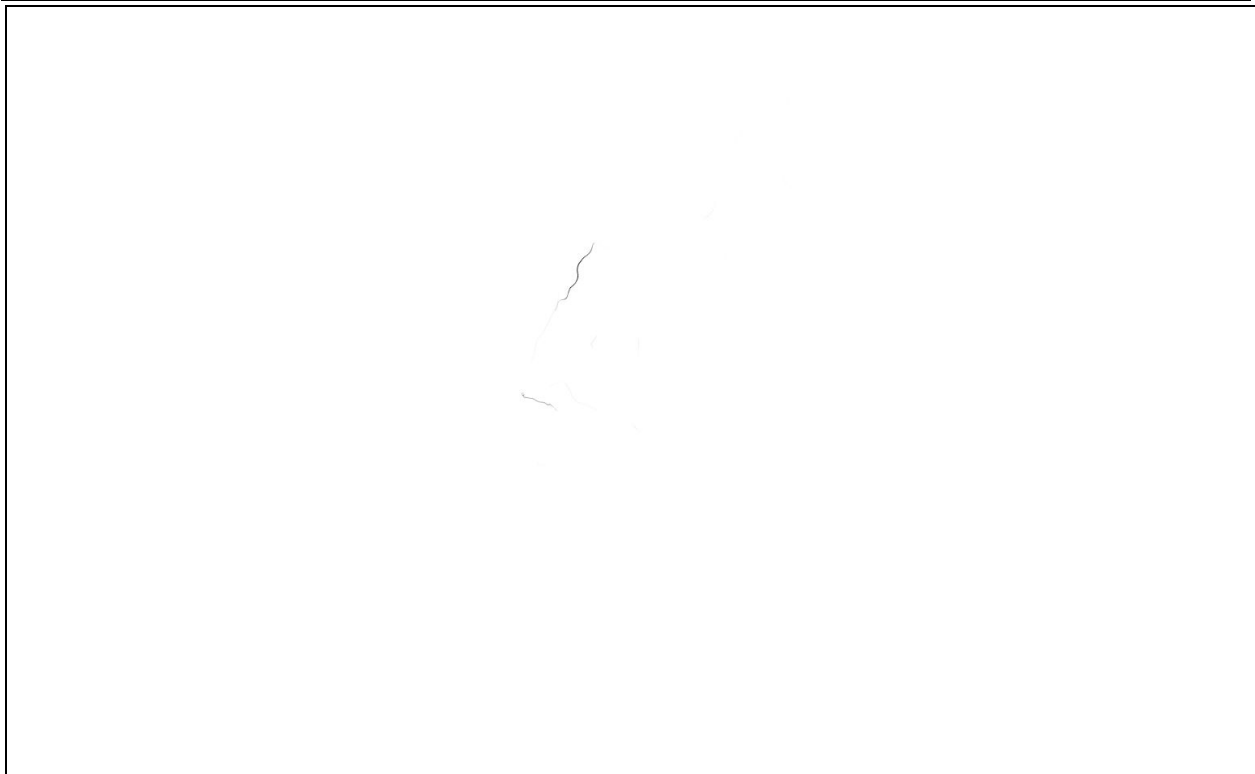Gus Lipkin

Homework 5

A. Based on our discussion in class (12.7 Route networks), filter is set to maxspeed ==
   "70 mph" change this to "50 mph," submit your igraph outputs; what differences
   you observe when comparing with "70 mph".

```{r}
ways_freeway = bristol_ways %>% filter(maxspeed == "50 mph")
ways_sln = SpatialLinesNetwork(ways_freeway)
#> Warning in SpatialLinesNetwork.sf(ways_freeway): Graph composed of
multiple
#> subgraphs, consider cleaning it with sln_clean_graph().
slotNames(ways_sln)
#> [1] "sl"            "g"             "nb"            "weightfield"
weightfield(ways_sln)
#> [1] "length"
class(ways_sln@g)
#> [1] "igraph"
```
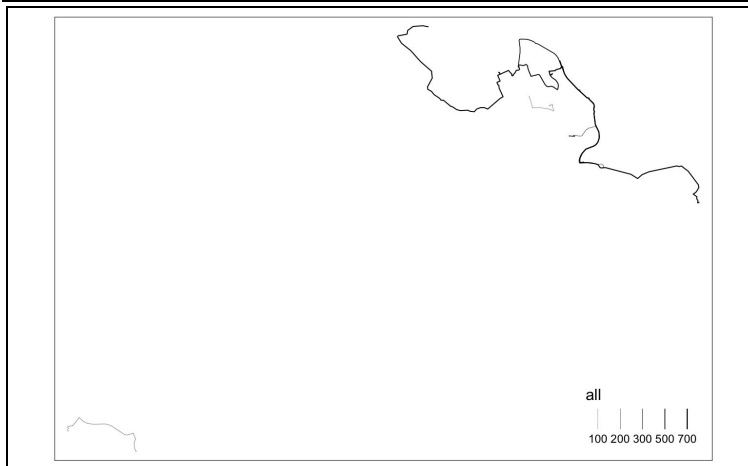

This is showing the number of roadways that have 50mph speed limits are displayed in
the chart. The thicker the line means the higher the betweenness scores.

B. In 12.8 prioritizing new infrastructure, we set st_set_geometry("leg_orig"). Set
    "leg_dest" and generate your results using 'mapview'. Interpret your answer, is it
    reasonable to use leg_dest? You may want to see FIGURE 12.4 for better
    interpretation.

```{r}
route_rail = desire_rail %>%
  st_set_geometry("leg_dest") %>%
  route(l = ., route_fun = osrmRoute, returnclass = "sf") %>%
  select(names(route_carshort))
route_rail
mapview::mapview(route_rail$all)
```


```{r}
route_cycleway = rbind(route_rail, route_carshort)
route_cycleway$all = c(desire_rail$all, desire_carshort$all)
```


```{r}
qtm(route_cycleway, lines.lwd = "all")
```


This adds the little bit of lines to the bottom left of the bap. It shows lines based on the
destination of everyone's trips around the city.