



2012 Zoning Survey Report: Zoning Adoption, Administration, and Provisions for Design Standards and Alternative Energy Facilities

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Overview

The School of Government completed a survey in 2012 of cities and counties in North Carolina with zoning ordinances. The survey gathered information about administration of zoning, use of design standards, and standards for alternative energy facilities. We also gathered updated information on adoption of zoning and use of extraterritorial jurisdiction for planning and development regulation.

Prior to conducting the survey, we updated the inventory of cities and counties that have adopted zoning. Of the state's 650 cities and counties, 559 have adopted zoning ordinances or zoning provisions within a unified development ordinance. Eighty-seven percent of the cities and 79 percent of the counties have adopted zoning ordinances. Virtually all of the more populous cities and counties now have zoning ordinances. We estimate that over 91 percent of the state's residents—some 8.7 million of the state's 9.6 million residents reside in areas subject to zoning.

The survey of zoning practices described in this report was distributed to all 559 cities and counties that have adopted zoning ordinances. Survey responses provided a good representation of counties and municipalities of every size. Overall, 296 jurisdictions responded to the survey, a response rate of 53 percent. For cities, 233 out of 480 municipalities with zoning ordinances responded (a rate of 49 percent). For counties, the number was 63 out of 79 (80 percent). Survey responses were particularly strong for jurisdictions with larger populations. The total population of the responding jurisdictions was 7,366,398 people, or 77 percent of the state's residents. The

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last section of this report describes the survey methodology and response rates in more detail. Appendix D includes the survey instrument and a list of responding jurisdictions.

We found that the use of extraterritorial planning jurisdiction by the state's cities has changed very little in the past five years. About two-thirds of the responding cities have adopted extraterritorial planning jurisdiction. Most of these cities—61 percent—have not changed the area subject to their extraterritorial jurisdiction in the past five years. Twenty-two percent reported a reduction in their extraterritorial planning areas (primarily through annexation or relinquishment of the area to county jurisdiction). Only 16 percent of the responding cities reported an increase in their extraterritorial planning area in the past five years. We estimate the current population of municipal extraterritorial planning areas at about 500,000 residents.

We found that the recession that began in 2008 continues to have a substantial impact on development levels in North Carolina. The reported level of requests for land use approvals in 2011 was generally about half of pre-recession levels. The application fees charged for typical projects do not appear to have changed markedly in recent years. One exception is the use of higher fees for special and conditional use permits and rezonings, perhaps suggesting a shift toward the use of fee receipts rather than tax revenues to cover the costs of development review.

We found that nearly half of the responding jurisdictions apply mandatory design standards for new construction. This is done primarily in commercial areas (central business districts, highway corridors, and other commercially zoned areas), as part of conditional rezonings and planned unit developments, and in historic districts. Multifamily housing and manufactured homes are also frequently subject to design standards. The most frequently applied standards pertained to the height of structures and their location and orientation on the property, and to fences and landscaping.

We also asked about sign regulations. Nearly half of the responding jurisdictions allow political signs within street rights-of-way, usually subject to time and size restrictions. Nearly half of the jurisdictions prohibit off-premise commercial signs, and more than a third ban electronic billboards.

While only a small number of North Carolina cities and counties have regulations for commercial-scale solar and wind farms, the increasing number of proposed facilities has generated considerable interest in local development standards for the location and design of these facilities.

The data in this report represent only those jurisdictions responding to the survey. Where percentages of jurisdictions are reported, the percentages are of responding jurisdictions rather than of all jurisdictions with zoning or of all jurisdictions in the state. Where data are reported by population categories, the official July 1, 2010, population figures provided by the State Office of Budget and Management (the most recent figures available) were used.

The 2011–12 survey is the sixth periodic survey of development regulation in all North Carolina cities and counties. The initial survey in 2002–03 examined experiences with zoning variances. The 2004–05 survey examined special and conditional use permits, extraterritorial jurisdiction, and adopted ordinances. The 2006–07 survey examined zoning amendments and design standards. The 2008–09 survey examined comprehensive planning, moratoria, and development agreements. Reports of all the previous surveys are posted [online](#).

Zoning Adoption and Jurisdiction

Jurisdictions Adopting Zoning

Zoning authority was granted to cities in 1923 with the adoption of the state's zoning enabling statute. Among the early zoning ordinances adopted in the state were those of Raleigh in 1923; Durham, Greensboro, High Point, and Southern Pines in 1926; Chapel Hill and Rocky Mount in 1928; Elizabeth City and Fayetteville in 1929; and Winston-Salem in 1930. By 1938 Goldsboro, Thomasville, and Warrenton had also adopted zoning. However, the Depression and World War II substantially reduced development levels in the state, and land use regulation was relatively dormant in this period, as were a number of the programs initiated in the 1920s. By 1950 virtually every city in the state with a population over 10,000 had adopted zoning, and by 1985 some 71 percent of the state's municipalities had zoning ordinances. Over time, even less populous municipalities began to adopt zoning ordinances. Our 2006 survey indicated that almost all of the state's cities with populations over 1,000 had adopted zoning ordinances.

County zoning in North Carolina came later. Several of the state's more urbanized counties undertook zoning shortly after World War II. Forsyth County received authority to undertake zoning in 1947, and Durham County was granted that authority in 1949. However, general enabling authority for county zoning was not adopted until 1959. With post-war population growth in unincorporated areas, use of county zoning in North Carolina began to expand. Only two counties, Durham and Guilford, had adopted countywide zoning for unincorporated areas by 1964. Forty-four of the state's 100 counties had adopted some zoning by 1979.

Prior to surveying jurisdictions on their zoning practices, we updated our list of the cities and counties in the state that have adopted zoning ordinances. We started with our prior survey results on this question. Queries were then made to each jurisdiction that had previously reported not having zoning, or for which no information on zoning adoption was available, to determine if these jurisdictions now have adopted zoning ordinances. The result was a complete inventory of the status of zoning adoption for all of the state's cities and counties. While it is possible that a few municipal jurisdictions that previously reported having adopted zoning may have subsequently repealed their zoning ordinances, we did not identify any such jurisdictions.

As of early 2012, we determined that 559 North Carolina cities and counties have adopted a zoning ordinance. This is 87 percent of the state's cities and 79 percent of the counties. An additional 31 municipalities have elected to be covered by county zoning. While this results in the application of zoning in 590 jurisdictions, it is county zoning that is applied in these additional municipalities, and this survey reports on the 559 jurisdictions that have actually adopted their own zoning ordinances. The rates for zoning adoption for cities of various population categories are set out in Table 1. The rates for counties are set out in Table 2.

Zoning adoption is strongly related to population levels. All of the cities with populations over 5,000 have adopted zoning ordinances, as have all of the counties with unincorporated area populations over 50,000. By contrast, 71 percent of the cities with populations under 1,000 and 52 percent of the counties with unincorporated populations under 20,000 have adopted zoning. Of the 39 North Carolina cities without municipal or county zoning, all but two have populations under 1,000. The long-term trend toward a more active county role in zoning continues (see Table 3). The distribution of counties with countywide zoning of unincorporated areas, partial county zoning, and no county zoning is depicted in Figure 1.

Table 1. Municipal Zoning Adoption

Municipal population	<i>N</i>	Number with municipal zoning	Percentage with municipal zoning	Municipalities with county zoning
1–999	216	154	71%	25
1,000–4,999	203	195	96%	6
5,000–9,999	49	49	100%	–
10,000–24,999	48	48	100%	–
25,000–49,999	17	17	100%	–
50,000 or more	17	17	100%	–
Total	550	480	87%	31

Table 2. County Zoning Adoption

Non-municipal population	<i>N</i>	Number with countywide zoning	Number with partial county zoning	Percentage with zoning (partial or full)
1–19,999	27	10	4	52%
20,000–49,999	41	25	8	80%
50,000 or more	32	29	3	100%
Total	100	64	15	79%

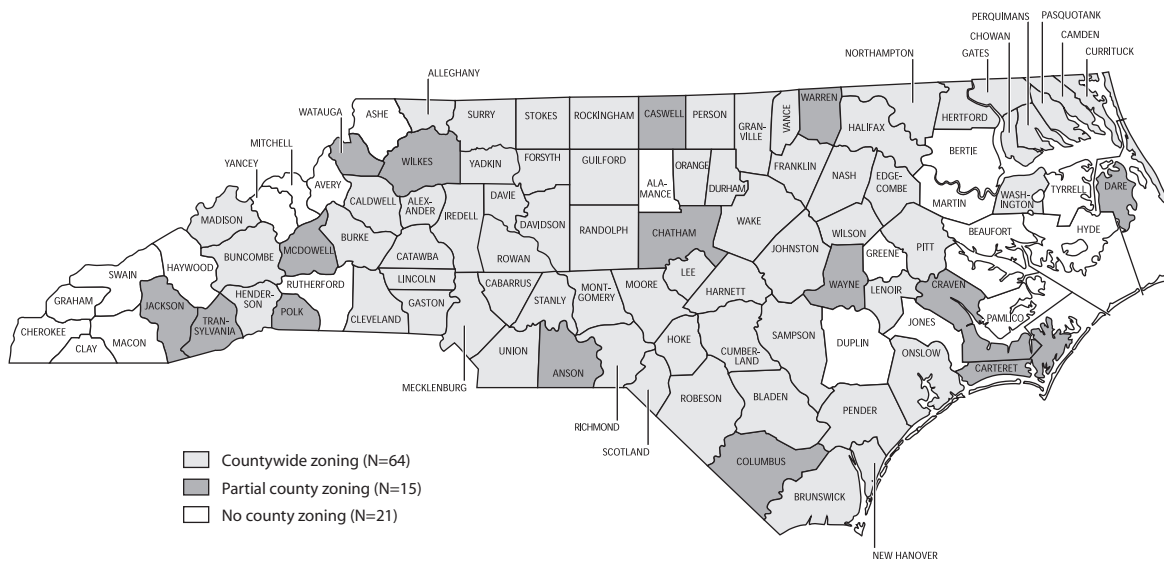
Table 3. Status of County Zoning over Time

Year	Countywide zoning	Partial county zoning	No county zoning
1979	25	19	56
1992	37	27	36
1996	40	27	33
2003	56	18	26
2006	60	16	24
2012	64	15	21

Table 4. Population in Zoned Areas

Area	2010 Population
1. Municipalities with city zoning	5,251,857
2. Municipalities with county zoning applied within city	22,072
3. Counties with countywide zoning of unincorporated area (including municipal extraterritorial planning jurisdiction)	3,303,815
4. Counties with partial zoning of unincorporated area	125,408
5. Municipal ETJ in counties with no county zoning	28,543
6. Municipal ETJ in counties with partial county zoning	9,253
Total	8,740,948

Figure 1. County Zoning, 2012



Population Living in Zoned Areas

It is not possible to estimate the precise number of North Carolina residents residing in zoned areas. While some components of the figure are certain (such as the population residing in cities with zoning), others are only our estimates (populations in extraterritorial municipal jurisdiction and the population in the zoned portions of partially zoned counties). For our analysis we used the most recent official population estimates from the Office of State Budget and Management, which are the July 1, 2010, estimates of population.

Our best estimate of the number of North Carolinians residing in zoned areas is 8.7 million persons, which is 91 percent of the total state population. The calculation of this estimate is set out in Table 4.

