

VALLEY FORGE MIDDLE SCHOOL

SUMMARY

Valley Forge Middle School Zoning Summary		
Tredyffrin Township		
Zoning District: R1/R2 - Residential		
Site Area		
	Acres	Square Feet
Lot Area	25.00	1089000

Description	Current Ordinance Section	Ordinance Required					
			Existing	Eastbound West Walker Road Right Turn Lane	Southbound Valley Forge Road Right Turn Lane	Secondary Driveway	Covered Drop-offs
Use Regulations	208-17	Non-Conf.	School	School	School	School	School
Min. Lot Area	208-19(A)	80,000 SF	>80000 SF	-	-	-	-
Min. Lot Width	208-19(A)	200 FT	> 200 FT	-	-	-	-
Max. Building Coverage	208-19(B)	10%	12.8%	-	-	-	13.38%
Max Impervious Coverage	208-19(C)	25%	30.86%	-	-	-	31.16%
Min. Front Yard	208-19(D)	50 FT	> 50 FT	-	-	-	-
Min. Side Yard, 2 Req.	208-19(E)	40 FT	-	-	-	-	-
Min. Rear Yard	208-19(F)	50 FT	Non-Conf.	-	-	-	-
Max. Height	208-19(G)	35 FT	-	-	-	-	-
Min. Buffer to Residential	208-19(H)	25 FT	< 25 FT	-	-	-	-
Buffer Use	208-102(B)(2)	No Sidewalk	Non-Conf.	-	-	-	-
One Entrance/ Exit in Buffer	208-102(B)(4)	More than one *	6	-	-	-	-
No More Than Two Accesses	208-102(C)(1)	300 FT Separation Req'd	< 300 FT	-	-	-	-
Off-Street Loading Space	208-104	Provided on the Lot	Yes	-	-	-	-
Add'l On-Site Impervious					1817 SF	3278 SF	
Add'l Off-Site Impervious				2150 SF	1817 SF		
Basin Footprint (5:1)				430 SF	727 SF	656 SF	

Existing Conditions

- 25.00 AC Lot Area
- R1/2-Residential Zoning District
- (8) nonconformities

Variance Required

* Special Exception Required

VALLEY FORGE MIDDLE SCHOOL

SUMMARY

BUDGETS:

EASTBOUND WEST WALKER ROAD RIGHT TURN LANE	\$384,975
SOUTHBOUND VALLEY FORGE ROAD RIGHT TURN LANE	\$473,400
SECONDARY DRIVEWAY AT CHESTERBROOK ROAD	\$611,430
NORTHBOUND VALLEY FORGE ROAD LEFT TURN ADVANCE	\$50,000
COVERED DROP-OFF CANOPY	\$700,003

VALLEY FORGE ELEMENTARY SCHOOL

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ZONING CHART
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VALLEY FORGE ELEMENTARY SCHOOL

