The Economics of Land Use

Draft Report

Music Row Transfer of Development Rights Feasibility Study

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Metropolitan Nashville Planning Department

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1. Executive Summary

Introduction

Study Purpose

EPS was contracted by the City of Nashville to study the feasibility of creating and utilizing a transfer of development rights (TDR) program in Music Row. With a rich history and present and more than 200 music-related businesses. Music Row is a national treasure, an official designation received from the National Trust for Historic Preservation, one of several agencies and community groups that have been working with Metro planners and Music Row stakeholders over the past three years to shape Music Row's future.

A TDR program is one of many policy tools that can be used to leverage development pressures in other areas of the city to preserve historically designated buildings in Music Row. At its root, TDR programs are a form of value-capture mechanism intended to leverage the strengths of a market and put them to use for a public good, such as, in this case, the preservation of music-related business and structures in Music Row. According to anecdotal accounts, numerous businesses have left Music Row, because the scale of studios or offices cannot support their business; more specifically, the music business has changed to where recording artists and studios prefer larger studio spaces with ample parking such that more suburban locations where land is less expensive can more easily support such demand factors.

Other factors have also contributed to the changing demand dynamics – the manner in which music is consumed has been changing: the internet changed the playing field; peer-to-peer online music sharing industry reduced the playing field substantially; playlists are shrinking; the "single-song economy" has largely replaced the "album economy"; and streaming has impacted the industry.

As such, motivated by a belief that the City should play a role in creating a welcoming environment for businesses and recreational visitors, and in the interest of keeping a long tradition of music production alive and healthy, this study documents how elements of a TDR program for Music Row would be feasible from a market and economic perspective.

Origins of TDR

According to Nelson, et al[1], TDR programs can be considered a form of dispute resolution called 'transaction theory', which posits that involved parties in potential disputes who have the same information, and who accept it as accurate, are likely to negotiate a solution. In a similar manner, TDR programs seek to provide information to both parties as to the amount of development rights available, where they can be used, and guidance on how much they cost.

In practice, the concept of a TDR is rooted in the first zoning ordinance, adopted in New York City in 1916. According to the literature, New York's ordinance allowed density to be transferred between lots under common ownership in the same block. The city subsequently amended this provision in 1968, allowing for transfers between contiguous properties and eventually between lots across streets.

Since then, TDR programs have been established in approximately 200 communities across the U.S. for agricultural land, open space, and historic landmark structure preservation. But according to Pruetz[2], numerous programs have failed to achieve their goals because the community continues to offer developers opportunities for additional development without having to comply with TDR requirements. To assist the planning community in steering the creation of TDR programs in the right direction, Pruetz also identifies the 10 success factors from the most successful TDR programs. The first two are considered "essential", the next three "extremely important", and the remaining five are "helpful but not necessarily critical".[3]

- Demand for bonus development
- Customized receiving areas
- Strict sending area regulations
- Few alternatives to TDR
- Market incentives
- Certainty of use
- Strong public preservation support
- Simplicity
- Promotion and facilitation
- TDR bank.

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[1] Nelson, Arthur C., et al. TDR Handbook: Designing and Implementing Successful Transfer of Development Rights Programs. Island Press, 2014.

[2] Rick Pruetz & Noah Stanridge (2008) What Makes Transfer of Development Rights Work?: Success Factors From Research and Practice, Journal of the American Planning Association, 75:1, 78-87, DOI: 10.1080/01944360802565627

[3] Ibid.

Definitions

A few important terms and their definitions are provided for framing of the discussion that follows.

- Development Right: the right to change land from a current use to another use. In the context of a TDR program, a development right may be defined as a unit of development, either a dwelling unit or a square-foot of development right. In this study, a development right is defined on a per square-foot basis.
- Transferrable Development Right (TDR): while a "market" must exist for a development right to be transferred, a TDR treats a development right as a commodity that can be moved from one property to another either through common ownerships or by different hands of ownership.
- Sending Area: This is a designated collection of contiguous or non-contiguous sites that can include farmland, forest, open space, other sensitive landscapes, historically or culturally significant sites, or sites in neighborhoods bordering commercial areas in need of large-scale redevelopment. This is an area from which development rights originate.
- Receiving Area: A designated receiving area is an area in which the purchaser of TDRs may add density in the amount of the TDRs purchased in order to exceed a level of density higher than may currently be permitted in zoning.
- Enhanced Transfer Ratio: A simple transfer ratio is where one unit of development rights available from a sending site equals one unit of development rights purchased for a receiving site. An enhanced transfer ratio - i.e. a ratio of greater than one-to-one, is used in many TDR programs to create market incentives for sending-area landowners and receiving-area developers.

Summary of Recommendations

The following 25 recommendations are based on EPS's analysis of the City's regulatory market, the development patterns, valuation of development rights in Music Row, and an optimization of project feasibility with different transfer ratios.

1. Voluntary TDR Program Compliance.
2. TDRs should be available by-right.
3. The initial sending area should be all NR and NRE sites.
4. The initial receiving areas should be Midtown and Music Row sites excluding NR and NRE sites.
5. The initial price of TDRs should not be fixed and should be allowed to fluctuate with the market.
6. A 3-to-1 enhanced transfer ratio is recommended as appropriate to bridge receiving and sending site land values per buildable square-foot.
7. Surface parking lots should be excluded from TDR eligibility.
8. Documentation of a transaction should include numerous pieces of pertinent information.
9. The tax implications of TDR should be made clear to sellers and purchasers.
10. TDRs should be certified by the overseeing entity and/or the City.
11. The TDR program should allow for flexibility in the timing of development without concurring requirements.
12. TDRs should be treated as a commodity that may be purchased through a secondary market.
13. The City should allocate sufficient funds for the purchase of an initial block of TDRs and for the establishment of a TDR bank.
14. Music Row TDRs should not be subject to expiration.
15. There should be no scale limitations on receiving sites with TDR usage.
16. There should be no minimum TDR purchase requirement.
17. The TDR program should not require public amenity dedications.
18. The City should limit the use of SP zoning in TDR receiving areas.
19. TDR transactions should be recorded and reported to appropriate governmental entities.
20. The TDR transaction should include a 5 percent administrative pass-through fee.
21. Future use of the sending site should be limited.
22. The City should provide a property tax grant to incentivize the preservation of music-related businesses.
23. Application of future rezoning/upzoning to a property that has sold its development rights.
24. Responsibility for oversight should be granted to a third-party entity, authorized by the City.
25. The TDR program should be reviewed and readjusted as appropriate on a 2-year cycle.

2. Regulatory Market Overview

Four contextual and regulatory elements are important to highlight: 1) Nashville's previous experience with a TDR program in 2007; 2) the Downtown Code; 3) SP zoning; and 4) other bonus options.

Existing Regulation

Downtown Code

The Bonus Height Program (BHP), part of Nashville's Downtown Code, adopted in February 2010, grants additional height in exchange for contribution to "specified programs that provide benefits to the public." There are nine public benefit contributions through which a building can qualify for bonus height:

- LEED certification
- LEED ND
- Pervious surface
- Publicly accessible open space
- Workforce housing
- Civil support space
- Upper level garage liners
- Underground parking
- Public parking

Multiple height bonuses can be compounded, so long as the total bonus height does not exceed the Bonus Height Maximum for the Subdistrict, two of which are unlimited. Development rights received through the BHP can also be transferred within the Downtown Code (DTC), as long as the transferred height does not exceed the bonus height maximum of the receiving site. There is also a process for an overall height modification, which requires that a development may obtain additional height through the Executive Director of the Planning Department after reasonable efforts to use existing bonuses available have been made and after a community meeting has been held for surrounding property owners.

On one hand, that these numerous bonus height options are available only in the limited geography of the Downtown Core is a positive for the sake of developing a feasible TDR program for Music Row. On the other hand, this means that so long as the DTC offers these (or any financially attractive) bonus height options within the Core, Downtown is not and will not be a viable receiving area.

SP Zoning

Perhaps the single largest threat to the success of a TDR program for Music Row is the existence and widespread usage (and market expectations) surrounding a "Specific Plan District," generally known as "SP" zoning. SP zoning is a new type of base zoning district, not an overlay, which is not subject to traditional zoning districts' development standards. It may be used for residential, office, commercial, industrial, and mixed-use developments.

Under SP zoning, design standards established for a specific development are written into the zone change ordinance. Some elements that can be written into the zone change include: height and size of buildings, setbacks, buffers, signage, and materials. Developers who use SP zoning must still follow historic and redevelopment guidelines, subdivision and stormwater regulations, and the goals and objectives of the General Plan. A developer proposes details of the development plan and then works with the Planning Department, fellow Metro Departments, the Council member(s) and their constituents to reach a workable compromise on the design of the development and the timeline for construction.

Although there has been great utilization of SP zoning and allows redevelopment to occur in "markets" where zoning may not reflect such demand and use pressures, the market has become accustomed to using SP zoning to obtain substantial increases in density over baseline zoning at development/ redevelopment sites.

Other Density Bonuses

Density bonuses are also discussed in District Bulk Regulations – Special FAR Provisions[4]. Residential bonuses are available in Mixed Use, ORI and ORI-A and CF District; property in the MUI and MUI-A district or within the urban zoning overlay district in any mixed-use, ORI and ORI-A or CF district, in any building where at least 25 percent of the floor area (not including parking) is designed and constructed for residential occupancy, the floor area for residential use will not be counted in determining the FAR of the building.

This uncounted floor area benefit cannot be used in combination with other bonuses in this section or the PUD section[5]. Any development that uses the uncounted floor area benefit to build 10 or more residential units must restrict a certain number of units for use as affordable housing for a period of at least seven years. The number of affordable housing units will be equal to: 25 percent x (total residential units – 10). There is also the potential for development incentives to

[4] §17.12.070
[5] §17.36.090

be created to "promote the inclusion of properties within an urban design overlay district for the purpose of achieving specified design objectives".[6]

As with the bonus height options for the DTC, these other bonus options are relevant to this analysis, in that a few of the zone districts are contained within the Music Row subdistrict. While these height and density bonuses pertain to the granting of additional density through provision of residential floor area (for the purpose of encouraging mixed-use development and/or residential development in commercial areas), they represent another obstacle to the potential for usage of TDRs in Nashville.

Historical TDR Experience

The City has had experience with TDRs in the past. In 2007, the Downtown Community Plan Update called for the preservation and adaptive reuse of historic structures, the designation of two new historic zoning districts, the creation of new Historic Landmark Districts and the adoption of a TDR ordinance to encourage the transfer of development potential from these landmarks to other sites in the Downtown.[7]

As a result, a TDR program was established and adopted in these historic zoning districts and landmark districts, which comprised the sending sites. Receiving sites were designated in non-contiguous areas of the Core, SoBro, the Gulch, Sulfur Dell, and Lafayette. The program allowed for pricing to be determined by free market negotiations between sending and receiving site owners.

Unfortunately, the program was destined to fail because there were too many alternative mechanisms by which developers could circumvent the TDR option. SP zoning and other options to obtain additional density meant that the program was never utilized.

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[6] §17.36.310
[7] Ordinance BL2007-1369, §17.12.120

3. Market analysis

Introduction

Land Value

Land has two fundamental values – in use and exchange. "The value in use refers to the value of the land to the owner based on the land's existing uses. This value can be both economic and noneconomic. The value in exchange refers to what someone else would pay for the land. Generally, when the value in exchange exceeds the value in use, the property will be sold."

Therein lies one of the greatest challenges – i.e. in the expectation of noneconomic value. "Owners place a value on their land, either subjectively or based on the results of appraisals or similar objective data (i.e. sales of surrounding or neighboring properties). Regardless of how they arrive at the number, owners have a sense of what their land is worth. When market values exceed owners' sense of worth, the owners will sell the land – not necessarily because of the price offered but, rather, because of the owners' sense of the land's worth."

"The opposite is also true. Bidders (i.e. buyers of sending site TDRs) may go beyond the economic value of property for noneconomic reasons. In both instances, prices – the values in exchange – seem beyond the underlying use value of the land. Of necessity, buyers will have to buy out both the economic and noneconomic values to acquire that land. It would follow that only those buyers who attached the same or higher noneconomic values to that land would acquire the property. In this manner, subjective values are capitalized into market prices of land."

"An owner with speculative expectations tends to hold land even when offers to purchase meet or exceed the value in exchange. Likewise, buyers tend to exceed values in exchanges when they have speculative expectations."

Sending Area Analysis

In theory, according to the literature, TDR programs in which the objective is the preservation of agricultural land or open space, do not require the designation of specific sending and receiving areas, because in a true market exchange, one owner could sell development right to another, regardless of the seller's or buyer's location. As a matter of policy, however, particularly one in which a City is approaching the creation of a targeted TDR program, it is essential that a sending and receiving area geography be identified.

