# Preconstruction Packet Cover Sheet

This preconstruction packet contains information for single family subdivision and commercial projects. This cover sheet shows you the pages which pertain to the particular project you are starting. Please see the page numbers on the right, so that you can access the appropriate information.

## Single Family Subdivision

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## Commercial

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Important Information for your Project

Attached you will find the City of Charlotte Pre-Construction Information Packet. Because of Project individuality, some of this information may not pertain to your current Construction Project. However, it is important that you familiarize yourself with this information for future reference.

You are required to have the City of Charlotte Approved Plans (Green Stamp) on site at all times. Mecklenburg County Building Standards Approved plans have a red stamp.

In addition, your Approved Site Plan may not contain all appropriate Details. The Charlotte Land Development Standards can be found online at: http://charlottenc.gov/cldsm

Additional Information may be found at...

City of Charlotte Land Development Services
http://charlottenc.gov/id

CDOT Work Area Traffic Control Handbook (WATCH)

CDOT Right Way Use Permits (Lane Closures, Sidewalk Closures, and Street Closures)
http://charmeck.org/city/charlotte/Transportation/ROWUse/Pages/ROW%20Use%20Permit.aspx
Closures and Right of Way Use Permits (closures lasting less than 30 days)
Bob Staley, 704-432-1562
Right of Way Lease Agreements (closures lasting more than 30 days)
Linda Poissant, 704-336-2562

CDOT Street Cut Permits
http://charmeck.org/city/charlotte/Transportation/divisionsandcontacts/Pages/streetmaintenance.aspx
Jeremy Hill, 704-432-2295

CDOT Right of Way Encroachment Agreements for non-standard items within the Right of Way
http://charmeck.org/city/charlotte/Transportation/ROWUse/Pages/ROW%20Encroachment%20Agreements.aspx
Linda Poissant, 704-336-2562

NCDOT Roadway Standard Drawings
https://connect.ncdot.gov/resources/Specifications/Pages/2012-Roadway-Drawings.aspx


NCDOT Division 10 District 2 Office
980-523-0000

Please forward this information to all applicable people involved with this project.
1. Grading (any Land Disturbing Activity): Grading or land disturbing activity is any type of activity that results in a change in the ground cover or topography and that may cause or contribute to sedimentation. Cutting, clearing, and stumping trees are considered disturbing activities. Land disturbing activity includes harvesting timber when conducted for any purpose other than tree farming where trees will be replaced with trees.

2. Grading Limits: Grading beyond the limits shown on the City of Charlotte approved plan constitutes a violation of up to $5,000 for grading without a grading permit. All right of ways and sewer easements must be included in the grading limits.

3. Erosion Control Measures: All erosion control measures shall be in-place as per the approved plan or as discussed in the pre-construction meeting prior to beginning grading activity. When installing the approved erosion control measures, disturbances are allowed only as necessary for installation. All silt fence is to be installed prior to basin installation. All measures must be maintained and able to pass the ten-year storm event (4.86” in 24 Hours).

4. Sediment Basin Removal: Prior to basin removal authorization must first be obtained from the appropriate Grading and Erosion Control Inspector.

5. Permanent Stabilization: Erosion control measures are to remain in place until all disturbed surfaces are stabilized. Stabilization includes stone, seed and mulch (measures should remain in until grass or other vegetative cover comes up) as well as areas covered by building and asphalt parking. Pit (pea) gravel is not considered stabilization. Grading permits will not be considered closed until such time as a permanent non-erosive ground cover has been established for 6 months. All requirements must be followed until this constraint has been satisfied.

6. Temporary Stabilization:
   - All perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3:1 shall be provided with temporary or permanent ground cover within 7 calendar days from the last land disturbing activity.
   - All other disturbed areas 3:1 or flatter shall be provided with temporary or permanent ground cover with 14 calendar days from the last land disturbing activity.

7. Log Books: All sites issued a grading permit (all sites 1 acre or greater) require that a log book be kept either on site of at a location readily accessible to your inspectors. Log books are to document a weekly inspection of all erosion and sediment control measures and their performance. Log books must also document an inspection of all erosion and sediment control measures after any rainfall event totaling ½” or more. Log books should document all measures individually and have a brief description of their condition and/or performance. Deficiencies and maintenance activities must be documented. All outfalls should be inspected after a rainfall even for quality of discharge and visible impacts. Any
receiving waters or adjacent lands should be inspected after rainfall for signs of visible sedimentation and noted in the inspection report. In addition to log books, all sites must maintain the following wither onsite or at a location readily approved plans with original stamps, a rain gauge, and a site contact list. The inspector may also require that the log books be emailed weekly to ensure compliance with monitoring requirements.

8. **Competent Inspector:** Any individual conducting erosion and sediment control inspections as required by the ordinance must be qualified to conduct a thorough inspection. Charlotte/Mecklenburg County offers training known as the “Charlotte-Mecklenburg Certified Site Inspector” (CMCSI) which provides a two-year certification for maximum competency. In addition to CMCSI, the City also recognizes the following certifications and professionals as qualified individuals: Professional Engineers (PE), Landscape Architects (LA), Certified Professional in Erosion and Sediment Control (CPESC), and Certified Erosion, Sediment and Storm Water Inspector (CESSWI). For consideration of other training or competency please contact your individual inspector.

