

Pretty_SFR

Import Packages + Read in Data

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.3.0 --
```

```
## v ggplot2 3.3.0    v purrr  0.3.3
## v tibble  3.0.0    v dplyr  0.8.5
## v tidyr   1.0.0    v stringr 1.4.0
## v readr   1.3.1    v forcats 0.4.0
```

```
## -- Conflicts ----- tidyverse_conflicts() --
```

```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

```
library(magrittr)
```

```
##
```

```
## Attaching package: 'magrittr'
```

```
## The following object is masked from 'package:purrr':
```

```
##
```

```
##      set_names
```

```
## The following object is masked from 'package:tidyr':
```

```
##
```

```
##      extract
```

```
library(here)
```

```
## here() starts at /Users/salmahuque/Desktop/BigThesis/ThesisR
```

```
library(data.table)
```

```
##
```

```
## Attaching package: 'data.table'
```

```
## The following objects are masked from 'package:dplyr':
```

```
##
```

```
##      between, first, last
```

```
## The following object is masked from 'package:purrr':  
##  
##      transpose
```

```
library(MASS)
```

```
##  
## Attaching package: 'MASS'
```

```
## The following object is masked from 'package:dplyr':  
##  
##      select
```

```
library(xtable)  
library(knitr)  
library(stargazer)
```

```
##  
## Please cite as:
```

```
## Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.
```

```
## R package version 5.2.2. https://CRAN.R-project.org/package=stargazer
```

```
library(pander)  
library(kableExtra)
```

```
##  
## Attaching package: 'kableExtra'
```

```
## The following object is masked from 'package:dplyr':  
##  
##      group_rows
```

```
library(lubridate)
```

```
##  
## Attaching package: 'lubridate'
```

```
## The following objects are masked from 'package:data.table':  
##  
##      hour, isoweek, mday, minute, month, quarter, second, wday, week,  
##      yday, year
```

```
## The following object is masked from 'package:here':  
##  
##      here
```

```
## The following object is masked from 'package:base':  
##  
##      date
```

```
# read in csv
thesis_data <- read_csv(here::here("DATA", "thesis-data.csv"))
```

```
## Warning: Missing column names filled in: 'X1' [1]
```

```
## Parsed with column specification:
```

```
## cols(
##   .default = col_double(),
##   STATE_ID = col_character(),
##   RNO = col_character(),
##   OWNER1 = col_character(),
##   OWNER2 = col_logical(),
##   OWNER3 = col_logical(),
##   OWNERADDR = col_character(),
##   OWNERCITY = col_character(),
##   OWNERSTATE = col_character(),
##   OWNERZIP = col_character(),
##   SITEADDR = col_character(),
##   SITECITY = col_character(),
##   SITE_STATE = col_character(),
##   LEGAL_DESC = col_character(),
##   PROP_CODE = col_character(),
##   PRPCD_DESC = col_character(),
##   LANDUSE = col_character(),
##   BEDROOMS = col_logical(),
##   MKTVALYR3 = col_character(),
##   SALEDATE = col_character(),
##   ACC_STATUS = col_character()
##   # ... with 37 more columns
## )
```

```
## See spec(...) for full column specifications.
```

```
## Warning: 19 parsing failures.
```

```
##   row   col           expected actual
## 8747 SHARED 1/0/T/F/TRUE/FALSE      Y '/Users/salmahuque/Desktop/BigThesis/ThesisR/DATA/thesis-data
## 20798 SHARED 1/0/T/F/TRUE/FALSE      Y '/Users/salmahuque/Desktop/BigThesis/ThesisR/DATA/thesis-data
## 20986 SHARED 1/0/T/F/TRUE/FALSE      Y '/Users/salmahuque/Desktop/BigThesis/ThesisR/DATA/thesis-data
## 21094 SHARED 1/0/T/F/TRUE/FALSE      Y '/Users/salmahuque/Desktop/BigThesis/ThesisR/DATA/thesis-data
## 21096 SHARED 1/0/T/F/TRUE/FALSE      Y '/Users/salmahuque/Desktop/BigThesis/ThesisR/DATA/thesis-data
## .....
## See problems(...) for more details.
```

```
# Split Data
```

```
SFR <- thesis_data %>%
  filter(PRPCD_DESC == "RESIDENTIAL IMPROVED", prop_type == "Single-family")
```

```
# Clean SFR Dataframe
```

```
test1 <- SFR %>%
  dplyr::select(-c(OWNER2, OWNER3, OWNERZIP,
    MKTVALYR1, MKTVALYR2,
    BLDGVAL1, BLDGVAL2,
```

```

    LANDVAL1, LANDVAL2,
    TOTALVAL1, TOTALVAL2,
    MS_GRADE, ES_GRADE,
    LEGAL_DESC, TAXCODE, PROP_CODE, LANDUSE, BEDROOMS, ACC_STATUS, NAME, COMMPLAN, SHARED, COAL.
mutate(top_1 = SALEPRICE > quantile(SALEPRICE, .99),
       MKTVALYR3 = case_when(MKTVALYR3 != 2018 ~ 2017,
                             TRUE ~ 2018),
       price_diff = SALEPRICE - LANDVAL3,
       price_ratio = SALEPRICE/LANDVAL3 * 100,
       vacant_dummy = PRPCD_DESC == "VACANT LAND",
       llc_flag = grepl("LLC", OWNER1),
       proud_flag = grepl("PROUD", OWNER1),
       trust_flag = grepl("TRUST", OWNER1) & !grepl("FAMILY", OWNER1) & !grepl("LIVING", OWNER1)) %>%
mutate(arms_length = price_ratio > 20,
       yearbuilt = na_if(yearbuilt, 0))

# switch the NAs in the constraints to 0s
to0 <- function(x){ifelse(is.na(x), 0, x)}

# Make a string of constraints and percent canopy names called "con_names"
clean <- SFR %>%
  dplyr::select(contains("con"), contains("pct")) %>%
  dplyr::select(-c("CONCRETE", "FIN SECOND", "PAVING/CONCRETE ONLY", "UNF SECOND", "conFldway", "pct_con"))
clean_names <- names(clean)
con_names <- paste(clean_names, collapse = " + ")

# removing observations
dat1 <- test1 %>% #25,266
  mutate_at(vars(clean_names), to0) %>%
  filter(top_1 == FALSE, #25,013, #253
         arms_length == TRUE, #24,495 #472
         vacant_dummy == FALSE, #24,495 #0
         proud_flag == FALSE, #24,480 #15
         llc_flag == FALSE, #24,128 #413
         trust_flag == FALSE #24,081 #52
  )

```

Note: Using an external vector in selections is ambiguous.
 ## i Use `all_of(clean_names)` instead of `clean_names` to silence this message.
 ## i See <<https://tidyselect.r-lib.org/reference/faq-external-vector.html>>.
 ## This message is displayed once per session.

```

#garage sqft
gar_sqft_sum <- dat1 %>%
  dplyr::select(matches("gar"), matches("car")) %>%
  rowSums()

#deck/patio/porch sqft
deck_sqft_sum <- dat1 %>%
  dplyr::select(matches("deck"), matches("patio"), matches("porch")) %>%
  rowSums()

# attic sqft

```

```

attic_sqft_sum <- dat1 %>%
  dplyr::select(matches("attic")) %>%
  rowSums()

# basement sqft
bsmt_sqft_sum <- dat1 %>%
  dplyr::select(matches("bsmt")) %>%
  dplyr::select(-c("BSMT PARKING", "BSMT GAR")) %>%
  rowSums()

dat1 %<>%
  mutate(garage_sqft = gar_sqft_sum,
         garage_dum = garage_sqft > 0,
         deck_sqft = deck_sqft_sum,
         deck_dum = deck_sqft > 0,
         attic_sqft = attic_sqft_sum,
         attic_dum = attic_sqft > 0,
         bsmt_sqft = bsmt_sqft_sum,
         bsmt_dum = bsmt_sqft > 0,
         saledate = mdy(saledate),
         year_sold = year(saledate),
         n_fireplaces = replace_na(n_fireplaces, 0)) %>%
  filter(between(totalsqft, 1, 7500),
         yearbuilt > 1500,
         f_baths < 6,
         BLDGSQFT != 0)

dat1 %>% filter(garage_sqft == 9379) # show noelwah

## # A tibble: 1 x 178
##       X1 AREA STATE_ID RNO  OWNER1 OWNERADDR OWNERCITY OWNERSTATE SITEADDR
##   <dbl> <dbl> <chr>    <chr> <chr>  <chr>      <chr>    <chr>    <chr>
## 1  7758 6217. 1S2E20B~ R099~ BAY,J~ 1124 NE ~ PORTLAND OR      6546 SE~
## # ... with 169 more variables: SITECITY <chr>, SITE_STATE <chr>, SITEZIP <dbl>,
## # PRPCD_DESC <chr>, BLDGSQFT <dbl>, FLOORS <dbl>, UNITS <dbl>,
## # MKTVALYR3 <dbl>, LANDVAL3 <dbl>, BLDGVAL3 <dbl>, TOTALVAL3 <dbl>,
## # SALEDATE <chr>, SALEPRICE <dbl>, A_T_SQFT <dbl>, A_T_ACRES <dbl>,
## # PROPERTYID <chr>, TLID <chr>, Shape_Length <dbl>, Shape_Area <dbl>,
## # saledate <date>, CN_score <dbl>, NBRNUM <dbl>, MapLabel <chr>,
## # percent_vacant <dbl>, HIGH_SCH <chr>, ELEM_SCH <chr>, dist_cityhall <dbl>,
## # dist_ugb <dbl>, totalsqft <dbl>, yearbuilt <dbl>, avgheight <dbl>,
## # surfelev <dbl>, minheight <dbl>, maxheight <dbl>, volume <dbl>,
## # bldguse <chr>, V1 <dbl>, `AES SOLAR` <dbl>, ARA <dbl>, `ATT GAR` <dbl>,
## # BLACKTOP <dbl>, `BOAT DOCK` <dbl>, BREEZEWAY <dbl>, `BRICK PAV` <dbl>,
## # `BSMT FINISHED` <dbl>, `BSMT GAR` <dbl>, `BSMT PARKING` <dbl>, `BSMT
## # SEMIFINISHED` <dbl>, `BSMT UNFINISHED` <dbl>, `BUILT-IN GARAGE` <dbl>,
## # CARPORT <dbl>, `CARPORT ONLY` <dbl>, CONCRETE <dbl>, `COV DECK` <dbl>, `COV
## # PATIO` <dbl>, `COVERED PORCH` <dbl>, DECK <dbl>, `DECK OR PATIO
## # ONLY` <dbl>, `DET GAR` <dbl>, `DET GAR ONLY` <dbl>, `DET ROOM` <dbl>,
## # `DETACHED ROOM ONLY` <dbl>, `ENC PATIO` <dbl>, `ENC PORCH` <dbl>, `ENC
## # STOR` <dbl>, `FARM BLDG` <dbl>, `FARM BLDG ONLY` <dbl>, `FIN ATTIC` <dbl>,
## # `FIN BSMT` <dbl>, `FIN LOWER LEVEL` <dbl>, `FIN SECOND` <dbl>, `GEN SHOP
## # MAIN` <dbl>, `GEN SHOP MEZZANINE` <dbl>, `GEN SHOP OFFICE` <dbl>, `GR

```

```
## # HOUSE` <dbl>, MAIN <dbl>, `MFG'D HOME DBL` <dbl>, `MFG'D HOME SGL` <dbl>,
## # `MISC. IMPS` <dbl>, `OFFICE STRUCTURE` <dbl>, `PAVING/CONCRETE ONLY` <dbl>,
## # POOL <dbl>, `POOL HOUSE` <dbl>, SHED <dbl>, `SHED ONLY` <dbl>, SHOP <dbl>,
## # `SHOP ONLY` <dbl>, `SURFACE PARKING` <dbl>, `SURFACE PARKING ONLY` <dbl>,
## # `TENNIS COURT ONLY` <dbl>, `TENNIS CT` <dbl>, `UNF ATTIC` <dbl>, `UNF
## # BSMT` <dbl>, `UNF LOWER LEVEL` <dbl>, `UNF MAIN` <dbl>, `UNF SECOND` <dbl>,
## # `UNFINISHED AREAS` <dbl>, f_baths <dbl>, h_baths <dbl>, fireplace <chr>,
## # ...
```

```
dat1 %>% filter(attic_sqft == 8208) # show noelwah
```

```
## # A tibble: 1 x 178
##       X1 AREA STATE_ID RNO OWNER1 OWNERADDR OWNERCITY OWNERSTATE SITEADDR
##   <dbl> <dbl> <chr>   <chr> <chr> <chr>   <chr>   <chr>   <chr>
## 1 16548 5560. 1N1E36C~ R479~ ANTON~ 3221 NE ~ PORTLAND OR      3221 NE~
## # ... with 169 more variables: SITECITY <chr>, SITE_STATE <chr>, SITEZIP <dbl>,
## # PRPCD_DESC <chr>, BLDGSQFT <dbl>, FLOORS <dbl>, UNITS <dbl>,
## # MKTVALYR3 <dbl>, LANDVAL3 <dbl>, BLDGVAL3 <dbl>, TOTALVAL3 <dbl>,
## # SALEDATE <chr>, SALEPRICE <dbl>, A_T_SQFT <dbl>, A_T_ACRES <dbl>,
## # PROPERTYID <chr>, TLID <chr>, Shape_Length <dbl>, Shape_Area <dbl>,
## # saledate <date>, CN_score <dbl>, NBRNUM <dbl>, MapLabel <chr>,
## # percent_vacant <dbl>, HIGH_SCH <chr>, ELEM_SCH <chr>, dist_cityhall <dbl>,
## # dist_ugb <dbl>, totalsqft <dbl>, yearbuilt <dbl>, avgheight <dbl>,
## # surfelev <dbl>, minheight <dbl>, maxheight <dbl>, volume <dbl>,
## # bldguse <chr>, V1 <dbl>, `AES SOLAR` <dbl>, ARA <dbl>, `ATT GAR` <dbl>,
## # BLACKTOP <dbl>, `BOAT DOCK` <dbl>, BREEZEWAY <dbl>, `BRICK PAV` <dbl>,
## # `BSMT FINISHED` <dbl>, `BSMT GAR` <dbl>, `BSMT PARKING` <dbl>, `BSMT
## # SEMIFINISHED` <dbl>, `BSMT UNFINISHED` <dbl>, `BUILT-IN GARAGE` <dbl>,
## # CARPORT <dbl>, `CARPORT ONLY` <dbl>, CONCRETE <dbl>, `COV DECK` <dbl>, `COV
## # PATIO` <dbl>, `COVERED PORCH` <dbl>, DECK <dbl>, `DECK OR PATIO
## # ONLY` <dbl>, `DET GAR` <dbl>, `DET GAR ONLY` <dbl>, `DET ROOM` <dbl>,
## # `DETACHED ROOM ONLY` <dbl>, `ENC PATIO` <dbl>, `ENC PORCH` <dbl>, `ENC
## # STOR` <dbl>, `FARM BLDG` <dbl>, `FARM BLDG ONLY` <dbl>, `FIN ATTIC` <dbl>,
## # `FIN BSMT` <dbl>, `FIN LOWER LEVEL` <dbl>, `FIN SECOND` <dbl>, `GEN SHOP
## # MAIN` <dbl>, `GEN SHOP MEZZANINE` <dbl>, `GEN SHOP OFFICE` <dbl>, `GR
## # HOUSE` <dbl>, MAIN <dbl>, `MFG'D HOME DBL` <dbl>, `MFG'D HOME SGL` <dbl>,
## # `MISC. IMPS` <dbl>, `OFFICE STRUCTURE` <dbl>, `PAVING/CONCRETE ONLY` <dbl>,
## # POOL <dbl>, `POOL HOUSE` <dbl>, SHED <dbl>, `SHED ONLY` <dbl>, SHOP <dbl>,
## # `SHOP ONLY` <dbl>, `SURFACE PARKING` <dbl>, `SURFACE PARKING ONLY` <dbl>,
## # `TENNIS COURT ONLY` <dbl>, `TENNIS CT` <dbl>, `UNF ATTIC` <dbl>, `UNF
## # BSMT` <dbl>, `UNF LOWER LEVEL` <dbl>, `UNF MAIN` <dbl>, `UNF SECOND` <dbl>,
## # `UNFINISHED AREAS` <dbl>, f_baths <dbl>, h_baths <dbl>, fireplace <chr>,
## # ...
```

```
dat1 %>% filter(bsmt_sqft == 11696) # show noelwah
```

```
## # A tibble: 1 x 178
##       X1 AREA STATE_ID RNO OWNER1 OWNERADDR OWNERCITY OWNERSTATE SITEADDR
##   <dbl> <dbl> <chr>   <chr> <chr> <chr>   <chr>   <chr>   <chr>
## 1 9660 11331. 1S1E17C~ R860~ SHARA~ 6135 SW ~ PORTLAND OR      6135 SW~
## # ... with 169 more variables: SITECITY <chr>, SITE_STATE <chr>, SITEZIP <dbl>,
## # PRPCD_DESC <chr>, BLDGSQFT <dbl>, FLOORS <dbl>, UNITS <dbl>,
## # MKTVALYR3 <dbl>, LANDVAL3 <dbl>, BLDGVAL3 <dbl>, TOTALVAL3 <dbl>,
```

```
## #   SALEDATE <chr>, SALEPRICE <dbl>, A_T_SQFT <dbl>, A_T_ACRES <dbl>,
## #   PROPERTYID <chr>, TLID <chr>, Shape_Length <dbl>, Shape_Area <dbl>,
## #   saledate <date>, CN_score <dbl>, NBRNUM <dbl>, MapLabel <chr>,
## #   percent_vacant <dbl>, HIGH_SCH <chr>, ELEM_SCH <chr>, dist_cityhall <dbl>,
## #   dist_ugb <dbl>, totalsqft <dbl>, yearbuilt <dbl>, avgheight <dbl>,
## #   surfelev <dbl>, minheight <dbl>, maxheight <dbl>, volume <dbl>,
## #   bldguse <chr>, V1 <dbl>, `AES SOLAR` <dbl>, ARA <dbl>, `ATT GAR` <dbl>,
## #   BLACKTOP <dbl>, `BOAT DOCK` <dbl>, BREEZEWAY <dbl>, `BRICK PAV` <dbl>,
## #   `BSMT FINISHED` <dbl>, `BSMT GAR` <dbl>, `BSMT PARKING` <dbl>, `BSMT
## #   SEMIFINISHED` <dbl>, `BSMT UNFINISHED` <dbl>, `BUILT-IN GARAGE` <dbl>,
## #   CARPORT <dbl>, `CARPORT ONLY` <dbl>, CONCRETE <dbl>, `COV DECK` <dbl>, `COV
## #   PATIO` <dbl>, `COVERED PORCH` <dbl>, DECK <dbl>, `DECK OR PATIO
## #   ONLY` <dbl>, `DET GAR` <dbl>, `DET GAR ONLY` <dbl>, `DET ROOM` <dbl>,
## #   `DETACHED ROOM ONLY` <dbl>, `ENC PATIO` <dbl>, `ENC PORCH` <dbl>, `ENC
## #   STOR` <dbl>, `FARM BLDG` <dbl>, `FARM BLDG ONLY` <dbl>, `FIN ATTIC` <dbl>,
## #   `FIN BSMT` <dbl>, `FIN LOWER LEVEL` <dbl>, `FIN SECOND` <dbl>, `GEN SHOP
## #   MAIN` <dbl>, `GEN SHOP MEZZANINE` <dbl>, `GEN SHOP OFFICE` <dbl>, `GR
## #   HOUSE` <dbl>, MAIN <dbl>, `MFG'D HOME DBL` <dbl>, `MFG'D HOME SGL` <dbl>,
## #   `MISC. IMPS` <dbl>, `OFFICE STRUCTURE` <dbl>, `PAVING/CONCRETE ONLY` <dbl>,
## #   POOL <dbl>, `POOL HOUSE` <dbl>, SHED <dbl>, `SHED ONLY` <dbl>, SHOP <dbl>,
## #   `SHOP ONLY` <dbl>, `SURFACE PARKING` <dbl>, `SURFACE PARKING ONLY` <dbl>,
## #   `TENNIS COURT ONLY` <dbl>, `TENNIS CT` <dbl>, `UNF ATTIC` <dbl>, `UNF
## #   BSMT` <dbl>, `UNF LOWER LEVEL` <dbl>, `UNF MAIN` <dbl>, `UNF SECOND` <dbl>,
## #   `UNFINISHED AREAS` <dbl>, f_baths <dbl>, h_baths <dbl>, fireplace <chr>,
## #   ...
```

```
test3 <- test1 %>% filter(llc_flag == TRUE)
# cant spend time going through every observation: problem is that not all improvements are included
# need to check if improvements square feet add up to SQFT
```

