**Differential value based on Current Assessment**

if (Current Assessment <= $250,000)

then

Differential\_percent = 6%

elseif (Current Assessment > $250,000 AND Current Assessment <= $500,000)

then

Differential\_percent = 3%

else (i.e. Current Assessment > $500,000)

Differential\_percent = 2%

endif

**Differential\_value** = (100 – Differential\_percent)/100

This value is used in the rest of the calculations.

**For properties valued at more than $2,000,000**

For properties where Subject Sale Price is not available, the Current Assessment should be used.

**For Case 1:**

If (Subject Sale Price available AND Subject Sale Price > $2,000,000)

then

Discard 20% Living area variance filter condition

else if Sale Price is not available in recent sale use condition (Current Assessment > $2,000,000)

Discard 20% Living area variance filter condition

endif

**For Case 2** (i.e. no recent Sale), use only Current Assessment in this condition

**Selection criteria using Subject property**

**For recent sales i.e. the subject property sold within 18 months before the date of value and/or 12 months after the date of value (Case 1).**

If ((date of value - Subject Property Sale date) <= 18 months OR (Subject Property Sale Date - Date of value) <= 12 months)

then (**Case 1**: recent sale)

if (Sale Price < Current Assessment)  
 then

if (Subject Sale Price <= Differential\_value \* Current Assessment) then

Appeal Amount = Sale Price

Apply Case 1 Selection Criteria

else

No Appeal

endif

else (Sale Price >= Current Assessment)

* No appeal recommendation

endif

else (**Case 2:** Sale is not recent**)**

**Step 1:**

* Get the comps on basis of Search Criteria
* Apply adjustments to the data coming from Corelogic
* Sort by distance from subject
* Sort by Adjusted Sale Price/SF
* Eliminate sales outside the 20% living area variance, if Subject Sale Price (or Current Assessment, as explained above) < $2,000,000
* Outlier percent (10%), outlier range from the assessment/SF (0.90\*current assessment/SF <= Comparable adjusted sale price/SF) where Outlier\_value = (100 - Outlier\_percent)/100
* Take the 5 lowest Sale Price/SF
* If count is less then 3 => No appeal, else if only 1 or 2 sales having Adjusted Sale Price/SF < Differential\_value \*Assessment/SF then => No appeal
* For an appeal, at least for 3 or more Sale Price/SF out of 5 should be > Outlier\_value \* Assessment / SF and < Differential\_value \* Assessment/SF. In such a case, take the average of Sale Price/SF of 3 or more sales (Adjusted Sale Price/SF) and multiply with Subject Living area.

**If an appeal is recommended in Step 1, then do the following,**

**Step 2:**

1. Get the comparables on basis of Search Criteria
2. Apply adjustments to the data coming from Corelogic
3. Sort by distance from subject
4. Eliminate sales outside the 20% living area variance, if Current Assessment < $2,000,000
5. Take the 5 closest Sale Price/SF up to 0.3 miles from the subject.
6. Mathematically exclude any outliers on a per SF basis. Refer to this link <https://www.youtube.com/watch?v=6VUqR5gXkuI> or https://www.techwalla.com/articles/how-to-use-the-outliers-function-in-excel
7. If average of 5 closest sales is higher than assessment/SF then no appeal.

**Hence, the following is the logic**

1. Do step 1 analysis.
2. If step 1 says no appeal then stop (NO APPEAL RECOMMENDED).
3. If step 1 says appeal then do step 2 analysis to confirm.
4. If step 2 says no appeal then stop (NO APPEAL RECOMMENDED).
5. If step 2 says appeal then we recommend appeal (APPEAL RECOMMENDED).
6. The appeal amount will be the lower of the average of either the sales in step 1 or the sales in step 2.

**Calculate Tax Savings**

An appeal is recommended when the tax savings are a minimum of $200.

Tax Savings = (Current Assessment – Appeal Amount) \* Tax Rate

Tax Rate = [RealEstateTotalTaxAmount] / [TotalAssessedValueAmount], where both these fields are picked from Corelogic. **[TotalAssessedValueAmount] could be same as the Assessed Value Amount entered by the user in the first screen, but not necessarily so**.

**Search criteria to Corelogic to fetch comparables**

* Radius within which comparable to be searched - 2 miles
* Residential type (Same as subject type)
* Living area variance percent +/- 50%
* Months back from date of valuation – 12
* Number of comparables to be returned - 250

**Selection Criteria for Case 1**

* Sale Price is our final Assessment Value
* Get the comparables on basis of Search Criteria for Corelogic
* Apply adjustments to the data coming from Corelogic according to the lookup table for the jurisdiction
* Sort by distance from subject
* Sort by Adjusted Sale Price/SF
* Eliminate sales outside the 20% living area variance if Subject Sale Price (or Current Assessment, as explained above) < $2,000,000
* Initalize Comp\_list;

**Tier 1 Selection**

Select top 5 sales that are within 1% of the sale price/sf of the subject property

If (number of comparable 1% Sales >= 3 and <= 5)

then STOP (end process and use these sales) (Tier 1 applicable only, Tier 2 and Tier 3 will not be considered)

Comp\_list = (3-5) Comparable Sales in 1% range;

Show this Comp\_list in Phase 2;

else

Count\_of\_Comp\_List = number of comparable 1% Sales;

Select down from 1% to the 20% range i.e. we pick the Comparable Adjusted Sale Price/SF downward from the Subject Sale Price to the -20% of the Subject Sale Price.

