309 E. Market Street - Smithfield NC 27577 - 919-989-5060

Johnston County Policy for Addressing New Subdivision Lots Using Distances

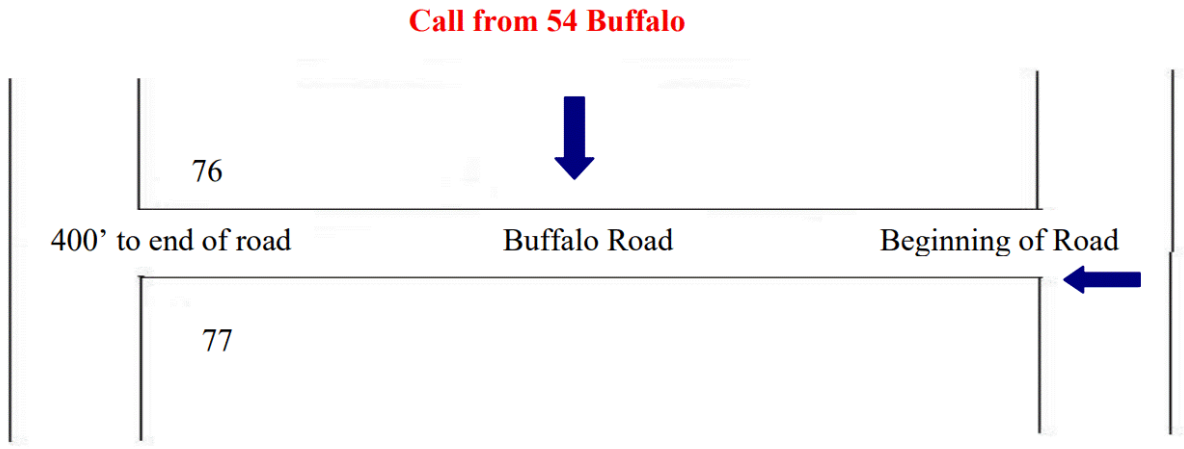
Purpose: In order to standardize address and parcel number assignment within the Jurisdiction of Johnston County Government, these documents have been created for the benefit and use of those charged with the tasks.

1. General Procedures

The Address Coordinator will generate new addresses for any location within the county's zoning jurisdiction and ETJ of each town based on the formula listed below.

1.1 Johnston County will assign addresses based upon a 10.56 foot distance interval. This will allow 1000 addresses per mile per side, which also changes the "100" block every 0.1 miles. (See Figure 1.1 for a diagram of why the interval is 10.56. It is important that the computer in the 911 center accurately determine the location of the incoming call on the screen.)

Figure 1.1



1. For example, suppose a call comes into the 911 Dispatch from 54 Buffalo Road. The range of the road is determined by dividing the road distance from the beginning of the road to the end of the road (400') by 10.56 [(400/10.56)x2] = 77). So at the end of the road, the even-numbered address would be 76 Buffalo Road and the odd-numbered address would be 77 Buffalo Road, and the range of the addresses would be from 0-77.
2. The 911 computer will generate a point based on the ratio of address to range (54/77). The point will be placed 7/10 of the way down Buffalo Road.

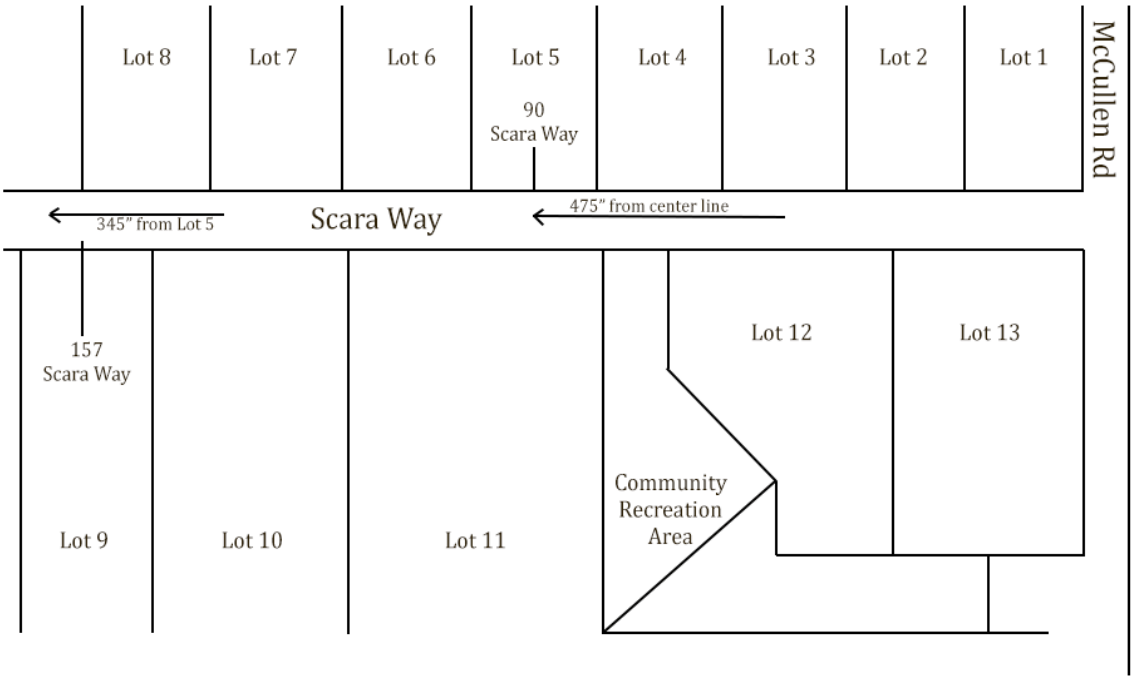
1.2 From the beginning point of the road (street, path, etc.), assign addresses as odd numbers to the left and even numbers to the right, based upon the midpoint of the lot.

1.3 After solving the addressing equation (which follows), round the answer UP to the next

available, appropriate address. For example, if the answer to the equation is 75.34, the next available even number is 76, and the next available odd number is 77.

1.4 The equation used to figure addresses in new subdivisions is: Address = Rounded Up quantity of [(D/10.56) x 2] ± beginning point where D is the distance in feet from the point at which you started measuring; and ± beginning point is the address from which you started measuring. The beginning point is assumed to be 0 when addressing a road that is neither a continuation (which is addressed using a hybrid addressing system) nor an existing main road (which is addressed using an incremental/proportional distance system).

Figure 1.4



Example 1: (See Figure 1.4, previous page) You want to determine the address of the fifth lot in on the right from the entrance to the subdivision. Lots are 100 feet wide at the street.

1. Measure from the intersection of McCullen Rd. and Scara Way (the beginning point) to the middle of the lot in question. In this case, we assume the right of way to be 50 feet (consequently, the half you are working with is 25 feet), so the middle of the lot you are interested in is 475 feet from the intersection of McCullen Rd. and Scara Way.
2. Using the equation, you arrive at the “answer” of (475/10.56) * 2 = 89.96.
3. Since the intersection of McCullen Rd. and Scara Way is assumed to be addressed as “0", we add 0: 89.96 + 0 = 89.96.
4. Rounding up to the next available even number (because the lot is on the right) yields 90, so the address would be 90 Scara Way.

Example 2: (See Figure 1.4, previous page) You want to determine the address of a lot whose midpoint is on the left 345 feet farther down the road from the lot you just addressed (90 Scara Way).

1. Using the formula, input the numbers - (345/10.56)*2 + 90 > rounded up gives an address of 157 (an odd number because the lot is on the left).
2. Assuming a starting point of the intersection of McCullen Rd. and Scara Way gives the

same result. (475+345)/10.56)*2 + 0 > rounded up = 157.

1.5 Assign addresses to the front door of the structure. For corner lots, one of the assigned addresses (the one not facing the front door, once the house is built) will be deleted at the time of permitting.

1.6 All lots in a subdivision should be addressed, even lots reserved for “greenspace”, recreational uses, etc. The description in the database should be “Eastern Greenspace”, or “Community Recreation Area” or the like.