For municipalities with city zoning and those reporting county zoning applied within the city (items 1 and 2 in Table 4), we used the official state 2010 population estimate. Similarly, for counties with countywide zoning of the unincorporated area, we used the official state 2010 population estimate for the county’s unincorporated population (item 3 in Table 4). For counties with countywide zoning, this figure by definition includes all of the residents in municipal extraterritorial planning jurisdiction (ETJ) areas, so for this calculation there is no need to estimate the municipal ETJ population in those counties (and to do so here would double count those residents). The remaining components of the overall calculation are less precise, but they involve only a relatively small number of persons (less than 2 percent of our total estimate), so the overall estimate remains relatively accurate. For partially zoned counties (item 4 in Table 4), county officials were asked to estimate the percentage of their unincorporated population living in county-zoned areas. In the event that counties did not provide an estimate, we used our knowledge of the county to generate a population figure. For the municipal ETJ population in unzoned and partially zoned counties (items 5 and 6 in Table 4), we used the ETJ population estimates described in the next section of this report.

Municipal Extraterritorial Planning Jurisdiction

As the post–World War II development boom took off, a good deal of the development occurred along the urban fringe, often in unregulated areas just outside of city corporate limits and in what was characterized at the time as relatively chaotic fashion. The result in North Carolina, as in many states, was the authorization of city perimeter zoning, which is now known as municipal extraterritorial planning jurisdiction. Authority to adopt zoning ordinances in the one-mile area surrounding the city was granted to Raleigh, Chapel Hill, Gastonia, and Tarboro in 1949. In succeeding years, a number of additional cities secured local legislation authorizing extraterritorial zoning. The legislature granted statewide authority for municipal extraterritorial land use regulation in 1959. While the details of the grant of municipal extraterritorial planning jurisdiction changed over the decades, the basic framework, now codified as Section 160A-360 of the North Carolina General Statutes (hereinafter G.S.), has been in place for more than 60 years.¹

When a city adopts an extraterritorial boundary ordinance, the city acquires jurisdiction for all of its ordinances adopted under Article 19 of G.S. Ch. 160A, and the county loses its jurisdiction for the same range of ordinances. This includes not only zoning and subdivision ordinances but also housing and building codes and regulations on historic districts and historic landmarks, open spaces, community development, erosion and sedimentation control, floodways, mountain ridges, and roadway corridors. The city does not acquire, nor does the county lose, jurisdiction for regulations adopted under the general ordinance-making power of G.S. 160A-174, such as nuisance lot, junked car, or noise ordinances.

Most North Carolina cities—particularly those with populations greater than 2,500—have taken advantage of the statutory authority to exercise extraterritorial land use regulation. A 1995 North Carolina League of Municipalities survey indicated that 64.5 percent of all municipalities responding to the survey had adopted extraterritorial zoning. Our 2005 survey indicated little change in the following decade, as 62 percent of responding municipalities had adopted extraterritorial zoning. Both surveys indicated that larger cities were far more likely to exercise extraterritorial jurisdiction.

Our 2012 survey indicates that little has changed regarding adoption of extraterritorial planning jurisdiction in the past decade. Sixty-five percent of municipalities responding in 2012 had adopted extraterritorial jurisdiction. This modest increase in adoption since 2005 was caused by slightly more small-population cities adopting ETJ, as the percentage of cities with populations under 1,000 having ETJ rose from 34 percent in 2005 to 39 percent in 2012. Extraterritorial planning jurisdiction adoption by population of municipalities is set out in Table 5.

One thing that does seem to have changed over time is the reason for adoption of extraterritorial planning jurisdiction. Though the motivation for adoption of an ordinance is rarely specified, prior to the 1980s there was very little county zoning of areas around cities, and land development in those areas was largely unregulated absent the adoption of municipal extraterritorial

1. For a detailed legislative history of the evolution of the statutes on municipal extraterritorial planning jurisdiction, see DAVID W. OWENS, *LAND USE LAW IN NORTH CAROLINA* 30–32 (UNC School of Government, 2d ed. 2011). There continue to be legislative proposals regarding extraterritorial jurisdiction. Bills on this topic considered but not adopted in the 2012 session of the General Assembly included H. 1043 (which would have amended North Carolina General Statutes (hereinafter G.S.) 160A-360 to prevent cities from extending extraterritorial planning jurisdiction to any area subject to county zoning and to require county approval of any new extraterritorial jurisdiction in any area subject to county subdivision regulation) and S. 949 (which would have removed any authority for extraterritorial planning jurisdiction from the Town of Boone).

Table 5. Municipal Adoption of ETJ, by Population

Municipal population	N	Number with ETJ	Percentage (2012)	Percentage (2005)
<1000	56	22	39%	34%
1,000–2,499	54	37	69%	71%
2,500–9,999	71	50	70%	69%
10,000 or more	52	43	83%	85%
Total	233	152	65%	62%

jurisdiction. That is increasingly not the case. Of the responding cities with extraterritorial planning jurisdiction, 80 percent are located in counties with countywide zoning of unincorporated areas, 11 percent in partially zoned counties, and only 9 percent in counties with no county zoning. It is clear that the choice is now more often between city or county land use regulation rather than between city regulation or no regulation.

A number of factors affect whether these perimeter areas are more appropriately regulated by cities or counties. In many jurisdictions city development regulations have standards that reflect urban levels of development, while county standards often reflect more rural forms of development. For example, city regulations for new residential subdivisions may address provision of public water and sewer, city streets, curbs, stormwater collection, and sidewalks, often with higher density levels allowed. Comparable county regulations often anticipate residential development with wells and septic tanks, roads that are privately owned and maintained or dedicated to the state, and so forth. Similar differences may exist in standards for commercial and industrial development. It is sometimes the case that perimeter areas are going to be annexed into the city as they are developed, and application of city development standards at the project design and construction phases prevents creation of future nonconformities, a situation that can eventually be costly for property owners, lot purchasers, and the government. It is not uncommon for landowners or developers to request municipal jurisdiction in some situations, particularly when then contemplated development will need city services, future annexation, or when city zoning is seen as beneficial in marketing the project to future purchasers. In other situations, the city may simply have greater staff capacity to review and implement urban-scale development proposals. Whatever the rationale, it is clear that over the past 50 years municipal extraterritorial planning jurisdiction has become a widely used and accepted tool for city–county coordination of planning and development regulation in urban fringe areas.

For municipalities with extraterritorial planning jurisdiction, we asked about changes in the amount of land area subject to municipal extraterritorial planning jurisdiction in the past five years. The majority of responding municipalities with extraterritorial jurisdiction—61 percent—reported that they have not changed their extraterritorial area in the past five years.

Among jurisdictions that have changed their extraterritorial areas, more have deleted area than have added territory. Sixteen percent of the responding municipalities reported that they have acquired new extraterritorial area, while 22 percent reported that they have deleted area. Of the 34 jurisdictions reporting deleted areas, 59 percent reported that the deletion resulted from annexation of previous extraterritorial jurisdiction, while 32 percent reported that they had returned jurisdiction to the county and 9 percent reported that they had transferred jurisdiction to another city. For the most part these responses were consistent for cities of all population sizes, except that cities with populations under 1,000 were less likely to have added

extraterritorial area, while cities with populations over 25,000 were more likely to have done so (5 percent of the smaller population cities added territory, while 28 percent of the larger population cities did so). The responses on changes in extraterritorial jurisdiction are set forth in Table 6.

We also estimated the population residing in municipal extraterritorial planning areas. Responding municipalities reported a total population of approximately 316,356 living in extraterritorial planning jurisdiction areas. However, a number of the jurisdictions that reported having extraterritorial planning jurisdiction did not provide an estimate of the population living in those regions, and some jurisdictions with extraterritorial planning jurisdiction did not respond to the survey at all.

We used two methods to estimate the total population of extraterritorial planning jurisdiction areas, including those cities for which we did not have an estimated ETJ population. The first method extrapolates the reported ETJ adoption rates and city–ETJ population ratios to all cities in the state. The reported extraterritorial planning jurisdiction adoption rate was 65 percent. The reported extraterritorial planning jurisdiction population relative to the city population was 13 percent of the city population. If these ratios are applied to the total state municipal population, that results in an estimate of about 450,000 persons residing in the statewide extraterritorial planning jurisdiction area. The second method of producing an estimate uses the adoption rate for each population category of cities in this report. This method recognizes that larger population cities are more likely to have extraterritorial planning jurisdiction. If the adoption rate for differing population size of cities is applied and then the reported 13 percent extraterritorial planning jurisdiction to city population ratio is applied, that produces an estimated ETJ population of about 550,000. Thus, it is reasonable to estimate the statewide total population in extraterritorial planning jurisdiction areas to be about 500,000, plus or minus 10 percent.

Zoning Administration

Our 2012 survey collected information about a variety of zoning administration topics. We asked about the number of applications received in the previous 12 months, the application fees charged, typical processing times for various actions, and the number of appeals both to the board of adjustment and to the courts.

Application Volume

The recession that began in 2008 substantially reduced the level of real estate development in North Carolina. This resulted in significant reductions in the number of applications for all types of development approval. As our survey was commencing in the fall of 2011, informal polling of local governments indicated that while a modest recovery was underway, the development levels in 2011 were still at the depressed levels that began in 2008. The survey results confirmed those impressions. In most instances, the number of applications received in 2011 was about half the number processed annually prior to the recession.

The responses regarding the number of various types of development approvals sought in the previous 12 months (generally corresponding to the 2011 calendar year) are set forth in Tables 7, 8, and 9.

Table 6. Changes in Extraterritorial Jurisdiction, by Population

Municipal population	Number with ETJ	Added to ETJ	ETJ deleted—annexed area	ETJ deleted—returned to county	ETJ deleted—transferred to other city	No reported change
1–999	22	1	0	1	0	20
1,000–9,999	87	15	11	5	3	53
10,000–24,999	25	4	4	2	0	15
>25,000	18	5	5	3	0	5
Total	152	25	20	11	3	93

Table 7. Applications Received in Previous Year, Legislative Decisions

	Conventional rezonings	Conditional rezonings	Zoning text amendments
Municipalities	515	379	648
Counties	287	196	190
Total	802	575	838

Table 8. Applications Received in Previous Year, Quasi-Judicial Decisions

	Special or conditional use permits	Variances	Appeals of staff determinations
Municipalities	537	353	106
Counties	363	166	60
Total	900	519	166

Table 9. Applications Received in Previous Year, Subdivisions and Site Plans

	Site plan approval	Preliminary plats
Municipalities	2,928	719
Counties	2,592	586
Total	5,520	1,305

A direct comparison of these reported activity levels with those reported in prior surveys is not possible, as each of our surveys had slightly different response levels and individual jurisdictions responding. However, given the similar overall response rates and the substantial consistency of responses from many jurisdictions (especially those with populations over 10,000), these results are at least roughly comparable to the prior survey responses.

We asked about requests for legislative amendments (rezonings and text amendments) in 2006. In that survey, responding jurisdictions reported receipt of 2,850 petitions for rezoning to conventional or conditional districts in 2005, compared to 1,377 in 2011. The number of zoning

text amendments considered dropped from 1,520 in 2005 to 838 in 2011. The current survey does indicate a very modest trend toward more use of conditional zoning. In 2005 rezonings to conditional and conditional use districts were 39 percent of the total rezonings, a figure that rose to 42 percent in 2011.

The 2011 caseload for quasi-judicial cases reflects a similar decline from pre-recession levels. Our 2004 survey indicated that in 2003, responding cities and counties received 2,207 applications for special or conditional use permit approvals. Our 2012 survey reported 900 of these applications in 2011. The number of variance petitions dropped even more. Our 2002 survey indicated that 1,806 variance petitions were considered in 2001, while our respondents reported consideration of 519 variance petitions in 2011. Although activity levels for other types of development approvals dropped by about half, the current level of variance petitions is less than a third of that reported a decade earlier. This suggests that factors in addition to the recession may be affecting the demand for variances—for example, local governments adding flexibility to ordinances or updating development standards to reduce the need for variances.

Application Fees

Local governments may set reasonable application fees to recover some or all of the costs of administering local development regulations.²

North Carolina jurisdictions use a wide range of methods for calculating their application fees, which makes calculation of “average” or “typical” fees difficult and imprecise. In order to provide some means of comparison, we attempted to examine standardized fees for each jurisdiction.