9. **Contractors:** In addition to the financially responsible party, any contractor responsible for violations of the Ordinance may be cited and penalized.

10. **Financially Responsible Party:** When a development or lots are sold to a third party, a new financial responsibility form must be submitted electronically to Jay Wilson (Water Quality Administrator) at jpwilson@charlottenc.gov. Failure to submit revised financial responsibility forms does not release the FRP of record from culpability.

12. **Impacts to Surface Waters:**
   - It is recommended that an onsite preconstruction meeting take place at least 24 hours prior to any creek crossing (roads, utilities, bridges, etc.)
   - Violations resulting in offsite sedimentation of a water body or wetland will be subject to an immediate civil penalty.
This map is subject to change. For the most up-to-date version, please refer to http://vc.charmeck.org. Expand the layer group "+Engineering-Survey" and choose layer "Engineering Land Development Inspectors."
Directions for Accessing Inspection Reports on Accela Citizen Access

Your Land Development Permit Number is: ________________________

1. The url for Citizen Access is:  http://aca.accela.com/charlotte/

2. Click the tab titled “Land Development”

3. Scroll down until you see a grey box titled “General Search”. Enter your Project Number, Name or Tax Parcel Number/Address. You must enter Project Number with dashes and no spaces (INSPECTION-2014-00010). Construction and UF Inspection will be under the INSPECTION number

4. Now Click “Search”. If you entered your permit number correctly, a single record should appear at the bottom of the page. If you put in the Project Name there will be several records on the list.
5. Click the record number, either Grading or Inspections, to bring up records associated with the project. Scroll down until you see Inspections. There should be a list of all the inspections done for the project.
Home Builder’s Guidelines for Inspections

Prior to construction of houses, schedule a meeting with your Construction Site Inspector, Erosion Control Coordinator and Urban Forster/Zoning Inspector:
- The Home Builder’s Superintendent/Project Manager and the Subdivision’s Developer must be present at this meeting.
- At the meeting, each Inspector will discuss what will be inspected per building lot and identify who (Builder and/or Developer) is responsible for these requirements.

When ALL requirements are met, enter online at (http://charlottenc.gov/ld) for the Hold Release inspection:

General:
- Builder is responsible for a concrete wash out area surrounded with silt fence and marked as concrete wash out.
- Emergency vehicles must have proper access at ALL times. Parking is allowed ONLY on one side of the street.
- Stop signs and street name with block number signs are installed.
- No trailers, dumpsters or any other nonconformance items allowed in right-of-way.

Final Lot Inspection – see http://charlottenc.gov/eldsm for city standards

Sidewalk:
- All sidewalk cross-slope is 1.5% (2% Max); sidewalks are backfilled and graded for safe use.
- Concrete in City ROW is minimum 3,600 PSI
- Sidewalk depth at driveway is 6” with expansion joints at each side.
- Driveway Apron does not exceed 1 ¼” per foot at driveway; grassed area per discretion of site inspector.
- Curb ramps have detectable warning surface with truncated domes installed in ramp per City standard.
- No silt fence, construction equipment/ materials, dumpsters in ROW at any time.

Curb and Gutter/Asphalt:
- All damaged curb and gutter and asphalt, including in driveway areas, must be replaced prior to Hold Release, on City Maintained Streets.

Grading/Drainage:
- Builder is responsible to follow drainage area per approved plan.
- A copy of the approved grading and drainage area plan must be on site at all times.
- Any work in the ROW will require contacting Land Development before starting.
- All silt fence/tree protection must be removed and area stabilized or seed and straw.

Driveway, Frame, and Grates:
- No frame and grates or accessible ramps allowed in driveway. If conflict arises, call your site inspector.
- See City std. 10.25A, 10.25C and 10.27A for residential driveway details.

Zoning/Tree Save:
- All zoning buffers adjacent to lot need to be planted as per approved plan.
- All tree save areas adjacent to lot need to be left undisturbed as per approved plan.
- Ordinance tree – plant every 40’or per approved plan. See City Std. 40.01.
- Ensure tags are on trees for species identification.

Inspection Requests: (http://charlottenc.gov/ld)
- Fill out the online form: Subdivision Single Family City Engineering Hold Release Request
- Please allow up to three to five (3-5) business days, starting next day, for the inspection/release.
INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project #</th>
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<tbody>
<tr>
<td>Financially Responsible Party (Permittee)</td>
<td>County</td>
</tr>
<tr>
<td>Name of Inspector</td>
<td>Company</td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Phone Number</td>
<td>Email Address</td>
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</tbody>
</table>

PART 1A: Rainfall Data.

<table>
<thead>
<tr>
<th>Day / Date</th>
<th>Rain Amt (in)</th>
<th>Initials</th>
<th>Notes: Daily Rainfall Required. Except for Holidays or Weekends. If no rain, indicate with a “zero”</th>
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<td>Sun (Optional)</td>
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PART 1B: Current Phase of Project

<table>
<thead>
<tr>
<th>Phase of Grading (Place a check in the box of the current project phase)</th>
<th>X</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Installation of perimeter erosion and sediment control measures</td>
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<tr>
<td>Clearing and grubbing of existing ground cover</td>
<td></td>
<td></td>
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<tr>
<td>Completion of any phase of grading of slopes or fills</td>
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<td></td>
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<tr>
<td>Installation of storm drainage facilities</td>
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<td></td>
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<tr>
<td>Completion of construction and development and all land-disturbing activity</td>
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<td>Permanent ground cover sufficient to restrain erosion has been established</td>
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PART 1C: Signatures

By this signature, I certify in accordance with the NCG010000 permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge.

