# 05 Preperation for Description Clustering Fabian Blasch 05/30/2022

## 1 Load Data

# 2 Final Checks before Mining

```
# check for descriptions that are shorter than 50 characters after cleaning
lapply(auctions, \(x){
  # over project ID
  lapply(x, (y){
    # Description length
    Dlen <- y$Text["Contract Description"] |> nchar()
    # required min char count
    dlen_check <- Dlen > 50
    # return
    list("Description" = Dlen,
         "Dlcheck" = dlen_check)
  })
}) -> filter_dat
# pull index
lapply(filter_dat, \(x){
  sapply(x, \x){
    # extr
    x[["Dlcheck"]]
```

```
})
}) -> ind

# files that will be removed
(!unlist(ind)) |> sum()

## [1] 4

# subset
Map(\(au, ind) au[ind], auctions, ind) -> auctions
```

# 3 Data Mining

### 3.1 Tokenization

## [1] 3323

# 3.2 Mispelled Words and Stopwords

```
# potentially misspelled words
miss <- hunspell::hunspell(uniq_words)

# to vector
miss_vec <- unlist(unique(miss))

# suggestions
sugg <- hunspell::hunspell_suggest(miss_vec)

# pick first suggestion and merge
sugg_1 <- sapply(sugg, "[", 1)

# merge and export
# openxlsx::write.xlsx(as.data.frame(cbind(miss_vec, sugg_1)),</pre>
```

```
"./../../Data/Misc Data/Word_corr.xlsx")
# import
corr <- openxlsx::read.xlsx("./../Data/Misc Data/Word_corr.xlsx")</pre>
corr[is.na(corr[, "sugg_1"]), "sugg_1"] <- ""</pre>
# stopwords
do.call(c, lapply(c("snowball", "stopwords-iso",
                     "smart", "marimo", "nltk"), \(x){
           # generate stopwords
           stopwords(language = "en", source = x)
         })) |> unique() -> stopw
# add stopwords to removal
corrs <- rbind(corr, cbind("miss_vec" = stopw,"sugg_1" = ""))</pre>
# remove
descrm <- stringi::stri_replace_all_regex(desc,</pre>
                                            paste0("\\b", corrs[, "miss_vec"], "\\b"),
                                            corrs[, "sugg_1"],
                                            vectorize_all = FALSE)
# this stop word list still results in noisy descriptions
# look at most frequent words that are not of importance
# df for tokenization
desc_tm_r2 <- data.frame("Num" = seq_along(CID), "Contract_id" = CID,</pre>
                          "Description" = descrm)
# generate tokens
desc_tok_r2 <- unnest_tokens(desc_tm_r2, word, Description)</pre>
# frequ
f_tab_words <- sort(table(desc_tok_r2$word), decreasing = TRUE)</pre>
# write to exceland check
\# openxlsx::write.xlsx(data.frame(names(f_tab_words), f_tab_words),
                        "./../../Data/Misc Data/StopWord_corr.xlsx")
# read back
corr_2 <- openxlsx::read.xlsx("./../Data/Misc Data/StopWord_corr.xlsx")</pre>
corr_2[is.na(corr_2[, "Replacement"]), "Replacement"] <- ""</pre>
# second round of removal
descrm_2 <- stringi::stri_replace_all_regex(descrm,</pre>
                                              paste0("\\b", corr_2[, "Word"], "\\b"),
                                              corr_2[, "Replacement"],
                                              vectorize_all = FALSE)
# retokenize
# df for tokenization
```

### 3.3 Stemming

```
# stemming
desc_stem <- cbind(desc_tok_r3,</pre>
                    "Stem" = SnowballC::wordStem(desc_tok_r3[, "word"],
                                                   language = "en"))
# unique stems
uniq_stem <- tapply(desc_stem[, "Stem"], desc_stem[, "Num"], unique)</pre>
# length of list in each year
split_ind <- sapply(auctions, length)</pre>
# ind
split_lst <- list(1:120,</pre>
                   121:234,
                   235:339,
                   340:452,
                   453:474)
# concatinate
Map(\(ind, auc){
  # temp stem
  tmp <- uniq_stem[ind]</pre>
  # concatinate
  Map(\(a, s)\{
    # assign
    a[["Stem"]] <- s
    # return
    return(a)
  }, auc, tmp)
}, split_lst, auctions) |> setNames(2015:2019) -> Bid_Tab_Stem
# write
# saveRDS(Bid_Tab_Stem, "./../../Data/Bid Tab RDS/Bid_Tab_Stem.RDS")
# glimpse into description and stem
lapply(Bid_Tab_Stem, \(x){
```

```
lapply(x, (y){}
    list(y$Text["Contract Description"],
    paste(y$Stem, collapse = ","))
  })
})
## $\2015\
## $\^2015\^$C19942
## $\2015\$C19942[[1]]
## "work consists of overlaying 7 bridges in el paso county with a thin bonded overlay (polyester concr
## $\2015\$C19942[[2]]
## [1] "overlay, bridg, polyest, concret, replac, repair, tile, interchang, retain"
##
## $`2015`$C20362
## $\2015\$C20362[[1]]
## "project br 0252-440 i-25:upper lake gulch rd brg repair consisting of milling, erosion control, sma,
##
## $\2015\$C20362[[2]]
## [1] "lake,gulch,repair,mill,eros,bridg,deck,pier,traffic"
##
## $`2015`$C19916
## $\2015\$C19916[[1]]
                                                                     Contract Description
##
## "bridge joint and deck repairs on i-25 - various structures between mp 244 to 270."
##
## $\^2015\^$C19916[[2]]
## [1] "bridg, deck, repair"
##
## $`2015`$C19384
## $\2015\$C19384[[1]]
## "the purpose of this project is to replace the sage creek bridge c-08-e on us 40 at milepost 112.911
##
## $\2015\$C19384[[2]]
## [1] "replac, bridg, milepost, concret, culvert, timber"
##
##
## $\\2015\\$C19918
## $\2015\$C19918[[1]]
## "br 0157a-012 sa# 19918 this bridge rehabilitation project is a part of the ramp bridge preservation
##
## $\2015\$C19918[[2]]
## [1] "bridg, rehabilit, ramp, boulder, remov, asphalt, pavement, concret, instal, compress, sealer, furnish, over
```

```
##
## $`2015`$C19553
## $\2015\$C19553[[1]]
## "bridge rehabilitation on two speer blvd and one 23rd avenue bridges over i-25, including joint elim
##
## $\2015\$C19553[[2]]
## [1] "bridg, rehabilit, waterproof, replac, epoxi, minor, widen, mill, resurfac, clearanc, girder, stripe"
##
##
## $`2015`$C20253
## $\2015\$C20253[[1]]
                                                                                 Contract Description
## "us 24 i-17-a bridge structure rehabilitation. north of manitou springs along business 24 west"
## $\2015\$C20253[[2]]
## [1] "bridg, rehabilit"
##
##
## $`2015`$C19395
## $\2015\$C19395[[1]]
## "the project is located on us 6 in eagle county. it begins at mp 164.6 and extends approximately 1 m
## $\2015\$C19395[[2]]
## [1] "replac, bridg, lake, improv, drainag, pave, traffic, stripe"
## $`2015`$C16756
## $\2015\$C16756[[1]]
## "project: brs 0704-215 located on interstate 70 beginning at mp 329 and extending approximately 12 m
##
## $\2015\$C16756[[2]]
## [1] "interst, rehabilit, hydrodemolit, mill, polyest, concret, overlay"
##
## $\^2015\^$C20609
## $\2015\$C20609[[1]]
##
## "installation of specialized remote preventative avalanche system above us 6 loveland pass - sister'
##
## $\2015\$C20609[[2]]
## [1] "instal, avalanch, path, highway"
##
## $`2015`$C19869
## $\2015\$C19869[[1]]
## "install a new and redundant anchor system on trex installed retaining wall coping panels throughout
##
## $\2015\$C19869[[2]]
## [1] "instal, anchor, retain, wall, panel, corridor, street, interst, rail, safeti, night, disturb, clean, residu,
```

```
##
## $`2015`$C18840
## $\2015\$C18840[[1]]
## "sh50 and san juan avenue, mp 91.2 - 92.5, city of montrose this project consists of constructing a
##
## $\2015\$C18840[[2]]
## [1] "deceler,upgrad,sewer,replac,traffic,signal,pole"
##
##
## $`2015`$C18753
## $\2015\$C18753[[1]]
## "c r600-409 18753 us36 wetland mitigation will construct wetlands at the confluence of s boulder crk
##
## $\2015\$C18753[[2]]
## [1] "wetland, boulder, construct, disturb, excav, seed, plant, realign, bike"
##
## $\2015\$C12372
## $\2015\$C12372[[1]]
## "this project will include 2 miles of concrete pavement, three intersection reconstructions includin
## $\2015\$C12372[[2]]
## [1] "concret, pavement, intersect, roundabout, resurfac, retain, wall, ditch, reloc, remov, earthwork, water, va
## $`2015`$C19565
## $\2015\$C19565[[1]]
## "us24/sh21(powers blvd), fountain blvd to platte ave, and airport road in colorado springs consisting
##
## $\2015\$C19565[[2]]
## [1] "fountain, airport, widen, wall, excav, base, asphalt, traffic, signal, drill, caisson, panel, drainag, pipe,
##
## $`2015`$C19868
## $\2015\$C19868[[1]]
##
## "sh121(wadsworth)-highland dr-10th ave-jefferson co this project is located on wadsworth between high
##
## $\2015\$C19868[[2]]
## [1] "highland, construct, widen, trail, pave, concret, culvert, gulch"
##
## $\`2015\`$C20102
## $\2015\$C20102[[1]]
## "this is a complete reconstruction project on sh 13 in rio blanco county, which inlcudes minor widen
##
## $\2015\$C20102[[2]]
## [1] "reconstruct,minor,widen,replac,earthwork,fenc,guardrail,asphalt,pave"
##
```

```
##
## $`2015`$C20549
## $\2015\$C20549[[1]]
## "us 40 mp 146.5-155 routt/grand/jackson ctys. rabbit ears e. includes a full-width 2\" mill and fill
##
## $`2015`$C20549[[2]]
## [1] "guardrail, replac, surgic, repair, subgrad, delin, stripe, rumbl, strip"
##
##
## $`2015`$C20351
## $\2015\$C20351[[1]]
## "i-70 row mp 241.6 0 - clear creek county frontage road (cr 314). stabilize hillside between i-70 ml
##
## $\2015\$C20351[[2]]
## [1] "stabil, retain, wall, drill, caisson, grade, pave, guardrail, rail, temporari, traffic, signal, construct"
##
## $\^2015\^$C20242
## $\2015\$C20242[[1]]
## "this project involves scour mitigation for 6 different structures at 5 different sites. mitigation
## $\2015\$C20242[[2]]
## [1] "riprap, soil, slope, ditch, pave, shotcret, shore, embank, landscap, mainten, seed, mulch, eros, traffic"
## $`2015`$C20243
## $\`2015\`$C20243[[1]]
## "this project involves scour repair at 5 individual sites involving 6 different structures. the type
##
## $\2015\$C20243[[2]]
## [1] "repair, remov, slope, ditch, pave, riprap, fenc, excav, embank, backfil, soil, concret, landscap, seed, mulch
##
## $`2015`$C20070
## $\2015\$C20070[[1]]
##
## "project no: fsa 0703-411 subacct: 20070 location: i-70 at eisenhower/johnson memorial tunnel approa
##
## $\2015\$C20070[[2]]
## [1] "tunnel,instal,perman,traffic,meter,portal,sign,signal,electr,conduit,wire,replac,construct"
##
## $`2015`$C19279
## $\2015\$C19279[[1]]
## "us 85 from factory shops blvd to us 85 founders parkway interchange jct i-25 north and south struct
##
## $\2015\$C19279[[2]]
## [1] "parkway,interchang,guardrail,remov,concret,pavement,curb,gutter,sidewalk,traffic,stripe,eros"
```

```
##
## $`2015`$C19140
## $\2015\$C19140[[1]]
## "on sh96, the project consists of shoulder widening, embankment, abc (cl 6), hma, structure repair,
##
## $\2015\$C19140[[2]]
## [1] "shoulder, widen, embank, repair, mill, topsoil, seed, mulch, stripe"
##
##
## $`2015`$C19397
## $\2015\$C19397[[1]]
## "sh 145 at county road p north of cortez. work to include widening sh 145 at the intersection of cou
## $\2015\$C19397[[2]]
## [1] "widen,intersect,culvert,replac,rumbl,strip,overlay,stripe"
##
## $`2015`$C19908
## $\2015\$C19908[[1]]
## "junction of sh 172 and sh 151 in the town of ignacio in la plata county. consists of the installati
## $\2015\$C19908[[2]]
## [1] "junction,instal,traffic,signal,concret,pavement,sidewalk,curb,ramp,stripe"
## $`2015`$C18928
## $\2015\$C18928[[1]]
## "the cribwall replacement project has three separate work zones and will be located within the cdot
##
## $\2015\$C18928[[2]]
## [1] "cribwal, replac, milepost, motorist, safeti, construct, minor, widen, guardrail, soil, nail, wall, cross, cu
##
## $\^2015\^$C19652
## $\2015\$C19652[[1]]
##
## "i-25 north of trinidad between ludlow and aguilar 2.5\" mill and fill of roadway with minor bridge
##
## $\2015\$C19652[[2]]
## [1] "minor, bridg, deck, repair, guardrail, replac"
##
## $`2015`$C20319
## $\2015\$C20319[[1]]
## "trinidad - raton pass rockfall mitigation on i-25 south of trinidad on raton pass (approx. mp 4.5-5
##
## $\2015\$C20319[[2]]
## [1] "rockfal, mainten"
##
```

```
##
## $`2015`$C18763
## $\2015\$C18763[[1]]
## "cdot proj.#: im 0703-381 cdot pcn: 18763 location: ejmt roof repair, interstate 70 - mp 213 to mp 2
##
## $\2015\$C18763[[2]]
## [1] "roof, repair, interst, remov, concret, slab, ventil, bridg, drain, waterproof, membran, compress, sealer"
##
##
## $`2015`$C19029
## $\2015\$C19029[[1]]
## "concrete overlay and reconstruction on i-70 between mp 411.4 and 418.3, with the option to continue
## $\2015\$C19029[[2]]
## [1] "concret, overlay, reconstruct, minor, bridg, rehabilit"
##
## $\^2015\^$C19228
## $\2015\$C19228[[1]]
## "this project is an 3\" hma overlay with fdr of shoulders from mm 101.8 to mm 115 in the eb lanes an
## $\2015\$C19228[[2]]
## [1] "overlay, shoulder, bridg, improv, rail, pave, guardrail, replac, stripe, delin"
## $`2015`$C20236
## $\2015\$C20236[[1]]
## "i-70 mountain corridor: fiber optic backbone replacement, ethernet upgrade and its equipment. a man
##
## $\2015\$C20236[[2]]
## [1] "mountain, fiber, replac, ethernet, upgrad, circl"
##
## $`2015`$C20281
## $\2015\$C20281[[1]]
##
## "statewide vms controller upgrade a mandatory pre-bid conference will be held on monday, march 30, 2
## $\2015\$C20281[[2]]
## [1] "upgrad,circl"
##
##
## $`2015`$C20283
## $\2015\$C20283[[1]]
## "this project will consist of replacing several variable message signs throughout cdot's region 3 an
##
## $\2015\$C20283[[2]]
## [1] "replac, sign, guardrail, remov, instal, underground, conduit, drill, caisson, erect, power, circl"
##
```

```
##
## $`2015`$C20560
## $\2015\$C20560[[1]]
## "this project will consist of replacing several variable message signs throughout cdot's region 1 an
##
## $\2015\$C20560[[2]]
## [1] "replac, sign, remov, underground, conduit, drill, caisson, erect, power, circl"
##
##
## $`2015`$C21163
## $\2015\$C21163[[1]]
## "project no. mtce 0251-349 (21163) is a region 2 traffic project located in huerfano, pueblo, and ot
##
## $\2015\$C21163[[2]]
## [1] "traffic,remov,instal,highway,sign,interst"
##
## $\2015\$C20576
## $\2015\$C20576[[1]]
## "project mp r200-614 (20576r) is a region 2 traffic and safety project located in el paso and pueblo
## $\2015\$C20576[[2]]
## [1] "traffic, safeti, upgrad, ethernet, instal, fiber, cabl, conduit, hardwar, signal"
## $`2015`$C21139
## $\2015\$C21139[[1]]
## "r2 regionwide variable message sign project will be to furnish and construct full operational varia
## $\2015\$C21139[[2]]
## [1] "sign,furnish"
##
##
## $\2015\$C20373
## $\2015\$C20373[[1]]
##
## "i 25 from walsenburg to pueblo: project no. mp 0251-347 (20373) is a region 2 traffic project locat
##
## $\2015\$C20373[[2]]
## [1] "traffic,remov,instal,sign,interst,highway"
##
## $`2015`$C20568
## $\2015\$C20568[[1]]
## "this project is located all on interstate 70 both eastbound and westbound from mile marker 60.0 to
##
## $\2015\$C20568[[2]]
## [1] "interst, marker, plastic, pavement, mark, inlaid, centerlin"
##
```

```
##
## $`2015`$C20072
## $\2015\$C20072[[1]]
## "mtce 184a-004 20072 mtce r5 fy15 sh184 overlay sh 184 mp 3.51 to mp 8.14 the project includes the f
##
## $\2015\$C20072[[2]]
## [1] "overlay, asphalt, patch, epoxi, pavement, mark, construct, traffic"
##
##
## $`2015`$C20218
## $\2015\$C20218[[1]]
                                                                                     Contract Description
## "regionwide striping work includes: modified epoxy, preform plastic tape, preformed thermo plastic"
##
## $\2015\$C20218[[2]]
## [1] "stripe, epoxi, plastic, tape, thermo"
##
##
## $`2015`$C20698
## $\2015\$C20698[[1]]
## "project no.: mtce r100-236 subacct.: 20698 location: i-70 between lowell blvd and pecos st descript
## $\2015\$C20698[[2]]
## [1] "remov, sign, bridg, instal, monotub, cantilev, drill, caisson, traffic, eros"
##
## $`2015`$C20109
## $\2015\$C20109[[1]]
## "this project will consist of refreshing existing crosswalks, stop bars, word and symbol pavement ma
##
## $\`2015\`$C20109[[2]]
## [1] "crosswalk,bar,pavement,mark,inlaid,thermoplast,mill,surfac,mil,highway"
##
## $`2015`$C20569
## $\2015\$C20569[[1]]
##
## "region 3 roundabouts work shall consist of the removal, supply and application of epoxy pavement ma
##
## $`2015`$C20569[[2]]
## [1] "roundabout,remov,epoxi,pavement,mark,thermoplast,crosswalk,tabul,highway,ramp,ground,recess"
##
## $`2015`$C20935
## $\2015\$C20935[[1]]
## "regionwide project of pavement marking removal and epoxy pavement marking including sections of 6i,
##
## $\2015\$C20935[[2]]
## [1] "pavement, mark, remov, epoxi"
```

```
##
## $`2015`$C20937
## $\2015\$C20937[[1]]
## "removal of existing pavement markings and placement of new preformed thermoplastic pavement marking
##
## $\2015\$C20937[[2]]
## [1] "remov, pavement, mark, thermoplast"
##
##
## $`2015`$C20567
## $\2015\$C20567[[1]]
                                                                    Contract Description
## "striping various highways in region 5 using both epoxy and high build water paint"
##
## $\2015\$C20567[[2]]
## [1] "stripe,highway,epoxi,water,pain"
##
##
## $`2015`$C20883
## $\2015\$C20883[[1]]
## "new and some replacement guardrail (all 31-inch) on various hywys in region 5 - sh 62, 550, and us
## $\2015\$C20883[[2]]
## [1] "replac, guardrail"
##
## $`2015`$C20905
## $\2015\$C20905[[1]]
## "replacement of signs throughout region 5, on sh's 17, 491, 160, 50, 24, 285, 114, and 145. an pedes
##
## $\2015\$C20905[[2]]
## [1] "replac, sign, pedestrian, crosswalk, led"
##
## $`2015`$C19108
## $\2015\$C19108[[1]]
##
## "located in chaffee county on us 24 between mp 217.0 and mp 223.0, this project consists of the addi
##
## $\2015\$C19108[[2]]
## [1] "climb, safeti, traffic, widen, realign, drainag, improv, pave, stripe, rock, excav"
##
## $`2015`$C19962
## $\2015\$C19962[[1]]
## "us 34: i-25 to cdot west yard this project proposes the continuation of fiber optic cable backbone
##
## $\2015\$C19962[[2]]
## [1] "yard, fiber, cabl, instal, cctv, sign"
##
```