Exploration

```
# A Look at the Dataset-----

salma <- summary(dat1) # notes in thesis notebook

controls <- dat1 %>%
  dplyr::select(price_diff, pct_canopy_cov, taxlot_area, yearbuilt, totalsqft, dist_ugb, dist_cityhall,
    SALEPRICE)
nm <- names(controls)

# Correlation-----

correlation <- cor(controls, use = "pairwise.complete.obs")
#takes only obs for which both vars are not NA

# Scatterplots-----

for (i in seq_along(nm)) {
  print(names(controls[i]))
  print(ggplot(controls, aes_string(y = nm[length(nm)], x = nm[i])) +
```

```

    geom_point(alpha = 0.1) +
    geom_smooth()
}

ggplot(dat1, aes(y = SALEPRICE, x = TOTALVAL3)) +
  geom_point(alpha = 0.1)

ggplot(dat1, aes(y = log(SALEPRICE), x = taxlot_area)) +
  geom_point(alpha = 0.1)

# Outliers -- Box Plots-----

# best for discrete x

for (i in seq_along(nm)) {
  print(names(controls[i]))
  print(ggplot(controls, aes_string(y = nm[length(nm)], x = nm[i])) +
    geom_boxplot(alpha = 0.1))
}

# Distribution -- Density Plots-----

# Now to check the linearity of the variables it is a good practice to plot distribution graph and look

for (i in seq_along(nm)) {
  print(names(controls[i]))
  print(ggplot(controls, aes_string(x = nm[i])) +
    geom_histogram(bins = 50))
}

```

Pre-analysis Regressions: Dummy Improvements, Neighborhoods, High Schools, CN_score

```

# LINEAR REGRESSION-----

# formula: only dummies, no percent except for percent canopy cover
sfr_lin = formula(paste0("SALEPRICE ~
                          CN_score + percent_vacant + dist_cityhall + dist_ugb + totalsqft + yearbui

# reg
sfr_lin_mod <- lm(sfr_lin, dat1)
summary(sfr_lin_mod)

##
## Call:
## lm(formula = sfr_lin, data = dat1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -648950  -46269    2947   47610  671356
##
## Coefficients: (6 not defined because of singularities)

```


	Estimate	Std. Error
## (Intercept)	-5.474e+07	1.162e+06
## CN_score	-1.129e+02	8.721e+01
## percent_vacant	2.998e+03	2.685e+03
## dist_cityhall	-5.390e+00	3.436e-01
## dist_ugb	-1.238e+00	4.209e-01
## totalsqft	5.610e+01	1.144e+00
## yearbuilt	-3.155e+02	3.446e+01
## f_baths	5.831e+04	1.157e+03
## h_baths	4.137e+04	1.494e+03
## n_fireplaces	9.396e+03	1.525e+03
## ADUdummy	-3.475e+04	5.440e+03
## pct_canopy_cov	-5.813e+03	3.908e+03
## taxlot_area	1.794e+00	1.109e-01
## garage_dumTRUE	1.224e+04	1.788e+03
## attic_dumTRUE	-2.149e+03	1.681e+03
## bsmt_dumTRUE	-2.447e+03	1.764e+03
## deck_dumTRUE	1.066e+04	1.403e+03
## year_sold	2.769e+04	5.743e+02
## MapLabelArbor Lodge	-3.895e+04	1.710e+04
## MapLabelArdenwald-Johnson Creek	-1.262e+05	2.011e+04
## MapLabelArgay Terrace	-1.842e+05	1.775e+04
## MapLabelArlington Heights	-2.031e+02	2.693e+04
## MapLabelArnold Creek	-1.022e+05	1.673e+04
## MapLabelAshcreek	-1.454e+05	1.612e+04
## MapLabelBeaumont-Wilshire	-1.424e+04	9.137e+03
## MapLabelBoise	-5.089e+04	2.004e+04
## MapLabelBrentwood-Darlington	-1.532e+05	1.308e+04
## MapLabelBridlemile	-1.555e+05	2.255e+04
## MapLabelBrooklyn Action Corps	-1.309e+05	1.435e+04
## MapLabelBuckman Community Association	-4.254e+04	1.587e+04
## MapLabelCathedral Park	-3.266e+04	2.154e+04
## MapLabelCentennial Community Association	-1.491e+05	1.619e+04
## MapLabelCollins View	-1.461e+05	1.712e+04
## MapLabelConcordia	-4.636e+04	1.137e+04
## MapLabelCreston-Kenilworth	-1.118e+05	1.314e+04
## MapLabelCrestwood	-1.638e+05	1.704e+04
## MapLabelCully Association of Neighbors	-1.143e+05	1.059e+04
## MapLabelEast Columbia	-1.707e+05	2.126e+04
## MapLabelEastmoreland	7.658e+04	1.394e+04
## MapLabelEliot	-1.680e+05	3.228e+04
## MapLabelFar Southwest	-1.143e+05	1.781e+04
## MapLabelForest Park	-4.783e+04	2.505e+04
## MapLabelFoster-Powell	-1.192e+05	1.309e+04
## MapLabelGlenfair	-1.729e+05	2.125e+04
## MapLabelGoose Hollow Foothills League	-6.310e+04	3.113e+04
## MapLabelGrant Park	4.363e+04	1.053e+04
## MapLabelHayden Island Neighborhood Network	5.822e+04	3.109e+04
## MapLabelHayhurst	-1.522e+05	1.615e+04
## MapLabelHazelwood	-1.479e+05	1.371e+04
## MapLabelHealy Heights	2.661e+04	3.749e+04
## MapLabelHillsdale	-1.268e+05	1.628e+04
## MapLabelHillside	-1.476e+04	2.511e+04
## MapLabelHollywood	3.389e+04	2.284e+04

## MapLabelHomestead	-1.889e+05	2.920e+04
## MapLabelHosford-Abernethy Neighborhood District Assn.	-2.848e+04	1.341e+04
## MapLabelHumboldt	-4.920e+04	1.618e+04
## MapLabelIrvington Community Association	2.558e+04	1.092e+04
## MapLabelKenton	-7.615e+04	1.917e+04
## MapLabelKerns	-4.076e+04	1.861e+04
## MapLabelKing	-9.575e+04	1.219e+04
## MapLabelLaurelhurst	3.936e+04	9.336e+03
## MapLabelLents	-1.526e+05	1.282e+04
## MapLabelLinnton	-1.808e+05	2.713e+04
## MapLabelMadison South	-1.199e+05	1.135e+04
## MapLabelMaplewood	-1.264e+05	1.687e+04
## MapLabelMarkham	-1.762e+05	1.667e+04
## MapLabelMarshall Park	-1.235e+05	1.809e+04
## MapLabelMC Unclaimed #13	-1.329e+05	8.806e+04
## MapLabelMill Park	-1.530e+05	1.432e+04
## MapLabelMontavilla	-9.078e+04	1.085e+04
## MapLabelMt. Scott-Arleta	-1.117e+05	1.322e+04
## MapLabelMt. Tabor	5.362e+03	1.174e+04
## MapLabelMultnomah	-1.331e+05	1.612e+04
## MapLabelNorth Tabor	-8.270e+04	1.229e+04
## MapLabelNorthwest District Association	9.352e+04	2.615e+04
## MapLabelNorthwest Heights	-1.195e+04	2.311e+04
## MapLabelOverlook	-1.295e+04	1.770e+04
## MapLabelParkrose	-1.841e+05	1.788e+04
## MapLabelParkrose Heights Association of Neighbors	-1.769e+05	1.713e+04
## MapLabelPiedmont	-4.952e+04	1.687e+04
## MapLabelPleasant Valley	-1.339e+05	1.538e+04
## MapLabelPortsmouth	-6.551e+04	2.004e+04
## MapLabelPowellhurst-Gilbert	-1.465e+05	1.452e+04
## MapLabelReed	-7.525e+04	1.508e+04
## MapLabelRichmond	-2.756e+04	1.218e+04
## MapLabelRose City Park	-5.001e+04	8.766e+03
## MapLabelRoseway	-7.617e+04	1.075e+04
## MapLabelRussell	-1.635e+05	1.760e+04
## MapLabelSabin Community Association	-3.829e+04	9.179e+03
## MapLabelSellwood-Moreland Improvement League	-2.780e+04	1.291e+04
## MapLabelSouth Burlingame	-1.513e+05	1.737e+04
## MapLabelSouth Portland	-6.696e+04	1.859e+04
## MapLabelSouth Tabor	-7.546e+04	1.298e+04
## MapLabelSouthwest Hills Residential League	-3.510e+04	2.247e+04
## MapLabelSt. Johns	-5.719e+04	2.021e+04
## MapLabelSullivan's Gulch	-1.008e+05	2.059e+04
## MapLabelSumner Association of Neighbors	-1.732e+05	1.849e+04
## MapLabelSunderland Association of Neighbors	-1.837e+05	5.012e+04
## MapLabelSunnyside	-1.624e+04	1.304e+04
## MapLabelSylvan-Highlands	-1.334e+05	2.516e+04
## MapLabelUniversity Park	-4.340e+04	2.034e+04
## MapLabelVernon	-2.050e+04	1.458e+04
## MapLabelWest Portland Park	-1.687e+05	1.653e+04
## MapLabelWilkes Community Group	-1.642e+05	1.870e+04
## MapLabelWoodland Park	-1.791e+05	2.566e+04
## MapLabelWoodlawn	-5.890e+04	1.548e+04
## MapLabelWoodstock	-7.977e+04	1.364e+04

## HIGH_SCHCLEVELAND HS	-3.072e+04	1.209e+04
## HIGH_SCHDAVID DOUGLAS HS	-3.966e+04	8.094e+03
## HIGH_SCHFRANKLIN HS	-3.619e+04	1.115e+04
## HIGH_SCHGRANT HS	5.270e+03	1.328e+04
## HIGH_SCHGRANT-JEFF	-4.269e+04	1.752e+04
## HIGH_SCHLINCOLN HS	6.654e+04	1.579e+04
## HIGH_SCHMADISON HS	-7.156e+04	1.198e+04
## HIGH_SCHMADISON-JEFF	-7.214e+04	1.452e+04
## HIGH_SCHPARKROSE HS	-2.532e+04	1.197e+04
## HIGH_SCHREYNOLDS HS	-1.297e+04	1.192e+04
## HIGH_SCHRIVERDALE HS	4.454e+05	6.757e+04
## HIGH_SCHROOS-JEFF	-9.688e+04	1.881e+04
## HIGH_SCHROOSEVELT CAMPUS	-8.534e+04	2.152e+04
## HIGH_SCHSUNSET HS	8.647e+04	3.120e+04
## HIGH_SCHWILSON HS	NA	NA
## conECSEI	6.099e+04	6.704e+04
## conLUST	-4.849e+04	6.800e+04
## conHist	3.726e+04	5.519e+03
## conHistLdm	2.375e+04	2.658e+04
## conNatAm	NA	NA
## conAirHgt	1.496e+04	3.491e+03
## conHeliprt	NA	NA
## conNoise	-2.421e+03	8.288e+03
## conGW	2.669e+04	3.836e+04
## conLSHA	1.065e+04	3.590e+03
## conSLID0	-2.113e+04	5.503e+03
## conSlp25	1.017e+04	3.749e+03
## conInstit	NA	NA
## conPrvCom	2.953e+05	9.553e+04
## conPubOwn	1.023e+04	2.631e+04
## conSewer	7.274e+03	1.192e+04
## conStorm	-3.342e+03	2.826e+03
## conTranCap	-8.324e+03	2.851e+03
## conTranInt	-7.625e+03	3.025e+03
## conTranSub	-9.600e+03	1.793e+03
## conWater	-7.458e+03	3.488e+03
## conView	NA	NA
## conCovrly	-1.654e+03	4.149e+03
## conPovrly	-2.795e+04	5.806e+03
## conWetland	-5.901e+04	2.254e+04
## conFld100	-1.003e+04	1.029e+04
## pct_conFld100	1.479e+04	1.414e+04
## pct_conPovrly	7.632e+03	9.580e+04
## pct_conCovrly	3.098e+04	8.013e+03
## pct_conWetland	NA	NA
##	t value	Pr(> t)
## (Intercept)	-47.127	< 2e-16 ***
## CN_score	-1.294	0.195511
## percent_vacant	1.117	0.264048
## dist_cityhall	-15.688	< 2e-16 ***
## dist_ugb	-2.940	0.003282 **
## totalsqft	49.055	< 2e-16 ***
## yearbuilt	-9.155	< 2e-16 ***
## f_baths	50.407	< 2e-16 ***

## h_baths	27.698	< 2e-16	***
## n_fireplaces	6.159	7.44e-10	***
## ADUdummy	-6.388	1.71e-10	***
## pct_canopy_cov	-1.488	0.136886	
## taxlot_area	16.178	< 2e-16	***
## garage_dumTRUE	6.847	7.76e-12	***
## attic_dumTRUE	-1.279	0.201070	
## bsmt_dumTRUE	-1.387	0.165379	
## deck_dumTRUE	7.599	3.09e-14	***
## year_sold	48.218	< 2e-16	***
## MapLabelArbor Lodge	-2.278	0.022721	*
## MapLabelArdenwald-Johnson Creek	-6.275	3.57e-10	***
## MapLabelArgay Terrace	-10.373	< 2e-16	***
## MapLabelArlington Heights	-0.008	0.993985	
## MapLabelArnold Creek	-6.110	1.01e-09	***
## MapLabelAshcreek	-9.020	< 2e-16	***
## MapLabelBeaumont-Wilshire	-1.558	0.119243	
## MapLabelBoise	-2.539	0.011123	*
## MapLabelBrentwood-Darlington	-11.711	< 2e-16	***
## MapLabelBridlemile	-6.896	5.50e-12	***
## MapLabelBrooklyn Action Corps	-9.120	< 2e-16	***
## MapLabelBuckman Community Association	-2.680	0.007376	**
## MapLabelCathedral Park	-1.517	0.129403	
## MapLabelCentennial Community Association	-9.209	< 2e-16	***
## MapLabelCollins View	-8.533	< 2e-16	***
## MapLabelConcordia	-4.077	4.58e-05	***
## MapLabelCreston-Kenilworth	-8.512	< 2e-16	***
## MapLabelCrestwood	-9.615	< 2e-16	***
## MapLabelCully Association of Neighbors	-10.789	< 2e-16	***
## MapLabelEast Columbia	-8.031	1.01e-15	***
## MapLabelEastmoreland	5.494	3.97e-08	***
## MapLabelEliot	-5.204	1.96e-07	***
## MapLabelFar Southwest	-6.419	1.40e-10	***
## MapLabelForest Park	-1.909	0.056276	.
## MapLabelFoster-Powell	-9.103	< 2e-16	***
## MapLabelGlenfair	-8.135	4.34e-16	***
## MapLabelGoose Hollow Foothills League	-2.027	0.042706	*
## MapLabelGrant Park	4.143	3.44e-05	***
## MapLabelHayden Island Neighborhood Network	1.872	0.061165	.
## MapLabelHayhurst	-9.420	< 2e-16	***
## MapLabelHazelwood	-10.788	< 2e-16	***
## MapLabelHealy Heights	0.710	0.477793	
## MapLabelHillsdale	-7.790	7.00e-15	***
## MapLabelHillside	-0.588	0.556717	
## MapLabelHollywood	1.484	0.137904	
## MapLabelHomestead	-6.469	1.00e-10	***
## MapLabelHosford-Abernethy Neighborhood District Assn.	-2.124	0.033716	*
## MapLabelHumboldt	-3.041	0.002361	**
## MapLabelIrvington Community Association	2.342	0.019198	*
## MapLabelKenton	-3.974	7.10e-05	***
## MapLabelKerns	-2.190	0.028543	*
## MapLabelKing	-7.854	4.23e-15	***
## MapLabelLaurelhurst	4.216	2.50e-05	***
## MapLabelLents	-11.908	< 2e-16	***

