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07.00 PERMITS, CHECKLISTS, AND FORMS

07.01 PERMIT CONTACT INFORMATION

The following is contact information for typical permits and approvals associated with development. Some permits or approvals may not apply and other permits or approvals may be required. It is the Developer/Contractor's ultimate responsibility to secure all applicable permits and approvals prior to the start of construction.

1. Erosion Control Certificate of Approval

Engineering Associate (Plan Review)
City of Monroe
Planning and Development Department
PO Box 69; Monroe, NC 28111-0069
300 W. Crowell Street; Monroe, NC 28112
Phone: (704) 282-4533

2. Erosion Control Permit

Permit Technician
City of Monroe
Planning and Development Department
PO Box 69; Monroe, NC 28111-0069
300 W. Crowell Street; Monroe, NC 28112
Phone: (704) 282-4524

3. Storm Drainage, and Flood Control Review

Stormwater Engineering Manager
City of Monroe
PO Box 69; Monroe, NC 28111-0069
300 W. Crowell Street; Monroe, NC 28112
Phone: (704) 282-4537

4. Water Supply System and Gravity Sewer Permit

Water Resources Engineer
City of Monroe
Water Resources Department
PO Box 69; Monroe, NC 28111-0069
2401 Walkup Avenue; Monroe, NC 28110
Phone: (704) 282-4600

5. Pump Stations, and Force Main Permit

North Carolina Department of Environment Quality
Division of Environmental Health; Non-Discharge Permitting Unit
1617 Mail Service Center; Raleigh, NC 27699-1617
512 N. Salisbury St., Suite 1219; Raleigh, NC 27604
Phone: (919) 707-3654

6. North Carolina Department of Transportation Encroachment Agreement (if required)

District Engineer
North Carolina Department of Transportation
Monroe District Office
130 S. Sutherland Avenue
Monroe, NC 28112
Phone: (704) 218-5100

7. North Carolina Department of Transportation Driveway Permit (if required)

District Engineer
North Carolina Department of Transportation
Monroe District Office
130 S. Sutherland Avenue
Monroe, NC 28112
Phone: (704) 218-5100

8. North Carolina Department of Environmental Quality
401 & Buffer Permitting Unit- Mooresville Regional Office

Mooresville Regional Office
610 East Center Avenue
Mooresville, NC 28115
(Courier 09-08-06)
Phone: (704) 235-2100

9. North Carolina Department of Environmental Quality

Raleigh Office
Dam Safety Program
1612 Mail Service Center
Raleigh, NC 27699
Phone: 919-707-9200

10. Army Corp of Engineers Wetlands Permit

Wilmington District
USAED, Wilmington
69 Darlington Avenue
Wilmington, NC 28403
Phone: (910) 251-4625 ext.26

Asheville Regulatory Field Office
US Army Corp of Engineers
151 Patton Avenue, Room 208
Asheville, NC 28801
Phone: (828) 271-7980

11. North Carolina Forest Service

Union County – District 12
1933 Mountain Island Highway
Mount Holly, NC 28120
Phone: (704) 827-7576

07.02.01 DEVELOPMENT REVIEW & PROCEDURE CHECKLIST FOR SUBDIVISIONS

- _____ Submit a digital copy of construction plans (civil drawings), Erosion Control application, checklist, and fee to the City of Monroe Permitting Department
- _____ Pre-construction meeting is scheduled with the City of Monroe Engineering Department (704-282-4515) following approval of the construction plans (civil drawings). Developers, designers or surveyors shall provide a digital copy of the plans in AUTOCAD format at the meeting.
- _____ Proceed with subdivision construction (refer to construction checklist). In order to record the final plat, the subdivision improvements must be completed or guaranteed with a financial instrument that can be converted into cash. ***Follow these steps for the option of guaranteeing subdivision improvements in order to apply for building permits:***
 - _____ Submit complete Subdivision Bond Estimate form to the Department of Planning and Development (this form will be reviewed by the Engineering Department, and the Water Resources Department to determine the costs of project completion).
 - _____ Receive a letter from the Department of Planning and Development stating the amount for which a letter of credit or other acceptable financial guarantee must be submitted (110% of the estimated cost of improvements).
 - _____ Submit letter of credit or other acceptable financial guarantee to the Department of Planning and Development for review.
 - _____ Submit Final Plat to the Department of Planning and Development digital copy (PDF) for review. (This can be submitted along with the completed bond estimate form). Plat is then routed to all applicable departments and reviewed by the Planning Department.
 - _____ After all comments are returned, submit revised final plat for review if necessary.
 - _____ Submit copies of the final plat to be recorded (2 mylars) along with the appropriate subdivision and recording fees to the Department of Planning and Development. (See City of Monroe Fee Schedule for subdivision fees) The Union County Register of Deeds requires 1 copy, and The City of Monroe requires 1 copy of the final plat. ***The procedure to record the plat is as follows:***
 - Planner reviews mylar copies to make sure all corrections were made, and all appropriate signatures were included.
 - Plat is signed by the City of Monroe Subdivision Administrator.
 - Plat is signed by the Union County Review Officer.
 - Plat is recorded at the Union County Register of Deeds office.
 - _____ Provide a digital copy of plat to the City of Monroe Engineering Department for roadway updates. (This should be submitted at the same time as the mylars)

07.02.02 CITY OF MONROE SITE PLAN AND LEGISLATIVE REZONING REVIEW REQUIREMENTS

Project Name: _____

Permit No.: _____

Address/Intersection _____

Date Reviewed: _____

Reviewer: _____

GENERAL SUBMITTAL REQUIREMENTS

All plans shall include at a minimum;

_____ North Arrow & Vicinity Map
Plan sheet shall be 24" x 36"
Plan sheets shall have the seal, signature, and date of the professional registered in the State of North Carolina under whose supervision the plans were prepared
_____ Show a title block on every sheet of the plan set that includes Developer's and his consultant's name, address, and telephone number, name of the development, original date of the plans, scale indication, sheet number and revision columns
_____ Adjacent properties along with name, deed book reference and tax map reference
_____ Existing and proposed paved areas, buildings, structures & utilities
_____ Typical sections for streets and divided entrances, if applicable (Public and Private)
_____ Typical sections for parking areas if applicable
_____ Sidewalk in accordance with Section 02.02.06 Sidewalk Requirements.
_____ Existing and proposed contours
_____ All right-of-ways and easements, existing and proposed
_____ Street Names
_____ Sight Triangles (Detail 02.01.10)
Roadway alignments shall be in conformance with Section 02.02.01 of the General Roadway Design Criteria (150 feet minimum centerline radius with 100 feet minimum between reverse curves)
_____ Dead end streets do not exceed 1200 ft. in length
_____ Identify all drainage features including but not limited to wetlands, perennial streams, intermittent streams, existing and proposed drainage systems
_____ Show and label 35' undisturbed vegetative buffers along perennial and intermittent streams
_____ Indicate setback for streams outside the designated floodplains - 5 times width of stream at top of bank or 35 feet on each side, whichever is greater
_____ 100 year floodplain (old and, if needed, new) and base flood elevation
_____ Location of stormwater management facilities if required for site development
_____ Impervious Coverage
Existing _____ Parcel Area _____
Proposed _____ % Coverage _____

_____ Show off-street parking for non-residential in accordance with Table 02-01.

_____ General Notes (to be placed on plan sheet)

- A. All roadway construction methods shall be in accordance with the City of Monroe Standard Specifications and Detail Manual, and the NCDOT Standard Specifications for Roads and Structures, latest edition except where otherwise noted.
- B. Deviations from the City of Monroe Standard Specifications and Detail Manual must be clearly noted on the plan and listed below. *(The Developer must request any deviation from the Detail Manual in writing along with justification for review and recommendation by Staff.)*

Additional Submittal Requirements:

_____ Traffic Impact Studies in accordance with Section 02.01.03 Traffic Studies.

_____ NCDOT Driveway Permit and/or City of Monroe Driveway Permit

_____ Copies of written approvals from USACOE and/or NC Dept. of Quality Approvals

07.03

SUBDIVISION PLAT CHECKLIST



City of Monroe
SUBDIVISION PLAT CHECKLIST

Name of Subdivision			Date:
Name of Subdivider			Contact Phone No:
Name of Preparer			