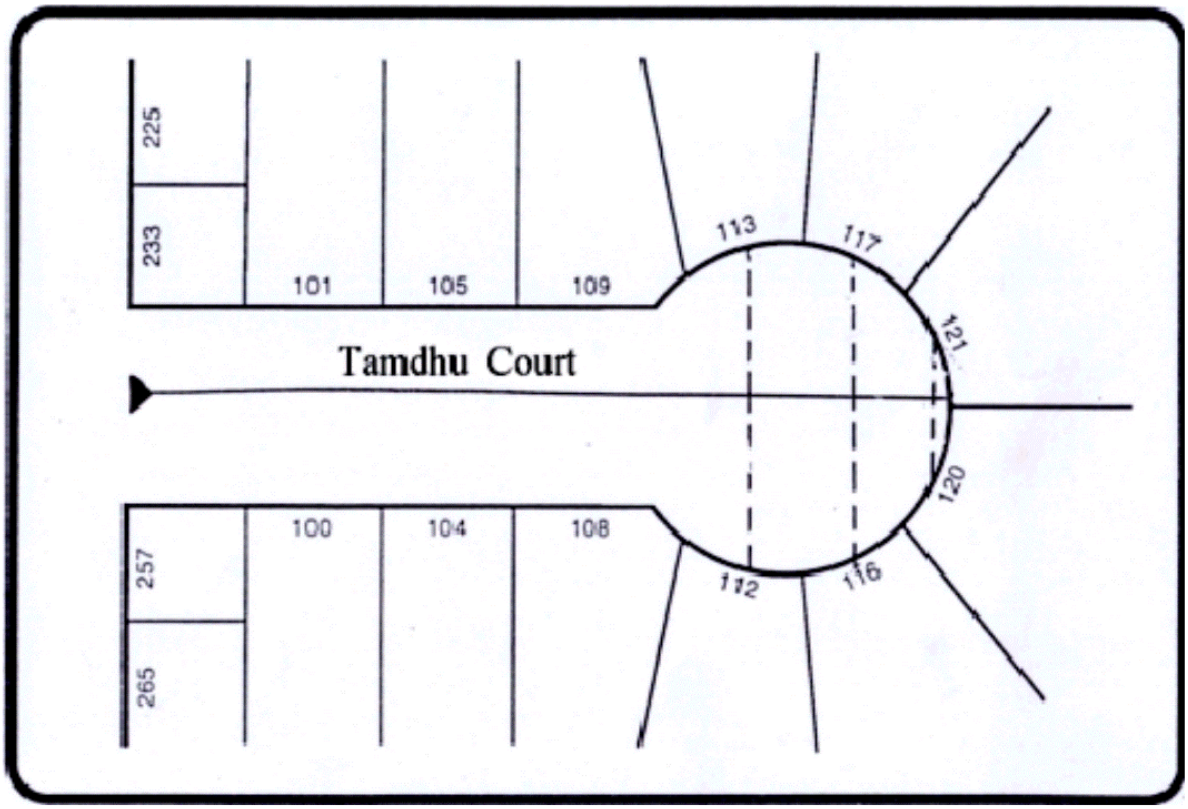
2. Cul-de-Sac Lots

2.1 Draw a straight line from the mouth of the Cul-de-Sac to the end of the “bulb”. For offset Cul-de-Sacs, approximate the mid-point of the bulb.

2.2 Draw a line perpendicular to the centerline you’ve just drawn to the center of the lot you wish to address. The point where the 2 lines intersect is assumed to be the distance you are addressing.

2.3 Assign addresses according to the formula above, keeping in mind: Lots whose midpoint is directly across from the mouth of the Cul-de-Sac will be addressed with an even number. Give it the address associated with the length of the line from starting point to the edge of the right of way at the center of the lot. (The place you drew your line to. See Figure 2.3 below)

Figure 2.3



3. Multiple Unit Structures

3.1 Apartments will assume the address given to the center of the lot, followed by an Apartment Number.

3.2 Businesses will assume the address given to the center of the lot, followed by a Suite Number.

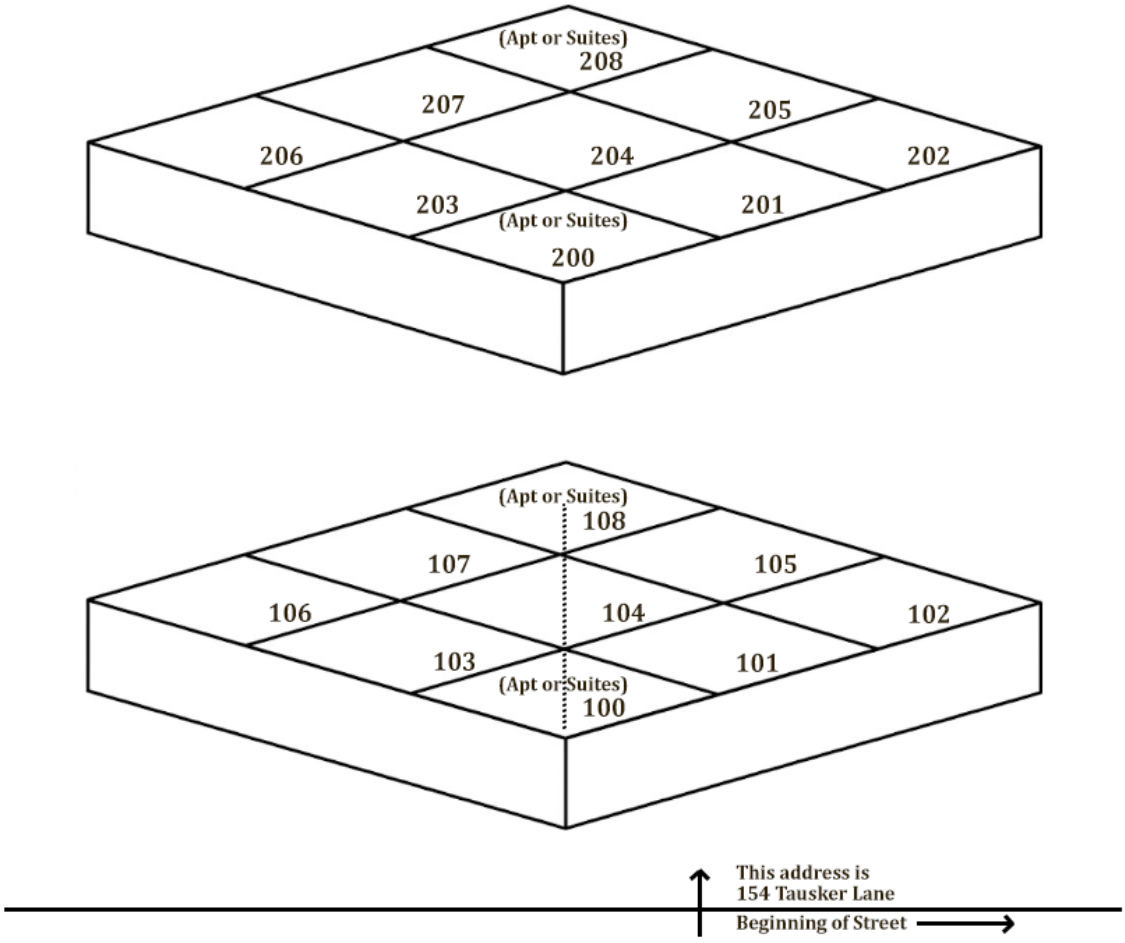
3.3 Apartment and Suite Numbers (See Figure 3.3)

1. Units on the bottom floor will be “100 series” apartments or suites, units on the next floor will be “200 series” apartments or suites, etc.
2. To the extent possible, and where feasible, addresses will be assigned to the exterior doors and apt. or suite numbers to units utilizing the exterior door.

3.4 Exceptions to the above are:

1. Duplexes
    a. Address to the center of the lot. This becomes the address of the half closest to the lowest addressed intersection.
    b. Add 2 to the original address to get the address of the 2nd half.

Figure 3.3



4. Readdressing Previously-Addressed Subdivision Lots

4.1 The basic policy is to allow the existing structure to keep its address where possible. For example, with the subdivided lot below, the lot (marked ‘A’) which now contains the midpoint of the original lot keeps the original address even though the midpoint of the subdivided lot has shifted; meanwhile, the other lot (marked ‘B’) is readdressed.

Figure 4.1

*There are so many ways to subdivide a lot each of which could require a different addressing solution. The Addressing Coordinator will handle each situation on a case-by case basis. It may be necessary to assign a new address on a lot if the lot is subdivided in such a way that the original address no longer fits with the addressing scheme laid out herein.