```
##
## $`2015`$C19282
## $\2015\$C19282[[1]]
## "project nh 0502-069: located on us 50 in gunnison county beginning at mp 166.9 and extending east a
##
## $\2015\$C19282[[2]]
## [1] "resurfac, recycl, asphalt, overlay, bridg, deck, rehabilit, rail, epoxi, pavement, mark, rumbl, strip, const
##
##
## $`2015`$C20172
## $\2015\$C20172[[1]]
## "us 85, i-25 to b street, el paso colorado project includes a 4 1/2 inch rotomill and 4 1/2 inch hma
##
## $\2015\$C20172[[2]]
## [1] "street,rotomil,overlay,curb,ramp,bridg,deck,repair,guardrail,rail,signal,stripe"
##
## $`2015`$C19498
## $\2015\$C19498[[1]]
## "sh-128: eldorado to sh-121 resurfacing consists of rotomilling existing pavement, removing geotexti
## $\2015\$C19498[[2]]
## [1] "resurfac, rotomil, pavement, remov, geotextil, asphalt, replac, repav, truncat, curb, ramp, guardrail, stri
## $`2015`$C20099
## $\2015\$C20099[[1]]
## "us 287 resurfacing harmony to mulberry, hot mix asphalt paving, milling, traffic control, concrete
##
## $\2015\$C20099[[2]]
## [1] "resurfac, mulberri, asphalt, pave, mill, traffic, concret, curb, gutter, repair"
##
## $`2015`$C19629
## $\2015\$C19629[[1]]
##
## "located in gunnison and chaffee county on us 50 between mp 198.96 and 210. this project consists of
##
## $\2015\$C19629[[2]]
## [1] "surfac, vehicl, bridg, deck, mainten, drainag, improv, level, overlay, safeti, traffic, waterproof, upgrad,
##
## $`2015`$C20674
## $\2015\$C20674[[1]]
## "this project will involve the removal and installation of new pavement markings on us 50, from m.p.
##
## $\2015\$C20674[[2]]
## [1] "remov, instal, pavement, mark, methyl, methacryl, waterborn, pain"
```

```
##
## $`2015`$C20332
## $\2015\$C20332[[1]]
## "project number nhpp 062a-018 located on sh 62 from mp 5.000 to mp 18.000 (13 miles) consisting of a
##
## $\2015\$C20332[[2]]
## [1] "lift,chip,seal,cover,coat,emuls,temporari,stripe,epoxi"
##
##
## $`2015`$C19674
## $\2015\$C19674[[1]]
## "this project is located on i-70 in mesa county beginning at m.p. 58.00 then proceeding east to m.p.
## $\2015\$C19674[[2]]
## [1] "excav, culvert, miscellan, fenc, asphalt, inlet, stripe, street, junction"
##
## $`2015`$C19911
## $\2015\$C19911[[1]]
## "nhpp 0701-223 exit 31 horizon drive roundabouts construct modern style roundabouts at the east and
## $\2015\$C19911[[2]]
## [1] "drive, roundabout, ramp, intersect, interst, upgrad, excav, base, asphalt, concret, pavement, drainag, pipe
## $`2015`$C20085
## $\2015\$C20085[[1]]
## "this project is located on i-70 in mesa county beginning at m.p. 49.4 then proceeding east to m.p.
##
## $\2015\$C20085[[2]]
## [1] "bridg, rail, delin, guardrail, temperatur, sensor, stripe"
##
## $\2015\$C19471
## $\2015\$C19471[[1]]
##
## "work consists of installing cured-in-place pipe linings, outlet and inlet revetment maintenance, an
##
## $\2015\$C19471[[2]]
## [1] "pipe,outlet,inlet,mainten,culvert,replac,trench,jack,eros,traffic"
##
## $`2015`$C20264
## $\2015\$C20264[[1]]
## "the project is located between mile markers 142.50 and 178.00 on i-70 in eagle county. the work wil
##
## $\2015\$C20264[[2]]
## [1] "bridg,deck,pavement,remov,instal,waterproof,membran,replac,stripe,traffic"
##
```

```
##
## $`2015`$C19941
## $\2015\$C19941[[1]]
## "the project is located on i-70 in clear creek county. it begins at m.p. 213.65 and extends approxim
##
## $\2015\$C19941[[2]]
## [1] "remov, pavement, overlay, repair, bridg"
##
##
## $`2015`$C20089
## $\2015\$C20089[[1]]
## "the project will widen the east bound i-70 on-ramp from grapevine road to create an additional lane
## $\2015\$C20089[[2]]
## [1] "widen, ramp"
##
##
## $`2015`$C20368
## $\2015\$C20368[[1]]
## "lining of existing culvert conveying hamilton gulch under i-70 at mile marker 211.68 in summit coun
## $\2015\$C20368[[2]]
## [1] "culvert,gulch,marker,summit,mountain,portal,tunnel"
## $`2015`$C19958
## $\2015\$C19958[[1]]
## "widening & retaining wall for eastbound offramp from i-76 to 88th & 88th & brighton rd.; 3 signal r
##
## $\2015\$C19958[[2]]
## [1] "widen, retain, wall, offramp, signal, replac, interchang"
##
## $`2015`$C19632
## $\2015\$C19632[[1]]
##
## "us 160 mancos hill to hesperus resufacing project. work to include, 1\" hma st leveling with a 1 1/
##
## $`2015`$C19632[[2]]
## [1] "resurfac, level, overlay, crown, correct, guardrail, remov, replac, culvert, inlet, clean, snow, fenc, insta
##
## $`2015`$C19710
## $\2015\$C19710[[1]]
## "project nhpp 1602-143. located on us highway 160 beginning near bayfield at mp 102.84 and extending
##
## $\2015\$C19710[[2]]
## [1] "highway, resurfac, level, overlay, guardrail, replac, shoulder, stripe, rumbl, strip, mill, patch"
```

```
##
## $`2015`$C20154
## $\2015\$C20154[[1]]
                                                                                Contract Description
## "surface treatment project on us160 from mm 186.3 to 201.5 involving a chip seal and restripe."
##
## $`2015`$C20154[[2]]
## [1] "surfac,chip,seal,restrip"
##
##
## $`2015`$C20431
## $\2015\$C20431[[1]]
## "this project is located on us highway 160 in alamosa and costilla counties. the project begins at a
## $\2015\$C20431[[2]]
## [1] "highway, milepost, intersect, chip, seal, coat, stripe, chipseal"
##
## $`2015`$C19860
## $\2015\$C19860[[1]]
## "u.s. 550 type - rock scaling, rock excavation, rock reinforcement, mesh anchors, draped mesh and ca
## $\2015\$C19860[[2]]
## [1] "rock, excav, reinforc, cabl, overlay, patch, stripe, marker"
## $`2015`$C20650
## $\2015\$C20650[[1]]
## "us 550 mp 47.5 to 49.0 remove and install pavement markings. install six luminaires with foundation
##
## $\2015\$C20650[[2]]
## [1] "remov,instal,pavement,mark,luminari,conduit"
##
## $\2015\$C20515
## $\2015\$C20515[[1]]
##
## "tub girder clean out on 5 region 1 bridges. locations are i-76 at i-70, sh 121, and i-70 at us 6. i
##
## $`2015`$C20515[[2]]
## [1] "girder,clean,bridg,debri,traffic,eros,mountain,circl"
##
## $`2015`$C20248
## $\2015\$C20248[[1]]
## "sh 030a west of i-225 replace structure f-17-gp, install new pedestrian curb ramps, and install new
##
## $\2015\$C20248[[2]]
## [1] "replac,instal,pedestrian,curb,ramp,sidewalk,street"
##
```

```
##
## $`2015`$C19490
## $\2015\$C19490[[1]]
## "extend eastbound i-70 chain-up station at mm 178.4, approximately 1,500 ft to the west. work includ
##
## $`2015`$C19490[[2]]
## [1] "widen,instal,wall,drainag,improv,replac,fiber,cabl,circuit"
##
##
## $`2015`$C19909
## $\2015\$C19909[[1]]
## "us 550 north of ouray. replacement of existing cmp with concrete box culvert. minor signing, painti
## $\2015\$C19909[[2]]
## [1] "replac,concret,culvert,minor,paint,pedestrian"
##
## $\`2015\`$C19500
## $\2015\$C19500[[1]]
## "acceleration and deceleration lanes on sh-21 s. carefree circle to stetson hills blvd. outside wide
## $\2015\$C19500[[2]]
## [1] "deceler,circl,widen,curb"
##
## $`2015`$C19884
## $\2015\$C19884[[1]]
## "project installs turning lanes on us50b as follows: at 32nd lane, add an eb left turn deceleration
##
## $\2015\$C19884[[2]]
## [1] "deceler, realign, storag"
##
## $\2015\$C20552
## $\2015\$C20552[[1]]
##
## "i-70: c-470 to 32nd avenue the project consists of installing cable rail barrier in the median, reg
##
## $\2015\$C20552[[2]]
## [1] "cabl,rail,barrier,pave,emerg,replac,delin,anchorag,guardrail"
##
## $`2015`$C19762
## $\2015\$C19762[[1]]
                                                        Contract Description
## "sh 151 widening to provide a center left turn lane for cr 521 and 321."
## $\2015\$C19762[[2]]
## [1] "widen"
##
```

```
##
## $`2015`$C20430
## $\2015\$C20430[[1]]
## "us 160 w.wildlife crossing at dry creek mm 97.05 to mm 98.05. project includes wildlife crossing un
##
## $\2015\$C20430[[2]]
## [1] "dri,retain,wall,wingwal,excav,embank,pave,deer,fenc,temporari,perman,stripe"
##
##
## $`2015`$C19680
## $\2015\$C19680[[1]]
## "she 165a-012 is a federal-aid safety project in pueblo county along hwy 165 between rye and i-25. to
##
## $\2015\$C19680[[2]]
## [1] "safeti,asphalt,construct,stripe,rumbl,strip,instal"
##
## $\2015\$C19740
## $\2015\$C19740[[1]]
                                        Contract Description
## "sh 172, mp 21.5 to 22.5, highway widening and overlay."
## $\2015\$C19740[[2]]
## [1] "highway, widen, overlay"
##
## $`2015`$C17268
## $\2015\$C17268[[1]]
## "this project involves the following operations: removal of sidewalk, removal of curb ramp, removal
##
## $\2015\$C17268[[2]]
## [1] "remov, sidewalk, curb, ramp, asphalt, concret, gutter, patch, pipe, instal, fenc, eros, seed, mulch, traffic"
##
## $`2015`$C17798
## $\2015\$C17798[[1]]
##
## "project sta 006a-045 sh 6, mp 257.05 to mp 260.05 construction will consist of resurfacing, hbp, gu
##
## $\2015\$C17798[[2]]
## [1] "construct,resurfac,guardrail,clean,culvert,concret,sealer,rumbl,strip"
##
## $`2015`$C20219
## $\2015\$C20219[[1]]
## "this is a resurfacing project on state highway 13 in rio blanco and moffat counties. there are two
##
## $\2015\$C20219[[2]]
## [1] "resurfac, highway, milepost, overlay, repair, guardrail, replac"
```

```
##
## $`2015`$C19470
## $\2015\$C19470[[1]]
## "located on sh 13 in moffat county at about mp 85.8. the work includes repair of bridge c-06-d over
##
## $\2015\$C19470[[2]]
## [1] "repair, bridg, river, replac, rail, instal, reconstruct"
##
##
## $`2015`$C20548
## $\2015\$C20548[[1]]
## "this is a surface rehabilitation project located on highway 13 north of the city of craig from mile
##
## $\2015\$C20548[[2]]
## [1] "surfac, rehabilit, highway, milepost, reclam, asphalt, concret, shoulder, remov, replac, guardrail, stripe
##
## $\^2015\^$C20225
## $\2015\$C20225[[1]]
## "on sh 16 and sh 21 in el paso county, resurfacing including rotomilling, unclassified excavation, en
## $\2015\$C20225[[2]]
## [1] "resurfac, rotomil, excav, embank, geogrid, reclam, pavement, base, traffic, signal, eros, epoxi, mark, inlai
## $`2015`$C20310
## $\2015\$C20310[[1]]
## "sh 23 holyoke to the state line this project consists of hot mix asphalt, full-depth reclamation, a
##
## $\2015\$C20310[[2]]
## [1] "asphalt, reclam, geotextil, transvers, crack, repair"
##
## $`2015`$C19959
## $\2015\$C19959[[1]]
##
## "us 34a mp 107.6 to 112.6 the project will implement a traffic adaptive signal timing control system
##
## $\2015\$C19959[[2]]
## [1] "traffic, signal, intersect"
##
## $`2015`$C20700
## $\2015\$C20700[[1]]
## "on us 34 at yuma county roads h & j, mp 225 to 226.8, intersection improvements including compaction
##
## $\2015\$C20700[[2]]
## [1] "road, intersect, improv, asphalt, pave, stripe, seed"
##
```

```
##
## $`2015`$C19904
## $\2015\$C19904[[1]]
## "us 36: cabin creek mp 118.4 to mp 120.0 work to include removal of asphalt mat (planing), erosion c
##
## $`2015`$C19904[[2]]
## [1] "cabin,remov,asphalt,eros,seed,stripe"
##
##
## $`2015`$C19653
## $\2015\$C19653[[1]]
## "project is located on sh 45 between mp 0 - 5.385. work will include milling, asphalt overlay, ada r
##
## $\2015\$C19653[[2]]
## [1] "mill,asphalt,overlay,ramp,traffic,stripe"
##
## $`2015`$C19654
## $\2015\$C19654[[1]]
## "sh 47 from dillion dr to pccp section (concrete to concrete), mp 0. 095-3.085 2.5\" mill and fill s
## $\2015\$C19654[[2]]
## [1] "concret, safeti, improv, curb, ramp, pedestrian, minor, bridg"
## $`2015`$C19724
## $\2015\$C19724[[1]]
                                     Contract Description
## "resurfacing of sh 56 from east of berthoud to i-25."
## $\2015\$C19724[[2]]
## [1] "resurfac"
##
## $`2015`$C19456
## $\2015\$C19456[[1]]
##
## "sh 58 resurfacing from us6/sh93 to i-70, 1\" hma 2\" sma. work includes guardrail replacements, min
##
## $\2015\$C19456[[2]]
## [1] "resurfac, guardrail, replac, minor, ramp, widen, bridg, signal"
##
## $`2015`$C19094
## $\2015\$C19094[[1]]
## "this project is located on interstate 70, north frontage road, and south frontage road in vail, col
##
## $\2015\$C19094[[2]]
## [1] "interst, realign, road, construct, bridg, roundabout, pavement, retain, wall, guardrail, traffic"
```

