve Elevation	Description	
6+30.00	364.77	PVC	
6+50.00	365.64	PVI	