

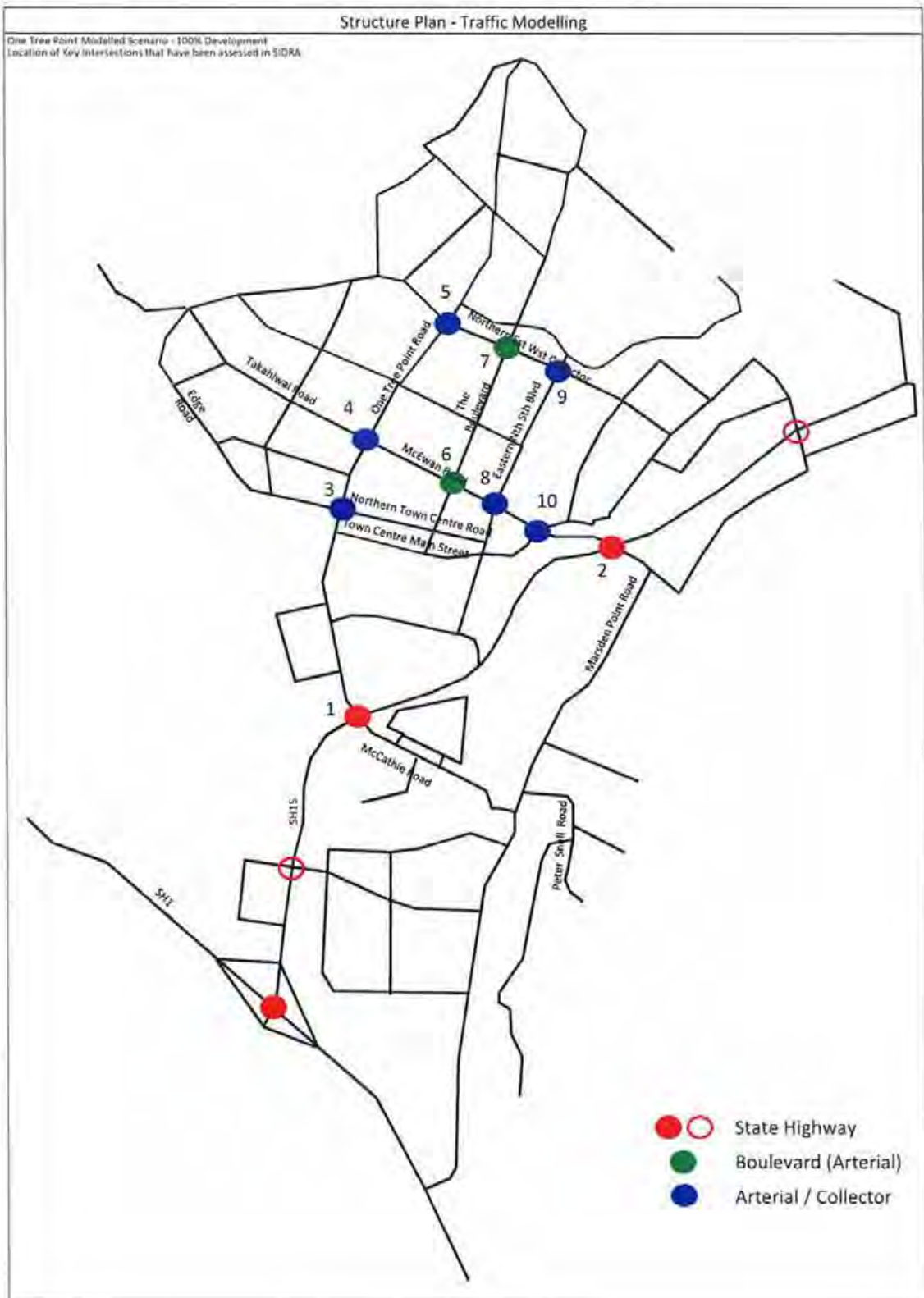
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## **APPENDIX D**

## **Intersection Modelling Results**

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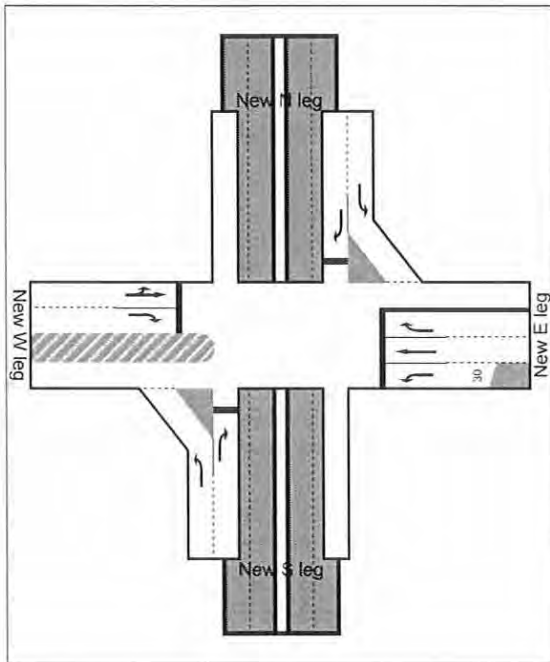
## D.1 MAP OF STRUCTURE PLAN AREA KEY INTERSECTIONS



## D.2 INTERSECTION PERFORMANCE

### D.2.1 State Highway 15A Interchange at One Tree Point Road

#### Intersection Layout

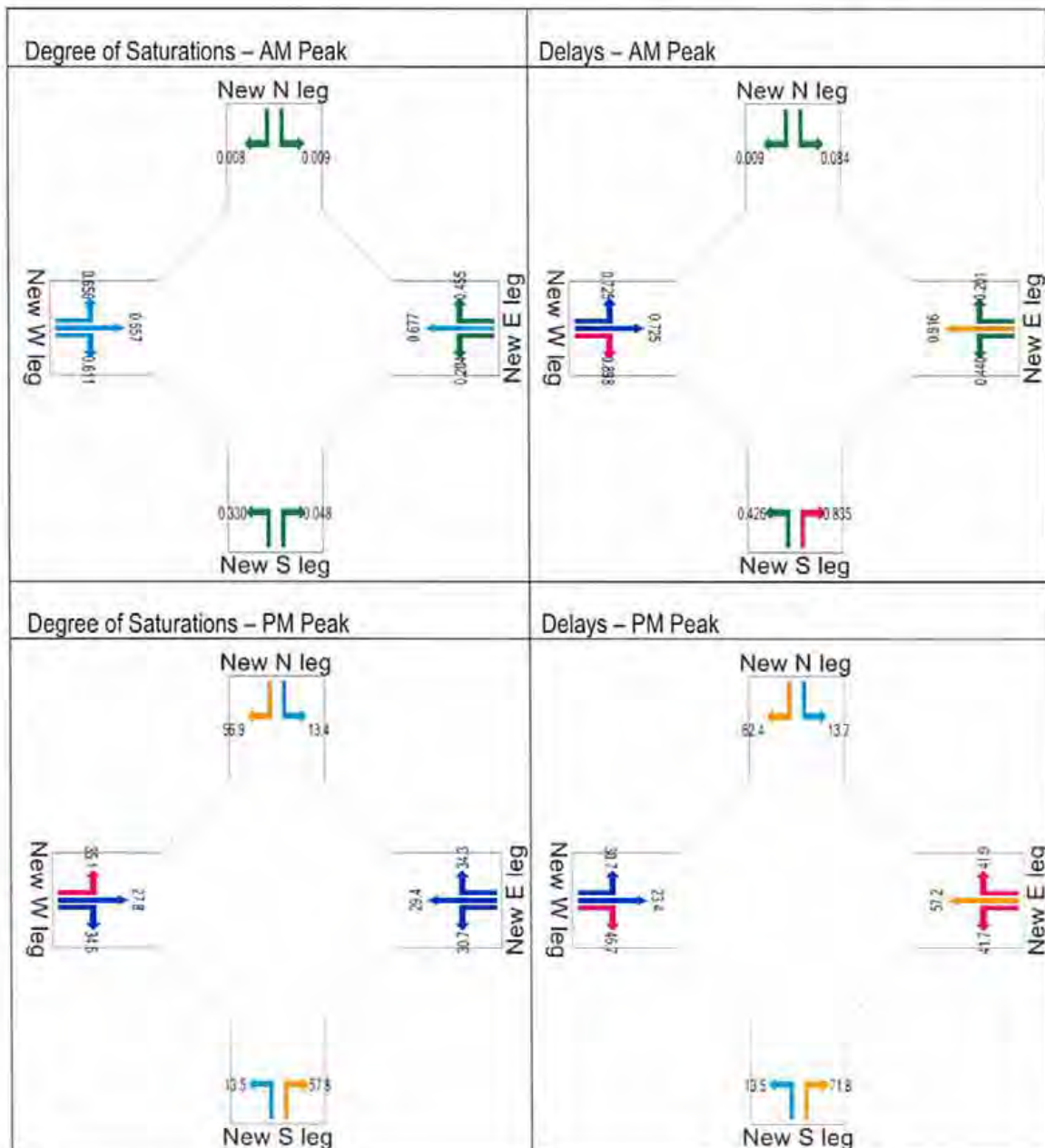


#### Volume Summary from TRACKS

AM Peak		PM peak	
<p>New N leg</p>		<p>New N leg</p>	
<p>New W leg</p>	<p>New E leg</p>	<p>New W leg</p>	<p>New E leg</p>
<p>New S leg</p>		<p>New S leg</p>	