City Department E=Engineering P=Planning	Item #	Item Description	When Required	Preparers check here if complete	Office use only
			F=Final, S=Sketch P=Preliminary		
TITLE BLOCK INFORMATION					
P	1	Title Block is shown containing:			
P		A. Name of development	S,P,F		
P		B. Name of map or plan (sketch plan, preliminary plan, or Final Plat)	S,P,F		
P		C. Owner's name with address and daytime phone number	S,P,F		
P		D. Location, including address, city, township, county, & state,	S,P,F		
P		E. Date(s) map(s) prepared or revised	S,P,F		
P		F. Scale of drawing in feet per inch – drawing scale shall not be less than 1" equals 200'	S,P,F		
P		G. Name, address, and telephone number of preparer of map	S,P,F		
P		H. Developer's name, address and daytime phone number, if different from owner's	S,P,F		
ZONING AND LAND USES					
P	2	Zoning district(s) within the property and adjacent properties are shown	S,P,F		
P	3	Existing land uses within the property and adjacent properties are noted	S,P		
P	4	Dimensions, location, and use of all existing buildings; distances between buildings measured at the closest point; distance from buildings to closest property lines; buildings to remain on final plat	S,P,F		
STREETS					
P	5	Street data is shown illustrating:			
P		A. Existing and proposed rights-of-way within and adjacent to property are shown	S,P,F		
P		1. Total right-of-way width dimensions are shown	S,P,F		
E		2. Cite Book & Page where right-of-way is recorded	P,F		
		3. Dimension from centerline of existing pavement to all corners are shown	P,F		
P		4. Cul-de-sac right-of-way radius from center point are shown	S,P		
P		B. Pavement or curb lines are shown	P		
P		C. Pavement width dimensions are shown	P		
P		D. Cul-de-sac pavement radius from center point are shown	P		
E	6	All existing streets and proposed streets are named and approved by E-911	F		
MAP INFORMATION AND DESCRIPTION					
P	7	Bar Graph Scale is shown	S,P,F		
P	8	(Deed or Record) Book references to subject property	P,F		
P	9	Names of adjoining property owners (Deed or Record) Book reference are shown	P,F		
P	10	Tax block and parcel(s) number(s) are shown	S,P,F		
P	11	A vicinity map, at a scale of 1" = 2000', is shown	S,P,F		
P	12	All jurisdiction lines which adjoin or cross the tract are shown	S,P,F		
P	13	North arrow and orientation (oriented towards top of map where practicable)	S,P,F		
P	14	Boundaries of the tract to be subdivided are shown as follows:			

City Department E=Engineering P=Planning	Item #	Item Description	When Required F=Final, S=Sketch P=Preliminary	Preparers check here if complete	Office use only
E		A. At least one corner is tied to: (1) N.C. Grid and provide grid coordinates where at least one of two control monuments needed are within 2000' of the boundary and show the combined grid factor or (2) tie to the nearest street intersection	F		
P		B. All locations of intersecting boundary lines of adjoining properties are shown	P,F		
P		C. Distinctly and accurately represent and show all distances; show bearings and distances on final; show bearings and distances and curve data on outside boundaries and street centerlines on preliminary with street centerline tied to boundary	S,P,F		
P	15	Location and descriptions of all monuments, markers, and control corners is shown on plat	F		
P	16	Existing "old" property lines on tract to be subdivided are shown as dashed lines and are labeled as "old property lines"	S,P,F		
P	17	Existing and proposed topography of tract and 100 feet beyond property showing existing contour intervals of no greater than 5 feet (2 feet where available) and labeling at least two contours per map and all others at 10 foot intervals from sea level	P		
ENVIRONMENTAL AND NATURAL FEATURES					
P	18	Existing and proposed topography of tract	P		
P	19	Marshes, swamps, and other wetlands are shown	S,P,F		
P	20	Water courses, ponds, lakes, and streams are shown	S,P,F		
P	21	Undisturbed, vegetative buffers along perennial streams are shown	S,P,F		
P	22	Railroad lines and rights-of-way are shown	S,P,F		
P	23	Areas to be dedicated or reserved for public use are shown	S,P,F		
P	24	The name and location of any property or building on the National Register of Historic Places or locally designated historic property is shown	P,F		
P	25	Areas designated as a common area or open space under control of a Developer's or Homeowner's Association are shown	S,P,F		
FLOOD IMPACT AREAS					
P,E	26	The location of floodway and floodway fringe areas (where applicable) are shown referenced from FEMA Flood Hazard Boundary Maps and/or approved Engineering Flood studies Flood Protection Elevation (FPE) for all lots adjacent to regulated floodplain	P,F		
SITE DATA					
	27	Site calculations are shown including:			
P		A. Acreage in total tract	S,P,F		
P		B. Acreage in public greenways and other open space	P,F		
P		C. Total number of lots proposed	S,P,F		
P		D. Linear feet in streets	P,F		
P		E. Area in newly dedicated right-of-way	P,F		
P		F. General location of the boundaries of any residual lot (> 10 acres)	S,P		
P	28	Proposed lot lines and dimensions, with bearing and distances shown	S,P,F		
P	29	Area in square footage of all proposed lots under one (1) acre in size; area in acres is shown for all lots one acre or more in size; smallest lot is indicated	P,F		
P	30	Lots shown are sequenced or numbered consecutively	P,F		
EASEMENT AND UTILITIES					
P	31	Location, dimension, and type of all easements (existing and proposed) are shown	P,F		
E	32	General Public Utility Easements are tied to the property lines	P,F		
E	33	Public Storm Drainage Easements are shown centered over the creeks, ditches, and/or structures. Ties to property lines are not required.	P,F		
P	34	Plat contains a utility layout plan for water, sewer, storm sewer, natural gas, electric, and cable TV	P		

City Department E=Engineering P=Planning	Item #	Item Description	When Required F=Final, S=Sketch P=Preliminary	Preparers check here if complete	Office use only

<u>NOTES AND STATEMENTS</u>					
P	35	Plat contains <i>NCDOT Construction Standards Certification</i> (where applicable)	P,F		
P	36	Plat contains an <i>On-Site Water and/or Sewer Note</i> (where applicable)	P,F		
P	37	Plat contains a <i>Special Flood Hazard Area Note</i>	P,F		
P	38	Plat contains a <i>Notary Certificate of Owners Signature</i>	F		
P	39	Plat contains a <i>Certificate of Ownership and Dedication</i>	F		
P	40	Plat contains a <i>Subdivision Administrator Approval Certificate</i>	F		
E	41	Plat contains a <i>Certification of Survey and Accuracy</i>	F		
E	42	Plat contains a <i>Union County Review Officer's Statement</i>	F		
E	43	Plat contains <i>Storm Drainage Note</i> (where applicable)	P,F		
E	44	<i>Complete Stormwater Operation and Maintenance Agreement for Recordation Attached</i>	F		
E	45	<i>The following notation shall appear on all final plats of major subdivisions with new private streets:</i> ROAD MAINTENANCE DISCLOSURE STATEMENT <i>This subdivision contains private streets and storm drainage that were designed and constructed or financially guaranteed in accordance with the City of Monroe's Standard Specifications and Detail Manual. Maintenance of these improvements shall be the responsibility of the developer(s) or the property owner(s) until accepted and maintenance responsibilities are assumed by a homeowners or property owners' association established by the collective lot owners. Neither NCDOT nor the City of Monroe are responsible for any maintenance associated with these improvements or enforcement of the responsibilities noted within this statement. (Note: This statement shall not serve as a substitute for any other statutory disclosure requirement.)</i>	P,F		
E	46	<i>The following notation shall appear on all final plats of major subdivisions with new public streets:</i> ROAD MAINTENANCE DISCLOSURE STATEMENT <i>The street and storm drainage system in this subdivision were designed and constructed or financially guaranteed in accordance with the City of Monroe's Standard Specifications and Detail Manual. Property owners should be aware the City of Monroe is not responsible for any maintenance associated with these improvements until the street right-of-ways have been completed by the developer and accepted by the City of Monroe. Maintenance of these improvements shall be the responsibility of the developer(s) or the property owner(s) until the City of Monroe has accepted maintenance responsibilities. The city is not responsible for any maintenance associated with these improvements or enforcement of the responsibilities noted within this statement. (Note: This statement shall not serve as a substitute for any other statutory disclosure requirement.)</i>	P,F		

NOTE: This checklist is intended for the use of the public in order to comply with the City of Monroe Subdivision mapping standards. Specifics are addressed in the City of Monroe subdivision Ordinance.

07.04 STORM WATER MAINTENANCE AGREEMENT

Prior to the conveyance or transfer of any lot or building site to be served by a structural SCM, and prior to issuance of any permit for development or redevelopment requiring a structural SCM, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the structural SCM. The operation and maintenance agreement shall require the owner or owners to maintain, repair and, if necessary, reconstruct the structural SCM, and shall state the terms, conditions, access conditions, and schedule of maintenance for the structural SCM. The operation and maintenance agreement must be approved by the Stormwater Administrator prior to plan approval and shall be recorded with the County Register of Deeds.

A copy of the standard form Operation and Maintenance Agreement may be found on the City's Stormwater webpage.

07.05 PRE-CONSTRUCTION MEETING AGENDA

The following items will be discussed at all Pre-Construction meetings for proposed developments. Refer to Standard 01.05.00 regarding the Pre-Construction Conferences. This agenda shall be modified to suit site conditions for each proposed development and distributed at the meeting.