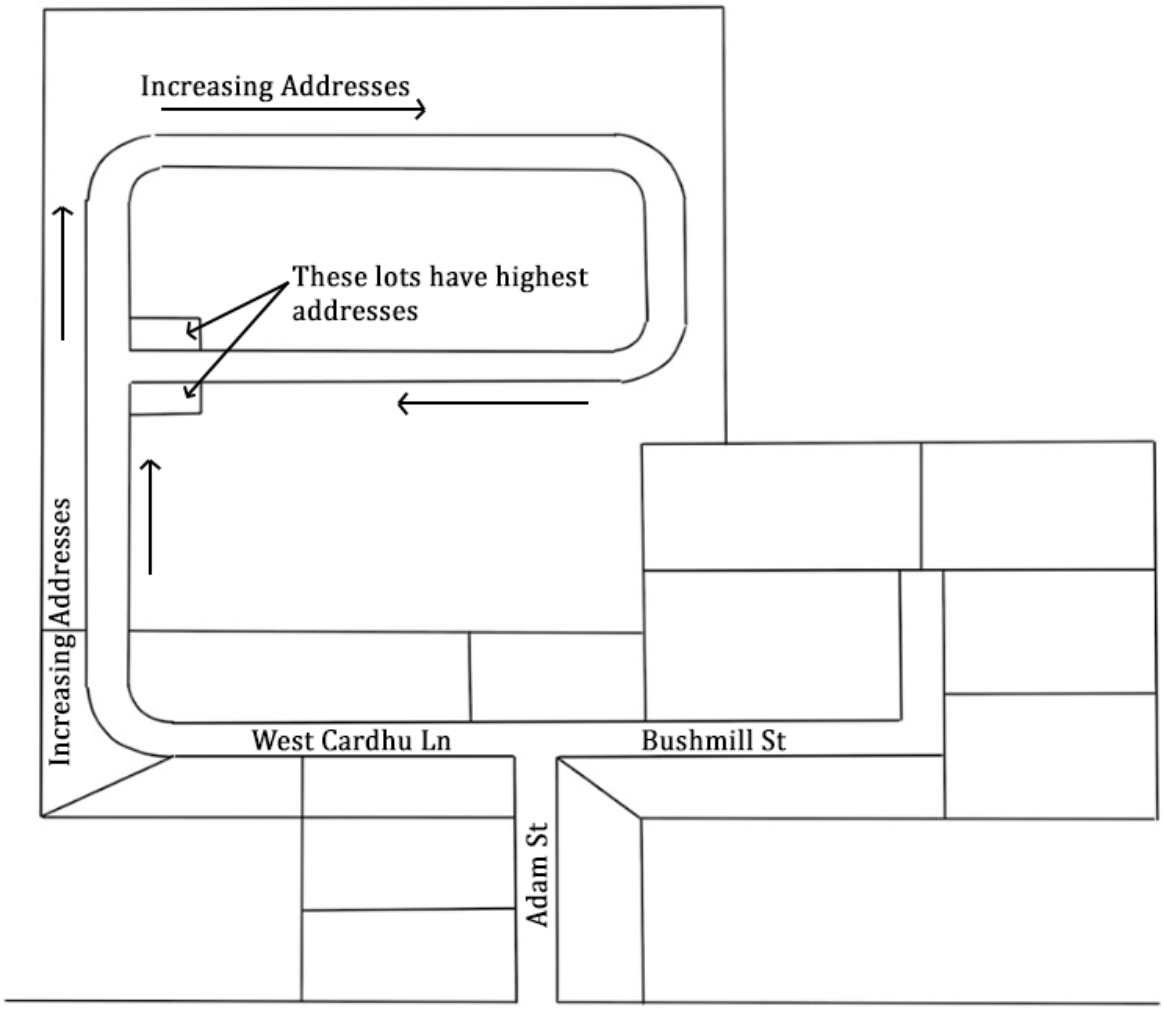
5. Addressing Intersections

5.1 Assign addresses for intersections using even numbers for centerlines to the right or for 4-way intersections and odd numbers for centerlines to the left.

6. Loop Roads

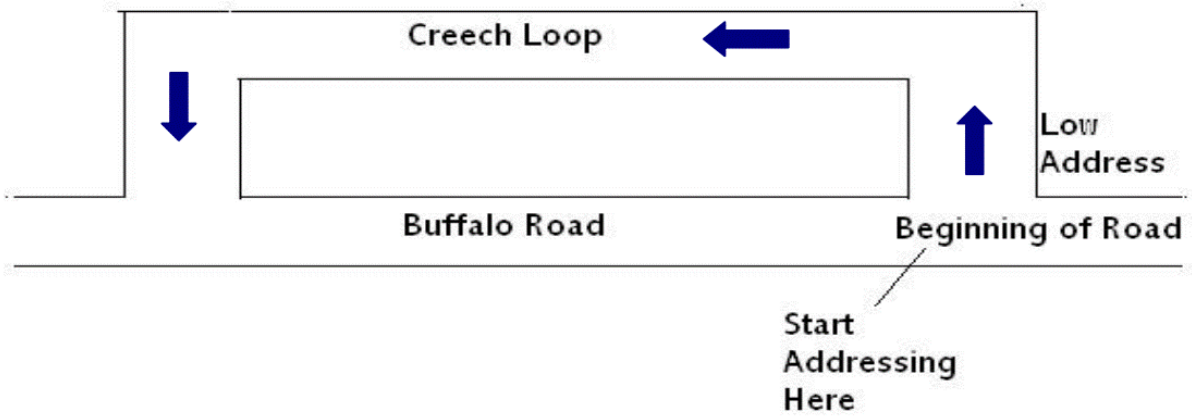
6.1 Roads which loop back upon themselves will be addressed in a “StraightLine” fashion; that is, the lot on the end which has the stop sign will have the highest numbered address. Begin with the end having the lowest addressable intersection, that is, the point where the road which is looping back upon itself has an intersection with an existing road (See Figure 6.1: Adam St. and West Cardhu Ln. on the following page)

Figure 6.1



6.2 Roads (like Creech Loop below) which loop back upon an existing road (like Buffalo Road below) will be addressed starting at the intersection of centerlines which has the lowest address on the existing road.

Figure 6.2



7. Non-Human Uses

A non-human use structure, which needs an address assigned for various reasons, is one that needs an address but will not be occupied by humans, except when performing routine maintenance or in the course of “using” the facility. Examples of non-human uses are: communications towers, ATM’s, power poles, telephone switch boxes, well heads for irrigation, etc.

7.1 Non-human use structures represent the only case in which a suffix to the address can be a letter.

7.2 Multiple letter suffixes are not allowed.

7.3 Multiple addresses containing single letters are allowed (until the 26 letters of the alphabet have been used, after which time, see the Addressing Coordinator). For example, if 195 Dalmore Lane needs addresses for both the power pole to run the swimming pool and the bulk barn then acceptable addresses for these non-human structures are 195 A and 195 B. Assign them based upon first-come-first-served criteria.