## MapLabelLinnton	-6.665	2.71e-11	***
## MapLabelMadison South	-10.569	< 2e-16	***
## MapLabelMaplewood	-7.488	7.27e-14	***
## MapLabelMarkham	-10.570	< 2e-16	***
## MapLabelMarshall Park	-6.831	8.68e-12	***
## MapLabelMC Unclaimed #13	-1.509	0.131255	
## MapLabelMill Park	-10.686	< 2e-16	***
## MapLabelMontavilla	-8.368	< 2e-16	***
## MapLabelMt. Scott-Arleta	-8.450	< 2e-16	***
## MapLabelMt. Tabor	0.457	0.647763	
## MapLabelMultnomah	-8.258	< 2e-16	***
## MapLabelNorth Tabor	-6.730	1.74e-11	***
## MapLabelNorthwest District Association	3.576	0.000349	***
## MapLabelNorthwest Heights	-0.517	0.605034	
## MapLabelOverlook	-0.731	0.464535	
## MapLabelParkrose	-10.295	< 2e-16	***
## MapLabelParkrose Heights Association of Neighbors	-10.324	< 2e-16	***
## MapLabelPiedmont	-2.935	0.003344	**
## MapLabelPleasant Valley	-8.707	< 2e-16	***
## MapLabelPortsmouth	-3.268	0.001085	**
## MapLabelPowellhurst-Gilbert	-10.089	< 2e-16	***
## MapLabelReed	-4.989	6.11e-07	***
## MapLabelRichmond	-2.263	0.023658	*
## MapLabelRose City Park	-5.704	1.18e-08	***
## MapLabelRoseway	-7.086	1.42e-12	***
## MapLabelRussell	-9.291	< 2e-16	***
## MapLabelSabin Community Association	-4.171	3.04e-05	***
## MapLabelSellwood-Moreland Improvement League	-2.153	0.031332	*
## MapLabelSouth Burlingame	-8.710	< 2e-16	***
## MapLabelSouth Portland	-3.603	0.000316	***
## MapLabelSouth Tabor	-5.814	6.19e-09	***
## MapLabelSouthwest Hills Residential League	-1.562	0.118227	
## MapLabelSt. Johns	-2.830	0.004665	**
## MapLabelSullivan's Gulch	-4.893	1.00e-06	***
## MapLabelSumner Association of Neighbors	-9.365	< 2e-16	***
## MapLabelSunderland Association of Neighbors	-3.664	0.000249	***
## MapLabelSunnyside	-1.246	0.212858	
## MapLabelSylvan-Highlands	-5.302	1.16e-07	***
## MapLabelUniversity Park	-2.134	0.032881	*
## MapLabelVernon	-1.406	0.159857	
## MapLabelWest Portland Park	-10.204	< 2e-16	***
## MapLabelWilkes Community Group	-8.784	< 2e-16	***
## MapLabelWoodland Park	-6.979	3.06e-12	***
## MapLabelWoodlawn	-3.804	0.000143	***
## MapLabelWoodstock	-5.850	4.98e-09	***
## HIGH_SCHCLEVELAND HS	-2.541	0.011074	*
## HIGH_SCHDAVID DOUGLAS HS	-4.900	9.65e-07	***
## HIGH_SCHFRANKLIN HS	-3.247	0.001168	**
## HIGH_SCHGRANT HS	0.397	0.691588	
## HIGH_SCHGRANT-JEFF	-2.436	0.014841	*
## HIGH_SCHLINCOLN HS	4.214	2.52e-05	***
## HIGH_SCHMADISON HS	-5.975	2.34e-09	***
## HIGH_SCHMADISON-JEFF	-4.968	6.80e-07	***
## HIGH_SCHPARKROSE HS	-2.116	0.034331	*

```

## HIGH_SCHREYNOLDS HS -1.088 0.276668
## HIGH_SCHRIVERDALE HS 6.592 4.45e-11 ***
## HIGH_SCHROOS-JEFF -5.150 2.62e-07 ***
## HIGH_SCHROOSEVELT CAMPUS -3.966 7.34e-05 ***
## HIGH_SCHSUNSET HS 2.772 0.005580 **
## HIGH_SCHWILSON HS NA NA
## conECSEI 0.910 0.362948
## conLUST -0.713 0.475785
## conHist 6.751 1.50e-11 ***
## conHistLdm 0.893 0.371622
## conNatAm NA NA
## conAirHgt 4.286 1.83e-05 ***
## conHeliprt NA NA
## conNoise -0.292 0.770174
## conGW 0.696 0.486544
## conLSHA 2.968 0.003000 **
## conSLID0 -3.840 0.000123 ***
## conSlp25 2.711 0.006710 **
## conInstit NA NA
## conPrvCom 3.091 0.002000 **
## conPubOwn 0.389 0.697549
## conSewer 0.610 0.541706
## conStorm -1.183 0.236981
## conTranCap -2.919 0.003511 **
## conTranInt -2.521 0.011724 *
## conTranSub -5.354 8.67e-08 ***
## conWater -2.138 0.032492 *
## conView NA NA
## conCovrly -0.399 0.690139
## conPovrly -4.814 1.49e-06 ***
## conWetland -2.618 0.008840 **
## conFld100 -0.975 0.329633
## pct_conFld100 1.046 0.295757
## pct_conPovrly 0.080 0.936504
## pct_conCovrly 3.866 0.000111 ***
## pct_conWetland NA NA
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 94660 on 22130 degrees of freedom
## (772 observations deleted due to missingness)
## Multiple R-squared: 0.76, Adjusted R-squared: 0.7585
## F-statistic: 483.4 on 145 and 22130 DF, p-value: < 2.2e-16

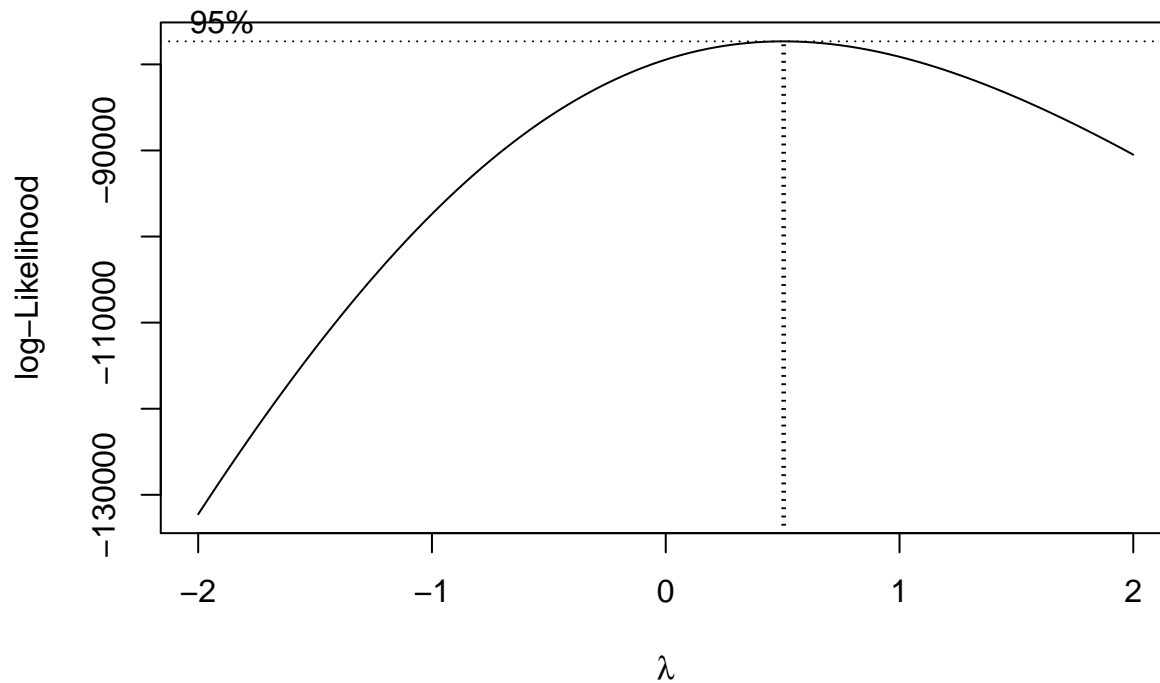
```

```
#plot(sfr_lin_mod)
```

```
# BOX-COX (LINEAR) REGRESSION-----
```

```
bc = boxcox(sfr_lin_mod, lambda = seq(-3, 3, 1))
```

```
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
## extra argument 'lambda' will be disregarded
```



```
best_lam = bc$x[which(bc$y == max(bc$y))]
dat1 %<>%
  mutate(SALEPRICEbc = SALEPRICE^best_lam)

# pre-analysis formula
sfr_bc = formula(paste0("SALEPRICEbc ~
                        CN_score + percent_vacant + dist_cityhall + dist_ugb + totalsqft + yearbuilt"))

# regression
sfr_mod_bc <- lm(sfr_bc, dat1)
summary(sfr_mod_bc)
```

```
##
## Call:
## lm(formula = sfr_bc, data = dat1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -630.10  -34.42    5.83   41.20  421.66
##
## Coefficients: (6 not defined because of singularities)
##
##              Estimate Std. Error
## (Intercept)   -4.688e+04  9.092e+02
## CN_score       -9.003e-02  6.827e-02
## percent_vacant  4.166e+00  2.101e+00
## dist_cityhall  -4.107e-03  2.690e-04
## dist_ugb       -1.142e-03  3.294e-04
## totalsqft      3.976e-02  8.952e-04
## yearbuilt     -1.703e-01  2.697e-02
## f_baths        4.439e+01  9.055e-01
## h_baths        3.124e+01  1.169e+00
```

## n_fireplaces	1.066e+01	1.194e+00
## ADUdummy	-2.645e+01	4.258e+00
## pct_canopy_cov	-3.776e+00	3.059e+00
## taxlot_area	1.204e-03	8.682e-05
## garage_dumTRUE	1.152e+01	1.400e+00
## attic_dumTRUE	2.020e+00	1.316e+00
## bsmt_dumTRUE	4.073e+00	1.381e+00
## deck_dumTRUE	1.039e+01	1.098e+00
## year_sold	2.378e+01	4.495e-01
## MapLabelArbor Lodge	-1.918e+01	1.338e+01
## MapLabelArdenwald-Johnson Creek	-8.738e+01	1.574e+01
## MapLabelArgay Terrace	-1.442e+02	1.390e+01
## MapLabelArlington Heights	-3.045e+01	2.108e+01
## MapLabelArnold Creek	-8.338e+01	1.310e+01
## MapLabelAshcreek	-1.134e+02	1.262e+01
## MapLabelBeaumont-Wilshire	-1.020e+01	7.152e+00
## MapLabelBoise	-1.824e+01	1.569e+01
## MapLabelBrentwood-Darlington	-1.200e+02	1.024e+01
## MapLabelBridlemile	-1.197e+02	1.765e+01
## MapLabelBrooklyn Action Corps	-8.647e+01	1.124e+01
## MapLabelBuckman Community Association	-1.991e+01	1.243e+01
## MapLabelCathedral Park	-1.422e+01	1.686e+01
## MapLabelCentennial Community Association	-1.353e+02	1.267e+01
## MapLabelCollins View	-1.140e+02	1.340e+01
## MapLabelConcordia	-3.080e+01	8.901e+00
## MapLabelCreston-Kenilworth	-7.573e+01	1.028e+01
## MapLabelCrestwood	-1.285e+02	1.334e+01
## MapLabelCully Association of Neighbors	-8.428e+01	8.290e+00
## MapLabelEast Columbia	-1.424e+02	1.664e+01
## MapLabelEastmoreland	5.491e+01	1.091e+01
## MapLabelEliot	-1.042e+02	2.527e+01
## MapLabelFar Southwest	-8.765e+01	1.394e+01
## MapLabelForest Park	-5.430e+01	1.961e+01
## MapLabelFoster-Powell	-8.513e+01	1.025e+01
## MapLabelGlenfair	-1.429e+02	1.663e+01
## MapLabelGoose Hollow Foothills League	-7.247e+01	2.437e+01
## MapLabelGrant Park	3.108e+01	8.243e+00
## MapLabelHayden Island Neighborhood Network	5.342e+01	2.434e+01
## MapLabelHayhurst	-1.180e+02	1.264e+01
## MapLabelHazelwood	-1.212e+02	1.073e+01
## MapLabelHealy Heights	-1.806e+01	2.935e+01
## MapLabelHillsdale	-1.037e+02	1.274e+01
## MapLabelHillside	-4.350e+01	1.966e+01
## MapLabelHollywood	3.041e+01	1.788e+01
## MapLabelHomestead	-1.459e+02	2.286e+01
## MapLabelHosford-Abernethy Neighborhood District Assn.	-1.528e+01	1.050e+01
## MapLabelHumboldt	-2.556e+01	1.267e+01
## MapLabelIrvington Community Association	1.088e+01	8.551e+00
## MapLabelKenton	-4.975e+01	1.500e+01
## MapLabelKerns	-2.022e+01	1.457e+01
## MapLabelKing	-6.037e+01	9.544e+00
## MapLabelLaurelhurst	2.941e+01	7.308e+00
## MapLabelLents	-1.260e+02	1.003e+01
## MapLabelLinnton	-1.333e+02	2.123e+01

## MapLabelMadison South	-9.434e+01	8.882e+00
## MapLabelMaplewood	-9.650e+01	1.321e+01
## MapLabelMarkham	-1.370e+02	1.305e+01
## MapLabelMarshall Park	-9.633e+01	1.416e+01
## MapLabelMC Unclaimed #13	-1.154e+02	6.893e+01
## MapLabelMill Park	-1.279e+02	1.121e+01
## MapLabelMontavilla	-6.682e+01	8.492e+00
## MapLabelMt. Scott-Arleta	-7.951e+01	1.035e+01
## MapLabelMt. Tabor	1.042e+01	9.187e+00
## MapLabelMultnomah	-1.037e+02	1.262e+01
## MapLabelNorth Tabor	-5.544e+01	9.619e+00
## MapLabelNorthwest District Association	3.036e+01	2.047e+01
## MapLabelNorthwest Heights	-3.020e+01	1.809e+01
## MapLabelOverlook	7.160e-01	1.386e+01
## MapLabelParkrose	-1.530e+02	1.400e+01
## MapLabelParkrose Heights Association of Neighbors	-1.462e+02	1.341e+01
## MapLabelPiedmont	-2.758e+01	1.321e+01
## MapLabelPleasant Valley	-1.022e+02	1.204e+01
## MapLabelPortsmouth	-4.145e+01	1.569e+01
## MapLabelPowellhurst-Gilbert	-1.256e+02	1.136e+01
## MapLabelReed	-4.360e+01	1.181e+01
## MapLabelRichmond	-1.096e+01	9.535e+00
## MapLabelRose City Park	-2.667e+01	6.862e+00
## MapLabelRoseway	-5.172e+01	8.415e+00
## MapLabelRussell	-1.315e+02	1.377e+01
## MapLabelSabin Community Association	-2.266e+01	7.185e+00
## MapLabelSellwood-Moreland Improvement League	-1.122e+01	1.011e+01
## MapLabelSouth Burlingame	-1.193e+02	1.360e+01
## MapLabelSouth Portland	-5.875e+01	1.455e+01
## MapLabelSouth Tabor	-4.554e+01	1.016e+01
## MapLabelSouthwest Hills Residential League	-5.313e+01	1.759e+01
## MapLabelSt. Johns	-3.922e+01	1.582e+01
## MapLabelSullivan's Gulch	-5.996e+01	1.612e+01
## MapLabelSumner Association of Neighbors	-1.459e+02	1.447e+01
## MapLabelSunderland Association of Neighbors	-1.704e+02	3.924e+01
## MapLabelSunnyside	1.024e-01	1.020e+01
## MapLabelSylvan-Highlands	-1.080e+02	1.969e+01
## MapLabelUniversity Park	-2.122e+01	1.592e+01
## MapLabelVernon	-8.835e+00	1.142e+01
## MapLabelWest Portland Park	-1.326e+02	1.294e+01
## MapLabelWilkes Community Group	-1.312e+02	1.464e+01
## MapLabelWoodland Park	-1.528e+02	2.009e+01
## MapLabelWoodlawn	-3.502e+01	1.212e+01
## MapLabelWoodstock	-4.932e+01	1.067e+01
## HIGH_SCHCLEVELAND HS	-3.432e+01	9.464e+00
## HIGH_SCHDAVID DOUGLAS HS	-3.719e+01	6.336e+00
## HIGH_SCHFRANKLIN HS	-3.770e+01	8.724e+00
## HIGH_SCHGRANT HS	-1.033e+01	1.040e+01
## HIGH_SCHGRANT-JEFF	-4.782e+01	1.371e+01
## HIGH_SCHLINCOLN HS	4.071e+01	1.236e+01
## HIGH_SCHMADISON HS	-6.573e+01	9.375e+00
## HIGH_SCHMADISON-JEFF	-6.142e+01	1.137e+01
## HIGH_SCHPARKROSE HS	-2.542e+01	9.366e+00
## HIGH_SCHREYNOLDS HS	-1.558e+01	9.331e+00

## HIGH_SCHRIVERDALE HS	2.554e+02	5.289e+01
## HIGH_SCHROOS-JEFF	-8.613e+01	1.472e+01
## HIGH_SCHROOSEVELT CAMPUS	-7.978e+01	1.684e+01
## HIGH_SCHSUNSET HS	5.176e+01	2.442e+01
## HIGH_SCHWILSON HS	NA	NA
## conECSEI	4.852e+01	5.248e+01
## conLUST	-2.758e+01	5.323e+01
## conHist	2.491e+01	4.320e+00
## conHistLdm	6.299e+00	2.081e+01
## conNatAm	NA	NA
## conAirHgt	1.136e+01	2.733e+00
## conHeliprt	NA	NA
## conNoise	5.466e-01	6.488e+00
## conGW	2.952e+01	3.003e+01
## conLSHA	9.987e+00	2.810e+00
## conSLIDO	-1.302e+01	4.308e+00
## conSlp25	4.962e+00	2.935e+00
## conInstit	NA	NA
## conPrvCom	1.475e+02	7.478e+01
## conPubOwn	-5.161e+00	2.060e+01
## conSewer	7.248e+00	9.330e+00
## conStorm	-1.340e+00	2.212e+00
## conTranCap	-6.356e+00	2.232e+00
## conTranInt	-6.803e+00	2.368e+00
## conTranSub	-7.797e+00	1.403e+00
## conWater	-8.039e+00	2.730e+00
## conView	NA	NA
## conCovrly	4.117e-01	3.248e+00
## conPovrly	-1.656e+01	4.545e+00
## conWetland	-3.474e+01	1.764e+01
## conFld100	-4.951e+00	8.057e+00
## pct_conFld100	4.046e+00	1.107e+01
## pct_conPovrly	6.422e+00	7.499e+01
## pct_conCovrly	2.845e+01	6.272e+00
## pct_conWetland	NA	NA
##	t value	Pr(> t)
## (Intercept)	-51.561	< 2e-16 ***
## CN_score	-1.319	0.187260
## percent_vacant	1.982	0.047460 *
## dist_cityhall	-15.270	< 2e-16 ***
## dist_ugb	-3.467	0.000526 ***
## totalsqft	44.414	< 2e-16 ***
## yearbuilt	-6.313	2.79e-10 ***
## f_baths	49.024	< 2e-16 ***
## h_baths	26.715	< 2e-16 ***
## n_fireplaces	8.931	< 2e-16 ***
## ADUdummy	-6.212	5.32e-10 ***
## pct_canopy_cov	-1.234	0.217030
## taxlot_area	13.872	< 2e-16 ***
## garage_dumTRUE	8.227	< 2e-16 ***
## attic_dumTRUE	1.535	0.124697
## bsmt_dumTRUE	2.950	0.003184 **
## deck_dumTRUE	9.457	< 2e-16 ***
## year_sold	52.893	< 2e-16 ***

## MapLabelArbor Lodge	-1.433	0.151840	
## MapLabelArdenwald-Johnson Creek	-5.550	2.89e-08	***
## MapLabelArgay Terrace	-10.374	< 2e-16	***
## MapLabelArlington Heights	-1.444	0.148744	
## MapLabelArnold Creek	-6.367	1.96e-10	***
## MapLabelAshcreek	-8.990	< 2e-16	***
## MapLabelBeaumont-Wilshire	-1.427	0.153679	
## MapLabelBoise	-1.162	0.245057	
## MapLabelBrentwood-Darlington	-11.721	< 2e-16	***
## MapLabelBridlemile	-6.785	1.19e-11	***
## MapLabelBrooklyn Action Corps	-7.696	1.46e-14	***
## MapLabelBuckman Community Association	-1.602	0.109105	
## MapLabelCathedral Park	-0.844	0.398924	
## MapLabelCentennial Community Association	-10.674	< 2e-16	***
## MapLabelCollins View	-8.510	< 2e-16	***
## MapLabelConcordia	-3.461	0.000540	***
## MapLabelCreston-Kenilworth	-7.365	1.84e-13	***
## MapLabelCrestwood	-9.634	< 2e-16	***
## MapLabelCully Association of Neighbors	-10.167	< 2e-16	***
## MapLabelEast Columbia	-8.555	< 2e-16	***
## MapLabelEastmoreland	5.032	4.88e-07	***
## MapLabelEliot	-4.123	3.76e-05	***
## MapLabelFar Southwest	-6.288	3.27e-10	***
## MapLabelForest Park	-2.769	0.005636	**
## MapLabelFoster-Powell	-8.305	< 2e-16	***
## MapLabelGlenfair	-8.592	< 2e-16	***
## MapLabelGoose Hollow Foothills League	-2.974	0.002947	**
## MapLabelGrant Park	3.771	0.000163	***
## MapLabelHayden Island Neighborhood Network	2.195	0.028198	*
## MapLabelHayhurst	-9.330	< 2e-16	***
## MapLabelHazelwood	-11.296	< 2e-16	***
## MapLabelHealy Heights	-0.615	0.538278	
## MapLabelHillsdale	-8.136	4.31e-16	***
## MapLabelHillside	-2.213	0.026928	*
## MapLabelHollywood	1.701	0.089026	.
## MapLabelHomestead	-6.382	1.78e-10	***
## MapLabelHosford-Abernethy Neighborhood District Assn.	-1.455	0.145632	
## MapLabelHumboldt	-2.018	0.043630	*
## MapLabelIrvington Community Association	1.273	0.203078	
## MapLabelKenton	-3.316	0.000915	***
## MapLabelKerns	-1.388	0.165165	
## MapLabelKing	-6.326	2.56e-10	***
## MapLabelLaurelhurst	4.025	5.72e-05	***
## MapLabelLents	-12.553	< 2e-16	***
## MapLabelLinnton	-6.278	3.49e-10	***
## MapLabelMadison South	-10.621	< 2e-16	***
## MapLabelMaplewood	-7.305	2.86e-13	***
## MapLabelMarkham	-10.502	< 2e-16	***
## MapLabelMarshall Park	-6.804	1.04e-11	***
## MapLabelMC Unclaimed #13	-1.674	0.094112	.
## MapLabelMill Park	-11.415	< 2e-16	***
## MapLabelMontavilla	-7.869	3.74e-15	***
## MapLabelMt. Scott-Arleta	-7.683	1.62e-14	***
## MapLabelMt. Tabor	1.135	0.256555	