AGENDA
PRE-CONSTRUCTION CONFERENCE
DEVELOPMENT NAME
TIME; DATE
LOCATION

- I. Introduction of Attendees
- II. Emergency Contacts
- III. Erosion Control
- IV. Clearing & Grubbing
- V. Undercuts & Embankments
- VI. Storm Drains & On- and Off-Site Drainage
- VII. Curb
- VIII. Subgrade
- IX. Stone Base
- X. Asphalt Base & Asphalt Surface
- XI. Shoulders
- XII. Landscaping
- XIII. Utilities within Proposed Street Right-of-Way
- XIV. Checklists and Certification Forms
- XV. Safety
- XVI. Inspections by City & Developer
- XVII. Post Construction Stormwater Requirements
- XVIII. Maintenance of Roadways and Right of Ways Prior to Acceptance
- XIX. Final Inspection
- XX. Other

07.06 EROSION CONTROL FORMS AND CHECKLISTS**07.06.01 EROSION CONTROL FINANCIAL RESPONSIBILITY FORM**

No person may initiate any land-disturbing activity as defined in Chapter 158 of the Monroe City Code prior to completion of this form, and an applicable and acceptable erosion and sedimentation control plan has been approved by the City of Monroe Engineering Department. (Please type or print)

Part I

1. Name of Project _____
2. Will there be any public funds allocated to this project? The allocation of public funds to a project requires the Erosion and Sedimentation Control plans to be reviewed and approved by the North Carolina Department of Environmental Quality. _____
3. Address where land disturbing activity will take place _____

4. Latitude (decimal degrees) _____ Longitude (decimal degrees) _____
5. Approximate date disturbing activity will commence _____ / _____ / _____
6. Purpose of development (residential, commercial, industrial, etc.) _____
7. Total acreage of land to be disturbed or uncovered, (include off site roadway improvements, utilities and borrow/waste areas) _____
8. Amount of fee enclosed (fee will be in accordance with current policy found in the City of Monroe Fee Schedule Ordinance, Chapter VII. Engineering/Public Works, Article A, Section 4. Charges and Fees. _____)
9. North Carolina Registered Agent to contact should sediment control issues arise during land disturbing activity
Name _____ Phone _____
Email _____
10. Landowner(s) of Record (use blank page to list additional owners)

If the landowner(s) of record is not the person(s) or firm(s) financially responsible as listed in Part II.B., a separate signed letter of consent to initiate land disturbing activity from the landowner(s) of record or their authorized agent will be required prior to approval of the Erosion Control Plans.

Name _____	Name _____
Mailing Address _____ _____	Mailing Address _____ _____
Street Address _____ _____	Street Address _____ _____
Phone _____	Phone _____
Email _____	Email _____

11. Indicate Book and Page where deed of the property where land disturbing activity will take place is recorded
(use blank page to list additional owners)

Book_____

Book_____

Page_____

Page_____

12. Tax Map Parcel Number where land disturbing activity will take place _____-_____-_____

_____ - _____ - _____

_____ - _____ - _____

Part II

1. Person(s) or firm(s) who are financially responsible for this land disturbing activity (use blank page to list additional owners)

Name _____

Name _____

Mailing Address _____

Mailing Address _____

Street Address _____

Street Address _____

Phone _____

Phone _____

Email _____

Email _____

2. A) If the Financially Responsible Party is not a resident of North Carolina, give name and address of a North Carolina Agent

B) If the Financially Responsible Party is a Partnership or other person engaging in business under an assumed name, **attach a copy of the Certificate of Assumed Name**. If the Financially Responsible Party is a Corporation, give the name and street address of the North Carolina Registered Agent:

Name of Registered Agent

Email Address

Current Mailing Address

Current Street Address

City _____

State _____

Zip _____

City _____

State _____

Zip _____

Phone _____

Email _____

3. The above information is true and correct to the best of my knowledge and belief and was provided by me under oath. I agree to provide corrected information should there be any change in the information provided herein. (This form must be signed by the financially responsible person if an individual or his attorney in fact, or if not an individual, by an officer, director, partner, or registered agent with authority to execute instruments for the financially responsible person)

Type or Print Name _____

Title _____

Signature _____

Date _____ / _____ / _____

I, _____, a Notary Public of the County of _____, State of North Carolina, hereby certify that _____ appeared personally before me this day and being duly sworn acknowledged that the above form was executed by him.

Witness my hand and notarial seal, this _____ day of _____, _____.

SEAL

(Notary)

My commission expires _____

07.06.02 EROSION CONTROL PLAN CHECKLIST

This Erosion Control Plan Checklist shall accompany all plan submittals or the submittal shall be considered incomplete. Items not applicable should be marked "N.A." Refer to City Of Monroe "Standard Specifications and Detail Manual", City Of Monroe Land Use Ordinance, Title XV, Chapter 158, and NCDEQ Design Manual, latest edition. Prior to Erosion and Sedimentation Control Plan approval, all applicable plan submittals and approvals from the Engineering Department shall be obtained, including but not limited to, roadway, City and State driveway permits and encroachments. All plans must be submitted concurrently with the erosion control plans.

- Detailed cover letter stating the purpose of the submission
- Maximum plan sheet size is 24"x 36".
- Show a north arrow and vicinity map on the erosion control plan.
- Show a final grading plan, if different from the erosion control plan.
- The maximum scale is 1" = 50'.
- Show all property lines and right-of-ways.
- Show sidewalks in accordance with Section 02.02.06 - Sidewalk Requirements.
- Show a legend. Call out each measure on the plan. The legend symbols and plan should match.
- Show water and sewer erosion control measures on erosion control plan. Show the size and location of existing and proposed storm and sewer structures.
- Show existing and proposed (2 foot or 1 foot) contours.
- Show limits of disturbed area (provide acreage total, delineate limits, and label). Be sure to include all access to measures, lots that will be disturbed, offsite borrow/waste areas and utilities/roadway improvements that may extend offsite.
- Show planned and existing buildings locations and FFE.
- Show planned and existing roads locations, elevations and profiles.
- Show lot and/or building numbers.
- Show seeps, springs, or wetland limits.
- Show all easement lines.
- Show boundaries of the total tract of land where disturbing activity will take place.
- Show borrow, waste areas, and stockpiled soil locations.

- Show existing and planned drainage areas including off-site areas that drain through the project area.
- Indicate the size of drainage areas above drainage structures.
- Show soil type(s) and special characteristics.
- Show design calculations for peak discharges of runoff.
- Show a watershed plan.
- Show a storm drainage plan.
- Show design calculations per Section 04.00 of the City Of Monroe Standard Specifications and Detail Manual and construction details for storm and sewer structures.
- Show design calculations per Section 04.00 of the City Of Monroe Standard Specifications and Detail Manual, cross-sections and method of stabilization of existing and planned channels per the NCDEQ Design Manual, latest edition.
- Show design and construction details of energy dissipators below storm outlets including the size of stone used for rip rap per the NCDEQ Design Manual, latest edition.
- Show design calculations and construction details to control groundwater per the NC DENR Design Manual, latest edition.
- NCDOT Driveway Permit and/or City of Monroe Driveway Permit/Encroachments
- Approved, signed documentation from USACOE and/or NC Dept. of Environmental Quality, Floodplain Development Permit and other applicable approvals.
- Show all perennial and intermittent stream buffers and show widths. Add note requiring orange net fencing along all stream buffers.
- The Developer must obtain the written permission of the adjacent property owner(s) for any off-site grading or construction prior to construction drawing approval.
- Show the name of the first watercourse into which storm water leaving the site is tributary.
- Show the location of all temporary and permanent erosion and sedimentation control measures.
- Show construction detail drawings for all temporary and permanent erosion and sedimentation control measures per the City of Monroe Detail Manual.
- Show all design calculations for sediment basins and sediment traps per the NCDEQ Design Manual, latest edition. Note: Minimum of 3 coir fiber baffles per the NCDEQ Design Manual.

- _____ Label basin contours. Tie into existing contours. Show basin dimensions and weir lengths on the plans.
- _____ Show wetland protection measures (Orange net fence).
- _____ Show temporary stream crossings (work along streams, lakes, ponds and wetlands) and details of how each will be stabilized.
- _____ Show maintenance requirements of temporary erosion and sedimentation control measures during construction.
- _____ Indicate the name and phone number of the person who is responsible for maintenance of temporary measures during construction on the plans.
- _____ Show maintenance requirements of permanent erosion and sedimentation control measures following construction.
- _____ Indicate the name and phone number of the person who is responsible for maintenance of permanent measures following construction on the plans.
- _____ Show all areas and acreage to be vegetatively stabilized.
- _____ Drainage area maps clearly and legibly depicts on-site and off-site areas (colored coded maps encouraged). All drainage area maps indicate project limits and are at a legible scale.
- _____ Show planned vegetation with details of plants, seed, mulch, and fertilizer. Include Seeding Requirement 03.07.01 from the City Of Monroe Standard Specifications and Detail Manual.
- _____ Show specifications for permanent and temporary vegetation. Include the method of soil preparation prior to seeding.
- _____ Include NCG010000 Notes Sheets for Ground Stabilization and Materials Handling
- _____ Include NCG010000 Notes for Self-Inspection, Record Keeping and Reporting
- _____ Attach the Financial Responsibility Form from Standard 07.07.01 of the City of Monroe Standard Specifications and Detail Manual.
- _____ Attach bond estimate for all erosion and sedimentation control measures.
- _____ Indicate setback for streams outside the designated floodplains - 5 times width of top of bank or 35 feet on each side, whichever is greater, as measured from the top of bank.
- _____ 100-year flood plain and base flood elevation.
- _____ Show all proposed and existing utilities including, but not limited to water lines, valves, hydrants, sanitary sewer lines, manholes, gas lines, valves, telephone, cable television, and electric lines and poles.