```
##
## $`2015`$C21094
## $\2015\$C21094[[1]]
## "vail i-70 mp 174.5-175.5 cm/gc project this project is located on interstate 70 in vail, colorado.
##
## $\2015\$C21094\[2]]
## [1] "interst"
##
##
## $`2015`$C20510
## $\2015\$C20510[[1]]
## "i-70 west overlay: mm 218 to ejmt resurfacing using sma, guardrail remove and replacement & guardra
##
## $\2015\$C20510[[2]]
## [1] "overlay,resurfac,guardrail,remov,replac,street"
##
## $\^2015\^$C17018
## $\2015\$C17018[[1]]
## "sta 0853-070 sa# 17018 sh85 ault to wyoming located on sh85 for 29.242 miles starting at mp 280.300
## $\2015\$C17018[[2]]
## [1] "embank, reclam, mill, culvert, rehabilit, seed, mulch, eros, fenc, stripe, rumbl, strip, gate"
## $`2015`$C19015
## $\2015\$C19015[[1]]
## "sh 94 ellicott east to el paso/lincoln cl 2\" mill and fill resurfacing from mm 17.200 to mm 35.010
##
## $\`2015\`$C19015[[2]]
## [1] "resurfac, bridg, deck, rehabilit, rail, replac"
##
## $\2015\$C19255
## $\2015\$C19255[[1]]
##
## "us 160, mp 405 to mp 423 this project will be a 1 1/2\" overlay with additional full depth patching
##
## $\2015\$C19255[[2]]
## [1] "overlay,patch,bridg,replac"
##
## $`2015`$C19772
## $\2015\$C19772[[1]]
## "sta 340a-017 this project is located on sh340 south of the town of fruita in mesa county beginning
##
## $\2015\$C19772[[2]]
## [1] "shoulder, widen, intersect"
##
```

```
##
## $`2015`$C19549
## $\2015\$C19549[[1]]
## "sh 391 (kipling st.): jewell to 6th ave. 2 inch mill and fill from 6th to jewell. median improvemen
##
## $\2015\$C19549[[2]]
## [1] "improv, signal, replac, minor, widen, guardrail"
##
##
## $`2015`$C19163
## $\2015\$C19163[[1]]
## "sta 3921-013 sa# 19163 sh 392 windsor to lucerne this is a resurfacing and bridge rehabilitation pr
##
## $\2015\$C19163[[2]]
## [1] "resurfac, bridg, rehabilit, reclam, asphalt, pavement, excav, remov, base, rail, guardrail, stripe, sign, se
##
## $\2015\$C20304
## $\2015\$C20304[[1]]
## "the work will include chip seals on sh 125 from mp 66.6 to 75.4, sh 127 from mp 0.0 to 9.2, sh 134
## $\2015\$C20304[[2]]
## [1] "chip, seal, bridg, rail, guardrail, improv, resurfac, cover, coat"
## $\2015\$C20562
## $\2015\$C20562[[1]]
## "project sta r300-218 located on sh349, mp 0.59 to mp 17.02, sh90 mp 81.53 to mp 88.97, us50 frontag
##
## $\2015\$C20562[[2]]
## [1] "road, patch, chip, seal, resurfac, traffic, pavement, mark"
##
## $`2015`$C20305
## $\2015\$C20305[[1]]
##
## "remove hma, class 2 & 3 deck repairs, install waterproofing membrane, replace expansion devises, pl
##
## $\2015\$C20305[[2]]
## [1] "remov,deck,repair,instal,waterproof,membran,replac,restrip"
##
## $`2015`$C20460
## $\2015\$C20460[[1]]
## "project consists of improvements at four cdot park and ride locations along i-25 in el paso and lar
##
## $\2015\$C20460[[2]]
## [1] "improv, excav, reinforc, concret, conduit, wire, resurfac, park, reloc, stripe"
##
```

```
##
## $`2015`$C20124
## $\2015\$C20124[[1]]
## "project is located on sh 12 near cucharas between mile posts 9.17 and 9.30. the project will remove
##
## $\2015\$C20124\[2]]
## [1] "post,remov,replac,culvert,mill,pave,instal,traffic,guardrail,stripe"
##
##
## $`2015`$C19657
## $\2015\$C19657[[1]]
## "project has 5 sites around region 2. work will include removal and replacement of concrete pavement
##
## $\2015\$C19657[[2]]
## [1] "remov, replac, concret, pavement, cross, instal, curb, ramp, truncat, pedestrian, gutter, polyurethan, slab
##
## $`2015`$C20487
## $\2015\$C20487[[1]]
## "the project is located on sh 71 between mile post 18.9 and 27.0. project is an 8\" full depth recla
## $\2015\$C20487[[2]]
## [1] "reclam, overlay, sign, replac, temporari, perman, stripe, bridg, rail, guardrail, instal, waterproof, membr
## $`2015`$C20380
## $\2015\$C20380[[1]]
## "located on sh 141 at mp 41.51, mp 43.49, mp 44.89, and mp 54.91 in san miguel and montrose counties
##
## $\2015\$C20380[[2]]
## [1] "culvert,concret,headwal,wingwal,pipe,remov,excav,riprap,wetland,seed,plug,brush,mulch"
##
## $`2015`$C20122
## $\2015\$C20122[[1]]
##
## "project has 4 locations east of pueblo. work will include lining culverts that vary in size from 36
##
## $\2015\$C20122[[2]]
## [1] "culvert,eros,traffic,clean,fenc"
##
## $`2015`$C20687
## $\2015\$C20687[[1]]
## "remove hma, class 2 & 3 deck repairs, install waterproofing membrane, replace expansion devises, pl
##
## $\2015\$C20687[[2]]
## [1] "remov,deck,repair,instal,waterproof,membran,replac,restrip"
```

```
##
## $`2015`$C18807
## $\2015\$C18807[[1]]
## "this project is located on the north side of i-70 between milepost 251.4 to milepost 253.8 in jeffe
##
## $\2015\$C18807[[2]]
## [1] "milepost,concret,bike,pedestrian,bridg,fiber,minor,drainag,improv,perman,pavement,mark,eros,tra
##
##
##
## $`2016`
## $`2016`$C19497
## $\2016\$C19497[[1]]
## "project br 0704-233 i-70: bridge rehabilitation and scour mitigation at 2 locations west of deer tr
##
## $\2016\$C19497[[2]]
## [1] "bridg, rehabilit, deer, trail, pier, repair, deck, remov, replac, eros, rock, riprap, seed"
##
## $`2016`$C17778
## $\2016\$C17778[[1]]
## "deer fence will be installed and existing deer fence repaired in eagle county on i-70 from approxim
## $\2016\$C17778[[2]]
## [1] "deer,fenc,repair,gypsum,ramp,instal,traffic"
##
##
## $`2016`$C19791
## $\2016\$C19791[[1]]
## "project no. c r500-154 sub-account 19791 project name us 160 mm 136.61 culvert replacement type cul
## $\2016\$C19791[[2]]
## [1] "culvert, replac"
##
##
## $\2016\$C20255
## $\2016\$C20255[[1]]
## "us 6 sterling work includes removal of asphalt mat, base course placement, concrete pavement, curb,
##
## $\`2016\`$C20255[[2]]
## [1] "sterl,remov,asphalt,base,concret,pavement,curb,gutter,sidewalk,bridg,deck,repair,waterproof,mem
##
##
## $`2016`$C20229
## $\2016\$C20229[[1]]
## "sh-7 from estes park to jct sh-72 mandatory pre-bid meeting will be held: 3/8/2016, 1 pm to 3 pm bi
##
## $\2016\$C20229[[2]]
```

```
## [1] "street, overlay, culvert, replac, pipe, jack, ditch, rock"
##
##
## $`2016`$C21443
## $\2016\$C21443[[1]]
##
## "pr sh 52 storm drain repair this project is a storm drain repair project along sh-52 between mp 87.
##
## $\2016\$C21443[[2]]
## [1] "drain,repair,pipe,replac,shore,pavement,manhol,seed,mulch,excav,water"
## $`2016`$C20246
## $\2016\$C20246[[1]]
## "sh66b 46.47 to 47.15 final overlay of 0.38 miles of sh 66 damaged during the flood, along with road
##
## $\`2016\`$C20246[[2]]
## [1] "overlay,flood,ditch,improv,culvert,replac,rip,rap,river,bank,wetland,plant"
##
## $\^2016\^$C20261
## $\`2016\`$C20261[[1]]
                                                                                       Contract Description
## "on sh72b, mp 32.6-54.064, permanent flood repair resurfacing with some earth work in boulder county
## $\2016\$C20261[[2]]
## [1] "perman,flood,repair,resurfac,earth,boulder"
##
##
## $`2016`$C20817
## $\2016\$C20817[[1]]
## "sh 90 mm 15.216 near bedrock colorado. this project consists of the removal and replacement of the
## $`2016`$C20817[[2]]
## [1] "bedrock, remov, replac, bridg, align"
##
##
## $`2016`$C20815
## $\2016\$C20815[[1]]
## "the project is located on us 40 in the town of empire. work includes construction of median island
##
## $\`2016\`$C20815[[2]]
## [1] "construct, island, traffic"
##
##
## $`2016`$C21310
## $\2016\$C21310[[1]]
## "i-70 eastbound over garrison street. bridge e-16-gu widening, partial sound wall reconstruction, re
## $\2016\$C21310[[2]]
```

```
## [1] "street, bridg, widen, wall, reconstruct, remov, guardrail, shoulder, pavement, drainag, inlet, reloc, sign,
##
##
## $`2016`$C19085
## $\2016\$C19085[[1]]
##
## "on i-76 between us-85 and 96th ave exits: safety project to correct geometry and superelevation and
## $\2016\$C19085[[2]]
## [1] "safeti,correct,superelev,resurfac,replac,concret,pavement,embank,base,drainag,improv,fiber,relo
## $`2016`$C19185
## $\2016\$C19185[[1]]
## "bridge construction work for the northbound bridge over the greeley no. 2 canal, and deck repairs f
##
## $\`2016\`$C19185[[2]]
## [1] "bridg,construct,canal,deck,repair"
##
## $`2016`$C19026
## $\2016\$C19026[[1]]
## "project fsa 1601-066 located on us 160 near mp 48.601 consists of the application of structural con
## $\2016\$C19026[[2]]
## [1] "concret, traffic"
##
##
## $`2016`$C19682
## $\2016\$C19682[[1]]
## "traffic signal improvements: hwy 96a and grand, hwy 96a and court, hwy 96a and main in pueblo; hwy
## $\2016\$C19682[[2]]
## [1] "traffic, signal, improv"
##
##
## $`2016`$C20519
## $\2016\$C20519[[1]]
## "i-25 m.p. 32.5 to m.p. 39.0, from aguilar north. 2.5\" mill and fill on i-25, 2\" overlay on 25 bus
##
## $\`2016\`$C20519[[2]]
## [1] "overlay, minor, bridg, repair, rebuild"
##
##
## $`2016`$C19626
## $\2016\$C19626[[1]]
## "i-25: 120th avenue (sh 128) to sh 7 im 0253-234 (19626) widening commencing 4,000 ft south of 120th
##
## $\2016\$C19626[[2]]
```

```
## [1] "widen, overlay, asphalt, construct, wall, retain, concret, culvert, replac, bridg, barrier, stripe, drainag
##
##
## $`2016`$C20575
## $\2016\$C20575[[1]]
##
## "i-25 at crossroads. this is a northbound and southbound bridge replacement project on i-25 over cro
## $\2016\$C20575[[2]]
## [1] "crossroad, bridg, replac, milepost, wall, embank, temporari, asphalt, pavement, concret, perman, sidewalk,
## $`2016`$C20929
## $\2016\$C20929[[1]]
## "i 25 milepost 138.2 to 139.7. on i-25, 2.5\" mill and 2.5\" sma full width on the existing roadway
##
## $\2016\$C20929[[2]]
## [1] "milepost,surfac,deck,repair,resurfac,guardrail"
##
## $`2016`$C20963
## $\2016\$C20963[[1]]
## "i25 raton pass project consisits of blasting scaling and removal of overhanging rocks, eliminating
## $\2016\$C20963[[2]]
## [1] "blast,remov,overhang,rock,instal"
##
##
## $`2016`$C21267
## $\2016\$C21267[[1]]
## "this project will consist of a 1\" leveling course with a 2\" top mat covering the 24' driving lane
## $`2016`$C21267[[2]]
## [1] "level, drive, asphalt, shoulder, recycl, reclam, overlay, concret, patch, construct, temporari, pavement, m
##
##
## $`2016`$C21382
## $\2016\$C21382[[1]]
## "this project consists of installing a fiber optic backbone along the north side of i-76 from i-70 i
##
## $\`2016\`$C21382[[2]]
## [1] "fiber, caisson, pole, ethernet, manhol, conduit, trench, bridg, mount, circl"
##
##
## $`2016`$C20771
## $\2016\$C20771[[1]]
## "this project will consist of node building equipment ethernet upgrade, and reset, remove and/or ins
##
## $\\2016\\$C20771[[2]]
```

```
## [1] "ethernet,upgrad,remov,instal,metro,field,retrofit,conduit,trench,manhol,circl"
##
##
## $`2016`$C20774
## $\2016\$C20774[[1]]
##
## "installation of its node building and node building equipment in walsenburg. including the creation
## $\2016\$C20774[[2]]
## [1] "instal, street, field, retrofit, sign, circuit, televis, mount, conduit, trench, manhol, circl"
## $`2016`$C20775
## $\2016\$C20775[[1]]
## "this project will replace 13 its weather stations (rwis) in regions 1,3, and 4. towers and sensors
##
## $\2016\$C20775[[2]]
## [1] "replac, sensor, cellular, modem, remov, conduit, trench, meter, circl"
##
## $\2016\$C20776
## $\2016\$C20776[[1]]
## "this project will it will replace 3 variable message signs (vms), and retrofit/modify vms structure
## $\2016\$C20776[[2]]
## [1] "replac,sign,trench,conduit,rail,electr,circl"
##
##
## $\2016\$C20777
## $\2016\$C20777[[1]]
## "weigh-in-motion maintenance and upgrades at i-70 mp 13.6 (loma eb) and 234.8 (dumont wb). each site
## $\2016\$C20777[[2]]
## [1] "mainten,concret,remov,replac,instal"
##
##
## $`2016`$C21365
## $\2016\$C21365[[1]]
## "project no. mp 0251-350 (21365) is a region 2, i-25 guardrail and safety improvements project locat
##
## $\2016\$C21365[[2]]
## [1] "guardrail, safeti, improv, remov, instal, highway"
##
##
## $`2016`$C21387
## $\2016\$C21387[[1]]
## "this project is located on interstate 70 both eastbound and westbound from mile marker 130.0 to mil
## $\2016\$C21387[[2]]
```

```
## [1] "interst, marker, plastic, pavement, mark, inlaid, centerlin"
##
##
## $`2016`$C21179
## $\2016\$C21179[[1]]
##
## "project no.: mtce r100-260 subacct: 21179 location: us 285 between pine jct. and morrison in jeffer
##
## $\2016\$C21179[[2]]
## [1] "pine,instal,sign,furnish,traffic"
## $`2016`$C21178
## $\2016\$C21178[[1]]
## "project no. mtce r100-261 subacct. 21178 location: various locations in region 1 description: this
##
## $\`2016\`$C21178[[2]]
## [1] "replac, sign, panel, remov, walkway, portion, instal"
##
## $`2016`$C21495
## $`2016`$C21495[[1]]
## "this project consists of removing and applying preformed plastic pavement markings, modified epoxy
## $\2016\$C21495[[2]]
## [1] "remov,plastic,pavement,mark,epoxi,thermoplast"
##
##
## $`2016`$C21539
## $\2016\$C21539[[1]]
## "project no: mtce r100-273 subacct: 21539 location: various locations in region 1 / metro denver des
## $\^2016\^$C21539[[2]]
## [1] "metro,remov,sign,replac,panel,furnish,traffic"
##
##
## $`2016`$C21537
## $\2016\$C21537[[1]]
## "project no: mtce r100-275 subacct: 21537 location: various locations in region 1 - metro denver des
##
## $\`2016\`$C21537[[2]]
## [1] "metro,replac,sign,bridg,monotub,cantilev,traffic,eros"
##
##
## $`2016`$C21366
## $\2016\$C21366[[1]]
## "project mtce r200-230 (21366) is a region 2 traffic and safety project located in in various counti
##
## $\\2016\\$C21366[[2]]
```

```
## [1] "traffic, safeti, upgrad, fiber, ethernet, intersect, optic"
##
##
## $`2016`$C21133
## $\2016\$C21133[[1]]
##
## "this project will consist of removal and replacement of highway signs on u.s. highway (us) 24a from
##
## $\2016\$C21133[[2]]
## [1] "remov, replac, highway, sign"
## $`2016`$C21386
## $\2016\$C21386[[1]]
## "this project will consist of refreshing existing crosswalks, stop bars, word and symbol pavement ma
##
## $\2016\$C21386[[2]]
## [1] "crosswalk,bar,pavement,mark,inlaid,thermoplast,highway"
##
## $`2016`$C21414
## $\^2016\^$C21414[[1]]
## "region 3 roundabout striping work shall consist of the removal, supply and application of epoxy pav
## $\2016\$C21414[[2]]
## [1] "roundabout, stripe, remov, epoxi, pavement, mark, thermoplast, crosswalk, tabul, highway, ramp, ground, rec
##
##
## $`2016`$C20936
## $\2016\$C20936[[1]]
## "regionwide project with pavement marking removal and application of epoxy pavment marking on 52a, 7
## $\2016\$C20936[[2]]
## [1] "pavement, mark, remov, epoxi"
##
##
## $`2016`$C21206
## $\2016\$C21206[[1]]
## "all striping will be high build paint in this contract, and using a mobile traffic control set up,
##
## $\`2016\`$C21206[[2]]
## [1] "stripe, pain, traffic, highway, intersect"
##
##
## $`2016`$C18146
## $\2016\$C18146[[1]]
## "this project is located on sh 17 between mileposts 73.962 and 88.481 in alamosa and saguache counti
## $\2016\$C18146[[2]]
```

```
## [1] "milepost, heat, remix, shoulder, widen, overlay, earthwork, topsoil, traffic, stripe"
##
##
## $`2016`$C19411
## $\2016\$C19411[[1]]
##
## "sh62 and town of ridgway the proposed ramp project has two major components: the reconstruction of
## $\2016\$C19411[[2]]
## [1] "ramp, reconstruct, highway"
## $`2016`$C20655
## $\2016\$C20655[[1]]
## "us 85 resurfacing mp 240-246 southbound this project entails the resurfacing of the southbound port
##
## $\`2016\`$C20655[[2]]
## [1] "resurfac,portion,surfac,overlay,remov,pot"
##
## $\2016\$C20501
## $\^2016\^$C20501[[1]]
## "project number nhpp 145a-064 located in dolores county beginning at mp 47.45 on sh 145 near the nor
## $\2016\$C20501[[2]]
## [1] "asphalt,level,overlay,culvert,guardrail,replac,bridg,rehabilit,stripe"
##
##
## $`2016`$C20363
## $\2016\$C20363[[1]]
## "sh 17 conejos county, str p-11-a over the conejos river this project is located on sh 17 in conejos
## $\2016\$C20363[[2]]
## [1] "river, milepost, bridg, realign, pier, abut, armor, bank, guardrail"
##
##
## $`2016`$C19643
## $\2016\$C19643[[1]]
## "this project is located on us 24 in the town of buena vista in chaffee county. it is located between
##
## $\2016\$C19643[[2]]
## [1] "milepost, remov, replac, sidewalk, curb, gutter, ramp, intersect, pedestrian, crosswalk, island, drainag, in
##
##
## $`2016`$C20405
## $\2016\$C20405[[1]]
## "us 24 str i-12-t bridge repairs and rehabilitation the work for this project consists of rehabilita
## $\\2016\\$C20405[[2]]
```