## MapLabelMultnomah	-8.221	< 2e-16	***
## MapLabelNorth Tabor	-5.764	8.32e-09	***
## MapLabelNorthwest District Association	1.483	0.138097	
## MapLabelNorthwest Heights	-1.669	0.095065	.
## MapLabelOverlook	0.052	0.958789	
## MapLabelParkrose	-10.930	< 2e-16	***
## MapLabelParkrose Heights Association of Neighbors	-10.906	< 2e-16	***
## MapLabelPiedmont	-2.088	0.036790	*
## MapLabelPleasant Valley	-8.488	< 2e-16	***
## MapLabelPortsmouth	-2.642	0.008248	**
## MapLabelPowellhurst-Gilbert	-11.051	< 2e-16	***
## MapLabelReed	-3.693	0.000222	***
## MapLabelRichmond	-1.149	0.250537	
## MapLabelRose City Park	-3.886	0.000102	***
## MapLabelRoseway	-6.147	8.05e-10	***
## MapLabelRussell	-9.550	< 2e-16	***
## MapLabelSabin Community Association	-3.154	0.001613	**
## MapLabelSellwood-Moreland Improvement League	-1.111	0.266782	
## MapLabelSouth Burlingame	-8.774	< 2e-16	***
## MapLabelSouth Portland	-4.038	5.41e-05	***
## MapLabelSouth Tabor	-4.482	7.43e-06	***
## MapLabelSouthwest Hills Residential League	-3.021	0.002525	**
## MapLabelSt. Johns	-2.479	0.013191	*
## MapLabelSullivan's Gulch	-3.719	0.000200	***
## MapLabelSumner Association of Neighbors	-10.083	< 2e-16	***
## MapLabelSunderland Association of Neighbors	-4.342	1.42e-05	***
## MapLabelSunnyside	0.010	0.991993	
## MapLabelSylvan-Highlands	-5.486	4.17e-08	***
## MapLabelUniversity Park	-1.333	0.182675	
## MapLabelVernon	-0.774	0.438965	
## MapLabelWest Portland Park	-10.247	< 2e-16	***
## MapLabelWilkes Community Group	-8.965	< 2e-16	***
## MapLabelWoodland Park	-7.607	2.93e-14	***
## MapLabelWoodlawn	-2.889	0.003863	**
## MapLabelWoodstock	-4.621	3.84e-06	***
## HIGH_SCHCLEVELAND HS	-3.626	0.000288	***
## HIGH_SCHDAVID DOUGLAS HS	-5.870	4.42e-09	***
## HIGH_SCHFRANKLIN HS	-4.322	1.56e-05	***
## HIGH_SCHGRANT HS	-0.994	0.320398	
## HIGH_SCHGRANT-JEFF	-3.487	0.000489	***
## HIGH_SCHLINCOLN HS	3.294	0.000989	***
## HIGH_SCHMADISON HS	-7.010	2.44e-12	***
## HIGH_SCHMADISON-JEFF	-5.404	6.58e-08	***
## HIGH_SCHPARKROSE HS	-2.714	0.006644	**
## HIGH_SCHREYNOLDS HS	-1.669	0.095096	.
## HIGH_SCHRIVERDALE HS	4.829	1.38e-06	***
## HIGH_SCHROOS-JEFF	-5.849	5.00e-09	***
## HIGH_SCHROOSEVELT CAMPUS	-4.736	2.19e-06	***
## HIGH_SCHSUNSET HS	2.119	0.034070	*
## HIGH_SCHWILSON HS	NA	NA	
## conECSEI	0.925	0.355155	
## conLUST	-0.518	0.604337	
## conHist	5.765	8.29e-09	***
## conHistLdm	0.303	0.762105	

```
## conNatAm                NA      NA
## conAirHgt               4.156 3.25e-05 ***
## conHeliprt              NA      NA
## conNoise                0.084 0.932855
## conGW                   0.983 0.325595
## conLSHA                 3.554 0.000380 ***
## conSLID0                -3.022 0.002518 **
## conSlp25                1.691 0.090931 .
## conInstit               NA      NA
## conPrvCom               1.972 0.048651 *
## conPubOwn               -0.251 0.802157
## conSewer                0.777 0.437257
## conStorm                -0.606 0.544540
## conTranCap              -2.847 0.004412 **
## conTranInt              -2.873 0.004071 **
## conTranSub              -5.555 2.80e-08 ***
## conWater                -2.945 0.003235 **
## conView                 NA      NA
## conCovrly               0.127 0.899129
## conPovrly               -3.644 0.000269 ***
## conWetland              -1.969 0.048972 *
## conFld100               -0.614 0.538904
## pct_conFld100           0.365 0.714808
## pct_conPovrly           0.086 0.931755
## pct_conCovrly           4.536 5.75e-06 ***
## pct_conWetland          NA      NA
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 74.09 on 22130 degrees of freedom
## (772 observations deleted due to missingness)
## Multiple R-squared:  0.7527, Adjusted R-squared:  0.7511
## F-statistic: 464.6 on 145 and 22130 DF, p-value: < 2.2e-16
```

```
#plot(sfr_mod_bc)
```

```
# SEMI-LOG REGRESSION-----
```

```
dat1 %<>%
```

```
  mutate(SALEPRICElog = log(SALEPRICE))
```

```
#pre-analysis formula
```

```
sfr_log = formula(paste0("SALEPRICElog ~
                          CN_score + percent_vacant + dist_cityhall + dist_ugb + totalsqft + yearbuil
```

```
# regression
```

```
sfr_mod_log <- lm(sfr_log, dat1)
```

```
summary(sfr_mod_log)
```

```
##
```

```
## Call:
```

```
## lm(formula = sfr_log, data = dat1)
```

```

##
## Residuals:
##      Min        1Q      Median        3Q        Max
## -2.48572 -0.08730  0.03027  0.12938  1.11035
##
## Coefficients: (6 not defined because of singularities)
##
##              Estimate Std. Error
## (Intercept)    -1.330e+02  2.920e+00
## CN_score        -2.676e-04  2.192e-04
## percent_vacant   1.757e-02  6.748e-03
## dist_cityhall   -1.101e-05  8.636e-07
## dist_ugb        -3.856e-06  1.058e-06
## totalsqft       9.893e-05  2.875e-06
## yearbuilt       -2.813e-04  8.662e-05
## f_baths         1.217e-01  2.908e-03
## h_baths         8.528e-02  3.755e-03
## n_fireplaces    3.899e-02  3.834e-03
## ADUdummy        -7.569e-02  1.367e-02
## pct_canopy_cov  -1.063e-02  9.823e-03
## taxlot_area     2.907e-06  2.788e-07
## garage_dumTRUE   3.917e-02  4.494e-03
## attic_dumTRUE    1.486e-02  4.225e-03
## bsmt_dumTRUE     2.774e-02  4.434e-03
## deck_dumTRUE     3.494e-02  3.526e-03
## year_sold       7.268e-02  1.443e-03
## MapLabelArbor Lodge    -1.377e-02  4.298e-02
## MapLabelArdenwald-Johnson Creek -2.049e-01  5.055e-02
## MapLabelArgay Terrace  -4.053e-01  4.463e-02
## MapLabelArlington Heights -1.663e-01  6.770e-02
## MapLabelArnold Creek   -2.521e-01  4.205e-02
## MapLabelAshcreek       -3.169e-01  4.051e-02
## MapLabelBeaumont-Wilshire -2.487e-02  2.297e-02
## MapLabelBoise         1.360e-02  5.038e-02
## MapLabelBrentwood-Darlington -3.334e-01  3.288e-02
## MapLabelBridlemile     -3.364e-01  5.667e-02
## MapLabelBrooklyn Action Corps -1.928e-01  3.608e-02
## MapLabelBuckman Community Association -1.850e-02  3.990e-02
## MapLabelCathedral Park  -2.642e-03  5.413e-02
## MapLabelCentennial Community Association -4.353e-01  4.069e-02
## MapLabelCollins View   -3.178e-01  4.303e-02
## MapLabelConcordia      -7.105e-02  2.858e-02
## MapLabelCreston-Kenilworth -1.778e-01  3.302e-02
## MapLabelCrestwood      -3.645e-01  4.282e-02
## MapLabelCully Association of Neighbors -2.192e-01  2.662e-02
## MapLabelEast Columbia  -4.433e-01  5.344e-02
## MapLabelEastmoreland   1.385e-01  3.503e-02
## MapLabelEliot         -2.110e-01  8.114e-02
## MapLabelFar Southwest  -2.424e-01  4.476e-02
## MapLabelForest Park    -2.081e-01  6.298e-02
## MapLabelFoster-Powell  -2.095e-01  3.291e-02
## MapLabelGlenfair       -4.202e-01  5.341e-02
## MapLabelGoose Hollow Foothills League -2.627e-01  7.826e-02
## MapLabelGrant Park     8.182e-02  2.647e-02
## MapLabelHayden Island Neighborhood Network 1.625e-01  7.815e-02

```

## MapLabelHayhurst	-3.277e-01	4.060e-02
## MapLabelHazelwood	-3.575e-01	3.446e-02
## MapLabelHealy Heights	-1.472e-01	9.423e-02
## MapLabelHillsdale	-3.049e-01	4.091e-02
## MapLabelHillside	-2.058e-01	6.313e-02
## MapLabelHollywood	9.642e-02	5.741e-02
## MapLabelHomestead	-4.111e-01	7.340e-02
## MapLabelHosford-Abernethy Neighborhood District Assn.	-2.231e-02	3.371e-02
## MapLabelHumboldt	-3.366e-02	4.067e-02
## MapLabelIrvington Community Association	9.682e-03	2.746e-02
## MapLabelKenton	-1.053e-01	4.817e-02
## MapLabelKerns	-2.516e-02	4.679e-02
## MapLabelKing	-1.288e-01	3.065e-02
## MapLabelLaurelhurst	7.963e-02	2.347e-02
## MapLabelLents	-3.726e-01	3.222e-02
## MapLabelLinnton	-3.564e-01	6.819e-02
## MapLabelMadison South	-2.632e-01	2.852e-02
## MapLabelMaplewood	-2.640e-01	4.242e-02
## MapLabelMarkham	-3.813e-01	4.190e-02
## MapLabelMarshall Park	-2.701e-01	4.546e-02
## MapLabelMC Unclaimed #13	-3.442e-01	2.213e-01
## MapLabelMill Park	-3.851e-01	3.599e-02
## MapLabelMontavilla	-1.750e-01	2.727e-02
## MapLabelMt. Scott-Arleta	-1.952e-01	3.323e-02
## MapLabelMt. Tabor	4.531e-02	2.950e-02
## MapLabelMultnomah	-2.892e-01	4.052e-02
## MapLabelNorth Tabor	-1.303e-01	3.089e-02
## MapLabelNorthwest District Association	-2.767e-02	6.573e-02
## MapLabelNorthwest Heights	-1.500e-01	5.808e-02
## MapLabelOverlook	3.591e-02	4.449e-02
## MapLabelParkrose	-4.513e-01	4.495e-02
## MapLabelParkrose Heights Association of Neighbors	-4.313e-01	4.306e-02
## MapLabelPiedmont	-3.894e-02	4.241e-02
## MapLabelPleasant Valley	-2.815e-01	3.866e-02
## MapLabelPortsmouth	-8.033e-02	5.038e-02
## MapLabelPowellhurst-Gilbert	-3.889e-01	3.649e-02
## MapLabelReed	-7.589e-02	3.791e-02
## MapLabelRichmond	-1.809e-03	3.062e-02
## MapLabelRose City Park	-4.073e-02	2.203e-02
## MapLabelRoseway	-1.200e-01	2.702e-02
## MapLabelRussell	-3.777e-01	4.423e-02
## MapLabelSabin Community Association	-4.245e-02	2.307e-02
## MapLabelSellwood-Moreland Improvement League	-1.315e-03	3.246e-02
## MapLabelSouth Burlingame	-3.397e-01	4.367e-02
## MapLabelSouth Portland	-1.820e-01	4.672e-02
## MapLabelSouth Tabor	-8.330e-02	3.263e-02
## MapLabelSouthwest Hills Residential League	-2.169e-01	5.647e-02
## MapLabelSt. Johns	-8.829e-02	5.081e-02
## MapLabelSullivan's Gulch	-1.163e-01	5.177e-02
## MapLabelSumner Association of Neighbors	-4.396e-01	4.648e-02
## MapLabelSunderland Association of Neighbors	-5.628e-01	1.260e-01
## MapLabelSunnyside	3.641e-02	3.277e-02
## MapLabelSylvan-Highlands	-3.195e-01	6.324e-02
## MapLabelUniversity Park	-1.782e-02	5.113e-02

## MapLabelVernon	-4.235e-03	3.665e-02
## MapLabelWest Portland Park	-3.700e-01	4.155e-02
## MapLabelWilkes Community Group	-3.753e-01	4.700e-02
## MapLabelWoodland Park	-4.593e-01	6.450e-02
## MapLabelWoodlawn	-6.039e-02	3.892e-02
## MapLabelWoodstock	-9.608e-02	3.428e-02
## HIGH_SCHCLEVELAND HS	-1.271e-01	3.039e-02
## HIGH_SCHDAVID DOUGLAS HS	-1.187e-01	2.035e-02
## HIGH_SCHFRANKLIN HS	-1.332e-01	2.801e-02
## HIGH_SCHGRANT HS	-7.212e-02	3.339e-02
## HIGH_SCHGRANT-JEFF	-1.820e-01	4.404e-02
## HIGH_SCHLINCOLN HS	8.692e-02	3.969e-02
## HIGH_SCHMADISON HS	-2.133e-01	3.010e-02
## HIGH_SCHMADISON-JEFF	-1.884e-01	3.650e-02
## HIGH_SCHPARKROSE HS	-8.866e-02	3.008e-02
## HIGH_SCHREYNOLDS HS	-5.928e-02	2.996e-02
## HIGH_SCHRIVERDALE HS	4.933e-01	1.698e-01
## HIGH_SCHROOS-JEFF	-2.792e-01	4.728e-02
## HIGH_SCHROOSEVELT CAMPUS	-2.652e-01	5.409e-02
## HIGH_SCHSUNSET HS	1.110e-01	7.842e-02
## HIGH_SCHWILSON HS	NA	NA
## conEC SI	1.395e-01	1.685e-01
## conLUST	-5.872e-02	1.709e-01
## conHist	5.708e-02	1.387e-02
## conHistLdm	-1.172e-02	6.681e-02
## conNatAm	NA	NA
## conAirHgt	3.045e-02	8.776e-03
## conHeliprt	NA	NA
## conNoise	1.245e-02	2.083e-02
## conGW	1.129e-01	9.642e-02
## conLSHA	3.225e-02	9.023e-03
## conSLID0	-3.037e-02	1.383e-02
## conSlp25	5.286e-03	9.424e-03
## conInstit	NA	NA
## conPrvCom	2.287e-01	2.401e-01
## conPubOwn	-6.761e-02	6.614e-02
## conSewer	2.045e-02	2.996e-02
## conStorm	-1.299e-03	7.103e-03
## conTranCap	-1.561e-02	7.167e-03
## conTranInt	-1.938e-02	7.604e-03
## conTranSub	-2.388e-02	4.507e-03
## conWater	-2.811e-02	8.766e-03
## conView	NA	NA
## conCovrly	6.607e-03	1.043e-02
## conPovrly	-3.300e-02	1.459e-02
## conWetland	-6.005e-02	5.665e-02
## conFld100	-2.523e-03	2.587e-02
## pct_conFld100	-2.046e-02	3.555e-02
## pct_conPovrly	1.616e-02	2.408e-01
## pct_conCovrly	9.080e-02	2.014e-02
## pct_conWetland	NA	NA
##	t value	Pr(> t)
## (Intercept)	-45.544	< 2e-16 ***
## CN_score	-1.221	0.222250

## percent_vacant	2.604	0.009226	**
## dist_cityhall	-12.751	< 2e-16	***
## dist_ugb	-3.645	0.000268	***
## totalsqft	34.417	< 2e-16	***
## yearbuilt	-3.248	0.001165	**
## f_baths	41.839	< 2e-16	***
## h_baths	22.712	< 2e-16	***
## n_fireplaces	10.169	< 2e-16	***
## ADUdummy	-5.535	3.14e-08	***
## pct_canopy_cov	-1.082	0.279317	
## taxlot_area	10.425	< 2e-16	***
## garage_dumTRUE	8.716	< 2e-16	***
## attic_dumTRUE	3.517	0.000438	***
## bsmt_dumTRUE	6.258	3.98e-10	***
## deck_dumTRUE	9.909	< 2e-16	***
## year_sold	50.351	< 2e-16	***
## MapLabelArbor Lodge	-0.320	0.748645	
## MapLabelArdenwald-Johnson Creek	-4.054	5.05e-05	***
## MapLabelArgay Terrace	-9.082	< 2e-16	***
## MapLabelArlington Heights	-2.456	0.014057	*
## MapLabelArnold Creek	-5.995	2.07e-09	***
## MapLabelAshcreek	-7.822	5.41e-15	***
## MapLabelBeaumont-Wilshire	-1.083	0.278796	
## MapLabelBoise	0.270	0.787221	
## MapLabelBrentwood-Darlington	-10.140	< 2e-16	***
## MapLabelBridlemile	-5.937	2.95e-09	***
## MapLabelBrooklyn Action Corps	-5.343	9.24e-08	***
## MapLabelBuckman Community Association	-0.464	0.642962	
## MapLabelCathedral Park	-0.049	0.961068	
## MapLabelCentennial Community Association	-10.698	< 2e-16	***
## MapLabelCollins View	-7.385	1.57e-13	***
## MapLabelConcordia	-2.486	0.012934	*
## MapLabelCreston-Kenilworth	-5.384	7.37e-08	***
## MapLabelCrestwood	-8.512	< 2e-16	***
## MapLabelCully Association of Neighbors	-8.234	< 2e-16	***
## MapLabelEast Columbia	-8.296	< 2e-16	***
## MapLabelEastmoreland	3.954	7.71e-05	***
## MapLabelEliot	-2.600	0.009334	**
## MapLabelFar Southwest	-5.415	6.18e-08	***
## MapLabelForest Park	-3.304	0.000955	***
## MapLabelFoster-Powell	-6.364	2.00e-10	***
## MapLabelGlenfair	-7.868	3.77e-15	***
## MapLabelGoose Hollow Foothills League	-3.356	0.000791	***
## MapLabelGrant Park	3.091	0.001995	**
## MapLabelHayden Island Neighborhood Network	2.079	0.037610	*
## MapLabelHayhurst	-8.070	7.36e-16	***
## MapLabelHazelwood	-10.373	< 2e-16	***
## MapLabelHealy Heights	-1.563	0.118164	
## MapLabelHillsdale	-7.451	9.57e-14	***
## MapLabelHillside	-3.261	0.001113	**
## MapLabelHollywood	1.679	0.093078	.
## MapLabelHomestead	-5.601	2.16e-08	***
## MapLabelHosford-Abernethy Neighborhood District Assn.	-0.662	0.508064	
## MapLabelHumboldt	-0.828	0.407880	