____ Deviations from the City of Monroe Standard Specifications and Detail Manual must be clearly noted on the plan. (*The Developer must request any deviation from the Detail Manual in writing along with justification for review and recommendation by Staff and/or City Council prior to plan review*).

____ The following notes will be included on all plan sets:

1. If disturbing less than 1 acre, add this note: Disturbances of less than one acre that are a part of a “Common Plan of Development”, as defined in Section 01.01 of this manual are to be covered under the General Stormwater Permit NCG010000 and requires compliance with all conditions of this general permit under the NPDES.
2. No land disturbing activity, except that which is required to install erosion control measures, may commence prior to approval by the City Engineer of Certification Form 1-01.
3. Additional erosion control measures may be required based upon specific site conditions.
4. Contact the City of Monroe Engineering Department for a pre-construction meeting prior to any land disturbing activity.
5. Remove all temporary erosion control devices and structures only after site is fully stabilized and approval has been obtained from the City of Monroe Engineering Department.
6. All erosion control designs shall be in accordance with the City of Monroe Standard Specifications and Detail Manual, and the NCDEQ Erosion and Sedimentation Control Planning and Design Manual, latest edition.
7. For phased erosion control plans, the Contractor shall meet with the Erosion Control Inspector prior to commencing each phase of erosion control measures.
8. Site grading is to be covered under the General Stormwater Permit NCG010000. Any land disturbing activity > 1 acre requires compliance with all conditions of this general permit under the NPDES. Any noncompliance is a violation of the Clean Water Act and may require enforcement by NCDEQ.
9. Contractor is to keep street clear of mud and other debris per the City of Monroe Mud Ordinance, Title VII, paragraph 71.20.
10. The Professional Engineer registered with the State of North Carolina who prepared the Erosion Control Plan is solely responsible for identification and location of all environmental wetlands, perennial and intermittent streams and buffers shown on the plans.

11. The City of Monroe is not responsible for the accuracy and adequacy of the design, dimensions, and elevations, which shall be confirmed and correlated at the job site. The City of Monroe, through the approval of this document, assumes no responsibility for the completeness and/or accuracy of this document.
12. Silt sacks will be placed in basins/inlets along roadways after initial asphalt surface work is completed.
13. The financially responsible party/agent or the landowner/agent of a land disturbing activity > one acre is required to self-inspect the project. A self inspection, as well as documentation of a project after each phase of the project, is required.

_____ Include Scheduling Notes 03.01.03, and Construction Notes 03.03.01 as well as all pertinent Division 08.00 Erosion Control Details from the City of Monroe Standard Specifications and Detail Manual on all plan sheets.

_____ Provide Construction Sequence 03.01.04 notes 1 through 11 as well as any additional notes necessary to describe the basic sequence of events on the site. Include site specific sequencing for individual phases.

_____ Erosion Control Review Fee.

_____ Bond Amount in the form of certified check, cash, or irrevocable letter of credit. The person(s) or firm(s) posting the bond and listed as the financial responsible party must be registered with the North Carolina Secretary of State.

07.06.03 STORMWATER CHECKLIST

This Stormwater Checklist shall accompany all plan submittals or the submittal shall be considered incomplete. Items not applicable should be marked "N.A." Refer to the City of Monroe "Standard Specifications and Detail Manual".

Show impervious areas/runoff coefficients per the City of Monroe Standard Specifications and Detail Manual, Appendix A, Rational Method.

Show stormwater runoff controls

<input type="checkbox"/> wet detention pond	<input type="checkbox"/> extended dry detention pond	<input type="checkbox"/> grassed swales
<input type="checkbox"/> sand filters	<input type="checkbox"/> stormwater wetlands	<input type="checkbox"/> bio-retention
<input type="checkbox"/> proprietary systems	<input type="checkbox"/> infiltration devices	<input type="checkbox"/> filter strips
<input type="checkbox"/> stream buffers	<input type="checkbox"/> permeable pavement	<input type="checkbox"/> other

Show soil types.

Provide boring/test pits, infiltration tests, groundwater impacts for infiltration structures.

Provide calculations of pre- and post-development peak runoff rates, volumes and velocities. The same hydrologic procedure shall be used to determine pre and post-developed hydrology.

Provide copy of the 404 Permit from the US Army Corp of Engineers (wetlands) and 401 permit from the North Carolina Department of Environmental Quality.

Show the water body that the SCM is discharging into, if applicable.

Provide a map and certified reports that includes locations of all perennial and intermittent streams, wetlands, 100-year floodplain boundaries, and other natural features as determined by survey.

Show time of concentration calculations for all hydrographs.

Show curve number calculations for both pre-developed and post-developed conditions for hydrographs.

Provide 2 drainage area maps, one for pre-development and one for post-development, that shows the dividing lines and direction of flow for each drainage area contributing to the project site.

Delineate sub-watershed areas on the plan for both pre- and post-development conditions. Clearly show and label the "Tc" path, slope and soil types in each sub watershed; provide the areas in acres.

Show a maintenance plan and schedule for all permanent Stormwater Control Measures.

Provide inlet and outlet invert elevations for all drainage structures.

_____ Provide profiles for all outfall pipes 15" and larger and channels located within recorded public easements. Include the Hydraulic Grade Line (HGL) profile for the Ten Year Return Period.

_____ Provide cross sections for diversions, ditches, ponds, swales, infiltration structures, etc.

_____ Provide a name of the person responsible for longtime maintenance of stormwater management facilities.

_____ Show natural and manmade features at the site, including wetlands, watercourses, floodplains and developments (roads, buildings, and other structures).

_____ Design criteria for drainage collection facilities within the right-of-ways must follow Standard Specifications and Detail Manual, Section 04.02.01.

_____ The following construction notes shall be included on the plans:

1. All roadway construction methods shall be in accordance with the City of Monroe Standard Specifications and Detail Manual and the NCDOT Standard Specifications for Roads and Structures, latest edition except when otherwise noted.
2. All storm drain pipes shall be placed to proper grade and alignment per approved plans.
3. No cracked or broken pipes shall be placed or accepted in construction of the project.
4. All catch basins 3'-6" deep or more shall have steps placed at 1'-2" on center.
5. Erosion control measures shall be placed around drainage inlets and catch basins.
6. All pipes in storm drainage structures shall be cut off flush with the inside wall.
7. All structures shall be smooth inside and outside of the structure using mortar mixed to manufacturer's specifications to avoid debris build-up obstructing flow.
8. All tail ditches shall have positive drainage with a minimum 1.0% slope.
9. The Developer shall obtain any off-site drainage easement from adjacent property owners required to complete the improvements or provide positive drainage flow prior to construction plan approval.
10. All concrete for drainage structures shall be a minimum of 3,600 psi except where otherwise noted or required.
11. All precast storm drainage structures must be certified to adequately carry H20 loading.

12. Pre-cast storm drainage structure shall not be cut or altered without a Professional Engineer's Certification of adequate load bearing strength following the alteration of the structure, except where designated "knock-out" panels are provided.
13. Under no circumstances shall water be permitted to rise in un-backfilled trenches after the pipe has been placed.
14. The laying of pipe in the finished trench shall be started at the lowest point and laid upgrade. The bell shall be laid upgrade.
15. Survey staking and proposed grades shall be consistent with plans and field conditions.
16. No construction activities are allowed to take place beyond the floodplain line or the stream buffer line, whichever is greater, without a permit issued by the U.S. Army Corps of Engineers, the North Carolina Department of Environmental Quality, and/or the City of Monroe.

Clearly delineate the following on the site and grading plans:

- Proposed FEMA floodplain line
- Existing FEMA floodplain line (to be shown until FEMA approval of proposed line)
- Existing FEMA floodway line
- Floodway cross-sections (stream station, location, existing and future flood elevations)
- Undisturbed vegetated stream buffer lines (35' intermittent and perennial streams, 50' for Legislative Rezoning, measured from the top of bank)
- Building setback for streams outside designated floodplains (5 times the stream width at the top of bank or 35' each side, whichever is greater)

25+1 Flood Analysis

For streams located outside of FEMA regulated waters and FEMA regulated "A" zones which serve a drainage area of 10 acres or more, perform a flood analysis utilizing the 25-year storm to establish finish floor elevations. Finish floor shall be established at least one foot above the 25-year storm elevation.