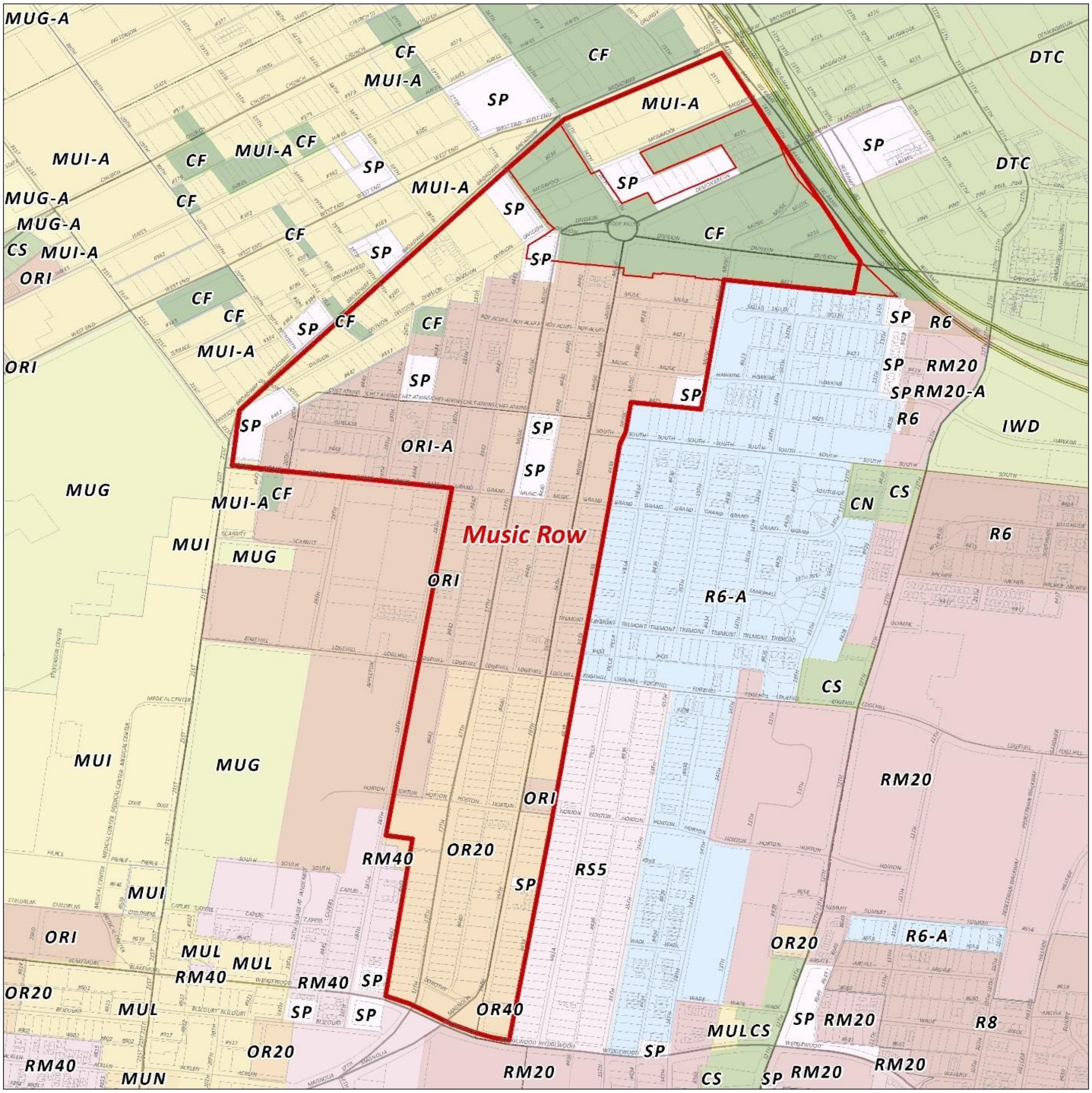
Music Row Current Zoning

Under current zoning, there are maximum FAR limits that were applied in one iteration of the sending area analysis. Zoning in Music Row primarily includes office and residential uses, as follows:

- Core Frame (CF) – allows 5.0 FAR
- Office / Residential Intensive (ORI) – allows 3.0 FAR
- Office / Residential Intensive (ORI-A) – allows 3.0 FAR
- Office / Residential Intensive (OR20) – allows 0.8 FAR
- Office / Residential Intensive (OR40) – allows 1.6 FAR

As illustrated in **Figure 1**, the northern part of the Music Row study area is currently zoned CF, parcels in the central part of the study are zoned ORI-A, and much of its southern portion zoned OR20.

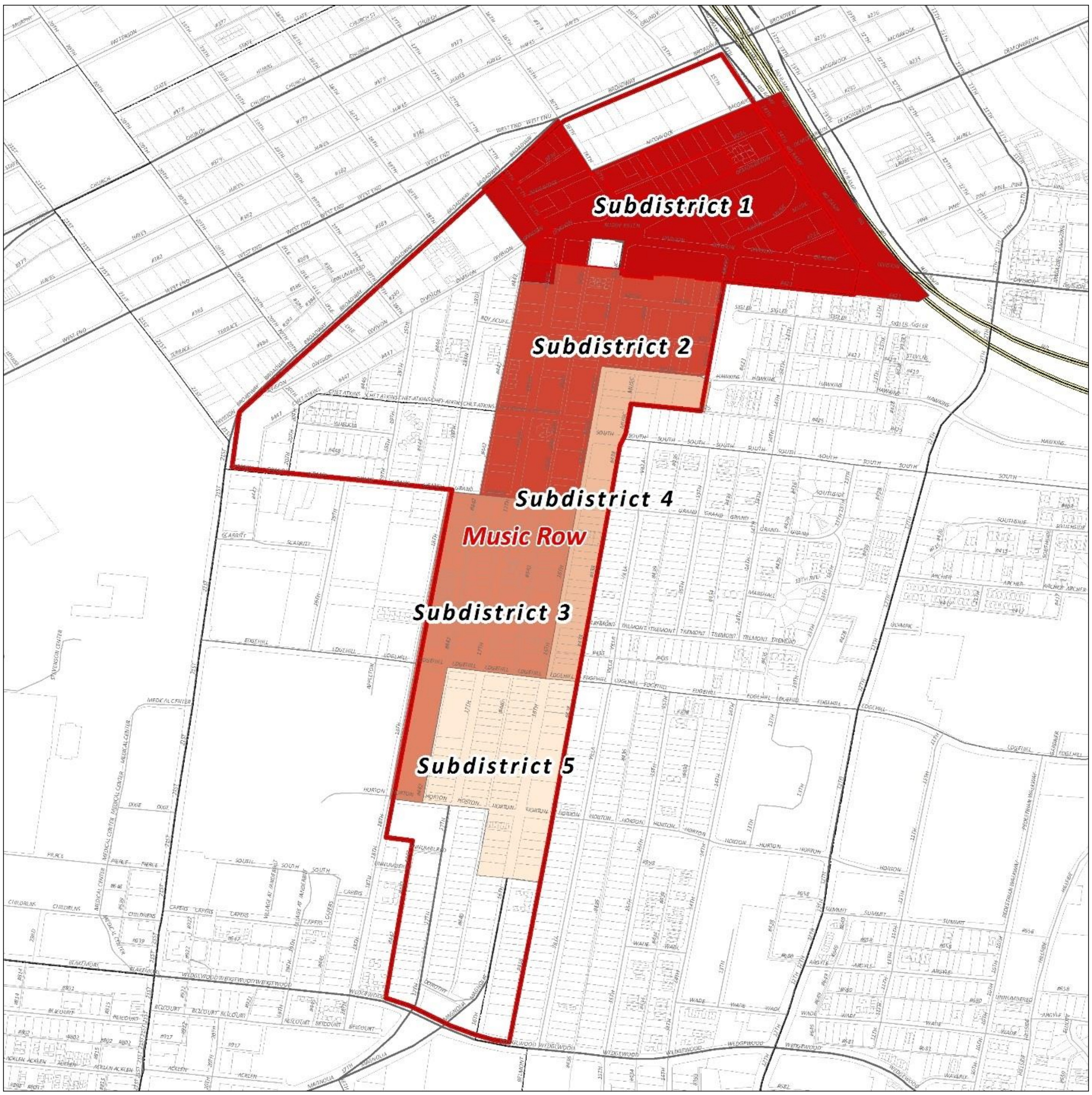
Figure 1. Current Zoning



Music Row Potential Zoning

Current and potential zoning was analyzed in Music Row to ascertain the magnitude of development rights available as a collective sending area. Further, numerous configurations of the sending area, such as all parcels, NR and NRE sites, as well as just NR sites were evaluated. As a starting point, **Figure 2** illustrates the potential zoning for Music Row, as defined by its five different subdistricts.

Figure 2. Potential Zoning



Development Rights Valuations

This section details the methodology used to estimate the development rights available in the Music Row study area, including assumptions regarding potential zoning, height, setback and stepback assumptions, how maximum development rights were calculated from actual parcel data, and how the remaining development rights were calculated using improvement values from actual parcel data.

Height and Setback Limits

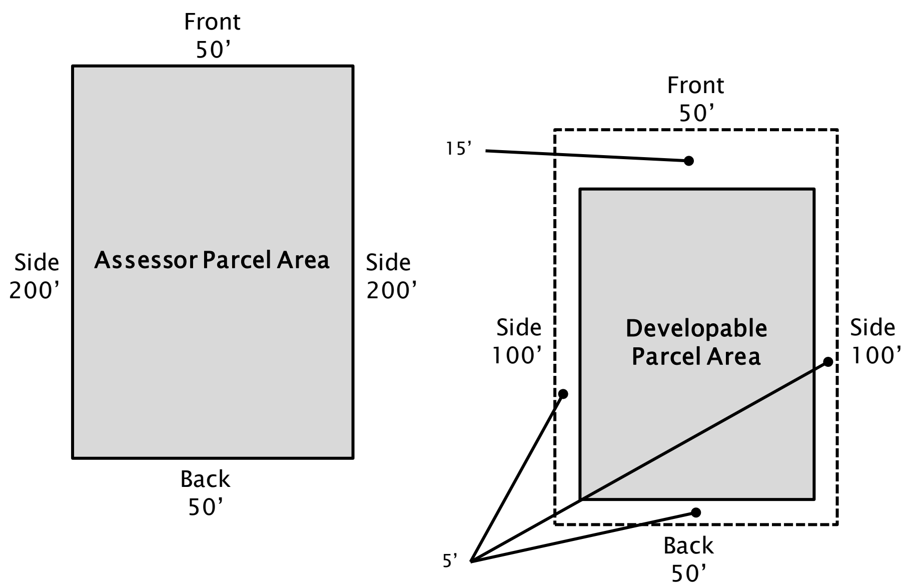
The characteristics of each subdistrict are described below **Table 1**, which identify the major height and setback limits used to quantify remaining development rights available for purchase in a TDR program.

Table 1. Subdistrict Parcel Height and Setback Assumptions

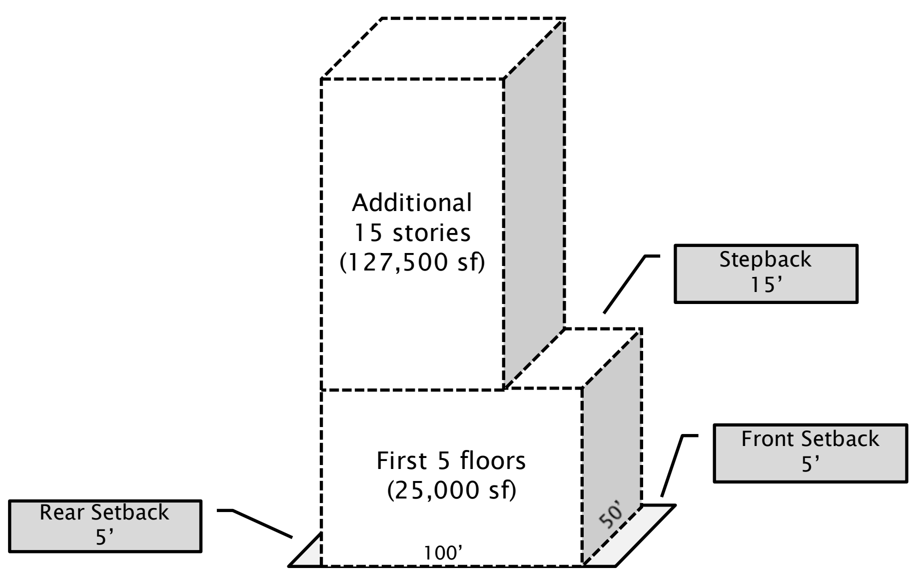
Subdistrict #	Max Bldg. Height	Front Setback	Rear Setback	Side Setback
	stories	feet	feet	feet
Subdistrict 1	20.0	5.0	5.0	0.0
Subdistrict 2	8.0	15.0	5.0	0.0
Subdistrict 3	5.0	15.0	5.0	5.0
Subdistrict 4	5.0	15.0	5.0	5.0
Subdistrict 5	3.0	30.0	5.0	5.0

Source: City of Nashville; Economic & Planning Systems

To illustrate the methodology, the following series of illustrations are intended to lead the reader through the calculation of remaining development rights capacity for sending sites. Shown below on the left, a 10,000 square foot parcel has a width (front and back) of 50 feet with a length (side) of 200 feet. The graphic below right illustrates the front, back, and side-yard setbacks associated with potential zoning for Subdistrict 3 and Subdistrict 4. These are used to estimate the developable parcel area, on which the FAR factors are applied.



Potential zoning also includes a stepback above a specific height is reached. The total additional development capacity accounts for this setback by estimating the bulk of additional floor area achievable above that height limit, assuming still the dimensions of the front-, back-, and side-yard setbacks as illustrated previously. This example makes the assumption that there is a 25,000 square foot improvement (i.e. structure) on the parcel.



Applying this example to the five subdistricts and calculating the remaining additional development capacity is illustrated in **Table 2**. The examples illustrate that a property owner situated on a 10,000 square foot parcel with a 25,000 square foot structure would have the following estimated additional development rights available to sell in a TDR program:

- Subdistrict 1 = 157,500 square feet
- Subdistrict 2 = 38,000 square feet
- Subdistrict 3 = 6,500 square feet
- Subdistrict 4 = 6,500 square feet
- Subdistrict 5 = not applicable

The calculations shown in the example here were applied to all parcels and their respective dimensions within the Music Row study area to estimate in total the amount of development rights available in a possible Music Row sending area.

Table 2. Development Capacity Examples in Potential Zoning for 10,000 SF Parcel

	Potential Zoning				
Description	Subdistrict 1	Subdistrict 2	Subdistrict 3	Subdistrict 4	Subdistrict 5
Zoning Requirements					
Front Setback	5.0'	15.0'	15.0'	15.0'	30.0'
Rear Setback	5.0'	5.0'	5.0'	5.0'	5.0'
Side Setback	0.0'	0.0'	5.0'	5.0'	5.0'
Steback	15.0'	15.0'	15.0'	15.0'	15.0'
Stepback Height	5 stories	3 stories	3 stories	3 stories	3 stories
Max Building Height	20 stories	8 stories	5 stories	5 stories	3 stories
Potential Development Capacity					
Developable Parcel Area	8,000	6,000	5,700	5,700	2,850
Base Building Area	40,000	18,000	17,100	17,100	8,550
Remaining Building Area	142,500	45,000	14,400	14,400	0
Potential Development Area	**182,500**	**63,000**	**31,500**	**31,500**	**8,550**
Additional Capacity	**157,500**	**38,000**	**6,500**	**6,500**	**-16,450**

Source: Economic & Planning Systems

Applied to the entirety of the Music Row study area, **Table 3** illustrates the total development rights available for all parcels in Music Row under both existing zoning and potential zoning. The analysis indicates (by land use type) that there is approximately 3.6 million square feet of total parcel area and a little more than 3.0 million square feet of total improved area.

- Under the existing zoning, the estimated maximum development capacity of these parcels is slightly more than 7.5 million square feet, leaving approximately 4.5 million square feet of additional development rights available.
- Under the potential zoning, the estimated maximum development capacity of these parcels is nearly 12.3 million square feet, leaving more than 9.2 million square feet of additional development rights available under a TDR program.

Table 3. Development Rights Available on All Music Row Study Area Sites

Description	Condo/Common	Lot	Other	Acreage Tract	TOTAL
Parcel Area	200,898	1,283,278	2,056,032	55,321	3,595,528
Improved Area	215,373	953,168	1,861,467	0	3,030,008
Existing Zoning					
Maximum Development Capacity	464,182	3,105,218	3,894,438	89,298	7,553,136
Remaining Development Capacity	**248,809**	**2,152,050**	**2,032,971**	**89,298**	**4,523,128**
Potential Zoning					
Developable Parcel Area	183,784	1,015,975	1,754,311	54,382	3,008,452
Maximum Development Capacity	913,769	4,732,817	6,486,259	139,660	12,272,506
Remaining Development Capacity	**698,396**	**3,779,649**	**4,624,792**	**139,660**	**9,242,498**

Source: Economic & Planning Systems

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Table 3 illustrates the total development rights available for all National Register and National Register Eligible parcels in Music Row under both existing zoning and potential zoning. The analysis indicates that there is approximately 700,000 square feet of total parcel area and approximately 590,000 square feet of total improved area.