Table 10 sets out the average application fees charged by cities and counties for various development approval applications. The numbers reported have been standardized to reflect a rough average of fees around the state. For jurisdictions listing a range of rates in their responses, we recorded the middle value in the range, rounded up to the nearest dollar. For jurisdictions basing their fees on lot size or square footage, we calculated the fee for a 2,000 square foot house on a one acre lot. Preliminary plat fees were calculated for a 100 lot residential subdivision on 25 acres.

Local governments reported the use of a variety of factors in determining the amount of the application fee where a flat fee was not used. The most common factors cited were square footage of buildings, lot sizes, total acreage involved, and number of lots involved. In addition to these factors, other variables cited less frequently included advertising fees, actual billed costs for review, the type of land use (for example, residential or commercial), the amount of heated space, the cost of construction, and the assessed value of the land involved. While it is certainly permissible to employ various factors that are reasonably related to the costs that will be incurred in reviewing an application, the use of factors unrelated to the costs of the review has a questionable legal basis.

As was reported in previous surveys, the fees tended to be higher in cities with larger populations, but there was not a similar trend for counties.

Although a direct comparison of reported application fees with those reported in prior surveys is not possible, some general comparison is reasonable. In some instances, the amount of the fee charged does not appear to have substantially changed. In 2002, for example, 52 percent of responding jurisdictions reported applying a \$50 to \$250 fee for a variance petition, while the

2. *Homebuilders' Ass'n of Charlotte v. City of Charlotte*, 336 N.C. 37 (1994).

Table 10. Average Development Approval Application Fees (in \$)

Jurisdiction, population size	Zoning verification	Site plan review	Variance	Building permit	Special or conditional use	Rezoning	Preliminary plat
Municipalities	20	252	224	365	510	590	1,779
1–999	13	87	141	447	159	176	422
1,000–9,999	15	166	218	257	272	276	2,041
10,000–24,999	36	339	268	450	460	494	1,098
>25,000	40	823	360	641	2,522	3,100	3,307
Counties	13	133	294	642	339	653	1,700
1,000–24,999	22	43	261	1,041	233	323	4,307
>25,000	11	149	300	566	357	712	1,257
All jurisdictions	18	225	240	428	472	603	1,760

average variance application fee reported in the 2012 survey was \$240. In other cases, however, it appears that application fees are higher now than they were prior to the 2008 recession. In our 2004 survey, 80 percent of jurisdictions reported a special or conditional use permit application fee of less than \$250. By contrast, the average reported application fee for a special or conditional use permit in 2012 was \$472. In 2006 the reported mean fee for a rezoning application was \$175 for cities and \$225 for counties. The average application fee for a rezoning in 2012 was reported to be \$603. This may well reflect a greater emphasis on using application fees for recovery of the governmental costs of development reviews rather than using general tax revenues to finance this staff work.

Use of Specialized Consultants

Occasionally development applications that require specialized technical analysis and review are presented. In 2012 we asked jurisdictions about their use of specialized consulting assistance in two contexts.

First, we asked if a transportation consultant is used to produce or review a transportation impact analysis for any development proposals. Twenty-seven percent of responding jurisdictions reported use of such a consultant. The practice is more common for cities (31 percent of respondents) than for counties (15 percent of respondents). This reflects the stronger city role in provision of streets (and likely the more frequent municipal review of projects with the potential to substantially affect transportation).

Second, we asked if a telecommunications consultant is used to assist in reviews of applications for cell towers or other telecommunication facilities. Fifteen percent of responding jurisdictions reported the use of such a consultant. Counties with populations over 25,000 in their unincorporated areas were more likely than other units of government to use this type of outside expertise in application reviews.

Processing Times

As would be expected, the typical processing time for development approvals varies based on the complexity of the review involved. Simple administrative reviews (such as zoning

verification or building permit reviews) typically take only a few days, while more complex staff reviews (such as site plan reviews and preliminary plats, which may also involve board review) often take a month. Quasi-judicial and legislative decisions, which are even more complex and involve both staff analysis and board review, typically take two to three months to complete.

Our survey asked about the most common processing time for several types of development approvals. We asked how many days typically elapse between receipt of a completed application and a decision on a typical, noncontroversial application for various development approvals. Projects that involve amendments and revisions to the application and those of unusual scale or controversy take longer to process. This question sought information about routine projects, and the responses are summarized in Tables 11 and 12.

The projects described in Table 11 are usually administrative approvals made without an evidentiary or public hearing.

Letters confirming the existing zoning of a site are generally processed in two or three days, while building permits are usually issued within a week. In both instances, municipalities with very small populations often take about twice as long to process these, typically due to the limited planning and development review staff available.

Site plan and preliminary plat reviews are generally completed in four to six weeks by most jurisdictions. The average processing time was 28 days for site plans and 38 days for preliminary plats. These generally require more technical review, usually by multiple staff members with differing expertise (sometimes comprising a staff technical review committee). They may also require a citizen board sign-off, although a typical project usually generates little neighborhood or political attention. Unlike zoning verification letters and building permits, however, these project reviews typically take longer in more populous jurisdictions. Where cities with populations under 10,000 typically process these in about a month, larger cities often take six to eight weeks. This likely reflects larger, more complicated projects in larger jurisdictions, which also often have a larger and more complex staff structure to navigate (for example, a proposal may be circulated through several city departments for review).

Quasi-judicial decisions generally take six to eight weeks from receipt of a complete application to issuance of a decision. Both variance petitions and special or conditional use permit applications require staff analysis, an advertised evidentiary hearing, and a decision by a citizen board (either the board of adjustment, the planning board, or the governing board). Many jurisdictions require an advisory review by one board and a decision by another. Finally, a written decision summarizing the facts found and conclusions reached is required. Each of these steps takes time, and the process is not subject to very much compression. For the most part, the processing time for these decisions does not vary much depending upon whether it is being done by a city or a county, nor does it vary based on the population of the reviewing jurisdiction. One exception is that special and conditional use permits generally take about twice as long to process in larger cities (an average of 71 days in cities with populations over 25,000, as compared to 38 days in cities with populations under 1,000).

The processing times reported in 2012 for quasi-judicial decisions are generally comparable to the times reported in earlier surveys. Fifty-two percent of jurisdictions responding in 2002 reported making variance decisions in less than 30 days and 45 percent reported decisions in 31 to 60 days, which is consistent with an overall average of 40 days reported in 2012. Similarly, 25 percent of jurisdictions responding in 2004 reported making typical special and conditional use permit decisions in under 30 days, 55 percent reported this being done in 31 to 60 days, and

Table 11. Average Processing Time (in Days)

Jurisdiction, population size	Zoning verification	Building permit	Site plan reviews	Preliminary plat
Municipalities	3	5	31	39
1–999	6	10	24	30
1,000–9,999	3	4	27	34
10,000–24,999	3	5	42	55
>25,000	3	7	52	56
Counties	2	3	16	34
1,000–24,999	2	5	15	48
>25,000	2	3	16	32
All jurisdictions	3	5	28	38

Table 12. Average Processing Time (in Days)

Jurisdiction, population size	Variance	Special or conditional use	Rezoning	Zoning text amendment
Municipalities	40	53	61	62
1–999	39	38	45	68
1,000–9,999	41	53	58	56
10,000–24,999	42	64	73	68
>25,000	40	71	89	77
Counties	38	50	65	66
1,000–24,999	39	64	81	81
>25,000	38	47	63	63
All jurisdictions	40	52	62	63

19 percent reported 61 to 90 days. This is generally comparable to the 52-day average processing time reported in 2012.

The lengthiest processing times are required for legislative decisions, which typically take two to three months to complete. Much of this additional time is due to statutory mandates for public notice, hearing, and planning board review. All zoning amendments must have a public hearing before the governing board, with two published notices of the hearing (the first notice of the hearing must be at least 10 but not more than 25 days prior to the hearing, and the second notice must be in a separate calendar week). If a zoning map amendment is involved, mailed notice to neighboring owners and a site posting of the hearing notice is also required. All amendments must be referred to the planning board, which must supply a written comment to the governing board. In addition to this statutorily mandated public review, staff analysis of plan consistency and project impacts is generally also undertaken. Small population cities report that this typically takes six to eight weeks, while in larger population cities the time is 10 to 12 weeks. As with the other review processes, these reported times are substantially similar to those reported in our 2006 survey.

Appeals and Litigation

The zoning statutes have always provided for appeals to the board of adjustment. The board is authorized to hear appeals “from and review any order, requirement, decision, or determination made by an administrative official” responsible for zoning administration and enforcement.³ An appeal can be made to contest a notice of violation, a zoning administrator’s determination interpreting the ordinance, or similar administrative decisions. These appeals are quasi-judicial in nature.

A relatively modest number of these appeals are made. We asked how many appeals to the board of adjustment had been made in the previous year (generally the calendar year 2011). Responding jurisdictions reported 170 appeals. Most of these appeals—88 percent—were made by the owner of affected property or an agent of the owner. Twelve percent were brought by a neighbor or other third party.

Litigation about development approvals also continues at relatively modest levels. Forty-seven jurisdictions reported litigation on their development regulations in the previous 12 months. Thirty-eight of these cities and counties reported only a single case in the previous year, while nine jurisdictions had multiple cases filed. Only two jurisdictions reported having more than two cases filed in the previous year (Nags Head had three cases and Currituck County had six).

These jurisdictions reported that a total of 60 cases had been filed. Most of the judicial appeals—62 percent—were initiated by the landowner. Thirty-seven percent were brought by a neighbor or other third party with standing. One case was brought by a city challenging a decision of its board of adjustment. The issue most frequently litigated issue was staff interpretation of the ordinance, which accounted for 30 percent of the litigation. Judicial review of special and conditional use permit decisions accounted for 24 percent of the litigation, while cases involving legislative rezoning decisions accounted for 13 percent. No other single issue accounted for more than 10 percent of the cases. The reported subject matter for cases is set out in Table 13.

Design Standards

Architectural Standards for Structures

The design and appearance of structures can have a substantial impact on adjacent properties, the neighborhood, and even the community at large. Thus it is not surprising that local governments have long been interested in the design standards for some parts of their communities.

The question of whether the regulation of aesthetics is a legitimate objective of land development regulation has been a controversial topic. For many years the courts nationally and in North Carolina held that regulations could not be based solely on aesthetics.⁴ For this reason, ordinances that imposed requirements to screen junkyards and regulate business signs were invalidated.⁵ However, in 1972 the North Carolina Supreme Court noted that there was “a growing body of authority in other jurisdictions to the effect that the police power [might] be broad enough to include reasonable regulation of property use for aesthetic reasons only.”⁶ Then, in 1979, the court stated that although it was not yet prepared to hold that the police power might

3. G.S. 153A-345(b) and 160A-388(b).

4. *See, e.g., Small v. Councilmen of Edenton*, 146 N.C. 527 (1908).

5. *Little Pep Delmonico Rest., Inc. v. City of Charlotte*, 252 N.C. 324, (1960).

6. *State v. Vestal*, 281 N.C. 517, 524 (1972).