- Runoff coefficients shall be based on assumption of full development of parcels per current zoning
- Proposed elevations shall be labeled on the site and grading plans for each lot
- Show and label 25+1 flood elevation flood line on site and grading plan
- Show and label or describe on plan the location and elevation (ref. vertical datum, i.e. NAVD 88) of permanent benchmark used in channel survey. All topographic information shown on grading plan shall also be referenced to this benchmark.
- Provide a hard copy of all channel analysis input and output files along with plan submittal.

**07.07 DRIVEWAY PERMIT**

Property Owner/ Lessee: _____

Property Address: _____

City, State & Zip code: _____

Driveway location by address: _____

Type of usage: Residential _____ Business _____ Industrial _____
(Select one)Driveway is located on the _____ side of _____,
(Direction N, E, S, W) (Street Name)
_____ feet _____ of the centerline of _____.
(distance) (Direction N,E,S,W) (Street Name)**(Sketch driveway plan of back or attach sketch plan to permit.
For multiple driveways attach sketch plan to permit.)****Driveways are to be paved in accordance with Chapter 8.4.3, B of the City of Monroe Unified Development Ordinance**

Driveway width: _____

Type of driveway pavement: Asphalt _____ Concrete _____
(Select one)Type of Approach:
(Select one)

_____ Concrete ramp with no pipe.
_____ Concrete ramp with _____ Pipe.
(12" minimum size) (material)
_____ City Standard Concrete ramp through curb and gutter section.
_____ Asphalt ramp with no pipe.
_____ Asphalt ramp with _____ Pipe.
(12" minimum size) (material)
_____ Street type entrance for shopping centers only.

Existing Sidewalk? Yes _____ No _____
(Select one)Approved by: _____
Engineering Department _____ Date _____

07.08 CERTIFICATION FORMS

1. The following forms shall be utilized in accordance with Standards 07.05.00 and 07.06.00.
2. Table 07-01 gives a description of the following Certification Forms contained in this document.

Table 07-01

Certification No.	Description	Notarization Required
1-01	Primary Erosion Control Inspection Form	No
1-02	Intermittent Subdivision Construction Form	Yes
1-03	Final Subdivision Construction Form	Yes
1-04A	Pre-Construction Certification Form – Post Construction Stormwater Control Measures	Yes
1-04B	Final Certification Form – Post Construction Stormwater Control Measures	Yes
1-04C	Engineer's Certification	No
1-05	Re-Inspection Form	No
1-06	Intermediary Erosion Control Acceptance Form	No
1-07	Final Erosion Control Acceptance Form	No

3. No construction activities other than installation of erosion control measures shall begin prior to the City Engineer's approval of Certification Form 1-01.
4. The Developer or his contractor shall not remove any Temporary Erosion Control Measure prior to approval of Certification Form 1-06 by the City Engineer.

CITY OF MONROE

Certification Form 1-01



Primary Erosion Control Inspection Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. The City of Monroe Erosion Control Permit Number for this project is _____
2. All approved erosion control measures have been installed per approved plans.
3. I understand that any failure to maintain these erosion control measures will result in appropriate enforcement actions in accordance with the City of Monroe Erosion and Sedimentation Control Ordinance, the North Carolina Sedimentation Pollution Control Act of 1973 (NCGS Chapter 113A, Article 4), and the North Carolina Administrative Code Title 15A, Department of Environmental Quality Chapter 4.
4. Additional erosion control measures may be required based upon specific site conditions.

I, _____ of _____
(Responsible Agent) (Development Company)
hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature) (Date) _____
(Contractor Agent Signature) (Date)

(Project Engineer Signature) (Date)

ACCEPTANCE BY CITY OF MONROE:

(Erosion Control Inspector Signature) (Date) _____
(City Engineer Signature) (Date)

CITY OF MONROE

Certification Form 1-02



Intermittent Subdivision Construction Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. All approved rough grading operations have been completed per approved plans.
2. All approved sanitary sewer system components have been installed per approved plans and in accordance with the City of Monroe Standard Specifications and Detail Manual.
3. All approved storm drainage system components have been installed per approved plans, and all construction was completed in accordance with the City of Monroe Standard Specifications and Detail Manual.
4. All curb has been installed, each section of curb was backfilled within 3 to 5 days of placement, and all construction was completed in accordance with the City of Monroe Standard Specifications and Detail Manual.
5. All approved water line system components have been installed per approved plans, and all work has been completed in accordance with the City of Monroe Standard Specifications and Detail Manual.
6. Attached are all geotechnical reports not previously submitted for roadway fill material and utility trench construction. Deviations from minimum testing requirements stipulated by Section 01.08 INSPECTIONS are documented and noted in the final report prepared by the independent testing firm.
7. The City of Monroe Energy Services Department, telephone, and television/cable utility service organizations have been contacted for utility service installation and sleeve/conduit installations for proposed curb crossings.
8. Upon receipt, the City of Monroe Engineering Department will issue costs for street sign installation.

I, _____ of _____
 (Responsible Agent) (Development Company)
 hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature) (Date) (Contractor Agent Signature) (Date)

(Project/Geotechnical Engineer Signature) (Date)

I, _____, a Notary Public of the County of _____, State of North Carolina,
 hereby certify that _____ appeared personally before me this day and being duly sworn acknowledged
 that the above form was executed by him.

Witness my hand and notarial seal, this _____ day of _____, _____

SEAL

_____ (Notary)

My commission expires _____

- Notary is for the Responsible Agent Signature

ACCEPTANCE BY CITY OF MONROE:

(Construction Inspector Signature) (Date) (City Engineer) (Date)

CITY OF MONROE

Certification Form 1-03



Final Subdivision Construction Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. The asphalt or stone base course for this project has been installed, and all construction was completed in accordance with the City of Monroe Standard Specifications and Detail Manual.
2. Post installation inspection reports for storm drainage pipe have been provided as required by Standard 1.08 INSPECTIONS, including identification of any defects with an assessment for severity and recommendations for repairs of lines inside right of way and public easements.
3. Post installation re-inspection reports for storm drainage pipe have been provided as required by Standard 1.08 INSPECTIONS verifying that recommended remediation of identified defects have been properly completed and all requirements of the City's *Post-Installation Inspection of Storm Drainage Pipes and Culverts Policy* have been met.
4. The asphalt roadway surface course for this project has been installed, and all construction was completed in accordance with the City of Monroe Standard Specifications and Detail Manual.
5. All sidewalk has been installed, each section of curb was backfilled within 3 to 5 days of placement, and all construction was completed in accordance with the City of Monroe Standard Specifications and Design Manual.
6. Attached are all geotechnical reports not previously submitted for roadway construction. Deviations from minimum testing requirements stipulated by Section 01.08 INSPECTIONS are documented and noted in the final report prepared by the independent testing firm.
7. All punch list items contained on the Post-Construction Checklist, Standard 07.11.00 are completed.
8. I have read items 1-11 within Standard 07.10.00 and understand that by requesting the final walk-through, the City of Monroe expects that all major items are completed to the fullest extent possible.
9. I further understand that any evident misrepresentation will incur a re-inspection fee in the amount of current policies and that no re-inspection will be scheduled until all fees are paid.
10. The completed Post-Construction Checklist is attached to this form.
11. The warranty period will initiate upon final acceptance by the City of Monroe.

I, _____ of _____
 (Responsible Agent) (Development Company)
 hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature) (Date) (Contractor Agent Signature) (Date)

(Project/Geotechnical Engineer Signature) (Date) (Project Engineer SEAL)

I, _____, a Notary Public of the County of _____, State of North Carolina,
 hereby certify that _____ appeared personally before me this day and being duly sworn acknowledged
 that the above form was executed by him.

Witness my hand and notarial seal, this _____ day of _____, _____

SEAL

 (Notary)

- Notary is for the Responsible Agent Signature

My commission expires _____

ACCEPTANCE BY CITY OF MONROE:

(Construction Inspector Signature) (Date) (City Engineer) (Date)

CITY OF MONROE

Certification Form 1-04 A



Erosion Control BMP to Post-Construction Stormwater Control Measure (SCM) Conversion Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. The contributing drainage area for the SCM structure is sufficiently stable to allow construction to begin or
2. Erosion and Sedimentation Control BMPs are in place to protect any proposed SCM during construction.
3. I understand that failure to protect any SCM from sedimentation during construction may result in a delay of final acceptance.
4. I further understand that the SCM must be fully functional with all features, vegetation, and controls installed before final acceptance.

I, _____ of _____
 (Responsible Agent) (Development Company)

hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature) (Date) _____

(Contractor Agent Signature) (Date) _____

(Project Engineer Signature) (Date) _____

(Project Engineer SEAL) _____

I, _____, a Notary Public of the County of _____, State of North Carolina,
 hereby certify that _____ appeared personally before me this day and being duly sworn acknowledged
 that the above form was executed by him.