- Under the existing zoning, the estimated maximum development capacity of these parcels is slightly more than 1.6 million square feet, leaving approximately 1.0 million square feet of additional development rights available.
- Under the potential zoning, the estimated maximum development capacity of these parcels is nearly 2.8 million square feet, leaving approximately 2.2 million square feet of additional development rights available under a TDR program.

Table 4. Development Rights Available on NR and NRE-Designated Sites

Description	Condo/Common	Lot	Other	TOTAL
Parcel Area	67,193	249,163	386,377	702,733
Improved Area	106,895	180,122	301,676	588,693
Existing Zoning				
Maximum Development Capacity	99,125	646,779	886,359	1,632,263
Remaining Development Capacity	**-7,770**	**466,657**	**584,683**	**1,043,570**
Potential Zoning				
Developable Parcel Area	66,645	198,446	355,984	621,075
Maximum Development Capacity	277,268	989,877	1,512,845	2,779,990
Remaining Development Capacity	**170,373**	**809,755**	**1,211,169**	**2,191,297**

Source: Economic & Planning Systems

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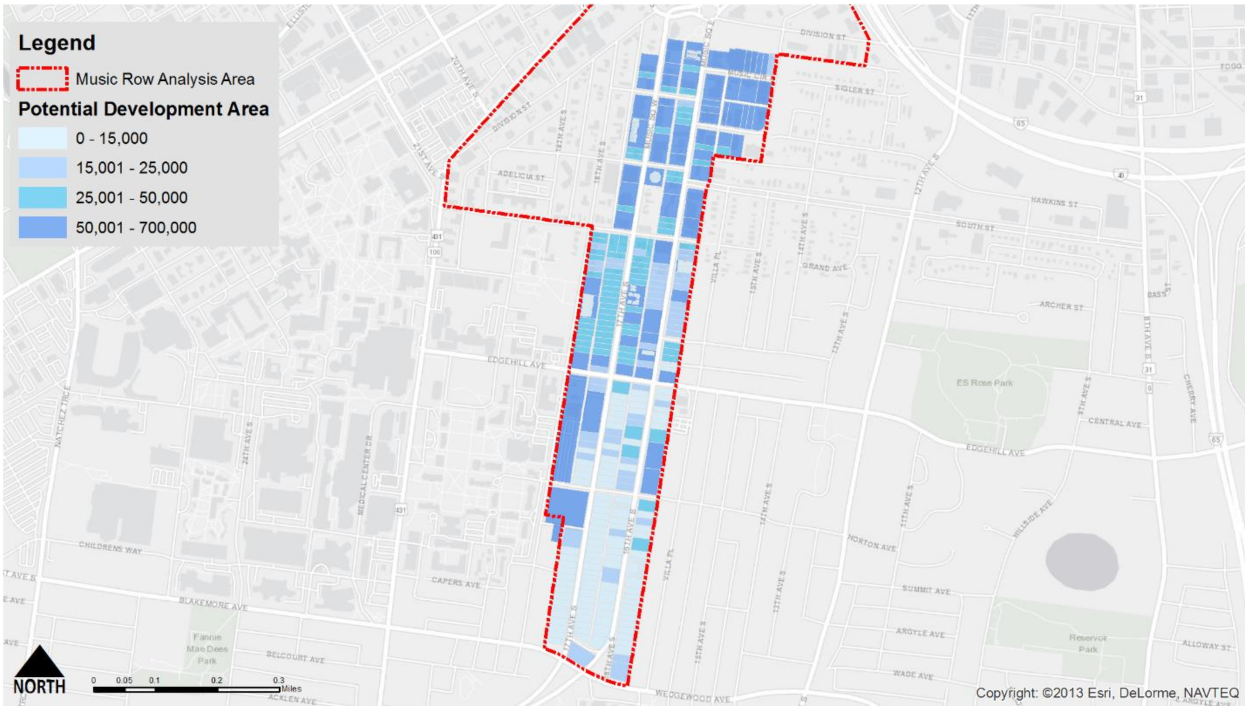
Figure 3 illustrates the location and magnitude of development rights available under the potential zoning. It is apparent, just as anticipated by the Subdistricts, that a predominance of additional development rights are available to parcels in the north and central portions of the study area.

Figure 3. Development Rights Available Under Potential Zoning



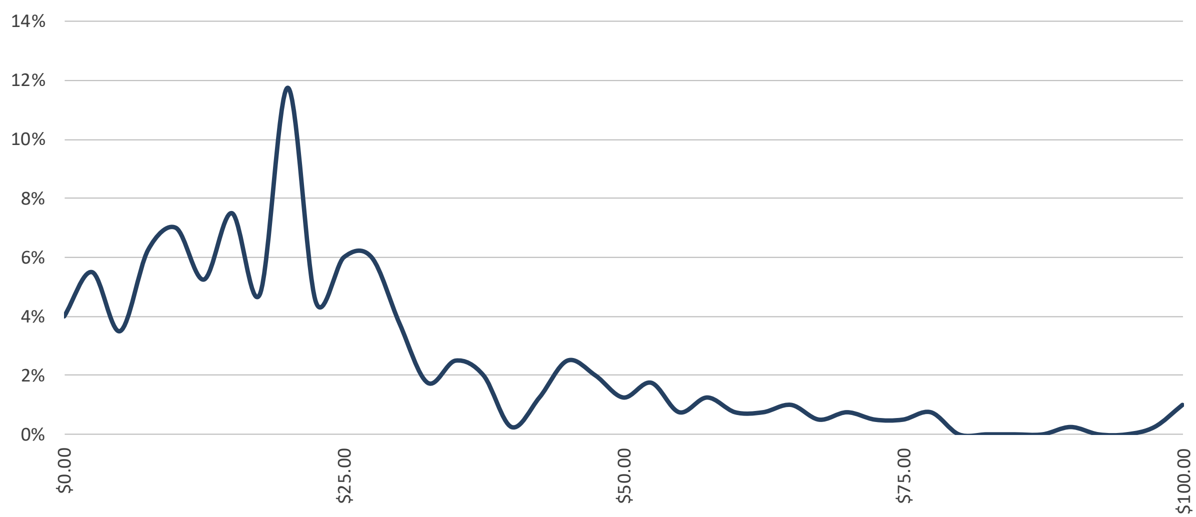
Sending Site Development Rights Valuation

In general, a sending area property owner would consider selling TDRs when the amount of the compensation from that sale equals or exceeds the property value that will be lost with the property is preserved. In practice, sending site economic considerations vary to the extent that considerations of individual property owner financial position, continued business interests, perceptions and expectation of land value, and market demand pressures (i.e. for redevelopment) all influence the valuation of development rights.

Interviews with stakeholders, property owners, and developers has revealed a variety of similar metrics concerning the threshold at which a property owner may consider selling development rights: 1) at least 50 percent of the total value of the property; 2) an amount equal to the value of development rights in a redevelopment scenario, which depends on location and market pressures; and 3) “it depends” on the property owner financial position and interests – such as might be characterized as an amount greater than the present value of the continuation of a current revenue-producing business use.

In total, there is approximately $540 million of appraised value in the Music Row study area parcels and approximately $57.2 million of appraised value in the NR and NRE sites. Using the 50 percent rule and evaluating only the NR and NRE sites, **Figure 4** illustrates the distribution of values on a per-square foot basis of the remaining development rights. Overall, remaining development rights are estimated at approximately $25 per square foot. Under this 50 percent rule, more than 40 percent of development rights would be valued between $10 and $20 per square foot; slightly more than 20 percent would be valued between $20 and $30 per square foot; and approximately 20 percent would be valued between $30 and $40 per square foot.

Figure 4. Distribution of Estimated Development Right Values in NR/NRE Sending Area



Source: Economic & Planning Systems
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Table 5 provides a summary of five high priority preservation properties in Music Row. The properties include RCA Studio A and B, the Quonset Hut, and Decca. Based on the Assessor's valuation, the total value of each property ranges from $1.34 million (Studio B) to $4.09 million (Studio A). Applying the remaining development right methodology described above to each property results in a range of 47,640 square feet to 176,549 square feet of remaining development area. Finally, a discount of 25 to 75 percent is applied to the total valuation of the property and divided by the remaining development rights in order to provide a range of values per remaining developable area. At 50 percent of value, the value of the remaining development rights range from $11.59 per square foot for the Quonset Hut.

Table 5. Selected Sending Site Development Rights Values

Description	RCA Studio A Building	RCA Studio A Parking Lot	RCA Studio B	Quonset Hut	Decca
Property Attributes					
APN	9216040600	9216043200	9216040500	9313016000	9313013900
Parcel Area (ac)	0.63	0.17	0.23	0.50	0.17
Parcel Area (sf)	27,443	7,405	10,019	21,780	7,405
Improved Area (sf)	20,886	0	4,661	23,187	4,500
Existing Zoning	ORI	ORI	ORI	ORI	ORI
Potenital Zoning	Subdistrict 2	Subdistrict 2	Subdistrict 2	Subdistrict 4	Subdistrict 2
Assessment					
Land Value	$2,775,000	$1,000	$975,000	$2,133,600	$750,000
Building Value	$1,315,900	$750,000	$368,700	$1,649,400	$340,000
Total Value	**$4,090,900**	**$751,000**	**$1,343,700**	**$3,783,000**	**$1,090,000**
Potential Developable Area	**176,549**	**47,640**	**55,489**	**84,799**	**47,640**
DR Value					
25% of Total Value	$1,022,725	$187,750	$335,925	$945,750	$272,500
50% of Total Value	$2,045,450	$375,500	$671,850	$1,891,500	$545,000
75% of Total Value	$3,068,175	$563,250	$1,007,775	$2,837,250	$817,500
100% of Total Value	$4,090,900	$751,000	$1,343,700	$3,783,000	$1,090,000
DR Value per SF					
25% of Total Value	$5.79	$3.94	$6.05	$11.15	$5.72
50% of Total Value	$11.59	$7.88	$12.11	$22.31	$11.44
75% of Total Value	$17.38	$11.82	$18.16	$33.46	$17.16
100% of Total Value	$23.17	$15.76	$24.22	$44.61	$22.88

Source: Economic & Planning Systems

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Receiving Area Analysis

The City's development patterns were analyzed to determine an initial receiving area for the Music Row TDR program. In the literature, there are several core attributes cited as most important features in a receiving area:

- Adequate infrastructure to accommodate the development
- Political acceptability
- Compatibility with existing development
- Consistency with the comprehensive plan
- Location where developers perceive a market for higher density

Ultimately, it was assumed that an area in which development patterns were greatest would generally conform to the principles outlined above. But beyond those, two critical components of a receiving area not mentioned above, are that market demand must not only be sufficient (i.e. market "momentum") for there to be an opportunity to utilize TDRs, but there also must be a limit to which base entitlement allows the market to "meet" these demands.

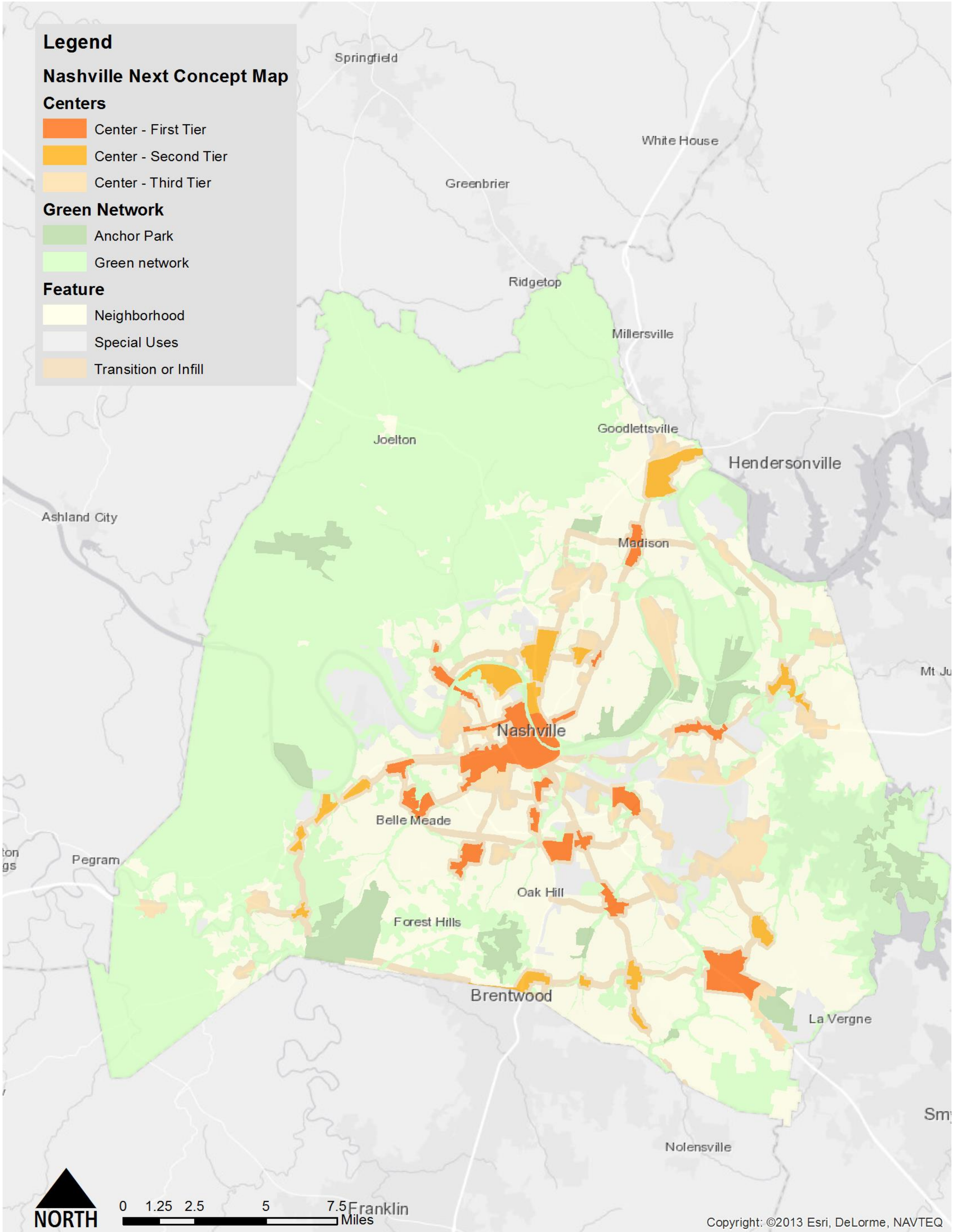
That is, developers do not merely need to prefer high-density development, they just need a motivation to exceed baseline density. One of the lessons-learned from other programs is that a TDR program will likely never be utilized if excessive entitlements (i.e. density) are allowed through competing mechanisms.[8]

Development Patterns

The first part of the receiving area analysis begins at the highest level. **Figure 5** illustrates the City Centers by tier. Development patterns in multifamily, office, and commercial were evaluated at this citywide level (and disaggregated by City Center) to estimate the magnitude of development occurring in each market.