Table 13. Subject Matter of Litigation by Number of Cases Filed

Issue	Number of cases filed	Percentage of cases filed
Staff interpretation of ordinance	16	30%
Special or conditional use permit	13	24%
Rezoning	7	13%
Enforcement actions	5	9%
Variance	4	7%
Text amendment	2	4%
Site plan approval	2	4%
Subdivision plat (final)	1	2%
Historic district certificate of appropriateness	1	2%
Housing code	1	2%
Coastal Area Management Act	1	2%
Adequate public facilities ordinance	1	2%

justify a regulation based on aesthetics alone, it had “no difficulty” in holding that the police power encompassed the right to control the exterior appearance of private property for the objective of preservation of the state’s legacy of historically significant structures.⁷ Finally, in a 1982 case upholding a Buncombe County junkyard-screening requirement, the court embraced zoning based on aesthetic concerns alone,⁸ noting that this was a legitimate government objective in that it provided benefits to the general community, including “protection of property values, promotion of tourism, indirect protection of health and safety, preservation of the character and integrity of the community, and promotion of the comfort, happiness, and emotional stability of area residents.”⁹ Federal cases arising in North Carolina have likewise held that protection of community aesthetics is a legitimate governmental objective. The federal cases involved design standards for manufactured housing¹⁰ and landscaping and design standards for residences in established neighborhoods.¹¹

Initial city and county attention to the design of individual structures was addressed through voluntary, advisory reviews. G.S. 160A-451 through 160A-455, adopted in 1971, authorize the creation of community appearance commissions. These boards provide advisory reviews of building designs. They often also develop plans for landscaping, community beautification, and streetscape projects. Many North Carolina cities and counties rely on public and private

7. *A-S-P Assocs. v. City of Raleigh* 298 N.C. 207, 216 (1979).

8. *State v. Jones*, 305 N.C. 520 (1982). Sign regulation cases have also held aesthetics to be a legitimate governmental objective. *Transylvania Cnty. v. Moody*, 151 N.C. App. 389 (2002); *Cumberland Cnty. v. E. Fed. Corp.*, 48 N.C. App. 518, 522–24 (1980), *review denied*, 301 N.C. 527 (1980). *See also* *Am. Legion Post N. 7 v. City of Durham*, 239 F.3d 601 (4th Cir. 2001) (upholding sign regulation as applied to flags as supporting substantial aesthetic interest).

9. *Jones*, 305 N.C. at 530.

10. *CMH Mfg., Inc. v. Catawba Cnty.*, 994 F. Supp. 697, 711 (W.D.N.C. 1998).

11. *Quality Built Homes, Inc. v. Vill. of Pinehurst*, No. 1:06CV1028, 2008 WL 3503149 (M.D.N.C. Aug. 11, 2008).

investments and voluntary incentives related to density bonuses, open space modifications, or modifications of buffers, setbacks, and lot compliance to address these aesthetic issues.

Local governments increasingly apply regulatory design standards to commercial developments and to particular areas, such as central business districts, historic districts (G.S. 160A-400.1 through 160A-400.14), important entry corridors, and particular residential neighborhoods. New development in existing neighborhoods sometimes leads to the call for detailed design review to assure compatibility of old and new land uses. This concern in established neighborhoods reflects the evolving interest in selectively extending the use of design standards from commercial development to residential development. Some communities want to allow carefully designed manufactured-housing units or small multifamily buildings on vacant urban lots in existing residential neighborhoods. Others want to allow basement or garage apartments as accessory uses within single-family zoning districts. Still other communities have discussed neighborhood-conservation zoning districts that allow infill while protecting an older neighborhood's character. These steps sometimes require amending the list of permitted uses in zoning ordinances, adjusting setbacks or density limits to make new construction feasible on small lots, and considering the aesthetic standards that maintain the character of the neighborhood.

A number of communities are considering reform of their development regulations to place more focus on physical design features, particularly the dimensions and locations of buildings and streets. An alternative to traditional zoning—the “form-based” code—has received considerable attention in planning circles in recent years. These codes regulate the physical form of development rather than focusing on the land uses, as is done with traditional zoning. These codes typically address the form and mass of buildings and the scale and types of streets and blocks. Building height, building placement, the design of building fronts, and the relation of buildings to streets, sidewalks, and public open space become the focus of the regulation. Some codes include more detailed architectural standards to regulate building styles, features, details, and materials. The use of graphics and architectural design guidelines is another common feature of form-based codes. They are often developed for a discrete geographic area, such as a downtown or a particular neighborhood. Davidson has adopted a variation of a form-based code, and other jurisdictions—including Raleigh and Chapel Hill—are actively considering it. It is also increasingly common for some elements of a form-based code to be incorporated within a more traditional use-based zoning code.

Many aspects of design regulation are expressly authorized in North Carolina. The zoning enabling statute specifically authorizes regulation of the height and size of buildings, the location of buildings and structures, and the size of open spaces.

Our 2006 survey indicated that local government regulatory design standards were applied most often to commercial developments and in particular areas (often through the use of overlay districts) and that their use was largely confined to more populous municipalities in North Carolina (generally those with populations over 10,000).

Our 2012 survey respondents indicate a modest increase in the use of mandatory design standards since 2006. Forty-two percent of responding jurisdictions report having some mandatory design standards, with slightly more smaller towns and more counties reporting use of design standards than was the case in 2006. Table 14 summarizes the reported use of design standards. Appendix B includes lists of jurisdictions reporting use of design standards generally and jurisdictions with standards for residential structures outside of historic districts.

Local governments report use of mandatory design standards most frequently in commercial areas and downtown or central business districts, closely followed by highway corridor overlay

Table 14. Adoption of Mandatory Design Standards

Jurisdiction, population size	Number of jurisdictions	Percentage of jurisdictions
Municipalities	106	45%
1–999	16	29%
1,000–9,999	56	45%
10,000–24,999	18	67%
>25,000	16	64%
Counties	18	29%
1,000–24,999	4	44%
>25,000	14	26%
All jurisdictions	124	42%

Table 15. Types of Zoning Districts with Mandatory Design Standards

	Number	Percentage
Central business districts	71	24%
Commercial districts	60	20%
Highway corridor districts	58	20%
Conditional or conditional use districts	43	15%
Historic districts	41	14%
Plan unit development districts	40	14%
Other districts	34	11%
Neighborhood conservation districts	9	3%

Figure 2. Types of Zoning Districts with Mandatory Design Standards

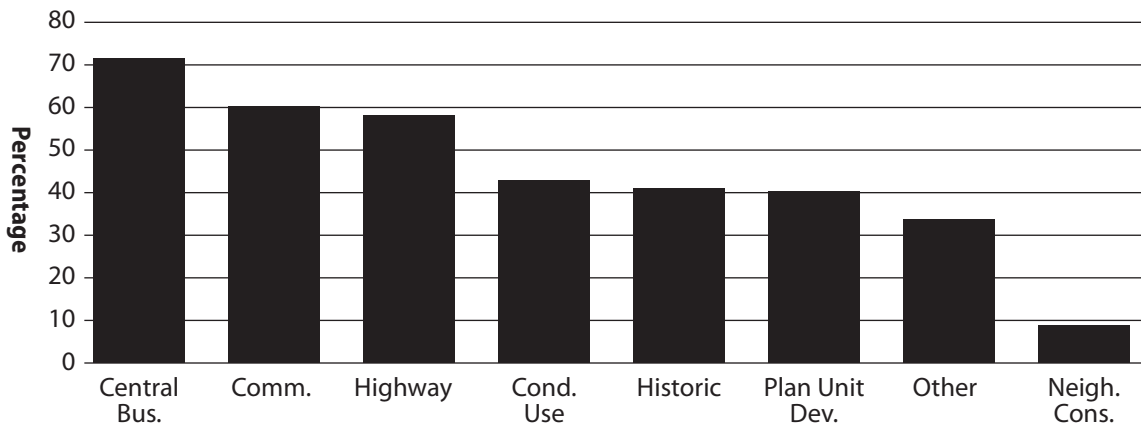
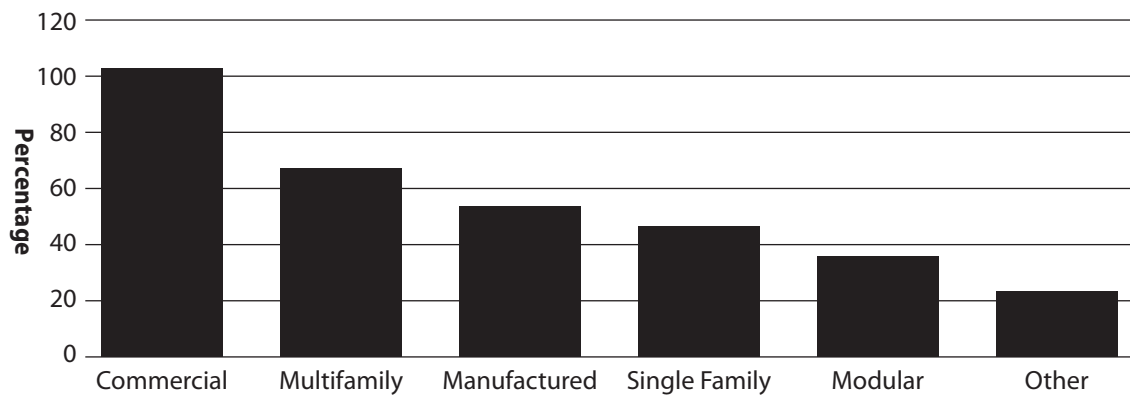


Table 16. Types of Structures Subject to Design Standards

	Number	Percentage
Commercial structures	104	35%
Multifamily residential	67	23%
Manufactured housing	53	18%
Single-family residential	44	15%
Modular housing	35	12%
Other	24	8%

Figure 3. Types of Structures Subject to Design Standards

districts. These results are shown in Table 15 and Figure 2. When local governments reported “other districts” as a response, that most often included all nonresidential, mixed use, and transit-oriented districts. In all instances, cities reported more frequent use of these regulations than did counties, and cities with populations under 1,000 were far less likely to use them than more populous cities.

We also asked about the types of structures to which mandatory design standards are applied. Outside of historic districts, design standards are applied to commercial structures by a third of the responding jurisdictions and to multifamily residential structures by a quarter. They are applied less frequently to manufactured housing (typically addressing roof pitch, orientation on the lot, lap siding, and foundation skirting), single-family residences, and modular housing (usually repeating the state design standards mandated by G.S. 143-139.1). These responses are reported in Table 16 and depicted in Figure 3. For local governments reporting application to “other” types of structures, those most frequently noted were accessory buildings and civic/institutional buildings.

For the most part, the design standards that are imposed relate to the bulk and location of structures rather than the details of their exterior design. The most common regulation is of the height of the structure, which was reported by 15 percent of the jurisdictions. There are many more jurisdictions that have height limits for structures, as this is a very common limit in most zoning districts and many of our respondents did not consider this a design standard. Most of the other design regulations applied by 10 percent or more of responding jurisdictions also