```
## [1] "bridg, repair, rehabilit, milepost, deck, remov, timber, instal, rail, patch"
##
##
## $`2016`$C20514
## $\2016\$C20514[[1]]
##
## "project nhpp 0501-065 us 50 orchard mesa resurfacing. this project is located on us 50 in mesa coun
##
## $\2016\$C20514[[2]]
## [1] "orchard, resurfac, overlay, drainag, correct, reconstruct, miscellan, curb, ramp, guardrail, safeti, strip
## $`2016`$C19495
## $\2016\$C19495[[1]]
## "this project is located in gunnison county on us 50 from mp 121.6 to mp 123.0. this project consist
##
## $\`2016\`$C19495[[2]]
## [1] "reconstruct, widen, earthwork, base, culvert, replac, eros, landslid, construct"
##
## $`2016`$C20133
## $\2016\$C20133[[1]]
## "located on us 50 in gunnison county beginning at mm 154.0 and extending east approximately 12.9 mil
## $\2016\$C20133[[2]]
## [1] "resurfac, bitumin, recycl, asphalt, overlay, epoxi, pavement, mark, bridg, remov, repair, deck, replac, inst
##
##
## $\2016\$C20902
## $\2016\$C20902[[1]]
## "this project is located on interstate 70 from mp 158.5 to 168, with work between mp 158.8 and 167 in
## $\^2016\^$C20902[[2]]
## [1] "interst, resurfac, construct, overlay, guardrail, rumbl, strip, stripe, bridg, repair, rail, culvert, traff
##
##
## $`2016`$C20323
## $\2016\$C20323[[1]]
## "eisenhower/johnson memorial tunnel (ejmt). this project will remove and replace the existing 2400v
##
## $\2016\$C20323[[2]]
## [1] "tunnel, remov, replac"
##
##
## $`2016`$C20783
## $\2016\$C20783[[1]]
## "wb i-70 to sb i-225 bridge repairs which includes expansion joint replacements, deck repairs, polye
##
## $\2016\$C20783[[2]]
```

```
## [1] "bridg, repair, replac, deck, polyest, concret, overlay, traffic"
##
##
## $`2016`$C21198
## $\2016\$C21198[[1]]
##
## "this is a wall repair project located along sh82 within pitkin county with project limits from mp 3
## $\2016\$C21198[[2]]
## [1] "wall, repair, minor, excav, anchor, ground, nail, shotcret, concret, stain, guardrail, traffic"
## $`2016`$C20170
## $\2016\$C20170[[1]]
## "sh 145 lizard head north chipseal located on sh 145 beginning at mp 59.406 (at north of lizard head
##
## $\^2016\^$C20170[[2]]
## [1] "chipseal, summit, roundabout, asphalt, concret, cover, coat, lift, emuls, chip, seal, temporari, stripe"
##
## $`2016`$C21059
## $\^2016\^$C21059[[1]]
## "project number nhpp 145a-071 located on sh 145 from mp 23.0 to mp 46.3 (23.3 miles) consisting of a
## $\2016\$C21059[[2]]
## [1] "lift,chip,seal,cover,coat,emuls,temporari,stripe"
##
##
## $`2016`$C20183
## $\2016\$C20183[[1]]
## "this project is located on us highway 160 between mileposts 165.87 and 174 in mineral county. the w
## $`2016`$C20183[[2]]
## [1] "highway,milepost,miner,level,overlay,shoulder,traffic,replac,guardrail,snow,roof,repair,minor,s
##
##
## $`2016`$C20061
## $\2016\$C20061[[1]]
                                                      Contract Description
## "us 160 in region 5 - cortez to alamosa, signal optimization project"
##
## $\2016\$C20061[[2]]
## [1] "signal"
##
##
## $`2016`$C19399
## $\2016\$C19399[[1]]
## "removal of 40,000 sy of asphalt pavement. placement of 38,000 sy of 8\" concrete pavement. replacem
##
## $\2016\$C19399[[2]]
```

```
## [1] "remov, asphalt, pavement, concret, replac, street, instal, electr, conduit, drainag, pipe, stripe"
##
##
## $`2016`$C20634
## $\2016\$C20634[[1]]
##
## "attendance at an onsite pre-bid conference will be required. the onsite pre-bid conference will be
## $\2016\$C20634[[2]]
## [1] "mainten"
##
## $`2016`$C20516
## $\2016\$C20516[[1]]
## "concrete & steel tub girder clean out on 6 region 1 bridges. locations are i-25 at i-270, w. 44th a
##
## $\`2016\`$C20516[[2]]
## [1] "concret, steel, girder, clean, bridg, debri, traffic, eros"
##
## $\^2016\^$C20681
## $\2016\$C20681[[1]]
## "region 1 wide - essential expansion joint repair on 10 bridges - some are only the gland replacemen
## $\2016\$C20681[[2]]
## [1] "repair,bridg,replac,traffic,cover"
##
##
## $`2016`$C20699
## $\2016\$C20699[[1]]
## "front range r1 the trenchless rehabilitation and repair of culverts throughout the region using pre
## $\2016\$C20699[[2]]
## [1] "rehabilit, repair, culvert"
##
##
## $`2016`$C20899
## $\2016\$C20899[[1]]
## "denver metro wall repair various locations work includes joint sealant, concrete patching, structur
##
## $\2016\$C20899[[2]]
## [1] "metro, wall, repair, sealant, concret, patch, stain, reinforc, steel, fenc, barrier, drainag, shotcret"
##
##
## $`2016`$C20591
## $\2016\$C20591[[1]]
## "project no: she 025a-029 subacct: 20591 location: i-25 in metro denver description: this project co
##
## $\2016\$C20591[[2]]
```

```
## [1] "metro, construct, ramp, meter, minor, widen"
##
##
## $`2016`$C20582
## $\2016\$C20582[[1]]
                                                                             Contract Description
##
## "i-70 vail pass mp 180-186 type 4 to type 7 barrier replacement and bridge rail replacement"
## $\2016\$C20582[[2]]
## [1] "barrier, replac, bridg, rail"
## $`2016`$C21300
## $\2016\$C21300[[1]]
\#\# "sh 96 m.p. 85.44-86.33, upgrade guardrail to mgs 31\" and extend one section, widen inside shoulder
##
## $\2016\$C21300[[2]]
## [1] "upgrad,guardrail,widen,shoulder,overlay,pavement,rumbl,strip,delin"
##
## $`2016`$C21462
## $`2016`$C21462[[1]]
## "this project will convert the intersection on 55th ave and sh 121 (wadsworth blvd) into a right-in
## $\2016\$C21462[[2]]
## [1] "intersect,remov,signal,construct,rais,island"
##
##
## $`2016`$C21496
## $\2016\$C21496[[1]]
## "project will install traffic signals at the intersections of powers & bradley and sb i-25 & sh 16.
## $\^2016\^$C21496[[2]]
## [1] "instal,traffic,signal,intersect,surfac,improv,reinforc,concret,pavement,curb,gutter"
##
##
## $`2016`$C20182
## $\2016\$C20182[[1]]
## "the project will upgrade signal controllers for identified corridors, in addition to fiber work to
##
## $`2016`$C20182[[2]]
## [1] "upgrad, signal, corridor, fiber"
##
##
## $`2016`$C20794
## $\2016\$C20794[[1]]
                                                                       Contract Description
## "replace traffic signals at sh 224 @ dahlia st, sh 287 @ lamar st, sh 287 @ 10th ave."
## $\\2016\\$C20794[[2]]
```

```
## [1] "replac, traffic, signal"
##
##
## $`2016`$C19930
## $\2016\$C19930[[1]]
##
## "the realignment of sh 9 in summit county between mp 92.9 & 94.35 south of the town of frisco. proje
## $\2016\$C19930[[2]]
## [1] "realign, summit, earthwork, construct, align, culvert, underpass, wall, bikepath, mountain, marker, portal
## $`2016`$C20559
## $\2016\$C20559[[1]]
## "reconstruction, widening, and snow fence project located on state highway 13 north of craig in moff
##
## $\`2016\`$C20559[[2]]
## [1] "reconstruct, widen, snow, fenc, highway, earthwork, surfac, culvert, replac, guardrail, shoulder, stripe, e
##
## $`2016`$C18266
## $\2016\$C18266[[1]]
## "us-24 this project consists of the replacement of the existing 14'x8.5' cross creek culvert structu
## $\2016\$C18266[[2]]
## [1] "replac,cross,culvert,concret,highway,improv,temporari,pave,pavement,widen,guardrail,bridg,rail,
##
##
## $\2016\$C19723
## $\2016\$C19723[[1]]
## "project sta 0243-084 located on state highway 24 beginning at mile post 356.7 and extending approximately appr
## $\2016\$C19723[[2]]
## [1] "highway, resurfac, overlay, stripe"
##
##
## $`2016`$C20857
## $\2016\$C20857[[1]]
## "us 24 stratton project sta 0243-088 located on us24 beginning at m.p. 423.5 and extending approxima
##
## $\2016\$C20857[[2]]
## [1] "resurfac, overlay, stripe"
##
##
## $`2016`$C20318
## $\2016\$C20318[[1]]
## "project no.: sta 030a-033 sub-account: 20318 project name: 6th avenue (sh 30) overlay (potomac to a
##
## $\2016\$C20318[[2]]
```

```
## [1] "overlay,airport,asphalt,street,curb,gutter,sidewalk,ramp,replac,bridg,deck,rehabilit,canal,stri
##
##
## $`2016`$C20580
## $\2016\$C20580[[1]]
                                                          Contract Description
##
## "us 36 yuma county chip seal with pavement marking removal and striping."
## $\2016\$C20580[[2]]
## [1] "chip, seal, pavement, mark, remov, stripe"
## $`2016`$C19906
## $\2016\$C19906[[1]]
## "roundabout installation at the intersection of dozier ave & fremont dr, traffic signal installation
##
## $\`2016\`$C19906[[2]]
## [1] "roundabout, instal, intersect, dozier, traffic, signal, remov, island"
##
## $\2016\$C20345
## $\2016\$C20345[[1]]
## "addition of a accel/decel lane to us 50 from wills blvd to bnsf railroad westbound. work shall incl
## $\2016\$C20345[[2]]
## [1] "railroad, pave, curb, instal, soil"
##
##
## $`2016`$C20850
## $\2016\$C20850[[1]]
## "i-70 us 6 to georgetown resurfacing project. project includes milling, hma paving, reset and replac
## $\^2016\^$C20850[[2]]
## [1] "resurfac, mill, pave, replac, guardrail, culvert, clean, stripe, eros"
##
##
## $`2016`$C20063
## $\2016\$C20063[[1]]
## "sh 74 overlay - el rancho to evergreen; mm 0.894 to 6.720 the project will involve milling and pavi:
##
## $\2016\$C20063[[2]]
## [1] "overlay, mill, pave, pavement, bridg, replac, minor, widen, shoulder, safeti, rock, excav"
##
##
## $`2016`$C19357
## $\2016\$C19357[[1]]
## "sh 119 county line to i-25. this project includes concrete pavement placed upon a full depth reclam
## $\\2016\\$C19357[[2]]
```

```
## [1] "concret, pavement, reclam, reconstruct, flood, minor, repair"
##
##
## $`2016`$C19705
## $\2016\$C19705[[1]]
##
## "sh 119b in boulder county mp 44.995 to mp 54.42 4\" asphalt overlay (with sections of 5\" mill and
## $\2016\$C19705[[2]]
## [1] "boulder,asphalt,overlay,guardrail,bridg,rail,replac,minor,rehab,sign"
## $`2016`$C20113
## $\2016\$C20113[[1]]
                                                                                                      Contr
## "us 287 mp 307.95 to 309.20 asphalt milling 0\"-2\" and 2\" - 4\" hma overlay guardrail replacement
##
## $`2016`$C20113[[2]]
## [1] "asphalt,mill,overlay,guardrail,replac,boulder"
##
## $`2016`$C20987
## $\2016\$C20987[[1]]
## "sh 340 redlands resurfacing this project is located on sh340 in mesa county. the project begins at
## $\2016\$C20987[[2]]
## [1] "resurfac, overlay, asphalt, shoulder, mill, pave, gutter, road, stripe, sign, thermoplast, guardrail, repla
##
##
## $`2016`$C21389
## $\2016\$C21389[[1]]
## "intersection us 385 & yuma county rd 33.6 work includes blading and compacting base course, hma pav
## $\^2016\^$C21389[[2]]
## [1] "intersect, blade, compact, base, pave, stripe, seed, eros"
##
##
## $\^2016\^$C20953
## $\2016\$C20953[[1]]
## "sh 402 & lcr 9e intersection improvements se of loveland. major work items include excavation/emban
##
## $\2016\$C20953[[2]]
## [1] "intersect, improv, excav, embank, pave"
##
##
## $`2016`$C17797
## $\2016\$C17797[[1]]
## "this project on us 40 mills 2\" and places 2\" of hot mix asphalt (hma) full width on the existing
##
## $\\2016\\$C17797[[2]]
```

```
## [1] "mill,asphalt,surfac,bridg,concret,deck,repair,resurfac,shoulder,fill,compact,guardrail,corros,r
##
##
## $`2016`$C20499
## $\2016\$C20499[[1]]
##
## "project is to install a linear in culverts at four (4) locations in region 2. work will include cul-
##
## $\2016\$C20499[[2]]
## [1] "instal, culvert, clean, eros, traffic"
## $`2016`$C20565
## $\2016\$C20565[[1]]
## "this project consists of replacing traffic signal poles, mast arms, traffic signal heads, detection
##
## $\`2016\`$C20565[[2]]
## [1] "replac, traffic, signal, pole, mast, instal, conduit, sign"
##
## $`2016`$C20860
## $`2016`$C20860[[1]]
## "sh348: this project consists of the replacement of the existing culvert on highway 348 in montrose
## $\2016\$C20860[[2]]
## [1] "replac,culvert,highway,concret,improv,temporari,pave,stripe,eros,traffic,pipe"
##
##
## $\2016\$C19778
## $\2016\$C19778[[1]]
## "signal pole replacements at: us 287/spring park dr/johnson dr in fort collins, sh 7/38th st/marine
## $\2016\$C19778[[2]]
## [1] "signal, pole, replac, boulder"
##
##
## $`2016`$C19401
## $\2016\$C19401[[1]]
## "intersection improvements: minor widening, milling, overlay, access realignment, re-striping to add
##
## $\2016\$C19401[[2]]
## [1] "intersect,improv,minor,widen,mill,overlay,realign,stripe"
##
##
## $`2016`$C20941
## $\2016\$C20941[[1]]
## "fy17 r4 signal pole replacements in boulder and greeley, colorado. the locations are at the followi:
##
## $\2016\$C20941[[2]]
```

```
## [1] "signal,pole,replac,boulder"
##
##
## $`2016`$C19706
## $\2016\$C19706[[1]]
##
## "this project consists of a 2.5\" mill/fill with hma, curb ramps, raised islands, manhole and valve
##
## $\2016\$C19706[[2]]
## [1] "curb,ramp,rais,island,valv,signal,perman,pavement,mark"
## $`2016`$C20791
## $\2016\$C20791[[1]]
                                                          Contract Description
## "i-25 northbound ramp extension of the acceleration lane at south academy"
##
## $\`2016\`$C20791[[2]]
## [1] "ramp"
##
## $\2016\$C20779
## $\2016\$C20779[[1]]
## "us 85 from sh 7 to bromley lane work to include unclassified excavation, removal of fence, placemen
## $\2016\$C20779[[2]]
## [1] "excav,remov,fenc,guardrail,curb,gutter,electr,conduit,fiber"
##
##
## $`2016`$C20788
## $\2016\$C20788[[1]]
## "i-25: mp 119-mp 128, sh115: mp 11-mp 12.5, el paso & fremont this project includes the installation
## $\2016\$C20788[[2]]
## [1] "instal,cabl,barrier,guardrail"
##
##
## $`2016`$C20765
## $\2016\$C20765[[1]]
## "chip seal sh 14 mp 34.7 to mp 64.9 and mp 75.5 to mp 87. mp 34.7 is close to the town of walden and
##
## $\2016\$C20765[[2]]
## [1] "chip, seal"
##
##
## $`2016`$C20858
## $\2016\$C20858[[1]]
## "sh 41 north of us 160 to utah stateline project str 041a-001 located on sh 41 beginning at the junc
```

## \$\\2016\\\$C20858[[2]]

```
## [1] "junction, resurfac, level, paver, chip, seal, stripe, guardrail, replac"
##
##
## $`2016`$C20703
## $\2016\$C20703[[1]]
##
## "str 065a-022 sh 65 mesa north resurfacing state hwy 65 mesa county. project limits: m.m. 36.000-61.
##
## $\2016\$C20703[[2]]
## [1] "resurfac,chip,seal,align,overlay,guardrail,replac,bridg,mainten,ramp"
## $`2016`$C20778
## $\2016\$C20778[[1]]
## "this project consists of 1.5 inches of hma overlay with a 1 inch hma leveling course at various loc
##
## $\`2016\`$C20778[[2]]
## [1] "overlay,level,shoulder,seed,mulch,delin,sign,stripe,guardrail,patch,concret,drive,steel,pile,pa
##
## $`2016`$C20804
## $`2016`$C20804[[1]]
## "sh 149 spring creek pass north, mp 56-70 in hinsdale county. the work consists of resurfacing, incl
## $\2016\$C20804[[2]]
## [1] "resurfac, recycl, asphalt, overlay, bridg, deck, repair, pavement, mark, delin, construct, traffic"
##
##
## $`2016`$C20625
## $\2016\$C20625[[1]]
## "sh 150 from us 160 to great sand dunes national park boundary. the project includes construction si
## $`2016`$C20625[[2]]
## [1] "sand, dune, construct, temporari, eros, chipseal, stripe"
##
##
## $`2016`$C19954
## $\2016\$C19954[[1]]
## "project will add a right turn lane from us 160 to cr 450. work will include excavation, embankment,
##
## $\2016\$C19954[[2]]
## [1] "excav,embank,pave,stripe,traffic,seed"
##
##
## $`2016`$C19668
## $\2016\$C19668[[1]]
## "the project includes reconstruction of us 50 and us 287 in lamar with full depth concrete. on us 28
##
## $\\2016\\$C19668[[2]]
```

