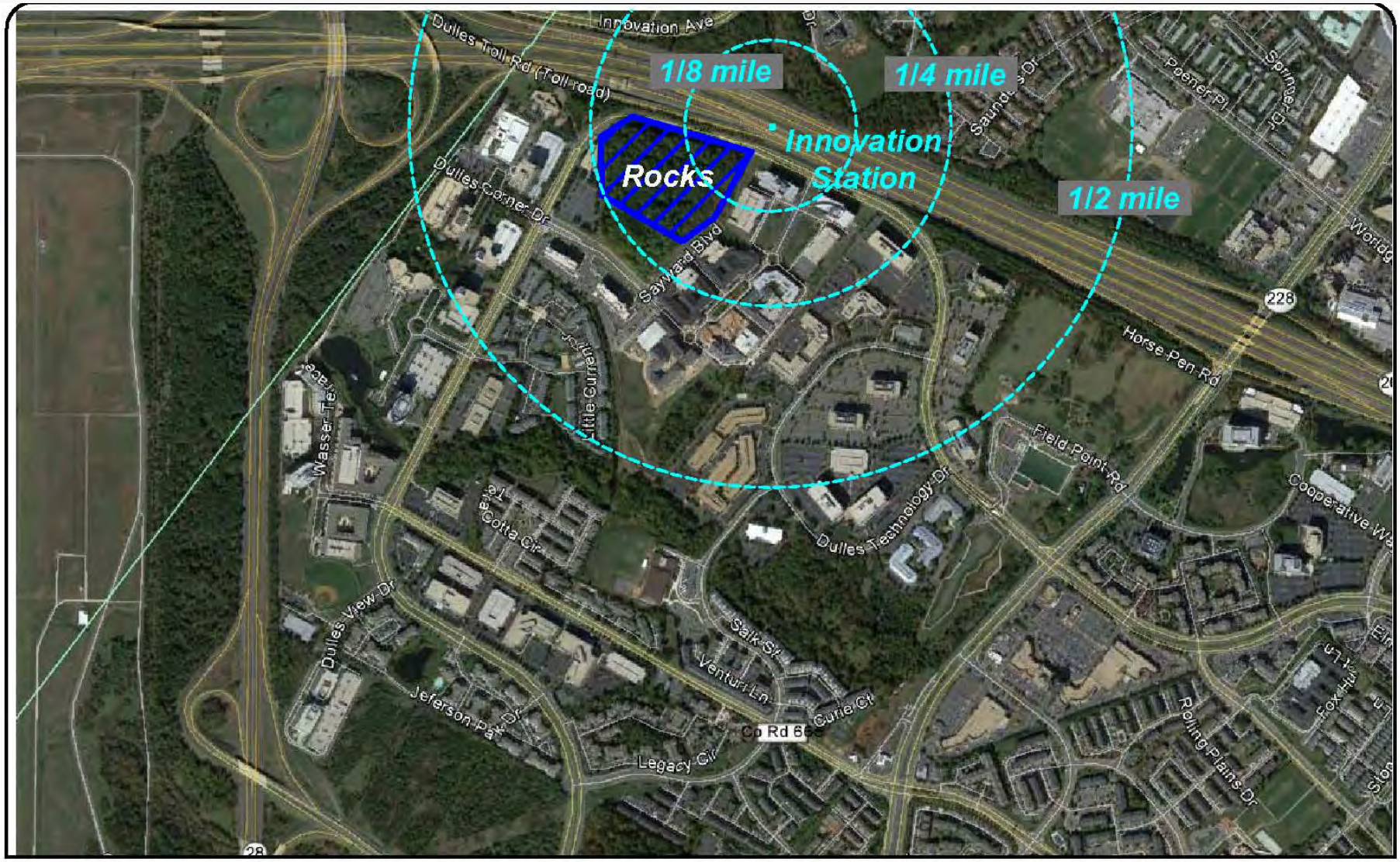
Route 28 Station–South Study

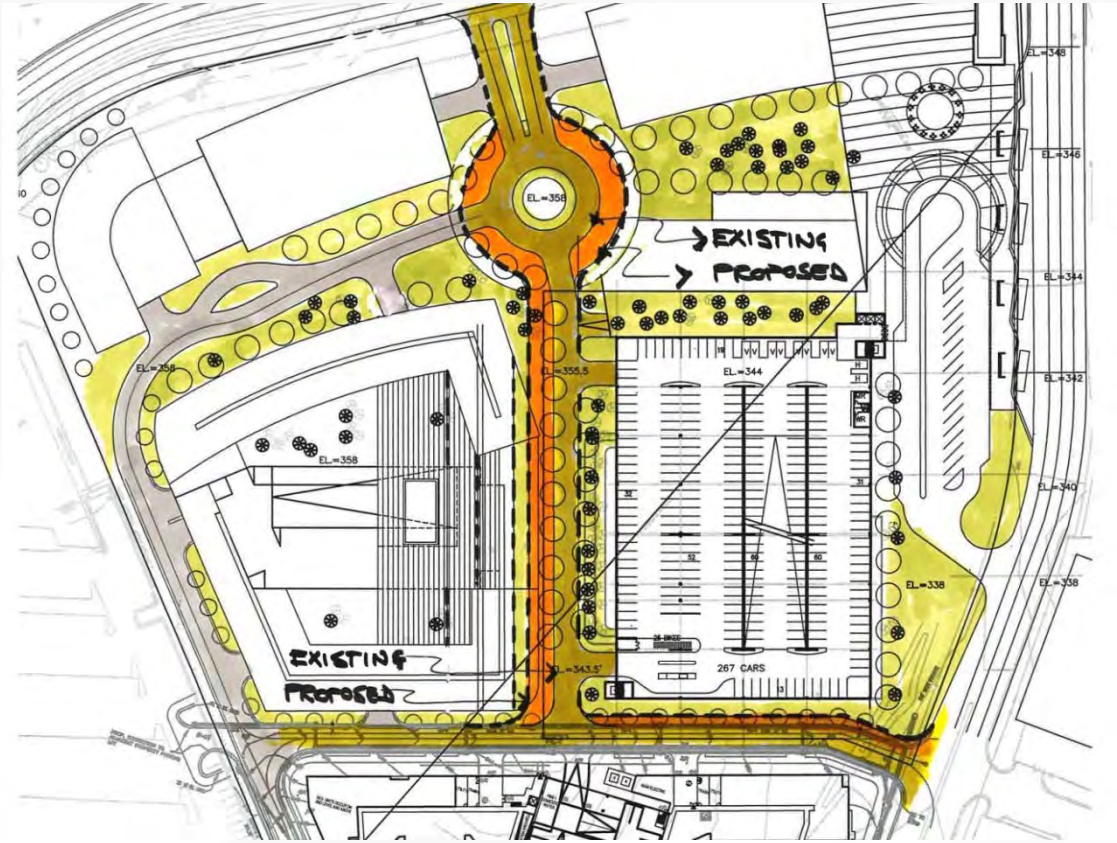
Grid Analysis Review

WELLS + ASSOCIATES

Location of Rocks Property



Rocks Property with Metro Garage



FCDOT Grid of Streets

FCDOT Results

VA 28 Grid Analysis Preliminary Results (5/9/2013) - After Optimization

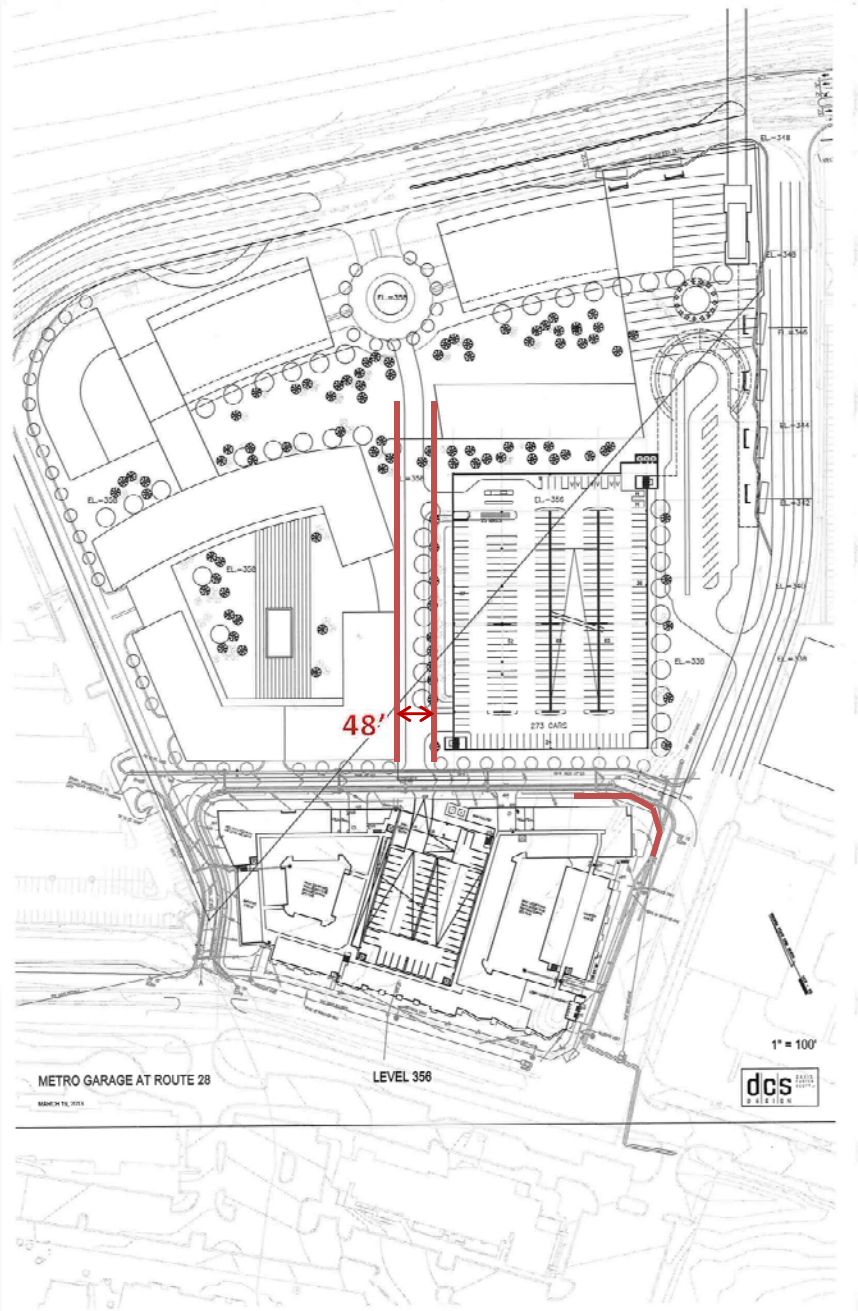
Synchro intersection delay and level of service

Synchro Node#	Intersection	Intersection Volume		AM		PM	
		AM	PM	Int. Delay (sec/veh)	LOS	Int. Delay (sec/veh)	LOS
9	Sunrise and Sayward	4387	3219	44.5	D	32.4	C
16	N/A	851	1089	3.9	A	6.5	A
28	N/A	1653	2013	1.3	A	5	A
54	N/A	289	405	8.5	A	6.8	A
68	N/A	803	845	8.6	A	17.8	B
72	N/A	1564	1663	32.7	C	18.5	B
73	N/A	393	541	8	A	10.2	B
74	N/A	739	666	10.3	B	11.4	B
75	N/A	987	1135	5.6	A	21.2	C
89	North of VA 28 Station Garage Entrance	735	952	13.6	B	13.1	B
92	VA 28 Station Garage Entrance	1340	1091	6.9	A	13.7	B

* NOTE: These preliminary results are subject to change as a result of the review on assumptions and inputs.

FCDOT Recommendations

- The north-south road should be four lanes with a width of 48 feet curb to curb
- The east-west road should be two lanes
- Intx #68 (Carta Way/E-W Road) should have exclusive eastbound left
- Intx #74 (N-S Road/E-W Road) should have two lanes southbound, one east and westbound



