



Leadership, Partnership, Stewardship

Wake County Business Plans *FY 2007 - 2009*

Community Services Department
Inspections/Development Plans/Permits

1. Statement of Purpose

Provide for the Administration and Enforcement of the North Carolina State Building Codes as adopted by the Building Code Council and enforced by State and Local Code Enforcement Officials. To provide staff, training, technology and physical facilities to bring the services closer to the customer. To develop partnerships for the sharing of resources, services and knowledge. Develop education and training programs for staff, internal and external county partners. Prepare for future staffing and leadership while reviewing the current structure of the division and the development services to provide for consistent management style and direction.

2. Scope

This is a program mandated by the State of North Carolina. The purpose is to protect the public's life safety, health and welfare in the built environment. All building, electrical, mechanical, and plumbing construction must be permitted and inspected. The North Carolina Building Code and North Carolina General Statutes regulate most functions of the Inspections Division. Records are kept in a manner prescribed by the North Carolina Department of Cultural Resources and are maintained on a software program developed in-house. The County also provides inspections services through inter-local agreement for the municipalities of Knightdale, Rolesville, Wendell, and Zebulon.

The field inspectors perform mandated inspections for construction of new structures, alteration/renovation of existing structures, and change of occupancy type. Other duties include posting of floor loads, maximum occupancy loads, stop work orders, and unsafe structure notices. Inspectors must inspect and approve child daycare centers, foster homes, business wishing to obtain ABC permits, and adult daycare facilities prior to the State of North Carolina issuing operations licenses. The division issues Certificates of Compliance and Certificates of Occupancy upon completion on construction projects.

The permitting staff processes, updates and issues building permits for new single-family dwellings, commercial structures, additions, renovations, demolition, accessory structures, and mobile homes located within the unincorporated areas of Wake County. Staff also creates the permits for the Environmental Services Department's Well and Waste Water Division for lots located within Wake County's jurisdiction. As part of the application process, staff verifies zoning and jurisdictional authority; checks site plans for buffers, FEMA flood soils, impervious surface limits, easements, and right-of-way; and gathers information concerning the scope of the permit. Permitting staff works closely with the Current Planning Division of the Planning Department;

Well and Waste Water, Flood, Erosion and Sedimentation, and Stormwater Divisions of Environmental Services; and the Geographical Information Services Division of Community Services. The staff of Inspections/Development Plans/Permits play an important roll in protecting the quality of life in Wake County through planned management and inspection of development and construction projects.

All construction plans are reviewed for life safety and structural integrity prior to the issuance of a permit. Commercial and residential plan reviewers are responsible for final approval of drawings, verification of contractor licenses, writing a detailed description of the work being permitted, and calculating permit fees. Both residential and commercial plans are being reviewed in each of the four contract municipalities and satellite locations.

Records are maintained as prescribed by law. Records include applications received, permits issued, inspections and re-inspections made, defects found, certificates of compliance and occupancy granted, and of other work and activities of the department. These are maintained as prescribed by the NC Department of Cultural Resources, Department of Archives.

3. Desired Outcomes

- A. Maintain and explore opportunities to enhance the quality and efficiencies of the current inspections and permit programs.
- B. Provide accurate and timely information of all public records as required by NC General Statues. Maintain records in such a manner as to provide access to business partners and the public.
- C. Provide the design and development community an environment of educational opportunities and to maintain a highly trained inspections/permitting staff. Develop administrative and leadership skills in existing and new employees to facilitate program continuity and growth.
- D. Provide access to services and records to the customers of the division in a manner that allows for better use of resources.
- E. Have an open line of communication between IDPP and the development community to improve efficiencies of the construction processes in Wake County. Open communication provides for increased quality of construction and development projects.

4. Define Priorities

- A. Building Code Enforcement – Mandated by the NC General Statues and provides for structural integrity, life safety and energy efficiencies of all construction.
- B. Education and Training – provides tools necessary to enforce building codes and reduces costs to IDPP, the development community, and the public at large for enforcement of code issues on construction projects.