```
## [1] "reconstruct,concret,instal,pedestrian,sign,pave,curb,gutter,ramp,sidewalk,drainag,water,fiber,o
##
##
## $`2016`$C20752
## $\2016\$C20752[[1]]
##
## "in park county: resurfacing us24 mp 225.55 - mp 234.00, us285 mp 161.80 - mp 171.33 consisting of:
##
## $\2016\$C20752[[2]]
## [1] "resurfac,asphalt,mill,pave,guardrail,replac,inlaid,epoxi,pavement,mark,culvert,embank,repair,so
## $`2016`$C20760
## $\2016\$C20760[[1]]
## "r2 fy 17 chipseal - manzanola and las animas areas. work consists of type i chipseal placement alon
##
## $\2016\$C20760[[2]]
## [1] "chipseal, guardrail, gate"
##
## $`2016`$C20733
## $\2016\$C20733[[1]]
## "us 287 mp 21.0 to mp 133.0. this projects consists of concrete panel removal and replacement, strip
## $\2016\$C20733[[2]]
## [1] "concret,remov,replac,stripe,traffic,eros,subgrad,stabil,culvert"
##
##
## $`2016`$C20467
## $\2016\$C20467[[1]]
## "this project consists of an overlay through manitou springs along with ada ramp work. the overlay i
## $\2016\$C20467[[2]]
## [1] "overlay, ramp, split, roundabout, intersect, bridg, rehab, repair, deck, drainag, improv"
##
##
## $`2016`$C19192
## $\2016\$C19192[[1]]
## "i-25 and arapahoe road, arapahoe county---improvements include i-25 mainline bridge construction, r
##
## $\`2016\`$C19192[[2]]
## [1] "improv, bridg, construct, ramp, widen, intersect, reloc, pedestrian, soundwal, landscap"
##
##
## $`2016`$C20846
## $\2016\$C20846[[1]]
## "c-470 resurfacing, s. rooney rd to ken caryl, 1\" hma and 2\" sma. work will include shouldering, b.
##
## $\\2016\\$C20846[[2]]
```

```
## [1] "resurfac, shoulder, bridg, deer, ramp, fenc"
##
##
## $`2016`$C20807
## $\2016\$C20807[[1]]
##
## "traffic signal replacements on hwy 21a and 24a within the corporate limits of colorado springs & wo
## $\2016\$C20807[[2]]
## [1] "traffic, signal, replac, woodland, teller"
##
##
## $\2017\
## $`2017`$C20916
## $\2017\$C20916[[1]]
## "i-25, colorado springs, various locations work includes polyester concrete overlay on six out of ni
##
## $\2017\$C20916[[2]]
## [1] "polyest,concret,overlay,remov,replac,deck,repair,minor,bridg"
##
## $`2017`$C20610
## $\2017\$C20610[[1]]
                                                                                          Contract Descrip
## "replace three substandard, failing, cmp's and sleeve a fourth cmp between mp 11.95 & mp 12.29 on us
## $\2017\$C20610[[2]]
## [1] "replac"
##
##
## $`2017`$C20866
## $\2017\$C20866[[1]]
## "this project will consist of replacing two timber structures f-22-e and f-23-f located on us 36 at 1
##
## $\2017\$C20866[[2]]
## [1] "replac,timber,concret,girder,steel,pile,abut,drill,caisson,pier,traffic,construct"
##
##
## $\2017\$C21629
## $\2017\$C21629[[1]]
## "this is a rockfall mitigation project along i-70 in glenwood canyon which is within garfield county
##
## $\2017\$C21629[[2]]
## [1] "rockfal, remov, flex, fenc, replac, rock, perman, temporari, traffic"
##
## $`2017`$C20142
## $\2017\$C20142[[1]]
## "sh 133 mcclure pass slip: beginning at mp 40.54 and extending to mp 40.61. the work consists of lan
```

```
##
## $\2017\$C20142[[2]]
## [1] "landslid, reconstruct, earthwork, base, asphalt, eros"
##
## $`2017`$C22143
## $`2017`$C22143[[1]]
## "i25/orchard will provide a permanent repair to the section of i-25 damaged by the tanker fire explo
##
## $\`2017\`$C22143[[2]]
## [1] "orchard, perman, repair, tanker, explos, remov, concret, barrier, overlay, strip"
##
## $`2017`$C21807
## $\2017\$C21807[[1]]
## "this project will replace traffic signal controllers and upgrade communications at approximately 10
##
## $\2017\$C21807[[2]]
## [1] "replac, traffic, signal, upgrad, intersect, corridor, circl"
##
## $`2017`$C22014
## $\2017\$C22014[[1]]
## "upgrading curb ramps in region 1 - various locations a mandatory pre-bid conference will be held on
## $\2017\$C22014[[2]]
## [1] "upgrad, curb, ramp, street"
##
##
## $`2017`$C21399
## $\2017\$C21399[[1]]
                                                                       Contract Description
## "sh 12, scour critical structure p-17-1 (mp 51.46) sh 12 and sh 160 critical culverts"
## $\2017\$C21399[[2]]
## [1] "culvert"
##
##
## $\2017\$C21438
## $\2017\$C21438[[1]]
## "sh14 west of rustic pr embankment repair west of rustic on sh 14 at m.p. 84.5, flood repair project
##
## $\2017\$C21438[[2]]
## [1] "rustic,embank,repair,flood,reconstruct,rip,rap"
##
## $`2017`$C20191
## $\2017\$C20191[[1]]
## "riprap removal/placement, retaining wall, new pavement, cbc removal, new bridge construction. town
```

```
##
## $\2017\$C20191[[2]]
## [1] "riprap, remov, retain, wall, pavement, bridg, construct, boulder, drive"
##
## $`2017`$C20187
## $`2017`$C20187[[1]]
## "this project is located in weld county and involves sh60 (mp 11.38 to 12.04) and sh257 (mp0.05 to 0
##
## $\`2017\`$C20187[[2]]
## [1] "weld,mp0,construct,plant,seed,bridg,remov,pavement,reconstruct,resurfac,waterlin,replac,excav,e
##
## $`2017`$C20257
## $\2017\$C20257[[1]]
## "flood scour repair at structures on sh 52, sh 6, sh 63, sh 55, sh 59, and sh 385. work consists of
##
## $\2017\$C20257[[2]]
## [1] "flood,repair,dewat,rip,rap,abut,pier,culvert"
##
## $`2017`$C21862
## $\2017\$C21862[[1]]
## "center line rumble strip installation on us highways 40, 287 and 385 and shoulder rumble strip inst
## $\2017\$C21862[[2]]
## [1] "rumbl, strip, instal, highway, shoulder, ramp, centerlin, mark, reapplic"
##
##
## $`2017`$C20964
## $\2017\$C20964[[1]]
## "this project is a surface treatment project on i-25 from mile post 7.5 to 12.9. this will be a mill
##
## $\2017\$C20964[[2]]
## [1] "surfac,minor,bridg,guardrail,improv,drainag,port"
##
##
## $\2017\$C21323
## $\2017\$C21323[[1]]
## "i25 at mp 12.73 - critical culvert extension the work for this project shall consist of two culvert
##
## $\2017\$C21323[[2]]
## [1] "culvert, manhol, construct"
##
## $`2017`$C18520
## $\2017\$C18520[[1]]
## "im 0701-212 i-70 exit 49 grand mesa the project scope involves ramp improvements at exit 49 on i-70
```

```
##
## $\2017\$C18520[[2]]
## [1] "ramp,improv,realign,retain,wall,river,rock,excav,soil,nail,stabil,traffic,seed,stripe,junction"
##
## $`2017`$C19963
## $`2017`$C19963[[1]]
## "the project consists of furnishing and installing pull boxes, conduit, fiber optic cable, cctv came
##
## $\2017\$C19963[[2]]
## [1] "furnish,conduit,fiber,cabl,cctv,instal,ethernet,pole,caisson,manhol"
##
## $`2017`$C21593
## $\2017\$C21593[[1]]
## "this its project will install fiber and conduit from 96th avenue (denver) to weld county road 8 (hu
##
## $\2017\$C21593[[2]]
## [1] "instal, fiber, conduit, weld, caisson, pole, cctvs, ethernet, manhol, splice, termin, circl"
##
## $`2017`$C20984
## $\2017\$C20984[[1]]
## "variable message sign (vms) upgrades in region 1 and region 3 (arapahoe, clear creek, delta, garfie
## $\2017\$C20984[[2]]
## [1] "sign, lake, instal, monotub, cantilev, caisson, cellular, modem, trench, conduit, cctvs, circl"
##
##
## $\2017\$C21596
## $\2017\$C21596[[1]]
## "weather station (ws) upgrades in region 2 and region 3 (las animas, huerfano, el paso, park, mesa,
##
## $\2017\$C21596[[2]]
## [1] "instal,cellular,modem,ethernet,fiber,trench,conduit,circl"
##
##
## $\2017\$C21592
## $\2017\$C21592[[1]]
## "new cctv cameras along sh 93 and us 285 on the west side of the denver metro area an optional pre-b
##
## $\2017\$C21592[[2]]
## [1] "cctv,metro,circl"
##
## $`2017`$C22150
## $\2017\$C22150[[1]]
##
## "in regions 1 and 2 at various locations, work consists of installing pull boxes, bored and trenched
```

```
##
## $\2017\$C22150[[2]]
## [1] "trench, conduit, fiber, cabl, circl"
##
## $`2017`$C21570
## $\2017\$C21570[[1]]
## "region 2 traffic project. this project will be located in various counties within region 2. the pro
##
## $\2017\$C21570[[2]]
## [1] "traffic,instal,highway,pavement,mark,surfac"
##
## $`2017`$C21980
## $\2017\$C21980[[1]]
## "mp r200-244 is highway sign replacement project consisting of highway sign installations and remova
##
## $\2017\$C21980[[2]]
## [1] "highway, sign, replac, remov, bent"
##
## $`2017`$C21904
## $\2017\$C21904[[1]]
                                                                                   Contract Description
## "i25 signage from mp 229.29 to mp 244.52 will be replaced and updated as called out in the plans."
## $\2017\$C21904[[2]]
## [1] "replac"
##
##
## $`2017`$C22176
## $\2017\$C22176[[1]]
## "this project is located on i-70 in kit carson county from m.p. 395-449.59 in both westbound and eas
##
## $\\2017\\$C22176[[2]]
## [1] "seal,crack,pavement,temporari,traffic"
##
##
## $\2017\$C22211
## $\2017\$C22211[[1]]
## "this project includes work sites in arapahoe, elbert, lincoln, and kit carson counties from mm 328
##
## $\2017\$C22211[[2]]
## [1] "remov, epoxi, pavement, mark, traffic, construct, tape, concret, recess"
##
## $`2017`$C21971
## $\2017\$C21971[[1]]
## "fy18 region 4 i76 concrete panel replacement mp 72.0 to mp 77.0 a mandatory pre bid conference will
```

```
##
## $\2017\$C21971[[2]]
## [1] "concret, replac, brush"
##
## $`2017`$C21981
## $\2017\$C21981[[1]]
## "repair of structure i-06-a, sh92 mp 21.006 which includes removal and replacement of three expansion
##
## $\`2017\`$C21981[[2]]
## [1] "repair, remov, replac, deck, polyest, concret, overlay, mill, pavement"
##
## $\2017\$C22052
## $\2017\$C22052[[1]]
## "mtce 131a-039 is located in eagle & routt counties along sh 131. construction limit begins at mp 0.
##
## $\2017\$C22052[[2]]
## [1] "construct,pour,crack,sealant,traffic"
##
## $\^2017\^$C22050
## $\2017\$C22050[[1]]
## "mtce 141a-048 is located within mesa county, along state highway 141. construction limits begin at
## $\2017\$C22050[[2]]
## [1] "highway, construct, chip, seal, pavement, mark, traffic"
##
##
## $\2017\$C21858
## $\2017\$C21858[[1]]
## "sh 142 located in conejos and costilla counties. the project begins at the intersection of us 285 a
##
## $\2017\$C21858[[2]]
## [1] "intersect, construct, traffic, temporari, eros, chipseal, coat, stripe"
##
##
## $\2017\$C21905
## $\2017\$C21905[[1]]
                                                                                           Contract Descri
## "removing and installing thermoplastic pavement markings along us 287 in loveland from mp 335 to mp
##
## $\2017\$C21905[[2]]
## [1] "remov, thermoplast, pavement, mark"
##
## $`2017`$C21538
## $\2017\$C21538[[1]]
## "project no: mtce r100-274 subaccount: 21538 location: sh 119 in gilpin county description: this pro
```

```
##
## $\2017\$C21538[[2]]
## [1] "remov,replac,instal,ground,sign,post,traffic,panel,furnish"
##
## $`2017`$C21407
## $`2017`$C21407[[1]]
## "this project will consist of replacing the traffic signal face, pedestrian signal face and pedestri
##
## $\2017\$C21407[[2]]
## [1] "replac, traffic, signal, pedestrian, lake, summit"
##
## $`2017`$C21810
## $\2017\$C21810[[1]]
## "this project will consist of removal and replacement of highway signs on u.s. highway (us) 6f from
##
## $\2017\$C21810[[2]]
## [1] "remov, replac, highway, sign, base"
##
## $`2017`$C21811
## $\2017\$C21811[[1]]
## "this project consists of grinding existing pavement markings and refreshing with inlaid modified ep
## $\2017\$C21811[[2]]
## [1] "grind, pavement, mark, inlaid, epoxi, remov, mil, restrip"
##
##
## $\2017\$C21812
## $\2017\$C21812[[1]]
## "this project will consist of refreshing existing crosswalks, stop bars, word and symbol pavement ma
##
## $\2017\$C21812[[2]]
## [1] "crosswalk,bar,pavement,mark,inlaid,thermoplast,roadway"
##
##
## $\2017\$C22035
## $\2017\$C22035[[1]]
## "region 3 roundabouts work shall consist of the removal, supply and application of epoxy pavement ma
##
## $\2017\$C22035[[2]]
## [1] "roundabout, remov, epoxi, pavement, mark, thermoplast, crosswalk, tabul, highway, ramp, ground, recess"
##
## $`2017`$C22029
## $\2017\$C22029[[1]]
## "this project consists of placing a heated crack sealant into longitudinal and transverse cracks on
```

```
## $\2017\$C22029[[2]]
## [1] "heat, crack, sealant, transvers, highway, mainten, seal"
##
## $`2017`$C21255
## $\2017\$C21255[[1]]
## "us50 - royal gorge west - sh9 - jct 50 north overlay project will include surface treatment and bri
##
## $\2017\$C21255[[2]]
## [1] "overlay, surfac, bridg, quail, lake, insur"
##
## $`2017`$C20910
## $\2017\$C20910[[1]]
## "us 160 mp 382.77 to mp 405.00. this project consists of of 1.5 inches of hma overlay with a 1.0 inc
##
## $\2017\$C20910[[2]]
## [1] "overlay,level,asphalt,patch,base,shoulder,stripe,delin,guardrail,bridg,rail,instal,repair"
##
## $`2017`$C20848
## $\2017\$C20848[[1]]
## "along us 6 in clear creek canyon from sh 93 to sh 119 (mp 260.2 to mp 271.6). rockfall mitigation in
## $\2017\$C20848[[2]]
## [1] "rockfal,rock,remov,instal,reinforc"
##
##
## $`2017`$C20885
## $`2017`$C20885[[1]]
## "i-25: county line road to belleview avenue this project consists of resurfacing i-25 with sma pavem
##
## $\\2017\\$C20885[[2]]
## [1] "resurfac,pavement,repair,bridg,sign"
##
##
## $\2017\$C20841
## $\2017\$C20841[[1]]
## "this is a combination intersection, resurfacing, sidewalk, and waterline construction project. the
##
## $\2017\$C20841[[2]]
## [1] "intersect, resurfac, sidewalk, waterlin, construct, portion, shoulder, drainag, improv, signal, river, rep
##
## $`2017`$C20801
## $\2017\$C20801[[1]]
## "us50 blue mesa resurfacing: located on us 50 in gunnison county county beginning at mm 127.0 and ex
```

##

```
##
## $\2017\$C20801[[2]]
## [1] "resurfac, bitumin, pavement, recycl, overlay, bridg, deck, repair, guardrail, replac, epoxi, mark, construc
##
## $`2017`$C20882
## $`2017`$C20882[[1]]
## "this project is located at i-70 mp 50.4 in mesa country. work includes the replacement of the exist
##
## $\2017\$C20882[[2]]
## [1] "replac, tunnel, concret, repair, patch, stormwat, traffic"
##
## $`2017`$C21035
## $\2017\$C21035[[1]]
## "nhpp 0701-238 i-70b north ave interchange this project is located in the city of grand junction on
##
## $\2017\$C21035[[2]]
## [1] "interchang, junction, surfac, lift, overlay, minor, shoulder, widen, realign, traffic, signal, improv, curb
##
## $\^2017\^$C20547
## $\2017\$C20547[[1]]
## "the project is located on interstate 70 in garfield county. it begins at mp 124.87 and extends appr
## $\2017\$C20547[[2]]
## [1] "interst, replac, sign, tunnel, lake, traffic, gypsum"
##
##
## $\2017\$C20758
## $\2017\$C20758[[1]]
## "i-70 east side vail pass mp 190 to 197.5 a mandatory pre bid conference will be held on november 20
## $\2017\$C20758[[2]]
## [1] "mountain"
##
##
## $\2017\$C22032
## $\2017\$C22032[[1]]
## "i-70 mp 183-190 eagle county installation of subsurface drains across i-70 with manholes and storm
##
## $\2017\$C22032[[2]]
## [1] "instal,drain,manhol,sewer,pipe,bedrock,trench"
##
## $`2017`$C20847
## $\2017\$C20847[[1]]
## "i-70 ejmt s. bore barrier, handrail, & walkway replacement project. project proposes to replace the
```

