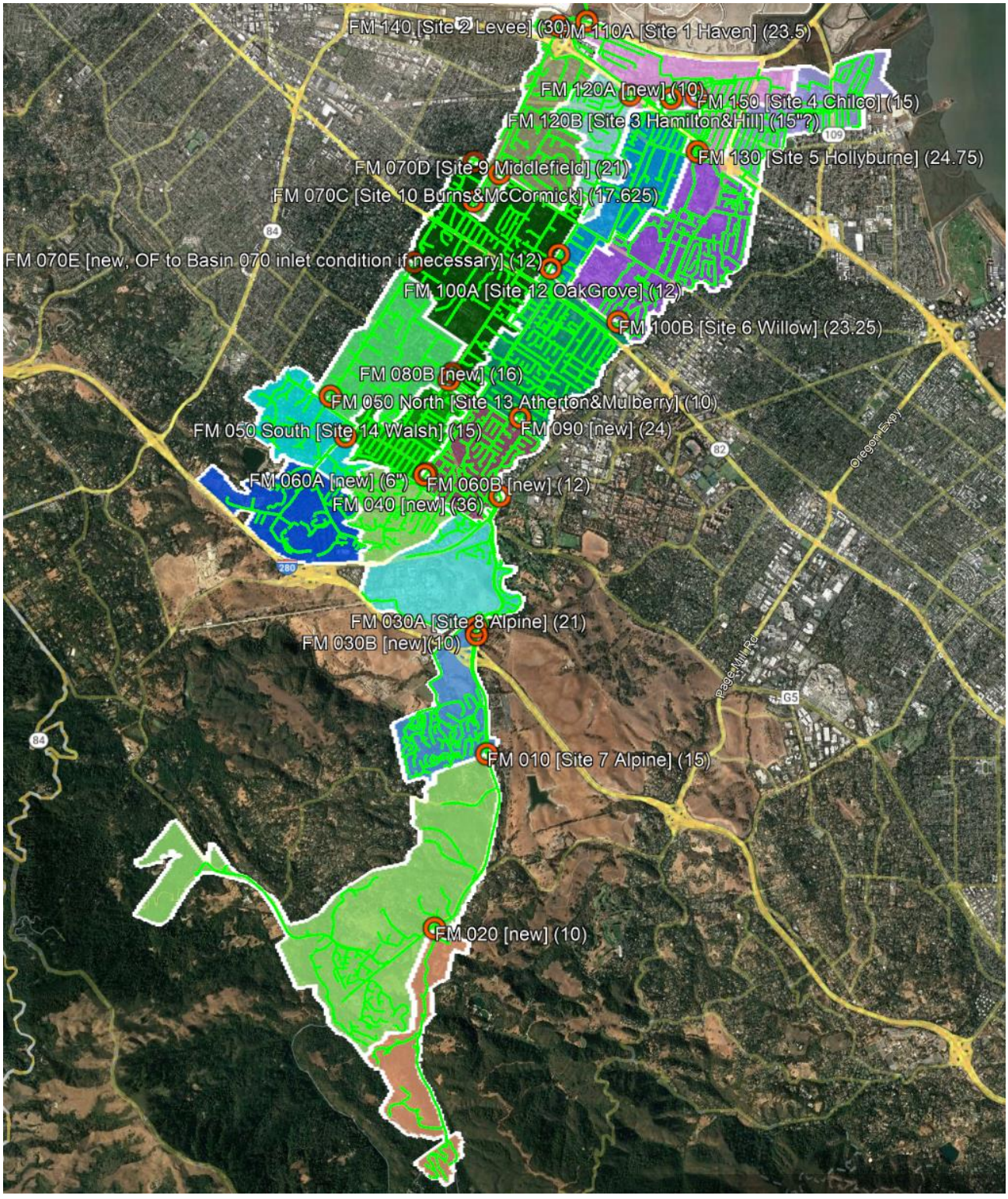
WBSD Proposed Flow Meter Locations (current and new)

22-0324

V&A proposes approximately 11 new flow meters to be used in conjunction with the existing 17 flow meters to isolate flow sewerage basins within the District collection system, and that also mostly conforms with the basins as already defined. The following pages indicate each basin, showing currently defined basin boundaries, and the proposed use of new and current flow meters.

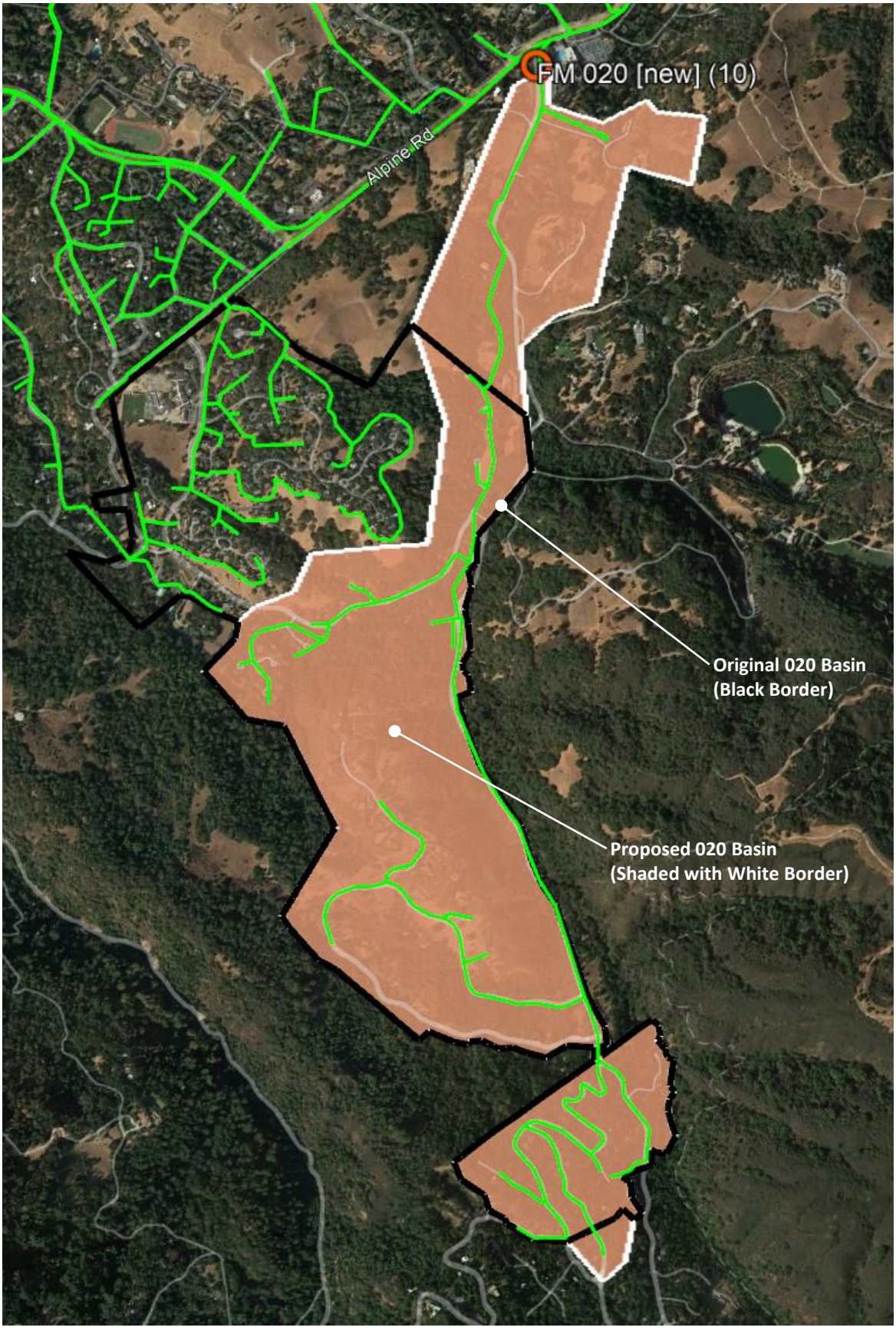
Considerations were made to optimize the use of current flow meters, minimize additional flow meters, and while also trying to not re-shape basin boundaries more than necessary.