- C. Customer Service physical and technological needs – provides efficiencies and convenience in a cost effective manner.
- D. Provide for development of internal and external partnerships and information sharing systems.

5. Status Report

Progress on Business Plans made during the FY06 Period.

A. Streamlining of commercial plan review:

The scope of commercial plans reviewed by the full time Plan Review staff increased during the year. The full time plan review team has reviewed more than 50% of the commercial plans for the area in Wake County's jurisdiction. In addition, greater cooperation was established with the field staff who are currently performing commercial reviews for projects within their areas. An electronic review tool, Buzzsaw, by Autodesk has been used for review of several major projects this year. This has allowed Plan Review staff to share comments with the clients and with the inspector who will be performing the field inspections. Plans and comments for these projects have been stored on the "P" drive for review on future development and for maintenance inspections.

B. Permits and inspections software

Representatives from Inspections/Development Plans/Permits, Planning, Environmental Services, Public Safety, Revenue and the Applied Technologies Project Manager began the process of mapping out the needs for a new enterprise system. A third party consulting firm, Farragut Systems, was hired to compile all of the information into a single Request for Proposal (RFP). Each work group responsible for some portion of the review of development projects provided lists of minimum requirements and a wish list of enhancements and tools to better track and review the development process. The RFP is due to be published in December 2006.

C. Automation enhancements:

Along with the migration of some of the commercial plan review process to the full time Plan Review Staff, an effort began in earnest to automate the process and to provide for better communications between review team members from all of the County services, the clients submitting the projects, and the project owners. An Autodesk service known as Buzzsaw has been contracted and installed allowing uploading of commercial plans to a secure site and reviews to be performed through the web. All review notes made under this system are automatically distributed to all internal and external parties. Plans, revisions, documents and even digital images may be stored in each project site. Upon completion of the project, all project documents can be stored on a server. The Development Services Team will use this saved project data at a later time for renovations or additions permits, by Fire Services during the scheduled maintenance inspections, by Revenue for accurate appraisals, and by Public

Safety for emergencies or security threats. Wake county Inspections/Development Plans/Permits may be the first Inspections agency to use this system for remote plan review and to provide this level of service.

D. Review of staffing and position responsibilities:

A review of staffing levels for the projected workloads and growth in the development in the contract municipalities was completed in the fall of 2006. IDPP staff has met with the Planning Departments of each contract municipality to determine the immediate and five year projected need for inspection services. These towns are experiencing tremendous growth due to their proximity to Raleigh and the Research Triangle Park, the completion of the Hwy 264 bypass and the soon to be completed Eastern section of the I-540 beltline. The area contains the largest amount of undeveloped land within Wake County with cost of raw land still within range of development for medium priced residential construction. Projections of new construction were based on meetings with the Planning Department of each municipality and documentation used by each town in approving development and lot creation. Based on the projections and the burden added by the state mandated continuing education requirements, additional full time positions will be required to fulfill the projected workload through FY2008. The approval of these positions will allow Wake County to meet its obligations to the contract towns and maintain our contractual relationships. Continued growth in the amount of construction, permits and inspection is projected through 2011. The addition of staff and resources to meet this growth will be evaluated each year and new expansion requests will be made as indicated by the increased workloads.

E. Mandated continuing education:

Continuing education requirements began in the fall of 2006. Each Inspector was required to complete 6 hours of continuing education before June 2007 for each certificate they held. As part of the requirement, any inspector holding a certificate in a discipline must complete 2 of the 6 hours within 180 days of any code change. The staff of IDPP holds 90 certificates requiring yearly updates. This alone is a loss of approximately one-third of an FTE each year in continuing education. In 2006, the NC Building Code, Mechanical Code, Fire Code and Plumbing Code all had new editions with an effective date of July 2006. This required each of the trades to have courses scheduled by end of December. By the end of December 2006, IDPP had completed all 6 hours of continuing education for Building, Fire, Mechanical and Plumbing. All of this was done by developing an in-house training program, getting certified by the State of North Carolina and scheduling the class time. By becoming certified as a state approved training facility, IDPP accomplished its training with no additional budget expenditures.

