



ROUTE 151- ROCKFISH VALLEY HWY

CORRIDOR IMPROVEMENT STUDY

Nelson County, VA

January 19, 2023



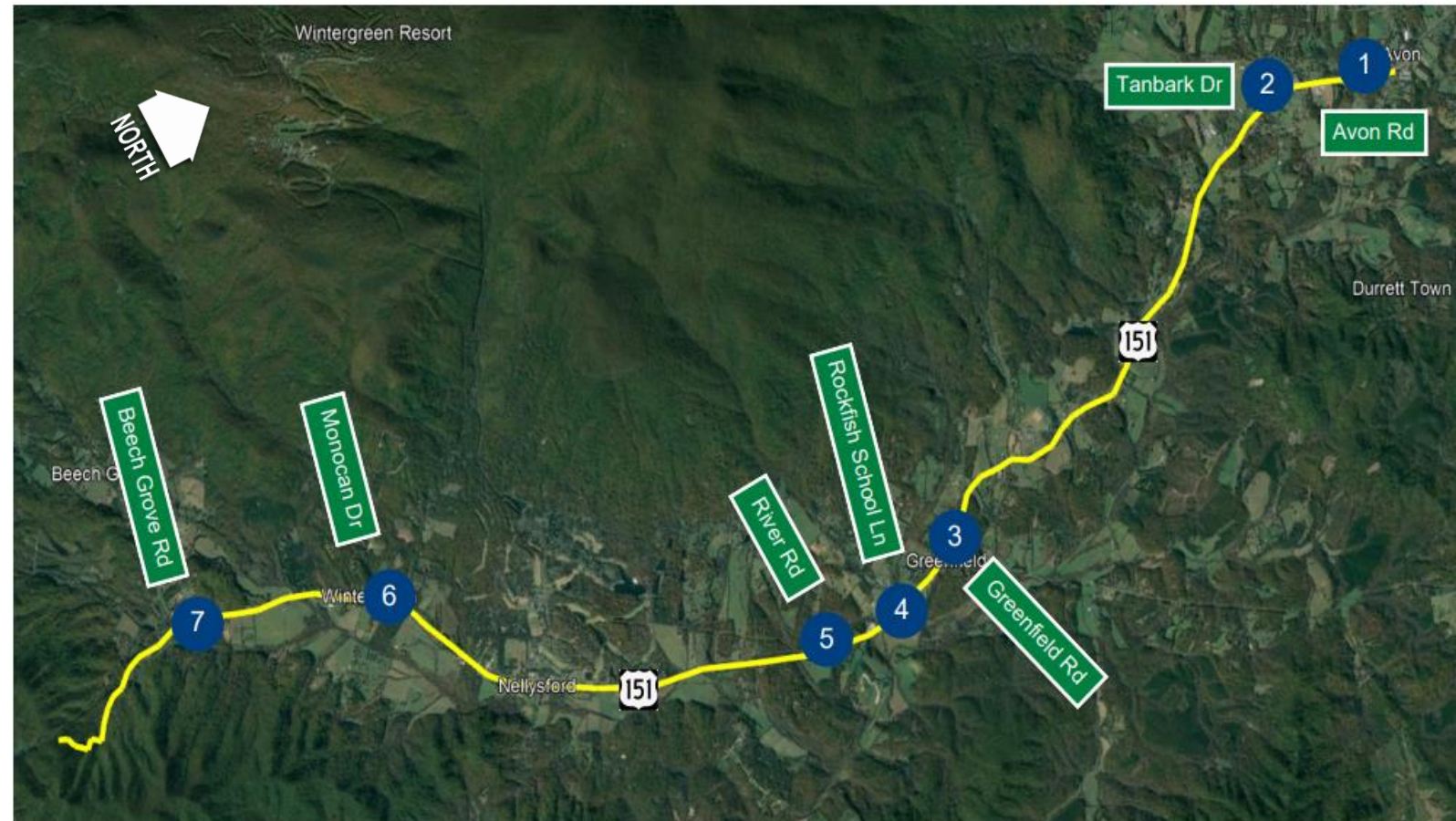
AGENDA

- **Study Area & Intersections**
- **Field Visit**
- **Safety Analysis**
- **Existing Conditions Analysis**
- **No-Build Analysis**



STUDY AREA

- Study area is approximately 14 miles
- Study area starts from Afton Mountain Rd. intersection to 2.5 mile south of Beech Grove Rd.
- All the 7 intersections are TWSC



STUDY SCOPE

- Evaluate the operational and safety characteristics of the Rte. 151 corridor
- Improve accessibility, operations, and safety for all modes of transportation
- Improve multi-modal accessibility within the Nellysford community



GENERAL CORRIDOR OBSERVATIONS

- Limited shoulders through the corridor
- Center lane rumble strips through corridor
- Rolling terrain
- Winding roadway
- Almost no bike or ped facilities
- No public transit stops identified
 - (Observed private buses)
- Clusters of development
- Concentrations of access points (driveways, intersections, etc). were sparse

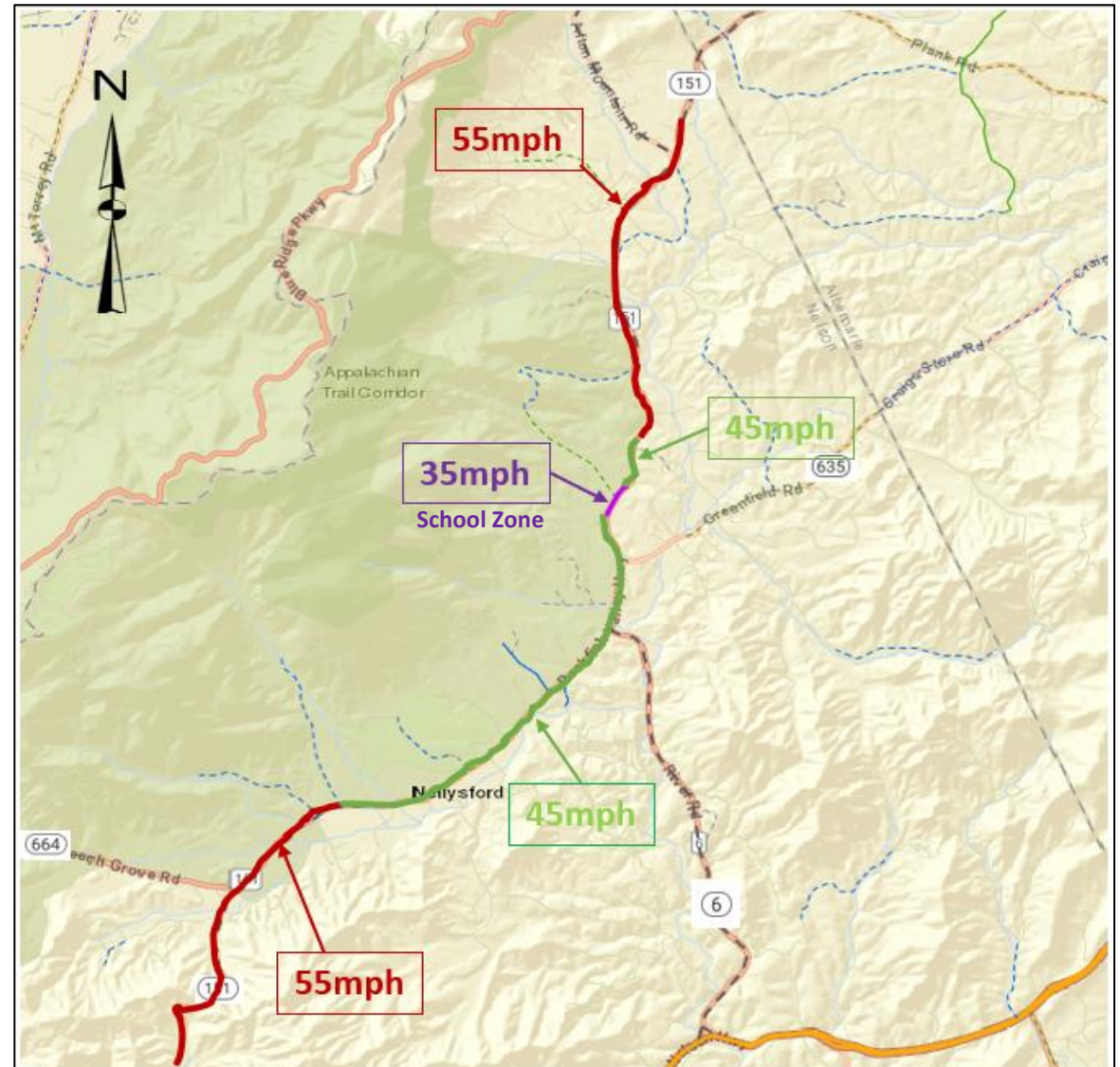


Figure:

Task Description:
Route 151 – Speed Limit
Nelson County, VA



FIELD VISIT

Avon Rd. / Afton Mountain Rd.