Witness my hand and notarial seal, this _____ day of _____, _____

SEAL

 (Notary)

My commission expires _____

- Notary is for Responsible Agent Signature

ACCEPTANCE BY CITY OF MONROE:

(Construction Inspector Signature) (Date) _____

(City Engineer) (Date) _____

CITY OF MONROE

Certification Form 1-04B



Final Inspection Form- Post-Construction Stormwater Control Measures (SCMs)

Project Name _____ Date _____

Developer _____ Contractor _____

1. All SCMs and related construction is completed and the SCM is fully functional with all features, vegetation, and controls installed.
2. A City of Monroe Stormwater Maintenance Agreement has been submitted along with the current recording fee and site sketch, as-built drawing of the SCM (s), and engineer of record's certification.
3. A copy of the Post-Construction Checklist for Post-Construction SCMs s 07.12 is attached and all applicable items have been verified and checked.
4. I have read items 1-6 within Standard 07.12 and understand that by requesting the final walk-through, the City of Monroe expects that all major items are completed to the fullest extent.
5. I further understand that any evident misrepresentation on the Checklist will incur a re-inspection fee in the amount of current policies and completion of Form 1-05 and that no re-inspection will be scheduled until all fees are paid and Form 1-05 is complete.

(Project Engineer Signature)

(Date)

(Project Engineer SEAL)

I, _____ of _____
 (Responsible Agent) (Development Company)

hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature)

(Date)

I, _____, a Notary Public of the County of _____, State of North Carolina,
 hereby certify that _____ appeared personally before me this day and being duly sworn acknowledged
 that the above form was executed by him.

Witness my hand and notarial seal, this _____ day of _____, _____

SEAL

(Notary)

My commission expires _____

- Notary is for Responsible Agent Signature

ACCEPTANCE BY CITY OF MONROE:

(Construction Inspector Signature) (Date)

(City Engineer) (Date)

CITY OF MONROE

Certification Form 1-04C



*Professional Engineer's Certification of
Engineered Stormwater Control Measure(s) and Associated Infrastructure*

Project Name

SW Permit #

SCM Type

Name/No. per Plans*

I, _____ as a duly licensed Professional Engineer, do hereby certify that the Engineered Stormwater Control Measure listed above has been constructed within substantial compliance and intent of the approved construction plans, drawings, and specifications and that the associated infrastructure has been installed in compliance with the approved construction plans, drawings, and specifications. This statement is based upon reference and reviews of the as-built drawings and as-built calculations prepared for this site and upon periodic field inspections and project reviews completed during the construction of the referenced Engineered Stormwater Control Measure, including a final inspection of the measure made within 30-days prior to the signature dated below.

(Project Engineer Signature)

(Date)

(Project Engineer SEAL)

*Complete a separate form for each SCM.

ACCEPTANCE BY CITY OF MONROE:

(Construction Inspector Signature)

(Date)

(City Engineer)

(Date)

CITY OF MONROE

Certification Form 1-05



Re-Inspection Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. On _____ (Date) an inspection was performed and the following items were found to be incomplete:

To be completed by Construction Inspector

2. All items listed above are now completed.
3. All re-inspection fees have been paid in full and a receipt is attached.

I, _____ of _____
(Responsible Agent) (Development Company)
hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature) (Date) (Contractor Agent Signature) (Date)

Form can be returned at the Re-Inspection along with a check made payable to the City of Monroe. Alternatively, the fee can be paid and a receipt received at the City of Monroe Customer Service Center located at 201 E Windsor St. Monroe. NC 28112. Receipt shall be presented at Re-Inspection.

(Project/Geotechnical Engineer Signature)

(Date)

(Project Engineer SEAL)

ACCEPTANCE BY CITY OF MONROE:

(Construction Inspector Signature) (Date)

(Date)

(City Engineer)

(Date)

CITY OF MONROE

Certification Form 1-06



Intermediary Erosion Control Acceptance Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. The City of Monroe Erosion Control Number for this project is _____.
2. The following temporary measures are no longer required for sedimentation and erosion control for the development site and removal is requested:

Measure/ Plan ID	Location	Comment

3. Upon removal, the area is to be seeded and permanent stabilization provided within 30 calendar days; or for residential developments, temporary measures in accordance with the ESC Installation and Maintenance Agreement Form are to be installed and maintained.
4. Certification Form 1-07 Final Erosion Control Acceptance will be submitted after all associated construction activities are completed.

I, _____ of _____
 (Responsible Agent) (Development Company)
 hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

_____ (Developer Agent Signature) (Date) _____ (Contractor Agent Signature) (Date)

_____ (Engineer Signature) (Date)

Project Engineer Seal

ACCEPTANCE BY CITY OF MONROE:

_____ (Erosion Control Specialist Signature) (Date)

_____ (City Engineer) (Date)

CITY OF MONROE

Certification Form 1-07



Final Erosion Control Acceptance Form

Project Name _____ Date _____

Developer _____ Contractor _____

1. The City of Monroe Erosion Control Number for this project is _____
2. This project is substantially complete and the site is sufficiently stabilized to allow removal of erosion control measures.

I, _____ of _____
(Responsible Agent) (Development Company)
hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and was provided by me under oath.

(Developer Agent Signature) (Date)

(Contractor Agent Signature) (Date)

(Project Engineer Signature) (Date)

(Project Engineer SEAL)

ACCEPTANCE BY CITY OF MONROE:

(Erosion Control Specialist Signature) (Date)

(City Engineer) (Date)

07.09 NOTIFICATION REQUIREMENTS

- _____ All plan approvals required for this development must be completed and authorization received to proceed prior to the start of construction.
- _____ Contact Erosion Control Inspector to schedule a preconstruction meeting prior to any land disturbing activity. Third party testing is required for all utility and storm drain installation as well as roadway construction activities.
- _____ Install temporary erosion control devices per Erosion Control Certificate of Approval and approved plans. No land disturbing activity, except that which is required to install erosion control measures, may commence prior to approval by the City Engineer of Certification Form 1-01.
- _____ Contact the Erosion Control Inspector via email following installation of erosion control devices to schedule primary erosion control inspection.
- _____ Submit completed Certification Form 1-01 to the Erosion Control Specialist.
- _____ Contact Construction Inspector via email prior to beginning Sewer and/or Storm Drain Installation.
- _____ Prior to curb and gutter installation, contact the City of Monroe Energy Services Department (for gas and electric), Telephone, and Cable Companies for utility service installation and for locations to place sleeves/conduit under the proposed curb line.
- _____ Contact Construction Inspector 48 hours in advance to schedule a proof roll for curb. Contractor/Developer is responsible for scheduling third party geotechnical representative.
- _____ Contact construction inspector, via email, 48 hours in advance to schedule a proof roll for roadway subgrade. Contractor/Developer is responsible for scheduling third party geo tech representative.
- _____ Submit completed and notarized Certification Form 1-02 to Construction Inspector. Certification has provisions for sanitary sewer, storm drainage, water system, curb installation, and contacting utilities outside the contractor's scope of work. Submit all geotechnical reports not previously submitted with Certification Form 1-02.
- _____ Contact the Construction Inspector, via email, 48 hours in advance to schedule a proof roll for the constructed roadway stone base material. Contractor/Developer is responsible for scheduling third party geo tech representative.
- _____ Submit CCTV footage report and repair recommendations in accordance with the City's "Post-Installation Inspection of Storm Drainage Pipes and Culverts" policy.

_____ Contact the City of Monroe Engineering Department for the cost and to schedule the installation of street signs. Decorative Street Signs installed by the developer must meet the requirements in City of Monroe Standard Detail 02.01.12B

AFTER ALL ITEMS HAVE BEEN CHECKED, REFER TO STANDARD 07.11

07.10**FINAL INSPECTION AND ACCEPTANCE OF SUBDIVISION CONSTRUCTION**

1. No final inspection shall be scheduled until Certification 1-03 is approved by the City Engineer.
2. The Developer, his Agent and the Contractor are responsible for utilizing the Post-Construction Checklist to generate the punch list for this project. The City of Monroe may generate a punch list for additional items not contained in the Post-Construction Checklist as well as prepare the Certificate Form 1-05.
3. Any item checked on the Post-Construction Checklist that is found during the walk-through to be an evident misrepresentation shall incur a re-inspection fee in the amount of current policies per each occurrence.
4. The City of Monroe will not accept the street right-of-ways for maintenance until every item on the Post-Construction Checklist and any punch list item is completed to the Construction Inspector's satisfaction, and all outstanding balances have been paid in full.
5. The Developer must submit the As-Built Drawings as required in Standard 01.10, and the City of Monroe must approve the drawings prior to acceptance of the street right-of-ways for maintenance by the City.
6. The developer is responsible for coordinating the installation of all private and public underground utilities including but not limited to telephone, natural gas, cable, and electric prior to acceptance of streets, storm drainage, sewer and water by the City of Monroe. Developer shall be responsible for notifying and keeping the builders and buyers within the development apprised of the acceptance status of municipal services.
7. Final air test of public and private sewer mains and service laterals along with final certification will not be accepted until all utilities are installed. The developer has the option to expedite the acceptance process prior to the installation of all utilities by agreeing to perform closed circuit television (CCTV) inspection at the conclusion of construction and to repair problems identified by the CCTV to the sewer mains and service laterals. Acceptance of the sewer certification will enable the City of Monroe to accept final certification of water, streets, and storm drainage. All testing, air test or CCTV, shall be performed to the requirements as set forth by the Water Resources Department.
8. The developer and/or owner shall submit a written request for acceptance to the Engineering Department outlining the street names(s) and the length in miles.