Landowner or Financially Responsible Party (Permittee) or Agent (Designee) Date

GROUND STABILIZATION TIMEFRAMES

<table>
<thead>
<tr>
<th>Site Area Description</th>
<th>Stabilization</th>
<th>Timeframe Exceptions</th>
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<tr>
<td>Perimeter dikes, swales and slopes</td>
<td>7 Days</td>
<td>None</td>
</tr>
<tr>
<td>High Quality Water (HQW) Zones</td>
<td>7 Days</td>
<td>None</td>
</tr>
<tr>
<td>Slopes Steeper than 3:1</td>
<td>7 Days</td>
<td>If slopes are 10’ or less in length and are not steeper than 2:1, 14 days are allowed</td>
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<tr>
<td>Slopes 4:1 or flatter</td>
<td>14 Days</td>
<td>7 days for slopes greater than 50’ in length</td>
</tr>
<tr>
<td>All other areas with slopes flatter than 4:1</td>
<td>14 Days</td>
<td>None, except for perimeters and HQW Zones</td>
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**PART 2A: EROSION AND SEDIMENTATION CONTROL MEASURES:** Measures must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD.

<table>
<thead>
<tr>
<th>Name/Number/Location of Measure</th>
<th>Operating Properly? (Y/N)</th>
<th>Any Repair or Maintenance Needed? (Y/N)</th>
<th>New Measures Installed *</th>
<th>Inspection Date</th>
<th>Describe Actions Needed</th>
<th>Corrected Date</th>
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<td>Corrective actions should be performed as soon as possible and before the next storm event</td>
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*New erosion and sedimentation control measures installed since the last inspection should be documented here or by initialing and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan.

**PART 2B: STORMWATER DISCHARGE OUTFALLS (SDOs):** SDOs must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD.

<table>
<thead>
<tr>
<th>Stormwater Discharge Outfall ID or Location</th>
<th>Any Visible Sedimentation in Streams, Wetlands or Outside Site Limits? (Y/N)</th>
<th>Any Increase in Stream Turbidity from Discharge? (Y/N)</th>
<th>Any Visible Erosion below SDO? (Y/N)</th>
<th>Any visible oil sheen, floating or suspended solids or discoloration? (Y/N)</th>
<th>Inspection Date</th>
<th>Report Visible Sedimentation to streams or wetlands to DWQ within 24 Hours <a href="http://portal.ncdenr.org/web/wq/">http://portal.ncdenr.org/web/wq/</a> Describe Actions Needed</th>
<th>Corrected Date</th>
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<td>Corrective actions should be performed as soon as possible and before the next storm event</td>
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**PART 2C: GROUND STABILIZATION** Must be recorded after each Phase of Grading

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<thead>
<tr>
<th>Area Where Temporary or Permanent Ground Cover is Required</th>
<th>Date Land-Disturbance Stopped or Completed</th>
<th>Time Limit for Ground Cover 7 days or 14 days</th>
<th>Is Ground Cover Sufficient to Restrain Erosion? (Y/N)</th>
<th>Inspection Date</th>
<th>Describe Actions Needed</th>
<th>Corrected Date</th>
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City of Charlotte Land Development Services
Certificate of Occupancy Checklist

Project Name: ____________________________ Date: _______________________

Building and site must be ready for SAFE USE.
City does NOT issue any TCO's. ALL work is to be COMPLETE per approved plan.

☐ Building Number/Address – Must have address so it can be read from street. Can be temporary numbers.

☐ Grading/Drainage Complete – Site should drain according to the approved grading and drainage plan. Stabilize per plan.

☐ BMP/Detention As-builts - Pond is to be completely constructed per approved plan. As-builts are required for all BMP/Detention facilities, for the last CO, and must be approved by City Engineering. Visit the As-built Surveys page for more information. http://charlottenc.gov/ld/Pages/As-builtSurveys.aspx

☐ Natural Area and PCO or Detention Easements – matching those shown on approved site development plans. Must be recorded at Mecklenburg County Register of Deeds as required by the Post Construction Ordinance (PCO). http://charlottenc.gov/StormWater/Regulations/Documents/CityPCSO2016.pdf

☐ BMP Operations and Maintenance Agreement - must be recorded at the Mecklenburg County Register of Deeds. See the PCO page, http://charlottenc.gov/StormWater/Regulations/Pages/CharlotteRegulations.aspx for more information, or view a sample O&M agreement in Appendix G1 of the PCSO Admin Manual at http://charlottenc.gov/StormWater/Regulations/Documents/PCSO_2016_ADMINISTRATIVE_MANUAL_revisions_FINAL.PDF

☐ BMP Plantings - All required water quality B.M.P. plant material must be installed per plan or a signed planting delay request issued.

☐ Street Storm Drainage Complete– construct per approved plan and standards. Asbuilts are to be submitted and approved in any City ROW.