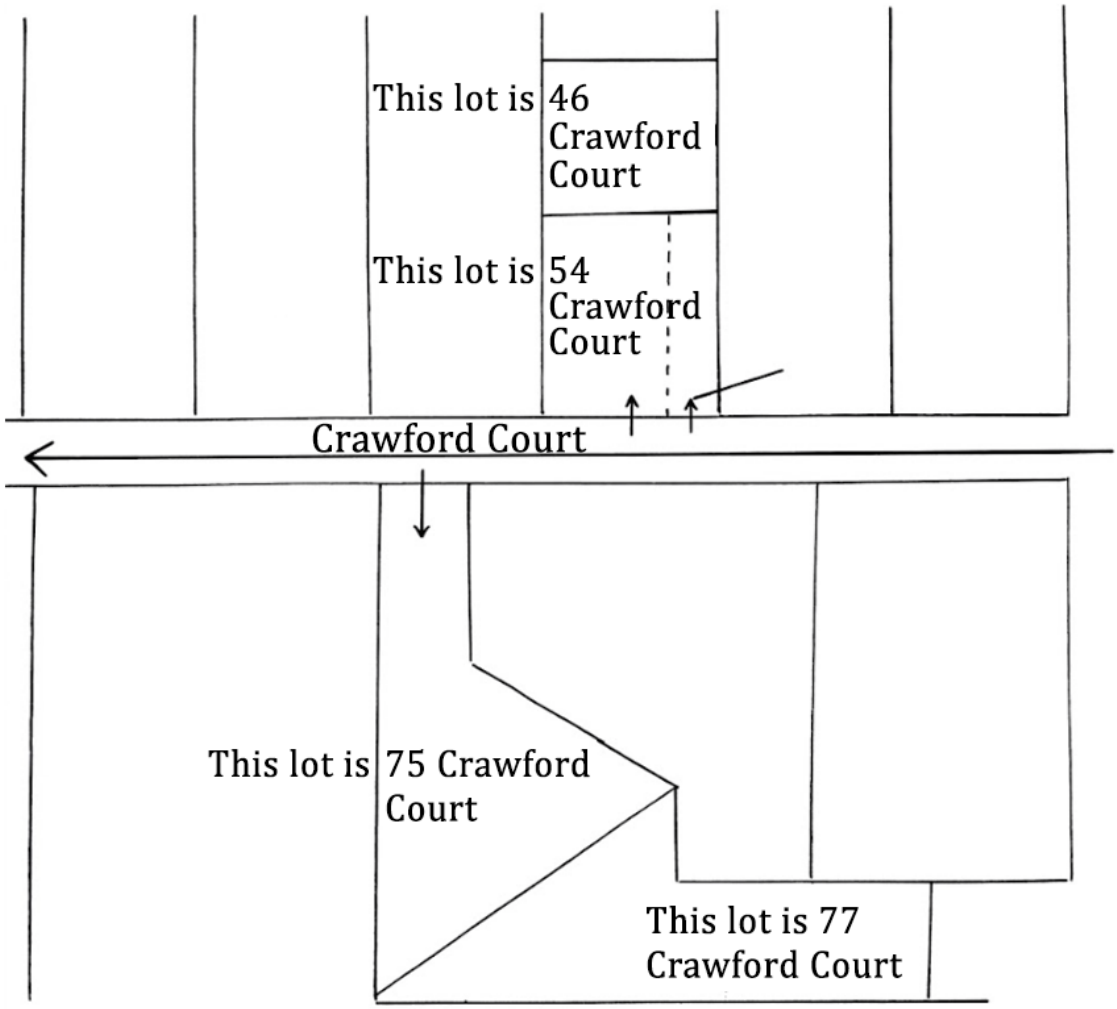
8. Easements and Flag Lots (See Figure 8.0)

8.1 Lots which utilize an easement for access should be addressed as if the center point of the easement were the center of the lot. For example, in Figure 8.0 on the following page, 46 Crawford Court’s address is based on the center point of the easement located on the righthand side of lot 54 Crawford Court.

8.2 Lots which utilize a flag pole shaped portion of the lot to access the lot should be addressed as if the center point of the flag pole shaped portion of the lot were the center of the lot (In Figure 8.0: 75 Crawford Court). Lots which, themselves, do not have road frontage, but use another lot’s flagpole to access the street, will be addressed by:

1. Adding 2 to the superior lot’s address if the lot is behind the superior lot or further away from the lowest addressed intersection. For example, because 75 Crawford Court, below, provides access to the lot in question behind it, the address of the lot in question should be 77 Crawford Court.
2. Subtracting 2 from the superior lot’s address if the lot is in front of the superior lot or closer to the lowest addressed intersection.

Figure 8.0



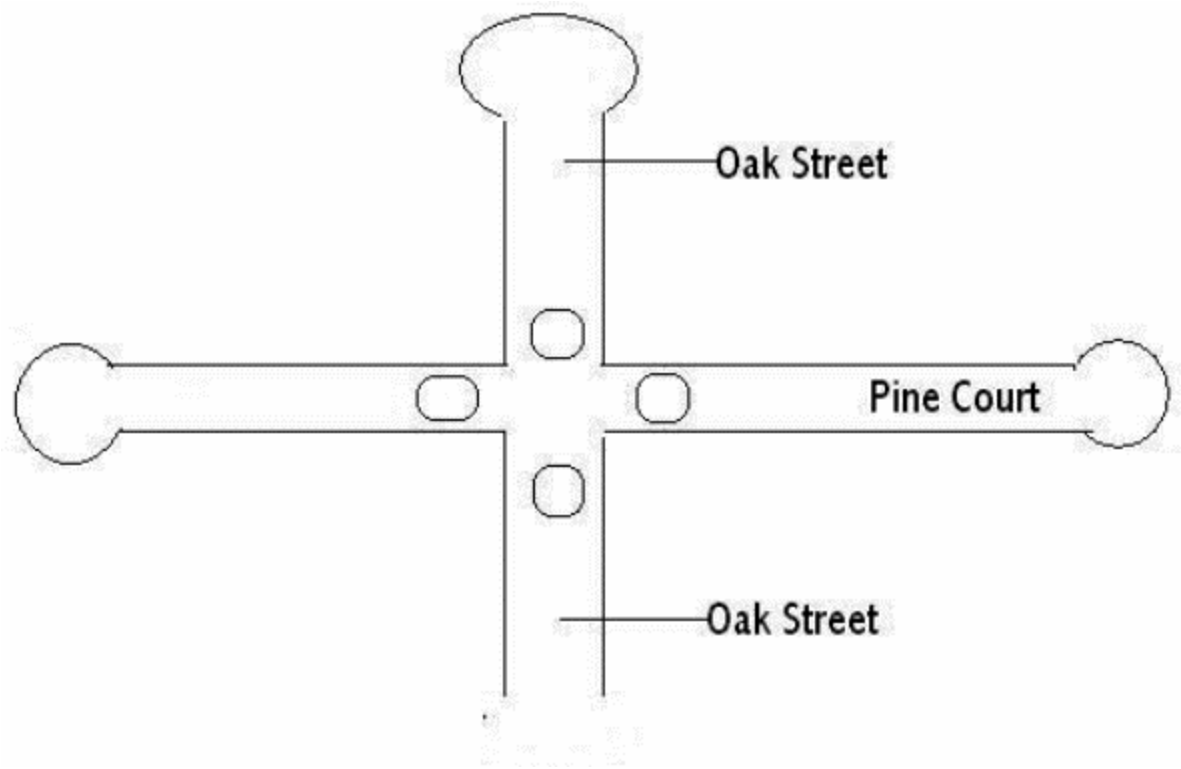
9. Road Names

9.1 Root names of streets shall not be duplicated within the County's jurisdiction. A "Talisker Court" previously allowed in the County will prevent another "Talisker Drive/Lane/Street/Way/etc." from being allowed. In addition, names that sound similar to each other will not be allowed. For example, in the 911 database, there already exists a Whitley Rd, Whitley Way, and Whitley Dr. Someone wishes to name their new street Whitley Oaks Way. First, you would need to check %Whitley* and then check %Oaks% to make sure that there are no other similar names. The % is a wildcard search that will bring up everything that contains Whitley and Oaks. If there is nothing similar, then Whitley Oaks will be acceptable with a type other than WAY, RD or Dr since those types are already used with the name Whitley. The objective here is to minimize the mistakes that could be made by having names that sound alike.

9.1A Root names of streets shall not use any punctuation, such as periods, dashed, apostrophes.

9.2 The prefixes N (North), S (South), E (East), and W (West), and the words North, South, East and West are NOT the same. Names of streets will not be allowed to have the words North, South, East, or West as part of the root name. The letters N, S, E, and W can only be used as a prefix to the root name of the street to denote direction (see Figure 9.4: West Crawford Lane and East Crawford Lane). When entering the street names, place the N, S, E, and W in the prefix field, not in the root name field.

