



TOWN COUNCIL WORK SESSION
Monday, December 4, 2017 @ 7:00pm
Town Hall Council Chambers

TOWN/STAFF RELATED ITEMS

1. Presentation from People Inc. on New Market Tax Credit
- Continued Discussion of Fixed Term Financing Option for new PD
2. FRLP Proffer Revision Request (R1-A) – *Director of Planning/Zoning*
3. Agreement between the Town and County for collection and remittance of fees paid online through EnerGov software. – *Director of Planning/Zoning*
4. Continued Discussion of IT Federal/Royal Phoenix/W. Main Street Extension – *Director of P & Z*
5. Criser Road Bridge Update – *Town Manager*

COUNCIL/MAYOR RELATED ITEMS:

6. Audit/Finance Committee Terms expire 12/31/17
7. Joint Tourism Advisory Committee Recommendations
8. Council Discussion/Goals (*time permitting*)

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Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: Funding for Construction of the Police Department

Summary: The Warren County Economic Development Authority & People's Inc will be present to answer questions related to the New Market Tax Credit. Additional information will also be provided for the option of a 30-year fixed term loan.

Council Discussion: Council is requested to provide staff with direction on proceeding with the New Market Tax Credit Program and/or the 30-year fixed term loan.

Staff Evaluation: Staff has provided several funding scenarios for the New Market Tax Credit Program & the 30 year fixed term financing. Each option has different benefits & risks to the Town.

Currently, the Town is being offered a 30-year fixed term loan with an interest rate of 2.65%.

If the Town proceeds with the N.M.T.C. program the Town will be required to refinance the remaining balance after paying interest only for a period of 7 years after the project has been completed. If the Town is able to obtain the 30% credit from the N.M.T.C. program and the fixed term interest rate remains under 4.8% for 30 years the N.M.T.C. would be beneficial to the Town when compared to the current option of 2.65% for 30 years. Some of the variables involved in the N.M.T.C. program are the terms that will be available for financing in 7+ years and the future of the program.

Budget/Funding: Scenarios have been provided for reference

Legal Evaluation: The Town Attorney will be present to answer any questions.

Staff Recommendations: Staff recommends to proceed with the fixed term financing.

Planning Commission Recommendation: N/A

Town Manager Recommendation: (The Town Manager will provide input on the issue and make his recommendations to council.)

Council Recommendation:

☐ Additional Worksession ☐ Regular Meeting ☐ No Action





TOWN OF FRONT ROYAL

DEPARTMENT OF FINANCE

102 E. MAIN STREET

P.O. BOX 1560

B.J. Wilson
Director of Finance
bwilson@frontroyalva.com

(540) 635-7799
(540) 635-2298 fax

DATE: November 21, 2017

TO: FRONT ROYAL MAYOR & TOWN COUNCIL
CC: JOE WALTZ

FROM: B. J. WILSON, DIRECTOR OF FINANCE

RE: NEW MARKET TAX CREDIT PROGRAM VS 30 YEAR FIXED TERM

Town Council requested some comparisons for the New Market Tax Credit Program & the option of a 30-year fixed term loan.

The refinancing of Leach Run Parkway has been removed from the New Market Tax Credit Program figures in order to provide a true apples to apples comparison. These scenarios take into account the \$11 million for the construction of the Police Department & the \$5.5 million for Happy Creek Phase II.

The scenarios all assume a 30 year term will be available when the Town is required to refinance the remaining debt from the New Market Tax Credit Program. The scenarios also include interest only payments on the \$16.5 million, for a period of 9 years in the New Market Tax Credit Program. Under the New Market Tax Credit Program, the Town is required to pay interest only for a period of 7 years after all projects have been completed. This is assuming that all projects will be complete within a period of 2 years. Additional interest expense would be incurred if the projects were not completed within 2 years. These scenarios also assume that the Town will then be refinancing a debt of \$11.55 million (70% of the original \$16.5 million) once the NMTC program has ended.

Using scenario #1 from the information provided at the November 20, 2017 work session for the 30-year fixed term rate at 2.65% the total expense incurred by the Town would be \$24,415,550 and is estimated to require a total real estate tax increase of \$0.025 per \$100. This scenario has been used as a basis to provide additional scenarios for the funding for the NMTC Program

Scenario #1 Provided at Council Work Session on Nov 20, 2017

The General Fund owes the Electric Fund \$600,000 (excluding the FY18 payment budgeted) for the repayment of the loan of the Town Hall Building. Council could elect to take money out of the general fund surplus funds to payback the electric fund; thus freeing up an additional \$150,000 in the annual budget that could be allocated toward the construction of the Police Department and/or Happy Creek Phase II. Based on current assessments/rates, the real estate tax rate would likely need to increase \$0.01 in April 2018, an additional \$0.01 in April 2019, and an additional \$0.005 in April 2020. The Town could begin paying interest & principal on the Police Department immediately. The Town would likely need to pay interest only for two years (totaling about \$290,000) on the debt service for the \$5.5 million with this option.

Comparison Scenario A

Assumes that term and interest rate currently being offered to the Town of 30 year/**2.65%** will be available when the Town is required to refinance the remaining \$11.55 million of the NMTC Program. The estimated real estate tax increase would be \$0.0025 per \$100 in April 2027 and the Town would recognize a **net benefit in expenses of \$5.3 million dollars** when compared to financing the full \$16.5 million with a fixed term rate of 2.65%.

Comparison Scenario B

Assumes that term and interest rate will increase 1% to be a 30 year/**3.65%** when the Town is required to refinance the remaining \$11.55 million of the NMTC Program. The estimated real estate tax increase would be \$0.01 per \$100 in April 2027 and the Town would recognize a **net benefit in expenses of \$2.99 million dollars** when compared to financing the full \$16.5 million with a fixed term rate of 2.65%.

Comparison Scenario C

Assumes that term and interest rate will increase 2% to be a 30 year/**4.65%** when the Town is required to refinance the remaining \$11.55 million of the NMTC Program. The estimated real estate tax increase would be \$0.01 per \$100 in April 2027 and the Town would recognize a **net benefit in expenses of \$538,970 million dollars** when compared to financing the full \$16.5 million with a fixed term rate of 2.65%.

Comparison Scenario D

Assumes that term and interest rate will increase 3% to be a 30 year/**5.65%** when the Town is required to refinance the remaining \$11.55 million of the NMTC Program. The estimated real estate tax increase would be \$0.03 per \$100 in April 2027 and the NMTC Program will have cost the Town more than if the Town had financed the full \$16.5 million. The **additional expense of \$2 million** would be incurred when compared to financing the full \$16.5 million with a fixed rate term of 2.65%.

If the Town were able to obtain a 30-year fixed term rate once the NMTC program has ended, the Town would recognize an overall benefit in total expense if the interest rate remains under 4.8% annually. The current interest rate being offered to the Town is 2.65%. If the interest rate were to increase more than 2.15% over the next 7-9 years, the NMTC program would not be beneficial to the Town based on a 30-year term.

SCENARIO #1 (PROVIDED AT 11/20/17 WORK SESSION)

- Use the General Fund Balance to payoff the internal loan to the Electric Fund, which frees up \$150,000 in General Fund budgeting that can be allocated to the 30 year fixed term loan.

-Real Estate Tax Increase April 2018 of \$.01 per \$100

-Real Estate Tax Increase April 2019 of \$.01 per \$100

-Real Estate Tax Increase April 2020 of \$0.005 per \$100

- Incorporate funding that was used for paying debt service to the EDA beginning in FY2023

-Interest Only on the \$5.5 million for other project would be paid for FY19 & FY20

Total R/E Tax Increase	\$0.025 per \$100
Total Debt Repayment	\$24,415,550
Year Ending	FY2050

	30 YEAR FIXED TERM			CURRENT DEBT SERVICE			FUNDING							
	Police HQ Estimated Full Debt Service on \$11 Million (2.65% for 30 Years)	Full Debt Service on \$5.5 Million (2.65% for 30 Years)	TOTAL	Repayment of Loan for Town Hall Building Ending 2022	Debt Service Paid to the EDA Ending 2021	Debt Service WC LRP Ending 2035	Police Dept HQ R/E Tax Allocation Based on FY18 Rates	Funding Previously Used to Repay Debt to Electric Fund	April 2018 \$0.01 R/E Increase	April 2019 \$0.01 R/E Increase	April 2020 \$0.005 R/E Increase	Funding From EDA Debt Service That Ended FY2021	TOTAL	
	DEBT SERVICE												FUNDING	
FY2018	\$268,063		\$268,063	\$150,000	\$141,390	\$148,790	\$ 242,500		\$ 105,000				\$ 347,500	
FY2019	\$536,125	\$145,000**Interest Only	\$681,125	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000			\$ 602,500	
FY2020	\$536,125	\$145,000**Interest Only	\$681,125	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500		\$ 655,000	
FY2021	\$536,125	\$268,060	\$804,185	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500		\$ 655,000	
FY2022	\$536,125	\$268,060	\$804,185	\$150,000		\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2023	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2024	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2025	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2026	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2027	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2028	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2029	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2030	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2031	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2032	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2033	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2034	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2035	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000	\$148,790	\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2036	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2037	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2038	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2039	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2040	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2041	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2042	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2043	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2044	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2045	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2046	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2047	\$536,125	\$268,060	\$804,185	\$242,500	\$150,000		\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2048	\$268,062	\$268,060	\$536,122				\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2049		\$268,060	\$268,060				\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
FY2050		\$268,060	\$268,060				\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	
TOTAL	\$16,083,750	\$8,331,800	\$24,415,550				\$ 242,500	\$ 150,000	\$ 105,000	\$ 105,000	\$ 52,500	\$ 141,390	\$ 796,390	

COMPARISON SCENARIO #A

- Only the \$11 million for the construction of the Police Department & \$5.5 million for Happy Creek Phase II have been included for comparison purposes. Refinancing of Leach Run Parkway has not been included to allow for a better comparison.
- Allowing for interest payments for a period of 9 years, the Town must pay interest only for 7 years upon completion of the projects, this scenario allows for project completion in 2 years.
- Use the General Fund Balance to payoff the internal loan to the Electric Fund, which frees up \$150,000 in General Fund budgeting that can be allocated to the project.
- Incorporate funding that was used for paying debt service to the EDA beginning in FY2023
- Real estate tax increase in April 2027 of \$0.0025 per \$100
- Based on assumption that the Town would be able to obtain financing for 30 years at a 2.65% interest rate in FY2027

	New Market Tax Credit Program			CURRENT DEBT SERVICE			FUNDING					
	Interest Only for \$16.5 Million 1.5 % Interest Rate	70% of \$16.5 million = \$11.55 million Financing of \$11.55 million for 30 Years at 2.65% interest rate	TOTAL DEBT SERVICE	Repayment of Loan for Town Hall Building Ending 2022	Debt Service Paid to the EDA Ending 2021	Debt Service WC LRP Ending 2035	Police Dept HQ R/E Tax Allocation Based on FY18 Rates	Funding Previously Used to Repay Debt to Electric Fund	Funding From EDA Debt Service That Ended FY2021	April 2027 \$0.0025 R/E Increase	TOTAL FUNDING	
FY2018	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500				\$ 242,500	
FY2019	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2020	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2021	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2022	\$247,500		\$247,500	\$150,000		\$148,790	\$ 242,500	\$ 150,000	\$ 141,390		\$ 533,890	
FY2023	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2024	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2025	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2026	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2027		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2028		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2029		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2030		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2031		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2032		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2033		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2034		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2035		\$562,930	\$562,930			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2036		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2037		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2038		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2039		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2040		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2041		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2042		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2043		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2044		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2045		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2046		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2047		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2048		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2049		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2050		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2051		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2052		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2053		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2054		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2055		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
FY2056		\$562,930	\$562,930				\$ 242,500	\$ 150,000	\$ 141,390	\$ 26,250	\$ 560,140	
TOTAL	\$2,227,500	\$16,887,900	\$19,115,400									

COMPARISON SCENARIO #B

- Only the \$11 million for the construction of the Police Department & \$5.5 million for Happy Creek Phase II have been included for comparison purposes. Refinancing of Leach Run Parkway has not been included to allow for a better comparison.
- Allowing for interest payments for a period of 9 years, the Town must pay interest only for 7 years upon completion of the projects, this scenario allows for project completion in 2 years.
- Use the General Fund Balance to payoff the internal loan to the Electric Fund, which frees up \$150,000 in General Fund budgeting that can be allocated to the project.
- Incorporate funding that was used for paying debt service to the EDA beginning in FY2023
- Real estate tax increase in April 2027 of \$0.01 per \$100
- Based on assumption that the Town would be able to obtain financing for 30 years at a 3.65% interest rate in FY2027

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	New Market Tax Credit Program			CURRENT DEBT SERVICE			FUNDING					
	Interest Only for \$16.5 Million 1.5 % Interest Rate	70% of \$16.5 million = \$11.55 million Financing of \$11.55 million for 30 Years at 3.65% interst rate	TOTAL DEBT SERVICE	Repayment of Loan for Town Hall Building Ending 2022	Debt Service Paid to the EDA Ending 2021	Debt Service WC LRP Ending 2035	Police Dept HQ R/E Tax Allocation Based on FY18 Rates	Funding Previously Used to Repay Debt to Electric Fund	Funding From EDA Debt Service That Ended FY2021	April 2027 \$0.01 R/E Increase	TOTAL FUNDING	
FY2018	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500				\$ 242,500	
FY2019	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2020	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2021	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2022	\$247,500		\$247,500	\$150,000		\$148,790	\$ 242,500	\$ 150,000	\$ 141,390		\$ 533,890	
FY2023	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2024	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2025	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2026	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2027		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2028		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2029		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2030		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2031		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2032		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2033		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2034		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2035		\$639,846	\$639,846			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2036		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2037		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2038		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2039		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2040		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2041		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2042		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2043		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2044		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2045		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2046		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2047		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2048		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2049		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2050		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2051		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2052		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2053		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2054		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2055		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
FY2056		\$639,846	\$639,846				\$ 242,500	\$ 150,000	\$ 141,390	\$ 105,000	\$ 638,890	
TOTAL	\$2,227,500	\$19,195,380	\$21,422,880									

COMPARISON SCENARIO #C

- Only the \$11 million for the construction of the Police Department & \$5.5 million for Happy Creek Phase II have been included for comparison purposes. Refinancing of Leach Run Parkway has not been included to allow for a better comparison.
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- Use the General Fund Balance to payoff the internal loan to the Electric Fund, which frees up \$150,000 in General Fund budgeting that can be allocated to the project.
- Incorporate funding that was used for paying debt service to the EDA beginning in FY2023
- Real estate tax increase in April 2027 of \$0.02 per \$100 (or real estate taxes could be increased over a number of years leading up to April 2027)
- Based on assumption that the Town would be able to obtain financing for 30 years at a 4.65% interest rate in FY2027

	New Market Tax Credit Program			CURRENT DEBT SERVICE			FUNDING					
	Interest Only for \$16.5 Million 1.5 % Interest Rate	70% of \$16.5 million = \$11.55 million Financing of \$11.55 million for 30 Years at 4.65% interest rate	TOTAL DEBT SERVICE	Repayment of Loan for Town Hall Building Ending 2022	Debt Service Paid to the EDA Ending 2021	Debt Service WC LRP Ending 2035	Police Dept HQ R/E Tax Allocation Based on FY18 Rates	Funding Previously Used to Repay Debt to Electric Fund	Funding From EDA Debt Service That Ended FY2021	April 2027 \$0.02 R/E Increase	TOTAL FUNDING	
FY2018	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500				\$ 242,500	
FY2019	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ → 150,000			\$ 392,500	
FY2020	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2021	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2022	\$247,500		\$247,500	\$150,000		\$148,790	\$ 242,500	\$ 150,000	\$ → 141,390		\$ 533,890	
FY2023	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2024	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2025	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2026	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2027		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2028		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2029		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2030		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2031		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2032		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2033		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2034		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2035		\$721,636	\$721,636			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2036		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2037		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
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FY2039		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
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FY2042		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
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FY2053		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2054		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2055		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
FY2056		\$721,636	\$721,636				\$ 242,500	\$ 150,000	\$ 141,390	\$ 210,000	\$ 743,890	
TOTAL	\$2,227,500	\$21,649,080	\$23,876,580									

COMPARISON SCENARIO #D

- Only the \$11 million for the construction of the Police Department & \$5.5 million for Happy Creek Phase II have been included for comparison purposes. Refinancing of Leach Run Parkway has not been included to allow for a better comparison.
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	New Market Tax Credit Program			CURRENT DEBT SERVICE			FUNDING					
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FY2020	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2021	\$247,500		\$247,500	\$150,000	\$141,390	\$148,790	\$ 242,500	\$ 150,000			\$ 392,500	
FY2022	\$247,500		\$247,500	\$150,000		\$148,790	\$ 242,500	\$ 150,000	\$ 141,390		\$ 533,890	
FY2023	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2024	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2025	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2026	\$247,500		\$247,500			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ -	\$ 533,890	
FY2027		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2028		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2029		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2030		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2031		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2032		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2033		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2034		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2035		\$807,913	\$807,913			\$148,790	\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2036		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2037		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2038		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2039		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2040		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2041		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2042		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2043		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2044		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2045		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2046		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
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FY2049		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2050		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
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FY2052		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2053		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2054		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2055		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
FY2056		\$807,913	\$807,913				\$ 242,500	\$ 150,000	\$ 141,390	\$ 315,000	\$ 848,890	
TOTAL	\$2,227,500	\$24,237,390	\$26,464,890									

2

Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: FRLP Proffer Revision Request (R1-A)
Director of Planning & Zoning / Town Manager

Summary:

Front Royal Limited Partnership (FRLP) has submitted a request to amend the 2010 proffers associated with the conditional rezoning of approximately 149 acres to the R1-A District.

The proposed changes do not alter the type or density of the proposed development (320 Single-Family Detached Dwelling Units). Rather, the proposed changes alter specific conditions in the proffers, such as, but not limited to, the tap fee credits, per-unit cash proffers, non-cash proffers, East/West Connector.

Please see the attached staff report and attachments for details on the proposed application.

Council Discussion: This agenda item is scheduled for a work session review on 12/04/17.

Staff Evaluation: Staff will be available for questions at the work session. A summary of the existing proffers and proposed proffers are included in the staff report. There are 9 other attachments included.

Budget/Funding: None.

Legal Evaluation: The Town Attorney will be available at the work session for questions.

Town Manager: The Town Manager will be available at the work session for questions.

Council Recommendation:

☐ Additional Work Session ☐ Regular Meeting ☐ No Action
Consensus Poll on Action: ____ (Aye) ____ (Nay)

Work Session



**TOWN OF FRONT ROYAL
DEPARTMENT OF PLANNING & ZONING**



STAFF REPORT FOR THE NOVEMBER 15, 2016 PLANNING COMMISSION MEETING

Revised/Updated for Town Council's 12/4/17 Work Session

APPLICATION #:

FRREZON-000522-2017

APPLICANT:

Front Royal Limited Partnership (FRLP)

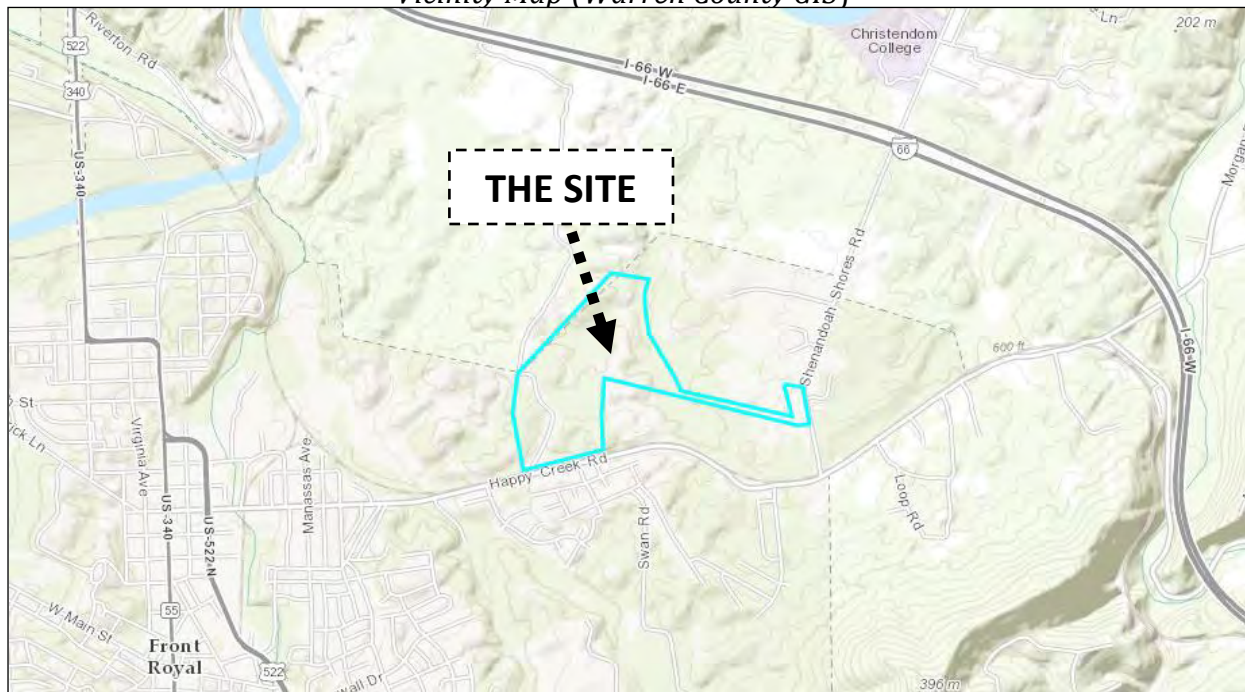
SUMMARY OF REQUEST:

FRLP has submitted a request to amend the 2010 proffers associated with the conditional rezoning of approximately 149 acres to the R1-A Zoning District.

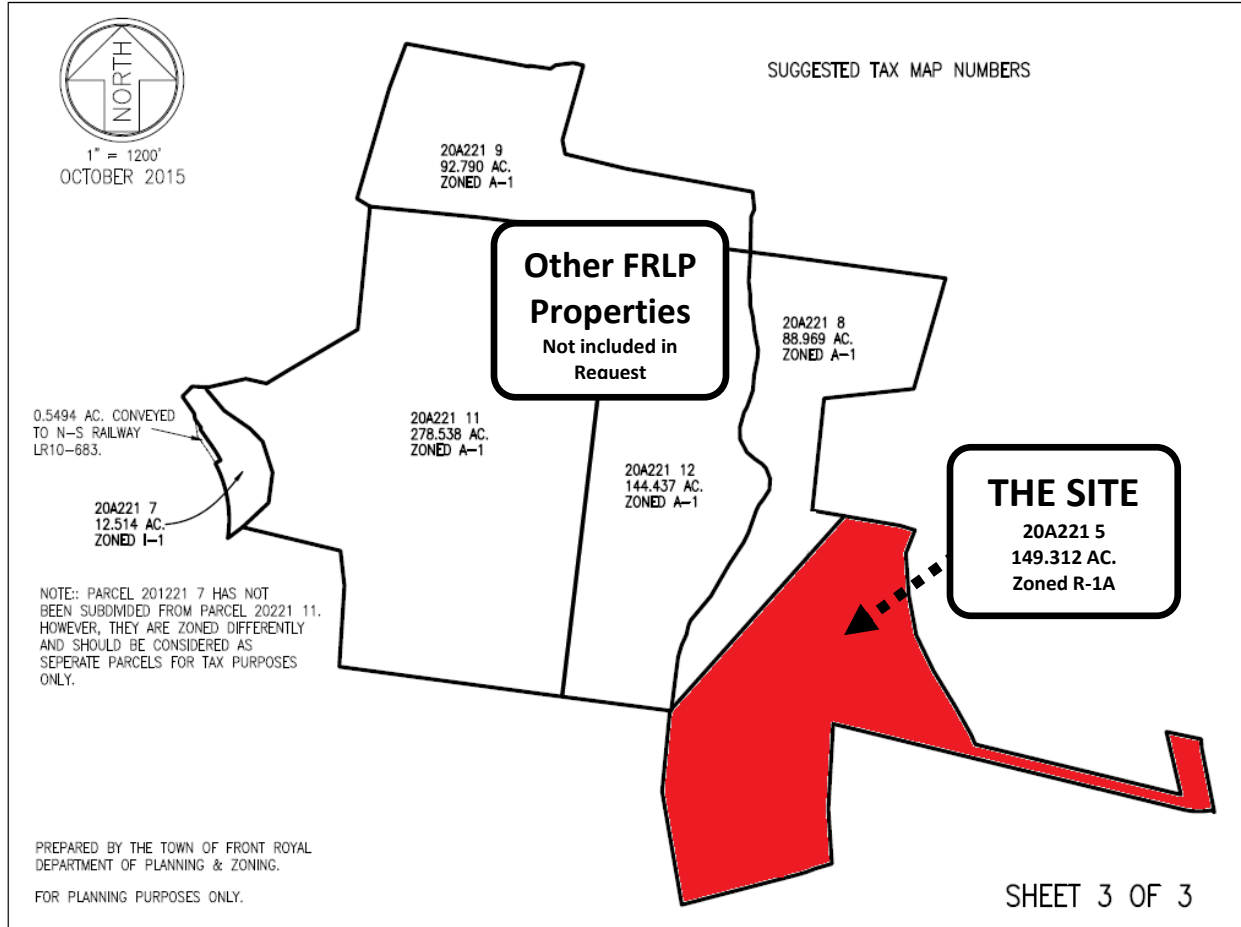
GENERAL INFORMATION:

<i>Site Addresses</i>	None (Vacant Land)
<i>Property Owner(s)</i>	Front Royal Limited Partnership
<i>Zoning District</i>	R-1A (Residential) District
<i>Tax Identification</i>	20A221 5
<i>Location</i>	The property is located north of Happy Creek Road and Norfolk Southern Railroad, presently accessible via Marys Shady Lane.

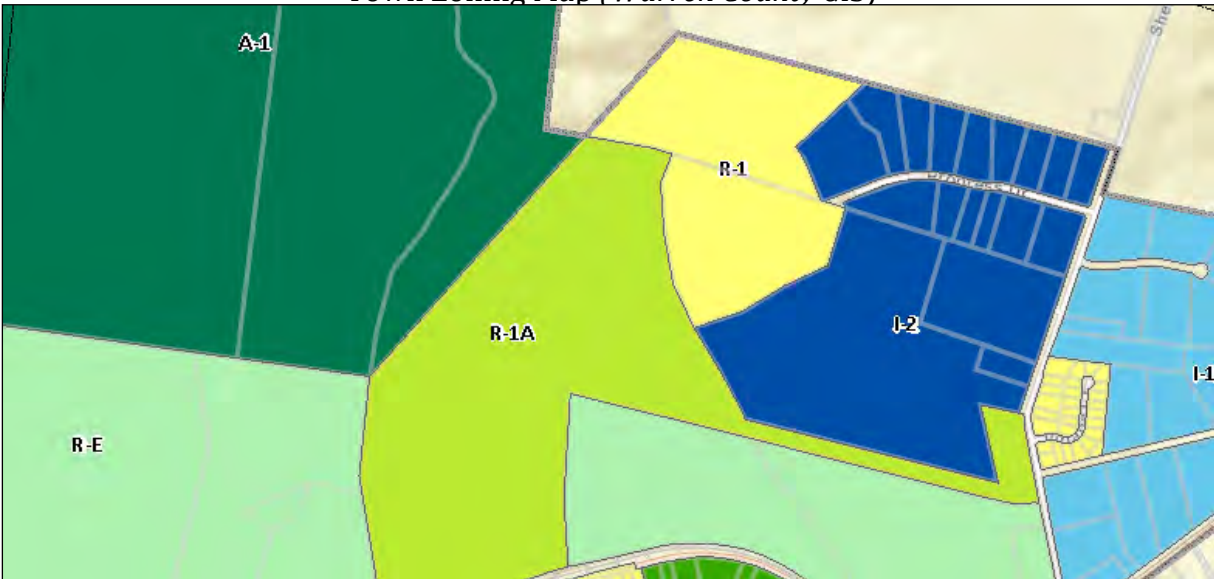
Vicinity Map (Warren County GIS)



Map of FRLP Properties (Survey Illustration)



Town Zoning Map (Warren County GIS)



Aerial Map (WC Online GIS)



SUPPLEMENTAL INFORMATION:

What are Proffers?

Virginia Code § 15.2-2296 through § 15.2-2303.4 address the legislative intent and rules associated with the practice of “conditional rezoning.” Conditional rezoning, typically just referred to as “proffers”, is a process where a zoning reclassification (rezoning) may be allowed subject to certain conditions that are proffered by the applicant. This process gives local governing bodies the ability to better protect their communities from negative impacts associated with new development. Proffers also give developers more flexibility to address negative impacts to obtain approval of rezoning applications that may not otherwise be possible. Once accepted by the governing body, proffers are the same as an ordinance and run with the land.

Proffers can either be cash proffers or non-cash proffers. However, not all localities are authorized to accept cash proffers. Pursuant to Virginia Code § 15.2-2298, the Town of Front Royal has the ability to accept either type. This is because the Town is classified as a high-growth locality (due to Warren County’s growth rate) in the State of Virginia.

Cash proffers may be collected by localities if the funds are for a capital improvement project that is on the community’s Capital Improvement Program (CIP). The funds must be used within 12 years, and may only be used for the project listed in the proffer statement, unless alternative use of the funds is specified within the proffers. Proffers must also be reasonably related to the rezoning; the rezoning must give rise for the need of such proffers; they must be in writing; signed by all parties; and may not obligate a locality to do something they would not otherwise have to do. In addition, proffers are intended to impose additional requirements and restrictions, not alternative or lesser requirements or restrictions. The alteration or lessening of requirements or restrictions is considered “contract zoning”. Contract zoning, much like spot zoning, is illegal. [Pima Gro Systems, Inc. v. Board of Supervisors of King George County, 52 Va. Cir. 241 (2000)].

Perhaps the most important thing to remember about proffers is that they cannot be required, they must be made voluntarily by the applicant.

What Does It Mean That Proffers Must Be “Voluntary”?

- The locality must identify all of the impacts that could result from the rezoning so that the owner may decide which impacts it will address through proffers.
- It is up to the owner to decide whether to address the impacts that could result from the rezoning through proffers.
- If the locality denies the rezoning and the owner did not volunteer proffers to address all of the identified impacts, the decision must be based on sound zoning principles (including unmitigated impacts), and not simply on the fact that the owner did not proffer something.
- It does not mean that the locality is powerless to engage the applicant and its representatives in a meaningful dialogue to ensure that the applicant either addresses the identified adverse impacts through proffers or makes a conscious decision to not address those impacts through proffers.

[Chapter 11, Conditional Zoning: Proffers, The Albemarle County Land Use Law Handbook, Kamptrner (June 2017).

Review Procedure

Adoption or revision of proffers requires the same procedures as a rezoning or ordinance amendment. The submission must first be reviewed by the Planning Commission, and the Planning Commission must forward recommendations to Town Council. Town Code 175-146.D. specifies that the Planning Commission must take action within 90 days after the date of the first regular meeting of the Commission. It is important to note that when the submission changes, such as when a property owner revises the proffers during the review process, the 90-day time period resets.

Before approving and adopting any rezoning, or modification of a previously approved rezoning (proffers), a public hearing is required, pursuant to Virginia Code § 15.2-2204.

Existing Proffers (2010)

The original proffers were reviewed by Town Council and the Planning Commission on June 22, 2017. During this joint meeting, the following issues were discussed:

- 1) Tap Fee Credits. Various aspects of the proffers are not permissible by law (see legal review document from the Town Attorney). Most notably, this includes the tap fee credit that reduces the required tap fees for FRLP. The existing proffers cap the tap fees paid by FRLP at \$10,000 per connection. **[See the Town Attorney's legal review]**
- 2) Confusing Language. Both the Town Attorney and FRLP agree that the proffers are "untenably confusing to interpret." The multiple ways to interpret many of the proffers could lead to unnecessary lawsuits in the future.
- 3) Complexity. In addition to being confusing, the language of the existing proffers is complex. Documentation from the original rezoning process in 2009/2010 appears to be misleading by suggesting that the proffers ensure the construction of the East/West Connector Road. This is far from the case. The existing proffers do account for the possibility of the East/West Connector Road being built, but such possibility is very unlikely due to the following provisions found in the proffers:
 - The proffers require FRLP to build Phases 2-4 of the East/West Connector if the Town elects to build Phase 5. However, even if the Town elects to build Phase 5, FRLP can choose to not build Phases 2 – 4 by stopping development at 199 houses.
 - Even if FRLP decides to build over 199 houses, and the Town builds Phase 5, the existing proffers give FRLP a dollar-for-dollar credit for all the costs FRLP incurs in the construction and design of the East/West Connector (Phases 2 – 4). It is probable that these credits (construction costs) would far exceed any cash proffers paid by FRLP, and not unimaginable that FRLP (or future owner) would try to seek additional payments or credits from the Town.

[See Scenario 1 and Scenario 2 tables for more details attached to the Town Attorney's legal review memorandum]

Proposed Proffers

The Applicant's original proffer revision submission was dated August 24, 2017. It was revised by the Applicant on September 29, 2017, October 27, 2017, November 6, 2017, and most recently on November 8, 2017. Below is a summary of the proffer changes proposed by the Applicant:

- **The proposed proffers eliminate the tap fee credits.**

As mentioned above, there are legal issues with the tap fee credits. FRLP proposes to eliminate the tap fee credits, but in doing so has eliminated the per-unit cash proffers.

- **The proposed proffers eliminate the per-unit cash proffers.**

The existing proffers (2010) include a cash proffer amount of \$19,600 per house, for each house built after the first 99 houses. There are many possible outcomes written into the proffers that control what the total amount of cash proffers would be. This could range dramatically, from a positive 3.1 million dollars to the Town to a negative 11.5 million dollars, or more, to the Town. The major variables that control the outcome include the following:

- How the tap fee credit is accounted for in the first 99 houses.
- The value of land dedications.
- Whether the East/West Connector Road is built or not (scenario 1 or 2).
- How many houses the applicant decides to build.
- The amount of time it takes for the development to occur.

Scenario 1 and 2 is broken down in more detail on the tables attached to the Town Attorney's legal review memorandum.

- **The proposed proffers eliminate Phases 2-5 of the East/West Connector Road.**

The proposed proffers require FRLP to build the first section of the East West Connector and provide right-of-way throughout FRLP's R1-A Zoned property. The intent is that the remaining sections would be addressed in the rezoning of FRLP's 604-acre property. Based on the Applicant's traffic study from 2010, as well as the draft 2017 traffic study, Phases 2 – 5 of the East/West Connector Road is not necessary to accommodate the traffic from the R1-A Zoned property (up to 320 dwelling units).

- **The proposed proffers add new transportation related proffers.**

FRLP has offered up to \$450,000 to the Town for traffic signals at the intersections of Shenandoah Shores Road & East/West Connector, and, Shenandoah Shores Road &

Happy Creek Road. Alternatively, the funds could be used toward Leach Run Parkway if the Town decides to not require a traffic signal. The applicant has also added a proffer for a left-turn lane onto the East/West Connector from northbound traffic on Shenandoah Shores Road. The applicant also has added an eastbound right-turn lane onto Shenandoah Shores Road. The westbound right turn lane off of Happy Creek Road to Shenandoah Shores Road remains in the proffers.

The applicant's original submission on August 24, 2017 included other transportation improvements, such as a southbound right-turn lane on Shenandoah Shores Road at Happy Creek Road. However, these were removed when the applicant's transportation consultants determined that this was not needed for the 320 units, but would be in the future. Current State law prohibits localities from accepting proffers for improvements that are not warranted by the proposed development.

- **The proposed proffers remove other credits in the existing proffers.**

The proposed proffers also remove various credits and gifts that would be received by FRLP, other than the tap fee credits. This includes credits for the right-of-way dedication needed for the development's access road; credits for a small portion of land at Shenandoah Shores Road that is needed for the future realignment of Shenandoah Shores Road for the flyover; and the gifting of Town land to FRLP.

- **The proposed proffers include other minor changes.**

The proposed proffers include other minor changes, such as, but not limited to, the elimination of Energy Star Certification; the increased width of the proposed trail to 8 feet, the modification of East/West Connector road location, as shown on Exhibit 3; the modification of when the neighborhood park would be built in the development process (150th versus 99th permit); the modification of when the school proffers are paid to Warren County; and clarification of what the entrance road will consist of.

The proffers include a provision that the road section A1 to B will be built when any final record plat includes a residential lot within 25 feet of Marys Shady Lane. Staff would note that this effectively means that section A1 to B may not be built. However, the proffers do guarantee that the Town would have reservation of the right to obtain such right-of-way if needed for the future road extension. Furthermore, the road section will be necessary before the A-1 property can be developed.

CONCLUSIONS:

The following bullet points include Pros and Cons associated with the proposed proffers:

- **Pro:** The proposed proffers do address the major legal issues that have been the topic of conversation for the past few years. This includes, but is not limited to, the removal of the tap fee credits and the elimination of Scenario 2 of the East/West Connector road that places a great financial burden on the Town.
- **Pro:** While the proposed proffers only address the first section of the East/West Connector road, this is all that can be legally required. The new proffer laws of the Virginia Code restrict proffers from including off-site improvements that are not necessary for the proposed development. As identified in the applicant's traffic studies, only the first part of the East/West Connector is necessary for the 320 dwelling units on the subject property.
- **Pro/Con:** FRLP did not combine the R1-A and A-1 properties into one unified development project, as requested from Town Council and the Planning Commission. FRLP intends to submit a rezoning application in the near future on the A-1 property to address the future extension of the East/West Connector.
- **Pro/Con:** Although improved from the existing proffers, the proposed proffers still include a great deal of unnecessary and unenforceable language. For example, Sections 2 and 3 are already required by Town Code, and Section 4 and 5 are unenforceable.
- **Pro/Con:** Upon evaluation of the proposed proffers, the most significant change from the Town's perspective appears to be the elimination of the per-unit cash proffers. The existing proffers allow these funds to be used by the Town towards Leach Run Parkway. The proposed proffers eliminate these per-unit cash proffers, but does add \$225,000 towards traffic signalization at the entrance road. Added with the \$225,000 already proffered for traffic signalization at Happy Creek Road/Shenandoah Shores Road, the applicant is offering \$450,000 in cash to the Town to address off-site transportation impacts created by the proposed development. The applicant has also added alternative language, so if the Town decides not to install either of the traffic lights, the funds can be used towards Leach Run Parkway. From FRLP's point of view, the per-unit cash proffers and tap fee credits were originally intended to balance each other out. Therefore, FRLP believes that eliminating the tap fee credits necessitates the elimination of the per-unit cash proffers.
- **Con:** Just as the existing proffers do not, the proposed proffers do not address impacts to law enforcement.

At the November 15, 2017 Planning Commission Meeting, a public hearing was held on the application. No citizen input was received at the public hearing. The Planning Commission approved a motion to recommend approval of the proposed proffers by FRLP.

Attachments to Staff Report:

- 1) Attachment 1 – Applicant's Cover Letter & Statement of Justification
- 2) Attachment 2 – Clean Copy of Proposed Proffers
- 3) Attachment 3 – Exhibits
- 4) Attachment 4 – Redline Version of Proposed Proffers
- 5) Attachment 5 – 2009 Traffic Study
- 6) Attachment 6 – Draft Traffic Report 2017
- 7) Attachment 7 – Technical Memorandum: Left Turn Lane Warrant and 4-Hour Traffic Signal Evaluation
- 8) Attachment 8 – 2010 Approved Recorded Proffers
- 9) Attachment 9 – Legal Review of Existing Proffers w/ Scenario Tables

Paper copies of the above attachments will be provided to Town Council in a 3-ring binder at the Work Session on 12/4/17.

Front Royal Limited Partnership

August 24, 2017

SENT VIA E-MAIL ONLY

Mr. Jeremy Camp
Director of Planning
Town of Front Royal
Front Royal, Va. 22630

Re: FRLP's R1-A Proffer Amendment, originally submitted June 25, 2015

Dear Mr. Camp,

Per our ongoing discussions of FRLP's 2015 proffer amendment please find attached:

1. A table outlining FRLP's proposed proffer changes, August 24, 2017.
2. A clean & redline version of the revised Proffer Statement, dated August 24, 2017.
3. Updated Statement of Justification in support of the application, August 24, 2017.

The proposed proffer revisions represent our best efforts to meet Town requests for changes to the original proffers. We believe that the proposed changes should resolve the Town's remaining legal concerns with the 2010 proffer statement. The proffer revisions also include an additional \$810,000+ in cash and transportation improvements that the Town would not receive (in any event) under the existing proffers.

R1-A and A-1 Property Transportation Improvements Coordination

Most notably, we have added transportation improvements to the revised proffers that reflect the results of our 2016 traffic study for the recently annexed property and an additional phasing analysis our traffic engineers did. Although these 320 homes will not generate any more traffic than when the project was approved, the underlying traffic counts on 606 and at H.C. Road increased significantly since our 2009 and 2013 study (and recent VDOT data). We are unaware of any development north of the railroad tracks that might account for the increase. In any event, the added improvements coordinate development of the two projects in an effort to minimize impacts to the area residents and businesses, and include 3 added turn lanes and a new traffic light or roundabout on 606.

where is this?

Why did FRLP submit the proffer amendment in 2015?

FRLP submitted the amendment in an effort to move beyond the Town's issues with the 2010 proffers and the uncertainties associated with the potential interpretations

of the proffers. The Town has expressed legal concerns with the proffers since the annexation efforts in 2013. At that time, it became clear that the Town interpretations had materially adversely changed since the proffers had been approved in 2010.

As such, and based on our subsequent discussions with the Town about the Town's concerns, FRLP submitted the amendment and that proposed removing all of what we believed to be the legally egregious terms to the Town. The 2010 proffer statement has two scenarios in it, and we believed the Town found portions of the "E/W scenario" as unacceptable to it and/or not legally permissible and thus the proffer amendment proposed removing it. In sum, we submitted this amendment to:

- Address and resolve the Town's concerns as stated since 2013, and
- Address and resolve the Town's concerns in order to remove the cloud of uncertainty associated with the varying proffer interpretations. Such uncertainty is untenable to development and we believe resolving these issues would be to the benefit of both parties, and
- Address and resolve the Town's concerns in order to enable both parties to negotiate rezoning proffers for the recently annexed A-1 property. We believe failing to resolve the proffer interpretation issues had become and is untenable to any rezoning effort for the recently annexed property.

The Town response was closed sessions. It became evident that the Town now found *both* scenarios in the proffers to be unacceptable to it and as it demanded wholesale changes to the proffer terms. In sum, FRLP had requested the Town consider making a choice between the two proffer scenarios that it will need to make one day anyway, and the Town response was both proffer scenarios were impermissible or unacceptable to it.

The Town added 82 new homes between 2009-16, or 10.25 per year on average

As an aside, Front Royal is not alone as many localities decide they do not want any more growth and/or will not approve viable projects. By adding enough costs or impact fees and proffer demands to our project(s), the Town eliminates incentive for the private sector to invest in and to finance any development. Capitalism is a terrible system, but it is the best one we have – and growth and investment will continue to go to viable projects in neighboring localities and states. Some states and localities actually even view growth favorably (think Texas/Southeast/Southwest). Virginia is not one of them.

Growth will go where it makes economic sense and where there is the least amount of risk as possible. Private sector investment requires some certainty, and the Town's 2013+ R1-A concerns and interpretations eliminated any certainty the project had.

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We believe resolving the uncertainties associated with the interpretation of the proffers would be in the best interests of both parties. The Town appears to want to litigate these issues, or at least threaten to do so in order to force FRLP to agree to its desired terms, and we have now removed all of the objectionable tap fees/proffer credits.

FRLP's 2010 R1-A Proffer Statement - Hindsight is 20/20

In hindsight, we under estimated the Town's distaste for both scenarios in the proffers it agreed to in 2010 – FRLP believed the Town would view this amendment favorably. We certainly did not expect such a visceral reaction from the Town. We had discussed these issues since we became aware of them during the annexation efforts in 2013, and in numerous meetings prior to filing the amendment. And we did not think that the Town would object to removing the scenario it deems unacceptable or impermissible.

In sum, if we can't resolve the Town's issues with our 2010 proffers then we would like to know that sooner rather than later and so that we may change our approach and efforts toward the project(s) accordingly. Similarly, if the Town refutes the R1-A proffer terms, and we can't resolve its requests for changes, then we see no path forward or reason to invest in any rezoning efforts and proffers for the A-1 property.

As such, FRLP would respectfully request a vote on our proffer amendment as soon as practicable. We might also request a work session with Council at the Mayor's discretion and Council and staff's earliest convenience.

Finally, we cannot emphasize enough that our door is always open to discuss any issues that Council, Town officials, and community members may have. We look forward to all such discussions, whether over coffee or in formal public meetings. We hope and would encourage any community stakeholders and decisions makers to be in touch and we would be happy to discuss the project and/or answer any questions.

I look forward to our continued discussions, and to closure on this amendment.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Vazzana", followed by a horizontal line.

David Vazzana

FRLP

dvazzana@gmail.com

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Section 1: Introduction

FRLP is proposing an amendment to its 2010 R1-A proffer statement for 150 acres and approved for 320 homes. It would be a text amendment to the proffers to reflect the understanding reached between the Town and property owner to eliminate legal concerns that have arisen and changes that have occurred in the post-recession housing market.

We believe the proffers should resolve the Town's remaining legal concerns and we believe that it would remove the uncertainty generated by these issues in the best interests and to the benefit of both parties. Importantly, the August 2017 proffers make every effort to coordinate the development of the two projects to the greatest extent and greatest benefit to existing residents/businesses and the Town as possible and feasible.

A. The 2010 Proffers have two potential scenarios

The existing proffers have 2 potential scenarios, each with their own terms and conditions, and the Town will need to choose one or the other in the future prior to approval of the first final record plat. The two potential scenarios in the proffers:

- The "E/W" scenario or/vs.
- The Town getting its full W&S tap/connection fees, and directing any cash proffer contributions toward transportation improvements.

Of the two, the proffer amendment proposes eliminating the "E/W" scenario.

Section 2: Proposed Removal of the E/W Scenario

FRLP filed the amendment primarily based on the legal concerns that the Town had expressed with the R1-A proffers, and specifically with the "E/W scenario". These concerns first surfaced during the annexation efforts. At that time, it became clear that the Town's legal interpretations of the two scenarios, and of what may and may not be allowed, had materially changed since the approval of the rezoning and proffers in 2010.

A. Town Concern: Legal Issues with the E/W scenario

- Legal Issues – Town staff has indicated that capping the W&S tap fees at \$10,000 as called for in 11.3.4 and that the escrow account mechanism in 13.4 may not be legally permissible. And the proffers make clear that if the Town and FRLP do not enter into an agreement for the reduced Tap fees (etc.), then we default to the other scenario in the proffers. In any event, the E/W scenario appears not acceptable to the Town at best, and a litigious headache or train wreck at worst.

- FRLP believes that the Town's legal concerns would prevent it from choosing, and/or from having the option to choose, the "E/W" scenario.
- FRLP did not believe that the Town would object to removing the "E/W" scenario" due to its position that its terms are impermissible and/or unacceptable to it.
- Based on the Town's concerns with proffers 11.3.4 and 13.4 respectively, and the fact that both 11.3.4 and 13.4 are only applicable to the E/W scenario, the proffer amendment proposed removing the legally objectionable E/W scenario.

The Town's legal concerns with the E/W scenario, and specifically sections 11.3 and 13.4 of the 2010 proffers, are discussed in more detail in Appendix B.

In sum, the Town considers proffers 11.3 and 13.4 as unacceptable to it and/or potentially not legally permissible – the amendment now proposes removing all tap fees/proffer credits from the proffer statement.

B. Town Concern: Adverse Fiscal Implications of E/W scenario

- Fiscal Implications – FRLP believes the Town would also not choose the E/W scenario due to the financial implications and potential liabilities to the Town. The "what if" legal risks associated with the varying interpretations of this scenario could result in adverse impacts and/or costs to the Town.
 - If the Town chooses the "E/W scenario" proposed for removal – FRLP could build 199 homes with tap fees of \$10,000 per home. Cash proffers to the Town go into an escrow account to be repaid to FRLP for Phase 2-4 of the East/West Connector. Town would receive 1.99 million in tap fees and no additional cash proffers or transportation improvements.
 - "The current proffers allows development to stop at the 199th house, and under such circumstances, the requirement to build Phases 2 – 4 is eliminated, even if the Town has already built phase 5.
 - "The current proffers require the Town to provide FRLP with a credit for costs incurred in the construction of Phases 2 – 4 of the East/West Connector Road. This credit is applied to FRLP's per unit cash proffer noted above. However, it is not clear what will happen when the credits exceed the per unit contributions. This is a probable outcome considering the cost of the East/West Connector Road.

- *“Could FRLP bill the Town for such additional costs for the off-site road improvements?”¹*

FRLP believes that removing any or all such adverse fiscal risks and/or liabilities associated with the “E/W” scenario might be considered by the Town to be in its best interests moving forward. In any event, such risks to the Town have been outlined by staff and for Council’s consideration.

Section 3: Removal of the E/W without Removal of Tap Fees/Proffer Credits

Notably, the cash proffer credits in proffer 13.2 that the Town would like removed are applicable to *both* proffer scenarios – not just the E/W scenario – removing these proffer credits is a material adverse change for FRLP. That said, the uncertainty generated by these proffer and tap fee credits interpretations, combined with our hope to move beyond the R1-A issues, has led FRLP to conclude that removing all the proffer credits is the only way to eliminate the Town’s concerns and move the project forward.

FRLP hopes its willingness to remove all the myriad proffer credits in its revised proffers helps to result in positive resolutions to the Town’s remaining concerns with the 2010 proffers and the R1-A project.

A. Removal of Tap Fees/Cash Proffer Credits – Proffer 13.2.1 & 13.2.2

By removing the cash proffer credits in 13.2, FRLP assumes the additional risk that the Town is going to substantially increase its W&S fees in the future. In such an event, agreeing to remove the proffer credits now will have increased our impact fees to the Town. Credits to be used to reduce the cash proffers to the Town in proffer 13 are,

13.2 “The Applicant shall receive a dollar-for-dollar credit against the aforesaid per-unit contribution for the following costs actually incurred by the Applicant:

13.2.1. the engineering, design and construction costs associated with constructing Phases 2 through 4 of the East/West Connector, and

13.2.2. any combined sewer and water connection and availability fees that exceed \$10,000 on a per-unit

¹ Town Staff Report, June 14, 2016.

basis.”

We believe a reading of proffer 13 makes clear that FRLP is to receive these credits to its cash contributions to the Town under either (any) scenario in the 2010 proffers. Moreover, FRLP would note that regardless of any presumptions or assertions about what the Town’s “intent” of any of the proffer credits might have been in 2010, the law is clear that any “intent” and/or “inferences” are irrelevant when interpreting proffers, and must therefore be disregarded in all interpretations of proffers,

“Because development proffers, once accepted, have the force of law that will bind both the local government and the current and future owner of the property to their terms, the terms of the proffers must be interpreted according to the plain meaning of the language used. Just as a court is not permitted to go beyond the words of a statute to infer a meaning that is not found in its express language, a meaning in development proffers cannot be inferred that is not found through a plain reading of the text.”²

Since filing the proffer amendment, FRLP has refused to remove the cash proffer credits in 13.2 as it was in our interests to keep these credits.

- Proffer 13.2.1 provides for a reduction to the cash proffers for amounts spent on the engineering, design, and construction of the E/W - FRLP has the option of using its Town cash proffers toward phases 2-4 of the E/W connector on its recently annexed property.
- Proffer 13.2.2 provides reductions to the cash proffers paid by each new home to the Town equal to the amount of the W&S Tap fees in excess of \$10,000 per home. It effectively “locks in” FRLP total impact fees (W&S plus cash outlays). As the Town’s W&S fees increase over time our cash proffers decrease by a like amount.

Combined, proffer 13.2.1 and 13.2.2 provides FRLP with the ability to:

FIRST: Decrease its cash proffers for its W&S tap fees credit amounts, and

SECOND: At FRLP’s sole discretion, to use any remaining funds toward phases 2-4 of the E/W on its annexed property, which we will likely need to do one day.

THIRD: FRLP would choose to use all of the remaining cash proffer monies to design and engineer phases 2-4 of the E/W on its recently annexed property and instead of paying any such amounts to the Town.

In sum, as a result of the proffer credits provided for by proffer 13.2 the Town would not receive any cash proffers under either scenario in the 2010 proffers.

² Hale v. Board of Zoning Appeals of Blacksburg, Virginia Supreme Court, 2009

B. The Town will receive no cash and no added improvements under 2010 proffers

The August 2017 proffer amendment removes all the tap fees and cash proffer credits from the proffer statement based on Town requests to do so. We consider these concessions as our best effort to address the Town's requests and as much as possible.

a. Future Tap Fees and Cash Proffer Credits

The W&S proffer credit in 13.2.2 alone could eliminate the cash proffer payments to the Town in the future if W&S Tap Fees increased enough. Under the 2010 proffers, if/when total W&S tap fees reach \$23,550 FRLP's cash proffers will be reduced to zero:

<u>Proffers=\$0</u>	Average W&S Tap Fee	Proffer "Credit"
Per Unit	<u>\$23,550</u>	<u>\$13,550</u>
Cash Proffers for units 100-320 ($\$19,600 \times 221$ units)		\$4,331,600
W&S Tap Fees>10k units 1-320 ($13,550 \times 320$)		\$4,336,000
Per Unit Cash Proffer after Proffer Credit has been used		<u>\$0</u>

Further, we believe future tap fees increases are a matter of when, not if. Tap Fees exceeded \$17,000 three years ago, and have drastically increased across the valley since the late 2000's. Based on the Town's W&S businesses and Councils preference to increase costs on new homes/residents before increasing user rates on existing residents, we believe W&S connection fees will resume their march upwards as soon as (if) new residential construction in Town begins to substantively increase.

For example, the Town's FY13-14 approved budget's proposed future connection fees schedule is instructive as to the future of Town tap fees, and was as follows³:

³ Town FY14 Budget, page 111.

<u>Connection Fees:</u>	Feb-11	Jul-11	Jul-13	Jul-14	Jul-15	Jul-16	
<u>Sewer:</u>			20%	30.00%	30.00%	7.50%	
\$ 7,500	\$ 9,750	11,700	15,210	19,773	21,256	3/4" Tap	
\$ 16,875	\$ 21,938	26,325	34,223	44,489	47,826	1" Tap	
\$ 32,500	\$ 42,250	50,700	65,910	85,683	92,109	1 1/2" Tap	
\$ 51,250	\$ 66,625	79,950	103,935	135,116	145,249	2" Tap	
\$ 101,250	\$ 131,625	157,950	205,335	266,936	286,956	3" Tap	
\$ 157,500	\$ 204,750	245,700	319,410	415,233	446,375	4" Tap	
\$ 313,750	\$ 407,875	489,450	636,285	827,171	889,208	6" Tap	
\$ 501,250	\$ 651,625	781,950	1,016,535	1,321,496	1,420,608	8" Tap	
\$ 720,000	\$ 936,000	1,123,200	1,460,160	1,898,208	2,040,574	10" Tap	
\$ 938,750	\$ 1,220,375	1,464,450	1,903,785	2,474,921	2,660,540	12" Tap	
<u>Water:</u>			23.50%	8.50%	8.50%	8.50%	
\$ 4,000	\$ 4,340	5,360	5,815	6,310	6,846	3/4" Tap	
\$ 8,125	\$ 8,816	10,887	11,813	12,817	13,906	1" Tap	
\$ 15,000	\$ 16,275	20,100	21,808	23,662	25,673	1 1/2" Tap	
\$ 23,250	\$ 25,226	31,154	33,803	36,676	39,793	2" Tap	
\$ 45,250	\$ 49,096	60,634	65,788	71,380	77,447	3" Tap	
\$ 70,000	\$ 75,950	93,798	101,771	110,422	119,807	4" Tap	
\$ 138,750	\$ 150,544	185,922	201,725	218,871	237,476	6" Tap	
\$ 221,250	\$ 240,056	296,469	321,669	349,011	378,677	8" Tap	
\$ 317,500	\$ 344,488	425,442	461,605	500,841	543,413	10" Tap	
\$ 413,750	\$ 448,919	554,415	601,540	652,671	708,148	12" Tap	

Based on the proposed schedule of future connection fee charges that were included in the FY14 Budget (above & below), and that were recommended by Town staff and its W&S consultant and approved by Council, our W&S connection fees would be \$28,102 dollars today had the Town followed through with its FY14 connection fees schedule.⁴

<u>Budget FY14</u>	FY14 (Jul-13)	FY15 (Jul-14)	FY16 (Jul-15)	FY17 (Jul-16)
Sewer	\$11,700	\$15,210	\$19,773	\$21,256
Water	\$5,360	\$5,815	\$6,310	\$6,846
TOTAL	\$17,060	\$21,025	\$26,083	\$28,102

In hindsight, we underestimated the Town's opposition to these credits, and its desire and resolve to have us remove them. Understandably, at \$23,550 in tap fees all the cash proffers in proffer 13 would be eliminated. Further, and based on the fact that combined W&S tap fees were \$17,060 in 2015, and projected to be raised to \$28,102 by FY17, eliminating them may increase our proffers - tap fees were to be \$28,102 this year.

FRLP believes tap fees will go up. However, in any event - whether they go up or down - the proffer credits in 13.2.1 and 13.2.2 make it unlikely that the Town would receive any cash proffers under the existing proffer statement - i.e. at FRLP's discretion.

⁴ Ibid. Also see: Alex Bridges, "NVDaily, X to Y, April, 2013

As such, our August 2017 proffer amendment has removed all these cash proffer credits as requested and, if approved, would result in the Town receiving \$810,000 in additional cash and improvements that it will not receive under the terms of the existing proffers.

C. The Amendment would provide the Town with \$810,000 in additional cash and transportation improvements that it will not receive under the 2010 proffers

FRLP believes that removing proffer 13.2 will ensure that the Town will receive both its full tap fees and additional cash proffers and needed transportation improvements that it would not receive under either scenario in the 2010 proffers. The revised proffers would provide the Town an estimated \$810,000+ in additional cash and transportation improvements.

Summary of new transportation improvements added to the R1-A proffers:

<i>Newly Added Transportation Improvements & Cash Proffer Outlays</i>				
9.2	Eastbound right on E/W at 606 Marys Shady Lane Emergency	Prior to 1st (required)	E/W & 606	\$0
10.3	Access Improvements Northbound left turn lane on 606	Units 100-199	M.S. Lane	\$100,000
10.4	at E/W (or Roundabout) Traffic Light at E/W and 606	Units 175-225 (or prior to 225th)	E/W & 606	\$160,000
10.5	intersection (or Roundabout) Southbound Turn Lane on 606 at	Units 200-299 (or prior to 225th)	E/W & 606	\$250,000
10.6	H.C. Road	Units 200-299	606 & H.C.	\$300,000
				<u>\$810,000</u>

Section 4: R1-A & A-1 Property Transportation Improvements Coordination

A. 2016/17 A-1 Property Traffic Analysis & New 2017 R1-A Transp. Improvements

In 2016, FRLP met with VDOT and Town officials in order to receive their directions on what assumptions FRLP should use in its preparation of a traffic study for any rezoning effort for the recently annexed A-1 property. As a complement to that traffic study FRLP asked our transportation engineers to add a phasing analysis with the R1-A property development in order to get a better understanding of the potential timing of improvements during development the R1-A and future A-1 property (if any).

3

Three (3) out of the four (4) transportation improvements added to the R1-A proffers were recommended in our 2016 phasing analysis but were not recommended in our 2009 traffic study (TIA). The R1-A project has not changed and its new homes will not generate any more traffic than they did in our 2009 TIA, however, the underlying assumptions and data were different in our 2016 study compared to our 2009 study.⁵

The newly recommended improvements in the 2016/17 phasing analysis were largely due to the underlying traffic count(s) on 606 and at H.C. Road having increased significantly since our 2009 and 2013 traffic studies (and recent VDOT data). We are unaware of any development north of the railroad tracks that might account for such an increase. In any event, the results of the 2016/17 phasing analysis indicated the need for improvements not recommended in the 2009 TIA study. In an effort to make these improvements sooner rather than later we added the following to the R1-A proffers:

- a) *Shenandoah Shores Road and E/W Connector (recommended with closure of Marys Shady Lane (225+/- units))*
- Add an eastbound right turn lane on E/W at 606
 - Add a northbound left turn lane on 606 at E/W
 - Add a traffic control signal at E/W and 606 intersection
- b) *Shenandoah Shores Road and H.C. Road (recommended with 700 units)*
- Add southbound right turn lane on 606 at H.C. Road

The added improvements coordinate development of the two projects in an effort to minimize impacts to the residents, businesses, and community in the area ASAP, and include 3 additional turn lanes and a traffic light or similar improvement (roundabout) on 606 at its future connection to the E/W.

B. 2009 Traffic Study: FRLP proffered all improvements prior to the 50th home

Recognizing the importance of transportation improvements to the Town and the community FRLP has made every effort to facilitate the construction of community transportation improvements as early as possible. And in response to these community

5 footnote on study assumptions...

concerns in 2009 FRLP proffered the improvements in proffers 10.1, 10.2, and 10.3 far sooner than they were called for in the 2009 traffic impact analysis (TIA) study.

These proffered improvements were needed in order to ensure the transportation network functioned at the Town's desired levels of service and for all:

- Existing traffic, plus
- Background growth on the traffic network (assumed 3%), plus
- New traffic associated with previously approved developments, plus
- FRLP's traffic associated with the 320 units in the R1-A rezoning.

FRLP's proffered transportation improvements met the needs of the transportation network, the Town's desired level of service ("LOS"), and as recommended by our 2009 VDOT TIA during the rezoning.⁶ The TIA showed that the traffic generated by these 320 homes would be safely accommodated and at the Town's desired LOS of C with the recommended and proffered improvements.

In sum, FRLP proffered to make every improvement needed in our 2009-10 TIA, and to do so prior to the 50th building permit and despite such improvements not being needed or recommended until far later in the project (i.e. build-out plus 6 years).

a) FRLP background & overview on Traffic "studies" (FYI)

FRLP would note that, after completing 8 "traffic studies" for the Town/County/VDOT since 2004, we have come to the conclusion these studies are as much art as they are "science". Traffic studies depend on the assumptions (dictated by regulators) – FRLP and its transportation consultants basically conduct the traffic counts and plug in the assumptions dictated to us. In other words – we run the numbers – we do the "science" part - while the VDOT/Town regulators adjust the assumptions each time and in so doing they control the "art" part that most impacts the outcome, or the studies recommended improvements. As such, VDOT (& Town) regulators presume all powers that can and do change the outcomes and recommended improvements of each study. (We note this FYI, and as any rezoning effort for the A-1 property these issues will be prescient).

b) Summary - For Town Transportation Network - 2016/17 traffic study and analysis trumps 2009 traffic study

⁶ The Town requires a LOS of "C" – V-DOT requires a LOS of "D". FRLP's studies have always been required to use much more rigorous assumptions than Town (&VDOT) studies. (i.e. The 2007 Town traffic study used a LOS of D – LOS C vs. D is most notable, but FRLP's studies have all used significantly more adverse assumptions, across the board, than the Town's study).

Based on the 2016/17 traffic study and phasing analysis we have added the above 4 additional improvements to H.C. Road and Shenandoah Shores Road. FRLP's 2016 traffic study and analysis also used the new (2016) assumptions dictated by VDOT and the Town (input). Notably, an additional southbound turn lane on 606 at H.C Road was also added despite not being recommended until the 700th total home in both projects – we felt accelerating this improvement to be in the best interests of the community and folks using Shenandoah Shores at Happy Creek on a daily basis.

C. The R1-A project has now proffered improvements to every approach on H.C. at 606 and to 2 out of 3 approaches on 606 at E/W – plus traffic lights at both locations

<u>Old Proffers</u>	<u>New Proffer #</u>	<u>Transportation: H.C. Road & Shenandoah Shores & M.S. Lane</u>	<u>When Required</u>	<u>Intersection / Location</u>
12.1	10.1	Westbound right turn lane on H.C. Road at 606	Prior to 25th	H.C. & 606
12.2	N/A	Eastbound left turn lane on H.C. at 606 (done)	Prior to 50th	H.C. & 606
12.3	10.2	606/HC Light -\$225,000	50th (warranted)	H.C. & 606
<u>NEW</u>	9.2	Eastbound right on E/W at 606 Marys Shady Lane Emergency Access	Prior to 1st (required)	E/W & 606
<u>NEW</u>	10.3	Improvements	Units 100-199	M.S. Lane
<u>NEW</u>	10.4	Northbound left turn lane on 606 at E/W (or Roundabout)	Units 175-225 (or prior to 225th)	E/W & 606
<u>NEW</u>	10.5	Traffic Light at E/W and 606 intersection (or Roundabout)	Units 200-299 (or prior to 225th)	E/W & 606
<u>NEW</u>	10.6	Southbound Turn Lane on 606 at H.C. Road	Units 200-299	606 & H.C.

The revised proffer amendment offers a transportation plan for long needed improvements – and for improvements that if not made by FRLP will need to be made by the Town, and sooner rather than later. FRLP's project(s) cannot fix or make up for a lack of investment in the transportation network in this area overnight. Investments in the Town's infrastructure by FRLP's project(s) must be phased otherwise we will not be able to finance or begin the project(s).

Similarly, development efforts for the A-1 property do not make much sense if the Town's demands are for the project to finance infrastructure improvements all at once. If that is the case then an A-1 rezoning may not be viable until the Town makes improvements to its transportation network in the N.E. planning area. Such FRLP project(s) contributions must be phased or the project(s) will not be viable.

Section 5: Conclusion

A. The Amendment adds \$810,000+ in needed improvements to 606 & H.C. Road

The R1-A project has proffered a new traffic light and adding new turn lanes at all 3 approaches at the intersection of H.C. Road and Shenandoah Shores Road. At the entrance road (the E/W), the project has proffered a new left turn lane on 606 going north and a dedicated right turn lane on the E/W at 606. At build-out, the R1-A project will have added 1 mile of the E/W connector with 2 lanes. These investment levels will need support from the recently annexed property in order to finance or begin any development.

i. This was the first project to offer any proffers to the Town

The Town annexed and rezoned this area for residential and industrial use in its N.E. planning area 40 years ago. The Town annexed the R1-A property in 1978. In 2009, FRLP was the first property owner to proffer anything to the Town for a residential development. In addition to all of the transportation improvements we proffered land for a future park, construction of that future park, land for a fire station, design covenants, 1-mile of the E/W with a walking/biking trail, cash to the Town, and cash to the County (schools). To our knowledge, no homes built in Town have proffered to contribute anything to the Town or County - ever.

ii. Town Legal & Fiscal Concerns - August 2017 Revised Proffers

- Legal Concerns – FRLP’s August 2017 proffer amendment has removed all of the tap fees/proffer credits from the 2010 proffers and based on Town requests that we do so. Removes legal/fiscal liability of any adverse interpretation to the Town.
- Fiscal Implications – The amendment will provide the Town with an additional \$810,000+ in cash and transportation improvements that it would not receive in any scenario under the 2010 proffers. Further,
 - FRLP believes that new Town residents and taxpayers would help to fund the ongoing maintenance and replacement costs attributable to the Town’s ageing G.F. and W&S infrastructure. New residents/customers will help fund system-wide repairs and that the Town’s existing resident’s will need to pay for one day whether any new homes are constructed or not.
 - FRLP believes that the Town would benefit from expanding its tax base. The project(s) would also create jobs and represents an opportunity for the Town. We also believe that the cumulative taxes generated will exceed the Town’s costs to provide services – (i.e.) the Town would be using excess

revenues generated by the project to fund community wide improvements and to the benefit of the Town and community environs.

iii. In Sum – A “win/win”?

FRLP is excited about Front Royal. And we believe fiscally and environmentally sustainable development is imperative to the community’s long-term sustainability and vitality. We believe the North-East Planning area offers opportunities to build upon the community’s existing civic culture and values. We believe this area represents an opportunity for a potential competitive advantage to the Town in attracting new businesses in the future. We agree area road improvements will help and are needed.

Since 2015, the proffer amendment has proposed removing only the proffer credits that are applicable under the “E/W” scenario. This has been a major roadblock to resolving the Town’s remaining legal concerns and issues with the 2010 proffers. At this time, we believe that removing the uncertainty surrounding the numerous tap fees/proffer credits would be in the best interests of both parties. The revised proffers reflect our best efforts to compromise and accommodate the Town’s concerns with the hope of breaking our current stalemate over these issues.

We also better understand the Town’s concerns and requests that we remove the myriad proffer and tap fee credits – and removing the proffer credits should eliminate the Town’s remaining concerns as well as any potential fiscal liabilities that would result from adverse legal interpretations of the proffer credits and to the detriment of the Town. Moreover, removing the tap fees/cash proffer credits in 13.2 is also a business (liability) issue for the Town or in the event of any future adverse legal interpretations to the Town.

In sum, based on our discussions and Town requests our revised proffers have removed all of the tap fee/proffer credits from the 2010 proffers. We have also added \$810,000+ in improvements to the local transportation network, all improvements that we believe the Town is going to need to make in any event and if FRLP’s project does not.

Appendix A: **Table of Contents**

- A. The Need for Town Infrastructure Investments has been clear for 40 years, or not
 - i. *The Town annexed and rezoned 800-acres North-East Planning Area 40 years ago*
 - ii. *The capacity of the present road network is inadequate to serve by-right dev. of area*
 - iii. *1976/78 Town Annexations of the North East Planning Area for Residential/Business*
 - iv. *FRLP's position on the E/W has not changed since concluding with the P.C in 2009*
 - v. *Need for Infrastructure Improvements to serve the N.E. was created 40 years ago*

Appendix A: Town Transportation Planning

A. The Need for Town Infrastructure Investments has been clear for 40 years, or not

i. The Town annexed and rezoned 800-acres North-East Planning Area 40 years ago

In a 2009 memo to the Town Planning Commission during this rezoning, and in regard to the local transportation network, Town staff stated,

“There seems to be universal agreement that the *future* development pattern (specifically overall density) of the Happy Creek land bay is a function of the capacity of the future road network. However, the assertion I wish to make is that the capacity of the *present* road network (i.e. Happy Creek Road and the intersection with Shenandoah Shores Road) is inadequate to serve the *present* and potential by-right demands of the industrial, residential, and institutional development in this area. So the membership is asked if there is consensus that a robust package of transportation improvements is already necessary. To reiterate, it is already necessary even if the subject property and the surrounding properties are to be developed by-right, and therefore this need is not generated exclusively by any increases in densities that might be permitted through the subject rezoning.”⁷

Then Planning Commission Chairman Mr. Gushee expounded upon the rezoning and transportation improvements proffers in a 2010 joint work session with the County P.C., “it will provide support to the transportation network that will need to be built

⁷ Andy Conlon, Town Director of Planning, August 25, 2009, Staff Report to Planning Commission, page 1.

because of the County growth outside of the Town limits. Because the roads will need to be built, the Town would like to get proffers to help pay for the roads....”⁸

ii. The capacity of the present road network is inadequate to serve by-right dev. of area

Not including the recent (2014) annexation, the Town’s North East Planning Area had approximately 691 developable acres out of a total of 799 total acres. Of the developable acres 399 acres were zoned for Residential and 297 acres were planned and zoned for Industrial/ Business use.⁹

To the best of our knowledge, the Town has not invested any money in capacity or safety improvements to its transportation network in the N.E. planning area in order to improve access to this industrial land it owns and to improve access to the entire N.E. planning area that it annexed 40 years ago.

iii. 76/78 Town Annexations of the North East Planning Area for Residential/Business

On December 3, 1976, and December 31, 1978, the Town formally adjusted its boundary and added 799 acres to the north of Happy Creek Road. The latter annexation decree, dated October 20, 1978, stated that,

“[t]he area described in paragraph 3 above, when taken together with the present Town forms a reasonably compact body of land and such area is adapted to town improvements and will be needed in the reasonably near future for development and especially is said land suitable for industrial development, which the court doth so adjudicate.”¹⁰

These issues were also noted by the County planning commission and during the 2007 Comprehensive Plan amendment hearings.

“The proposed [town] plan also appears to be completely contradictory of the purposes and requirements of the Town’s 1976 annexation of the area. The town’s petition for annexation indicated that the area would be developed ‘for the coordinated and harmonious development and growth of the community,’ including the extension of water lines, sewer lines, streets and avenues, and street lighting ‘as soon as practicable.’”¹¹

⁸ February 25, 2010, Joint Town-County Planning Commission Work Session, Meeting Minutes, page 3.

⁹ 2008 Town Comprehensive Plan Amendment, page 36.

¹⁰ 1978 Town Annexation Agreement, page 3.

¹¹ 1978 Town Annexation Area. Deed Book 243, Page 749.

Further, numerous local business owners in the area expressed their frustration at the transportation situation during public hearings in 2007 and 2008. They also sent a letter to the Town signed by the majority of the business owners in the H.C. Park. As a local businessman summarized in the public hearings of the Town P.C. and Council and in regard to 606 and the roads leading to the H.C. technology park,

“(he) currently brings in 12-15 tractor-trailer loads of equipment daily and that the owners and operators of those trucks had expressed serious safety concerns because of sole access along roads referred to as ‘paved cow trails’ to get to the Happy Creek Industrial and Technology Park areas.”¹²

After the 1976/78 annexations the Town did not follow the legal requirements of the annexations to extend its sewer lines and service to annexation areas. The Town faced legal action in 1987, and it extended a sewer line in 1989. The case concluded in 1996.

In this case, FRLP filed its first preliminary site plan for its R1-A property in 2004. We filed another one a few years later. We asked for an open space ordinance in 2007. We asked for more environmentally friendly regulations beginning in 2009... The Town has preferred to defer until... In any event, FRLP has done its best to follow the Comprehensive Plan & for the N.E. planning area and to meet the Town’s requests as much as has been tenable. Indecision is a refusal to act, but it is a decision nonetheless.

I would also stress our issues are with Town Council – we hold no issue with staff through the years. Needless to say, the buck stops at Council for the Town’s actions, laws, and culture of viewing residential development as a zero sum “us” vs. “them” proposition and ever since we filed our 2004 site plan and the Town first went into closed sessions. Staff has the hardest job in Town, beholden to the political expediencies of an ever-changing Council and individual Councilman, a tall order.

iv. FRLP’s position on the E/W has not changed since concluding with the P.C in 2009

In 2010, it was clear that no matter which scenario the Town might choose in the future, we believed that both scenarios were well discussed, thought out, and beneficial to both parties when compared to the alternative at the time of 99 1-acre home lots. This is still true, and our positions on these issues have not changed since our discussions with the P.C. concluded in 2009¹³, as we tried to make clear and stated to the P.C. at the time,

“I was disappointed that staff chose our last work session to present the Applicant and the P.C. with an entirely new set of proffer requests. I thought the timing and

¹² Roger Biancini, “Businessmen tell Town to fix roads or we’ll leave”, W.C. Report, Early October, 2007.

¹³ What has changed at the local level (for FRLP) are our expectations of future W&S tap fees – FRLP’s ability to proffer improvements are impacted by tap fees – indeed, that is why we negotiated all of these proffer/tap fees “credits” in 2010.

content of these new requests was confusing for both the Applicant and the P.C.... It was unfortunate that we had to conclude our negotiations with the P.C. with a new set of requests from staff after months of back and forth negotiations, a public hearing, five work sessions, and a meeting with the County Administrator. With this 11th hour set of requests, the Town has quickly exceeded what FRLP considers to be our tipping point of reasonable proffer negotiations and requests. As the Town planning staff has previously stated, such requests (for the construction of the E/W) are beyond the scope of this project...