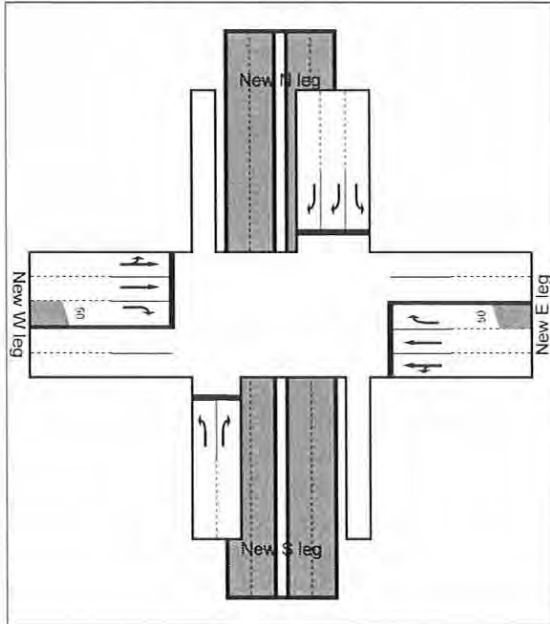
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – SH15A	0.33	0.84	B	C	14	20
E Leg – McMathie Road	0.68	0.92	C	D	31	53
N Leg – SH15A	0.01	0.08	B	B	16	14
W Leg – One Tree Point Road	0.66	0.90	C	D	31	36
<b>OVERALL</b>	<b>0.68</b>	<b>0.92</b>	<b>C</b>	<b>C</b>	<b>27</b>	<b>34</b>



### D.2.2 State Highway 15A interchange at McEwan Road

#### Intersection Layout

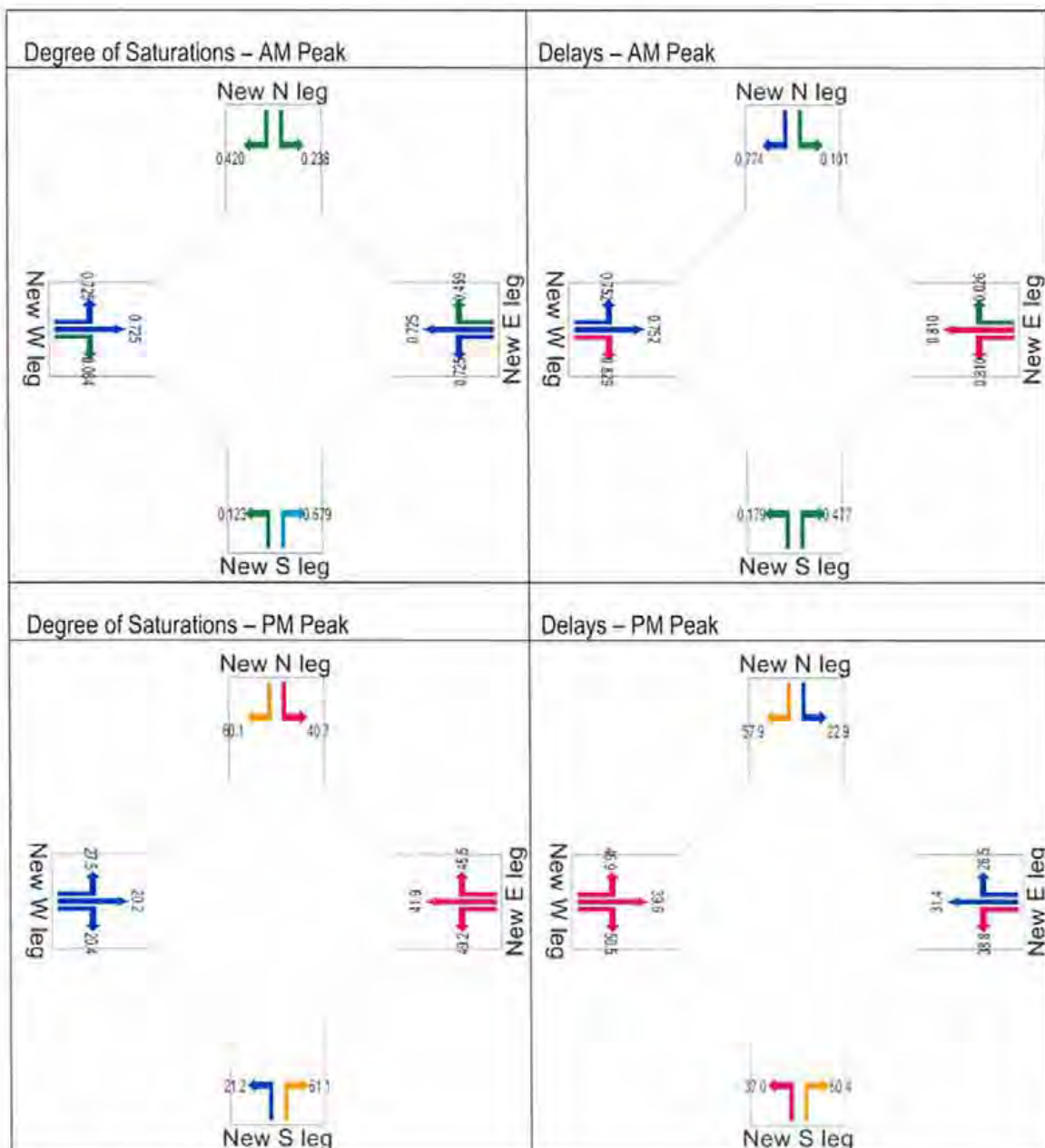


#### Volume Summary from TRACKS

AM Peak		PM peak	
<p><b>New N leg</b></p>		<p><b>New N leg</b></p>	
<p><b>New W leg</b></p>	<p><b>New E leg</b></p>	<p><b>New W leg</b></p>	<p><b>New E leg</b></p>
<p><b>New S leg</b></p>		<p><b>New S leg</b></p>	

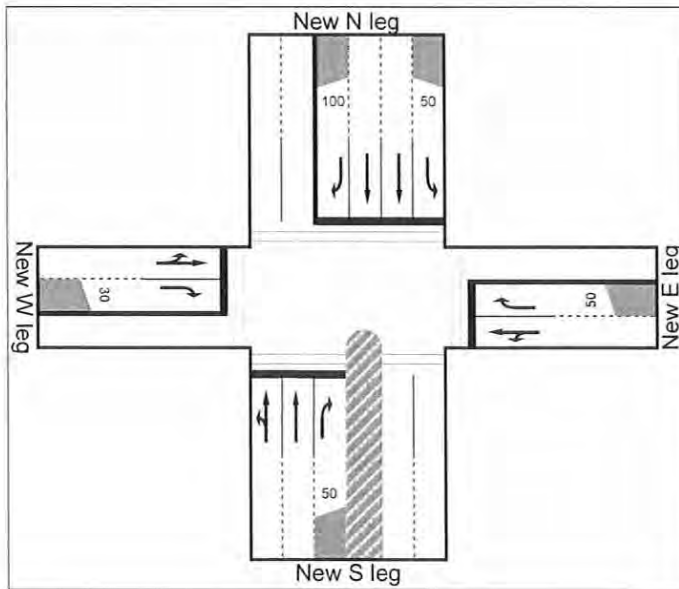
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – SH15A	0.68	0.48	C	C	33	31
E Leg – McEwan Road	0.71	0.80	D	C	42	34
N Leg – SH15A	0.42	0.77	D	D	35	49
W Leg – McEwan Road	0.70	0.83	C	D	20	38
<b>OVERALL</b>	<b>0.71</b>	<b>0.83</b>	<b>C</b>	<b>D</b>	<b>28</b>	<b>38</b>