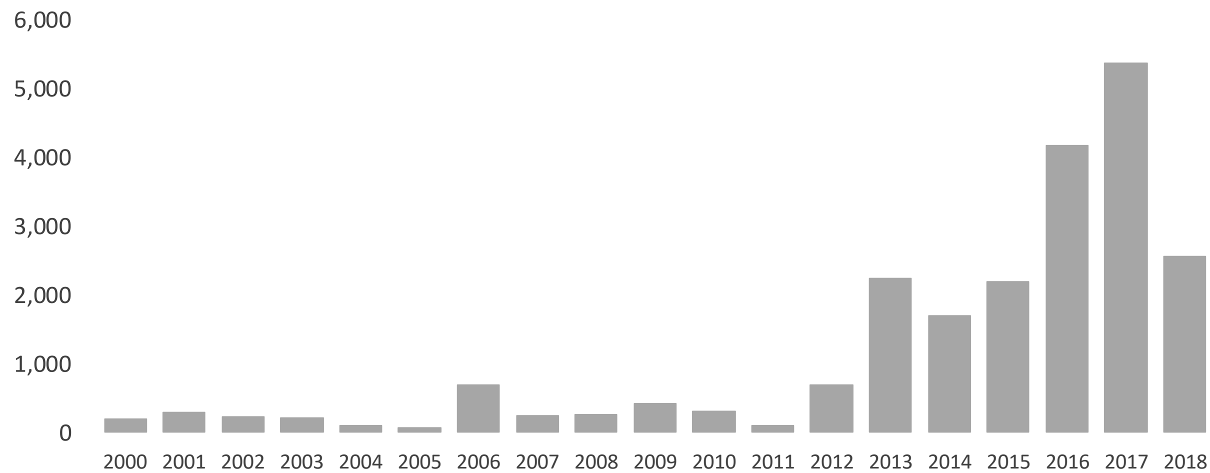
[8] In communities where baseline zoning grants too much density, there is little to no political will for downzoning. Once the "market" perceives a highest and best use, such value is often and quickly internalized by property owners in their expectations of value. For example, in the 1990s, Atlanta, did downzone land in its receiving areas in order to create a better market for TDRs. It had created an historic preservation TDR program in which TDRs could be used for office development, but because office development previously (preceding the downzoning) had not exceeded maximum entitlements, the downzoning increased the likelihood that TDRs would be utilized.

Figure 5. City Subareas by Tier



Up to 2012, the multifamily market had been fairly inactive, building fewer than 1,000 units per year in the City, as shown in **Figure 6**. Beginning in 2013, delivery of multifamily units exceeded 2,000 units and peaked at more than 5,000 units in 2017. The count of units year-to-date in 2018 has been a little more than 2,500, well below the previous years' magnitudes.

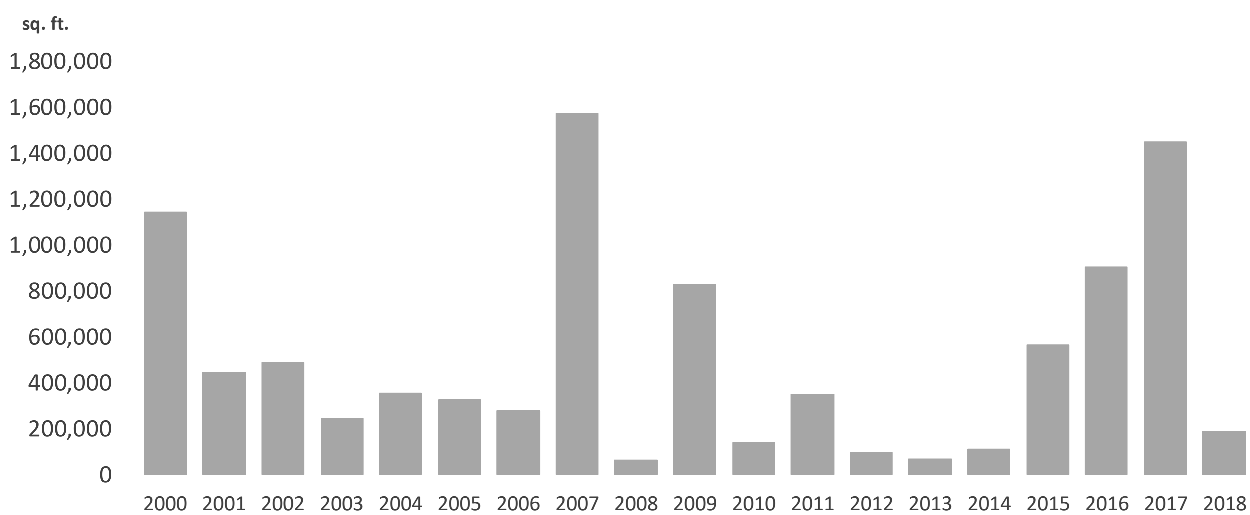
Figure 6. New Multifamily Units, 2000-18



Source: CoStar; Economic & Planning Systems

The office market, on the other hand, has been relatively more active than the multifamily market. Figure 7 illustrates that the market for office development has occurred more sporadically, delivering close to 1 million square feet in a year nearly 5 times in the last 17 years.

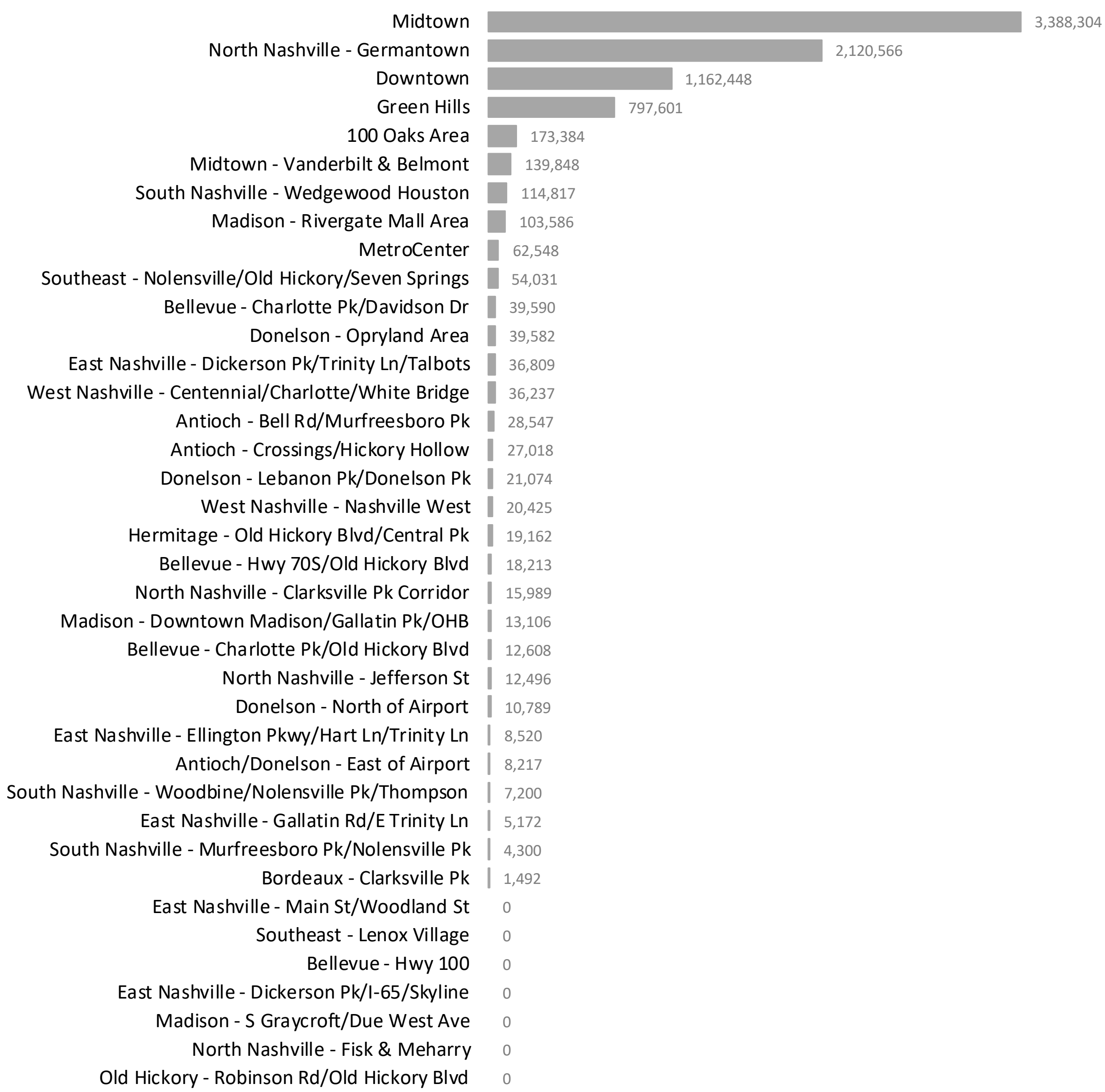
Figure 7. New Office Floor Area, 2000-18



Source: CoStar; Economic & Planning Systems

Through conversations with City staff and as well as through the analysis of geospatial data, it was determined that Midtown was one of the most active real estate markets in the City. Its neighboring proximity to Music Row and the strength of its current and foreseeable market make it an appropriate candidate for a receiving area. The following illustrates a subset of total development as portrayed in the previous two charts. **Figure 8** illustrates the total floor area (in all developments) by City Center for the past 17 years. In total, approximately 8.5 million square feet of development has occurred under the SP zoning process in the City Centers since 2000. Approximately 40 percent of that total has occurred in Midtown.

Figure 8. Floor Area of SP Zoning Development by City Center, 2000-17



Source: Nashville-Davidson Metro Building Department; Economic & Planning Systems

Over the last 17 years, 74 applications for SP zoning have been made per year in the City. As illustrated in **Figure 9**, while less than 10 percent of them have occurred in Midtown by number of application (by comparison to Midtown accounting for 40 percent of all square footage approved), an average of seven (7) applications for SP zoning are made per year in Midtown. And because of the prevalence of SP zoning being used in Music Row, it was also determined that it (i.e. the northern portion, which neighbors Midtown, should also be a part of the TDR program receiving area.

Figure 9. Current SP Zoning Parcels

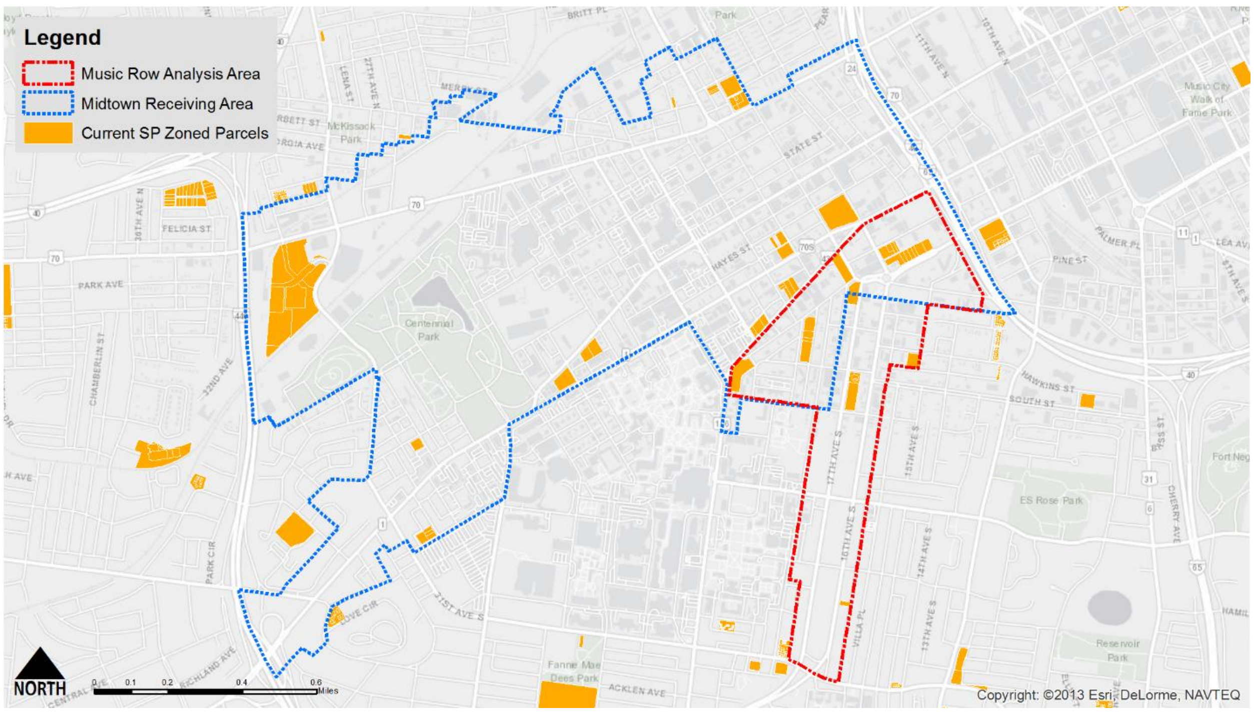


Figure 10 and **Figure 11** illustrate the magnitude of multifamily and commercial developments in these geographies over the past 17 years, as well. These maps also illustrate where and what magnitude of multifamily and commercial development is proposed. Again, the prevalence of development activity in both these areas and the fact that they are neighboring areas, make them both appropriate receiving areas.

