

SUMMARY OF REQUIRED CIRCULATION IMPROVEMENTS BY PHASE
Black Mountain Ranch Revised VTM and the Remainder of Black Mountain Ranch Subarea I

Facility	Location	Required Improvement Description*
Vesting Tentative Map Phase One: Prior to development in the Vesting Tentative map are, the following improvements shall be assured to the satisfaction of the City Engineer:		
On-Site Roads		
Black Mountain Road	Carmel Valley Road to existing Black Mountain Road	Construct 4-lane major street.
Camino Ruiz	@ San Dieguito Road	Construct traffic signal.
Camino Ruiz	San Dieguito Road to Carmel Valley Road	Construct 2 lanes of an ultimate 4-lane major road.
Camino Ruiz	@ B Street	Construct traffic signal.
Camino Ruiz	@ Carmel Valley Road	Construct traffic signal.
Carmel Valley Road	@ Black Mountain Road	Construct traffic signal.
San Dieguito Road	Property boundary east to Camino Ruiz	Construct 2-lane collector street with intersection widening.
Off-Site Roads		
Black Mountain Road	@ Maler Road	Construct traffic signal.
Black Mountain Road	@ SR-56 WB ramp	Widen WB approach for dual lefts and right-turn lanes. Modify signal.
Black Mountain Road	@ SR-56 EB ramp	Widen SB approach for dual lefts. Widen NB approach for exclusive right-turn lane.
Black Mountain Road	@ Park Village Road	Widen SB approach for exclusive right-turn lane.
Carmel Valley Road	Western portion of SR-56 to Via Abertura	Provide striping, signing and widening improvements as required by City Engineer. Enhance existing 2-lane road.
Carmel Valley Road	Via Abertura to Black Mountain Road	Construct 2 lanes of an ultimate 4-lane major road with intersection widening.
Carmel Valley Road	@ Rancho Santa Fe Farms Road	Construct traffic signal.
El Camino Real	@ San Dieguito Road	Widen WB approach for shared left and right-turn lane.
Rancho Peñasquitos Boulevard	@ SR-56 WB ramp	Widen WB off-ramp to provide a center/left/through/right-turn lane.
Vesting Tentative Map Phase Two: Prior to exceeding 600 equivalent dwelling units in the Vesting Tentative map area, the following improvements shall be assured to the satisfaction of the City Engineer:		
On-Site Roads		
Camino Ruiz	Carmel Valley Road to SR-56	Construct 4-lane major street.
State Route 56	Black Mountain Road to Camino Ruiz, or	Extend to Camino Ruiz.
Camino Ruiz	San Dieguito Road to Carmel Valley Road	Construct 4-lane major street.
Off-Site Roads		
Carmel Valley Road	@ I-5 SB ramp	Re-stripe the intersection for a WB shared left/through lane. Modify signal for split phasing.

SUMMARY OF REQUIRED CIRCULATION IMPROVEMENTS BY PHASE (cont.)
Black Mountain Ranch Revised VTM and the Remainder of Black Mountain Ranch Subarea I