☐ Street Sidewalk Complete – Sidewalk must be backfilled and forms removed, per building.

☐ Street Curb and Gutter Complete – Curb must be backfilled and planting strip stabilized. NO silt fence in City ROW.

☐ Interior Sidewalk Complete – Sidewalk must be backfilled and forms removed (or temporary sidewalk for safe access to building including handicap).

☐ Driveway(s) Complete – Driveways to be constructed per driveway permit standard and have safe use (sight triangles, signs, etc.)

☐ Erosion Control measures in Good Condition– If grass is not up. CANNOT HAVE ANY OUTSTANDING NOTICE OF VIOLATIONS OR FINES. Get with erosion and site inspector.

☐ Row Improvements – Need sign off from NCDOT if on State maintained road.

☐ Parking – all spaces are to be defined: striping or wheel stops. Handicap spaces on solid surface with striping and signs in place.
Urban Forestry Items

1. Call Urban Forestry Specialist prior to tree planting. Minimum tree size at planting is 2" caliper and 8' tall for single-stem trees. All multi-stem plants must be tree form, 13. Minimum tree size at planting is 2-inch caliper (for single stem trees). All multi-stem plants must be tree form, maximum 3 to 5 trunks, and minimum 10' tall. Where 3” single-stem caliper trees are specified/required the minimum height shall be 10’ tall, if multi-stem trees are specified then they shall be a minimum of 12’ tall. See CLDS 40.01 and Charlotte Urban Forestry notes on approved landscape plan for detailed tree planting requirements.

2. All new trees must have straight trunks with strong central leaders intact to the top of the crown unless multi-stem trees are specified. All required trees shall be typical of their species and variety, have normal growth habits, have well-developed branches, be vigorous and have fibrous root systems. Trees with co-dominant branching will NOT be accepted. Trees that have been sheared, topped or cut back to multiply the branching structure will NOT be accepted. Trees shall be free of abrasions, damage, disease, pests and cracks. All pruning cuts greater than ½ inch diameter shall have callus tissue formed prior to planting. No pruning cut on the trunk shall be more than one-half the diameter of the central leader at the height where the cut was made. Root flares shall be located at grade. Trees with more than 2” of soil covering the root ball/flare from will NOT be accepted (CLDS.40.09).

3. All required trees of a particular species and variety shall be uniform in size and configuration.

4. For new planting areas, remove all pavement, gravel sub-base and construction debris; remove compacted soil and add 24” new topsoil, or till and amend the top 24” of existing soil to meet topsoil/planting mix standards for trees (within entire minimum area of 274 square feet per large mature tree and 200 square feet per small mature tree).

5. Large maturing trees may not be planted within 25’ of overhead power distribution or transmission lines. If trees conflict with power lines or signs, call Urban Forester to resolve BEFORE planting.

6. Adjust tree planting locations to avoid underground utilities. Plant 15' from all underground utilities.

7. No light poles, utility poles or transformers can be installed in tree islands.

8. Commercial scale lighting (> 15' in height) must be a minimum distance of 30’ from a tree. Pedestrian scale lighting (≤ 15’ in height) must be a minimum distance of 15’ from a tree. Show site lighting on landscape plan.

9. Tree protection must be installed and verified by Urban Forestry prior to starting ANY construction activity.

10. Commercial tree save areas must be recorded on a final plat with the Mecklenburg County Register of Deeds before Urban Forestry holds can be released. A 10’ no build zone around tree save areas must be referenced on the plat.

11. Any alterations to tree save areas must be accomplished without mechanized equipment.

All commercial zoning requirements must be in place including but not limited to, bicycle parking, car parking striped, screening and buffer planting, sidewalk(s) to all public street frontage, dumpster enclosures, and back flow preventer assembly placed outside of the building setback and city maintained right of way.

Note: Please give 4 day minimum notice before need of Certificate of Occupancy. There may be other site conditions that will need to be addressed for the safe use of site. This is for the Engineering Certificate of Occupancy only and does not address any Tree Ordinance issues. Multi-building sites – It is okay to give Certificate of Occupancy if you have another building to place a hold on and the building has safe use. Contact site inspector on this method and what will be required.
Receipt of approved Grading/Subdivision Plans from City Land Development Division, schedule a Pre-construction Meeting on the Land Development’s website, (http://charlottenc.gov/ld). A representative from the Developer, Grading Contractor, and any Subcontractors (as applicable) are to be present. The Erosion Control Coordinator, Construction Site Inspector, Urban Forester/Zoning Inspector will meet with the Developer/Builder prior to ANY home building to review Developer/Builder responsibilities.

PRE-CONSTRUCTION MEETING
• A copy of the Approved Subdivision Plans and the NCDOT encroachment agreement (if applicable) must be available on site during the Pre-construction Meeting and all times during construction.
• Provide handouts including (1) Subdivision Guidelines, (2) Sub-grade, sub-base and paving sequence, (3) Density Report Example, and (4) NCDOT Roadway Petition.