### D.2.3 One Tree Point Road / Edge Road / Northern Town Centre Road

#### Intersection Layout



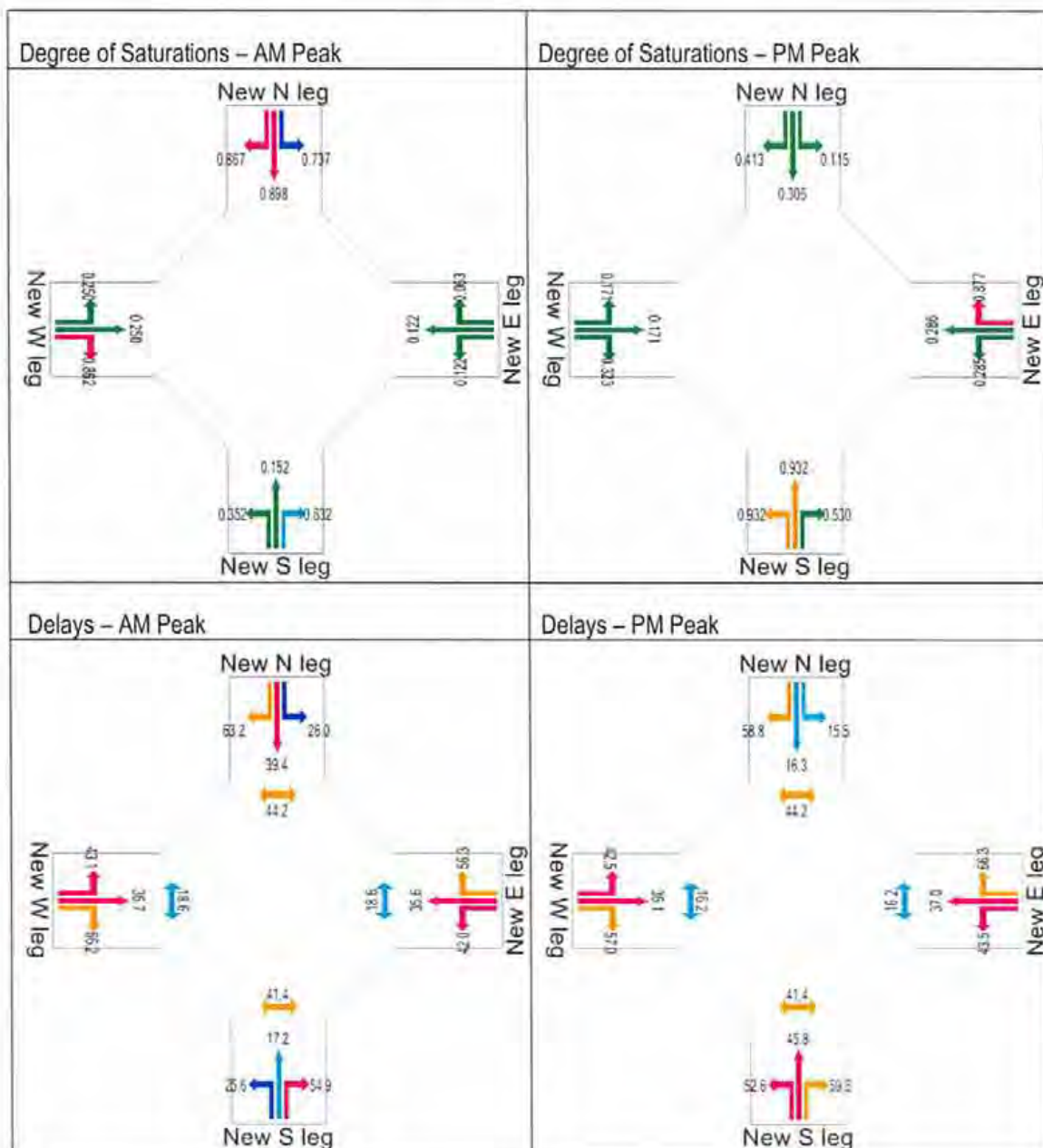
#### Volume Summary from TRACKS

AM Peak		PM peak	
New W leg	New N leg	New N leg	New E leg
	New S leg	New S leg	New W leg
	New E leg	New E leg	New S leg
	New W leg	New W leg	New N leg

The table displays traffic volume data for the AM and PM peaks. Each cell contains a diagram of a leg intersection with traffic flow directions and volume values. The AM peak volumes are generally higher than the PM peak volumes.

Performance Indicators

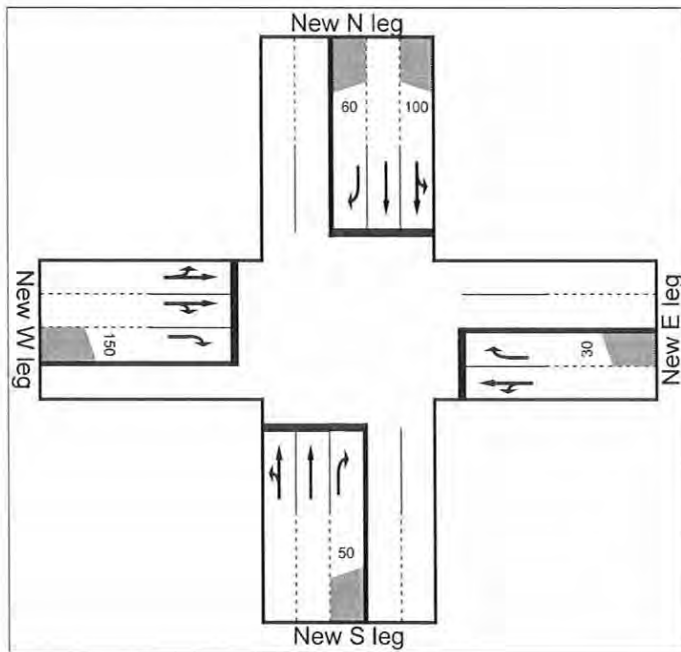
Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – OTP Road	0.63	0.93	C	D	30	48
E Leg – North TC Road	0.12	0.88	D	D	39	52
N Leg – OTP Road	0.90	0.41	D	B	40	19
W Leg – Edge Road	0.86	0.32	D	D	52	44
<b>OVERALL</b>	<b>0.90</b>	<b>0.93</b>	<b>D</b>	<b>D</b>	<b>39</b>	<b>42</b>



