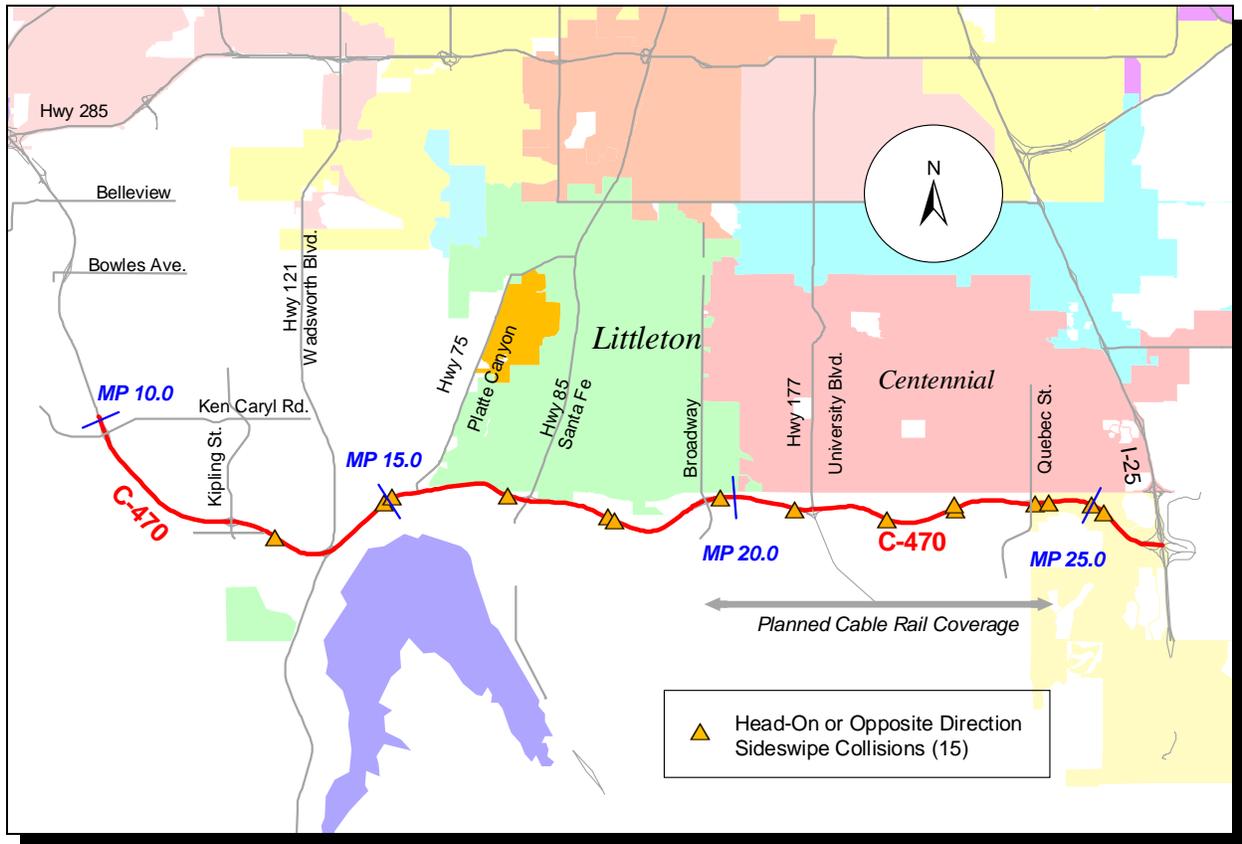


Figure 16b identifies the locations where head-on and opposing direction sideswipe collisions occurred during the study period. The planned cable rail section will enclose an area where several of these severe accidents have historically taken place.

**Figure 16b**



On a corridor-wide basis, fewer collisions than average occur under adverse road surface conditions or during poor weather along this segment of C-470 indicating that CDOT Maintenance Section 8 has an effective winter maintenance and treatment system in place. The efficient road maintenance practices exhibited are a crucial component in ensuring a high level of roadway safety. With this in mind, however, review of those crash locations involving icy, snowy or slushy road conditions indicate minor concentrations occurring in the Santa Fe, Quebec and Yosemite interchange areas, including associated ramps. Most of these involving westbound vehicles.

