

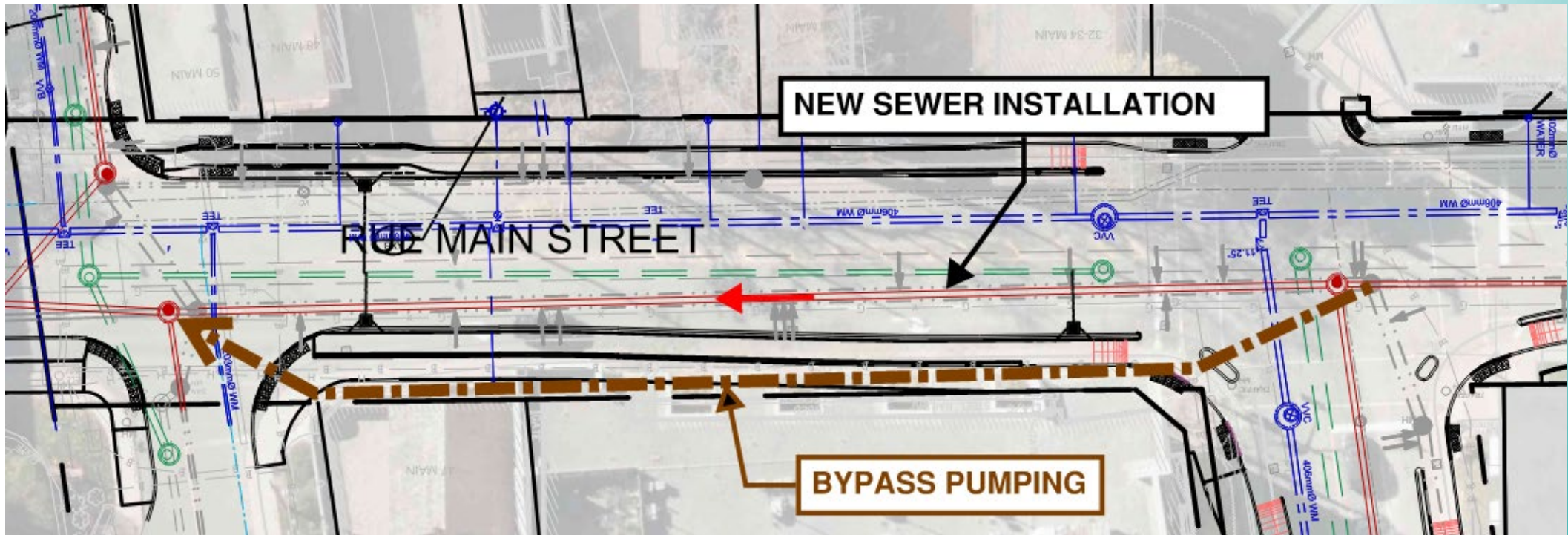


SEWER FLOW MANAGEMENT Design Considerations

Project Example:
Greenfield, Main, Hawthorne Reconstruction Project (GMH)