Facility	Location	Required Improvement Description*
Black Mountain Ranch Subarea I Phase One: Prior to exceeding 2,628** equivalent dwelling units in the Vesting Tentative Map area and any equivalent dwelling units in the remainder of Subarea I, the following improvements shall be assured to the satisfaction of the City Engineer:		
On-Site Roads		
Camino Ruiz	Resort Street to San Dieguito Road	Construct 2 lanes of an ultimate 4-lane major street.
Camino Ruiz	San Dieguito Road to Carmel Valley Road	If not complete, widen to 4-lane major street.
Internal Roadways	As needed	Construct roadways and traffic signals.
Off-Site Roads		
Black Mountain Road	@ Park Village Road	Construct intersection improvements (NB dual left). ¹
Camino Ruiz	Southern project boundary to SR-56	Construct 2 lanes of an ultimate 4-lane major street.
Camino Ruiz	@ SR-56	Construct diamond interchange.
Camino Ruiz	SR-56 to Carmel Mountain Road	Construct 4-lane major street.
Camino Ruiz	Carmel Valley Road to Dormouse Road	2-lane collector.
Camino Santa Fe	SR-56 to Carmel Valley Road	Construct 4-lane major street.
Carmel Valley Road	Camino Ruiz to Black Mountain Road	If not complete, widen to 4-lane major street.
Carmel Valley Road	Camino Santa Fe to Camino Ruiz	Construct to 4-lane major street.
Del Mar Heights Road	Lansdale Drive (E) to Camino Santa Fe	Construct 6-lane/4-lane major roadway.
El Apajo	Via de Santa Fe to San Dieguito Road	Widen to 3 lanes.
El Camino Real (W)	Via de la Valle to Half Mile Drive	Widen to 4-lane street.
Interstate 5	SR-56 to I-805	Construct dual freeways.
San Dieguito Road	El Camino Real to San Diego City limits	Spot intersection improvements. ¹
San Dieguito Road	@ El Apajo	Construct traffic signal.
San Dieguito Road	El Apajo to Camino Ruiz	Spot intersection improvements. ¹
State Route 56	@ Camino Santa Fe	Construct interchange.
State Route 56	Carmel Valley to Black Mountain Road	Construct 4-lane expressway.
State Route 56	@ I-15	Construct EB to NB loop ramps, and SB on-ramp, EB to SB right-turn lane.
Via de la Valle	I-5 to San Andres Drive	Re-stripe for 6 lanes.
Via de la Valle	San Andres Drive to El Camino Real (E)	Widen to 4-lane street.
Black Mountain Ranch Subarea I Phase Two: Prior to exceeding 2,628** equivalent dwelling units in the Vesting Tentative Map area and 1,582 equivalent dwelling units in the remainder of Subarea I (totaling 4,210 equivalent dwelling units in all of Subarea I), the following improvements shall be assured to the satisfaction of the City Engineer:		
On-Site Roads		
Camino Ruiz	Resort Street to San Dieguito Road	Widen to 4-lane major.
Resort Street	Camino Ruiz to eastern project boundary	Construct 4-lane collector.
Internal Roadways	As needed	Construct roadways and traffic signals.
Off-Site Roads		
Camino Ruiz	Carmel Valley Road to Carmel Mountain Road	Widen to 6-lane primary.
State Route 56	I-5 to I-15	Widen to 6-lane freeway.
State Route 56	@ I-5	Construct north-facing ramps.
State Route 56	@ Camino Ruiz	Construct partial cloverleaf interchange.

SUMMARY OF REQUIRED CIRCULATION IMPROVEMENTS BY PHASE (cont.)
Black Mountain Ranch Revised VTM and the Remainder of Black Mountain Ranch Subarea I