West Bay San: Basin 020

22-0324

New Flow Meter 020 (expected 10” line) that will capture approximately 70% of the original 020 basin. The northwest portion of the original 020 basin flows into Basin 010. The single flow meter will be stand-alone and capture the entirety of the proposed basin area. Basin 020 Isolation = FM 020



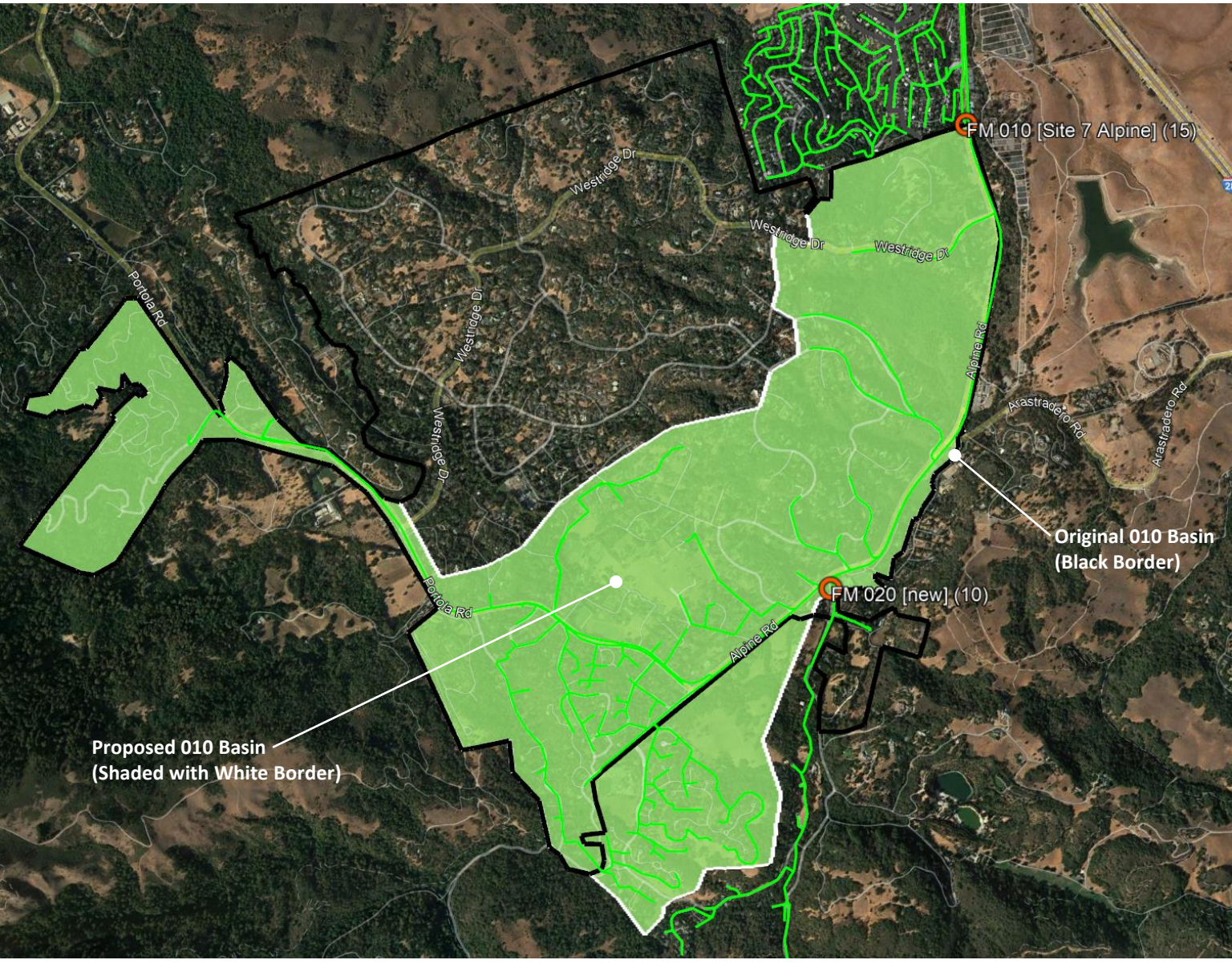
West Bay San: Basin 010

22-0324

Uses existing Flow Meter 010 (Site 7 flow meter on 15” line) that will capture approximately 120% of the original 010 basin (the northwest portion of the original 020 basin flows into Basin 010)

Basin 010 Isolation = FM 010 – FM 020

Note: new shaded area was drawn with consideration of the GIS sewerage pipes as received. V&A and WCWD can discuss the merits of including the unsewered basin as drawn in the original 020 basin boundary (see northwest region near Westridge Drive, etc.).