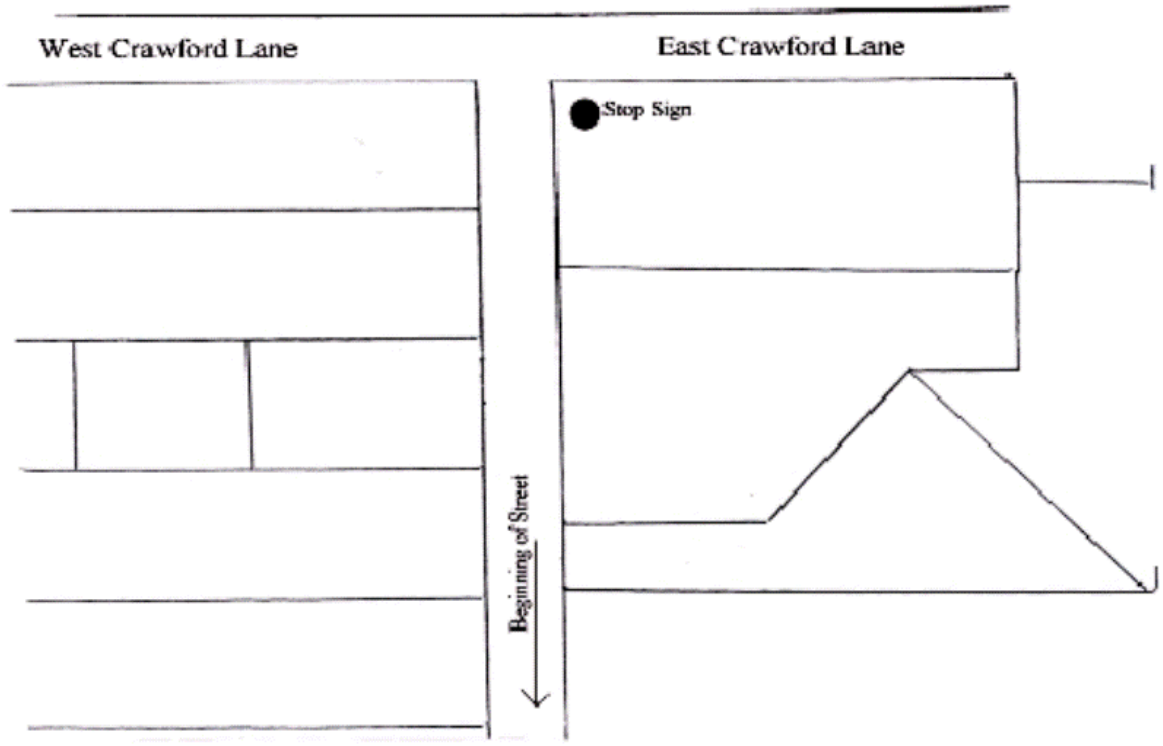
9.3 The Addressing Coordinator will determine the viability of road names and generally, road names will change at ‘Stop’ signs, with very few exceptions. For example, at the four-way stop below, Oak Street, which ends in a Culde-Sac, retains its name, but Maple Court, which also ends in a Cul-de-Sac cannot retain its name after the ‘Stop’ sign because that street (given the new name Pine Court) also ends in a Cul-de-Sac.



9.4 Prefixes to road names are acceptable, and indeed encouraged for the cases where continuing a road name is unacceptable. For example, at a “T” intersection, “West Crawford Lane” and “East Crawford Lane” are acceptable names for the streets making up the top of the “T” (See Figure 9.4 on the following page). This situation will only be allowed where the centerline(s) are the same.

1. Lots directly across from the vertical portion of the “T” will be addressed as follows:
    A. In situations where it is readily apparent that the lot is either to the left or the right of the centerline of the vertical part of the “T”, address as appropriate along the correct street, remembering which direction you are going - is the lot on the left or the right as you are turning on to the street?
    B. Where the location of the structure is ambiguous at the addressing stage, assign both addresses, one of which will be used at the time of permitting and the other deleted.
    C. Extend the centerline from the vertical part of the “T” to the lot in question.
    D. Assign addresses to the lot based upon the approximate midpoint of the portion of the lot between the extended centerline and the property line further down the appropriate street.

Figure 9.4



9.5 The word EXTENSION or abbreviation EXT cannot be used in the root name or in the type.

9.6 The full name of a person is not allowed as a street name. For example, Joe Smith Dr is not allowed, but Joe Dr or Smith Dr is allowable. This rule is not intended to exclude well known historic names such as George Washington Dr.

9.7 Typically, the type ‘RD’ cannot be used in a subdivision. This type is reserved for a road connecting two other existing roads with a ‘RD’ type designation. However, ‘RD’ can be used in a subdivision if the end result is it will connect to a main road on both ends.

9.8 A type can be spelled out and used in a street name, as long as it is different from the type that is utilized with that street. For instance, you can have a Joe Cove St or Joe Trail Way, but you cannot have Joe Cove Cv, or Joe Trail Trl. As another example, the road Trailing Oaks Trl would not be allowed, but Trailing Oaks Way would be allowed.

10. Miscellaneous

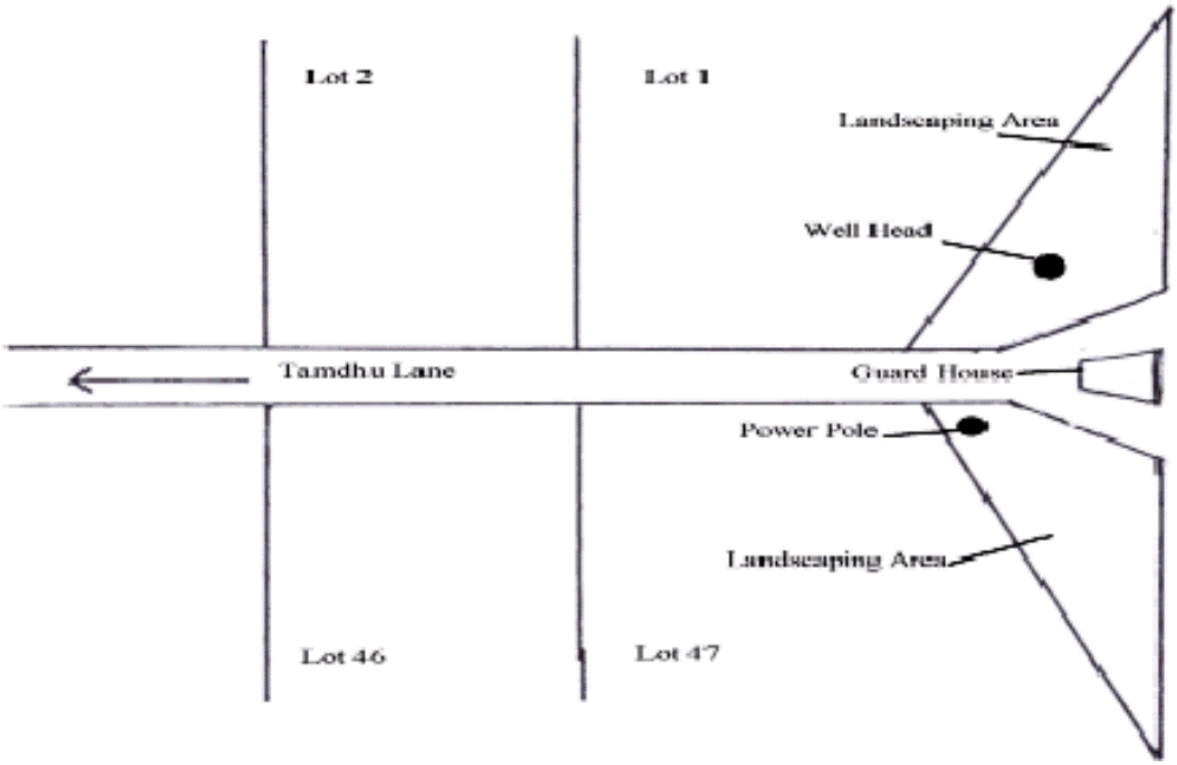
10.1 Addresses at the entrance to subdivisions (Guard Houses, power poles for lighting, well heads, etc.) will be addressed as follows (See Figure 10.1 on the following page):

1. If the address is needed at a point in the right of way of the street it will assume an odd number (for example, the Guard house) based upon its distance from the intersection of the 2 centerlines.
2. If the address is needed to the side of the right of way (for example the Lighting for a Subdivision Entrance sign) it shall assume an address appropriate to the side of the road and distance from the intersection.
3. Should there be a need for 2 odd addresses, the one in the right of way shall have the lowest assigned address.

Figure 10.1

(In this case the guard house address would be 11 Tamdhu Lane, the well head address would

be 16 Tamdhu Lane and the power pole address would be 15 Tamdhu Lane. Letter suffixes (such as _____A and _____B would be acceptable for the well head and power pole.)



10.2 Zip codes will not be changed by these addressing procedures. If a zip code boundary is present in the subdivision, houses on either side of the boundary will assume the zip code that was present at that location immediately prior to the subdivision being proposed.

10.3 Community names: Assign Community names, which are vital in geocoding procedures for 911 and various other applications, based on the Postal Service scheme.