- Some sight distance challenges for west leg
- Turn lanes for both northbound and southbound
- Center line rumble strips
- Recent intersection improvement project with turn lanes and a bike lane



Avon Rd/Afton Mountain Rd looking south



FIELD VISIT

Tanbark Dr.

- Sight distance limitations
- Commercial entrances in close proximity
- Southbound right-turn lane
- No shoulders
- High crash intersection



Tanbark Dr. looking south



FIELD VISIT

Greenfield Rd.

- Steep approach along Greenfield Rd.
- Sub-standard right-turn lane for northbound
- Dedicated turn-lane southbound
- Segment north of intersection has a high crash density



FIELD VISIT

Rockfish School Ln.

- Shared lane for southbound right turns
- Dedicated left-turn lane northbound
- 7' shoulder northbound
- No recorded crashes in analysis period



Rockfish School Ln. looking north



FIELD VISIT

River Rd.

- Heavy southbound left-turns causes queues.
- Steady volume from Rte. 6
- No turn lanes on Rte. 151
- Steep downgrade approach northbound
- Grade challenges beyond pavement at intersection
- High density of crashes



Looking North at Rockfish Valley & River Rd

FIELD VISIT

Monocan Dr.

- Turn lanes along Rte. 151
- Adequate sight distance
- Limited crash history
- No bike/ped connectivity to adjacent destinations



Looking south at Rockfish Valley



Looking north at Rockfish Valley



FIELD VISIT

Nellysford community

- Observed pedestrian crossings without crosswalks
- No sidewalk or shared-use paths present
- No shoulders
- 8 PDO crashes and 1 non-visible injury crash along Valley Green Center frontage and Adial Rd.
- Speed limit 45 mph



FIELD VISIT

Beech Grove Rd.

- Southbound right-turn lane (recent improvement)
- Some sight-distance constraints westbound at stop sign
- Other approaches have adequate sight distance



FIELD VISIT

Segment 2.5 mi south of Beech Grove Rd.

- Steep slope segments and tight radii curves
- Steep drop offs protected by guardrail
- Steep cut slopes just off shoulder
- Speed limit 55 mph, curve advisory speeds as low as 15 mph

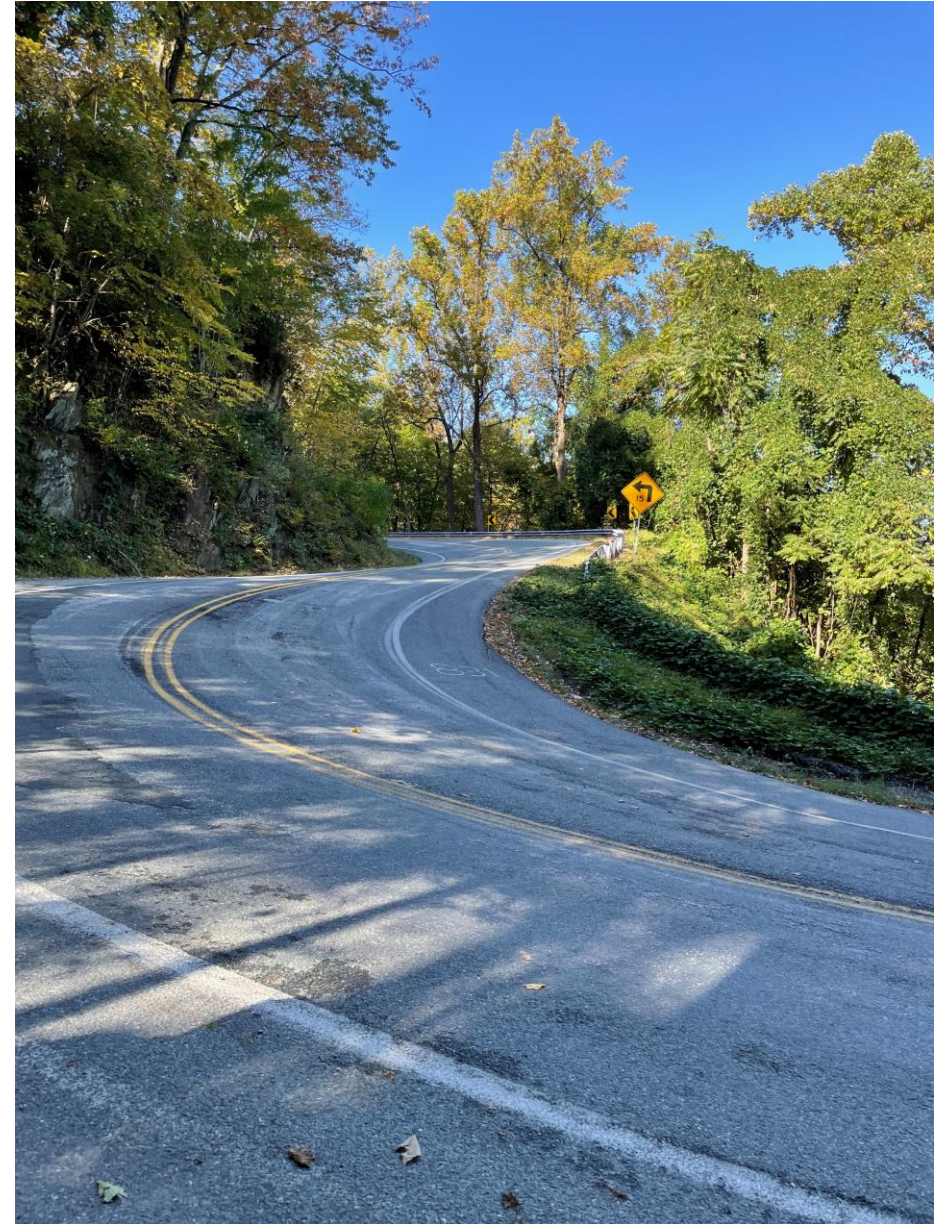


CRASH ANALYSIS



CRASH ANALYSIS METHODOLOGY

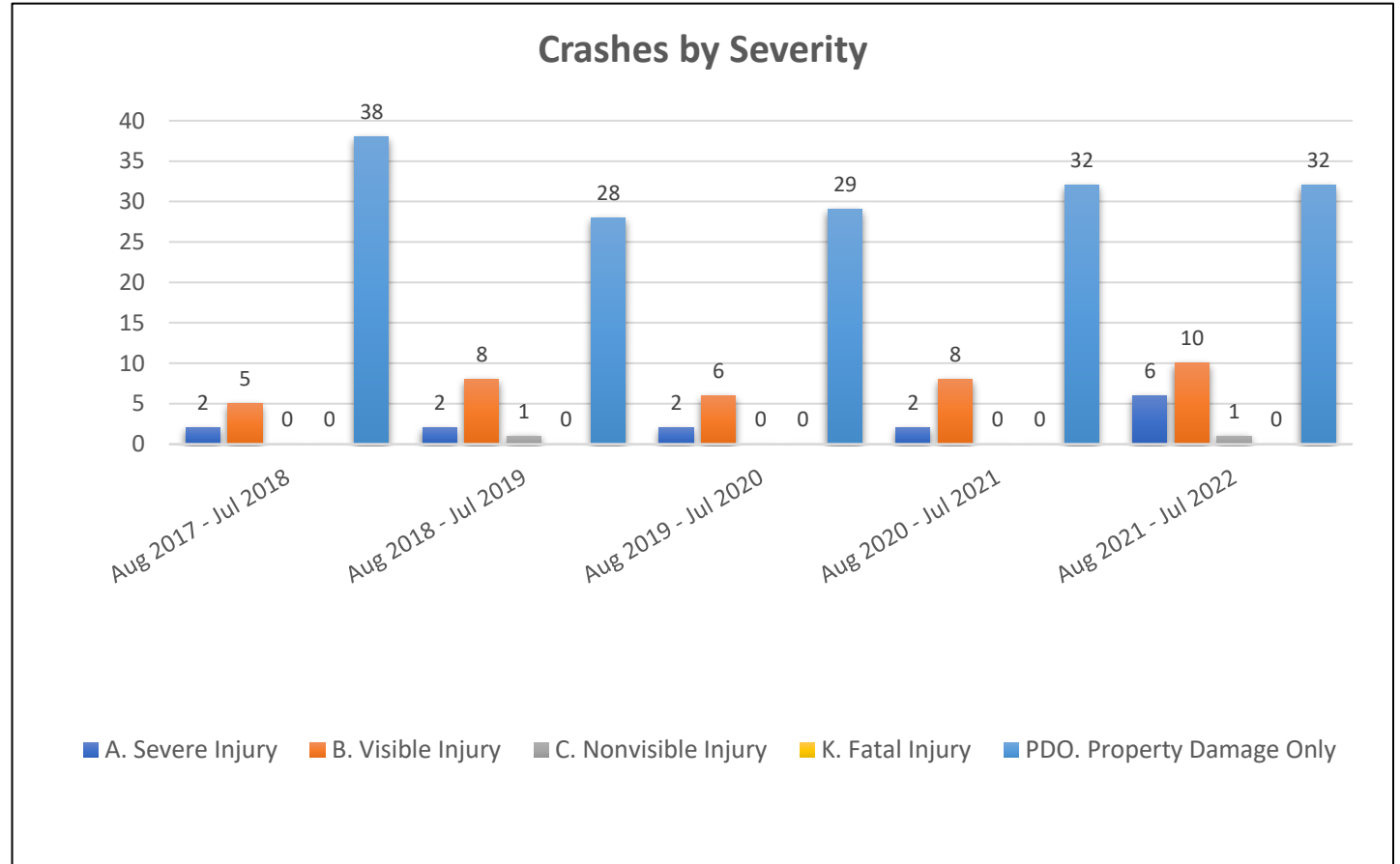
- Evaluated trends by intersection
- Summarized using tables and figures