9. The developer is required to provide a one year written warranty utilizing Warranty Form 07.15. The subdivider shall be responsible for completing all street repairs resulting from defects in materials and workmanship. A final inspection shall be completed by the Engineering Department prior to conclusion of the warranty period.

07.11 POST-CONSTRUCTION CHECKLIST

- All necessary erosion control measures are in place, sediment basins are clean and in working order.
- Streets, curb and gutter, and sidewalks are clear of debris and dirt.
- All storm drain lines are in proper alignment and have straight and positive grade.
- All storm drain lines are free of dirt, rocks, and debris.
- All pipes are cut flush with the inside wall of catch basins and other drainage structures.
- All inside walls of drainage structures are grouted and troweled smooth.
- All steps in drainage structures are in placed at proper location (if needed).
- All catch basins have the proper throat area as designed.
- All invert of drainage structures are troweled smooth and sloped toward the outlet pipe.
- All grates are the proper type for the slope (type "E", "F", or "G").
- All double boxes have either a steel I-beam or two 4" X 4" X $3/8$ " angle irons supporting the middle of the frames & grates.
- All ditches have proper grade and side slopes for positive drainage.
- All ditches have proper permanent erosion control measures in place.
- All offsite drainage maintains positive flow from the proposed subdivision to adjacent properties.
- All curb & gutter has proper alignment and grades specified by the approved plans.
- Any ponding in the flow line of the gutter is within tolerances per Standard 02.03.06.
- All accessibility ramps and sidewalks are constructed in accordance with the PROWAG current specifications.
- All roadway sections are constructed with proper cross-sectional slope.
- There is no prolonged ponding in roadway areas.
- All manholes, valves, and grates are set flush with pavement and follow the grade of the street.

- _____ All sidewalks are placed at proper alignment and grade with proper expansion joint material and contraction joints placed at the correct locations per the plans and/or Standard Detail 02.03.01.
- _____ Asphalt pavement is free of subgrade failure (settlement), and free of failures in the asphalt (cracking).
- _____ Any asphalt surface repairs are within tolerances per Standard 02.03.06 and the City of Monroe Street Cut Pavement Repair Standards
- _____ All broken and cracked curb, sidewalk, accessibility ramps, are within tolerances per Standard 02.03.06.
- _____ All shoulders are compacted and graded per the typical sections.
- _____ The shoulders are graded to proper slope, seeded, mulched, and free of large rocks and debris to the back of the utility easement.
- _____ The right-of-way is clear of all obstructions other than those permitted by existing policies.
- _____ Street trees, including root protection, are installed per the plans and viable.

1. This Checklist shall be considered the Punch List for the proposed subdivision development.
2. The City of Monroe does not generate a Punch List for the items contained within this Checklist.
3. The City of Monroe may generate a Punch List for additional items not listed on this Checklist as well as prepare Certificate Form 1-05.
4. The Developer and his Contractor shall have full quality control of the development, which includes these Punch List items.
5. After all items have been checked, submit completed and notarized Certification Form 1-03 to the construction inspector to schedule a final walk-through.
6. Any item checked that is found during the final walk-through to be an evident misrepresentation shall incur a re-inspection fee in the amount of current policies per each occurrence.
7. In the event a re-inspection is required, submit Certification Form 1-05 to the Construction Inspector. A re-inspection will not be scheduled until the required fees are paid in full.
8. After the City has approved all checked items in this standard and any punch list items that may have been generated, submit Certification Form 1-06 to the Construction Inspector for authorization to remove all Temporary Erosion Control Measures.

07.12 POST-CONSTRUCTION CHECKLIST FOR STORMWATER CONTROL
MEASURES (SCM)

- The SCM area including barrel, riser, and emergency spillway, if applicable are all free of debris, trash, and other obstructions.
- The SCM including pond, barrel, riser, embankment and emergency spillway, if applicable are free of holes, leaks, and slides.
- All bare earth areas have been properly stabilized.
- All forebay areas are free of sediment (if applicable).
- The SCM is at the permanent pool elevation and functioning without leakage (if applicable).
- All disturbed areas within the contributing drainage area and the immediate vicinity of the pond have been properly stabilized.
- All horizontal alignments and vertical elevations are in accordance with the approved plans.
- Pipe ends have stabilized outlet per approved plans.
- Filter surfaces are stable and are not clogged (if applicable).
- A copy of the soil report on soil media used was submitted and accepted (Applicable for Sand Filters, infiltration and Bioretention SCM's only).
- Sediment within the SCM has been removed (if SCM has been used as a sediment Basin throughout construction).
- The Engineer's Certification Form 1-04C and As-built survey from the Professional of Record are attached.
- All required vegetation for hydrologic zones has been installed per approved plan.
- Stormwater Maintenance Agreement, plat recording fee, and Site Sketch Map are attached.
- Certification Form 1-04B has been submitted and accepted.

1. This Checklist shall be considered the Punch List for the proposed SCM.
2. The City of Monroe does not generate a Punch List for the items contained within this Checklist.
3. The City of Monroe may generate a Punch List for items not listed on this Checklist.

4. The Developer and his Contractor shall have full quality control of the SCM construction, which includes these Punch List items.
5. Any item checked that is found during the final walk-through to be an evident misrepresentation shall incur a reinspection fee in the amount of current policies per each occurrence.
6. In the event a reinspection is required, all fees are required to be paid by the Developer and verified by the City prior to scheduling the reinspection.

07.13 AS-BUILT DRAWING CHECKLIST**1. AS-BUILT INFORMATION**

Submitted by _____

Phone # _____

CHECK ONE

- (Please check) Blue Line For Review Only
- Mylar or Vellum (Final)

Transmittal Date _____

2. GENERAL AS-BUILT INFORMATION

- _____ A. Copy of recorded plat or deed of easements, indicating easements and right of way
- _____ B. Boundary of tract by courses and distance with references
- _____ C. Tie to N.C. grid coordinate system
- _____ D. Vicinity map
- _____ E. Scale of drawings and bar scale
- _____ F. North arrow
- _____ G. Location of benchmark with M.S.L. elevations
- _____ H. Seal and signature of North Carolina registered P.E. or P.L.S. that generated as-built drawings on each sheet per NCBELS Board Rule – 21 NCAC 56 .1103
- _____ I. All easements identified and dimensioned
- _____ J. Statement designating drawings are "as-built" on each sheet
- _____ K. Digital copy of the Final As-built PDF signed and sealed
- _____ L. Summary Information File in an ASCII file format that contains the following items:
 - 1) Project Name,
 - 2) Name of Firm that prepared the data,
 - 3) Date the data was prepared,
 - 4) Specification of two or more survey control monuments established and/or used for the project
 - 5) A statement that indicates the horizontal and vertical datum of the control monuments.
- _____ M. AutoCad (DWG or DXF format) drawing files submitted in conformance with Section 01.11 AS-BUILT DRAWING REQUIREMENTS.

3. STREETS

- _____ A. Horizontal alignment with radii, P.C.'s, and P.T.'s of all curves
- _____ B. Vertical alignment with centerline grades, vertical curve lengths and station and elevation of all PVC's and PVT's and centerline profile
- _____ C. Dimensioned right of way and street widths
- _____ D. Pavement section
- _____ E. Typical cross section
- _____ F. Horizontal and vertical sight lines
- _____ G. Delineation of landscaping limits and materials

4. STORM DRAINAGE SYSTEMS

- _____ A. Electronic (PDF) copy of as-built plans of constructed structures, pipes, channels, and drainage easements.
- _____ B. Supplemental digital file for City records in AutoCAD format meeting the City's current standards
- _____ C. Cover Sheet with Professional Engineer and Registered Surveyor Certifications.
- _____ D. Site Plan or Grading Plan with all storm system structures identified to match the approved Plans.
- _____ E. 100- year flood plain boundary shown and labeled, if applicable.
- _____ F. Easement dedication for storm drainage extensions outside right of way shown with bearings and distances.
- _____ G. Pipe material per the approved plans.
- _____ H. Pipe size, slope, and length (design values text struck-through and constructed values labeled).
- _____ I. Structure rim elevations (center of grate at lip) and invert elevations.
- _____ J. Grate elevations for grated yard inlets, throat opening dimensions and inverts for "slab type" yard inlets. Provide sufficient spot elevations for finished grade around inlet to confirm that the required sump has been provided.
- _____ K. Size and depth of riprap dissipation pad
- _____ L. Minimum 2 feet of cover provided in Public Rights of way or provide verification that Class IV Reinforced Concrete Pipe or another approved pipe was installed.
- _____ M. Statement of stormwater velocity and discharge at all outlets.
- _____ N. Professionally sealed as-built pipe profiles with plotted hydraulic grade line (HGL) to confirm constructed system meets intent of the approved plans.
- _____ O. Provide ditch/channel cross-sections to define the ditch section and slope as shown by the approved plans, plotted to scale at 100 feet maximum intervals with minimum of 2 cross sections per ditch with adequate spot elevations. Label distances between spot elevations on the cross sections (Receiving one acre or more of drainage area),

_____ P. Show and label ditch/channel cross sections on the plan view.

Note: Any new or revised storm drainage systems or easements shown on as-built plans may require a review of revised subdivision plans, engineering calculations, and drainage area maps.