The previous analysis of freeway segments confirms the presence of congestion related safety problems. This conclusion supports the fact that new alternatives will need to provide additional capacity.

In the following sections of the study, safety at the included interchanges is examined. Safety problems detected on the crossing streets, ramps and ramp intersections will be identified.

## INTERCHANGE SAFETY

### *C-470 and Ken Caryl Rd. Interchange*

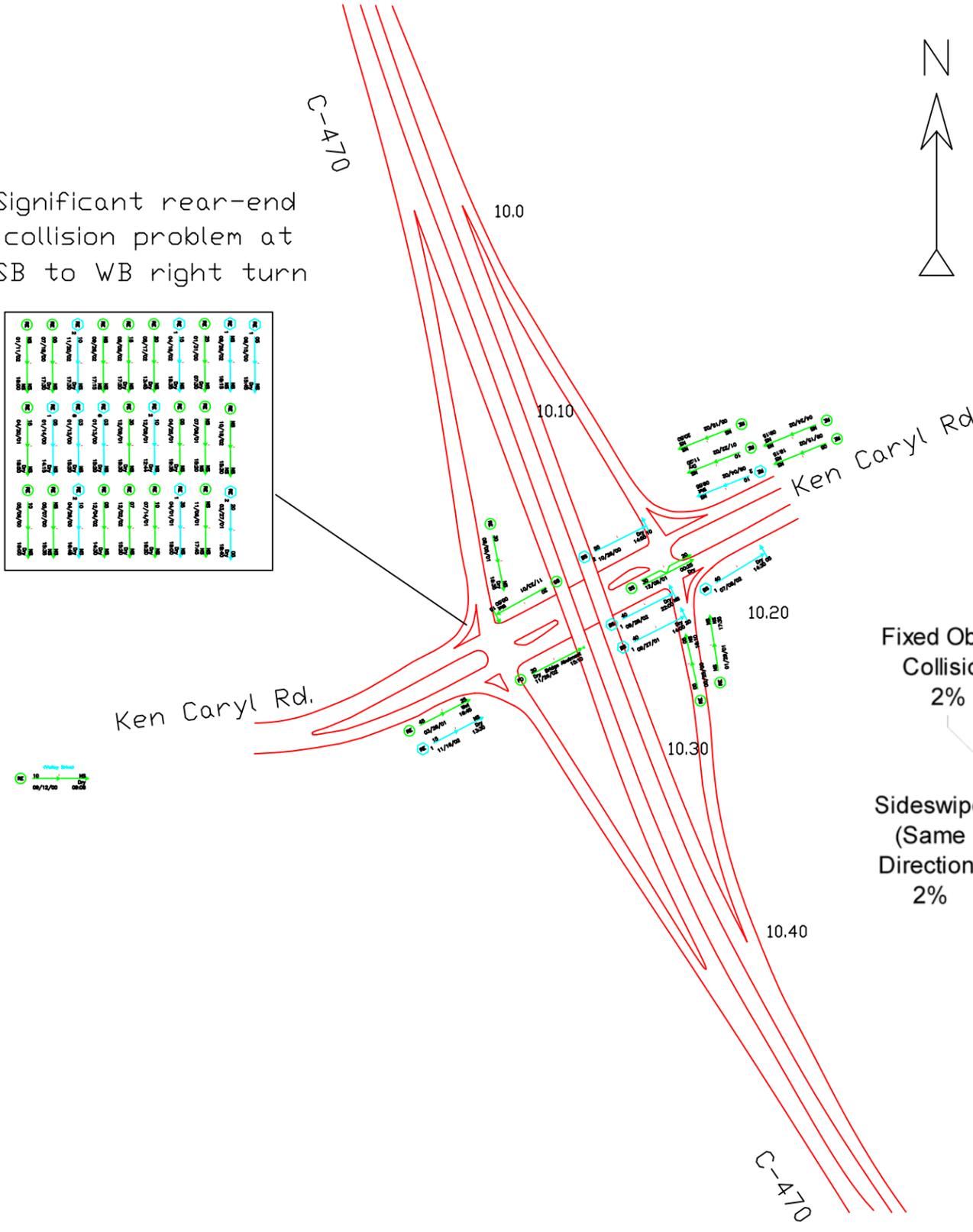
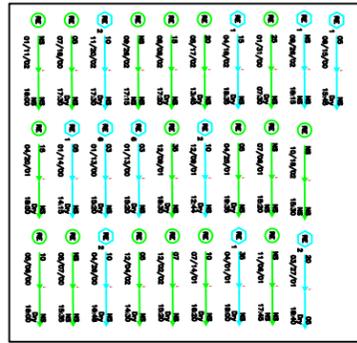
An accident diagram as well as a chart showing the accident type distribution profile for interchange intersections, ramps and cross road is shown on the following page.