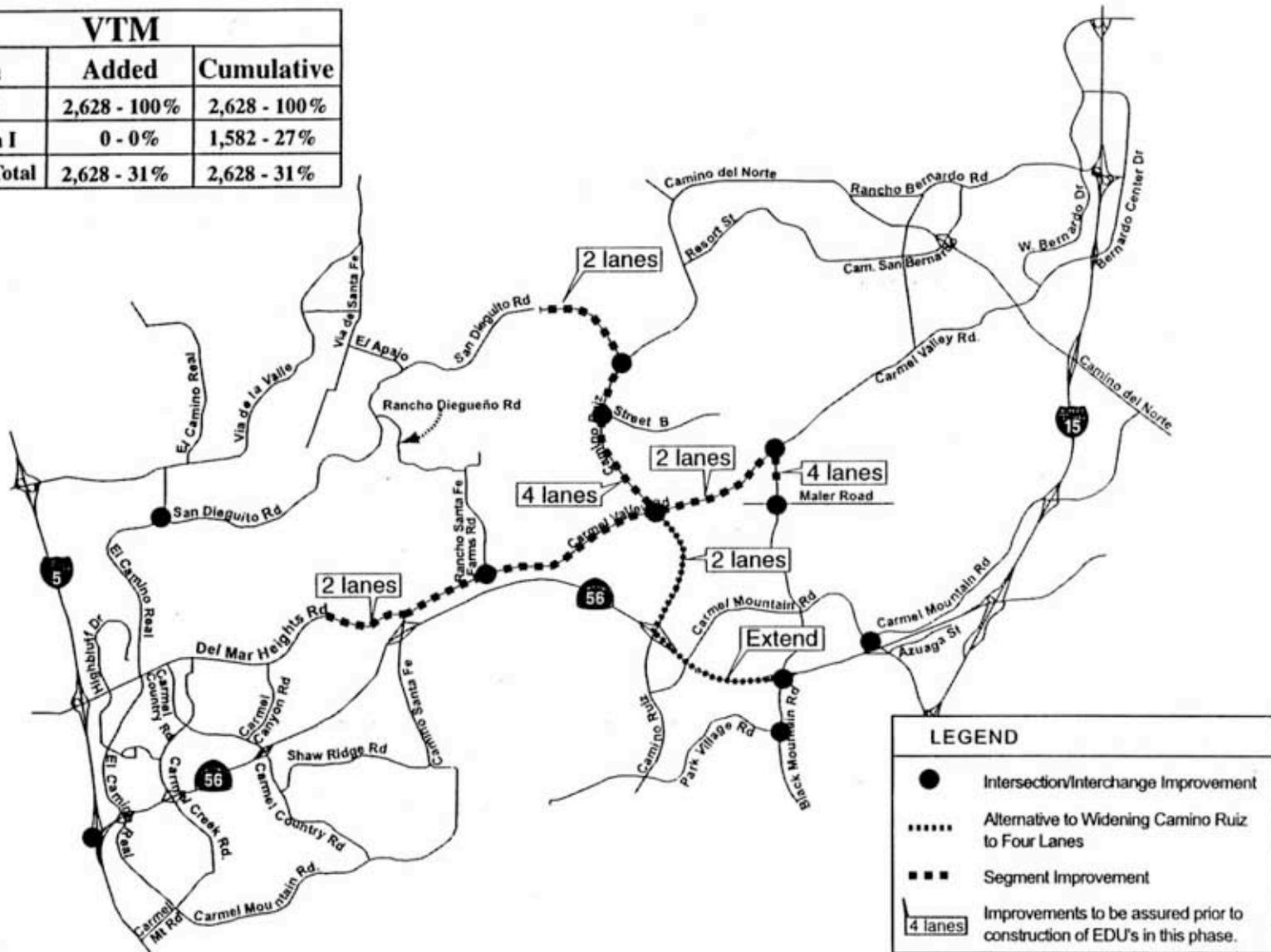
Facility	Location	Required Improvement Description*
Black Mountain Ranch Subarea I Phase Three: Prior to exceeding 2,628** equivalent dwelling units in the Vesting Tentative Map area and 3,687 equivalent dwelling units in the remainder of Subarea I (totaling 6,316 equivalent dwelling units in all of Subarea I), the following improvements shall be assured to the satisfaction of the City Engineer:		
On-Site Roads		
Camino del Norte	Eastern project boundary to western project boundary	Construct 4-lane major street.
Camino Ruiz	Resort Street to Camino del Norte	Construct 4-lane major street.
Off-Site Roads		
Bernardo Center Drive	@ I-15	Construct ramp improvements
Black Mountain Road	Twin Trails to north of Mercy Road	Widen to 6-lane primary.
Carmel Valley Road	Black Mountain Drive to Bernardo Center Drive	Construct 4-lane major.
Camino del Norte	Eastern project boundary to 4S Parkway	If not constructed, construct to 4-lane major.
Camino del Norte	@ Bernardo Center Drive	Improve capacity at-grade, pedestrian bridge.
Camino del Norte	4S Parkway to existing terminus	If not complete, construct 6-lane primary.
Camino del Norte	@ I-15 ramps	Construct interchange improvements, NB and SB truck climbing lanes.
Camino Santa Fe	SR-56 to Carmel Valley Road	Widen to 6-lane major street.
Camino Ruiz	Carmel Mountain Road to Dormouse Road	Widen to 4-lane major street.
Interstate 5	Del Mar Heights Road to Birmingham Drive	Construct improvements (HOV, auxiliary lanes) or comparable improvement to facility.
Interstate 15	SR-56 to Escondido	Construct improvements (HOV, auxiliary lanes) or comparable improvement to facility.
Rancho Bernardo Road	Bernardo Center Drive to West Bernardo Drive	Widen to 6-lane major.
Rancho Bernardo Road	@ West Bernardo Drive	Construct intersection improvements.
Rancho Bernardo Road	@ I-15 NB/SB ramps	Construct intersection improvements.
West Bernardo Drive	@ Bernardo Center Drive	Construct intersection improvements.
West Bernardo Drive	I-15 SB ramps to Aguamiel Road	Improve cross section. ¹
West Bernardo Drive	@ I-15 SB ramp	Construct traffic signal.

Note: * Required improvements to be assured to the satisfaction of the City Engineer.

** These 2,628 EDUs are assumed to only be associated with approved land uses defined by the approved VTM.

¹ Improvements to be defined, designed and assured to the satisfaction of the City Engineer.