Impact of FCDOT Recommendations on Garage

Transportation Consultants
INNOVATION + SOLUTIONS

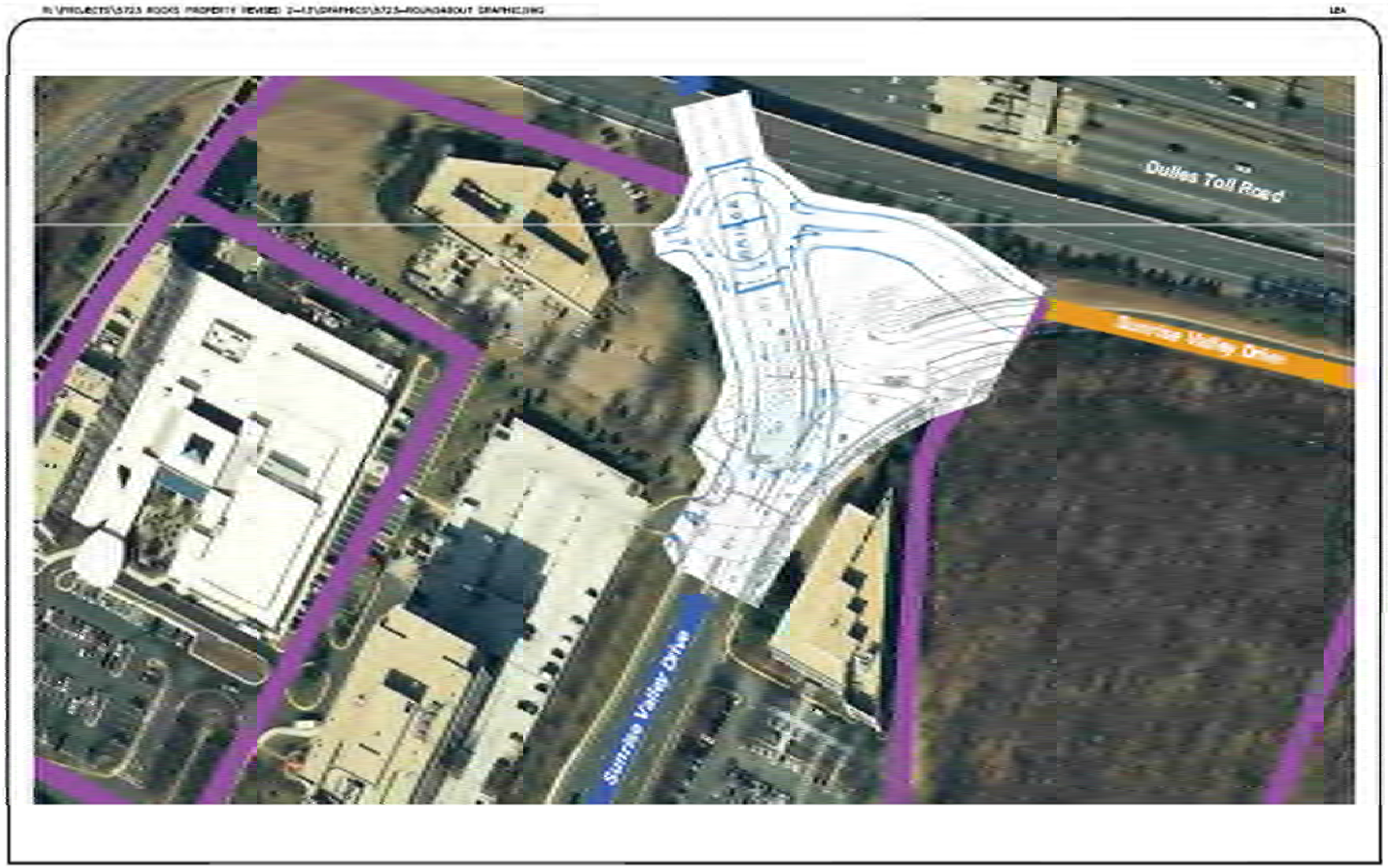
W+A Review

- North-South Roadway can operate within acceptable urban standards as two-lane, local roadway.
- Eastbound approach at Carta/E-W roadway appears to have been modeled as single lane and achieves adequate LOS.
- Highway Capacity Manual (HCM) analysis shows N-S/E-W operates at LOS B or better during the PM peak hour with two-lane N-S Road and E-W Road.

W+A Review

- FCDOT extends Sunrise Valley Drive under overpass as two-lane roadway.
- W+A suggested staff evaluate Sunrise Valley Drive as roundabout under the overpass.
  - Facilitates bus circulation
  - Maintains Sunrise Valley Drive as arterial
  - Minimizes impact to redevelopment plans
  - Concept supported by VDOT in other locations

Sunrise Valley Drive Roundabout



Sunrise Valley Drive Roundabout Concept – For Discussion Purposes Only

North

Questions for FCDOT

- Mode splits and transit usage assumed in analysis. Past discussions referenced less than reflected in Draft Plan Text.
- Response to Rocks request for evaluation of roundabout concept
- Rationale for North-South Road configuration
- Geometry for Build alternatives. Specifically, LOS achieved without County recommendations.