## MapLabelIrvington Community Association	0.353	0.724367	
## MapLabelKenton	-2.186	0.028813	*
## MapLabelKerns	-0.538	0.590712	
## MapLabelKing	-4.202	2.66e-05	***
## MapLabelLaurelhurst	3.394	0.000691	***
## MapLabelLents	-11.564	< 2e-16	***
## MapLabelLinnton	-5.227	1.74e-07	***
## MapLabelMadison South	-9.227	< 2e-16	***
## MapLabelMaplewood	-6.225	4.91e-10	***
## MapLabelMarkham	-9.099	< 2e-16	***
## MapLabelMarshall Park	-5.942	2.86e-09	***
## MapLabelMC Unclaimed #13	-1.555	0.119910	
## MapLabelMill Park	-10.700	< 2e-16	***
## MapLabelMontavilla	-6.420	1.39e-10	***
## MapLabelMt. Scott-Arleta	-5.875	4.29e-09	***
## MapLabelMt. Tabor	1.536	0.124561	
## MapLabelMultnomah	-7.136	9.89e-13	***
## MapLabelNorth Tabor	-4.217	2.48e-05	***
## MapLabelNorthwest District Association	-0.421	0.673770	
## MapLabelNorthwest Heights	-2.583	0.009803	**
## MapLabelOverlook	0.807	0.419642	
## MapLabelParkrose	-10.039	< 2e-16	***
## MapLabelParkrose Heights Association of Neighbors	-10.016	< 2e-16	***
## MapLabelPiedmont	-0.918	0.358569	
## MapLabelPleasant Valley	-7.282	3.40e-13	***
## MapLabelPortsmouth	-1.594	0.110883	
## MapLabelPowellhurst-Gilbert	-10.656	< 2e-16	***
## MapLabelReed	-2.002	0.045320	*
## MapLabelRichmond	-0.059	0.952875	
## MapLabelRose City Park	-1.848	0.064555	.
## MapLabelRoseway	-4.440	9.05e-06	***
## MapLabelRussell	-8.539	< 2e-16	***
## MapLabelSabin Community Association	-1.840	0.065814	.
## MapLabelSellwood-Moreland Improvement League	-0.041	0.967672	
## MapLabelSouth Burlingame	-7.778	7.71e-15	***
## MapLabelSouth Portland	-3.896	9.80e-05	***
## MapLabelSouth Tabor	-2.553	0.010685	*
## MapLabelSouthwest Hills Residential League	-3.841	0.000123	***
## MapLabelSt. Johns	-1.738	0.082283	.
## MapLabelSullivan's Gulch	-2.246	0.024717	*
## MapLabelSumner Association of Neighbors	-9.457	< 2e-16	***
## MapLabelSunderland Association of Neighbors	-4.467	7.96e-06	***
## MapLabelSunnyside	1.111	0.266477	
## MapLabelSylvan-Highlands	-5.053	4.39e-07	***
## MapLabelUniversity Park	-0.348	0.727499	
## MapLabelVernon	-0.116	0.908016	
## MapLabelWest Portland Park	-8.906	< 2e-16	***
## MapLabelWilkes Community Group	-7.985	1.47e-15	***
## MapLabelWoodland Park	-7.121	1.11e-12	***
## MapLabelWoodlawn	-1.552	0.120768	
## MapLabelWoodstock	-2.803	0.005066	**
## HIGH_SCHCLEVELAND HS	-4.181	2.91e-05	***
## HIGH_SCHDAVID DOUGLAS HS	-5.836	5.43e-09	***
## HIGH_SCHFRANKLIN HS	-4.754	2.00e-06	***

```

## HIGH_SCHGRANT HS -2.160 0.030791 *
## HIGH_SCHGRANT-JEFF -4.132 3.60e-05 ***
## HIGH_SCHLINCOLN HS 2.190 0.028521 *
## HIGH_SCHMADISON HS -7.085 1.44e-12 ***
## HIGH_SCHMADISON-JEFF -5.162 2.47e-07 ***
## HIGH_SCHPARKROSE HS -2.948 0.003205 **
## HIGH_SCHREYNOLDS HS -1.978 0.047899 *
## HIGH_SCHRIVERDALE HS 2.904 0.003684 **
## HIGH_SCHROOS-JEFF -5.905 3.58e-09 ***
## HIGH_SCHROOSEVELT CAMPUS -4.903 9.51e-07 ***
## HIGH_SCHSUNSET HS 1.415 0.157036
## HIGH_SCHWILSON HS NA NA
## conECSI 0.828 0.407761
## conLUST -0.344 0.731184
## conHist 4.115 3.89e-05 ***
## conHistLdm -0.175 0.860764
## conNatAm NA NA
## conAirHgt 3.469 0.000522 ***
## conHeliprt NA NA
## conNoise 0.598 0.550147
## conGW 1.171 0.241740
## conLSHA 3.574 0.000352 ***
## conSLID0 -2.196 0.028137 *
## conSlp25 0.561 0.574912
## conInstit NA NA
## conPrvCom 0.953 0.340810
## conPubOwn -1.022 0.306696
## conSewer 0.683 0.494905
## conStorm -0.183 0.854874
## conTranCap -2.178 0.029446 *
## conTranInt -2.548 0.010826 *
## conTranSub -5.298 1.18e-07 ***
## conWater -3.206 0.001346 **
## conView NA NA
## conCovrly 0.634 0.526387
## conPovrly -2.261 0.023757 *
## conWetland -1.060 0.289138
## conFld100 -0.098 0.922310
## pct_conFld100 -0.575 0.565027
## pct_conPovrly 0.067 0.946499
## pct_conCovrly 4.508 6.58e-06 ***
## pct_conWetland NA NA
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2379 on 22130 degrees of freedom
## (772 observations deleted due to missingness)
## Multiple R-squared: 0.6922, Adjusted R-squared: 0.6902
## F-statistic: 343.3 on 145 and 22130 DF, p-value: < 2.2e-16

```

```
#plot(sfr_mod_log)
```

Regressions 2: Dummy vs. SQFT Improvements

```
# LINEAR REGRESSION DUMMY-----

# formula: only dummies, no percent except for percent canopy cover
sfr_lin = formula(paste0("SALEPRICE ~
                        CN_score + percent_vacant + dist_cityhall + dist_ugb + totalsqft + yearbui.

# reg
sfr_lin_mod <- lm(sfr_lin, dat1)
summary(sfr_lin_mod)

##
## Call:
## lm(formula = sfr_lin, data = dat1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -648950  -46269    2947   47610  671356
##
## Coefficients: (6 not defined because of singularities)
##
##              Estimate Std. Error
## (Intercept)   -5.474e+07  1.162e+06
## CN_score       -1.129e+02  8.721e+01
## percent_vacant  2.998e+03  2.685e+03
## dist_cityhall  -5.390e+00  3.436e-01
## dist_ugb       -1.238e+00  4.209e-01
## totalsqft      5.610e+01  1.144e+00
## yearbuilt     -3.155e+02  3.446e+01
## f_baths        5.831e+04  1.157e+03
## h_baths        4.137e+04  1.494e+03
## n_fireplaces   9.396e+03  1.525e+03
## ADUdummy       -3.475e+04  5.440e+03
## pct_canopy_cov -5.813e+03  3.908e+03
## taxlot_area    1.794e+00  1.109e-01
## garage_dumTRUE  1.224e+04  1.788e+03
## attic_dumTRUE  -2.149e+03  1.681e+03
## bsmt_dumTRUE   -2.447e+03  1.764e+03
## deck_dumTRUE   1.066e+04  1.403e+03
## year_sold      2.769e+04  5.743e+02
## MapLabelArbor Lodge      -3.895e+04  1.710e+04
## MapLabelArdenwald-Johnson Creek -1.262e+05  2.011e+04
## MapLabelArgay Terrace    -1.842e+05  1.775e+04
## MapLabelArlington Heights -2.031e+02  2.693e+04
## MapLabelArnold Creek     -1.022e+05  1.673e+04
## MapLabelAshcreek        -1.454e+05  1.612e+04
## MapLabelBeaumont-Wilshire -1.424e+04  9.137e+03
## MapLabelBoise           -5.089e+04  2.004e+04
## MapLabelBrentwood-Darlington -1.532e+05  1.308e+04
## MapLabelBridlemile       -1.555e+05  2.255e+04
## MapLabelBrooklyn Action Corps -1.309e+05  1.435e+04
## MapLabelBuckman Community Association -4.254e+04  1.587e+04
## MapLabelCathedral Park   -3.266e+04  2.154e+04
```

## MapLabelCentennial Community Association	-1.491e+05	1.619e+04
## MapLabelCollins View	-1.461e+05	1.712e+04
## MapLabelConcordia	-4.636e+04	1.137e+04
## MapLabelCreston-Kenilworth	-1.118e+05	1.314e+04
## MapLabelCrestwood	-1.638e+05	1.704e+04
## MapLabelCully Association of Neighbors	-1.143e+05	1.059e+04
## MapLabelEast Columbia	-1.707e+05	2.126e+04
## MapLabelEastmoreland	7.658e+04	1.394e+04
## MapLabelEliot	-1.680e+05	3.228e+04
## MapLabelFar Southwest	-1.143e+05	1.781e+04
## MapLabelForest Park	-4.783e+04	2.505e+04
## MapLabelFoster-Powell	-1.192e+05	1.309e+04
## MapLabelGlenfair	-1.729e+05	2.125e+04
## MapLabelGoose Hollow Foothills League	-6.310e+04	3.113e+04
## MapLabelGrant Park	4.363e+04	1.053e+04
## MapLabelHayden Island Neighborhood Network	5.822e+04	3.109e+04
## MapLabelHayhurst	-1.522e+05	1.615e+04
## MapLabelHazelwood	-1.479e+05	1.371e+04
## MapLabelHealy Heights	2.661e+04	3.749e+04
## MapLabelHillsdale	-1.268e+05	1.628e+04
## MapLabelHillside	-1.476e+04	2.511e+04
## MapLabelHollywood	3.389e+04	2.284e+04
## MapLabelHomestead	-1.889e+05	2.920e+04
## MapLabelHosford-Abernethy Neighborhood District Assn.	-2.848e+04	1.341e+04
## MapLabelHumboldt	-4.920e+04	1.618e+04
## MapLabelIrvington Community Association	2.558e+04	1.092e+04
## MapLabelKenton	-7.615e+04	1.917e+04
## MapLabelKerns	-4.076e+04	1.861e+04
## MapLabelKing	-9.575e+04	1.219e+04
## MapLabelLaurelhurst	3.936e+04	9.336e+03
## MapLabelLents	-1.526e+05	1.282e+04
## MapLabelLinnton	-1.808e+05	2.713e+04
## MapLabelMadison South	-1.199e+05	1.135e+04
## MapLabelMaplewood	-1.264e+05	1.687e+04
## MapLabelMarkham	-1.762e+05	1.667e+04
## MapLabelMarshall Park	-1.235e+05	1.809e+04
## MapLabelMC Unclaimed #13	-1.329e+05	8.806e+04
## MapLabelMill Park	-1.530e+05	1.432e+04
## MapLabelMontavilla	-9.078e+04	1.085e+04
## MapLabelMt. Scott-Arleta	-1.117e+05	1.322e+04
## MapLabelMt. Tabor	5.362e+03	1.174e+04
## MapLabelMultnomah	-1.331e+05	1.612e+04
## MapLabelNorth Tabor	-8.270e+04	1.229e+04
## MapLabelNorthwest District Association	9.352e+04	2.615e+04
## MapLabelNorthwest Heights	-1.195e+04	2.311e+04
## MapLabelOverlook	-1.295e+04	1.770e+04
## MapLabelParkrose	-1.841e+05	1.788e+04
## MapLabelParkrose Heights Association of Neighbors	-1.769e+05	1.713e+04
## MapLabelPiedmont	-4.952e+04	1.687e+04
## MapLabelPleasant Valley	-1.339e+05	1.538e+04
## MapLabelPortsmouth	-6.551e+04	2.004e+04
## MapLabelPowellhurst-Gilbert	-1.465e+05	1.452e+04
## MapLabelReed	-7.525e+04	1.508e+04
## MapLabelRichmond	-2.756e+04	1.218e+04

## MapLabelRose City Park	-5.001e+04	8.766e+03
## MapLabelRoseway	-7.617e+04	1.075e+04
## MapLabelRussell	-1.635e+05	1.760e+04
## MapLabelSabin Community Association	-3.829e+04	9.179e+03
## MapLabelSellwood-Moreland Improvement League	-2.780e+04	1.291e+04
## MapLabelSouth Burlingame	-1.513e+05	1.737e+04
## MapLabelSouth Portland	-6.696e+04	1.859e+04
## MapLabelSouth Tabor	-7.546e+04	1.298e+04
## MapLabelSouthwest Hills Residential League	-3.510e+04	2.247e+04
## MapLabelSt. Johns	-5.719e+04	2.021e+04
## MapLabelSullivan's Gulch	-1.008e+05	2.059e+04
## MapLabelSumner Association of Neighbors	-1.732e+05	1.849e+04
## MapLabelSunderland Association of Neighbors	-1.837e+05	5.012e+04
## MapLabelSunnyside	-1.624e+04	1.304e+04
## MapLabelSylvan-Highlands	-1.334e+05	2.516e+04
## MapLabelUniversity Park	-4.340e+04	2.034e+04
## MapLabelVernon	-2.050e+04	1.458e+04
## MapLabelWest Portland Park	-1.687e+05	1.653e+04
## MapLabelWilkes Community Group	-1.642e+05	1.870e+04
## MapLabelWoodland Park	-1.791e+05	2.566e+04
## MapLabelWoodlawn	-5.890e+04	1.548e+04
## MapLabelWoodstock	-7.977e+04	1.364e+04
## HIGH_SCHCLEVELAND HS	-3.072e+04	1.209e+04
## HIGH_SCHDAVID DOUGLAS HS	-3.966e+04	8.094e+03
## HIGH_SCHFRANKLIN HS	-3.619e+04	1.115e+04
## HIGH_SCHGRANT HS	5.270e+03	1.328e+04
## HIGH_SCHGRANT-JEFF	-4.269e+04	1.752e+04
## HIGH_SCHLINCOLN HS	6.654e+04	1.579e+04
## HIGH_SCHMADISON HS	-7.156e+04	1.198e+04
## HIGH_SCHMADISON-JEFF	-7.214e+04	1.452e+04
## HIGH_SCHPARKROSE HS	-2.532e+04	1.197e+04
## HIGH_SCHREYNOLDS HS	-1.297e+04	1.192e+04
## HIGH_SCHRIVERDALE HS	4.454e+05	6.757e+04
## HIGH_SCHROOS-JEFF	-9.688e+04	1.881e+04
## HIGH_SCHROOSEVELT CAMPUS	-8.534e+04	2.152e+04
## HIGH_SCHSUNSET HS	8.647e+04	3.120e+04
## HIGH_SCHWILSON HS	NA	NA
## conECSEI	6.099e+04	6.704e+04
## conLUST	-4.849e+04	6.800e+04
## conHist	3.726e+04	5.519e+03
## conHistLdm	2.375e+04	2.658e+04
## conNatAm	NA	NA
## conAirHgt	1.496e+04	3.491e+03
## conHeliprt	NA	NA
## conNoise	-2.421e+03	8.288e+03
## conGW	2.669e+04	3.836e+04
## conLSHA	1.065e+04	3.590e+03
## conSLID0	-2.113e+04	5.503e+03
## conSlp25	1.017e+04	3.749e+03
## conInstit	NA	NA
## conPrvCom	2.953e+05	9.553e+04
## conPubOwn	1.023e+04	2.631e+04
## conSewer	7.274e+03	1.192e+04
## conStorm	-3.342e+03	2.826e+03

## conTranCap	-8.324e+03	2.851e+03
## conTranInt	-7.625e+03	3.025e+03
## conTranSub	-9.600e+03	1.793e+03
## conWater	-7.458e+03	3.488e+03
## conView	NA	NA
## conCovrly	-1.654e+03	4.149e+03
## conPovrly	-2.795e+04	5.806e+03
## conWetland	-5.901e+04	2.254e+04
## conFld100	-1.003e+04	1.029e+04
## pct_conFld100	1.479e+04	1.414e+04
## pct_conPovrly	7.632e+03	9.580e+04
## pct_conCovrly	3.098e+04	8.013e+03
## pct_conWetland	NA	NA
##	t value	Pr(> t)
## (Intercept)	-47.127	< 2e-16 ***
## CN_score	-1.294	0.195511
## percent_vacant	1.117	0.264048
## dist_cityhall	-15.688	< 2e-16 ***
## dist_ugb	-2.940	0.003282 **
## totalsqft	49.055	< 2e-16 ***
## yearbuilt	-9.155	< 2e-16 ***
## f_baths	50.407	< 2e-16 ***
## h_baths	27.698	< 2e-16 ***
## n_fireplaces	6.159	7.44e-10 ***
## ADUdummy	-6.388	1.71e-10 ***
## pct_canopy_cov	-1.488	0.136886
## taxlot_area	16.178	< 2e-16 ***
## garage_dumTRUE	6.847	7.76e-12 ***
## attic_dumTRUE	-1.279	0.201070
## bsmt_dumTRUE	-1.387	0.165379
## deck_dumTRUE	7.599	3.09e-14 ***
## year_sold	48.218	< 2e-16 ***
## MapLabelArbor Lodge	-2.278	0.022721 *
## MapLabelArdenwald-Johnson Creek	-6.275	3.57e-10 ***
## MapLabelArgay Terrace	-10.373	< 2e-16 ***
## MapLabelArlington Heights	-0.008	0.993985
## MapLabelArnold Creek	-6.110	1.01e-09 ***
## MapLabelAshcreek	-9.020	< 2e-16 ***
## MapLabelBeaumont-Wilshire	-1.558	0.119243
## MapLabelBoise	-2.539	0.011123 *
## MapLabelBrentwood-Darlington	-11.711	< 2e-16 ***
## MapLabelBridlemile	-6.896	5.50e-12 ***
## MapLabelBrooklyn Action Corps	-9.120	< 2e-16 ***
## MapLabelBuckman Community Association	-2.680	0.007376 **
## MapLabelCathedral Park	-1.517	0.129403
## MapLabelCentennial Community Association	-9.209	< 2e-16 ***
## MapLabelCollins View	-8.533	< 2e-16 ***
## MapLabelConcordia	-4.077	4.58e-05 ***
## MapLabelCreston-Kenilworth	-8.512	< 2e-16 ***
## MapLabelCrestwood	-9.615	< 2e-16 ***
## MapLabelCully Association of Neighbors	-10.789	< 2e-16 ***
## MapLabelEast Columbia	-8.031	1.01e-15 ***
## MapLabelEastmoreland	5.494	3.97e-08 ***
## MapLabelEliot	-5.204	1.96e-07 ***

## MapLabelFar Southwest	-6.419	1.40e-10	***
## MapLabelForest Park	-1.909	0.056276	.
## MapLabelFoster-Powell	-9.103	< 2e-16	***
## MapLabelGlenfair	-8.135	4.34e-16	***
## MapLabelGoose Hollow Foothills League	-2.027	0.042706	*
## MapLabelGrant Park	4.143	3.44e-05	***
## MapLabelHayden Island Neighborhood Network	1.872	0.061165	.
## MapLabelHayhurst	-9.420	< 2e-16	***
## MapLabelHazelwood	-10.788	< 2e-16	***
## MapLabelHealy Heights	0.710	0.477793	
## MapLabelHillsdale	-7.790	7.00e-15	***
## MapLabelHillside	-0.588	0.556717	
## MapLabelHollywood	1.484	0.137904	
## MapLabelHomestead	-6.469	1.00e-10	***
## MapLabelHosford-Abernethy Neighborhood District Assn.	-2.124	0.033716	*
## MapLabelHumboldt	-3.041	0.002361	**
## MapLabelIrvington Community Association	2.342	0.019198	*
## MapLabelKenton	-3.974	7.10e-05	***
## MapLabelKerns	-2.190	0.028543	*
## MapLabelKing	-7.854	4.23e-15	***
## MapLabelLaurelhurst	4.216	2.50e-05	***
## MapLabelLents	-11.908	< 2e-16	***
## MapLabelLinnton	-6.665	2.71e-11	***
## MapLabelMadison South	-10.569	< 2e-16	***
## MapLabelMaplewood	-7.488	7.27e-14	***
## MapLabelMarkham	-10.570	< 2e-16	***
## MapLabelMarshall Park	-6.831	8.68e-12	***
## MapLabelMC Unclaimed #13	-1.509	0.131255	
## MapLabelMill Park	-10.686	< 2e-16	***
## MapLabelMontavilla	-8.368	< 2e-16	***
## MapLabelMt. Scott-Arleta	-8.450	< 2e-16	***
## MapLabelMt. Tabor	0.457	0.647763	
## MapLabelMultnomah	-8.258	< 2e-16	***
## MapLabelNorth Tabor	-6.730	1.74e-11	***
## MapLabelNorthwest District Association	3.576	0.000349	***
## MapLabelNorthwest Heights	-0.517	0.605034	
## MapLabelOverlook	-0.731	0.464535	
## MapLabelParkrose	-10.295	< 2e-16	***
## MapLabelParkrose Heights Association of Neighbors	-10.324	< 2e-16	***
## MapLabelPiedmont	-2.935	0.003344	**
## MapLabelPleasant Valley	-8.707	< 2e-16	***
## MapLabelPortsmouth	-3.268	0.001085	**
## MapLabelPowellhurst-Gilbert	-10.089	< 2e-16	***
## MapLabelReed	-4.989	6.11e-07	***
## MapLabelRichmond	-2.263	0.023658	*
## MapLabelRose City Park	-5.704	1.18e-08	***
## MapLabelRoseway	-7.086	1.42e-12	***
## MapLabelRussell	-9.291	< 2e-16	***
## MapLabelSabin Community Association	-4.171	3.04e-05	***
## MapLabelSellwood-Moreland Improvement League	-2.153	0.031332	*
## MapLabelSouth Burlingame	-8.710	< 2e-16	***
## MapLabelSouth Portland	-3.603	0.000316	***
## MapLabelSouth Tabor	-5.814	6.19e-09	***
## MapLabelSouthwest Hills Residential League	-1.562	0.118227	