VTM		
Area	Added	Cumulative
VTM	2,628 - 100%	2,628 - 100%
Subarea I	0 - 0%	1,582 - 27%
Subarea Total	2,628 - 31%	2,628 - 31%

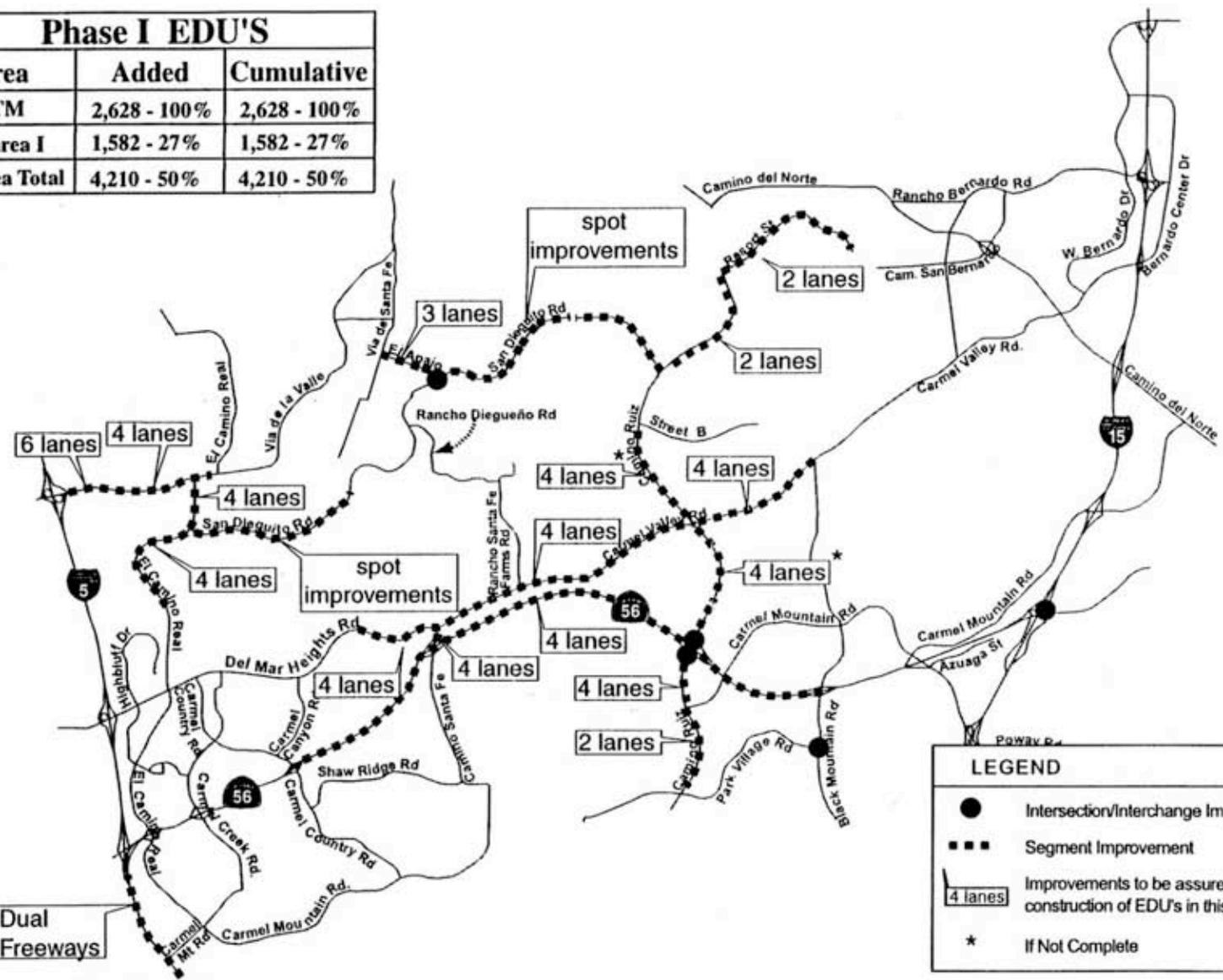


Circulation Impact Analysis/VTM Circulation Network Improvements

Black Mountain Ranch Subarea Plan



Phase I EDU'S		
Area	Added	Cumulative
VTM	2,628 - 100%	2,628 - 100%
Subarea I	1,582 - 27%	1,582 - 27%
Subarea Total	4,210 - 50%	4,210 - 50%