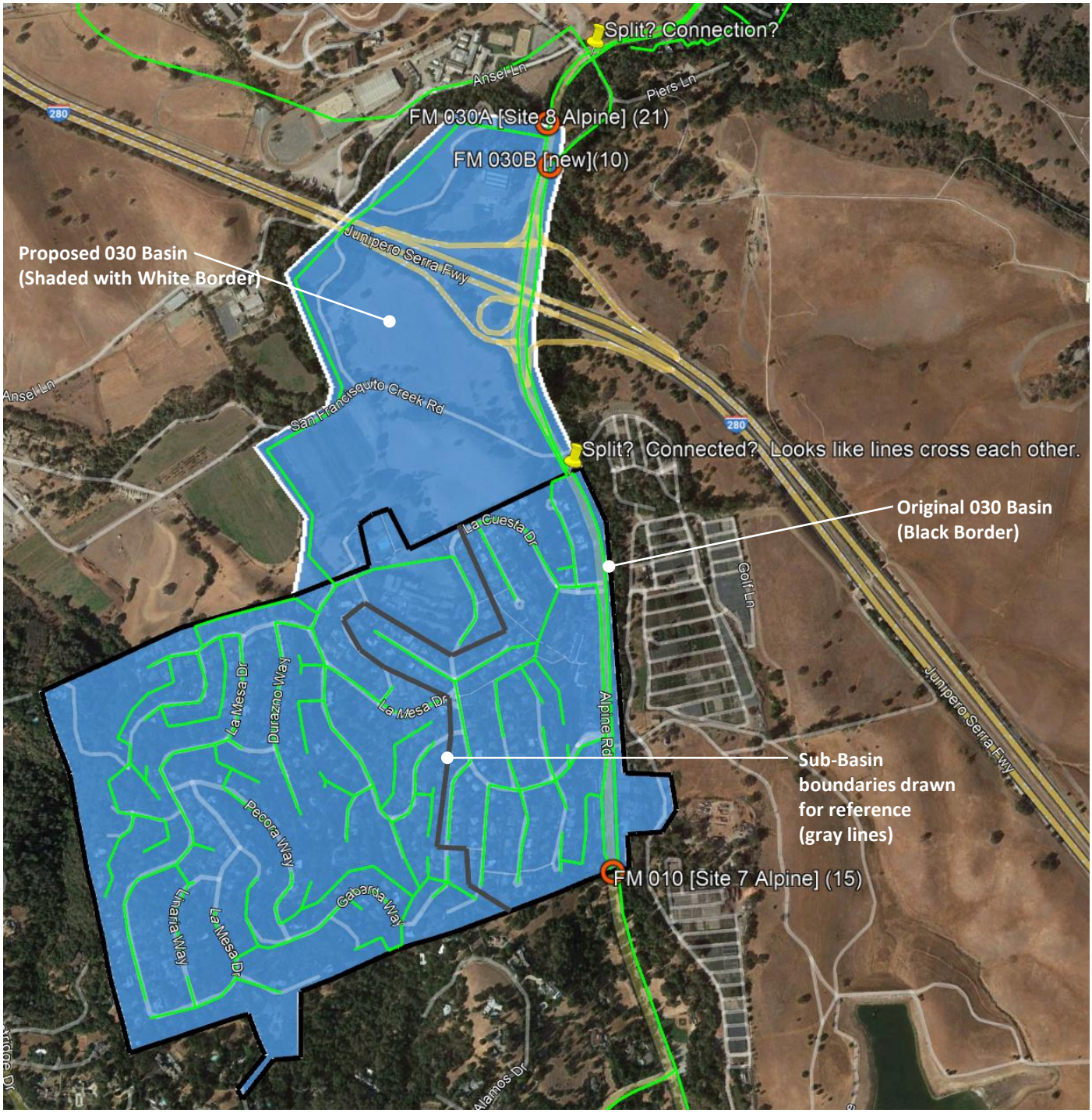


West Bay San: Basin 030

22-0324

Uses existing Flow Meter 030A (Site 8 Alpine on 21” line) and includes new Flow Meter 030B (expected 10” line) that will capture approximately 110% of the original 030 basin. There is a possible split near the downstream northeast corner of the original 030 basin – to properly capture this basin another flow meter (or possible plug) is included to capture the entirety of the basin including possible split/overflow situations.

Basin 030 Isolation = FM 030A + FM 030B – FM 010.



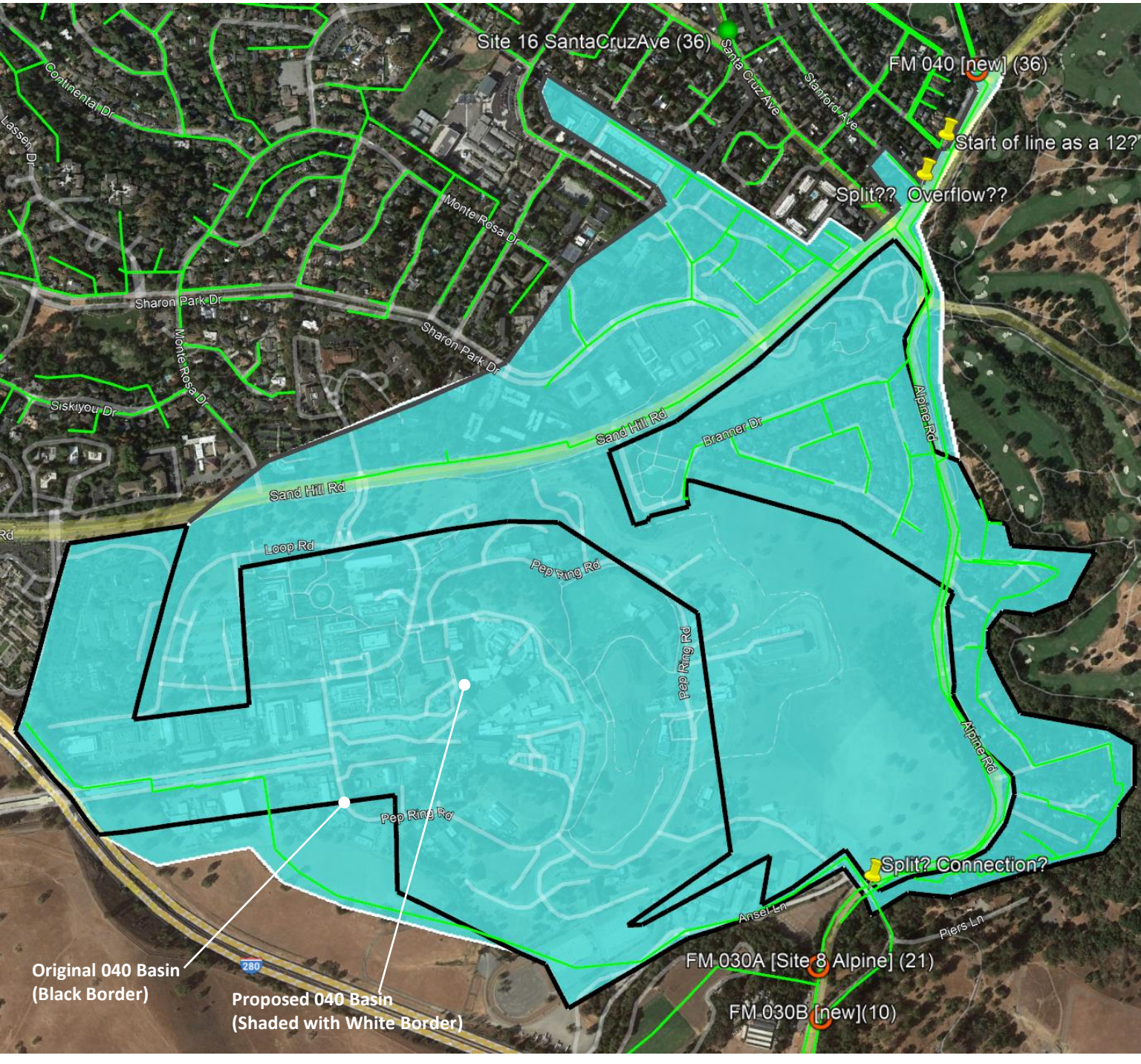
West Bay San: Basin 040

22-0324

Proposed <u>new</u> Flow Meter 040 (expected 36” line) that will capture approximately 120% of the original 040 basin. This line is after an upstream split and should capture the basin shown as a whole. There are possible overflow relief lines that need to be investigated to confirm basin isolation (Leland and Stanford Ave near Sand Hill).

Does V&A have current WCWD Site 16 in the correct location? Per GIS, there is no 36” line near here (Santa Cruz Ave as shown on map). If Site 16 actually meters the 36” line that V&A is proposing, then the existing meter Site 16 can be used and the proposed meter can be eliminated.