"I am not passionate about, and FRLP has less interest in, wild proffer negotiation tactics ... FRLP made significant concessions after the August 25th work session with the shortsighted assumption that such concessions would lead to a staff recommendation of approval. I feel as though FRLP has negotiated this deal in good faith with the Town Planning staff and P.C. If we missed something or failed to address any requirements on the part of the P.C., we are more than happy, and eager to discuss any such oversight. Based upon our negotiations to date, and my belief in the professionalism and integrity of the Town Planning staff, it seems unlikely that these new requests came from the Planning staff."¹⁴

FRLP's positions on the E/W have been consistent and we believe we had met every Town/P.C. request prior to our final work session with the P.C. in 2009. The 2010 proffers were the direct result of the Town P.C. and FRLP (& staff) doing our best to meet the Town's expectations for such an "E/W scenario" in these proffers. Since our annexation discussion with the Town, the Town has conveyed its concerns that aspects of the E/W scenario may not be legally permissible and the Amendment proposes we remove all of the objectionable tap fees/proffer credits from the proffer statement.

**v. Need for Infrastructure Improvements to serve the N.E.
was created 40 years ago**

Similar to Leach Run Parkway, the demand for much of the needed transportation infrastructure was generated 40 years ago when the Town annexed its N.E. Planning area and rezoned 800+/- acres for residential and industrial development.

**a. 2004 Town/County Funded Happy Creek Road
Area Traffic Analysis**

The 2004 Town/County jointly funded Happy Creek Charrette highlighted the need for improvements to the Town's traffic network in the future based solely on what may occur by-right in the Town, County, and specifically, the Happy Creek Road area. The Town/County funded Happy Creek Transportation Study projected future Average

¹⁴ FRLP, Letter to Town P.C. (Town Staff and Town Manager), September 11, 2009. FRLP comments after our last work session with P.C. and prior to its vote on this project.

Daily Trips (ADT's), generated from the by-right development of the area, on the local transportation network as follows:

LONG RANGE PLANNING (20-50 years) - H.C. Charrette 'by-right' development scenario				
Existing "By-Right" Development Potential			Units	ADT's (Approx.)
Town Residential			1400.00	14000.00
Town I-1	145 acres	.5 FAR	3158000.00	23000.00
Town I-2	70 acres	.4 FAR	1220000.00	8200.00
TOTAL ADT's from NEW by-right Dev.				45200.00

NOTE: The H.C. Charrette was a jointly funded planning exercise by the Town and County in 2004. Additionally, its residential unit #'s do not reflect the downzonings.

The H.C. technology park, developed by right, will generate significantly more traffic on the local transportation network than FRLP's projects combined.

- The by right development of 145 acres of the EDA owned H.C. technology park would generate 23,000 ADT's.
- FRLP's R1-A project will generate 3,200 ADT's. In perspective/context, 1,000 single-family detached homes would generate 10,000 ADT's – less than half of the 23,000 ADT's generated by right by development of the H.C. technology park (i.e. excluding the 100+/- acres of by right industrial in the privately owned H.C. Industrial Park, and which would add another 8,200 ADT's to the EDA's 23,000.

The EDA is a Town/County owned quasi-governmental agency, and the Town/County will benefit financially from the future sale and development of the H.C. technology park in the form of reduced financial support requirements, an expanded local tax base, and expanded local employment further resulting in increased tax receipts.

b. The Need for Town Infrastructure Investments to serve the N.E. has been clear for 40 years, or not

FRLP would disagree with an assertion that the project has fallen short in any transportation planning capacity, to the contrary, we believe the R1-A amendment offers a short to medium term transportation plan for the area that is realistic and that makes improvements that should (ideally) be made sooner rather than later. If the R1-A project does not make some of these improvements the Town may need/decide to do so instead.

Appendix B: **Table of Contents**

A. The Town has been clear that the terms and conditions of the "E/W" scenario are unacceptable and/or legally impermissible to it - we propose we remove it

- i. *Concern: Capping the Tap Fees at \$10,000 in Proffer 11.3.4*
- ii. *Concern: Escrow Account in Proffer 13.4*
- iii. *It appears reasonable to assume that the Town will not choose the E/W scenario*

Appendix B: Town Legal Concerns with the E/W scenario in the 2010 proffers

**A. The Town has been clear that the terms and conditions of the
"E/W" scenario are unacceptable and/or legally
impermissible to it - we propose we remove it.**

i. Concern: Capping the Tap Fees at \$10,000 in Proffer 11.3.4

In an August 2015 Memo to the Planning Commission from the Town Attorney, legal concerns were raised in regards to the tap fee credits provided to FRLP that effectively act to cap, or limit FRLP's total tap fees per unit to \$10,000 under the "E/W" scenario (11.3.4). The relevant portions of that summary and in regards to such tap fee credits under the E/W scenario are included below:

1) The validity of the Town taking moneys from its water and sewer enterprise funds to pay the credits called for in the 2010 FRLP proffers;

...

"A locality may make like gifts, donations and appropriations of money to industrial development authorities for the purposes of promoting economic development.") FRLP is clearly not a charitable institution or association. The situation is even more pronounced under attached Scenario 2. Note what the Department of Planning & Zoning has calculated: "Under this scenario with the current proffers, the Town gets the E/W Connector [Road] constructed with a financial loss [to the Town] of approximately 5 million dollars. Worst case scenario, the Town loses 11 Y2 million dollars and FRLP covers the cost of the entrance road (4lanes) required by the Subdivision Ordinance.

...

"The Attorney General stated in 83-84 Va. AG 133 that local governments Counties have the right to make gifts to certain charitable and eleemosynary organizations by reason of the aforementioned statute; they do not, however, have the right to make gifts to private parties.

"It seems to me the overall effect of the 2010 proffers is that, at the sole election of FRLP, FRLP could require the Town, in essence, to pay to FRLP a net sum of money or other things of value; in essence, require the Town to make a gift of money or other things of value to FRLP. I do not think this is legally permissible."¹⁵

The Town position appears to be that capping the tap fees at \$10,000 per home would constitute the Town making a "gift" to FRLP and therefore doing so would not be legally permissible. If that is indeed the Town position, then why would/could the Town choose the "E/W" scenario? Further, if the Town does choose this scenario and then refuses to cap our tap fees at \$10,000 then FRLP would not be required to build the road. The proffers make this clear (11.3) - FRLP's obligations under the E/W scenario are contingent upon the Town's agreement to these terms in a MOU (discussed in #3 below).

ii. Concern: Escrow Account in Proffer 13.4

The following additional concern was expressed in regards to the "E/W" scenario and its reimbursements that would be paid to FRLP as required in proffer 13.4.

FOURTH: The proffers have been worded so that the proffer contributions paid by FRLP would be placed in a third party escrow account and be paid over to FRLP "to reimburse it for the actual audited cost of the engineering, design, and construction of the Phase 2 through 4 improvements." This is frightening wording. Does "improvements" mean "residential units" as well as the cost of the East/West Connector Road, the water and sewer tap fees, sidewalks, and all the other miscellaneous costs? Whatever it means, it certainly seems the Town will be making gifts to FRLP, and this would seem to be the making of impermissible gifts."¹⁶

Based on the position that the escrow account mechanism in 13.4, and the tap fees cap in 11.3.4, would constitute the Town making impermissible gifts to FRLP, we do not believe the Town would/could choose the "E/W" scenario and that it would therefore make sense to remove the objectionable scenario.

¹⁵ Town Attorney, Memo to Director of Planning, August 25, 2015

¹⁶ Ibid.

iii. **It appears reasonable to assume that the Town will not choose the E/W scenario**

The Town's legal concerns with the E/W scenario in the R1-A proffers suggest that the Town views this scenario or option as being unsavory - but also illegal.

FRLP's obligations in this scenario are contingent upon the Town's future agreement to cap the tap fees and use an escrow account that the Town deems illegal. Notably, the Town cannot "choose" this scenario and then refuse to agree to the terms outlined in the proffers - as doing so would relieve FRLP of any and all of its obligations under the "E/W" scenario and we would default to the other scenario.

The Town has noted that proffers cannot legally "obligate" the Town to do anything, and we agree, however, we set these proffers up so that FRLP's obligations are contingent upon the Town's future agreement to these terms. In other words, the Town is not "obligated" to provide FRLP with the cap to its W&S fees, but if the Town chooses not to provide the cap then FRLP is not obligated to fulfill any of its obligations under the E/W scenario. Proffer 11.3 makes this clear, and begins "Subject to the following conditions, the Applicant shall...", and it then lists the conditions of the E/W scenario that must be met in order for it to apply, including,

11.3.4 within twelve months from approval of the first Final Record Plat for the Property, the Town and the Applicant have entered into a mutually satisfactory memorandum of understanding which shall, among other things, include provisions delineating i) ... the Applicant shall receive a dollar for dollar credit in the amount of... Such sums shall be a credit against the Applicant's Water and Sewer Tap fees in excess of the current cost thereof of \$10,000 per such unit. If the Town increases the aforesaid Water and Sewer Tap fees, then the Applicant shall be entitled to a credit against Water and Sewer Tap Fees in the amount of any increase above \$10,000. (*Section 11.3.4 of Proffers, emphasis added*)

If the Town position is that agreeing to these terms would be illegal then let's remove this scenario and move on. If the Town position is to try to require FRLP to fulfill its obligations under the E/W scenario but the Town is not going to live up to its obligations then we can revisit this in the future. The law is clear on interpreting proffers.¹⁷

In sum, the Town's legal issues with "capping" the tap fees at \$10,000 as required in section 11.3, and specifically 11.3.4, and its legal issues with the escrow account mechanism in section 13.4, each suggest to FRLP that the Town would and/or could not choose the "E/W" scenario that is proposed for removal because it views portions of this scenario as being illegal. Similarly, the first sentence of 11.3 makes clear that if the Town does not agree to these conditions within 12 months of the first final record plat then FRLP's obligations under the E/W scenario are no longer applicable or enforceable.

¹⁷ See Section 3(A) & Footnote #5

FRLP continues to believe we should remove this "E/W" scenario and that doing so would be to the benefit of both parties. We believe resolving these issues is significantly more important now than it was when we submitted the amendment. This is due to our underestimating these Town concerns. We believe the proffer amendment is an opportunity for a "win/win" and is in the Town's best interests legally and financially.

**FRONT ROYAL LIMITED PARTNERSHIP – TOWN PROPERTY
TOWN OF FRONT ROYAL, VIRGINIA**

REZONING: RZ09-02-64

PROPERTY: Parcel 5A, containing approximately 149.3 acres, as shown on “Plat Showing Vacation of Boundary Line on the Property of F&R Limited Partnership” and as recorded in the Land Records of Warren County as Instrument Number 060012763, (attached hereto and incorporated herein by reference as Exhibit 1)

PROPERTY OWNER: Front Royal Limited Partnership, a Virginia Limited partnership

APPLICANT: Front Royal Limited Partnership, a Virginia Limited Partnership

PROJECT NAME: To be determined at time of subdivision application

ORIGINAL DATE OF PROFFERS: February 20th, 2009

REVISION DATES: August 5, 2009
September 4, 2009
September 10, 2009
December 7, 2009
December 28, 2009
January 29, 2010
~~August 24, 2017~~
~~September 29, 2017~~
~~October 27, 2017~~
~~November 6, 2017~~
November 8, 2017

The undersigned hereby proffers that the use and development of the subject property ("Property"), as described above, shall be in general conformance with the following conditions, which shall supersede all other proffers that may have been made prior hereto. In the event the above referenced rezoning is not granted as applied for by the Applicant ("Applicant"), these proffers shall be withdrawn and shall be invalid. In the event this application is denied by the Front Royal Town Council (the "Council"), such denial is appealed to a court of competent jurisdiction, and this rezoning application is thereafter remanded to the Council for reconsideration, then the Applicant may elect to

readopt all or any portion hereof, in a writing specifically for that purpose; if no such election is made, these proffers shall be withdrawn and shall be invalid.

The headings of the proffers set forth below have been prepared for convenience or reference only and shall not control or affect the meaning or be taken as an interpretation of any provision of the proffers.

The improvements proffered herein shall be provided at the time of development of that portion of the Property adjacent to or including the improvement or other proffered requirement, unless otherwise specified herein.

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- 1.2. The total number of dwelling units shall not exceed 320 single-family dwellings.

2. WATER AND SEWER

- 2.1. The Property shall be connected to public water and sewer systems constructed at the Applicant’s expense.

3. STORMWATER MANAGEMENT & ENVIRONMENT

- 3.1. Stormwater management on the Property shall be provided in accordance with the applicable regulations of the town of Front Royal and Warren County. In addition, Best Management Practices and low impact development technologies shall be used where reasonably practical, as determined by the Applicant, and permitted, to mitigate any adverse water quality impact on the Shenandoah River that may occur.

4. COMMUNITY DESIGN

- 4.1. The Applicant shall impose restrictive covenants for the overall community, which shall be recorded prior to the conveyance of the first parcel of the Property, and which shall be made available to staff upon request prior to recordation of any final subdivision plat. Among other things such covenants will

address the overall continuity of design within the community through design standards for the following elements:

- 4.1.1. Custom mailbox design;
- 4.1.2. Standardized private residential fencing styles and color;
- 4.1.3. Custom designed street signage and stop signage;
- 4.1.4. Uniform site furnishing selection (trash receptacles and benches);
- 4.1.5. Standardized common area fencing style and color.
- 4.1.6. Permitted building materials.
- 4.1.7. Restrictions on the visibility of concrete block from streets within the development.

5. CREATION OF HOMEOWNERS' AND PROPERTY OWNERS' ASSOCIATIONS

- 5.1. One or more homeowners' associations ("HOA") shall be created and shall be made responsible for the maintenance and repair of common areas, including any common open space that may be established in accordance with the requirements of the Town Zoning Ordinance or these proffers. Any such HOA shall be granted such other responsibilities, duties, and powers as are customary for such associations, or as may be required to effect the purposes for which such HOA is created. Such HOA shall be granted sufficient powers as may be necessary, by regular or special dues or assessment, to raise revenues sufficient to perform the duties assigned hereby, or by the documents creating the Association, and to perform rate studies necessary to determine dues, fees, and assessments as may be required.
- 5.2. In addition to any other duties and responsibilities as may be assigned to it, the HOA shall have title to and responsibility for (i) common open space areas not dedicated to public use in accordance with these proffers and (ii) common buffer areas located outside of residential lots. It shall also have (iii) responsibility for the perpetual maintenance of any entrance feature (subdivision) signs, street, alleys and perimeter or road buffers located within any easements for those purposes to be

granted to the HOA, and (iv) for maintenance of private streets and alleyways, if any.

6. LAND DEDICATION

- 6.1. The Applicant shall dedicate to the Town of Front Royal, under the conditions set forth below, a 1.75 acre site adjacent to Route 606, as such area is generally depicted on Exhibit 2 attached hereto and incorporated herein by reference, prepared by J. Duggan & Associates, dated September 4, 2009, and identified as "1.75-Acre Land Dedication" (the "Dedication Area"). A sight distance easement shall be reflected on the Dedication Plat, if required by VDOT at the time of dedication, so as not to impede or adversely affect design or approval of the Entrance Road (as defined below), and its connection to Route 606.
- 6.2. The Dedication Area shall be used by the Town and the Virginia Department of Transportation ("VDOT") for the construction of the Leach Run Parkway, or, at the Town's sole discretion, it may be further conveyed by the Town to Warren County, Virginia, for use as a fire and rescue station. If the Town elects to use the Dedication Area for construction of Leach Run Parkway and if the Town determines that additional right-of-way beyond the Dedication Area is necessary for Leach Run Parkway, the Applicant shall dedicate additional land to the Town solely for construction of Leach Run Parkway the "Additional Land Dedication"). Provided, however, that (i) such Additional Land Dedication shall not exceed two (2) acres in size, and (ii) the Additional Land Dedication shall not impede or adversely affect design or approval of the Entrance Road (as defined below), and its connection to Route 606.
- 6.3. The Applicant shall execute a dedication plat within 18 months of the Town's delivery of a plat at the Town's expense, depicting by metes and bounds the Dedication Area (the "Dedication Plat"), provided that no such dedication shall be required prior to the issuance of the 25th building permit for the Property. Further, and notwithstanding the foregoing, in the event the Town does not request the aforesaid dedication prior to the issuance of the 300th building permit for the Property, the Applicant shall be relieved of its obligation to make the aforesaid dedication.

7. PEDESTRIAN AND PARK FACILITIES

- 7.1. Trails.

- 7.1.1. The Applicant shall construct a walking/jogging trail with a minimum width of 8 feet on one side of Phase 1 of the East/West Connector as generally depicted on Exhibit 3 attached hereto and incorporated herein prepared by Bowman Consulting and entitled “R1-A Transportation Exhibit”.
 - 7.1.2. In addition, if the Town approves all final subdivision plats for the development permitting sidewalks on one side of each street in the development, the Applicant shall construct alternative pedestrian walking trails within the development of a minimum length of .75 miles. The location of the walking trails shall be determined by the Applicant and depicted on any preliminary plat for the development of the Property. The construction of such walking trails shall occur either in phases in conjunction with the development of sections Property as depicted on the preliminary plat, or at one time, in the sole discretion of the Applicant. If such final subdivision plats are not approved with sidewalks on one side of each street of the development, the Applicant shall not be obligated to construct such additional trails, but in any event, the Applicant shall construct the trails as set forth in Proffer 7.1.1
- 7.2. Not later than the issuance of the 150th building permit for the Property, the Applicant shall construct a neighborhood park or parks (the “Neighborhood Park”) that shall consist of not less than four (4) acres but not more than ten (10) acres, and shall include a basketball court or 2 basketball hoops, a playground, and at least one multi-purpose playing field, or similar equivalent amenities if approved by the Director of Planning. The design and location of the Neighborhood Park and its associated amenities shall be in the sole discretion of the Applicant.
- 7.3. Alternatively and notwithstanding the foregoing, in the event the Town elects in writing prior to the issuance of the 25th building permit for the Property to require the Applicant to dedicate the Neighborhood Park to Warren County, and Warren County agrees in writing to accept such dedication and the maintenance responsibility for the Neighborhood Park and its amenities, the Applicant shall design, plat, and construct the Neighborhood Park and the amenities described above in accordance with the standards set by the Warren County

Department of Parks and Recreation. In the event that the County declines to accept the aforesaid dedication, the Neighborhood Park shall be dedicated to an HOA created pursuant to Proffer 5, above.

8. RIGHT-OF-WAY DEDICATIONS AND RESERVATION

- 8.1. Entrance Road –Phase 1 of East/West Connector. The final subdivision plat (a “Record Plat”) for the first phase of the development of the Property shall include reservation and/or dedication of not less than 100 feet of right-of-way, unless an alternative width is mutually agreed to by the Town and Applicant, for an entrance road into the Property, the general location of which is depicted on the Exhibit 3 attached hereto and incorporated herein prepared by Bowman Consulting and entitled “R1-A Transportation Exhibit,” with such road identified thereon as Phase 1, and connecting Point A to A-1 and A-1 to B thereon (hereinafter the “Entrance Road”). The right-of-way reservation and/or dedication language shall be submitted by the Applicant and reviewed by the Town Attorney and Director of Planning before recordation of the first final record plat.
- 8.2. Right-of-Way Dedication. As a condition of the approval of each record plat where the East/West Connector is located the Applicant shall dedicate to the Town, at no cost and in fee simple absolute, right-of-way with a minimum width of one-hundred (100) feet, unless an alternative width is mutually agreed to by the Town and Applicant, to accommodate the development of the East/West Connector on the Property.
- 8.3. The final locations of the aforesaid roads shall be subject to modifications based on final design and final engineering and approvals thereof by the Town and/or VDOT, final lot layout, and Town Code requirements.

9. CONSTRUCTION OF EAST/WEST CONNECTOR

- 9.1. Entrance Road – Phase 1 of East/West Connector. The Entrance Road shall consist of a two-lane roadway with full turn lanes, and shall include a 4-lane section at its connection with Shenandoah Shores Road for five hundred and fifty (550) feet as required by Town Code or as otherwise may be approved by the Town. For purposes of this Proffer Statement the segments

of the roadways to be dedicated and constructed are depicted on Exhibit 3 and designated by letters and numbers and referenced herein.

- 9.1.1. Point A to A-1. The Applicant shall construct a two (2) lane Entrance Road to the first proposed street intersection in the subdivision prior to and as a condition of the issuance of the first building permit for the property
- 9.1.2. Point A-1 to B. Prior to and as a condition of the recordation of any final record plat that includes any residential lot area within 25 feet of the centerline of existing Mary's Shady Lane the Applicant shall have completed the construction of two (2) lanes of Phase 1 of the East/West Connector to the western property boundary.
- 9.1.3. No individual single-family lot shall have direct driveway access to the East/West Connector.
- 9.2. Eastbound Right Turn Lane on Entrance Road at Shenandoah Shores Road. The Applicant shall construct one (1) dedicated eastbound right turn lane on the Entrance Road at its intersection with Shenandoah Shores Road.

10. TRANSPORTATION IMPROVEMENTS

- 10.1. Westbound Right Turn Lane on Happy Creed Road. The Applicant shall construct a fifty (50) foot westbound right turn lane on Happy Creek Road at Shenandoah Shores within the existing right-of-way prior to the issuance of the 25th building permit for the Property. In the event that such improvement has been completed at such time, then the Applicant shall be relieved of its obligations herein.
- 10.2. Traffic Light at Happy Creek Road and 606. If the Town determines that a traffic light is warranted at Route 606 and Happy Creek Road, then the Applicant shall contribute \$225,000.00 to the Town of Front Royal for the construction of such traffic light. The Applicant shall not be required to make such contribution earlier than the issuance of the 50th building permit for the Property or later than the issuance of the 225th building permit for the Property.

- 10.2.1. Alternatively, and notwithstanding the foregoing, any such monies paid pursuant to this Proffer may be applied toward the right-of-way acquisition, design, and/or construction of the Leach Run Parkway, including a future fly-over of Happy Creek Road and the Norfolk Southern Railroad tracks to Shenandoah Shores Road.
- 10.3. Northbound Shenandoah Shores Road Left Turn at East/West Connector. The Applicant shall construct a two hundred (200) foot northbound left turn lane with taper on Shenandoah Shores Road at its proposed intersection with the Entrance Road within the existing right-of-way prior to the issuance of the 200th building permit for the Property. In the event that such improvement has been completed at such time, then the Applicant shall be relieved of its obligations herein.
 - 10.3.1. Alternatively, and notwithstanding the foregoing, if at any time prior to the issuance of the 150th building permit on the Property the Applicant shall have designed and engineered a traffic circle or roundabout at this location, and the Town and VDOT shall have approved such design and in lieu of the aforementioned turn lane, then the Applicant shall construct a traffic roundabout prior to and as a condition of the issuance of the 200th building permit on the Property.
- 10.4. Roundabout or Traffic Signalization at Shenandoah Shores Road and East/West Connector.
 - 10.4.1. Prior to and as a condition of the issuance of the 1st building permit on the Property, the Applicant shall submit a roundabout justification report to the Town and VDOT for the intersection of Route 606 and the Entrance Road.
 - 10.4.2. Prior to and as a condition of the issuance of the 225th building permit for the Property, the Applicant shall submit a traffic signalization warrant analysis to the Town, and in accordance with VDOT requirements for the same, for the intersection of Route 606 and the Entrance Road. In the event such traffic signal is warranted, the Applicant shall make a one-time contribution to the Town of Front Royal equal to its pro-rata share of the estimated costs of

such traffic light, provided, however, that in no event shall such contribution exceed \$225,000.00. The Applicant shall not be required to make such contribution earlier than the issuance of the 250th building permit for the Property or later than the issuance of the 300th building permit for the Property.

- 10.4.2.1. Alternatively, and notwithstanding the foregoing, any such monies paid pursuant to this Proffer may be applied toward the right-of-way acquisition, design, and/or construction of the Leach Run Parkway, including a future fly-over of Happy Creek Road and the Norfolk Southern Railroad tracks to Shenandoah Shores Road.

11. CASH CONTRIBUTIONS TO WARREN COUNTY, VIRGINIA.

- 11.1. In the event this rezoning application is approved, the Applicant will pay to Warren County, Virginia a per unit sum of \$11,000.00, prior to and as a condition of the issuance of an occupancy permit for each single-family dwelling unit in excess of 160 such units constructed on the Property.
- 11.2. Notwithstanding the foregoing Proffer, the audited costs of the engineering, design, and construction of the Neighborhood Park as provided in these Proffers, shall be credited against the aforesaid per unit contribution, provided further that the Applicant shall be entitled to a credit for the dedication of the land therefor in the amount of \$320,000.

12. MARY'S SHADY LANE

- 12.1. If the Applicant fails to relocate Mary's Shady Lane, the Applicant shall revise its then current site or subdivision plan to reflect the continued existence thereof.
- 12.2. If the Applicant successfully relocates Mary's Shady Lane, then the Applicant shall connect Mary's Shady Lane to the Entrance Road no later than the 300th building permit for the Property. At no time during the construction on or development of the Property shall access be denied to persons using Mary's Shady Lane.
- 12.3. Applicant shall not utilize Mary's Shady Lane as a construction entrance for the Property.

13. MISCELLANEOUS

- 13.1. Prior to the commencement of any land disturbing activities on the Property, the Applicant shall perform a Phase I Archeological Study for investigation of those areas previously identified on the Property as potentially sensitive in the "Phase IA Archeological Evaluation of the 830.4 Acre Vazzana Property, Front Royal and Warren County, Virginia," dated January 2004, prepared by Thunderbird Archeological Associates, Inc.
- 13.2. Any additional archeological features identified on the Property during the Phase I study shall be further evaluated in accordance with the Virginia Department of Historical Resources ("VDHR") guidelines.

14. OPEN SPACE

- 14.1. A minimum of 30% of the Property will be used for permanent open space. Such open space shall be inclusive of passive and active open space including all park land provided hereunder and stormwater management uses.

15. COMPLIANCE WITH STATE LAWS

- 15.1. The Applicant hereby acknowledges, affirms, and agrees that all offsite proffers, including cash proffers, offered herein are voluntary, reasonable, specifically attributable to the new residential development or new residential use, address an impact to an offsite public facility such that the new residential development or residential use creates a need, or identifiable portion of a need, for one or more public facility improvements in excess of existing public facility capacity at the time of the rezoning or proffer condition amendment and each new residential development or new residential use receives a direct and material benefit from the proffer made with respect to any public facility improvement, and are offered in accordance with all requirements of state law. Furthermore, the Applicant agrees that the Town, including its officers, employees and agents, have not suggested, requested, required or accepted any unreasonable proffers for the rezoning or proffer condition amendment.

16. ESCALATOR

- 16.1. Monetary contributions as set forth in this Proffer Statement

that are paid to the Town of Front Royal and/or Warren County after 24 months from the date of rezoning approval shall be adjusted in accordance with the Urban Consumer Price Index (“CPI-U”), as published by the United States Department of Labor. The adjustment shall be calculated from the CPI-U published most nearly to and following January 1st from that date 24 months after rezoning approval and the date the contributions are paid, subject to a cap of 3% per year, non-compounded.

SIGNATURES APPEAR ON THE FOLLOWING PAGE

OWNER:

FRONT ROYAL LIMITED PARTNERSHIP,
a Virginia limited Partnership

By: MVA Limited Partnership, general partner of
Front Royal Limited Partnership

By: DOC Corporation, general partner of MVA
Limited Partnership

By: _____
David A. Vazzana, President of
DOC Corporation

Date: _____

EXHIBIT 1

FOR PLAT SEE SLIDES

227-H

227-I

227-J

227-K

WARREN COUNTY, VIRGINIA
LAND RECORDS

DEDICATION OF PLAT ENTITLED
PLAT SHOWING VACATION OF BOUNDARY LINE
ON THE PROPERTY OF F & R LIMITED PARTNERSHIP
SHENANDOAH DISTRICT
WARREN COUNTY, VIRGINIA

000231 NOV-98

06001850

Centex/F & R Limited

KNOW ALL MEN BY THESE PRESENTS: That, Front Royal Limited Partnership, a Virginia Limited Partnership, f/k/a/ F & R Limited Partnership, a Virginia Limited Partnership the owner and proprietor of a certain parcel of real estate located in Warren County, Virginia, as shown on a plat entitled, "Plat Showing Vacation of Boundary Line on the Property of F&R Limited Partnership," dated May 22, 2006, and prepared by Walter C. Sampsell, Jr., Land Surveyor;

The undersigned desiring to have said plat and survey recorded in the Clerk's Office so the deeds hereafter be executed with reference to and in accordance with said plat, does hereby adopt, ratify, approve and confirm said plat and survey as a true plat and survey of the said real estate and do announce their intention to refer hereafter to said plat and survey for the purposes of identifying in any deed hereafter to be granted and conveyed.

WITNESS the following signatures and seals this 9th day of November, 2006.

Front Royal Limited Partnership,
a Virginia Limited Partnership
f/k/a F & R Limited Partnership

By MVA Limited Partnership, a Virginia limited partnership, its general partner

By DOC Corporation, a Virginia corporation, its general partner

By: David A. Vazzana
Its: President

EXHIBIT 1

COMMONWEALTH OF VIRGINIA
COUNTY OF Warren, to-wit:

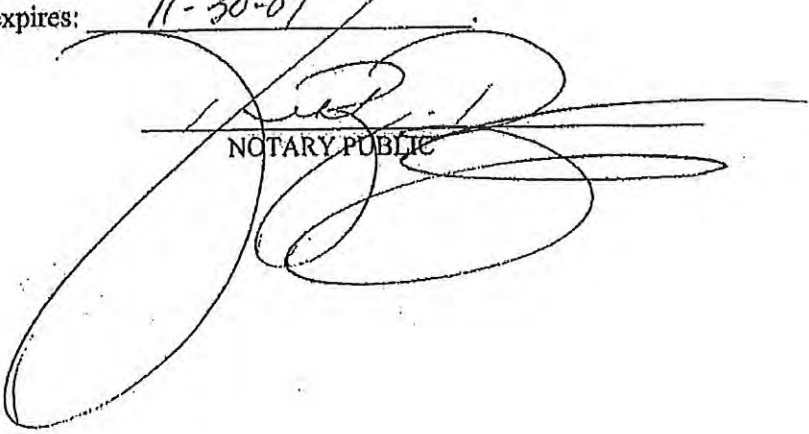
WARREN COUNTY, VIRGINIA
LAND RECORDS

000232 NOV-9 2006

I, the undersigned, a Notary Public in and for the State and County aforesaid, do hereby certify that David A. Vazzana, President of DOC Corporation, a Virginia, whose name is signed to the foregoing Dedication of Plat, has this day personally appeared and acknowledged the same before me in my State and County aforesaid.

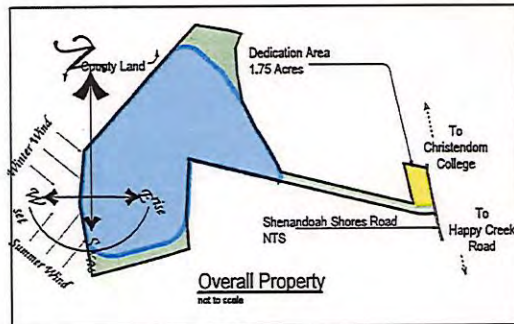
Given under my hand this 9th day of November, 2006.

My commission expires: 11-30-07

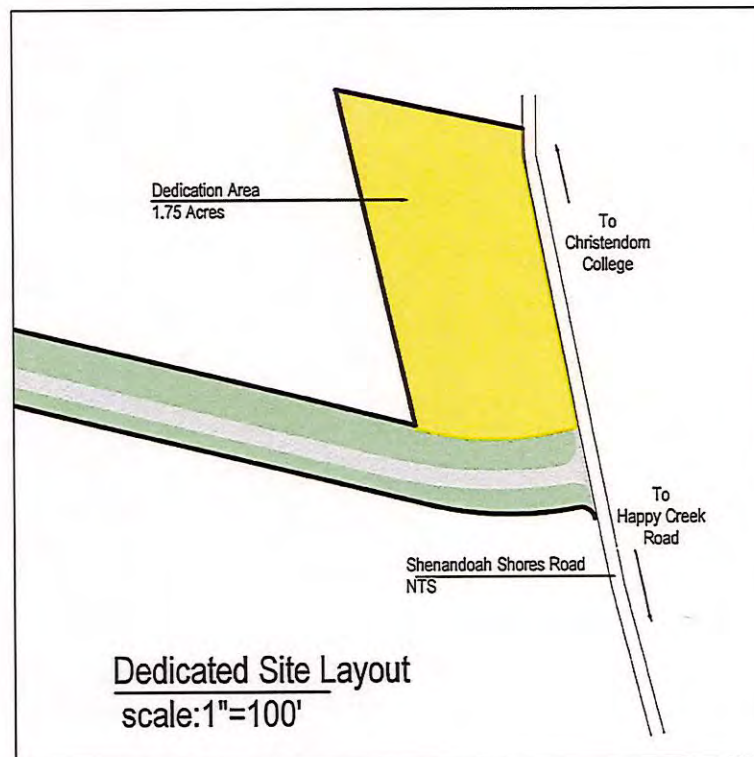

NOTARY PUBLIC

INSTRUMENT #060011850
RECORDED IN THE CLERK'S OFFICE OF
WARREN COUNTY ON
NOVEMBER 5, 2006 AT 11:36PM
JENNIFER E. GIMEN CLERK

RECORDED BY: MCS



LEGEND	
	- Road
	- Open Space
	- Project Area (approx location)
	- Dedicated Public Use Site

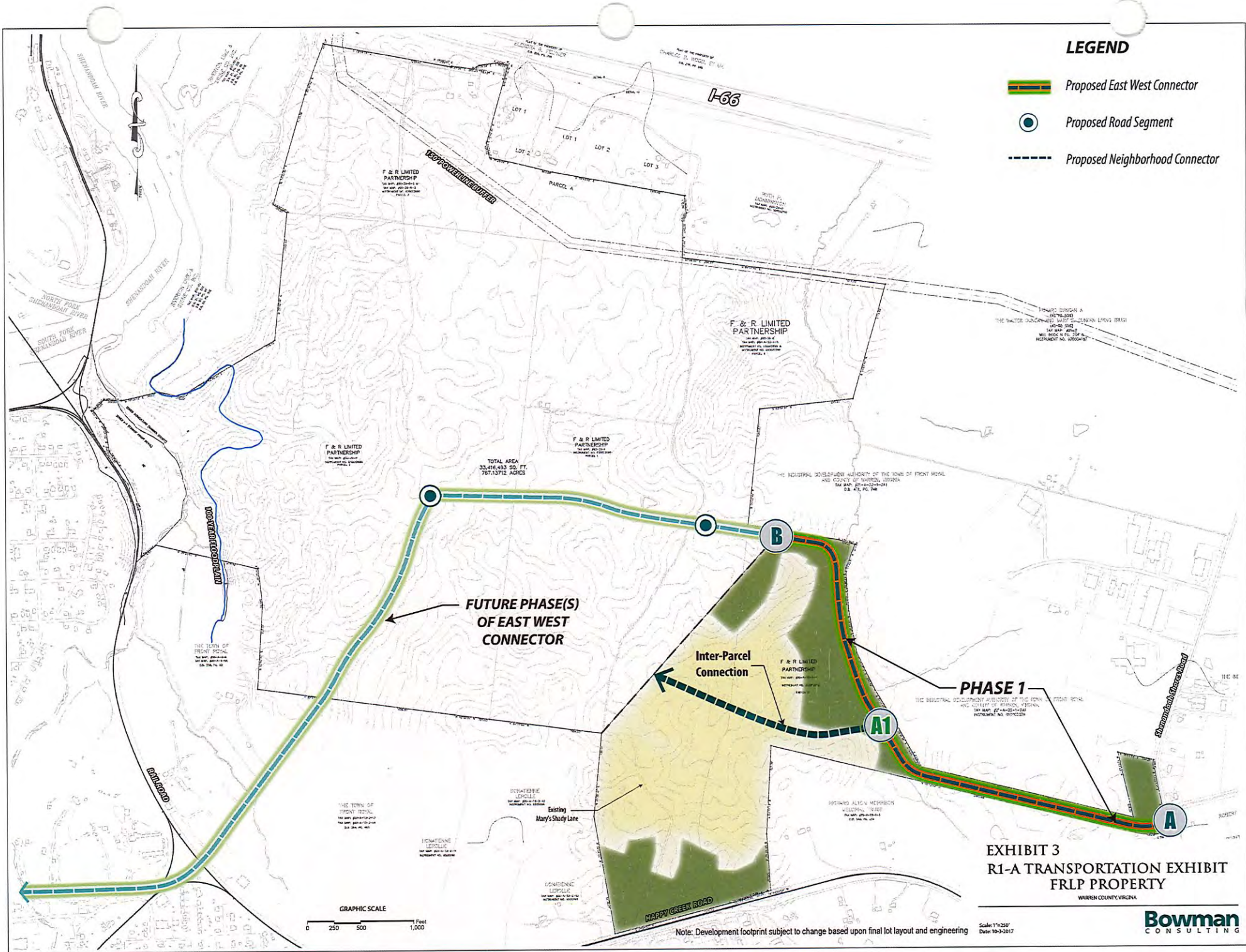


FOR DISCUSSION PURPOSES ONLY

Front Royal Limited Partnership Rezoning Proffer Exhibit 2



1	12-09	Proffer exhibit #
No.	Date	Revisions
Design Firm J. Duggan & Associates Landscape Architecture 151 Honey Hill Lane, Winchester, VA 22602 540.734.5425 www.jdugganandassociates.com		
Consultant		
Project Title Maplecroft		
Drawing Title Proffer Exhibit		
Project Manager J. Duggan RLA		
Drawn By TM/JD	Scale as shown	Drawing No. 1 of 1 Total Sheets
Reviewed By JD		
Date 06-25-08		
CAD File		



LEGEND

-  Proposed East West Connector
-  Proposed Road Segment
-  Proposed Neighborhood Connector

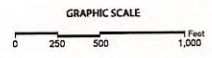
**FUTURE PHASE(S)
OF EAST WEST
CONNECTOR**

**Inter-Parcel
Connection**

PHASE 1

**EXHIBIT 3
R1-A TRANSPORTATION EXHIBIT
FRLP PROPERTY**

WARREN COUNTY, VIRGINIA



Note: Development footprint subject to change based upon final lot layout and engineering

Scale: 1"=250'
Date: 10-3-2017

**FRONT ROYAL LIMITED PARTNERSHIP – TOWN PROPERTY
TOWN OF FRONT ROYAL, VIRGINIA**

REZONING: RZ09-02-64

PROPERTY: Parcel 5A, containing approximately 149.3 acres, as shown on "Plat Showing Vacation of Boundary Line on the Property of F&R Limited Partnership" and as recorded in the Land Records of Warren County as Instrument Number 060012763, (attached hereto and incorporated herein by reference as Exhibit 1)

PROPERTY OWNER: Front Royal Limited Partnership, a Virginia Limited partnership

APPLICANT: Front Royal Limited Partnership, a Virginia Limited Partnership

PROJECT NAME: To be determined at time of subdivision application

ORIGINAL DATE OF PROFFERS: February 20th, 2009

REVISION DATES: August 5, 2009
September 4, 2009
September 10, 2009
December 7, 2009
December 28, 2009
January 29, 2010

~~August 24, 2017~~

~~September 29, 2017~~

~~October 27, 2017~~

~~November 6, 2017~~

~~November 8, 2017~~

The undersigned hereby proffers that the use and development of the subject property ("Property"), as described above, shall be in general conformance with the following conditions, which shall supersede all other proffers that may have been made prior hereto. In the event the above referenced rezoning is not granted as applied for by the Applicant ("Applicant"), these proffers shall be withdrawn and shall be invalid. In the event this application is denied by the Front Royal Town Council (the "Council"), such denial is appealed to a court of competent jurisdiction, and this rezoning application is thereafter remanded to the Council for reconsideration, then the Applicant may elect to

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readopt all or any portion hereof, in a writing specifically for that purpose; if no such election is made, these proffers shall be withdrawn and shall be invalid.

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address the overall continuity of design within the community through design standards for the following elements:

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- 4.1.3. Custom designed street signage and stop signage;
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- 5.2. In addition to any other duties and responsibilities as may be assigned to it, the HOA shall have title to and responsibility for (i) common open space areas not dedicated to public use in accordance with these proffers and (ii) common buffer areas located outside of residential lots. It shall also have (iii) responsibility for the perpetual maintenance of any entrance feature (subdivision) signs, street, alleys and perimeter or road buffers located within any easements for those purposes to be

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- 6.3. The Applicant shall execute a dedication plat within 18 months of the Town's delivery of a plat at the Town's expense, depicting by metes and bounds the Dedication Area (the "Dedication Plat"), provided that no such dedication shall be required prior to the issuance of the 25th building permit for the Property. Further, and notwithstanding the foregoing, in the event the Town does not request the aforesaid dedication prior to the issuance of the 300th building permit for the Property, the Applicant shall be relieved of its obligation to make the aforesaid dedication.

7. PEDESTRIAN AND PARK FACILITIES

- 7.1. Trails.

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7.1.1. The Applicant shall construct a walking/jogging trail with a minimum width of 8 feet on one side of Phase 1 of the East/West Connector as generally depicted on Exhibit 3 attached hereto and incorporated herein prepared by Bowman Consulting and entitled "R1-A Transportation Exhibit".

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7.1.2. In addition, if the Town approves all final subdivision plats for the development permitting sidewalks on one side of each street in the development, the Applicant shall construct alternative pedestrian walking trails within the development of a minimum length of .75 miles. The location of the walking trails shall be determined by the Applicant and depicted on any preliminary plat for the development of the Property. The construction of such walking trails shall occur either in phases in conjunction with the development of sections Property as depicted on the preliminary plat, or at one time, in the sole discretion of the Applicant. If such final subdivision plats are not approved with sidewalks on one side of each street of the development, the Applicant shall not be obligated to construct such additional trails, but in any event, the Applicant shall construct the trails as set forth in Proffer 7.1.1.

7.2. Not later than the issuance of the 150th building permit for the Property, the Applicant shall construct a neighborhood park or parks (the "Neighborhood Park") that shall consist of not less than four (4) acres but not more than ten (10) acres, and shall include a basketball court or 2 basketball hoops, a playground, and at least one multi-purpose playing field, or similar equivalent amenities if approved by the Director of Planning. The design and location of the Neighborhood Park and its associated amenities shall be in the sole discretion of the Applicant.

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7.3. Alternatively and notwithstanding the foregoing, in the event the Town elects in writing prior to the issuance of the 25th building permit for the Property to require the Applicant to dedicate the Neighborhood Park to Warren County, and Warren County agrees in writing to accept such dedication and the maintenance responsibility for the Neighborhood Park and its amenities, the Applicant shall design, plat, and construct the Neighborhood Park and the amenities described above in accordance with the standards set by the Warren County

Department of Parks and Recreation. In the event that the County declines to accept the aforesaid dedication, the Neighborhood Park shall be dedicated to an HOA created pursuant to Proffer 5, above.

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8. RIGHT-OF-WAY DEDICATIONS AND RESERVATION

8.1. Entrance Road –Phase 1 of East/West Connector. The final subdivision plat (a “Record Plat”) for the first phase of the development of the Property shall include reservation and/or dedication of not less than 100 feet of right-of-way, unless an alternative width is mutually agreed to by the Town and Applicant, for an entrance road into the Property, the general location of which is depicted on the Exhibit 3 attached hereto and incorporated herein prepared by Bowman Consulting and entitled “R1-A Transportation Exhibit,” with such road identified thereon as Phase 1, and connecting Point A to A-1 and A-1 to B thereon (hereinafter the “Entrance Road”). The right-of-way reservation and/or dedication language shall be submitted by the Applicant and reviewed by the Town Attorney and Director of Planning before recordation of the first final record plat.

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8.2. Right-of-Way Dedication. As a condition of the approval of each record plat where the East/West Connector is located the Applicant shall dedicate to the Town, at no cost and in fee simple absolute, right-of-way with a minimum width of one-hundred (100) feet, unless an alternative width is mutually agreed to by the Town and Applicant, to accommodate the development of the East/West Connector on the Property.

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8.3. The final locations of the aforesaid roads shall be subject to modifications based on final design and final engineering and approvals thereof by the Town and/or VDOT, final lot layout, and Town Code requirements.

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9. CONSTRUCTION OF EAST/WEST CONNECTOR

9.1. Entrance Road – Phase 1 of East/West Connector. The Entrance Road shall consist of a two-lane roadway with full turn lanes, and shall include a 4-lane section at its connection with Shenandoah Shores Road for five hundred and fifty (550) feet as required by Town Code or as otherwise may be approved by the Town. For purposes of this Proffer Statement the segments

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of the roadways to be dedicated and constructed are depicted on Exhibit 3 and designated by letters and numbers and referenced herein.

9.1.1. Point A to A-1. The Applicant shall construct a two (2) lane Entrance Road to the first proposed street intersection in the subdivision prior to and as a condition of the issuance of the first building permit for the property

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9.1.2. Point A-1 to B. Prior to and as a condition of the recordation of any final record plat that includes any residential lot area within 25 feet of the centerline of existing Mary's Shady Lane the Applicant shall have completed the construction of two (2) lanes of Phase 1 of the East/West Connector to the western property boundary.

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9.1.3. No individual single-family lot shall have direct driveway access to the East/West Connector.

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9.2. Eastbound Right Turn Lane on Entrance Road at Shenandoah Shores Road. The Applicant shall construct one (1) dedicated eastbound right turn lane on the Entrance Road at its intersection with Shenandoah Shores Road.

10. TRANSPORTATION IMPROVEMENTS

10.1. Westbound Right Turn Lane on Happy Creed Road. The Applicant shall construct a fifty (50) foot westbound right turn lane on Happy Creek Road at Shenandoah Shores within the existing right-of-way prior to the issuance of the 25th building permit for the Property. In the event that such improvement has been completed at such time, then the Applicant shall be relieved of its obligations herein.

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10.2. Traffic Light at Happy Creek Road and 606. If the Town determines that a traffic light is warranted at Route 606 and Happy Creek Road, then the Applicant shall contribute \$225,000.00 to the Town of Front Royal for the construction of such traffic light. The Applicant shall not be required to make such contribution earlier than the issuance of the 50th building permit for the Property or later than the issuance of the 225th building permit for the Property.

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10.2.1. Alternatively, and notwithstanding the foregoing, any such monies paid pursuant to this Proffer may be applied toward the right-of-way acquisition, design, and/or construction of the Leach Run Parkway, including a future fly-over of Happy Creek Road and the Norfolk Southern Railroad tracks to Shenandoah Shores Road.

10.3. Northbound Shenandoah Shores Road Left Turn at East/West Connector. The Applicant shall construct a two hundred (200) foot northbound left turn lane with taper on Shenandoah Shores Road at its proposed intersection with the Entrance Road within the existing right-of-way prior to the issuance of the 200th building permit for the Property. In the event that such improvement has been completed at such time, then the Applicant shall be relieved of its obligations herein.

10.3.1. Alternatively, and notwithstanding the foregoing, if at any time prior to the issuance of the 150th building permit on the Property the Applicant shall have designed and engineered a traffic circle or roundabout at this location, and the Town and VDOT shall have approved such design and in lieu of the aforementioned turn lane, then the Applicant shall construct a traffic roundabout prior to and as a condition of the issuance of the 200th building permit on the Property.

10.4. Roundabout or Traffic Signalization at Shenandoah Shores Road and East/West Connector.

10.4.1. Prior to and as a condition of the issuance of the 1st building permit on the Property, the Applicant shall submit a roundabout justification report to the Town and VDOT for the intersection of Route 606 and the Entrance Road.

10.4.2. Prior to and as a condition of the issuance of the 225th building permit for the Property, the Applicant shall submit a traffic signalization warrant analysis to the Town, and in accordance with VDOT requirements for the same, for the intersection of Route 606 and the Entrance Road. In the event such traffic signal is warranted, the Applicant shall make a one-time contribution to the Town of Front Royal equal to its pro-rata share of the estimated costs of

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such traffic light, provided, however, that in no event shall such contribution exceed \$225,000.00. The Applicant shall not be required to make such contribution earlier than the issuance of the 250th building permit for the Property or later than the issuance of the 300th building permit for the Property.

- 10.4.2.1. Alternatively, and notwithstanding the foregoing, any such monies paid pursuant to this Proffer may be applied toward the right-of-way acquisition, design, and/or construction of the Leach Run Parkway, including a future fly-over of Happy Creek Road and the Norfolk Southern Railroad tracks to Shenandoah Shores Road.

11. CASH CONTRIBUTIONS TO WARREN COUNTY, VIRGINIA.

- 11.1. In the event this rezoning application is approved, the Applicant will pay to Warren County, Virginia a per unit sum of \$11,000.00, prior to and as a condition of the issuance of an occupancy permit for each single-family dwelling unit in excess of 160 such units constructed on the Property.

- 11.2. Notwithstanding the foregoing Proffer, the audited costs of the engineering, design, and construction of the Neighborhood Park as provided in these Proffers, shall be credited against the aforesaid per unit contribution, provided further that the Applicant shall be entitled to a credit for the dedication of the land therefor in the amount of \$320,000.

12. MARY'S SHADY LANE

- 12.1. If the Applicant fails to relocate Mary's Shady Lane, the Applicant shall revise its then current site or subdivision plan to reflect the continued existence thereof.
- 12.2. If the Applicant successfully relocates Mary's Shady Lane, then the Applicant shall connect Mary's Shady Lane to the Entrance Road no later than the 300th building permit for the Property. At no time during the construction on or development of the Property shall access be denied to persons using Mary's Shady Lane.
- 12.3. Applicant shall not utilize Mary's Shady Lane as a construction entrance for the Property.

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13. MISCELLANEOUS

- 13.1. Prior to the commencement of any land disturbing activities on the Property, the Applicant shall perform a Phase I Archeological Study for investigation of those areas previously identified on the Property as potentially sensitive in the "Phase IA Archeological Evaluation of the 830.4 Acre Vazzana Property, Front Royal and Warren County, Virginia," dated January 2004, prepared by Thunderbird Archeological Associates, Inc.
- 13.2. Any additional archeological features identified on the Property during the Phase I study shall be further evaluated in accordance with the Virginia Department of Historical Resources ("VDHR") guidelines.

14. OPEN SPACE

- 14.1. A minimum of 30% of the Property will be used for permanent open space. Such open space shall be inclusive of passive and active open space including all park land provided hereunder and stormwater management uses.

15. COMPLIANCE WITH STATE LAWS

- 15.1. The Applicant hereby acknowledges, affirms, and agrees that all offsite proffers, including cash proffers, offered herein are voluntary, reasonable, specifically attributable to the new residential development or new residential use, address an impact to an offsite public facility such that the new residential development or residential use creates a need, or identifiable portion of a need, for one or more public facility improvements in excess of existing public facility capacity at the time of the rezoning or proffer condition amendment and each new residential development or new residential use receives a direct and material benefit from the proffer made with respect to any public facility improvement, and are offered in accordance with all requirements of state law. Furthermore, the Applicant agrees that the Town, including its officers, employees and agents, have not suggested, requested, required or accepted any unreasonable proffers for the rezoning or proffer condition amendment.

16. ESCALATOR

- 16.1. Monetary contributions as set forth in this Proffer Statement

that are paid to the Town of Front Royal and/or Warren County after 24 months from the date of rezoning approval shall be adjusted in accordance with the Urban Consumer Price Index (“CPI-U”), as published by the United States Department of Labor. The adjustment shall be calculated from the CPI-U published most nearly to and following January 1st from that date 24 months after rezoning approval and the date the contributions are paid, subject to a cap of 3% per year, non-compounded.

SIGNATURES APPEAR ON THE FOLLOWING PAGE

OWNER:

FRONT ROYAL LIMITED PARTNERSHIP,
a Virginia limited Partnership

By: MVA Limited Partnership, general partner of
Front Royal Limited Partnership

By: DOC Corporation, general partner of MVA
Limited Partnership

By: _____
David A. Vazzana, President of
DOC Corporation

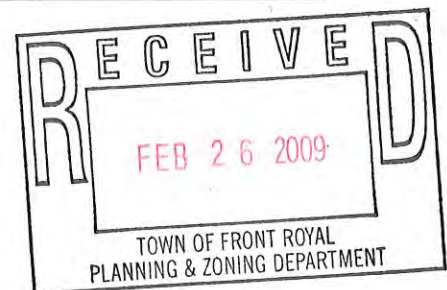
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Traffic Impact Study

Vazzana Property Development

Town of Front Royal, Virginia

February 10, 2009



Prepared for:
Front Royal Limited Partnership
Middleburg, Virginia

Prepared By:
Gorove/Slade
Associates, Inc.



R209-02-64



GOROVE/SLADE ASSOCIATES, INC.
Transportation, Traffic and Parking

PREPARED BY:

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INTRODUCTION AND SUMMARY

Purpose and Study Objective

This report presents the findings of a traffic impact analysis for the proposed Vazzana Property development in the Town of Front Royal, Virginia. This study is prepared in conjunction with the rezoning application to the R-1A zoning classification for the development. The site is located north of Route 647 (Happy Creek Road), south of I-66, generally east of Marys Shady Lane, and west of Route 606 (Shenandoah Shores Road) in the Town of Front Royal, Virginia.

The project site is currently approved for a 75 dwelling unit residential development. The proposed development program calls for a 320 dwelling unit residential development. The project is scheduled to be complete by 2016. Access to the project site is proposed along Shenandoah Shores Road.

The following tasks were completed as part of this study in accordance with direction received from Town of Front Royal and Virginia Department of Transportation (VDOT) staff in a scoping meeting held on November 20, 2008. A copy of the scoping document summarizing the parameters and assumptions used in this report is included as Appendix A.

- Field reconnaissance in the vicinity of the site was performed to collect information related to existing traffic controls, roadway geometry, and traffic flow characteristics;
- Existing traffic counts were conducted on December 9, 2008 during the weekday morning and afternoon peak periods at two intersections located within the study area. Existing counts for the intersection of Happy Creek Road and Shenandoah Shores Road was obtained from the *Town of Front Royal's Long-Range Transportation Study* dated July 2007. The existing counts for the intersection of Happy Creek Road and Marys Shady Lane was obtained from the *Villages of Maplecroft Traffic Impact Analysis*, dated July 5, 2005 and prepared by Gorove/Slade Associates.
- Future without development traffic conditions were estimated based on the approved 75 dwelling unit development for the Vazzana development and inherent traffic growth compounded annually to account for regional development along the roadway network.
- Site traffic volumes were generated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 7th Edition publication.
- Intersection capacity analyses were performed for the weekday morning and afternoon peak hours using *Synchro*, version 7.0 based on the *Highway Capacity Manual* (HCM 2000) methodology. Traffic analyses were performed for the existing conditions (2008), future conditions without development (2016), future conditions with development (2016), future conditions with development plus six years (2022).

Sources of data for this study include the Virginia Department of Transportation (VDOT), the Town of Front Royal and the office files and field reconnaissance efforts of Gorove/Slade Associates, Inc.



Executive Summary

Site Location and Study Area

The site is located in the Town of Front Royal Virginia, north of Happy Creek Road, east of Marys Shady Lane, and west of Shenandoah Shores Road. The study area consists of four intersections: Happy Creek Road with East 6th Street, Happy Creek Road with Marys Shady Lane, Happy Creek Road with Route 606 (Shenandoah Shores Road), and Happy Creek Road with Dismal Hollow Road, along with the proposed site driveway along Shenandoah Shore Road.

Description of Proposed Development

The proposed development program consists of a 320 single-family detached dwelling unit development of which 75 dwelling units are by right. The existing Marys Shady Lane intersection at Happy Creek Road, and existing railroad crossing, will be removed as part of this project. The project is scheduled to be complete by 2016. Access to the project site is proposed via Shenandoah Shores Road.

Principal Findings, Conclusions and Recommendations

According to the direction received from the Town of Front Royal during the scoping meeting, it is desirable to maintain a level of service (LOS) 'C' or better for each lane group. Based on these requirements, the analysis presented in this report supports the following major conclusions:

Existing Conditions (2008)

All intersections in the study area operate at acceptable conditions during the weekday morning peak and afternoon peak hours under existing traffic conditions.

Future Conditions without Development (2016)

Traffic volumes were projected for the year 2016 without the proposed development. According to the scoping meeting, annual inherent growth rates were applied to the existing volumes to estimate the future background volumes. In addition to the inherent growth, trips generated by the 75 dwelling unit Vazzana Property by-right development was added to the future background volumes.

All intersections in the study area operate at acceptable conditions during the weekday morning peak and afternoon peak hours under the future without development conditions.

Future Conditions with Development (2016)

The proposed development program consists of 320 dwelling unit single-family detached housing. Of the 320 dwelling units, 75 of them have been approved. The site will be accessed by one full access



driveway along Shenandoah Shores Drive. As part of this development, it was assumed that Marys Shady Lane's access to Happy Creek Road would be removed. The proposed development will generate approximately 171 additional trips during the weekday morning peak hour, approximately 223 additional trips during the weekday afternoon peak hour, and approximately 2,234 additional trips during an entire weekday.

Based on the capacity analysis, the intersection of Happy Creek Road and Shenandoah Shores Road will not operate at acceptable level of service during the morning and afternoon peak periods. A signal and turn bays on Happy Creek Road were therefore recommended at this intersection as mitigation measures to achieve the Town's LOS "C" requirement under the future conditions with development.

In addition to the capacity analyses, the criteria for a traffic signal and turn lanes were reviewed and analyzed before the recommendation of those mitigation measures. Based on the Manual on Traffic Signal Design (MTSD) methodology for signals and the Virginia Department of Transportation (VDOT) criteria for turn lanes, a signal and right turn bay were warranted, but a left-turn lane would not be warranted until 2022 conditions.

Future Conditions with Development plus Six Years (2022)

All intersections in the study area operate at acceptable conditions during the weekday morning peak and afternoon peak hours under the future with development plus six (2022) traffic conditions.



BACKGROUND INFORMATION: PROPOSED DEVELOPMENT (SITE AND NEARBY)

Description of On-Site Development

This study is being performed for a proposed rezoning of the Vazzana Property to the R-1A zoning classification. The project site is located north of Happy Creek Road, east of Marys Shady Lane, and west of Shenandoah Shores Road in the Town of Front Royal, Virginia, as shown in Figure 1. Parcel maps, from Warren County's internet GIS, are included as Figures 2A and 2B. The study area consists of four intersections along Happy Creek Road: Dismal Hollow Road, Shenandoah Shores Road, Marys Shady Lane, and East 6th Street. In addition, access to the site will be via a proposed site entrance along Shenandoah Shores Road, north of Happy Creek Road, which is also included in the analysis.

The existing zoning on the project site allows for a 75 dwelling unit single-family detached housing development. The proposed development program requires a rezoning to the R1-A zoning classification, and calls for 320 dwelling units of single-family detached housing. The proposed use is consistent with the land use strategies and vision that resulted from the Happy Creek Road Charette in January 2005 (the "Charette"). Northeast of the subject site lies an industrial park, and adjacent land within Warren County is zoned for agriculture use. The proposed development is planned to be complete by 2016. An image of the site concept plan is shown in Figure 3. A scaled site plan can be found with the application package.

Planned/Non-Existing Roadway Improvements

There is no known planned regional roadway improvement within the vicinity of the project site expected to be in place by 2016. Marys Shady Lane is an easement through the Vazzana property, and the connection of Marys Shady Lane to Happy Creek Lane (as well as the railroad crossing) will be terminated under all future conditions as development takes place on the Vazzana property.

The entrance to the site will be via a new connection to Shenandoah Shores Road. This entrance is meant to be the beginning of the parallel road to Happy Creek Road that was envisioned as part of the Charette.

Multi-modal Transportation Services

The FRAT (Front Royal Area Transit) bus provides transit service through the Town during the weekdays, during typical working hours. However, the service does not serve Happy Creek Road, nor is it expected to serve the proposed site.

In addition to the transit service, there are existing and planned trails throughout the Town that extend into the subject property. Trails will be incorporated into the development as planned by the Town.



Scope of Study

A scoping meeting was held between the Applicant, the Town staff, and VDOT staff on November 20, 2008 to scope the parameters and assumptions for the study. Per the Chapter 527 regulations for traffic studies, a development of this size would study intersections within one mile of the property. As a result, the following intersections were identified at the meeting for inclusion in this study:

- 1) Happy Creek Road and Morgan Ford Road/Dismal Hollow Road;
- 2) Happy Creek Road and Shenandoah Shores Road (Route 606);
- 3) Happy Creek Road and Marys Shady Lane;
- 4) East 6th Street and Happy Creek Road; and
- 5) Shenandoah Shores Road (Route 606) and Site Drive

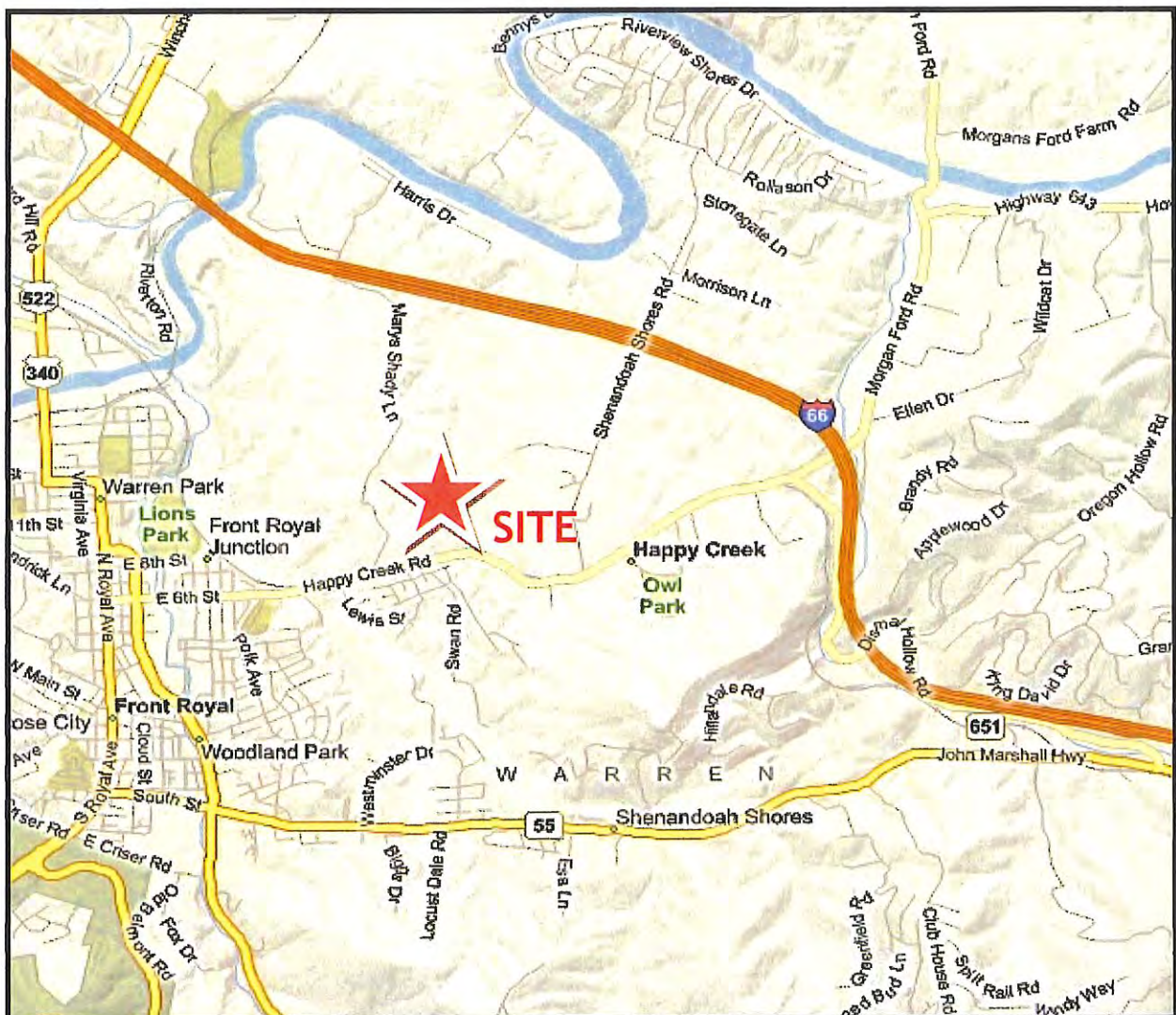
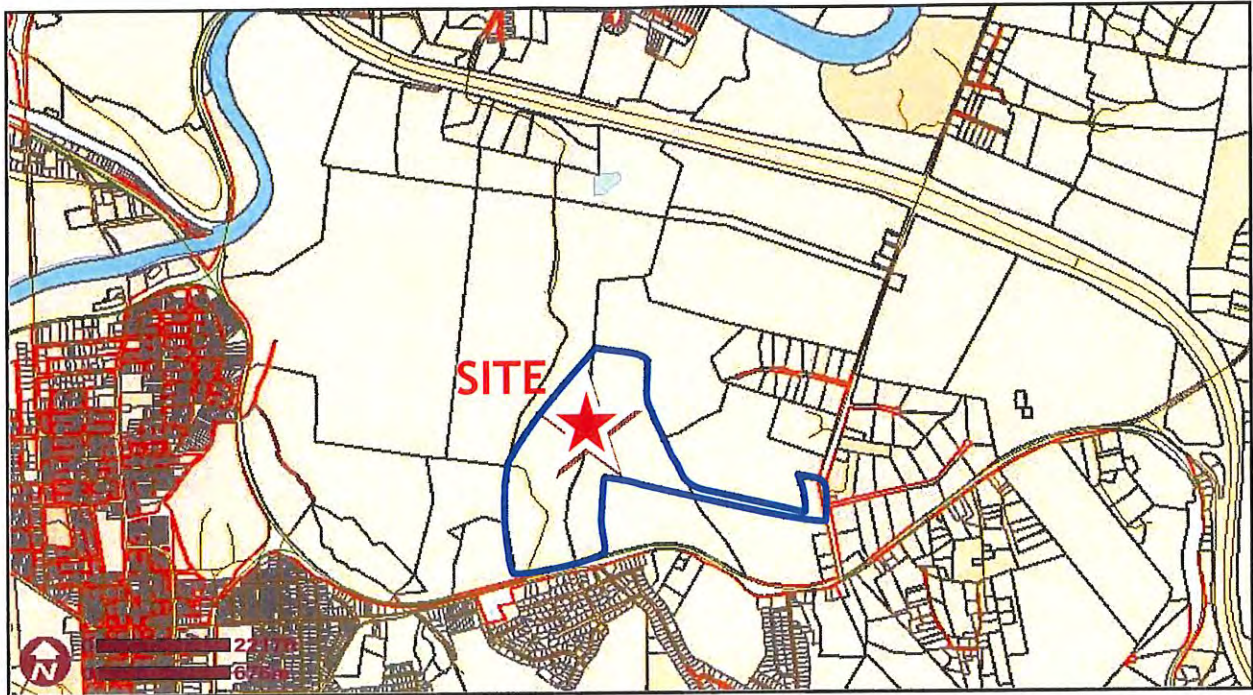
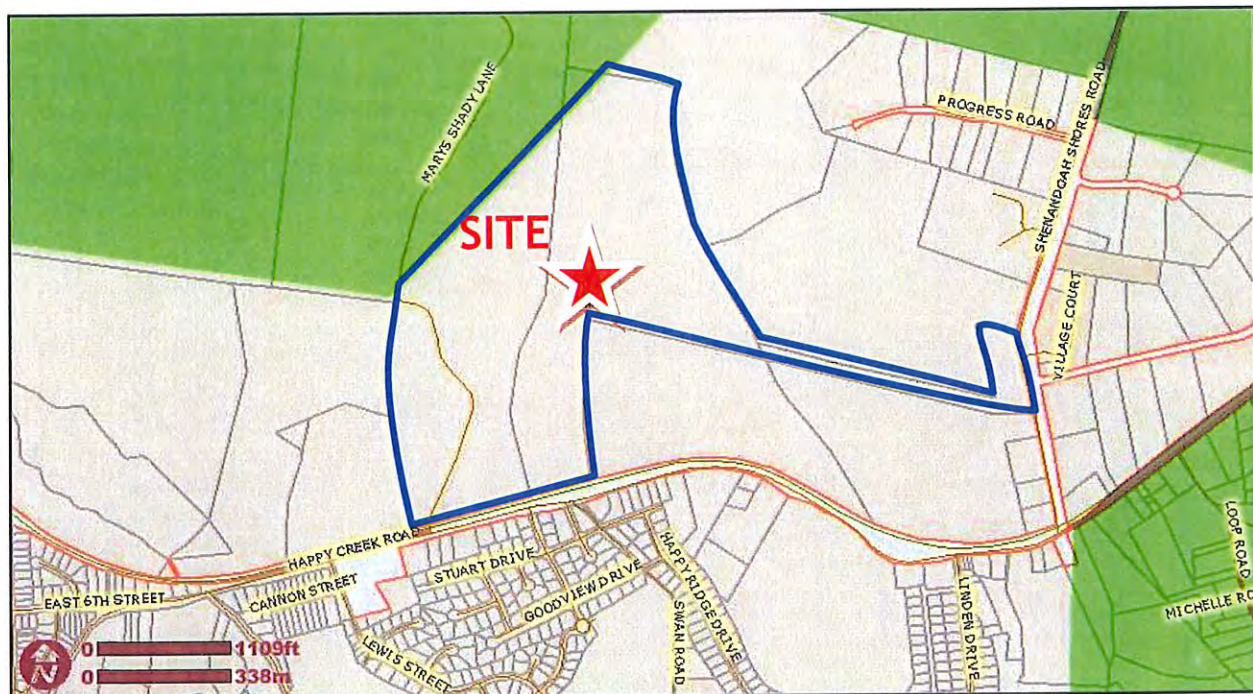


Figure 1: Regional Map and Site Location



Source: Warren County Internet GIS

Figure 2A: Parcel Map 1



Source: Warren County Internet GIS

Figure 2B: Parcel Map 2

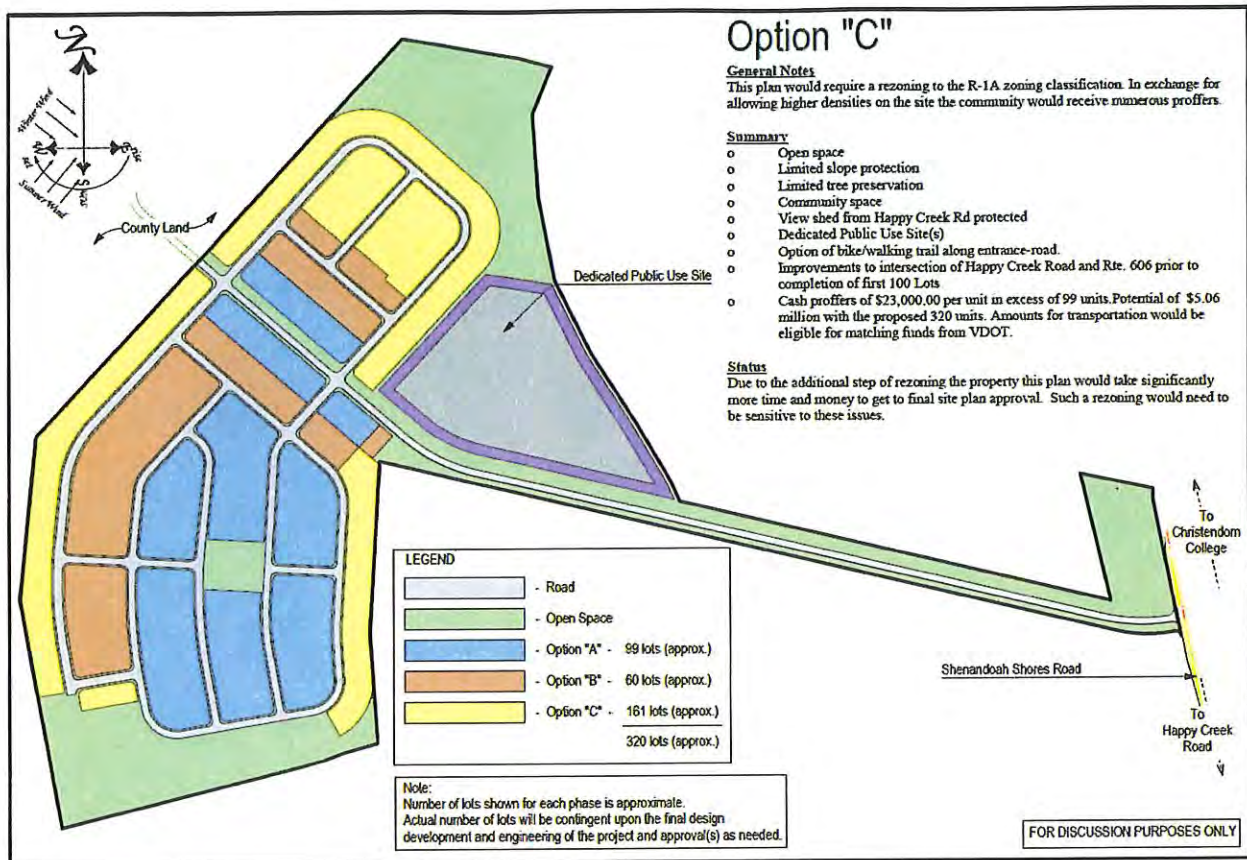


Figure 3: Proposed Development Plan

Roadway Network

A description of the major roadways within the vicinity of the proposed site is presented below. The existing lane configurations and traffic controls in the study area are shown in Figure 4.

- East 6th Street is a two-lane undivided roadway with left turn lanes at signalized intersections. It has a posted speed limit of 25 mph in the vicinity of the project site.
- Happy Creek Road (Route 647) is a two-lane undivided roadway with varying posted speed limits of 25 mph (near downtown Front Royal), 35 mph, and 45mph (near Dismal Hollow Road) in the vicinity of the project site.
- Marys Shady Lane is a two-lane undivided road that runs from Happy Creek Road to Avalon Drive with a posted speed limit of 25 mph in the vicinity of the site.
- Shenandoah Shores Road (Route 606) is a two-lane undivided roadway that runs from Happy Creek Road to Rollason Drive with a posted speed limit of 25 mph in the vicinity of the site.
- Dismal Hollow Road (Route 624) is a two-lane undivided roadway that runs from Happy Creek Road to John Marshall Highway with a posted speed limit of 45 mph in the study area.