REVIEW INSPECTION PROCESS
• Grading (Density tests should be performed in all roadway fill areas as per the Standards Manual)
  o Drainage areas
  o Slopes no greater than 2:1 unless per approved plan
• Traffic control per Work Area Traffic Control Handbook (WATCH)
• Storm Drainage (Density test shall be performed on all trenches as directed by Inspector)
  o Pipe and catch basin installation
  o All cracked/damaged pipes are to be replaced not patched in any way
  o Catch basins have to be within a 6” tolerance of alignment on brick face.
  o Existing State ROW - All pre-cast catch basins and RCP pipe need NCDOT stamp. Rose brick is to be used for box construction.
  o City - All pre-cast catch basins need certification from manufacturer. No knock boxes in ROW
• Curb and Gutter
  o Catch basins have to be mudded in and set to grade except for the 4”x4” opening prior to curb transition placement
  o Subgrade to be proofrolled prior to placement
  o Meet minimum 0.5% slope
  o State roads-expansion and controlled joints are to be sealed with approved joint sealer
• Roadway (See Approval for Paving City Streets guideline)
• Sidewalks and Curb Ramps
  o Cross slope 1.5%, not to exceed 2% Max.
  o Driveway Aprons can’t exceed 1 ¼”/ft. Grass area as per discretion of Construction Site Inspector.
  o Ramps are to have approved truncated domes
  o Ramps are not to exceed 12:1 slope
• Culverts and Retaining Walls
  o If headwalls/retaining walls are not pre-approved in subdivision plan or constructed per State standard, a stamped shop drawing is to be submitted to City for approval
  o Set an onsite meeting with City Construction Site Inspector and Erosion Control Coordinator prior to installation
  o All pre-cast headwalls require NCDOT stamp
• Signs
  o Sign is 7’ from ground to bottom of sign
  o Letters are 5” high with a 9” blade, block numbers are also to be posted on sign
  o Private streets off a Public street- attach yellow PVT sign to private street sign
  o Signs are placed behind sidewalk within right of way, encased in concrete or new breakaway posts. STOP signs placed in ROW, need to be placed on an NCDOT approved breakaway post. Std. 950.04

• Roadway Widening/Turn Lanes on State Roads
  o All inspections to be coordinated with NCDOT Inspector.

• Bonds and Plats
  o Plats need to be approved prior to as-built submittals.
  o For plat release need to post Surety Bond or Letter of Credit. Bonds MUST be kept active.
  o For Bond reduction or release need to submit form found in City Land Development Website: http://charlottenc.gov/ld

**CITY STREET ACCEPTANCE**
• Within the City Limits: *If approved subdivision plans require new street standard, then 75% occupancy of homes or 1 year from intermediate course placement is required.*
  • To schedule a final inspection/bond release obtain the form from the Land Development website (http://charlottenc.gov/ld/Documents/Final%20Inspection%20Bond%20Release%20Form.pdf), and submit it to the Bond Administrator. *(NOTE: Storm water as-builds have to be approved BEFORE any final inspections can be scheduled. Design ditches are to be shown on as-builds)*
  • Punch list can be voided after 45 calendar days *(Final inch of pavement will be on punch list.)*
  • Inspector is to be notified of punch list conformance. Make sure a representative is present during the final reinspection to make sure all items are complete

**STATE STREET ACCEPTANCE**
• Streets need to meet 2 homes per 1/10-mile density
• Once density is met, *see attached Roadway Petition Summary for State Street Maintenance*
• Will need a signed off punch list from the City Inspector and NCDOT Inspector

**All ETJ projects and State streets are to follow state standards and specifications (unless subdivisions plans require City of Charlotte’s Standard, including 1 year or 75% occupancy, before surface course may be applied and the streets accepted for maintenance).**
City of Charlotte
Steps to Approval for Paving Streets

Storm Drain and Curb:
1. Call Inspector prior to any pipe installation.
2. Email or text inspector the following Subgrade Compaction Reports: Private Lab Soil Compaction Reports. For random subgrade tests, 1 test at 1 foot above the pipe and every 2 to 3 feet up to the final subgrade elevation for each pipe run in the right of way. All subgrade shall be compacted to 100% of the maximum density obtainable with the Standard Proctor Test to a depth of eight (8) inches, and a density of 95% Standard Proctor for depths greater than eight (8) inches below final subgrade elevation. All tests are performed by the developer at no cost to the City/County. This report should be similar to the City of Charlotte Field Density Report.
3. All Storm Drain may be subject to a camera inspection at the Developers cost.
5. Subgrade should be neat, clean, trimmed, and rolled down.
6. All Catch Basins should be adjusted to support frame and grate to proper slope and grade.
7. After all the above items have been completed, THEN a subgrade proofroll can be scheduled and performed with the inspector. Proofroll weight is 30,000# per single axle or 45,000# per dual axle.
8. Curb and Gutter must be placed within 7 days or before any ½” rain event or another proofroll may be required.