↑
Not To Scale

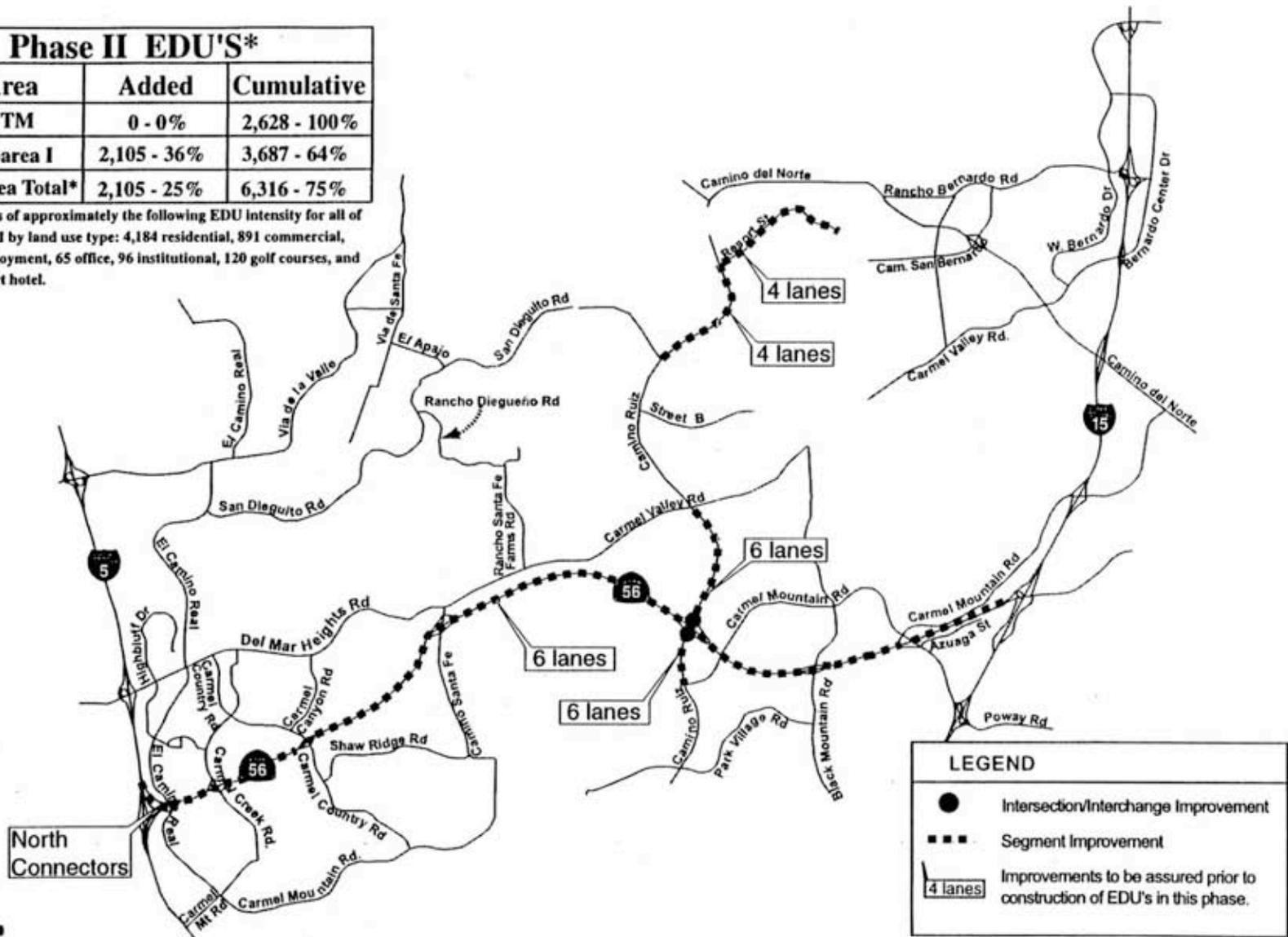


Circulation Impact Analysis/Phase One Circulation Network Improvements

Black Mountain Ranch Subarea Plan

Phase II EDU'S*		
Area	Added	Cumulative
VTM	0 - 0%	2,628 - 100%
Subarea I	2,105 - 36%	3,687 - 64%
Subarea Total*	2,105 - 25%	6,316 - 75%

*Consists of approximately the following EDU intensity for all of Subarea I by land use type: 4,184 residential, 891 commercial, 720 employment, 65 office, 96 institutional, 120 golf courses, and 240 resort hotel.