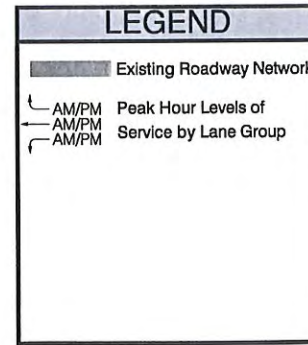
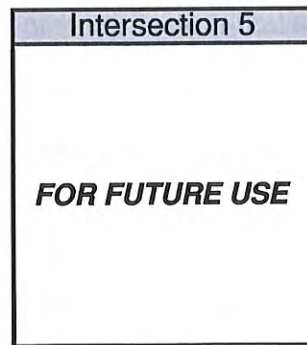
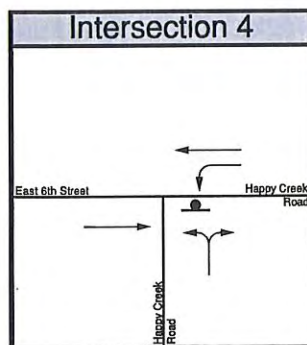
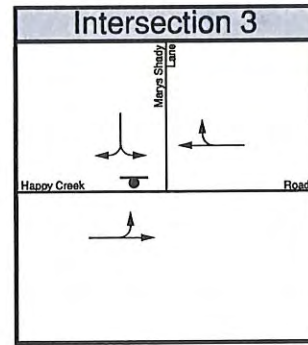
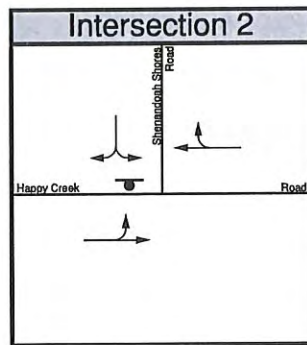
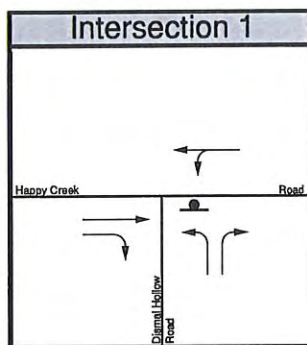
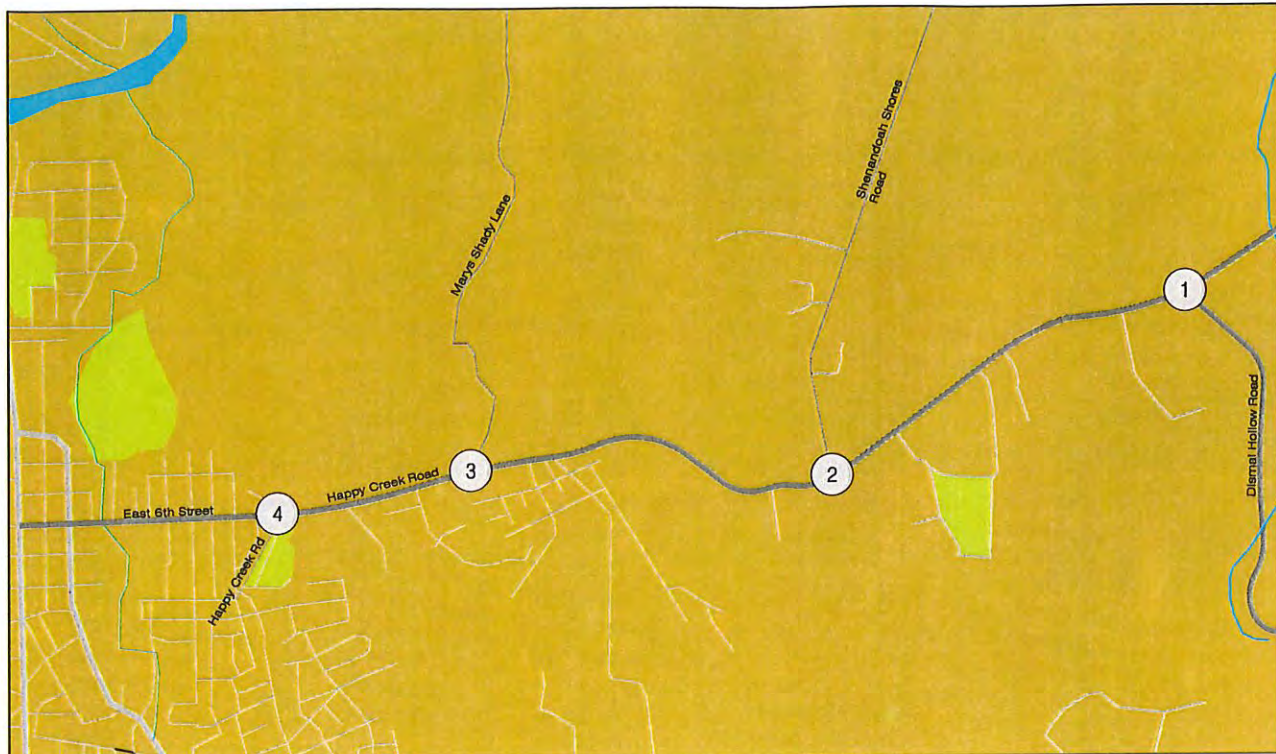


Figure 4
Existing (2008) Lane Configuration and Traffic Controls



EXISTING CONDITIONS (2008)

Existing Traffic Volumes

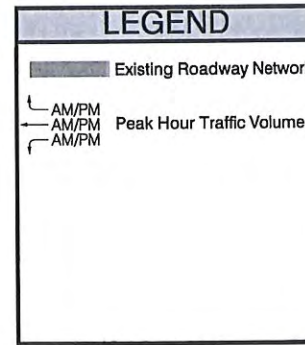
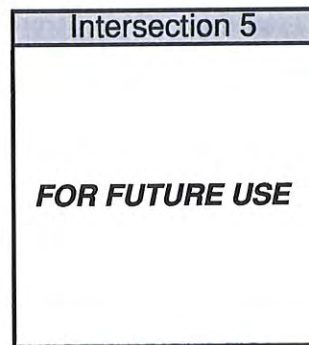
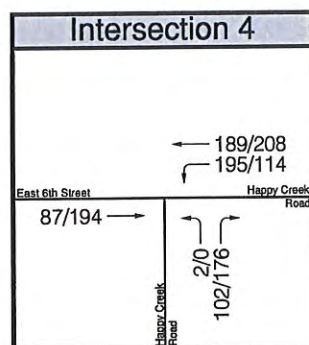
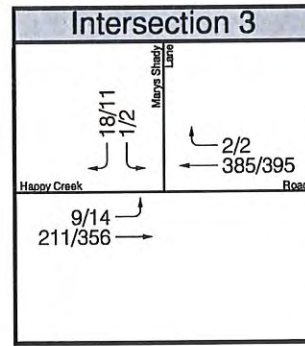
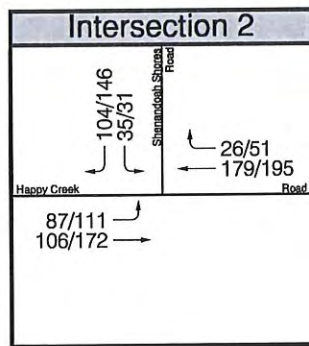
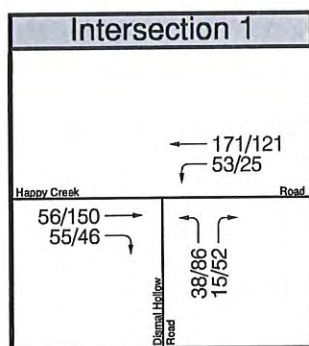
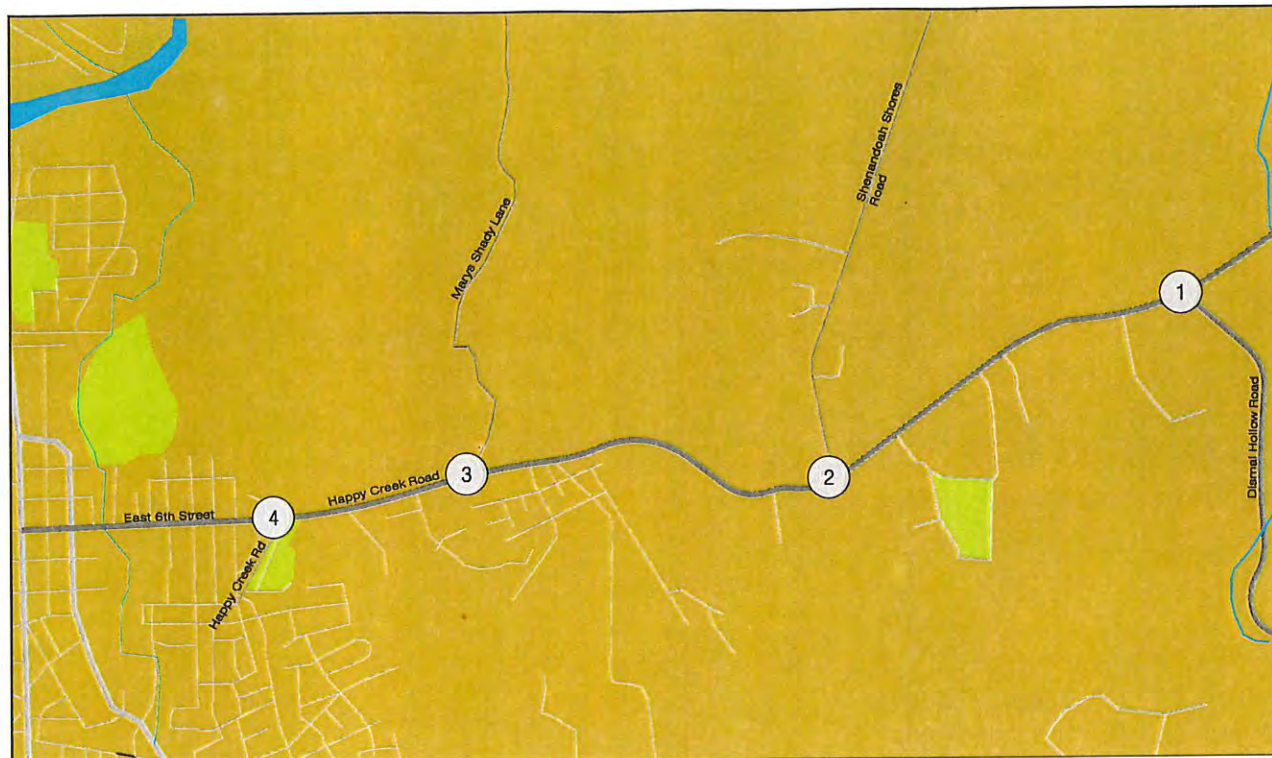
In order to determine the weekday peak hour turning movement volumes, traffic counts were conducted by Gorove/Slade Associates, Inc. at the intersections of Happy Creek Road with East 6th Street as well as the intersection of Happy Creek Road with Dismal Hollow Road. The counts were performed on Tuesday, December 9, 2008 from 6:00 AM to 9:00 AM and from 4:00 PM to 7:00 PM.

Existing counts for the intersection of Happy Creek Road and Shenandoah Shores Road was obtained from the Town of Front Royal's *Long-Range Transportation Study* dated July 2007. The existing turning movement count for the intersection of Happy Creek Road and Marys Shady Lane was obtained from the *Villages of Maplecrofte Traffic Impact Analysis*, dated July 5, 2005 and prepared by Gorove/Slade Associates. All intersection counts performed in previous years were adjusted to 2008 levels using a compounded growth rate of 3.5% per year in order to obtain a consistent baseline for all intersections.

Analysis of the existing traffic data determined the following peak hours:

- AM Peak Hour = 7:30 AM to 8:30 AM
- PM Peak Hour = 4:30 PM to 5:30 PM

The existing peak hour traffic volumes, adjusted to 2008 where needed, for the intersections contained within the study area are shown in Figure 5. The existing counts are included as the Appendix B.



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Figure 5
Existing (2008) Traffic Volumes



Existing Conditions Capacity Analysis

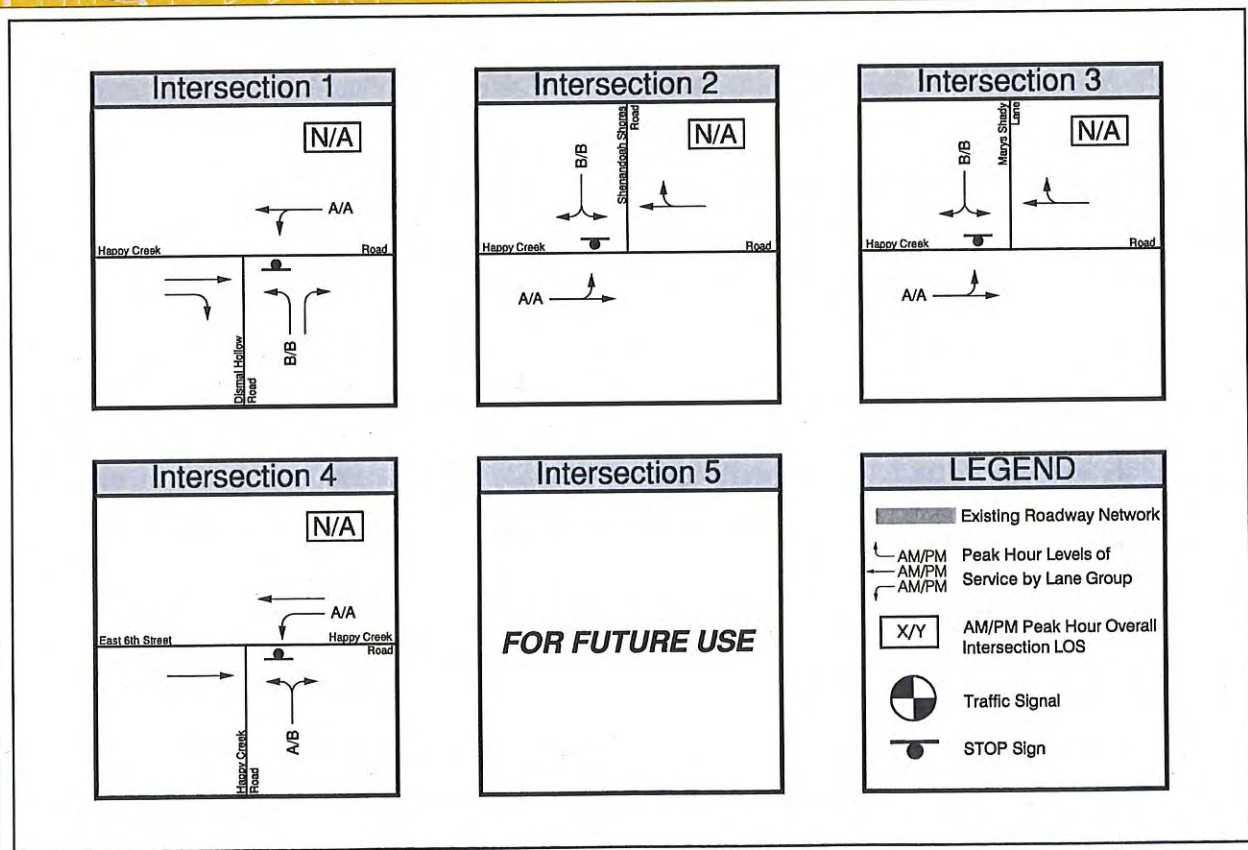
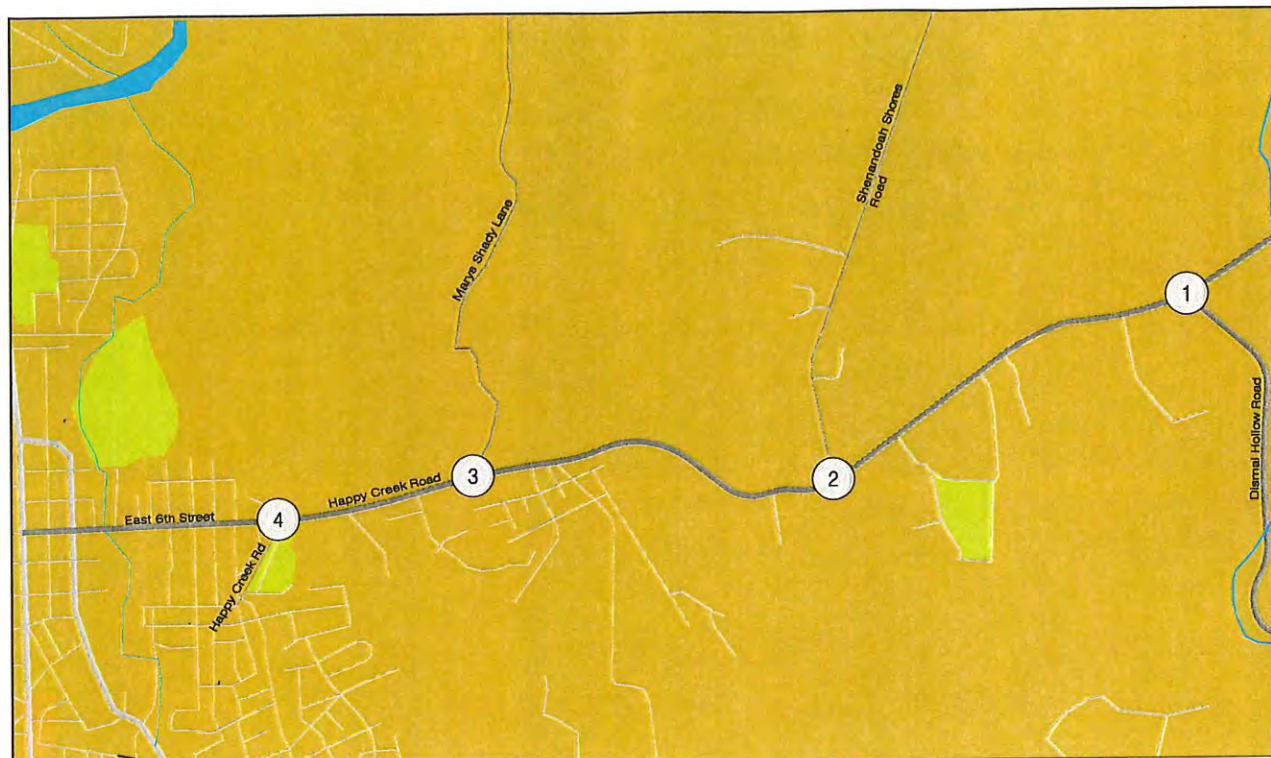
Intersection capacity analysis was performed for the existing conditions at the intersections contained within the study area during the weekday morning and afternoon peak hours. *Synchro version 7.0* was used to analyze the study intersections based on the Highway Capacity Manual (HCM 2000) methodology. The results of the existing intersection capacity analysis are presented in Table 1, and are expressed in terms of level of service (LOS) and delay (seconds per vehicle) per approach. a description of the different LOS and delays are included in Appendix C. The detailed results of the intersection capacity analysis for existing conditions is contained in Appendix D. Figure 6 illustrates the results graphically.

Table 1: Existing (2008) Intersection Capacity Analysis

ID No	Intersection/Approach	Turn Lane Length	AM Peak Hour			PM Peak Hour		
			LOS	Delay	95 th Queue	LOS	Delay	95 th Queue
1	<i>Happy Creek Road and Dismal Hollow Road</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Through/Left Movement		A	2.1	4	A	2.2	3
	Northbound Left Turn Movement		B	10.8	6	B	10.8	13
2	<i>Happy Creek Road and Shenandoah Shores Road</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Through/Left Movement		A	4.6	8	A	3.8	9
	Southbound Left/Right Movement		B	11.9	24	B	13.6	40
3	<i>Happy Creek Road and Marys Shady Lane</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Through/Left Movement		A	0.8	1	A	0.8	2
	Southbound Left/Right Movement		B	10.9	4	B	11.6	6
4	<i>East 6th Street and Happy Creek Road</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Left Turn Movement	200'	A	8.0	16	A	8.0	8
	Northbound Left/Right Movement		A	9.8	13	B	11.0	30

Note: N/A – Not Applicable.

According to the Town of Front Royal's guidelines, it is desirable to maintain a LOS 'C' or better for each lane group at an intersection. Based on these guidelines, all intersections in the study area operate at acceptable levels.



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Figure 6
Existing (2008) Levels of Service



FUTURE CONDITIONS WITHOUT DEVELOPMENT (2016)

Future without Development Traffic Volumes

Inherent Growth

Future traffic volumes are projected by increasing existing traffic volumes to the build-out year using a growth rate based on historical traffic growth. At the scoping meeting, it was agreed that a 3.5% inherent growth rate compounded annually is used over the eight years to account for regional increase in traffic due to background growth and development outside of the study area.

Marys Shady Lane Rerouting

The access for Marys Shady Lane at Happy Creek Road will be removed as development occurs on the Vazzana property. The vehicles currently using Marys Shady Lane will be rerouted through the Vazzana Property to Shenandoah Shores Road. The directional split along Happy Creek Road for the vehicles currently using Marys Shady Lane was replicated at the intersection of Shenandoah Shores Road and Happy Creek Road when they were relocated.

Background Development

In addition to the regional growth, traffic generated by the 75 dwelling unit Vazzana Property by-right development was added to the future without development volumes as a background site. In order to calculate the trip generated by the approved background development, the Institute of Transportation Engineers' (ITE's) Trip Generation, 7th Edition publication was used to determine the trips into and out of the background site for the weekday morning and afternoon peak hours as well as the weekday daily trips. The trip generation for the approved by-right development is shown in Table 2.

Table 2: Vazzana Property By-Right Development Trip Generation

Land Use	ITE Code	Size	Week day						
			AM Peak Hour			PM Peak Hour			Daily Total
			In	Out	Total	In	Out	Total	
By-Right Vazzana Site									
Single-Family Detached Housing	210	75 DU	16	46	62	53	30	83	798

As shown in Table 2, the approved background developments will generate approximately 62 weekday morning peak hour trips and 83 weekday afternoon peak hour trips under the future conditions without development. These approved background trips were distributed based on existing and anticipated traffic patterns. The by-right trips can be found in Appendix E.

Future Volumes without Development

The existing traffic, inherent regional growth, and trips generated by the approved background site were combined to estimate the future volumes without development as illustrated in Figure 7.

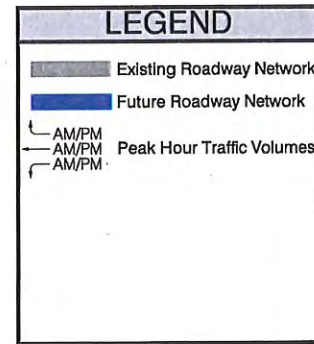
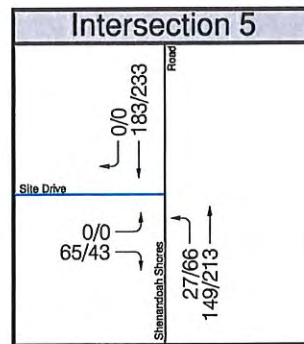
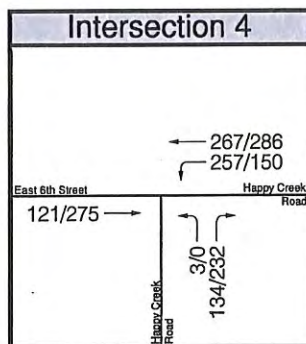
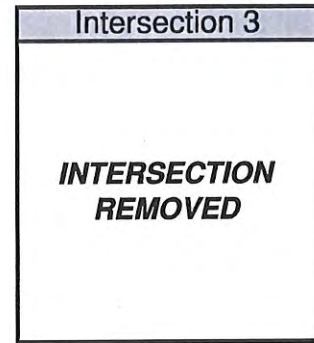
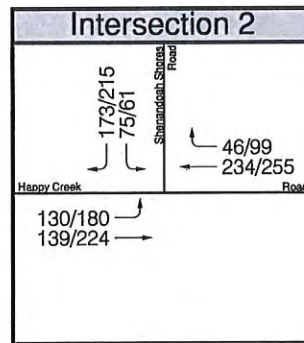
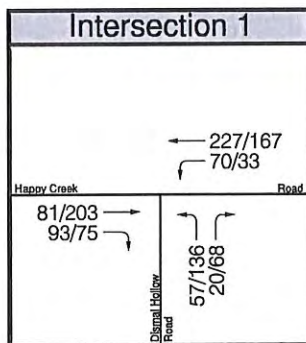
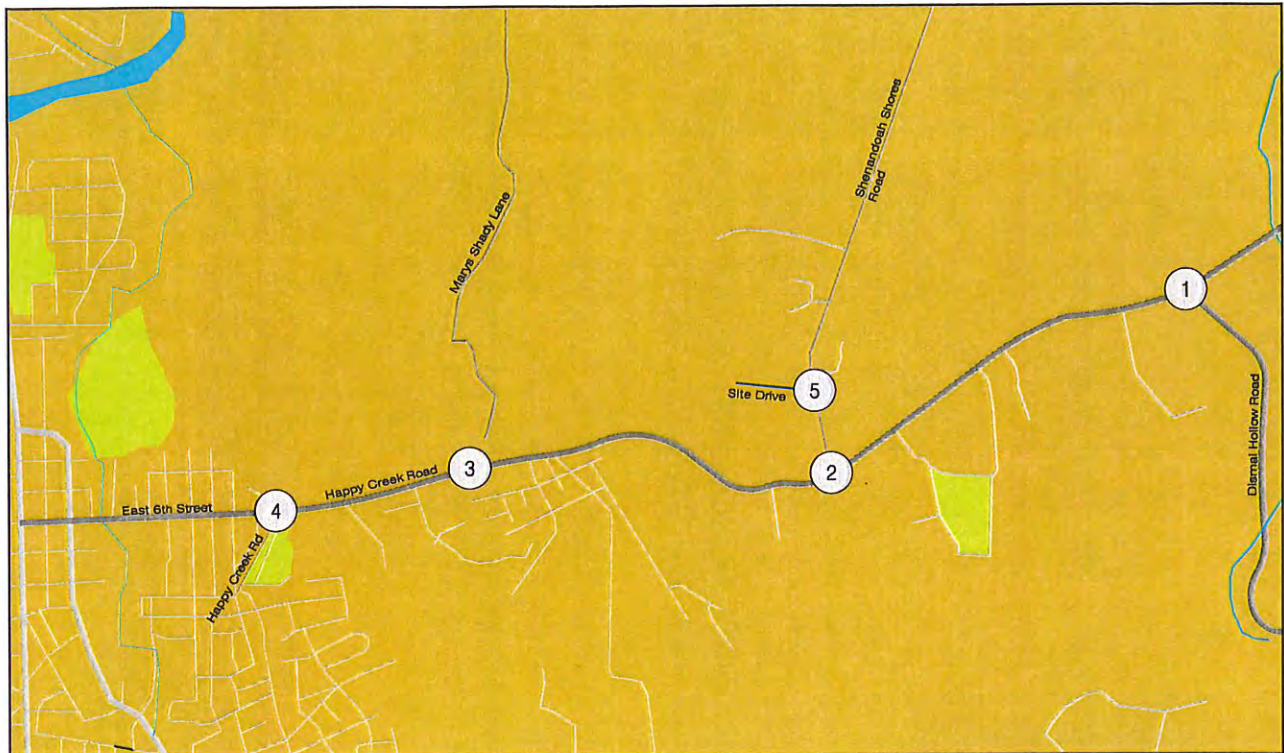


Figure 7
Future Conditions without Development (2016) Traffic Volumes



Future without Development Capacity Analysis

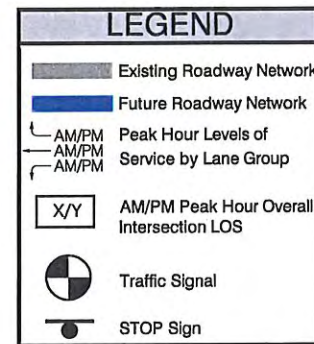
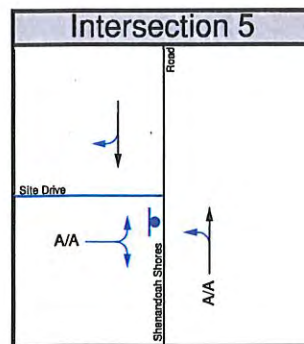
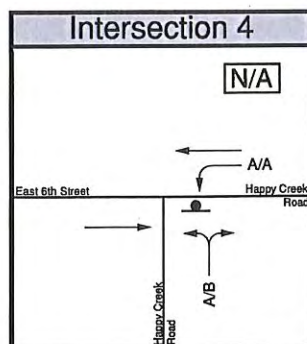
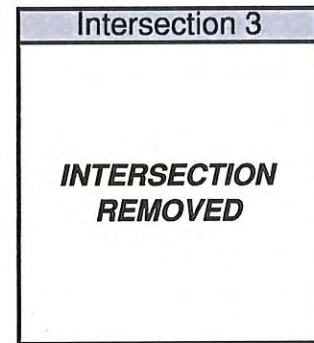
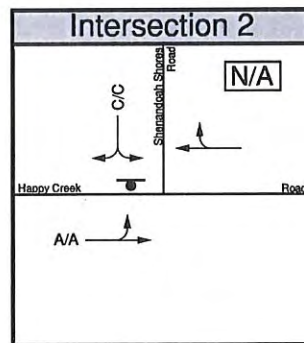
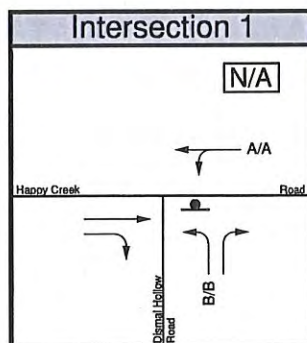
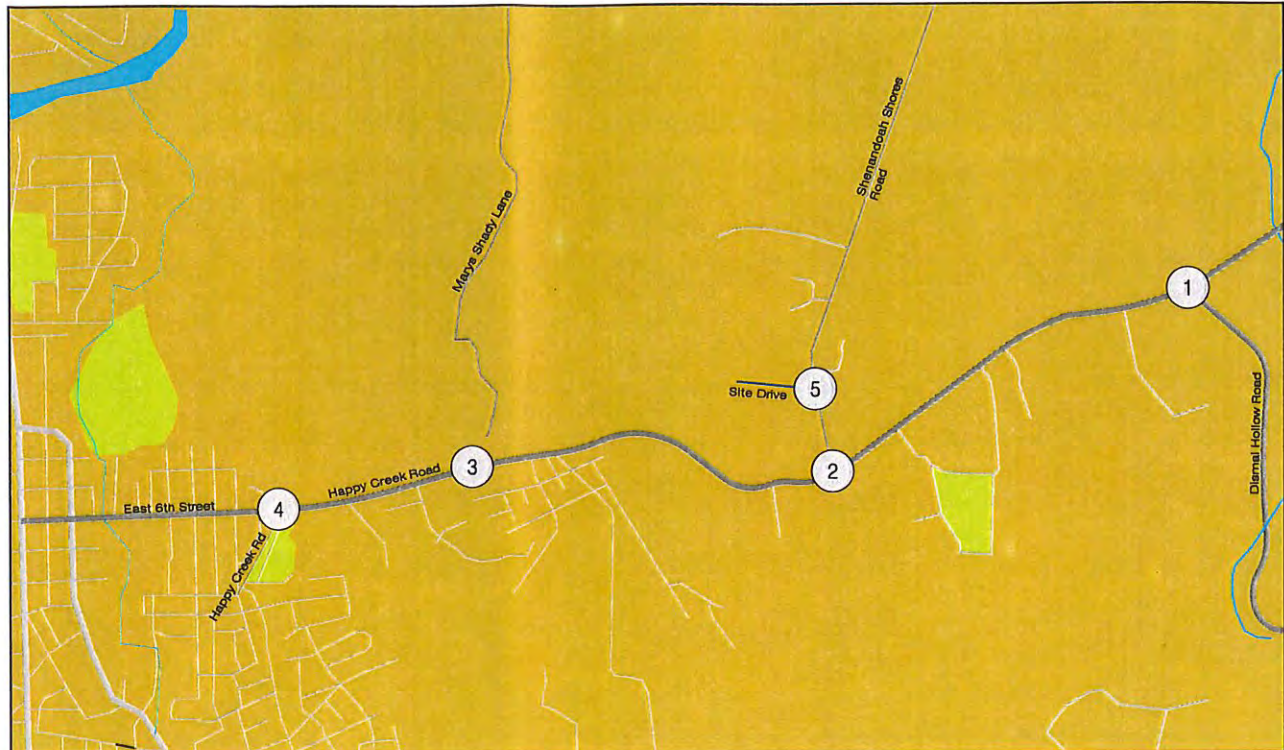
Intersection capacity analysis was performed for the future conditions without the proposed development at the intersections contained within the study area during the weekday morning and afternoon peak hours. The results of the intersection capacity analysis under this scenario are presented in Table 3. The detailed analysis worksheets are contained in Appendix F.

Table 3: Future without Development (2016) Intersection Capacity Analysis

ID No	Intersection/Approach	Turn Lane Length	AM Peak Hour			PM Peak Hour		
			LOS	Delay	95 th Queue	LOS	Delay	95 th Queue
1	<i>Happy Creek Road and Dismal Hollow Road</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Through/Left Movement		A	2.2	4	A	1.5	2
	Northbound Left Turn Movement		B	11.4	9	B	12.1	25
2	<i>Happy Creek Road and Shenandoah Shores Road</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Through/Left Movement		A	4.5	9	A	4.8	15
	Southbound Left/Right Movement		C	15.4	56	C	19.3	83
3	<i>Happy Creek Road and Marys Shady Lane</i>		Intersection Removed					
4	<i>East 6th Street and Happy Creek Road</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Left Turn Movement	200'	A	8.1	18	A	8.3	11
	Northbound Left/Right Movement		A	9.9	15	B	11.9	36
5	<i>Shenandoah Shores Road and Site Drive</i>							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Left/Right Movement		A	9.5	7	A	9.7	5
	Northbound Left/Through Movement		A	1.3	2	A	2.3	4

Notes: N/A – Not Applicable

Based on the Town of Front Royal's LOS criteria mentioned earlier in the report, all intersections in the study area operate at suitable levels. The results of the intersection capacity analysis for the future conditions without the proposed development are shown in Figure 8.



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Figure 8
Future Conditions without Development (2016) Levels of Service



TRIP GENERATION

As mentioned earlier in the report, the project site is currently approved for a 75 dwelling unit residential development. The proposed development program calls for a 320 dwelling unit development. In order to calculate the trips generated by the proposed Vazzana Property development, the ITE's Trip Generation, 7th Edition publication was used to determine the trips generated by the Vazzana Property for the weekday morning and afternoon peak hours as well as the typical weekday daily trips. Table 4 shows the trips generated by the approved and proposed development plan as well as the additional trips between the proposed and approved plans.

Table 4: Site Trip Generation

Land Use	ITE Code	Size	Week day							
			AM Peak Hour			PM Peak Hour			Daily Total	
			In	Out	Total	In	Out	Total		
Approved Plan										
Single-Family Detached Housing	210	75 DU	16	46	62	53	30	83	798	
Proposed Plan										
Single-Family Detached Housing	210	320 DU	59	174	233	193	113	306	3,032	
Additional Trips (Proposed minus Approved)			43	128	171	140	83	223	2,234	

As shown in the Table 4, the proposed zoning will generate approximately 171 additional trips during the weekday morning peak hour and approximately 223 additional trips during the weekday afternoon peak hour.

SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT

Site Access, Distribution and Assignment

As described previously, the site will be accessed by a full access driveway along Shenandoah Shores Road. Existing traffic patterns and the proposed land uses were taken into consideration when distributing trips to and from the site. The trip distribution was scoped with and agreed upon by VDOT and the Town of Front Royal, as well as previous traffic studies performed in the area. Table 5 presents the direction of approach for the proposed development, which is also shown in Figure 9. The peak hour site generated trips are shown in Figure 10.

Table 5: Site Trip Distribution

Roadway Link	Trip Distribution
To/From Morgan Ford Road, north of Happy Creek Road	15%
To/From Happy Creek Road, west of Shenandoah Shores Road	40%
To/From Dismal Hollow Road, south of Happy Creek Road	45%
TOTAL	100%

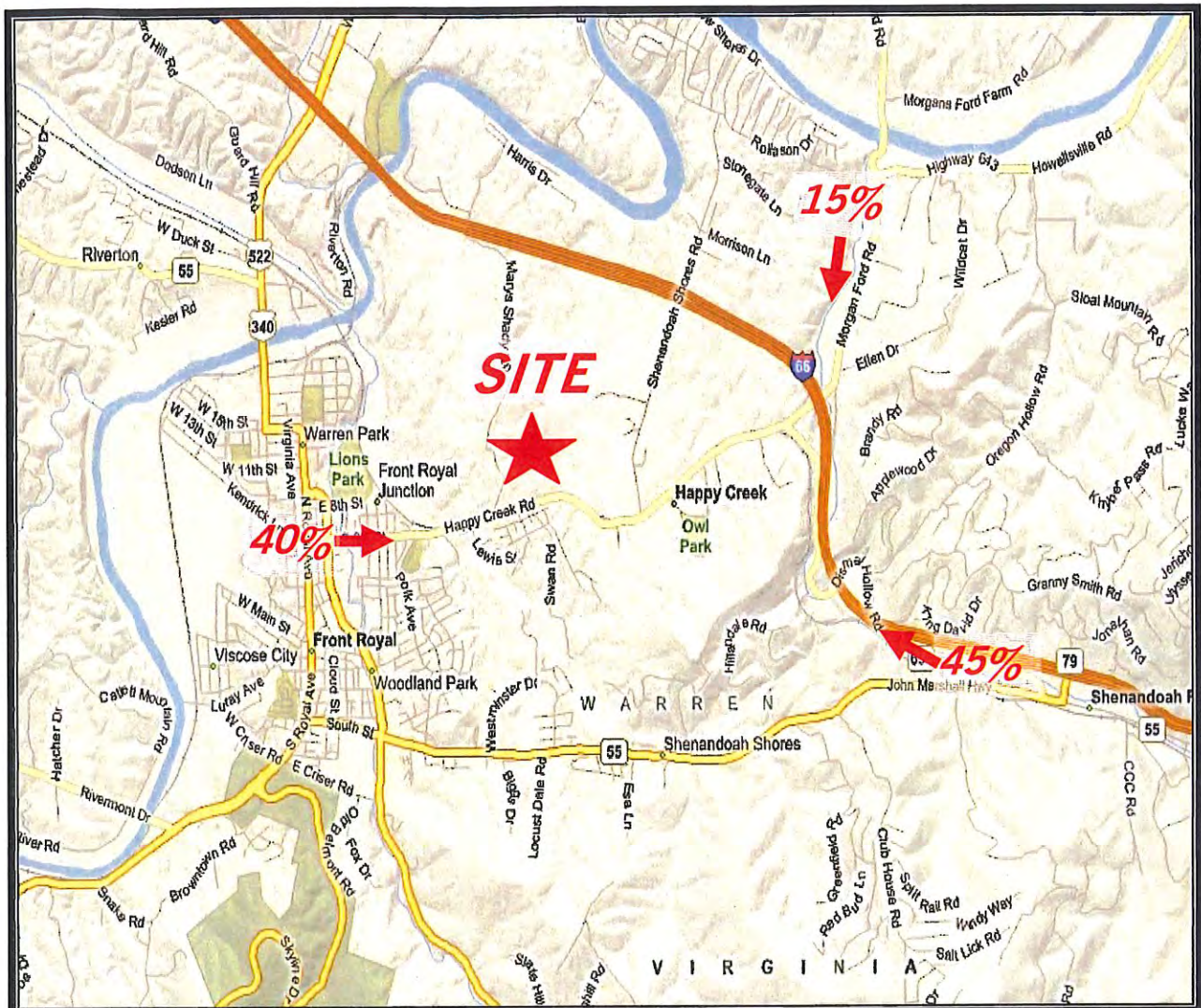
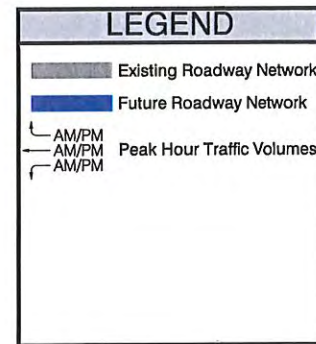
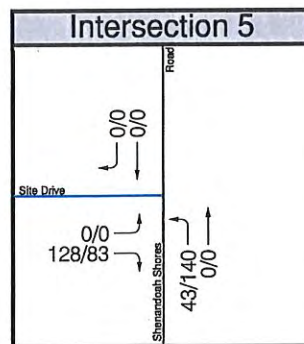
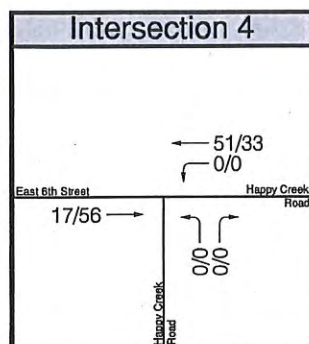
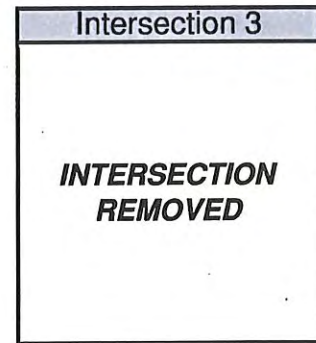
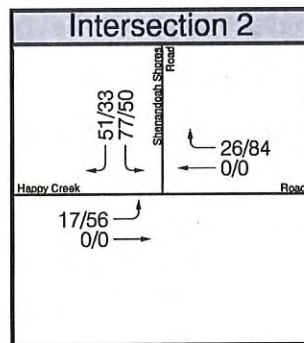
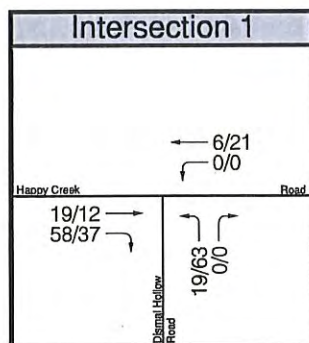
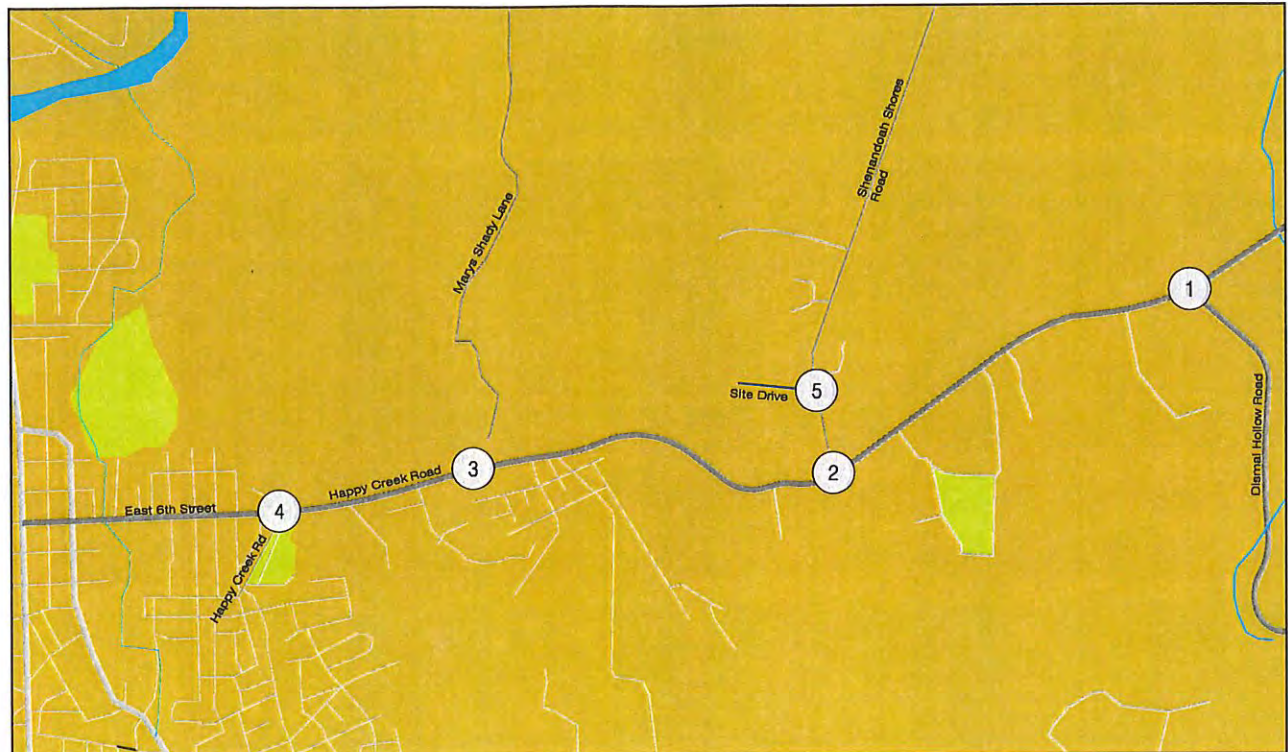


Figure 9: Regional Site Trip Distribution



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Figure 10
Site Generated Trips



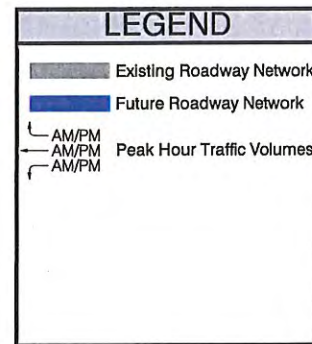
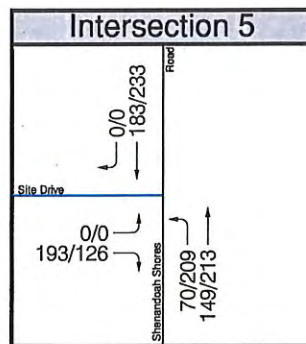
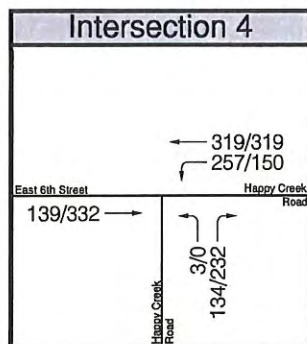
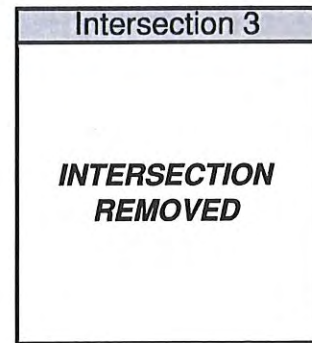
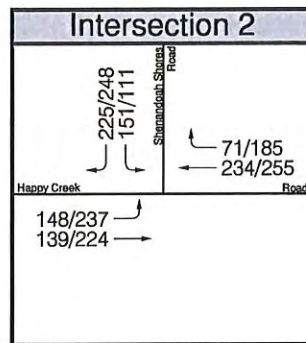
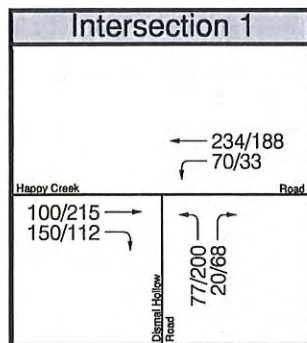
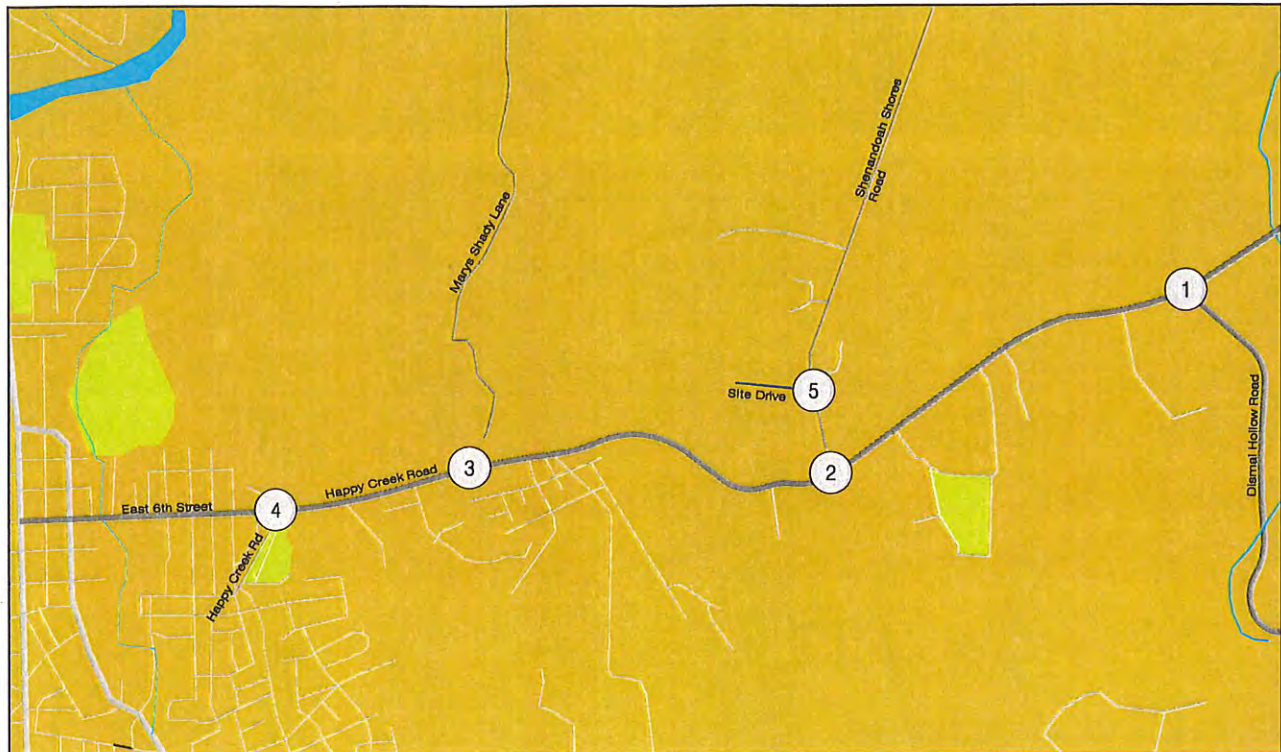
FUTURE CONDITIONS WITH DEVELOPMENT (2016)

Future with Development Traffic Volumes

In order to determine the traffic volumes present on the roadways within the vicinity of the project site under the build 2016 condition, the proposed site trips were added to the future without development volumes. The traffic volumes for the future conditions with development are shown in Figure 11.

Future with Development Capacity Analysis

Intersection capacity analysis was performed for the future conditions with development at the intersections contained within the study area during the weekday morning and afternoon peak hours. With the proposed Vazzana development in place, Marys Shady Lane will be abandoned or removed north of Happy Creek Road. The intersection of Happy Creek Road and Marys Shady Lane is therefore not analyzed under the future with development conditions. The results of the intersection capacity analysis for the future with development conditions are presented in Table 6. The detailed analysis worksheets are contained in Appendix G.



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Figure 11
Future Conditions with Development (2016) Traffic Volumes

**Table 6: Future with Development (2016) Intersection Capacity Analysis**

ID No	Intersection/Approach	Turn Lane Length	AM Peak Hour			PM Peak Hour		
			LOS	Delay	95 th Queue	LOS	Delay	95 th Queue
1	Happy Creek Road and Dismal Hollow Road							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Through/Left Movement		A	2.3	5	A	1.4	2
	Northbound Left Turn Movement		B	12.1	14	B	14.1	47
2	Happy Creek Road and Shenandoah Shores Road							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Through/Left Movement		A	4.9	11	A	6.1	23
	Southbound Left/Right Movement		D	29.6	167	F	67.4	278
	Mitigation (Signalized)		B	18.2		B	17.9	
	Eastbound Left Turn Movement	100'	B	11.4	77	B	11.3	116
	Eastbound Through Movement		B	10.1	72	A	9.2	107
	Westbound Through Movement		C	25.3	168	C	28.4	192
	Westbound Right Turn Movement	50'	B	10.6	39	B	12.4	84
	Southbound Left/Right Movement		C	20.8	207	C	23.0	199
3	Happy Creek Road and Marys Shady Lane							
	Intersection Removed							
4	East 6th Street and Happy Creek Road							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Left Turn Movement	200'	A	8.1	18	A	8.5	12
	Northbound Left/Right Movement		B	10.0	15	B	12.7	39
5	Shenandoah Shores Road and Site Drive							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Left/Right Movement		B	10.5	24	B	10.4	15
	Northbound Left/Through Movement		A	2.8	4	A	5.0	16

Based on the Town of Front Royal's LOS criteria, it is desirable to achieve a LOS C or better for each lane group at an intersection. Based on these guidelines, the intersection of Happy Creek Road and Shenandoah Shores Road will not operate at acceptable level of service during the morning and afternoon peak periods. A signal was therefore recommended at this intersection with turn bays on Happy Creek Road to achieve the Town's LOS requirement under the future conditions with development.

The results of the intersection capacity analysis for the future conditions with the proposed development and the recommended improvements are shown in Figure 12.

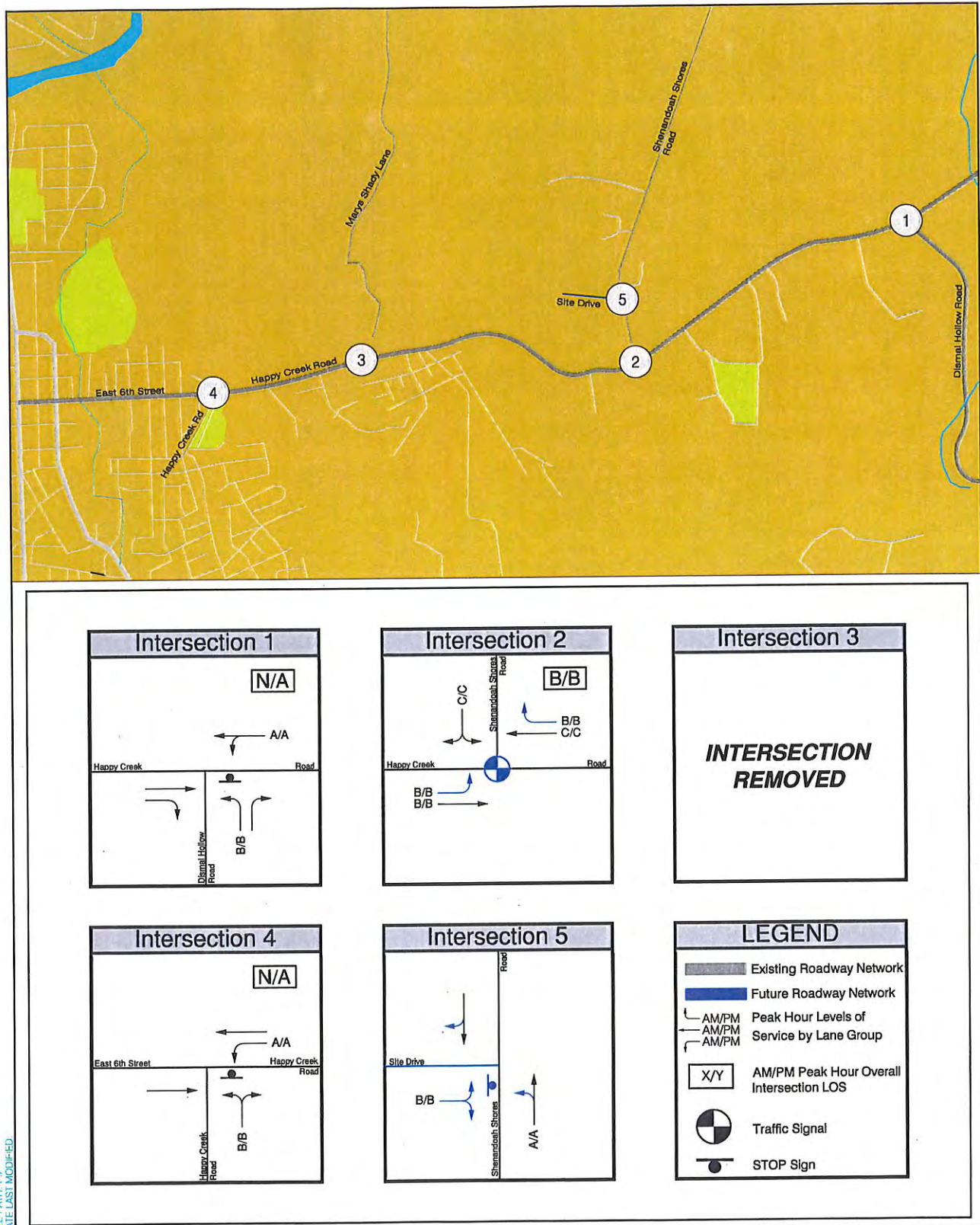


Figure 12
Future Conditions with Development (2016) Levels of Service and Recommended Improvements



Warrant Analyses

Signal Warrant Analysis

A signal warrant analysis was performed for the intersection of Happy Creek Road and Shenandoah Shores Road using the Manual on Traffic Signal Design (MTSD) methodology. This methodology is used on future intersections, though it may be used at existing intersections in instances for planning purposes. For an rural area, the criteria for satisfying the warrants are shown in Table 7 below. The daily volumes used in the analysis are shown in Table 8, and equates to ten times the afternoon peak hour volume. The results of the analyses are summarized below, with the detailed analysis included in Appendix H.

Table 7: MTSD Warrant Criteria – Happy Creek Road and Shenandoah Shores Road

Warrant Name	Minimum Required Estimated Average Daily Traffic	
	Vehicles per day on major street (total of both approaches)	Vehicles per day on higher-volume minor street (one direction only)
1. Minimum Vehicular		
Major Street	Minor Street	
1 lane	1 lane	5,600
		1,680
2. Interruption of Continuous Traffic		
Major Street	Minor Street	
1 lane	1 lane	8,400
		850
3. Combination	Must satisfy 80% of Warrants 1 and 2	Must satisfy 80% of Warrants 1 and 2

Table 8: Average Daily Traffic (2016) for MTSD Warrant Analysis

Intersection Name	Major Street, Both Approaches	Minor Street, One Direction Only
Happy Creek Road and Shenandoah Shores Road	Eastbound/ Westbound 9,010	Southbound 3,590

Only one of the three warrants must be met in order for the signal to be warranted. The projected volumes in Table 8 trigger the three warrant criteria for the intersection of Happy Creek Road and Shenandoah Shores Road; therefore, a signal is warranted at this location.

Turn Lane Warrant Analysis

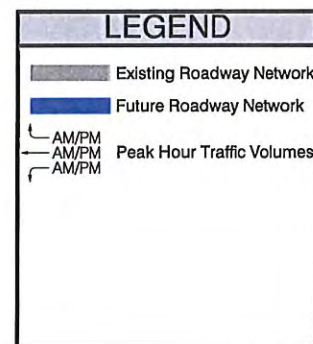
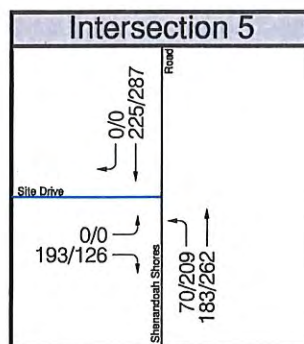
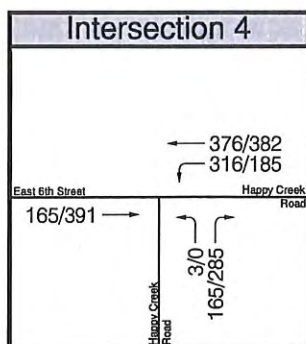
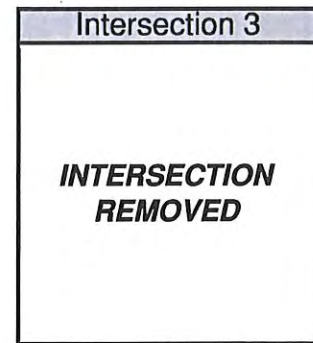
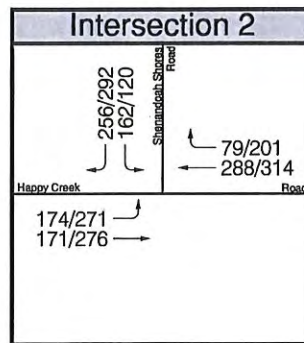
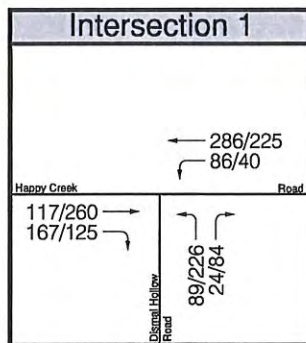
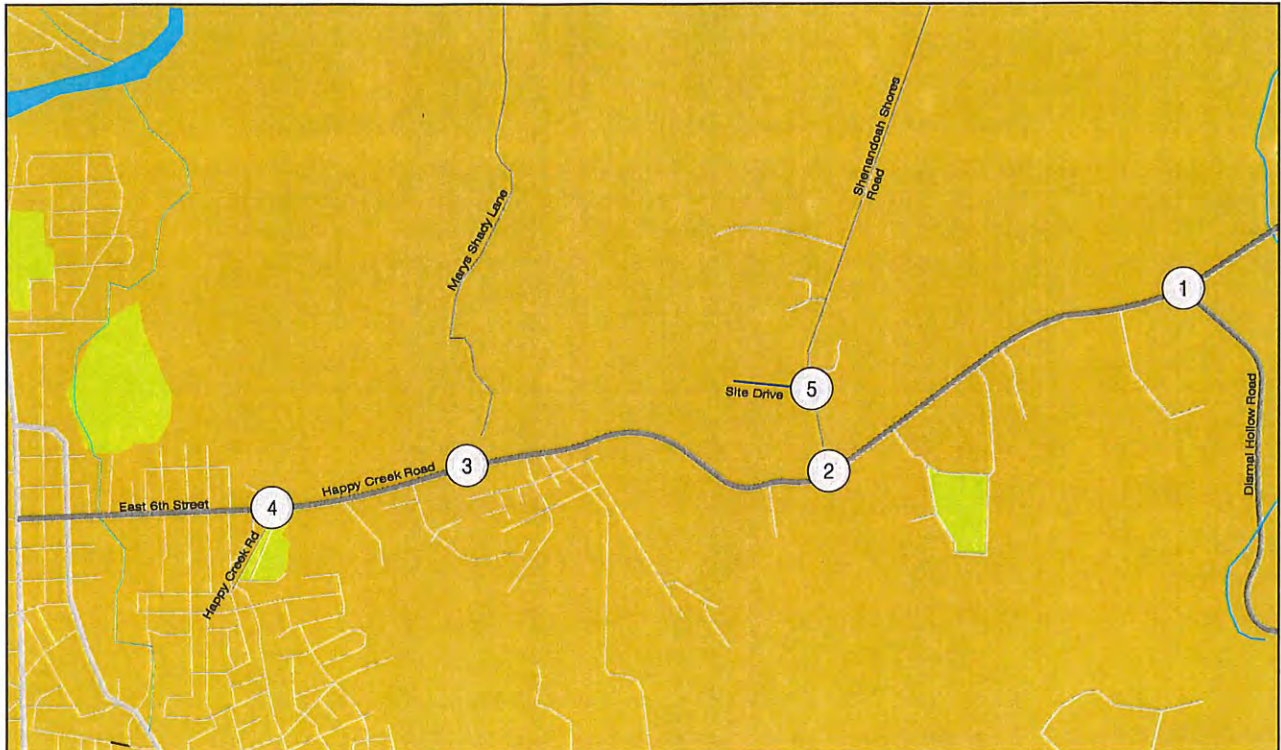
Turn lane warrant analyses were conducted based on VDOT's Road Design Manual for the northbound left at Shenandoah Shores Road with the site entrance, and the eastbound left and westbound right turn movements at the intersection of Shenandoah Shores Road and Happy Creek Road. The northbound left turn lane is not warranted for the site entrance. However, at the intersection of Happy Creek Road with Shenandoah Shores Road, a full width turn lane is warranted for the westbound right turn. An eastbound left turn lane is not warranted in 2016. The turn lane warrant spreadsheets are attached in Appendix H.



FUTURE CONDITIONS WITH DEVELOPMENT PLUS SIX YEARS (2022)

Future with Development plus Six Years Traffic Volumes

In order to determine the traffic volumes under the future conditions with development plus six years (2022), the 3.5% inherent growth rate was compounded annually over a fourteen-year period and added to the existing traffic volumes to account for regional increase in traffic due to background growth and development outside of the study area. The trips generated by the approved Vazzana Property were also added to the existing traffic and inherent growth. Finally, the new trips associated with the proposed Vazzana Property were combined to attain the traffic volumes for the future conditions with development plus six years, as shown in Figure 13.



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Figure 13
Future Conditions with Development plus Six Years (2022) Traffic Volumes



Future with Development plus Six Years Capacity Analysis

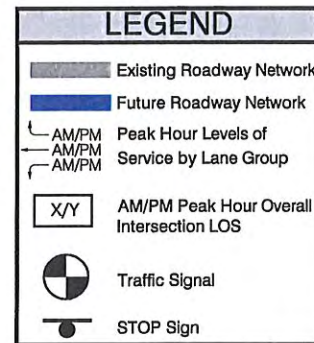
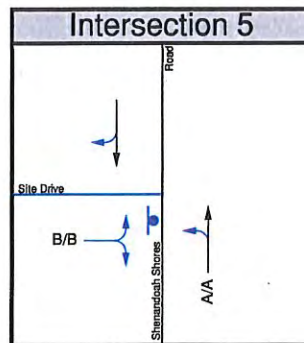
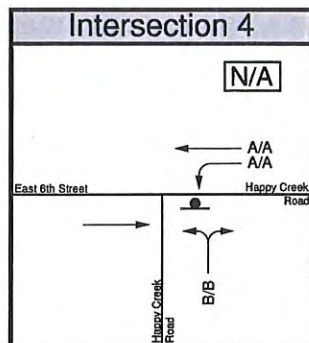
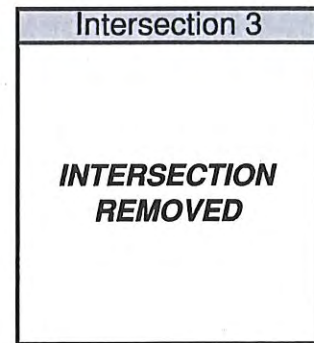
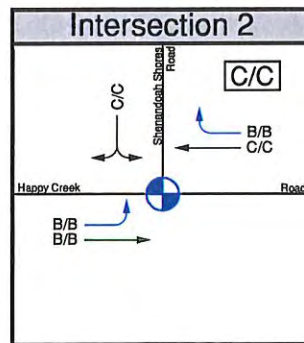
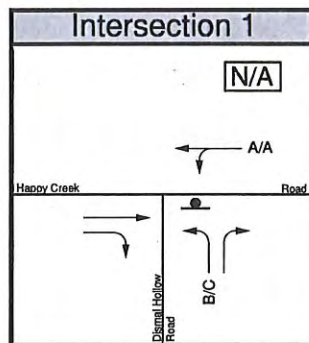
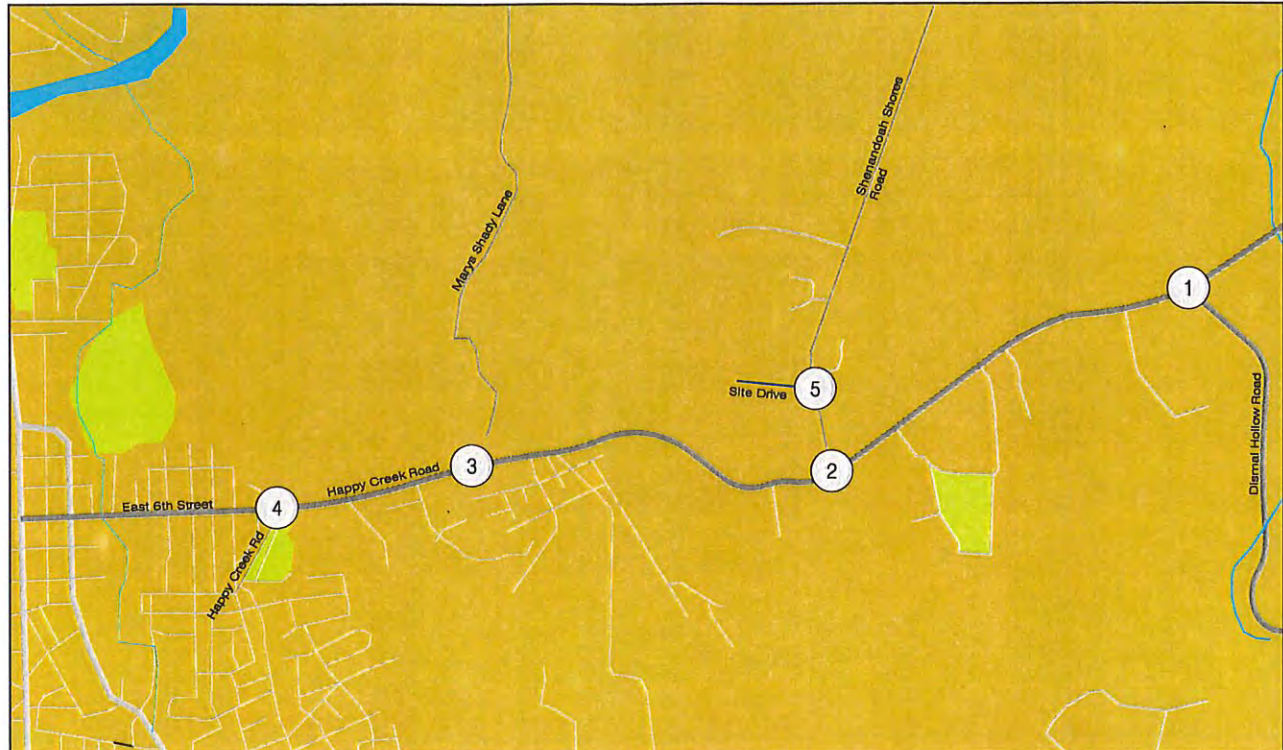
Intersection capacity analysis was performed for the future conditions with development plus six years at the intersections contained within the study area during the morning and afternoon peak hours. The results of the intersection capacity analysis are presented in Table 9 and shown graphically in Figure 14. The detailed analysis worksheets are contained in Appendix I.

Table 9: Future with Development plus Six Years (2022) Intersection Capacity Analysis

ID No	Intersection/Approach	Turn Lane Length	AM Peak Hour			PM Peak Hour		
			LOS	Delay	95 th Queue	LOS	Delay	95 th Queue
1	Happy Creek Road and Dismal Hollow Road							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Through/Left Movement		A	2.4	6	A	1.6	3
	Northbound Left Turn Movement		B	13.6	20	C	17.1	71
2	Happy Creek Road and Shenandoah Shores Road							
	Overall Intersection (Signalized)		C	21.5		C	21.0	
	Eastbound Left Turn Movement	100'	B	13.5	100	B	14.7	149
	Eastbound Through Movement		B	11.2	97	B	10.8	148
	Westbound Through Movement		C	29.7	225	C	32.7	256
	Westbound Right Turn Movement	50'	B	12.4	49	B	15.1	109
	Southbound Left/Right Movement		C	25.2	258	C	25.8	238
3	Happy Creek Road and Marys Shady Lane		Intersection Removed					
4	East 6th Street and Happy Creek Road							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Westbound Left Turn Movement	200'	A	8.4	24	A	8.9	16
	Northbound Left/Right Movement		B	10.6	21	B	14.9	61
5	Shenandoah Shores Road and Site Drive							
	Overall Intersection (Unsignalized)		N/A	N/A		N/A	N/A	
	Eastbound Left/Right Movement		B	10.9	25	B	10.8	17
	Northbound Left/Through Movement		A	2.6	5	A	4.8	17

Note: N/A – Not Applicable

As described previously, it is desirable to maintain a LOS 'C' or better for each lane group at an intersection. Based on these guidelines, and with the implementation of the mitigation measures recommended in the future with development conditions, all intersections in the study area operate at acceptable levels.



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Figure 14
Future Conditions with Development plus Six Years (2022) Levels of Service



RECOMMENDED IMPROVEMENTS

The following improvements were determined to be necessary to achieve the Town's LOS "C" requirement under the future conditions with development:

- *Happy Creek Road and Shenandoah Shores:*
 - Add a 100ft eastbound left turn bay
 - Add a 50ft westbound right turn bay
 - Add a signal

The above improvements were analyzed against VDOT's right and left turn lane warrant criteria, as well as the Manual on Traffic Signal Design (MTSD) traffic signal warrant requirements. The signal and right turn were warranted by 2016, but the left turn was not warranted until 2022 conditions.



CONCLUSIONS

This report presented the findings of a traffic impact analysis for the proposed Vazzana development in the Town of Front Royal, Virginia. This study is prepared in conjunction with the rezoning application to the R-1A zoning classification for the development. The site is located north of Happy Creek Road, south of I-66, east of Marys Shady Lane, and west of Shenandoah Shores Road in the Town of Front Royal, Virginia.

The proposed development program consists of a 320 single-family detached dwelling unit development of which 75 dwelling units are by right. The existing Marys Shady Lane intersection at Happy Creek Road, and existing railroad crossing, will be removed as part of this project. The project is scheduled to be complete by 2016. Access to the project site is proposed via Shenandoah Shores Road.

According to the direction received from the Town of Front Royal during the scoping meeting, it is desirable to maintain a level of service (LOS) 'C' or better for each lane group. Based on these requirements, the analysis presented in this report supports the following major conclusions:

Existing Conditions (2008)

All intersections in the study area operate at acceptable conditions during the weekday morning peak and afternoon peak hours under existing traffic conditions.

Future Conditions without Development (2016)

Traffic volumes were projected for the year 2016 without the proposed development. According to the scoping meeting, annual inherent growth rates were applied to the existing volumes to estimate the future background volumes. In addition to the inherent growth, trips generated by the 75 dwelling unit Vazzana Property by-right development was added to the future background volumes.

All intersections in the study area operate at acceptable conditions during the weekday morning peak and afternoon peak hours under the future without development conditions.

Future Conditions with Development (2016)

The proposed development program consists of 320 dwelling unit single-family detached housing. Of the 320 dwelling units, 75 of them have been approved. The site will be accessed by one full access driveway along Shenandoah Shores Drive. As part of this development, it was assumed that Marys Shady Lane's access to Happy Creek Road would be removed. The proposed development will generate approximately 171 additional trips during the weekday morning peak hour, approximately 223 additional trips during the weekday afternoon peak hour, and approximately 2,234 additional trips during an entire weekday.



Based on the capacity analysis, the intersection of Happy Creek Road and Shenandoah Shores Road will not operate at acceptable level of service during the morning and afternoon peak periods. A signal and turn bays on Happy Creek Road were therefore recommended at this intersection as mitigation measures to achieve the Town's LOS "C" requirement under the future conditions with development.

In addition to the capacity analyses, the criteria for a traffic signal and turn lanes were reviewed and analyzed before the recommendation of those mitigation measures. Based on the Manual on Traffic Signal Design (MTSD) methodology for signals and the Virginia Department of Transportation (VDOT) criteria for turn lanes, a signal and right turn bay were warranted, but a left-turn lane would not be warranted until 2022 conditions.

Future Conditions with Development plus Six Years (2022)

All intersections in the study area operate at acceptable conditions during the weekday morning peak and afternoon peak hours under the future with development plus six (2022) traffic conditions.

Traffic Impact Study

Vazzana Property Development

Town of Front Royal, Virginia

September 29, 2017

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INTRODUCTION AND SUMMARY

Purpose of Report and Study Objectives

The following report presents the findings of a traffic impact analysis for the proposed Vazzana Property development located in the Town of Fort Royal, Virginia. The site is located north of Route 647 (Happy Creek Road), south of I-66, east of Route 522, and west of Route 606 (Shenandoah Shores Road). The proposed development is planned to consist of approximately 715 single-family detached residential units, 155 senior adult housing units, and up to 95,000 square feet of non-residential space (estimated as a 10 kSF day care center, 20 kSF church, 40 kSF office space and 25 kSF of specialty retail center). The 715 dwelling units (DUs) and 95 kSF retail space will complement the 320 by-right dwelling units located on the Vazzana property that was rezoned by the Town in 2010. Also, it is possible that a portion of the property will be dedicated to Warren County to develop a fire station and up to ±700 student elementary school. The 604-acre site has been annexed in the Town of Front Royal and is zoned Agriculture. The site is currently vacant, and full build out is anticipated by 2034.