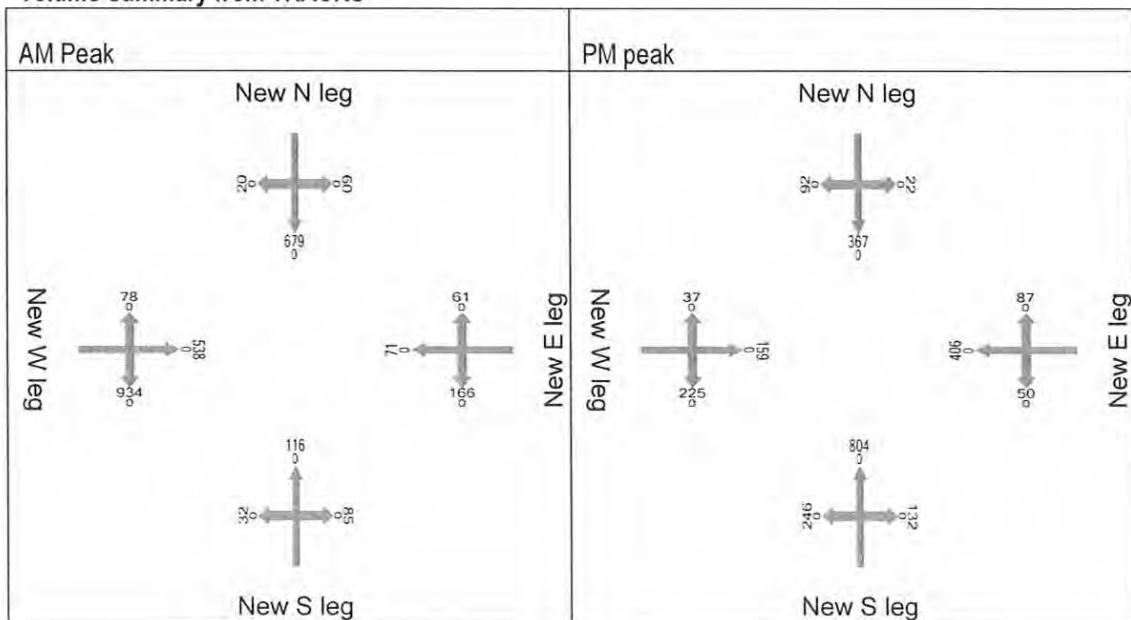


### D.2.4 One Tree Point Road / Takahiwai Road / McEwan Road

#### Intersection Layout

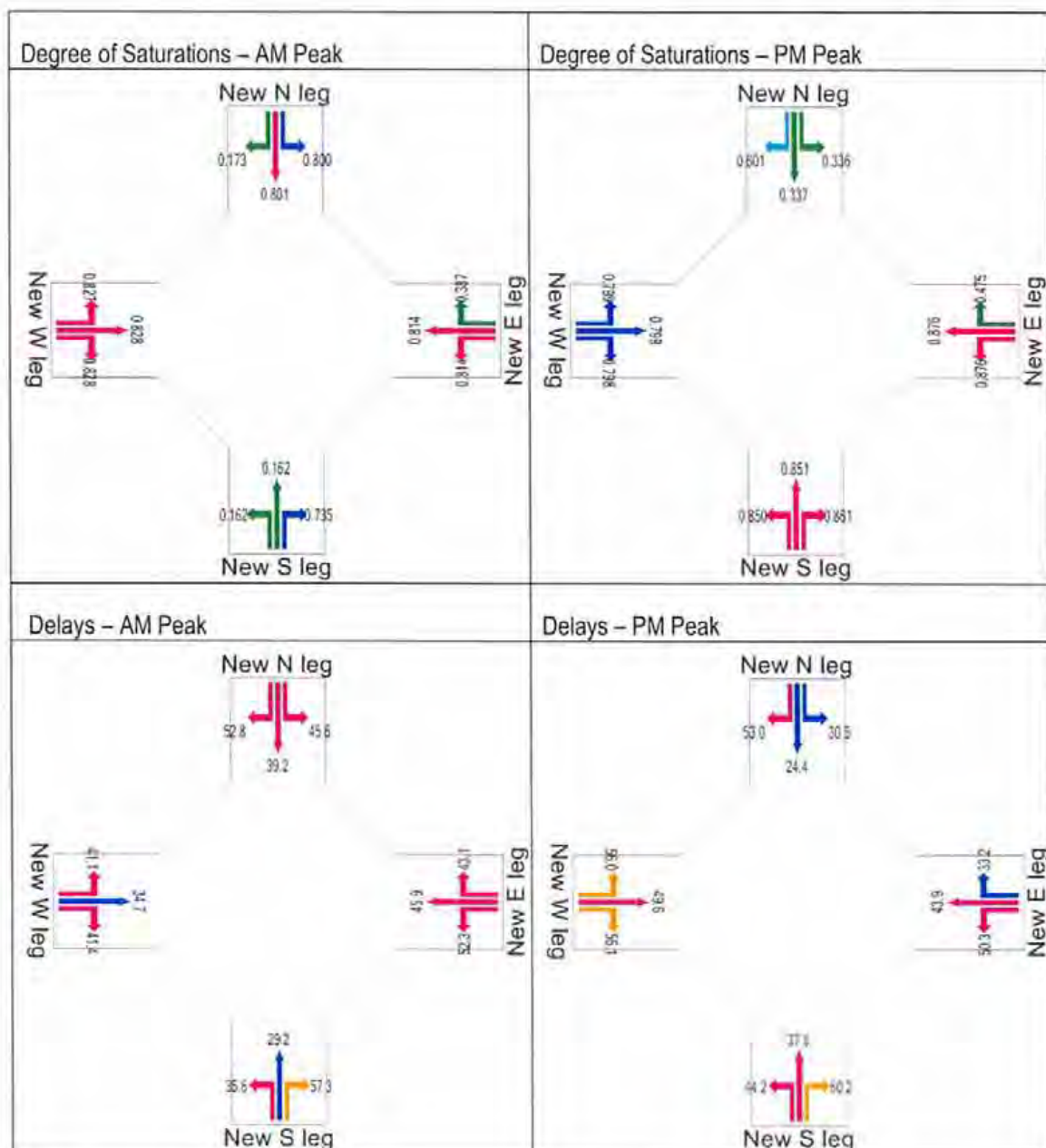


#### Volume Summary from TRACKS



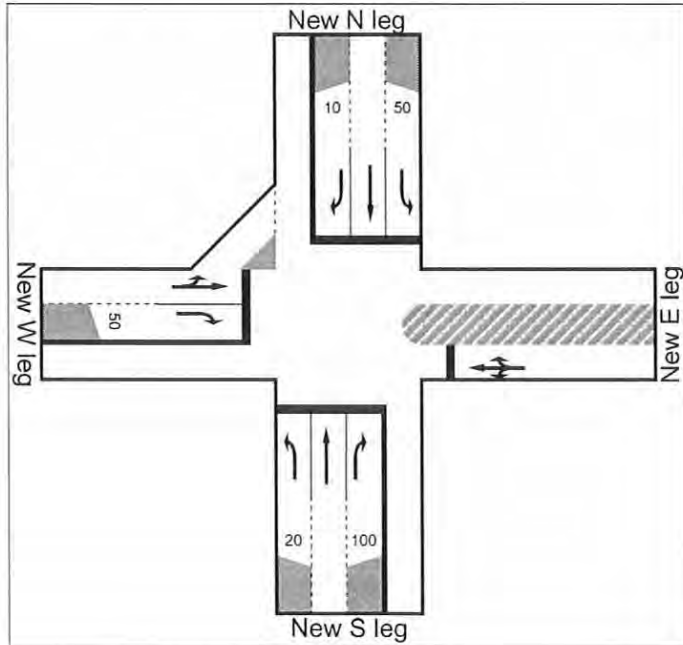
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – OTP Road	0.74	0.86	D	D	40	42
E Leg – Takahiwai Road	0.81	0.88	D	D	49	43
N Leg – OTP Road	0.80	0.60	D	C	40	30
W Leg – McEwan Road	0.83	0.80	D	D	39	54
<b>OVERALL</b>	<b>0.83</b>	<b>0.88</b>	<b>D</b>	<b>D</b>	<b>41</b>	<b>42</b>