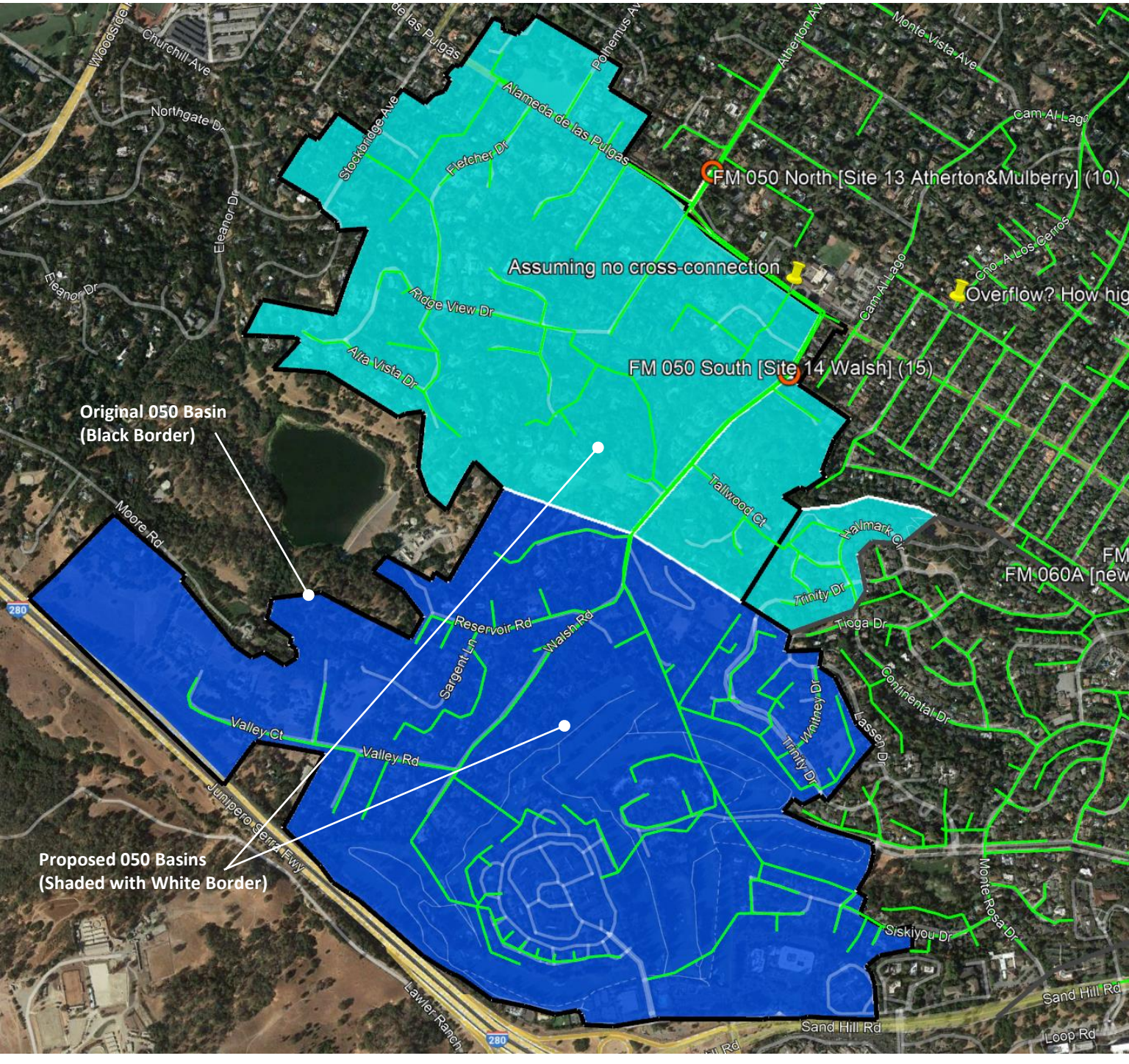
Basin 040 Isolation = FM 040 – (FM 030A + FM 030B)



West Bay San: Basin 050 (North and South sub-basins) 22-0324

Uses existing Flow Meter 050 South (Site 14 Walsh on 15” line) and uses existing Flow Meter 050 North (Site 13 Atherton/Mulberry on 10” line) that captures ~100% of the original 050 basin, but naturally splits the basin into north and south sub-basins based on existing flow meter locations. A potential cross-connection needs to be confirmed to be inactive.

Basin 050 North Isolation = FM 050 North
Basin 050 South Isolation = FM 050 South



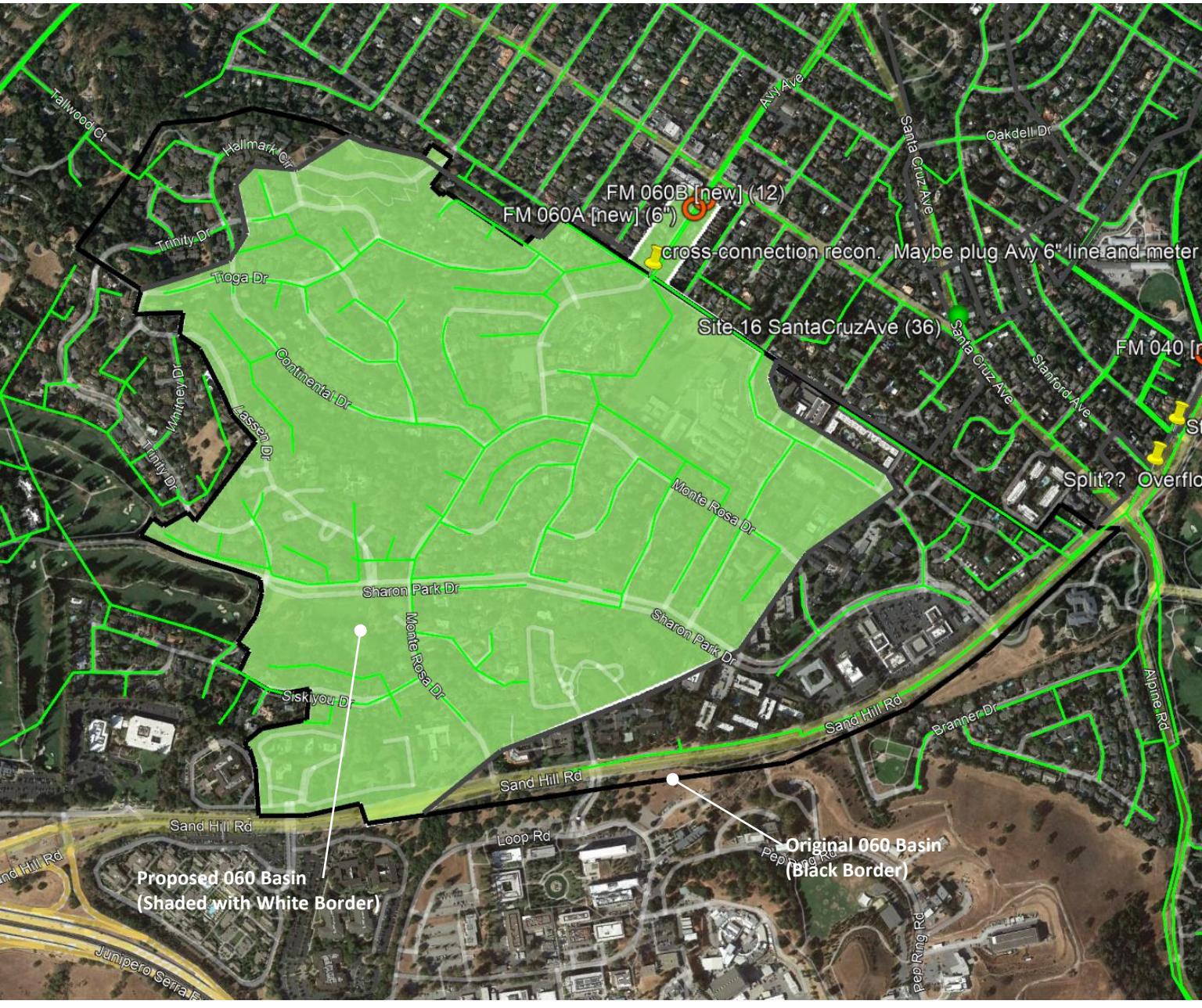
West Bay San: Basin 060

22-0324

Propose new flow meters 060A (expecting 6” line) and 060B (expecting 12” line) that will capture ~85% of the original 060 basin. There currently are no WBSD meters that measure near this basin. There appears to be a possible split at Altschul/Avy that necessitates the use of two flow meters to meter this basin. It’s possible a plug could be utilized as well to achieve basin isolation.

Small portions of the east and northwest regions of the original basin flow out to other neighboring basins.