11. Departmental Task

11.1 GIS Department Task

1. Maintain centerline of all roads in the county and towns.
2. Digitize new road centerlines from orthophotos.
3. Join a roadname to each new segment using E911 database, also to adjust or correct range values and road segment directions based on the E911 data.

11.2 Addressing Coordinator Task

1. Generate new addresses within the county's zoning jurisdiction and ETJ of each town.
2. Provide assistance to the town staff that assigns addresses.
3. Enter town addresses into the E911 database as received from the town.
4. Approve all road names for the entire county
5. Enter address ranges assigned to new streets into the E911 database
6. Provide assistance to citizens naming a p private road or path.
7. Assist citizens with addressing errors or changes.

11.3 E911 Department Tasks

1. Assign emergency responders to each new address assigned by the Addressing

Coordinator.
2. Enter responder information into several databases then forward to Sprint and responder unit.
3. Forward the new road information to the appropriate person in GIS so it can be added to the centerline file.

Johnston County Policy for Addressing Existing Main Roads Using Increments and Proportional Distance

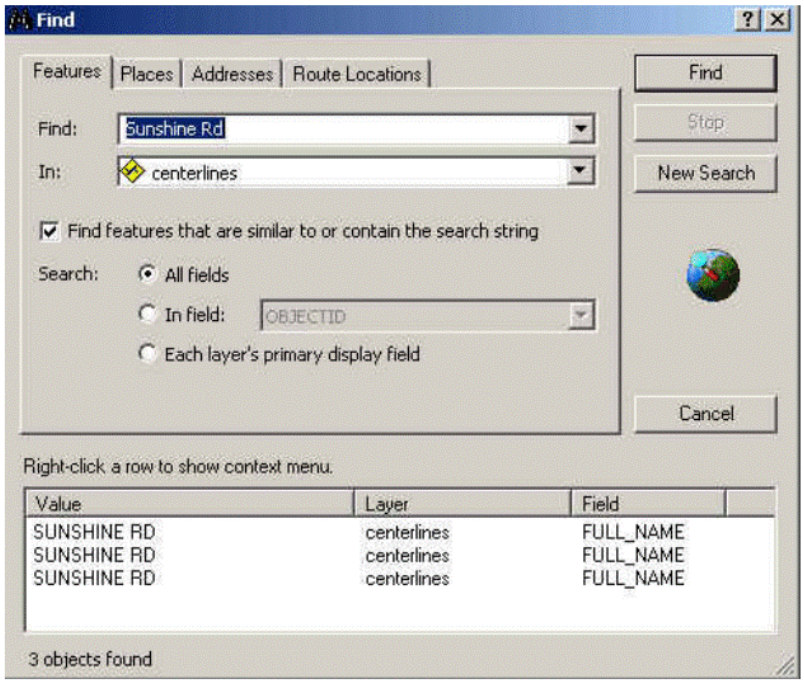
Purpose: In order to standardize address and parcel number assignment within the Jurisdiction of Johnston County Government, these documents have been created for the benefit and use of those employees charged with the tasks.

1. General Procedures

1.1 From the beginning point of the road (street, path, etc.), addresses will be assigned as odd numbers to the left and even numbers to the right, based upon the midpoint of the lot.

1.2 GIS Procedure

1. Open the ArcMap project. Turn on the orthophotos if necessary.
2. Find the lot in question. Scale from the GIS map to a known point in order to correlate a survey map and the GIS map so that you have a starting point for the GIS addressing function.
    A. Using GIS: You may have to use a combination of information to find the general location of the lot in question in GIS. Items that are useful are ponds, NCGS monuments, tree lines (if they are still there), names of adjoining property owners, NCPIN numbers or Parcel numbers that surveyors put on their maps, distances to intersections, etc. You can use the binoculars  button in ArcMap to locate a parcel by it's parcel ID, to locate a centerline by it's name, etc. To use this feature, in the 'Find' box that is triggered by the binoculars button, put in the attribute you wish to find (ex. Sunshine Rd), and in the 'In' box select the correct shapefile from the drop down list.

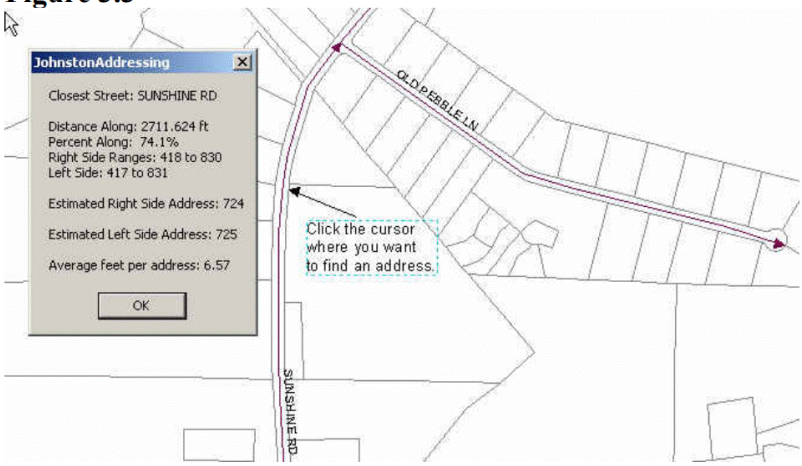


Right click on the correct feature that returns on the bottom of the box and select 'Zoom to' to have the map center on that feature. If you see many of the same features as in the example above, that is because there are a few segments that are named the same thing. Sunshine Rd is comprised of 3 segments. Simply pick one for zooming to and then pan to the correct area.

B. Using Information from the Person: Ask the person questions in order to determine the location of the lot in question on the GIS orthophoto.

3. In GIS, perform the following:
    A. Click the Estimate Address button located on the button bar at the top.
    B. Next, you will determine the potential address of the lot in question and the location of even-numbered and odd-numbered addresses:
        1. Estimate the midpoint of the lot in question and click the centerline of the road at that midpoint.
        2. A box titled JohnstonAddressing pops up with a potential right-hand side and left hand side address.
        3. This is your potential GIS address: In figure 3.3 below, the right side address is 724 Sunshine Road and the left address is 725 Sunshine Road. To figure out where the right side of the road is versus the left, look for the direction of the centerline based on where the arrow head faces. This, in conjunction with the right and left address ranges will determine if your address should be even or odd.

Figure 3.3



C. Next, you will determine whether the GIS address is reasonable.

1. Use the  button to find the addresses of people who live on the lots near the lot in question. Click on this button and then, generally, click on small lots. Big lots might be farms with owners who live on distant roads or developers who don't live in the area. GIS will return the address where the tax bill is sent and not where the lot is located. Another option for determining physical address is to use the MapClick (http://mapclick) application. This will return a physical address for a parcel if it is available. If the addresses you find are in keeping with the address GIS calculated, you'll now want to check for consistency with the following:
    A. Make sure assigned addresses above the lot in question have higher address numbers than the calculated address for the lot in question. For example, 775 Sunshine Road is has a higher address than 724 Sunshine Road.
    B. Make sure assigned addresses below the lot in question have lower address numbers than the calculated address for the lot in question. For example, 651 Sunshine Road has a lower address than 724 Sunshine Road.
    C. If the address is consistent, assign the address GIS calculated (724 Sunshine Road); but, if the address is not consistent, continue with the non-GIS-based Increment and Proportional Distance procedure below.

1.3 Non-GIS Procedure

1. Open the 911 database.
2. Click on the Address button located in the middle of the bottom row (you'll need to wait about 30 seconds when you first open the application).