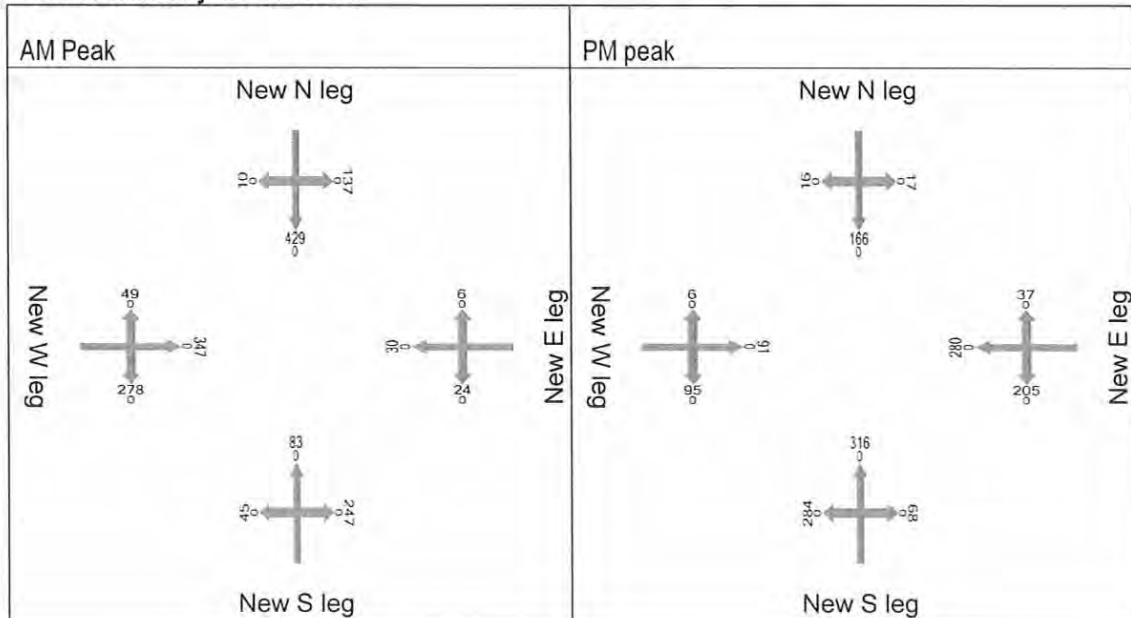


### D.2.5 One Tree Point Road / Northern East-West Collector Road

#### Intersection Layout

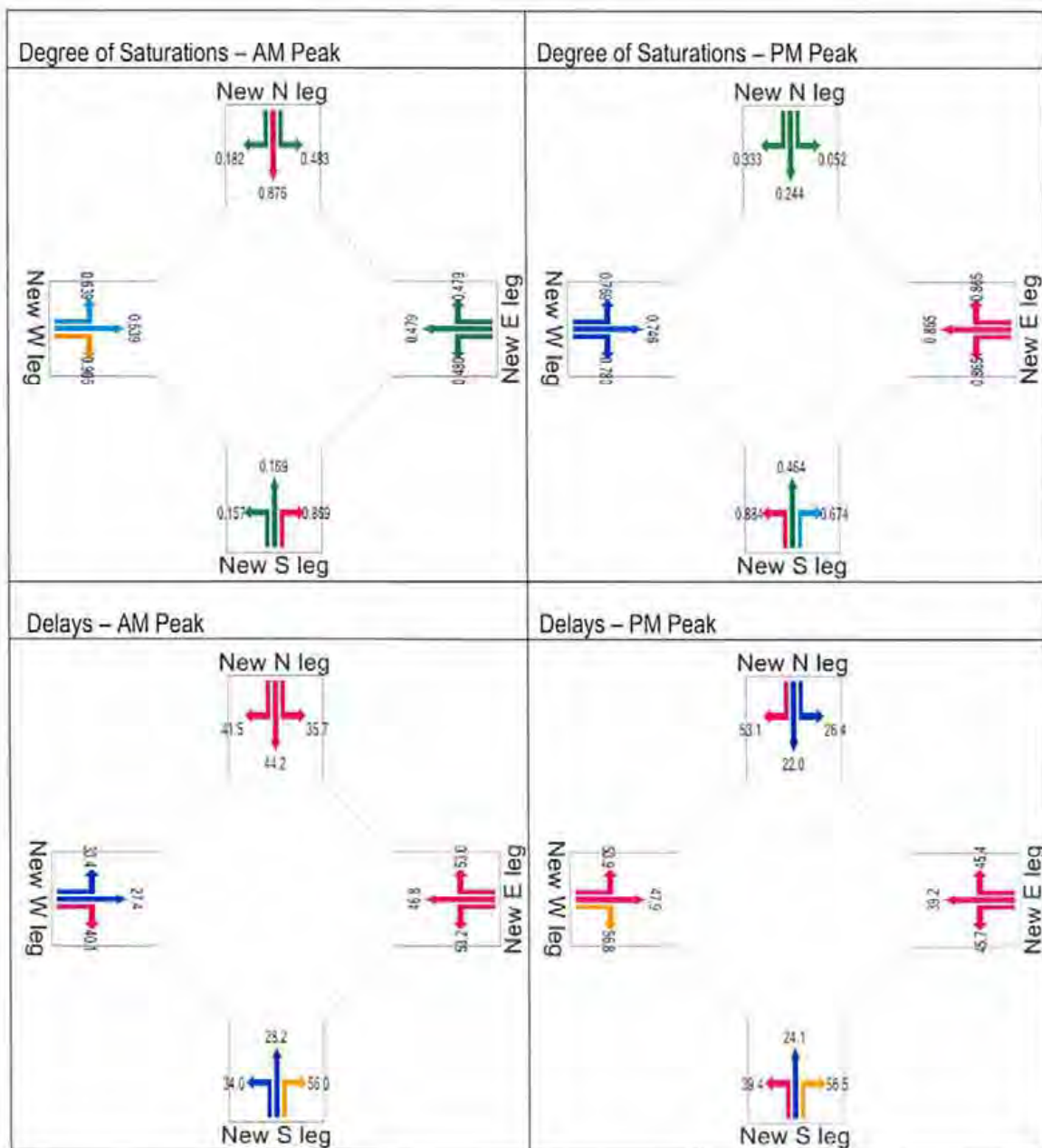


#### Volume Summary from TRACKS



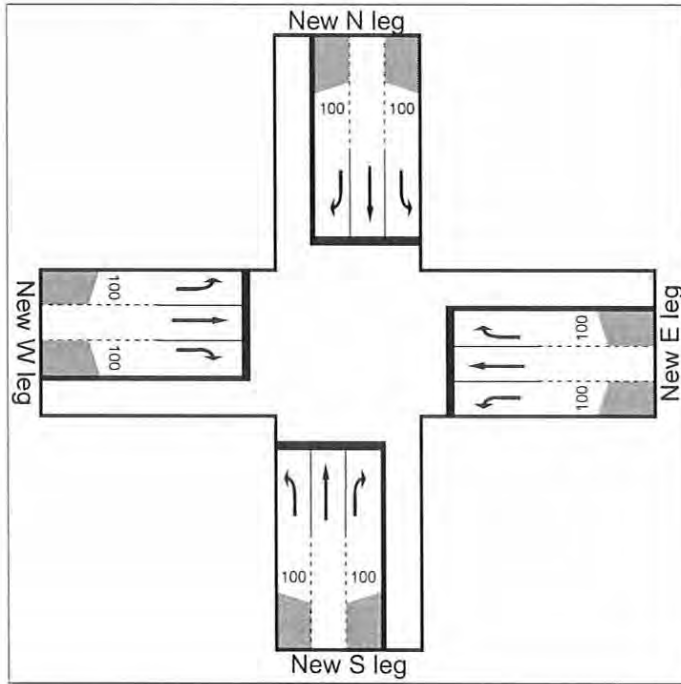
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – OTP Road	0.87	0.88	D	C	47	34
E Leg – EW Collector Road	0.48	0.86	D	D	50	42
N Leg – OTP Road	0.88	0.33	D	C	42	25
W Leg – EW Collector Road	0.91	0.78	C	D	33	53
<b>OVERALL</b>	<b>0.91</b>	<b>0.88</b>	<b>D</b>	<b>D</b>	<b>40</b>	<b>38</b>