Basin 060 Isolation = FM 060A + FM 060B



West Bay San: Basin 070 (North and South Sub-Basins)

22-0324

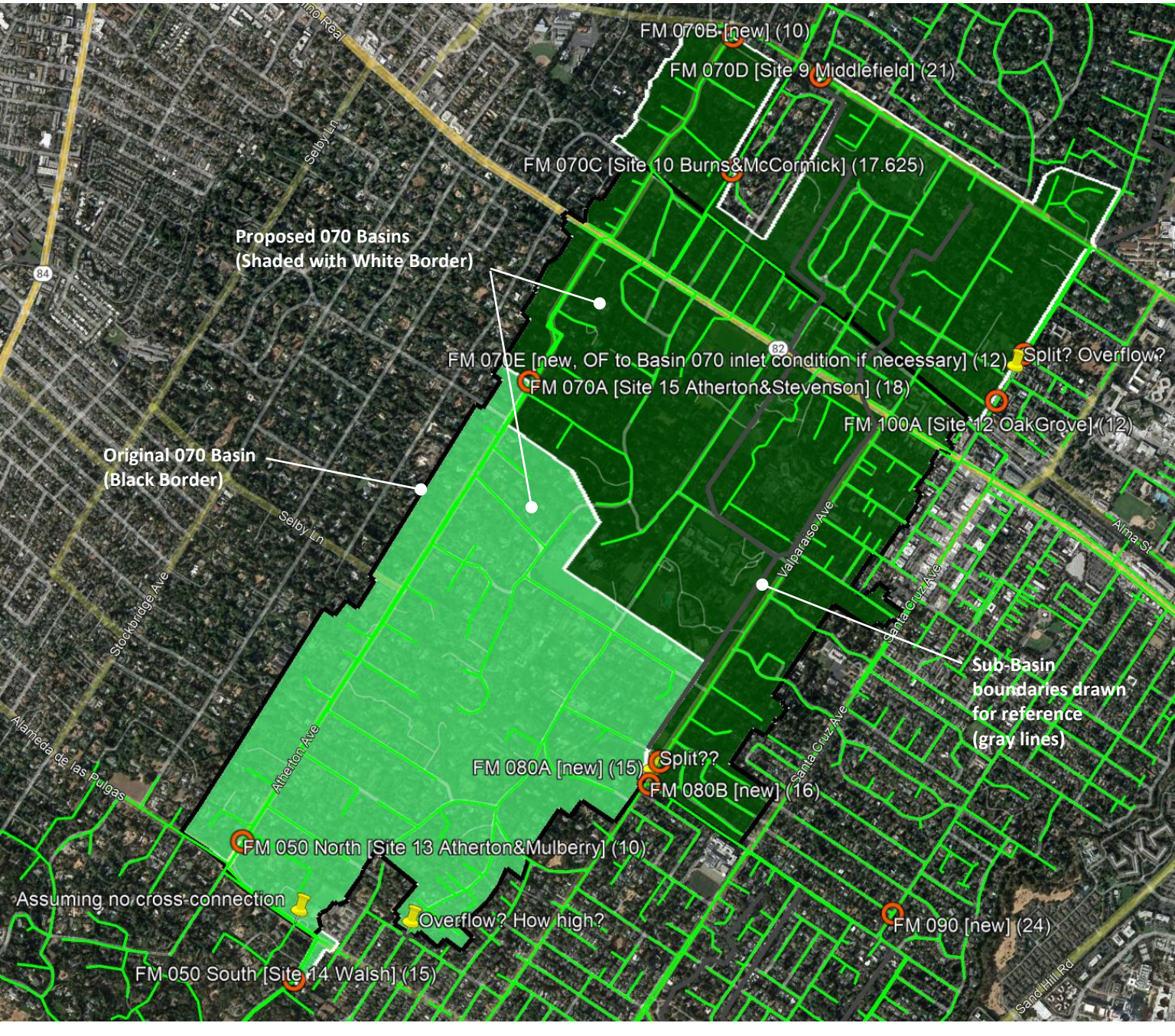
Uses existing Flow Meter 070A (Site 15 Atherton/Stevenson on 18” line) to isolate Basin 070 North.

Basin 070 North Isolation = FM 070A – (FM 050A + FM 050B)

Uses existing Flow Meter 070C (Site 10 Burns/McCormick on 17.625” line), existing Flow Meter 070D (Site 9 Middlefield on 21” line), and proposed new Flow Meter 070B (expected 10” line) and new Flow Meter 070E (possible overflow inlet condition to basin on 12” line) to isolate Basin 070 South.

Basin 070 South Isolation = (FM 070B + FM 070C + FM 070D) – (FM 070A + FM 070E + FM 080A)

Proposed locations will measure ~120% of the original Basin 070 (intrudes north into Basin 110).