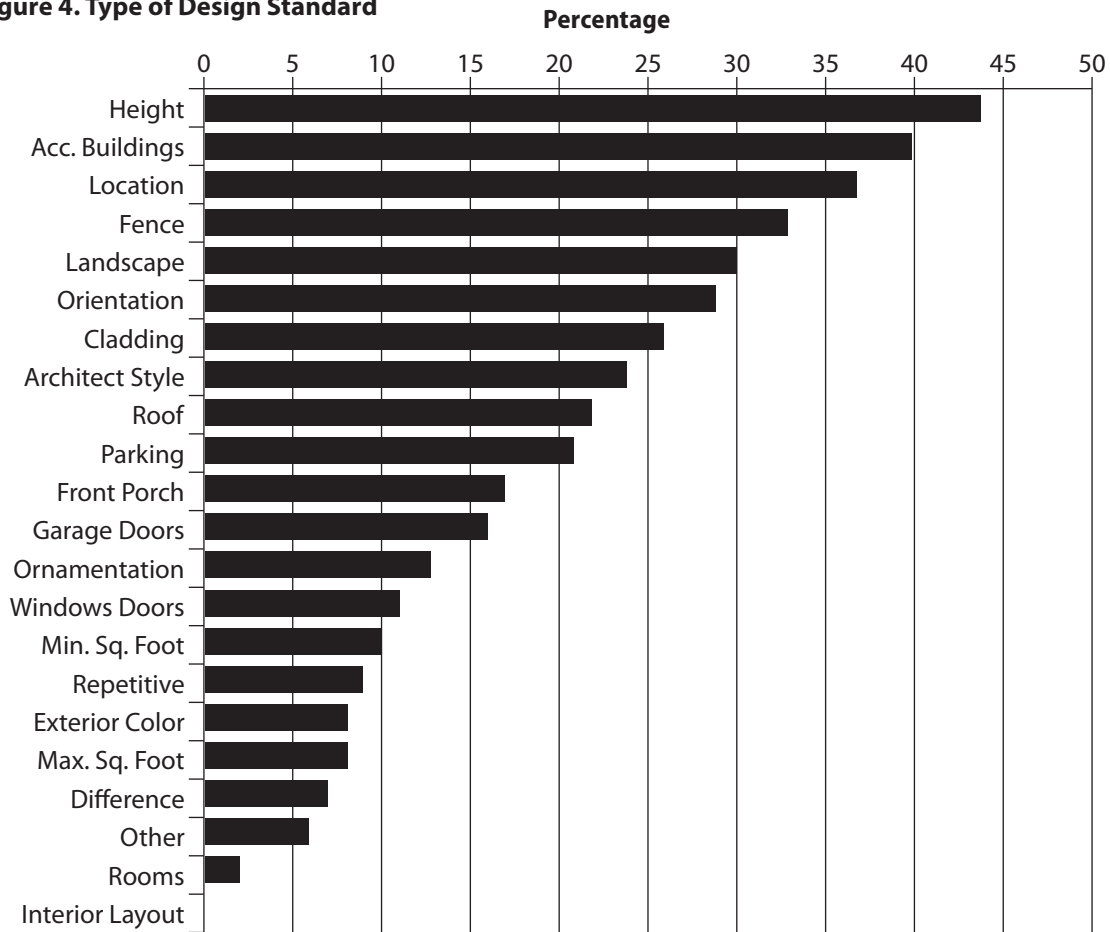
Table 17. Type of Design Standard

	Number of jurisdictions	Percentage of jurisdictions
Height of structure	44	15%
Location and design of accessory buildings	40	14%
Location of structure on lot	37	13%
Fence location or materials	33	11%
Landscaping	30	10%
Orientation of structure on lot	29	10%
Type or style of exterior cladding	26	9%
Architectural style	24	8%
Style or materials of roof	22	7%
Location or design of parking	21	7%
Front porch requirement	17	6%
Location or style of garage doors	16	5%
Exterior architectural ornamentation	13	4%
Location or style of windows or doors	11	4%
Minimum area of structure	10	3%
Limit on repetitive design relative to nearby structures	9	3%
Exterior building color	8	3%
Maximum area of structure	8	3%
Limit on excess difference relative to nearby structures	7	2%
Other	6	2%
Number and type of rooms	2	1%
Interior layout of rooms	0	0%

relate to location or orientation of structures and fences (with landscaping requirements being the only exception). These results are shown in Table 17 and Figure 4.

While the statutes allow design review boards to implement advisory or mandatory design standards, they are only occasionally used by North Carolina local governments. Only 13 percent of our responding jurisdictions reported having a design review board. About half of these boards perform only advisory functions, while the other half have mandatory design standards. Only 4 percent of the responding jurisdictions provide for the review of single-family residences by a design review board.¹² As with other types of design review, these boards are used much less frequently by counties and by cities with populations under 1,000.

12. By contrast, the private sector makes extensive use of design review and approval for individual single-family residences. Many new residential subdivisions are subject to restrictive covenants that mandate design standards and often approval by a design review board. These, however, are private matters between the developer and lot purchasers and such private matters are not enforced by local governments.

Figure 4. Type of Design Standard

This increased attention to design features has created some apprehension, particularly for residential builders. These concerns have led to legislative consideration of limitations on the use of design standards in local development regulations. A bill considered in 2011–12, S. 731, reflected that concern. As introduced, the bill would have precluded application of design standards to any residential building with four or fewer units except in historic districts or where the standard related to fire and life safety issues. As passed by the Senate in 2011, the bill would have made the limits on design standards applicable only for single-family residential structures in zoning districts with densities of five or fewer units per acre. In addition to design standards for historic districts and landmarks, this version of the bill would have allowed design standards to be imposed as conditions related to density bonuses. It would also use of design standards for these residential structures if imposed as a condition for allowing modifications in open space, setbacks, lot size, or screening requirements and standards for manufactured homes. The bill was not adopted.

Sign Regulations

Most North Carolina local governments have adopted sign regulations. They are usually included within zoning ordinances but are sometimes adopted as a separate ordinance. The regulations often limit the size, location, and form of various types of signs. While state law

Table 18. Types of Regulations Imposed on Political Signs within Street Rights-of-Way

	Number of jurisdictions	Percentage of jurisdictions where ROW signs allowed
Time limits	95	73%
Size limits	92	70%
Limits in intersection sight triangles	62	47%
Height limits	61	47%
Maximum number limits	41	31%
Spacing requirements	17	13%
Other	9	7%

also regulates outdoor advertising near federal highways,¹³ the state regulatory scheme does not preempt local sign regulations. Our 2004 survey indicated that nearly all cities with populations over 1,000 and counties with unincorporated populations over 20,000 had adopted sign regulations.

One aspect of sign regulation that has been of considerable ongoing interest is the placement of political signs in street rights-of-way. Although the U.S. Supreme Court has upheld the constitutionality of a complete ban of private signs, including campaign ads, within highway rights-of-way,¹⁴ many local governments allow but regulate them. The General Assembly in 2011 adopted state standards for private signs within the rights-of-way of state-maintained roads.¹⁵

We asked whether city or county regulations allowed political signs within road rights-of-way. Forty-four percent of responding jurisdictions reported that campaign or political signs are allowed within street or highway rights-of-way. The most common regulations, imposed by nearly three-quarters of the jurisdictions that allow signs in rights-of-way, were time limits on sign placement and sign size limits. About half of the responding jurisdictions that allow these signs reported limits on placement that would block sight lines near intersections and height limits. Less-common regulations addressed the maximum number of signs, sign spacing requirements, and other miscellaneous regulations (such as no internal illumination, no postings on utility poles, minimum street setbacks, and the limitation of signs to specified zoning districts). These results are summarized in Table 18.

The General Assembly recently adopted standards for political signs located in the rights-of-way of state roads. G.S. 136-32 was amended in 2011 to allow political signs to be placed in rights-of-way for the state highway system. Much like the local regulations noted above, the state statute includes a variety of time and size limits on these signs. They may be posted 30 days prior to the start of early voting and must be removed 10 days after the election. They must be three feet from the road pavement, no more than 42 inches above the pavement, and no

13. G.S. 136-129 to -136.

14. City Council of L.A. v. Taxpayers for Vincent, 466 U.S. 789 (1984) (upholding ban of flyers placed on telephone poles within the public street right-of-way).

15. G.S. 136-32, described below.

larger than 864 square inches (a standard 2-foot by 3-foot sign), and they must not obscure sight lines at intersections. Political signs are not allowed within the right-of-way of a fully controlled access highway. The law allows cities to prohibit or regulate political signs on streets within a city that are maintained by the municipality (if the city does not do so, the state rules described above apply within the city).

In 2012 we also asked about several other specific types of sign regulations. The results are summarized in Table 19. Nearly half of the responding jurisdictions—46 percent—reported that they completely prohibit off-premise commercial sign advertisements. Almost as many—39 percent—reported banning electronic billboards. Only 14 percent reported that their regulations addressed removal of vegetation to improve the visibility of off-premise advertising. This last point was the subject of recent legislation. In 2011 the General Assembly enacted G.S. 136-131.1 to set standards for selective vegetation removal along state roads to maintain or improve advertising sign visibility.

Land Use Regulation of Solar and Wind Energy Facilities

Recent years have seen an increasing interest in the use of alternative energy sources. This interest until very recently had been focused on small-scale facilities, such as solar collectors to serve individual residences. Increasingly, however, commercial-scale solar projects are being proposed and built, as the state in 2007 adopted a renewable energy portfolio standard that requires public utilities to derive the equivalent of 6 percent of their retail sales from renewable sources by 2015, rising to 10 percent in 2018 and 12.5 percent in 2021.¹⁶

Several large commercial-scale solar projects have been built in North Carolina. The largest is a 40-megawatt solar project in Maiden, built by Apple to supply power for its large data complex (construction is expected to be completed by fall 2012). This solar farm occupies some 250 acres near the data center that serves Apple's iCloud and iTunes operations and is the largest privately owned solar array in the country. Apple also plans a large fuel cell project at this site. Other private companies have installed smaller but still substantial solar facilities. SAS has a five acre, 1-megawatt solar farm in Cary; QVC has a similar facility near Rocky Mount. Local governments are also active partners in several substantial solar projects. Raleigh installed a 1.3-megawatt project at its Neuse River wastewater treatment plant, and there is a 1.2-megawatt facility at Mount Airy's wastewater treatment plant.

Other solar farms produce electricity for sale to major utilities.¹⁷ The largest of these is a 17-megawatt project on 355 acres near Linwood in Davidson County, which was developed by SunEdison (the country's largest solar energy services provider). The facility sells its power to Duke Energy. Duke Energy also owns several commercial solar farms, including three 1-megawatt projects near Murphy and sites at Taylorsville and Shelby. Many other commercial-scale solar projects have been proposed, with 25 or more 4.5-megawatt or larger solar farms in

16. G.S. 62-133.8. Initial plans submitted by the state's major utilities indicate strong initial use of energy efficiency measures to meet the targets, with some use of both in-state and out-of-state solar generation being employed as well.

17. The largest solar farm to date in the United States is the Agua Caliente project in Arizona. Currently producing 100 megawatts, it is planned to expand to 290 megawatts by 2014. The power produced is sold to Pacific Gas & Electric for use in California.

Table 19. Specific Sign Provisions Adopted

	Number of jurisdictions	Percentage of jurisdictions
Completely prohibit off-premise commercial advertisements	137	46%
Ban electronic billboards	115	39%
Regulate vegetation removal to improve sign visibility	42	14%

the planning stage in the state. For example, Strata Solar in Chapel Hill has proposed a 20-megawatt solar farm in Chatham County and announced plans to install 15 projects similar to its 5-megawatt King's Mountain project in Cleveland County (each sufficient to power 400 to 500 homes) around the state by the end of 2012.

In addition to use of solar power for generation of electricity, an increasing number of commercial-scale projects use solar power for hot water generation. FLS Energy recently installed one of the nation's largest solar hot water projects to service a turkey processing plant in St. Pauls. This system uses 2,100 ground-mounted solar panels to heat 100,000 gallons of water per day.

Major utilities and many private companies are strongly supporting expanded use of small-scale solar installations, often as accessory structures to a principal use. These range from larger installations on warehouses, factories, convention centers, and schools to solar panels for individual single-family residences. These smaller-scale installations are often mounted on the rooftops of structures, but they may also be ground-mounted.