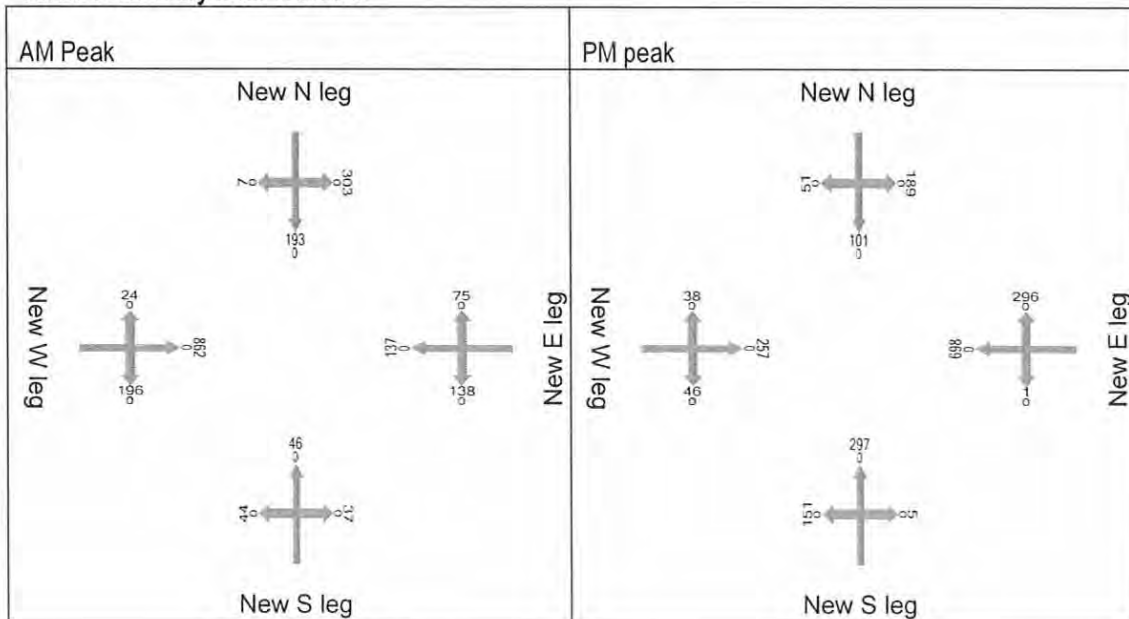


### D.2.6 The Main Boulevard (Pyle Road) / McEwan Road

#### Intersection Layout

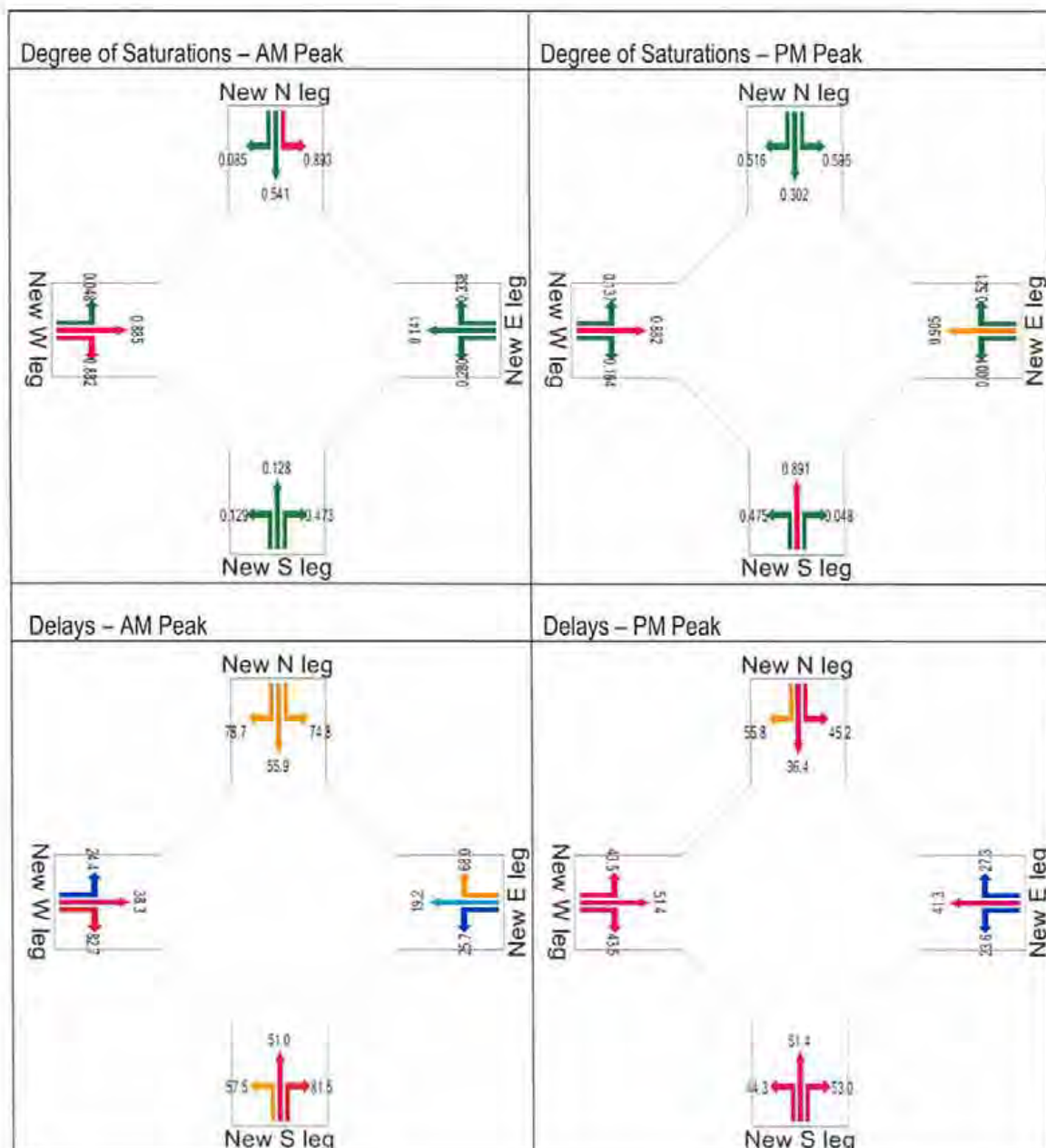


#### Volume Summary from TRACKS



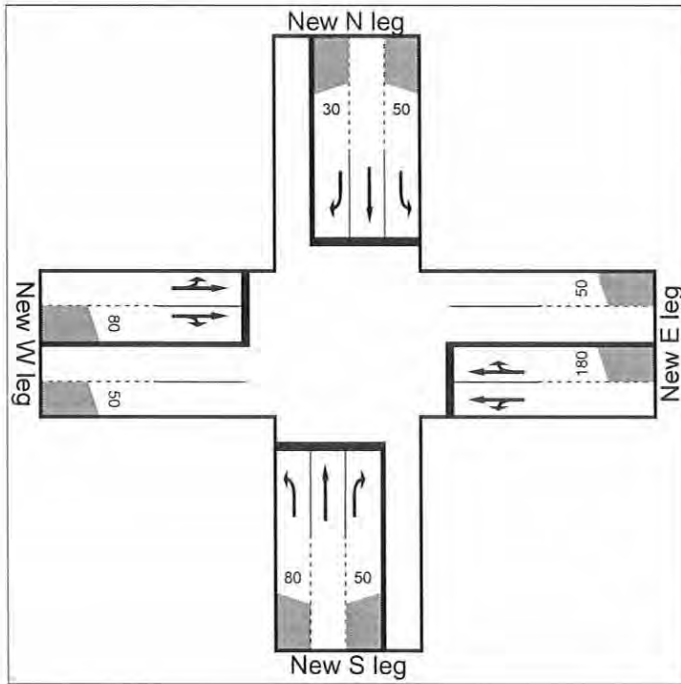
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – The Main Boulevard	0.47	0.89	E	D	62	49
E Leg – McEwan Road	0.34	0.91	D	D	32	37
N Leg – The Main Boulevard	0.89	0.60	E	D	68	44
W Leg – McEwan Road	0.89	0.88	D	D	46	50
<b>OVERALL</b>	<b>0.89</b>	<b>0.91</b>	<b>D</b>	<b>D</b>	<b>50</b>	<b>43</b>



### D.2.7 The Main Boulevard (Pyle Road) / Northern East-West Collector

#### Intersection Layout

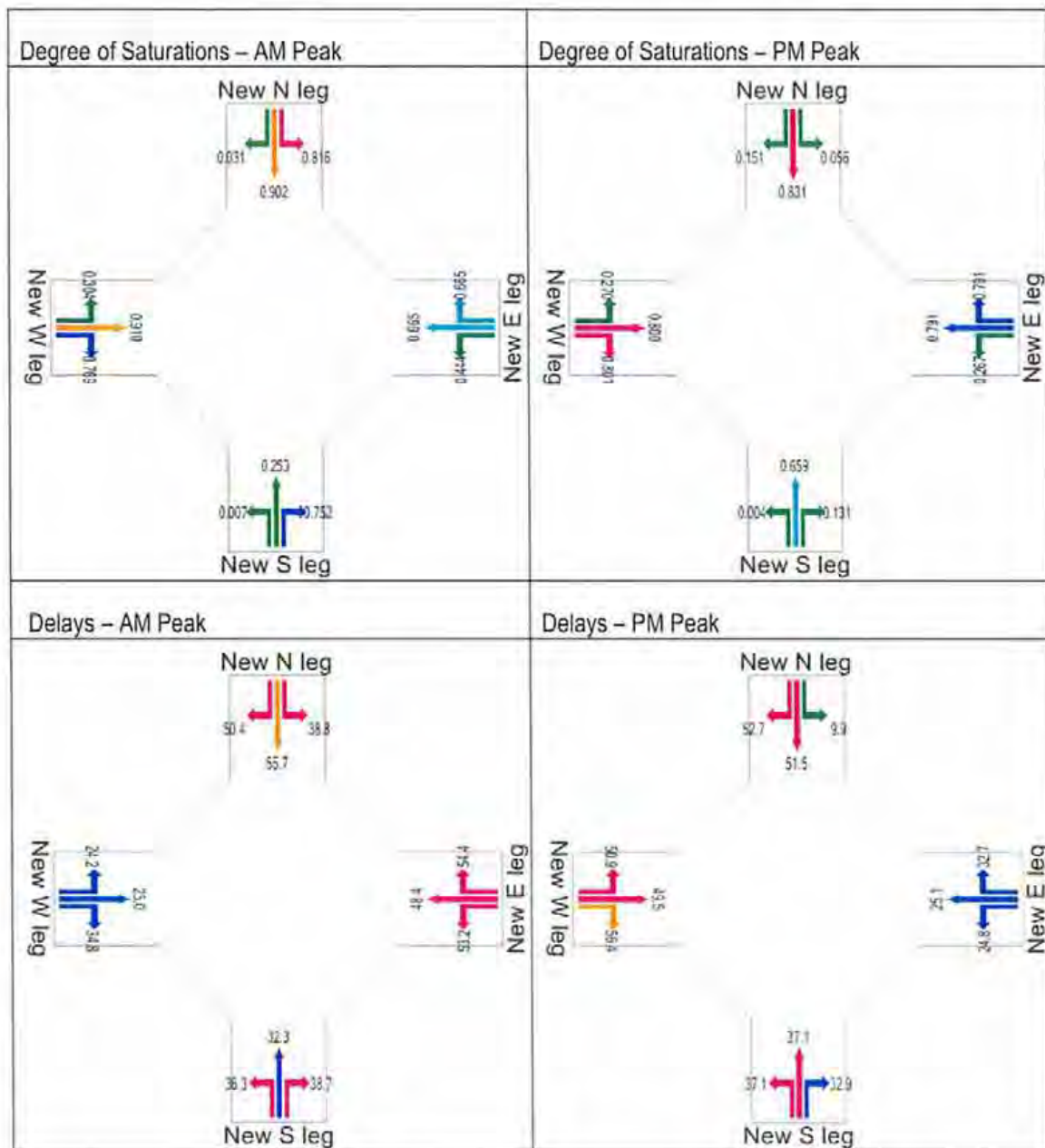


#### Volume Summary from TRACKS

AM Peak		PM peak	
<p><b>New N leg</b></p>		<p><b>New N leg</b></p>	
<p><b>New W leg</b></p>	<p><b>New E leg</b></p>	<p><b>New W leg</b></p>	<p><b>New E leg</b></p>
<p><b>New S leg</b></p>		<p><b>New S leg</b></p>	