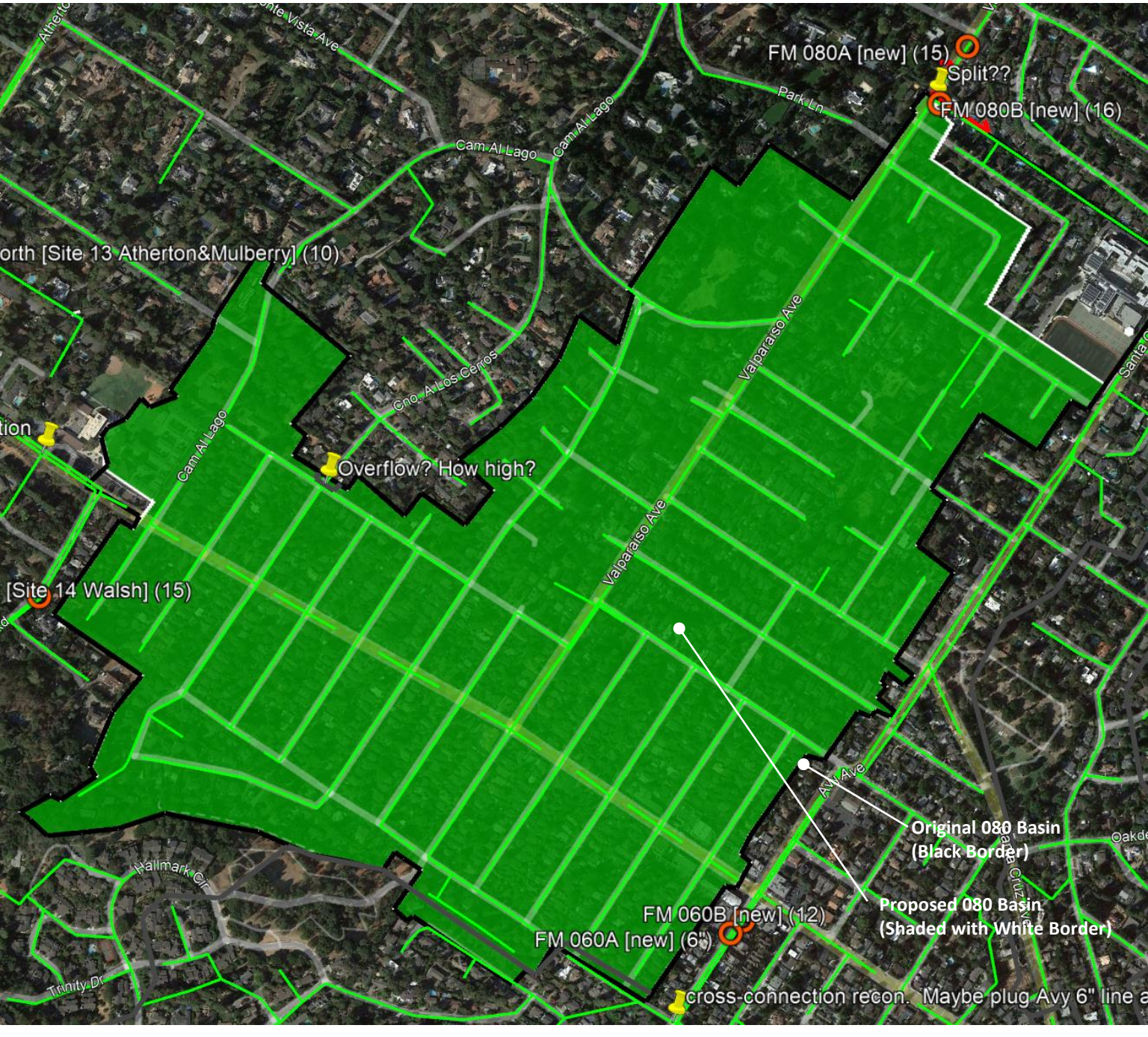
West Bay San: Basin 080

22-0324

Propose <u>new</u> flow meters 080A (expecting 15” line) and 080B (expecting 16” line) that will capture ~95% of the original 080 basin. There currently are no WBSD meters that measure near this basin. There appears to be a split at Valparaiso, just north of Politzer Drive that necessitates the use of two flow meters to meter this basin.

A possible overflow at Barney and A Los Cerros should be confirmed.

Basin 080 Isolation = FM 080A + FM 080B



West Bay San: Basin 090

22-0324

Propose <u>new</u> flow meter 090 (expecting 24” line) that will capture ~100% of the original 090 basin.

Basin 090 Isolation = FM 090 – (FM 040 + FM 060A + FM 060B + FM 080B)

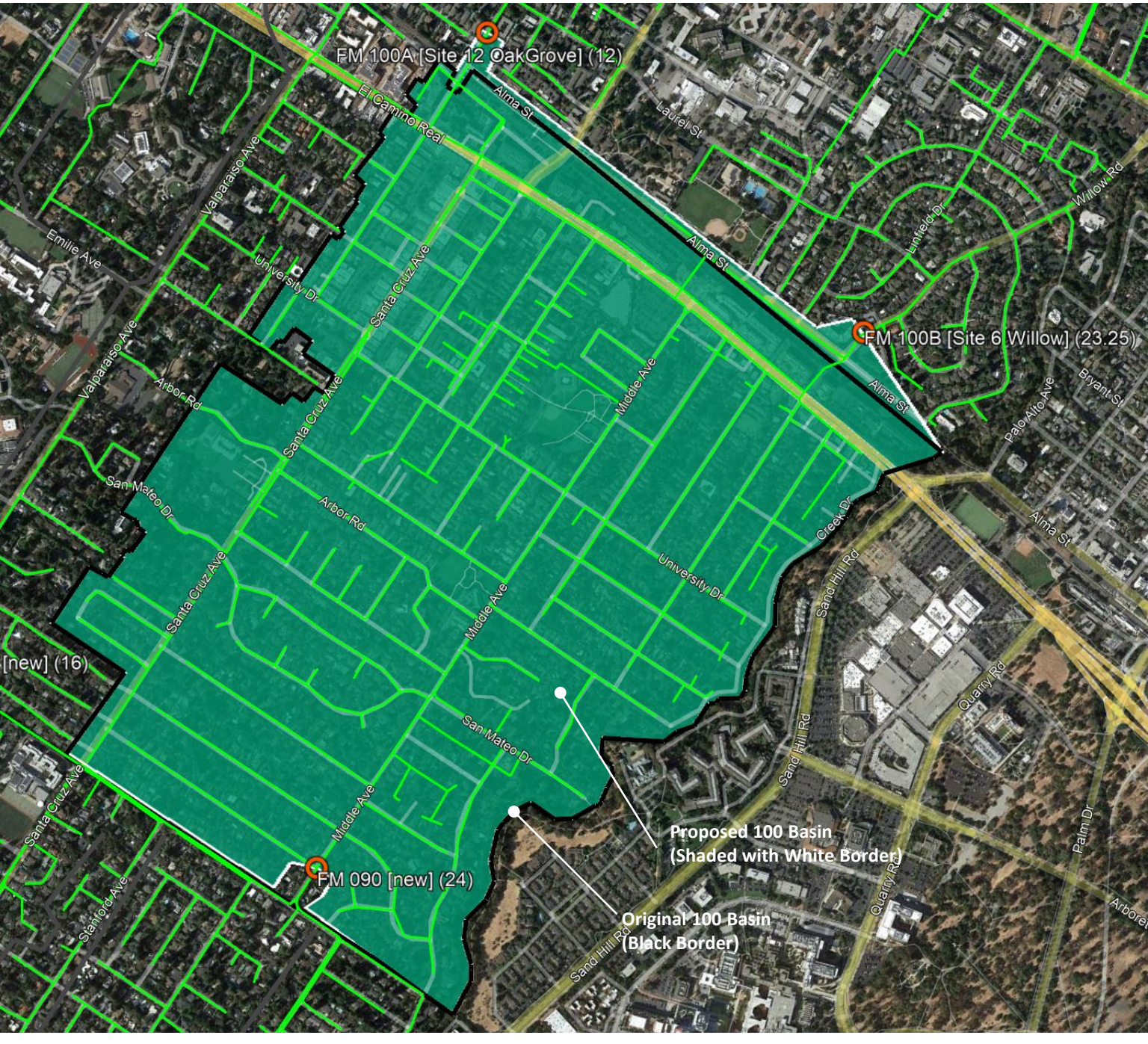
West Bay San: Basin 100

22-0324

Uses existing flow meters 100A (Site 12 Oak Grove on 12” line) and 100B (Site 6 Willow on 23.25” line) that will capture ~100% of the original 100 basin.

Basin 100 Isolation = FM 100A + FM 100B – FM 090

Possible cross-basin connections on Arbor, San Mateo, and University for review.