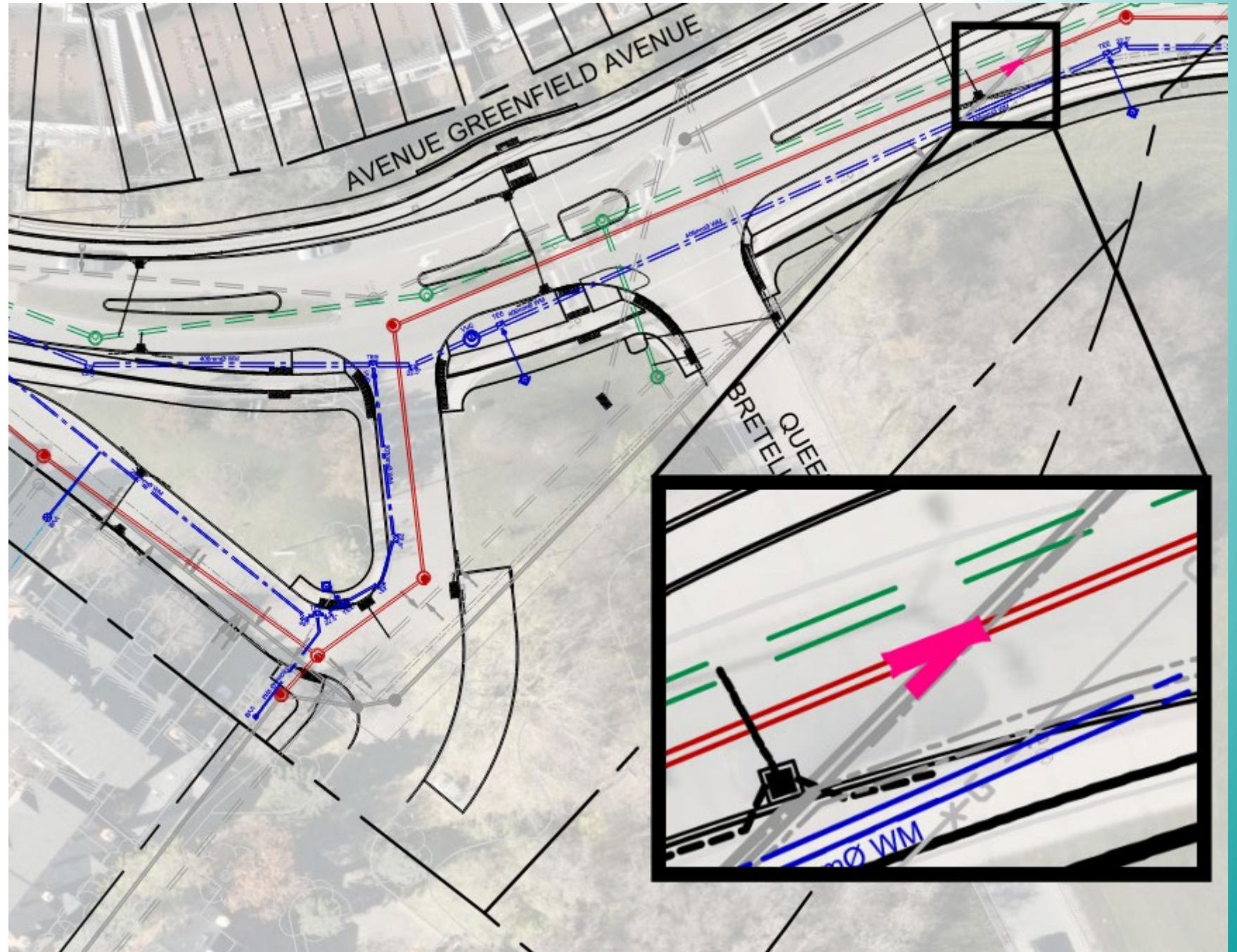
Standard Plans

- If working on sewers in a similar alignment, between two manholes
- Pumping from upstream manhole to downstream manhole
- Reviewed to ensure:
 - Limited impact on upstream systems
 - Sufficient pump capacity to manage known flows
 - System redundancy (i.e.. back up pumps)