Performance Indicators

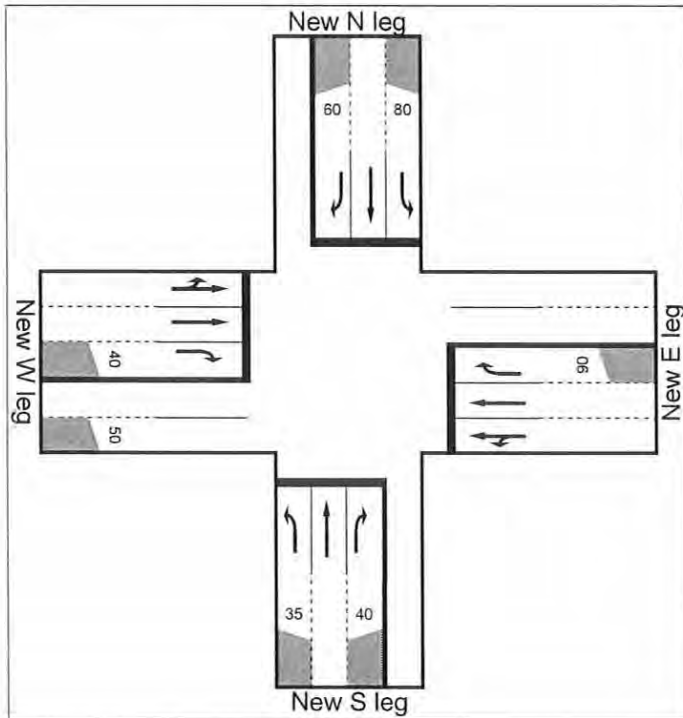
Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – Pyle Road	0.75	0.66	D	D	36	37
E Leg – EW Collector Road	0.67	0.79	D	C	52	27
N Leg – Pyle Road	0.90	0.83	C	D	44	41
W Leg – EW Collector Road	0.91	0.80	C	D	25	51
<b>OVERALL</b>	<b>0.91</b>	<b>0.83</b>	<b>C</b>	<b>C</b>	<b>35</b>	<b>34</b>





### D.2.8 Western North-South Boulevard / McEwan Road

#### Intersection Layout

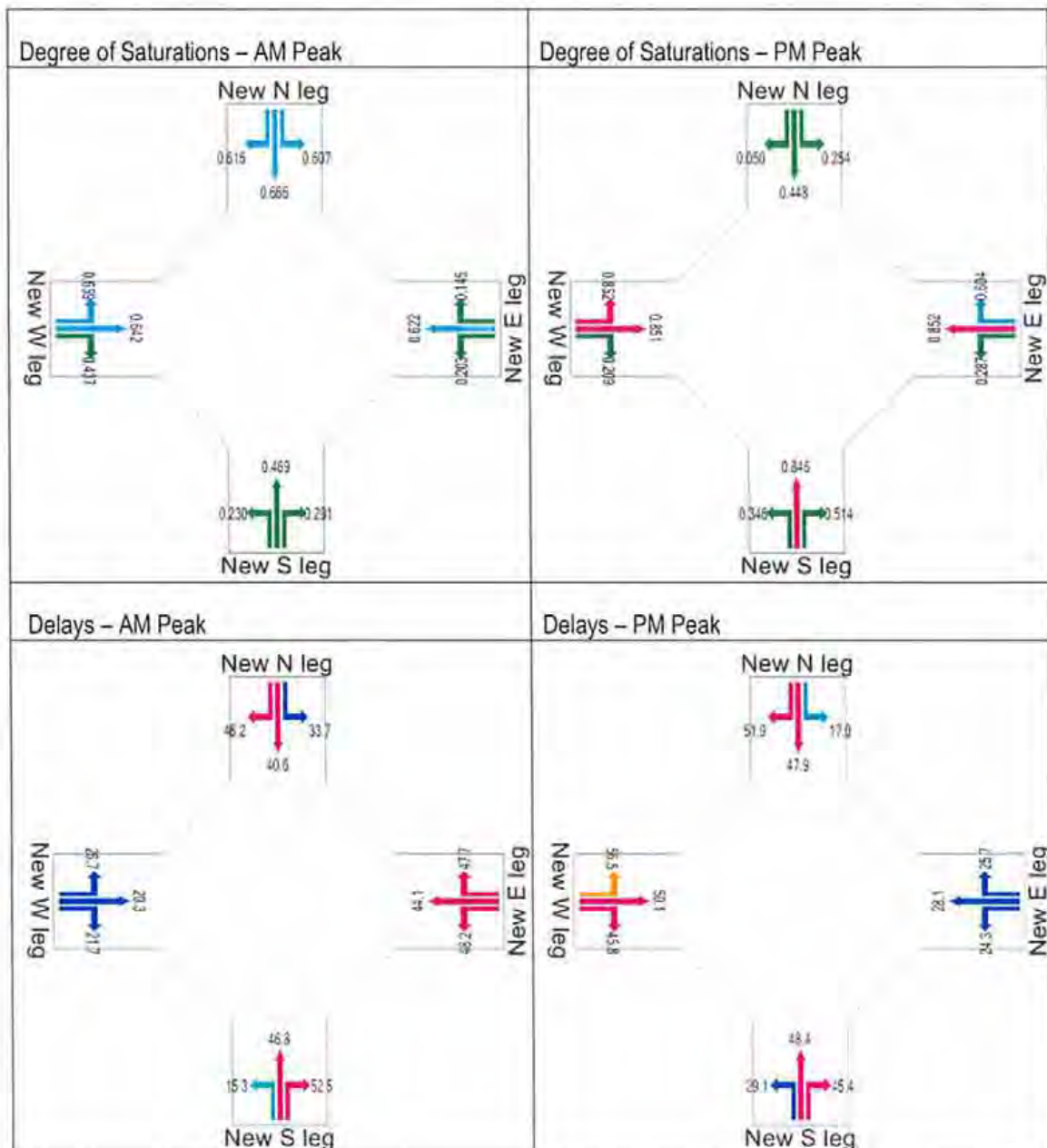


#### Volume Summary from TRACKS

AM Peak		PM peak	
<p><b>New N leg</b></p>	<p><b>New S leg</b></p>	<p><b>New N leg</b></p>	<p><b>New S leg</b></p>
<p><b>New W leg</b></p>	<p><b>New E leg</b></p>	<p><b>New W leg</b></p>	<p><b>New E leg</b></p>

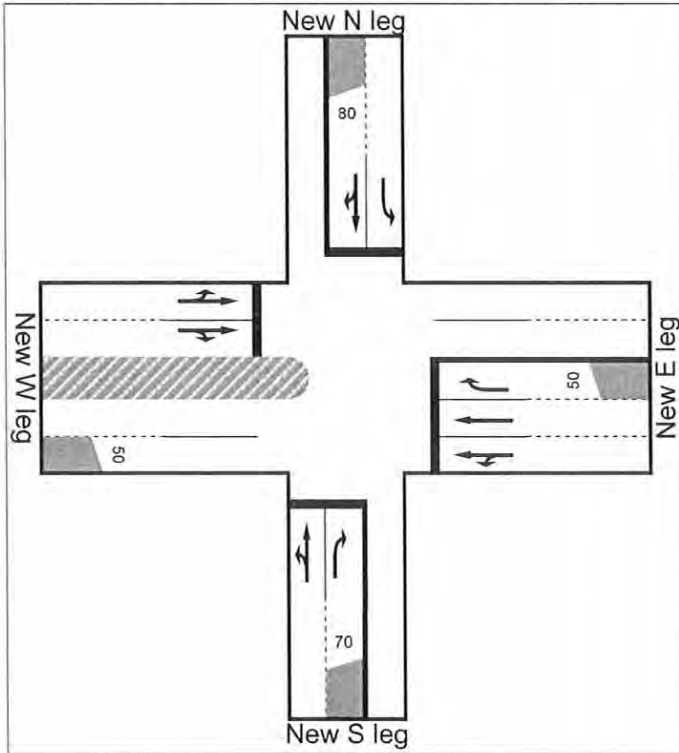
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – NS Boulevard	0.47	0.85	C	D	33	44
E Leg – McEwan Road	0.62	0.85	D	C	45	28
N Leg – NS Boulevard	0.67	0.45	D	C	39	26
W Leg – McEwan Road	0.64	0.85	D	D	20	50
<b>OVERALL</b>	<b>0.67</b>	<b>0.85</b>	<b>C</b>	<b>C</b>	<b>29</b>	<b>35</b>