3. Search for existing addresses using any field (usually use Road Name)
    A. Click on the Query button located on the left-hand side of the bottom row.
    B. Enter Information in any field (for example, type “Buffalo” in the Road Name Box (See Figure 1B, following page).
    C. Click on the Execute button and the program returns all the addresses for Buffalo Road. Figure 1C

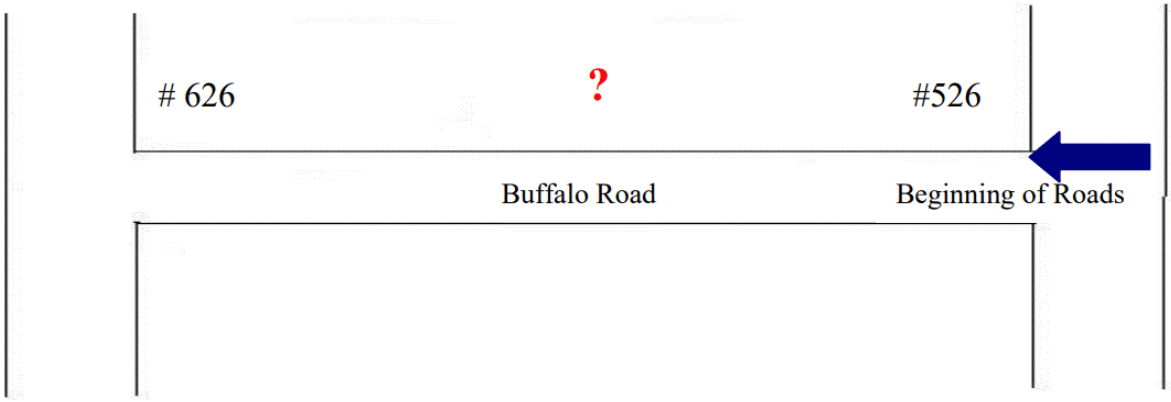
2. For Locations on Main Roads and Not On Existing Paths

2.1 Obtain the following information from the person:

1. Obtain the nearest address PRIOR to the lot in question (this will be the smaller house # compared to step 2 below.
2. Obtain the nearest address AFTER the lot in question (this will be the larger house # compared to step 1 above.
3. With respect to the lot in question, find out how close it is proportionately to the addressed lots on either side.
4. Obtain the address across from the lot in question
5. Assign the address of the lot in question according to its proportional distance from existing addresses taking into account the addresses of lots across form the lot in question.

Example 1: Using Proportional Distances

1. For the lot in question, marked “?” below, calculate the proportional distance from the addressed lots 526 prior to the lot in question and lot 626 after the lot in question.



2. Since the lot in question is half way between lots 526 and 626, the address for the lot in question would be 576 Buffalo Road

    (526 + [(626-526)/2]) or (526 + 50)

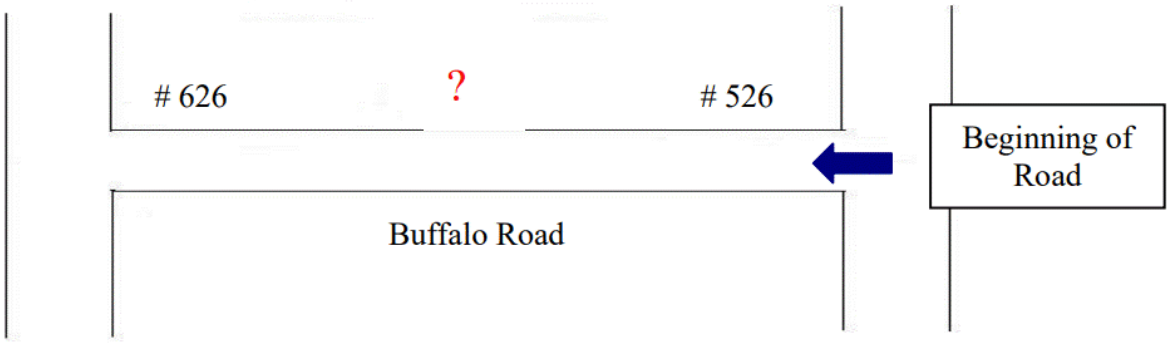
    If the lot in question were 1/3 of the way between the two lots, but closer to 526, the new address would be 550 Buffalo Road (526 + [(626-526)/3]). Be sure to round numbers (like the fraction [526 + (626-526)/3]) up to the next available even number if the lot in question is on the right side of the road and round up to the next odd available odd number if the lot in question is on the left side of the road.

Example 2: Using Proportional Distances And Taking Into Account Addresses Across the Street

1. Since the lot in question, marked “?” below, is half way between lots 526 and 626, the

address for the lot in question should be 576 Buffalo Road.

However, lot #575 across the road prevents #576 from being used and the address needs to be the next closest even number smaller than #575, so the address would be 574 Buffalo Road.



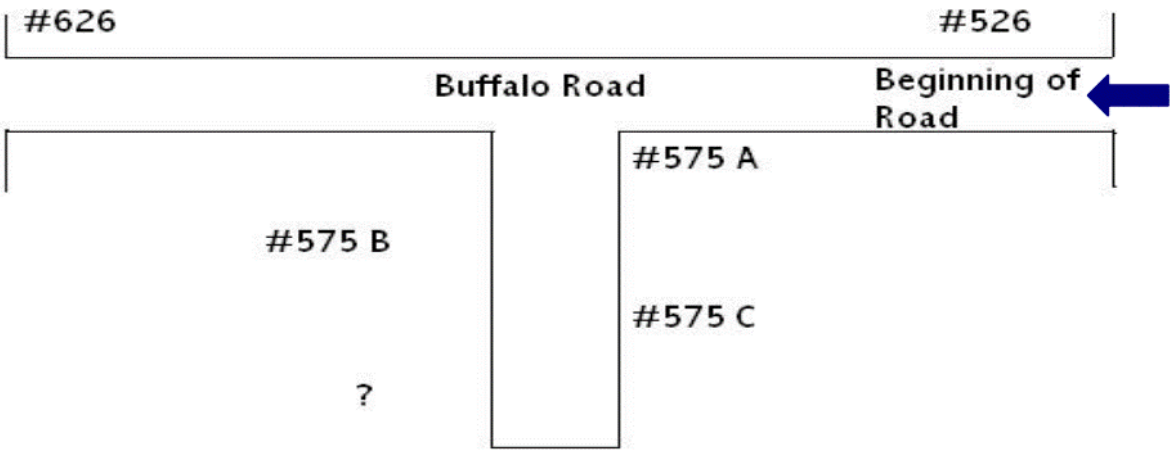
3. For Locations on Existing Paths

1.1 Obtain the following information from the person:

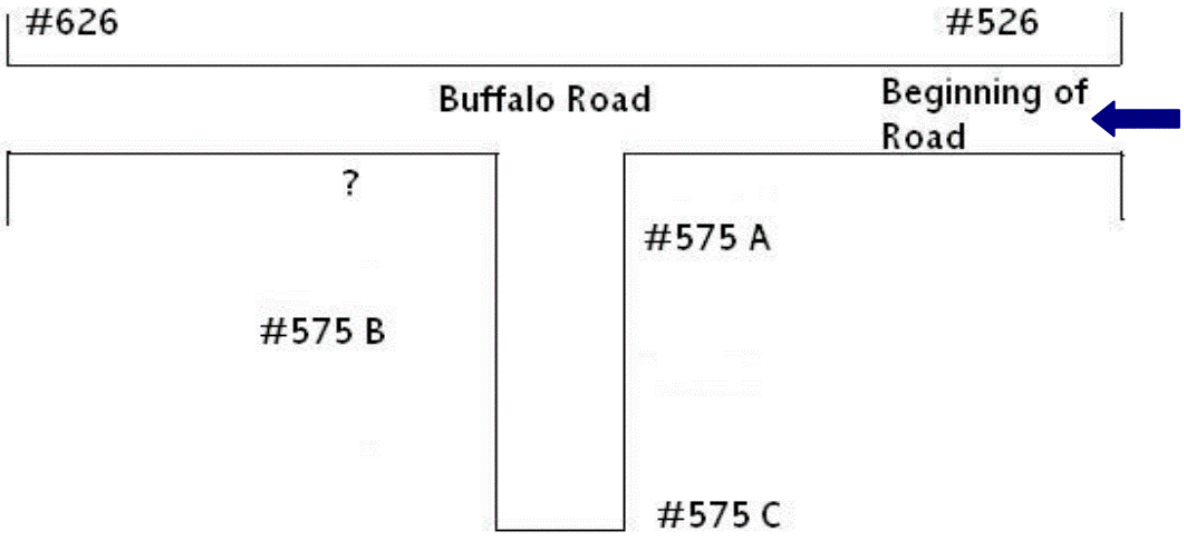
1. Obtain the nearest address PRIOR to the lot in question (this will be the smaller house # compared to step 2 below.
2. Obtain the nearest address AFTER the lot in question (this will be the larger house # compared to step 1 above.
3. With respect to the lot in question, find out how close it is proportionately to the addressed lots on either side.
4. Obtain the address across from the lot in question
5. Assign the address of the lot in question according to its proportional distance from existing addresses taking into account the addresses of lots across form the lot in question.

Example 1: Paths Using Lettering System

1. Since the path currently uses a lettering system, then the lot in question, marked “?” below, has to follow suit and the address would be 575 D Buffalo Road.