CRASH ANALYSIS

Start Year	Number of Crashes
2017	45
2018	39
2019	37
2020	42
2021	49

Severity	Number of Crashes
Fatal	0
Severe Injury	14
Visible Injury	37
Nonvisible Injury	2
PDO	159
Total	212



Used 5-years of data from August 1, 2017 to July 31, 2022

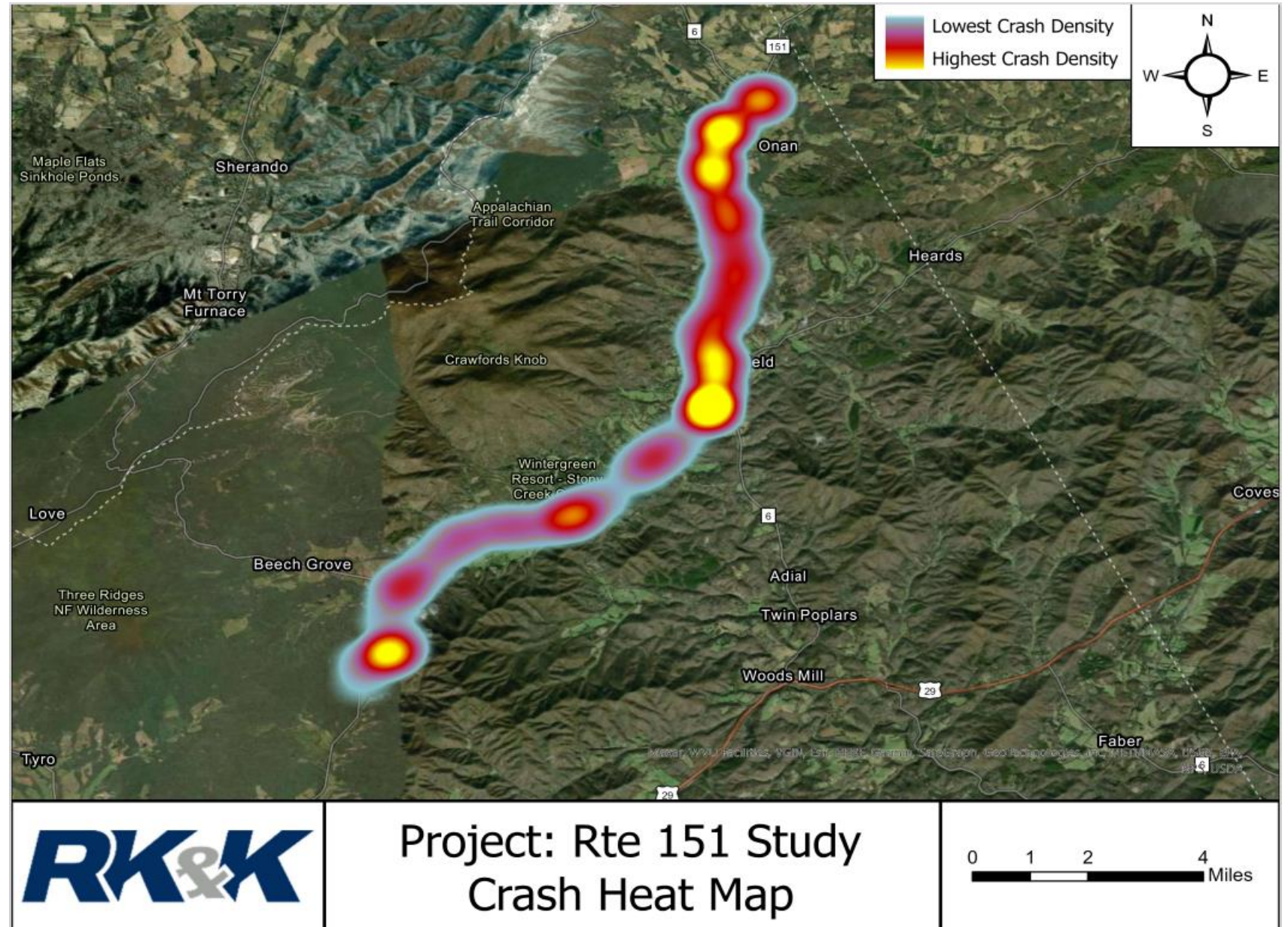


CRASH HEAT MAP

212 crashes occurred on Rte. 151 between August 2017 and July 2021

Highest density locations

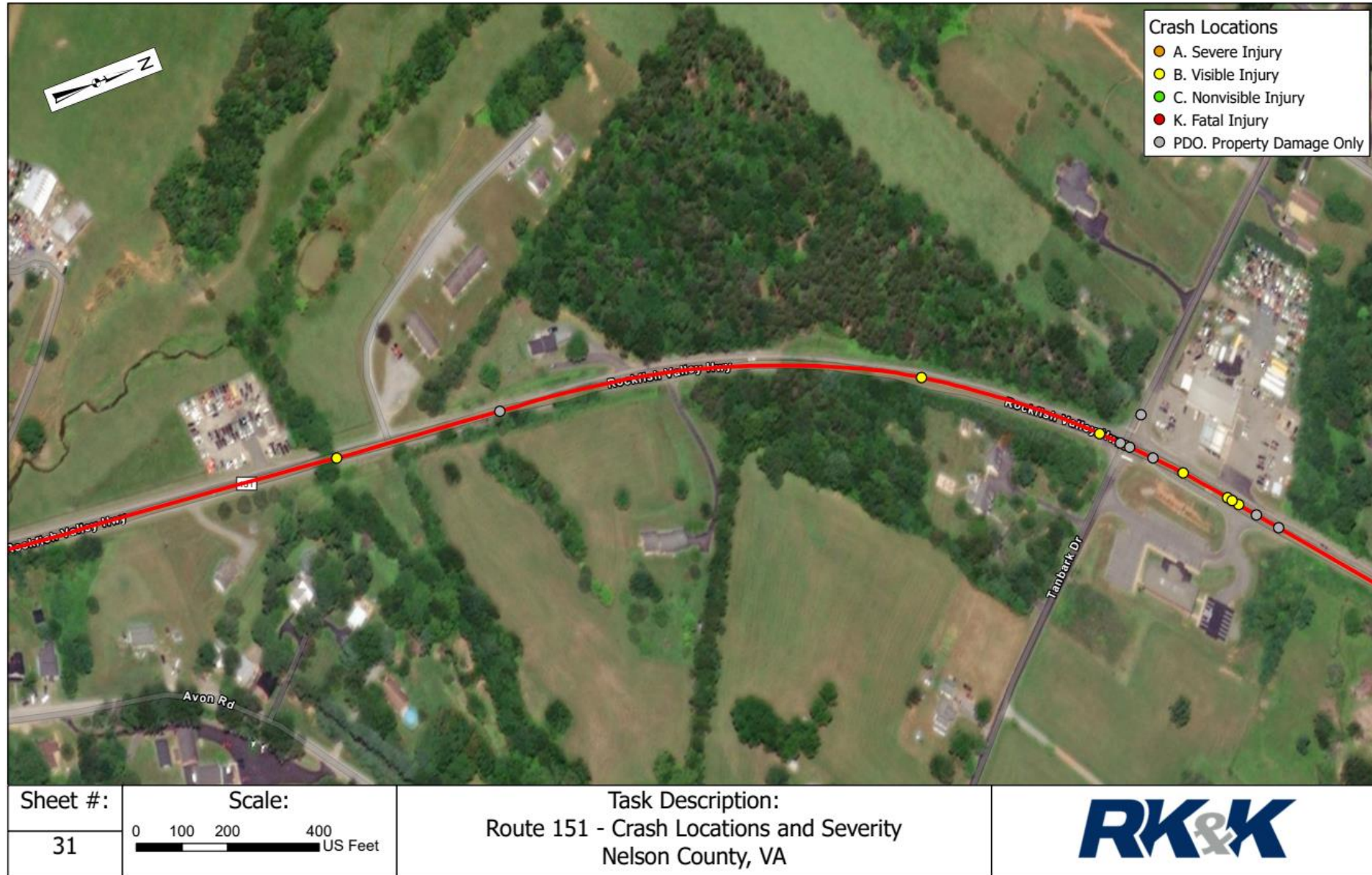
- Tanbark Dr.
- Mill Ln.
- North of Greenfield Rd.
- River Rd.
- Nellysford Area
- Switchbacks south of Beach Grove Rd.