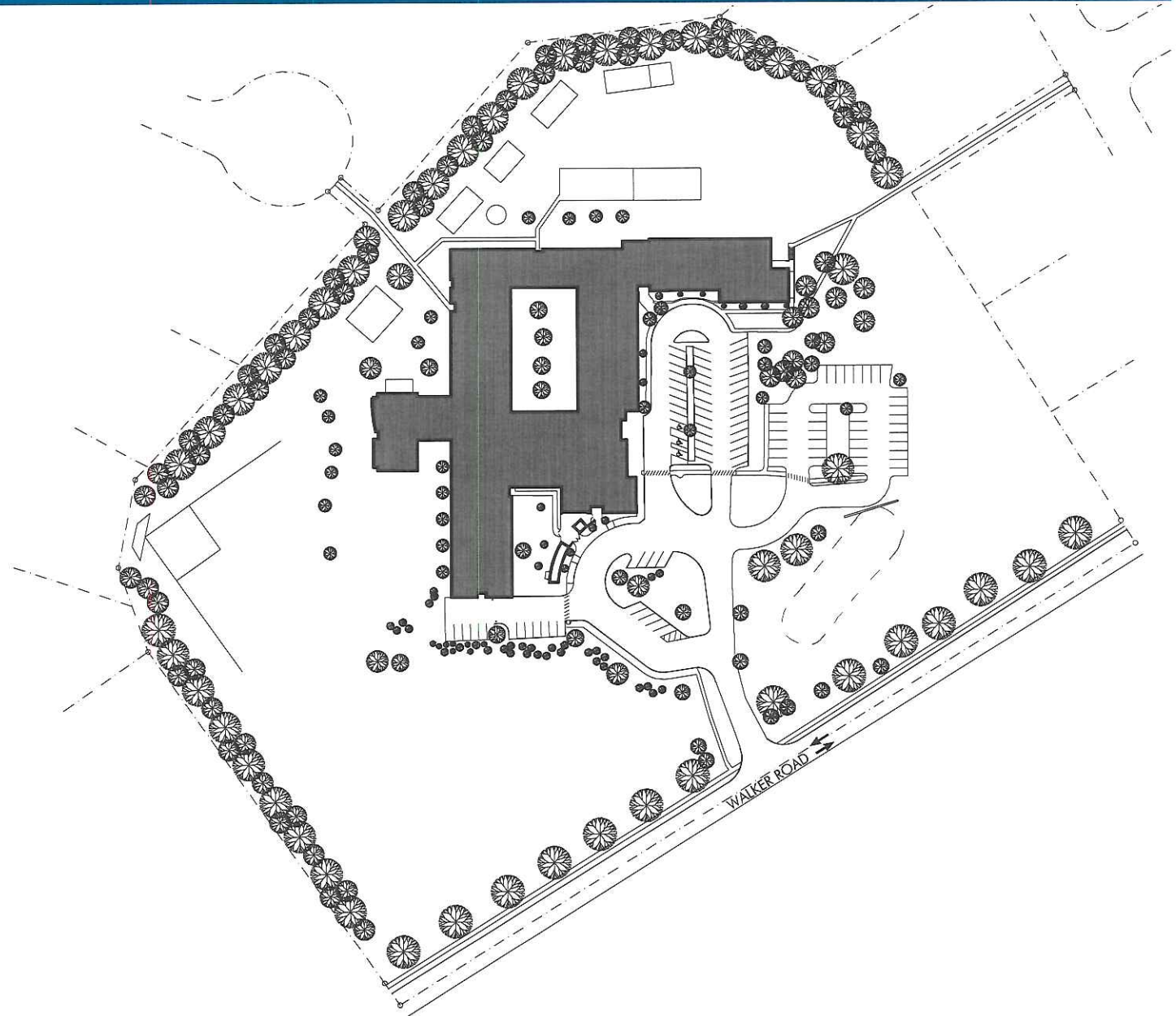
EXISTING CONDITIONS



AERIAL IMAGE

VALLEY FORGE ELEMENTARY SCHOOL

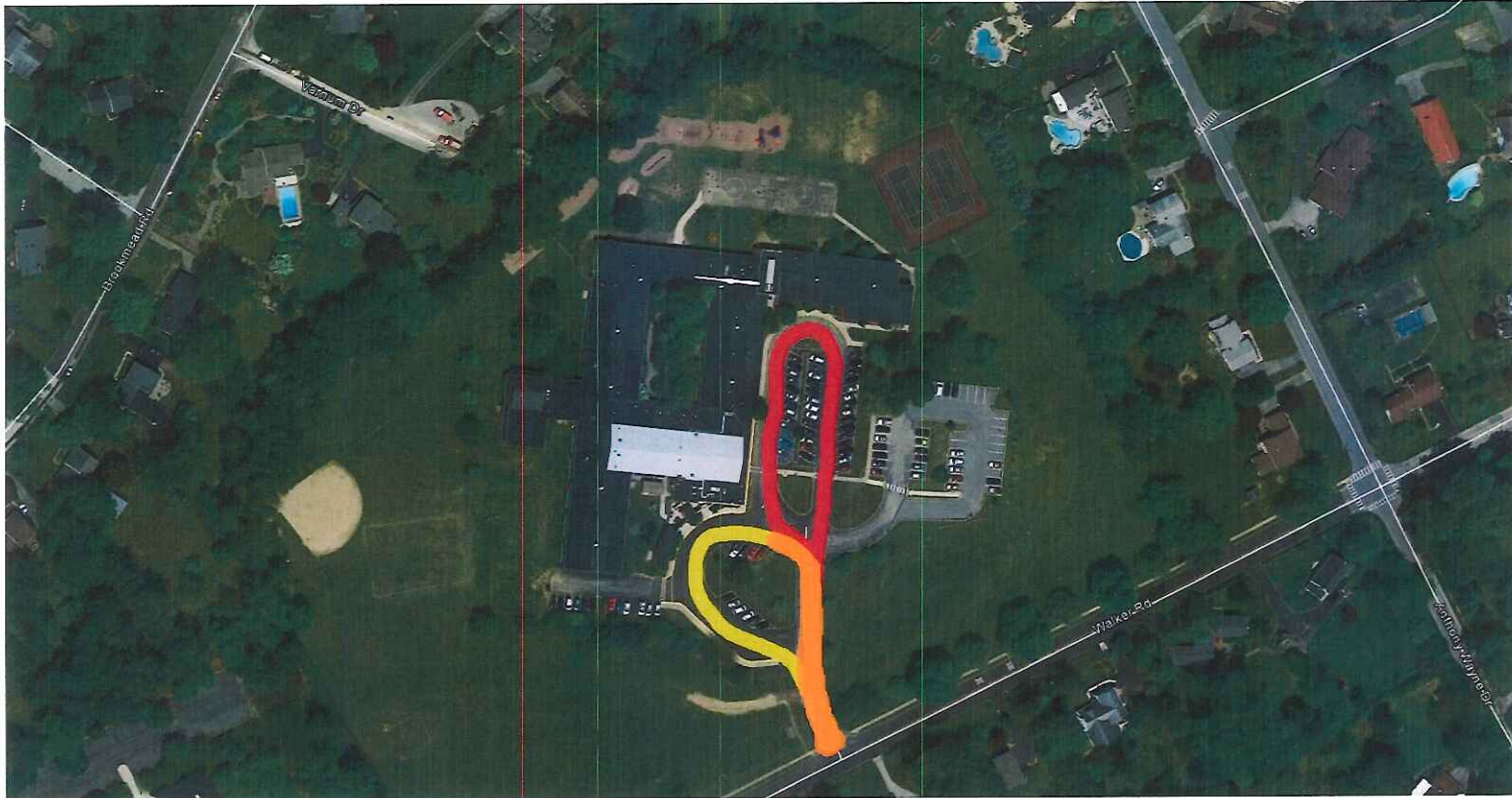
EXISTING CONDITIONS



SITE PLAN

VALLEY FORGE ELEMENTARY SCHOOL

EXISTING CONDITIONS



 BUSES

 BUSES AND PASSENGER VEHICLES

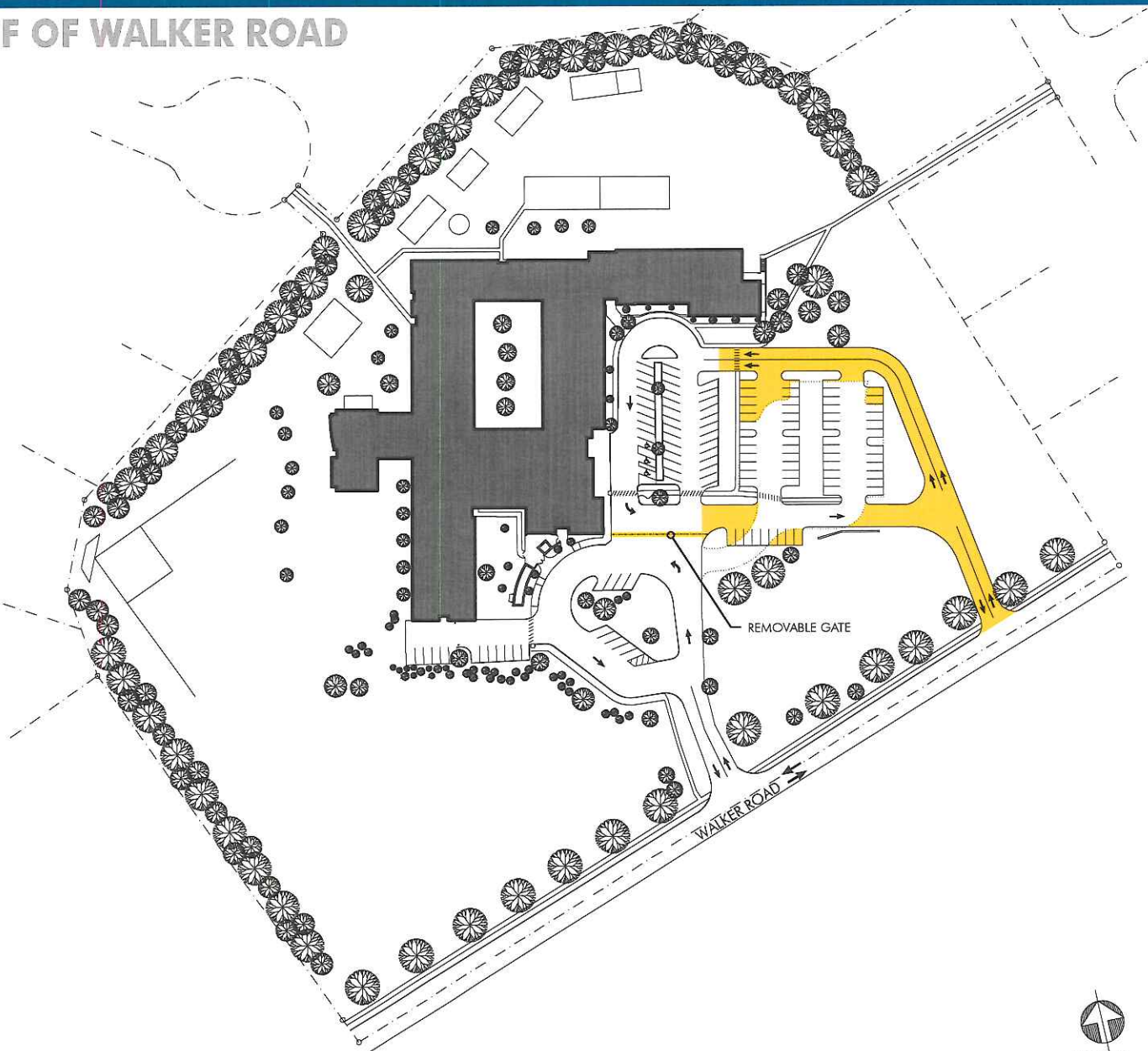
 PASSENGER VEHICLES

VEHICLE ROUTES FROM TPD TRAFFIC STUDY, APRIL 2017

VALLEY FORGE ELEMENTARY SCHOOL

SECONDARY DRIVEWAY OFF OF WALKER ROAD

This option will provide a second driveway for vehicular traffic. The new driveway would allow for vehicles to enter and exit without interfering with the bus circulation. The buses would be able to circulate through the existing driveway. The new driveway would also allow for double stacked queuing. The new driveway and parking layout will increase the parking to 117 spaces from the existing 100. Modifications to the existing parking areas, and retaining wall will be needed to tie