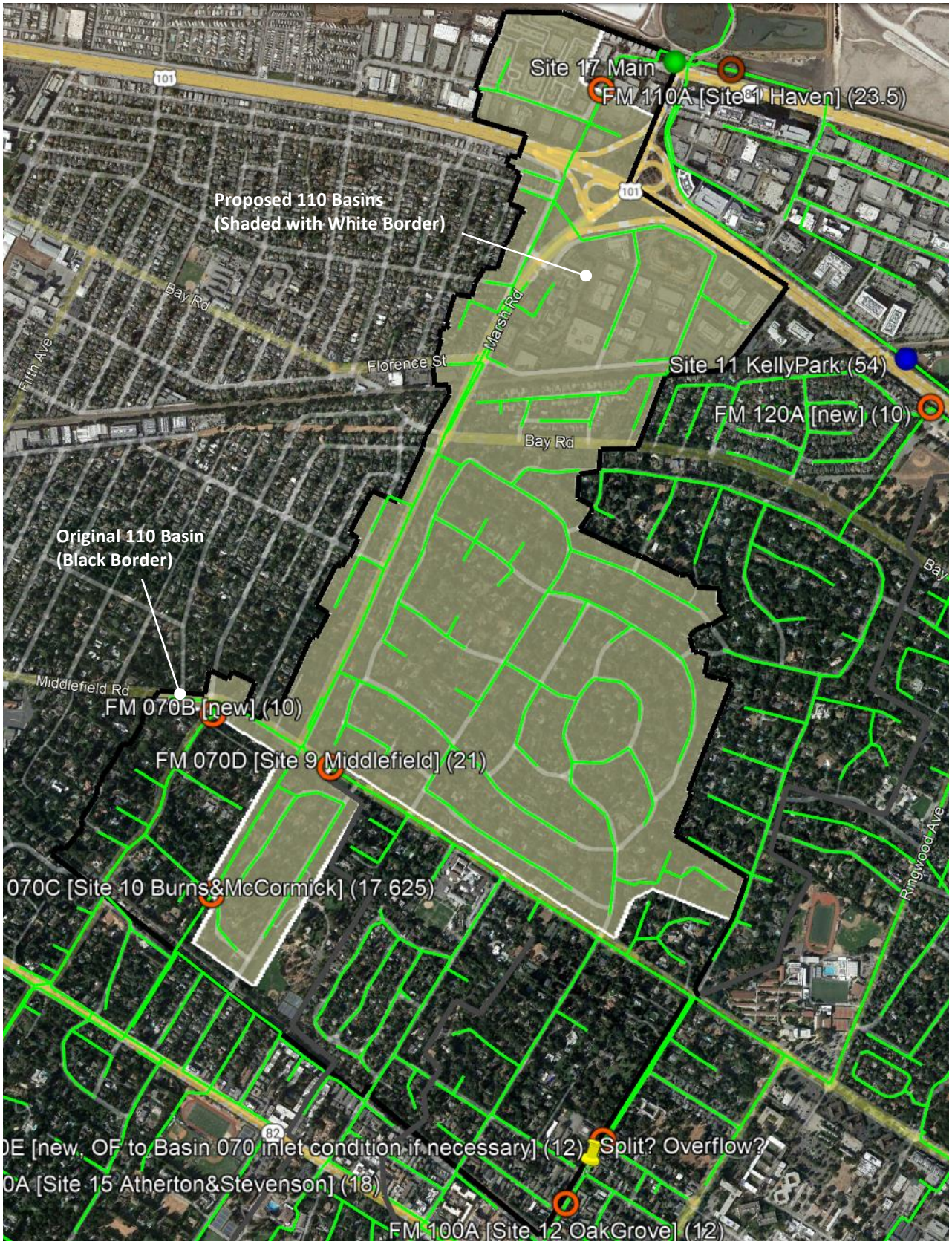


West Bay San: Basin 110

22-0324

Uses existing Flow Meter 110 (Site 1 Haven on 23.5” line) to isolate Basin 110, capturing ~85% of the original 110 Basin.

Basin 110 Isolation = FM 110 – (FM 070B + FM 070C + FM 070D)

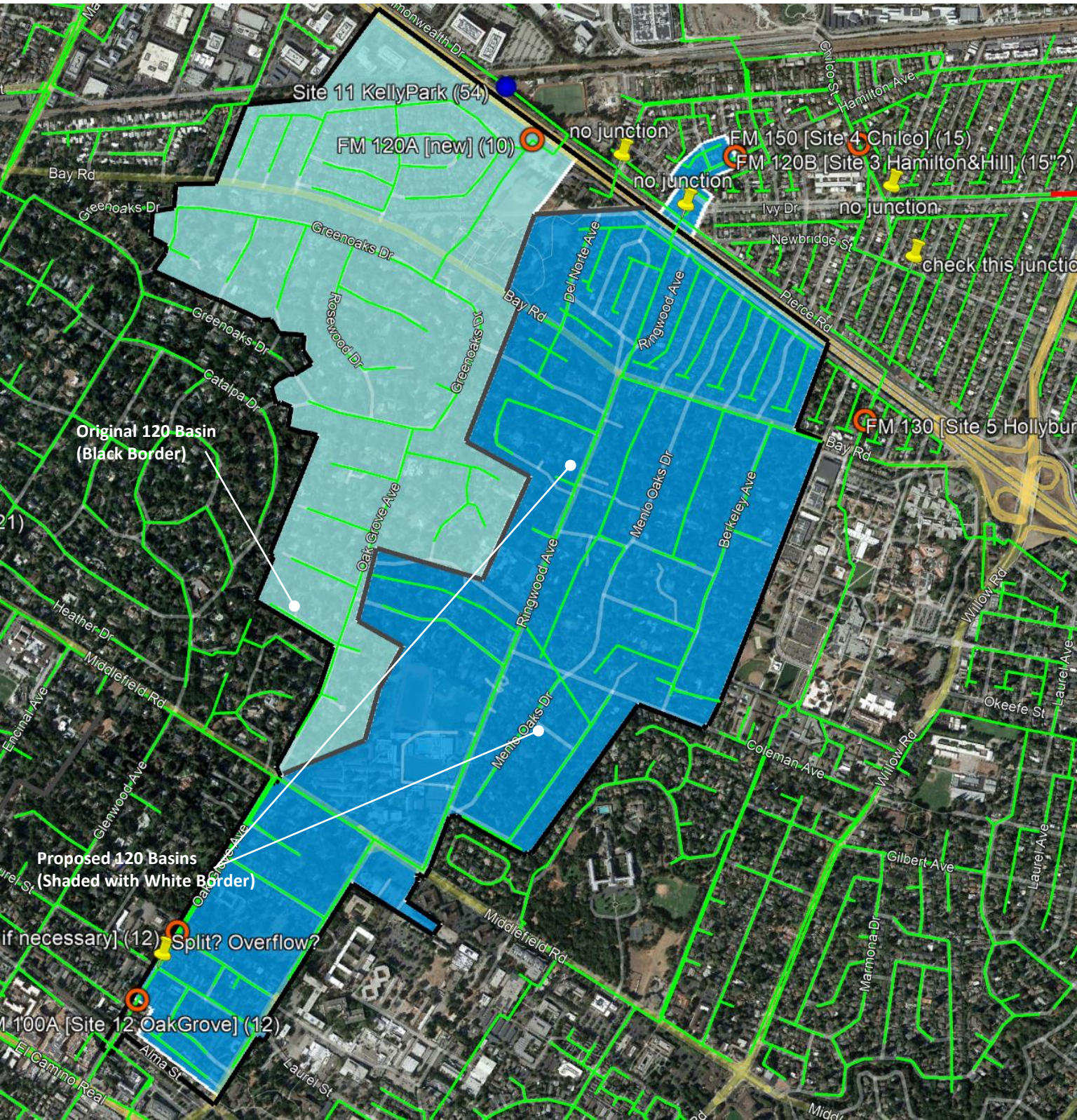


West Bay San: Basin 120 (West and East sub-basins)

22-0324

Propose <u>new</u> FM 120A (expected 10”) to directly monitor Basin 120 West.
Use <u>existing</u> FM 120B (Site 3 Hamilton/Hill on 15” line) to measure Basin 120 East. Both meters will capture ~100% of the original 120 basin.