CRASH MAP - INTERSECTION

Rte. 151 at Tanbark Dr.
12 crashes occurred on Rte. 151 at Tanbark Dr. between August 2017 and July 2021

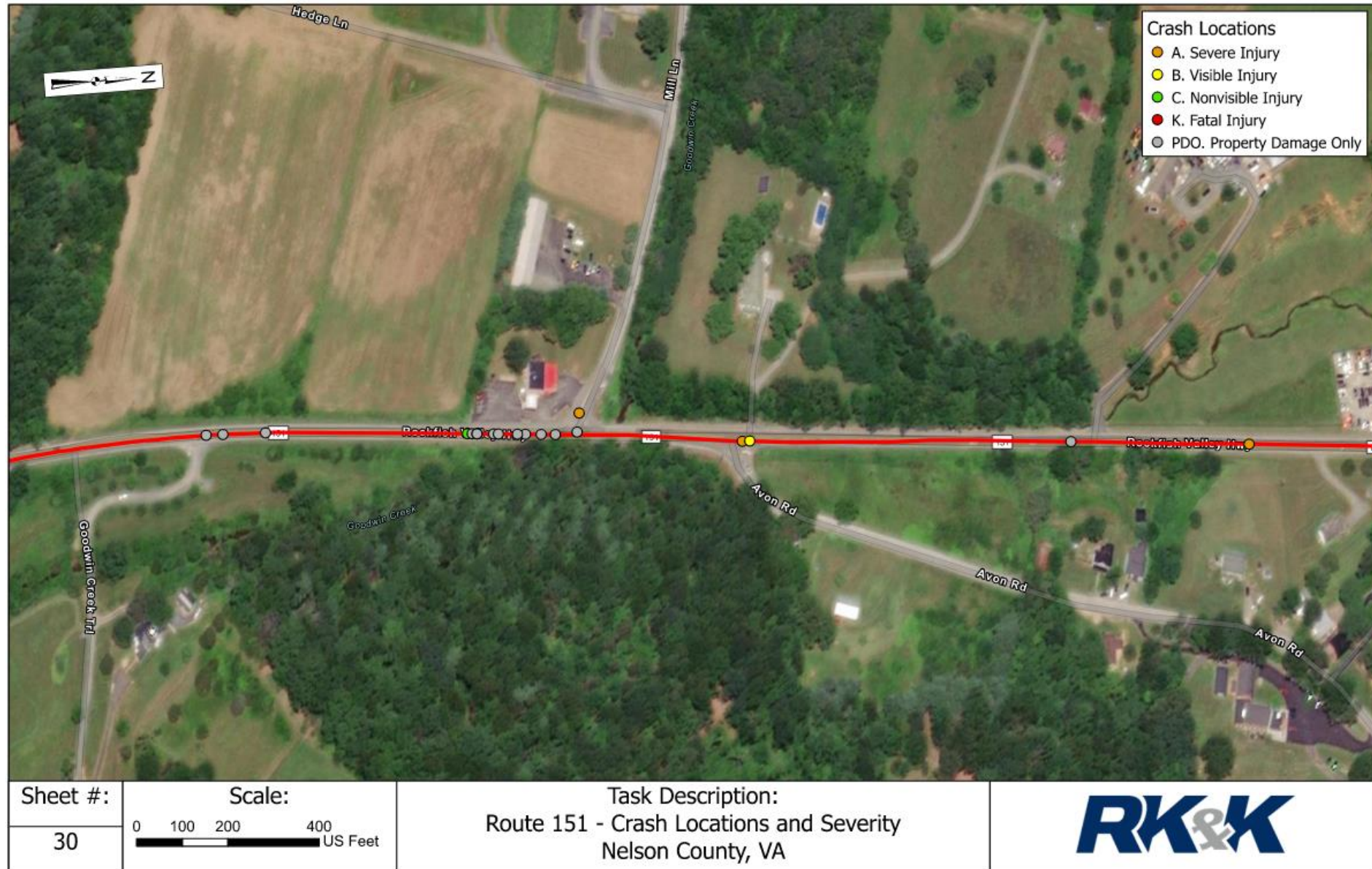
- 80th ranked PSI intersection in district



CRASH MAP - INTERSECTION

Rte. 151 at Mill Ln.

11 crashes occurred on Rte. 151 at Mill Ln. between August 2017 and July 2021.



CRASH MAP - INTERSECTION

Rte. 151 at Greenfield Rd.

13 crashes occurred on Rte. 151 at Greenfield Rd. between August 2017 and July 2021

- 110th ranked PSI segment in district



Sheet #:

22

Scale:

0 100 200 400
US Feet

Task Description:

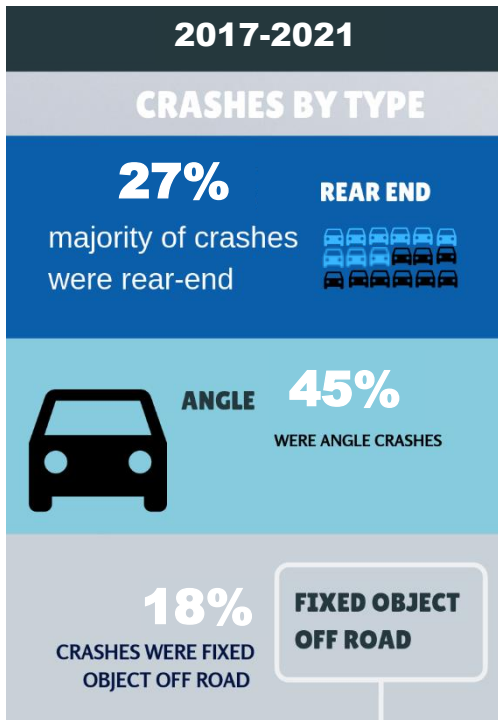
Route 151 - Crash Locations and Severity
Nelson County, VA



CRASH MAP - INTERSECTION

Rte. 151 at River Rd.

- 99th ranked PSI intersection in district



22 crashes occurred on Rte. 151 at River Rd. between August 2017 and July 2021



Sheet #:	Scale:	Task Description:	
20	0 100 200 400 US Feet	Route 151 - Crash Locations and Severity Nelson County, VA	


CRASH MAP - INTERSECTION

Nellysford



9 crashes occurred on Rte. 151 near Adial Rd. between August 2017 and July 2021



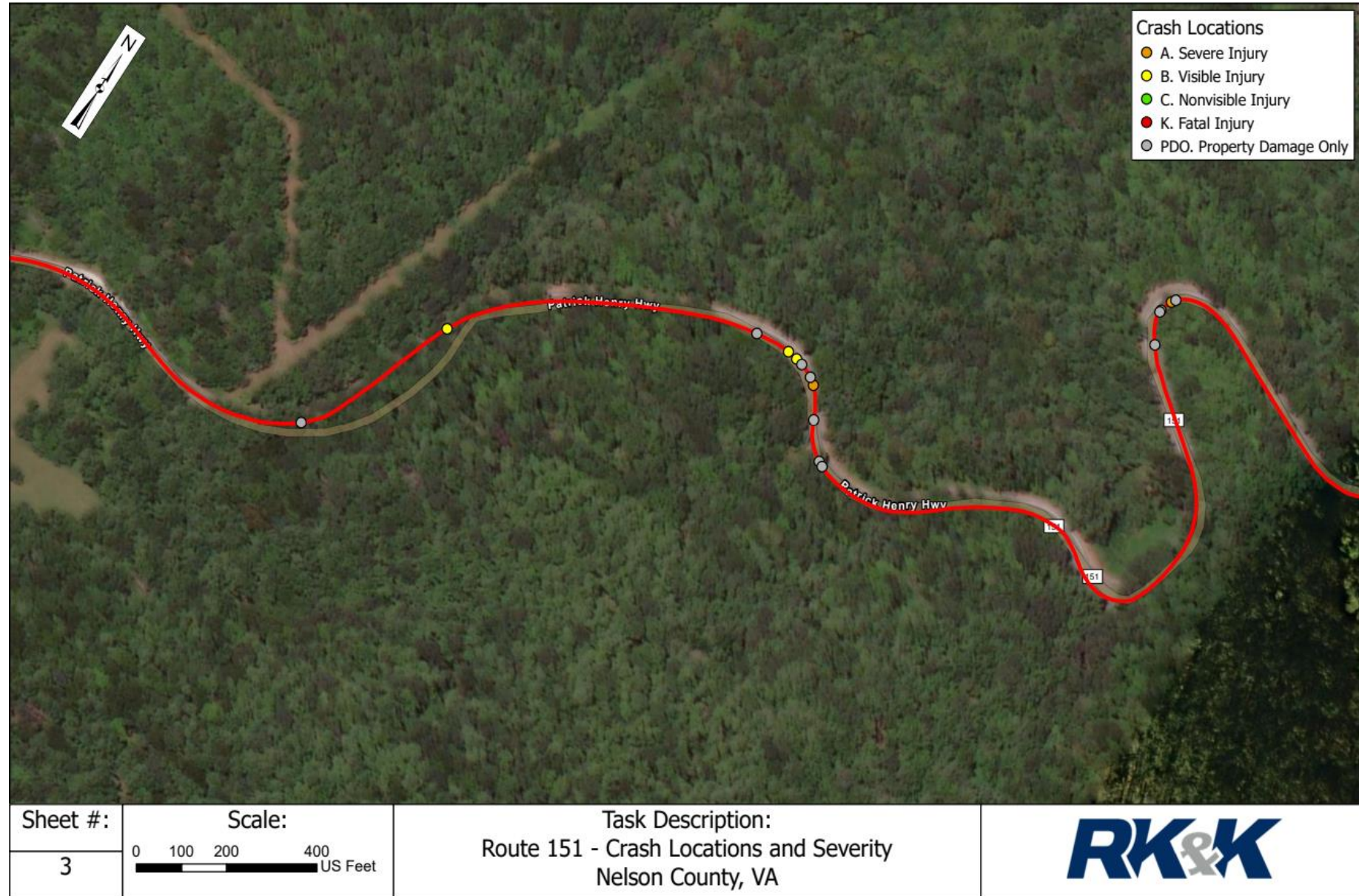
Sheet #:	Scale:	Task Description:	
13	0 100 200 400 US Feet	Route 151 - Crash Locations and Severity Nelson County, VA	