The following tasks were completed as part of this study:

- A scoping document was prepared to outline the scope and parameters of the study and relevant background information. Both the Town of Front Royal and the Virginia Department of Transportation (VDOT) reviewed and provided input regarding the scope. A copy of the scoping document is included in Appendix A.
- Field reconnaissance in the vicinity of the site was performed to collect information related to existing traffic controls, roadway geometry, and traffic flow characteristics.
- In order to determine the weekday peak hour traffic volumes, turning movement traffic counts were conducted during the AM and PM commuter peak periods.
- Future traffic conditions were estimated based on a regional growth rate of 1.0%. The proposed HEPTAD development, the approved by-right Vazzana development and the elementary school and fire station were included as background developments in the analysis per discussions held with VDOT and Town of Front Royal staff. Historical data from VDOT was available along Happy Creek Road, Dismal Hollow Road, Shenandoah Shores Road, 6th Street, and Commerce Avenue.
- Traffic volumes for the background developments were generated using the methodology outlined in the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 9th Edition publication.
- Intersection capacity analyses were performed for existing conditions (2016), future conditions without proposed development (2034), future conditions with proposed development (2034) and build-out plus six years (2040) during weekday morning and afternoon commuter peak hour traffic conditions at the intersections located within the study area.

Sources of data for this study include Institute of Transportation Engineers (ITE), the Virginia Department of Transportation (VDOT), the Town of Fort Royal, and the office files and field reconnaissance efforts by Gorove/Slade Associates, Inc.

EXECUTIVE SUMMARY

Site Location and Study Area

The proposed Vazzana Property development will be located in Fort Royal, Virginia. The site is located north of Route 647 (Happy Creek Road), south of I-66, east of the Shenandoah River, and west of Route 606 (Shenandoah Shores Road.) The development will be accessed via one full-access entrance along Shenandoah Shores Drive and a connection to East 8th Street. The property is approximately 604 acres.

Description of the Proposed Development

The majority of the 604-acre site has been annexed in the Town of Front Royal and is previously approved to develop 320 DU's. The site is currently vacant. The proposed Vazzana Property development plan calls for the additional construction of approximately 715 single-family detached residential units, 155 senior adult housing units, and up to 95 kSF of non-residential space (approximately 10 kSF day care center, 20 kSF church, 40 kSF office space and 25 kSF of specialty retail center). In addition, it is possible that a portion of the property will be dedicated to Warren County to develop a fire station and up to ±700 student Elementary School. The full build out is anticipated by 2034.

Principal Findings, Conclusions, and Recommendations

The analysis presented in this report supports the following major conclusions:

▪ **Existing Conditions (2016)**

The following intersections operate beyond capacity under the Existing conditions:

- *North Commerce Avenue and East 6th Street*
The eastbound and westbound approaches operate at level of service D during both the weekday morning and afternoon peak hours.
- *North Commerce Avenue and East 8th Street*
The eastbound and westbound approaches operate at level of service E and D respectively during the weekday afternoon peak hours.
- *North Commerce Avenue and North Royal Avenue*
The westbound left and southbound left turn movements approach at level of service E during both the morning and afternoon peak hour. The overall level of service is at LOS D during the afternoon peak hour.
- *W 14th Street and North Shenandoah Avenue*
The southbound approach operates at acceptable levels of service during both the weekday morning and afternoon peak hours. The remaining approaches operate at LOS D or worse.

▪ **Future Conditions without Proposed Development (2034)**

- A 1.0% growth rate was applied to Happy Creek Road, Shenandoah Shores Road, North Commerce Avenue, and East 8th Street.
- The anticipated traffic from the 450 residential units of the proposed HEPTAD development was added. That site is located south of Happy Creek Road along the future Leach Run Parkway.
- Currently, there are 320 residential units previously approved for development on the by-right portion of the Vazzana Property. Anticipated traffic from this by-right development was added under background conditions.

- With the development of the by-right Vazzana property, access to Happy Creek Road from Marys Shady Lane will close. Traffic will access Happy Creek Road via Shenandoah Shores Road.
- It is possible that a portion of the Vazzana property will be dedicated to Warren County to develop a fire station and up to ±700 student Elementary School. These developments were also considered as background developments.
- The construction of Leach Run Parkway between John Marshall Highway and Happy Creek Road at Shenandoah Shores Road is expected to be complete by 2034. A portion of existing traffic was rerouted to use this new roadway.
- According to the Town of Front Royal, it is desirable to maintain a level of service (LOS) C or better for each movement. The following intersections operate beyond capacity under future without development 2034 conditions:
 - *Happy Creek Road and Shenandoah Shores Road*
The southbound approach operates at level of service F during both the weekday morning and afternoon peak hours.
 - *North Commerce Avenue and East 6th Street*
The westbound approach operates at level of service E during both the peak hours. During the afternoon peak hour, the northbound approach operates at level of service C and the rest of the approaches operate at level of service D or worse.
 - *North Commerce Avenue and East 8th Street*
The westbound left turn operates at level of service D during the morning peak hours. During the afternoon peak hour, the eastbound and westbound approaches operate at level of service D or worse.
 - *North Commerce Avenue and North Royal Avenue*
The northbound approach operates at LOS C during both the morning and afternoon peak hours. All the other approaches operate at LOS D or worse during both the peak hours.
 - *W 14th Street and North Shenandoah Avenue*
The westbound and southbound approaches operate at acceptable levels of service during both the peak hours. Rest all of the approaches operate at LOS D or worse during both the morning and the afternoon peak hours.
 - *Leach Run Parkway and Happy Creek Road*
The northbound approach operates at LOS F during both the morning and the afternoon peak hours.

The following improvements are anticipated with the by-right Vazzana development and the middle school:

- Happy Creek Road and Shenandoah Shores Road
 - Add an exclusive eastbound left turn lane. (Proffered under rezoning RZ09-02-64, Front Royal Limited Partnership-Town Property). The eastbound left turn lane will be constructed with the middle school and is anticipated to open by 2017.
 - Add an exclusive westbound right turn lane. (Proffered under rezoning RZ09-02-64, Front Royal Limited Partnership-Town Property)

- Install a traffic control signal. (Proffered under rezoning RZ09-02-64, Front Royal Limited Partnership-Town Property) This recommendation is subject to the completion of an MUTCD signal warrant study, which should be conducted before installation of a traffic signal.
- Happy Creek Road and Leach Run Parkway (new intersection with middle school construction)
 - Add an eastbound right turn lane.
 - Add a westbound left turn lane.
 - Add a northbound left turn lane, and,
 - Install a traffic control signal.
- **Future Conditions with Proposed Development (2034)**
 - The proposed development program consists of approximately 715 single-family detached residential units, 155 senior adult housing units, and up to 95 kSF of non-residential space. The site will be accessed via one full-access entrance along Shenandoah Shores Drive and a connection to East 8th Street.
 - The proposed development will generate approximately 796 trips during the weekday morning peak period, 1,022 trips during the weekday afternoon peak period, and 9,654 trips during an entire weekday.
 - The following improvements are recommended with the proposed development:
 - Happy Creek Road and Shenandoah Shores Road
 - Add a southbound right turn lane.
 - Adjust signal timings as necessary.
 - N. Commerce Avenue and E. 8th Street:
 - Restripe the westbound approach to a thru/left turn lane and a right turn lane, and,
 - Install a traffic control signal.
 - Shenandoah Shores Road and East/West Connector
 - Add a traffic control signal
 - Add an eastbound right turn lane.
 - Add a northbound left turn lane.
 - With the above improvements in place under the future with development conditions, the study intersections operate at the following levels of service:
 - *Happy Creek Road and Shenandoah Shores Road*

The overall intersection and each of the turning movements operate at LOS C or better during the commuter peak hours.
 - *North Commerce Avenue and East 6th Street*

The westbound approaches operate at level of service D during both the morning and afternoon peak hours. The eastbound approach and the overall intersection operate at LOS D during the afternoon peak hour.
 - *North Commerce Avenue and East 8th Street*

- The westbound through/left turn movement operates at level of service D during the afternoon peak hour. The remaining movements and the overall intersection operate at LOS C or better during both peak periods.
- *North Commerce Avenue and North Royal Avenue*
All the approaches operate at LOS D or worse during both the morning and the evening peak hours, except for the southbound approach during the afternoon peak hour.
 - *W 14th Street and North Shenandoah Avenue*
Most of the movements operate at LOS D or worse during both the morning and the evening peak hours.
 - *Shenandoah Shores Road and East West connector*
The overall intersection and each of the turning movements operate at LOS C or better during the commuter peak hours.
- **Build-out Plus Six Years (2040)**
- With continued regional traffic growth, the following intersections operate with at least one movement at unacceptable levels of service under the future (2040) conditions:
- *North Commerce Avenue and East 6th Street*
 - *North Commerce Avenue and East 8th Street*
 - *North Commerce Avenue and North Royal Avenue*
 - *W 14th Street and North Shenandoah Avenue*

EXISTING CONDITIONS (2016)

Existing and Proposed Site Uses

The study site is located north of Route 647 (Happy Creek Road), south of I-66, east of Route 522, and west of Route 606 (Shenandoah Shores Road). The site currently is vacant. The proposed Vazzana Property development site plan calls for approximately 715 single-family detached residential units, 155 senior adult housing units, and up to 95 kSF of non-residential space. For the purposes of this analysis, the full build out of the property was assumed to be complete by 2034. Site access will be provided via a new East/West Connector Road at one full-access entrance along Shenandoah Shores Road and a connection to East 8th Street. The area map and site location is shown in Figure 1.

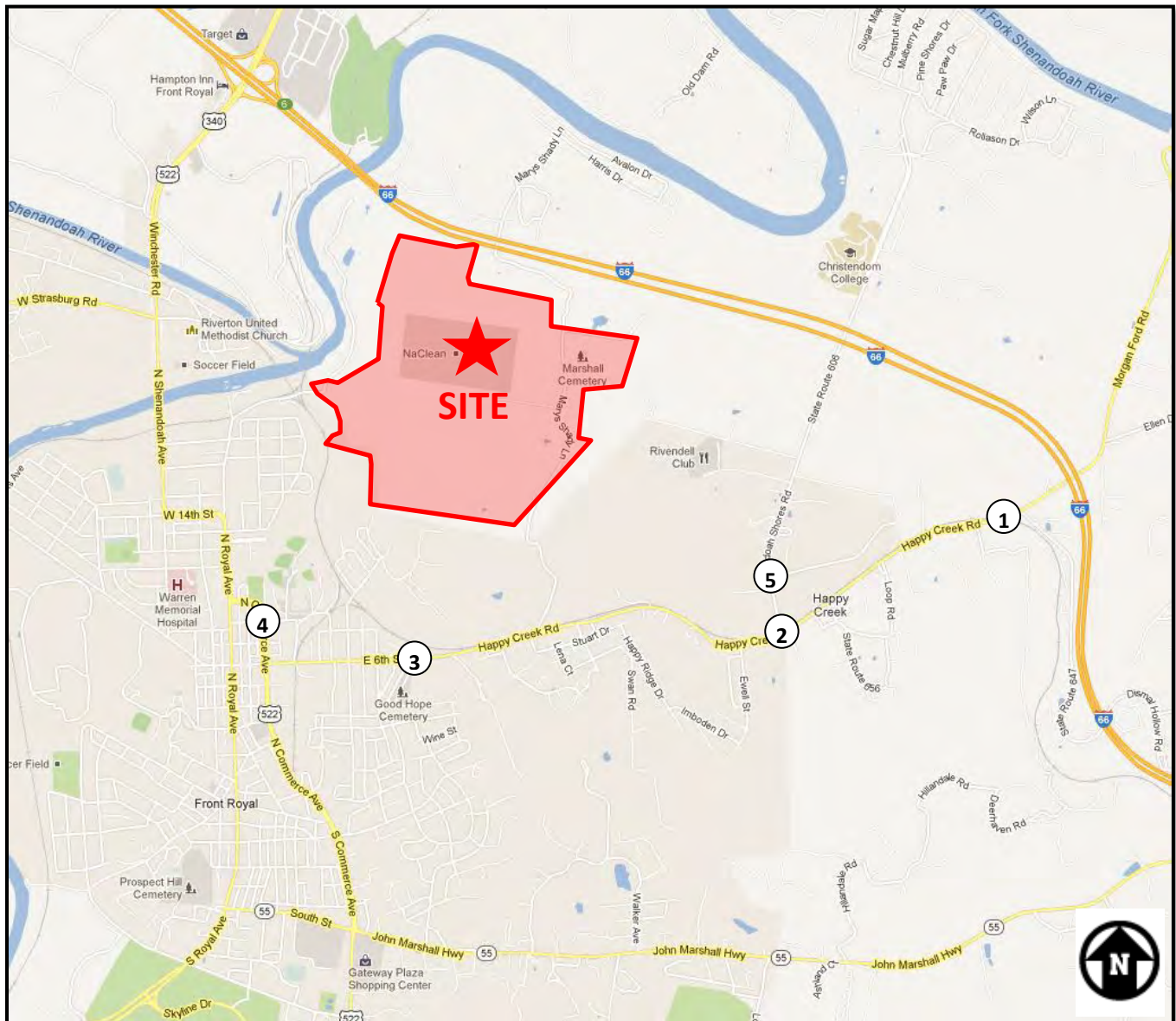


Figure 1: Area Map and Site Location

The following intersections were analyzed as part of this study:

1. Happy Creek Road and Dismal Hollow Road
2. Happy Creek Road and Shenandoah Shores Road
3. North Commerce Avenue and East 6th Street
4. North Commerce Avenue and East 8th Street
5. North Commerce Avenue and North Royal Avenue
6. W 14th Street and North Shenandoah Avenue
7. Happy Creek Road and Leach Run Parkway (Future intersection)
8. Shenandoah Shores Road and Site Entrance (Future intersection)

Roadway Network

A description of the major roadways within the immediate vicinity of the site is presented below:

Happy Creek Road (VA Route 624/647) is a two-lane, undivided roadway with varying posted speed limits of 25 mph (near downtown Front Royal), 35 mph, and 45 mph (near Dismal Hollow Road) in the study area.

Dismal Hollow Road (VA Route 624) is a two-lane, undivided roadway that runs from Happy Creek Road to John Marshall Highway with a posted speed limit of 45 mph in the study area.

Shenandoah Shores Road (VA Route 606) is a two-lane, undivided roadway that runs from Happy Creek Road to Rollason Drive with a posted speed limit of 35 mph in the vicinity of the site.

East 6th Street (VA Route 647) is a two-lane, undivided roadway with left turn lanes at signalized intersections. The posted speed limit is 25 mph in the vicinity of the project site.

North Commerce Street (US Route 522) is a four-lane, divided roadway that runs from North Royal Avenue to John Marshall Highway. The posted speed limit is 35 mph.

East 8th Street is a two-lane, undivided roadway. Parking is provided on either side of the street between North Royal Avenue and North Commerce Street.

The existing lane configuration and traffic controls for the study intersections are shown in Figure 2.

Existing Traffic Volumes

In order to determine the weekday peak hour turning movement traffic volumes, traffic counts at the study intersections were conducted on Thursday, March 17, 2016, from 6:00 AM to 9:00 AM and from 4:00 PM to 7:00 PM. Analysis of the existing traffic data determined the following peak hours:

AM Peak Hour: 7:45 AM to 8:45 AM

PM Peak Hour: 4:30 PM to 5:30 PM

The existing morning and afternoon peak hour traffic volumes for the study intersections are shown in Figure 3, and the estimated average daily traffic data are also shown in the same graphic. The existing turning movement counts are included in Appendix B.

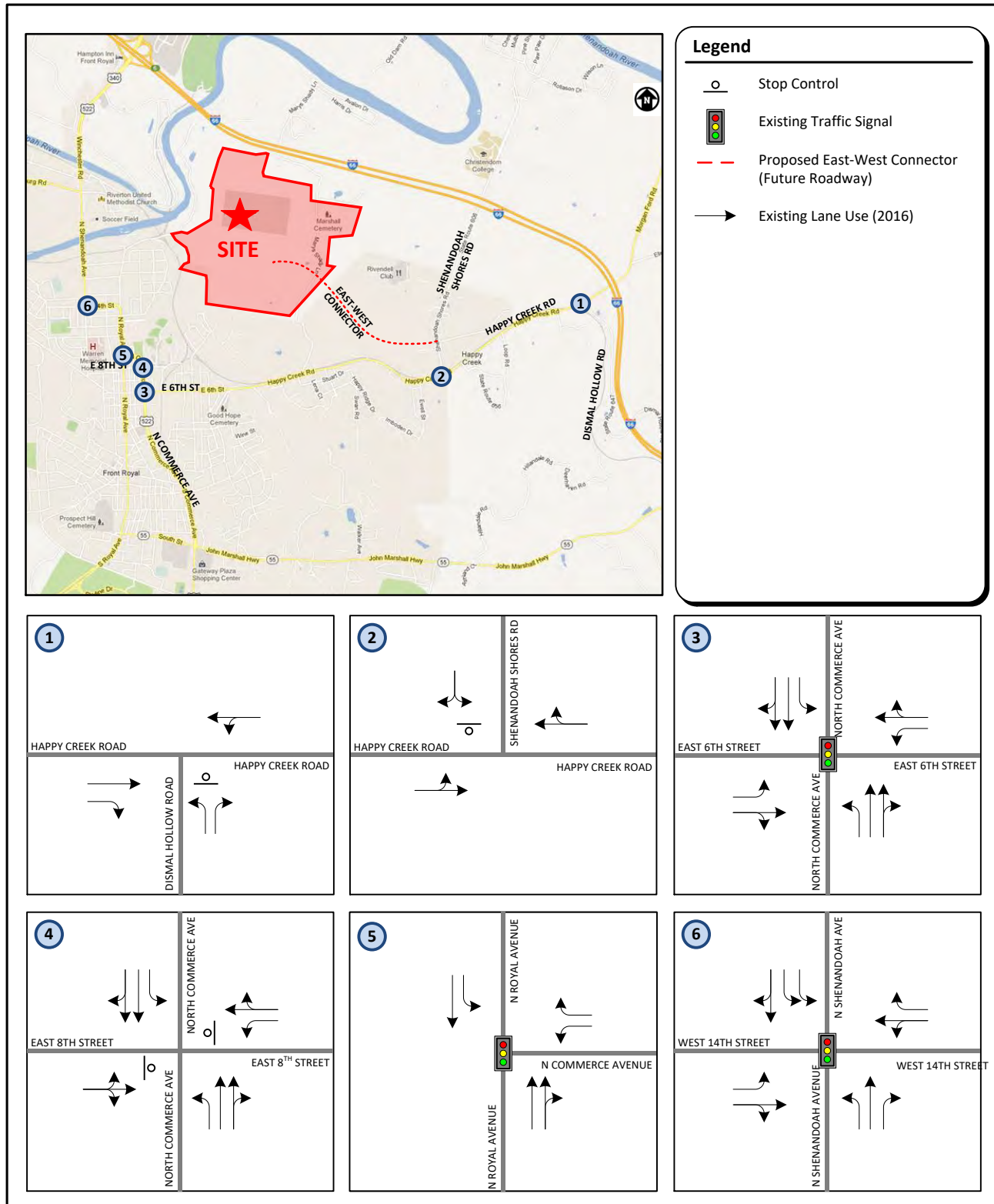


Figure 2: Lane Configuration and Traffic Control – Existing Conditions (2016)

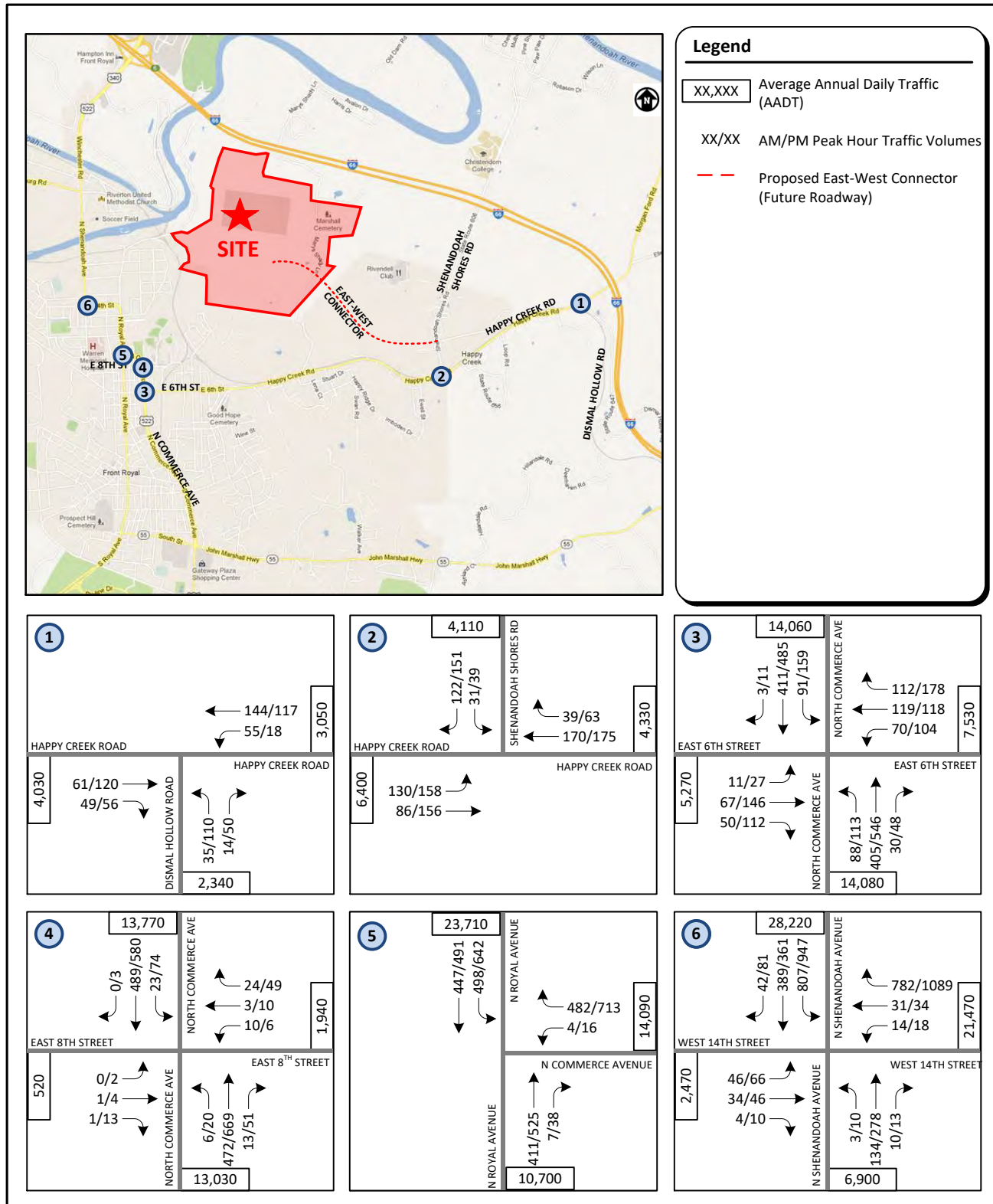


Figure 3: Existing Traffic Volumes (2016)

Existing Conditions Capacity Analysis

Capacity analyses were performed at the study intersections during the weekday morning and afternoon commuter peak hours under the existing conditions. Intersection capacity analyses were performed using *Synchro version 9.1* based on the latest Highway Capacity Manual (HCM 2000) data and methodology. Existing peak hour factors by movement were calculated from field count data.

Table 1 summarizes the results of the intersection capacity analyses for existing conditions, and Figure 4 shows the existing levels of service. A description of the different LOS and delay and the detailed analysis worksheets for the existing conditions are included in Appendix C and D, respectively.

Table 1: Existing Conditions (2016) Intersection Capacity Analysis

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue		LOS	Delay (sec/veh)	Queue		LOS	Delay (sec/veh)
			50th	90th			50th	90th		
1	<i>Happy Creek Rd and Dismal Hollow Rd</i>									
	Overall Intersection (Unsignalized)				n/a	n/a			n/a	n/a
	Westbound Approach		n/a	n/a		3.6	n/a	n/a		1.4
	Westbound Through/Left		n/a	7	A	3.6	n/a	2	A	1.4
	Northbound Approach		n/a	n/a	B	12.1	n/a	n/a	B	11.2
	Northbound Left		n/a	10	B	12.1	n/a	19	B	11.2
2	<i>Happy Creek Rd and Shenandoah Shores Rd</i>									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Eastbound Approach		n/a	n/a		6.1	n/a	n/a		4.8
	Eastbound Through/Left		n/a	14	A	6.1	n/a	13	A	4.8
	Southbound Approach		n/a	n/a	B	14.4	n/a	n/a	B	14.6
	Southbound Left/Right		n/a	41	B	14.4	n/a	48	B	14.6
3	<i>East 6th St and N Commerce Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	24.2	n/a	n/a	C	31.7
	Eastbound Approach		n/a	n/a	D	36.5	n/a	n/a	D	45.4
	Eastbound Left		7	17	C	32.2	18	31	C	30.5
	Eastbound Through/Right		68	109	D	37.0	233	212	D	47.1
	Westbound Approach		n/a	n/a	D	37.8	n/a	n/a	D	38.4
	Westbound Left		40	68	C	27.2	87	88	C	32.1
	Westbound Through/Right		132	233	D	40.9	227	337	D	41.1
	Northbound Approach		n/a	n/a	B	19.1	n/a	n/a	C	26.2
	Northbound Left	145'	30	64	B	13.6	52	86	B	18.9
	Northbound Through/Right		107	181	C	20.3	176	250	C	27.8
	Southbound Approach		n/a	n/a	B	18.2	n/a	n/a	C	24.7
	Southbound Left	165'	36	64	B	13.6	68	120	B	19.5
	Southbound Through/Right		98	173	B	19.6	146	212	C	26.4
4	<i>East 8th St and N Commerce Avenue</i>									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Eastbound Approach		n/a	n/a	C	18.0	n/a	n/a	E	45.6
	Eastbound Left/Through/Right		n/a	2	C	18.0	n/a	28	E	45.6
	Westbound Approach		n/a	n/a	C	16.9	n/a	n/a	D	27.5
	Westbound Left	140'	n/a	7	C	23.1	n/a	8	F	54.7
	Westbound Through/Right		n/a	8	B	14.1	n/a	31	C	24.8
	Northbound Approach		n/a	n/a		0.2	n/a	n/a		0.3
	Northbound Left	150'	n/a	1	A	8.7	n/a	3	A	8.9
	Southbound Approach		n/a	n/a		0.5	n/a	n/a		1.8
	Southbound Left	165'	n/a	3	A	8.5	n/a	14	A	9.8
5	<i>N Commerce Avenue and N Royal Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	31.4	n/a	n/a	D	43.8
	Westbound Approach		n/a	n/a	C	32.1	n/a	n/a	D	51.5
	Westbound Left		9	12	E	68.7	24	36	E	69.3
	Westbound Right		207	327	C	31.3	539	#830	D	50.8
	Northbound Approach		n/a	n/a	C	27.3	n/a	n/a	C	32.2
	Northbound Through/Right		134	199	C	27.3	246	285	C	32.2
	Southbound Approach		n/a	n/a	C	33.0	n/a	n/a	D	45.3
	Southbound Left		407	#646	E	59.4	~650	#916	E	78.7
	Southbound Through		0	123	A	2.4	99	152	A	3.0
6	<i>W 14th Street and Shenandoah Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	E	57.5	n/a	n/a	C	29.6
	Eastbound Approach		n/a	n/a	F	478.8	n/a	n/a	F	157.7
	Eastbound Left		~160	#318	F	665.7	~74	#152	F	265.2
	Eastbound Through/Right		37	58	D	47.1	52	75	D	50.2
	Westbound Approach		n/a	n/a	A	7.3	n/a	n/a	A	7.5
	Westbound Through/Left		47	74	E	74.1	58	84	E	63.0
	Westbound Right		0	0	A	1.4	0	0	A	3.3
	Northbound Approach		n/a	n/a	D	35.3	n/a	n/a	D	50.7
	Northbound Left	125'	7	8	E	72.3	10	24	E	58.0
	Northbound Through		123	151	C	33.7	224	#393	D	51.4
	Northbound Right		0	0	C	27.8	0	0	C	32.5
	Southbound Approach		n/a	n/a	C	28.5	n/a	n/a	C	28.1
	Southbound Left	288'	267	313	D	36.2	313	377	C	34.0
	Southbound Through/Right		150	296	B	13.8	149	307	B	15.4

According to the Town of Fort Royal, it is desirable to achieve a level of service C or better for each movement at an intersection. The results show that the following intersections operate at unacceptable levels of service under the existing conditions:

- *North Commerce Avenue and East 6th Street*
The eastbound and westbound approaches operate at level of service D during both the weekday morning and afternoon peak hours.
- *North Commerce Avenue and East 8th Street*
The eastbound and westbound approaches operate at level of service E and D respectively during the weekday afternoon peak hours.
- *North Commerce Avenue and North Royal Avenue*
The westbound left and southbound left turn movements operate at level of service E during both the morning and afternoon peak hour. The overall level of service is LOS D during the afternoon peak hour.
- *W 14th Street and North Shenandoah Avenue*
The southbound approach operates at acceptable levels of service during both the weekday morning and afternoon peak hours. The remaining approaches operate at LOS D or worse.

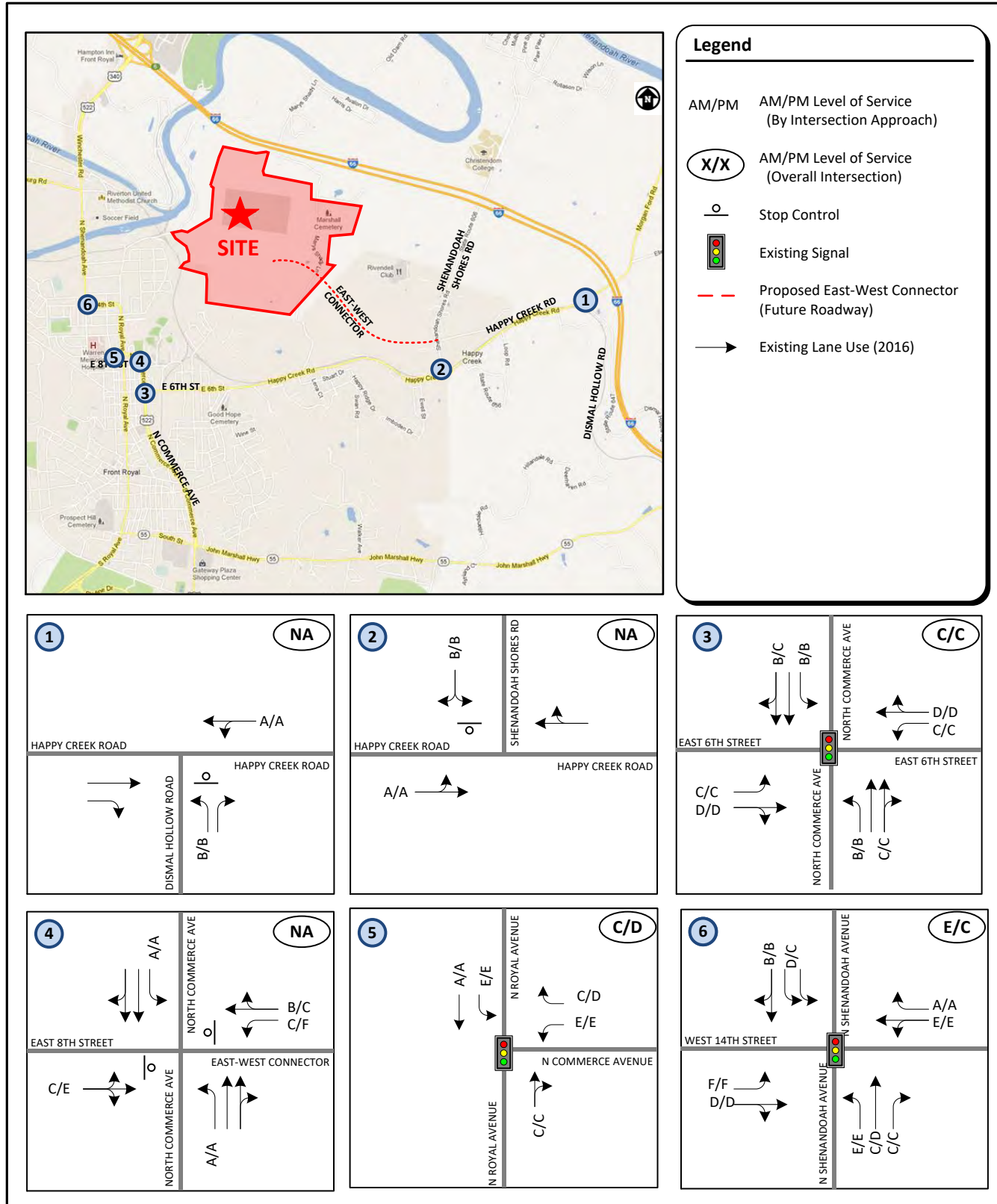


Figure 4: Existing Levels of Service (2016)

FUTURE CONDITIONS WITHOUT PROPOSED DEVELOPMENT (2034)

Planned Roadway/Transportation Improvements

The following planned or proposed roadway/transportation improvements in the vicinity of the site for the 2034 traffic conditions were considered in the traffic study:

- Marys Shady Lane – The connection of Marys Shady Lane to Happy Creek Road will be replaced with a connection to Shenandoah Shores Road with development of the by-right portion of the Vazzana Property. Therefore, the relocated access is assumed under all future conditions.
- Leach Run Parkway – Leach Run Parkway is currently under construction in conjunction with the middle school, and will be in place for all future scenarios. Leach Run Parkway will be a four-lane, divided, limited-access highway between John Marshall Highway (Route 55) to the south and Happy Creek Road to the north with a design speed of 50 mph. The northern terminus of the Leach Run Parkway would be an at-grade intersection with Happy Creek Road, approximately 450 feet west of Shenandoah Shores Road

Direction of Approach and Future Conditions without Proposed Development Traffic Volumes (2034)

Traffic volumes were analyzed during the morning peak hour and the afternoon peak hour for the future year 2034. In order to determine the weekday peak hour volumes, the following data was used:

- Existing 2016 AM and PM peak period turning movement counts
- Annual growth rate of 1.00%
- Traffic volumes at the intersection of Happy Creek Road and Marys Shady Lane from *2009 Vazzana Property Development Traffic Impact Study*
- Previously approved Vazzana Property by-right development program
- Approved future HEPTAD development, located south of Happy Creek Road on Leach Run Parkway
- A fire station and an elementary school to be developed on the Vazzana property to be dedicated to Warren County.

Inherent Growth

Future traffic volumes are projected by increasing existing traffic volumes to the build-out year using a growth rate. It was agreed at the scoping meeting that, to be conservative, a regional growth rate of 1.00% would be used in this traffic study to account for background growth and development outside of the study area. Figure 5 shows the existing 2016 volumes with the applied growth rate.

Marys Shady Lane Rerouting

The access for Marys Shady Lane at Happy Creek Road will be removed as development occurs on the Vazzana property. The vehicles currently using Marys Shady Lane will be rerouted to Shenandoah Shores Road. The directional split along Happy Creek Road for the vehicles currently using Marys Shady Lane was replicated at the intersection of Shenandoah Shores Road and Happy Creek Road when they were relocated. Traffic volumes were not recounted at the intersection of Happy Creek Road and Marys Shady Lane; instead, the same traffic volumes from the *2009 Vazzana Property Development Traffic Impact Study* were used in this analysis. Since the road is a dead end, the volumes should be similar. The rerouted volumes are shown in Figure 6 and Figure 7.

Leach Run Parkway Rerouting

Leach Run Parkway is expected to be constructed by the year 2034. It will extend approximately two (2) miles from Happy Creek Road near Shenandoah Shores Road south to John Marshall Highway. A portion of the vehicles currently using Dismal Hollow Road will be rerouted to Leach Run Parkway. The rerouted volumes are shown in Figure 8 and Figure 9.

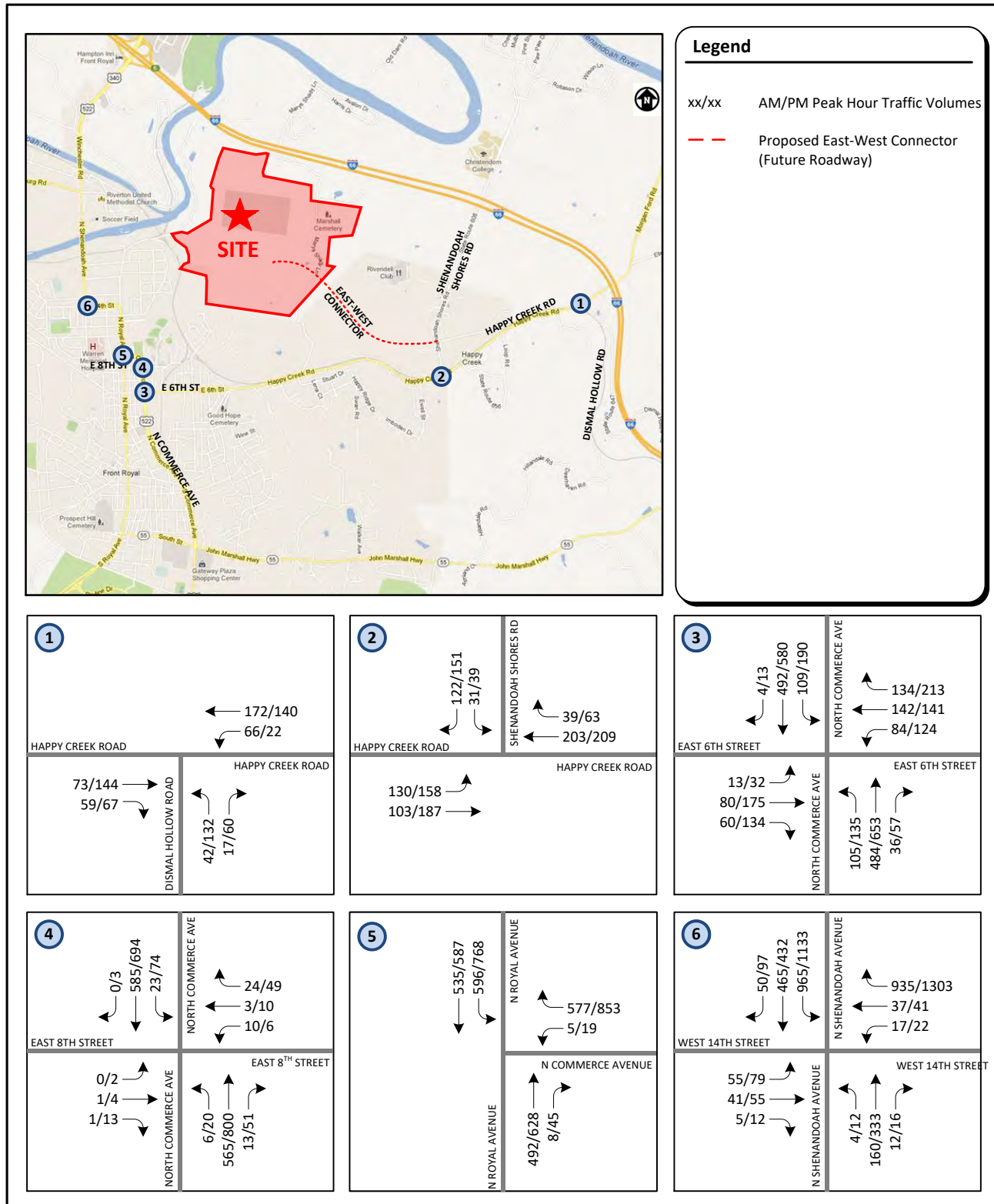


Figure 5: Existing 2016 Volumes + 1.00% Annual Growth

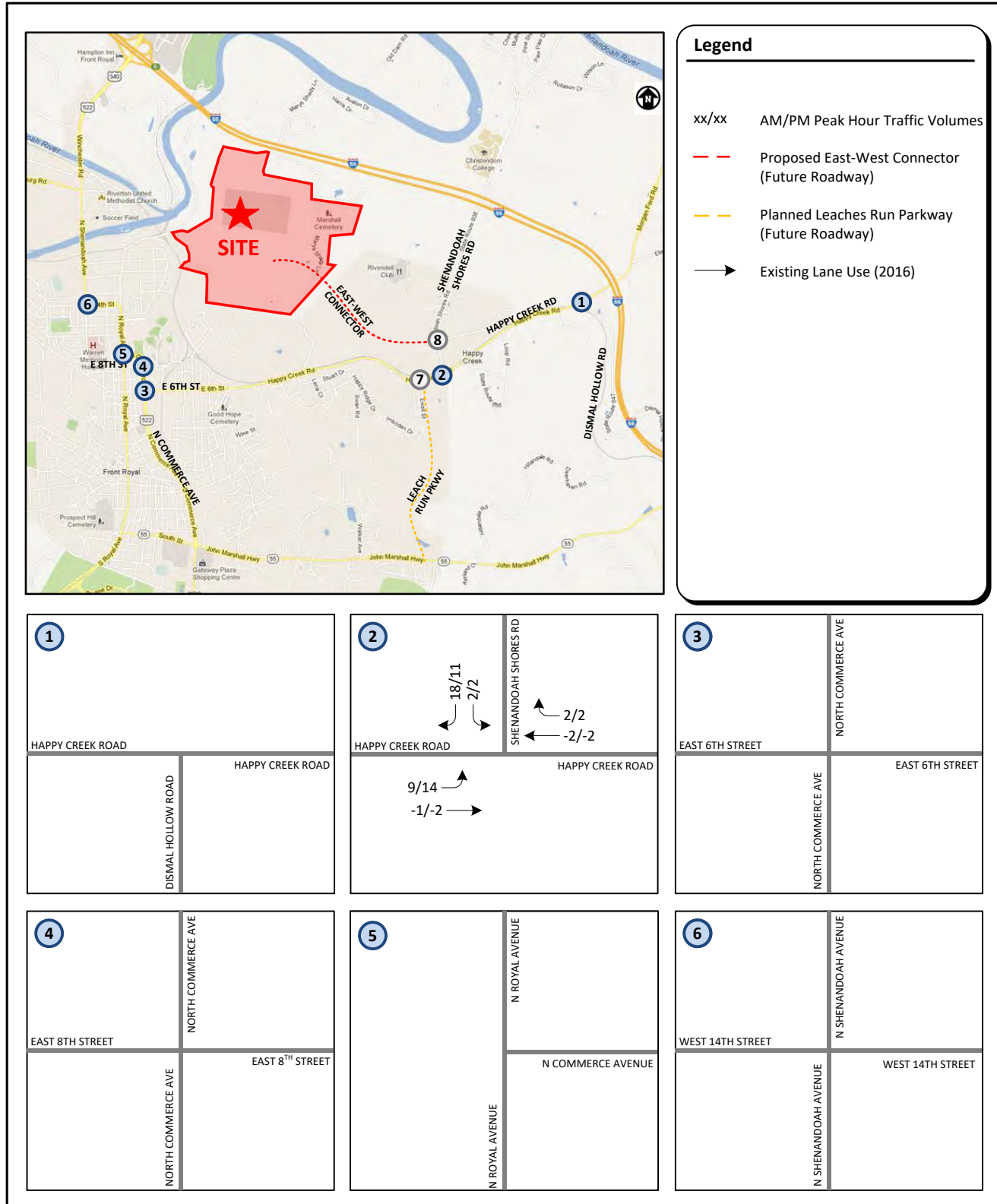


Figure 6: Marys Shady Lane Rerouting (1 of 2)

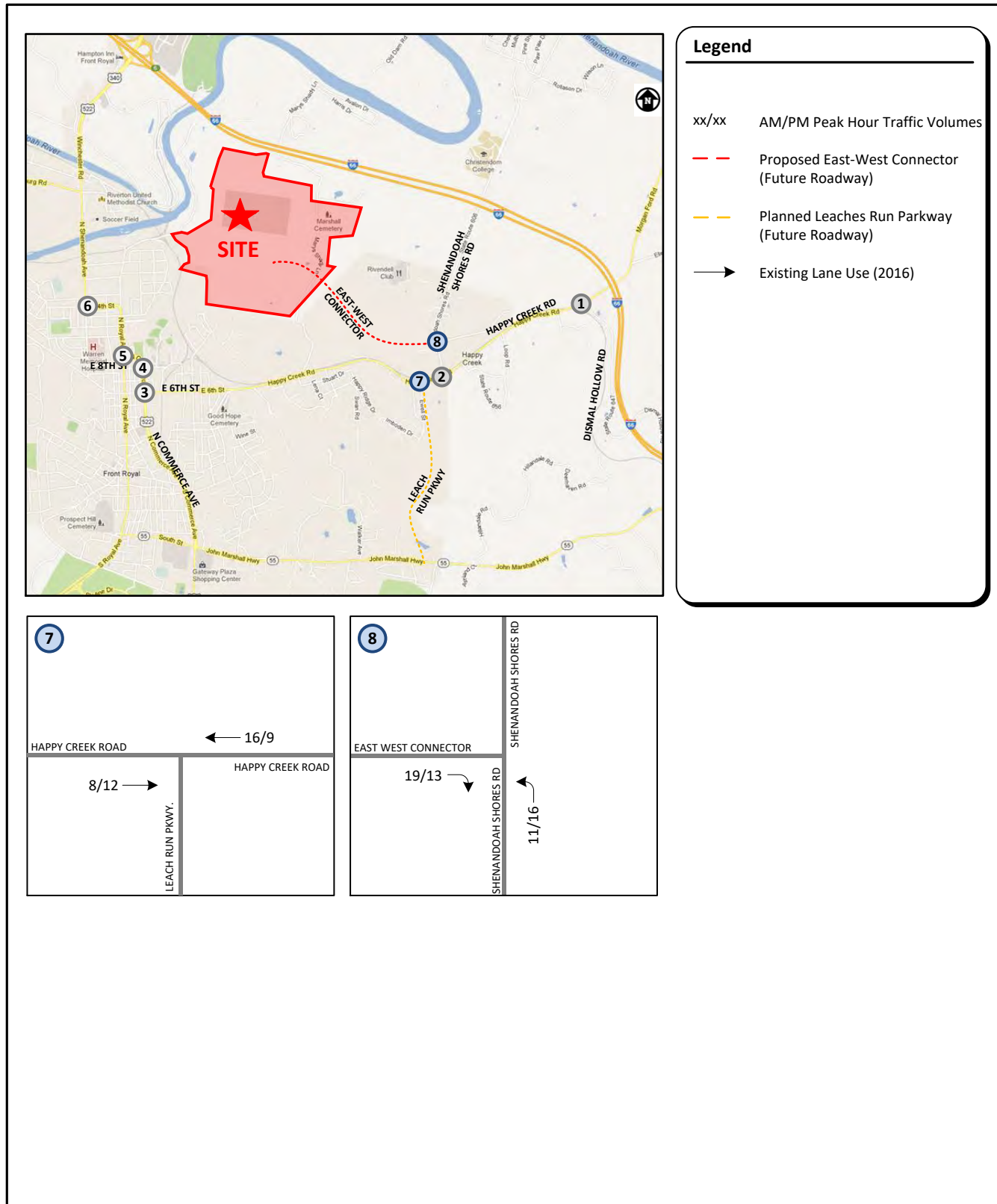


Figure 7: Marys Shady Lane Rerouting (2 of 2)

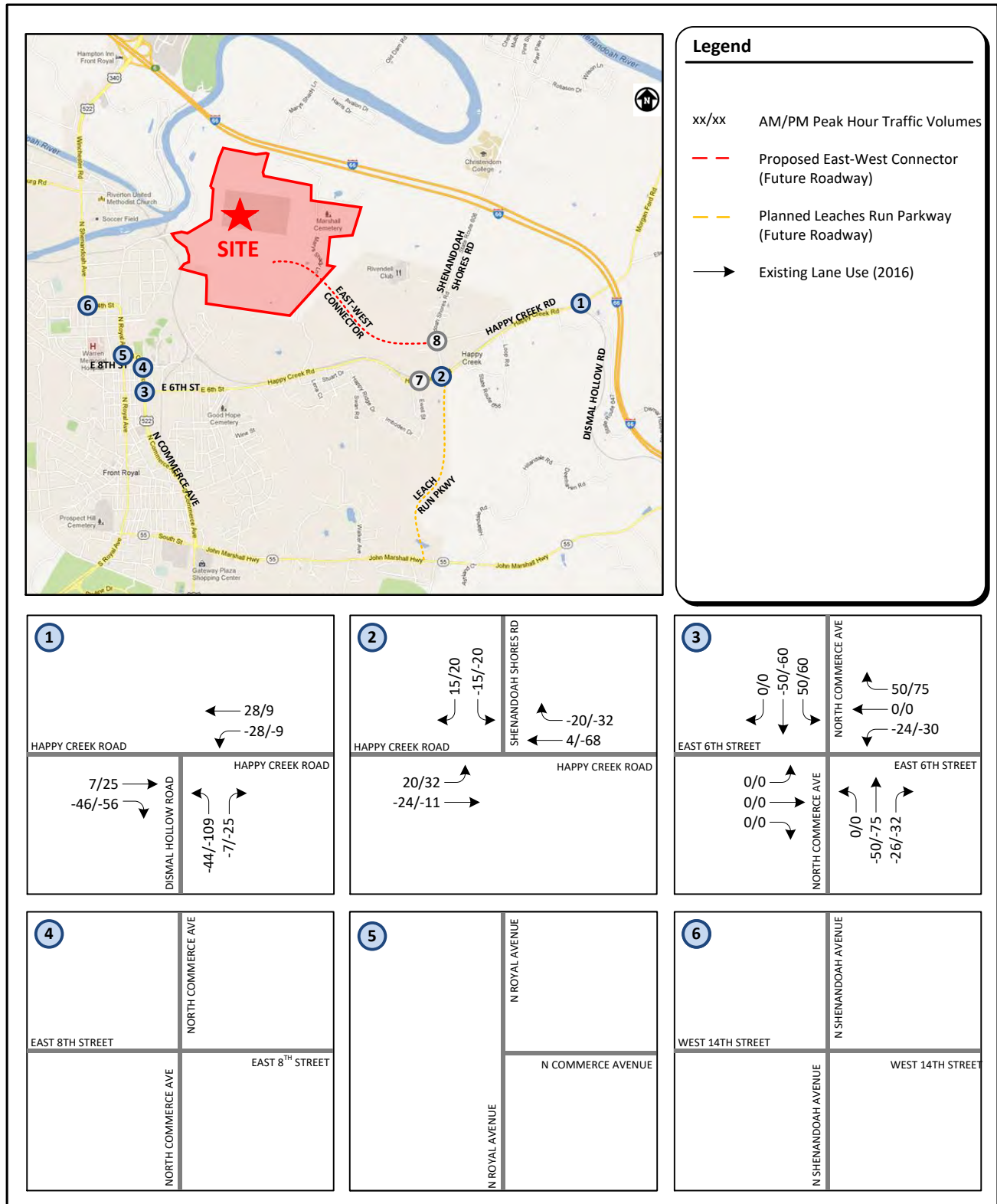


Figure 8 : Leach Run Parkway Rerouting (1 of 2)

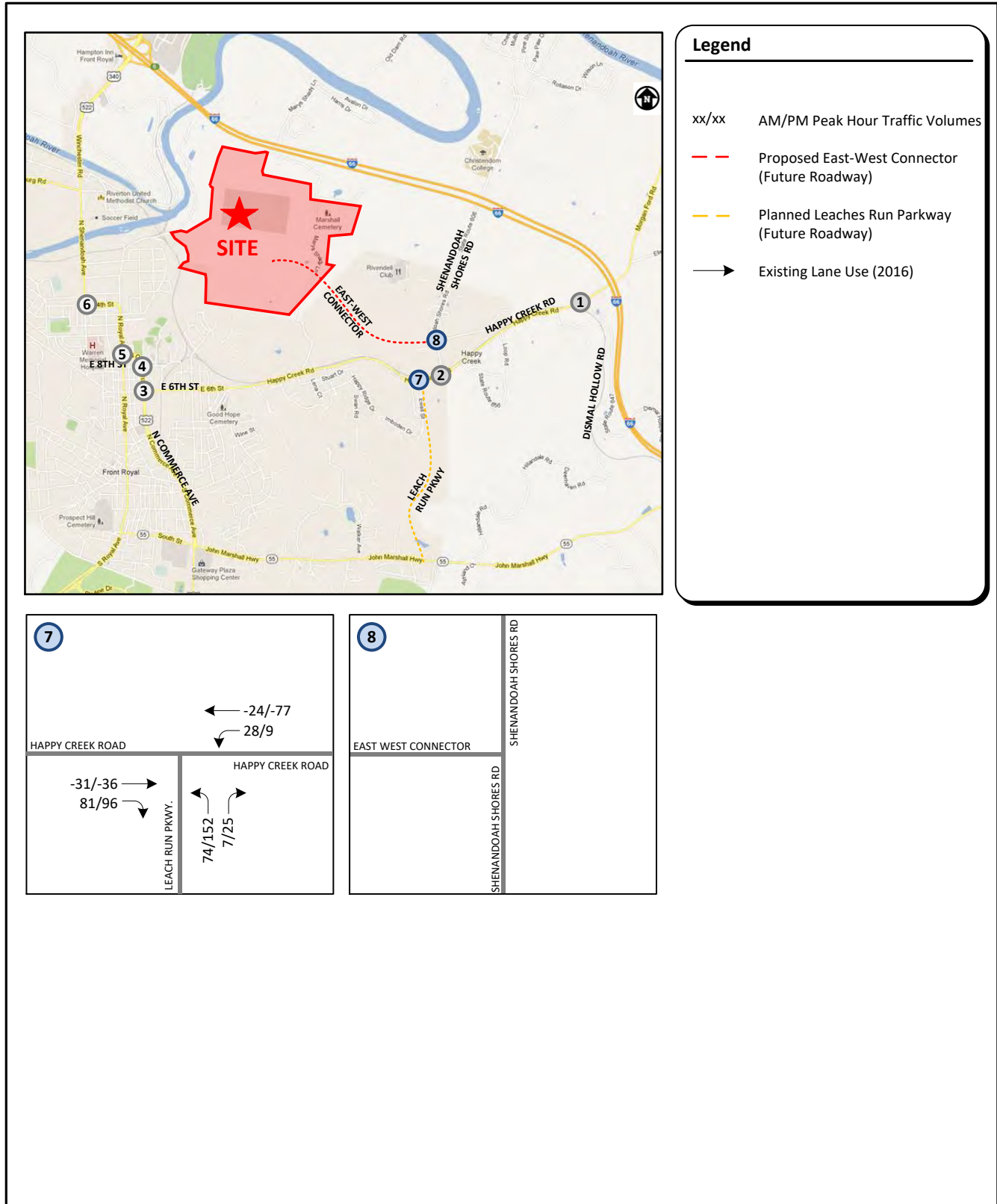


Figure 9 : Leach Run Parkway Rerouting (2 of 2)

Approved Vazzana Property By-right Development Traffic Volumes

The Vazzana Property development is currently approved for 320 single-family residential units. These homes are included under future background conditions without the proposed rezoning. To calculate the trips generated by the approved development, ITE's Trip Generation Manual, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. The trip generation for the approved Vazzana Property development is shown in Table 2.

Table 2: 2034 Future without Proposed Development (Future Background) Trip Generation: Vazzana Property

Land Use	ITE Code	Size	----- Week day -----							
			AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
<u>Vazzana Property (By-Right, Within Town)</u>										
<i>Residential</i>										
Single-Family Detached Housing	210	320	DU	59	175	234	188	111	299	3,062
Total Background By-Right External Trips				59	175	234	188	111	299	3,062

As shown in Table 2, the approved Vazzana Property development will generate 234 weekday morning peak hour trips and 299 weekday afternoon peak hour trips under future conditions without proposed development.

In order to route the projected traffic through the study area, a direction of approach was established based on previous traffic studies, existing travel patterns, and general engineering judgment. The direction of approach assumptions for traffic generated by the approved development are shown in Table 3 and Figure 10 and Figure 11. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 3: Direction of Approach

APPROVED VAZZANA PROPERTY DEVELOPMENT	Residential
To and from the north along North Shenandoah Avenue	25%
To and from the south along Dismal Hollow Road	15%
To and from the south along (Future) Leach Run Parkway	30%
To and from the south along North Royal Avenue	5%
To and from the south along North Commerce Avenue	5%
To and from the east along Happy Creek Road	15%
To and from the west along West 6 th Street	5%
Total	100%

Figure 10 and Figure 11 also illustrate the site traffic assignment for both peak hours.

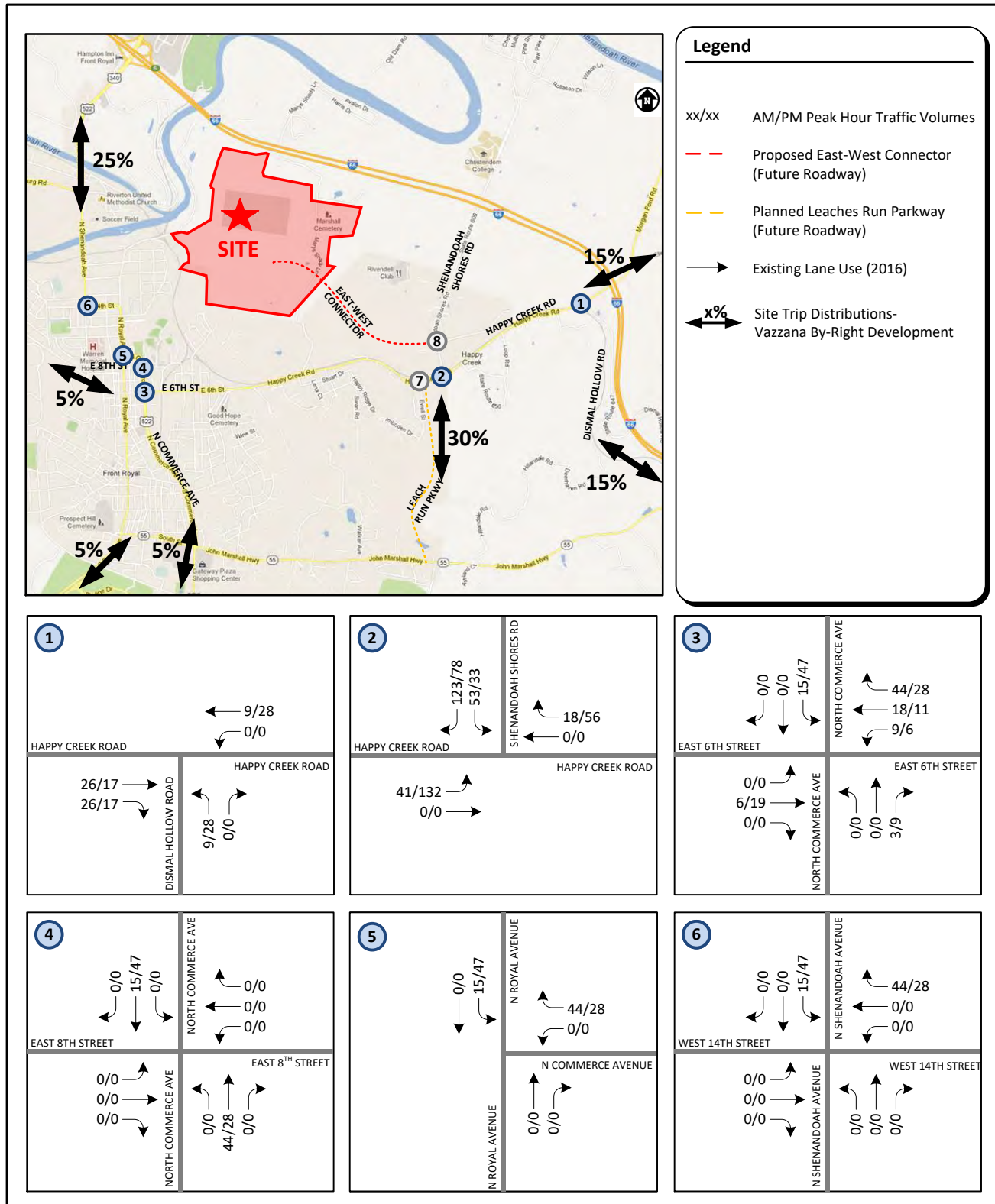


Figure 10: Approved Vazzana Property Development Traffic Volumes (2034) (1 of 2)

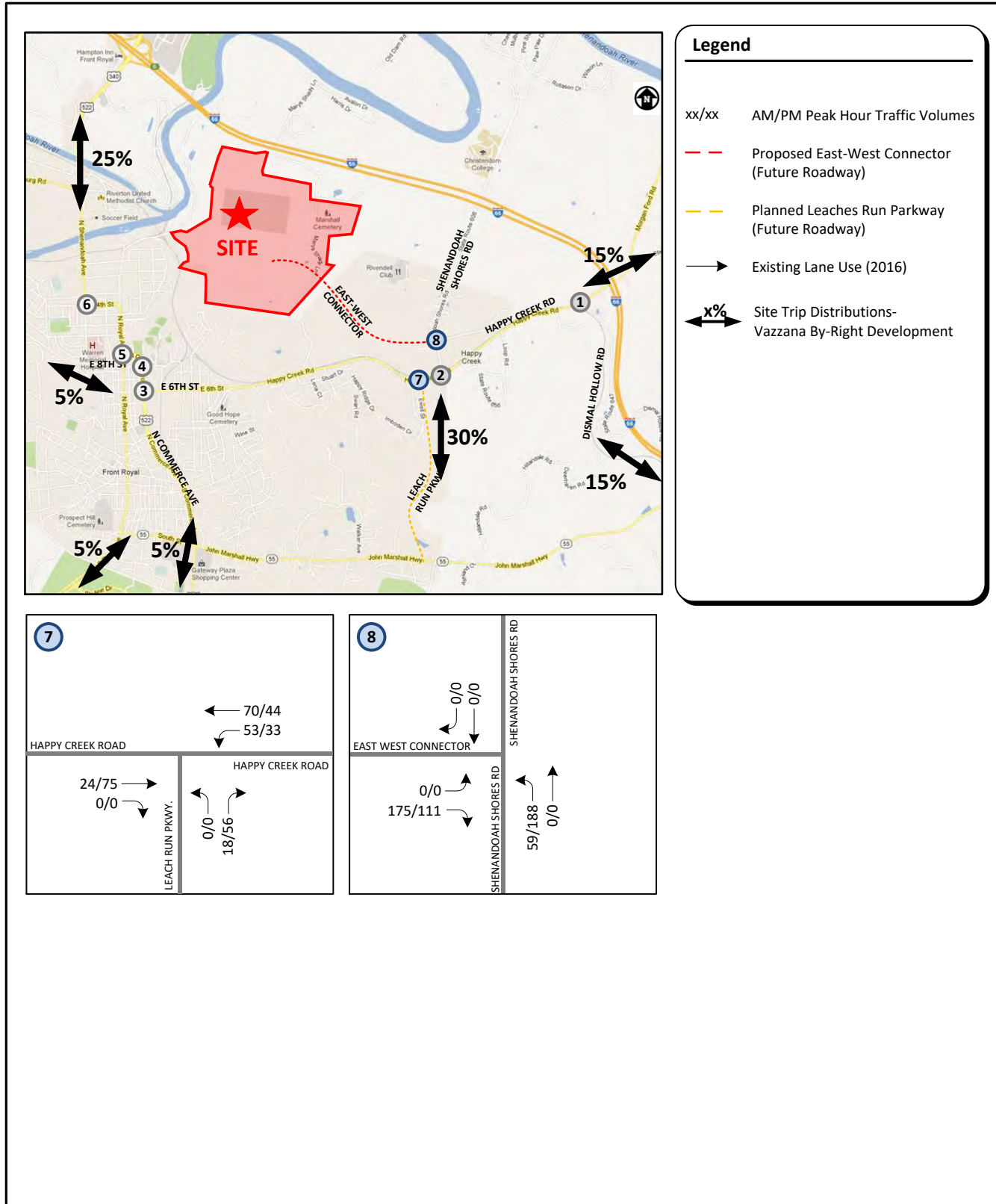


Figure 11: Approved Vazzana Property Development Traffic Volumes (2034) (2 of 2)

Approved Future Heptad Development Traffic Volumes

The HEPTAD development is currently approved for 450 residential units. This development is included under future background conditions without the proposed development. To calculate the trips generated by the approved development, ITE's Trip Generation Manual, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. The trip generation for the approved HEPTAD development is shown in Table 4.

Table 4: 2034 Future without Proposed Development (Future Background) Trip Generation: Heptad Development

Land Use	ITE Code	Size	AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
<u>Heptad Development</u>										
Residential										
Single-Family Detached Housing	210	54	DU	12	36	48	39	22	61	596
Single-Family Attached Housing	230	100	DU	9	43	52	41	20	61	644
Multifamily Housing	220	296	DU	30	119	149	118	63	181	1,918
Total Residential External Trips				51	198	249	198	105	303	3,158

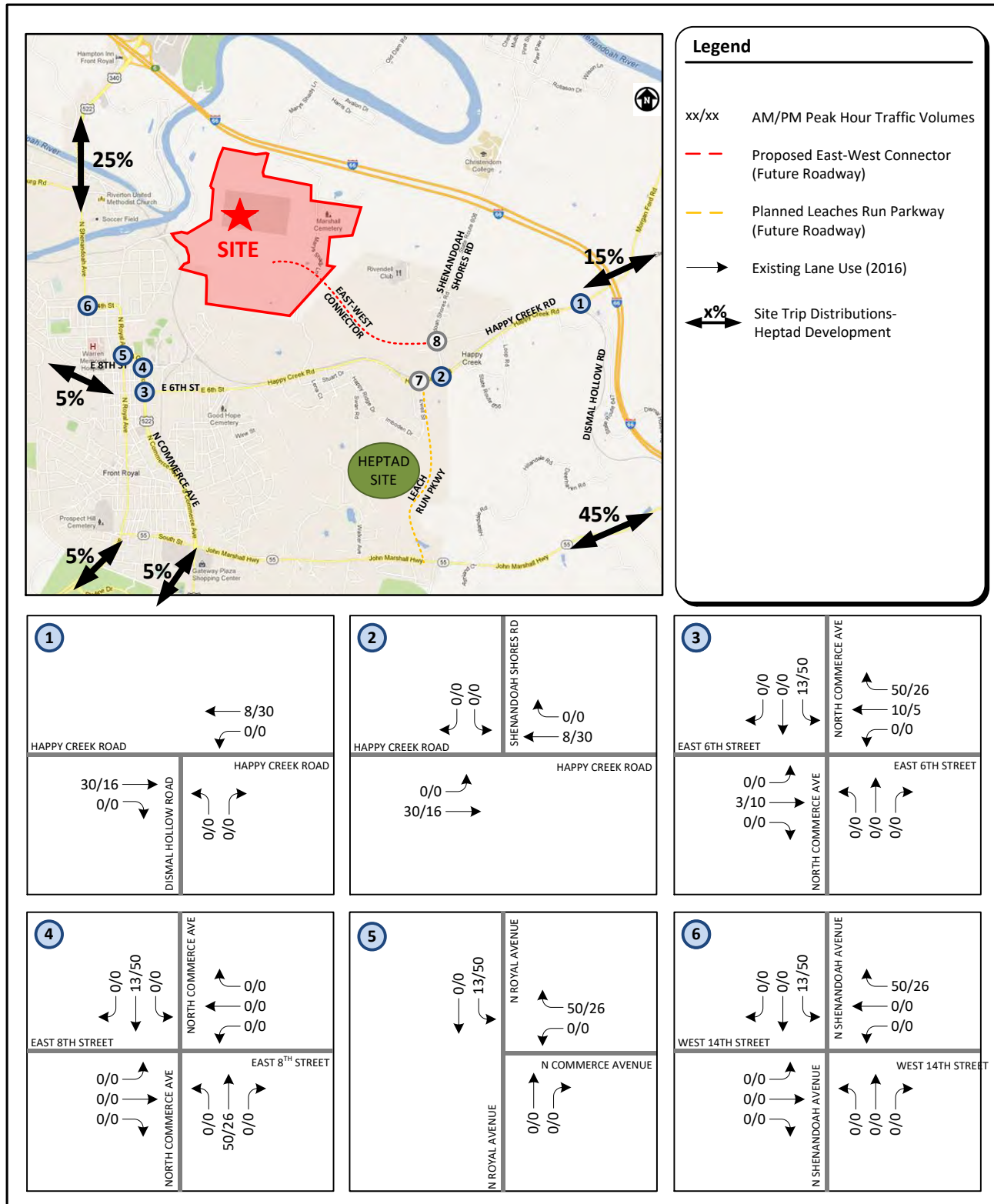
As shown in Table 4, the approved HEPTAD development will generate 249 weekday morning peak hour trips and 303 weekday afternoon peak hour trips under future conditions without proposed development. The location of the HEPTAD development is shown in Figure 12.

In order to route the projected traffic through the study area, a direction of approach was established based on previous traffic studies, existing travel patterns, and general engineering judgment. The direction of approach assumptions for traffic generated by the approved development are shown in Table 5 and Figure 12 and Figure 13. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 5: Direction of Approach

APPROVED HEPTAD DEVELOPMENT	Residential
To and from the north along North Shenandoah Avenue	25%
To and from the east along John Marshall Highway 55	45%
To and from the southwest along North Royal Avenue	5%
To and from the southwest along North Commerce Avenue	5%
To and from the east along Happy Creek Road	15%
To and from the west along West 6 th Street	5%
Total	100%

Figure 12 and Figure 13 also illustrate the site traffic assignment for both peak hours.



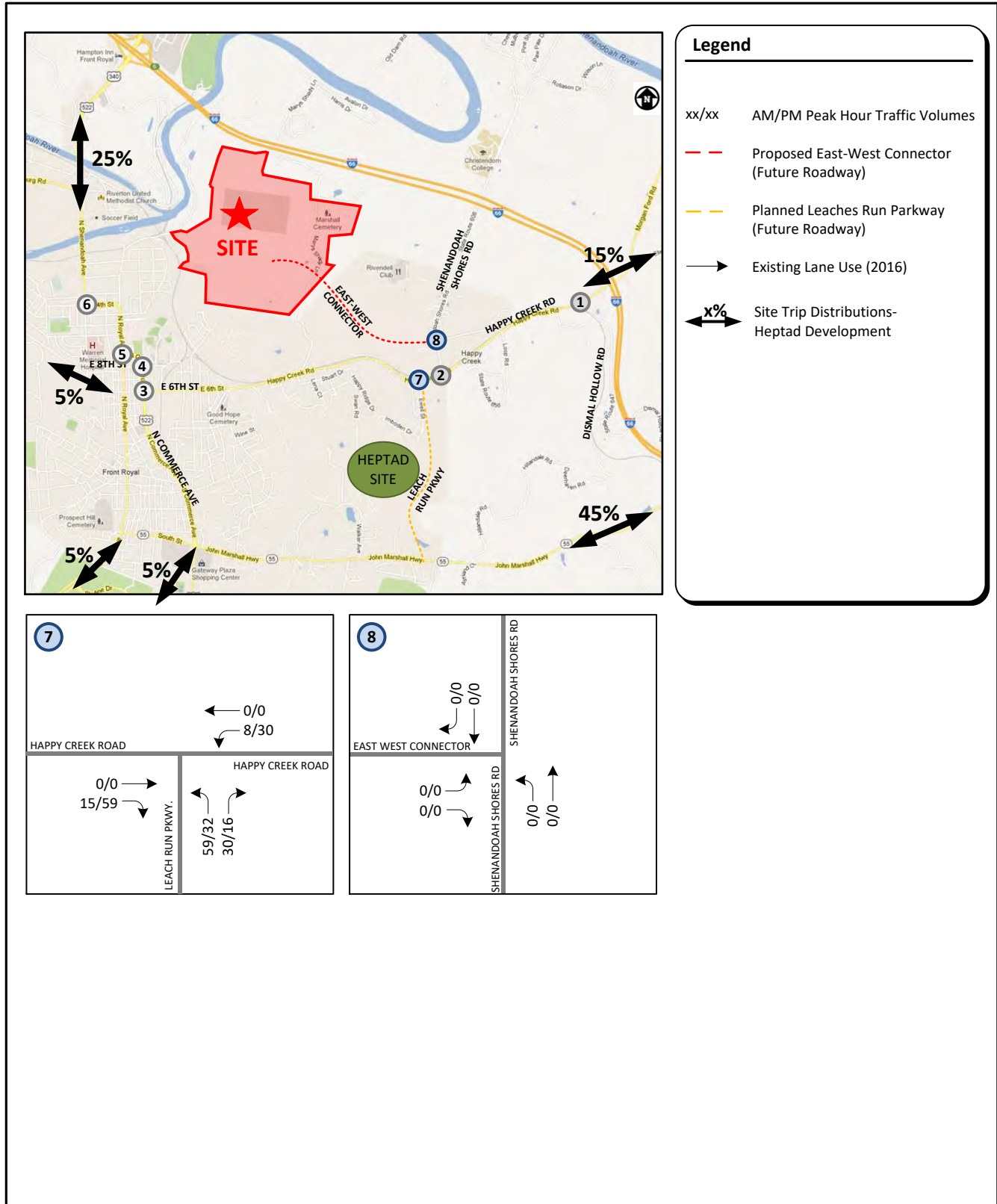


Figure 13: Heptad Development Traffic Volumes (2034) (2 of 2)

Elementary School and Fire Station Traffic Volumes

It is possible that a portion of the Vazzana property will be dedicated to Warren County to develop a fire station and up to ±700 student Elementary School. Per discussion at the scoping meeting, these developments were also considered as background developments. To calculate the trips generated by the elementary school, ITE's Trip Generation Manual, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. Based on traffic engineering judgment, the fire station was estimated to generate 10 trips each during the morning and afternoon peak hours. The trip generation for this background development is shown in Table 6.

Table 6: Future Background Trip Generation: Fire Station and Elementary School

Land Use	ITE Code	Size	Weekday							
			AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
Elementary School	520	700	Students	174	141	315	52	53	105	903
School Internal Trips Reduction: 13% ¹		13%		-23	-18	-41	-7	-7	-14	-117
Fire Station				5	5	10	5	5	10	100
Total Elementary School and Fire Station Trips				156	128	284	50	51	101	886

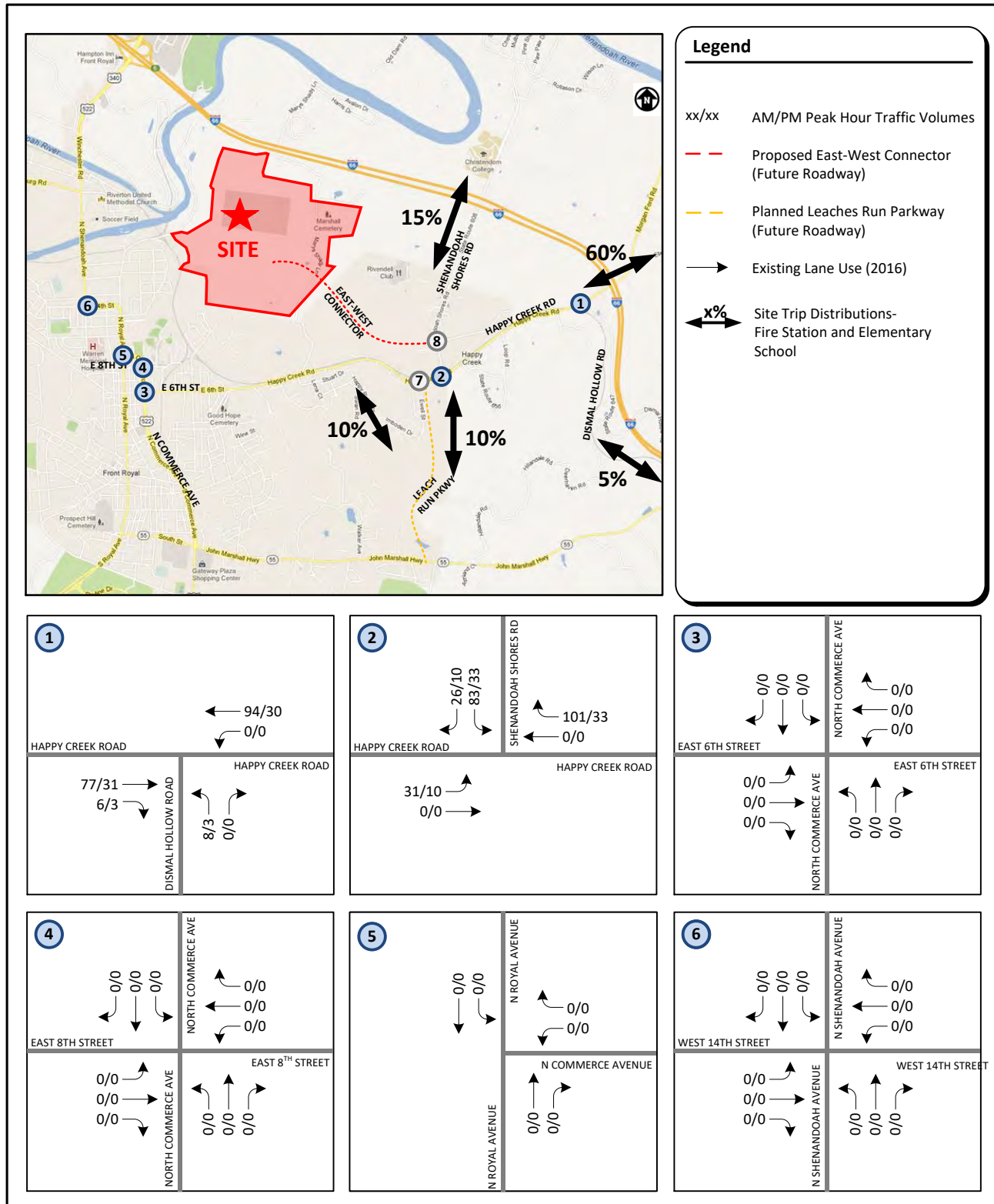
Note: 1 – The elementary school internal reduction rate was developed using data for Warren County's population based on age and number of households. 13% = [0.181 students per DU x 515 DU] / 700 students, or in other words approximately 13% of the school's students will live in the proposed development.