```
##
## $\2017\$C20847[[2]]
## [1] "barrier, handrail, replac, concret, tunnel, salient, inlet, clean, repair, traffic, eros, summit"
##
## $`2017`$C20997
## $\2017\$C20997[[1]]
## "i-70 ebnd evergreen pkwy to chief hosa mp 252 to mp 253 this project will repair an existing failed
##
## $\2017\$C20997[[2]]
## [1] "repair, wall, upgrad, drainag, remov, guardrail, replac, pave, shoulder"
##
## $`2017`$C20891
## $\2017\$C20891[[1]]
## "this project includes limited deck repairs, thin bonded polyester concrete overlay, removal and rep
##
## $\2017\$C20891[[2]]
## [1] "deck,repair,polyest,concret,overlay,remov,replac,saw,seal,bridg,rail,clean,drain"
##
## $`2017`$C21814
## $\2017\$C21814[[1]]
## "the sh-82 mp 45.3 over length vehicle detection system (olvds) consists of installing a system (in-
## $\2017\$C21814[[2]]
## [1] "vehicl, pavement, traffic, signal, sign, conduit, wire"
##
##
## $`2017`$C21806
## $\2017\$C21806[[1]]
## "sheridan blvd. 52nd to 58th/ralston road: asphalt resurfacing, traffic signal pole upgrades, roadwa
##
## $\2017\$C21806[[2]]
## [1] "asphalt,resurfac,traffic,signal,pole,bridg,deck,repair,pedestrian,curb,ramp"
##
##
## $\2017\$C20456
## $\2017\$C20456[[1]]
## "sh 145 construction of a cribwall, replacement of two existing cuvlerts mm 76 and mm 75.93, addition
##
## $\2017\$C20456[[2]]
## [1] "construct, cribwal, replac, culvert, patch"
##
## $`2017`$C21751
## $\2017\$C21751[[1]]
## "this is a removal of an existing 42\" csp and one concrete headwall. the pipe is to be replaced wit.
```

```
##
## $\2017\$C21751[[2]]
## [1] "remov,concret,pipe,replac,culvert,headwal,wingwal,riprap,sawpit"
##
## $`2017`$C20797
## $`2017`$C20797[[1]]
## "us 160 wolf creek pass - install fiber optic cable, conduit and manholes from wolf creek pass tunne
##
## $\2017\$C20797[[2]]
## [1] "instal, fiber, cabl, conduit, manhol, tunnel, electr"
##
## $`2017`$C20416
## $\2017\$C20416[[1]]
## "this project is located on us highway 285 in chaffee county. the project begins at milepost 143.00
##
## $\2017\$C20416[[2]]
## [1] "highway,milepost,intersect,fenc,ramp,deer,guard,guardrail,chipseal,temporari,stripe"
##
## $`2017`$C20502
## $\2017\$C20502[[1]]
## "project number nhpp 4912-006 located on us 491 north of cortez in montezuma county. project begins
## $\2017\$C20502[[2]]
## [1] "overlay, recycl, guardrail, replac, stripe"
##
##
## $`2017`$C20741
## $\^2017\^$C20741[[1]]
                                                                 Contract Description
## "replacement of two cribwalls at mm 68.6 and mm 68.75 on highway 550 molas pass"
##
## $\2017\$C20741[[2]]
## [1] "replac, cribwal, highway"
##
##
## $\2017\$C21307
## $\2017\$C21307[[1]]
## "the preventative maintenance includes replacing and patching damaged concrete pavement, restoring to
##
## $\2017\$C21307[[2]]
## [1] "mainten, replac, patch, concret, pavement, restor, surfac, microgrind, seal, stripe, curb"
##
##
## $`2017`$C20890
## $\2017\$C20890[[1]]
##
## "work includes clearing and grubbing, removal of asphalt mat, bridge rehab, sma pavement, guardrail
```

```
##
## $\2017\$C20890[[2]]
## [1] "grub,remov,asphalt,bridg,rehab,pavement,guardrail,cabl,barrier,traffic,signal,stripe"
##
## $`2017`$C20886
## $`2017`$C20886[[1]]
## "this project will repair/replace walls along us 040a between mile marker 244.37 and mile marker 248
##
## $\`2017\`$C20886[[2]]
## [1] "repair, replac, wall, marker, sealer"
##
## $`2017`$C22039
## $\2017\$C22039[[1]]
## "nhpp r100-291, pcn 22039 southbound i-225 from yosemite to i-25 project will re-stripe i-225 southb
##
## $\2017\$C22039[[2]]
## [1] "shoulder,widen,guardrail"
##
## $`2017`$C19656
## $\2017\$C19656[[1]]
## "this resurfacing project is located in the city and county of denver on us 40 (colfax ave) from gal
## $\2017\$C19656[[2]]
## [1] "resurfac, mill, pavement, overlay, curb, ramp, reconstruct, manhol, valv, inlet, traffic"
##
##
## $\2017\$C21736
## $\2017\$C21736[[1]]
## "located on us 139 in garfield county beginning at mm 19.0 and extending north approximately 12.0 mi
##
## $\2017\$C21736[[2]]
## [1] "resurfac, recycl, drive, overlay, shoulder, guardrail, replac, epoxi, pavement, mark, construct, traffic, j
##
##
## $\2017\$C20403
## $\2017\$C20403[[1]]
## "on sh 14 west of ted's place in larimer county. project work includes mgs guardrail, moment slab su
##
## $\2017\$C20403[[2]]
## [1] "guardrail,slab,bridg,rail,rock,patch,delin,temporari,signal"
##
## $`2017`$C21184
## $\\2017\\$C21184[[1]]
## "project number she 0831-119: subaccount: 21184 this project consists of the installation of a raise
```

```
##
## $\2017\$C21184[[2]]
## [1] "instal, rais, street"
##
## $`2017`$C20962
## $\2017\$C20962[[1]]
## "the aforementioned project consists of a lane widening on sh 160 between mp 294 and mp 297 and on &
##
## $\2017\$C20962[[2]]
## [1] "widen, ramp, improv, street"
##
## $`2017`$C20145
## $\2017\$C20145[[1]]
## "project she340a-018 is a resurfacing (site a) and intersection improvement (site b) project located
##
## $\2017\$C20145[[2]]
## [1] "resurfac,intersect,junction,post,parkway,pavement,reconstruct,guardrail,improv,drainag,sidewalk
##
## $`2017`$C20878
## $\2017\$C20878[[1]]
## "this project consists of replacing traffic signals at three intersections: sh 75 & coal mine avenue
## $\2017\$C20878[[2]]
## [1] "replac, traffic, signal, intersect, coal, ramp"
##
##
## $\2017\$C22013
## $\2017\$C22013[[1]]
## "project sta 0061-091 sh 6 chipseal near fleming consists of minor resurfacing with a chipseal as we
##
## $\2017\$C22013[[2]]
## [1] "chipseal,minor,resurfac,bridg,rail,guardrail,eros,temporari,perman,stripe,traffic"
##
##
## $\2017\$C20840
## $\2017\$C20840[[1]]
## "sh 6 east of sterling project sta 006a-057 is located on us highway 6 beginning at mp 406.880 and e
##
## $\2017\$C20840[[2]]
## [1] "sterl, highway, reclam, asphalt, pavement, delin, instal, traffic, temporari, stripe"
##
## $`2017`$C21174
## $\2017\$C21174[[1]]
## "this project consists of installing pull boxes, traffic management system manholes, conduit, fiber
```

```
##
## $\2017\$C21174[[2]]
## [1] "traffic, manhol, conduit, fiber, cabl, street"
##
## $`2017`$C20856
## $\2017\$C20856[[1]]
## "us 24 el paso-elbert county line east this project includes overlaying the existing asphalt pavemen
##
## $\2017\$C20856[[2]]
## [1] "overlay, asphalt, pavement"
##
## $`2017`$C20561
## $\2017\$C20561[[1]]
## "us 36: strasburg to byers; i70m:i70 to us 36; cr2:cr173 - 36 work includes removal of asphalt mat,
##
## $\2017\$C20561[[2]]
## [1] "i70m, remov, asphalt, guardrail, concret, slab, repair, bridg, rehab, pave, curb, ramp, stripe"
##
## $`2017`$C19487
## $\2017\$C19487[[1]]
## "resurfacing colfax ave from i-70 to cole blvd. and from simms st. to kipling st. work includes 2.5
## $\2017\$C19487[[2]]
## [1] "resurfac, overlay, pedestrian, curb, ramp"
##
##
## $`2017`$C20344
## $\2017\$C20344[[1]]
## "realign us 50 between the bnsf railroad to pueblo blvd (approximately) and convert existing roadway
##
## $\2017\$C20344[[2]]
## [1] "realign,railroad,ramp,pave,culvert,traffic"
##
##
## $\2017\$C20750
## $\2017\$C20750[[1]]
## "the project work entails installation of new storm sewer, inlets, manholes, asphalt patching and ot
##
## $\2017\$C20750[[2]]
## [1] "instal, sewer, manhol, asphalt, patch, drive"
##
## $`2017`$C20586
## $\2017\$C20586[[1]]
## "sh 60 us 287 to milliken. hma overlay and various locations of milling. various ada curb ramp and s
```

```
##
## $\2017\$C20586[[2]]
## [1] "overlay,mill,curb,ramp,sidewalk,improv,remov,replac,culvert,reconstruct,guardrail,bridg,rail"
##
## $`2017`$C21254
## $`2017`$C21254[[1]]
## "this project is located on sh 67 in two discontinuous project sites, site a between mp 52.304- 69.6
##
## $\2017\$C21254[[2]]
## [1] "teller, woodland, overlay, shoulder, guardrail, hardwar, replac, bridg, rail, temporari, eros, centerlin, r
##
## $`2017`$C21225
## $\2017\$C21225[[1]]
## "on i-70 from 32nd to 44th, 2\" mill and sma overlay. bridge deck rehabilitation for seven structure
##
## $\2017\$C21225[[2]]
## [1] "overlay,bridg,deck,rehabilit,repair,waterproof,membran,guardrail,stripe"
##
## $`2017`$C20845
## $\2017\$C20845[[1]]
## "this project includes the resurfacing of us 85 from eaton (mp 275.5) to ault (280.3), with full dep
## $\2017\$C20845[[2]]
## [1] "resurfac, asphalt, reclam, concret, overlay, intersect"
##
##
## $\2017\$C21626
## $\2017\$C21626[[1]]
## "sh 93 boulder erosion correction project, on sh 93, to direct sheet flow into systematic locations.
##
## $\2017\$C21626[[2]]
## [1] "boulder, eros, correct, flow, instal, rock, curb, steel, pipe, seed, turf, reinforc"
##
##
## $\2017\$C20589
## $\2017\$C20589[[1]]
## "jimmy creek tributary channel repair at sh 94 project: work include sheetpile (type ii), riprap, pi
##
## $\2017\$C20589[[2]]
## [1] "repair, sheetpil, riprap, pipe, concret"
##
## $`2017`$C19593
## $\2017\$C19593[[1]]
##
## "sheridan blvd. from 25th to 52nd ave. in denver/jefferson county. work includes 2.5\" mill & hma ov
```

```
##
## $\2017\$C19593[[2]]
## [1] "overlay, pedestrian, curb, ramp"
##
## $`2017`$C19644
## $\2017\$C19644[[1]]
## "sheridan blvd. from us 285 (hampden ave.) to arizona ave. work includes 3\" mill and hma overlay, p
##
## $\2017\$C19644[[2]]
## [1] "overlay, pedestrian, curb, ramp, traffic, signal, pole, replac"
##
## $`2017`$C20461
## $\2017\$C20461[[1]]
## "us287 mp 291.00 to mp 295.00 this project consists of hot mix asphalt sx (100) (pg 76-28) overlay of
##
## $\2017\$C20461[[2]]
## [1] "asphalt, overlay, mill, pavement, curb, ramp, gutter, sidewalk, replac, stripe, instal, signal, intersect"
##
## $`2017`$C21305
## $\\2017\\$C21305[[1]]
## "us-287 and lcr 17 near berthoud - this project includes milling and an hma overlay, an hma overlay
## $\2017\$C21305[[2]]
## [1] "mill, overlay, slab, clean, drain, outlet"
##
##
## $\2017\$C21392
## $\2017\$C21392[[1]]
## "at the intersection of us 287 and sh 14 (ted's place), work consists of asphalt overlay, signing, s
##
## $\2017\$C21392[[2]]
## [1] "intersect, asphalt, overlay, stripe, curb, gutter, delin"
##
##
## $\2017\$C20904
## $\2017\$C20904[[1]]
## "this project consists of removing debris from cracks in the roadway and placing a hot bituminous cr
##
## $\2017\$C20904[[2]]
## [1] "remov,debri,crack,bitumin,sealant,asphalt,bridg,deck,highway"
##
## $`2017`$C20939
## $\2017\$C20939[[1]]
## "this project consists of furnishing and installing: traffic signal controller cabinets, traffic sig
```

```
##
## $\2017\$C20939[[2]]
## [1] "furnish, traffic, signal"
##
## $`2017`$C20901
## $\2017\$C20901[[1]]
## "this project is located on i-70 in eagle county. it begins at mp 182.5 and extends 1 mile to mp 183
##
## $\2017\$C20901[[2]]
## [1] "construct, trail, sediment"
##
## $`2017`$C21533
## $\2017\$C21533[[1]]
                                                                                                Contract :
## "this project will consist of installing 7 mast arms for signal lights, pull boxes, led luminaires a
##
## $\2017\$C21533[[2]]
## [1] "mast,signal,led,luminari,conduit"
##
## $`2017`$C20911
## $\2017\$C20911[[1]]
## "alternate bid project (hma or pccp) on us 24 in el paso county consisting of earthwork, drainage, f
## $\2017\$C20911[[2]]
## [1] "earthwork,drainag,reclam,minor,widen,curb,gutter,pavement,mark,seed,repair,concret,riprap,soil,
##
##
## $`2017`$C21881
## $\2017\$C21881[[1]]
## "repair and install water quality and erosion control devices. work is at various locations in all c
##
## $\2017\$C21881[[2]]
## [1] "repair, instal, water, eros, seal, quail, lake"
##
##
## $\2017\$C20755
## $\2017\$C20755[[1]]
## "project is located on sh 45 (pueblo blvd) between mile posts 4.9 and 8.7. work to included removal
##
## $\2017\$C20755[[2]]
## [1] "post,remov,asphalt,concret,pave,grade,correct,shoulder,signal,traffic"
##
## $`2017`$C20757
## $\2017\$C20757[[1]]
## "sh 9 north mp 101.6 to 107, us 6 dillon mp 208.7 to 210.7 resurfacing and curb ramp replacement and
```

```
##
## $\2017\$C20757[[2]]
## [1] "resurfac,curb,ramp,replac,minor,drainag,improv,mountain"
##
## $`2017`$C21381
## $\2017\$C21381[[1]]
## "storm sewer design on us50c at james st in avondale. work will include the installation of reinforc
##
## $\`2017\`$C21381[[2]]
## [1] "sewer,instal,reinforc,concret,pipe,inlet"
##
## $`2017`$C21202
## $\2017\$C21202[[1]]
## "this project is located along sh 13 with construction limits beginning at approx mp 20.7 to approx
##
## $\2017\$C21202[[2]]
## [1] "construct, seal, chip, drive, patch, rumbl, strip, pavement, mark, traffic"
##
## $`2017`$C20695
## $\2017\$C20695[[1]]
## "project is located on us 84 mp 14.67, in archuleta county. work includes slip lining of existing cu
## $\2017\$C20695[[2]]
## [1] "culvert,improv,inlet,wall,earthwork,eros,traffic"
##
##
## $`2017`$C21879
## $\2017\$C21879[[1]]
## "this is phase funded project in fy17 and fy 18 with $1.3m budgeted for fy17. this project will remo
##
## $\2017\$C21879[[2]]
## [1] "3m, remov, replac, pavement, mark, stripe"
##
##
##
## $\2018\
## $`2018`$C18611
## $\2018\$C18611[[1]]
## "located on state highway 86 beginning at m.p. 33.1 and extending approximately 26.1 miles easterly
## $\2018\$C18611[[2]]
## [1] "highway,resurfac,overlay,bridg,repair,stripe"
##
##
## $`2018`$C19664
## $\2018\$C19664[[1]]
```

```
##
## "this project consists of concrete pavement reconstruction on west main street and division avenue, :
## $\2018\$C19664[[2]]
## [1] "concret, pavement, reconstruct, street, construct, asphalt, curb, gutter, sidewalk, ramp, sewer, instal, st
##
##
## $`2018`$C19875
## $\2018\$C19875[[1]]
## "i-70 mp 115-132 garfield/eagle county i-70 glenwood canyon variable speed limit sign project instal
## $\2018\$C19875[[2]]
## [1] "sign,instal,cctv,remov,replac,traffic,conduit,pullbox,manhol,fiber,electr,trench,wire,transport
##
##
## $`2018`$C20262
## $\2018\$C20262[[1]]
## "sh 170 mp 1.2 cbc eldorado canyon installation of new concrete box culvert and concrete channel, in
##
## $\2018\$C20262[[2]]
## [1] "instal, concret, culvert, guardrail"
##
## $`2018`$C20285
## $\2018\$C20285[[1]]
## "us 287 & sh 14 north of fort collins the work consists of placing rip rap along the highway embankm
##
## $\`2018\`$C20285[[2]]
## [1] "rip,rap,highway,embank,temporari,river,reconstruct,cross,culvert"
##
##
## $`2018`$C20322
## $\2018\$C20322[[1]]
## "this project is located on sh 121 (s. wadsworth blvd) beginning at bear creek. (m.p. 8.5) and exten
##
## $\2018\$C20322[[2]]
## [1] "resurfac,curb,ramp,manhol,valv,clean,pipe,drain,stripe"
##
## $`2018`$C20684
## $\2018\$C20684[[1]]
## "project nhpp 4912-007 consists of minor widening at jct with montezuma county road s located on us
## $\2018\$C20684[[2]]
## [1] "minor, widen, level, overlay, instal, sign"
##
##
## $\^2018\^$C20751
## $\2018\$C20751[[1]]
```