## MapLabelSt. Johns	-2.830	0.004665	**
## MapLabelSullivan's Gulch	-4.893	1.00e-06	***
## MapLabelSumner Association of Neighbors	-9.365	< 2e-16	***
## MapLabelSunderland Association of Neighbors	-3.664	0.000249	***
## MapLabelSunnyside	-1.246	0.212858	
## MapLabelSylvan-Highlands	-5.302	1.16e-07	***
## MapLabelUniversity Park	-2.134	0.032881	*
## MapLabelVernon	-1.406	0.159857	
## MapLabelWest Portland Park	-10.204	< 2e-16	***
## MapLabelWilkes Community Group	-8.784	< 2e-16	***
## MapLabelWoodland Park	-6.979	3.06e-12	***
## MapLabelWoodlawn	-3.804	0.000143	***
## MapLabelWoodstock	-5.850	4.98e-09	***
## HIGH_SCHCLEVELAND HS	-2.541	0.011074	*
## HIGH_SCHDAVID DOUGLAS HS	-4.900	9.65e-07	***
## HIGH_SCHFRANKLIN HS	-3.247	0.001168	**
## HIGH_SCHGRANT HS	0.397	0.691588	
## HIGH_SCHGRANT-JEFF	-2.436	0.014841	*
## HIGH_SCHLINCOLN HS	4.214	2.52e-05	***
## HIGH_SCHMADISON HS	-5.975	2.34e-09	***
## HIGH_SCHMADISON-JEFF	-4.968	6.80e-07	***
## HIGH_SCHPARKROSE HS	-2.116	0.034331	*
## HIGH_SCHREYNOLDS HS	-1.088	0.276668	
## HIGH_SCHRIVERDALE HS	6.592	4.45e-11	***
## HIGH_SCHROOS-JEFF	-5.150	2.62e-07	***
## HIGH_SCHROOSEVELT CAMPUS	-3.966	7.34e-05	***
## HIGH_SCHSUNSET HS	2.772	0.005580	**
## HIGH_SCHWILSON HS	NA	NA	
## conECSI	0.910	0.362948	
## conLUST	-0.713	0.475785	
## conHist	6.751	1.50e-11	***
## conHistLdm	0.893	0.371622	
## conNatAm	NA	NA	
## conAirHgt	4.286	1.83e-05	***
## conHeliprt	NA	NA	
## conNoise	-0.292	0.770174	
## conGW	0.696	0.486544	
## conLSHA	2.968	0.003000	**
## conSLID0	-3.840	0.000123	***
## conSlp25	2.711	0.006710	**
## conInstit	NA	NA	
## conPrvCom	3.091	0.002000	**
## conPubOwn	0.389	0.697549	
## conSewer	0.610	0.541706	
## conStorm	-1.183	0.236981	
## conTranCap	-2.919	0.003511	**
## conTranInt	-2.521	0.011724	*
## conTranSub	-5.354	8.67e-08	***
## conWater	-2.138	0.032492	*
## conView	NA	NA	
## conCovrly	-0.399	0.690139	
## conPovrly	-4.814	1.49e-06	***
## conWetland	-2.618	0.008840	**
## conFld100	-0.975	0.329633	

```
## pct_conFld100                1.046 0.295757
## pct_conPovrly                0.080 0.936504
## pct_conCovrly                3.866 0.000111 ***
## pct_conWetland               NA      NA
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 94660 on 22130 degrees of freedom
## (772 observations deleted due to missingness)
## Multiple R-squared:  0.76, Adjusted R-squared:  0.7585
## F-statistic: 483.4 on 145 and 22130 DF, p-value: < 2.2e-16
```

```
#plot(sfr_lin_mod)
```

```
# LINEAR REGRESSION SQFT-----
```

```
# formula: only dummies, no percent except for percent canopy cover
```

```
sfr.lin.sqft = formula(paste0("SALEPRICE ~
                               CN_score + percent_vacant + dist_cityhall + dist_ugb + totalsqft + yearbuilt"))
```

```
# reg
```

```
sfr.lin.sqft_mod <- lm(sfr.lin.sqft, dat1)
summary(sfr.lin.sqft_mod)
```

```
##
## Call:
## lm(formula = sfr.lin.sqft, data = dat1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -643580  -46587    3220   47883  662005
##
## Coefficients: (6 not defined because of singularities)
##              Estimate Std. Error
## (Intercept)   -5.456e+07  1.159e+06
## CN_score       -1.018e+02  8.721e+01
## percent_vacant  2.706e+03  2.683e+03
## dist_cityhall  -5.473e+00  3.433e-01
## dist_ugb       -1.221e+00  4.206e-01
## totalsqft      5.558e+01  1.144e+00
## yearbuilt     -3.354e+02  3.211e+01
## f_baths        5.818e+04  1.154e+03
## h_baths        4.140e+04  1.493e+03
## n_fireplaces   1.026e+04  1.521e+03
## ADUdummy       -3.576e+04  5.439e+03
## pct_canopy_cov -5.045e+03  3.915e+03
## taxlot_area    1.736e+00  1.112e-01
## garage_sqft    3.921e+00  5.450e-01
## attic_sqft     -3.463e-01  5.007e-01
## bsmt_sqft      -1.535e+00  3.221e-01
## deck_sqft      2.552e+00  3.410e-01
## year_sold      2.763e+04  5.731e+02
## MapLabelArbor Lodge -3.872e+04  1.709e+04
## MapLabelArdenwald-Johnson Creek -1.294e+05  2.010e+04
```

## MapLabelArgay Terrace	-1.850e+05	1.774e+04
## MapLabelArlington Heights	-2.262e+03	2.692e+04
## MapLabelArnold Creek	-1.066e+05	1.672e+04
## MapLabelAshcreek	-1.482e+05	1.611e+04
## MapLabelBeaumont-Wilshire	-1.426e+04	9.131e+03
## MapLabelBoise	-5.312e+04	2.002e+04
## MapLabelBrentwood-Darlington	-1.560e+05	1.308e+04
## MapLabelBridlemile	-1.601e+05	2.254e+04
## MapLabelBrooklyn Action Corps	-1.326e+05	1.434e+04
## MapLabelBuckman Community Association	-4.496e+04	1.586e+04
## MapLabelCathedral Park	-3.308e+04	2.152e+04
## MapLabelCentennial Community Association	-1.515e+05	1.618e+04
## MapLabelCollins View	-1.489e+05	1.711e+04
## MapLabelConcordia	-4.717e+04	1.136e+04
## MapLabelCreston-Kenilworth	-1.125e+05	1.313e+04
## MapLabelCrestwood	-1.675e+05	1.703e+04
## MapLabelCully Association of Neighbors	-1.175e+05	1.058e+04
## MapLabelEast Columbia	-1.726e+05	2.125e+04
## MapLabelEastmoreland	7.711e+04	1.393e+04
## MapLabelEliot	-1.737e+05	3.225e+04
## MapLabelFar Southwest	-1.187e+05	1.780e+04
## MapLabelForest Park	-5.024e+04	2.504e+04
## MapLabelFoster-Powell	-1.222e+05	1.309e+04
## MapLabelGlenfair	-1.746e+05	2.124e+04
## MapLabelGoose Hollow Foothills League	-6.542e+04	3.111e+04
## MapLabelGrant Park	4.345e+04	1.052e+04
## MapLabelHayden Island Neighborhood Network	5.450e+04	3.108e+04
## MapLabelHayhurst	-1.552e+05	1.615e+04
## MapLabelHazelwood	-1.498e+05	1.371e+04
## MapLabelHealy Heights	2.107e+04	3.747e+04
## MapLabelHillsdale	-1.290e+05	1.627e+04
## MapLabelHillside	-1.830e+04	2.510e+04
## MapLabelHollywood	3.422e+04	2.283e+04
## MapLabelHomestead	-1.888e+05	2.918e+04
## MapLabelHosford-Abernethy Neighborhood District Assn.	-3.016e+04	1.340e+04
## MapLabelHumboldt	-5.071e+04	1.617e+04
## MapLabelIrvington Community Association	2.447e+04	1.092e+04
## MapLabelKenton	-7.787e+04	1.915e+04
## MapLabelKerns	-4.140e+04	1.860e+04
## MapLabelKing	-9.713e+04	1.218e+04
## MapLabelLaurelhurst	3.941e+04	9.334e+03
## MapLabelLents	-1.554e+05	1.281e+04
## MapLabelLinnton	-1.818e+05	2.711e+04
## MapLabelMadison South	-1.204e+05	1.134e+04
## MapLabelMaplewood	-1.298e+05	1.687e+04
## MapLabelMarkham	-1.792e+05	1.666e+04
## MapLabelMarshall Park	-1.269e+05	1.808e+04
## MapLabelMC Unclaimed #13	-1.293e+05	8.801e+04
## MapLabelMill Park	-1.549e+05	1.431e+04
## MapLabelMontavilla	-9.206e+04	1.084e+04
## MapLabelMt. Scott-Arleta	-1.147e+05	1.322e+04
## MapLabelMt. Tabor	4.223e+03	1.173e+04
## MapLabelMultnomah	-1.354e+05	1.611e+04
## MapLabelNorth Tabor	-8.294e+04	1.228e+04

## MapLabelNorthwest District Association	9.253e+04	2.614e+04
## MapLabelNorthwest Heights	-1.685e+04	2.309e+04
## MapLabelOverlook	-1.351e+04	1.769e+04
## MapLabelParkrose	-1.842e+05	1.787e+04
## MapLabelParkrose Heights Association of Neighbors	-1.790e+05	1.712e+04
## MapLabelPiedmont	-4.943e+04	1.686e+04
## MapLabelPleasant Valley	-1.360e+05	1.537e+04
## MapLabelPortsmouth	-6.713e+04	2.003e+04
## MapLabelPowellhurst-Gilbert	-1.487e+05	1.451e+04
## MapLabelReed	-7.660e+04	1.508e+04
## MapLabelRichmond	-2.794e+04	1.217e+04
## MapLabelRose City Park	-4.952e+04	8.762e+03
## MapLabelRoseway	-7.604e+04	1.074e+04
## MapLabelRussell	-1.658e+05	1.758e+04
## MapLabelSabin Community Association	-3.882e+04	9.173e+03
## MapLabelSellwood-Moreland Improvement League	-2.772e+04	1.291e+04
## MapLabelSouth Burlingame	-1.529e+05	1.736e+04
## MapLabelSouth Portland	-6.828e+04	1.858e+04
## MapLabelSouth Tabor	-7.568e+04	1.297e+04
## MapLabelSouthwest Hills Residential League	-3.837e+04	2.245e+04
## MapLabelSt. Johns	-5.920e+04	2.020e+04
## MapLabelSullivan's Gulch	-1.029e+05	2.058e+04
## MapLabelSumner Association of Neighbors	-1.742e+05	1.848e+04
## MapLabelSunderland Association of Neighbors	-1.903e+05	5.010e+04
## MapLabelSunnyside	-1.810e+04	1.303e+04
## MapLabelSylvan-Highlands	-1.370e+05	2.515e+04
## MapLabelUniversity Park	-4.371e+04	2.032e+04
## MapLabelVernon	-2.200e+04	1.457e+04
## MapLabelWest Portland Park	-1.723e+05	1.652e+04
## MapLabelWilkes Community Group	-1.667e+05	1.869e+04
## MapLabelWoodland Park	-1.775e+05	2.564e+04
## MapLabelWoodlawn	-5.969e+04	1.547e+04
## MapLabelWoodstock	-8.124e+04	1.363e+04
## HIGH_SCHCLEVELAND HS	-3.113e+04	1.208e+04
## HIGH_SCHDAVID DOUGLAS HS	-4.004e+04	8.090e+03
## HIGH_SCHFRANKLIN HS	-3.669e+04	1.114e+04
## HIGH_SCHGRANT HS	4.939e+03	1.328e+04
## HIGH_SCHGRANT-JEFF	-4.345e+04	1.751e+04
## HIGH_SCHLINCOLN HS	6.633e+04	1.578e+04
## HIGH_SCHMADISON HS	-7.168e+04	1.197e+04
## HIGH_SCHMADISON-JEFF	-7.199e+04	1.451e+04
## HIGH_SCHPARKROSE HS	-2.559e+04	1.196e+04
## HIGH_SCHREYNOLDS HS	-1.332e+04	1.191e+04
## HIGH_SCHRIVERDALE HS	4.403e+05	6.753e+04
## HIGH_SCHROOS-JEFF	-9.770e+04	1.880e+04
## HIGH_SCHROOSEVELT CAMPUS	-8.536e+04	2.151e+04
## HIGH_SCHSUNSET HS	8.105e+04	3.118e+04
## HIGH_SCHWILSON HS	NA	NA
## conECSEI	6.817e+04	6.700e+04
## conLUST	-4.980e+04	6.796e+04
## conHist	3.676e+04	5.516e+03
## conHistLdm	1.987e+04	2.656e+04
## conNatAm	NA	NA
## conAirHgt	1.522e+04	3.489e+03

## conHeliprt	NA	NA
## conNoise	-2.387e+03	8.281e+03
## conGW	2.330e+04	3.832e+04
## conLSHA	1.078e+04	3.588e+03
## conSLID0	-2.051e+04	5.501e+03
## conSlp25	9.739e+03	3.746e+03
## conInstit	NA	NA
## conPrvCom	2.976e+05	9.548e+04
## conPubOwn	8.894e+03	2.630e+04
## conSewer	7.776e+03	1.192e+04
## conStorm	-3.450e+03	2.824e+03
## conTranCap	-8.044e+03	2.850e+03
## conTranInt	-7.517e+03	3.023e+03
## conTranSub	-9.873e+03	1.791e+03
## conWater	-7.143e+03	3.486e+03
## conView	NA	NA
## conCovrly	-1.360e+03	4.147e+03
## conPovrly	-2.810e+04	5.803e+03
## conWetland	-5.694e+04	2.253e+04
## conFld100	-9.901e+03	1.029e+04
## pct_conFld100	1.379e+04	1.414e+04
## pct_conPovrly	-5.700e+02	9.575e+04
## pct_conCovrly	3.001e+04	8.007e+03
## pct_conWetland	NA	NA
##	t value	Pr(> t)
## (Intercept)	-47.074	< 2e-16 ***
## CN_score	-1.168	0.243002
## percent_vacant	1.008	0.313252
## dist_cityhall	-15.943	< 2e-16 ***
## dist_ugb	-2.902	0.003707 **
## totalsqft	48.600	< 2e-16 ***
## yearbuilt	-10.446	< 2e-16 ***
## f_baths	50.431	< 2e-16 ***
## h_baths	27.724	< 2e-16 ***
## n_fireplaces	6.749	1.53e-11 ***
## ADUdummy	-6.575	4.96e-11 ***
## pct_canopy_cov	-1.289	0.197520
## taxlot_area	15.613	< 2e-16 ***
## garage_sqft	7.195	6.47e-13 ***
## attic_sqft	-0.691	0.489268
## bsmt_sqft	-4.764	1.91e-06 ***
## deck_sqft	7.484	7.46e-14 ***
## year_sold	48.208	< 2e-16 ***
## MapLabelArbor Lodge	-2.266	0.023476 *
## MapLabelArdenwald-Johnson Creek	-6.438	1.24e-10 ***
## MapLabelArgay Terrace	-10.432	< 2e-16 ***
## MapLabelArlington Heights	-0.084	0.933015
## MapLabelArnold Creek	-6.375	1.87e-10 ***
## MapLabelAshcreek	-9.203	< 2e-16 ***
## MapLabelBeaumont-Wilshire	-1.561	0.118441
## MapLabelBoise	-2.653	0.007990 **
## MapLabelBrentwood-Darlington	-11.929	< 2e-16 ***
## MapLabelBridlemile	-7.102	1.26e-12 ***
## MapLabelBrooklyn Action Corps	-9.244	< 2e-16 ***

## MapLabelBuckman Community Association	-2.835	0.004591	**
## MapLabelCathedral Park	-1.537	0.124293	
## MapLabelCentennial Community Association	-9.359	< 2e-16	***
## MapLabelCollins View	-8.704	< 2e-16	***
## MapLabelConcordia	-4.151	3.32e-05	***
## MapLabelCreston-Kenilworth	-8.569	< 2e-16	***
## MapLabelCrestwood	-9.833	< 2e-16	***
## MapLabelCully Association of Neighbors	-11.097	< 2e-16	***
## MapLabelEast Columbia	-8.121	4.85e-16	***
## MapLabelEastmoreland	5.534	3.16e-08	***
## MapLabelEliot	-5.386	7.29e-08	***
## MapLabelFar Southwest	-6.668	2.66e-11	***
## MapLabelForest Park	-2.006	0.044832	*
## MapLabelFoster-Powell	-9.335	< 2e-16	***
## MapLabelGlenfair	-8.219	< 2e-16	***
## MapLabelGoose Hollow Foothills League	-2.103	0.035494	*
## MapLabelGrant Park	4.128	3.67e-05	***
## MapLabelHayden Island Neighborhood Network	1.754	0.079499	.
## MapLabelHayhurst	-9.610	< 2e-16	***
## MapLabelHazelwood	-10.927	< 2e-16	***
## MapLabelHealy Heights	0.562	0.573833	
## MapLabelHillsdale	-7.929	2.30e-15	***
## MapLabelHillside	-0.729	0.466020	
## MapLabelHollywood	1.499	0.133826	
## MapLabelHomestead	-6.470	1.00e-10	***
## MapLabelHosford-Abernethy Neighborhood District Assn.	-2.250	0.024430	*
## MapLabelHumboldt	-3.137	0.001711	**
## MapLabelIrvington Community Association	2.241	0.025012	*
## MapLabelKenton	-4.066	4.79e-05	***
## MapLabelKerns	-2.226	0.026022	*
## MapLabelKing	-7.974	1.62e-15	***
## MapLabelLaurelhurst	4.222	2.43e-05	***
## MapLabelLents	-12.126	< 2e-16	***
## MapLabelLinnton	-6.708	2.03e-11	***
## MapLabelMadison South	-10.616	< 2e-16	***
## MapLabelMaplewood	-7.696	1.47e-14	***
## MapLabelMarkham	-10.756	< 2e-16	***
## MapLabelMarshall Park	-7.019	2.30e-12	***
## MapLabelMC Unclaimed #13	-1.469	0.141922	
## MapLabelMill Park	-10.826	< 2e-16	***
## MapLabelMontavilla	-8.490	< 2e-16	***
## MapLabelMt. Scott-Arleta	-8.681	< 2e-16	***
## MapLabelMt. Tabor	0.360	0.718806	
## MapLabelMultnomah	-8.402	< 2e-16	***
## MapLabelNorth Tabor	-6.754	1.48e-11	***
## MapLabelNorthwest District Association	3.540	0.000401	***
## MapLabelNorthwest Heights	-0.730	0.465576	
## MapLabelOverlook	-0.764	0.445157	
## MapLabelParkrose	-10.307	< 2e-16	***
## MapLabelParkrose Heights Association of Neighbors	-10.458	< 2e-16	***
## MapLabelPiedmont	-2.931	0.003379	**
## MapLabelPleasant Valley	-8.848	< 2e-16	***
## MapLabelPortsmouth	-3.351	0.000806	***
## MapLabelPowellhurst-Gilbert	-10.243	< 2e-16	***