CRASH MAP - INTERSECTION

Segment south of Beach Grove Rd.

- 15 crashes, 5 injuries within portion shown.
- 60th ranked PSI segment in district



TRAFFIC ANALYSIS



DATA COLLECTION

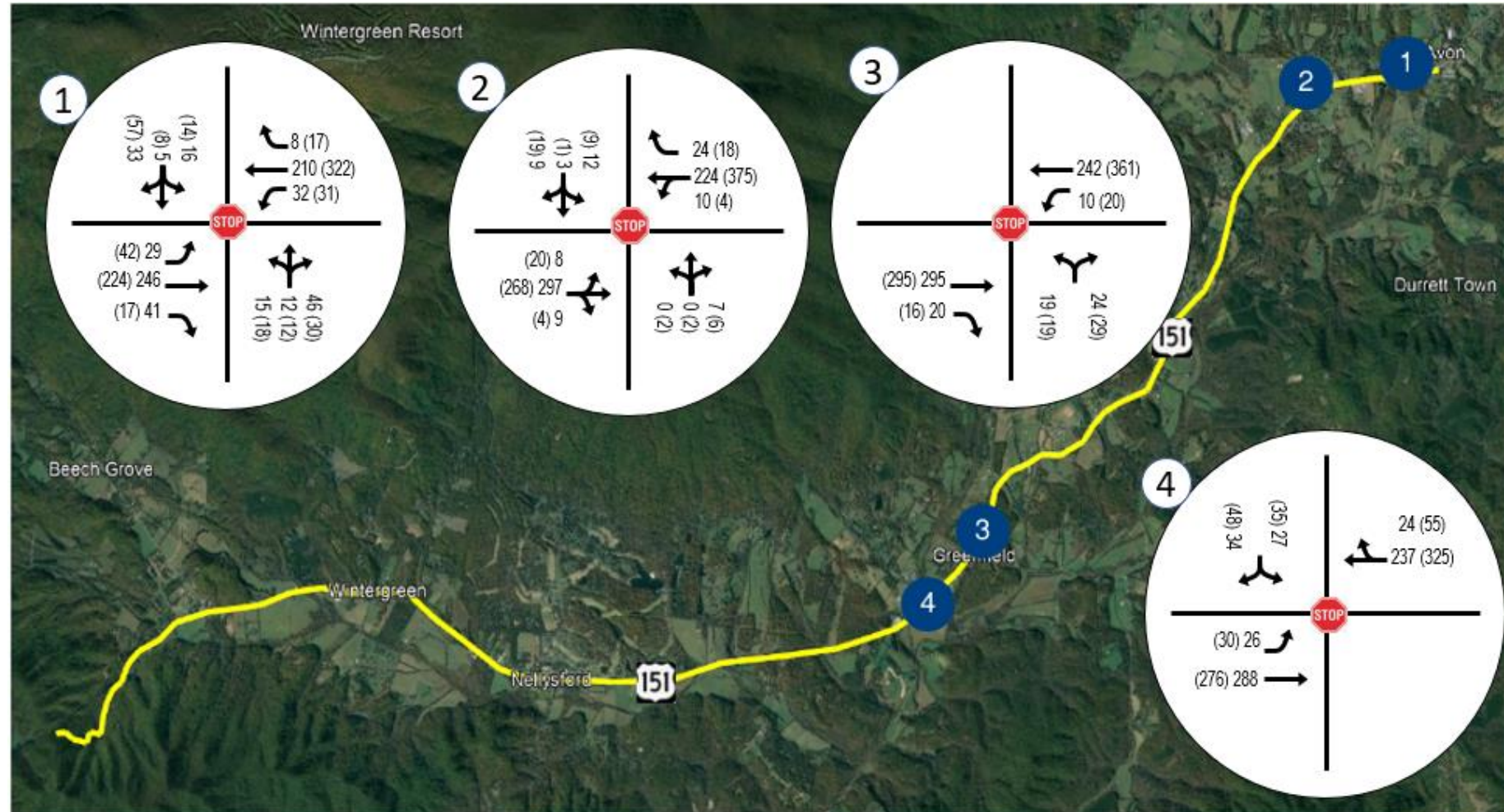
- 12-hour turning movement counts collected on May 24, and August 13, 2022
- 7 Intersections TMCs (Weekday and Saturday 12-Hour)
- Saturday peak volumes were used in the analysis
- 48-Hour Speed Data

Location	Direction	Avg Speed	85%ile Speed
Rt.151 & Tanbark Dr (Posted speed 55 mph)	North	52.0	59.6
	South	48.2	57.0
Rt.151 & Beech Grove Rd (Posted speed 55 mph)	North	46.7	55.8
	South	47.3	55.5



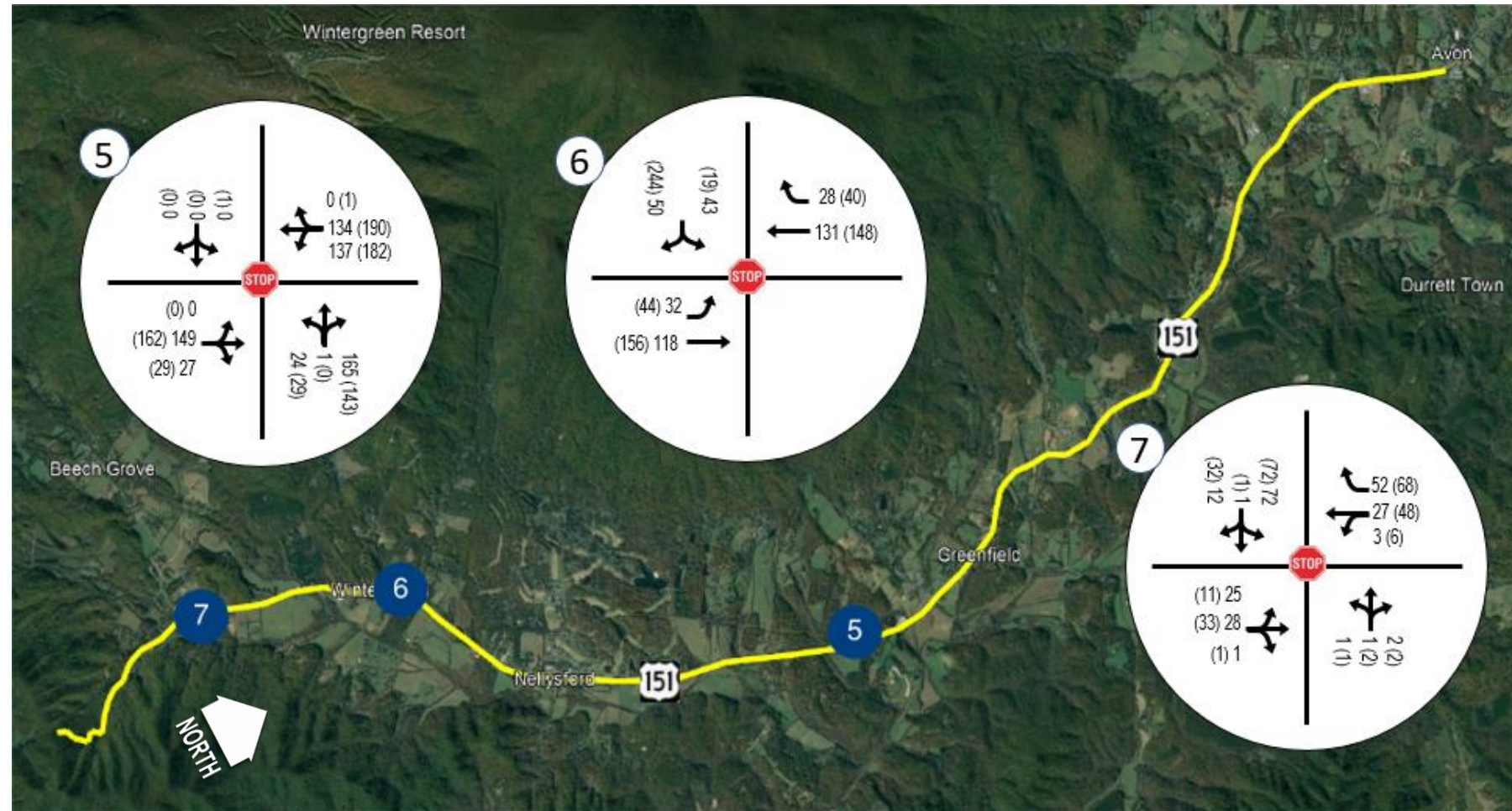
EXISTING INTERSECTIONS VOLUMES (AM & PM PEAK HOURS)

- 1. Afton Mountain Rd.
- 2. Tanbark Dr.
- 3. Greenfield Rd.
- 4. Rockfish School Ln.