in the new driveway. A stormwater management system would need to be constructed to manage the additional impervious coverage. Lighting for the parking area may need to be modified for the new layout. A removable gate will be installed to manage traffic circulation during the school drop off and pick up hours.



PROPOSED PLAN

VALLEY FORGE ELEMENTARY SCHOOL

SECONDARY DRIVEWAY OFF OF WALKER ROAD

ZONING ANALYSIS

- Variance required for exceeding maximum impervious cover
- Special Exception for second driveway in the buffer
- Township approvals for development and stormwater
- 100 existing parking spaces, 76 Required, 117 parking spaces proposed

TRAFFIC ANALYSIS

- Increases on-site queue capacity from 24 cars to 47 cars
- Segregates vehicle types, improving on- and off-site traffic flow
- Reduces congestion and improves pedestrian safety
- Eliminates/reduces queued vehicles along Walker Road, thus improving capacity and reducing congestion on the public roadway
- Introduces a new conflict point/driveway on Walker Road
- Cost Benefit Assessment:
This improvement will produce the greatest number of positive benefits, including increased on-site queue capacity, reduction of congestion along Walker Road, improvement of internal circulation, improved safety, and vehicle type segregation. Therefore, this alternative should be considered a high priority.

VALLEY FORGE ELEMENTARY SCHOOL

SECONDARY DRIVEWAY OFF OF WALKER ROAD

PROJECT DURATION

Preparation of construction documentation will take approximately 3-4 months. The permitting process will take approximately 4-6 months to receive Township and conservation district approvals. Bidding process will take approximately 2-3 months. Construction of the proposed improvements will take approximately 3-4 months. A revised budget and schedule is recommended to be prepared as additional details of the improvement are developed.