Internal Issues: Issues Facing IDPP in the FY 2007 and 2008

A. Continued review of the services structure provided to the development community and our contract services to the municipalities:

As Wake County has experience rapid growth in single family and commercial structures over the past 15 years, the number of existing structures contracting for additions and renovations has seen a sharp growth curve. This in addition to new residential and commercial construction has dictated constant review of projected workloads and service levels. Through a long-standing and cooperative relationship with the building community, Wake County IDPP has established and agreed to permit fees and work service levels that provide for an efficient construction process. The Homebuilders Association of Raleigh/Wake County and General Contractors Association have long supported and encouraged a permit fee schedule supporting staffing levels that maintain next day inspections. Delays in inspections result in lost workdays on projects and increase costs for construction. For the last fifteen years, IDPP has performed 98% of its inspections on the next business day after contractor request. The average time out for inspections during FY 2006 is 0.92 days. This time out of less than one day is the result of inspections called in and performed on the same business day.

Equally important is the trend in growth of our contract municipalities of Knightdale, Rolesville, Wendell and Zebulon. While the number of permits and inspections in the un-incorporated areas of Wake County may be static and even decreasing slightly over the next five years, the growth in the contract towns is increasing at a very rapid rate. The cost of raw land has pushed much of the development into areas with water and sewer to decrease the lot size from that would be required for homes on individual well water and septic tanks. The service level expected by our contract partners is high and to sacrifice that level may mean loss of the contract. The staffing to provide the required service would be revenue neutral to revenue positive as the permit fees pay for the costs of IDPP.

The capacity of current field inspectors has been reached at this time. Commercial permits, which require longer review and more field inspections, has increased dramatically in the past 12 months. Placement of staff in closer physical proximity to the work and clients has helped to maintain the level of service and communication within the division. Office space for staff will become a major issue in the South and renovation of space in the East will be needed. The satellite offices add efficiencies in staffing, saves fuel costs and reduce travel time. With General Inspectors working from remote locations, there exists a need to provide supervision and leadership in these remote locations. A re-structuring of the supervisor and team leader roles, responsibilities and work assignments is required.

B. Continued development of the permitting and inspections application.

This issue will remain for several more years as a vendor is selected, budget appropriations are approved and implementation of the new system is completed. There will be a significant draw on personnel to implement this project and workloads will have to be adjusted. Legacy systems will have to be maintained during the transition and old data will have to be converted and stored in a manner that can be easily retrieved. Commitment of resources is not only an IDPP issue but is necessary by each of the internal partners within Wake County. A large funding commitment is also required by the Board.

C. Continued streamlining of commercial plan review.

The shift of staff to satellite locations has placed physical impediments to the document handling required for review of commercial plans by the field inspection staff. This impediment along with the enhancement of the staffing in the Development Service teams provides opportunity to migrate many of the reviews to the full time plan review staff. This provides greater accessibility to the reviewers for our client base and consolidates services. Greater cooperation and collaboration with Fire Services, Zoning and Environmental Services Land Development teams is essential in providing this service. It is essential that representatives from all of the Wake County Teams participate in pre-construction meetings on all major projects.

D. Automation enhancements:

Maintenance and accessibility of documents needed to perform permit issuance, plan review and to provide records as required, is currently a cumbersome process and paperbound. Original Certificates of Occupancy's are not maintained, commercial plans are destroyed one year after completion, and subdivision maps are available only at one or two specific locations. Studies should be made on electronic storage and archival of all important documents. As part of the Permitting and Inspections Automation Application, a document management system should be developed and implemented.

E. Fee collections:

Web and phone based systems for payment of all fees is needed to move forward, provide convenience to clients, and to provide secure and auditable transactions. The number of persons handling fee collections need to be reduced and the number of different and disconnected systems reduced or linked together. This is a major issue as IDPP collects funds for several departments within Wake County.