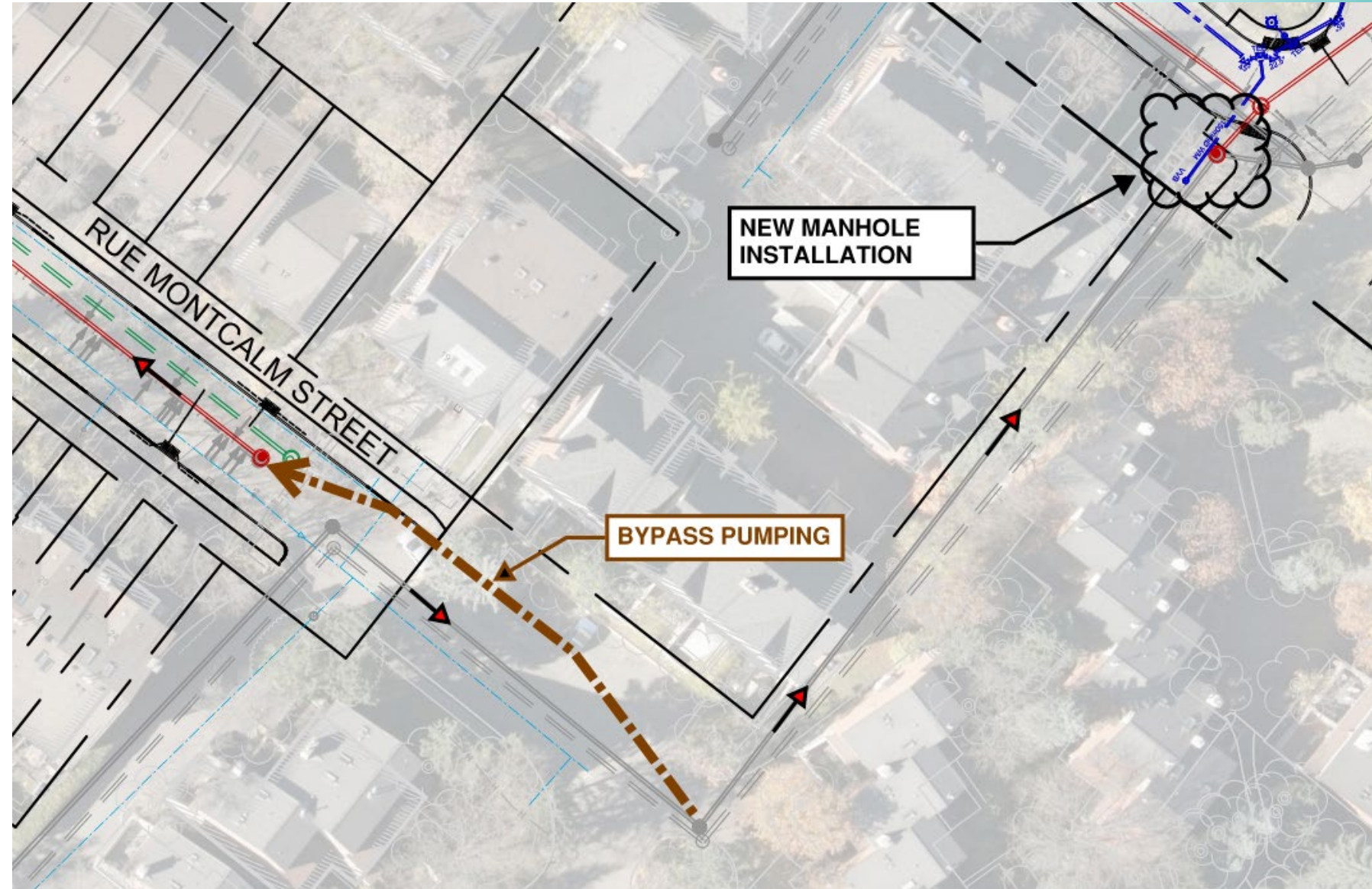
Temporary Wye/Tee

- Used to maintain existing sanitary flows during construction of new sewer in a new alignment
- Avoided weeks of 24/7 pumping
- Integral with the new sewer (no repair sleeves used)
- Connection blanked with a watertight cap upon completion



Alternate Bypass Destination

- Diverting flows from one catchment area to another
- Site constraints are easier to manage
- Reduced pumping distance (hose length)
- Ultimately denied due to capacity concerns



Construction Sequencing

- Maintained sewer flows within existing combined system during construction
- Sewers constructed out of sequence (upstream first)
- Limited pumping requirements for major storm flows
- Combined system fully separated prior to sewer abandonment