PROJECT BUDGET

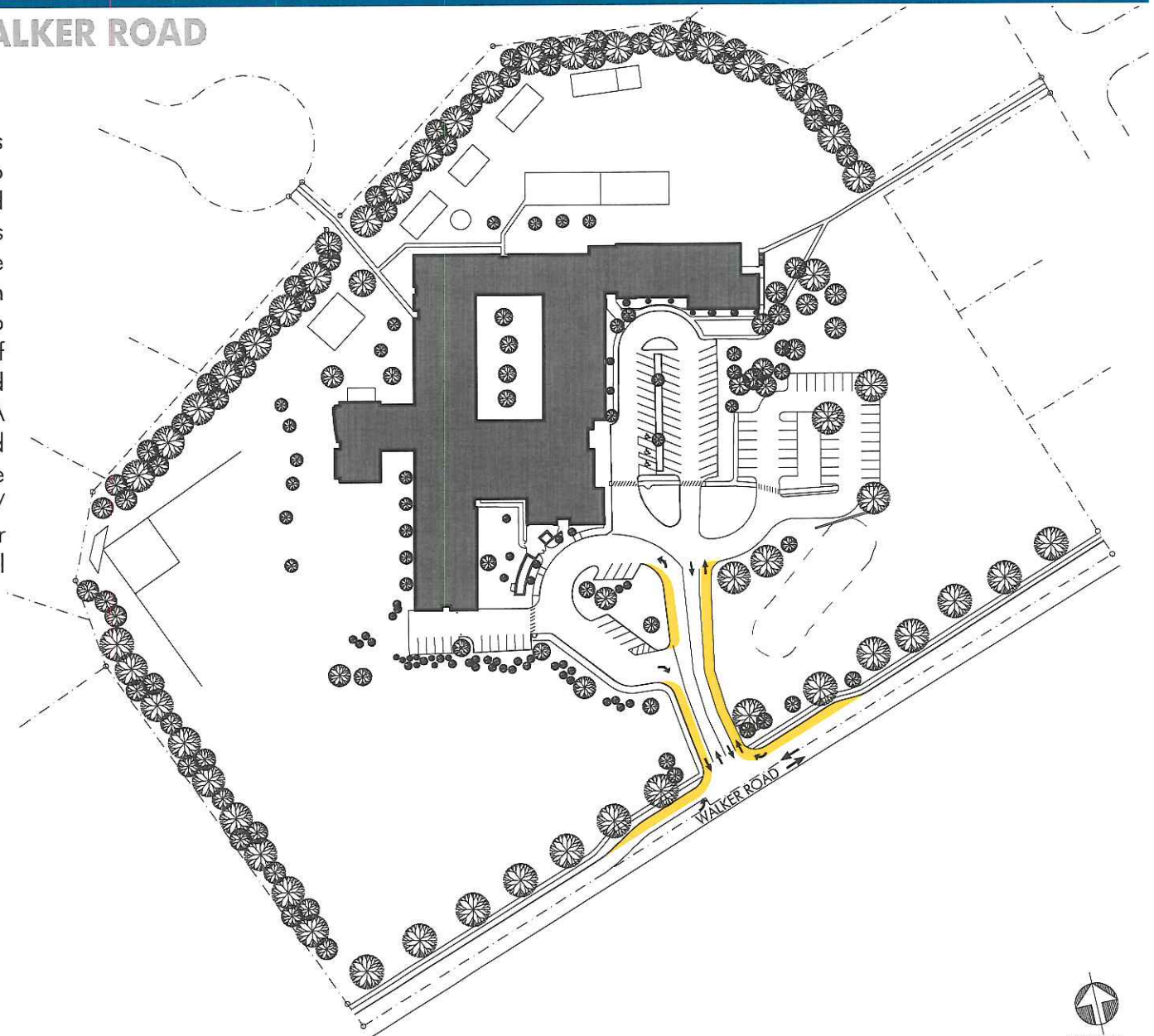
ITEM	EST. COST
VALLEY FORGE ELEMETARY SCHOOL	
SECONDARY DRIVEWAY OFF OF WALKER ROAD	
REMOVE - TREES	\$ 8,000
REMOVE - CONCRETE CURB	\$ 3,000
REMOVE - CONCRETE SIDEWALK	\$ 500
REMOVE - ASPHALT PAVING	\$ 1,500
REMOVE AND RELOCATION - SITE UTILITES	\$ 35,000
EARTHWORK/GRADING/FINE GRADING	\$ 75,000
STORMWATER MANAGEMENT	\$ 80,000
NEW ASPHALT - FULL DEPTH	\$ 107,000
ASPHALT PAVING - MILL and OVERLAY	\$ 31,000
NEW CONCRETE CURB	\$ 66,000
PAVEMENT STRIPING	\$ 10,000
NEW LIGHTING	\$ 75,000
EROSION & SEDIMENTATION CONTROLS	\$ 25,000
GENERAL CONDITIONS (15%)	\$ 77,550
CONTINGENCY (20%)	\$ 103,400
SOFT COSTS - DESIGN, ENG., PERMIT.	\$ 105,000
Subtotal	\$ 802,950

* Cost estimate does not include property/Right-of-Way acquisition

VALLEY FORGE ELEMENTARY SCHOOL

WIDENED DRIVEWAY & WALKER ROAD TURNING LANES

Construction of left and right turning lanes from Walker Road will require cutting into the school property for the space needed for the turn lanes. The existing sidewalks would be modified to accommodate the new turning lanes. Re-construction of the existing driveway to widen it to accommodate an additional two lanes of traffic. New walkway would be constructed alongside the new widen driveway. A stormwater management system would need to be constructed to manage the additional impervious coverage. Trees/Vegetation may need to be cut back or removed. Relocation of existing school signage.