External Issues:

A. Contract municipality support:

Continued cooperation and support for the contracting municipalities is needed to enhance and provide continuity of services to the development community within Wake County. Educational and technical support is needed to continue the current relationship with the four towns and to review options of working with other municipalities. Workshops to improve processes should include the staff of all of the contract towns and regular meetings with all of the towns should be set. Space for review of plans at the town halls is needed. Dedicated teams to serve the towns are necessary as well as continued contact with the inspection team leaders. See Continued Review of Structure of Services.

Current Initiatives:

Internal Issues

A. Review of Development Services Structure:

As part of the staffing study, the need for additional inspectors is evaluated and along with the need to place all inspectors in closer proximity to the daily workloads. IDPP staff has met with the Planning Departments of each contract municipality to determine the immediate and five year projected need for inspection services. These towns are experiencing tremendous growth due to their proximity to Raleigh and the Research Triangle Park, the completion of the Hwy 264 bypass and the soon to be completed Eastern section of the Interstate 540 beltline. Projections of new construction were based on meetings with the Planning Department of each municipality and documentation used by each town in approving development and lot creation. Based on the projections and the burden added by the state mandated continuing education requirements, additional full time positions will be required to fulfill the projected workload over the next five years. A third satellite Regional Center in the Northern part of Wake County is under contract and construction has begun. Up to six field staff and one team leader will be located to the new regional center placing the inspectors closer to the citizen/builder clients they serve. Team leaders will be placed at each of the current satellite locations. This increases face-to-face communication, saves fuel and travel expenses, and allows each inspector to spend more time in the field. This has been extremely successful in the past at the Eastern and Southern Regional centers. A re-structure of the team leaders and supervisors is needed to accomplish this goal.

B. In-house permits and inspections software application:

A “sponsor” team and a “user” team have been assembled to study needs and opportunities for replacement of the current system. A consulting firm has been contracted to map out the services provided, business practices and needs of all for the Departments, Divisions and Sections to ensure that a viable RFP is written. The RFP is to be issued by end of calendar year 2006, review of submitted proposals in early spring of 2007, site visits are to take place in spring of 2007 and approval sought from the Board of Commissioners July of 2007. The contract is to be awarded and implementation begun with final implementation completed in FY2008 or FY2009.

C. The Role of the Review staff located on the first floor.

Development Services Area began taking a greater role in the review of commercial plans. Small commercial jobs once forwarded to the field inspector are now being reviewed in a timelier manner. Additional responsibilities will be added to the full time Plan Review Staff as deemed appropriate and larger projects will be added to the scope of work performed on the 1st floor. This process is expected to continue throughout FY06 and into FY07. Permit/Plan Review Staff organization and staffing levels are being reviewed for workload and needed organization changes. Building permit levels are rising as well as the programs supported by and tied to the Building Permit. Permits have increased 28% since FY2003. The need for team leaders of the permitting and plan review groups is being discussed with all options being explored.

D. Automation Enhancements:

The process of Document Scanning is still being studied for the most efficient solution. Plan Review Staff will be tasked with providing estimates of the number of pages of commercial plans that require scanning and saving to file. Permit staff is currently saving the Certificate of Occupancy Word Document to a folder and then converting the files to PDF for later distribution. The goal is to place these documents on the Web for citizen access. Commercial permits will require the final permit set of plans to also be submitted in electronic form for archival or a copy fee added to the permit cost to have the plans scanned and stored.

E. Contract Municipality support:

Each year the relationship with the contracting municipal governments for Inspection Services is reviewed. Items such as enforcement of unsafe buildings, revenue sharing and services are major concerns and will be addressed during Fy07 and FY08. Staffing levels for continued inspection is being monitored (see Current Initiatives part A). The Town of Knightdale is in the process of opening some space for the review of plans in the Town Hall.