Several commercial-scale wind projects have been proposed in North Carolina. Some have been permitted, but as yet none has been built. While design varies, commercial-scale wind power projects generally use towers of 130 to 400 feet in height. Iberdrola Renewable's Desert Wind project proposed installation of 150 turbines on an area encompassing a 31-square-mile area in northern Pasquotank and Perquimans Counties. This 300-megawatt project received state utility approval and county zoning permits, but it has not been built pending a contract for utility purchase of its power. Smaller proposed commercial wind projects include Invenergy's 49-turbine, 80-megawatt Pantego project in Beaufort County (permit review is on indefinite hold pending review of impacts on nearby eagle populations) and Wind Capital's Bay River Wind's 55- to 94-turbine project, which is under consideration for 20,000 acres in Pamlico County. Offshore wind energy projects in the Albemarle and Pamlico sounds and the Atlantic Ocean have also been proposed but have not yet been permitted or built.¹⁸

Regulation

One of the issues raised by increasing use of alternative energy sources is local land use regulation of these projects. The state has chosen to encourage small-scale solar power use by limiting local land use regulation of residential solar collectors. G.S. 153A-144 and 160A-201, enacted

18. Report of the Governor's Scientific Advisory Panel on Offshore Energy 67–77 (Sept. 20, 2011).

in 2007, provide that cities and counties may not prohibit solar collectors on residences. These restrictions apply to solar collectors used for water heating, active space heating, passive heating, or electricity generation. Ordinances may regulate the location or screening of solar collectors and may prohibit collectors that are visible from the ground if they are on the facade facing an area open to common or public access, on the roof facing such an area, or within the area between the façade or roof and the public area. The law similarly prohibits the use of deed restrictions and private restrictive covenants that would limit use of residential solar collectors. These statutes address the use of solar collectors as appurtenances or accessory uses for residences. They are not applicable where the solar collector is the primary use of the property.

North Carolina jurisdictions, particularly larger cities and counties, are beginning to add provisions to their development regulations for alternative energy facilities, but the number of jurisdictions that have done so remains relatively modest. Appendix C includes lists of jurisdictions reporting adoption of regulatory provisions for solar and wind projects, as well as those adopting incentives for use of alternative energy, green buildings, or green site design.

In our 2012 survey, 8 percent of responding jurisdictions reported having adopted provisions for commercial-scale solar facilities; 6 percent have done so for residential-scale solar facilities. These responses are summarized in Table 20. A number of jurisdictions noted that they are actively considering ordinance amendments to explicitly address these facilities, particularly commercial-scale solar farms.

The results are similar for wind power. Nine percent of responding jurisdictions reported having adopted regulations for commercial-scale wind projects; 8 percent have done so for residential-scale wind facilities. These responses are summarized in Table 21. One notable aspect of the regulation of commercial-scale wind is the more active role of counties. This is not surprising given the large areas of undeveloped land required for a commercial wind farm with numerous turbines on towers over 150 to 400 feet tall.

Jurisdictions reported a variety of regulatory provisions applicable to commercial-scale solar facilities (often referred to in the regulations as “solar farms”). The most common requirement was a special or conditional use permit, allowing a case-by-case review to assess compliance with the standards of not having a significant adverse impact on neighboring property values, being harmonious with the surrounding neighborhood, and not having significant adverse impacts on public health and safety. The most common specific standards mentioned were requirements for buffers, setbacks, equipment screening, prevention of off-site glare, equipment height limits, and minimum site acreage. Other standards included provisions for fencing, lighting, stormwater runoff, emergency access, removal upon abandonment, and incorporation of standards applicable to all industrial land uses. In most instances these facilities are also limited to specified types of zoning districts (such as industrial, utility, or agricultural districts).

For residential-scale solar facilities, the most frequently cited regulatory requirements pertained to location or placement (usually requiring a rear or side yard placement) and setbacks (or glare-reduction screening) and a maximum height for ground-mounted equipment. Several jurisdictions explicitly allow solar facilities only as accessory to a principal use on a lot.

Jurisdictions similarly reported a variety of regulatory provisions applicable to commercial-scale wind facilities, often referred to in the regulations as “wind farms.” Some jurisdictions incorporate the standards in their zoning or unified development ordinances, while others deal with these facilities in separate ordinances. As with commercial-scale solar, the most common requirements are for special or conditional use permits and restriction to specified zoning districts. The most common specific regulations reported included setbacks, height and

Table 20. Adoption of Regulations for Solar Energy Projects

	Number of jurisdictions regulating commercial-scale solar	Percentage of jurisdictions	Number of jurisdictions regulating residential-scale solar	Percentage of jurisdictions
Municipalities	14	6%	11	5%
1-999	1	2%	0	0%
1,000-9,999	8	6%	5	4%
10,000-24,999	2	7%	3	11%
>25,000	3	12%	3	12%
Counties	10	16%	7	11%
1,000-24,999	2	22%	1	11%
>25,000	8	15%	6	11%
All jurisdictions	24	8%	18	6%

Table 21. Adoption of Regulations for Wind Energy Projects

	Number of jurisdictions regulating commercial-scale wind	Percentage of jurisdictions	Number of jurisdictions regulating residential-scale wind	Percentage of jurisdictions
Municipalities	11	5%	12	5%
1-999	3	5%	3	5%
1,000-9,999	6	5%	6	5%
10,000-24,999	1	4%	2	7%
>25,000	1	4%	1	4%
Counties	15	24%	13	21%
1,000-24,999	4	44%	4	44%
>25,000	11	20%	9	17%
All jurisdictions	26	9%	25	8%

sound limits, minimum acreage requirements, provisions for removal upon decommissioning, and provisions to deal with shadow flicker. Several ordinances required coordination with and review by the Federal Aviation Administration, the Federal Communications Commission, and the state Utilities Commission.

For residential-scale wind facilities, the most frequently cited regulatory requirements were maximum heights and minimum setbacks. Other common restrictions included limiting these facilities to accessory uses to support an existing primary use on the site, a limit of one turbine per site, and standards related to noise, blade ground clearance, blade color, maximum generating capacity, structural integrity, and minimum lot size.

Incentives

State law also authorizes incentives in development regulations to encourage use of alternative energy sources. G.S. 160A-383.4 authorizes cities and counties to provide density bonuses and other incentives in development regulations for developments that conserve energy. Only a handful of jurisdictions reported adoption of these permitted incentives. The most commonly provided incentives are for green site design (reported by 19 jurisdictions), followed by incentives for green building features (reported by 13 jurisdictions) and inclusion of alternative energy features. The most common incentive is a density bonus for inclusion of desired features. Several jurisdictions provide reduced or waived application fees for qualifying projects, and a very few provide expedited permit processing. Priority for water allocation and signage bonuses were among other incentives reported.

Survey Methods and Response Rate

An update of the list of North Carolina cities and counties that have adopted zoning or comparable land use regulation was made prior to administration of the 2011–12 survey. A preliminary survey was distributed in October 2011 to all jurisdictions previously identified as not having zoning or for which the status of zoning adoption was unknown. Web searches, telephone calls, emails, and letters were used to determine the status of zoning adoption for all non-responding jurisdictions. This preliminary survey identified all cities and counties in the state that have adopted zoning ordinances.

A full survey was distributed in November 2011 to every municipality and county with zoning (and later to those jurisdictions subsequently identified as having adopted zoning). The survey was distributed in online format for all jurisdictions with available email addresses. Jurisdictions that did not have email addresses (or that requested a paper copy) received a survey by mail. From December 2011 to February 2012, follow-up calls and emails were used to encourage jurisdictions that had not yet responded to participate in the survey.

Responses to the 2012 survey provided a good representation of counties and municipalities of every size. Overall, 296 jurisdictions responded to the survey, a response rate of 53 percent. For municipalities, 233 out of 480 with zoning responded (a rate of 49 percent). For counties, the number was 63 out of 79 (80 percent). Appendix D lists all responding jurisdictions.

Survey responses were particularly strong for larger population jurisdictions, with small municipalities (less than 1,000 residents) achieving the lowest response rate. Seventy-four percent of the cities with zoning and populations over 25,000 responded, compared to only 36 percent of the cities with zoning and populations under 1,000. Data for municipalities and counties with combined planning departments (for example, Durham County and the City of Durham) were recorded once for the county *and* once for the municipality as those responses addressed zoning practices in both incorporated and unincorporated areas. The survey response rates are summarized in Table 22.

In addition to these responses, another 35 municipalities and four counties began taking the survey but did not input any information other than the name of their jurisdiction and the name of the person taking the survey. We disregarded these responses, as they did not provide any useful data. However, it is worth noting that some of those jurisdictions may have ceased taking the survey because they realized the questions did not apply to their particular jurisdiction.

Table 22. Survey Response Rate

	Number with zoning	Number responding	Percentage responding
Municipalities	480	233	49%
1–999	154	56	36%
1,000–9,999	244	125	51%
10,000–24,999	48	27	56%
>25,000	34	25	74%
Counties	79	63	80%
1,000–24,999	13	9	69%
>25,000	67	54	81%
All jurisdictions	559	296	53%

Table 23. Population of Responding Jurisdictions

	Total population	Population of responding jurisdictions	Percentage of population responding
Municipalities	5,289,567	4,174,506	79%
Counties (non-municipal)	4,296,071	3,191,892	74%
All jurisdictions	9,586,227	7,366,398	77%

The total population of responding jurisdictions was 7,366,398 people, or 77 percent of the state's population. The population of responding jurisdictions is shown in Table 23. When considering the population of responding jurisdictions, our overall response rate for cities and counties was comparable (79 percent of the state's municipal residents and 74 percent of the residents in unincorporated areas of counties).

Occasional comparisons are made to the responses in previous surveys in this series. Some caution is appropriate in comparing the responses in this survey to our previous survey reports. The responses are generally comparable, as each survey reports on all jurisdictions in North Carolina. The response rates are generally comparable from survey to survey. The population of responding jurisdictions ranged from 6.74 million to 7.61 million over the five surveys. The proportion of respondents in terms of population size of jurisdictions and city–county mix are also relatively consistent over all the surveys. However, the exact response rate varies modestly from survey to survey, and the individual responding jurisdictions are slightly different in each survey.

Appendix A. Jurisdictions with Zoning

Municipal Zoning (480)

Aberdeen	Blowing Rock	Chocowinity	Elizabeth City
Ahoskie	Bogue	Claremont	Elizabethtown
Alamance	Boiling Spring Lakes	Clarkton	Elkin
Albemarle	Boiling Springs	Clayton	Ellerbe
Andrews	Bolivia	Clemmons	Elm City
Angier	Bolton	Cleveland	Elon
Ansonville	Boone	Clinton	Emerald Isle
Apex	Boonville	Clyde	Enfield
Arapahoe	Brevard	Coats	Erwin
Archdale	Bridgeton	Cofield	Eureka
Archer Lodge	Broadway	Colerain	Fair Bluff
Asheboro	Brookford	Columbia	Fairmont
Asheville	Brunswick	Columbus	Fairview
Atkinson	Bunn	Como	Faison
Atlantic Beach	Burgaw	Concord	Faith
Aulander	Burlington	Conetoe	Falcon
Aurora	Burnsville	Connelly Springs	Farmville
Ayden	Butner	Conover	Fayetteville
Badin	Cajah's Mountain	Conway	Flat Rock
Bailey	Calabash	Cooleemee	Fletcher
Bald Head Island	Calypso	Cornelius	Forest City
Banner Elk	Cameron	Cramerton	Forest Hills
Bath	Candor	Creedmoor	Fountain
Bayboro	Canton	Creswell	Four Oaks
Bear Grass	Cape Carteret	Dallas	Foxfire Village
Beaufort	Carolina Beach	Danbury	Franklin
Beech Mountain	Carolina Shores	Davidson	Franklinton
Belhaven	Carrboro	Denton	Franklinville
Belmont	Carthage	Dillsboro	Fremont
Belville	Cary	Dobbins Heights	Fuquay-Varina
Belwood	Castalia	Dobson	Gamewell
Benson	Caswell Beach	Dortches	Garland
Bermuda Run	Catawba	Drexel	Garner
Bessemer City	Cedar Point	Dublin	Garysburg
Bethania	Cedar Rock	Duck	Gaston
Bethel	Cerro Gordo	Dunn	Gastonia
Beulaville	Chadbourn	Durham	Gatesville
Biltmore Forest	Chapel Hill	East Bend	Gibson
Biscoe	Charlotte	East Spencer	Gibsonville
Black Creek	Cherryville	Eastover	Glen Alpine
Black Mountain	Chimney Rock Village	Eden	Goldsboro
Bladenboro	China Grove	Edenton	Graham