PROPOSED PLAN

VALLEY FORGE ELEMENTARY SCHOOL

WIDENED DRIVEWAY & WALKER ROAD TURNING LANES



TPD TRAFFIC STUDY, APRIL 2017
MORNING QUEUE CONDITION



TPD TRAFFIC STUDY, APRIL 2017
MORNING QUEUE CONDITION



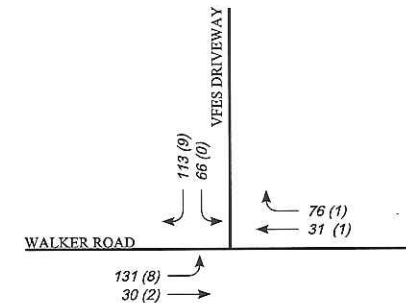
TPD TRAFFIC STUDY, APRIL 2017
AFTERNOON QUEUE CONDITION



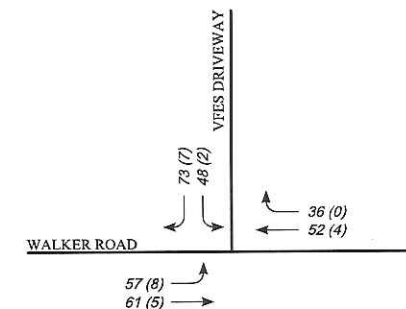
TPD TRAFFIC STUDY, APRIL 2017
AFTERNOON QUEUE CONDITION

EXISTING CONDITIONS TRAFFIC VOLUMES BY TPD

WEEKDAY AM PEAK HOUR (8:00 - 9:00 AM)



WEEKDAY PM PEAK HOUR (2:45 - 3:45 PM)



KEY:
SCHEMATIC DRAWING: NOT TO SCALE
XX (YY) - PASSENGER VEHICLES (BUSES)

VALLEY FORGE ELEMENTARY SCHOOL

WIDENED DRIVEWAY & WALKER ROAD TURNING LANES

ZONING ANALYSIS

- Variance required for exceeding maximum permitted width of a driveway
- Variance required for sidewalk in the buffer
- Township approvals for development, stormwater, and dedication of widened roads

TRAFFIC ANALYSIS

- Increases vehicle queue capacity along Walker Road
- Removes existing queued vehicles from Walker Road through travel lanes, thus improving capacity and reducing congestion on the public roadway
- Does not improve on-site circulation and safety deficiencies
- Does not segregate vehicle types or drop-off/pick-up areas
- Cost Benefit Assessment:

This improvement will have a positive impact by providing increased queue capacity. However, the queue capacity is only needed as a result of on-site congestion and not from a traffic volume perspective. The non-school-related traffic along Walker Road will receive the greatest benefit. Furthermore, this improvement would only benefit the school for limited time periods during the school year. For these reasons, this improvement should be considered a medium priority.

VALLEY FORGE ELEMENTARY SCHOOL

WIDENED DRIVEWAY & WALKER ROAD TURNING LANES

PROJECT DURATION

Preparation of construction documentation will take approximately 3-4 months. The permitting process will take approximately 4-6 months to receive Township and conservation district approvals. Bidding process will take approximately 2-3 months. Construction of the proposed improvements will take approximately 2-3 months. A revised budget and schedule is recommended to be prepared as additional details of the improvement are developed.