Figure 10. Completed and Proposed Multifamily Development, Midtown and Music Row

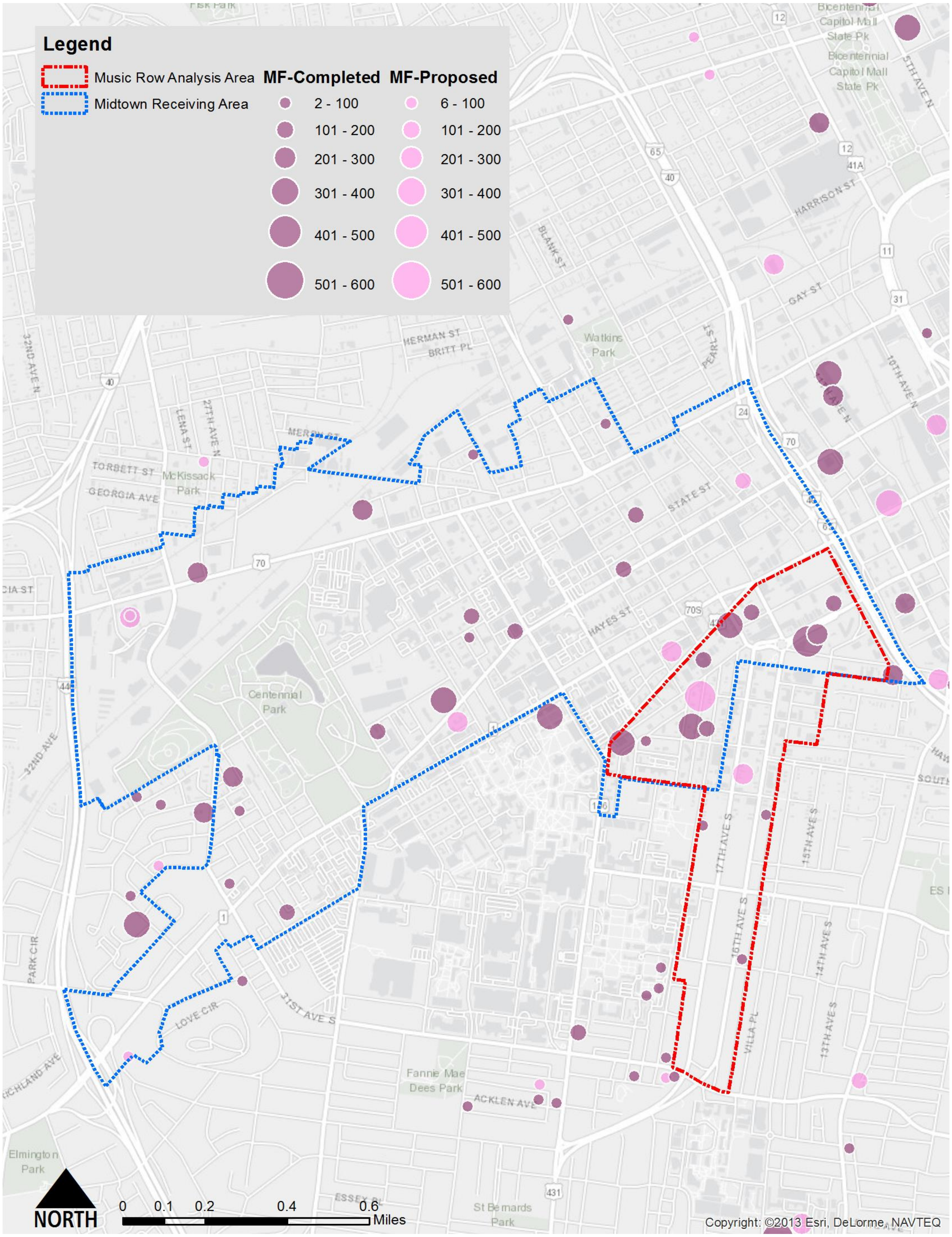


Figure 11. Completed and Proposed Commercial Development, Midtown and Music Row

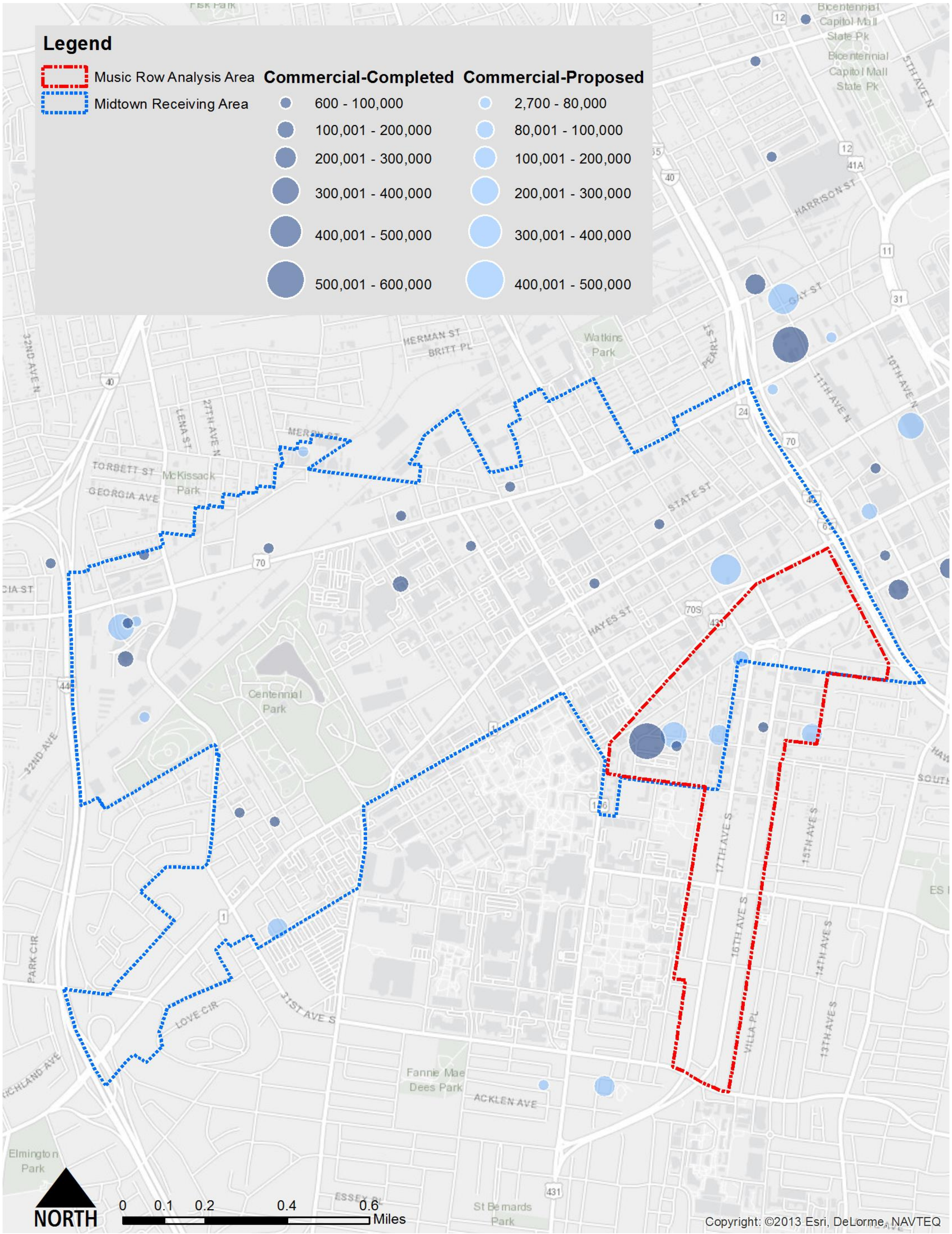


Table 6 illustrates a few recent projects completed within the Music Row (north) receiving area. These projects, completed in 2015 and 2017, provide a range of development types that may take advantage of a TDR program in the future. The two multifamily projects, SkyHouse Nashville and The Morris Apartments, both took advantage of SP zoning to increase their building area by roughly 62,300 square feet and 183,800 square feet, respectively. Under a potential TDR program that assumes a 3:1 transfer ratio and a development right (DR) cost of roughly $13.50 per square foot, it is likely that both projects would have purchased DRs in order to achieve additional density. The additional costs associated with the acquisition of DRs range from $843,700 to $2.49 million or an increase of 0.76 percent to 2.46 percent.

Table 6. Recent Development Project Comparable Properties [text size looks small]

Description	SkyHouse Nashville	The Morris Apts.	SESAC Building
Property Attributes			
Addresss	111 17th Ave	818 19TH AVE S	35 MUSIC SQ E
Year Built	2017	2017	2015
Parcel Area (sf)	55,757	42,689	38,333
Stories	25	25 (inc. garage)	5
Units	352	344	N/A
Building Area (sf)	341,087	311,881	99,914
Assessor Valuation			
Building Value	$77,670,596	$74,708,500	$22,643,300
Land Value	$11,123,300	$8,516,300	$3,833,300
Total Value	**$88,793,896**	**$83,224,800**	**$26,476,600**
Original Zoning Requirements			
Original Zoning	MUI-A	ORI-A	ORI-A
Max FAR	5.0	3.0	3.0
Max Building Area	278,784	128,066	114,998
Current Zoning and Additional Density			
Current Zoning	SP	SP	ORI-A
Actual Building Area (sf)	341,087	311,881	99,914
Additional Area through SP Zoning	**62,303**	**183,815**	**0**
TDR Assumptions			
Land Value per Building Area	$40.63	$40.63	$40.63
Transfer Ratio	1:3	1:3	1:3
DR Cost per SF	$13.54	$13.54	$13.54
Total DR Cost	$843,686	$2,489,156	$0
Estimated Construction Cost ($325/sf)	$110,853,275	$101,361,325	$32,472,050
% Cost Increase	0.76%	2.46%	0.00%

Source: CoStar; Nashville-Davidson County Assessor; Economic & Planning Systems

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In addition to the assessor's valuation of the property, the land acquisition costs were pulled from the Assessor to identify an initial purchase price for land. Land for the CESAC building land was acquired in 2014 for approximately $91 per square foot (or $35 per buildable square foot), and records indicate that prior to the development of SkyHouse Nashville the land was valued at approximately

$100 per square foot or $20 per buildable square foot. Land for the Morris Apartments was valued at approximately $266 per square foot of land or approximately $90 per square foot of buildable square feet.

For any developer a key component of the decision to acquire additional land and build horizontally or acquire development rights and build vertically will be dependent on the value of land per buildable area and the value of DRs per square foot. For all three properties, the land value per buildable square foot ranges from $16 to $36 per square foot and, as a result, it is financially beneficial for these properties to acquire additional development rights at roughly $13.50 and build vertically as opposed to acquiring additional properties and building horizontally. While this is obviously an oversimplified example, it illustrates the important relationship between the cost of development rights and the cost to acquire land.

Table 7. Comparable Property Land Acquisition

Description	SkyHouse Nashville	The Morris Apts.	SESAC Building
Land Acquisition			
Valuation	$5,575,600 [1]	$11,352,000 [1]	$3,500,000 [2]
Per Land Area (sf)	$100	$266	$91
Per Buildable - Original Zoning	$20	$89	$30
Per Buildable - Actual Building	$16	$36	$35
Per Unit - Actual Building	$15,840	$33,000	N/A

[1] Nashville-Davidson County Assessor 2016 estimate
[2] Actual sales price, 2014
Source: CoStar; Nashville-Davidson County Assessor; Economic & Planning Systems
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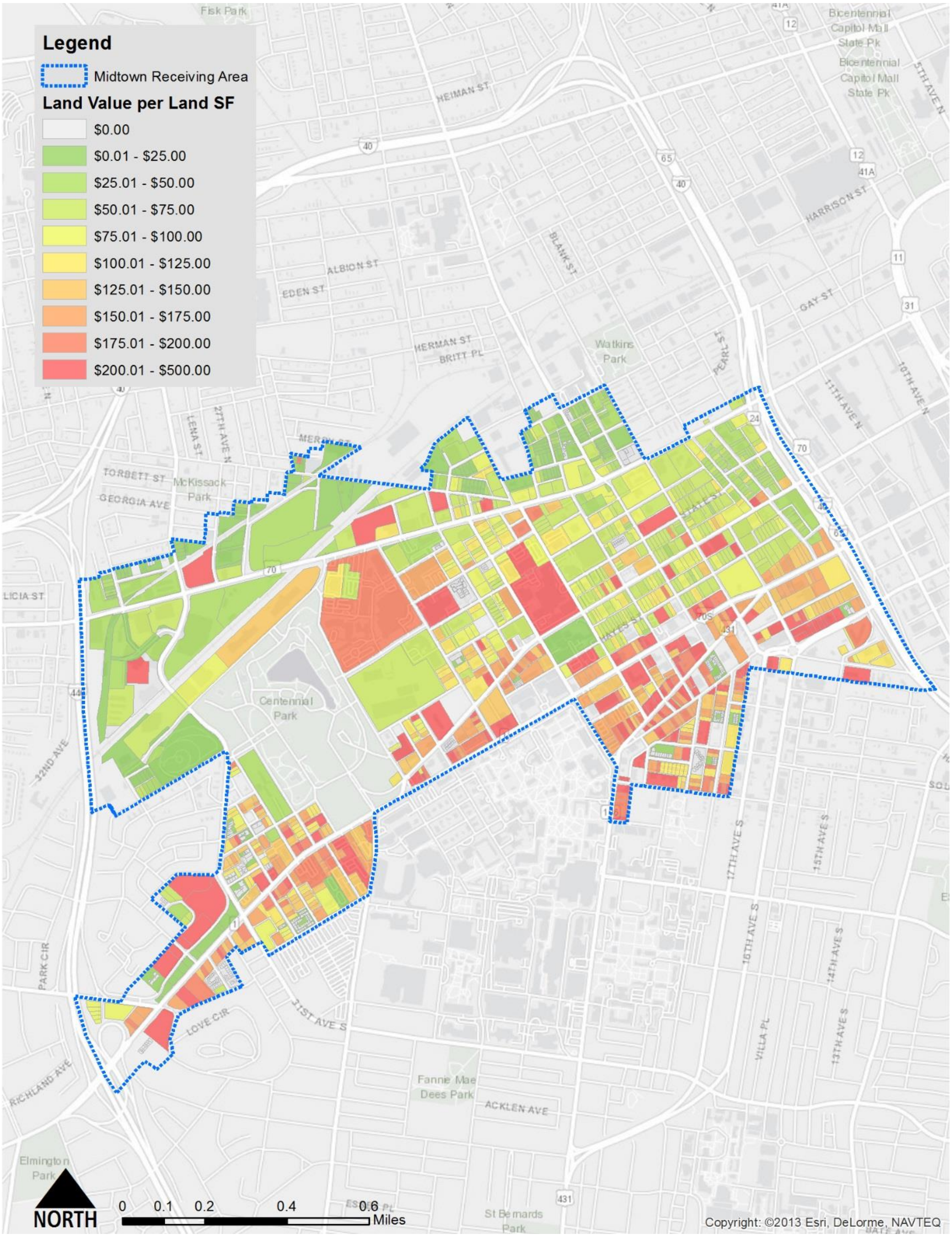
One of the metrics by which a developer may seek to achieve greater density is to acquire more land. While more land affords a developer the opportunity to minimize the height of a project and thus per square foot total development costs (i.e. total development costs escalate significantly after 6 floors, and again after approximately 12 floors), there are instances when adding density can be done without the addition of land.

Error! Not a valid bookmark self-reference. illustrates the land value per square foot for parcels in Midtown. With the exception of the CESAC building, the other projects assembled neighboring parcels for the development project. In these cases, a developer that seeks to assemble parcels to obtain greater density would have the option of purchasing additional development rights so long as they were less costly than the per buildable square foot of neighboring parcels.

Figure 12. Land Values per Square Foot in Midtown



Feasibility

A market exists when sending area owners area willing to sell TDRs at a price that allows buyers to use the TDRs profitably. There must be market "growth" in a receiving area for a TDR program to succeed; there must not be an oversupply of "other" development opportunities that negate the need for acquisition of TDRs; and there must be sufficient value in the TDR for a sending site to sell its DRs, and the value of TDRs must not exceed a purchaser's willingness to pay.