Grandfather Village	Kelford	Marshall	Norwood
Granite Falls	Kenansville	Marshville	Oak Island
Granite Quarry	Kenly	Marvin	Oak Ridge
Grantsboro	Kernersville	Matthews	Oakboro
Green Level	Kill Devil Hills	Maxton	Ocean Isle Beach
Greenevers	King	Mayodan	Oriental
Greensboro	Kings Mountain	Maysville	Oxford
Greenville	Kingstown	McAdenville	Pantego
Grifton	Kinston	Mebane	Parkton
Halifax	Kitty Hawk	Middlesex	Parmele
Hamilton	Knightdale	Midland	Peachland
Hamlet	Kure Beach	Midway	Peletier
Harmony	La Grange	Mills River	Pembroke
Harrells	Lake Lure	Mineral Springs	Pikeville
Harrisburg	Lake Santeetlah	Minnesott Beach	Pilot Mountain
Havelock	Lake Waccamaw	Mint Hill	Pine Knoll Shores
Haw River	Landis	Misenheimer	Pine Level
Hayesville	Lasker	Mocksville	Pinebluff
Henderson	Laurel Park	Momeyer	Pinehurst
Hendersonville	Laurinburg	Monroe	Pinetops
Hertford	Leland	Montreat	Pineville
Hickory	Lenoir	Mooresboro	Pink Hill
High Point	Lewiston Woodville	Mooresville	Pittsboro
High Shoals	Lewisville	Morehead City	Pleasant Garden
Highlands	Lexington	Morganton	Plymouth
Hildebran	Liberty	Morrisville	Polkton
Hillsborough	Lilesville	Morven	Pollocksville
Hobgood	Lillington	Mount Airy	Powellsville
Hoffman	Lincolnton	Mount Gilead	Princeton
Holden Beach	Littleton	Mount Holly	Princeville
Holly Ridge	Locust	Mount Olive	Raeford
Holly Springs	Long View	Mount Pleasant	Raleigh
Hookerton	Louisburg	Murfreesboro	Ramseur
Hope Mills	Lowell	Murphy	Randleman
Hot Springs	Lucama	Nags Head	Ranlo
Hudson	Lumber Bridge	Nashville	Red Cross
Huntersville	Lumberton	Navassa	Red Oak
Indian Beach	Macclesfield	New Bern	Red Springs
Indian Trail	Madison	New London	Reidsville
Jackson	Maggie Valley	Newport	Rich Square
Jacksonville	Magnolia	Newton	Richfield
Jamestown	Maiden	Newton Grove	Richlands
Jamesville	Manteo	Norlina	River Bend
Jefferson	Marietta	North Topsail Beach	Roanoke Rapids
Jonesville	Marion	North Wilkesboro	Robbins
Kannapolis	Mars Hill	Northwest	Robersonville

Rockingham	Simpson	Tabor City	Waxhaw
Rockwell	Sims	Tarboro	Waynesville
Rocky Mount	Smithfield	Taylorsville	Weaverville
Rolesville	Snow Hill	Taylortown	Webster
Roper	Southern Pines	Teachey	Weddington
Rose Hill	Southern Shores	Thomasville	Weldon
Roseboro	Southport	Topsail Beach	Wendell
Rowland	Sparta	Trent Woods	Wesley Chapel
Roxboro	Spencer	Trinity	West Jefferson
Roxobel	Spindale	Troutman	Whispering Pines
Rutherford College	Spring Hope	Troy	Whitakers
Rutherfordton	Spring Lake	Tryon	White Lake
Saint Helena	Spruce Pine	Turkey	Whiteville
Saint Pauls	St. James	Unionville	Whitsett
Salemburg	Staley	Valdese	Wilkesboro
Salisbury	Stallings	Vanceboro	Williamston
Saluda	Stanfield	Vandemere	Wilmington
Sandy Creek	Stanley	Vass	Wilson
Sandyfield	Stantonsburg	Wadesboro	Wilson's Mills
Sanford	Star	Wagram	Windsor
Saratoga	Statesville	Wake Forest	Winfall
Sawmills	Stedman	Walkertown	Wingate
Scotland Neck	Stokesdale	Wallace	Winston-Salem
Seaboard	Stoneville	Wallburg	Winterville
Seagrove	Stonewall	Walnut Cove	Winton
Selma	Stovall	Walnut Creek	Woodfin
Seven Devils	Sugar Mountain	Walstonburg	Woodland
Severn	Summerfield	Warrenton	Wrightsville Beach
Shallotte	Sunset Beach	Warsaw	Yadkinville
Sharpsburg	Surf City	Washington	Yanceyville
Shelby	Swansboro	Washington Park	Youngsville
Siler City	Sylva	Watha	Zebulon

Municipalities with County Zoning (31)

Earl	Hemby Bridge	Orrum	Sedalia
East Arcadia	Kittrell	Ossipee	Speed
Falkland	Lake Park	Proctorville	Spencer Mountain
Godwin	Leggett	Raynham	Tobaccoville
Goldston	Linden	Rennert	Varnamtown
Grimesland	McDonald	Rhodhiss	Wade
Grover	Middleburg	Ronda	Wentworth
Harrellsville	Old Fort	Rural Hall	

Counties with Countywide Zoning of Unincorporated Area (64)

Alexander	Durham	Lenoir	Randolph
Alleghany	Edgecombe	Lincoln	Richmond
Bladen	Forsyth	Madison	Robeson
Brunswick	Franklin	Mecklenburg	Rockingham
Buncombe	Gaston	Montgomery	Rowan
Burke	Gates	Moore	Sampson
Cabarrus	Granville	Nash	Scotland
Caldwell	Guilford	New Hanover	Stanly
Camden	Halifax	Northampton	Stokes
Catawba	Harnett	Onslow	Surry
Chowan	Henderson	Orange	Union
Cleveland	Hertford	Pasquotank	Vance
Cumberland	Hoke	Pender	Wake
Currituck	Iredell	Perquimans	Washington
Davidson	Johnston	Person	Wilson
Davie	Lee	Pitt	Yadkin

Counties with Partial County Zoning of Unincorporated Area (15)

Anson	Craven	Transylvania
Carteret	Dare	Warren
Caswell	Jackson	Watauga
Chatham	McDowell	Wayne
Columbus	Polk	Wilkes

Appendix B. Jurisdictions Reporting Use of Design Standards

Note: Information was also collected on applicable regulations in jurisdictions that did not respond to these survey queries. They are noted in parentheses at the ends of lists.

1. Design Standards Generally

Municipalities

Aberdeen	Enfield	Lenoir	Pollocksville
Angier	Fairview	Lewisville	Ramseur
Apex	Faith	Liberty	Sharpsburg
Archdale	Farmville	Lincolnton	Simpson
Asheboro	Fayetteville	Magnolia	St. James
Banner Elk	Fletcher	Manteo	Stanfield
Belville	Four Oaks	Marvin	Stedman
Bermuda Run	Franklin	Matthews	Stokesdale
Bessemer City	Gastonia	Mebane	Stoneville
Biltmore Forest	Hamilton	Mineral Springs	Surf City
Blowing Rock	Harmony	Minnesott Beach	Troutman
Boiling Springs	Harrisburg	Mint Hill	Tryon
Boone	Havelock	Momeyer	Wake Forest
Bridgeton	Hendersonville	Monroe	Walnut Creek
Cary	Hildebran	Morrisville	Waxhaw
Catawba	Hillsborough	Mount Gilead	Weddington
Charlotte	Holly Springs	Mount Holly	Wendell
Clinton	Huntersville	Nags Head	Wentworth
Cornelius	Jacksonville	New Bern	West Jefferson
Creedmoor	Jamestown	Newton	Wilmington
Davidson	Kannapolis	Newton Grove	Wilson
Dillsboro	Kenansville	North Wilkesboro	Winterville
Durham	Kernersville	Norwood	Woodland
East Spencer	Kill Devil Hills	Oak Ridge	Youngsville
Edenton	Knightdale	Ocean Isle Beach	Zebulon
Elkin	Lake Lure	Pinebluff	(Yadkinville)
Emerald Isle	Laurel Park	Pineville	

Counties

Brunswick	Davie	Jackson
Burke	Durham	Lee
Cabarrus	Franklin	Lincoln
Camden	Gaston	Mecklenburg
Catawba	Granville	Northampton
Currituck	Harnett	Perquimans

2. Standards Applicable to Single-Family Residences

Municipalities

Aberdeen	Four Oaks	Manteo	Pineville
Apex	Hamilton	Marvin	Ramseur
Banner Elk	Havelock	Matthews	Stanfield
Bermuda Run	Hendersonville	Minnesott Beach	Troutman
Biltmore Forest	Hillsborough	Mint Hill	Tryon
Catawba	Holly Springs	Monroe	Walnut Creek
Charlotte	Huntersville	Mount Holly	Waxhaw
Cornelius	Jacksonville	Nags Head	Wendell
Creedmoor	Kernersville	Ocean Isle Beach	Wilson
Farmville	Knightdale	Pinebluff	

Counties

Burke
Cabarrus
Davie
Mecklenburg
Northampton

Appendix C. Jurisdictions with Reporting Provisions for Alternative Energy Facilities

Note: Information was also collected on applicable regulations in jurisdictions that did not respond to these survey queries. They are noted in parentheses at the ends of lists.

1. Regulations on Commercial Solar

Municipalities

Archdale	Fayetteville	Maiden	Waxhaw
Asheboro	Hayesville	Navassa	Wentworth
Enfield	Hendersonville	Pleasant Garden	(Raeford)
Fairview	Huntersville	Saint Pauls	

Counties

Brunswick	Granville	Nash	Stanly
Currituck	Guilford	Pender	
Davidson	Johnston	Perquimans	

2. Regulations on Residential Solar

Municipalities

Archdale	Fairview	Huntersville	Navassa
Chapel Hill	Fayetteville	Maiden	Pleasant Garden
Enfield	Hendersonville	Morrisville	

Counties

Brunswick	Granville	Henderson	Perquimans
Davidson	Guilford	Johnston	

3. Regulations on Commercial Wind

Municipalities

Archdale	Columbia	Huntersville	Manteo
Beech Mountain	Fairview	Kitty Hawk	Nags Head
Blowing Rock	Hayesville	Maiden	

Counties

Brunswick	Dare	Pasquotank	Stanly
Camden	Davidson	Pender	Stokes
Carteret	Iredell	Perquimans	Washington
Currituck	Johnston	Randolph	

4. Regulations on Residential Wind

Municipalities

Archdale	Columbia	Huntersville	Morrisville
Beech Mountain	Fairview	Kitty Hawk	Nags Head
Blowing Rock	Hayesville	Maiden	Southern Shores

Counties

Brunswick	Currituck	Johnston	Washington
Cabarrus	Granville	Perquimans	
Camden	Henderson	Pitt	
Carteret	Iredell	Stanly	

5. Alternative Energy Incentives

Municipalities

Chapel Hill	Kernersville	Monroe	Wilmington
Fayetteville	Knightdale	Montreat	

Counties

Currituck

6. Incentives for Green Building Features

Municipalities

Boiling Springs	Jamestown	Monroe	
Durham	Kernersville	Montreat	
Fayetteville	Knightdale	Wilmington	

Counties

Currituck	Durham	Harnett	Henderson
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7. Incentives for Green Site Design Features

Municipalities

Apex	Knightdale	Montreat	Wendell
Cary	Manteo	Randleman	Wilmington
Jamestown	Monroe	Stokesdale	

Counties

Cabarrus	Currituck	Harnett	Pender
Chatham	Gaston	Macon	Randolph

Appendix D. Survey and Responses

1. Survey Instrument

2011 SOG Survey Instrument

This survey has three parts. The first part asks several administrative questions that are applicable for all jurisdictions, the second asks about design standards in your jurisdiction's development regulations, and the third asks about how alternative energy is addressed.