PROJECT BUDGET

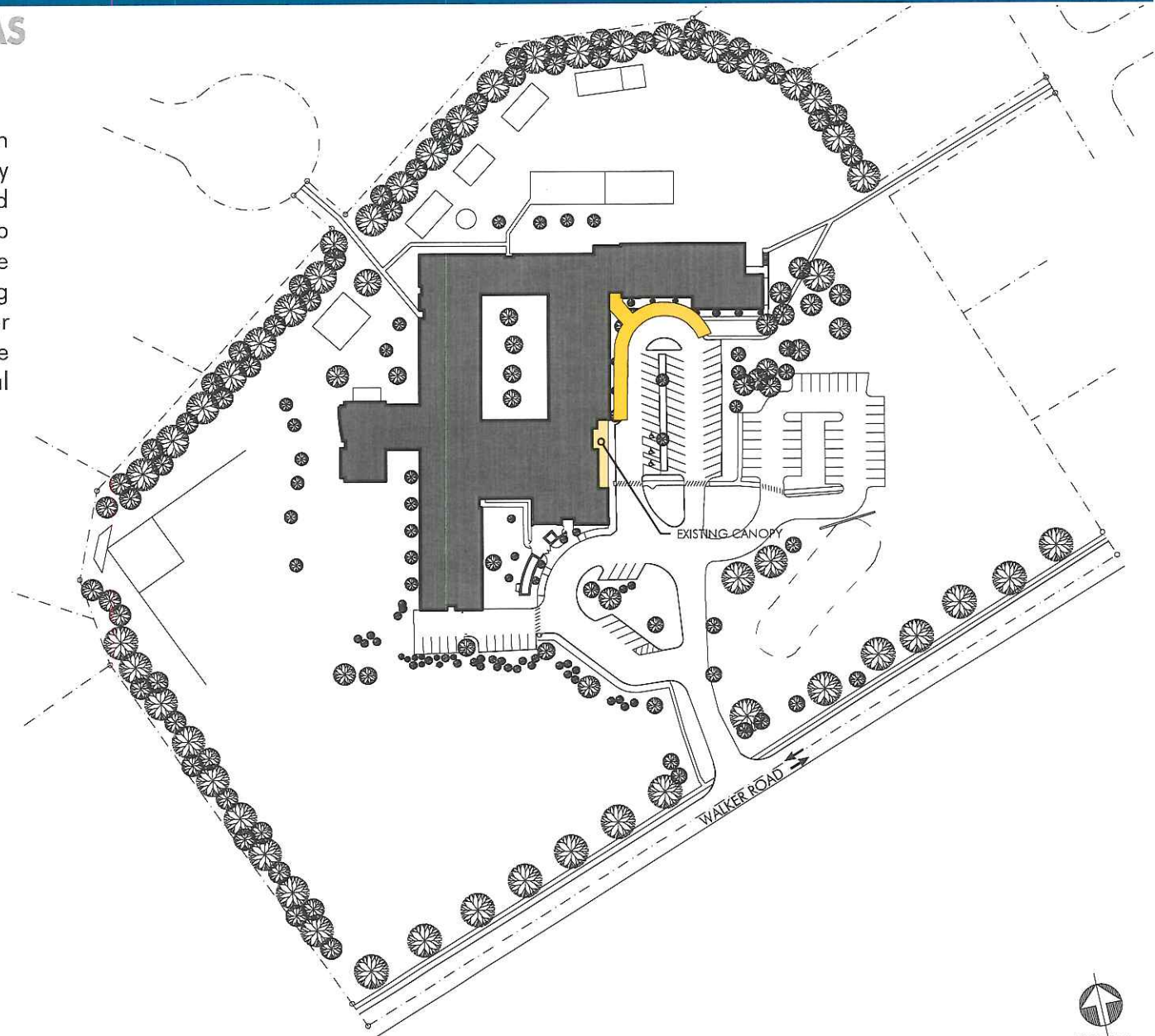
ITEM	EST.	COST
VALLEY FORGE ELEMETARY SCHOOL		
WB RIGHT TURN LANE, EB LEFT TURN LANE, & WIDEN DRIVEWAY		
REMOVE - CONCRETE CURB	\$	3,000
REMOVE - CONCRETE SIDEWALK	\$	3,600
REMOVE AND RELOCATION - SITE UTILITES	\$	15,000
EARTHWORK/GRADING/FINE GRADING	\$	25,000
STORMWATER MANAGEMENT	\$	60,000
NEW ASPHALT - FULL DEPTH	\$	20,500
ASPHALT PAVING - MILL and OVERLAY	\$	20,000
CONCRETE SIDEWALK PAVING	\$	90,000
NEW CONCRETE CURB	\$	30,000
PAVEMENT STRIPING	\$	5,000
EROSION & SEDIMENTATION CONTROLS	\$	10,000
GENERAL CONDITIONS (15%)	\$	42,315
CONTINGENCY (20%)	\$	56,420
SOFT COSTS - DESIGN, ENG., PERMIT.	\$	105,000
Subtotal	\$	485,835

* Cost estimate does not include property/Right-of-Way acquisition

VALLEY FORGE ELEMENTARY SCHOOL

COVERED DROP-OFF AREAS

A Canopy for covered drop off location would be constructed at the main entry driveway. The canopy would be installed over existing sidewalk to facilitate the drop off of multiple students at one time. The canopy would be extended to the existing covered main entrance. A stormwater management system would need to be constructed to manage the additional impervious coverage.