Basin 120 West Isolated = FM 120A
Basin 120 East Isolated = FM 120B – (FM 100A – FM 070E [overflow])

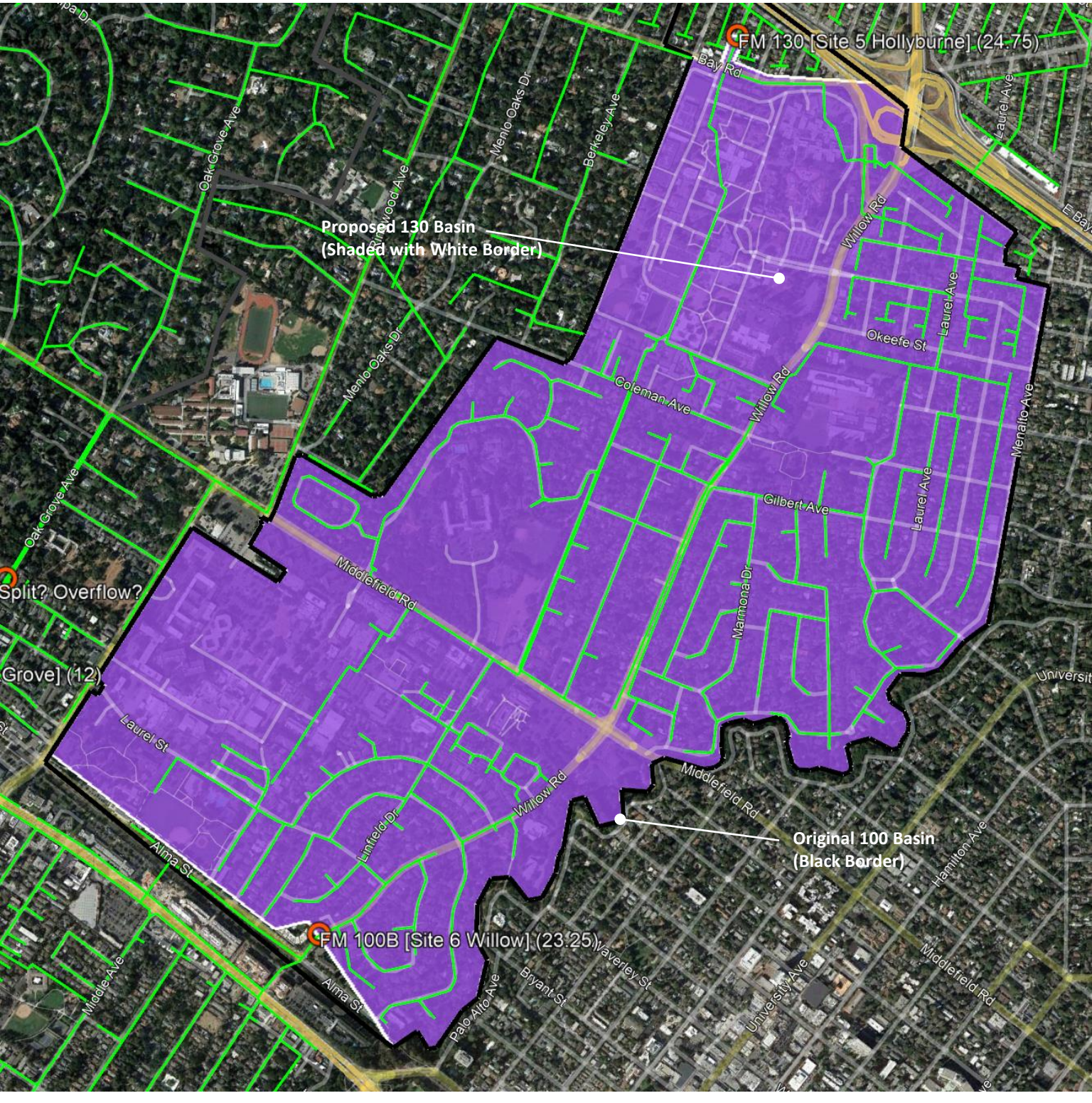


West Bay San: Basin 130

22-0324

Uses existing FM 130 (Site 5 Hollyburne on 24.75” line) that will capture ~100% of the original 130 basin.

Basin 130 Isolation = FM 130 – FM 100B



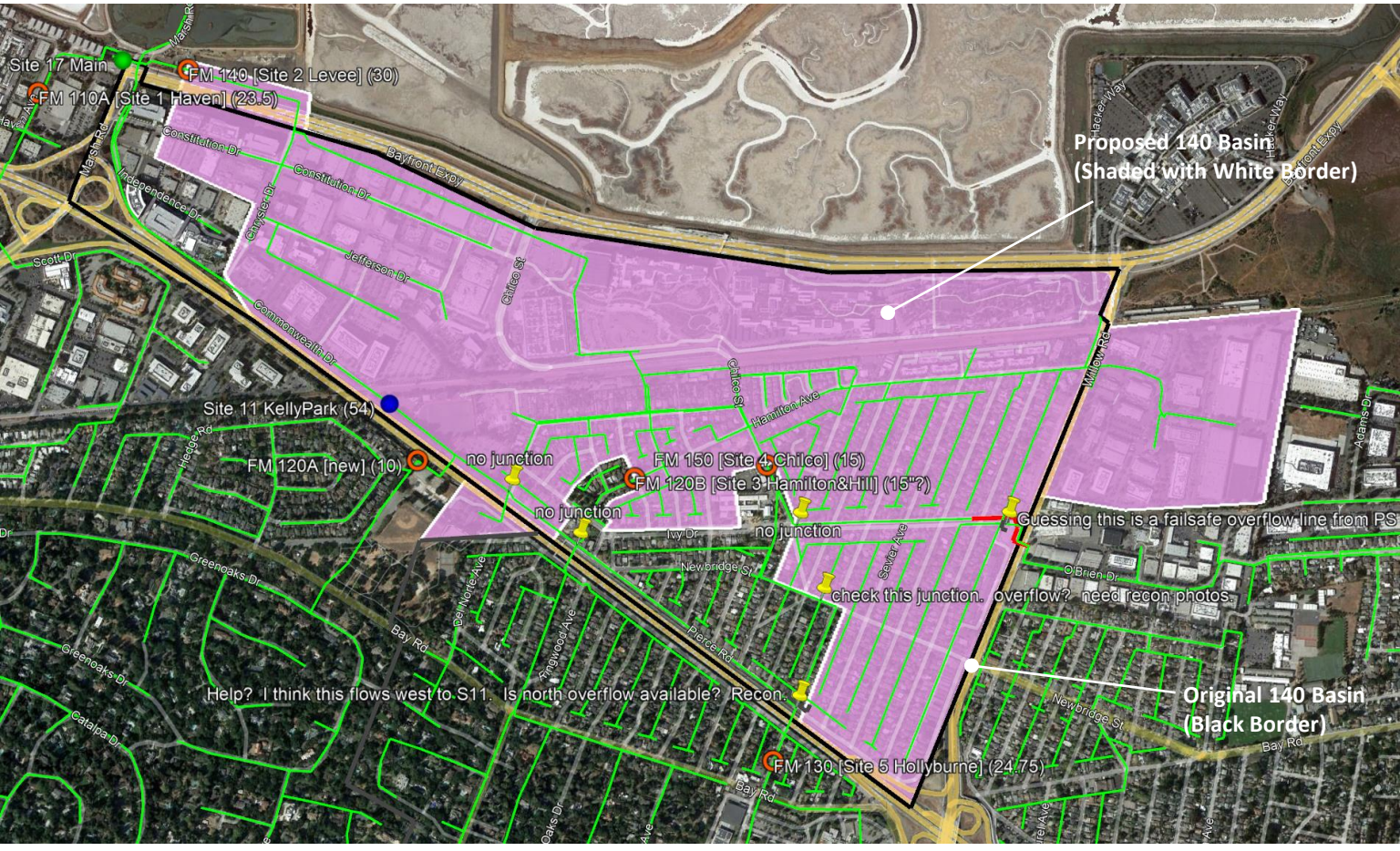
West Bay San: Basin 140

22-0324

Uses existing FM 140 (Site 2 Levee on 30” line) that will capture ~95% of the original 140 basin.

Basin 140 Isolation = FM 140 – (FM 120B + FM 150)

Check overflow at Pierce and Hollyburne.



West Bay San: Basin 150

22-0324

Uses existing FM 150 (Site 4 Chilco on 15” line) that will capture ~120% of the original 150 basin.

Basin 150 Isolation = FM 150.

Check overflow at Pierce and Hollyburne.