```
## "this project is located in pueblo, co along us 50c from 4th st. to baxter rd. the project consists
## $\2018\$C20751[[2]]
## [1] "ramp,upgrad,sewer,park,bridg,crack,sealant,polyurethan,slab,jack,concret,pavement,repair"
##
##
## $\2018\$C20753
## $\2018\$C20753[[1]]
##
## "bridge preventative maintenance project for five structures: b-06-a on us40z mp 0.02 in moffat coun
## $\2018\$C20753[[2]]
## [1] "bridg, mainten"
##
##
## $`2018`$C20790
## $\2018\$C20790[[1]]
## "sh160 through walsenburg huerfano county this project consist of either replacing or installing new
##
## $\2018\$C20790[[2]]
## [1] "replac,curb,ramp,minor,culvert,bridg,improv,instal,perman,traffic,pine,sidewalk,beacon,librari,
##
## $`2018`$C20852
## $\2018\$C20852[[1]]
## "the project installs water-proofing membrane over 4 existing bridge structures (f-15-dj, f-15- di,
##
## $\\2018\\$C20852[[2]]
## [1] "water,proof,membran,bridg,concret,girder,mill,pavement,drive,shoulder,drainag,improv"
##
##
## $`2018`$C20855
## $\2018\$C20855[[1]]
## "us 385 @ cheyenne wells 90 degree curve this project shall reconstruct the two(2) 90 degree curves
##
## $\2018\$C20855[[2]]
## [1] "reconstruct, instal, sidewalk, sewer, drainag, improv"
##
## $`2018`$C20869
## $\2018\$C20869[[1]]
## "region 1 wide - 9 bridges - this project consists of repairing bridge bearings for 3 bridges; abutm
## $\`2018\`$C20869[[2]]
## [1] "bridg,repair,bear,abut,rail,sandblast,paint,seal,slope,pave,debri,remov,anchor,bolt,embank,wast
##
##
## $`2018`$C20949
## $\2018\$C20949[[1]]
```

```
## "us 285, 2.5\" mill and fill from m.p. 171.3 to 174.98, passing lanes and turn lanes widening from m
## $\2018\$C20949[[2]]
## [1] "widen, culvert, pipe"
##
## $\^2018\^$C21245
## $\2018\$C21245[[1]]
## "this project is located on i-70 from mp 166.0 to 174.5, with work and mainline resurfacing between
## $\`2018\`$C21245[[2]]
## [1] "resurfac,construct,overlay,guardrail,rumbl,strip,stripe,bridg,rail,repair,eros,traffic"
##
## $`2018`$C21317
## $\2018\$C21317[[1]]
## "on sh 112, from us 285 to sh 17, work consists of hma leveling course, followed by hma overlay, sho
##
## $\2018\$C21317[[2]]
## [1] "level, overlay, shoulder, concret, ramp, sidewalk, pavement, mark"
##
## $`2018`$C21364
## $\2018\$C21364[[1]]
## "the smart 25 project limits are along nb i-25 from ridgegate to university. there is additional its
##
## $\2018\$C21364[[2]]
## [1] "instal, ramp, meter, fiber, conduit, pavement, mark, signal, split, motorway, widen, remov"
##
##
## $`2018`$C21559
## $\2018\$C21559[[1]]
## "sh 159 san luis to fort garland surf treatment. work consists of hma leveling course, hma overlay,
##
## $\2018\$C21559[[2]]
## [1] "surf,level,overlay,shoulder,pavement,mark"
##
## $`2018`$C21789
## $\2018\$C21789[[1]]
## "asphalt chip seal four locations: sh-79 from north of 48th avenue (bennett) to 112th avenue (mp 4.1
## $\2018\$C21789[[2]]
## [1] "asphalt,chip,seal,summit,rock"
##
##
## $`2018`$C21792
## $\2018\$C21792[[1]]
```

```
##
## "work consists of upgrading traffic signal controllers and cabinets to improve coordination and oper
## $\2018\$C21792[[2]]
## [1] "upgrad, traffic, signal, circl"
##
##
## $`2018`$C21852
## $\2018\$C21852[[1]]
##
## "this project consists of full depth reclamation of the existing asphalt, regrading, wetting and com
## $\2018\$C21852[[2]]
## [1] "reclam, asphalt, regrad, compact, overlay, shoulder, pavement, mark, delin, sign, panel"
##
##
## $`2018`$C21856
## $\2018\$C21856[[1]]
## "this is an intersection widening project. salient features include new signals and caissons, street
##
## $\2018\$C21856[[2]]
## [1] "intersect, widen, salient, signal, caisson, street, overlay, curb, gutter, rais, concret, drainag, pipe"
##
## $`2018`$C21876
## $\2018\$C21876[[1]]
## "this project entails the widening at sh60 and wcr40 to improve the safety of the corridor. southbou
##
## $\2018\$C21876[[2]]
## [1] "widen, safeti, deceler, minor, farmer, ditch, align, overlay"
##
##
## $`2018`$C21878
## $\2018\$C21878[[1]]
## "project im 0705-082 located on interstate 70 beginning at mp 380.0 and extending approximately 15.1
##
## $\\2018\\$C21878[[2]]
## [1] "interst, concret, overlay, pave, remov, asphalt, reclam, stripe"
##
## $`2018`$C21926
## $\2018\$C21926[[1]]
## "this resurfacing project is located on us highway 6 in mesa county. the project begins at mp 11.08
## $\2018\$C21926[[2]]
## [1] "resurfac, highway, overlay, shoulder, level, guardrail, ramp, epoxi, pavement, mark, junction"
##
##
## $`2018`$C21978
## $\2018\$C21978[[1]]
```

```
## "in southern colorado at various work locations consisting of highway pavement marking installations
## $\2018\$C21978[[2]]
## [1] "highway,pavement,mark,surfac,sign,remov,bypass"
##
##
## $`2018`$C22086
## $\2018\$C22086[[1]]
## "us550 mp 21.5-24.0 us160 mp 82.5-83.4 consists of installation of curb ramps at 19 locations within
## $\2018\$C22086[[2]]
## [1] "instal, curb, ramp"
##
##
## $`2018`$C22312
## $\2018\$C22312[[1]]
## "the south douglas creek box culvert (structure number 025a145120bl, mp 145.12) is a 400 feet long,
##
## $\2018\$C22312[[2]]
## [1] "culvert,concret,repair,flood,restor,embank,wall,bed,inlet,outlet,correct,rebar,trail,remov,sedi
##
## $`2018`$C22366
## $\2018\$C22366[[1]]
## "this project will consist of installation and reset of ramp metering at various locations in region
##
## $\2018\$C22366[[2]]
## [1] "instal,ramp,meter,highway,traffic,safeti"
##
##
## $\`2018\`$C22442
## $\2018\$C22442[[1]]
## "us 34 and us 287 in loveland ada curb ramp repair and replacement to prowag standards a mandatory p
## $\2018\$C22442[[2]]
## [1] "curb,ramp,repair,replac"
##
## $`2018`$C22499
## $\2018\$C22499[[1]]
## "this project consists of 3,500,000 sf of removal, 49,000 gallons of modified epoxy, 70,000 sf of in
## $\2018\$C22499[[2]]
## [1] "remov,epoxi,inlaid,thermoplast,plastic,tape,corridor"
##
##
## $\2018\$C22503
## $\2018\$C22503[[1]]
```

```
## "on us-24 from i-25 to morning sun drive (woodland park), work consists of installation of fiber opt
## $\2018\$C22503[[2]]
## [1] "drive, woodland, instal, fiber, cabl, conduit, manhol, ethernet, splice, test, teller, quail, lake"
##
##
## $\2018\$C22535
## $\2018\$C22535[[1]]
##
## "region 2 - pueblo county highways this project consist of removal and replacement of existing signs
## $\2018\$C22535[[2]]
## [1] "highway,remov,replac,sign,instal,panel"
##
##
## $`2018`$C22577
## $\2018\$C22577[[1]]
## "this work consist of removing and applying modified epoxy pavement marking and high contrast tape a
##
## $\2018\$C22577[[2]]
## [1] "remov, epoxi, pavement, mark, tape, weld"
##
## $\^2018\^$C22700
## $\2018\$C22700[[1]]
## "mtce 0253-267 #22700 fy19 r4 this project is located on i25 in larimer county from mp 269.0 to mp 2
##
## $\2018\$C22700[[2]]
## [1] "remov,replac,concret,panel,drive,temporari,traffic,mainten"
##
##
## $\`2018\`$C22703
## $\2018\$C22703[[1]]
## "i-25: 120th (sh 128) to sh 66 completion of sb and nb tolled express lane from 120th to e470. consi
##
## $\2018\$C22703[[2]]
## [1] "overlay,barrier,toll,street"
##
## $`2018`$C22760
## $\2018\$C22760[[1]]
## "this project includes work sites in adams, morgan, and weld counties from mm 25.14 to mm 100. the p
## $\2018\$C22760[[2]]
## [1] "weld, remov, tape"
##
##
## $`2018`$C20809
## $\2018\$C20809[[1]]
```

```
## "el paso county, colorado springs i-25 and rockrimmon this project has a mandatory pre-bid meeting of
## $\2018\$C20809[[2]]
## [1] "quail"
##
##
## $\2018\$C20407
## $\2018\$C20407[[1]]
                                                        Contract Description
## "i25 bridge replacements over butte creek at exit 59 - n-17-bn & n-17-s"
## $\2018\$C20407[[2]]
## [1] "bridg,replac"
##
##
## $`2018`$C20862
## $\2018\$C20862[[1]]
## "this project consists of removing a timber structure, a-24-1, and replacing with a double cell prec
##
## $\2018\$C20862[[2]]
## [1] "remov,timber,replac,traffic,construct,dewat,rip,rap,wingwal,flatten,slope,highway"
##
## $`2018`$C21020
## $\2018\$C21020[[1]]
## "bridge m-22-z replacement on sh 10 east of la junta. work to include earthwork, bridge demolition a
##
## $\2018\$C21020[[2]]
## [1] "bridg,replac,earthwork,demolit,guardrail,instal"
##
##
## $`2018`$C21686
## $\2018\$C21686[[1]]
## "ejmt:loop road/whistler/batch plant & us 40 berthod pass:80 a mandatory pre bid conference will be
## $\2018\$C21686[[2]]
## [1] "plant, mountain"
##
## $`2018`$C22441
## $\2018\$C22441[[1]]
## "upgrade ada ramps in various locations on us34 and us85 in greeley a mandatory pre-bid meeting will
## $\2018\$C22441[[2]]
## [1] "upgrad,ramp"
##
##
## $`2018`$C21088
## $\2018\$C21088[[1]]
```

```
## "sh-7 includes flood permanent repairs and a non flood shoulder widening and ada curve ramps. the pr
## $\2018\$C21088[[2]]
## [1] "flood,perman,repair,shoulder,widen,ramp,overlay,bike,culvert,ditch,replac"
##
##
## $`2018`$C22311
## $\2018\$C22311[[1]]
## "i-25 mp 155 monument creek branch this project's purpose is to restore the monument creek branch af
## $\2018\$C22311[[2]]
## [1] "branch, restor, concret, culvert, repair, construct, armor, boulder, riprap, grout, embank, seed, disturb, p
##
##
## $`2018`$C20180
## $\`2018\`$C20180[[1]]
## "this project is located along us 34d and 18th street with construction limits from mp 11.65 to mp 1
##
## $\2018\$C20180[[2]]
## [1] "street,construct,culvert,asphalt,remov,overlay,pavement,shoulder,concret,hydrodemolit,bridg,dec
##
## $`2018`$C21289
## $\2018\$C21289[[1]]
                                                                 Contract Description
## "permanent repairs from the flood of 2015 near sh 55 at the south platte river"
##
## $\2018\$C21289[[2]]
## [1] "perman, repair, flood, river"
##
##
## $`2018`$C21352
## $\2018\$C21352[[1]]
## "this project consists of permanent repairs to three areas affected by the 2015 flood event in color
##
## $\2018\$C21352[[2]]
"## [1] "perman, repair, flood, curb, instal, trench, drain, slope, regrad, replac, wall, grout, boulder, stabil"
##
## $\2018\$C20254
## $\2018\$C20254[[1]]
## "this project will consist of reconstructing 1.6 miles of two lane highway located on sh 144 between
## $\2018\$C20254[[2]]
## [1] "reconstruct, highway, align, river, grub, embank, rock, flood, base, asphalt, surfac, remov, fenc, tree, slop
##
##
## $`2018`$C22436
## $\2018\$C22436[[1]]
```

```
##
## "work includes removal of portions of existing bridge structure, removal of asphalt mat, construction
## $\2018\$C22436[[2]]
## [1] "remov,bridg,asphalt,construct,concret,culvert,wingwal,toewal,pave,patch,pavement,mark"
##
##
## $`2018`$C21146
## $\2018\$C21146[[1]]
##
## "this project entails the demolition and replacement of structure c-17-b with structure c-17-ft; a 7
## $\^2018\^$C21146[[2]]
## [1] "demolit,replac,bridg,curb,river,align,culvert,remov,embank,eros,fenc,stripe,traffic,pipe"
##
##
## $`2018`$C22320
## $\2018\$C22320[[1]]
## "the project will replace m-16-p on sh 69 near gardner. work will include building detour, removal o
##
## $\2018\$C22320[[2]]
## [1] "replac,remov,traffic"
##
##
## $`2018`$C22170
## $\2018\$C22170[[1]]
## "i-70 mp 56.77 wb in mesa county, bridge g-03-q over the colorado river overflow. bridge repairs inc
##
## $\\2018\\$C22170[[2]]
## [1] "bridg,river,repair,fatigu,crack,steel,girder,drill,bolt,weld,deck,replac,waterproof,membran,rai
##
##
## $`2018`$C22359
## $\2018\$C22359[[1]]
## "i-70 mp 88.55 wb in garfield county, bridge f-05-1 over the colorado river. bridge repairs include:
##
## $\2018\$C22359[[2]]
## [1] "bridg,river,repair,fatigu,crack,steel,girder,drill,weld,paint,deck,replac,slab,concret,overlay,
##
## $`2018`$C22360
## $\2018\$C22360[[1]]
## "i-70 mp 158.85 eb in eagle county, bridge f-10-l over the eagle river, us6, and uprr. bridge repair
## $\2018\$C22360[[2]]
## [1] "bridg,river,repair,fatigu,crack,steel,girder,drill,weld,paint,deck,replac,waterproof,membran,ra
##
##
## $`2018`$C21012
## $\2018\$C21012[[1]]
```

```
##
## "arkansas river bridge replacement project on sh 71. work to include installation of construction ac
## $\2018\$C21012[[2]]
## [1] "river, bridg, replac, instal, construct, remov, earthwork, stripe, guardrail"
##
## $`2018`$C21011
## $\2018\$C21011[[1]]
## "this project will replace structure k-17-f on sh 96 with box culvert k-17-ff. work will include bui
## $\^2018\^$C21011[[2]]
## [1] "replac,culvert,remov,traffic"
##
##
## $`2018`$C21864
## $\2018\$C21864[[1]]
## "sh 71 and sh 94 in lincoln county this is intersection safety improvement project which includes 2\
##
## $\2018\$C21864[[2]]
## [1] "intersect, safeti, asphalt, overlay, instal, rumbl, strip, stripe"
##
## $`2018`$C19796
## $\2018\$C19796[[1]]
## "sh 145 in dolores, remove and replace concrete flatwork and other minor items; including sign repla
##
## $\2018\$C19796[[2]]
## [1] "remov,replac,concret,flatwork,minor,sign,traffic,emerg,librari,railroad"
##
##
## $`2018`$C22167
## $\2018\$C22167[[1]]
## "us 287 from mp 0.00 (state line) to mp 133.0 (r2 border) this project proposes to install centerlin
##
## $\2018\$C22167[[2]]
## [1] "instal,centerlin,rumbl,strip"
##
## $`2018`$C21594
## $\2018\$C21594[[1]]
## "furnish and install overheight detection systems, including detectors, blank out signs, cabinets, c
## $\2018\$C21594[[2]]
## [1] "furnish,instal,sign,conduit,circl"
##
##
## $\^2018\^$C22457
## $\2018\$C22457[[1]]
```