As identified previously, it is estimated that more than 70 percent of sending site property owners would have a threshold value of approximately $30 per square foot (or less) to achieve in the sale of their development rights. The purpose of the feasibility analysis is to identify:

- Initial pricing: find an optimal price per development right for buyer and seller
- Transfer ratio: find a transfer ratio that optimizes the pricing
- Supply of development rights: ensure an adequate supply of development rights

Model Testing

Static Proforma

In order to illustrate the impact of implementing a TDR program on potential development projects EPS has developed a hypothetical project proforma for two projects that were recently completed in Music Row with and without a TDR purchase component. The purpose is to illustrate the impact of a TDR program on projects that did pursue SP zoning to achieve additional density. In general, the modeling assumptions come from a wide variety of primary and secondary sources, including:

- Land costs: Nashville-Davidson County Assessor, Costar, or EPS assumption
- Hard construction costs: RS Means
- Soft construction costs: RS Means and EPS assumptions
- Rental or lease rates: Costar
- Development rights values: EPS analysis of Assessor data

The projects summarized in this section, SkyHouse Nashville and The Morris, were both completed in Music Row and both were able to gain SP approval in order to achieve densities not permitted under the existing zoning.

- Development Program**:** SkyHouse Nashville is a Class A multifamily development that was completed in 2017 in Music Row, as shown in **Table 8**. The 25-story project includes 352 units and a gross building area of 341,000 square feet. In order to achieve the current density, the project was able to gain an additional 62,300 square feet through SP zoning. The Morris is also a Class A multifamily development that was completed in 2017, as shown in

Table 9. The 19-story building include 344 units, 311,900 gross square feet, and was able to add an additional 183,800 square feet through SP zoning.

- Construction Costs**:** Although actual construction cost information for both these projects is not publicly available, EPS estimated construction costs through an evaluation of current market data specific to the Nashville market, as shown in **Table 10** and **Table 11**. Land costs were estimated at $25,000 per unit, which can generally range from $20,000 to $30,000 per unit for multifamily projects. Demolition and general sitework was estimated at $5.00 and $2.50 per land square foot, respectively. Infrastructure and sitework costs can vary considerably depending on the condition of the site but typically reflect a relatively small proportion of overall development costs (i.e. less than 1.0 percent of total). Hard costs were estimated at $1.55 per GBA, which was based on current market data summarized by RSMeans. Finally, soft costs, which include developer fees, project management fees, insurance, architecture and engineering, legal, and other, were estimated at 25 percent of hard costs. For the majority of projects soft costs can range from 20 to 30 percent of hard costs.
- Net Operating Revenue**:** Assumptions driving project revenues were based on current data provided by CoStar and industry accepted standards relating to vacancy rates and operating costs. Average rental rates range from $2.50 per square foot for SkyHouse Nashville to $2.83 per square foot for The Morris. Stabilized vacancy rates are estimated at 7.0 percent of potential gross income and operating expenditures are estimated at 30 percent of effective gross income (revenues after vacancy).
- Project Performance**:** Without additional costs related to acquiring additional development rights both projects achieve return rates that are necessary in order to achieve project feasibility. For the purposes of this analysis, return on cost (net operating income divided by total project cost) was used as a proxy for development return and feasibility. The necessary hurdle rates of 5.75 to 6.25 were informed by current capitalization rates in the Nashville market and 125 basis point spread between cap rates and return on cost.

- Impact of Development Right Cost**:** The impact of acquiring development rights in order to achieve densities greater than the existing zoning is also shown in **Table 10** and **Table 11**. At a cost of $10 per square foot, the cost of acquiring additional development rights was estimated $623,000 for SkyHouse Nashville and $1.8 million for The Morris. For SkyHouse Nashville, costs associated with acquiring development rights represent 0.7 percent of total estimated construction costs. For The Morris, costs associated development right costs represent 2.2 percent of total construction costs. Both projects remained feasible under the additional costs associated with acquiring development rights. The return on cost for SkyHouse Nashville dropped from 6.07 percent to 5.99 percent and the return on cost for The Morris dropped from 7.35 percent to 7.03 percent, both within an acceptable rate of return range.

Table 8
Development Program: SkyHouse Nashville

Description			Program
Project Overview			
Type			Multifamily
Year Built			2017
Stories			25
Gross Building Area (sf)			341,087
Parcel Area (sf)			55,757
Additional Area through SP			62,303
Development Program			
Studio	604	sf per unit	84
1-Bed	705	sf per unit	174
2-Bed	1,009	sf per unit	76
3-Bed	1,384	sf per unit	18
Subtotal	**781**	**avg sf per unit**	**352**

Source: Nashville-Davidson County Assessor, CoStar; RSMeans; CBRE; Economic & Planning Systems

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Table 9
Development Program: The Morris

Description			Program
Project Overview			
Type			Multifamily
Year Built			2017
Stories			19
Gross Building Area (sf)			311,881
Parcel Area (sf)			42,689
Additional Area through SP			183,815
Development Program			
Studio	544	sf per unit	61
1-Bed	727	sf per unit	205
2-Bed	1,095	sf per unit	78
3-Bed	0	sf per unit	0
Subtotal	**778**	**avg sf per unit**	**344**

Source: Nashville-Davidson County Assessor, CoStar; RSMeans; CBRE; Economic & Planning Systems

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Table 10
Hypothetical Project Proforma: SkyHouse Nashville

Description			SkyHouse	
			w/out DR Cost	w/ DR Cost
CONSTRUCTION COST				
Land Cost				
Land Acquisition	$25,000	per unit	$8,800,000	$8,800,000
Subtotal			**$8,800,000**	**$8,800,000**
Infrastructure and Sitework				
Demolition	$5.00	per land sf	$278,784	$278,784
General Sitework	$2.50	per land sf	$139,392	$139,392
Subtotal			**$418,176**	**$418,176**
Hard Costs				
Vertical Construction	$155.00	per GBA	$52,868,485	$52,868,485
Tenant Improvements	$0.00	per GBA	$0	$0
Subtotal			**$52,868,485**	**$52,868,485**
Soft Costs				
General Soft Costs	25.0%	% of HC	$13,217,121	$13,217,121
DR Acquisition	$10.00	per add. area	$0	$623,030
Subtotal			**$13,217,121**	**$13,840,151**
Total Construction Costs	$260	per GBA	**$88,520,904**	**$89,766,964**
OPERATING REVENUE				
Potential Gross Income				
Studio	$2.50	per sf	$1,522,080	$1,522,080
1-Bed	$2.44	per sf	$3,591,778	$3,591,778
2-Bed	$2.60	per sf	$2,392,541	$2,392,541
3-Bed	$2.50	per sf	$747,360	$747,360
Subtotal			**$8,253,758**	**$8,253,758**
Less: Vacancy	7.00%	% of PGI	-577,763	-577,763
Effective Gross Income			**$7,675,995**	**$7,675,995**
Less: Operating Expenses	30.00%	% of EGI	-$2,302,799	-$2,302,799
Net Operating Income			**$5,373,197**	**$5,373,197**
Return on Cost (ROC)			**6.07%**	**5.99%**
Feasibility			**Feasible**	**Feasible**
ROC Hurdle Spread				
Low			5.75%	5.75%
High			6.25%	6.25%

Source: Nashville-Davidson County Assessor, CoStar; RSMeans; CBRE; Economic & Planning Systems

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Table 11
Hypothetical Project Proforma: The Morris

Description			The Morris w/out DR Cost	The Morris w/ DR Cost
CONSTRUCTION COST				
Land Cost				
Land Acquisition	$25,000	per unit	$8,600,000	$8,600,000
Subtotal			**$8,600,000**	**$8,600,000**
Infrastructure and Sitework				
Demolition	$5.00	per land sf	$213,444	$213,444
General Sitework	$2.50	per land sf	$106,722	$106,722
Subtotal			**$320,166**	**$320,166**
Hard Costs				
Vertical Construction	$155.00	per GBA	$48,341,555	$48,341,555
Tenant Improvements	$0.00	per GBA	$0	$0
Subtotal			**$48,341,555**	**$48,341,555**
Soft Costs				
General Soft Costs	25.0%	% of HC	$12,085,389	$12,085,389
DR Acquisition	$10.00	per add. area	$0	$1,838,146
Subtotal			**$12,085,389**	**$13,923,535**
Total Construction Costs	$261	per GBA	**$81,432,499**	**$85,108,791**
OPERATING REVENUE				
Potential Gross Income				
Studio	$2.93	per sf	$1,166,749	$1,166,749
1-Bed	$2.92	per sf	$5,222,186	$5,222,186
2-Bed	$2.74	per sf	$2,808,281	$2,808,281
3-Bed	$0.00	per sf	$0	$0
Subtotal			**$9,197,217**	**$9,197,217**
Less: Vacancy	7.00%	% of PGI	-643,805	-643,805
Effective Gross Income			**$8,553,411**	**$8,553,411**
Less: Operating Expenses	30.00%	% of EGI	-$2,566,023	-$2,566,023
Net Operating Income			**$5,987,388**	**$5,987,388**
Return on Cost (ROC)			**7.35%**	**7.03%**
Feasibility			**Feasible**	**Feasible**
ROC Hurdle Spread				
Low			5.75%	5.75%
High			6.25%	6.25%

Source: Nashville-Davidson County Assessor, CoStar; RSMeans; CBRE; Economic & Planning Systems

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Sensitivity Analysis

In addition to a static proforma, more generalized assumptions were used on prototypical construction scales to assess the impact that three core elements have on a project's total development costs: the enhanced transfer ratio; land acquisition value; and the building scale (i.e. construction costs per square foot). These sensitivities are intended to illustrate also the range in possible development rights costs per buildable square foot that a purchaser might pay to acquire the same magnitude of additional density.

In **Table 12**, a generalized project is displayed as being 350,000 gross square feet, of which 150,000 square feet were obtained through SP zoning. At a total development cost of $325 per square foot (including land) for this scale of project, the total cost of the project is estimated to be $113.8 million. Assuming that land accounts for 12.5 percent of the total development costs, a conservative (i.e. high) assumption for a project of this scale, the acquisition costs would have been approximately $14.2 million or $41 per buildable square-foot of structure ($14.2 million divided by 350,000 square feet of building).

Each scenario varies the transfer ratio from a 1-to-1 to a 4-to-1 ratio. At a 1-to-1 ratio, the cost per development right is exactly the land cost per building area at $41 per square foot and, to accommodate the purchase of 150,000 square feet of additional building area, would cost more than $6 million, an increase in total development costs of 5.4 percent. At a 2-to-1 ratio, the cost of development rights drops to $20 and would add just over $3 million in project costs, impacting total development costs by 2.7 percent. At 3-to-1, the impact is to a project is approximately 1.8 percent, and 1.3 percent at a 4-to-1 ratio.

Table 12. Transfer Ratio Sensitivity

	Transfer Ratio			
Description	**1 : 1**	**2 : 1**	**3 : 1**	**4 : 1**
Receiving Site				
Total Building Area (sf)	350,000	350,000	350,000	350,000
GBA Obtained from SP Zoning	150,000	150,000	150,000	150,000
Construction Cost per SF	$325	$325	$325	$325
Total Construction Cost	$113,750,000	$113,750,000	$113,750,000	$113,750,000
Land as % of Total	12.5%	12.5%	12.5%	12.5%
Land Cost	$14,218,750	$14,218,750	$14,218,750	$14,218,750
Land Cost per Building Area	$41	$41	$41	$41
Obtaining GBA Through TDR				
GBA Obtained from SP Zoning	150,000	150,000	150,000	150,000
Transfer Ratio	1 : 1	2 : 1	3 : 1	4 : 1
Req'd Sender Development Rights	150,000	75,000	50,000	37,500
Development Right Cost per SF	$40.63	$20.31	$13.54	$10.16
Cost to Purchase Additional GBA	$6,093,750	$3,046,875	$2,031,250	$1,523,438
as % Increase in TDC	**5.36%**	**2.68%**	**1.79%**	**1.34%**

Source: Economic & Planning Systems

H:\173054-Nashville TN Transfer of Development Rights Study\Models\[173054-DR Value Est-11-15-2018.xlsm]TABLE - Transfer Ratio Impact

In **Table 13**, the same generalized project is displayed as being 350,000 gross square feet, of which 150,000 square feet were obtained through SP zoning. Again, the total development cost is $325 per square foot (including land), and the total cost of the project is $113.8 million. In this sensitivity, however, land is assumed to range from 10 percent to 17.5 percent of total project costs for the purpose of illustrating the range in possible land per buildable square-foot that exists in the area of Midtown, for example. Using these assumptions, land costs per buildable square-foot range from $33 to $57 per square foot. Shown at a 3-to-1 transfer ratio, these scenarios illustrate that the potential impact on total development costs would range from approximately 1.4 to 2.5 percent.

Table 13. Land Value Sensitivity

	Land Value			
Description	**10.0%**	**12.5%**	**15.0%**	**17.5%**
Receiving Site				
Total Building Area (sf)	350,000	350,000	350,000	350,000
GBA Obtained from SP Zoning	150,000	150,000	150,000	150,000
Construction Cost per SF	$325	$325	$325	$325
Total Construction Cost	$113,750,000	$113,750,000	$113,750,000	$113,750,000
Land as % of Total	10.0%	12.5%	15.0%	17.5%
Land Cost	$11,375,000	$14,218,750	$17,062,500	$19,906,250
Land Cost per Building Area	$33	$41	$49	$57
Obtaining GBA Through TDR				
GBA Obtained from SP Zoning	150,000	150,000	150,000	150,000
Transfer Ratio	3 : 1	3 : 1	3 : 1	3 : 1
Req'd Sender Development Rights	50,000	50,000	50,000	50,000
Development Right Cost per SF	$10.83	$13.54	$16.25	$18.96
Cost to Purchase Additional GBA	$1,625,000	$2,031,250	$2,437,500	$2,843,750
as % Increase in TDC	**1.43%**	**1.79%**	**2.14%**	**2.50%**

Source: Economic & Planning Systems

H:\173054-Nashville TN Transfer of Development Rights Study\Models\[173054-DR Value Est-11-15-2018.xlsm]TABLE - Land Impact

In **Table 14**, the scale of project is varied to reflect different prototypical project types, which represent different total development cost structures. Prototypes were defined as:

- 5-floors: assumed to be four floors of wood-frame construction over one floor of concrete of 267,000 square feet. It is assumed that 100,000 square feet of this building might have been obtained through an SP zoning. The estimated per square-foot total development costs is $250 per square-foot.
- 8-floors: assumed to be concrete and/or steel construction, this prototype is assumed to be 170,000 square feet, of which 50,000 were obtained through SP zoning. The estimated per square-foot total development costs is $333 per square-foot.
- 12 floors: assumed to be concrete and/or steel construction, this prototype is assumed to be 250,000 square feet, of which 100,000 were obtained through SP zoning. The estimated per square-foot total development costs is $400 per square-foot.
- 20 floors: assumed to be concrete and/or steel construction, this prototype is assumed to be 350,000 square feet, of which 150,000 were obtained through SP zoning. The estimated per square-foot total development costs is $400 per square-foot.