Subgrade Approval:
1. Slab top for all basins and manholes have to be below subgrade.
2. All curb and gutter has been completed and backfilled. Any needed repairs have been made.
3. All catch basins have been bricked in except for minor (approximately 4” x 4”) weep holes.
4. Subgrade has been cut to correct grade (3/8”/ft in roadway and ¼”/ft in cul-de-sac sections).
5. All manholes have to meet proper cross slope/grade.
6. Contractor shall perform a self-proofroll and repair deficiencies BEFORE calling for inspection.
7. Subgrade should be neat, clean, trimmed, and rolled down.
8. Email or text inspector the following Subgrade Compaction Reports: Private Lab Soil Compaction Reports – For random subgrade tests, every 200 ft. (3 minimum) and 2 in cul-de-sac PER STREET or as directed by the inspector. All subgrade shall be compacted to 100% of the maximum density obtainable with the Standard Proctor Test to a depth of eight (8) inches, and a density of 95% Standard Proctor for depths greater than eight (8) inches. All tests are performed by the developer at no cost to the City/County. This report should be similar to the City of Charlotte Field Density Report.
9. New Densities may be required if it has been more than 7 days since the densities were performed or we have had more than a ½” rain event.
10. After all the above items have been completed, THEN a subgrade proofroll can be scheduled and performed with the inspector. Proofroll weight is 30,000# per single axle or 45,000# per dual axle.
11. Stone must be placed within 7 days or before any ½” rain event or another proofroll may be required.
City of Charlotte
Steps to Approval for Paving Streets

Stone Base Approval:
1. After subgrade approval, stone base (all from the same quarry and NCDOT approved) shall be placed and compacted to the correct grade (3/8”/ft in roadway and ¼”/ft in cul-de-sac sections). All edges and manholes are to be trimmed to the proper depth. Remove any loose stone. All manholes covers have to be adjusted to final pavement grade and slope.
2. Email or text inspector the following Stone Base Compaction Report: Private Lab Stone Base Compaction Report – For random stone base tests, every 200 ft. (3 minimum) and 2 in cul-de-sac or as directed by the inspector. The stone base shall be compacted to 100% of the maximum density obtainable with the Modified Proctor Test or 100% with the Standard Proctor Test. When completed, the base course shall be smooth, hard, dense, unyielding and well bonded. This report should be similar to the City of Charlotte Field Density Report.
3. New Densities may be required if it has been more than 7 days since the densities were performed or we have had more than a ½” rain event.
5. After the inspector has received density reports, THEN a stone base proof-roll can be scheduled and performed with the inspector. Proofroll weight is 30,000# per single axle or 45,000# per dual axle. During proofroll, all sanitary sewer manhole covers are to be removed for manhole alignment inspection.
6. After the inspector has approved stone base, then a paving schedule can be coordinated with the inspector.
7. Asphalt must be placed within 7 days or before any ½” rain event or another proof roll may be required.

Paving Requirements:
1. Compaction has to meet NCDOT requirements. The contractor shall perform quality control on asphalt by performing a random density tests every 200 LF, 3 minimum and 2 in cul-de-sac or as directed by the inspector. Superpave mixes are to be compacted 92.0% of the maximum specific gravity (90% for SF9.5A mixes). Fax results the following day to inspector.
2. Weather temperatures: SF9.5A, S9.5B minimum air and road surface – 40 F
   S9.5C, S12.5C minimum air and road surface – 45 F
3. Prior to final lift of asphalt, call inspector for curb and gutter and existing asphalt repair.
# FIELD DENSITY REPORT

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Project Name:</th>
</tr>
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<tbody>
<tr>
<td>Technician Name:</td>
<td>Project Number:</td>
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## Test Results

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<th>% Moisture</th>
<th>% Compaction</th>
<th>Material</th>
<th>Location</th>
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### Comments:

- **Proctor % Comp. Required**
- **Max. Dry Density, PCF**
- **Opt. Moisture Content, %**

<table>
<thead>
<tr>
<th>Proctor % Comp. Required</th>
<th>Max. Dry Density, PCF</th>
<th>Opt. Moisture Content, %</th>
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</thead>
<tbody>
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### Sketch of Testing Locations:
Requirements for Addition of Subdivision Roads to the NCDOT System:

1. The minimum construction standards and other requirements in this manual must be a part of the proposal to be reviewed for approval prior to development in order for a plat to be recorded by the County Register of Deeds.

2. A Petition for Addition (DOT Form SR-1) is required from the developer and/or property owners. (See Pages 33 and 34 of this document.)

3. Developers or property owners must dedicate right-of-way, as indicated in the minimum design and construction criteria section of this manual; free of charge and clear of all encumbrances, including structural storm water control (SSC) devices. (See Page 16 of this document.)

4. Existing utilities may remain within the right-of-way of any subdivision road added to the Secondary Road System provided the location of same meets Division of Highways' approval and the utility owner executes an encroachment agreement on forms furnished by the Division of Highways. Should utility adjustments or relocation to conform to Division of Highways' requirements be required, (See Policy and Procedures for Accommodating Utility on Highway Rights of Way; http://www.ncdot.gov/doh/preconstruct/altern/value/manuals/pap.pdf) they shall be made at no expense to the Division of Highways. As per General Statute 136-102.6, "Utilities are defined as electric power, telephone, television, telegraph, water, sewage, gas, oil, petroleum products, steam, chemicals, drainage, irrigation and similar lines." G. S. 136-102.6 dictates further that "The right of any utility placed or located on a proposed or existing subdivision public road right-of-way shall be subordinate to the road right-of-way, and the utility shall be subject to regulation by the Board of Transportation". NOTE: The developer and/or owners will be required to submit encroachment agreements for all utilities within a subdivision as dictated by G. S. 136-102.6. (See Page 29 of this document for Statute).