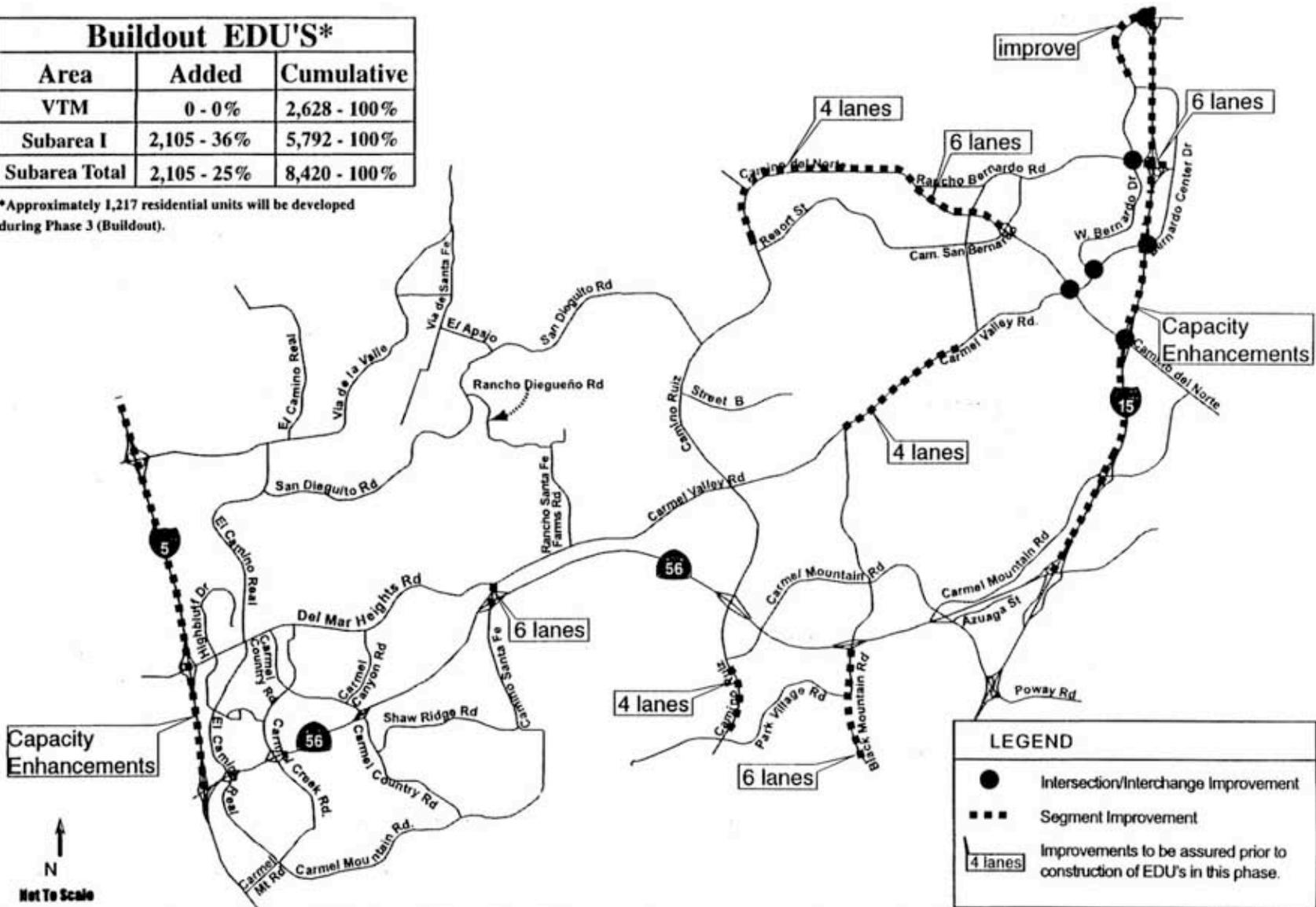
Circulation Impact Analysis/Phase Two Circulation Network Improvements

Black Mountain Ranch Subarea Plan



Buildout EDU'S*		
Area	Added	Cumulative
VTM	0 - 0%	2,628 - 100%
Subarea I	2,105 - 36%	5,792 - 100%
Subarea Total	2,105 - 25%	8,420 - 100%

*Approximately 1,217 residential units will be developed during Phase 3 (Buildout).



Phase Three - Buildout Circulation Network Improvements

Black Mountain Ranch Subarea Plan

