



# The Long and Widening Road

## A Cause for Proximity Damage

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There are many forms of proximity damage, one of which results from road widening. In this situation, proximity damage can occur when a roadway is widened and results in a partial take of land, while the residence remains. As a result, the front yard setback to the residence is substandard, as the road is within the safe line distance. With a decreased front yard setback, the resident is faced with an increase in noise, dirt, traffic, vibration, dust, as well as diminished privacy. Therefore, the residence is considered less livable and hence, the property is damaged.

The safe line theory defines the point where a resident is not adversely impacted by noise and reduced privacy relative to their home's proximity to the roadway. The safe line is essentially the typical front yard setback of existing and new homes on either the subject's roadway or a comparable roadway. It is believed that new homes in particular adhere to this theory, as a developer would not intentionally construct a residence with objectionable qualities. It is in everyone's best interest to evaluate a large sampling of homes along a roadway project before determining the appropriate safe line distance for that specific area before beginning any new construction.

When a State Department of Transportation (DOT) acquires property to construct a freeway, they pay the landowners for the property taken and proximity damage at that time. If, at a later date, the DOT expands an additional lane within the freeway right of way, they do not typically pay the property owner a second time for proximity damage. Typically, road widening that results in proximity damage is calculated from either 50 feet or 100 feet. The right of way line theory states that damage is estimated from the right of way line to the front occupied wall of the residence.

### How is Proximity Damage Determined?

While several valuation methodologies are applicable, the cost and sales comparison approaches are used most often. When a roadway is widened and involves a strip of land along the front edge of an

owner's property, the right of way agency usually requires a before and after valuation to estimate the just compensation. In the before valuation, proximity damage may already exist, depending on how close the residence is to the roadway line. If so, it must be reflected in the cost approach due to the limited front yard setback. In the after valuation, the appraiser would estimate what additional proximity damage there is, if any, due to the roadway widening and the safe line to the front occupied wall of the residence.

An allocation for the residence can be also made using the sales comparison approach. After analyzing the severity of the take area along the roadway, an estimate can be made. The proximity damage is market derived using the typical setback from the roadway in the neighborhood, the severity of the reduction of the front yard setback, and the impact of the roadway to the residence.

### Estimating Roadway Proximity Damage

While there are three methods used for estimating proximity damage, some are more viable than others. They are the paired sales method, the appraiser's estimation of the appropriate adjustment, and estimates from market participants, such as real estate agents, brokers and developers.

There is inherent difficulty in locating paired sales for the subject property. Finding similar comparables to the subject with and without the roadway proximity damage is the first challenge. Locating comparables on the same or similar traffic arterial in the subject's neighborhood presents another challenge. Comparables would also need the proximity damage to have the same front yard distance as the subject property in both the before and the after condition. Given these obstacles, the paired sales method is not often used.

Using the second method, the appraiser typically estimates the roadway proximity damage by assessing the severity of the take area and the roadway proximity in the after condition. The main

consideration focuses on the reduced front yard area. The more the front yard is reduced beyond the safe line, the greater the proximity damage. Typically, the more the take area encroaches beyond the safe line from the residence, the larger the percentage for the proximity damage.

The third method, which is the most subjective, involves using market participants such as real estate agents, brokers and developers. Since they usually have a vested interest, it can be difficult for them to provide an objective proximity damage estimate.

### **What do Studies Indicate?**

An article written by William R. Lang titled Residential Proximity Damage Study<sup>1</sup> outlined an appraisal project consisting of 12 blocks on both sides of the street in Salt Lake City. The properties appraised included take areas ranging from 1-foot to 12-feet along the roadway. The new right of way line came within 8-9 feet from several homes. With 119 residential parcels involved, 106 properties were appraised and only 28 were impacted with proximity damage. He determined that the safe line for his study was at 28 feet.

When he attempted to find proximity damage studies, he was surprised at how little information was available. After considerable research, he agreed with the method employed by the Utah Department of Transportation (UDOT), where they measured the distance remaining between the house and the right of way line in the after condition. The UDOT files contained six front yard residential damage studies. After analyzing the studies, he was able to estimate a residential front yard proximity damage curve and applied his findings to the properties he was appraising. The damage curve ranged from 8 to 28 feet and ranged in percentage adjustment from 0% to 44% (0% to 2.2% per foot).

Another relevant article was authored by Larson Edge titled Mity Damage – Do You Draw the Line?<sup>2</sup> He was involved in two road-widening studies in northeast Alabama along a busy rural arterial. The difference in the two studies was where the safe line started. This was determined by the front yard setback in each neighborhood.

The first study was conducted along Highway 29, where Edge found the safe line to be at 100 feet from the property. In this case, he used a two-tiered approach when estimating proximity damage. Dwellings within 100-feet were damaged at 0.5% per foot to the residence until 50-feet where the damage increased to 1.5% per foot to the residence. The reasoning behind the two-tiered approach was there would be greater impact the closer the right of way line was to the improvements.