5. At least 20 percent of the lots bordering the road must be individually owned.

6. There must be at least two occupied residences for each one-tenth of a mile. A minimum of four occupied homes is required for the addition of roads less than two-tenths of a mile in length. If four occupied homes are not served, it will be treated as a private drive. An exception may be made if the cul-de-sac is fully developed, serves at least four platted lots and has four occupied homes that abut the road. A minimum of two homes must have primary access to the cul-de-sacs. Subdivision Access Roads must provide ingress and egress for at least five occupied residences for roads less than one mile in length and an average of five occupied residences per mile for roads over one mile in length.

7. The number of platted lots on each road will be reviewed to ensure that the minimum occupied housing requirements in this manual are served.

8. Connecting roads with less than the required occupied homes for the length involved may be reviewed as to traffic usage for addition purposes. Traffic usage equivalent to the traffic that would be generated by the correct number of occupied homes will be acceptable.

9. Any subdivision road with a right-of-way dedicated, recorded, or that has preliminary approval from a county planning board dated after September 30, 1975, will not be added to the State System unless the road is built to the minimum construction standards of the Division of Highways for subdivision roads.

10. Erosion and Sedimentation - All subdivision roads shall have an acceptable permanent vegetative cover established and other acceptable permanent erosion control measures installed in accordance with Division of Highways' specifications, prior to addition to the State maintained system.
11. Subdivision roads shall meet the minimum design and construction criteria contained herein prior to addition to the State system and shall be in an acceptable state of maintenance prior to addition to the State maintained road system.

12. All pipe culverts, storm sewers and appurtenances shall be free of all debris and silt build-up and shall be structurally and hydraulically sound, and functioning in a normal manner. All drainage structures shall be of sufficient length to accommodate appropriate roadway side slopes, as defined in the minimum construction standards in this manual, with standard height headwalls. Extended height headwalls intended to reduce drainage structure length or to reduce right of way requirements are not acceptable. All drainage ditches shall be of such a width and depth and with such a slope as to carry the anticipated discharges. Paved ditches or Rip Rap shall be required where necessary.

13. Where extenuating circumstances exist, the Division Engineer has the authority to allow deviations from this manual which are reasonable, and limited only to safety, environmental and maintenance factors. No deviation will be allowed from the typical section requirements except by written approval from the Chief Engineer-Operations.

14. Within a Municipal Extra Territorial Jurisdiction or within Counties having local ordinances affecting subdivisions, the more restrictive ordinance shall apply if maintenance responsibilities by the NCDOT are not increased beyond normal maintenance by applying the construction standards of this document.


16. For the Policy on Roadway Bridges and Dams, see Page 17.

17. Roads being considered for addition must be clear of highway obstructions as defined in NCAC 2E.0404. (See Page 32.)

18. The Division of Highways will consider the addition of streets that serve developments with large lots or parcels that are of the size that the occupied housing requirement of two homes per tenth of a mile cannot be met. The number of occupied homes needed shall be a judgment factor based upon the length and the number of lots or parcels involved. The minimum requirement shall be four occupied homes.
North Carolina Department of Transportation
Division of Highways
Petition for Road Addition

ROADWAY INFORMATION: (Please Print/Type)

County: __________________ Road Name: ____________________________

(Please list additional street names and lengths on the back of this form.)

Subdivision Name: __________________ Length (miles): __________________

Number of occupied homes having street frontage: __________________ Located (miles): __________________

Check one:

miles N □ S □ E □ W of the intersection of Route _________ and Route _________.

(SR, NC, US) (SR, NC, US)

We, the undersigned, being property owners and/or developers of __________________ in __________ County, do hereby request the Division of Highways to add the above described road.

CONTACT PERSON: Name and Address of First Petitioner. (Please Print/Type)

Name: __________________________ Phone Number: __________________

Street Address: __________________________

Mailing Address: __________________________

PROPERTY OWNERS

<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing Address</th>
<th>Telephone</th>
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20
INSTRUCTIONS FOR COMPLETING PETITION:
1. Complete Information Section
2. Identify Contact Person (This person serves as spokesperson for petitioner(s)).
3. Attach two (2) copies of recorded subdivision plat or property deeds, which refer to candidate road.
4. Adjoining property owners and/or the developer may submit a petition. Subdivision roads with prior NCDOT review and approval only require the developer’s signature.
5. If submitted by the developer, encroachment agreements from all utilities located within the right of way shall be submitted with the petition for Road addition. However, construction plans may not be required at this time.
6. Submit to District Engineer's Office.

FOR NCDOT USE ONLY: Please check the appropriate block
☐ Rural Road  ☐ Subdivision platted prior to October 1, 1975  ☐ Subdivision platted after September 30, 1975

REQUIREMENTS FOR ADDITION

If this road meets the requirements necessary for addition, we agree to grant the Department of Transportation a right-of-way of the necessary width to construct the road to the minimum construction standards of the NCDOT. The right-of-way will extend the entire length of the road that is requested to be added to the state maintained system and will include the necessary areas outside of the right-of-way for cut and fill slopes and drainage. Also, we agree to dedicate additional right-of-way at intersections for sight distance and design purposes and execute said right-of-way agreement forms that will be submitted to us by representatives of the NCDOT. The right-of-way shall be cleared at no expense to the NCDOT, which includes the removal of utilities, fences, other obstructions, etc.