In this analysis, the land cost is uniformly assumed to be 12.5 percent, which varies the land cost per buildable square-foot from $31 to $50 per square-foot. As a percent of the total development costs, the impact that the purchase of TDR would have ranges from approximately 1.5 percent to 2.9 percent.

Table 14. Building Scale Sensitivity

Description	Building Scale			
	5 floors	8 floors	12 floors	20 floors
Receiving Site				
Total Building Area (sf)	267,000	170,000	250,000	350,000
GBA Obtained from SP Zoning	100,000	50,000	100,000	150,000
Construction Cost per SF	$250	$333	$400	$400
Total Construction Cost	$66,750,000	$42,500,000	$62,500,000	$87,500,000
Land as % of Total	12.5%	12.5%	12.5%	12.5%
Land Cost	$8,343,750	$5,312,500	$7,812,500	$10,937,500
Land Cost per Building Area	$31	$42	$50	$50
Obtaining GBA Through TDR				
GBA Obtained from SP Zoning	100,000	50,000	100,000	150,000
Transfer Ratio	3 : 1	3 : 1	3 : 1	3 : 1
Req'd Sender Development Rights	33,333	16,667	33,333	50,000
Development Right Cost per SF	$10.42	$13.85	$16.67	$16.67
Cost to Purchase Additional GBA	$1,041,667	$692,708	$1,666,667	$2,500,000
as % Increase in TDC	**1.56%**	**1.63%**	**2.67%**	**2.86%**

Source: Economic & Planning Systems

Conclusions

The feasibility assessment revolves around a single question: is there a market for both the sellers of development rights and potential buyers given two different sets of economic considerations?

- Seller considerations: as indicated previously, the distribution of sending area (i.e. Music Row NR and NRE site) property values on the basis of a per square foot of development rights ranges from $20 to $80 per square-foot. Based on conversations throughout the process of this study, the threshold rule that surfaces frequently is that a buyer would seek to obtain a minimum of 50 percent of the entire property's value in selling their development rights. This would equate to a range of available development rights in Music Row of $10 to $40 per square-foot, with an average of approximately $24 per square-foot.
- Purchaser considerations: a purchaser of development rights would be, at the least, considering the cost of land at the receiving site, the estimated total development costs, and the potential to generate income in the project. Ultimately, using a ROC metric or something similar as depicted in the proforma analysis described earlier (refer to **Table 10** and **Table 11**), the purchaser will be seeking to minimize the impact on total development costs, which means seeking to minimize the cost paid for development rights. And at a 1-to-1 ratio, the average cost per development right of $24 would impact a projects development costs by nearly 3.0 percent (refer to **Table 12**).

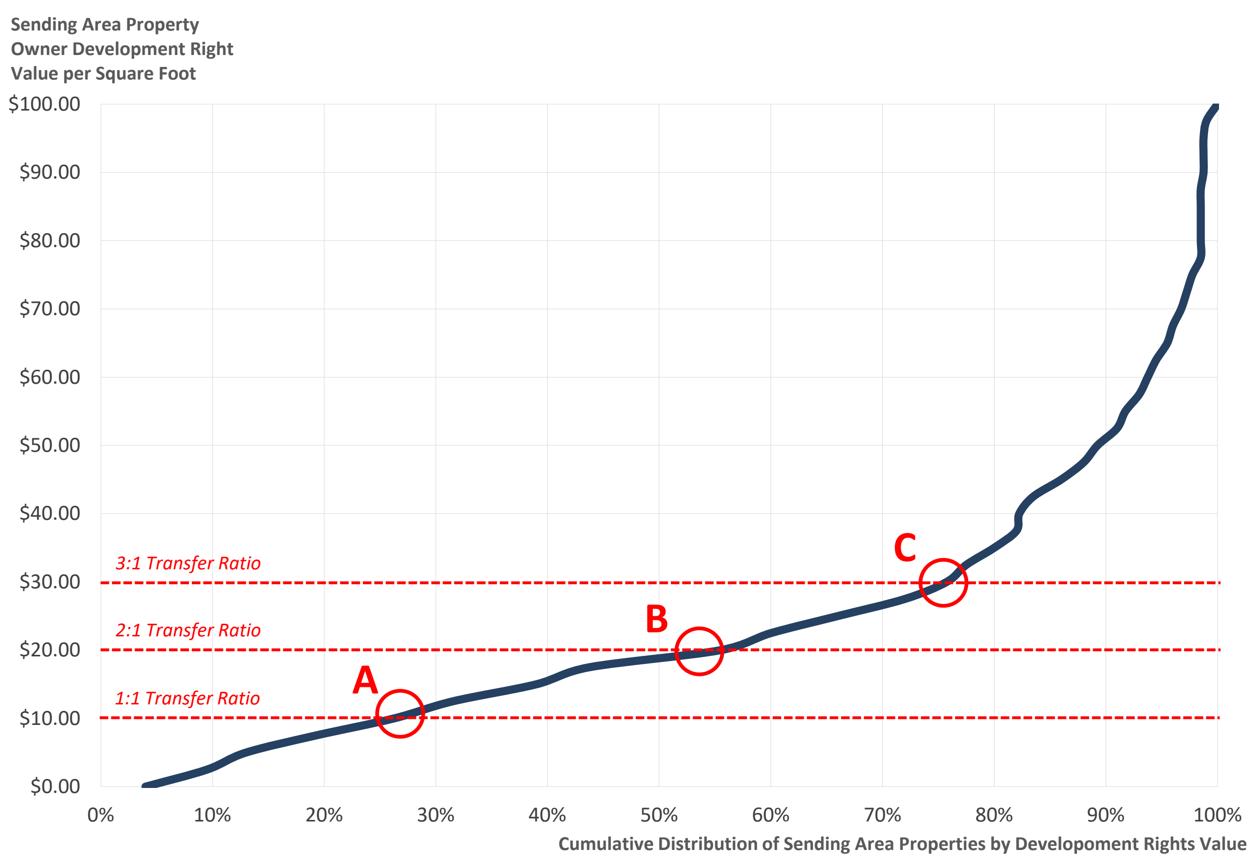
The link between the seller and purchaser feasibility considerations is the enhanced transfer ratio. To illustrate a few of the critical concepts inherent to this element of the TDR program, **Figure 13** illustrates how and at what transfer ratio the seller and purchaser considerations can be optimized to make the largest market (i.e. supply) of development rights available to purchasers at the optimal (i.e. lowest) price. From the perspective of the sending sites, the chart illustrates the following basic elements:

- Sending Area Property Owner Development Right Values: on the left side of the chart (the Y-axis), the values per square feet represent the value of development rights available to the collection of Music Row (NR and NRE) property owners.
- Distribution of Sending Area Property Values: displayed cumulatively (on the X-axis), this distribution illustrates the portion of all properties in the sending area at specified development right values per square-foot. For example, the red circles A, B, and C illustrate points of intersection along this cumulative distribution that demarcate the proportion of properties valued at $10, $20, and $30 per square foot of development rights or less. The corresponding portions are approximately 27 percent, 53 percent, and 75 percent, respectively.

The second layer of information contained within this chart are the dotted red lines, which also highlight the points of intersection A, B, and C, as well. From the purchaser's perspective, this chart illustrates a purchaser payment of $10 per square-foot of development rights obtained for a receiving site. But with an enhanced transfer ratio of 1-to-1, 2-to-1, and 3-to-1, it means.

- Enhanced transfer ratio at 1:1: at a 1-to-1 ratio, sellers receive $10 per square-foot of development rights sold and receivers receive one (1) square-foot of development rights. It means that only 27 percent of sending area properties are available at this price point.
- Enhanced transfer ratio at 2:1: at a 2-to-1 ratio, sellers receive $10 per square-foot of development rights sold and receivers receive two (2) square-foot of development rights. It means that 53 percent of sending area properties are available at this price point.
- Enhanced transfer ratio at 3:1: at a 3-to-1 ratio, sellers receive $10 per square-foot of development rights sold and receivers receive three (3) square-foot of development rights. It means that 75 percent of sending area properties are available at this price point.

Figure 13. Value per SF of Sending Area Property Owner Development Rights



Source: Nashville-Davidson County Assessor; Economic & Planning Systems

In conclusion, transfer ratio of 3-to-1 is clearly optimal. While it seems that the higher the enhanced transfer ratio, the better, if the transfer ratio is too high, it will take much longer to meaningfully preserve Music Row's NR and/or NRE sites.

It should be noted that the transfer ratio represents a win for both the seller and the purchaser. On the seller side, a higher value per square foot of development rights is achieved, making achievement of as much total property value possible. From the purchaser's perspective, the enhanced ratio means that the effective cost per square foot is lower, minimizing the impact to a project's proforma.

4. Program Recommendations

Introduction

Throughout the literature, the two most frequently-mentioned challenges to the success of TDR programs are that:

- Market demand (in receiving areas) must exceed the baseline zoning; and
- There must not be competing mechanisms by which developers may obtain additional density in receiving areas.

Communities are often interested in portraying and codifying aspirational magnitudes of density they believe to be supported by the market in comprehensive planning processes. What is often forgotten in these processes is that such upzoning modifications typically ignore the value-capture component of the additional entitlements.

When the development community is accustomed to obtaining additional entitlements through inexpensive (or relatively free) processes, such as SP zoning, there is no reason that a developer will agree to pay for density increases that are currently granted relatively without charge (though there are nominal application fees by density tier for SP zoning, in addition to the cost of time involved in going through the process).

Major Programmatic Elements

Based on the market analysis of the sending and receiving areas, land sales and recent development project comparables, and a feasibility assessment of the intersection between sending- and receiving-area economics, EPS recommends the following framework for implementing and phasing in a TDR program for Music Row.

1. ***Voluntary TDR Program Compliance.***

   The Music Row TDR should be based upon participation by request, and property owners may opt in or opt out of the program. An NRE site property owner approached by an interested purchaser of development rights may refuse or participate in a negotiation freely just as they may accept or reject an offer for purchase of development rights freely.

2. ***TDRs should be available by-right.***

   Along similar lines, some programs are distinct in that they either allow transactions of TDRs as-of-right or through an application (and/or approval) process. The TDR program for Music Row should be as-of-right to avoid unnecessary cost and deterrence from their utilization.

3. ***The initial sending area should be all NR and NRE sites.***

   Although sites designated as NR represent the highest preservation priority for the City, the volume of development rights available exclusively from these sites is too small to comprise an adequate supply of TDRs. The analysis of NR and NRE sites shows that approximately 2.2 million square feet of development rights are available from this body of properties. At an enhanced transfer ratio of 3-to-1, this will make approximately 6.6 million square feet of development rights available for the receiving areas.

4. ***The initial receiving areas should be Midtown and Music Row sites excluding NR and NRE sites.***

   A commonality among TDR programs around the country is the close proximity of sending and receiving areas. In some instances, this proximity is a detrimental element when the receiving area has too few opportunities for TDR usage, or development in general (as is the case with Portland's historic preservation TDR). In Midtown, however, there are still ample opportunities for development and usage of TDRs. And the rationale for allowing the transfer of development rights from one site to another in Music Row is to facilitate market demand pressures within the market, not to subvert them entirely.

5. ***The initial price of TDRs should not be fixed and should be allowed to fluctuate with the market.***

   While research and analysis of the local real estate market has been conducted to identify an ***initial suggested*** range of TDR pricing, EPS recommends that the City and/or its authorized oversight entity not engage in future pricing TDRs; rather, leave the determination of future pricing to the market. The price of TDRs will depend on the market and the influence that expectations of achieving additional density through use of SP zoning have on development projects. For example, in New York, TDRs have reportedly sold for $200 to $400 per square foot because of the absence of competing mechanisms, whereas in Portland, historic preservation TDRs have reportedly sold for approximately $10 per square foot (or less) where there are numerous other competing mechanisms.

   Estimation of site-specific examples (using actual sending sites and developed projects), as shown previously in **Table 10** and **Table 11**, illustrates that actual projects would have been feasible at a cost of $10 per square-foot of development rights received by the developer/purchaser (and $30 per square-foot purchased from the seller).

   Such examples, however, are made with generalized assumptions, which in an actual transaction, would be unique and particular to both parties – i.e. from the purchaser's perspective - market-specific land costs at the receiving site, construction costs and valuation assumptions, and from the seller's perspective – unique financial position considerations, plans for continued revenue-generating use of the site, etc. Moreover, it is often unclear whether market demand may be increasing or decreasing.

6. ***A 3-to-1 enhanced transfer ratio is recommended as appropriate to bridge receiving and sending site land values per buildable square-foot.***

   There is precedent in the implementation of urban and historic preservation TDR programs for the use of an enhanced transfer ratio – i.e. a ratio of greater than one-to-one. In theory, many TDR programs adopt an enhanced transfer ratio in an effort to create market incentives for sending-area landowners and receiving-area developers. As illustrated in **Figure 13**, EPS recommends an initial transfer ratio of three (3) square feet (to the purchaser) for every one (1) square foot purchased from the sending site. In EPS's estimation, enhances the element of economic feasibility for the purchaser (i.e. developer of a project in the receiving area) and makes the offer more attractive to the seller (i.e. especially considering the redevelopment pressures, and thus increasing land values, in Music Row).

   There is an awareness in the literature regarding initial landowner reluctance to sell TDRs, being uncertain where TDR pricing may ultimately settle. As mentioned above, the price of TDRs will be driven by numerous external and internal market and financial considerations (on the part of the purchaser and seller).

7. ***Surface parking lots should be excluded from TDR eligibility.***

   Surface parking lots not in connection with an NRE site and under separate ownership from the NRE site should not be eligible to transfer and sell their development rights. The development of surface parking lots is a desired outcome; there, surface parking lots should not be the beneficiaries of a TDR program. As noted in the analysis of the sending area parcels, the estimation of available development rights does include the land area (and the FAR capacity) of sites designated as NR or NRE that have surface parking on the same parcel.

8. ***Documentation of a transaction should include numerous pieces of pertinent information.***

   Documentation should include a by-right "severance" of development rights, a record of the parties involved, the location, the amount of development rights severed, remaining development rights on the sending site, location and/or ownership of the severed development rights, as well as purchase price and date of the transaction. It should also include any other pertinent or legally necessary pieces of information as determined by Metro Legal. The process should also be monitored by an authorized entity, and the "rights" of individuals to purchase and/or hold development rights as a commodity should be explained, as well as an explanation of the taxation of TDRs for purchaser and sending site property owner.

9. The tax implications of TDR should be made clear to sellers and purchasers.

The documentation of the reduction in zoning is simultaneously a documentation of the reduction of the land basis a property owner has in the land, which theoretically directly impacts the property owner's property tax liability. That is, the proceeds from the sale of development rights can be subject to capital gains taxes for a sending site property owner. It is generally understood that when the proceeds from a sale of development rights exceeds a seller's basis in their land, capital gains taxes are paid.