EXISTING INTERSECTIONS VOLUMES (AM & PM PEAK HOURS)

- 5. River Rd.
- 6. Monacon Dr.
- 7. Beech Grove Rd.



EXISTING CONDITIONS OPERATIONS

Traffic Level of Service

Good

Fair

Poor

Intersections Results

Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
Greenfield Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	WBL	-	19	11.8	47	19	12.7	69	27	17.1	58
	WBR	-	24	11.8	47	29	12.7	69	27	17.1	58
	WB	-	43	11.8		48	12.7		54	17.1	
	NBT	-	295	0.0		295	0.0		397	0.0	
	NBR	134	20	0.0		16	0.0		27	0.0	2
	NB	-	315	0.0		311	0.0		424	0.0	
	SBL	285	10	8.0	30	20	8.0	39	14	8.3	37
	SBT	-	242	0.3		361	0.4		574	0.2	
	SB	-	252	0.3		381	0.4		588	0.2	
Overall			610			740			1,066		
Rockfish School Ln. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	27	12.1	67	35	13.5	70	55	27.7	127
	EBR	-	34	12.1	67	48	13.5	70	58	27.7	127
	EB	-	61	12.1		83	13.5		113	27.7	
	NBL	320	26	7.9	28	30	8.2	34	59	9.1	56
	NBT	-	288	0.7		276	0.8		369	1.3	
	NB	-	314	0.7		306	0.8		428	1.3	
	SBT	-	237	0.0	9	325	0.0	17	537	0.0	15
	SBR	-	24	0.0	9	55	0.0	17	64	0.0	15
	SB	-	261	0.0		380	0.0		601	0.0	
	Overall			636			769			1,142	

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.

Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
Afton Mountain Rd/Avon Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	16	13.4	44	14	14.5	67	21	19.0	75
	EBT	-	5	13.4	44	8	14.5	67	2	19.0	75
	EBR	-	33	13.4	44	57	14.5	67	44	19.0	75
	EB	-	54	13.4		79	14.5		67	19.0	
	WBL	-	15	13.5	63	18	16.4	75	1	13.0	46
	WBT	-	12	13.5	63	12	16.4	75	3	13.0	46
	WBR	-	46	13.5	63	30	16.4	75	19	13.0	46
	WB	-	73	13.5		60	16.4		23	13.0	
	NBL	348	29	7.8	25	42	8.1	36	58	8.5	46
	NBT	-	246	0.8		224	1.3		365	1.2	
	NBR	190	41	0.8		17	1.3		4	1.2	
	NB	-	316	0.8		283	1.3		427	1.2	
	SBL	298	32	7.9	22	31	7.8	18	18	8.2	20
	SBT	-	210	1.0		322	0.7		441	0.3	
	SBR	176	8	1.0		17	0.7		39	0.3	
	SB	-	250	1.0		370	0.7		498	0.3	
	Overall			693			792			1,015	
Tanbark Dr. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	12	12.7	37	9	13.1	39	12	19.4	37
	EBT	-	3	12.7	37	1	13.1	39	1	19.4	37
	EBR	-	9	12.7	37	19	13.1	39	7	19.4	37
	EB	-	24	12.7		29	13.1		20	19.4	
	WBL	-	0	10.0	22	2	12.6	25	0	10.9	11
	WBT	-	0	10.0	22	2	12.6	25	0	10.9	11
	WBR	-	7	10.0	22	6	12.6	25	1	10.9	11
	WB	-	7	10.0		10	12.6		1	10.9	
	NBL	-	8	7.8	43	20	8.3	99	20	8.5	103
	NBT	-	297	0.0	43	268	0.0	99	414	0.0	103
	NBR	-	9	0.0	43	4	0.0	99	1	0.0	103
	NB	-	314	0.2		292	0.6		435	0.4	
	SBL	-	10	8.5	58	4	8.1	31	10	8.4	43
	SBT	-	224	0.0	58	375	0.0	31	461	0.0	43
	SBR	168	24	0.0		18	0.0		15	0.0	
SB	-	258	0.3		397	0.1		486	0.2		
Overall			603			728			942		

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.

Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

EXISTING CONDITIONS OPERATIONS

Traffic Level of Service



Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
Beech Grove Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151 Rockfish Valley Hwy Unsignalized	EBL	-	72	10.0	75	72	9.8	65	108	10.2	71
	EBT	-	1	10.0	75	1	9.8	65	1	10.2	71
	EBR	-	12	10.0	75	32	9.8	65	39	10.2	71
	EB	-	85	10.0		105	9.8		148	10.2	
	WBL	-	1	9.4	47	1	9.2	31	2	9.3	55
	WBT	-	1	9.4	47	2	9.2	31	0	9.3	55
	WBR	-	2	9.4	47	2	9.2	31	3	9.3	55
	WB	-	4	9.4		5	9.2		5	9.3	
	NBL	-	25	7.4	31	11	7.3	17	16	7.3	20
	NBT	-	28	0.0	31	33	0.0	17	55	0.0	20
	NBR	-	1	0.0	31	1	0.0	17	1	0.0	20
	NB	-	54	3.4		45	1.8		72	1.6	
	SBL	-	3	7.3	2	6	7.3	5	3	7.3	2
	SBT	-	27	0.0	2	48	0.0	5	58	0.0	2
	SBR	366	52	0.0	11	68	0.0		134	0.0	31
SB	-	82	0.7		122	0.8		195	0.4		
Overall			225			277			420		

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.

Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2022 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
River Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151 Rockfish Valley Hwy Unsignalized	EBL	-	0	0.0		1	23.9	19	1	64.1	15
	EBT	-	0	0.0		0	23.9	19	0	64.1	15
	EBR	-	0	0.0		0	23.9	19	0	64.1	15
	EB	-	0	0.0		1	23.9		1	64.1	
	WBL	-	24	11.7	96	29	13.6	121	29	25.6	202
	WBT	-	1	11.7	96	0	13.6	121	1	25.6	202
	WBR	-	165	11.7	96	143	13.6	121	222	25.6	202
	WB	-	190	11.7		172	13.6		252	25.6	
	NBL		0	0.0	6	0	0.0	18	0	0.0	8
	NBT		149	0.0	6	162	0.0	18	205	0.0	8
	NBR	-	27	0.0	6	29	0.0	18	45	0.0	8
	NB	-	176	0.0		191	0.0		250	0.0	
	SBL		137	8.0	112	182	8.2	132	301	8.8	164
	SBT		134	0.0	112	190	0.0	132	293	0.0	164
	SBR	-	0	0.0	112	1	0.0	132	1	0.0	164
SB	-	271	4.1		373	4.0		595	4.5		
Overall			637			737			1,098		
Monocan Dr. (Rockfish Valley Hwy.; N-S) at Rt. 151 Rockfish Valley Hwy Unsignalized	EBL	-	43	11.2	59	20	11.6	38	104	16.5	76
	EBR	146	50	9.3	63	50	9.4	55	105	10.2	66
	EB	-	93	10.2		70	10.0		209	13.3	
	NBL	360	32	7.7	41	44	7.7	41	87	8.1	61
	NBT		118	10.2		156	1.7		161	2.8	
	NB	-	150	10.2		200	1.7		248	2.8	
	SBT		131	0.0		148	0.0		218	0.0	
	SBR	260	28	0.0	2	40	0.0	9	74	0.0	20
	SB	-	159	0.0		188	0.0		292	0.0	
	Overall			402			458			749	

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.

Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

TRAFFIC FORECASTING

■ Traffic Forecasting

- Growth rates from two sources
 - Statewide Planning System (SPS) data
 - VDOT historical AADT data

■ Future Volume Methodology

- Growth rate of 1.0% applied to all movement volumes

■ AADT Development

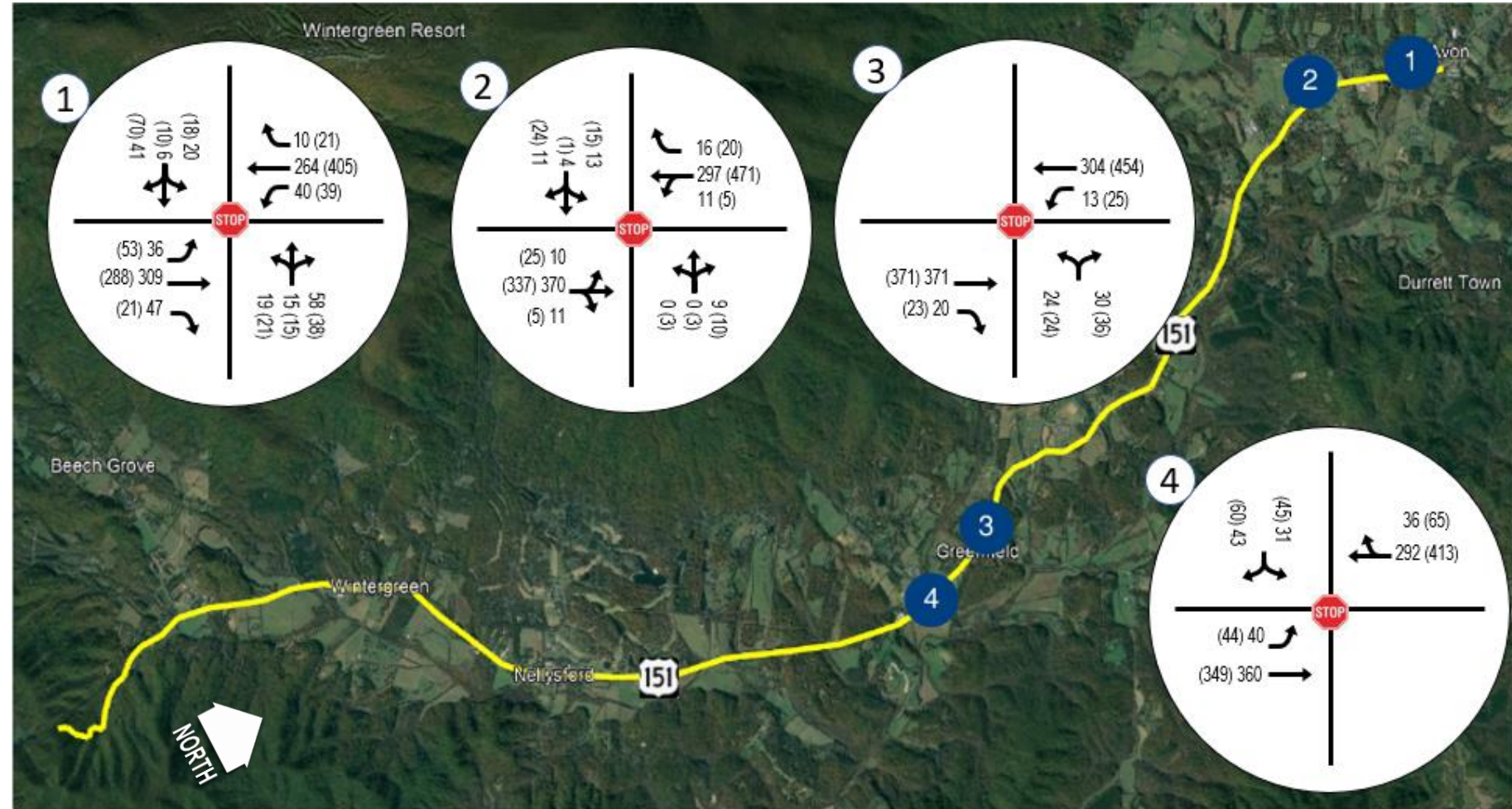
- Movements on each segment between intersections on VDOT AADT data for Rockfish Valley Hwy:
 - 1.0% Growth rate applied from 2022 to 2045 to entire corridor volumes and intersections

Road	Segment From	Segment To	Count Year (AADT)		Annual Growth	Growth Factor
			2019	2045	2019-2045	2022 - 2045
Route 151	SR 6 Avon	Albemarle County Line	9,424	12,419	1.1%	1.3
	784 Bland Wade Ln	SR 6 Avon	8,586	10,726	0.9%	1.2
	SR 6 River Rd	784 Bland Wade Ln	8,586	9,777	0.5%	1.1
	751 Old Stony Creek Rd	SR 6 River Rd	4,481	6,873	1.7%	1.5
	707 Brents Ln	751 Old Stony Creek Rd	1,457	1,646	0.5%	1.1
	62-664 Beach Grove Rd	SR 6 River Rd	4,481	6,873	1.7%	1.5
Afton Mountain Rd	US 250 Rockfish Gap Trnprk	SR 151 Critzers Shop Rd	741	908	0.8%	1.2
Greenfield Rd	SR 151 Rockfish Valley Hwy	SC 692 Albemarle County Line	1,434	1,696	0.6%	1.2
River Road	SR 151 Rockfish Valley Hwy	US 29 W, Thomas Nelson Hwy	4,972	7,164	1.4%	1.4



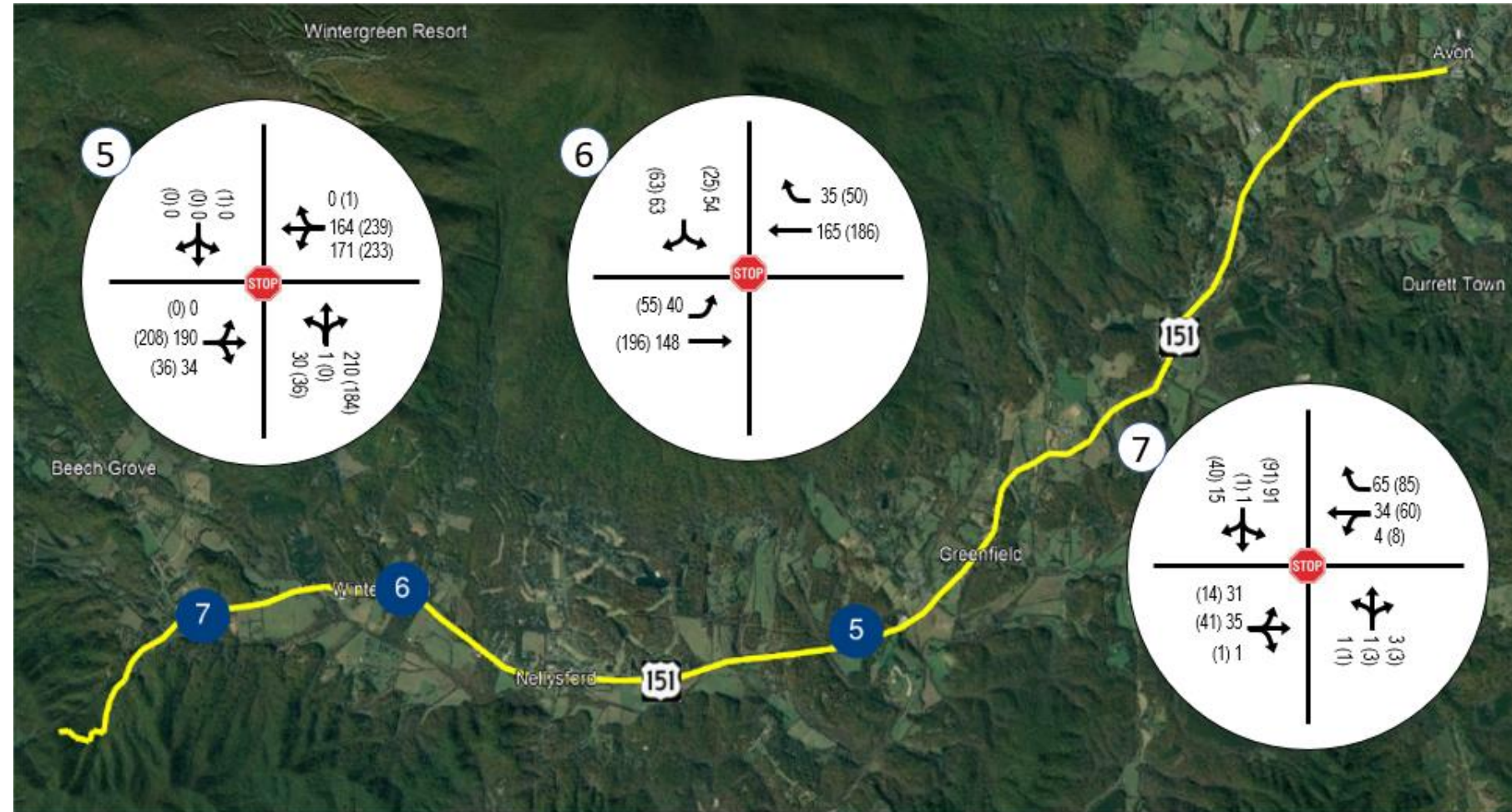
NO-BUILD CONDITION INTERSECTIONS VOLUMES STUDY AREA

- 1. Afton Mountain Rd.
- 2. Tanbark Dr.
- 3. Greenfield Rd.
- 4. Rockfish School Ln.