General Statute 136-102.6 states that any subdivision recorded on or after October 1, 1975, must be built in accordance with NCDOT standards in order to be eligible for addition to the State Road System.

<table>
<thead>
<tr>
<th>ROAD NAME</th>
<th>HOMES</th>
<th>LENGTH</th>
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Final Inspection/Bond Release Request Form

Please note, form must be fully completed. Incomplete forms will not be accepted.

Bond Administration Surety Release Request
As the authorized agent, I hereby complete this section as my formal request for the release of the following surety associated with the subdivision/project/map below: Please check only one Box

☐ Sidewalk  ☐ ROW  ☐ BMP  ☐ Other ___________________________

☐ Subdivision  ☐ N/A - If no bond is associated with this subdivision/project/map

Is this surety greater than four (4) years from the original effective date?  ☐ No  ☐ Yes

If yes, the $480 bond administration fee must be submitted with this form. The request for release and final inspection will not be processed until payment is received. Please note, this request and fee are valid for 90 days. If the surety is not released within 90 days of the form submittal, another Final Inspection/Bond Release Request Form and applicable bond release fee will be required prior to surety release. Annual renewal fees are not waived by requesting a bond release. The release must occur before the surety’s annual renewal date.

☐ Payment Enclosed  Payment Method: ☐ Check (made payable to the City of Charlotte)  ☐ Credit Card (Visa or Mastercard)

Continuous Maintenance Request (Streets) – If subdivision or N/A box is checked, check only one box below:

☐ I hereby request that the City of Charlotte accept these streets for public maintenance. The streets are located within the limits of the City of Charlotte and are contiguous to streets currently maintained by the City or State.

☐ I hereby acknowledge that the streets are located within the extra territorial jurisdiction (ETJ) outside of the limits of the City of Charlotte and are not eligible for maintenance by the City of Charlotte. Upon completion of all punch list items, I must directly petition the State of North Carolina to accept the streets for public maintenance.

As a prerequisite to Subdivision or BMP requests for Final Inspection, Storm Drainage and/or BMP as-built drawings for this subdivision/project/map must be approved by Engineering and Property Management.

Approved as-built permit number: LDAB ___________________________

Final Inspection Request

As the authorized agent, I submit this form as my formal request for the City of Charlotte to begin the Final Inspection process for:

Subdivision/Project/Map Name ___________________________

Phase ____________Map ___________________________

I hereby certify that to the best of my knowledge, with the exception of specific final punch list items resulting from the requested final inspection, which will be satisfactorily completed prior to any surety release and/or transfer of street maintenance responsibility, all public improvements for the subdivision/project/map listed above have been constructed in accordance with the approved preliminary plan and corresponding to a record map filed in the office of Mecklenburg County Register of Deeds. All work conforms to the construction standards of the City of Charlotte Engineering and Property Management, Charlotte Department of Transportation (CDOT), North Carolina Department of Transportation (NCDOT) and the City of Charlotte Subdivision Ordinance. The map has been recorded with the Mecklenburg County Register of Deeds in

Map Book _________________ Page _________________

Authorized Agent Name: ___________________________

Signature: ___________________________

Mailing Address: ___________________________________________

City, State, Zip Code: _______________________________________

Telephone Number: ___________________________ Date: ___________________________

Email: ___________________________

Submit completed form to: Bond Administrator
Charlotte-Mecklenburg Government Center, Engineering and Property Management, Land Development Division
600 East Fourth Street, Charlotte, North Carolina 28202-2844
Telephone: (704) 432-0960 Fax: (704) 336-6586

7/1/2014
Class III, Type 2

Class III or Class II

Class III or Class II, Type 1
Select Material Sources

**Class III**
- Arrow Wood Quarry
- Bonds Quarry
- Denver Quarry
- Kings Mountain Quarry
- Rock Hill Quarry

**Class II, Type 1**
- Arrow Wood Quarry
- Bonds Quarry
- Denver Quarry
- Hickory Quarry
- Kings Mountain Quarry

**Class III, Type 2**
No Source available because of the designation and/or interpretation of “Type 2 select material is a granular soil material meeting AASHTO M 145 for soil classification A-1 or A-3”
### Soil Classification A-1 or A-3

#### AASHTO Soil Classification System (from AASHTO M 145 or ASTM D3282)

<table>
<thead>
<tr>
<th>General Classification</th>
<th>Granular Materials (35% or less passing the 0.075 mm sieve)</th>
<th>Silt-Clay Materials (&gt;35% passing the 0.075 mm sieve)</th>
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</thead>
<tbody>
<tr>
<td>Group Classification</td>
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<td>A-1-a</td>
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<td>Sieve Analysis, % passing</td>
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<tr>
<td>2.00 mm (No. 10)</td>
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<td>Liquid Limit</td>
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<tr>
<td>Plasticity Index</td>
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<tr>
<td>Usual types of significant constituent materials</td>
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<td>General rating as a subgrade</td>
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</table>

Note (1): Plasticity index of A-7-5 subgroup is equal to or less than the LL - 30. Plasticity index of A-7-6 subgroup is greater than LL - 30.