## MapLabelReed	-5.081	3.78e-07	***
## MapLabelRichmond	-2.295	0.021751	*
## MapLabelRose City Park	-5.651	1.61e-08	***
## MapLabelRoseway	-7.078	1.51e-12	***
## MapLabelRussell	-9.431	< 2e-16	***
## MapLabelSabin Community Association	-4.232	2.33e-05	***
## MapLabelSellwood-Moreland Improvement League	-2.148	0.031745	*
## MapLabelSouth Burlingame	-8.803	< 2e-16	***
## MapLabelSouth Portland	-3.676	0.000238	***
## MapLabelSouth Tabor	-5.833	5.53e-09	***
## MapLabelSouthwest Hills Residential League	-1.709	0.087459	.
## MapLabelSt. Johns	-2.931	0.003381	**
## MapLabelSullivan's Gulch	-5.000	5.79e-07	***
## MapLabelSumner Association of Neighbors	-9.429	< 2e-16	***
## MapLabelSunderland Association of Neighbors	-3.799	0.000146	***
## MapLabelSunnyside	-1.389	0.164831	
## MapLabelSylvan-Highlands	-5.448	5.14e-08	***
## MapLabelUniversity Park	-2.151	0.031505	*
## MapLabelVernon	-1.510	0.131104	
## MapLabelWest Portland Park	-10.429	< 2e-16	***
## MapLabelWilkes Community Group	-8.918	< 2e-16	***
## MapLabelWoodland Park	-6.923	4.55e-12	***
## MapLabelWoodlawn	-3.858	0.000115	***
## MapLabelWoodstock	-5.961	2.55e-09	***
## HIGH_SCHCLEVELAND HS	-2.576	0.009990	**
## HIGH_SCHDAVID DOUGLAS HS	-4.949	7.51e-07	***
## HIGH_SCHFRANKLIN HS	-3.294	0.000989	***
## HIGH_SCHGRANT HS	0.372	0.709945	
## HIGH_SCHGRANT-JEFF	-2.481	0.013094	*
## HIGH_SCHLINCOLN HS	4.203	2.64e-05	***
## HIGH_SCHMADISON HS	-5.988	2.15e-09	***
## HIGH_SCHMADISON-JEFF	-4.961	7.08e-07	***
## HIGH_SCHPARKROSE HS	-2.140	0.032388	*
## HIGH_SCHREYNOLDS HS	-1.118	0.263612	
## HIGH_SCHRIVERDALE HS	6.520	7.21e-11	***
## HIGH_SCHROOS-JEFF	-5.196	2.05e-07	***
## HIGH_SCHROOSEVELT CAMPUS	-3.969	7.24e-05	***
## HIGH_SCHSUNSET HS	2.599	0.009350	**
## HIGH_SCHWILSON HS	NA	NA	
## conECSI	1.017	0.308940	
## conLUST	-0.733	0.463720	
## conHist	6.665	2.71e-11	***
## conHistLdm	0.748	0.454394	
## conNatAm	NA	NA	
## conAirHgt	4.362	1.30e-05	***
## conHeliprt	NA	NA	
## conNoise	-0.288	0.773199	
## conGW	0.608	0.543188	
## conLSHA	3.006	0.002651	**
## conSLID0	-3.728	0.000193	***
## conSlp25	2.600	0.009329	**
## conInstit	NA	NA	
## conPrvCom	3.117	0.001829	**
## conPubOwn	0.338	0.735208	

```
## conSewer                0.653 0.514006
## conStorm                -1.222 0.221724
## conTranCap              -2.823 0.004769 **
## conTranInt              -2.487 0.012905 *
## conTranSub              -5.512 3.58e-08 ***
## conWater                -2.049 0.040468 *
## conView                 NA      NA
## conCovrly              -0.328 0.742967
## conPovrly              -4.842 1.29e-06 ***
## conWetland              -2.528 0.011480 *
## conFld100              -0.962 0.335810
## pct_conFld100           0.975 0.329354
## pct_conPovrly          -0.006 0.995250
## pct_conCovrly           3.748 0.000179 ***
## pct_conWetland          NA      NA
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 94600 on 22130 degrees of freedom
## (772 observations deleted due to missingness)
## Multiple R-squared:  0.7603, Adjusted R-squared:  0.7587
## F-statistic: 484.1 on 145 and 22130 DF,  p-value: < 2.2e-16
```

```
#plot(sfr.lin.sqft_mod)
```

```
# OUTPUT-----
```

```
star.1 <- stargazer(sfr_lin_mod, sfr_mod_log, sfr_mod_bc, type="html", out="models.htm")
```

```
##
## <table style="text-align:center"><tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr>
## <tr><td></td><td colspan="3" style="border-bottom: 1px solid black"></td></tr>
## <tr><td style="text-align:left"></td><td>SALEPRICE</td><td>SALEPRICElog</td><td>SALEPRICEbc</td></tr>
## <tr><td style="text-align:left"></td><td>(1)</td><td>(2)</td><td>(3)</td></tr>
## <tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left">
## <tr><td style="text-align:left"></td><td>(87.211)</td><td>(0.0002)</td><td>(0.068)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">percent_vacant</td><td>2,998.344</td><td>0.018<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(2,684.516)</td><td>(0.007)</td><td>(2.101)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">dist_cityhall</td><td>-5.390<sup>***</sup></td><td>-0.00001<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(0.344)</td><td>(0.00000)</td><td>(0.0003)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">dist_ugb</td><td>-1.237<sup>***</sup></td><td>-0.00000<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(0.421)</td><td>(0.00000)</td><td>(0.0003)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">totalsqft</td><td>56.101<sup>***</sup></td><td>0.0001<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(1.144)</td><td>(0.00000)</td><td>(0.001)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">yearbuilt</td><td>-315.482<sup>***</sup></td><td>-0.0003<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(34.460)</td><td>(0.0001)</td><td>(0.027)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">f_baths</td><td>58,310.440<sup>***</sup></td><td>0.122<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(1,156.788)</td><td>(0.003)</td><td>(0.906)</td></tr>
```


[illegible]

[illegible]

[illegible]


```

## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPleasant Valley</td><td>-133,915.500<sup>***</sup></td><td>-
## <tr><td style="text-align:left"></td><td>(15,380.080)</td><td>(0.039)</td><td>(12.039)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPortsmouth</td><td>-65,506.420<sup>***</sup></td><td>-0.080<
## <tr><td style="text-align:left"></td><td>(20,044.510)</td><td>(0.050)</td><td>(15.690)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPowellhurst-Gilbert</td><td>-146,476.900<sup>***</sup></td><td>-
## <tr><td style="text-align:left"></td><td>(14,518.770)</td><td>(0.036)</td><td>(11.365)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelReed</td><td>-75,245.860<sup>***</sup></td><td>-0.076<sup>**
## <tr><td style="text-align:left"></td><td>(15,081.690)</td><td>(0.038)</td><td>(11.806)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRichmond</td><td>-27,563.780<sup>***</sup></td><td>-0.002</td>
## <tr><td style="text-align:left"></td><td>(12,181.300)</td><td>(0.031)</td><td>(9.535)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRose City Park</td><td>-50,006.330<sup>***</sup></td><td>-0.
## <tr><td style="text-align:left"></td><td>(8,766.228)</td><td>(0.022)</td><td>(6.862)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRoseway</td><td>-76,173.570<sup>***</sup></td><td>-0.120<sup>
## <tr><td style="text-align:left"></td><td>(10,750.180)</td><td>(0.027)</td><td>(8.415)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRussell</td><td>-163,478.800<sup>***</sup></td><td>-0.378<sup>
## <tr><td style="text-align:left"></td><td>(17,595.260)</td><td>(0.044)</td><td>(13.773)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSabin Community Association</td><td>-38,289.650<sup>***</sup>
## <tr><td style="text-align:left"></td><td>(9,179.484)</td><td>(0.023)</td><td>(7.185)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSellwood-Moreland Improvement League</td><td>-27,800.640<sup>
## <tr><td style="text-align:left"></td><td>(12,912.680)</td><td>(0.032)</td><td>(10.108)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouth Burlingame</td><td>-151,327.200<sup>***</sup></td><td>-
## <tr><td style="text-align:left"></td><td>(17,374.660)</td><td>(0.044)</td><td>(13.600)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouth Portland</td><td>-66,956.990<sup>***</sup></td><td>-0.
## <tr><td style="text-align:left"></td><td>(18,585.600)</td><td>(0.047)</td><td>(14.548)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouth Tabor</td><td>-75,463.880<sup>***</sup></td><td>-0.083
## <tr><td style="text-align:left"></td><td>(12,980.030)</td><td>(0.033)</td><td>(10.160)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouthwest Hills Residential League</td><td>-35,101.370</td><
## <tr><td style="text-align:left"></td><td>(22,467.470)</td><td>(0.056)</td><td>(17.587)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSt. Johns</td><td>-57,193.950<sup>***</sup></td><td>-0.088<sup>
## <tr><td style="text-align:left"></td><td>(20,212.990)</td><td>(0.051)</td><td>(15.822)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSullivan's Gulch</td><td>-100,763.800<sup>***</sup></td><td>-
## <tr><td style="text-align:left"></td><td>(20,594.790)</td><td>(0.052)</td><td>(16.121)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSumner Association of Neighbors</td><td>-173,160.500<sup>***
## <tr><td style="text-align:left"></td><td>(18,490.770)</td><td>(0.046)</td><td>(14.474)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSunderland Association of Neighbors</td><td>-183,665.200<sup>
## <tr><td style="text-align:left"></td><td>(50,124.880)</td><td>(0.126)</td><td>(39.237)</td></tr>

```

[illegible]

[illegible]

[illegible]


```
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">Constant</td><td>-54,738,589.000<sup>***</sup></td><td>-132.967<sup>***</sup></td><td></td></tr>
## <tr><td style="text-align:left"></td><td>(1,161,504.000)</td><td>(2.920)</td><td>(909.199)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">R<sup>2</sup></td><td>0.760</td><td>0.692</td><td>0.753</td></tr>
## <tr><td style="text-align:left">Adjusted R<sup>2</sup></td><td>0.758</td><td>0.690</td><td>0.751</td></tr>
## <tr><td style="text-align:left">Residual Std. Error (df = 22130)</td><td>94,655.570</td><td>0.238</td><td></td></tr>
## <tr><td style="text-align:left">F Statistic (df = 145; 22130)</td><td>483.389<sup>***</sup></td><td></td><td></td></tr>
## <tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## </table>
```

```
kable(star.1)
```

	SALEPRICE	SALEPRICElog	SALEPRICEbc
	(1)	(2)	(3)
CN_score	(87.211)	(0.0002)	(0.068)
percent_vacant	2,998.344	0.018	^{***}
	(2,684.516)	(0.007)	(2.101)
dist_cityhall	-5.390	^{***}	-0.00001 ^{***}
	(0.344)	(0.00000)	(0.0003)
dist_ugb	-1.237	^{***}	-0.00000 ^{***}
	(0.421)	(0.00000)	(0.0003)
totalsqft	56.101	^{***}	0.0001 ^{***}
	(1.144)	(0.00000)	(0.001)
yearbuilt	-315.482	^{***}	-0.0003 ^{***}
	(34.460)	(0.0001)	(0.027)
f_baths	58,310.440	^{***}	0.122 ^{***}
	(1,156.788)	(0.003)	(0.906)
h_baths	41,374.880	^{***}	0.085 ^{***}
	(1,493.789)	(0.004)	(1.169)
n_fireplaces	9,395.554	^{***}	0.039 ^{***}
	(1,525.474)	(0.004)	(1.194)
ADUdummy	-34,751.090	^{***}	-0.076 ^{***}
	(5,439.845)	(0.014)	(4.258)
pct_canopy_cov	-5,813.272		-0.011
	(3,907.971)	(0.010)	(3.059)
taxlot_area	1.794	^{***}	0.00000 ^{***}
	(0.111)	(0.00000)	(0.0001)
garage_dum	12,241.820	^{***}	0.039 ^{***}
	(1,788.024)	(0.004)	(1.400)
attic_dum	-2,149.019		0.015
	(1,680.828)	(0.004)	(1.316)
bsmt_dum	-2,447.036		0.028
	(1,763.945)	(0.004)	(1.381)
deck_dum	10,661.420	^{***}	0.035 ^{***}
	(1,402.940)	(0.004)	(1.098)
year_sold	27,689.280	^{***}	0.073 ^{***}
	(574.252)	(0.001)	(0.450)
MapLabelArbor Lodge	-38,954.070	^{**}	-0.014

```
pander(summary(sfr_mod_linear, sfr_mod_log))
```

Quitting from lines 240-270 (SFR_pretty.Rmd) Error in summary(sfr_mod_linear, sfr_mod_log) : object 'sfr_mod_linear' not found Calls: ... withCallingHandlers -> withVisible -> eval -> eval -> pander -> summary

Switching CN_score, neighborhood, and elementary school, and County??

note that elementary school is included in cn score

Adding in trusts and LLCs (per Jon's comments)

Incorporating zoning history

PLAYING AROUND WITH VACANT DUMMY VS PERCENT VACANT (AND OTHER PERCENT CONSTRAINTS)

Control-specific transformations (ie sqft vs sqft-squared) PLAYING AROUND WITH PRICE RATIO

Output Tables

```
summary(dat1) %>% kable
```

	X1	AREA	STATE_ID	RNO	OWNER1	OWNERADDR	OWNER
	Min. : 1	Min. : 1035	Length:23048	Length:23048	Length:23048	Length:23048	Length:2
	1st Qu.: 8280	1st Qu.: 4999	Class :character	Class :character	Class :character	Class :character	Class :ch
	Median :16948	Median : 5500	Mode :character	Mode :character	Mode :character	Mode :character	Mode :ch
	Mean :16858	Mean : 7520	NA	NA	NA	NA	NA
	3rd Qu.:25387	3rd Qu.: 8044	NA	NA	NA	NA	NA
	Max. :34628	Max. :355500	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA

```
stargazer(sfr_lin_mod, sfr_mod_log, sfr_mod_bc, type="html", out="models.htm")
```

```
##
## <table style="text-align:center"><tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr>
## <tr><td></td><td colspan="3" style="border-bottom: 1px solid black"></td></tr>
## <tr><td style="text-align:left"></td><td>SALEPRICE</td><td>SALEPRICElog</td><td>SALEPRICEbc</td></tr>
## <tr><td style="text-align:left"></td><td>(1)</td><td>(2)</td><td>(3)</td></tr>
## <tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left">
## <tr><td style="text-align:left"></td><td>(87.211)</td><td>(0.0002)</td><td>(0.068)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">percent_vacant</td><td>2,998.344</td><td>0.018<sup>***</sup></td><td></td>
## <tr><td style="text-align:left"></td><td>(2,684.516)</td><td>(0.007)</td><td>(2.101)</td></tr>
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## <tr><td style="text-align:left"></td><td>(0.344)</td><td>(0.00000)</td><td>(0.0003)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">dist_ugb</td><td>-1.237<sup>***</sup></td><td>-0.00000<sup>***</sup></td>
## <tr><td style="text-align:left"></td><td>(0.421)</td><td>(0.00000)</td><td>(0.0003)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
```

style="text-align:left">	totalsqft	56.101	***	0.0001	***
style="text-align:left">		(1.144)		(0.00000)	(0.001)
style="text-align:left">					
style="text-align:left">	yearbuilt	-315.482	***	-0.0003	***
style="text-align:left">		(34.460)		(0.0001)	(0.027)
style="text-align:left">					
style="text-align:left">	f_baths	58,310.440	***	0.122	***
style="text-align:left">		(1,156.788)		(0.003)	(0.906)
style="text-align:left">					
style="text-align:left">	h_baths	41,374.880	***	0.085	***
style="text-align:left">		(1,493.789)		(0.004)	(1.169)
style="text-align:left">					
style="text-align:left">	n_fireplaces	9,395.554	***	0.039	***
style="text-align:left">		(1,525.474)		(0.004)	(1.194)
style="text-align:left">					
style="text-align:left">	ADUdummy	-34,751.090	***	-0.076	***
style="text-align:left">		(5,439.845)		(0.014)	(4.258)
style="text-align:left">					
style="text-align:left">	pct_canopy_cov	-5,813.272		-0.011	-3.776
style="text-align:left">		(3,907.971)		(0.010)	(3.059)
style="text-align:left">					
style="text-align:left">	taxlot_area	1.794	***	0.00000	***
style="text-align:left">		(0.111)		(0.00000)	(0.0001)
style="text-align:left">					
style="text-align:left">	garage_dum	12,241.820	***	0.039	***
style="text-align:left">		(1,788.024)		(0.004)	(1.400)
style="text-align:left">					
style="text-align:left">	attic_dum	-2,149.019		0.015	2.0
style="text-align:left">		(1,680.828)		(0.004)	(1.316)
style="text-align:left">					
style="text-align:left">	bsmt_dum	-2,447.036		0.028	4.07
style="text-align:left">		(1,763.945)		(0.004)	(1.381)
style="text-align:left">					
style="text-align:left">	deck_dum	10,661.420	***	0.035	***
style="text-align:left">		(1,402.940)		(0.004)	(1.098)
style="text-align:left">					
style="text-align:left">	year_sold	27,689.280	***	0.073	***
style="text-align:left">		(574.252)		(0.001)	(0.450)
style="text-align:left">					
style="text-align:left">	MapLabelArbor Lodge	-38,954.070	**	-0.014	
style="text-align:left">		(17,098.260)		(0.043)	(13.384)
style="text-align:left">					
style="text-align:left">	MapLabelArdenwald-Johnson Creek	-126,202.300	***		
style="text-align:left">		(20,112.480)		(0.051)	(15.744)
style="text-align:left">					
style="text-align:left">	MapLabelArgay Terrace	-184,162.000	***	-0.1	
style="text-align:left">		(17,753.980)		(0.045)	(13.897)
style="text-align:left">					
style="text-align:left">	MapLabelArlington Heights	-203.052		-0.166	***
style="text-align:left">		(26,934.150)		(0.068)	(21.083)
style="text-align:left">					
style="text-align:left">	MapLabelArnold Creek	-102,227.300	***	-0.2	
style="text-align:left">		(16,729.930)		(0.042)	(13.096)
style="text-align:left">					

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## |  |  |  |
| --- | --- | --- |
| MapLabelAshcreek | -145,371.400*** | -0.317 |
## |  | (16,116.220) | (0.041) |
## |  | (12.615) |  |
## |  |  |  |
## | MapLabelBeaumont-Wilshire | -14,235.520 | -0.025 |
## |  | (9,136.938) | (0.023) |
## |  | (7.152) |  |
## |  |  |  |
## | MapLabelBoise | -50,887.290*** | 0.014 |
## |  | (20,042.060) | (0.050) |
## |  | (15.688) |  |
## |  |  |  |
## | MapLabelBrentwood-Darlington | -153,210.700*** |  |
## |  | (13,082.720) | (0.033) |
## |  | (10.241) |  |
## |  |  |  |
## | MapLabelBridlemile | -155,473.900*** | -0.336 |
## |  | (22,546.260) | (0.057) |
## |  | (17.649) |  |
## |  |  |  |
## | MapLabelBrooklyn Action Corps | -130,893.700*** |  |
## |  | (14,353.110) | (0.036) |
## |  | (11.235) |  |
## |  |  |  |
## | MapLabelBuckman Community Association | -42,536.330*** |  |
## |  | (15,873.970) | (0.040) |
## |  | (12.426) |  |
## |  |  |  |
## | MapLabelCathedral Park | -32,660.390 | -0.003 |
## |  | (21,536.460) | (0.054) |
## |  | (16.858) |  |
## |  |  |  |
## | MapLabelCentennial Community Association | -149,081.400*** |  |
## |  | (16,188.080) | (0.041) |
## |  | (12.672) |  |
## |  |  |  |
## | MapLabelCollins View | -146,070.800*** | -0.3 |
## |  | (17,119.290) | (0.043) |
## |  | (13.401) |  |
## |  |  |  |
## | MapLabelConcordia | -46,357.750*** | -0.071 |
## |  | (11,370.990) | (0.029) |
## |  | (8.901) |  |
## |  |  |  |
## | MapLabelCreston-Kenilworth | -111,821.300*** |  |
## |  | (13,137.330) | (0.033) |
## |  | (10.284) |  |
## |  |  |  |
## | MapLabelCrestwood | -163,821.800*** | -0.365 |
## |  | (17,037.390) | (0.043) |
## |  | (13.336) |  |
## |  |  |  |
## | MapLabelCully Association of Neighbors | -114,257.200*** |  |
## |  | (10,590.460) | (0.027) |
## |  | (8.290) |  |
## |  |  |  |
## | MapLabelEast Columbia | -170,738.000*** | -0.4 |
## |  | (21,259.710) | (0.053) |
## |  | (16.642) |  |
## |  |  |  |
## | MapLabelEastmoreland | 76,576.060*** | 0.139 |
## |  | (13,938.290) | (0.035) |
## |  | (10.911) |  |
## |  |  |  |
## | MapLabelEliot | -168,010.100*** | -0.211 |
## |  | (32,282.500) | (0.081) |
## |  | (25.270) |  |
## |  |  |  |
## | MapLabelFar Southwest | -114,299.100*** | -0.5 |
## |  | (17,807.050) | (0.045) |
## |  | (13.939) |  |
## |  |  |  |