PROPOSED PLAN



VALLEY FORGE ELEMENTARY SCHOOL

COVERED DROP-OFF AREAS

ZONING ANALYSIS

- Variance required for exceeding maximum building cover
- Township approvals for development and stormwater

TRAFFIC ANALYSIS

- No traffic benefit
- Cost Benefit Assessment:
Low priority level from traffic and cost perspectives.

VALLEY FORGE ELEMENTARY SCHOOL

COVERED DROP-OFF AREAS

PROJECT DURATION

Preparation of construction documentation will take approximately 2-3 months. Permitting 4-6 months to receive township and conservation district approvals. Bidding process will take approximately 2-3 months. Fabrication of the aluminum canopy system will take approximately 10-12 weeks. Construction time for the proposed improvement would take approximately 1-2 months. A revised budget and schedule is recommended to be prepared as additional details of the improvement are developed.

PROJECT BUDGET

ITEM	EST. COST
VALLEY FORGE ELEMENTARY SCHOOL	
CONSTRUCT COVERED DROP-OFF	
PREFABRICATED ALUMINUM CANOPY SYSTEM	\$ 193,600
CONCRETE FOUNDATIONS	\$ 4,500
LIGHTING	\$ 11,000
STORMWATER MANAGEMENT	\$ 50,000
REMOVE - CONCRETE CURB	\$ 2,500
REMOVE - CONCRETE SIDEWALK	\$ 5,000
CONCRETE SIDEWALK PAVING	\$ 10,000
NEW CONCRETE CURB	\$ 10,500
EROSION & SEDIMENTATION CONTROLS	\$ 5,000
GENERAL CONDITIONS (15%)	\$ 43,815
CONTINGENCY (20%)	\$ 58,420
SOFT COSTS - DESIGN, ENG., PERMIT.	\$ 57,000
Subtotal	\$ 451,335

VALLEY FORGE ELEMENTARY SCHOOL

SUMMARY

Valley Forge Elementary School Zoning Summary		
Tredyffrin Township		
Zoning District: R1 - Residential		
Site Area		
	Acres	Square Feet
Lot Area	16.80	731808

Description	Current Ordinance Section	Ordinance Required				
			Existing	Second Driveway Off of Walker Road	Widened Driveway, Eastbound Left Turn, Westbound Right Turn	Covered Drop-off Areas
Use Regulations	208-21(B)	Public Agency (School)	School	School	School	School
Min. Lot Area	208-23(A)	80,000 SF	>80000 SF	-	-	-
Min. Lot Width	208-23(A)	200 FT	> 200 FT	-	-	-
Max. Building Coverage	208-23(B)	10%	10.1%	-	-	11.76%
Max Impervious Coverage	208-23(C)	25%	24.30%	26.80%	24.58%	24.41%
Min. Front Yard	208-23(D)	50 FT	> 50 FT	-	-	-
Min. Side Yard, 2 Req.	208-23(E)	40 FT	> 40 FT	-	-	-
Min. Rear Yard	208-23(F)	50 FT	> 50 FT	-	-	-
Max. Height	208-23(G)	35 FT	-	-	-	-
Min. Buffer to Residential	208-23(H)	25 FT	> 25 FT	-	-	-
Buffer Use	208-102(B)(2)	No Sidewalk	Non-Conf.	-	Sidewalk	-
One Entrance/ Exit in Buffer	208-102(B)(4)	More than one *	-	2*	-	-
No More Than Two Accesses	208-102(C)(1)	300 FT Separation Req'd	-	300'	-	-
Driveway Width	208-102(C)(1)	20'-30'	24'	-	32'	-
Off-Street Loading Space	208-104	Provided on the Lot	Yes	-	-	-
Add'l On-Site Impervious				18325 SF	2100 SF	850 SF
Add'l Off-Site Impervious					1350 SF	
Basin Footprint (5:1)				3665 SF	690 SF	170 SF

Existing Conditions

- 16.80 AC Lot Area
- R1-Residential Zoning District
- (2) nonconformities

Variance Required

* Special Exception Required

VALLEY FORGE ELEMENTARY SCHOOL

SUMMARY

BUDGETS:

SECONDARY DRIVEWAY OFF OF WALKER ROAD	\$802,950
WIDENED DRIVEWAY & WALKER ROAD TURNING LANES	\$485,835
COVERED DROP-OFF CANOPY	\$451,335

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PARKING STUDY VALLEY FORGE MIDDLE SCHOOL

PARKING STUDY VALLEY FORGE ELEMENTARY SCHOOL

PARKING STUDY SUMMARY TESD

IMPROVEMENT OPTIONS ELIMINATED