```
## "i-70 mm 37.0 to 67.5, mesa and garfield counties this project is located on interstate 70 both east
## $\2018\$C22457[[2]]
## [1] "interst, marker, plastic, pavement, mark, inlaid, centerlin"
## $\2018\$C22701
## $\2018\$C22701[[1]]
## "this project is located on i-70 in arapahoe, elbert, lincoln and kit carson counties from m.p. 328.
## $\2018\$C22701[[2]]
## [1] "seal,crack,concret,pavement,temporari,traffic,salient,clean,pour,instal"
##
## $`2018`$C22177
## $\2018\$C22177[[1]]
## "this project, mtce 0712-017, is located on sh-71d in washington county and lincoln county from m.p.
##
## $\2018\$C22177[[2]]
## [1] "chip, seal, shoulder, cover, coat, asphalt, stripe"
##
## $`2018`$C22230
## $\2018\$C22230[[1]]
## "project no: mtce r100-296 subacct: 22230 location: sh 72 and sh 74 in jefferson, gilpin, and boulde
##
## $\2018\$C22230[[2]]
## [1] "boulder, remov, replac, instal, sign, panel, furnish, post, eros, traffic"
##
##
## $`2018`$C22322
## $\2018\$C22322[[1]]
## "this signing project will replace, remove, or install sign panels and overhead sign structures on u
##
## $\2018\$C22322[[2]]
## [1] "replac, remov, instal, sign, panel"
##
## $\^2018\^$C22471
## $\2018\$C22471[[1]]
## "asphalt chip seal two locations: sh-86 from sh-83 (franktown) to doglas/elbert county line (mp 6.8
## $\2018\$C22471[[2]]
## [1] "asphalt,chip,seal,drive"
##
##
## $\^2018\^$C22237
## $\2018\$C22237[[1]]
```

```
##
## "description of project this project will consist of removal and replacement of highway signs, posts
## $\2018\$C22237[[2]]
## [1] "remov,replac,highway,sign,post,seal"
##
##
## $\^2018\^$C22432
## $\2018\$C22432[[1]]
## "this project consists of grinding existing pavement markings and restriping with modified epoxy pav
##
## $\2018\$C22432[[2]]
## [1] "grind, pavement, mark, epoxi, roadway"
##
##
## $`2018`$C22309
## $\2018\$C22309[[1]]
## "remove and replace class i & ii sign panels on us 550, us 160 and sh 140 in la plata and san juan c
##
## $\2018\$C22309[[2]]
## [1] "remov,replac,sign,panel,post"
##
## $`2018`$C22310
## $\2018\$C22310[[1]]
## "the project consists of striping 665 miles of highway in region 5. the highways consist of: sh3, sh
##
## $\2018\$C22310[[2]]
## [1] "stripe, highway"
##
##
## $`2018`$C22477
## $\2018\$C22477[[1]]
## "crack sealing project within cdot's region-5 maintenance section 3: this project consists of placin
##
## $\2018\$C22477[[2]]
## [1] "crack, seal, mainten, heat, sealant, transvers, highway, asphalt, bridg, deck, concret"
##
##
## $`2018`$C21774
## $\2018\$C21774[[1]]
## "us 85 and weld county road 18 project contain removal of existing asphalt, concrete, base material,
## $\2018\$C21774[[2]]
## [1] "weld, remov, asphalt, concret, base, excav, fiber, traffic, signal"
##
##
## $\^2018\^$C21290
## $\2018\$C21290[[1]]
```

```
##
## "this project is located within moffat county, along us 40, with project limits beginning at mp 31 a
## $\2018\$C21290[[2]]
## [1] "surfac, overlay, guardrail, replac, pavement, mark, traffic"
##
##
## $\2018\$C20842
## $\2018\$C20842[[1]]
##
## "the project work includes a 2.5\" mill and 2\" fill surface treatment, guardrail replacement, sign
## $\2018\$C20842[[2]]
## [1] "surfac, guardrail, replac, sign, culvert, sediment, heav, repair, pavement, mark, traffic"
##
##
## $`2018`$C22415
## $\`2018\`$C22415[[1]]
## "this project is located in the city of delta on us50 mp 70.93 to 72.38 and sh348, mp 0.00 to mp 0.7
##
## $\2018\$C22415[[2]]
## [1] "replac, curb, ramp"
##
## $`2018`$C21201
## $\2018\$C21201[[1]]
## "this project entails the resurfacing of the travel lanes of i-70 between approx mp 68 and mp 75, in
##
## $\2018\$C21201[[2]]
## [1] "resurfac, overlay, shoulder, heav, guardrail, bridgerail, replac, sliplin, culvert"
##
##
## $`2018`$C21696
## $\2018\$C21696[[1]]
## "this is a surface treatment project located within garfield county, along interstate 70, with proje
##
## $\2018\$C21696[[2]]
## [1] "surfac,interst,remov,asphalt,mill,replac,pavement,waterproof,membran,slab,mark,traffic"
##
## $`2018`$C21224
## $\2018\$C21224[[1]]
## "the project will consist of repairing the existing damaged/leaking plenum waterproofing membrane for
##
## $\2018\$C21224[[2]]
## [1] "repair, leak, plenum, waterproof, membran, tunnel, replac, mainten, portal"
##
##
## $`2018`$C22231
## $\2018\$C22231[[1]]
```

```
## "the project includes three (3) site locations. two (2) site locations are in jefferson county and or
## $\2018\$C22231[[2]]
## [1] "guardrail, barrier, concret, pave, interchang"
##
##
## $\2018\$C22250
## $\2018\$C22250[[1]]
##
## "east clear creek county & west jefferson county on i-70 the bridge preventative maintenance project
## $\2018\$C22250[[2]]
## [1] "bridg, mainten, deck, repair, waterproof, membran, remov, replac, leak"
##
##
## $`2018`$C22484
## $\`2018\`$C22484[[1]]
## "i-70b&z in mesa county this project is located in the city of grand junction along i-70a between mi
##
## $\2018\$C22484[[2]]
## [1] "junction, milepost, improv, curb, ramp, gutter, sidewalk"
##
## $`2018`$C22027
## $\2018\$C22027[[1]]
## "sh 72: 64th ave at indiana st this project consists of drilled caissons, conduit, traffic signal eq
##
## $\`2018\`$C22027[[2]]
## [1] "drill,caisson,conduit,traffic,signal,concret,sidewalk,replac"
##
##
## $\2018\$C22227
## $\2018\$C22227[[1]]
## "a portion of the 250 feet retaining wall has been damaged. remove the remaining section of the wall
##
## $\2018\$C22227[[2]]
## [1] "portion, retain, wall, remov, reconstruct, concret, reinforc, gutter, drain, water"
##
## $`2018`$C20705
## $\2018\$C20705[[1]]
\#\# "full project limits are mm 144.29 - mm 158.56. the full projects limits will mainly include a total
## $\2018\$C20705[[2]]
## [1] "surfac, level, overlay, stripe, replac, delin, upgrad, bridg, repair, patch, widen, geohazard, culvert, ditc
##
##
## $\^2018\^$C22010
## $\2018\$C22010[[1]]
```

```
## "project nhpp 1602-166 located in la plata county colorado east of durango on us 160. project starts
## $\2018\$C22010[[2]]
## [1] "patch,level,overlay, shoulder, guardrail, replac, stripe, delin, night"
##
## $\2018\$C20799
## $\2018\$C20799[[1]]
##
## "remove existing lighting from the us 550 red mtn pass snow shed tunnel at mp 88.15. replace with ne
## $\2018\$C20799[[2]]
## [1] "remov, snow, tunnel, replac, led"
##
##
## $`2018`$C20894
## $\2018\$C20894[[1]]
                                                                    Contract Description
## "lighted chain stations in san juan, ouray, chaffee, saquache, and mineral county."
##
## $\2018\$C20894[[2]]
## [1] "miner"
##
## $`2018`$C21743
## $\2018\$C21743[[1]]
## "chip seal and pavement markings will be installed on us 550 mp 37.30-44.00. centerline rumble strip
##
## $\2018\$C21743[[2]]
## [1] "chip,seal,pavement,mark,centerlin,rumbl,strip"
##
##
## $`2018`$C20737
## $\2018\$C20737[[1]]
## "signal replacement, roadway improvements, ada ramp and sidewalk construction at 32nd, 22nd and 17th
##
## $\2018\$C20737[[2]]
## [1] "signal,replac,improv,ramp,sidewalk,construct,street"
##
## $`2018`$C20805
## $\2018\$C20805[[1]]
## "project # nhpp c470-041 pcn# 20805 sh 67, east&west plum crk,sh83 antelope crk, sh 86 plum crk scou
## $\2018\$C20805[[2]]
## [1] "plum, excav, riprap, pile, landscap, traffic"
##
##
## $\2018\$C20873
## $\2018\$C20873[[1]]
```

```
##
## "culvert repairs utilizing spray lining methods in cdot region 1, including replacement of failed wi
## $\2018\$C20873[[2]]
## [1] "culvert,repair,spray,replac,wall,soil,nail"
##
##
## $\2018\$C22022
## $\2018\$C22022[[1]]
##
## "region 1 up-grade ada curb ramp at various locations. work includes curb ramp, sidewalk, and curb a
## $\2018\$C22022[[2]]
## [1] "grade, curb, ramp, sidewalk, gutter, remov, replac, turnpik, street"
##
##
## $`2018`$C22414
## $\`2018\`$C22414[[1]]
## "location: city of delta, colorado us 50 mp 69.14 to mp 71.84 sh 92 mp 0.00 to mp 1.47 this project?
##
## $\2018\$C22414[[2]]
## [1] "emerg"
##
##
## $`2018`$C22314
## $\2018\$C22314[[1]]
## "state highway 21 and omaha blvd intersection improvements to remove left turn movements to and from
##
## $\2018\$C22314[[2]]
## [1] "highway,intersect,improv,remov,island,embank,base,pave,curb,gutter,pavement,mark"
##
##
## $`2018`$C20288
## $\2018\$C20288[[1]]
## "this is a wildlife fence project located in garfield and mesa counties, along i -70 with project li
##
## $\\2018\\$C20288[[2]]
## [1] "fenc,ramp,deer,guard,traffic"
##
## $`2018`$C22410
## $\2018\$C22410[[1]]
## "i-70 mp 30.61-mp 32.2 mesa county this project involves the removal of 4,520 lf of type 3 guardrail
## $\2018\$C22410[[2]]
## [1] "remov,guardrail,shoulder,replac,termin,instal,tension,cabl,barrier,concret,strip,anchorag"
##
##
## $`2018`$C21847
## $\2018\$C21847[[1]]
```

```
##
## "project will install a traffic signal at sh1 and i-25 southbound ramp in wellington. work will cons
## $\2018\$C21847[[2]]
## [1] "instal,traffic,signal,ramp,conduit,pole"
##
##
## $`2018`$C20945
## $\2018\$C20945[[1]]
## "the scope of work consists of a 3-4\" mill and overlay from lemay to i-25, full depth turn lane wid
## $\2018\$C20945[[2]]
## [1] "overlay, widen, reconstruct, timberlin, pave, curb, ramp, replac, cabl, rail, culvert, signal, stripe"
##
##
## $`2018`$C20715
## $\2018\$C20715[[1]]
## "sh 52 m.p. 62.23 salient features: 1)embankment 2)aggregate base course (class 6) 3)hot mix asphalt
##
## $\2018\$C20715[[2]]
## [1] "salient,embank,base,asphalt,riprap,concret,pipe,construct"
##
## $`2018`$C20768
## $\2018\$C20768[[1]]
## "this project is located in sedgwick county on sh 138. work will include bridge replacement, hma pav
##
## $\2018\$C20768[[2]]
## [1] "bridg, replac, pave, pavement, mark, curb, ramp, rip, rap"
##
##
## $`2018`$C21193
## $\2018\$C21193[[1]]
## "sh 141 mm 160 to 161.3 and i-70b mm 11.47 to mm 11.67 in mesa county. the clifton traffic signal re
## $\2018\$C21193[[2]]
## [1] "traffic, signal, replac, pole, mast, instal, conduit, sign, pedestrian, curb, ramp"
##
## $`2018`$C20511
## $\2018\$C20511[[1]]
## "this project has two separate areas of work. one area is located on sh-177 from easter ave. to hamp
## $\2018\$C20511[[2]]
## [1] "curb,ramp,bridg,deck,replac,rehabilit,signal,orchard,intersect,culvert,repair,stripe"
##
##
## $`2018`$C20927
## $\2018\$C20927[[1]]
```

```
## "this project is a cdot region 2 traffic signal project. this project will incorporate the removal a
## $\2018\$C20927[[2]]
## [1] "traffic,signal,remov,replac,intersect"
##
##
## $\2018\$C20942
## $\2018\$C20942[[1]]
## "this project consists of traffic signal pole replacement including removals, poles, conduit, heads,
## $\2018\$C20942[[2]]
## [1] "traffic, signal, pole, replac, remov, conduit, stripe, curb, gutter, pavement, patch, bus"
##
##
## $`2018`$C20940
## $\2018\$C20940[[1]]
## "this project consists of furnish and install: traffic signal controller cabinets, traffic signal controller
##
## $\2018\$C20940[[2]]
## [1] "furnish,instal,traffic,signal,conduit,ethernet,meter,concret,sawcut,patch,street"
##
## $`2018`$C21450
## $\2018\$C21450[[1]]
## "us 24 from approx 289 to 301 us 24 rockfall mitigation: 16 sites locations, mitigation includes sca
##
## $\2018\$C21450[[2]]
## [1] "rockfal,ditch,clean,concret,barrier,rock,bolt,quail,lake"
##
##
## $`2018`$C22383
## $\2018\$C22383[[1]]
## "r2 ada ramps i-25 int s nev- n acad replacing and or modifying curb ramps along the i-25 and the sh
##
## $\2018\$C22383[[2]]
## [1] "ramp,replac,curb,quail,lake"
##
## $\^2018\^$C20759
## $\2018\$C20759[[1]]
## "sh 9 summit boulevard mp 96.1 to mp 97.2, this project shall include hma resurfacing, ada curb ramp
## $\2018\$C20759[[2]]
## [1] "summit,resurfac,curb,ramp,signal,mountain,tunnel"
##
##
## $\^2018\^$C20950
## $\2018\$C20950[[1]]
```

```
## "sh 69 mp 25.7 to mp 50.1.this project consists of a 1.5\" hma overlay, 1.0\" hma leveling course at
## $\2018\$C20950[[2]]
## [1] "overlay,level,rotomil,shoulder,seed,mulch,replac,guardrail,instal,delin,rumbl,strip,stripe"
##
##
## $`2018`$C20915
## $\2018\$C20915[[1]]
## "this project is located within pitkin and gunnison counties, along state highway 133, with project
## $\2018\$C20915[[2]]
## [1] "highway,construct,heat,remix,chip,seal,guardrail,pavement,mark,traffic"
##
##
## $`2018`$C21262
## $\2018\$C21262[[1]]
## "this project is located on sh 133 in delta and gunnison counties. the project begins at mp 11.43 an
##
## $\2018\$C21262[[2]]
## [1] "bitumin,pavement,recycl,overlay,shoulder,guardrail,epoxi,mark,bridg,concret,fenc,replac"
##
## $`2018`$C21091
## $\2018\$C21091[[1]]
## "archuleta county, replacement of two 84\" corrugated metal pipes with one 12' x 8' precast concrete
##
## $\`2018\`$C21091[[2]]
## [1] "replac,metal,pipe,concret,culvert,pavement,guardrail,asphalt,pave"
##
##
##
## $\2019\
## $\2019\$C20258
## $\2019\$C20258[[1]]
                                                                                    Contract Description
## "this is a combo project with 20258 for a reconstruction, resurfacing and a boulder trail project."
## $\2019\$C20258[[2]]
## [1] "reconstruct, resurfac, boulder, trail"
##
## $`2019`$C20334
## $\2019\$C20334[[1]]
## "the overall project consists of the permanent flood repairs along sh 72 in coal creek canyon. the s
## $\2019\$C20334[[2]]
## [1] "perman, flood, repair, coal, culvert, replac, armor, bank, pave, shoulder, traffic, stripe"
##
##
```

##

```
## $`2019`$C20600
## $\2019\$C20600[[1]]
## "sh 145 san miguel county, illium road to deep creek road. widening to add uphill passing lane and in
## $\2019\$C20600[[2]]
## [1] "widen, shoulder, reinforc, soil, slope, wall, retain, guardrail, instal, culvert, replac, concret, superele
##
## $`2019`$C20740
## $\2019\$C20740[[1]]
## "this project is located in la plata county on us 160, us 550, and sh 3. the work consists of signal
##
## $\2019\$C20740[[2]]
## [1] "signal, intersect"
##
##
## $`2019`$C20789
## $\\2019\\$C20789[[1]]
## "sh96a (lincoln st): abriendo ave to orman ave, pueblo, pueblo county this project consist of replac
##
## $\2019\$C20789[[2]]
## [1] "replac, signal, street, intersect, remov, traffic, instal, curb, ramp, drainag"
##
## $`2019`$C20813
## $\2019\$C20813[[1]]
## "this project is located on us 6 (mm 174.40)/us 24 (mm 148.0) in eagle county. the work includes res
##
## $\2019\$C20813[[2]]
## [1] "resurfac, sidewalk, improv, guardrail, rockfal, drainag, wall, stripe, traffic"
##
##
## $\2019\$C20892
## $\2019\$C20892[[1]]
## "i25 and i76/i270 interchange and i25/i70 interchange limited deck repairs, thin bonded polyester co.
## $\\2019\\$C20892[[2]]
## [1] "interchang, deck, repair, polyest, concret, overlay, remov, replac, saw, seal, bridg, rail, portion, clearan
##
## $`2019`$C20908
## $\2019\$C20908[[1]]
##
## "us 287 passing lanes south of lamar. this project will add a new northbound passing lane from mp 50
## $\2019\$C20908[[2]]
## [1] "climb,remov,concret,asphalt,pavement,pave,base,embank,topsoil,seed,guardrail,stripe"
##
```

##

```
## $`2019`$C21010
## $\2019\$C21010[[1]]
## "work includes replacement of existing structurally deficient bridge d-13-a over the north fork of t
## $\2019\$C21010[[2]]
## [1] "replac, bridg, river, improv, drainag, pavement, traffic, stripe, mountain"
##
## $`2019`$C21229
## $\2019\$C21229[[1]]
## "sh-67 resurfacing in sedalia. 1.5 mile long 2\ hma mill & fill. includes 2' widening for 500' in 1
##
## $\2019\$C21229[[2]]
## [1] "resurfac, widen, bridg, repair, deck, water, proof, membran, rail, guardrail, instal, upgrad"
##
##
## $`2019`$C21463
## $\\2019\\$C21463[[1]]
## "this project is located in mesa county on state highway 141. the work consists of a 2\" hot in plac
##
## $`2019`$C21463[[2]]
## [1] "highway,recycl,overlay,asphalt,pave,shoulder,widen,guardrail,bridg,rail,replac,delin,stripe,mil
##
## $`2019`$C21796
## $\2019\$C21796[[1]]
## "this project will resurfacing sh-74 from i-70 and extend approximately 2.0 miles to bergen pkwy. in
##
## $\2019\$C21796[[2]]
## [1] "resurfac,instal,waterproof,membran,remov,replac,curb,gutter,ramp,stripe"
##
##
## $`2019`$C21831
## $\2019\$C21831[[1]]
## "this project is a surface treatment project on i-25 from mile post 79.6 to 92. this will be a mill
## $\\2019\\$C21831[[2]]
## [1] "surfac,minor,bridg,guardrail,improv"
##
## $`2019`$C21892
## $\2019\$C21892[[1]]
##
## "the proposed project constructs a new two-lane vehicular bridge over clear creek which will connect
## $\2019\$C21892[[2]]
## [1] "bridg,river,interchang,reconstruct,slab,guardrail,minor,drainag,improv,stripe"
##
##
```

```
## $`2019`$C21923
## $\2019\$C21923[[1]]
## "historic wall stabilization and repair. southbound i-25 noise wall repair. work is at two sites wit
## $\2019\$C21923[[2]]
## [1] "wall, stabil, repair, seal"
##
## $`2019`$C21943
## $\2019\$C21943[[1]]
## "this project consist of replacing the traffic signal equipment at three(3) locations, along with up,
##
## $\2019\$C21943[[2]]
## [1] "replac,traffic,signal,upgrad,curb,ramp,island,improv"
##
##
## $`2019`$C22025
## $\\2019\\$C22025[[1]]
## "intersections @ sh83/longs way & us40/dunkirk this project is a part of the highway safety improvem
##
## $\\2019\\$C22025[[2]]
## [1] "intersect, highway, safeti, improv, instal, rais, island, cover, curb, ramp, gutter, stripe, widen, realign,
##
## $`2019`$C22031
## $\2019\$C22031[[1]]
## "this project is located along i-70, within garfield county, from approximate mp 107 to mp 116. the
##
## $\`2019\`$C22031[[2]]
## [1] "improv,park,vehicl"
##
##
## $`2019`$C22261
## $\2019\$C22261[[1]]
## "this project is located on state highway 14 at the weld cr 33 intersection at milepoint 152.17, wes
## $\\2019\\$C22261[[2]]
## [1] "highway, weld, intersect, milepoint, asphalt, mill, pave, earthwork, stripe, widen, shoulder"
##
## $`2019`$C22377
## $\2019\$C22377[[1]]
##
## "this project is located in moffat county on sh 13 north of craig between mp 115.3 and 120.8. the pr
## $\2019\$C22377[[2]]
## [1] "reconstruct, widen, earthwork, pave, culvert, improv, fenc, guardrail, stripe, seed, eros"
##
##
```

```
## $^2019`$C22800
## $^2019`$C22800[[1]]
##
## "region-wide highway striping in region 5. match existing pavement markings with new white and yellow
## $^2019`$C22800[[2]]
## [1] "highway,stripe,pavement,mark,pain"
##
## $^2019`$C22898
## $^2019`$C22898
## $^2019`$C22898[[1]]
##
## "project consists of removing existing thermoplastic pavement markings and installing new thermoplas
##
## $^2019`$C22898[[2]]
## [1] "remov,thermoplast,pavement,mark,highway"
```