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## <tr><td style="text-align:left">MapLabelForest Park</td><td>-47,829.250<sup>*</sup></td><td>-0.208<sup>*</sup></td><td>(25,054.670)</td><td>(0.063)</td><td>(19.612)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelFoster-Powell</td><td>-119,199.500<sup>***</sup></td><td>-0.1<sup>*</sup></td><td>(13,094.530)</td><td>(0.033)</td><td>(10.250)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelGlenfair</td><td>-172,862.500<sup>***</sup></td><td>-0.420<sup>*</sup></td><td>(21,249.390)</td><td>(0.053)</td><td>(16.634)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelGoose Hollow Foothills League</td><td>-63,097.450<sup>**</sup></td><td>-0.1<sup>*</sup></td><td>(31,133.280)</td><td>(0.078)</td><td>(24.370)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelGrant Park</td><td>43,627.940<sup>***</sup></td><td>0.082<sup>*</sup></td><td>(10,530.010)</td><td>(0.026)</td><td>(8.243)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHayden Island Neighborhood Network</td><td>58,218.580<sup>*</sup></td><td>-0.1<sup>*</sup></td><td>(31,093.060)</td><td>(0.078)</td><td>(24.339)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHayhurst</td><td>-152,156.900<sup>***</sup></td><td>-0.328<sup>*</sup></td><td>(16,153.290)</td><td>(0.041)</td><td>(12.644)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHazelwood</td><td>-147,912.500<sup>***</sup></td><td>-0.358<sup>*</sup></td><td>(13,710.950)</td><td>(0.034)</td><td>(10.733)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHealy Heights</td><td>26,612.000</td><td>-0.147</td><td>-18.0<sup>*</sup></td><td>(37,488.600)</td><td>(0.094)</td><td>(29.345)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHillsdale</td><td>-126,795.900<sup>***</sup></td><td>-0.305<sup>*</sup></td><td>(16,276.800)</td><td>(0.041)</td><td>(12.741)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHillside</td><td>-14,760.510</td><td>-0.206<sup>***</sup></td><td>-0.206<sup>***</sup></td><td>(25,114.310)</td><td>(0.063)</td><td>(19.659)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHollywood</td><td>33,888.260</td><td>0.096<sup>*</sup></td><td>0.096<sup>*</sup></td><td>(22,840.450)</td><td>(0.057)</td><td>(17.879)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHomestead</td><td>-188,913.300<sup>***</sup></td><td>-0.411<sup>*</sup></td><td>(29,201.050)</td><td>(0.073)</td><td>(22.858)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHosford-Abernethy Neighborhood District Assn.</td><td>-28,478.000</td><td>-0.147</td><td>-18.0<sup>*</sup></td><td>(13,410.710)</td><td>(0.034)</td><td>(10.498)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelHumboldt</td><td>-49,204.840<sup>***</sup></td><td>-0.034<sup>*</sup></td><td>(16,180.470)</td><td>(0.041)</td><td>(12.666)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelIrvington Community Association</td><td>25,581.020<sup>***</sup></td><td>-0.105<sup>*</sup></td><td>(10,923.480)</td><td>(0.027)</td><td>(8.551)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelKenton</td><td>-76,153.330<sup>***</sup></td><td>-0.105<sup>*</sup></td><td>(19,165.200)</td><td>(0.048)</td><td>(15.002)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelKerns</td><td>-40,760.860<sup>***</sup></td><td>-0.025<sup>*</sup></td><td>(18,613.240)</td><td>(0.047)</td><td>(14.570)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>

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## <tr><td style="text-align:left">MapLabelKing</td><td>-95,751.500<sup>***</sup></td><td>-0.129<sup>***</sup></td><td>(12,192.150)</td><td>(0.031)</td><td>(9.544)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelLaurelhurst</td><td>39,356.130<sup>***</sup></td><td>0.080<sup>***</sup></td><td>(9,335.635)</td><td>(0.023)</td><td>(7.308)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelLents</td><td>-152,636.500<sup>***</sup></td><td>-0.373<sup>***</sup></td><td>(12,817.930)</td><td>(0.032)</td><td>(10.034)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelLinnton</td><td>-180,803.800<sup>***</sup></td><td>-0.356<sup>***</sup></td><td>(27,126.820)</td><td>(0.068)</td><td>(21.234)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMadison South</td><td>-119,933.600<sup>***</sup></td><td>-0.373<sup>***</sup></td><td>(11,347.230)</td><td>(0.029)</td><td>(8.882)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMaplewood</td><td>-126,352.500<sup>***</sup></td><td>-0.264<sup>***</sup></td><td>(16,874.680)</td><td>(0.042)</td><td>(13.209)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMarkham</td><td>-176,204.900<sup>***</sup></td><td>-0.381<sup>***</sup></td><td>(16,669.750)</td><td>(0.042)</td><td>(13.049)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMarshall Park</td><td>-123,536.800<sup>***</sup></td><td>-0.373<sup>***</sup></td><td>(18,085.960)</td><td>(0.045)</td><td>(14.157)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMC Unclaimed</td><td>-132,899.000</td><td>-0.344</td><td>-119,933.600</td><td>(88,057.740)</td><td>(0.221)</td><td>(68.930)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMill Park</td><td>-152,999.400<sup>***</sup></td><td>-0.385<sup>***</sup></td><td>(14,317.530)</td><td>(0.036)</td><td>(11.207)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMontavilla</td><td>-90,777.370<sup>***</sup></td><td>-0.175<sup>***</sup></td><td>(10,848.050)</td><td>(0.027)</td><td>(8.492)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMt. Scott-Arleta</td><td>-111,728.300<sup>***</sup></td><td>-0.175<sup>***</sup></td><td>(13,221.870)</td><td>(0.033)</td><td>(10.350)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMt. Tabor</td><td>5,361.892</td><td>0.045</td><td>10.423</td><td>(11,735.940)</td><td>(0.029)</td><td>(9.187)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelMultnomah</td><td>-133,123.800<sup>***</sup></td><td>-0.289<sup>***</sup></td><td>(16,120.650)</td><td>(0.041)</td><td>(12.619)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelNorth Tabor</td><td>-82,699.130<sup>***</sup></td><td>-0.130<sup>***</sup></td><td>(12,287.840)</td><td>(0.031)</td><td>(9.619)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelNorthwest District Association</td><td>93,518.930<sup>***</sup></td><td>0.080<sup>***</sup></td><td>(26,150.800)</td><td>(0.066)</td><td>(20.470)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelNorthwest Heights</td><td>-11,950.830</td><td>-0.150<sup>***</sup></td><td>(23,107.570)</td><td>(0.058)</td><td>(18.088)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelOverlook</td><td>-12,946.030</td><td>0.036</td><td>0.716</td><td>(17,700.030)</td><td>(0.044)</td><td>(13.855)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>

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## <tr><td style="text-align:left">MapLabelParkrose</td><td>-184,118.000<sup>***</sup></td><td>-0.451<sup>***</sup></td><td>(17,884.510)</td><td>(0.045)</td><td>(14.000)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelParkrose Heights Association of Neighbors</td><td>-176,860.4<sup>***</sup></td><td>-0.451<sup>***</sup></td><td>(17,130.740)</td><td>(0.043)</td><td>(13.410)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPiedmont</td><td>-49,517.620<sup>***</sup></td><td>-0.039<sup>***</sup></td><td>(16,873.920)</td><td>(0.042)</td><td>(13.209)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPleasant Valley</td><td>-133,915.500<sup>***</sup></td><td>-0.039<sup>***</sup></td><td>(15,380.080)</td><td>(0.039)</td><td>(12.039)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPortsmouth</td><td>-65,506.420<sup>***</sup></td><td>-0.080<sup>***</sup></td><td>(20,044.510)</td><td>(0.050)</td><td>(15.690)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelPowellhurst-Gilbert</td><td>-146,476.900<sup>***</sup></td><td>-0.036<sup>***</sup></td><td>(14,518.770)</td><td>(0.036)</td><td>(11.365)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelReed</td><td>-75,245.860<sup>***</sup></td><td>-0.076<sup>***</sup></td><td>(15,081.690)</td><td>(0.038)</td><td>(11.806)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRichmond</td><td>-27,563.780<sup>***</sup></td><td>-0.002<sup>***</sup></td><td>(12,181.300)</td><td>(0.031)</td><td>(9.535)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRose City Park</td><td>-50,006.330<sup>***</sup></td><td>-0.022<sup>***</sup></td><td>(8,766.228)</td><td>(0.022)</td><td>(6.862)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRoseway</td><td>-76,173.570<sup>***</sup></td><td>-0.120<sup>***</sup></td><td>(10,750.180)</td><td>(0.027)</td><td>(8.415)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelRussell</td><td>-163,478.800<sup>***</sup></td><td>-0.378<sup>***</sup></td><td>(17,595.260)</td><td>(0.044)</td><td>(13.773)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSabin Community Association</td><td>-38,289.650<sup>***</sup></td><td>-0.023<sup>***</sup></td><td>(9,179.484)</td><td>(0.023)</td><td>(7.185)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSellwood-Moreland Improvement League</td><td>-27,800.640<sup>***</sup></td><td>-0.032<sup>***</sup></td><td>(12,912.680)</td><td>(0.032)</td><td>(10.108)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouth Burlingame</td><td>-151,327.200<sup>***</sup></td><td>-0.044<sup>***</sup></td><td>(17,374.660)</td><td>(0.044)</td><td>(13.600)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouth Portland</td><td>-66,956.990<sup>***</sup></td><td>-0.047<sup>***</sup></td><td>(18,585.600)</td><td>(0.047)</td><td>(14.548)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouth Tabor</td><td>-75,463.880<sup>***</sup></td><td>-0.033<sup>***</sup></td><td>(12,980.030)</td><td>(0.033)</td><td>(10.160)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSouthwest Hills Residential League</td><td>-35,101.370<sup>***</sup></td><td>-0.056<sup>***</sup></td><td>(22,467.470)</td><td>(0.056)</td><td>(17.587)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSt. Johns</td><td>-57,193.950<sup>***</sup></td><td>-0.051<sup>***</sup></td><td>(20,212.990)</td><td>(0.051)</td><td>(15.822)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>

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## <tr><td style="text-align:left">MapLabelSullivan's Gulch</td><td>-100,763.800<sup>***</sup></td><td>
## <tr><td style="text-align:left"></td><td>(20,594.790)</td><td>(0.052)</td><td>(16.121)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSumner Association of Neighbors</td><td>-173,160.500<sup>***</sup>
## <tr><td style="text-align:left"></td><td>(18,490.770)</td><td>(0.046)</td><td>(14.474)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSunderland Association of Neighbors</td><td>-183,665.200<sup>
## <tr><td style="text-align:left"></td><td>(50,124.880)</td><td>(0.126)</td><td>(39.237)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSunnyside</td><td>-16,239.800</td><td>0.036</td><td>0.102</td>
## <tr><td style="text-align:left"></td><td>(13,035.830)</td><td>(0.033)</td><td>(10.204)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelSylvan-Highlands</td><td>-133,383.300<sup>***</sup></td><td>
## <tr><td style="text-align:left"></td><td>(25,158.760)</td><td>(0.063)</td><td>(19.694)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelUniversity Park</td><td>-43,403.040<sup>***</sup></td><td>-0.
## <tr><td style="text-align:left"></td><td>(20,342.030)</td><td>(0.051)</td><td>(15.923)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelVernon</td><td>-20,497.560</td><td>-0.004</td><td>-8.835</td>
## <tr><td style="text-align:left"></td><td>(14,582.770)</td><td>(0.037)</td><td>(11.415)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelWest Portland Park</td><td>-168,667.000<sup>***</sup></td><td>
## <tr><td style="text-align:left"></td><td>(16,528.960)</td><td>(0.042)</td><td>(12.938)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelWilkes Community Group</td><td>-164,249.000<sup>***</sup></td><td>
## <tr><td style="text-align:left"></td><td>(18,699.490)</td><td>(0.047)</td><td>(14.638)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelWoodland Park</td><td>-179,088.700<sup>***</sup></td><td>-0.
## <tr><td style="text-align:left"></td><td>(25,661.140)</td><td>(0.065)</td><td>(20.087)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelWoodlawn</td><td>-58,897.850<sup>***</sup></td><td>-0.060</td>
## <tr><td style="text-align:left"></td><td>(15,484.630)</td><td>(0.039)</td><td>(12.121)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">MapLabelWoodstock</td><td>-79,773.740<sup>***</sup></td><td>-0.096</td>
## <tr><td style="text-align:left"></td><td>(13,636.250)</td><td>(0.034)</td><td>(10.674)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">HIGH_SCHCLEVELAND HS</td><td>-30,716.140<sup>***</sup></td><td>-0.127
## <tr><td style="text-align:left"></td><td>(12,090.260)</td><td>(0.030)</td><td>(9.464)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">HIGH_SCHDAVID DOUGLAS HS</td><td>-39,662.340<sup>***</sup></td><td>-
## <tr><td style="text-align:left"></td><td>(8,094.337)</td><td>(0.020)</td><td>(6.336)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">HIGH_SCHFRANKLIN HS</td><td>-36,190.600<sup>***</sup></td><td>-0.133
## <tr><td style="text-align:left"></td><td>(11,145.440)</td><td>(0.028)</td><td>(8.724)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">HIGH_SCHGRANT HS</td><td>5,269.956</td><td>-0.072<sup>***</sup></td><td>
## <tr><td style="text-align:left"></td><td>(13,284.270)</td><td>(0.033)</td><td>(10.399)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">HIGH_SCHGRANT-JEFF</td><td>-42,685.180<sup>***</sup></td><td>-0.182</td>
## <tr><td style="text-align:left"></td><td>(17,519.560)</td><td>(0.044)</td><td>(13.714)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">HIGH_SCHLINCOLN HS</td><td>66,537.510<sup>***</sup></td><td>0.087<sup>
## <tr><td style="text-align:left"></td><td>(15,788.370)</td><td>(0.040)</td><td>(12.359)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>

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HIGH_SCHMADISON HS	-71,558.170	***	-0.213
(11,976.930)	(0.030)	(9.375)	
HIGH_SCHMADISON-JEFF	-72,136.720	***	-0.18
(14,519.290)	(0.036)	(11.365)	
HIGH_SCHPARKROSE HS	-25,322.810	**	-0.089
(11,965.670)	(0.030)	(9.366)	
HIGH_SCHREYNOLDS HS	-12,967.850	*	-0.059
(11,920.500)	(0.030)	(9.331)	
HIGH_SCHRIVERDALE HS	445,390.300	***	0.493
(67,569.380)	(0.170)	(52.892)	
HIGH_SCHROOS-JEFF	-96,883.540	***	-0.279
(18,810.950)	(0.047)	(14.725)	
HIGH_SCHROOSEVELT CAMPUS	-85,337.100	***	-
(21,518.950)	(0.054)	(16.845)	
HIGH_SCHSUNSET HS	86,470.730	***	0.111
(31,197.230)	(0.078)	(24.420)	
HIGH_SCHWILSON HS			
conEC SI	60,990.610	0.139	48.523
(67,038.790)	(0.169)	(52.476)	
conLUST	-48,493.770	-0.059	-27.583
(68,003.220)	(0.171)	(53.231)	
conHist	37,263.860	0.057	0.057
(5,519.383)	(0.014)	(4.320)	
conHistLdm	23,748.380	-0.012	6.299
(26,580.330)	(0.067)	(20.806)	
conNatAm			
conAirHgt	14,963.730	0.030	0.030
(3,491.364)	(0.009)	(2.733)	
conHeliprt			
conNoise	-2,421.365	0.012	0.547
(8,288.045)	(0.021)	(6.488)	
conGW	26,691.490	0.113	29.518
(38,359.350)	(0.096)	(30.027)	

conLSHA	10,654.950	***	0.032	***
	(3,589.845)	(0.009)	(2.810)	
conSLID0	-21,134.140	***	-0.030	***
	(5,503.487)	(0.014)	(4.308)	
conSlp25	10,165.220	***	0.005	4.961
	(3,749.366)	(0.009)	(2.935)	
conInstit				
conPrvCom	295,262.200	***	0.229	14.782
	(95,534.020)	(0.240)	(74.782)	
conPubOwn	10,226.210		-0.068	-5.161
	(26,313.070)	(0.066)	(20.597)	
conSewer	7,273.643		0.020	7.248
	(11,919.230)	(0.030)	(9.330)	
conStorm	-3,341.668		-0.001	-1.340
	(2,825.699)	(0.007)	(2.212)	
conTranCap	-8,324.418	***	-0.016	***
	(2,851.474)	(0.007)	(2.232)	
conTranInt	-7,624.790	***	-0.019	***
	(3,025.055)	(0.008)	(2.368)	
conTranSub	-9,600.392	***	-0.024	***
	(1,792.962)	(0.005)	(1.403)	
conWater	-7,457.881	***	-0.028	***
	(3,487.542)	(0.009)	(2.730)	
conView				
conCovrly	-1,654.136		0.007	0.412
	(4,149.122)	(0.010)	(3.248)	
conPovrly	-27,948.620	***	-0.033	***
	(5,806.064)	(0.015)	(4.545)	
conWetland	-59,012.640	***	-0.060	
	(22,537.650)	(0.057)	(17.642)	
conFld100	-10,034.320		-0.003	-4.951
	(10,292.940)	(0.026)	(8.057)	
pct_conFld100	14,789.280		-0.020	4.046
	(14,144.300)	(0.036)	(11.072)	

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## <tr><td style="text-align:left">pct_conPovrly</td><td>7,631.667</td><td>0.016</td><td>6.422</td></tr>
## <tr><td style="text-align:left"></td><td>(95,796.480)</td><td>(0.241)</td><td>(74.987)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">pct_conCovrly</td><td>30,980.630<sup>***</sup></td><td>0.091<sup>***</sup></td><td></td></tr>
## <tr><td style="text-align:left"></td><td>(8,013.084)</td><td>(0.020)</td><td>(6.272)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">pct_conWetland</td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td style="text-align:left">Constant</td><td>-54,738,589.000<sup>***</sup></td><td>-132.967<sup></sup></td><td></td></tr>
## <tr><td style="text-align:left"></td><td>(1,161,504.000)</td><td>(2.920)</td><td>(909.199)</td></tr>
## <tr><td style="text-align:left"></td><td></td><td></td><td></td></tr>
## <tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left">
## <tr><td style="text-align:left">R<sup>2</sup></td><td>0.760</td><td>0.692</td><td>0.753</td></tr>
## <tr><td style="text-align:left">Adjusted R<sup>2</sup></td><td>0.758</td><td>0.690</td><td>0.751</td></tr>
## <tr><td style="text-align:left">Residual Std. Error (df = 22130)</td><td>94,655.570</td><td>0.238</td><td></td></tr>
## <tr><td style="text-align:left">F Statistic (df = 145; 22130)</td><td>483.389<sup>***</sup></td><td></td><td></td></tr>
## <tr><td colspan="4" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left">
## </table>

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