6. Demand analysis

Fluctuations may be caused by interest rates, economy, land costs, unemployment rates, and governmental services and policy decisions. Catastrophic acts of nature will shift emphasis and change the demands placed upon the division. Acts of

terrorism or threats of terrorism may cause demands to shift direction or change in magnitude.

Data elements for projections:

- A. Population growth patterns from planning demographics. The Unincorporated area of the county grew at a 27.7% rate over the last 10 years (3670 persons per year) while incurring losses of territory due to extensions of city and town limits. The contract municipalities grew an average of 76.8% over the same 10-year period (138 persons per year). It is projected that the areas around and in the contract municipalities will continue with rapid growth and that territory will continue to be absorbed by municipal extensions.
- B. Projection of housing starts from National Association of Home Builders and other resources.
- C. Projections of commercial growth from sources such as RDU Airport, Research Triangle Park Authority are used.

Consequences of failure to address business plan items:

- A. **Building Code enforcement** –
Lower ISO ratings are reflected in higher home and business insurance premiums. Inspection failures increase risks to life safety and well being of building occupants.
- B. **Review of Business structure and of staffing needs.**
Failure to perform regular review of business structure and staffing needs could result in default of contract agreements with contact towns and the levels of services expected and supported by our development partnerships. Default on contract service levels or reduction in levels of service to the contract towns may cause loss of contract and major sources of funding for staffing and support services. Lower service levels provided to our contractor base would violate our agreement to maintain service by tying fee schedules to expected levels. Most importantly, as the quality of the inspections program deteriorates, the quality of the built environment within Wake County declines. Our citizens deserve the protection levels and professional services currently provided by IDPP.
- C. **Education and training** –
Education of the design and development community impacts rejection rates, customer services, cost of construction and cost of maintenance, and assessment of insurance fees. Failure to provide the required continuing education to staff would result in loss of certifications for staff and the ability to function under the General Statutes of North Carolina.

D. Customer Service facilities and technology-

Without adequate conveniently located physical facilities and proper automation systems, customers will experience increased costs of doing business and poor use of the existing technologies. IDPP would step back from its current leadership in quality and efficiency of inspections services.

E. Partnerships and program sharing-

Lack of partnerships and sharing of systems results in wasted financial resources throughout County and other related municipal agencies. Lost opportunities could occur when IDPP, Environmental Services, GIS, Revenue and Inspection/Development programs in other government agencies are transitioning and upgrading land based applications.

7. Define approaches for achieving outcomes

- A. Review desirability and/or feasibility for permit staff to be made available at satellite locations. Explore methods in which subdivision plats and required staffing are to be made available from other development services. Determine if the best business processes for remote permitting is through electronic medium versus the physical relocation of staff and paper resources as described in C below. Investigate the possibilities of using the same on site staff person to issue permits for other departments and divisions.
- B. Provide services through electronic media. Provide updated permitting and inspections applications that enhance access by the builder clients and citizens of Wake County. This same system should provide greater communication and document management for and between all internal Wake County partners.
- C. Provide open and free communications between partners. This will be accomplished by maintaining an up to date web presence, continued use of the broadcast email system, and of browser-based systems such as MobileHWY to share inspection records and schedule inspections. Monthly articles in the Home Builders magazine will continue to facilitate the flow of Divisional information and code related updates. IDPP will continue to visit contractor's offices to show how technology can provide needed information to the client. Expansion of published information and requirements will facilitate communications.
- D. Work with internal County partners, other municipal partners, and private industry to share development resources, information, software applications, and electronic archival of construction documents. Review

with internal partners and other municipal inspections programs existing software needs, packaged inspection programs, and the possibility of modifying or combining existing programs to provide a uniform system of permitting scheduling and records maintenance.

- E. Establish and implement educational seminars for the development community and county citizens. Provide education and training for staff on codes, procedures, and related development issues. Provide annual seminars and code courses for the design and development community as needed. Continue semimonthly training session for field personnel with opportunities for additional value added certifications within the division. Provide community education and information workshops through speaking opportunities and presentations to external clients such as the Association of General Contractors, North Carolina Licensing Board for Engineers and Surveyors, AIA of North Carolina, and the Capital Area Manufactured Housing Association.