Name of Jurisdiction: _____

Name of person completing survey: _____

Part One. Administration

1. What is the *application fee* charged by your jurisdiction for each of the following? (If no fee is charged, please enter \$0; if a variable fee is charged, please indicate the range of potential fees)
 - \$ _____ Rezoning (zoning map amendment)
 - \$ _____ Special or conditional use permit
 - \$ _____ Site plan review
 - \$ _____ Variance
 - \$ _____ Building permit for single family residence
 - \$ _____ Certification/verification of current zoning
 - \$ _____ Preliminary plat (100 lot residential subdivision)

2. What is the average or most common *processing time* for each of the following types of development approvals in your jurisdiction? For each type of approval, please indicate the number of calendar days between receipt of a completed application and a decision (not including any appeals) for a typical noncontroversial project.
 - _____ days Rezoning (zoning map amendment)
 - _____ days Zoning text amendment
 - _____ days Special or conditional use permit
 - _____ days Site plan approval
 - _____ days Variance
 - _____ days Building permit for single family residence
 - _____ days Certification of current zoning
 - _____ days Preliminary plat approval

3. In the most recent 12 month period for which you have records, please indicate the *number of applications* your jurisdiction received for each of the following types of actions:
 - _____ Rezoning to a conventional zoning district
 - _____ Rezoning to a conditional or conditional use district
 - _____ Zoning text amendments
 - _____ Special or conditional use permits
 - _____ Site plan approval
 - _____ Variances
 - _____ Appeals of staff interpretation of ordinance
 - _____ Preliminary plats

4. If there have been *appeals* to the board of adjustment of staff determinations in your jurisdiction in the most recent 12 month period for which you have records, please indicate the number of appeals that were initiated by each of the following:
 - _____ The landowner, applicant, or developer
 - _____ A neighbor or other third party

- Other. Please specify: _____
 Not applicable
5. In the most recent 12 month period for which you have records, has *litigation* been initiated challenging a land use regulatory decision of your jurisdiction?
- Yes
 No
6. If yes, please indicated the number of cases initiated by:
- The landowner, applicant, or developer
 A neighbor or other third party
 Other. Please specify: _____
 Not applicable
7. If yes, please indicate the number of cases filed regarding each type of decision listed below:
- Rezoning (zoning map amendment)
 Zoning text amendments
 Special or conditional use permits
 Site plan approvals
 Variances
 Appeals of staff interpretation of ordinance
 Notice of violation or other enforcement action
 Preliminary plats
 Not applicable
8. For municipalities – Does your jurisdiction currently exercise extraterritorial planning jurisdiction?
- Yes
 No
9. If yes, what is the estimated population of your ETJ area? _____
10. Has your municipality amended the extraterritorial planning jurisdiction boundary within the past five years?
- Territory added through ETJ boundary amendment
 Territory deleted through annexation
 Territory deleted, area returned to county jurisdiction
 Territory deleted, area transferred to another municipality
 No change in extraterritorial jurisdiction area
 Not applicable, no ETJ
11. Does your jurisdiction use a telecommunications consultant to assist in reviews of cell tower applications or other telecommunication facilities?
- Yes
 No
12. Does your jurisdiction use a transportation consultant to assist in producing or reviewing traffic or transportation impact analysis for any development applications?
- Yes
 No

Part 2. Design Standards

13. Do your development regulations include mandatory design standards that set requirements for the appearance of buildings?
- Yes
 No

14. If yes, please check each type of zoning district or regulation in which mandatory design standards for structures are imposed:
- Historic districts
 - Highway corridor districts
 - Downtown or central business districts
 - Shopping center or other commercial districts
 - Planned unit development districts
 - Conditional or conditional use permit districts
 - Neighborhood conservation districts
 - Other Please list: _____
-
- Not applicable
15. If yes, in areas outside of historic districts, what types of structures are subject to mandatory design standards (check each that apply)
- Commercial structures
 - Multifamily residential structures
 - Single-family residential structures
 - Modular housing
 - Manufactured housing
 - Other types of structures Please list: _____
-
- Not applicable
16. If your mandatory design standards apply to *site-built single-family residential structures* outside of historic districts, please check each type of standard included in your ordinance:
- Building or architectural style
 - Exterior building color
 - Type or style of exterior cladding material
 - Style or materials of roof
 - Exterior architectural ornamentation
 - Location or architectural styling of windows or doors
 - Location or architectural styling of garage doors
 - Front porch requirement
 - Number and types of rooms
 - Interior layout of rooms
 - Height of structure
 - Minimum square footage of structure
 - Maximum square footage of structure
 - Limits on repetitive design relative to nearby structures
 - Limits on excessive difference in design relative to nearby structures
 - Orientation of structure on lot
 - Location of structure on lot
 - Fence location or materials
 - Landscaping
 - Location and design of parking
 - Location and design of accessory buildings
 - Other Please list: _____
-
- Not applicable
17. Do your development regulations provide for an architectural review or design review board?
- Yes
 - No

- 18. If yes, which of the following roles does this board perform?
 - Advisory
 - Approval required
- 19. If yes, does this board review site-built single family residences?
 - Yes
 - No
- 20. Do your regulations allow for the placement of campaign or political signs within street or highway rights of way?
 - Yes
 - No
- 21. If yes, what types of regulations apply to the signs placed with a right of way (check all that apply):
 - Time limits
 - Size limits (area of signs)
 - Height limits
 - Maximum number of signs
 - Spacing between signs
 - Limits within intersection sight triangles
 - Other. Please list: _____
- 22. Do your regulations regulate the removal of vegetation in order to improve sign visibility for off-premise advertising?
 - Yes
 - No
- 23. Do your regulations completely prohibit off-premise commercial advertisements?
 - Yes
 - No
- 24. Do your regulations ban electronic billboards?
 - Yes
 - No

Part 3. Alternative Energy

- 25. Do your development regulations include regulatory provisions that specifically address *commercial* scale solar energy projects?
 - Yes
 - No
- 26. If yes, please briefly describe the nature of the regulations: _____

- 27. Do your development regulations include regulatory provisions that specifically address *residential* scale solar energy projects (other than state statutory limits on regulation of solar collectors)?
 - Yes
 - No
- 28. If yes, please briefly describe the nature of the regulations: _____

- 29. Do your development regulations include regulatory provisions that specifically address *commercial* scale wind energy projects?
 - Yes
 - No

30. If yes, please briefly describe the nature of the regulations: _____

31. Do your development regulations include regulatory provisions that specifically address *residential* scale wind energy projects?
 Yes
 No
32. If yes, please briefly describe the nature of the regulations: _____

33. Are *incentives* provided in your jurisdiction's development regulations for inclusion of alternative energy features?
 Yes
 No
34. If yes, please check each that applies:
 Reduce or waive permit application fees
 Expedite permit processing
 Density bonus
 Other. Please list: _____
35. Are *incentives* provided in your jurisdiction's development regulations for inclusion of green building features?
 Yes
 No
36. If yes, please check each that applies:
 Reduce or waive permit application fees
 Expedite permit processing
 Density bonus
 Other. Please list: _____
37. Are *incentives* provided in your jurisdiction's development regulations for inclusion of green site design measures?
 Yes
 No
38. If yes, please check each that applies:
 Reduce or waive permit application fees
 Expedite permit processing
 Density bonus
 Other. Please list: _____

When completed, please return your survey to the address below or fax it to us at 919-962-0654.

RETURN ADDRESS:
 David Owens
 School of Government
 UNC-CH
 CB 3330
 Chapel Hill, NC 27599-3330

2. Responding Jurisdictions

Municipalities

Aberdeen	Cornelius	Haw River	Maiden
Andrews	Creedmoor	Hayesville	Manteo
Angier	Dallas	Hendersonville	Marion
Apex	Davidson	High Point	Mars Hill
Archdale	Dillsboro	High Shoals	Marshville
Asheboro	Dortches	Hildebran	Marvin
Asheville	Drexel	Hillsborough	Matthews
Bald Head Island	Dunn	Hoffman	Maxton
Banner Elk	Durham	Holly Springs	Mebane
Bayboro	East Spencer	Huntersville	Mineral Springs
Beech Mountain	Eastover	Indian Beach	Minnesott Beach
Belville	Edenton	Jackson	Mint Hill
Belwood	Elkin	Jacksonville	Misenheimer
Benson	Emerald Isle	Jamestown	Momeyer
Bermuda Run	Enfield	Jamesville	Monroe
Bessemer City	Erwin	Jefferson	Montreat
Biltmore Forest	Fairview	Jonesville	Morrisville
Biscoe	Faith	Kannapolis	Morven
Black Creek	Falkland	Kenansville	Mount Gilead
Bladenboro	Farmville	Kernersville	Mount Holly
Blowing Rock	Fayetteville	Kill Devil Hills	Mount Olive
Bogue	Flat Rock	Kinston	Murfreesboro
Boiling Springs	Fletcher	Kitty Hawk	Murphy
Boone	Four Oaks	Knightdale	Nags Head
Bridgeton	Franklin	Kure Beach	Navassa
Burgaw	Franklinton	Lake Lure	New Bern
Burlington	Fremont	Lake Santeetlah	Newton
Burnsville	Fuquay-Varina	Lake Waccamaw	Newton Grove
Cameron	Garland	Landis	North Topsail Beach
Candor	Garysburg	Laurel Park	North Wilkesboro
Carolina Beach	Gastonia	Laurinburg	Northwest
Cary	Gibson	Lenoir	Norwood
Castalia	Gibsonville	Lewisville	Oak Island
Catawba	Glen Alpine	Liberty	Oak Ridge
Chapel Hill	Granite Falls	Lilesville	Ocean Isle Beach
Charlotte	Greensboro	Lillington	Parkton
Cherryville	Greenville	Lincolnton	Pine Level
Chimney Rock Village	Hamilton	Littleton	Pinebluff
Claremont	Hamlet	Locust	Pinetops
Clayton	Harmony	Long View	Pineville
Clinton	Harrells	Lumberton	Pittsboro
Clyde	Harrisburg	Madison	Pleasant Garden
Columbia	Havelock	Magnolia	Polkton

Pollocksville	Seven Devils	Tabor City	Wentworth
Powellsville	Sharpsburg	Taylorstown	West Jefferson
Raleigh	Shelby	Troutman	White Lake
Ramseur	Siler City	Tryon	Williamston
Randleman	Simpson	Vanceboro	Wilmington
Reidsville	Smithfield	Wadesboro	Wilson
Richlands	Southern Shores	Wake Forest	Wilson's Mills
Rockingham	Southport	Walnut Creek	Winston-Salem
Rocky Mount	St. James	Warsaw	Winterville
Roxboro	Stanfield	Washington	Woodland
Roxobel	Statesville	Washington Park	Wrightsville Beach
Saint Pauls	Stedman	Waxhaw	Youngsville
Salemburg	Stokesdale	Waynesville	Zebulon
Saluda	Stoneville	Weaverville	
Saratoga	Stonewall	Weddington	
Selma	Surf City	Wendell	

Counties

Alexander	Davie	Lee	Randolph
Bladen	Durham	Lenoir	Richmond
Brunswick	Edgecombe	Lincoln	Rockingham
Buncombe	Forsyth	Macon	Rowan
Burke	Franklin	McDowell	Sampson
Cabarrus	Gaston	Mecklenburg	Stanly
Caldwell	Gates	Moore	Stokes
Camden	Granville	Nash	Transylvania
Carteret	Guilford	Northampton	Vance
Catawba	Halifax	Onslow	Wake
Chatham	Harnett	Pasquotank	Warren
Craven	Henderson	Pender	Washington
Cumberland	Hertford	Perquimans	Wayne
Currituck	Iredell	Person	Wilkes
Dare	Jackson	Pitt	Wilson
Davidson	Johnston	Polk	

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