In the second study, the safe line was at 50-feet along Highway 84. Using a flat line basis, he determined dwellings within 50-foot safe line were damaged at 2% per foot to the residence.

Edge's two damage studies estimated that the severity of damage varied in relation to the proposed right of way. All damages were to the dwellings and not to the site or outbuildings. Two unpublished proximity damage studies that were prepared for King County, Washington were reviewed and found to support the two previous studies.

### **Modified Paired Sales Comparison**

When the Washington Department of Transportation created a new roadway in the City of Issaquah, several properties suffered from proximity damage. The paired sales comparison approach was used in order to arrive at a proximity damage using the before and after sale of two subject properties. The valuation included two properties that were unaffected in the before condition that were sold and then later resold in the after condition. What resulted was a unique opportunity to analyze two properties utilizing actual sales data instead of estimating proximity damage that simply reflected the market.

In the before valuation, both residences were accessed by a narrow paved private road. However, in the after condition, both residences were located next to an elevated moderate traffic arterial with four traffic lanes and a center turn lane, which also served as an off ramp to a freeway. Both residences were impacted, although there was no take area in constructing the new road.

### **First Paired Sale**

The first property is a single-family residence with 2,160 square feet of livable area on one level. Built in 1966, it consisted of three bedrooms, 2½ baths, two fireplaces and a two-car garage. The lot size totaled 50,529 square feet on mostly level topography and had a front yard setback of more than 100 feet. In 1999, the property sold for \$292,000 in the before condition. In the after condition, the property was only 15 feet from the newly elevated roadway – a loss of 85 feet. When the property was resold in the after condition in 2004, it sold for \$5,000 less.



Front view of Paired Sale #1.





Front view of Paired Sale #2.

## Second Paired Sale

The second property is a single-family residence with 4,830 square feet of livable area. It had a lot size of 32,374 square feet and was more than 100-feet from the roadway. The two-story home was constructed in 1993 and consisted of four bedrooms, 3½ baths, two fireplaces and a three-car garage. The property was purchased in 2000 for \$1,257,500 in the before condition. In the after condition, the property was only 30-feet from the newly elevated roadway – a loss of 70 feet. When it was resold in 2004, it sold for less than half the price – for only \$526,500.



Rear view of Paired Sale #2.

With the before and after sales of these two properties, all that needs to be adjusted is market conditions (time) and any remodeling that occurred. Market conditions for the City of Issaquah indicated a 5% yearly appreciation rate from 2000 through 2003 and a 20% yearly appreciation rate for 2004. The first property had \$14,650 in remodeling and the second property had \$22,135 in remodeling.

The value diminution for the first paired sale is calculated by applying the 5% annual appreciation until 2004 (when the appreciation rate jumped to 20% annually), plus the remodeling cost of \$14,650. After applying the market condition adjustment and the remodeling cost, the result indicates a decrease of 32% (.92% per foot).

## The Appraisal Report

The following illustrates how the roadway proximity damage would appear in the appraiser's report.

### Paired Sale #1

<b>SFR Contribution before Acquisition:</b>	\$240,173
(2,160 sf x \$120.86 sf x 15% profit x 80% depreciation)	
Less ±32% Roadway Proximity Damage:	<u>(\$76,855)</u>
Adjusted SFR Contribution after Acquisition:	\$163,318

### Paired Sale #2

<b>SFR Contribution before Acquisition:</b>	\$725,512
(4,830 sf x \$145.13 sf x 15% profit x 90% depreciation)	
Less 68% Roadway Proximity Damage	<u>(\$493,348)</u>
Adjusted SFR Contribution after Acquisition	\$232,164

## Analyzing and Reconciling the Studies

In considering both the published and unpublished proximity damage studies, the first paired sale helps to reinforce the findings of the previous studies. The studies indicate a .5% to 2% per foot for proximity damage for an average priced residential property. In this case, the residence indicated a proximity damage of about 1% per foot lost from the front yard setback taken within the safe line to the residence.

However, in analyzing the high-end property, which originally sold for over \$1 million, the percentage per foot for the proximity damage indicates a much higher rate of damage. In this case, the high-end property indicated a 3.5% per foot for proximity damage. This finding appears to be logical in the fact that million dollar properties are typically designed for more privacy and are usually setback more from the roadway than typical average-priced properties.

## Conclusion

Roadway proximity damage studies indicate that damage results when the right of way line is widened within the safe line of the residence. Once the safe line is estimated for a particular area, the appraiser will want to collect sufficient data, analyze the data and estimate the appropriate proximity damage to the property. The estimate should be calculated from the right of way line theory to the front of the closest occupied wall. ⚡

## References

- <sup>1</sup>William R. Lang, "Residential Proximity Damage Study," Right of Way Magazine, October 1988; pages 10-13.  
<sup>2</sup>Larson Edge, "Mity Damage – Do You Draw the Line?" Right of Way Magazine, January/February 2003; pages 29-37.