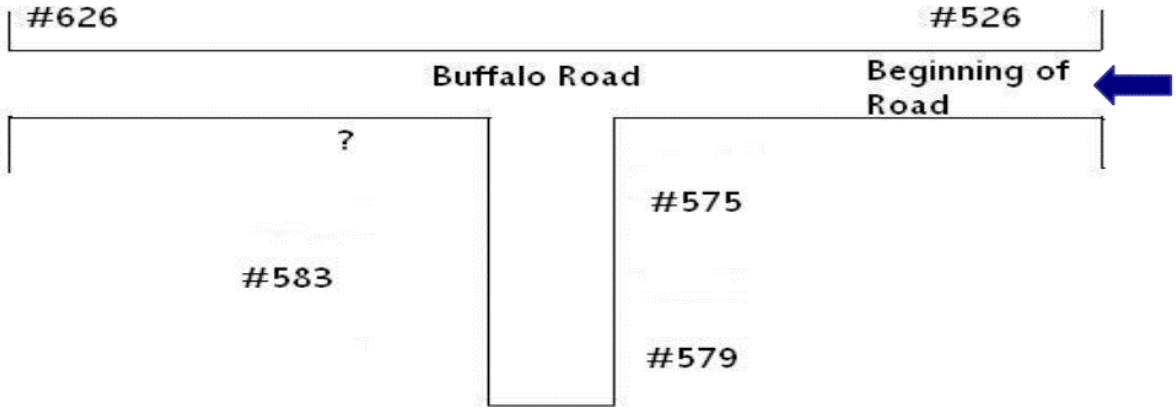


(Even the lot in question below, which was added last but closest to the main road, would still be addresses as 575 D Buffalo Road).



Example 2: Paths Using Main Road Numbers

1. Created and Previously-Created Lots: If a lot is created along a path, the owner is required to pay for the grading or paving of the path so that it can become a named road, which would then require that each house be readdressed. Because of the expense involved, this is a rare occurrence. Previously-created lots does not require that the path be reworked and should be addressed according to the following:
2. It is important to address the path with the lots closest to the starting point having the lowest numbers.
3. Also, if the path is on the side of the road needing odd numbers, all the addresses on the path need odd numbers. So the address of the lot in question would be 587 Buffalo Road*



(When making decisions about what numbers to use, make sure that there are enough road front numbers “available” to use on the path. If there are very few numbers available, address the above as #581, #579, #577, and #575 Buffalo Road).

Johnston County Policy for Addressing Extensions of a Previously-Addressed

Street in a Subdivision Using a Hybrid Addressing System

Purpose: In order to standardize address and parcel number assignment within the Jurisdiction of Johnston County Government, these documents have been created for the benefit and use of those employees charged with the tasks.

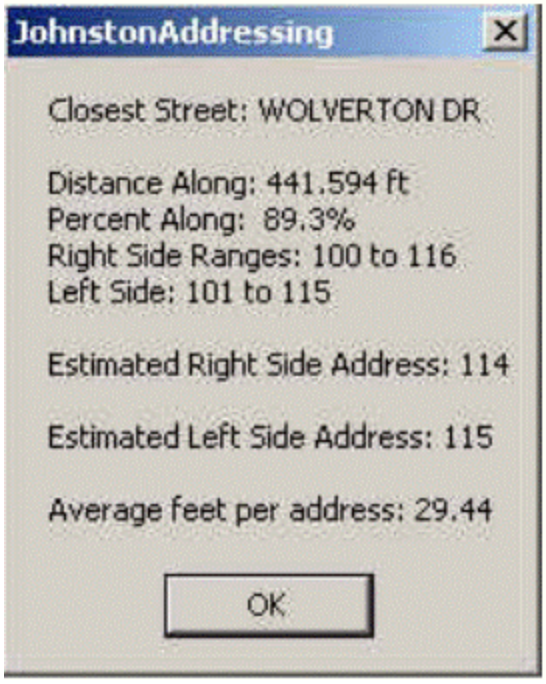
1. General Procedures

1.1 Addressing an extension of a subdivision road, which was not previouslyaddressed by distance presents an awkward situation in that addressing the extension by distance could badly skew the addresses (potentially leaving a distance-based address of 350 Christopher Drive next to and incrementalbased address of 144 Christopher Drive). This large gap could cause problems for Emergency Services as they search for the lot. Johnston County will assign addresses based upon a hybrid addressing system that includes elements of addressing by distance and addressing by increments.

1.2 From the beginning point of the road (street, path, etc.), addresses will be assigned as odd numbers to the left and even numbers to the right, based upon the midpoint of the lot.

1.3 Use the following procedure to assign addresses:

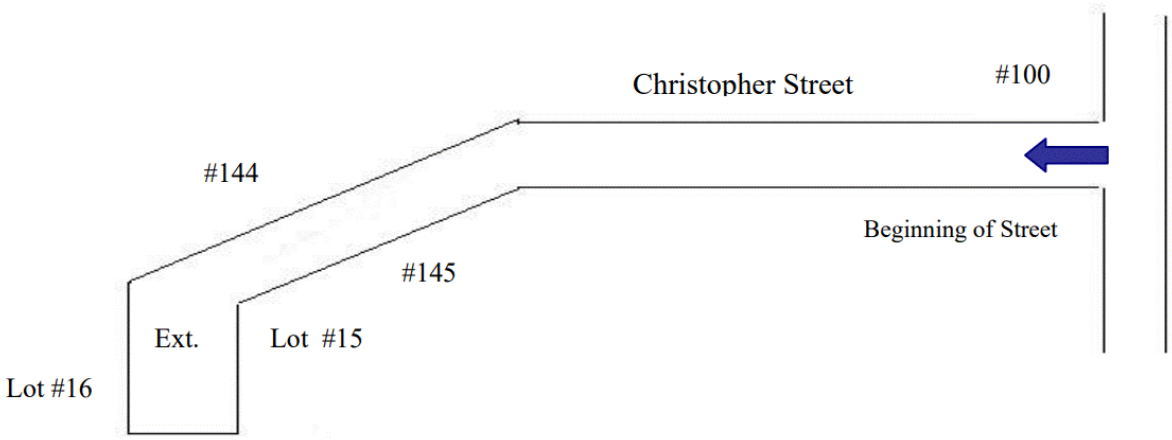
1. Find the street in GIS using the earlier instructions.
2. In ArcMap click on the ‘Estimate Address’ button. Click on the road. At the bottom of the resulting window, you will see ‘Average feet per address’.



3. This GIS interval is calculated by dividing the length of the road segment by the number of existing addresses. For example, , Christopher Road, which was originally addressed purely in increments of 4, has a high address of 148 and a low address of 100 and a total length of 1721 feet (from the beginning of the street to the point where the new extension starts (marked Ext. in Figure 1.3). The GIS interval is 1721/(148-100) = 39.1.
4. Measure from the midpoint of the last odd address that exists on the segment of the street to the midpoint of the lot(s) in question that you are addressing. For example, from the last odd lot (#145 below), the distance to the lot on the right (Lot # 16) is 278 feet

and the distance to the lot on the left is (Lot #15) is 178 feet.

Figure 1.3



1.4 Divide the distance to the lot in question by the GIS interval from step 2 (39.1) and then round UP to the nearest odd or even number, depending on which you need according to the procedure below.

A. For the lefthand side lot in question (Lot #15), 278/39.1 = 7.1 and the lot will need an even-numbered address. Because you will be adding some number to 145 to obtain the address and because ODD + ODD = EVEN, round 7.1 UP to the next odd number, which is 9, and add it to 145 to yield: 154 Christopher Street.
B. For the righthand side lot in question (Lot #16), 178/39.1 = 4.5 and the lot will need an odd-numbered address. Because you will be adding some number to 145 to obtain the address and because ODD + EVEN = ODD, round 4.5 UP to the next even number, which is 6, and add it to 145 to yield: 151 Christopher Street.
C. Assign addresses for intersections using even numbers for centerlines to the right or for 4-way intersections and odd numbers for centerlines to the left.

1.5 Continue in this fashion until you get to the next intersection, either half ‘T’ intersections or full 4-way intersections. At this point, you will be at a new GIS section and can begin addressing strictly by distance as outlined in Johnston County Policy for Addressing New Subdivision Lots Using Distances.

Page last updated on: May 19, 2026