8. Performance measures

- A. Time out for inspections.
- B. Number of permits issued.
- C. Number of Plans Reviewed
- D. Percentage inspection rejections.
- E. Reduction in man-hours reviewing complaint and attending hearings.
- F. Client feedback and customer satisfaction surveys.
- G. Percentage of permits issued, inspections scheduled and records accessed through satellite locations, browser based and other automated systems versus the traditional centralized office counter and phone systems.

FY 06	Total	Same Day	Next Day	2+ Days	Average Days Out
Number of Inspections					
Building Trades	23914	2392	21336	150	.90
Plumbing Trades	13516	1130	12316	70	.92
Heating Trades	9813	628	9115	70	.94
Electrical Trades	14613	1339	13155	119	.92
Totals all Inspections	61818	5489	55922	409	.92
Average days out for FY 06 (Prior Year)					.92
Projected days out for FY 07					<1.00
Projected days out for FY 08					<1.00
Projected days out for FY 09					<1.00

IDPP has maintained a time out of somewhat less than one day for the past 7 years without overtime. The current scheduling systems allow scheduling until 5:30 am for same day inspections.

	Projected	Actual FY06	Projected FY07	Projected FY08	Projected FY09
Building Permits Issued	4157	4273	4657	5250	5575
PM&E Permits Issued	2550	2484	2558	2634	2713
Investigation Permits Issued	120	118	120	140	155
(Investigation permits may vary greatly when and if used to track un-safes and other citizen complaints)					
Residential Plan Reviews	3385	3405	3785	4185	4475
Commercial Reviews	468	479	520	545	565

Rejection rates by Trade

Trade Group	Projected FY06	Actual FY06	Projected FY07	Projected FY08	Projected FY09
Building	25.00	22.54	24.50	23.0	23.00
Electrical	21.80	19.06	19.00	21.00	21.0
Heating	27.40	24.11	26.00	24.0	24.0
Plumbing	18.50	16.81	19.00	17.0	17.0

9. Milestones of service accomplishments

A. With permits and inspections on the increase and activity in construction expected to continue to be strong for the next years, maintaining current time out and quality of inspections remains the highest priority. Continued reliance on permitting staff to educate and enforce programs for Stormwater, Wastewater and FEMA Sections and the new emphasize on revenue reporting could extend time frames for permit issuance. Automation advances, review of Permit/Plan Review/Field Inspectors staffing levels, and the use of field staff with multiple certificates are the best weapons we can place in our current arsenal. Through strategies listed above, the goal to maintain the current timeouts for our inspections and the quality of service is within reach.

- B. Education and Training Issues –
 - Staff development and continued training – Six credit hours per certification
 - Plan Review Design Seminars – Annually
 - Code Seminars for Development Community – Annually

- C. Customer Service Issues – Commercial on line plan review – Work on online review to continue as well as re-alignment of work toward full time plan review staff. Openness to public – Development of the new P & I application and web based portals for review of public documents will continue to enhance the service levels of the division. Open lines of communications – Staff should maintain speaking engagements, teaching opportunities, electronic systems for communication, and membership in professional organizations. This will be ongoing and should reduce rejection rates and avert future problems in construction.

- D. Education: Continuing education and education directed toward the client base will become measures of a successful program and will enhance the status of the division.

10. Resource requirements by business program

A. Staff –

Current staff levels consist of 23 field inspectors and their supervisors, 7 permitting staff, 2 plan reviewers and their supervisor, one administrative secretary and the division director. This staff meets the needs of the customers today and handles the seasonal peaks in workloads. The need for additional staff is balanced by the pace of construction in the jurisdiction and with current inspection requirements of the NC Department of Insurance, Office of the State Fire Marshall. Additional staff needs are currently being evaluated based on service levels and workload increases. Time required for continued education may affect the staffing levels.