10. TDRs should be certified by the overseeing entity and/or the City.

Some TDR programs require governmental approval of TDR eligibility and/or approval of a transaction. This can be unnecessarily costly and time-consuming, as well as contribute unpredictability to the development process. Participation in the recommended TDR program is voluntary. EPS recommends that properties may be certified under two circumstances; 1) property owners wishing to certify the availability of their development rights may do so even when they have not been approached by a prospective purchaser. Under this circumstance, these property owners could be granted first right of refusal (over those property owners that have not certified their development rights) for potential transactions that may arise; 2) the City's authorized entity would certify the legitimacy of the transaction without formalizing the process or requiring review and approval by a governing body.

11. The TDR program should allow for flexibility in the timing of development without concurring requirements.

A concurrency requirement means that the transfer of TDRs must occur simultaneously to an application for the usage of them. That is, some communities require that at the time TDRs are purchased that a developer (or the purchaser) simultaneously submit a plan for how they will be used and apply for a zoning variance on the receiving site. This is typically used in situations where the community's interests are to simply ensure that the development rights get utilized. This is not recommended for Nashville in the interest of allowing third-party entities to purchase TDRs.

12. TDRs should be treated as a commodity that may be purchased through a secondary market.

This means that even an individual investor, for example, interested and motivated by preservation, may purchase development rights without a specific development project or receiving site in mind for the purpose of "banking" TDRs that he or she may sell to a willing buyer at a later time. In reviewing San Francisco's TDR program transactions, a consultant indicated that a primary reason for the program's success was due to the fact that it allowed for any third party (i.e. developers with entitled or proposed projects, brokers, investors, speculators, and financial) institutions to own TDRs. It was stated that such a model "better accommodates the desires of interested nonprofits, alleviates timing concerns, [and] favors the developer's schedule".[9] On the other hand, it has also be noted that investors own a significant portion of TDRs in San Francisco, and thus have control over pricing, which forces purchasers of development rights to negotiate with multiple property owners (an eventuality to be avoided if possible).

13. The City should allocate sufficient funds for the purchase of an initial block of TDRs and for the establishment of a TDR bank.

This initial funding not only ensures (without relying on market momentum) that TDRs are purchased for the benefit of sites, but it also facilitates Metro's control over a block of development rights. The latter would assist in avoiding the problem that San Francisco has run into where an investment entity owns a considerable portion of existing development rights, such that the development market is forced to work with multiple property owners to acquire sufficient development rights.

14. Music Row TDRs should not be subject to expiration.

Some programs utilize a limited time frame for the validity (usability) or TDRs. There is little market justification for such an approach. TDRs should be treated like a commodity that can be purchased, banked, or used like any other asset or property. There should be no expiration of TDRs from Music Row. If an investor, entity, nonprofit, or even the City wanted to purchase a block of TDRs for use or sale in the future, it should be able to do so.

15. There should be no scale limitations on receiving sites with TDR usage.

In an interest to of avoiding dramatically different building scales in receiving areas, some TDR programs like New York's Landmark Transfers program, allow only a portion of maximum floor area on a receiving site to be achieved through the use of TDRs. In Music Row's more limited density context, this limitation is unnecessary.

16. There should be no minimum TDR purchase requirement.

In the interest of ensuring that a sufficient number of acres or square feet of land or (historic) structure are preserved, some programs (e.g. Montgomery County, MD) require a minimum purchase of TDRs.

17. The TDR program should not require public amenity dedications.

Some TDR programs require that receiving sites accommodate other planning or public amenity requirements, such as public open space, etc. in addition to the use of TDRs. EPS does not recommend that the City's Planning Commission or Metro Planning make additional requests on the receiving site

[9] "TDR Study: San Francisco's Transfer of Development Rights Program" June 2013

other than those ordinarily a part of the planning and development review processes.

18. The City should limit the use of SP zoning in TDR receiving areas.

As long as developers are able to utilize SP zoning in receiving areas, the TDR program will not be utilized or successful. There are three options for Nashville to mitigate against this threat: 1) eliminate the usage of SP zoning in the receiving area after a published period of time (e.g. 6-12 months after approval of the TDR program by Planning Commission); 2) identify a density/height threshold that may be achieved through usage of SP above which a maximum density/height threshold may be achieved through the usage of TDR; or 3) require the Planning Commission to no longer promote, encourage, or support the usage of SP zoning for achieving additional density in the receiving area.

- *Option 1: The most concrete approach to ensuring that TDRs are utilized for obtaining additional density would involve advance notice that, after a specified and published date, SP zoning will no longer be an available mechanism for achieving additional density within the receiving area. The strategy runs the risk of also creating negative externalities such as thwarting development patterns within the receiving area and pushing development beyond the district's boundaries.*
- *Option 2: Also in practice is an option in which a City allows development in the receiving area additional density through numerous mechanisms, such as TDR and in this case SP zoning. The City would require that a portion of requested additional density be obtained through TDRs and the other portion be obtained through SP zoning. And because SP zoning applications do not uniformly request a specific amount of additional density, it is recommended that such a program option be implemented in "relative" terms, such as percentages. This option could also function as an interim step toward eventually implementing Option 1.*
- *Option 3: An option that would avoid some externalities but create others is for the City to directing the Planning Commission not to support, promote, or encourage the use of SP zoning in the receiving area. This option runs the risk that developers will object to the use of TDRs as a matter of time, effort, and cost – and ultimately utilize SP zoning anyway.*

19. TDR transactions should be recorded and reported to appropriate governmental entities.

In some communities, the transfer is documented as a recorded agreement and in other communities recorded as a deed restriction. Both accomplish the same goal of preventing the property owner from using the rights transferred, but a recorded agreement can be legally nullified by both parties whereas a deed restriction generally cannot. In Nashville's first iteration of a historic preservation TDR program, the transaction was recorded as a deed restriction, and EPS recommends that this simplest of approaches be maintained.

Conversations with City staff, Metro Legal, and the Assessor's Office led to the determination that the Assessor should record the transaction as a downzoning of the property in the order of magnitude of the rights transferred/sold. The entity responsible for monitoring and oversight of the TDR program would report both to Metro Planning and the Assessor's Office the amount of the transfer, among other critical pieces of information as described below.

The challenge may arise in which a small transfer reduces a property's maximum development potential to an increment that conforms neither to the original zoning nor any incrementally lower zoning category.

20. The TDR transaction should include a 5 percent administrative pass-through fee.

It has been identified by Metro staff that the most optimal administration of the TDR program is one that does not increase the staffing or administrative burden on the City's staff. As such, a 5 percent administrative cost is recommended on each TDR transaction that would be passed directly through to the authorized oversight/monitoring entity.

21. Future use of the sending site should be limited.

Because urban TDR programs are generally used for the preservation of landmarked historic structures, the prohibition to demolish or redevelop the site as anything else is a mandate of the landmark designation rather than of the TDR program. Nevertheless, the nature of TDR programs is to provide a mechanism by which sending area property owners may monetize the social value (i.e. as open space, agricultural land, historic or cultural buildings) of their properties in exchange for maintaining that public "good". To this end, a sending area property owner who sells development rights should be encouraged (through other means) to maintain their music-related business and/or preserve their built structure.

22. The City should provide a property tax grant to incentivize the preservation of music-related businesses.

To provide additional incentive to meet the intent of the TDR program, the City should provide a property tax grant equal to 25 percent of property taxes back to the property owner if they maintain a music-related business. The property tax incentive would expire under the condition that either: the site is demolished and/or redeveloped as something other than a music-related business. It is recommended that after the program has been reviewed in two years (see following recommendations), that the amount of the property tax grant be reevaluated for efficacy. That is, based on how the Nashville-Davidson County Assessor treats any sale of development rights (and thus, the valuation of the "downzoned" property), the amount of this property tax grant should be reevaluated. For example, if the Assessor does not reduce property values as anticipated, the property tax grant could be increased; if the Assessor does reduce the property values, the property tax grant could be left as is.

23. *Application of future rezoning/upzoning to a property that has sold its development rights.*

To facilitate this, EPS recommends that even when development rights can be sold and "permanently" severed from a site, the City may still, in a future comprehensive planning process, upzone the site as it may determine appropriate for the surrounding neighborhood. As an example, a property owner (whose site is initially zoned for 3.0 FAR) sells 1.0 FAR of development rights and has 2.0 FAR of development rights remaining. The City may decide that that site and its neighboring sites should be zoned for 5.0 FAR. In this case, the subject site would still be upzoned, but to 4.0 FAR (2.0 FAR above the previous original zoning minus the 1.0 FAR sold).

24. *Responsibility for oversight should be granted to a third-party entity, authorized by the City.*

The program manager entity's responsibilities would include: 1) maintaining records of all available and/or sold development rights; 2) maintaining a database (clearinghouse) of addresses, contact information, and associated amounts of development rights; 3) facilitating the pairing of (not necessarily brokering a transaction, however, between) prospective purchasers of development rights and possible sending area property owners; 4) maintaining a map of all development rights available by site that could be published and maintained on the City's website; 5) documenting in these records the amount of development rights transacted, where sent, whether and to what extent used, the transaction price, and the transaction date; 6) reporting the transaction (and subsequent information) to the City's Planning Department and to the Assessor; 7) subsequently documenting the resulting zoning (i.e. downzoning) at sending sites following Assessor review and documentation of deed restriction.

It is recommended that the City, however, develop and maintain a webpage on its website that contains the information about the TDR program, the location of sending sites, receiving areas, the process, as well as the information documented by the authorized TDR program oversight entity.

25. *The TDR program should be reviewed and readjusted as appropriate on a 2-year cycle.*

EPS recommends that the City periodically review the efficacy of its TDR program. In particular, EPS recommends that the city engage in an assessment of the program two years following its inception. It is noted in the literature that TDR programs can take many years to establish in a market as an accepted mechanism. The reality of market cycles should also be acknowledged. It is possible that, in the absence of sufficiently strong market forces (either in multifamily, office, or commercial development) that the TDR program does not get tested at all for several years. As such, EPS recommends that the City and its stakeholders evaluate the program in terms of: usage; sending area and receiving area relevance; transfer ratio; stakeholder and property owner acceptance, etc.

Program Phasing

One the primary concerns is that at any given time, there may be projects in various stages of planning and development, some of which may have already acquired land. Implementing land use policy change, such as a TDR program that simultaneously seeks to limit the use of an alternative (i.e. SP zoning) to obtaining entitlements (i.e. density), disrupts the market's expectations of land value and potentially the feasibility of projects altogether.

For example, in the early stages of planning, developers often estimate their willingness to pay for land, making assumptions about supportable rents, construction costs, financing, and entitlements. While fluctuations in costs and revenues are anticipated, entitlements are generally assumed to remain constant. If entitlements change after land has been acquired, the feasibility of a project can be adversely impacted.

Shifting to a process in which there is (even an optimized) cost associated increased entitlements will have the impact of lowering supportable land values, i.e. a developer's willingness to pay for land. The risk to be avoided, if possible, is that a project might not proceed as a result. As such, EPS has outlined a few core phasing elements to mitigate the impact that immediate implementation could have on land values.

Phase 1

Step 1: Stakeholder Education

The City has already been engaged with property owners in Music Row and the brokerage and development community as to the possibility of a TDR program. To manage expectations through the implementation process, the City should continue some stakeholder education as to the elements of the TDR program. The following are a few elements of use of property and development that sending area property owners and developers should clearly understand:

- Publicize core elements of TDR program: The City should educate the development community and the sending area property owners as to how this transfer ratio benefits them and how it will work. The City should also educate the development community and sending area property owners as to the initial suggested pricing range.

- Participation in TDR is voluntary: Sending area property owners should be properly informed as to how they can exercise their redevelopment rights, i.e. sell TDRs or decline to sell TDRs and sell their properties for redevelopment with the underlying zoning.
- Where TDR fits in the development process: Simultaneously, receiving area property owners and the development community should be informed as to how the TDR program will work and how it will impact redevelopment or development on their sites.

Step 2: Establish TDR Applicability Date

It is recommended that at a date of 6 to 12 months from the time of Planning Commission approval, the TDR program in all its facets, go into effect. This date would also establish a date after which will go into effect the chosen treatment of SP zoning and TDRs as a means to obtaining additional density in the receiving area.

Step 3: Coordinate an Initial Transaction

The City should not expect that mere establishment of a TDR program will guarantee its usage. To ensure City that the program is used over time, it would be helpful for the City to coordinate an initial transaction between a potential purchaser and seller to demonstrate how TDRs work, how the transaction benefits both buyer and seller, and how reasonable the cost is.

- Creation of the TDR bank: One of the most important elements of TDR programs from practitioners' perspective is a clearinghouse of information and development rights themselves. The City should establish a TDR Bank
- City purchase of development rights: As noted in the recommendations, the City should consider allocation funding to the purchase of development rights from sending area sites with the highest preservation priority and/or sending area sites with too few development rights available such that transactions of such small scale are unlikely to occur.
- Initial transaction: The City could solicit interest from the development community formally or informally to identify projects and partners that might be interested in utilizing the TDR program to obtain additional density.

Phase 2

Step 1: Review Program

Two years after establishment, the City should undertake a review of the TDR program to identify and assess its usage and the level of market activity in which there may have been opportunities for its usage, etc. This review should be conducted periodically to ensure that the program's core elements (sending and receiving areas, enhanced transfer ratio, and other elements) remain effective. A few of the elements this review should contain are:

- TDR Usage: In addition to the ongoing documentation and inventory of TDR usage, a general review of the TDR program should be conducted at this point to identify patterns, market receptivity, and usage. Transaction amounts, pricing, and the market cycle should be evaluated. The overall market should be analyzed also to understand whether usage (or absence of usage) of the program is the result of an ordinary market cycle or a miscalibration of the program's main elements.
- Sending Areas: The City should assess whether the volume of remaining sending area development rights is adequate and should assess whether there area still adequate opportunities for development remaining in Midtown. Consideration should also be given to whether other historic areas of town should be designated as TDR sending areas.
- Receiving Areas: As with the review of development activity throughout the City and SP zoning usage in the City's Centers, such a review should be conducted to identify whether other City Centers represent opportunities.
- Transaction Pricing: The review should document trends in transaction pricing with project-specific details. From the seller's perspective, this would mean quantifying the property and valuation details and qualitatively identifying the property owner's financial considerations without publicly divulging sensitive information. From the buyer's perspective, this would mean identifying the purpose for which the TDRs were purchased, how many TDRs were purchased, at what price, and whether and what type of development they were used for. The objective of the review would be to inform the understanding of the program's TDR calibration, especially its enhanced transfer ratio.
- Enhanced Transfer Ratio: Based on the review and conclusions of transactions, the City should evaluate how the enhanced transfer ratio has or has not facilitated transactions. Two considerations could be made in this review: one regarding the pricing of transactions, and the second regarding the volume of transactions. It should be determined how transaction pricing and volume have affected the effectiveness of the program and whether either has resulted in an unintended or unanticipated consequence.