NO-BUILD CONDITION INTERSECTIONS VOLUMES STUDY AREA

- 5. River Rd.
- 6. Monacon Dr.
- 7. Beech Grove Rd.



No-BUILD CONDITION OPERATIONS

Traffic Level of Service



Intersections Results

Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour		PM Peak Hour			SAT Peak Hour		
			2045 Volume (vph)	HCM Delay (s/vehs)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
Greenfield Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	WBL	-	24	13.4	24	15.0	70	34	23.2	70
	WBR	-	30	13.5	36	15.0	70	34	23.2	70
	WB	-	54	13.5	60	15.0		68	23.2	
	NBT	-	371	0.0	371	0.0		499	0.0	
	NBR	134	20	0.0	23	0.0	2	26	0.0	
	NB	-	391	0.0	394	0.0		525	0.0	
	SBL	285	13	8.2	25	8.3	47	10	8.6	27
	SBT	-	304	0.3	454	0.4		700	0.1	
	SB	-	317	0.3	479	0.4		710	0.1	
Overall			762		933			1,303		
Rockfish School Ln. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	30	13.9	45	17.1	88	66	68.1	138
	EBR	-	43	13.9	60	17.1	88	73	68.1	138
	EB	-	73	13.9	105	17.1		139	68.1	
	NBL	320	40	8.1	44	8.5	48	74	9.9	70
	NBT	-	360	0.8	349	1.0		459	1.4	
	NB	-	400	0.8	393	1.0		533	1.4	
	SBT	-	292	0.0	413	0.0	17	660	0.0	18
	SBR	-	36	0.0	65	0.0	17	74	0.0	18
	SB	-	328	0.0	478	0.0		734	0.0	
	Overall			801		976			1,406	

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.

Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
Afton Mountain Rd/Avon Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	20	15.8	66	18	18.9	80	26	31.0	91
	EBT	-	6	15.8	66	10	18.9	80	3	31.0	91
	EBR	-	41	15.8	66	70	18.9	80	55	31.0	91
	EB	-	67	15.8		98	18.9		84	31.0	
	WBL	-	19	15.9	81	21	21.9	79	1	15.7	50
	WBT	-	15	15.9	81	15	21.9	79	4	15.7	50
	WBR	-	58	15.9	81	38	21.9	79	24	15.7	50
	WB	-	92	15.9		74	21.9		29	15.7	
	NBL	348	36	7.9	27	53	8.4	47	73	9.0	64
	NBT	-	309	0.8		288	1.3		459	1.2	8
	NBR	190	47	0.8		21	1.3		1	1.2	
	NB	-	392	0.8		362	1.3		533	1.2	
	SBL	298	40	8.1	31	39	8.0	25	23	8.5	25
	SBT	-	264	1.1		405	0.7		554	0.3	
	SBR	176	10	1.1		21	0.7		49	0.3	
	SB	-	314	1.1		465	0.7		626	0.3	
Overall			865			999			1,272		
Tanbark Dr. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	13	14.7	43	10	16.4	58	15	23.8	67
	EBT	-	4	14.7	43	1	16.4	58	1	23.8	67
	EBR	-	11	14.7	43	21	16.4	58	20	23.8	67
	EB	-	28	14.7		32	16.4		36	23.8	
	WBL	-	0	10.6	23	2	14.5	31	0	11.8	13
	WBT	-	0	10.6	23	2	14.5	31	0	11.8	13
	WBR	-	9	10.6	23	7	14.5	31	1	11.8	13
	WB	-	9	10.5		11	14.5		1	11.8	
	NBL	-	10	7.9	72	22	8.7	122	25	8.9	194
	NBT	-	370	0.0	72	297	0.0	122	517	0.0	194
	NBR	-	11	0.0	72	4	0.0	122	1	0.0	194
	NB	-	391	0.2		323	0.6		543	0.1	
	SBL	-	11	8.8	54	4	8.4	39	10	8.8	75
	SBT	-	297	0.0	54	416	0.0	39	585	0.0	75
	SBR	168	16	0.0		20	0.0		15	0.0	2
	SB	-	324	0.3		440	0.1		610	0.1	
Overall			752			806			1,190		

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.

Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

No-BUILD CONDITION OPERATIONS

Traffic Level of Service



Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
			Beech Grove Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	91	10.4	80	91	10.3	74
	EBT	-	1	10.4	80	1	10.3	74	1	10.9	75
	EBR	-	15	10.4	80	40	10.3	74	49	10.9	75
	EB	-	107	10.4		132	10.3		186	10.9	
	WBL	-	1	9.3	40	1	9.4	31	3	9.5	50
	WBT	-	1	9.3	40	3	9.4	31	0	9.5	50
	WBR	-	3	9.3	40	3	9.4	31	4	9.5	50
	WB	-	5	9.3		7	9.4		7	9.5	
	NBL	-	31	7.4	22	14	7.4	15	20	7.4	23
	NBT	-	35	0.0	22	41	0.0	15	69	0.0	23
	NBR	-	1	0.0	22	1	0.0	15	1	0.0	23
	NB	-	67	3.4		56	1.8		90	1.6	
	SBL	-	4	7.3	2	8	7.3	7	4	7.3	5
	SBT	-	34	0.0	2	60	0.0		73	0.0	5
	SBR	366	65	0.0	18	85	0.0		168	0.0	24
	SB	-	103	0.8		153	0.9		245	0.4	
	Overall		282			348			528		

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.
 Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

Study Intersection	Movement	Storage Length (Feet)	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)	2045 Volume (vph)	HCM Delay (s/vehs)	Sim Traffic Max Q (Feet)
			River Rd. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	0	0.0		1	37.2	18
	EBT	-	0	0.0		0	37.2	18	0	149.6	30
	EBR	-	0	0.0		0	37.2	18	0	149.6	30
	EB	-	0	0.0		1	37.2		1	149.6	
	WBL	-	30	13.8	125	36	18.8	154	36	131.0	379
	WBT	-	1	13.8	125	0	18.8	154	1	131.0	379
	WBR	-	210	13.8	125	184	18.8	154	276	131.0	379
	WB	-	241	13.8		220	18.8		313	131.0	
	NBL		0	0.0	15	0	0.0	10	0	0.0	14
	NBT		190	0.0	15	208	0.0	10	256	0.0	14
	NBR	-	34	0.0	15	36	0.0	10	57	0.0	14
	NB	-	224	0.0		244	0.0		313	0.0	
	SBL		171	8.3	150	233	8.6	216	369	9.5	246
	SBT		164	0.0	150	239	0.0	216	363	0.0	246
	SBR	-	0	0.0	150	1	0.0	216	1	0.0	246
	SB	-	335	4.2		473	4.2		733	4.8	
	Overall		800			938			1,360		
Monocan Dr. (Rockfish Valley Hwy.; N-S) at Rt. 151Rockfish Valley Hwy <i>Unsignalized</i>	EBL	-	54	12.2	56	25	12.9	35	131	23.5	107
	EBR	146	63	10.8	58	63	10.6	58	132	17.2	79
	EB	-	117	10.8		88	10.6		263	17.2	
	NBL	360	40	7.8	56	55	7.9	46	109	8.4	72
	NBT		148	1.7		196	1.7		202	3.0	
	NB	-	188	1.7		251	1.7		311	3.0	
	SBT		148	0.0		186	0.0		274	0.0	
	SBR	260	35	0.0	2	50	0.0	6	93	0.0	19
	SB	-	183	0.0		236	0.0		367	0.0	
	Overall		488			575			941		

Note 1: HCM Delay for unsignalized intersections represents Average Control Delay reported from the HCM 6th module within Synchro.
 Note 2: Delay values highlighted in Green, Yellow, Orange, and Red indicated LOS A-C, D, E and F, respectively.

KEY TAKEAWAYS SO FAR

■ Safety

- Multiple intersections and segments in need of safety enhancement
- Speed could be a barrier for bikes/ped

■ Corridor

- Intersection operations are generally good
 - Exception for River Rd.
- Lack of bike and pedestrian access
- Did not notice public transit access
- Terrain could be problematic for large linear improvements such as shoulder widenings
- Appears to have stable growth along the corridor
- Understand there is some variability in busy periods making this corridor unique



NEXT STEPS



NEXT STEPS

- **Public survey and 1st in-person engagement.**
 - When/Where? Are there key questions for the online survey?
- **Evaluate range of potential concepts, such as:**
 - Turn lanes, bicycle and pedestrian upgrades, intersection reconfigurations and targeted safety measures
- **Concept development & stakeholder discussion.**
 - Prepare preliminary sketches using aerial photography / GIS data
 - Prepare planning-level cost estimates for comparison
- **Conduct 2nd public outreach.**
- **Based on stakeholder input:**
 - Refine concept sketches
 - Produce summary report





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