As shown in Table 6, the background development will generate 284 weekday morning peak hour trips and 101 weekday afternoon peak hour trips under future conditions without proposed development. In order to route the projected traffic into the Vazzana Property development, a direction of approach was established based on previous traffic studies, existing travel patterns, location of employment within the region, approved developments, and general engineering judgment. The direction of approach assumptions for traffic generated by the elementary school and fire station development and are shown in Table 7 and Figure 14 and Figure 15. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 7: Direction of Approach

APPROVED VAZZANA PROPERTY DEVELOPMENT	Elementary School/Fire Station
To and from the north along North Shenandoah Avenue	0%
To and from the north along Shenandoah Shores Road	15%
To and from the south along Happy Ridge Drive	10%
To and from the south along Dismal Hollow Road	5%
To and from the south along (Future) Leach Run Parkway	10%
To and from the south along North Royal Avenue	0%
To and from the south along North Commerce Avenue	0%
To and from the east along Happy Creek Road	60%
To and from the west along West 6 th Street	5%
Total	100%

Figure 14 and Figure 15 show the site traffic assignment for both peak hours for the elementary school and fire station.



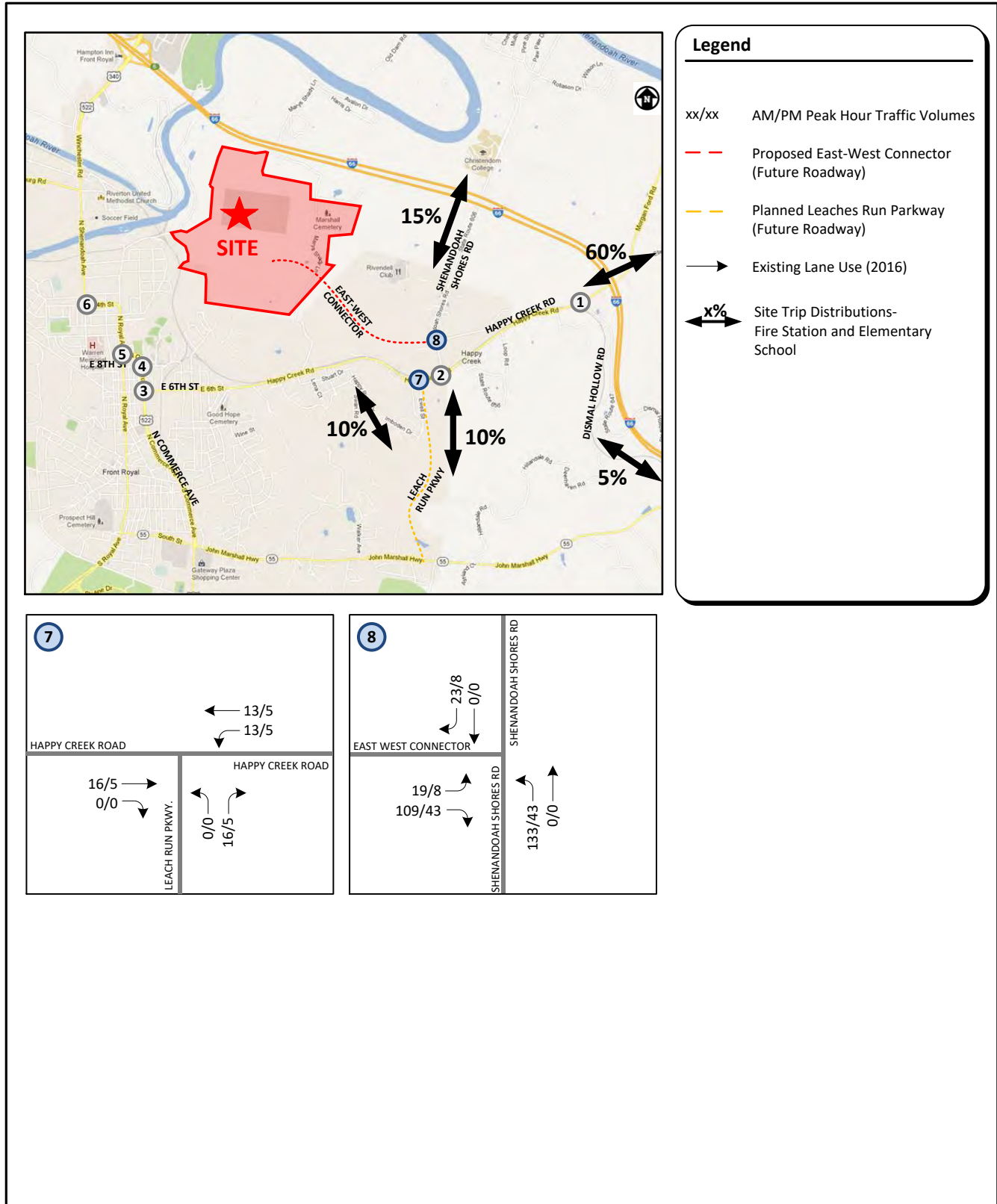


Figure 15: Elementary School and Fire Station Traffic Volumes (2034) (2 of 2)

The trips from the anticipated developments (Figures 10 thru 15) were added to the existing volumes with growth (2034) (Figure 5), the rerouted Marys Shady Lane traffic (Figures 6 and 7) and the rerouted Leach Run Parkway traffic (Figures 8 and 9) to establish the future without proposed development (2034) traffic volumes, as shown in Figure 16 and Figure 17.

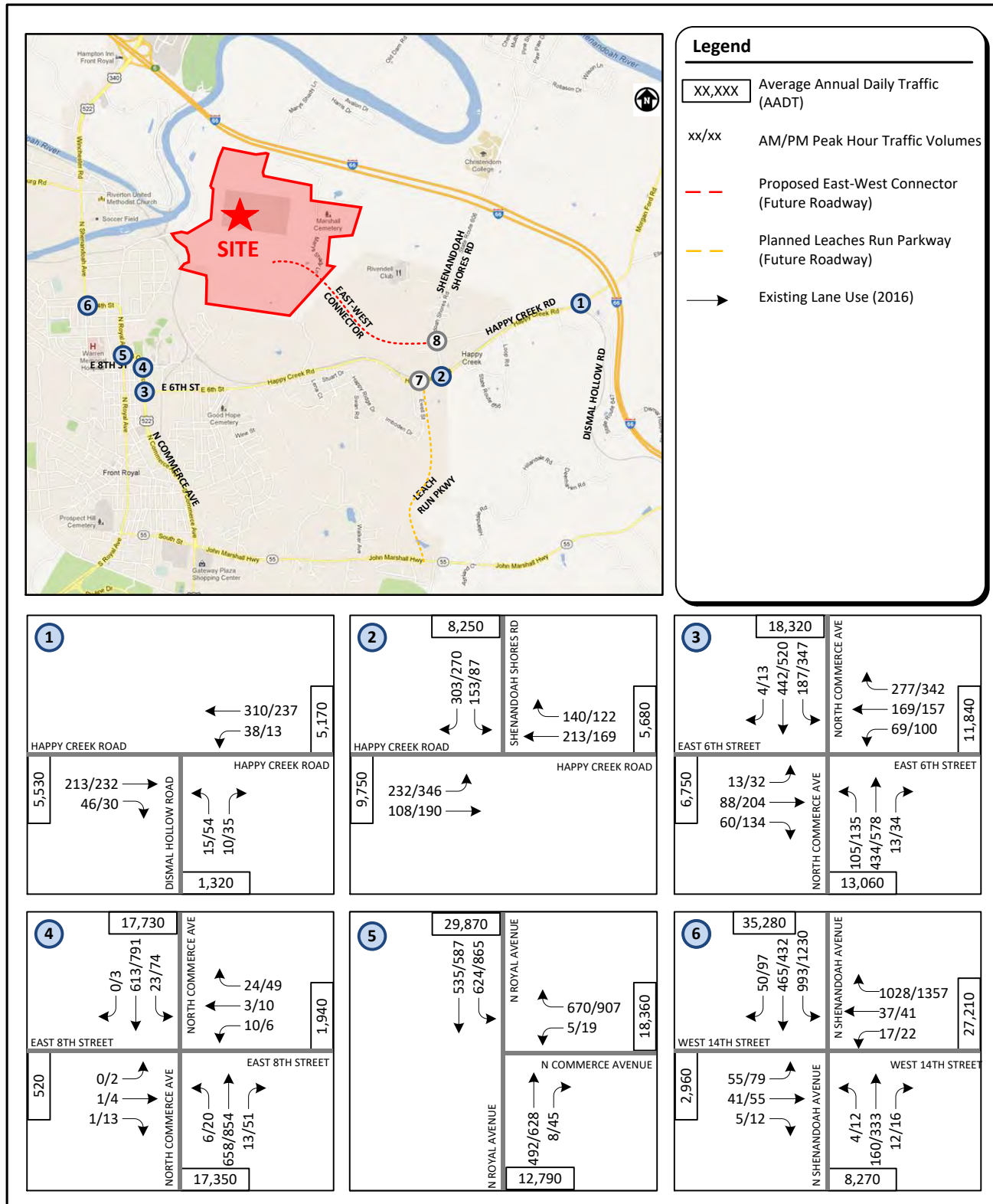


Figure 16: Future Conditions without Proposed Development Traffic Volumes (2034) (1 of 2)

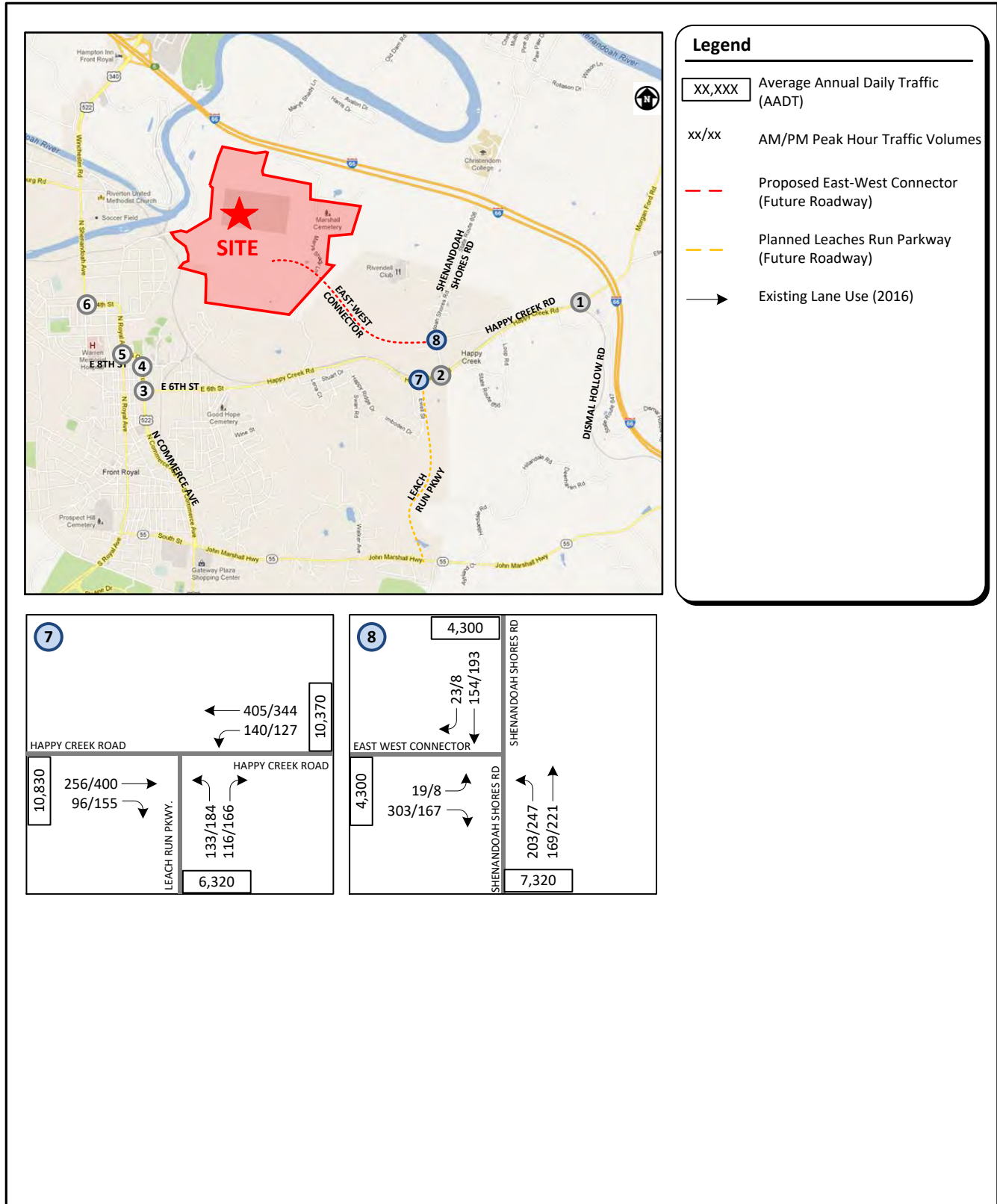


Figure 17: Future Conditions without Proposed Development Traffic Volumes (2034) (2 of 2)

Future Conditions without Proposed Development Capacity Analysis (2034)

Capacity analyses were performed at the study intersections during the weekday morning and afternoon peak hours under future 2034 conditions. Intersection capacity analyses were performed using *Synchro version 8* based on the latest Highway Capacity Manual (HCM 2000) data and methodology. A peak hour factor of 0.90 was used for all movements under the future without development conditions.

The results of the intersection capacity analyses for the future conditions without the proposed development (2034) are summarized in Table 8 and

Figure 18 and Figure 19. A description of the different LOS and delay and the detailed analysis worksheets for the future conditions without proposed development (2034) are included in Appendix C and E, respectively.

Figure 20 and Figure 21 show the recommended lane geometry for each study intersection.

Table 8: Future Conditions without Proposed Development (2034) Intersection Capacity Analysis

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
1	Happy Creek Rd and Dismal Hollow Rd									
	Overall Intersection (Unsignalized)				n/a	n/a			n/a	n/a
	Westbound Approach		n/a	n/a		1.2	n/a	n/a		0.5
	Westbound Through/Left		n/a	3A	A	1.2	n/a	1	A	0.5
	Northbound Approach		n/a	n/a	B	12.4	n/a	n/a	B	12.0
	Northbound Left		n/a	3	B	12.4	n/a	10	B	12.0
2	Happy Creek Rd and Shenandoah Shores Rd									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Eastbound Approach		n/a	n/a		6.9	n/a	n/a		7.1
	Eastbound Through/Left		n/a	22	A	6.9	n/a	34	A	7.1
	Southbound Approach		n/a	n/a	F	153.9	n/a	n/a	F	122.1
	Southbound Left/Right		n/a	526	F	153.9	n/a	384	F	122.1
2	Happy Creek Rd and Shenandoah Shores Rd									
	Mitigation: Add a traffic control signal; add a eastbound left turn lane; add a westbound right turn lane									
	Overall Intersection (Signalized)		n/a	n/a	C	24.0	n/a	n/a	B	17.4
	Eastbound Approach		n/a	n/a	B	14.3	n/a	n/a	A	5.6
	Eastbound Left	250'	40	115	B	16.9	34	69	A	6.2
	Eastbound Through		18	38	A	8.7	18	41	A	4.6
	Westbound Approach		n/a	n/a	C	23.5	n/a	n/a	C	20.7
	Westbound Through		130	207	C	34.6	95	165	C	29.8
	Westbound Right	250'	0	16	A	6.6	0	20	A	8.1
	Southbound Approach		n/a	n/a	C	31.6	n/a	n/a	C	32.3
	Southbound Left/Right		210	338	C	31.6	124	229	C	32.3
3	East 6 th St and N Commerce Avenue									
	Overall Intersection (Signalized)		n/a	n/a	C	33.9	n/a	n/a	D	51.5

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Eastbound Approach		n/a	n/a	C	33.7	n/a	n/a	D	45.1
	Eastbound Left		6	20	C	31.2	17	38	C	32.3
	Eastbound Through/Right		81	145	C	33.9	246	363	D	46.3
	Westbound Approach		n/a	n/a	E	57.6	n/a	n/a	E	64.2
	Westbound Left		36	69	C	24.9	53	93	C	26.8
	Westbound Through/Right		274	#547	E	62.6	~375	#615	E	71.6
	Northbound Approach		n/a	n/a	C	24.2	n/a	n/a	C	27.9
	Northbound Left	145'	35	80	B	18.1	59	103	C	20.1
	Northbound Through/Right		116	190	C	25.6	205	274	C	29.6
	Southbound Approach		n/a	n/a	C	23.1	n/a	n/a	E	65.6
	Southbound Left	165'	67	139	B	19.4	~228	#464	F	123.3
	Southbound Through/Right		114	189	C	24.6	175	237	C	27.9
4	East 8th St and N Commerce Avenue									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Eastbound Approach		n/a	n/a	C	21.7	n/a	n/a	D	34.8
	Eastbound Left/Through/Right		n/a	1	C	21.7	n/a	17	D	34.8
	Westbound Approach		n/a	n/a	C	17.0	n/a	n/a	D	32.8
	Westbound Left	140'	n/a	5	D	27.6	n/a	10	F	63.5
	Westbound Through/Right		n/a	5	B	13.1	n/a	38	D	29.5
	Northbound Approach		n/a	n/a		0.1	n/a	n/a		0.2
	Northbound Left	150'	n/a	1	A	9.0	n/a	3	A	9.9
	Southbound Approach		n/a	n/a		0.3	n/a	n/a		0.9
	Southbound Left	165'	n/a	2	A	9.0	n/a	11	B	10.2
5	N Commerce Avenue and N Royal Avenue									
	Overall Intersection (Signalized)		n/a	n/a	D	42.2	n/a	n/a	F	125.3
	Westbound Approach		n/a	n/a	D	51.2	n/a	n/a	F	157.6
	Westbound Left		4	21	E	78.4	18	46	E	67.5
	Westbound Right		479	#766	D	50.9	~1054	#1326	F	159.5
	Northbound Approach		n/a	n/a	C	27.8	n/a	n/a	C	32.8
	Northbound Through/Right		148	241	C	27.8	270	344	C	32.8
	Southbound Approach		n/a	n/a	D	43.2	n/a	n/a	F	147.7
	Southbound Left		506	#927	E	78.2	~1170	#1464	F	245.6
	Southbound Through		0	152	A	2.3	129	198	A	3.4
6	W 14th Street and Shenandoah Avenue									
	Overall Intersection (Signalized)		n/a	n/a	E	67.7	n/a	n/a	D	36.4
	Eastbound Approach		n/a	n/a	F	687.9	n/a	n/a	F	177.5
	Eastbound Left		~212	#378	F	869.7	~86	#193	F	283.9
	Eastbound Through/Right		31	75	D	48.1	48	97	D	51.0
	Westbound Approach		n/a	n/a	A	6.0	n/a	n/a	B	17.7

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Westbound Through/Left		4	88	E	63.4	50	99	E	69.7
	Westbound Right		0	0	A	3.0	0	#171	B	15.3
	Northbound Approach		n/a	n/a	D	36.5	n/a	n/a	F	69.9
	Northbound Left	125'	3	14	E	59.7	9	30	E	58.6
	Northbound Through		110	196	D	36.4	~321	#509	E	72.0
	Northbound Right		0	0	C	30.9	0	0	D	35.1
	Southbound Approach		n/a	n/a	C	28.6	n/a	n/a	C	32.9
	Southbound Left	288'	326	410	D	36.1	459	565	D	40.6
	Southbound Through/Right		181	368	B	14.1	188	389	B	15.1
7	Leach Run Parkway and Happy Creek Road									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Westbound Approach		n/a	n/a		3.4	n/a	n/a		3.8
	Westbound Through/Left		n/a	12	A	3.4	n/a	9	A	3.8
	Northbound Approach		n/a	n/a	F	69.0	n/a	n/a	F	277.3
	Northbound Left/Right		n/a	216	F	69.0	n/a	328	F	277.3
7	Leach Run Parkway and Happy Creek Road									
	Mitigation: Add a traffic control signal; add a eastbound right turn lane; add a westbound left turn lane; add a northbound left turn lane									
	Overall Intersection (Signalized)		n/a	n/a	B	17.7	n/a	n/a	B	18.9
	Eastbound Approach		n/a	n/a	B	19.8	n/a	n/a	B	17.1
	Eastbound Through		135	209	C	25.4	198	292	C	22.0
	Eastbound Right	250'	0	11	A	4.9	0	12	A	4.6
	Westbound Approach		n/a	n/a	B	14.5	n/a	n/a	B	13.7
	Westbound Left	250'	55	m86	B	13.2	38	m89	B	13.6
	Westbound Through		175	261	B	14.9	132	281	B	13.8
	Northbound Approach		n/a	n/a	C	21.7	n/a	n/a	C	28.7
	Northbound Left	250'	69	118	C	26.5	109	178	C	34.0
	Northbound Right		0	29	B	17.3	0	40	C	22.8
8	Shenandoah Shores Road and East West Connector									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Eastbound Approach		n/a	n/a	B	13.7	n/a	n/a	B	11.8
	Eastbound Left/Right		n/a	62	B	13.7	n/a	27	B	11.8
	Northbound Approach		n/a	n/a		5.1	n/a	n/a		5.3
	Northbound Through/Left		n/a	15	A	5.1	n/a	19	A	5.3

According to the Town of Fort Royal, it is desirable to achieve a level of service C or better for each movement at an intersection. The results show that the following intersections operate at unacceptable levels of service under the future without development conditions:

- *Happy Creek Road and Shenandoah Shores Road*

The southbound approach operates at level of service F during both the weekday morning and afternoon peak hours.

- *North Commerce Avenue and East 6th Street*
The westbound approach operates at level of service E during both the peak hours. During the afternoon peak hour, the northbound approach operates at level of service C and the rest of the approaches operate at level of service D or worse.
- *North Commerce Avenue and East 8th Street*
The westbound left turn operates at level of service D during the morning peak hours. During the afternoon peak hour, the eastbound and westbound approaches operate at level of service D or worse.
- *North Commerce Avenue and North Royal Avenue*
The northbound approach operates at LOS C during both the morning and afternoon peak hours. All the other approaches operate at LOS D or worse during both the peak hours.
- *W 14th Street and North Shenandoah Avenue*
The westbound and southbound approaches operate at acceptable levels of service during both the peak hours. Rest all of the approaches operate at LOS D or worse during both the morning and the afternoon peak hours.
- *Leach Run Parkway and Happy Creek Road*
The northbound approach operates at LOS F during both the morning and the afternoon peak hours.

The following improvements are recommended:

- Happy Creek Road and Shenandoah Shores Road
 - Add an exclusive eastbound left turn lane. (Proffered under rezoning RZ09-02-64, Front Royal Limited Partnership-Town Property). The eastbound left turn lane will be constructed by as part of the middle school project and is anticipated to open by 2017.
 - Add an exclusive westbound right turn lane. (Proffered under rezoning RZ09-02-64, Front Royal Limited Partnership-Town Property)
 - Install a traffic control signal. (Proffered under rezoning RZ09-02-64, Front Royal Limited Partnership-Town Property) This recommendation is subject to the completion of an MUTCD signal warrant study, which should be conducted before installation of a traffic signal.
- Happy Creek Road and Leach Run Parkway (new intersection by others)
 - Add an eastbound right turn lane.
 - Add a westbound left turn lane.
 - Add a northbound left turn lane, and,
 - Install a traffic control signal.

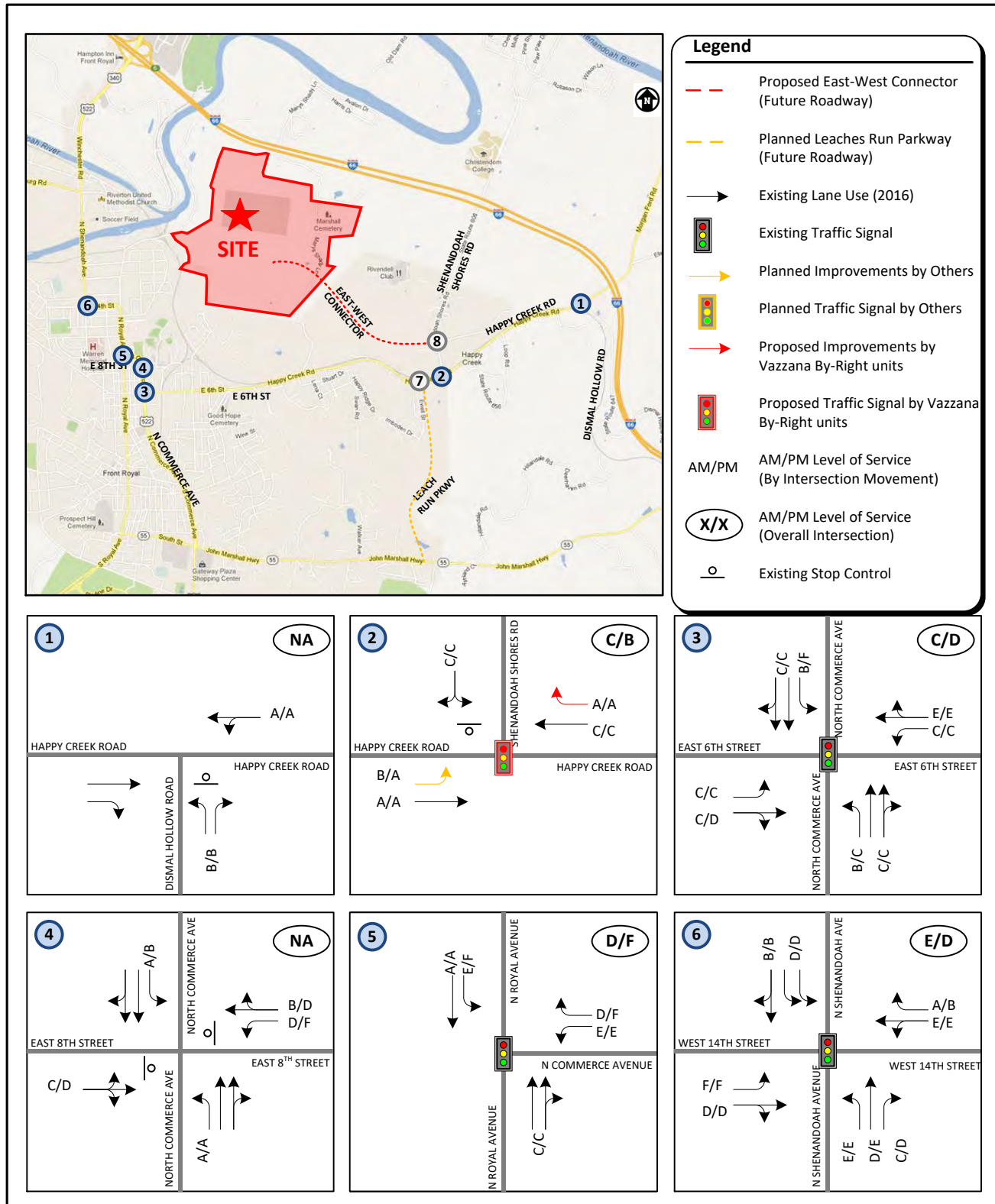


Figure 18: Future Conditions without Proposed Development Levels of Service (2034) (1 of 2)

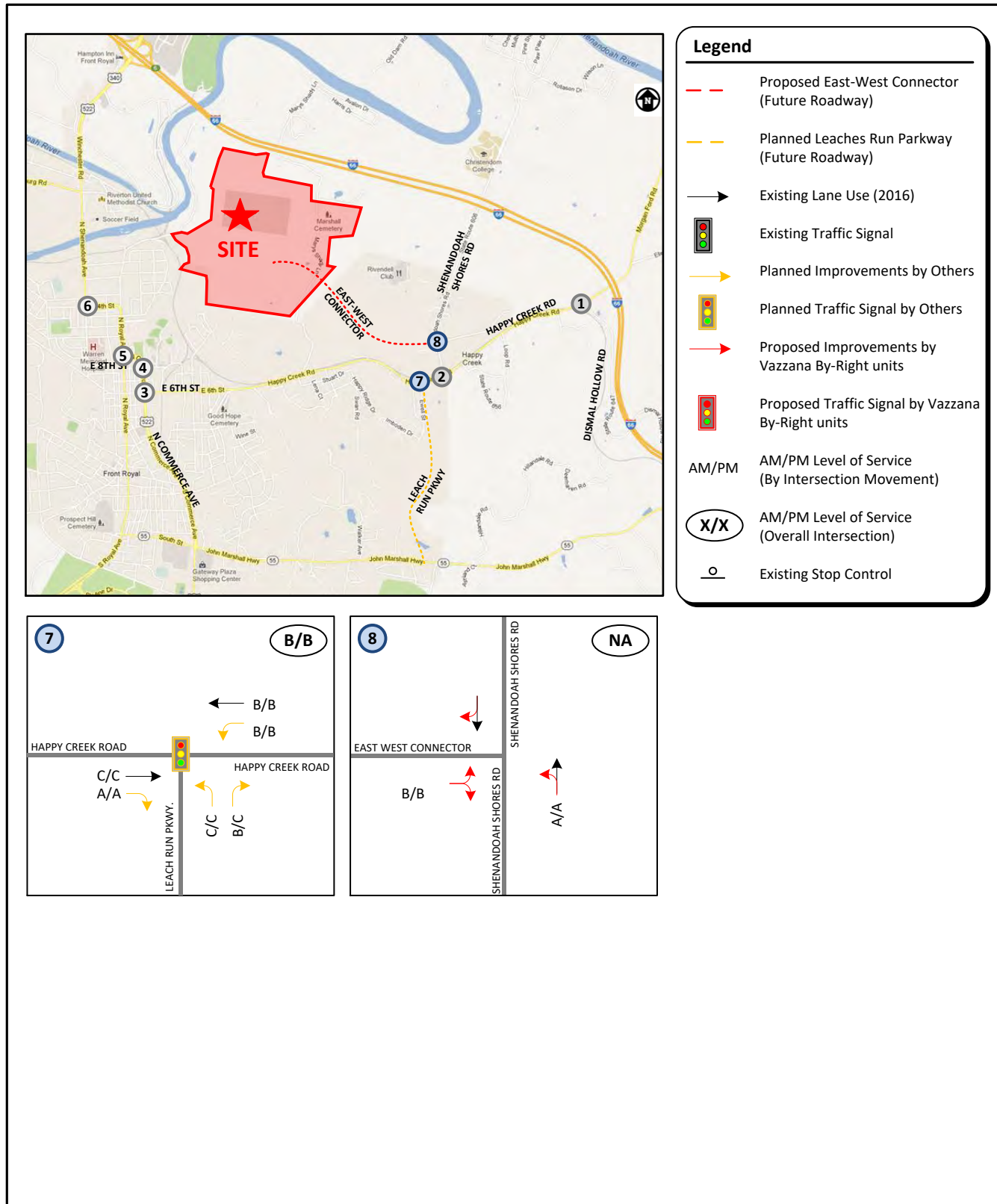


Figure 19: Future Conditions without Proposed Development Levels of Service (2034) (2 of 2)

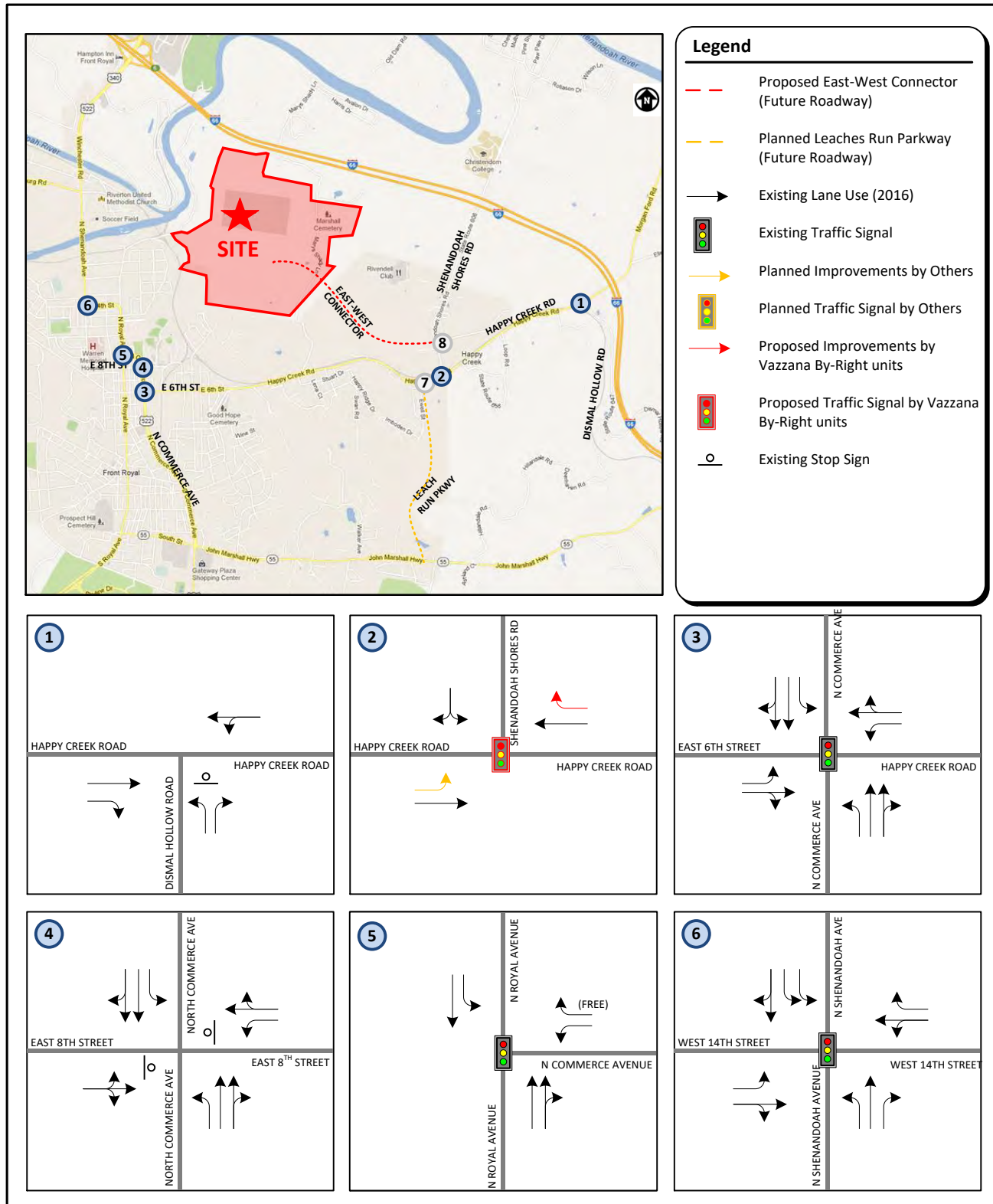


Figure 20: Future Lane Configuration and Traffic Control without Proposed Development (2034) (1 of 2)

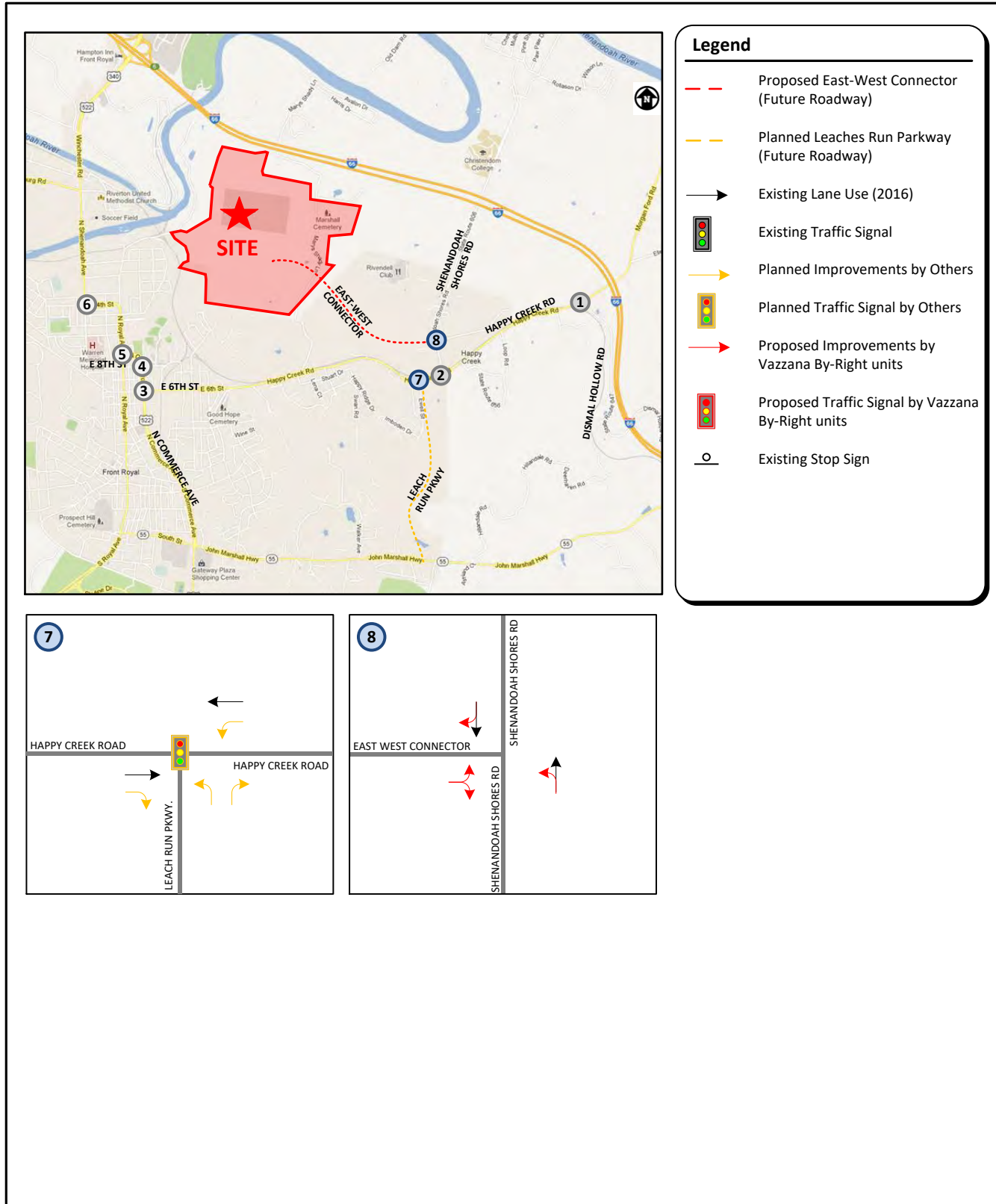


Figure 21: Future Lane Configuration and Traffic Control without Proposed Development (2034) (2 of 2)

TRIP GENERATION AND SITE TRAFFIC FOR FUTURE CONDITIONS WITH PROPOSED DEVELOPMENT (2034)

Site Description

The study site is located north of Route 647 (Happy Creek Road), south of I-66, east of Route 522, and west of Route 606 (Shenandoah Shores Road). The proposed Vazzana Property development plan calls for the additional construction of approximately 715 single-family detached residential units, 155 senior adult housing units, and up to 95 kSF of non-residential space (approximately 10 kSF day care center, 20 kSF church, 40 kSF office space and 25 kSF of specialty retail center). The site is currently vacant. Full-build of the proposed development is anticipated to be complete by 2034.

Site Access

Site access for the Vazzana Property development will be provided via one full-access entrance along Shenandoah Shores Drive and a connection to 8th Street, both via the new East-West Connector road.

With the connection to 8th Street, the 320 DUs previously approved on the Vazzana by-right parcel will have a second access point. The trips associated with the 320 DUs included in the Future without Development scenario (as shown in Figure 10) were removed and redistributed through the network with the revised direction of approach.

Site Generated Volumes

The proposed Vazzana Property development is expected to be built by 2034. To calculate the trips generated for the build-out year, ITE's *Trip Generation Manual*, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. The trip generation for the proposed Vazzana Property development is shown in Table 9.

Table 9: Proposed Vazzana Property Development Trip Generation

Land Use	ITE			Weekday						
	Code	Size		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	Total
Residential										
Single-Family Detached Housing	210	715	DU	128	383	511	390	228	618	6,416
School Internal Trips Reduction: 13% ¹		13%		-18	-23	-41	-7	-7	-14	-117
Senior Adult Housing (VDOT -Staunton Rates)		155	DU	23	75	98	81	45	126	1,262
Residential Subtotal				133	435	568	464	267	731	7,561
Internal Trips				-3	-8	-10	-13	-8	-20	-226
Residential Total (with VDOT Staunton Housing Rates)				130	428	558	451	259	710	7,334
Institutional										
Day Care Center	565	10	kSF	65	57	122	59	65	124	741
Church	560	20	kSF	8	4	12	7	6	13	183
Church Internal Trip Reduction		15%		-1	-1	-2	-1	-1	-2	-27
Institutional Total				72	60	132	65	70	135	897
Office										
General Office Building	710	40	kSF	81	11	92	22	102	124	655
Office Internal Trip Reduction		5%		-4	-1	-5	-1	-5	-6	-33
Office Total				77	10	87	21	97	118	622

Land Use	ITE Code	Size	----- Week day -----							
			AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
Retail										
Specialty Retail Center	826	25 kSF	16	10	25	37	45	82	1,108	
Retail Internal Trip Reduction		15%	-2	-1	-4	-6	-7	-12	-166	
Retail Pass-by Trip Reduction		15%	-2	-1	-3	-5	-6	-10	-141	
Retail Total			11	7	18	27	33	59	801	
Total New Proposed External Trips			290	506	796	564	458	1,022	9,654	

Note: 1 – The elementary school internal reduction rate was developed using data for Warren County's population based on age and number of households.

13% = [0.181 students per DU x 515 DU] / 700 students, or in other words approximately 13% of the school's students will live in the proposed development.

The proposed development, with reductions for internal trip interactions, will generate approximately 796 trips during the weekday morning peak period, 1,022 trips during the weekday afternoon peak period, and 9,654 trips during an entire weekday.

Through the scoping process, VDOT staff required the use of special Staunton District rates for the senior adult housing component of the site. It is noted that these rates are considerably higher than the corresponding ITE rates for this type of use. The resulting trip generation estimates are approximately twice those projected by the ITE equations and are nearly the same on a per-unit basis as the non-age-restricted single family trip generation. Further, the ITE peak hour trip generation recommendations were developed from 23 studies across five states and Canada over a significant span of time. The VDOT Staunton rates were not developed based on empirical traffic count data, but on anticipated driver behavior and automobile availability.

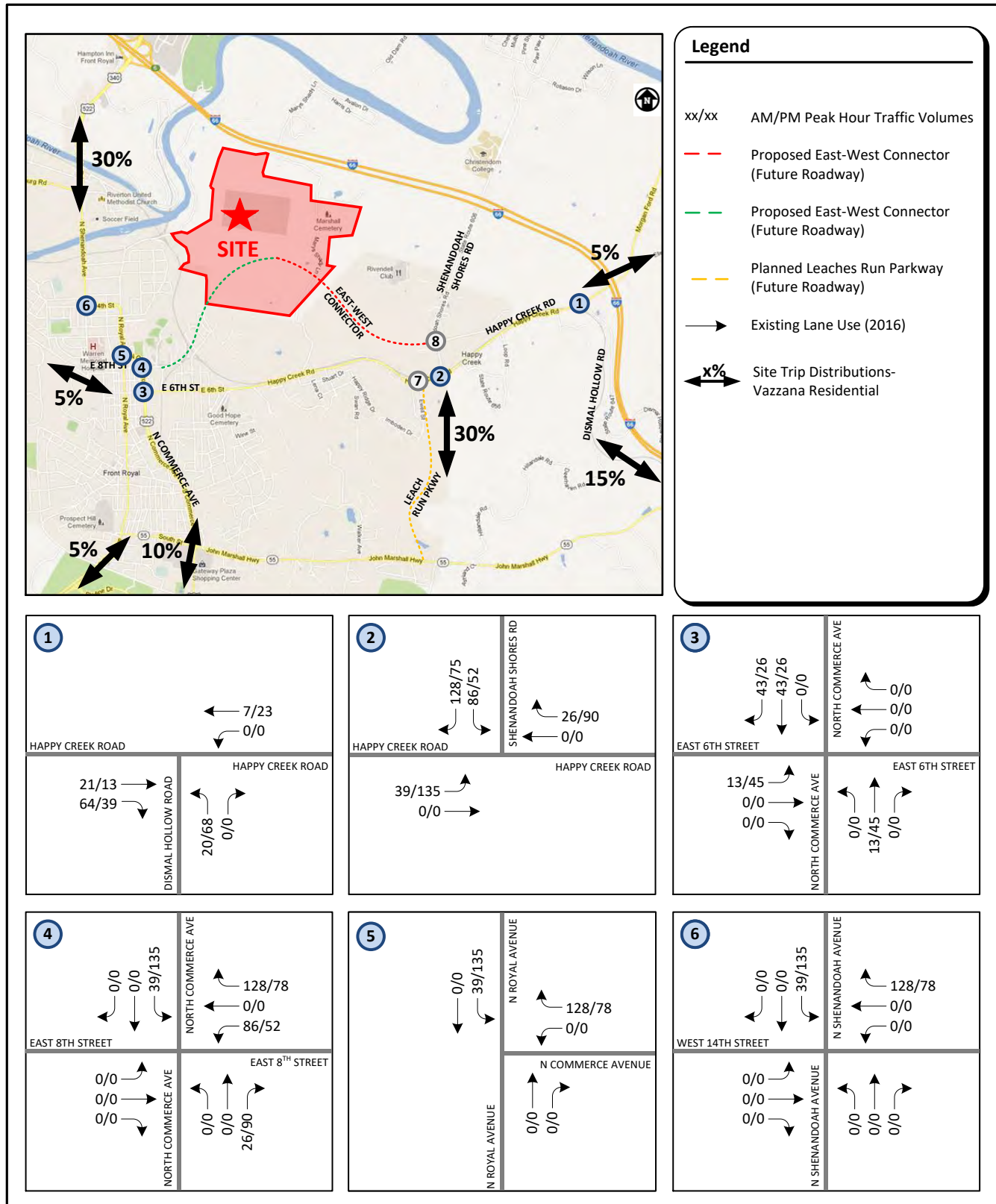
Direction of Approach and Future Conditions with Proposed Development Traffic Volumes (2034)

In order to route the projected traffic into the Vazzana Property development, a direction of approach was established based on previous traffic studies, existing travel patterns, location of employment within the region, approved developments, and general engineering judgment. The direction of approach assumptions for traffic generated by the proposed development are separate for residential and non-residential development and are shown in Table 10 and Figure 22 through Figure 25. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 10: Direction of Approach

APPROVED VAZZANA PROPERTY DEVELOPMENT	Residential	Non-Residential
To and from the north along North Shenandoah Avenue	30%	35%
To and from the north along Shenandoah Shores Road	0%	5%
To and from the south along Happy Ridge Drive	0%	5%
To and from the south along Dismal Hollow Road	15%	10%
To and from the south along (Future) Leach Run Parkway	30%	15%
To and from the south along North Royal Avenue	5%	10%
To and from the south along North Commerce Avenue	10%	10%
To and from the east along Happy Creek Road	5%	5%
To and from the west along West 6 th Street	5%	5%
Total	100%	100%

Figure 22 through Figure 25 also show the site traffic assignment for both peak hours. The site trips were added to the future without proposed development (2034) volumes (Figure 16 and Figure 17) in order to establish the future with proposed development (2034) volumes, as shown in Figure 26 and Figure 27.



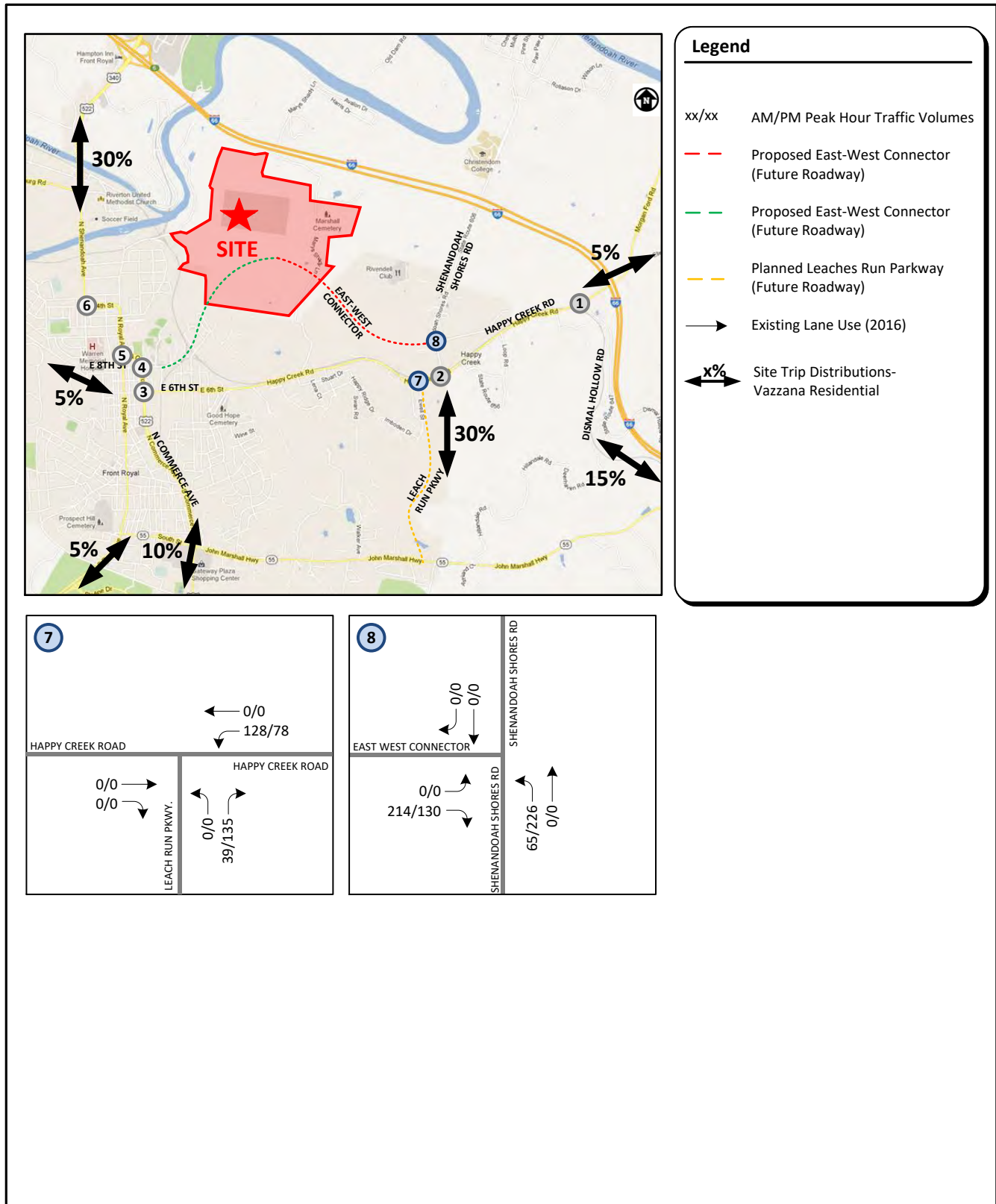


Figure 23 : Proposed Vazzana Property Development Residential Trip Generation and Assignment (2034) (2 of 2)

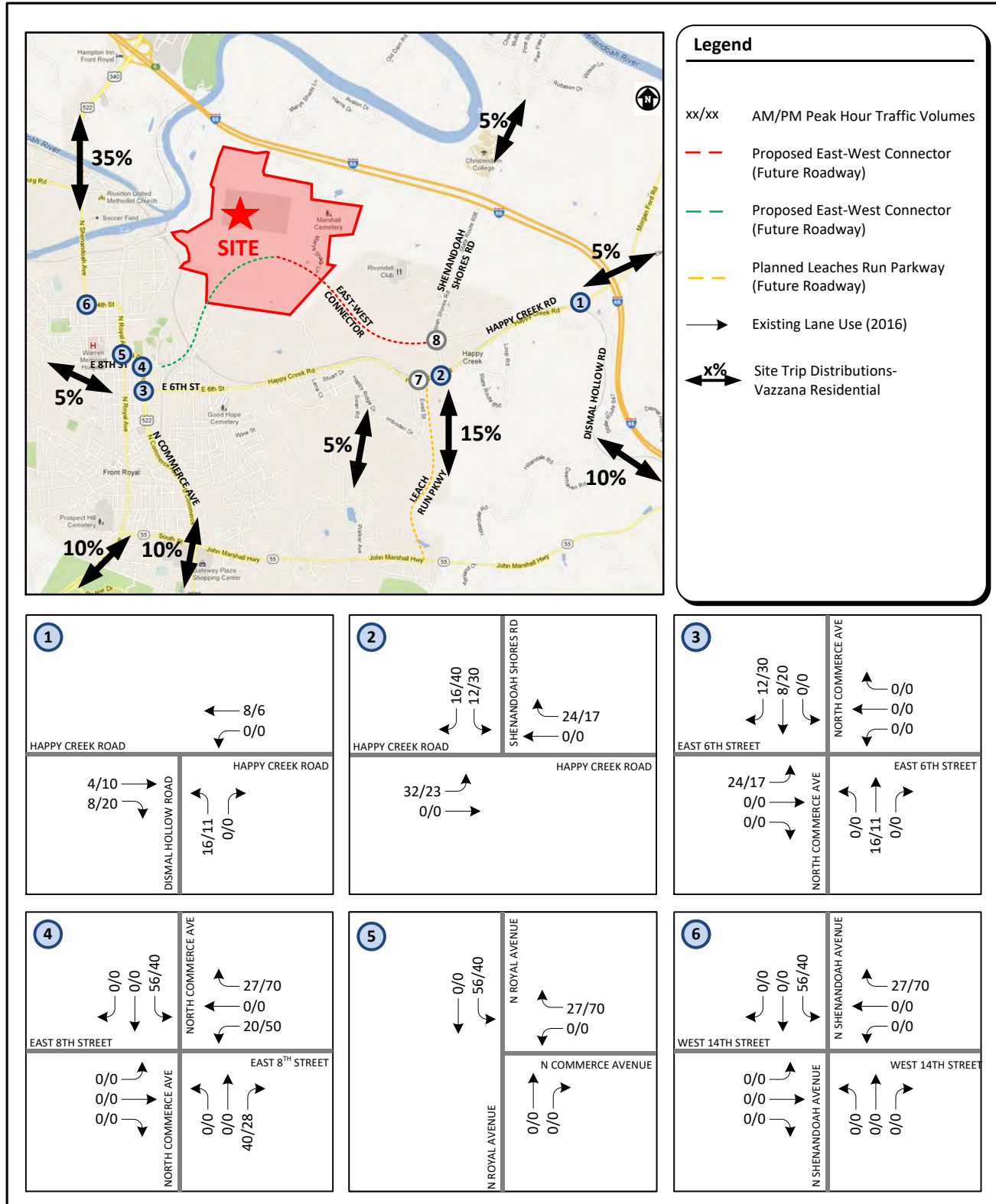


Figure 24 : Proposed Vazzana Property Development Non-Residential Trip Generation and Assignment (2034) (1 of 2)

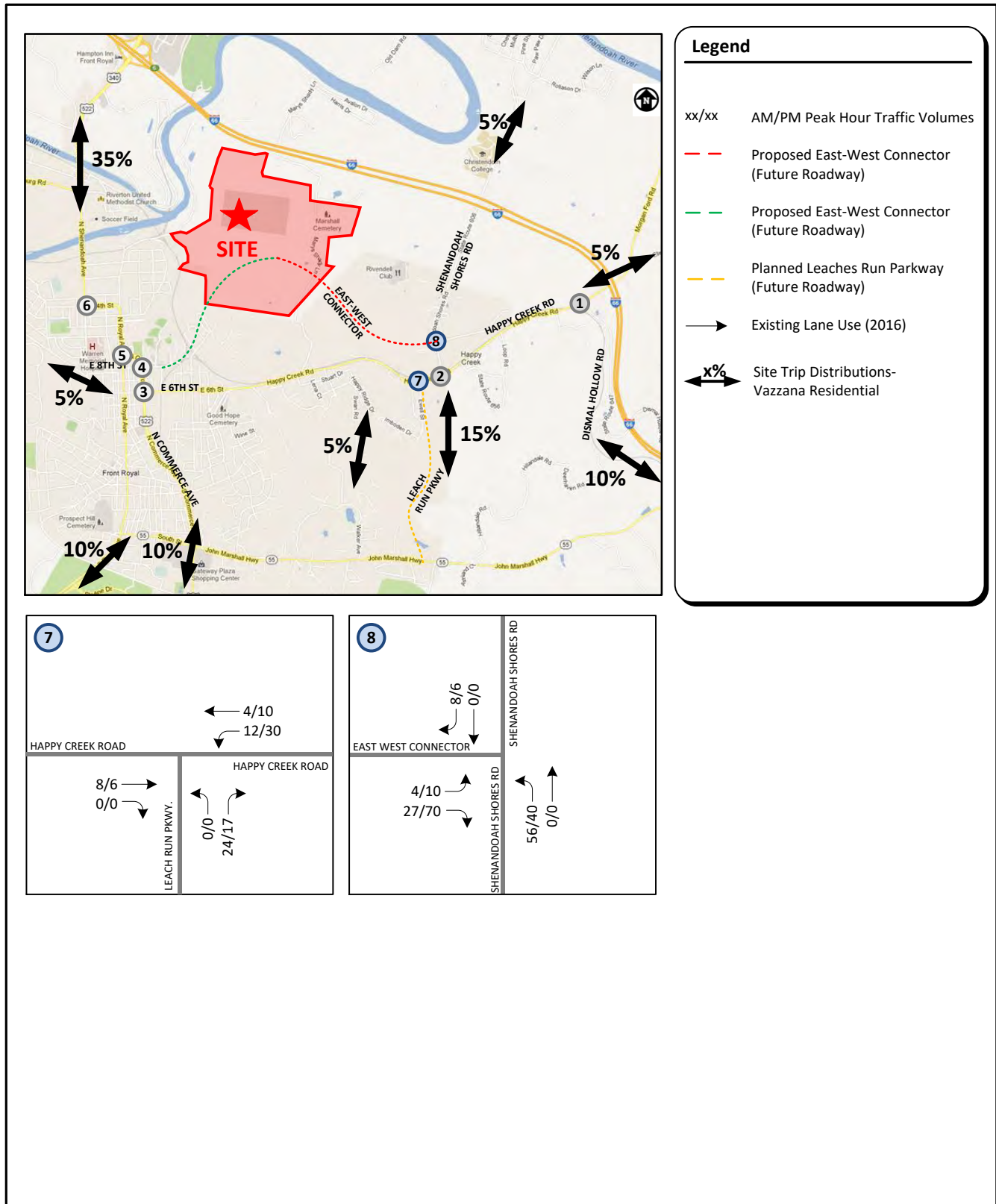


Figure 25 : Proposed Vazzana Property Development Non-Residential Trip Generation and Assignment (2034) (2 of 2)

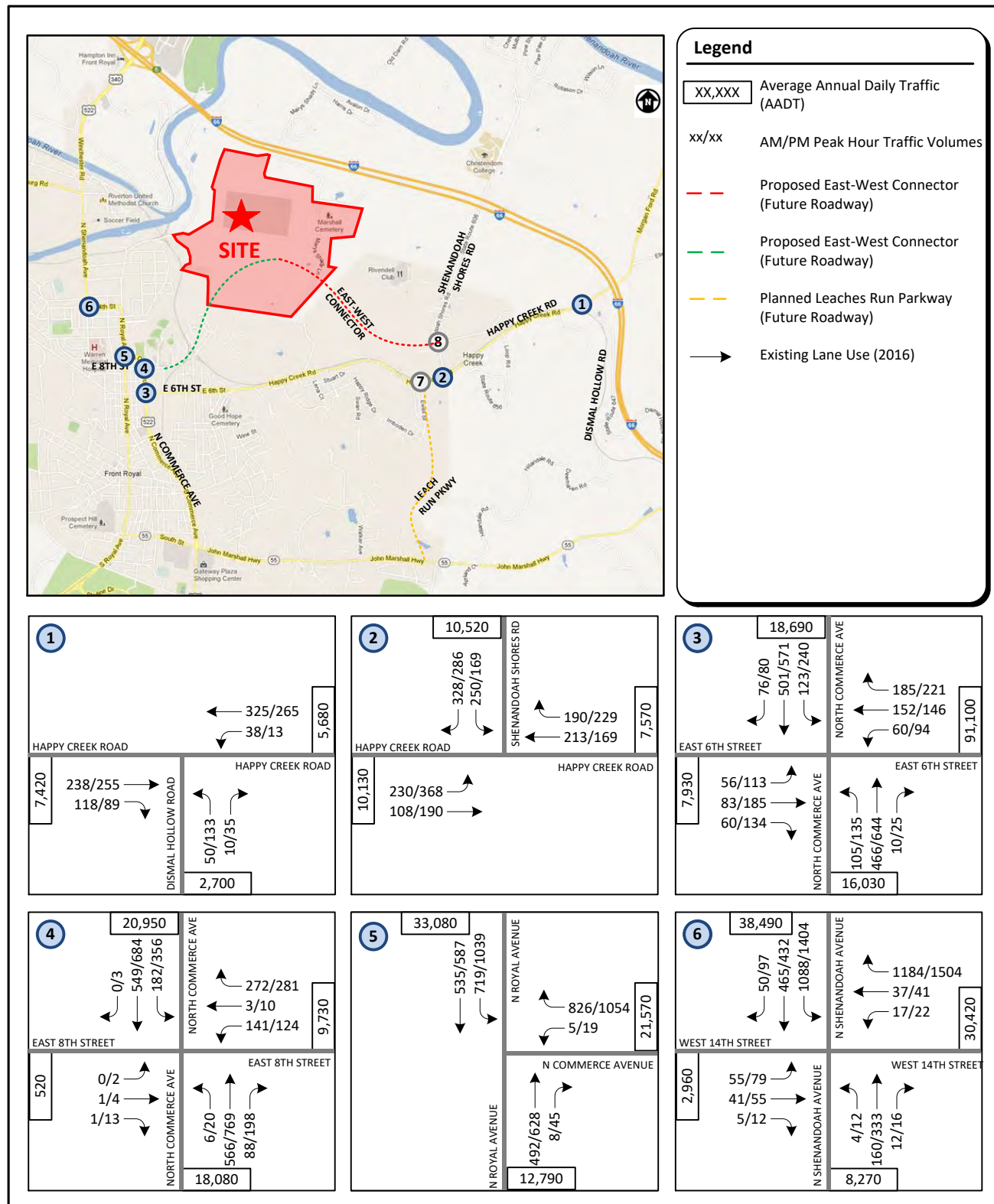


Figure 26 : Future Conditions with Proposed Development Traffic Volumes (2034) (1 of 2)

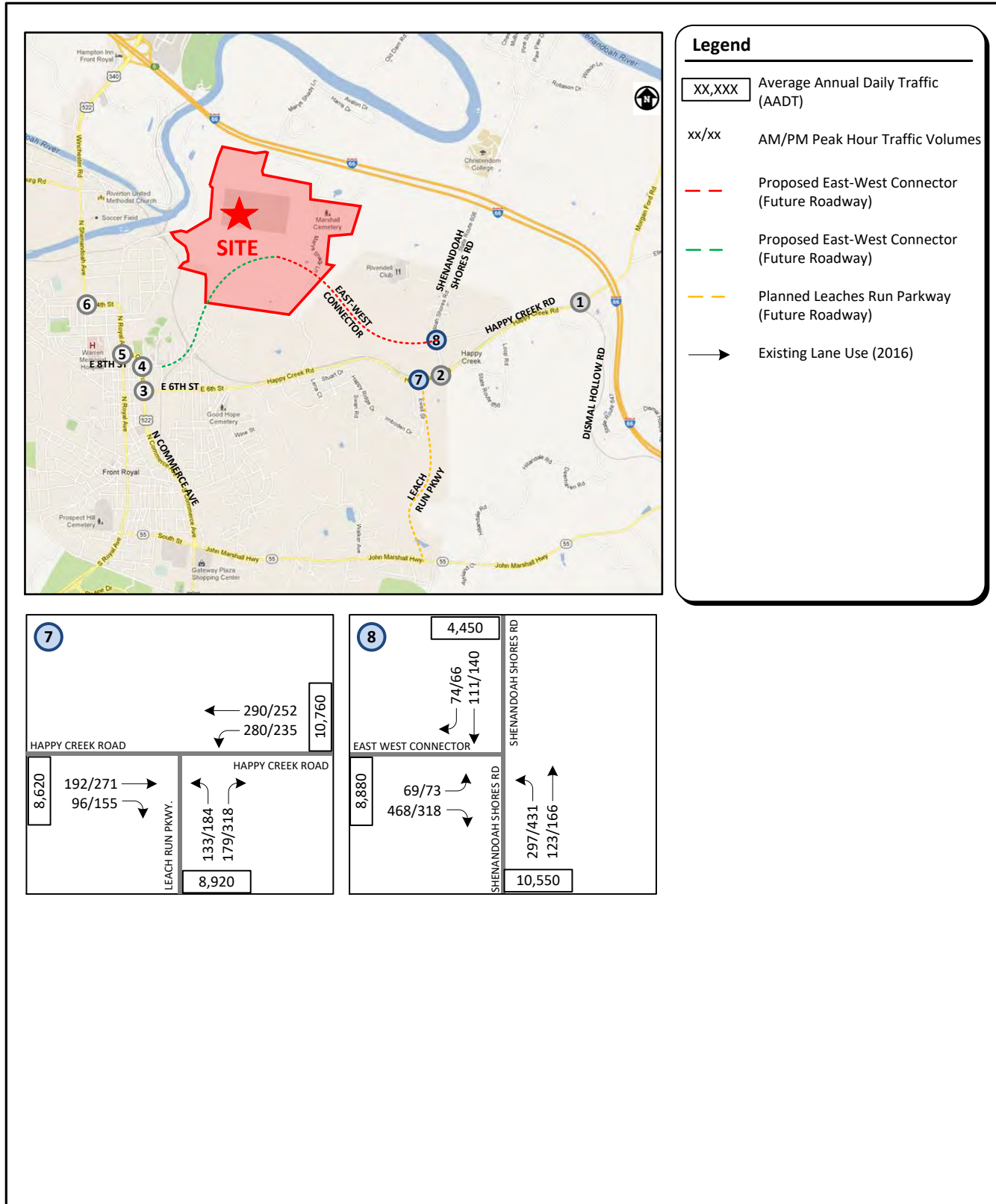


Figure 27 : Future Conditions with Proposed Development Traffic Volumes (2034) (2 of 2)

FUTURE CONDITIONS WITH PROPOSED DEVELOPMENT (2034)

Future Conditions with Proposed Development Capacity Analysis (2034)

Capacity analyses were performed at the study intersections during the weekday morning and afternoon peak hours under future 2034 conditions. Intersection capacity analyses were performed using *Synchro version 9.1* based on Highway Capacity Manual (HCM 2000) data and methodology. A peak hour factor of 0.90 was used for all movements under the future without development conditions.

The results of the intersection capacity analyses for the future conditions with the proposed development (2034) are summarized in Table 11 and Figure 28 and Figure 29. A description of the different LOS and delay and the detailed analysis worksheets for the future conditions with proposed development (2034) are included in Appendix C and F, respectively. Figure 30 and Figure 31 show the recommended lane geometry for each study intersection.

Table 11: Future Conditions with Proposed Development (2034) Intersection Capacity Analysis

			AM Peak Hour				PM Peak Hour			
No.	Intersection (Movement)	Storage Length	Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
1	Happy Creek Rd and Dismal Hollow Rd									
	Overall Intersection (Unsignalized)				n/a	n/a			n/a	n/a
	Westbound Approach		n/a	n/a		1.2	n/a	n/a		0.5
	Westbound Through/Left		n/a	3	A	1.2	n/a	1	A	0.5
	Northbound Approach		n/a	n/a	C	15.1	n/a	n/a	C	15.3
	Northbound Left		n/a	13	C	15.1	n/a	35	C	15.3
2	Happy Creek Rd and Shenandoah Shores Rd									
	Overall Intersection (Signalized)		n/a	n/a	C	32.6	n/a	n/a	C	24.4
	Eastbound Approach		n/a	n/a	B	13.6	n/a	n/a	A	9.5
	Eastbound Left	250'	53	105	B	14.9	70	134	B	10.4
	Eastbound Through		24	50	B	10.7	34	73	A	7.9
	Westbound Approach		n/a	n/a	C	21.5	n/a	n/a	B	18.1
	Westbound Through		130	207	C	34.6	97	165	C	30.5
	Westbound Right	250'	0	19	A	6.9	0	26	A	9.0
	Southbound Approach		n/a	n/a	D	51.4	n/a	n/a	D	48.2
	Southbound Left/Right	250'	350	#584	D	51.4	255	#445	D	48.2
2	Happy Creek Rd and Shenandoah Shores Rd									
	Mitigation: Add a southbound left turn lane and mitigate signal timings									
	Overall Intersection (Signalized)		n/a	n/a	C	21.2	n/a	n/a	B	13.0
	Eastbound Approach		n/a	n/a	B	10.5	n/a	n/a	A	9.5
	Eastbound Left	250'	46	87	B	11.3	70	134	B	10.4
	Eastbound Through		21	45	A	8.7	34	73	A	7.9
	Westbound Approach		n/a	n/a	B	20.0	n/a	n/a	B	18.2
	Westbound Through		121	211	C	31.3	98	165	C	30.7
	Westbound Right	250'	0	23	A	7.3	0	26	A	9.0

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Southbound Approach		n/a	n/a	C	28.3	n/a	n/a	B	12.6
	Southbound Left	250'	146	226	C	27.7	86	143	C	22.4
	Southbound Right		46	68	C	28.8	0	0	A	6.8
3	<i>East 6th St and N Commerce Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	30.0	n/a	n/a	D	35.4
	Eastbound Approach		n/a	n/a	C	32.9	n/a	n/a	D	43.2
	Eastbound Left		29	58	C	29.3	61	104	C	32.7
	Eastbound Through/Right		76	138	C	34.3	225	337	D	46.9
	Westbound Approach		n/a	n/a	D	49.9	n/a	n/a	D	50.9
	Westbound Left		31	62	C	28.2	50	88	C	29.3
	Westbound Through/Right		227	350	D	53.8	249	#385	E	56.4
	Northbound Approach		n/a	n/a	C	22.7	n/a	n/a	C	27.5
	Northbound Left	145'	43	83	B	16.8	60	103	B	19.6
	Northbound Through/Right		148	211	C	24.0	234	305	C	29.1
	Southbound Approach		n/a	n/a	C	24.0	n/a	n/a	C	30.9
	Southbound Left	165'	52	97	B	16.6	116	#246	D	37.5
	Southbound Through/Right		184	261	C	25.6	224	295	C	28.4
4	<i>East 8th St and N Commerce Avenue</i>									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Eastbound Approach		n/a	n/a	D	33.6	n/a	n/a	F	Err
	Eastbound Left/Through/Right		n/a	1	D	33.6	n/a	Err	F	Err
	Westbound Approach		n/a	n/a	F	167.6	n/a	n/a	F	Err
	Westbound Left	140'	n/a	326	F	466.7	n/a	Err	F	Err
	Westbound Through/Right		n/a	53	B	13.7	n/a	480	F	285.0
	Northbound Approach		n/a	n/a		0.1	n/a	n/a		0.2
	Northbound Left	150'	n/a	1	A	8.8	n/a	3	A	9.4
	Southbound Approach		n/a	n/a		2.5	n/a	n/a		5.2
	Southbound Left	165'	n/a	20	A	9.9	n/a	71	C	15.3
4	<i>East 8th St and N Commerce Avenue</i>									
	Mitigation: Add a traffic control signal and restripe the WB approach to shared thru/left and a right turn lane									
	Overall Intersection (Signalized)		n/a	n/a	C	20.2	n/a	n/a	C	25.7
	Eastbound Approach		n/a	n/a	C	25.9	n/a	n/a	C	33.8
	Eastbound Left/Through/Right		0	6	C	25.9	3	24	C	33.8
	Westbound Approach		n/a	n/a	C	25.7	n/a	n/a	C	30.7
	Westbound Through/Left	140'	84	148	C	33.9	89	156	D	49.0
	Westbound Through		62	126	C	21.4	100	167	C	22.0
	Northbound Approach		n/a	n/a	C	24.5	n/a	n/a	C	33.6
	Northbound Left	150'	3	12	B	18.3	9	26	C	20.7
	Northbound Through/Right		177	235	C	24.6	310	396	C	33.8

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Southbound Approach		n/a	n/a	B	13.2	n/a	n/a	B	16.1
	Southbound Left		57	94	B	19.3	147	#268	C	33.7
	Southbound Through/Right	165'	98	131	B	11.2	93	122	A	7.0
5	<i>N Commerce Avenue and N Royal Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	F	81.2	n/a	n/a	F	201.1
	Westbound Approach		n/a	n/a	F	119.4	n/a	n/a	F	248.3
	Westbound Left		4	21	E	78.4	18	46	E	67.5
	Westbound Right		~805	#1102	F	119.7	~1359	#1641	F	251.6
	Northbound Approach		n/a	n/a	C	27.8	n/a	n/a	C	32.8
	Northbound Through/Right		148	241	C	27.8	270	344	C	32.8
	Southbound Approach		n/a	n/a	E	77.2	n/a	n/a	F	239.7
	Southbound Left		~699	#1129	F	132.8	~1526	#1833	F	373.2
	Southbound Through		0	152	A	2.3	129	198	A	3.4
6	<i>W 14th Street and Shenandoah Avenue</i> (1)									
	Overall Intersection (Signalized)		n/a	n/a	E	67.6	n/a	n/a	D	46.5
	Eastbound Approach		n/a	n/a	F	719.2	n/a	n/a	F	189.1
	Eastbound Left		~230	#378	F	909.5	~86	#192	F	303.8
	Eastbound Through/Right		34	75	D	49.6	48	97	D	52.8
	Westbound Approach		n/a	n/a	A	8.2	n/a	n/a	C	23.1
	Westbound Through/Left		43	88	E	65.2	50	99	E	71.1
	Westbound Right		0	0	A	5.6	0	#245	C	21.0
	Northbound Approach		n/a	n/a	D	38.6	n/a	n/a	E	79.6
	Northbound Left	125'	3	14	E	61.8	9	30	E	60.0
	Northbound Through		121	196	D	38.5	~321	#509	F	82.0
	Northbound Right		0	0	C	32.6	0	0	D	36.9
	Southbound Approach		n/a	n/a	C	30.7	n/a	n/a	D	47.2
	Southbound Left	288'	379	470	D	38.8	~588	#760	E	57.9
	Southbound Through/Right		183	368	B	13.8	188	389	B	14.8
7	<i>Leach Run Parkway and Happy Creek Road</i>									
	Overall Intersection (Signalized)		n/a	n/a	B	16.6	n/a	n/a	B	18.2
	Eastbound Approach		n/a	n/a	B	17.9	n/a	n/a	B	13.9
	Eastbound Through		97	156	C	24.4	122	188	B	19.2
	Eastbound Right	250'	0	11	A	5.1	0	12	A	4.7
	Westbound Approach		n/a	n/a	B	13.7	n/a	n/a	B	12.6
	Westbound Left	250'	126	m167	B	14.3	79	m136	B	13.9
	Westbound Through		129	m171	B	13.1	78	m147	B	11.3
	Northbound Approach		n/a	n/a	C	20.7	n/a	n/a	C	27.3
	Northbound Left	250'	69	118	C	25.5	109	178	C	34.0

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Northbound Right		0	34	B	17.1	0	53	C	23.4
8	<i>Shenandoah Shores Road and East West Connector</i>									
	Overall Intersection (Unsignalized)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Eastbound Approach		n/a	n/a	E	49.7	n/a	n/a	F	130.0
	Eastbound Left/Right		n/a	326	E	49.7	n/a	426	F	130.0
	Northbound Approach		n/a	n/a		6.6	n/a	n/a		7.7
	Northbound Through/Left		n/a	24	A	6.6	n/a	41	A	7.7
8	<i>Shenandoah Shores Road and East West Connector</i>									
	Mitigation: Add a traffic control signal; add a eastbound right turn lane; add a northbound left turn lane									
	Overall Intersection (Signalized)		n/a	n/a	C	20.9	n/a	n/a	B	19.9
	Eastbound Approach		n/a	n/a	B	15.4	n/a	n/a	B	17.0
	Eastbound Left		32	65	C	21.8	42	84	C	33.1
	Eastbound Right	250'	0	40	B	14.4	0	35	B	13.3
	Northbound Approach		n/a	n/a	C	24.1	n/a	n/a	B	17.2
	Northbound Left	250'	147	233	C	25.9	136	244	C	21.1
	Northbound Through		63	115	B	19.7	35	61	A	7.2
	Southbound Approach		n/a	n/a	C	30.0	n/a	n/a	C	33.2
	Southbound Through/Right		86	150	C	30.0	109	181	C	33.2

Notes: (1): In order to get a result without any errors, the PM Peak westbound right turn volume at the intersection of N Shenandoah Avenue and W. 14th Street was changed from 1500 to 1400 vph in Synchro.