If (Count of Comparable Adjusted Sale Price/SF outside the -20% range for Subject Sale Price/SF) < 5 – Count of Comp\_list

then

Add to the Comp\_list the Comparables within the -20% range

Stop after a minimum of 3 and max of 5 (a minimum of 1 would do here)

Pick all Comparables (even outside -20% range of Sale Price/SF)

Apply tier 2

Stop after a minimum of 3 and max of 5

Apply tier 3

else

Add to the Comp\_list the Comparables within the -20% range

Stop and show this in Phase 2

endif

endif

**Tier 2 Selection**

If (Count of Comp\_list < 5 ) then

If (Comparable Adjusted Sale Price/SF < = (100 – Differential Value)/100 \*Current Assessment/SF)

Add to Comp\_list

endif

endif

**Tier 3 Selection**

If (Count of Comp\_list < 5 ) then

If there are no sales below Assessment/SF, then

* Pick the remaining sales having Comparable Adjusted Sale Price/SF closest to Subject Sale Price/SF
* Apply downward condition adjustments i.e. take an overall condition adjustment to get the lowest sales down to subject’s Sale Price/SF. Subtract the Sale Price/SF from Comparable Sale Price/SF and the difference is the condition adjustment.
* Add to Comp\_list

endif

endif

Go ahead with the Appeal even if there is only one sale in either 1% or 20% or both

**Calculate Adjustments For Each Comparable**

Step 1 – Fetch the adjustment values for particular state (managed from admin panel)

Step 2 – Calculate adjustments for each comparable using the below formulas:-

Values to be used according to sale price categories -

Category 1 – price < 750000

Category 2 – price >= 750000 & < 1500000

Category 3 – price >= 1500000

|  |  |  |
| --- | --- | --- |
| **Adjustment Name** | **Percent (%) Formula** | **Price ($) Formula** |
| ~~date\_of\_sale~~ | ~~(comparable\_sale\_price \*~~ ~~sale\_price\_value) \*~~ ~~difference of date\_of\_sale\_of\_subject\_property\_and\_compartable~~ | ~~difference of date\_of\_sale\_of\_subject\_property\_and\_compartable \* sale\_price\_value~~ |
| parcel\_size | If parcel\_size of comparable is greater than subject property by 100% -  (subject\_property\_parcel\_size – comparable\_parcel\_size) \* parcel\_size\_greater\_than\_subject\_percent\_value  ~~If parcel\_size of comparable is less than subject property by 50% -~~  ~~(subject\_property\_parcel\_size – comparable\_parcel\_size) \* parcel\_size\_less\_than\_subject\_percent\_value~~ | If parcel\_size of comparable is greater than subject property by 100% -  (subject\_property\_parcel\_size – comparable\_parcel\_size) \* parcel\_size\_greater\_than\_subject\_value  ~~If parcel\_size of comparable is less than subject property by 50% -~~  ~~(subject\_property\_parcel\_size – comparable\_parcel\_size) \* parcel\_size\_less\_than\_subject\_value~~ |
| interior\_v\_corner | Not used as field not returned in Corelogic Array  - | |
| above\_grade\_sf | (subject\_property\_square\_footage - comparable\_square\_footage) \* square\_footage\_percent\_value | (subject\_property\_square\_footage - comparable\_square\_footage) \* square\_footage\_price\_value |
| total\_bedrooms | (subject\_property\_bedrooms – comparable\_bedrooms) \* above\_grade\_bedrooms\_percent\_value | (subject\_property\_bedrooms – comparable\_bedrooms) \* above\_grade\_bedrooms\_value |
| total\_bathrooms | (subject\_property\_bathrooms – comparable\_bathrooms) \* above\_grade\_bathrooms\_percent\_value | (subject\_property\_bathrooms – comparable\_bathrooms) \* above\_grade\_bathrooms\_value |
| finished\_space | ~~(subject\_property\_finished\_space – comparable\_finished\_space) \* below\_grade\_finished\_space\_percent\_value~~ | ~~(subject\_property\_finished\_space – comparable\_finished\_space) \* below\_grade\_finished\_space\_value~~ |
| unfinished\_space | ~~(subject\_property\_unfinished\_space – comparable\_unfinished\_space) \* below\_grade\_unfinished\_space\_percent\_value~~ | ~~(subject\_property\_unfinished\_space – comparable\_unfinished\_space) \* below\_grade\_unfinished\_space\_value~~ |
| garage | - | (subject\_property\_garage\_count – comparable\_garage\_count) \* per\_garage\_space\_value |
| included\_carport | - | (subject\_property\_carport – comparable\_carport) \* per\_carport\_value |
| swimming\_pool | - | (subject\_property\_swimming\_pool – comparable\_swimming\_pool) \* per\_swimming\_pool\_value |
| fireplace | - | (subject\_property\_fireplace\_count – comparable\_fireplace\_count) \* per\_fireplace\_value |

In the above calculations, the following points need to be considered:

* For Basement, we have the following 3 possibilities:
  1. If [\_AreaSquareFeet] = [\_FinishedAreaSquareFeet], then Basement Unfinished Space is 0 and Basement Finished Space = [\_FinishedAreaSquareFeet]
  2. If [\_AreaSquareFeet] has a value, and [\_FinishedAreaSquareFeet] is empty, then then Basement Unfinished Space = [\_AreaSquareFeet] and Basement Finished Space = 0
  3. If [\_AreaSquareFeet] > [\_FinishedAreaSquareFeet], then Basement Unfinished Space is [\_AreaSquareFeet] - [\_FinishedAreaSquareFeet] and Basement Finished Space = [\_FinishedAreaSquareFeet]
* Lastly, make final adjustments with the “additional homeowner information” given by the customer. Subtract the values of each “additional homeowner information” selected by the customer