The accident type distribution profile shows that rear end collisions make up most of the accidents at the ramp terminals and on Ken Caryl Rd., accounting for 85% of the total. A significant number of these rear end accidents are occurring in the right turn movement from the southbound (EB C-470) off ramp to westbound Ken Caryl Rd. During the 3 year study period approximately 28 crashes were reported at this location. Improvements such as extended acceleration lanes on Ken Caryl Rd. can help moderate the incidence of these accidents. Ensuring optimum visibility from the intersection to the east can also help curtail the tendency for drivers to start and then unexpectedly stop to clear traffic.

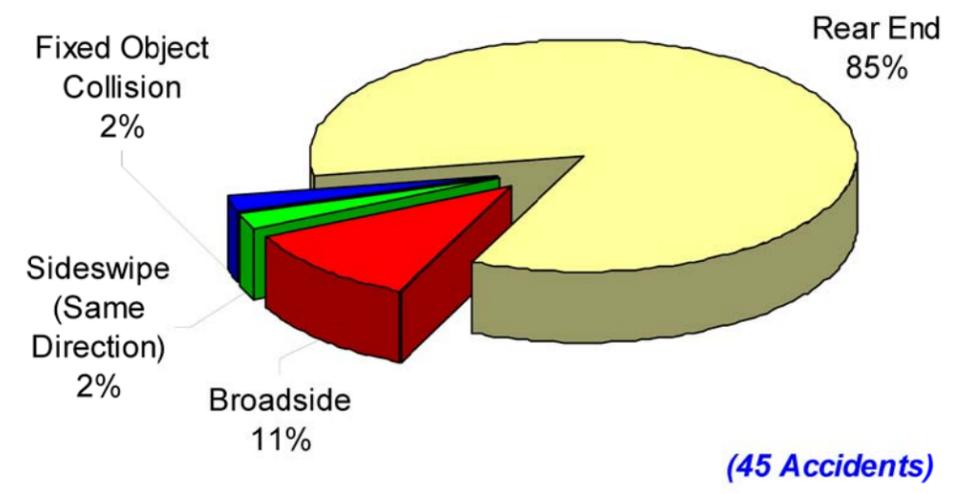
Five broadside collisions are noted at the east side ramp terminal. At this location, east bound drivers are occasionally running through a red signal indication resulting in a crash with northbound drivers turning onto Ken Caryl from the westbound C-470 off ramp. Ensuring optimum visibility of the eastbound traffic signal for approaching vehicles can help reduce the incidence of these crashes.

# C-470 & Ken Caryl Rd. Interchange

Significant rear-end collision problem at SB to WB right turn



**Accident Types at Ken Caryl Interchange Ramps & Crossroad Only**



### *C-470 and Kipling Parkway Interchange*

An accident diagram as well as an accident type distribution profile for interchange intersections, ramps and Kipling Pkwy. at the interchange is shown on the following page.

Overall, approximately 22 collisions on the interchange ramps and crossroad were reported. Although this accident frequency is not unexpected, two minor accident groupings were noted at the Kipling interchange. Six rear-end crashes occurred in the channelized right turn lane from the westbound C-470 off ramp to northbound Kipling. These are related to congestion on northbound Kipling. Extension of the northbound acceleration lane on Kipling was completed in conjunction with commercial development and may have alleviated much of this minor accident concentration. A minor cluster of eight crashes is noted at the south ramp intersection. The accidents forming this cluster did not exhibit distinguishing patterns, therefore no specific improvement is recommended at this location either.