According to the Town of Fort Royal, it is desirable to achieve a level of service C or better for each movement at an intersection. The results show that the following intersections operate at unacceptable levels of service under the future with development conditions:

- *Happy Creek Road and Shenandoah Shores Road*
The southbound approach operates at level of service D during both the weekday morning and afternoon peak hours.
- *North Commerce Avenue and East 6th Street*
The westbound approaches operate at level of service D during both the morning and afternoon peak hours. The eastbound approach and the overall LOS is at LOS D during the afternoon peak hour.
- *North Commerce Avenue and East 8th Street*
The eastbound and westbound approaches operate at level of service D or worse during both the morning and afternoon peak hours.
- *North Commerce Avenue and North Royal Avenue*
All the approaches operate at LOS D or worse during both the morning and the evening peak hours, except for the southbound approach during the afternoon peak hour.
- *W 14th Street and North Shenandoah Avenue*
Most of the movements operate at LOS D or worse during both the morning and the evening peak hours.
- *Shenandoah Shores Road and East West connector*

The eastbound approach operates at LOS E and F during the morning and the evening peak hours respectively. The following improvements are recommended:

- Happy Creek Road and Shenandoah Shores Road
 - Add a southbound right turn lane, and,
 - Adjust signal timings as necessary.
- N. Commerce Avenue and E. 8th Street:
 - Restripe the westbound approach to a thru/left turn lane and a right turn lane, and,
 - Install a traffic control signal.
- Shenandoah Shores Road and East/West Connector
 - Add a traffic control signal,
 - Add an eastbound right turn lane, and,
 - Add a northbound left turn lane.

The Applicant's Proffer Statement includes commitments to implement the improvement recommended above.

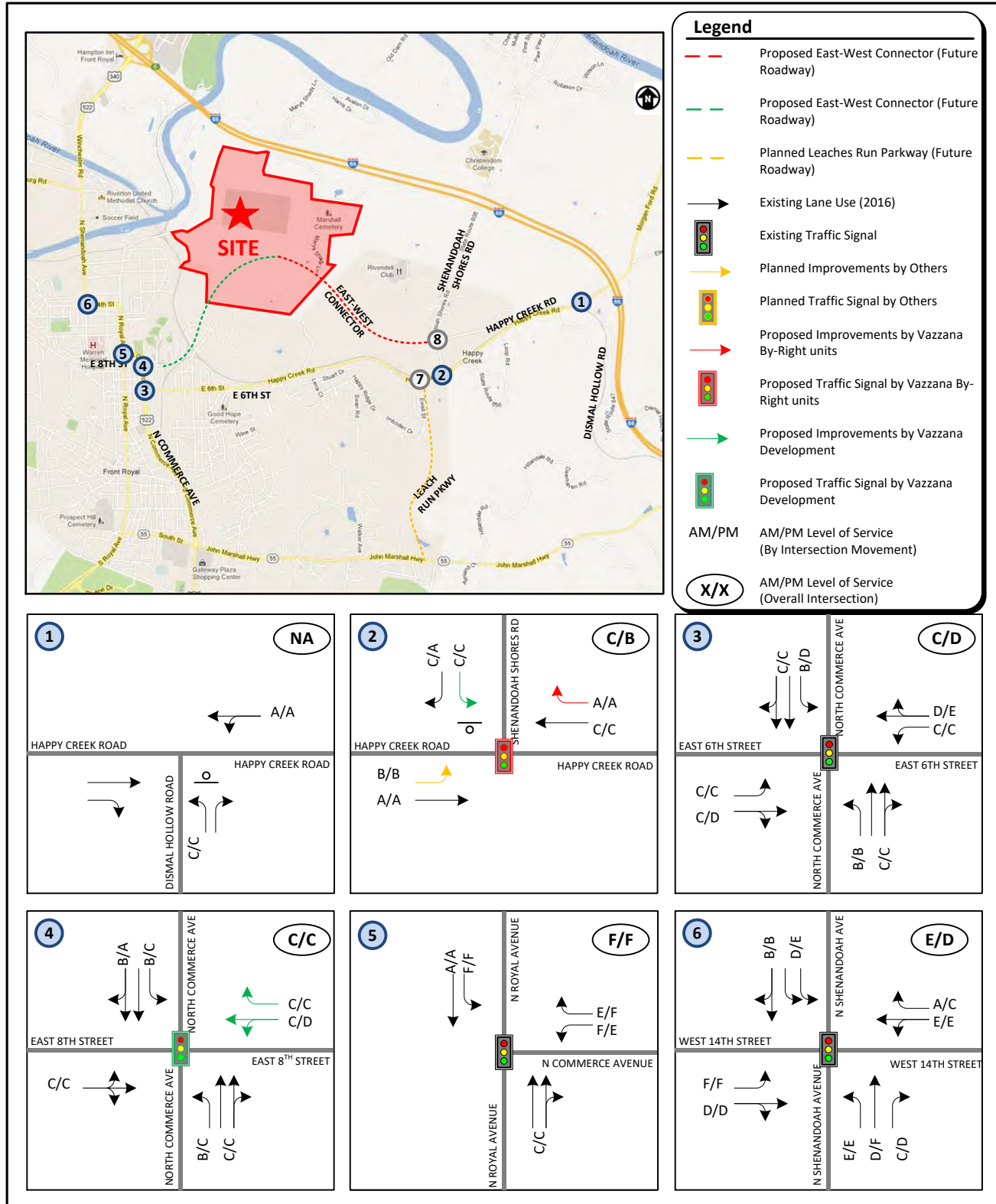


Figure 28: Future Conditions with Proposed Development Levels of Service (2034) (1 of 2)

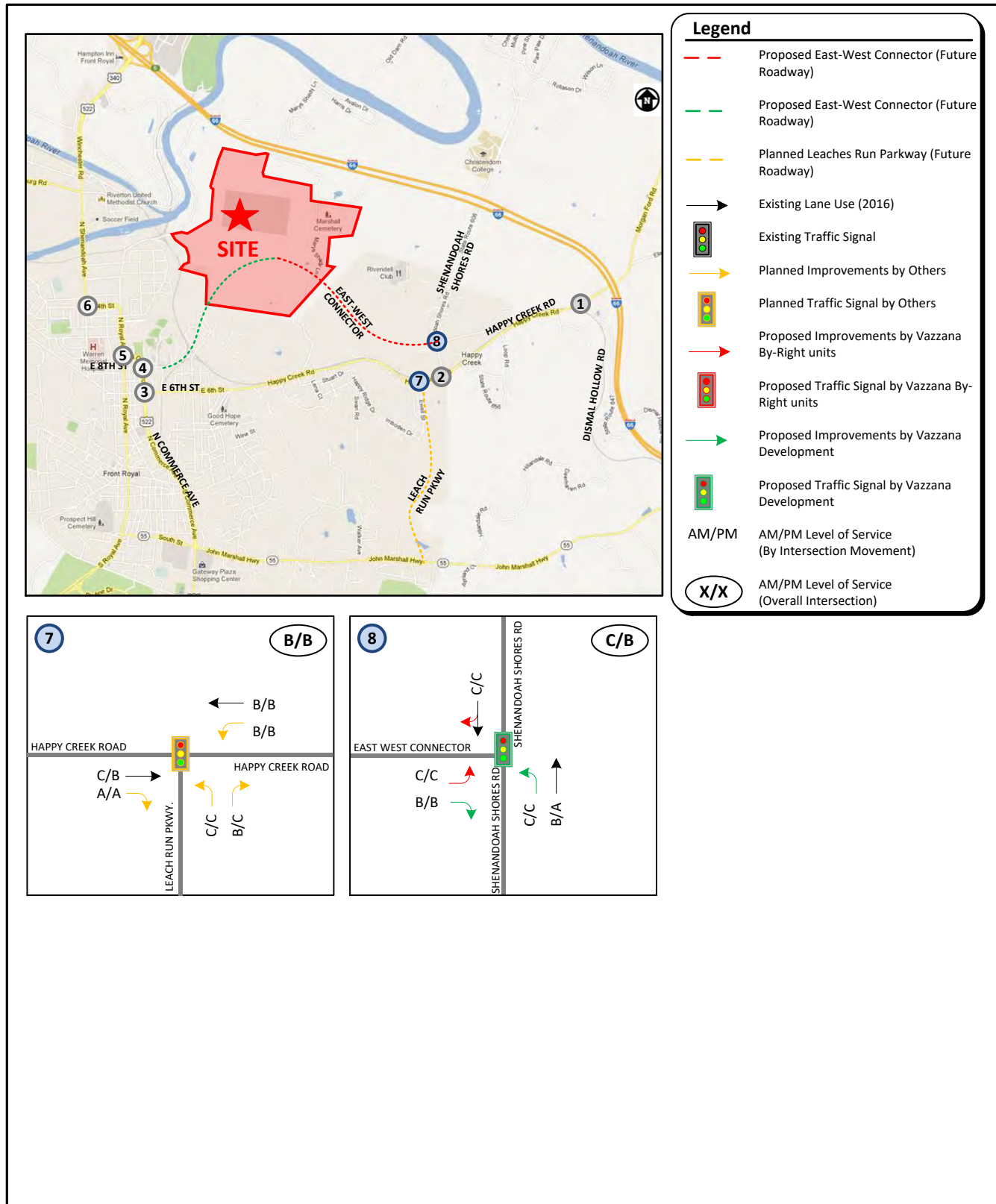


Figure 29: Future Conditions with Proposed Development Levels of Service (2034) (1 of 2)

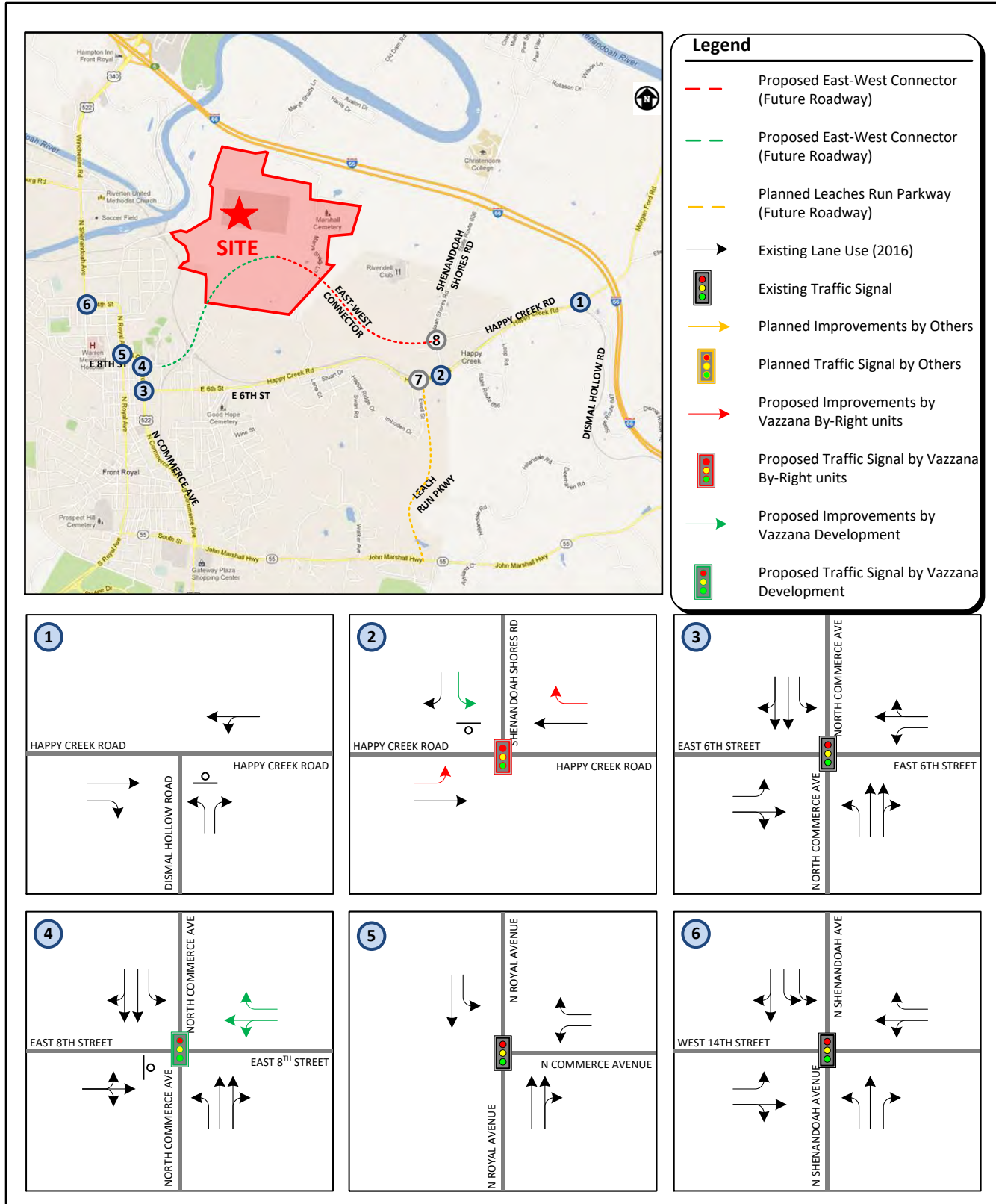


Figure 30: Future Conditions Lane Configuration and Traffic Control with Proposed Development (2034) (1 of 2)

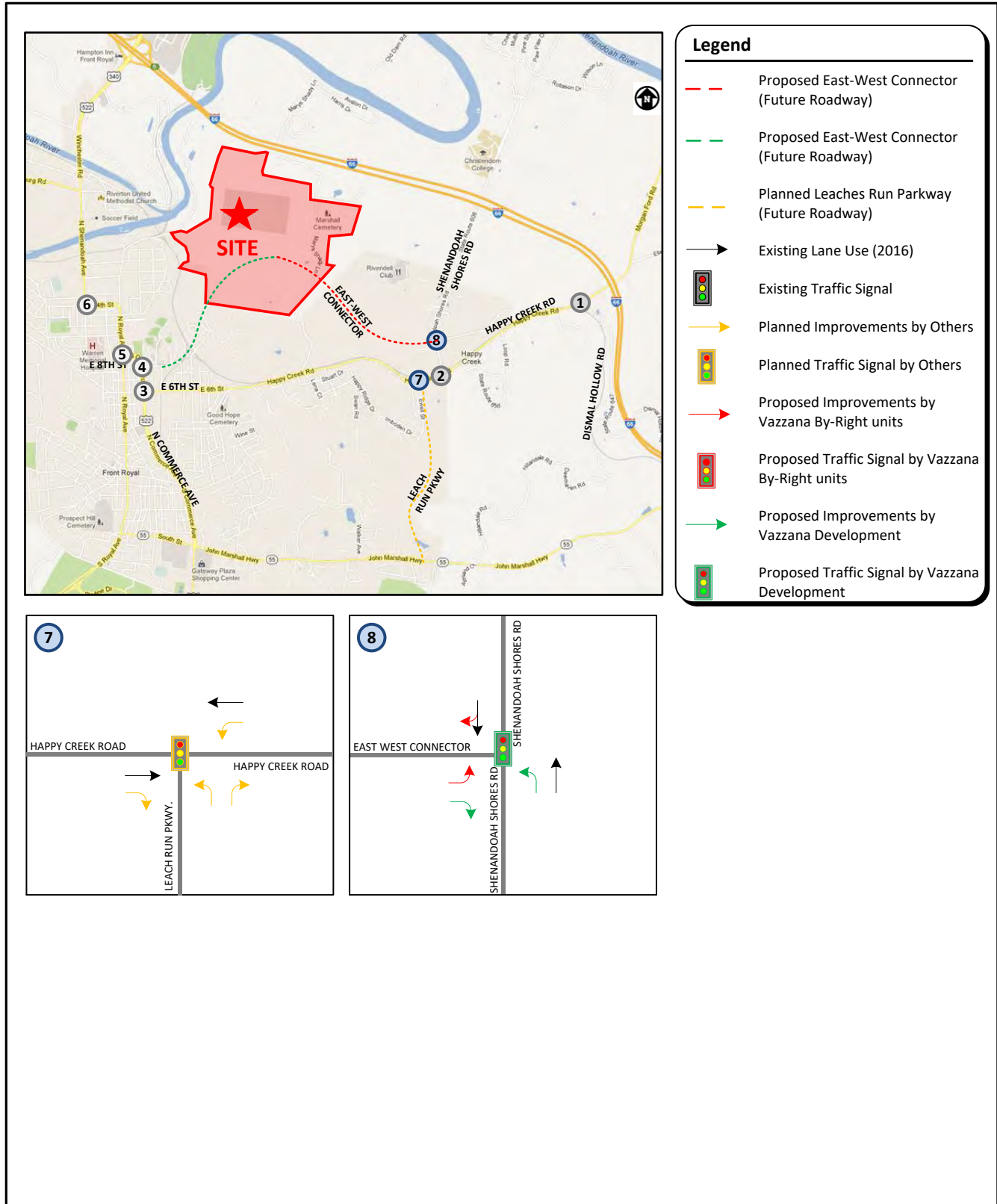


Figure 31: Future Conditions Lane Configuration and Traffic Control with Proposed Development (2034) (2 of 2)

BUILD-OUT PLUS SIX YEARS (2040)

As discussed previously, the proposed redevelopment is anticipated to be complete in 2034. The future year 2040 analysis is provided in accordance with VDOT guidelines and the terms of the scoping agreement.

Future (2040) Development Traffic Volumes

Traffic volumes were projected by increasing the Existing (2016) traffic volumes to the year 2040 using an inherent growth rate of one (1.0) percent, as per the terms of the scoping agreement. These volumes were added to the trips generated from the anticipated developments, the rerouted Mary's Shady Lane traffic and the rerouted Leach Run Parkway traffic volumes to establish the Build-out plus six future traffic volumes. The Build-out plus six years future volumes are shown in Figure 32 and Figure 33.

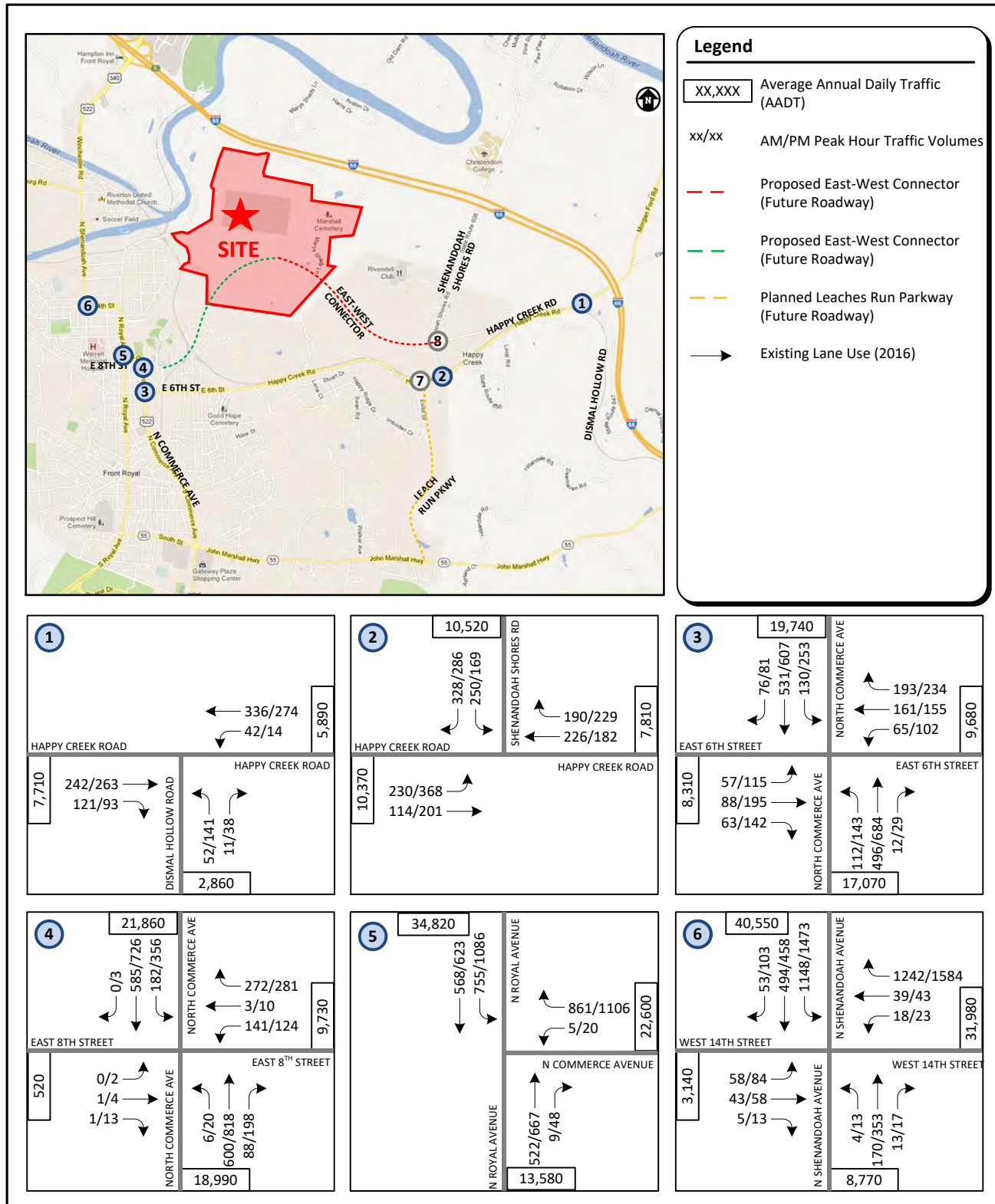


Figure 32 : Build Out Plus Six Future Conditions Traffic Volumes (2040) (1 of 2)

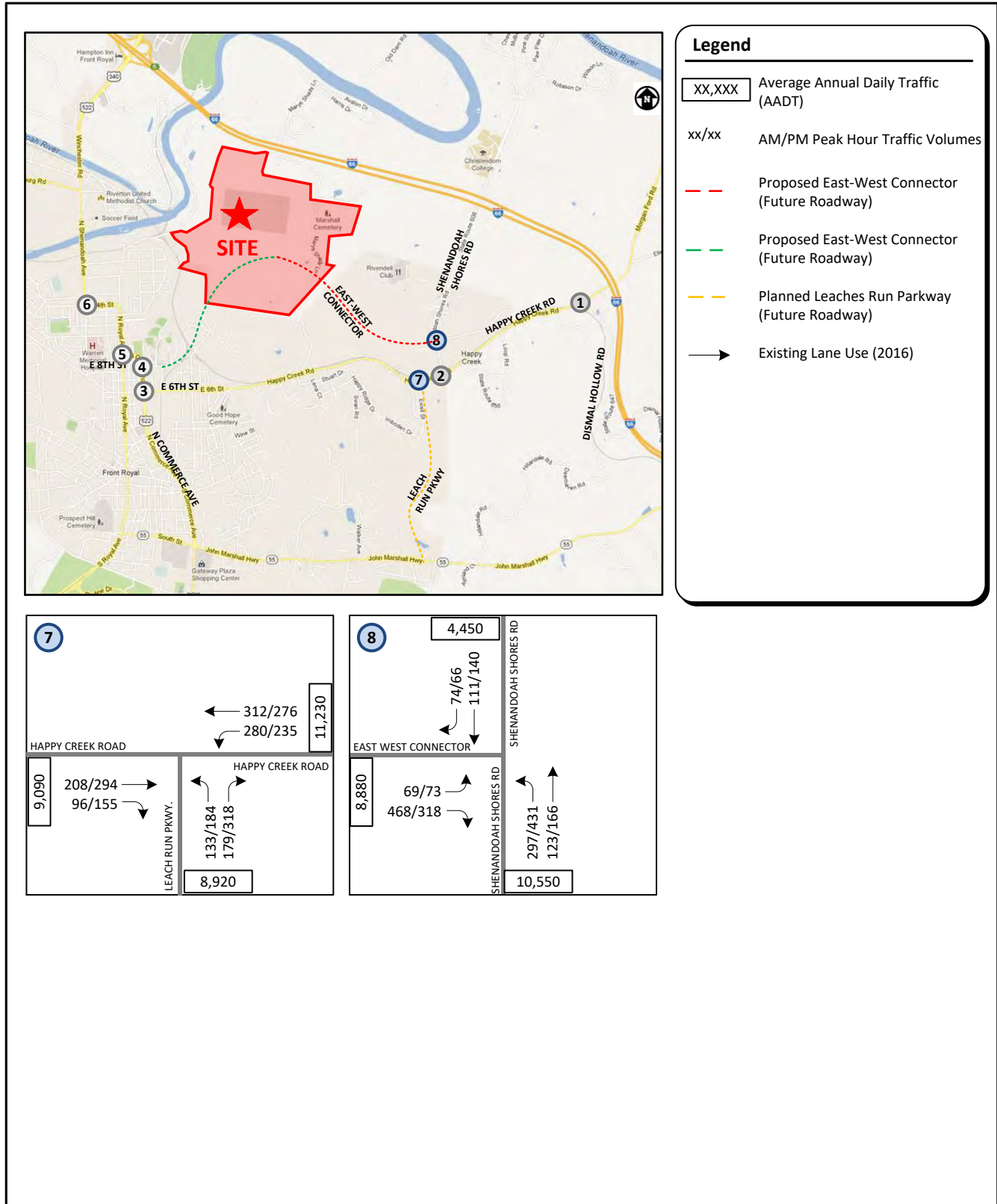


Figure 33 : Build Out Plus Six Future Conditions Traffic Volumes (2040) (2 of 2)

Future (2040) Development Capacity Analysis

Capacity analyses were performed at the study intersections during the weekday morning and afternoon peak hours under future 2034 conditions. Intersection capacity analyses were performed using Synchro version 8 based on Highway Capacity Manual (HCM 2000) data and methodology. A peak hour factor of 0.90 was used for all movements under the future without development conditions.

The results of the intersection capacity analyses for the future conditions with the proposed development (2040) are summarized in Table 11 and Figure 34 and Figure 35. A description of the different LOS and delay and the detailed analysis worksheets for the future conditions with proposed development (2034) are included in Appendix C and F, respectively. Figure 36 and Figure 37 show the recommended lane geometry for each study intersection.

Table 12: Future Conditions with Proposed Development (2040) Intersection Capacity Analysis

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
1	<i>Happy Creek Rd and Dismal Hollow Rd</i>									
	Overall Intersection (Unsignalized)				n/a	n/a			n/a	n/a
	Westbound Approach		n/a	n/a		1.3	n/a	n/a		0.5
	Westbound Through/Left		n/a	3	A	1.3	n/a	1	A	0.5
	Northbound Approach		n/a	n/a	C	15.5	n/a	n/a	C	16.1
	Northbound Left		n/a	14	C	15.5	n/a	40	C	16.1
2	<i>Happy Creek Rd and Shenandoah Shores Rd</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	20.8	n/a	n/a	B	13.1
	Eastbound Approach		n/a	n/a	B	10.5	n/a	n/a	A	9.3
	Eastbound Left	250'	44	83	B	11.4	67	128	B	10.2
	Eastbound Through		21	46	A	8.5	34	74	A	7.7
	Westbound Approach		n/a	n/a	C	20.6	n/a	n/a	B	18.8
	Westbound Through		129	224	C	31.8	106	177	C	31.1
	Westbound Right	250'	0	23	A	7.3	0	26	A	9.0
	Southbound Approach		n/a	n/a	C	27.1	n/a	n/a	B	12.6
	Southbound Left	250'	146	226	C	27.7	86	143	C	22.4
	Southbound Right		53	75	C	26.6	0	0	A	6.8
3	<i>East 6th St and N Commerce Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	31.1	n/a	n/a	D	39.2
	Eastbound Approach		n/a	n/a	C	32.9	n/a	n/a	D	43.8
	Eastbound Left		30	59	C	29.3	62	106	C	33.8
	Eastbound Through/Right		82	147	C	34.2	243	358	D	47.2
	Westbound Approach		n/a	n/a	D	51.2	n/a	n/a	D	52.6
	Westbound Left		34	65	C	27.9	55	95	C	29.4
	Westbound Through/Right		244	#399	E	55.5	272	#440	E	58.7
	Northbound Approach		n/a	n/a	C	23.7	n/a	n/a	C	29.3
	Northbound Left	145'	48	88	B	17.5	67	110	C	21.1

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Northbound Through/Right		165	226	C	25.1	261	330	C	30.9
	Southbound Approach		n/a	n/a	C	25.2	n/a	n/a	D	39.0
	Southbound Left	165'	57	102	B	17.4	128	#290	E	62.6
	Southbound Through/Right		205	277	C	26.9	248	315	C	30.3
4	<i>East 8th St and N Commerce Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	20.5	n/a	n/a	C	27.0
	Eastbound Approach		n/a	n/a	C	25.9	n/a	n/a	C	33.8
	Eastbound Left/Through/Right		0	6	C	25.9	3	24	C	33.8
	Westbound Approach		n/a	n/a	C	25.8	n/a	n/a	C	30.8
	Westbound Thru/ Left		82	144	C	33.9	89	156	D	49.0
	Westbound Right		69	134	C	21.5	105	172	C	22.2
	Northbound Approach		n/a	n/a	C	25.0	n/a	n/a	D	36.1
	Northbound Left	150'	3	12	B	18.3	9	26	C	20.8
	Northbound Through/Right		191	251	C	25.1	335	#432	D	36.4
	Southbound Approach		n/a	n/a	B	13.6	n/a	n/a	B	16.8
	Southbound Left		57	94	C	20.5	161	#303	D	36.7
	Southbound Through/Right	165'	106	141	B	11.4	101	131	A	7.1
5	<i>N Commerce Avenue and N Royal Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	F	96.4	n/a	n/a	F	222.5
	Westbound Approach		n/a	n/a	F	147.0	n/a	n/a	F	285.3
	Westbound Left		4	21	E	78.4	19	48	E	68.0
	Westbound Right		~885	#1192	F	147.4	~1481	#1767	F	289.2
	Northbound Approach		n/a	n/a	C	28.2	n/a	n/a	C	33.6
	Northbound Through/Right		159	256	C	28.2	292	370	C	33.6
	Southbound Approach		n/a	n/a	F	90.6	n/a	n/a	F	260.2
	Southbound Left		~763	#1207	F	156.9	~1626	#1934	F	407.3
	Southbound Through		0	166	A	2.4	143	219	A	3.6
6	<i>W 14th Street and Shenandoah Avenue</i>									
	Overall Intersection (Signalized)		n/a	n/a	E	72.9	n/a	n/a	E	55.1
	Eastbound Approach		n/a	n/a	F	775.4	n/a	n/a	F	206.5
	Eastbound Left		~248	#396	F	978.3	~94	#203	F	335.2
	Eastbound Through/Right		35	78	D	50.3	50	100	D	53.1
	Westbound Approach		n/a	n/a	B	10.1	n/a	n/a	C	23.5
	Westbound Through/Left		45	91	E	68.4	53	104	E	76.1
	Westbound Right		0	0	A	7.4	0	#245	C	21.0
	Northbound Approach		n/a	n/a	D	40.3	n/a	n/a	F	92.4
	Northbound Left	125'	3	14	E	62.3	10	31	E	60.5
	Northbound Through		130	207	D	40.3	~355	#548	F	96.2

No.	Intersection (Movement)	Storage Length	AM Peak Hour				PM Peak Hour			
			Queue				Queue			
			50th	90th	LOS	Delay (sec/veh)	50th	90th	LOS	Delay (sec/veh)
	Northbound Right		0	0	C	33.5	0	0	D	36.9
	Southbound Approach		n/a	n/a	C	32.6	n/a	n/a	E	59.5
	Southbound Left	288'	414	513	D	41.3	~685	#821	E	76.2
	Southbound Through/Right		200	400	B	14.3	205	426	B	15.4
7	<i>Leach Run Parkway and Happy Creek Road</i>									
	Overall Intersection (Signalized)		n/a	n/a	B	17.7	n/a	n/a	B	19.4
	Eastbound Approach		n/a	n/a	B	18.6	n/a	n/a	B	14.5
	Eastbound Through		106	170	C	24.8	135	205	B	19.7
	Eastbound Right	250'	0	11	A	5.1	0	12	A	4.7
	Westbound Approach		n/a	n/a	B	15.6	n/a	n/a	B	15.8
	Westbound Left	250'	89	193	B	17.0	101	168	B	17.5
	Westbound Through		100	204	B	14.4	110	187	B	14.5
	Northbound Approach		n/a	n/a	C	20.7	n/a	n/a	C	27.3
	Northbound Left	250'	69	118	C	25.5	109	178	C	34.0
	Northbound Right		0	34	B	17.1	0	53	C	23.4
8	<i>Shenandoah Shores Road and East West Connector</i>									
	Overall Intersection (Signalized)		n/a	n/a	C	20.8	n/a	n/a	B	19.9
	Eastbound Approach		n/a	n/a	B	15.4	n/a	n/a	B	17.0
	Eastbound Left		32	65	C	21.8	42	84	C	33.1
	Eastbound Right	250'	0	40	B	14.4	0	35	B	13.3
	Northbound Approach		n/a	n/a	C	23.7	n/a	n/a	B	17.2
	Northbound Left	250'	147	233	C	25.6	136	245	C	21.0
	Northbound Through		63	115	B	19.3	35	62	A	7.2
	Southbound Approach		n/a	n/a	C	30.0	n/a	n/a	C	33.2
	Southbound Through/Right		86	150	C	30.0	109	181	C	33.2

Notes: (1): In order to get a result without any errors, the PM Peak westbound right turn volume at the intersection of N Shenandoah Avenue and W. 14th Street was changed from 1584 to 1400 vph in Synchro.

According to the Town of Fort Royal, it is desirable to achieve a level of service C or better for each movement at an intersection. The results show that the following intersections operate with at least one movement at unacceptable levels of service under the future (2040) conditions:

- North Commerce Avenue and East 6th Street
- North Commerce Avenue and East 8th Street
- North Commerce Avenue and North Royal Avenue
- W 14th Street and North Shenandoah Avenue

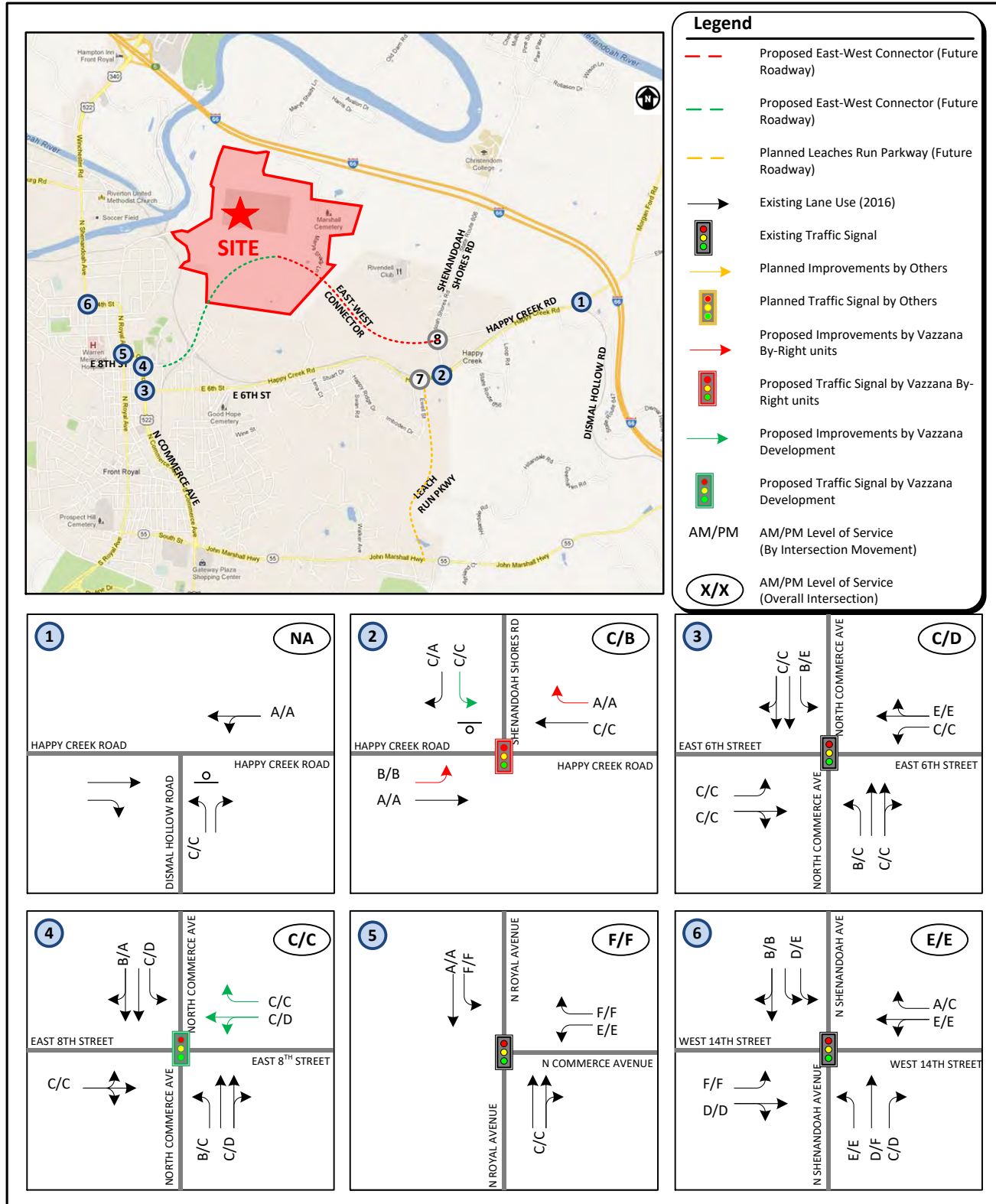


Figure 34: Build-out Plus Six Conditions Levels of Service (2040) (1 of 2)

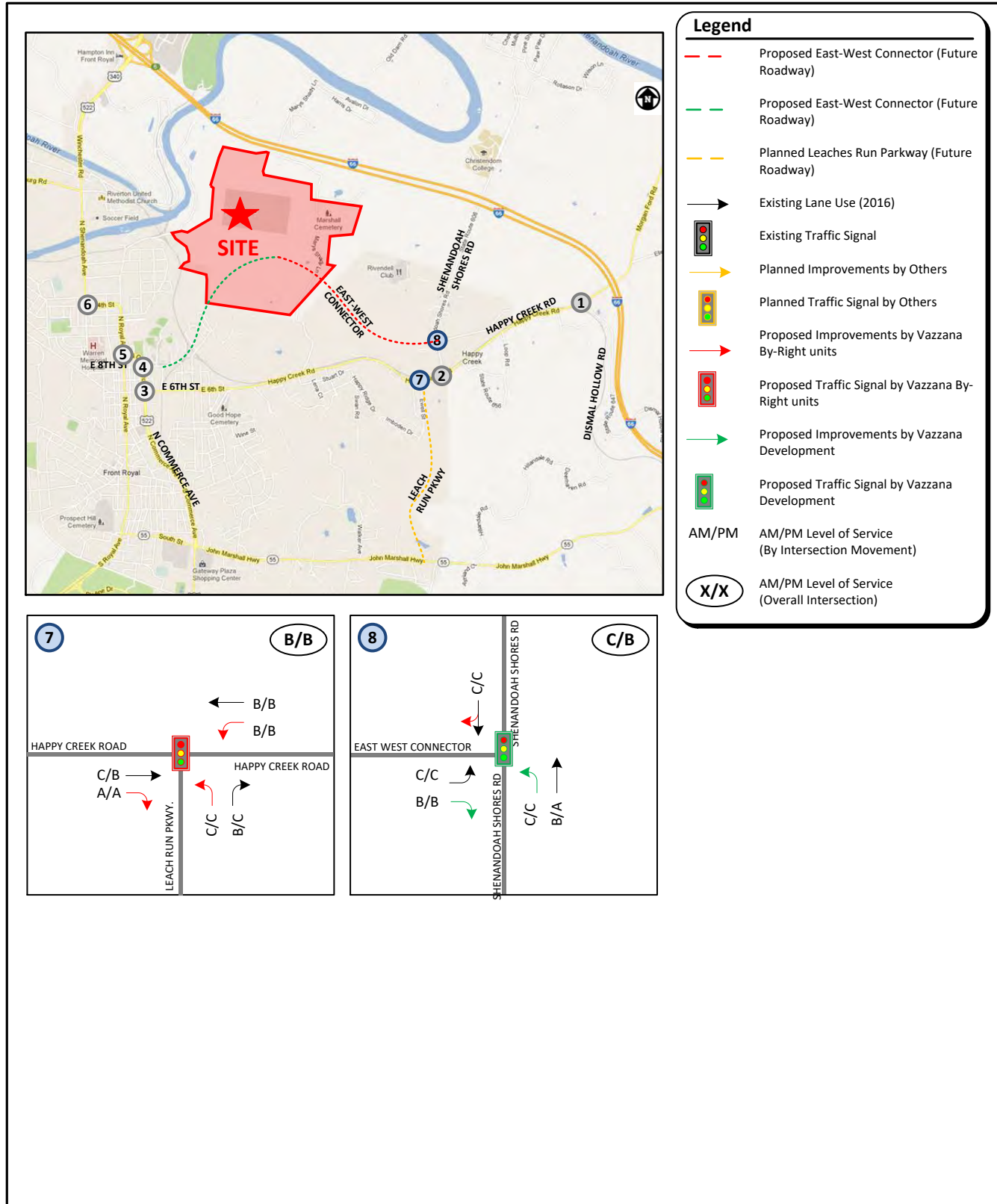


Figure 35: Build-out Plus Six Conditions Levels of Service (2040) (1 of 2)

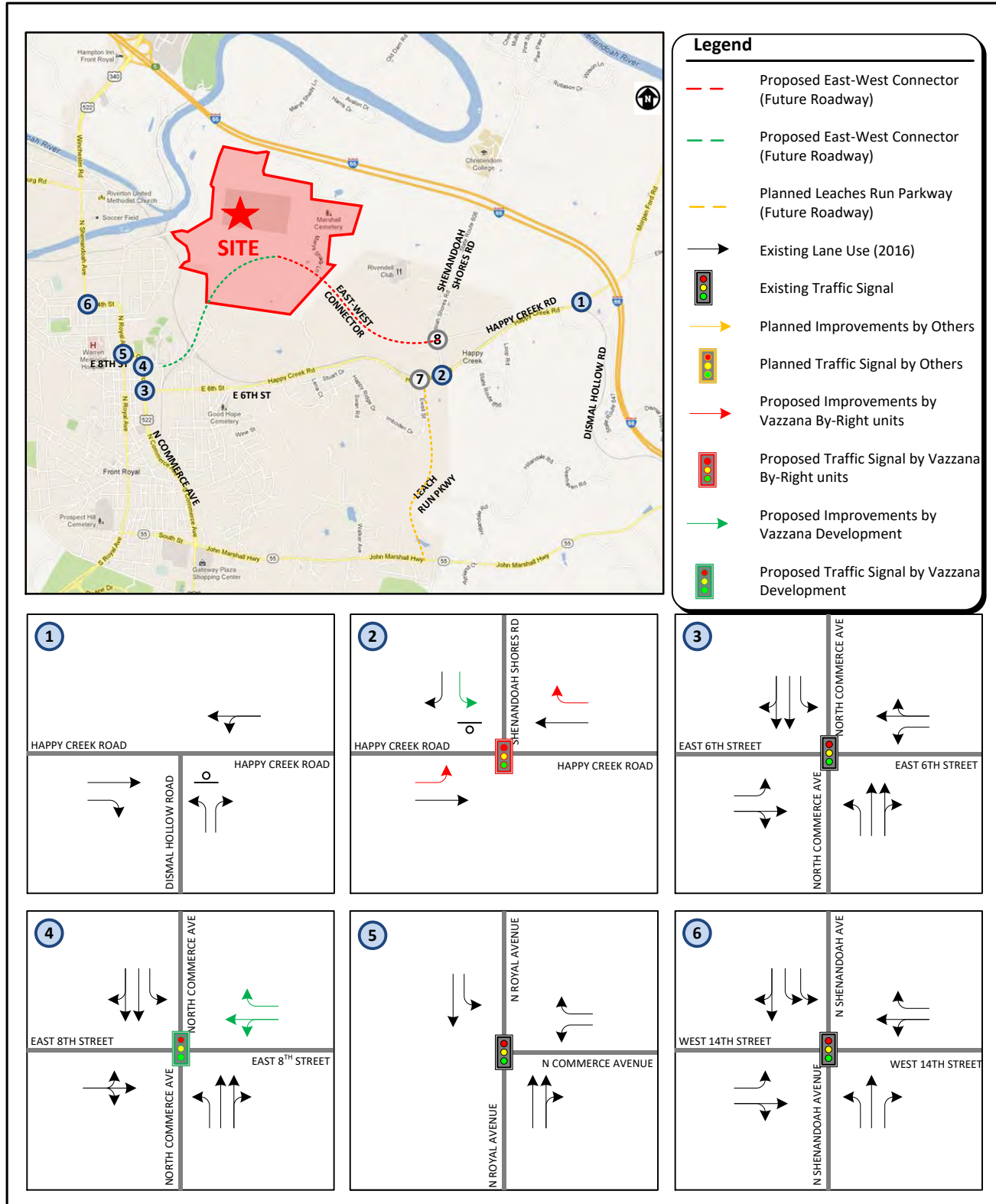


Figure 36: Build-out Plus Six Conditions Lane Configuration and Traffic Control (2040) (1 of 2)

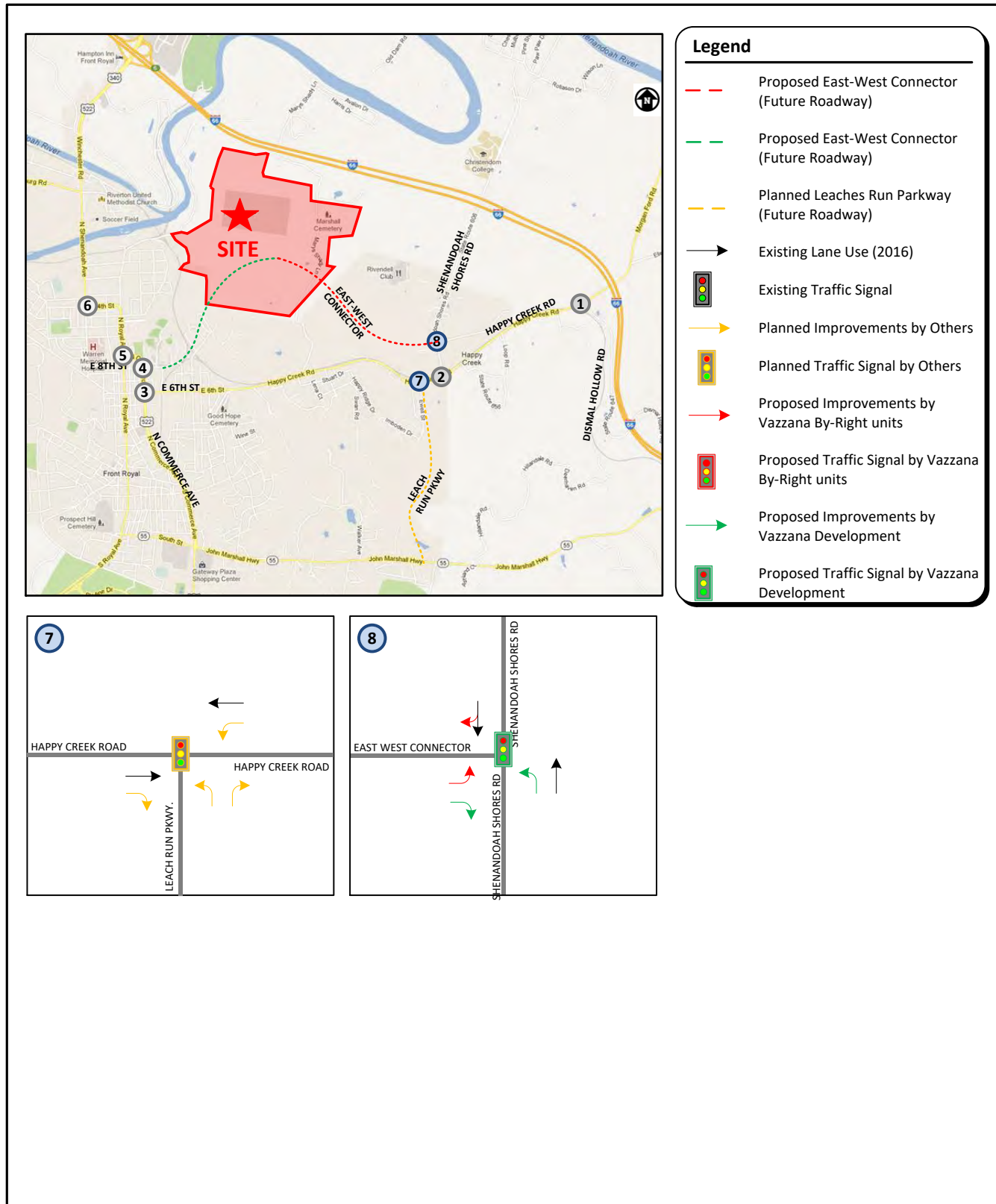


Figure 37: Build-out Plus Six Conditions Lane Configuration and Traffic Control (2040) (1 of 2)

ROADWAY IMPROVEMENT PHASING ANALYSIS

A phasing analysis was performed to estimate the point at which various roadway improvements at the study intersection would be needed. It is anticipated that the majority of the residential portion of the property will be developed prior to the development of the non-residential portion. Hence, the trips generated by only the residential portion of the site were used to estimate the traffic impacts on the roadway network. The following methodology was used to carry out the roadway improvement phasing analysis:

- The number of units that could be potentially built each year until the buildout year 2034 were calculated based on the average absorption rate of 66 dwelling units per year (320 by-right plus 870 proposed units divided across 18 years).
- Future traffic volumes were projected for the year to be investigated were determined by adding a regional growth of 1.00% per year and the trips generated by the residential units in that year to the existing traffic volumes.
- Capacity analyses were performed at the study intersections for each of these years to estimate the impact of the trips generated by the residential units on the study intersections. The results of the roadway improvement phasing analysis are shown in Table 13.

Table 13: Phasing Analysis

Intersection	Improvements	No. of units	Year
Mary's Shady Lane Closure	Closure	225 DU	2020
Shenandoah Shores Road/Happy Creek Road	Southbound turn lane improvements	700 DU	2027
N. Commerce Avenue/E. 8th Street	3rd westbound lane	Not required, even with full residential development (1190 DU)	2034

Table 13 shows that:

- The access for Marys Shady Lane at Happy Creek Road will be removed as development occurs on the by-right portion of the Vazzana property. This lane closure is anticipated to occur in the year 2020 with the development of approximately 225 DU.
- The addition of a southbound left turn lane at the intersection of Shenandoah Shores Road and Happy Creek Road would be required in the year 2027 with the development of approximately 700 DU.
- The addition of a 3rd westbound lane at the intersection of N. Commerce Avenue and E. 8th Street is not necessary with the buildout of the entire residential development (1,190 DU) in the year 2034. This improvement would be needed with commercial development on the Vazzana property or future regional growth.

CONCLUSIONS

The analysis presented in this report supports the following major conclusions:

- **Existing Conditions (2016)**
 - All study intersections operate at acceptable levels of service (LOS) C or better overall, with the exception of the North Commerce Avenue/North Royal Avenue and West 14th Street/North Shenandoah Avenue intersections. No improvements are recommended at this time due to the available reserve capacity for the mainline approaches.
- **Future Conditions without Proposed Development (2034)**
 - A 1.0% annual growth rate was applied to Happy Creek Road, Shenandoah Shores Road, North Commerce Avenue, and East 8th Street.
 - The anticipated traffic from the 450 residential units of the proposed HEPTAD development was added to the road network. The site is located south of Happy Creek Road along the future Leach Run Parkway.
 - Currently, there are 320 residential units approved for development on the Vazzana Property. Anticipated traffic from this by-right development was added under background conditions.
 - With the development of the by-right Vazzana property, access to Happy Creek Road from Marys Shady Lane is expected to close. Traffic will be rerouted to Shenandoah Shores Road and may access Happy Creek Road from Shenandoah Shores Road.
 - The construction of Leach Run Parkway between John Marshall Highway and Happy Creek Road at Shenandoah Shores Road is expected to be complete by 2034. A portion of existing traffic was rerouted to use this new roadway.
 - The following intersections operate with at least one movement at an unacceptable LOS:
 - *Happy Creek Road and Shenandoah Shores Road*
 - *North Commerce Avenue and East 6th Street*
 - *North Commerce Avenue and East 8th Street*
 - *North Commerce Avenue and North Royal Avenue*
 - *W 14th Street and North Shenandoah Avenue*
 - *Leach Run Parkway and Happy Creek Road*
 - The following improvements are anticipated in association with the by-right Vazzana property and middle school:
 - *Happy Creek Road and Shenandoah Shores Road*
 - Eastbound left turn lane
 - Westbound right turn lane
 - New traffic signal
 - *Happy Creek Road and Leach Run Parkway*
 - Eastbound right turn lane
 - Westbound left turn lane

- Northbound left turn lane
 - New traffic signal
- All other study intersections operate at acceptable levels of service C or better.
- **Future Conditions with Proposed Development (2034)**
 - The proposed development program consists of approximately 870 residential units and 95,000 square feet of commercial space. The site will be accessed via the new East-West Connector road at Shenandoah Shores Road and East 8th Street.
 - The proposed development will generate approximately 796 trips during the weekday morning peak period, 1,022 trips during the weekday afternoon peak period, and 9,654 trips during an entire weekday.
 - Similar to the future conditions without the rezoning, the following intersections operate with at least one movement at an unacceptable LOS:
 - *Happy Creek Road and Shenandoah Shores Road*
 - *North Commerce Avenue and East 6th Street*
 - *North Commerce Avenue and East 8th Street*
 - *North Commerce Avenue and North Royal Avenue*
 - *W 14th Street and North Shenandoah Avenue*
 - *Leach Run Parkway and Happy Creek Road*
 - *Shenandoah Shores Road and East/West Connector*
 - The following improvements are recommended with the proposed development:
 - *Shenandoah Shores Road and East/West Connector (with closure of Marys Shady Lane)*
 - Install a traffic control signal
 - Add an eastbound right turn lane
 - Add a northbound left turn lane
 - *Happy Creek Road and Shenandoah Shores Road (700 DU)*
 - Add a southbound right turn lane
 - Adjust signal timings as necessary
 - *N. Commerce Avenue and E. 8th Street (with commercial development)*
 - Restripe the westbound approach to a thru/left turn lane and a right turn lane
 - Install a traffic control signal
 - The Applicant's Proffer Statement includes implementation of the improvements recommended above. With these improvements, all movements at the intersections of Shenandoah Shores Road with Happy Creek Road and with the East/West Connector would operate at acceptable levels of service. The intersection of East 8th Street and North Commerce Street would operate with acceptable levels of service for the overall intersection and each movement, with the exception of the westbound through/left movement during the PM peak hour.

TECHNICAL MEMORANDUM

To: Dave Vazzana
From: Kevin Sitzman, P.E.
Steven Dauterman, E.I.T.
Date: October 27, 2017
Subject: Vazzana Property Development – Left-Turn Lane Warrant and 4-Hour Traffic Signal Evaluation

This memorandum presents the results of a left-turn lane warrant analysis and a 4-hour traffic signal warrant evaluation in conjunction with the by-right Vazzana Property Development in the Town of Front Royal, Virginia. The need for, and the appropriateness of, a northbound left-turn lane and traffic signal at the intersection of Shenandoah Shores Road (Rte. 606) and the proposed East-West Connector were evaluated with the additional traffic associated with the future conditions of the roadway network.

PROJECT DESCRIPTION

The by-right Vazzana Property Development is planned to be comprised of 320 single-family residential homes. With the development, access to Happy Creek Road from Mary's Shady Lane will be rerouted via Shenandoah Shores Road through the proposed East-West Connector. This change to the road network and other specifics regarding the development are discussed in a traffic impact study (TIS) performed by Gorove/Slade Associates, titled *Traffic Impact Study – Vazzana Property Development* and dated September 29, 2017.

This memorandum was performed in response to the Town of Front Royal request for justification of a northbound left-turn lane and traffic signal at the subject intersection with the R1-A proffer amendment.

An aerial of the site and the location of the study intersections are shown in **Figure 1**. It should be noted that the study intersection for this memo is labeled as "Intersection 8," in the aforementioned TIS and in **Figure 1**.

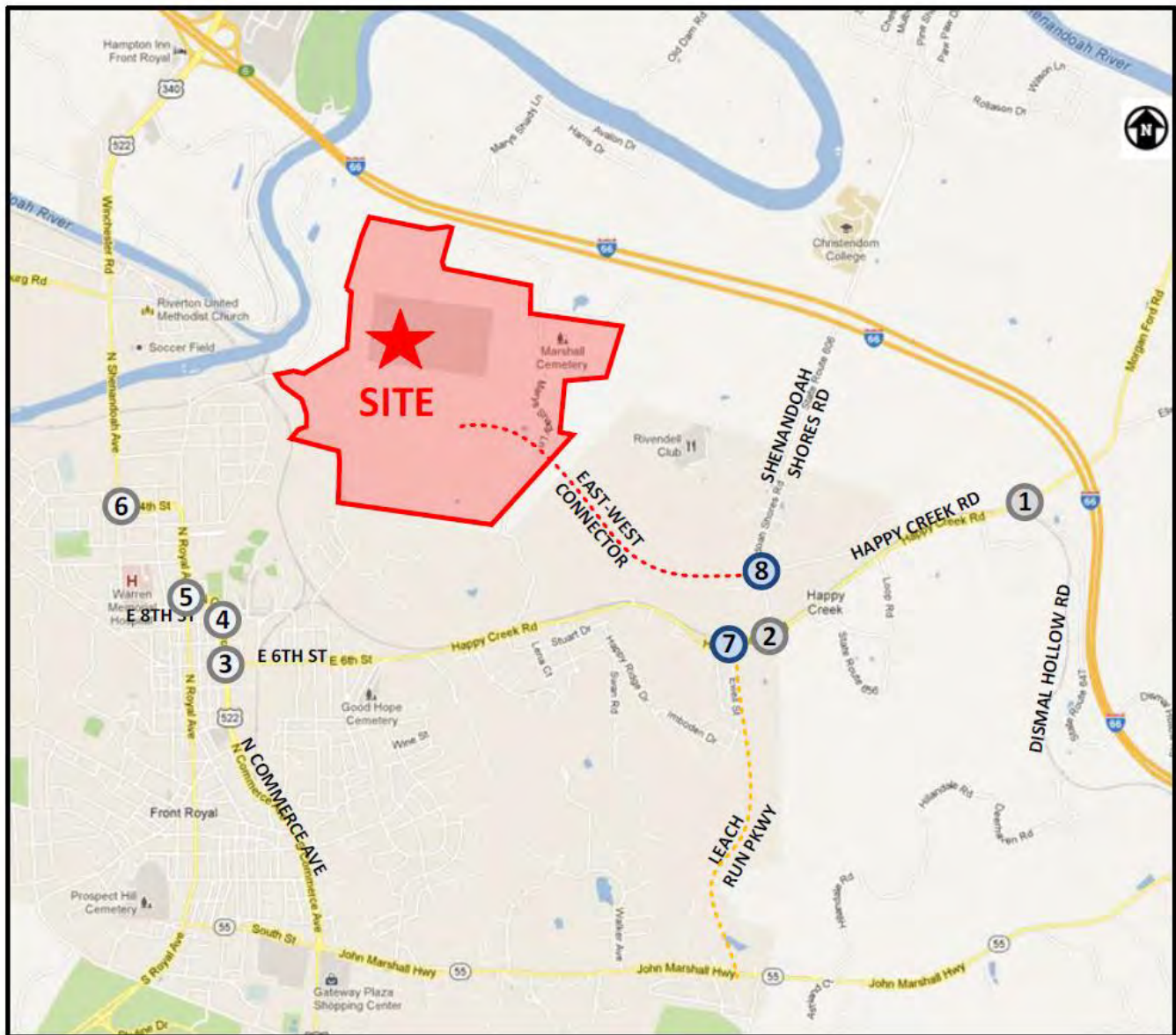


Figure 1: Site Aerial

2034 TRAFFIC CONDITIONS

2034 traffic conditions are taken from the TIS’s “Future Conditions without the Proposed Development (2034)” section. The 2034 traffic volumes are based traffic counts conducted on Thursday, March 17, 2016, from 6:00 AM to 9:00 AM and 4:00 PM to 7:00 PM.

To determine the 2034 traffic volumes, as mentioned in the TIS, the existing traffic volumes had an inherent growth rate applied to account for regional growth within the study area. As mentioned previously, along with the by-right Vazzana Property Development, access to Happy Creek Road will be rerouted from Mary’s Shady Lane to Shenandoah Shores Road via the proposed East-West Connector.

For the 2034 traffic volumes, other background developments and reroutes were also analyzed and discussed in the “Future Conditions without the Proposed Development (2034)” section of the 2017 TIS. An excerpt of this section for the TIS is provided in the Appendix A.

Figure 2 illustrates the 2034 lane configuration and traffic volumes at the future intersection of Shenandoah Shores Road and the East-West Connector.

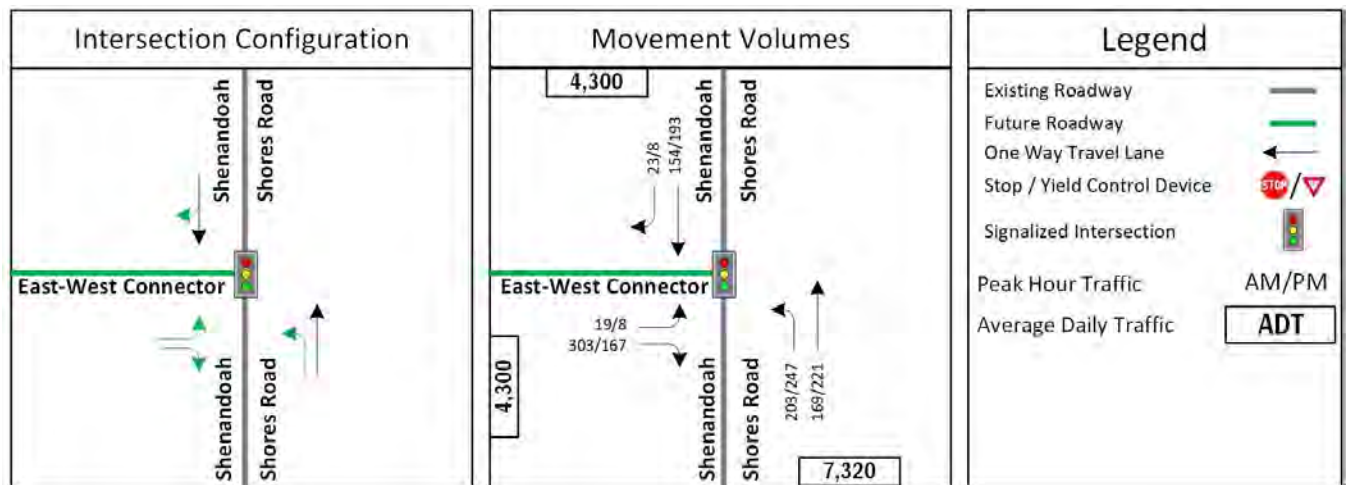


Figure 2: Lane Configuration and Traffic Volumes

TURN LANE WARRANTS ANALYSIS

Left and right turn lane warrants are based off VDOT’s Road Design Manual (RDM), Appendix F. The future volumes with development, shown in **Figure 2**, were evaluated to determine the need for, and appropriateness of, a northbound left-turn lane at the intersection of Shenandoah Shores Road and the East-West Connector.

Left Turn Lane Warrant

The warrants for left-turn storage lanes for two-lane highways at unsignalized intersection are based on Figure 3-5 to Figure 3-22 in Appendix F of VDOT’s RDM. Each figure varies based on the left-turn percentages and the design speed. These figures provide a graphical representation for determining the necessity of a left turn lane by comparing advancing volumes and the respective opposing volumes. Figure 3-10 shows the warrant for left-turn storage lanes with 40% or more left-turning movements and a design speed of 40 mph. This figure was used for left-turn warrant analysis for the northbound approach.

Table 1 illustrates the respective advancing volumes, opposing volumes, and left-turn movements used in the analysis. **Figure 3** illustrates the left-turn analysis for the northbound approach at the intersection of Shenandoah Shores Road and the proposed East-West Connector with the use of RDM Appendix F Figure 3-10.

It should be noted that the RDM does not contain figures for the design speed lower than 40 mph and higher left-turning movements of 40% for two-lane highways.

Table 2: Left Turn Lane Warrant Analysis

	AM Peak	PM Peak
Shenandoah Shores Road at East-West Connector		
Advancing Volume (vph)	372	468
Opposing Volume (vph)	177	201
Left Turn Movements (vph)	203	247
% Left Turns	54.57%	52.78%

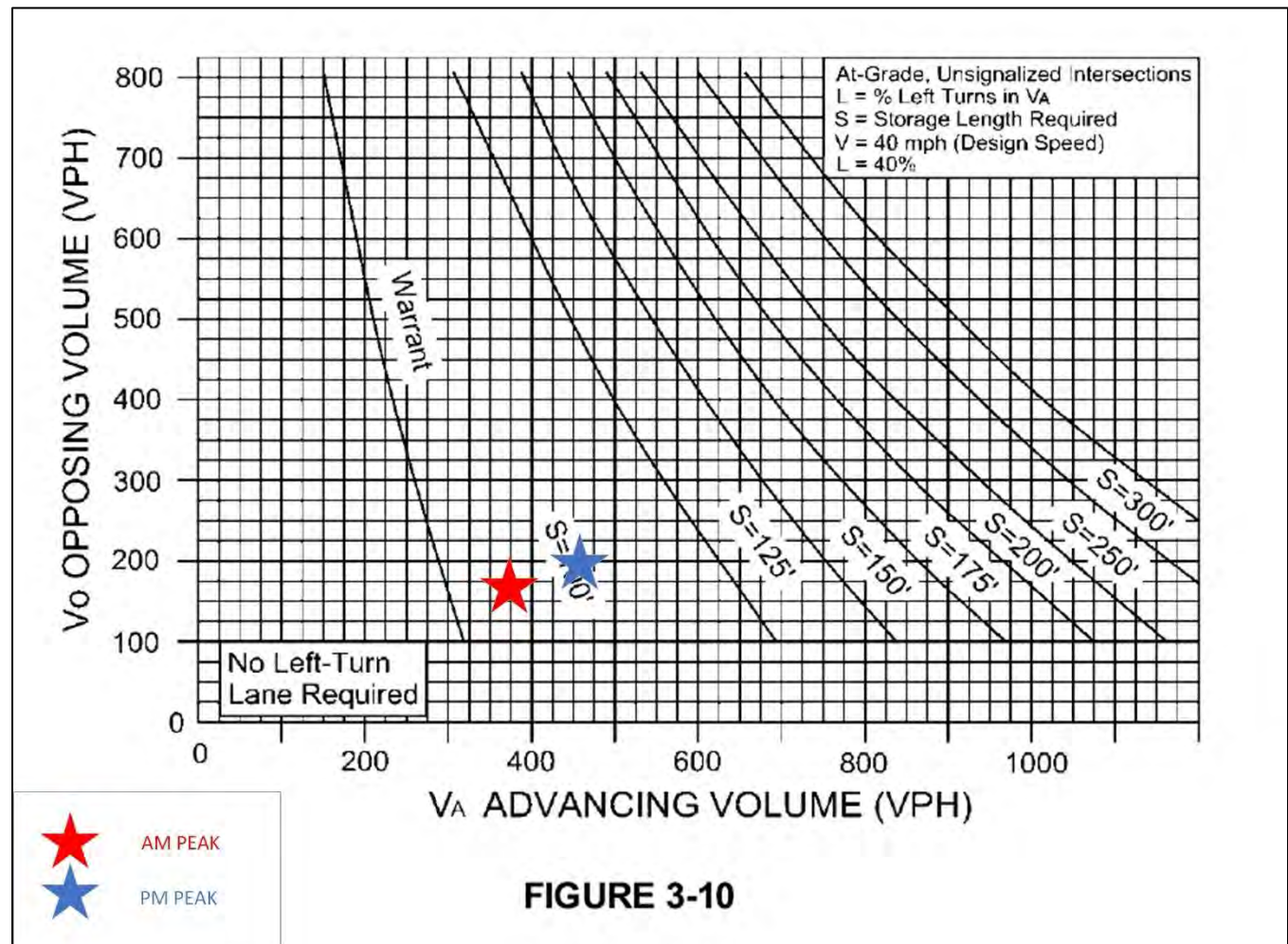


Figure 3: Left-Turn Lane Analysis for the Northbound Approach for the Intersection of Shenandoah Shores Road and the East-West Connector (VDOT Road Design Manual, Appendix E, Figure 3-10)

As seen in **Figure 3**, the northbound left turning movements would warrant a separate left-turn lane. Per the RDM, the left-turn lane would require a minimum storage length of 100-feet and a minimum taper length of 100-feet.

RDM Appendix F, Figure 3-10 is provided in Appendix B.

TRAFFIC SIGNAL WARRANT ANALYSIS

The signal warrant analysis is based off the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, *Chapter 4C: Traffic Control Signal Needs Studies*. Chapter 4C discusses 9 separate warrants, by which only one warrant needs to be satisfied to justify the installation of a traffic control signal. For the analysis of the intersection of Shenandoah Shores Road and East-West Connector, only the 4-hour traffic signal warrant was analyzed due to the available traffic count information. It should be noted that a signal justification report would be required to be conducted and approved by VDOT prior to the installation of a signal at this location. Such a report would evaluate each of the 9 separate warrants, including the 8-hour warrant, and would require the collection of traffic count data for additional hours.

4-Hour Vehicular Volume (MUTCD Chapter 4C Warrant 2)

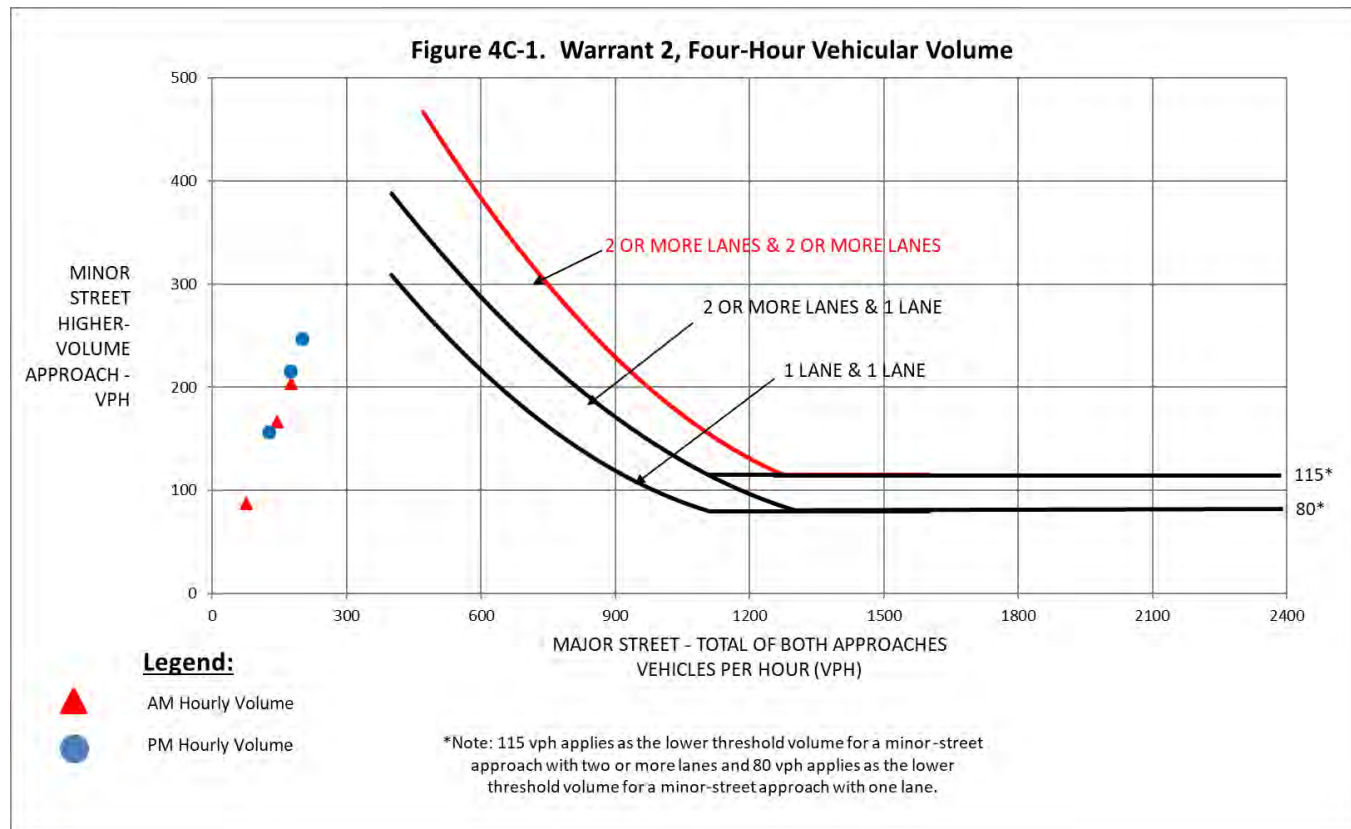
The 4-Hour Vehicular Volume Signal Warrant (Warrant 2) conditions are intended to be applied where the volume of intersecting traffic is the principle reason to consider installing a traffic signal. Warrant 2 is satisfied when the plotted points representing the vehicles per hour on the major-street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only), for each of any four hours of an average day, all fall above either MUTCD Figure 4C-1 or Figure 4C-2 (depending on applicability) for the future combination of approach lanes. If the posted speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-2 may be used in place of Figure 4C-1.