### D.2.9 Western North-South Boulevard / Northern East-West Collector

#### Intersection Layout

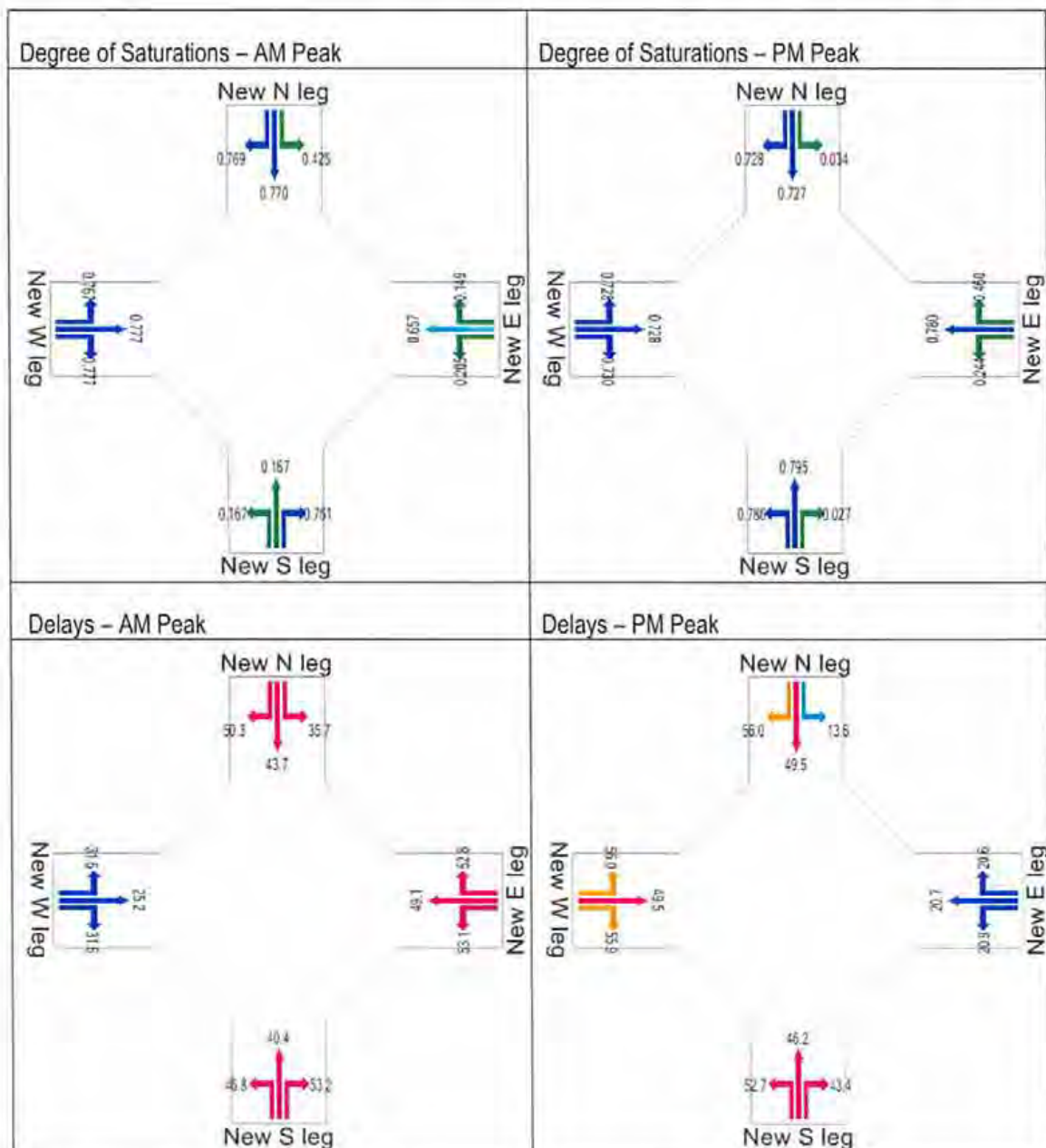


#### Volume Summary from TRACKS

AM Peak		PM peak	
<p>New N leg</p>	<p>New S leg</p>	<p>New N leg</p>	<p>New S leg</p>
<p>New W leg</p>	<p>New E leg</p>	<p>New W leg</p>	<p>New E leg</p>

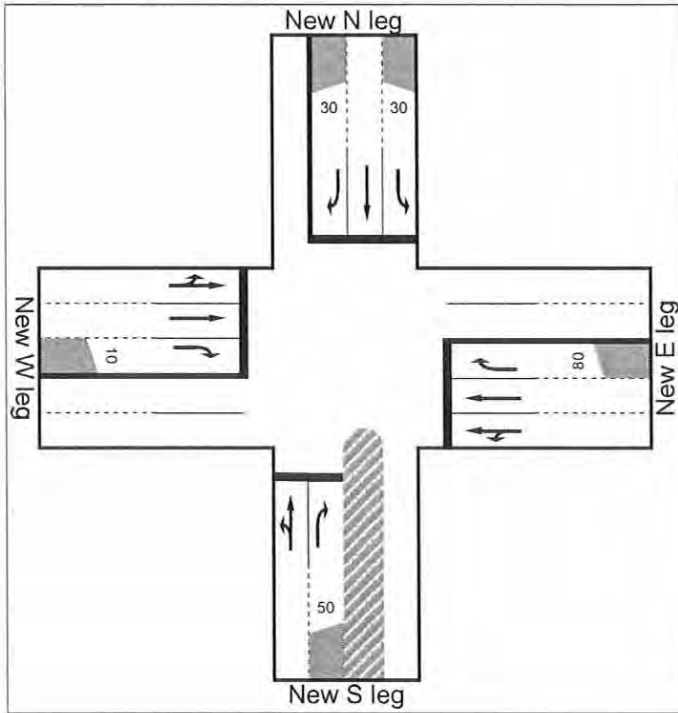
Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – NS Boulevard	0.47	0.85	C	D	33	44
E Leg – EW Collector Road	0.62	0.85	D	C	45	28
N Leg – NS Boulevard	0.67	0.45	D	C	39	26
W Leg – EW Collector Road	0.64	0.85	D	D	20	50
<b>OVERALL</b>	<b>0.67</b>	<b>0.85</b>	<b>C</b>	<b>C</b>	<b>29</b>	<b>35</b>

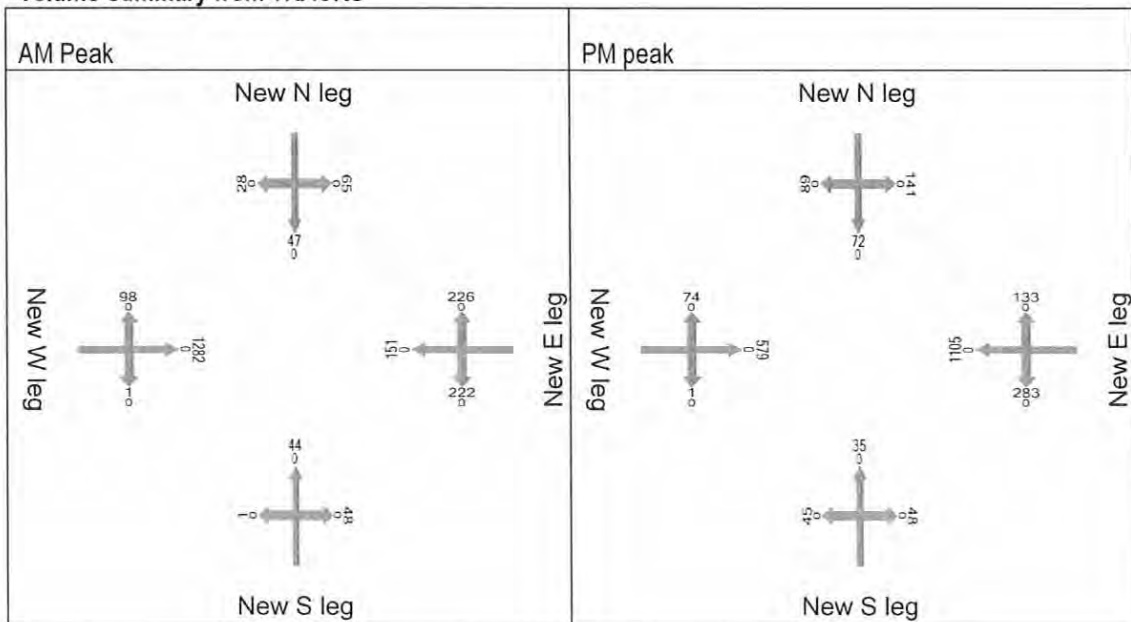


### D.2.10 McEwan Road / Town Centre and Industrial Connector

#### Intersection Layout



#### Volume Summary from TRACKS



Performance Indicators

Approach	Degree of Saturation		Level of Service		Average Delay (s)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
S Leg – TC and Industrial Connector	0.44	0.41	D	D	53	44
E Leg – McEwan Road	0.77	0.85	C	C	31	34
N Leg – TC and Industrial Connector	0.50	0.87	D	D	53	50
W Leg – McEwan Road	0.76	0.40	C	B	22	19
<b>OVERALL</b>	<b>0.77</b>	<b>0.87</b>	<b>C</b>	<b>C</b>	<b>28</b>	<b>33</b>