As noted in MUTCD Chapter 4C Section 1, signal warrant analysis should consider the effect of right-turn vehicle from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count when evaluating the count against the 9 signal warrants. Similarly, at an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher of the major-street left-turn volumes as the “minor-street” volume and the corresponding single direction of the opposing traffic on the major street as the “major-street” volume. For this analysis, the right-turns on the minor-street (the East-West Connector) were reduced by 100% due to the expected availability of gaps along the major street (Shenandoah Shores Road). Due to the high number of northbound left-turn movements, the northbound left-turn volume was treated as the “minor-street” volumes and the corresponding the southbound approach volumes were treated as the “major-street” volumes. Figure 4C-1 was used since the posted speed limit along the major road is 25 mph, and the intersection is not located in an isolated community.

In order to determine the hourly traffic volumes for the 4-Hour Vehicular Volume Signal Warrant, the 2016 traffic counts at the intersection of Shenandoah Shores Road and Happy Creek Lane were used. Identifying the peak hours as 100% of the morning traffic and afternoon traffic, the “shoulder” hours were calculated as a percentage of either the 2034 AM peak hour volumes or the 2034 PM peak hour volumes depending on their time of day. **Table 3** illustrates the 2034 traffic volumes used in this analysis. The six 2034 hourly traffic volumes were plotted in Figure 4C-1, as shown in **Figure 4**.

Table 3: 2034 Hourly Volume

Movements	Morning			Afternoon		
	6:00 AM	7:00 AM	8:00 AM	4:00 PM	5:00 PM	6:00 PM
	43% of AM Peak	AM Peak	82% of AM Peak	87% of PM Peak	PM Peak	63% of PM Peak
EBL	8	19	16	7	8	5
EBR	130	303	248	145	167	105
EBR (reduction)	0	0	0	0	0	0
NBL	87	203	166	215	247	156
NBT	73	169	139	192	221	139
SBT	66	154	126	168	193	122
SBR	10	23	19	7	8	5
Major Approach	76	177	145	175	201	127
Minor Approach	87	203	166	215	247	156

**Figure 4: 4-Hour Vehicular Volume Analysis for the Intersection of Shenandoah Shores Road and the East-West Connector (MUTCD, Chapter 4-C, Section 3)**

As can be seen in Figure 4, none of the six hourly volumes meet the minimum threshold. Therefore, Warrant 2 is not satisfied.

MUTCD, Chapter 4C, Section 1 and 3 are provided in Appendix C.

ROUNDAABOUT

VDOT policy requires that roundabouts be considered at any location where a signal warrant study is being conducted. At the subject intersection, a single-lane roundabout would be an appropriate design solution. The capacity of a single-lane roundabout is typically 15,000 vehicles per day, and the 2040 volume projection from the traffic study is approximately one-half of that. Interim traffic volumes would be lower, with an associated improvement in level of service. Further, the two major-volume movements, the northbound left turn and eastbound right turn, would not conflict with each other within the circulating roadway. Thus, it is anticipated that a roundabout at this location would operate efficiently, improve levels of service, and serve the traffic demands of existing and planned uses along both Shenandoah Shores Road and the East-West Connector. This this would include current residential, institutional, and employment uses along Shenandoah Shores Road, as well as the by-right and recently-annexed portions of the proposed Vazzana development.

RESULTS/CONCLUSIONS

The northbound left-turn lane warrant analysis and 4-hour traffic signal warrant evaluation for the intersection of Shenandoah Shores Road and the proposed East-West Connector with the by-right Vazzana Property Development in the Town of Front Royal, Virginia indicate the following:

- The analysis of the northbound left turn movement at the intersection indicated that a left-lane is required. Per the RDM, the left-turn bay should have at minimum 100-feet of storage and a 100-foot taper.
- The 4-hour traffic signal study indicated that a traffic signal is not warranted with the 320-unit by-right development. However, this location should be monitored to determine if a signal is necessary in the future.

TECHNICAL APPENDIX TABLE OF CONTENTS

Appendix A: Excerpts from *Traffic Impact Study – Vazzana Property Development* (dated September 29, 2017)

Appendix B: VDOT Road Design Manual Appendix F Documentation for Turning Lanes

Appendix C: MUTCD Four-Hour Vehicular Volume

APPENDIX A:

Excerpts from *Traffic Impact Study – Vazzana Property Development*
(dated September 29, 2017)

FUTURE CONDITIONS WITHOUT PROPOSED DEVELOPMENT (2034)

Planned Roadway/Transportation Improvements

The following planned or proposed roadway/transportation improvements in the vicinity of the site for the 2034 traffic conditions were considered in the traffic study:

- Marys Shady Lane – The connection of Marys Shady Lane to Happy Creek Road will be replaced with a connection to Shenandoah Shores Road with development of the by-right portion of the Vazzana Property. Therefore, the relocated access is assumed under all future conditions.
- Leach Run Parkway – Leach Run Parkway is currently under construction in conjunction with the middle school, and will be in place for all future scenarios. Leach Run Parkway will be a four-lane, divided, limited-access highway between John Marshall Highway (Route 55) to the south and Happy Creek Road to the north with a design speed of 50 mph. The northern terminus of the Leach Run Parkway would be an at-grade intersection with Happy Creek Road, approximately 450 feet west of Shenandoah Shores Road

Direction of Approach and Future Conditions without Proposed Development Traffic Volumes (2034)

Traffic volumes were analyzed during the morning peak hour and the afternoon peak hour for the future year 2034. In order to determine the weekday peak hour volumes, the following data was used:

- Existing 2016 AM and PM peak period turning movement counts
- Annual growth rate of 1.00%
- Traffic volumes at the intersection of Happy Creek Road and Marys Shady Lane from *2009 Vazzana Property Development Traffic Impact Study*
- Previously approved Vazzana Property by-right development program
- Approved future HEPTAD development, located south of Happy Creek Road on Leach Run Parkway
- A fire station and an elementary school to be developed on the Vazzana property to be dedicated to Warren County.

Inherent Growth

Future traffic volumes are projected by increasing existing traffic volumes to the build-out year using a growth rate. It was agreed at the scoping meeting that, to be conservative, a regional growth rate of 1.00% would be used in this traffic study to account for background growth and development outside of the study area. Figure 5 shows the existing 2016 volumes with the applied growth rate.

Marys Shady Lane Rerouting

The access for Marys Shady Lane at Happy Creek Road will be removed as development occurs on the Vazzana property. The vehicles currently using Marys Shady Lane will be rerouted to Shenandoah Shores Road. The directional split along Happy Creek Road for the vehicles currently using Marys Shady Lane was replicated at the intersection of Shenandoah Shores Road and Happy Creek Road when they were relocated. Traffic volumes were not recounted at the intersection of Happy Creek Road and Marys Shady Lane; instead, the same traffic volumes from the *2009 Vazzana Property Development Traffic Impact Study* were used in this analysis. Since the road is a dead end, the volumes should be similar. The rerouted volumes are shown in Figure 6 and Figure 7.

Leach Run Parkway Rerouting

Leach Run Parkway is expected to be constructed by the year 2034. It will extend approximately two (2) miles from Happy Creek Road near Shenandoah Shores Road south to John Marshall Highway. A portion of the vehicles currently using Dismal Hollow Road will be rerouted to Leach Run Parkway. The rerouted volumes are shown in Figure 8 and Figure 9.

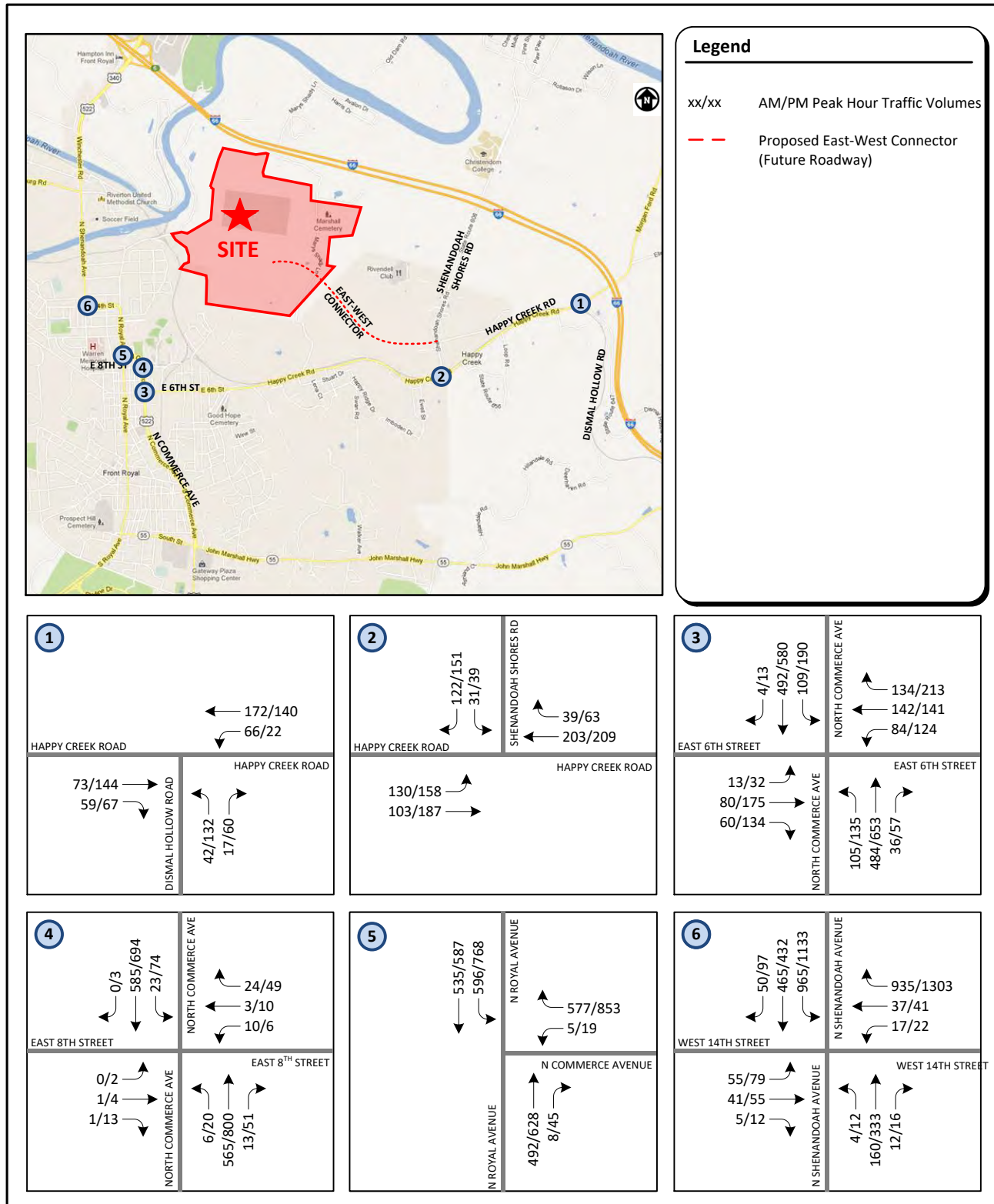


Figure 5: Existing 2016 Volumes + 1.00% Annual Growth

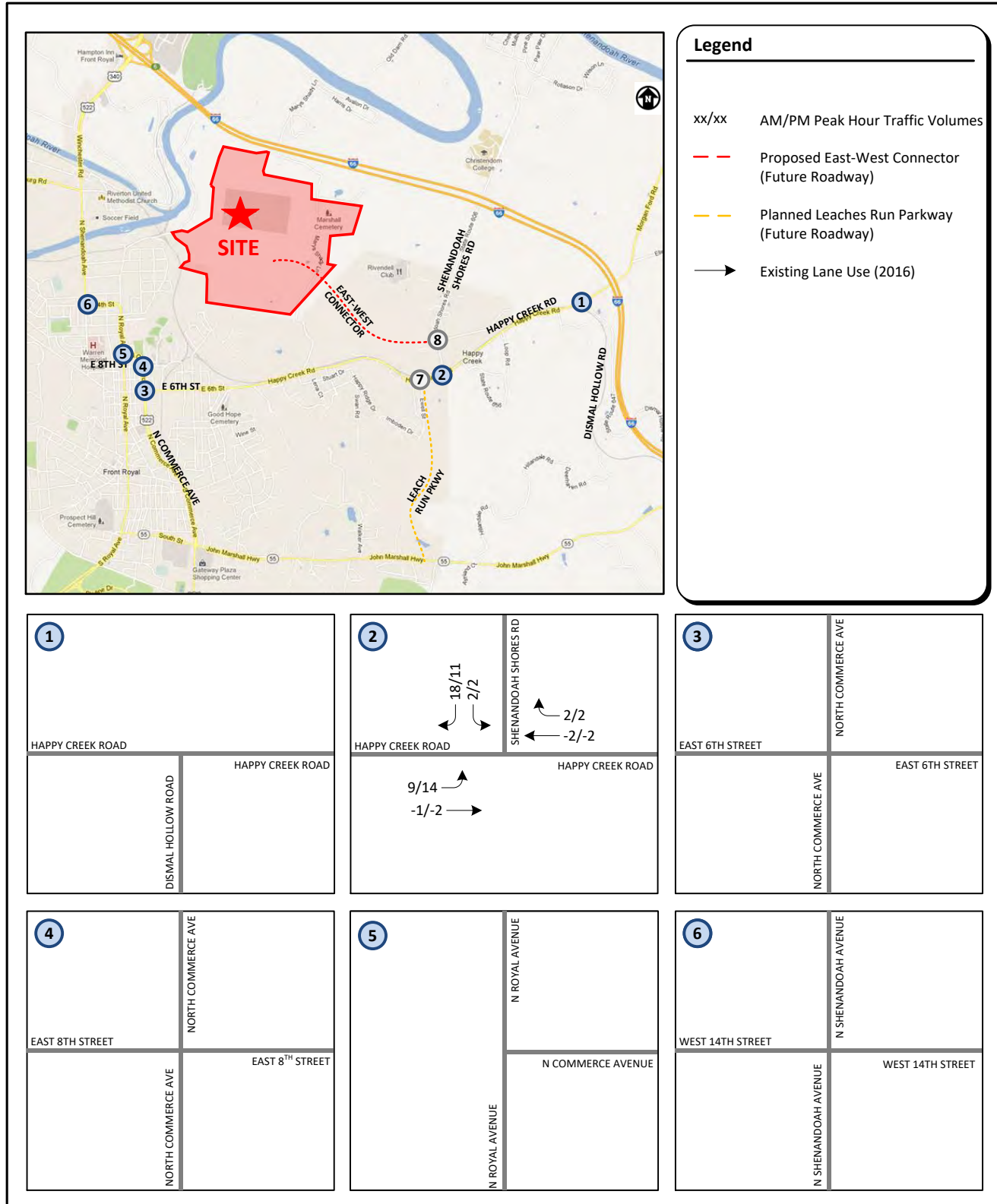


Figure 6: Marys Shady Lane Rerouting (1 of 2)

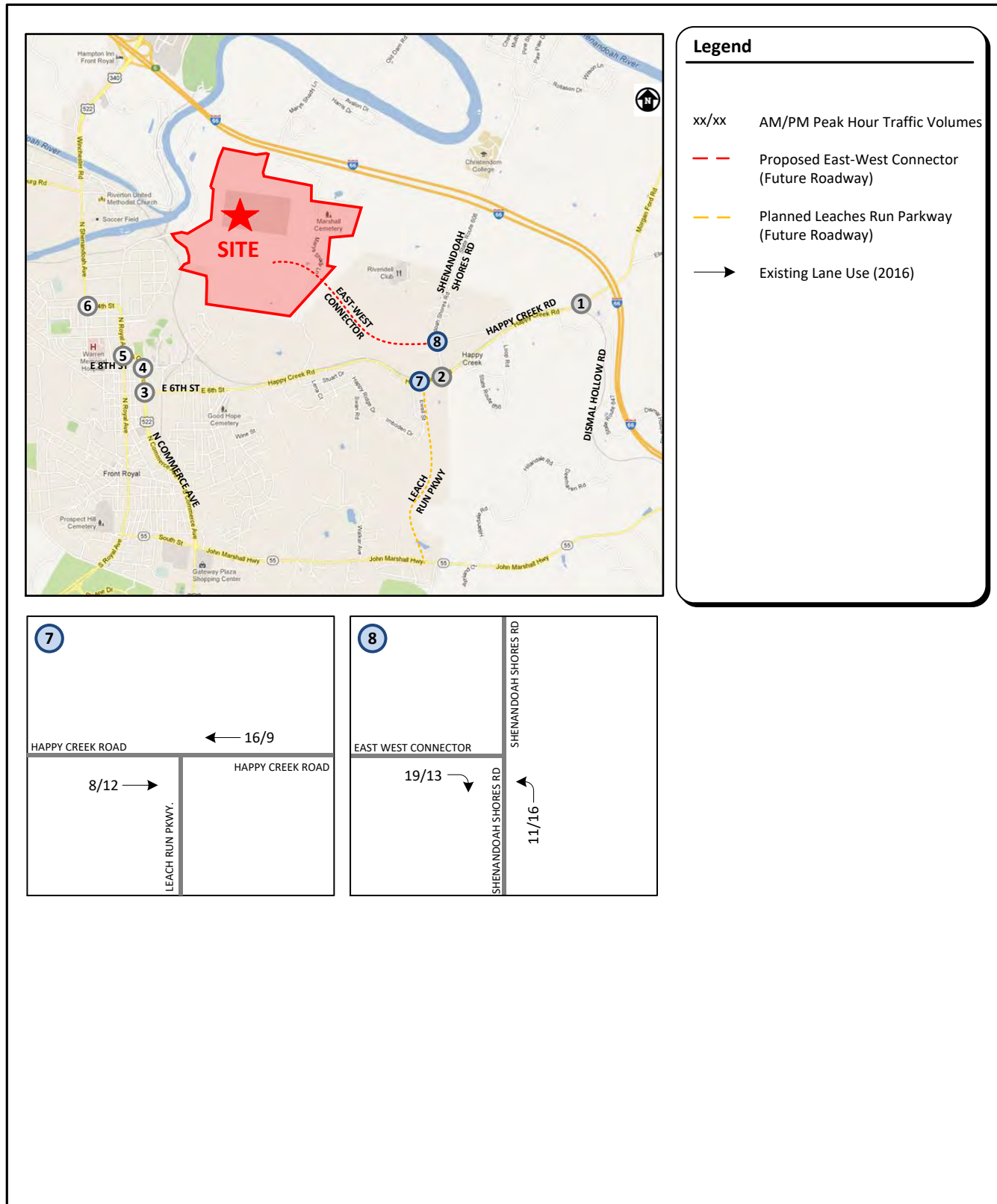


Figure 7: Marys Shady Lane Rerouting (2 of 2)

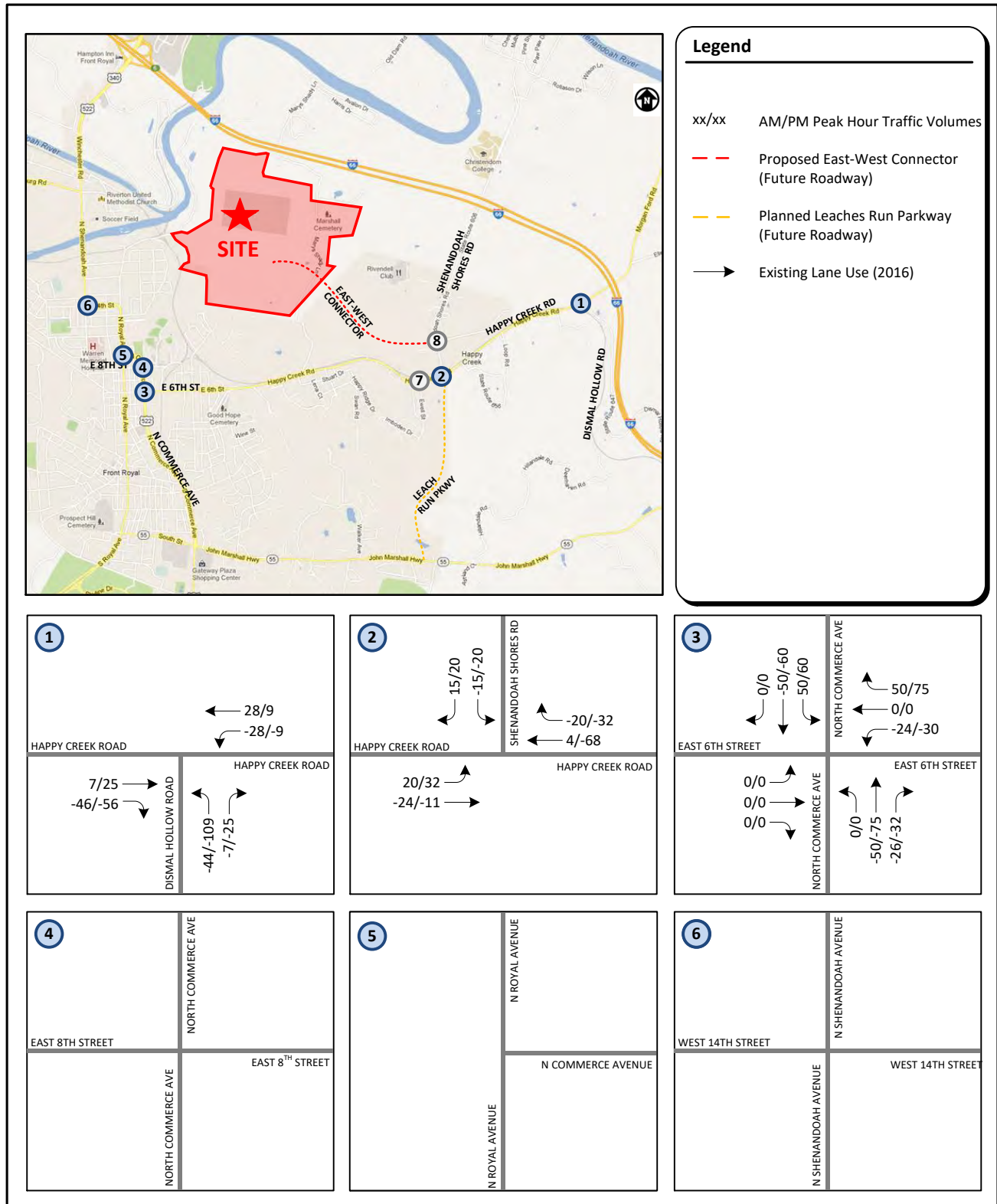


Figure 8 : Leach Run Parkway Rerouting (1 of 2)

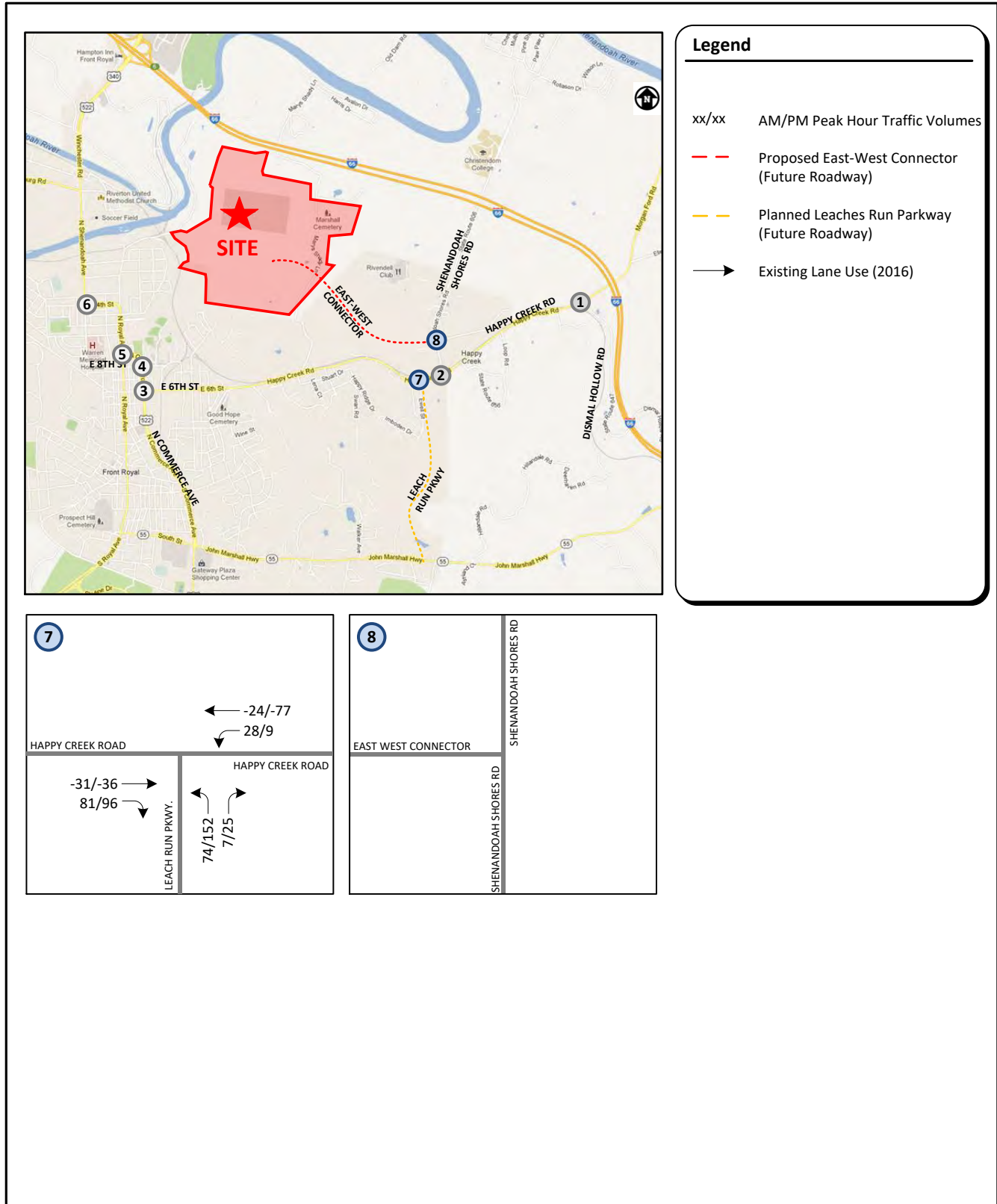


Figure 9 : Leach Run Parkway Rerouting (2 of 2)

Approved Vazzana Property By-right Development Traffic Volumes

The Vazzana Property development is currently approved for 320 single-family residential units. These homes are included under future background conditions without the proposed rezoning. To calculate the trips generated by the approved development, ITE's Trip Generation Manual, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. The trip generation for the approved Vazzana Property development is shown in Table 2.

Table 2: 2034 Future without Proposed Development (Future Background) Trip Generation: Vazzana Property

Land Use	ITE Code	Size	----- Week day -----							
			AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
<u>Vazzana Property (By-Right, Within Town)</u>										
<i>Residential</i>										
Single-Family Detached Housing	210	320	DU	59	175	234	188	111	299	3,062
Total Background By-Right External Trips				59	175	234	188	111	299	3,062

As shown in Table 2, the approved Vazzana Property development will generate 234 weekday morning peak hour trips and 299 weekday afternoon peak hour trips under future conditions without proposed development.

In order to route the projected traffic through the study area, a direction of approach was established based on previous traffic studies, existing travel patterns, and general engineering judgment. The direction of approach assumptions for traffic generated by the approved development are shown in Table 3 and Figure 10 and Figure 11. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 3: Direction of Approach

APPROVED VAZZANA PROPERTY DEVELOPMENT	Residential
To and from the north along North Shenandoah Avenue	25%
To and from the south along Dismal Hollow Road	15%
To and from the south along (Future) Leach Run Parkway	30%
To and from the south along North Royal Avenue	5%
To and from the south along North Commerce Avenue	5%
To and from the east along Happy Creek Road	15%
To and from the west along West 6 th Street	5%
Total	100%

Figure 10 and Figure 11 also illustrate the site traffic assignment for both peak hours.

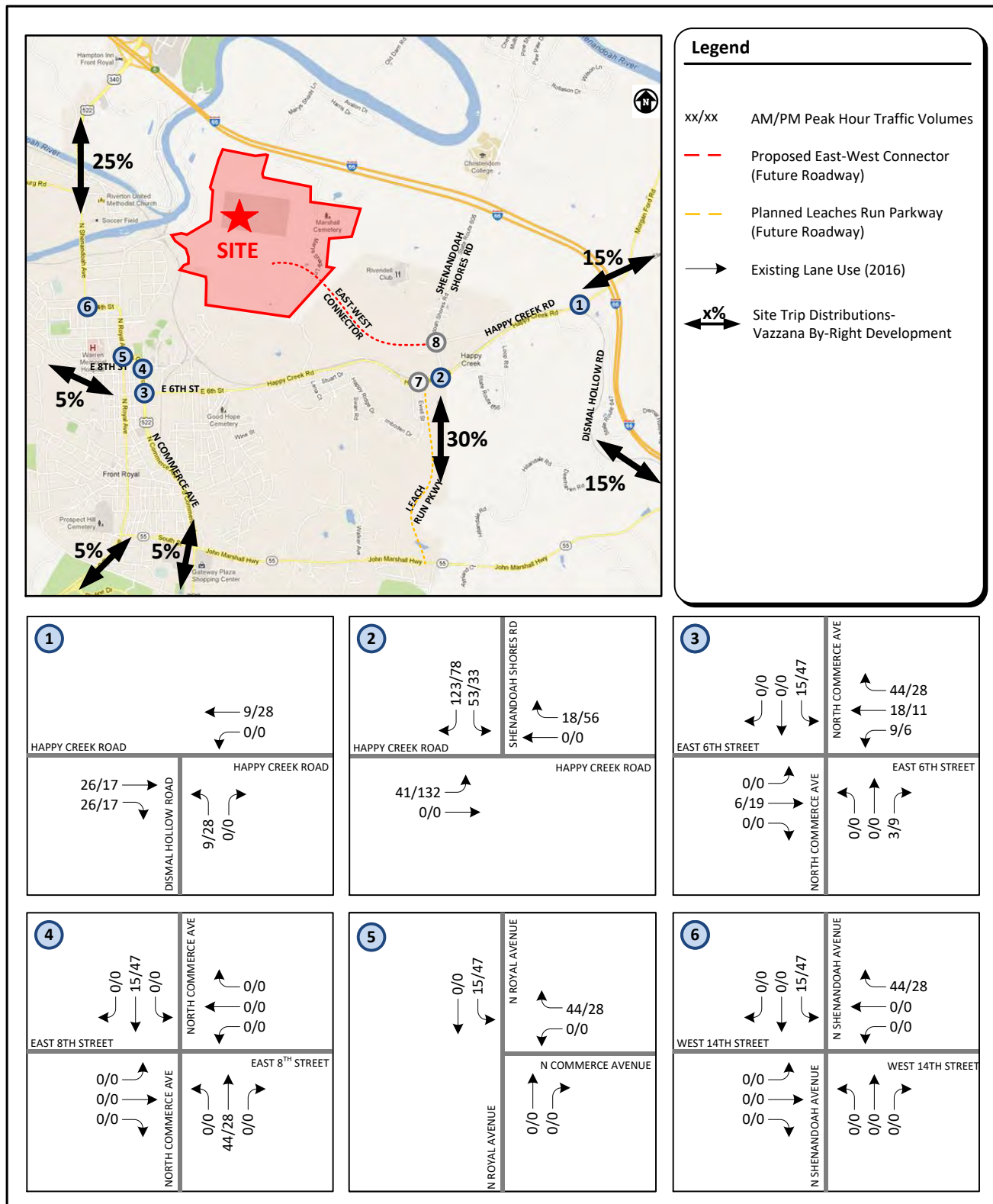


Figure 10: Approved Vazzana Property Development Traffic Volumes (2034) (1 of 2)

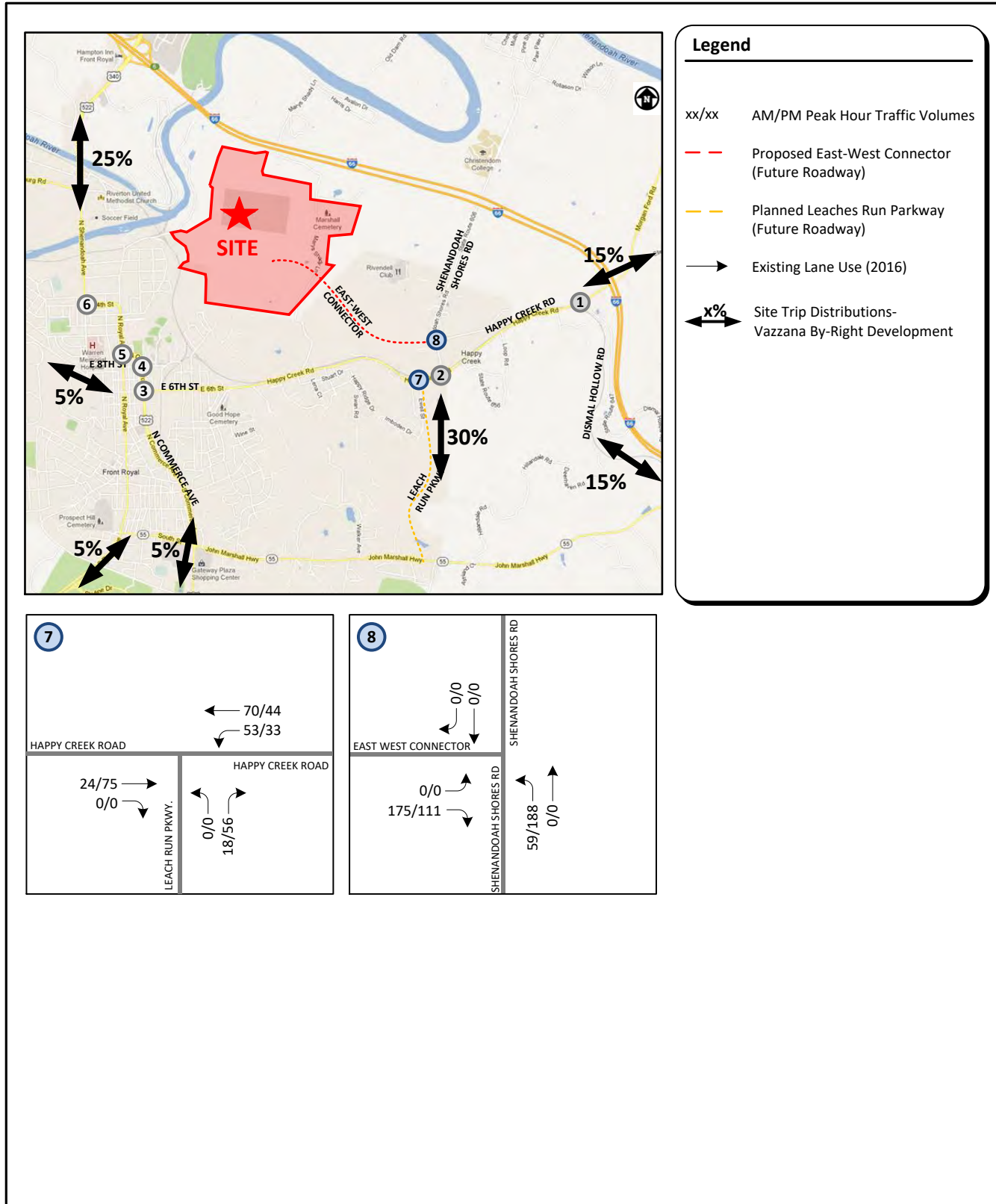


Figure 11: Approved Vazzana Property Development Traffic Volumes (2034) (2 of 2)

Approved Future Heptad Development Traffic Volumes

The HEPTAD development is currently approved for 450 residential units. This development is included under future background conditions without the proposed development. To calculate the trips generated by the approved development, ITE's Trip Generation Manual, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. The trip generation for the approved HEPTAD development is shown in Table 4.

Table 4: 2034 Future without Proposed Development (Future Background) Trip Generation: Heptad Development

Land Use	ITE Code	Size	AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
<u>Heptad Development</u>										
Residential										
Single-Family Detached Housing	210	54	DU	12	36	48	39	22	61	596
Single-Family Attached Housing	230	100	DU	9	43	52	41	20	61	644
Multifamily Housing	220	296	DU	30	119	149	118	63	181	1,918
Total Residential External Trips				51	198	249	198	105	303	3,158

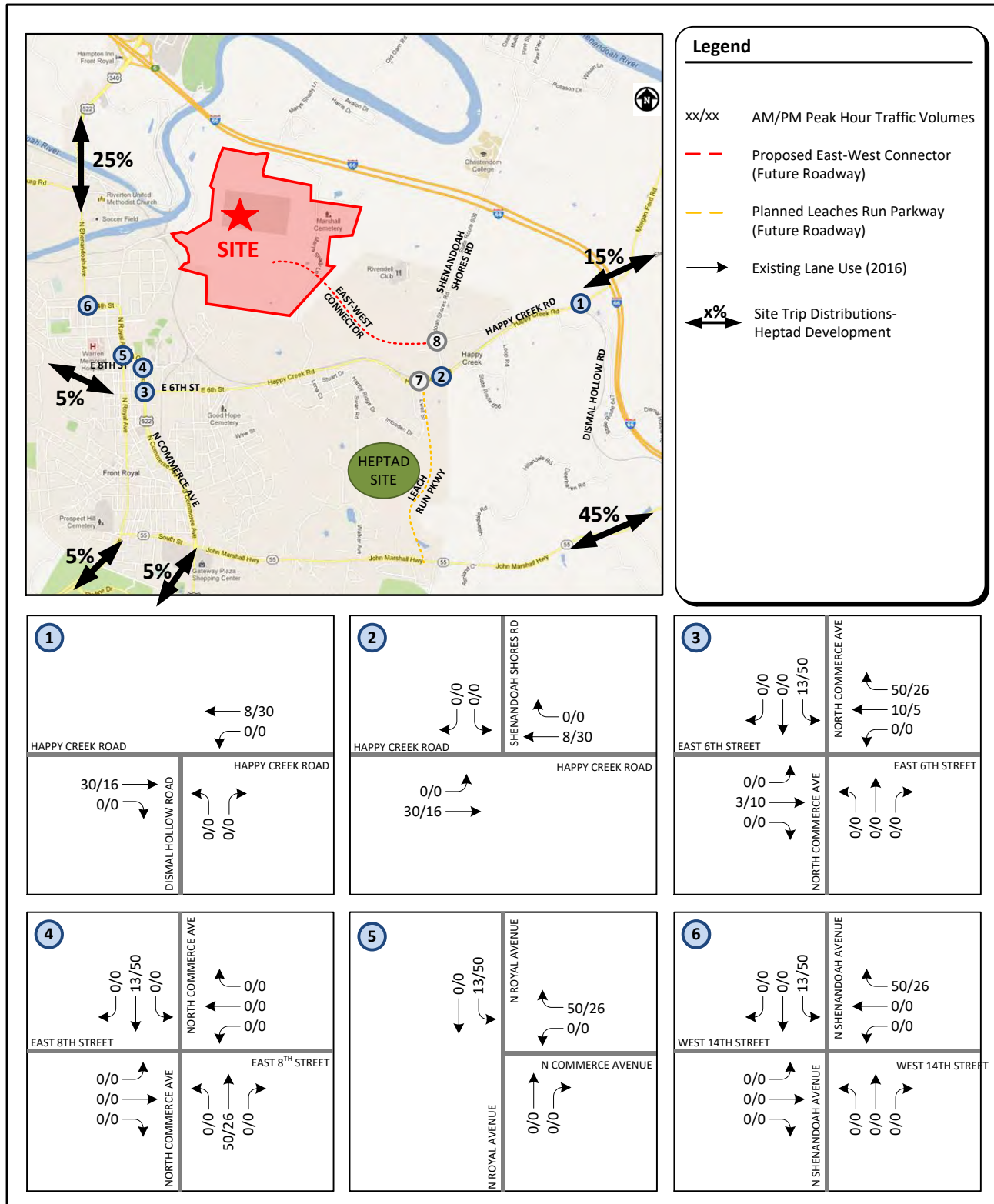
As shown in Table 4, the approved HEPTAD development will generate 249 weekday morning peak hour trips and 303 weekday afternoon peak hour trips under future conditions without proposed development. The location of the HEPTAD development is shown in Figure 12.

In order to route the projected traffic through the study area, a direction of approach was established based on previous traffic studies, existing travel patterns, and general engineering judgment. The direction of approach assumptions for traffic generated by the approved development are shown in Table 5 and Figure 12 and Figure 13. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 5: Direction of Approach

APPROVED HEPTAD DEVELOPMENT	Residential
To and from the north along North Shenandoah Avenue	25%
To and from the east along John Marshall Highway 55	45%
To and from the southwest along North Royal Avenue	5%
To and from the southwest along North Commerce Avenue	5%
To and from the east along Happy Creek Road	15%
To and from the west along West 6 th Street	5%
Total	100%

Figure 12 and Figure 13 also illustrate the site traffic assignment for both peak hours.



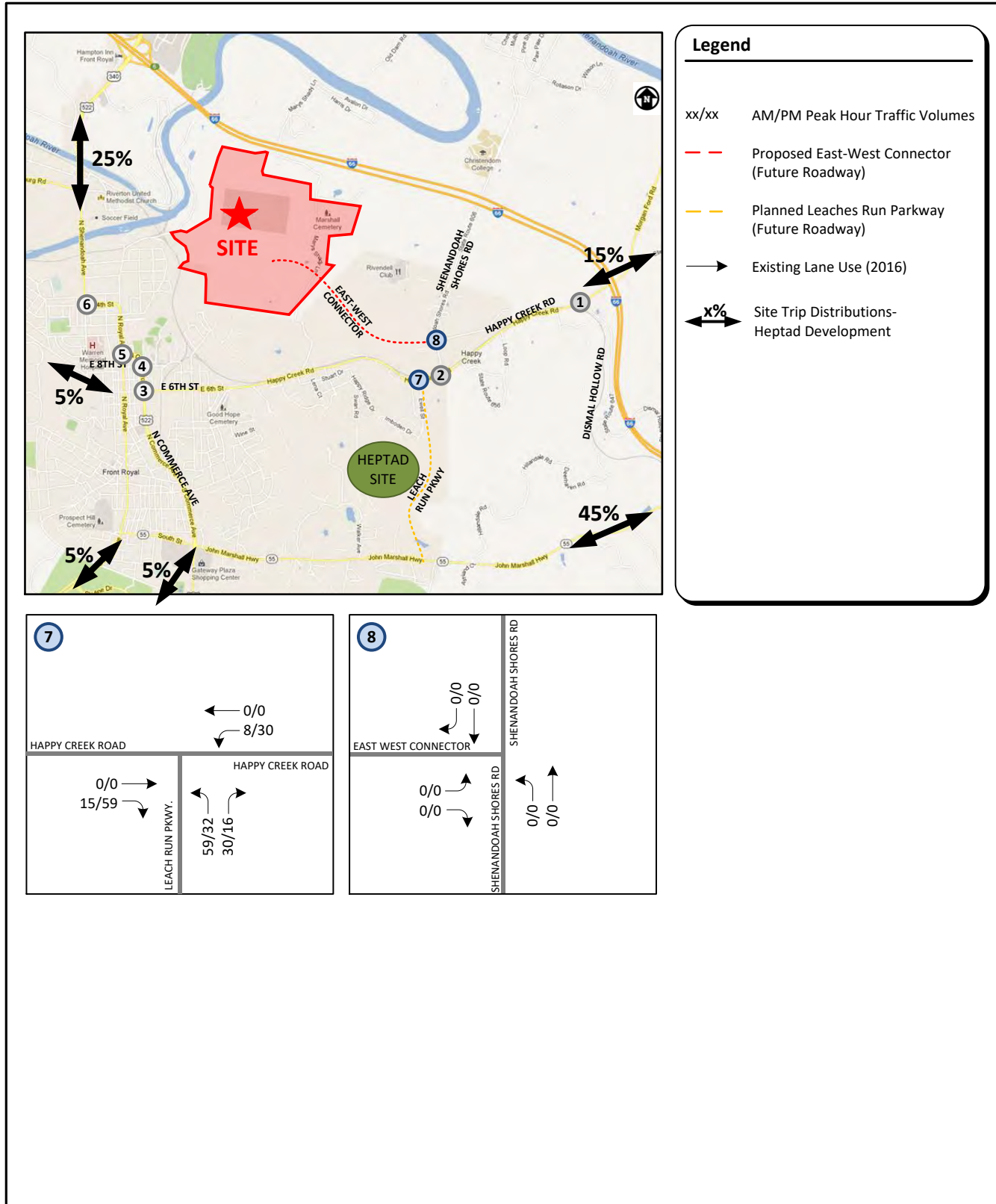


Figure 13: Heptad Development Traffic Volumes (2034) (2 of 2)

Elementary School and Fire Station Traffic Volumes

It is possible that a portion of the Vazzana property will be dedicated to Warren County to develop a fire station and up to ±700 student Elementary School. Per discussion at the scoping meeting, these developments were also considered as background developments. To calculate the trips generated by the elementary school, ITE's Trip Generation Manual, 9th Edition was used to determine the trips for the weekday morning and afternoon peak hours. Based on traffic engineering judgment, the fire station was estimated to generate 10 trips each during the morning and afternoon peak hours. The trip generation for this background development is shown in Table 6.

Table 6: Future Background Trip Generation: Fire Station and Elementary School

Land Use	ITE Code	Size	Weekday							
			AM Peak Hour			PM Peak Hour			Daily	
			In	Out	Total	In	Out	Total	Total	
Elementary School	520	700	Students	174	141	315	52	53	105	903
School Internal Trips Reduction: 13% ¹		13%		-23	-18	-41	-7	-7	-14	-117
Fire Station				5	5	10	5	5	10	100
Total Elementary School and Fire Station Trips				156	128	284	50	51	101	886

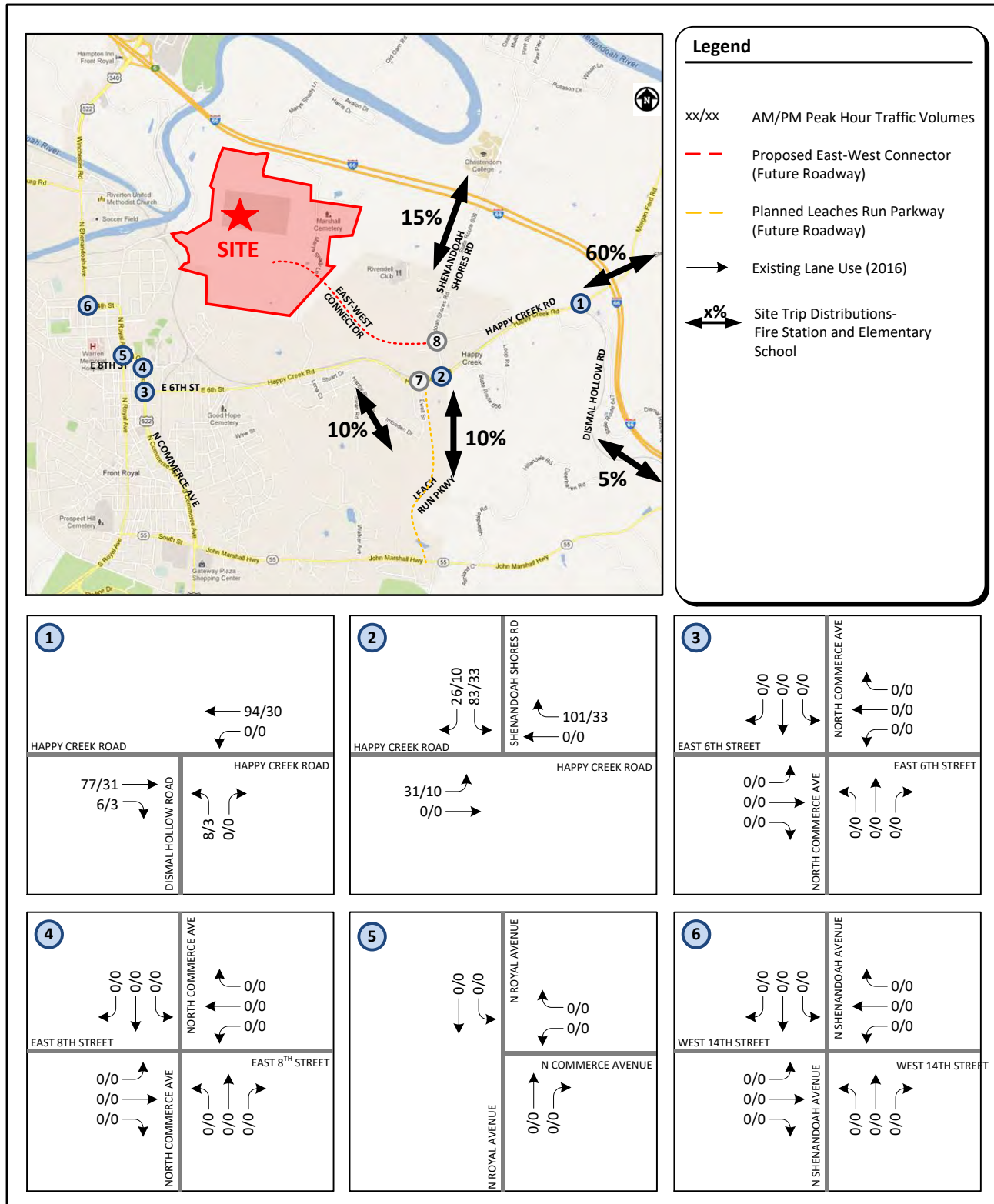
Note: 1 – The elementary school internal reduction rate was developed using data for Warren County's population based on age and number of households. 13% = [0.181 students per DU x 515 DU] / 700 students, or in other words approximately 13% of the school's students will live in the proposed development.

As shown in Table 6, the background development will generate 284 weekday morning peak hour trips and 101 weekday afternoon peak hour trips under future conditions without proposed development. In order to route the projected traffic into the Vazzana Property development, a direction of approach was established based on previous traffic studies, existing travel patterns, location of employment within the region, approved developments, and general engineering judgment. The direction of approach assumptions for traffic generated by the elementary school and fire station development and are shown in Table 7 and Figure 14 and Figure 15. The inbound and outbound trips calculated for the weekday morning and weekday afternoon commuter peak hours were routed based on these distributions.

Table 7: Direction of Approach

APPROVED VAZZANA PROPERTY DEVELOPMENT	Elementary School/Fire Station
To and from the north along North Shenandoah Avenue	0%
To and from the north along Shenandoah Shores Road	15%
To and from the south along Happy Ridge Drive	10%
To and from the south along Dismal Hollow Road	5%
To and from the south along (Future) Leach Run Parkway	10%
To and from the south along North Royal Avenue	0%
To and from the south along North Commerce Avenue	0%
To and from the east along Happy Creek Road	60%
To and from the west along West 6 th Street	5%
Total	100%

Figure 14 and Figure 15 show the site traffic assignment for both peak hours for the elementary school and fire station.



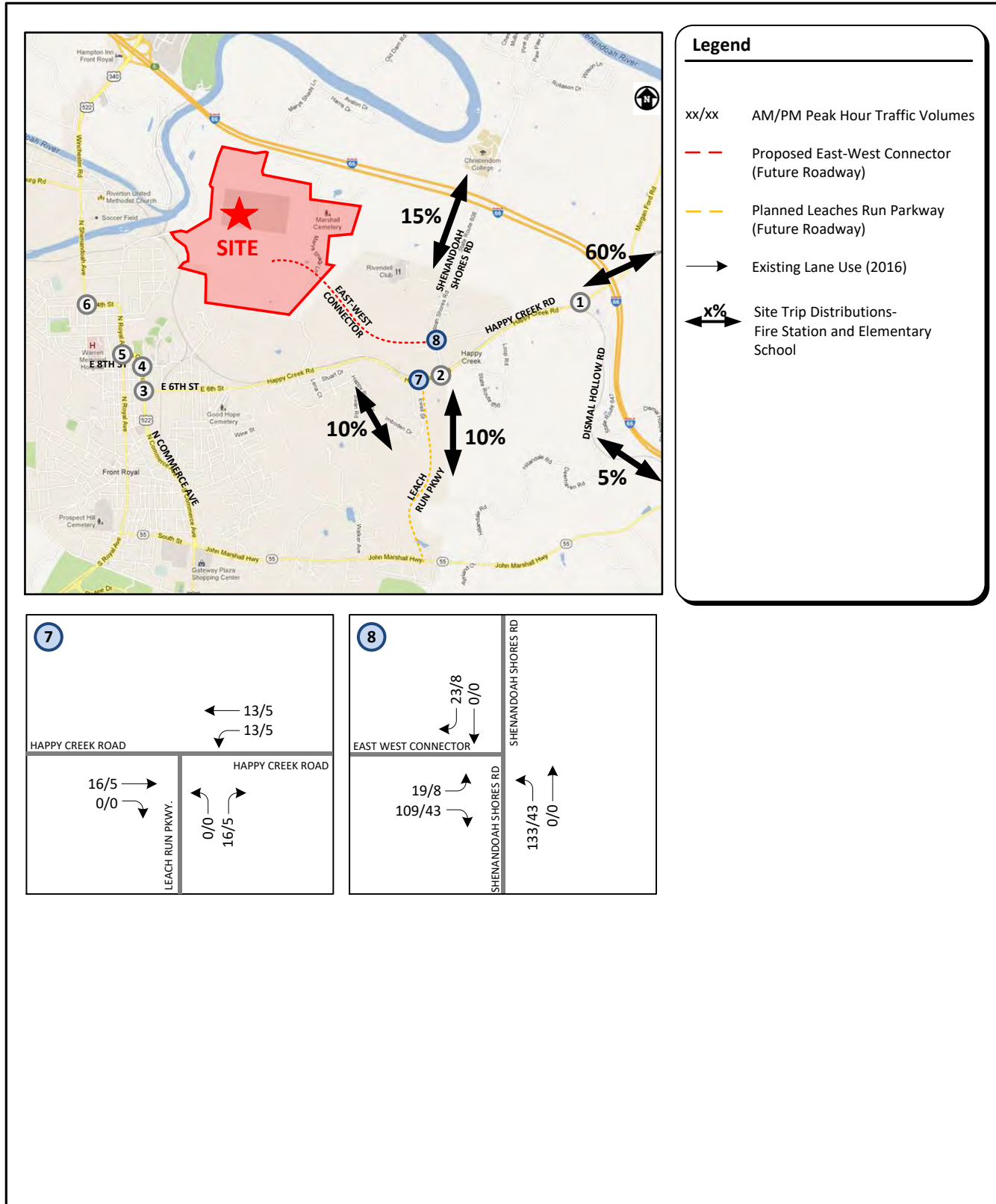


Figure 15: Elementary School and Fire Station Traffic Volumes (2034) (2 of 2)

The trips from the anticipated developments (Figures 10 thru 15) were added to the existing volumes with growth (2034) (Figure 5), the rerouted Marys Shady Lane traffic (Figures 6 and 7) and the rerouted Leach Run Parkway traffic (Figures 8 and 9) to establish the future without proposed development (2034) traffic volumes, as shown in Figure 16 and Figure 17.

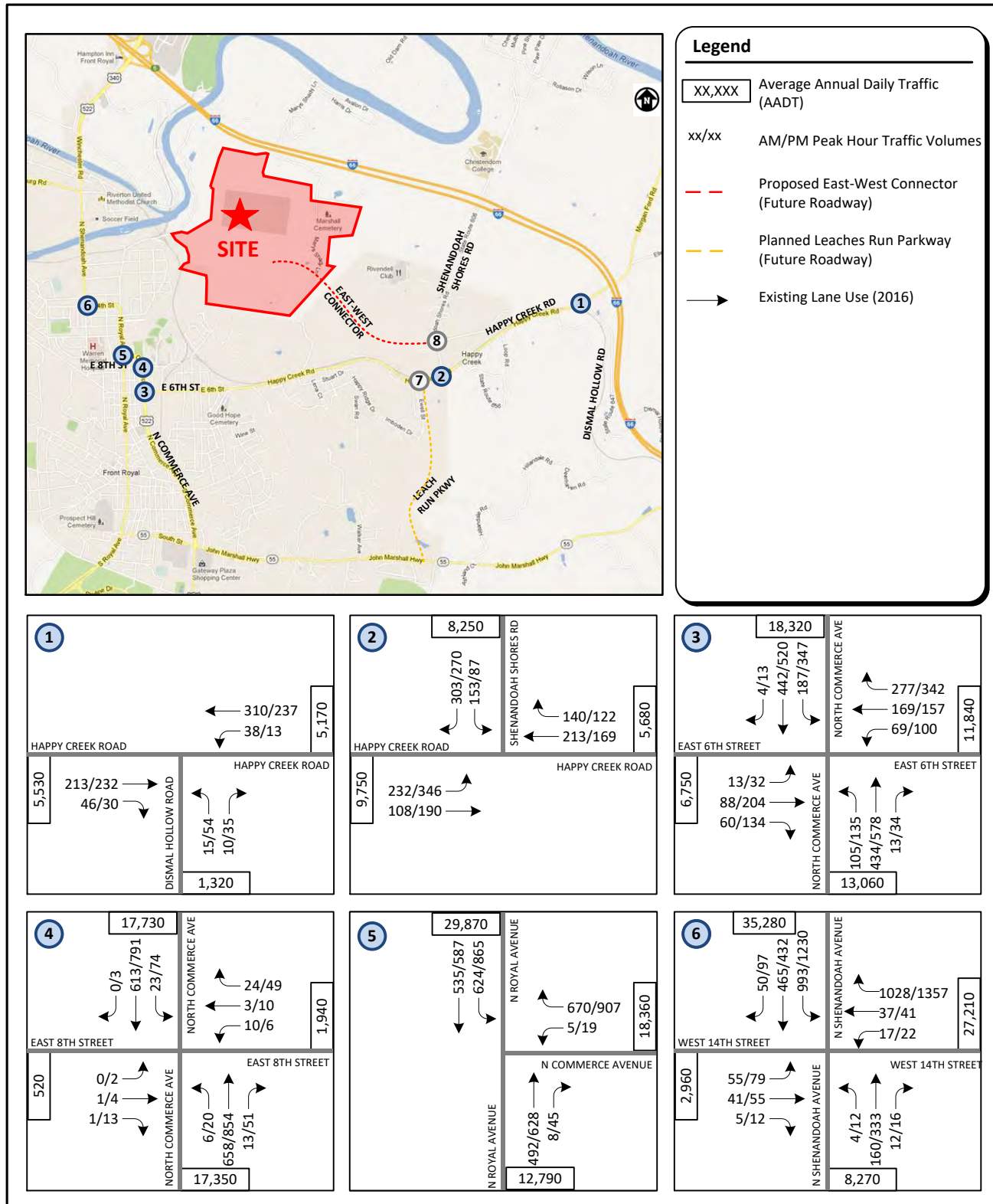


Figure 16: Future Conditions without Proposed Development Traffic Volumes (2034) (1 of 2)

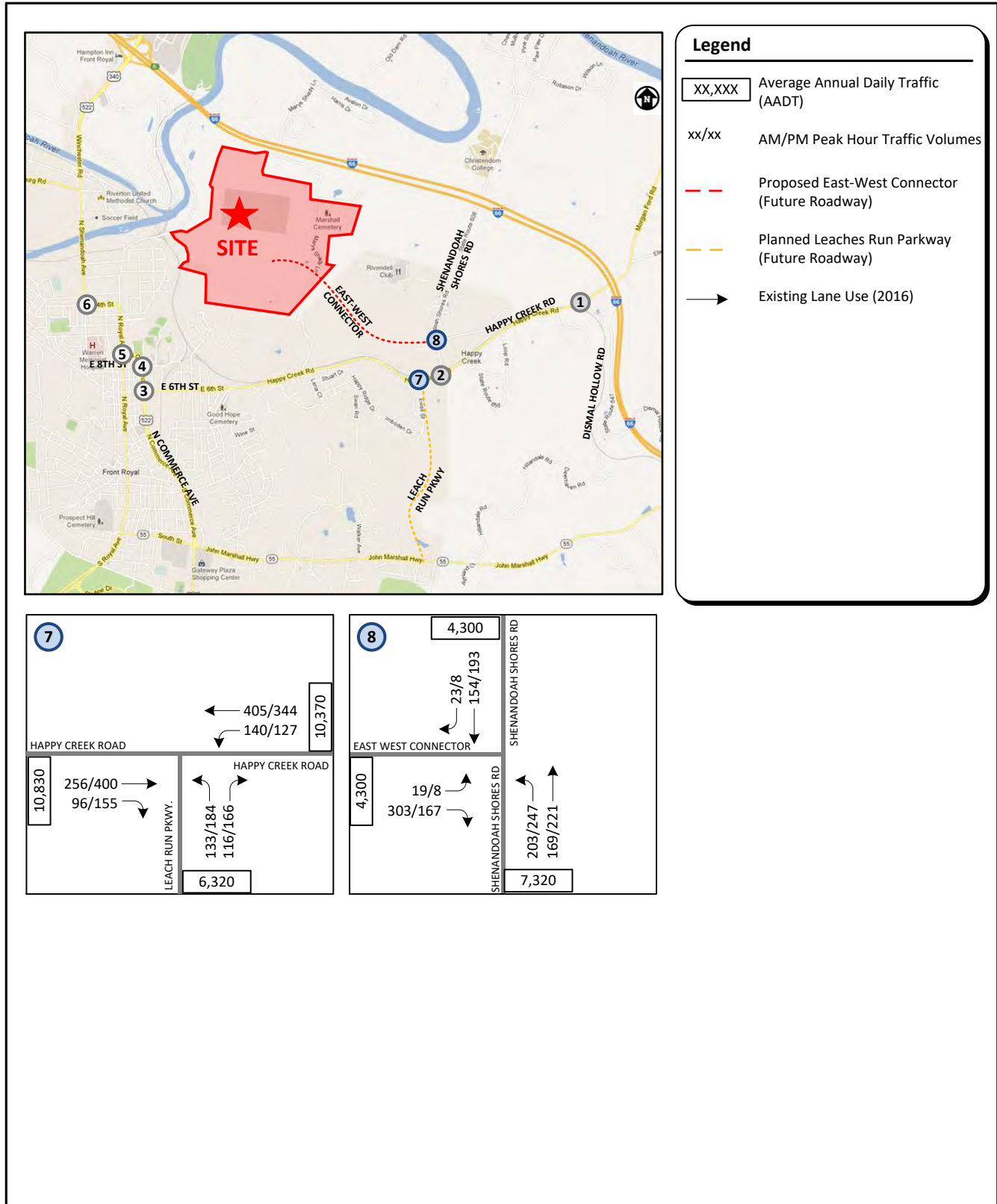


Figure 17: Future Conditions without Proposed Development Traffic Volumes (2034) (2 of 2)

APPENDIX B:

VDOT Road Design Manual Appendix F Documentation for Turning Lanes

SECTION 3 – TURNING LANES

Turn Lane Criteria for Single and Dual Lanes

Right and left-turn lanes are to be provided for traffic in both directions in the design of intersections and left turn lanes for median crossovers and in one direction for directional median openings (see Figure 3-25 illustration) on non-access controlled four-lane or greater divided highways using controls as shown in Figure 3-1 and adjusted upward as determined by Figure 3-3 or by capacity analysis for left-turn storage.

Left-turn lanes should also be established on two-lane and four lane undivided highways where needed for storage of left-turn vehicles and/or prevention of thru-traffic delay as shown in Figure 3-1 and adjusted upward as determined by Table 3-1 and Figure 3-5 through 3-22 or by capacity analysis for left-turn storage.

Intersections with low right turn volumes shall be evaluated in accordance with Figures 3-26 and 3-27.

LENGTH OF STORAGE (*)		TAPER - Rural (*)	
Rural - For Design Speeds 50 MPH or Higher	*L - 200' min. (For 240 or fewer vehicles during peak hour, <u>making turn</u>)	- For Design Speeds 35 MPH or Higher	**T - 200' Min.
Rural - For Design Speeds 45 MPH or Less	*L - 100' min. (For 60 or fewer vehicles during peak hour, <u>making turn</u>)	- For Design Speeds 30 MPH or Less	**T - 100' Min. (single) **T - 200' Min. (dual)
*Distance L to be adjusted upward as determined by capacity analysis for Left and Right Turn Storage.		**Tapers are to be straight-line unless local policy requires reverse curves. In congested areas the taper length may be reduced to increase storage length. However, a design waiver shall be required.	
LENGTH OF STORAGE		TAPER - Urban	
Urban - Length determined by capacity analysis for Left and Right Turn Storage (100' Minimum)		- For Design Speeds 50 MPH or Higher	**T - 200' Min.
		- For Design Speeds 45 MPH or Less	**T - 100' Min. (single) **T - 150' Min. (dual)

(*) For instructions on selection of design speed, see [Appendix A, Section A-1](#)*

FIGURE 3-1 RIGHT AND LEFT TURN LANE CRITERIA FOR SINGLE AND DUAL LANES

WARRANT FOR LEFT-TURN STORAGE LANES ON TWO-LANE HIGHWAY

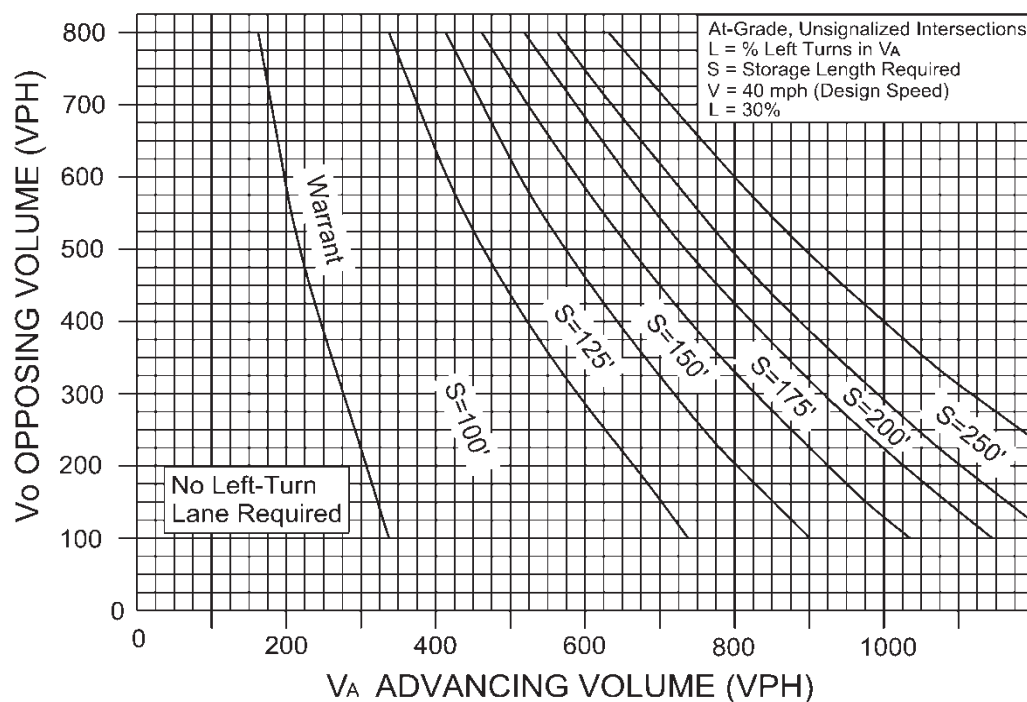


FIGURE 3-9

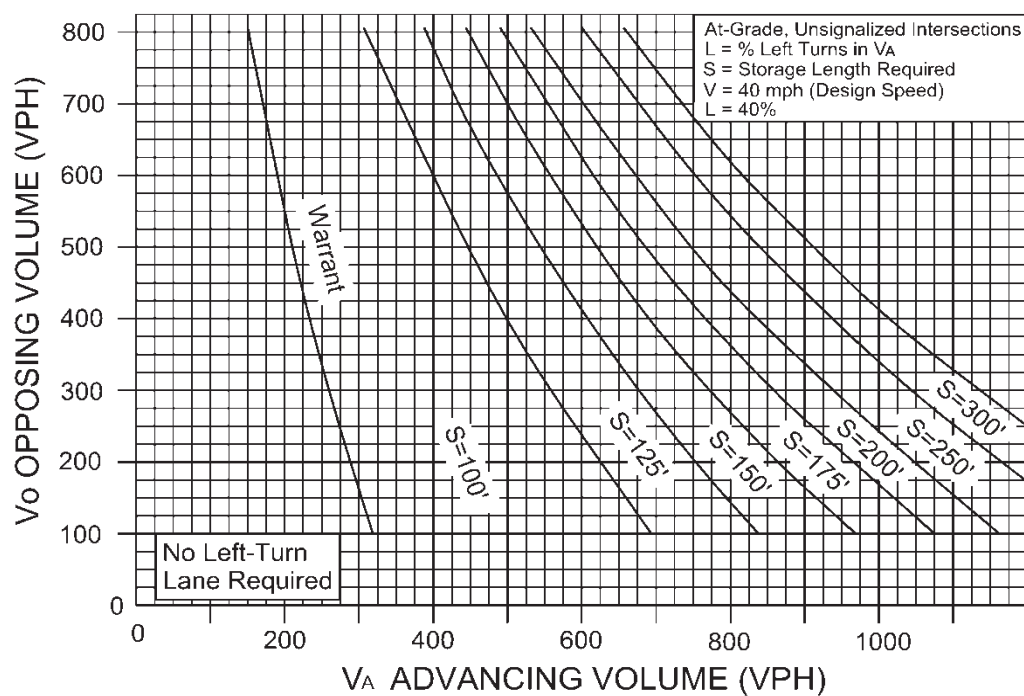


FIGURE 3-10

APPENDIX C:

MUTCD Four-Hour Vehicular Volume

CHAPTER 4C. TRAFFIC CONTROL SIGNAL NEEDS STUDIES

Section 4C.01 Studies and Factors for Justifying Traffic Control Signals

Standard:

- 01 An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location.
- 02 The investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants:
- Warrant 1, Eight-Hour Vehicular Volume
 - Warrant 2, Four-Hour Vehicular Volume
 - Warrant 3, Peak Hour
 - Warrant 4, Pedestrian Volume
 - Warrant 5, School Crossing
 - Warrant 6, Coordinated Signal System
 - Warrant 7, Crash Experience
 - Warrant 8, Roadway Network
 - Warrant 9, Intersection Near a Grade Crossing

- 03 The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Support:

- 04 Sections 8C.09 and 8C.10 contain information regarding the use of traffic control signals instead of gates and/or flashing-light signals at highway-rail grade crossings and highway-light rail transit grade crossings, respectively.
- Guidance:*
- 05 A traffic control signal should not be installed unless one or more of the factors described in this Chapter are met.
- 06 A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.
- 07 A traffic control signal should not be installed if it will seriously disrupt progressive traffic flow.
- 08 The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count when evaluating the count against the signal warrants listed in Paragraph 2.
- 09 Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. The site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left-turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles.
- 10 Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- 11 At a location that is under development or construction and where it is not possible to obtain a traffic count that would represent future traffic conditions, hourly volumes should be estimated as part of an engineering study for comparison with traffic signal warrants. Except for locations where the engineering study uses the satisfaction of Warrant 8 to justify a signal, a traffic control signal installed under projected conditions should have an engineering study done within 1 year of putting the signal into stop-and-go operation to determine if the signal is justified. If not justified, the signal should be taken out of stop-and-go operation or removed.
- 12 For signal warrant analysis, a location with a wide median, even if the median width is greater than 30 feet, should be considered as one intersection.

Option:

- 13 At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher of the major-street left-turn volumes as the “minor-street” volume and the corresponding single direction of opposing traffic on the major street as the “major-street” volume.
- 14 For signal warrants requiring conditions to be present for a certain number of hours in order to be satisfied, any four sequential 15-minute periods may be considered as 1 hour if the separate 1-hour periods used in the warrant analysis do not overlap each other and both the major-street volume and the minor-street volume are for the same specific one-hour periods.
- 15 For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians.

Support:

- 16 When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians.

Option:

- 17 Engineering study data may include the following:
 - A. The number of vehicles entering the intersection in each hour from each approach during 12 hours of an average day. It is desirable that the hours selected contain the greatest percentage of the 24-hour traffic volume.
 - B. Vehicular volumes for each traffic movement from each approach, classified by vehicle type (heavy trucks, passenger cars and light trucks, public-transit vehicles, and, in some locations, bicycles), during each 15-minute period of the 2 hours in the morning and 2 hours in the afternoon during which total traffic entering the intersection is greatest.
 - C. Pedestrian volume counts on each crosswalk during the same periods as the vehicular counts in Item B and during hours of highest pedestrian volume. Where young, elderly, and/or persons with physical or visual disabilities need special consideration, the pedestrians and their crossing times may be classified by general observation.
 - D. Information about nearby facilities and activity centers that serve the young, elderly, and/or persons with disabilities, including requests from persons with disabilities for accessible crossing improvements at the location under study. These persons might not be adequately reflected in the pedestrian volume count if the absence of a signal restrains their mobility.
 - E. The posted or statutory speed limit or the 85th-percentile speed on the uncontrolled approaches to the location.
 - F. A condition diagram showing details of the physical layout, including such features as intersection geometrics, channelization, grades, sight-distance restrictions, transit stops and routes, parking conditions, pavement markings, roadway lighting, driveways, nearby railroad crossings, distance to nearest traffic control signals, utility poles and fixtures, and adjacent land use.
 - G. A collision diagram showing crash experience by type, location, direction of movement, severity, weather, time of day, date, and day of week for at least 1 year.
- 18 The following data, which are desirable for a more precise understanding of the operation of the intersection, may be obtained during the periods described in Item B of Paragraph 17:
 - A. Vehicle-hours of stopped time delay determined separately for each approach.
 - B. The number and distribution of acceptable gaps in vehicular traffic on the major street for entrance from the minor street.
 - C. The posted or statutory speed limit or the 85th-percentile speed on controlled approaches at a point near to the intersection but unaffected by the control.
 - D. Pedestrian delay time for at least two 30-minute peak pedestrian delay periods of an average weekday or like periods of a Saturday or Sunday.
 - E. Queue length on stop-controlled approaches.

Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

Support:

- 01 The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.
- 02 The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.
- 03 It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then Warrant 1 is satisfied and an analysis of the combination of Conditions A and B is not needed.

Standard:

04 The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:

- A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or
- B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.

Option:

05 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

Guidance:

06 The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Standard:

07 The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

- A. The vehicles per hour given in both of the 80 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and
- B. The vehicles per hour given in both of the 80 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

^a Basic minimum hourly volume

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

^d May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Option:

- 08 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Section 4C.03 Warrant 2, Four-Hour Vehicular Volume

Support:

- 01 The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Standard:

- 02 **The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.**

Option:

- 03 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-2 may be used in place of Figure 4C-1.

Section 4C.04 Warrant 3, Peak Hour

Support:

- 01 The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

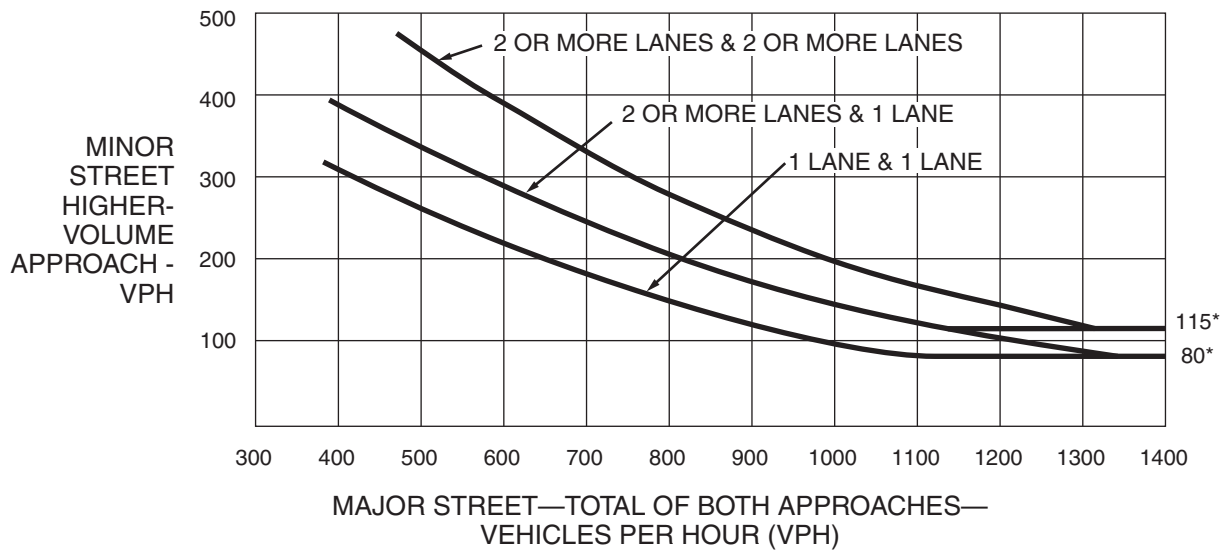
- 02 **This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.**
- 03 **The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:**
- A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:**
 - 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and**
 - 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and**
 - 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.**
 - B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.**

Option:

- 04 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to evaluate the criteria in the second category of the Standard.
- 05 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Guidance:

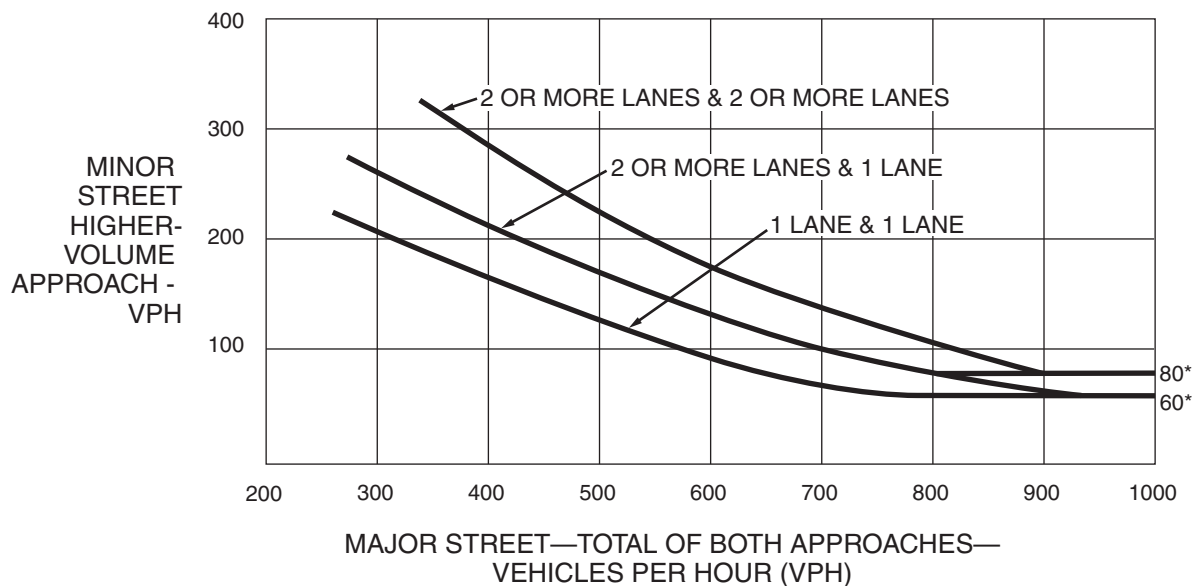
- 06 *If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal should be traffic-actuated.*

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.



COPY

OFFICIAL RECEIPT
WARREN COUNTY CIRCUIT
1 EAST MAIN STREET
FRONT ROYAL, VA 22630
540-635-2435

DEED RECEIPT

DATE: 10/13/10 TIME: 15:05:45 ACCOUNT: 187CLR100005293 RECEIPT: 10000010354
CASHIER: AMM REG: WK36 TYPE: OTHER PAYMENT: FULL PAYMENT
INSTRUMENT : 100005293 BOOK: PAGE: RECORDED: 10/13/10 AT 15:05
GRANTOR: FRONT ROYAL LIMITED PARTNERSHIP EX: N LOC: CO
GRANTEE: FRONT ROYAL LIMITED PARTNERSHIP EX: N PCT: 100%
AND ADDRESS :
RECEIVED OF : TOWN OF FRONT ROYAL
CASH: \$30.00
DESCRIPTION 1: PARCEL 5A F & R LIMITED PARTNERSHIP PAGES: 17 O/P 0
2: PROFFER STATEMENT NAMES: 0
CONSIDERATION: .00 A/VAL: .00 MAP: PIN:

301 DEEDS

28.50 145 VSLF

1.50

TENDERED : 30.00
AMOUNT PAID: 30.00
CHANGE AMT : .00

CLERK OF COURT: JENNIFER R. SIMS

PAYOR'S COPY
RECEIPT COPY 1 OF 2

**FRONT ROYAL LIMITED PARTNERSHIP – TOWN PROPERTY
TOWN OF FRONT ROYAL, VIRGINIA**

REZONING: RZ09-02-64

PROPERTY: Parcel 5A as shown on "Plat Showing Vacation of Boundary Line on the Property of F&R Limited Partnership" and as recorded in the Land Records of Warren County as Instrument Number 060012763, (attached hereto and incorporated herein by reference as Exhibit 1)

PROPERTY OWNER: Front Royal Limited Partnership, a Virginia Limited partnership

APPLICANT: Front Royal Limited Partnership, a Virginia Limited Partnership

PROJECT NAME: To be determined at time of subdivision application

ORIGINAL DATE OF PROFFERS: February 20th, 2009

REVISION DATES: August 5, 2009
September 4, 2009
September 10, 2009
December 7, 2009
December 28, 2009
January 29, 2010

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The undersigned hereby proffers that the use and development of the subject property ("Property"), as described above, shall be in general conformance with the following conditions, which shall supersede all other proffers that may have been made prior hereto. In the event the above referenced rezoning is not granted as applied for by the Applicant ("Applicant"), these proffers shall be withdrawn and shall be invalid. In the event this application is denied by the Front Royal Town Council (the "Council"), such denial is appealed to a court of competent jurisdiction, and this rezoning application is thereafter remanded to the Council for reconsideration, then the Applicant may elect to readopt all or any portion hereof, in a writing specifically for that purpose; if no such election is made, these proffers shall be withdrawn and shall be invalid.

The headings of the proffers set forth below have been prepared for convenience or reference only and shall not control or affect the meaning or be taken as an interpretation of any provision of the proffers.

The improvements proffered herein shall be provided at the time of development of that portion of the Property adjacent to or including the improvement or other proffered requirement, unless otherwise specified herein.

The term "Applicant" as referenced herein shall include the present and all future owners and successors in interest. The term "building permit" as used herein shall mean a building permit issued for the construction of a single-family home on the Property.

1. LAND USE:

- 1.1. The Property shall be developed in general conformance with the regulations of the R1-A zoning districts, as it is set forth in the Town of Front Royal Code, or as may be otherwise approved by the Town of Front Royal or modified herein.
- 1.2. The total number of dwelling units shall not exceed 320 single-family dwellings.

2. PHASING

- 2.1. The Applicant shall construct no more than 48 single-family dwellings in any calendar year. Units not constructed in a calendar year may be constructed in subsequent years.
- 2.2. The first year in which development may commence shall be the date of approval of a preliminary plan for the Property.

3. WATER AND SEWER

- 3.1. The Property shall be connected to public water and sewer systems constructed at the Applicant's expense.

4. STORMWATER MANAGEMENT & ENVIRONMENT

- 4.1. Stormwater management on the Property shall be provided in accordance with the applicable regulations of the town of Front Royal and Warren County. In addition, Best Management Practices and low impact development technologies shall be used where reasonably practical, as determined by the Applicant, and permitted, to mitigate any adverse water quality impact on the Shenandoah River that may occur.

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5. COMMUNITY DESIGN

- 5.1. The Applicant shall impose restrictive covenants for the overall community, which shall be recorded prior to the conveyance of the first parcel of the Property, and which shall be made available to staff upon request prior to recordation of any final subdivision plat. Among other things such covenants will address the overall continuity of design within the community through design standards for the following elements:

- 5.1.1. Custom mailbox design;
- 5.1.2. Standardized private residential fencing styles and color;
- 5.1.3. Custom designed street signage and stop signage;
- 5.1.4. Uniform site furnishing selection (trash receptacles and benches);
- 5.1.5. Standardized common area fencing style and color.
- 5.1.6. Permitted building materials.
- 5.1.7. Restrictions on the visibility of concrete block from streets within the development.

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LAND RECORDS

6. CREATION OF HOMEOWNERS' AND PROPERTY OWNERS' ASSOCIATIONS

- 6.1. One or more homeowners' associations ("HOA") shall be created and shall be made responsible for the maintenance and repair of common areas, including any common open space that may be established in accordance with the requirements of the Town Zoning Ordinance or these proffers. Any such HOA shall be granted such other responsibilities, duties, and powers as are customary for such associations, or as may be required to effect the purposes for which such HOA is created. Such HOA shall be granted sufficient powers as may be necessary, by regular or special dues or assessment, to raise revenues sufficient to perform the duties assigned hereby, or by the documents creating the Association, and to perform rate studies necessary to determine dues, fees, and assessments as may be required.
- 6.2. In addition to any other duties and responsibilities as may be

assigned to it, the HOA shall have title to and responsibility for (i) common open space areas not dedicated to public use in accordance with these proffers and (ii) common buffer areas located outside of residential lots. It shall also have (iii) responsibility for the perpetual maintenance of any entrance feature (subdivision) signs, street, alleys and perimeter or road buffers located within any easements for those purposes to be granted to the HOA, and (iv) for maintenance of private streets and alleyways, if any.

7. HOME CONSTRUCTION

- 7.1. All homes shall be constructed using regionally appropriate Energy Star approved appliances, insulation, and windows. In addition, all homes shall qualify as an Energy Star approved home and carry the Energy Star label as determined by an independent third party approved by the United States Environmental Protection Agency.

8. LAND DEDICATION

- 8.1. The Applicant shall dedicate to the Town of Front Royal, under the conditions set forth below, a 1.75 acre site adjacent to Route 606, as such area is generally depicted on Exhibit 2 attached hereto and incorporated herein by reference, prepared by J. Duggan & Associates, dated September 4, 2009, and identified as "1.75-Acre Land Dedication" (the "Dedication Area"). A sight distance easement shall be reflected on the Dedication Plat, if required by VDOT at the time of dedication, so as not to impede or adversely affect design or approval of the Entrance Road (as defined below), and its connection to Route 606.
- 8.2. The Dedication Area shall be used by the Town and the Virginia Department of Transportation ("VDOT") for the construction of the Leach Run Parkway, or, at the Town's sole discretion, it may be further conveyed by the Town to Warren County, Virginia, for use as a fire and rescue station. If the Town elects to use the Dedication Area for construction of Leach Run Parkway and if the Town determines that additional right-of-way beyond the Dedication Area is necessary for Leach Run Parkway, the Applicant shall dedicate additional land to the Town solely for construction of Leach Run Parkway the "Additional Land Dedication". Provided, however, that (i) such Additional Land Dedication shall not exceed two (2) acres in size and (ii) the Additional Land Dedication shall not impede or adversely affect design or approval of the Entrance Road (as

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defined below), and its connection to Route 606.

- 8.3. The Applicant shall execute a dedication plat within 18 months of the Town's delivery of a plat at the Town's expense, depicting by metes and bounds the Dedication Area (the "Dedication Plat"), provided that no such dedication shall be required prior to the issuance of the 25th building permit for the Property. Further, and notwithstanding the foregoing, in the event the Town does not request the aforesaid dedication prior to the issuance of the 300th building permit for the Property, the Applicant shall be relieved of its obligation to make the aforesaid dedication.

9. PEDESTRIAN AND PARK FACILITIES

9.1. Trails.

9.1.1. The Applicant shall construct a walking/jogging trail with a minimum width of 6 feet on one side of Phase 1 of the East/West Cross Connector as generally depicted on Exhibit 3 attached hereto and incorporated herein prepared by J2 Engineers, Inc. and entitled "Cross Connector Road."

9.1.2. In addition, if the Town approves all final subdivision plats for the development permitting sidewalks on one side of each street in the development, the Applicant shall construct alternative pedestrian walking trails within the development of a minimum length of .75 miles. The location of the walking trails shall be determined by the Applicant and depicted on any preliminary plat for the development of the Property. The construction of such walking trails shall occur either in phases in conjunction with the development of sections Property as depicted on the preliminary plat, or at one time, in the sole discretion of the Applicant. If such final subdivision plats are not approved with sidewalks on one side of each street of the development, the Applicant shall not be obligated to construct such additional trails, but in any event, the Applicant shall construct the trails as set forth in Proffer 9.1.1

- 9.2. Not later than the issuance of the 99th building permit for the Property, the Applicant shall construct a neighborhood park (the "Neighborhood Park") that shall consist of not less than four (4)

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acres but not more than ten (10) acres, and shall include a basketball court, a playground, and at least one multi-purpose playing field. The design and location of the Neighborhood Park and its associated amenities shall be in the sole discretion of the Applicant.

- 9.3. Alternatively and notwithstanding the foregoing, in the event the Town elects in writing prior to the issuance of the 25th building permit for the Property to require the Applicant to dedicate the Neighborhood Park to Warren County, and Warren County agrees in writing to accept such dedication and the maintenance responsibility for the Neighborhood Park and its amenities, the Applicant shall design, plat, and construct the Neighborhood Park and the amenities described above in accordance with the standards set by the Warren County Department of Parks and Recreation. In the event that the County declines to accept the aforesaid dedication, the Neighborhood Park shall be dedicated to an HOA created pursuant to Proffer 6, above.

10. RIGHT-OF-WAY DEDICATIONS AND RESERVATION

- 10.1. Entrance Road – Phase 1 of East/West Connector. The final subdivision plat (a "Record Plat") for the first phase of the development of the Property shall include dedication of not less than 100 feet of right-of-way for an entrance road into the Property, the general location of which is depicted on the Exhibit 3 attached hereto and incorporated herein prepared by J2 Engineers, Inc. and entitled "Cross Connector Road," with such road identified thereon as Phase 1 (hereinafter the "Entrance Road").
- 10.2. Phase 2 of East/West Connector. Prior to the issuance of the 1st building permit, Applicant shall make a reservation of not less than 100 feet of right-of-way to connect the Entrance Road to the southwestern boundary of the Applicant's property located in Warren County, the general location of which is depicted on Exhibit 3 and identified thereon as Phase 2.
- 10.3. The final locations of the aforesaid roads shall be subject to modifications based on final engineering and approvals thereof by the Town and/or VDOT, final lot layout, and Town Code requirements. The Town shall have the option to move the intersection of the East/West Connector and Commerce Avenue to another location, in its discretion. The Town shall also have the option to notify the Applicant prior to approval of the first

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final record plat for the subdivision that the Town will not construct Phase 5 of the East/West Connector. If the Town elects not to construct Phase 5, then the per unit monetary contributions set out in Proffer 13.1 shall be paid to the Town for the construction of Leach Run Parkway.

11. CONSTRUCTION OF EAST/WEST CONNECTOR

11.1. Entrance Road – Phase 1 of East/West Connector.

11.1.1. The Applicant shall construct two (2) lanes of the Entrance Road to the first proposed street intersection in the subdivision prior to and as a condition of the issuance of the first building permit for the property or as otherwise required by Chapter 148 of the Town Code ("Subdivision Ordinance"). The Applicant shall have completed the construction of Phase 1 of the East/West Connector to the western property boundary prior to and as a condition of the issuance of the 75th building permit.

11.1.2. No individual single-family lot shall have direct driveway access to the East/West Connector.

11.2. Completion of the East/West Connector to Commerce Avenue or 8th Street.

11.2.1. Phases 2 through 5 of East/West Connector. The general location of the right-of-way for the remaining phases of the East/West Connector are depicted on Exhibit 3 and generally described as follows:

11.2.2. Phase 2. The right-of-way for Phase 2 shall connect the Entrance Road with the southwestern boundary of the Applicant's property located in Warren County.

11.2.3. Phase 3. The right-of-way for Phase 3 shall be co-located with the existing 50 foot easement running to the benefit of the Applicant, which easement is recorded in Deed Book 207 at Page 447.

11.2.4. Phase 4. The existing right-of-way for Phase 4 shall begin at the southern terminus of Phase 3 and end at the Norfolk Southern Railroad crossing as set out in Deed Book 118 at Page 443, which shall accommodate a two-lane rural collector road that

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meets VDOT standards to the southern terminus of Phase 5.

11.2.5. Phase 5. The right-of-way for Phase 5 shall be wide enough to accommodate a two-lane urban collector road that meets VDOT standards and shall run from 8th Street to or other location approved by the Town and across the Norfolk Southern right-of-way connecting to the street that was dedicated in Deed Book 118 at Page 443, and shall include the construction of two at-grade crossings that meet all applicable VDOT and Federal Surface Transportation Board safety requirements;

11.3. Subject to the following conditions, prior to and as a condition of the issuance of the 200th building permit, the Applicant shall construct a two-lane rural connector road that meets VDOT standards in the right-of-way for Phases 2 through 4:

11.3.1. prior to the recordation of the first final plat for the development of the Property, the Town shall have notified the Applicant in writing that it desires the Applicant to construct Phases 2 through 4;

11.3.2. the existing at-grade railroad crossing at Mary's Shady Lane and Happy Creek Road will have been closed or will have been authorized for closure by a court or other competent authority, or, alternatively, consent has been given by the necessary parties and governmental agencies for the construction of an at-grade intersection of Mary's Shady Lane and the East/West Connector;

11.3.3. the Town has used its best good faith efforts to design and construct a road within the Phase 5 right-of-way and the Norfolk Southern railroad crossing that is a part of Phase 5 as described above, provided that, if the Town elects not to construct the Phase 5 road as set forth above, the Applicant shall not be obligated to construct phases 2 through 4; and

11.3.4. within twelve months from the approval of the first Final Record Plat for the Property, the Town and the Applicant have entered into a mutually satisfactory memorandum of understanding which shall, among other things, include provisions delineating i) the

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parties' responsibilities with respect to construction of Phases 2-5 of the East/West Connector, ii) the Applicant's responsibility to assign any rights it has to the crossing of the railroad tracks that is a part of Phase 5 to the Town, and iii) provided that, pursuant to §§ 134-22 (J) and 134-30 (K) of the Town Code, no connection fee for sewer or water service shall be accepted by the Town prior to the issuance of a zoning permit and the approval of a building permit application for building development or conversion upon the lot or parcel of land to be served, the Applicant shall receive a dollar for dollar credit in the amount of all costs incurred by the Applicant in the design and construction of Phases 2-4 of the East/West Connector as provided in Proffer 11.2, and the Land Dedication as provided in Proffer 8.1 (with a minimum credit of \$110,000), the right-of-way reservation as provided in Proffer 10.2 (with a minimum credit of \$462,500). Such sums shall be a credit against the Applicant's Water and Sewer Tap fees in excess of the current cost thereof of \$10,000 per such unit. If the Town increases the aforesaid Water and Sewer Tap fees, then the Applicant shall be entitled to a credit against Water and Sewer Tap Fees in the amount of any increase above \$10,000.

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12. SHENANDOAH SHORES ROAD AND HAPPY CREEK ROAD

- 12.1. The Applicant shall construct a westbound right turn lane on Happy Creek Road at Shenandoah Shores within the existing right-of-way prior to the issuance of the 25th building permit for the Property
- 12.2. The Applicant shall construct an eastbound left turn lane on Happy Creek Road at Shenandoah Shores within the existing right-of-way prior to the issuance of the 50th building permit for the Property.
- 12.3. If the Town determines that a traffic light is warranted at Route 606 and Happy Creek Road, then the Applicant shall contribute \$225,000.00 to the Town of Front Royal for the construction of such traffic light. The Applicant shall not be required to make such contribution earlier than the issuance of the 50th building permit for the Property or later than the issuance of the 225th building permit for the Property.

13. CASH CONTRIBUTIONS TO TOWN OF FRONT ROYAL

- 13.1. In the event this rezoning is approved, the Applicant will pay to the Town of Front Royal, a per unit contribution of \$19,600 for each single-family dwelling unit in excess of 99 such units, which contributions shall be used by the Town solely for the planning, design, engineering, right of way acquisition and/or construction of Leach Run Parkway or the East/West Connector above.
- 13.2. The Applicant shall receive a dollar-for-dollar credit against the aforesaid per-unit contribution for the following costs actually incurred by the Applicant:
- 13.2.1. the engineering, design and construction costs associated with constructing Phases 2 through 4 of the East/West Connector, and
 - 13.2.2. any combined sewer and water connection and availability fees that exceed \$10,000 on a per-unit basis.
- 13.3. Prior to the issuance of the 99th building permit, and at the end of each phase of the development of the Property thereafter, an accounting of the credits accrued by the Applicant shall be undertaken by the Town, in cooperation with the Applicant, and the credits available for the future phases of the development shall be determined. The Applicant's obligation to make future per-unit contributions required by Proffer 13.1 shall be adjusted according to the dollar amount of the credits earned.
- 13.4. In the event the Town elects to have the Applicant construct Phases 2 through 4 of the East/West Connector as provided above, the per unit contribution set out in Proffer 13.1 shall be placed in third party escrow (such third party escrow agent and the escrow agreement to be mutually agreed upon by the Town and the Applicant), and shall be paid over to the Applicant to reimburse it for the actual audited cost of the engineering, design, and construction of the Phase 2 through 4 improvements. The Town and the Applicant shall enter into a mutually agreeable agreement that sets out responsibilities of the parties; provided that until such agreement is entered into, the Applicant shall not be obligated to make the Phase 2 through 4 improvements nor shall it be obligated to make further per unit contributions, and provided further that the Applicant shall not unreasonably condition or withhold

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approval of such agreement. After the Applicant completes such improvements, and if the actual audited cost of the engineering, design, and construction of the Phase 2 through 4 improvements do not exceed the escrowed contribution proffers and projected future proffer payments, the remaining per-unit contributions, if any, shall be made directly to the Town of Front Royal.

14. CASH CONTRIBUTIONS TO WARREN COUNTY, VIRGINIA.

- 14.1. In the event this rezoning application is approved, the Applicant will pay to Warren County, Virginia a per unit sum of \$5,500.00, prior to and as a condition of the issuance of an occupancy permit for each single-family dwelling constructed on the Property.
- 14.2. Notwithstanding the foregoing Proffer, the audited costs of the engineering, design, and construction of the Neighborhood Park as provided in these Proffers, shall be credited against the aforesaid per unit contribution, provided further that the Applicant shall be entitled to a credit for the dedication of the land therefor in the amount of \$320,000.

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15. DESIGN MODIFICATIONS

- 15.1. If, at the time of or prior to the approval of a preliminary subdivision plat for the Property, the Town approves amendments to the Subdivision and Land Development Ordinance, or approves modifications to or waivers of the standards set forth therein so permitting, the Applicant shall construct streets without curb and gutter.
- 15.2. If, at the time of or prior to the approval of the preliminary subdivision plat for the Property, the Town approves amendments to the Subdivision and Land Development Ordinance, or approves modifications to or waivers of the standards set forth therein so permitting, the Applicant shall construct:
- i) one-way local streets with a minimum pavement width of 16 feet;
 - ii) two way collector streets without on-street parking and a minimum pavement width of 18 feet;
 - iii) pavement widths of 20' with parking on one side for local

and cul-de-sac streets: and,

iv) pavement widths of 26' with parking on both sides for local, collector, and cul-de-sac streets; and

v) sidewalks on only one side of all streets within the development.

16. MARY'S SHADY LANE

- 16.1. If the Applicant fails to relocate Mary's Shady Lane, the Applicant shall revise its then current site or subdivision plan to reflect the continued existence thereof.
- 16.2. If the Applicant successfully relocates Mary's Shady Lane, then the Applicant shall connect Mary's Shady Lane to the Entrance Road no later than the 300th building permit for the Property. At no time during the construction on or development of the Property shall access be denied to persons using Mary's Shady Lane.
- 16.3. Applicant shall not utilize Mary's Shady Lane as a construction entrance for the Property.

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17. MISCELLANEOUS

- 17.1. Prior to the commencement of any land disturbing activities on the Property, the Applicant shall perform a Phase I Archeological Study for investigation of those areas previously identified on the Property as potentially sensitive in the "Phase I Archeological Evaluation of the 830.4 Acre Vazzana Property, Front Royal and Warren County, Virginia," dated January 2004, prepared by Thunderbird Archeological Associates, Inc.
- 17.2. Any additional archeological features identified on the Property during the Phase I study shall be further evaluated in accordance with the Virginia Department of Historical Resources ("VDHR") guidelines.

18. OPEN SPACE

- 18.1. A minimum of 30% of the Property will be used for permanent open space. Such open space shall be inclusive of passive and active open space including all park land provided hereunder and stormwater management uses.

19. ESCALATOR

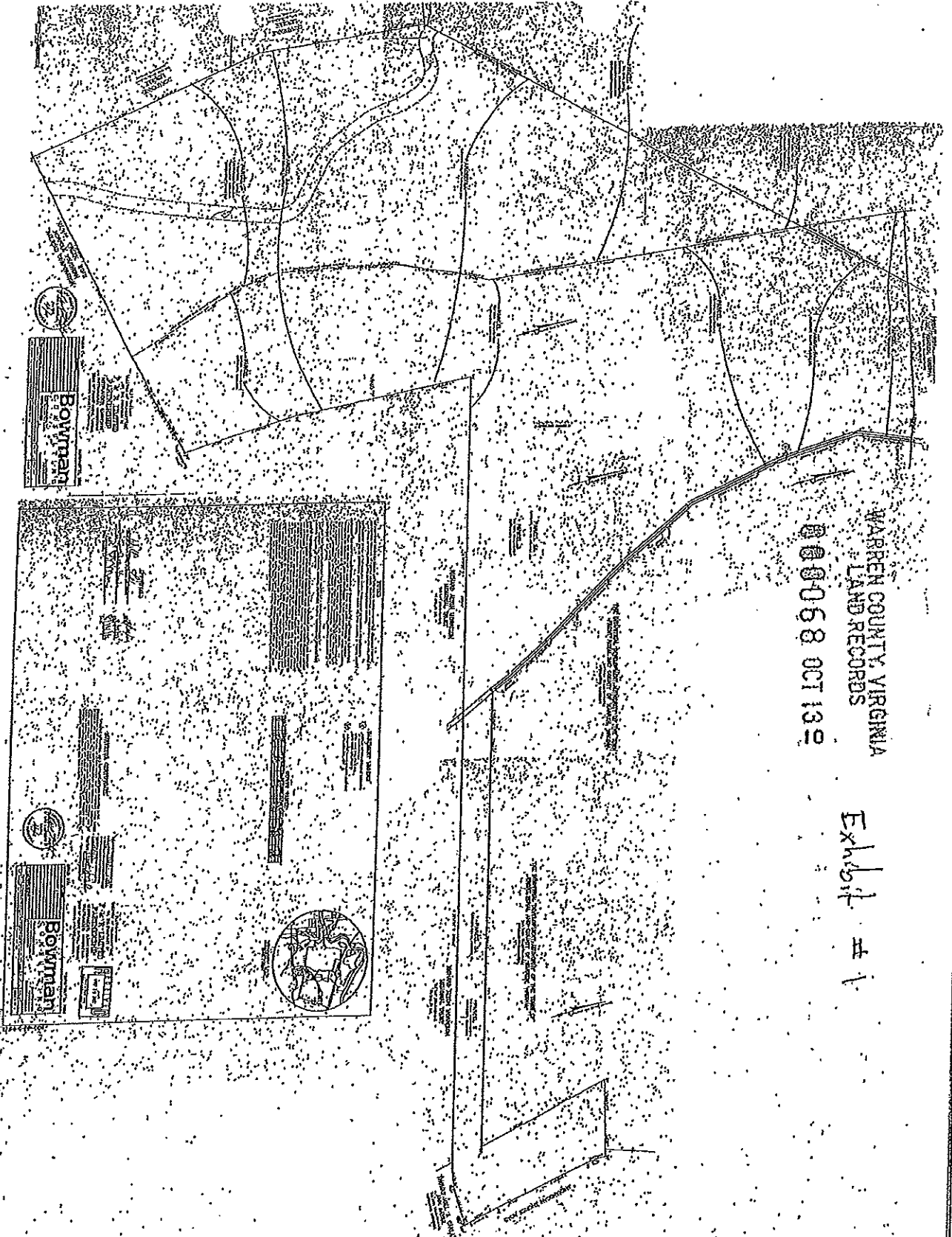
- 19.1. Monetary contributions as set forth in this Proffer Statement that are paid to the Town of Front Royal and/or Warren County after 24 months from the date of rezoning approval shall be adjusted in accordance with the Urban Consumer Price Index ("CPI-U"), as published by the United States Department of Labor. The adjustment shall be calculated from the CPI-U published most nearly to and following January 1st from that date 24 months after rezoning approval and the date the contributions are paid, subject to a cap of 3% per year, non-compounded.

SIGNATURES APPEAR ON THE FOLLOWING PAGE

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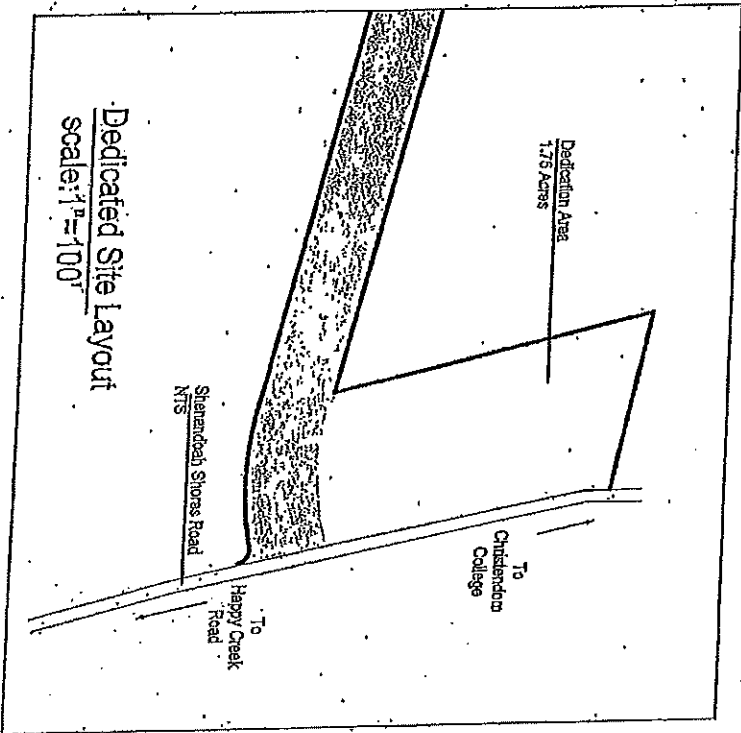
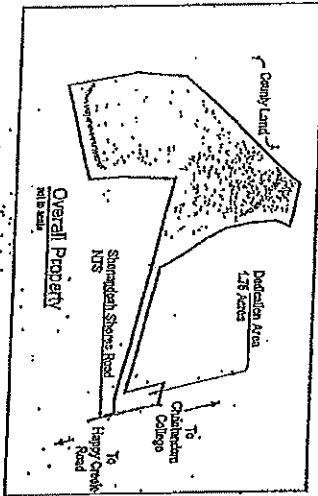
Exhibit # 1



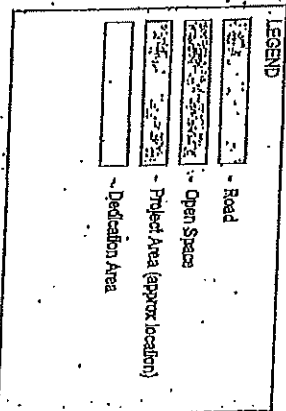
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Dedicated Site Layout
scale: 1" = 100'



Front Royal Limited Partnership
Rezoning
Proffer Exhibit # 2



Map	Scale	1" = 100'
Project Name	Front Royal Limited Partnership	
Project Location	Stemands Shores Road	
Project Size	1.75 Acres	
Project Status	Rezoning	
Project Date	08-04-08	
Project No.	1	
Project Name	Front Royal Limited Partnership	
Project Location	Stemands Shores Road	
Project Size	1.75 Acres	
Project Status	Rezoning	
Project Date	08-04-08	
Project No.	1	

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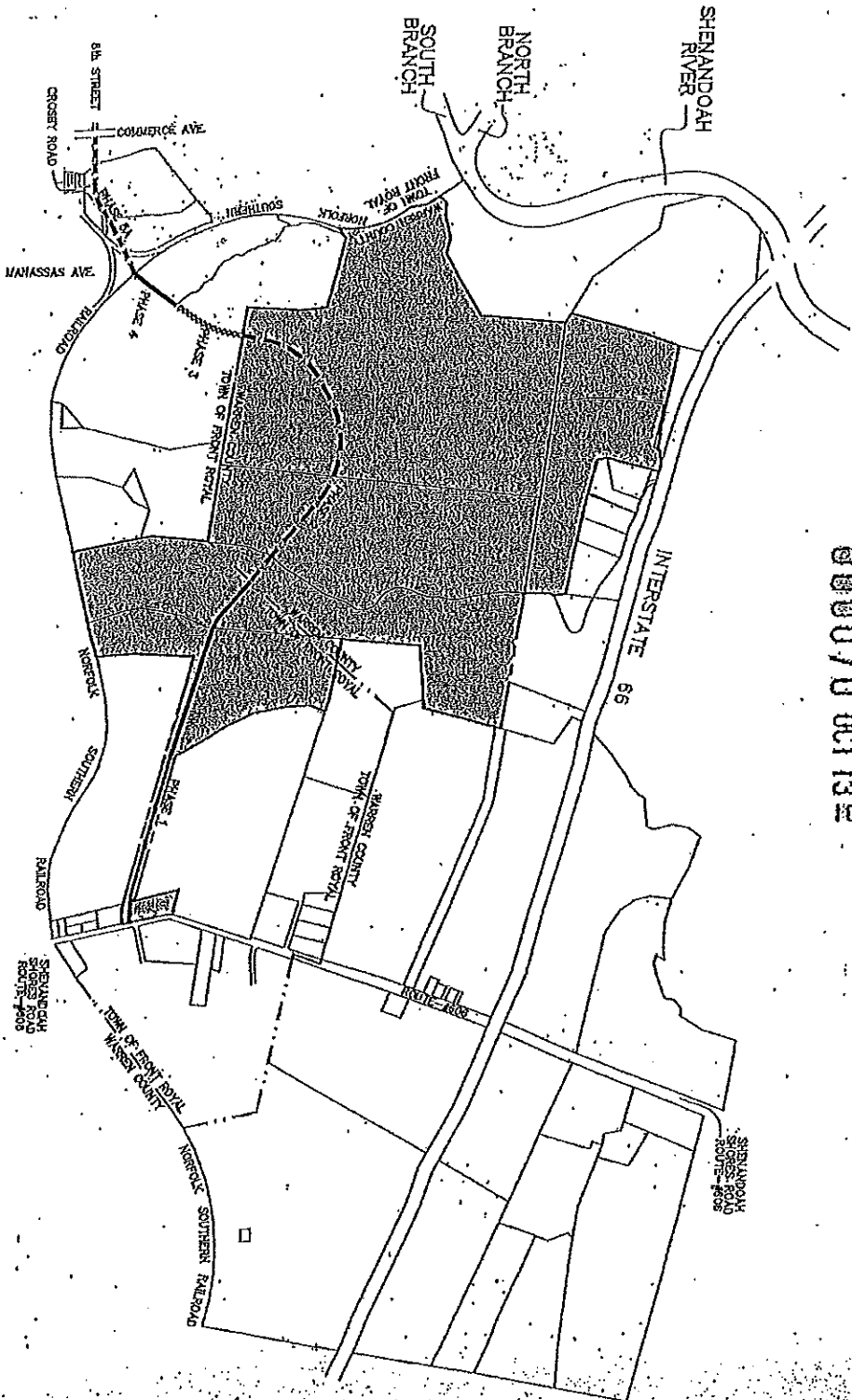


EXHIBIT #3

CROSS CONNECTOR ROAD

SEPTEMBER 4, 2009
Revised 12-02-09

SCALE: 1" = 100'



PREPARED BY:

12200 S. 15th Street
Farmingdale, NY 11735
716.224.1500
www.zengr.com

FOR INFORMATIONAL PURPOSES ONLY

OWNER:

FRONT ROYAL LIMITED PARTNERSHIP,
a Virginia Limited Partnership

By: MVA Limited Partnership, general partner of
Front Royal Limited Partnership

By: DOC Corporation, general partner of MVA
Limited Partnership

By: [Signature]
David A. Vazzana, President of
DOC Corporation

Date: 10/7/10

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City/County of Warren

Commonwealth of Virginia

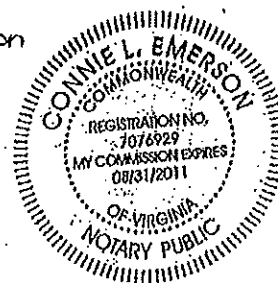
The foregoing instrument was acknowledged before me this

7th day of October, 2010 by DAVID A. VAZZANA

[Signature] I was commissioned
As Connie L. Emerson
Notary Public

Notary registration number: 7076929

My commission expires: 8/31/2011



INSTRUMENT #100005293
RECORDED IN THE CLERK'S OFFICE OF
WARREN COUNTY ON
OCTOBER 13, 2010 AT 03:05PM

JENNIFER R. SIMS, CLERK
RECORDED BY: AMM

Am

MEMORANDUM

TO: JEREMY F. CAMP, DIRECTOR OF PLANNING
FROM: DOUGLAS W. NAPIER, TOWN ATTORNEY *DWN*
DATE: AUGUST 19, 2015
RE: 2010 PROFFERS OF FRONT ROYAL LIMITED PARTNERHIP

ISSUES:

You have asked me a number of related questions concerning the interpretation and validity of the 2010 proffers accompanying the rezoning request of Front Royal Limited Partnership ("FRLP") (RZ09-02-64). These include:

- 1) The validity of the Town paying net moneys to FRLP as a result of the development of the FRLP property in the event of the playing out of factual Scenarios I or 2, as set forth on the attachments which you and your staff projected from the approved 2010 proffers, if FRLP chose to develop to one of those particular factual scenarios;
- 2) The validity of the Town taking moneys from its water and sewer enterprise funds to pay the credits called for in the 2010 FRLP proffers; and
- 3) The almost seemingly impossible-to-resolve ambiguities and uncertainties in understanding the language contained in the 2010 FRLP proffer statements, which even FRLP itself has recently stated "have become untenably confusing to interpret as we have discussed with both [Town] staff and the Planning Commission since 2013".

ANALYSIS:

[This Memorandum will be a sketch of what I will fill out with a more organized scheme of legal authorities and analysis shortly. Despite working on this matter over many hours over the past month, because of the difficulty in understanding the proffer statement on even a rudimentary level, it has taken me until the past couple of days to where I could fashion a coherent legal framework of the legal underpinning of the issues that appear to govern these matters. Some of my legal research, in a somewhat unorganized fashion, is enclosed.]

FIRST: The first point to note is that how many residential units will be developed, and over what period of time, appear to me to be totally within the discretion and control of FRLP, and not the Town. Because of this, the Town has very little control over what it will ultimately receive from these proffers. Conversely, FRLP has a great deal of control over what it can require from the Town. It is almost exactly the opposite of what one would expect from a traditional, typical proffer statement, where a developer "offers" certain things to the local government to offset and mitigate the net impacts and net expenses of the development to the local government and to the community as a whole. Instead, these proffers seem to work more to be designed to offset the impact and expense to FRLP of its development, depending upon the level, degree, and timing of development it might ultimately wish to put in place.

SECOND: The second point to note is the difficulty in determining what the proffer statement means precisely. Part of this is trying to make sense of the notion of FRLP paying cash proffers of \$19,600 per residential unit for each unit in excess of 99 units, but then receiving a dollar for dollar credit against that payment for each tap fee in excess of \$10,000. If this is read to apply to all tap fees up to the total amount of residential units built by FRLP, then the amount of money the Town would ultimately owe back to FRLP would be quite large, as this \$10,000 credit would be owed by the Town to FRLP for each and every single unit built by FRLP, including the units in Phase I.

THIRD: The attached Scenarios 1 and 2 are factual scenarios provided me by the Department of Planning and Zoning.

Note under Scenario 1, if FRLP decided to stop the development at the 99th residential unit, "the Town receives no [cash] proffers and there is no East/West Connector Road under this option. In addition, the Town would subsidize \$495,000 in tap fees [to FRLP to allow it to connect its residential units to Town utilities] and pay FRLP at least \$110,000 for land dedication."

This brings up the point raised in "FIRST", above, that FRLP has full control over how many residential units it wishes to develop. The Town, under the scenario of only 98 residential units being built, would receive nothing, and would be giving FRLP substantial cash and other valuable contributions. This, it seems to me, would violate the Dillon Rule:

As stated often by the courts and the Attorney General, Virginia adheres to the Dillon Rule of strict construction, which provides that local governing bodies "have only those powers that are expressly granted, those necessarily or fairly implied from expressly granted powers, and those that are essential and indispensable."² The powers of a local governing body are limited to those "conferred expressly or by necessary implication."³ Any doubt as to the existence of power must be resolved against the locality.⁴ The Dillon Rule requires a narrow interpretation of all powers conferred on local governments since they are delegated powers. 2004 Va. AG 48.

.” In addition, § 15.2-953(A) clearly permits appropriations of public funds by local governing bodies, but only to charitable institutions or associations “located within their respective limits or outside their limits if such institution or association provides services to residents of the locality.” *Id.* (Va. Code § 15.2-953. **Donations to charitable institutions and associations, volunteer and nonprofit organizations, chambers of commerce, etc....** “A locality may make like gifts, donations and appropriations of money to industrial development authorities for the purposes of promoting economic development.”) FRLP is clearly not a charitable institution or association.

The situation is even more pronounced under attached Scenario 2. Note what the Department of Planning & Zoning has calculated: “Under this scenario with the current proffers, the Town gets the E/W Connector [Road] constructed with a financial loss [to the Town} of approximately 5 million dollars. Worst case scenario, the Town loses 11 ½ million dollars and FRLP covers the cost of the entrance road (4 lanes) required by the Subdivision Ordinance.”

The Attorney General stated in 83-84 Va. AG 133 that local governments Counties have the right to make gifts to certain charitable and eleemosynary organizations by reason of the aforementioned statute; they do not, however, have the right to make gifts to private parties.

It seems to me the overall effect of the 2010 proffers is that, at the sole election of FRLP, FRLP could require the Town, in essence, to pay to FRLP a net sum of money or other things of value; in essence, require the Town to make a gift of money or other things of value to FRLP. I do not think this is legally permissible.

FOURTH: The proffers have been worded so that the proffer contributions paid by FRLP would be placed in a third party escrow account and be paid over to FRLP “to reimburse it for the actual audited cost of the engineering, design, and construction of the Phase 2 through 4 improvements.” This is frightening wording. Does “improvements” mean “residential units” as well as the cost of the East/West Connector Road, the water and sewer tap fees, sidewalks, and all the other miscellaneous costs? Whatever it means, it certainly seems the Town will be making gifts to FRLP, and this would seem to be the making of impermissible gifts.

My opinion, from everything I have seen and been to interpret, is the 2010 proffers are, by the admission of FRLP itself, “untenably confusing to interpret”. They are also work to provide FRLP, at the option of FRLP, with impermissible gifts to it from the Town (and its taxpayers), and is contrary to public policy.

Because of the unusually convoluted and confusing wording of these proffers, and the significance of the issues presented, both to the Town and to FRLP, I think it would be advisable for the Town to seek a second opinion, either from the Office of the Attorney General, from outside counsel, or both. Prior to doing that, I would like to flesh out my own written opinion over the next week or so, so as to make it a more finished product.

SCENARIO 1**IF THE TOWN DOESN'T BUILD PHASE 5 OF THE E/W CONNECTOR**

(THIS WOULD RELIEVE FRLP FROM THE OBLIGATION OF BUILDING PHASES 2 – 4 OF THE E/W CONNECTOR)

Houses 1 – 99 (99)

Financial Analysis	Cash Proffers Paid	0.00 - First 99 houses exempt from paying per unit cash proffer.
	Financial Losses	[\$605,000] - \$495,000 Tap Fee Subsidy Given to FRLP based on amount over 10K, which is currently approximately 5K (5K x 99); plus \$110,000 minimum estimated credit for 1.75-2.0 acre land dedication along Shenandoah Shores Road. If the tap fees increase this credit will increase.
	Proposed Changes	No change.
Road Infrastructure Analysis	Currently	A 2-lane entrance road off of Shenandoah Shores Road to a point selected by FRLP by the 75 th house.
	Proposed Changes	No change.

If development stops at 99th house the Town receives no proffers and there is no East/West Connector Road under this option. In addition, the Town would subsidize \$495,000 in tap fees and pay FRLP at least \$110,000 for land dedication.

Houses 100 – 320 (221)

Financial Analysis	Cash Proffers Paid	\$4,331,600 - Less if fewer houses built.
	Financial Losses	[\$1,230,000] \$1,105,000 Tap Fee Subsidy Given to FRLP based on amount over 10K, which is currently approximately 5K (5K x 221); plus \$462,500 minimum estimated credit for Phase 2 E/W Connector right-of-way dedication (Could occur sooner, at least by the 200 th permit). If the tap fees increase this credit will increase.
	Proposed Changes	No change.
Road Infrastructure Analysis	Currently	A 2-lane entrance road off of Shenandoah Shores Road to a point selected by FRLP by the 75 th house.
	Proposed Changes	No change.

A net of 3,101,600 in per unit cash proffers could be used towards Leach Run Parkway, Phase 2, based on full-build out. Pursuant to Virginia Code § 15.2-2303.2 these funds would need to be used by 12 years or the funds go the Commonwealth Transportation Board.

IF THE TOWN DOES BUILD PHASE 5 OF THE E/W CONNECTOR*(THIS WOULD REQUIRE FRLP TO BUILD PHASES 2 – 4 OF THE E/W CONNECTOR)***Houses 1 – 99 (99)**

Financial Analysis	Cash Proffers Paid	0.00 - First 99 houses exempt from paying per unit cash proffer.
	Financial Losses	[\$605,000] - \$495,000 Tap Fee Credit accumulated by FRLP based on amount over 10K, which is currently approximately 5K (5K x 99); plus \$110,000 minimum estimated credit for 1.75-2.0 acre land dedication along Shenandoah Shores Road. If the tap fees increase this credit will increase.
	Proposed Changes	The draft revised proffer removes this scenario entirely. The language of the proffers is not clear if the tap fee credit would apply if the Town does require FRLP to build the E/W Connector. If it does not, the draft revised language of the proffers proposes the removal of language in this section. The removal of this language would clarify that the tap fee credit applies regardless if the Town requires FRLP to build Phases 2 – 4.
Road Infrastructure Analysis	Currently	A 2-lane entrance road off of Shenandoah Shores Road to a point selected by FRLP by the 75 th house.
	Proposed Changes	<u>This scenario is proposed for removal.</u>

Under the current proffers of this scenario, if the tap fee credits apply to this scenario, if development stops at 99th house the Town receives no proffers and there is no East/West Connector Road under this option. In addition, FRLP would have a credit of \$495,000 from tap fee overpayment and the Town would have to pay FRLP at least \$110,000 for land dedication. This option is proposed for removal.

Houses 100 – 320 (221)

Financial Analysis	Cash Proffers Paid	\$4,331,600 - Less if fewer houses built.
	Financial Losses	[\$5,226,600 - 11,593,400] \$1,105,000 Tap Fee Credit given to FRLP based on amount over 10K, which is currently approximately 5K (5K x 221); plus \$462,500 minimum estimated credit for Phase 2 E/W Connector right-of-way dedication (Could occur sooner, at least by the 200 th permit); plus \$6,563,400, the amount of the cost of the E/W Connector after Tap Fee Credits and Cash Proffers Paid based on a 12 million dollar cost; plus \$462,500 a rough guess at the value of land lost by the Town donating the Town property for ROW; plus 3 million, an estimated cost for construction of Phase 5, including the railroad crossing.
	Proposed Changes	<u>This scenario is proposed for removal.</u>
Road Infrastructure Analysis	Currently	The E/W Connector, with a varying number of lanes between 2 and 4.
	Proposed Changes	<u>This scenario is proposed for removal.</u>

Under this scenario with the current proffers, the Town gets the E/W Connector constructed with a financial loss of approximately 5 million dollars. Worst case scenario, the Town loses 11 ½ million dollars and FRLP covers the cost of the entrance road (4 lanes) required by the Subdivision Ordinance.

3

Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: Agreement between the Town and County for collection and remittance of fees paid online through EnerGov software. *Director of Planning & Zoning*

Summary:

In 2014, the Town and County individually signed agreements to purchase permitting and land management software known as EnerGov. The system went live in 2016, and is currently used by the Town and the County to process permits, inspections and other land use applications. However, for the full utilization of the software, integration of the Citizen Self Service (CSS) component is needed. CSS will establish an online portal for EnerGov, where applicants can apply online and check the status of their permits, inspections and/or application review. This includes payment of application fees online.

CSS does not allow both the County and the Town to process payments. The system is only able to remit payments to one entity, either the Town or the County. The Town and County have discussed setting-up an agreement where the County would collect payments to the Town and reimburse those on a quarterly basis. This would be at no charge to the Town, and would be accompanied by an itemized report. Credit card processing fees would be paid online by a vendor and not require collection by the Town or County.

Attached with this cover page is the DRAFT Memorandum of Agreement between the Town and the County that is necessary to establish the terms outlined above for the collection of fees paid online. The agreement has been approved by the Warren County Board of Supervisors at this time.

Council Discussion: This agenda item is scheduled for a work session review on 12/04/17.

Staff Evaluation: Staff recommends that Town Council schedule the agreement for a future meeting for approval.

Budget/Funding: None.

Legal Evaluation: The Town Attorney will be available at the work session for questions. The Town Attorney helped draft the attached MOA with the County Attorney, with assistance from the Town Director of Finance and Director of Planning & Zoning.

Town Manager: The Town Manager will be available at the work session for questions.

Council Recommendation:

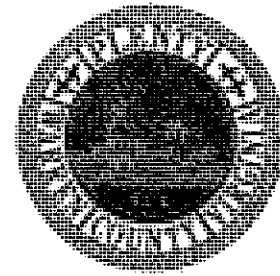
☐ Additional Work Session ☐ Regular Meeting ☐ No Action
 Consensus Poll on Action: ____ (Aye) ____ (Nay)

Work Session





MEMORANDUM OF AGREEMENT



*of the County of Warren
and the Town of Front Royal*

EnerGov Fee Collection Agreement

This MEMORANDUM OF AGREEMENT (Agreement) is between the COUNTY OF WARREN, VIRGINIA, a political subdivision of the Commonwealth of Virginia (hereinafter the "County") and THE TOWN OF FRONT ROYAL, VIRGINIA, a municipal corporation (hereinafter the "Town").

WITNESSETH:

RECITALS:

- A. In 2014, the County (April 4, 2014) and Town (June 9, 2014) individually signed agreements to purchase permitting and inspections software known as "EnerGov" from Tyler Technologies (hereinafter "EnerGov Software").
- B. One of the major advantages of the acquisition of the EnerGov Software is that the Town and County will be on the same software platform and have the ability to share information during the permit review process. Once applicants apply for planning, zoning, and building permits or plans (hereinafter "Permits") and information is entered into the system, information will be available to applicable Town and County staff.
- C. In addition, the applicants will have the ability to stay up to date on the status of Permits and inspections as the project progresses. This is possible through the Citizen Self Service (hereinafter "CSS") component of the software and is the final phase of the EnerGov Software implementation.
- D. One of the features of CSS is the ability for applicants to apply and pay for Permits online. One of the issues that have been identified with the EnerGov Software is its inability to process payments for both the County and Town. The system is only able to remit payments to either the Town or the County.

- E. The County is proposing that it take in all payments for Permits through the EnerGov Software and on a regular basis remit the portion of funds owed to the Town. This will allow County and Town to proceed with configuring CSS and complete the EnerGov Software implementation.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions contained herein, the parties hereto mutually covenant and agree as follows:

1. The Town and County will direct Tyler Technologies to complete the necessary changes to the permitting and inspections software to allow the County to accept payments for all permit applications through the system for all properties located in the Town and County limits.
2. The County will on a quarterly basis (September 30th, December 31st, March 31st, and June 30th) process a quarterly payment (hereinafter the "Payment") to the Town equal to the amount received from Tyler Technologies for the preceding 3 months for the Permits issued for properties within the Town limits.
3. The Payment will be remitted to the Town with an itemized report detailing the Permits that the Payment covers.
4. A vendor will collect all credit card processing fees through the online payment process at the time of each transaction. Neither the County nor Town will be responsible for collecting or paying any credit card processing fees. The Payment consisting of only Town Permit fees will be remitted to the Town on a quarterly basis. The County will not charge the Town for the collection and remittance of the Payment to the Town.
5. During normal business hours, the County shall provide a report on current collections for the Permits within Town limits at the request of the Town. The County will not charge the Town for the reporting service.
6. This Agreement constitutes the entire, full, and complete understanding and agreement of the parties, and may not be modified orally or in any other manner than by agreement in writing signed by all parties to the Agreement or their respective successors in interest.
7. Any term of this Agreement which is prohibited by, or is unlawful or unenforceable under Virginia law shall be ineffective only to the extent of such prohibition, without invalidating the remaining terms of this Agreement.

8. This Agreement may be terminated with ninety (90) days' notice at any time by either party.

WITNESS the following signature(s):

This Agreement is hereby entered into by the County of Warren, Virginia, as evidenced by the signature of the undersigned, who is authorized to enter into this Agreement on behalf of the County of Warren, as evidenced by a Motion authorizing the same adopted by the Warren County Board of Supervisors on _____, 20____.

For the County of Warren, Virginia

Linda P. Glavis, Chair
Board of Supervisors

Attest:

Douglas P. Stanley, Clerk
Board of Supervisors

This Agreement is hereby entered into by the Town of Front Royal, Virginia, as evidenced by the signature of the undersigned, who is authorized to enter into this Agreement on behalf of the Town of Front Royal, as evidenced by a Resolution authorizing the same adopted by the Front Royal Town Council on _____, 20____.

For the Town of Front Royal, Virginia

Hollis L. Tharpe, Mayor

Attest:

Joseph E. Waltz
Town Manager

Approved as to Form:

Dan N. Whitten
County Attorney
County of Warren, Virginia

Douglas W. Napier
Town Attorney
Town of Front Royal, Virginia

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Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: Continued Discussion of IT Federal/Royal Phoenix/W. Main Street Ext.
Director of Planning & Zoning / Town Manager

Summary:

- **IT Federal:** Based on Town Council's direction at the Work Session on November 20, 2017, Town Staff has directed Pennoni Associates to begin design work of the pump station. The work is being initiated through the EDA with the understanding that the Town will pay for the cost. Based on Pennoni Associate's cost estimate, the design will cost \$9,200. Staff has also requested a time schedule for design and construction. A decision still needs to be made regarding who is paying for the pump station construction.

To recap from the November 20th Work Session, the pump station will be designed as a 10HP Smith and Loveless system that will accommodate 80,000 GPD, or the equivalence of 4,200 employees at 15 GPD. The pump station will discharge to the north of the site, and a second pump station would be needed in the future for the southern portion of the development.

- **Royal Phoenix:** The concept plan and traffic study is scheduled for review by the Planning Commission during a work session on December 20, 2017. As identified in the traffic study addendum, there are approximately 12 million dollars in off-site improvements that are recommended to accommodate the traffic that the entire development would generate. The addendum includes a phasing analysis that points out the thresholds of when the various off-site improvements will be warranted. The concept plan and traffic study will be forwarded to Town Council following review by the Planning Commission with their recommendations.
- **W. Main Street Extension:** Bohler Engineering submitted a revised cost estimate for the construction of West Main Street (Attached). The original estimate was adjusted to reflect the pump station being a public facility. The total estimated cost is approximately \$1.4 million dollars.

Council Discussion: This agenda item is scheduled for a work session review on 12/04/17.

Staff Evaluation: Staff will be available for questions at the work session.

Budget/Funding: TBD.

Legal Evaluation: The Town Attorney will be available at the work session for questions.

Town Manager: The Town Manager will be available at the work session for questions.

Council Recommendation:

☐ Additional Work Session ☐ Regular Meeting ☐ No Action

Consensus Poll on Action: ____ (Aye) ____ (Nay)

Work Session



WEST MAIN STREET EXTENSION ENGINEERING

OPINION OF PROBABLE COST

PREPARED BY: BOHLER ENGINEERING		PREPARER: CPH		DATE: 11/29/17	
PLAN TITLE: ROYAL PHOENIX, LOT 6 SITE PLAN - PHASE 2A		PLAN #: V172037		PLAN DATE: 08/22/17	
ITEM		QUANTITY	UNIT	UNIT COST	TOTAL COST
WET UTILITIES					
WATER					
8" WATERLINE DIP		1820	LF	\$ 70.00	\$ 127,400.00
8" 45° FITTING		1	EA	\$ 500.00	\$ 500.00
8" 11.25° FITTING		2	EA	\$ 500.00	\$ 1,000.00
CHLORINATION, FLUSHING AND TESTING		1	EA	\$ 2,000.00	\$ 2,000.00
8" GATE VALVE		10	EA	\$ 1,300.00	\$ 13,000.00
6" GATE VALVE		2	EA	\$ 1,300.00	\$ 2,600.00
8" X 8" TEE		1	EA	\$ 600.00	\$ 600.00
8" X 8" CROSS		1	EA	\$ 700.00	\$ 700.00
8" X 6" CROSS		1	EA	\$ 500.00	\$ 500.00
FIRE HYDRANT ASSEMBLY		2	EA	\$ 4,000.00	\$ 8,000.00
8" STUB OUT		5	EA	\$ 2,500.00	\$ 12,500.00
SANITARY					
8" SAN PVC SDR 35		1658	LF	\$ 35.00	\$ 58,030.00
4" HDPE FORCE MAIN		1311	LF	\$ 38.00	\$ 49,818.00
SAN. MAN HOLE		9	EA	\$ 3,500.00	\$ 31,500.00
CORROSION RESISTANT MH LINING		1	EA	\$ 1,500.00	\$ 1,500.00
4" 45° FITTING		7	EA	\$ 200.00	\$ 1,400.00
PUMP STATION WITH WET WELL		1	EA	\$ 300,000.00	\$ 300,000.00
50 KW GENERATOR W/ AUTO TRANSFER SWITCH		1	EA	\$ 50,000.00	\$ 50,000.00
PRECAST BUILDING		1	EA	\$ 50,000.00	\$ 50,000.00
STORM					
6" HDPE		149	LF	\$ 16.00	\$ 2,384.00
15" CLIII RCP		104	LF	\$ 45.00	\$ 4,680.00
36" CLIII RCP		119	LF	\$ 70.00	\$ 8,330.00
15" HDPE END SECTION		1	EA	\$ 600.00	\$ 600.00
EW-1		1	EA	\$ 2,000.00	\$ 2,000.00
DI-3C		2	EA	\$ 4,000.00	\$ 8,000.00
STM. MAN HOLE		1	EA	\$ 3,200.00	\$ 3,200.00
20' SPILLWAY W/ CL I RIPRAP		300	SF	\$ 3.00	\$ 900.00
LEVEL 2 BIORETENTION (D)		1	EA	\$ 30,000.00	\$ 30,000.00
DRY UTILITIES					
6" CONDUIT ELEC		543	LF	\$ 14.00	\$ 7,602.00
4" CONDUIT TELE		96	LF	\$ 10.00	\$ 960.00
4" CONDUIT CABLE		96	LF	\$ 10.00	\$ 960.00
ROADWAY					
PAVEMENT (FULL SECTION)		4370	SY	\$ 30.00	\$ 131,100.00
PAVEMENT (BASE COURSE)		890	SY	\$ 20.00	\$ 17,800.00
GRAVEL ACCESS ROAD		10550	SY	\$ 4.00	\$ 42,200.00

CONCRETE CURB CG-6	1610	LF	\$ 15.00	\$ 24,150.00
RAMP CG-12A	6	EA	\$ 1,350.00	\$ 8,100.00
CONC. SIDE WALK	910	SY	\$ 30.00	\$ 27,300.00
STREET LIGHTS	11	EA	\$ 5,000.00	\$ 55,000.00
STOP SIGN	2	EA	\$ 200.00	\$ 400.00
6" WHITE BIKE LINE	1510	LF	\$ 1.25	\$ 1,887.50
24" CROSS WALK LINE	260	LF	\$ 3.00	\$ 780.00
4" WHITE MINI-SKIPS	80	LF	\$ 1.25	\$ 100.00
24" SOLID YELLOW	120	LF	\$ 3.00	\$ 360.00
4" SOLID YELLOW	1060	LF	\$ 1.25	\$ 1,325.00
4" SOLID DOUBLE YELLOW	190	LF	\$ 1.25	\$ 237.50
4" YELLOW MINI-SKIPS	100	LF	\$ 1.25	\$ 125.00
24" STOP BAR	5	EA	\$ 100.00	\$ 500.00
BIKE LANE SYMBOL	10	EA	\$ 100.00	\$ 1,000.00
TURN ARROW	12	EA	\$ 100.00	\$ 1,200.00
LANDSCAPING				
TREE	39	EA	\$ 400.00	\$ 15,600.00
SHRUB	30	EA	\$ 150.00	\$ 4,500.00
EROSION AND SEDIMENT CONTROL				
TEMPORARY STONE CONSTRUCTION ENTRANCE	1	EA	\$ 2,000.00	\$ 2,000.00
WASH RACK	1	EA	\$ 2,000.00	\$ 2,000.00
SILT FENCE	230	LF	\$ 8.00	\$ 1,840.00
SUPER SILT FENCE	2500	LF	\$ 20.00	\$ 50,000.00
STORM DRAIN INLET PROTECTION	2	EA	\$ 175.00	\$ 350.00
CULVERT INLET PROTECTION	3	EA	\$ 300.00	\$ 900.00
TEMPORARY DIVERSION DIKE	300	LF	\$ 6.00	\$ 1,800.00
OUTLET PROTECTION	2	EA	\$ 50.00	\$ 100.00
ROCK CHECK DAMS	7	EA	\$ 175.00	\$ 1,225.00
SITE CLEARANCE	5	AC	\$ 6,500.00	\$ 32,500.00
SEEDING	4840	SY	\$ 0.80	\$ 3,872.00
GRADING				
TYPICAL SOIL CUT-TO-FILL	7500	CY	\$ 5.00	\$ 37,500.00
OTHER				
15% CONTINGENCY (CONTRACTOR OH&P, CA'S, ETC.)				\$ 187,262.40
TOTAL:				\$ 1,435,678.40

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Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: Criser Road Bridge Project

Summary: On August 10, 2017, the Town only received one bid for the construction of the bridge for \$1,377,980 which was double the construction estimate. The Town re-advertised the RFP and on September 15, 2017, the Town received two bids but still double the construction estimate. We have had discussions with both contractors and will update Council at the meeting.

Council Discussion: Discussion on the next steps for the construction of Criser Road Bridge Project.

Staff Evaluation: Staff will be available

Budget/Funding: N/A

Legal Evaluation: Town Attorney will be available

Staff Recommendations: Staff will be available

Town Manager Recommendation: Town Manager will be available

Council Recommendation:

☐ Additional Work Session ☐ Regular Meeting ☐ No Action

Consensus Poll on Action: ____ (Aye) ____ (Nay)

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Item No. __6__

Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: Audit/Finance Committee Terms Expire

Summary: Councilman Jacob L. Meza and Vice Mayor Eugene R. Tewalt terms on the Audit and Finance Committee expire December 31, 2017. This is a one year term.

Council Discussion: Council takes desired action for appointments at the December 11, 2017 meeting

Staff Evaluation: N/A

Budget/Funding: N/A

Legal Evaluation: N/A

Staff Recommendations: N/A

Town Manager Recommendation: N/A

Council Recommendation:

☐ Additional Work Session ☐ Regular Meeting ☐ No Action

Consensus Poll on Action: ____ (Aye) ____ (Nay)

Work Session

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Town of Front Royal, Virginia Work Session Agenda Form

Date: December 4, 2017

Agenda Item: Joint Tourism Advisory Committee Recommendations

Summary: Council approved the Front Royal-Warren County Joint Tourism Advisory Committee Memorandum of Agreement (MOA) on November 13, 2017. The MOA states the Committee shall consist of (9) nine members, each appointed to a 4-year term. Three members shall be 1) the Front Royal Director of Community Development & Tourism; 2) the Warren County Planning Director and 3) the President of the Front Royal-Warren County Chamber of Commerce. The remaining (6) six members shall be appointed by the Town Council (3 members) and Board of Supervisors (3). One member from each the Town and County must be a representative from a lodging property. Council is requested to consider the recommendations from the Director of Community Development & Tourism and approve the (3) three appointments at a regular meeting.

Council Discussion: Council takes desired action

Staff Evaluation: Staff will be in attendance

Budget/Funding: N/A

Legal Evaluation: Town Attorney will be in attendance

Staff Recommendations: Staff will be in attendance

Town Manager Recommendation: Town Manager will be in attendance

Council Recommendation:

☐ Additional Work Session ☐ Regular Meeting ☐ No Action

Consensus Poll on Action: ____ (Aye) ____ (Nay)



Memorandum of Agreement



*of the Board of Supervisors of Warren County
and the Town of Front Royal*

FRONT ROYAL-WARREN COUNTY JOINT TOURISM ADVISORY COMMITTEE

I. PURPOSE

Since June 21, 1993 the Town of Front Royal has been responsible for funding the Visitor's Center and tourism for the community. At the time, the vast majority of hotels, motels, and restaurants benefitting from tourism were located inside the limits of the Town of Front Royal. With the growth of the lodging industry in the County outside of Town limits, Warren County recently adopted a 3% increase to the transient occupancy tax that increases the tax from 2% to 5% (effective July 1, 2017), which will allow the County to collect money to be spent for tourism purposes. It is understood that the intent of the County is not to supplant the current funding by the Town, but to allow the Town and County to put additional resources to branding and marketing the community as a destination. Additionally, this would allow the Town and County to support and enhance restaurants, lodging establishments, and the many amenities in the community.

The Town of Front Royal and County of Warren would like to appoint a Joint Tourism Advisory Committee to advise, assist, support, and advocate for tourism policies, programs, and activities to market and promote Front Royal-Warren County and its environs. This Committee will serve as the "local tourism industry organization" referred to in Section 58.1-3819 of the Code of Virginia, as amended, and will include local lodging partners as indicated in the Code section.

This Committee shall:

- A. Promote and assist tourism development in the Front Royal-Warren County community;
- B. Develop and assist in the implementation of a joint tourism development plan to increase overall tourism revenue;
- C. Encourage individuals, businesses, and the Town and County to invest in tourism development as an integral part of overall economic development; and
- D. Assist the various regional organizations in planning and implementing a regional tourism development plan(s).

II. COMPOSITION

- A. The Committee shall consist of nine (9) members, each appointed to a four-year term. Three members shall be 1) the Front Royal Director of Community Development & Tourism, 2) the Warren County Planning Director, and 3) the President of the Front Royal-Warren County Chamber of Commerce. The remaining six (6) members shall be appointed by the Front Royal Town Council (3 members) and Warren County Board of Supervisors (3 members). One member from each the Town and the County must be a representative from a lodging property.
- B. The officers of the Committee shall be appointed for a one-year term, with no individual holding an office for more than two consecutive terms without a one year lapse between terms. The Committee shall elect officers each July and fill vacancies as required during the intervening months. The officers shall include the following:
 - I. Chairman: develops an agenda and presides over meetings, reports quarterly to the Warren County Board of Supervisors and the Front Royal Town Council, and as agreed upon by the Committee, represents the committee on other tourism development committees and organizations, as appropriate
 - II. Vice-Chairman: serves in the absence of the Chairman and oversees the Plan of Work
 - III. Secretary: maintains the minutes of the meetings and issues notices of meetings as provided herein
 - IV. Treasurer: develops an annual budget of funds made available to the Committee
 - V. The offices of Secretary and Treasurer may be combined if the Committee so votes
- C. The Committee may utilize any existing tourism subcommittees or appoint such subcommittees or advisory groups as necessary for the conduct of its work. The Chairman of the Committee shall be an ex officio member of all such subcommittees or groups.
- D. Members of the Committee may be reimbursed for their actual expenses. Claims for expenses by Committee members shall be submitted to the Town of Front Royal and/or County of Warren and paid in accordance with the governing procedures for such claims and shall also be subject to the County's allocation and budgeting procedures.

III. FINANCIAL MATTERS

The Joint Tourism Advisory Committee is authorized to apply for, accept, and expend gifts, grants, or donations from public or private sources to enable the Committee to carry out its objectives.

- A. The County of Warren shall be designated as fiscal agent to administer and maintain fiscal records for the Committee.
- B. Each tourism project that is approved by the Committee shall include a budget and funding plan. The funding plan shall include any grant and/or private funds that may be used toward the project, as well as a proposed split (agreed to by the Director of Tourism and a representative of Warren County) of the remaining cost of the project between the Town of Front Royal and County of Warren.

IV. ADMINISTRATIVE MATTERS

- A. The Committee shall make quarterly reports to the Front Royal Town Council and Warren County Board of Supervisors.
- B. No individual member of the Committee shall make representations or commitments on the Committee's behalf without formal approval or endorsement by the majority of the membership of the Committee.

V. MEETINGS

- A. The Committee shall meet every other month on the second Wednesday of the month. Notice of time and place of regular meetings shall be emailed by the Secretary to the Committee and interested parties at least fourteen (14) days in advance of each meeting. Special meetings may be called by the Chairman or on request of three members of the Committee by emailed notice at least seven (7) days in advance of the date of such special meeting. Emergency meetings may be convened by the Chairman with a 24-hour telephone notice attempt to reach all members.
- B. Meetings shall be open to the general public and news media within the provisions of the Virginia Freedom of Information Act.
- C. The Committee, if voted upon, shall endeavor to hold its meetings in various locations of the Town/County in order to facilitate citizen involvement.
- D. A quorum shall consist of a majority of the members.
- E. Minutes of all meetings shall be kept and retained by the Secretary.
- F. Robert's Rules of Order shall govern the conduct of all meetings.

VI. GOALS OF THE COMMITTEE

Consistent with its purpose, the Committee shall establish objectives and strategies (Plan of Work) that support the Joint Tourism Plan for achieving the goals set forth below. In doing so, the Committee will provide recommendations to any public employees who may be specifically assigned to carry out the Committee's mission.

- A. Citizen Understanding - Increase the economic value of tourism and travels to the Town of Front Royal and County of Warren and its citizens and businesses, and encourages inter-community collaboration on all matters relating to tourism development and promotion.
- B. Tourism - Broaden awareness of the community's existing attractions, both natural and man-made, its heritage and historic sites, and services provided for travelers. This effort shall include awareness within the tourism industry and among the traveling public, with emphasis on multi-county initiatives whenever possible.
- C. Hospitality - Ensure that travelers to and through Front Royal-Warren County are served hospitably and have ready access to information on tourist services and points of interest.
- D. Tourism Development - Pursue with the Economic Development Authority, Town of Front Royal, and County of Warren an overall economic development program to include the development of additional visitor accommodations such as lodging and conference facilities, restaurants, campgrounds, public parks, and other attractions.
- E. Scenic Beauty - Encourage programs whose purpose(s) are to preserve and enhance the scenic beauty of the Town and County, particularly along its public highways.

VII. AMENDMENTS

This Memorandum of Agreement may be amended, repealed, or altered in whole or in part by the Front Royal Town Council and Warren County Board of Supervisors with thirty (30) days written notice.

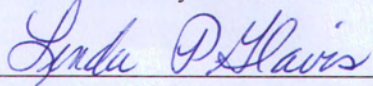
VIII. SEAL

The Committee may have a seal or logotype that identifies its purposes for use in any brochures, letterheads, and other official publications issued by the Committee on its behalf. The Committee may authorize the use of such a graphic by others when such use helps further the Committee's goals and objectives.

Approved by the Warren County Board of Supervisors
Approved by the Front Royal Town Council

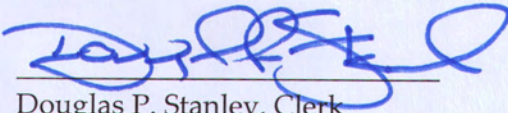
Witnesseth the following signatures:

For the County of Warren, Virginia



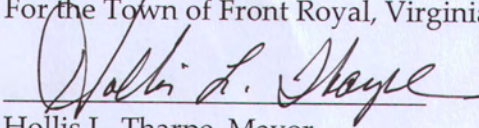
Linda P. Glavis, Chair
Board of Supervisors

Attest:



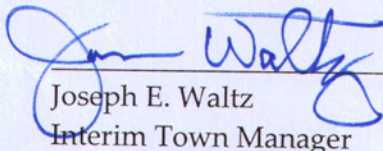
Douglas P. Stanley, Clerk
Board of Supervisors

For the Town of Front Royal, Virginia



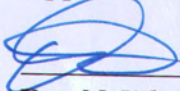
Hollis L. Tharpe, Mayor

Attest:

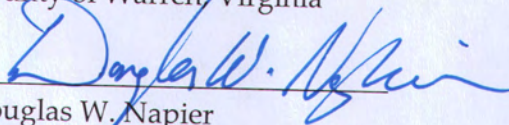


Joseph E. Waltz
Interim Town Manager

Approved as to Form:



Dan N. Whitten
County Attorney
County of Warren, Virginia



Douglas W. Napier
Town Attorney
Town of Front Royal, Virginia

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