5. STORMWATER CONTROL MEASURES (SCM)

_____ A. Show and label the 100-year flood plain boundary, if applicable

_____ B. Pipe material, diameter, slope, and length (design values text struck-through and constructed values labeled)

_____ C. Show structure orifice and/or weir dimensions and elevation(s) (design and constructed)

_____ D. Show structure invert and top elevations (design and constructed)

_____ E. Dimensions and depth of riprap dissipation pad

_____ F. Show limits of permanent SCM(s) in Plan view

_____ G. Show and label limits of filter media (soil or sand), if applicable

_____ H. Water Quality Storage Volume (design and constructed volumes)

_____ I. Water Quantity Storage Volume (design and constructed volumes), if applicable

_____ J. Contour elevations at 1-foot intervals

_____ K. Permanent easement around SCM(s)

_____ L. Clean out and underdrain system, if applicable

_____ M. Show location and dimensions of all impervious coverage and show the total amount of impervious coverage built as a percentage of the total site in a summary table.

_____ N. Permanent pool elevation, spillway elevation, top of bank elevation, depth, and surface area.

City of Monroe Use Only

As-Builts Reviewed by _____ Date _____

CHECK ONE

Approved _____ Date _____

Returned _____ Date _____

**07.14 PERMIT TO OPEN CUT UTILITY TRENCHES CITY MAINTAINED
STREET RIGHT OF WAY**

PROJECT: _____

LOCATION: _____

STREET _____ MH _____ TO MH _____

SHEET _____ OF CONTRACT _____

REQUEST TO OPEN CUT IS DUE TO THE FOLLOWING: _____

BY APPLICATION, THE UNDERSIGNED CONTRACTOR AGREES TO ADHERE TO THE
SPECIAL PROVISIONS REQUIRED FOR ALL OPEN CUTS WITHIN CITY MAINTAINED
RIGHT OF WAY.

SIGNATURE OF CONTRACTOR

NAME OF CONTRACTOR: _____

ADDRESS: _____

CONTACT PERSON: _____

PHONE NO.: _____

RECOMMENDED BY PROJECT INSPECTOR: _____ DATE: _____

ENGINEERING DEPARTMENT APPROVAL

BY: _____ DATE: _____

FINAL ACCEPTANCE OF WORK

FINAL INSPECTION REQUESTED BY CONTRACTOR ON

DATE: _____

ACCEPTED BY PROJECT INSPECTOR

BY: _____

DATE: _____

ACCEPTED BY ENGINEERING DEPARTMENT

BY: _____

DATE: _____

_____CC: UTILITY DIRECTOR
 CONTRACTOR
 PROJECT ENGINEER

PERMIT TO OPEN CUT UTILITY TRENCHES
SPECIAL PROVISIONS

1. Contact the engineering department at 704-282-4515, at least 24 hours prior to construction. The engineering department must be notified in writing upon completion so an inspection can be made.
2. Traffic shall be maintained through the work area at all times. Only one lane may be closed at any given time unless otherwise approved.
3. Approval for road closure must be obtained by City of Monroe and/or NCDOT. City of Monroe approval requires a temporary use permit through the permit center.
4. Non-emergency union county communications shall be notified at 704-289-1591 24 hours in advance of a road closure by the contractor.
5. Proper traffic control devices, signs, etc. In accordance with the Manual on Uniform Traffic Control Devices shall be installed to ensure public safety.
6. All materials and workmanship shall conform to the City of Monroe Standard Specifications and Detail Manual. Trench backfill material shall meet NCDOT material requirements.
7. The area disturbed at each site shall be left in a neat and satisfactory condition.
8. No trenches are to be open overnight.
9. Contractor is responsible for providing adequate shoring in all trenches to prevent collapse during construction.
10. Manholes will be adjusted to correct elevation making them level with existing ground.
11. Open cut is to be patched in accordance with standard detail 02.06.01 and the City of Monroe street cut pavement repair standards.
12. Patching is to be performed the same day the cut is made. Plating per details 02.06.02 and 02.06.03 are required.
13. Pavement is to be saw cut. (cuts shall be perpendicular to EOP)
14. Pavement repair should match existing roadway elevation with no dips or raises.
15. Backfill of trenches within the road right of way shall be backfilled in layers not to exceed six (6) inches and thoroughly tamped (each successive layer).
16. (A) Unless otherwise directed by the City Engineering Department, all material from the bottom of the trench to within twelve (12) inches of the subgrade shall be 95% maximum density of standard proctor.
(B) All material within twelve (12) inches of the subgrade level shall be 100% maximum density of standard proctor.

THE CITY ENGINEERING DEPARTMENT RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO EMPLOY THE SERVICES OF A GEOTECHNICAL FIRM TO RUN DENSITY TESTS AND TO CERTIFY THE COMPACTION OF THE BACKFILL MATERIAL.

07.15 WARRANTY**North Carolina
Union County**

Date: _____

RE: _____
(Name of Subdivision)

That Whereas, the undersigned subdivider of _____ has requested
(Name of Subdivision)
approval by the City of Monroe of the final plat and/or acceptance by the City of any improvements in said subdivision;
and,

Whereas Chapter 02.02.11-6 of the City of Monroe Detail Manual provides that prior to said approval and/or acceptance of improvements the subdivider shall furnish to the City a written warranty against defects which shall guarantee the material and workmanship in said subdivision for a period of not less than **twelve (12)** months from the date of such acceptance;

Now, Therefore in consideration of the provisions of said section, which are incorporated herein by reference, and the granting of final plat approval and/or acceptance of improvements by the City, the undersigned subdivider does hereby guarantee to the City of Monroe, its successors and assigns, the material and workmanship of said subdivision against any defects for a period of twelve (12) months from the date of acceptance, which said date is set out herein below, provided however, that until successful performance is obtained as determined by the Subdivision Administrator, this warranty shall not expire.

(Date of Acceptance)_____
(Signature of Subdivider)_____
(Print Name of Subdivider)**North Carolina
Union County**

I, _____, a Notary Public in and aforesaid State and _____ County, do hereby certify that _____ subdivider(s), personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

WITNESS my Hand and Notarial Seal, this the _____ day of _____, 200____

My Commission Expires:

Notary Public

07.16 GUARANTEEING SUBDIVISION IMPROVEMENTS

In lieu of requiring the completion, installation, and inspection of all or any part of required subdivision improvements (as described in Section 156.60 of the City Code of Ordinances) prior to final plat approval, the City permits subdividers to deposit with the City cash, an irrevocable letter of credit, or other instrument readily convertible into cash at face value. Such financial guarantees shall be in an amount equal to 110% of the estimated cost of completing the required improvements. The duration of the guarantee shall be of a reasonable period to allow for completion and acceptance of the improvements. All subdivisions for which improvements have not been completed and accepted by the appropriate governmental agency at least thirty (30) days prior to the expiration of the guarantee shall be considered to be in default. The City may at this time use the financial guarantee to complete all necessary improvements unless an extension is granted.

The following is a discussion of the process required for acceptance by the City of a financial guarantee.

Step 1: The subdivider must submit to the Subdivision Administrator an itemized list showing cost estimates signed by his contractor for all required improvements not completed in the subdivision. *Note: As a minimum, for each work item the quantity of work along with the unit price and total cost must be provided. If this list is incomplete or doesn't provide sufficient detail for independent analysis, the request cannot be reviewed by the City.*

Step 2: The cost estimates are reviewed by the City's Engineering Department and Water Resources Department for accuracy and completeness. Comments are forwarded to the Subdivision Administrator.

Step 3: The subdivider is given a letter by the Subdivision Administrator showing the amount for which a letter of credit or other acceptable form of guarantee must be submitted.

Step 4: If a letter of credit or other acceptable legal instrument is submitted by the subdivider, the Subdivision Administrator, Finance Director, and City Attorney will review the instrument to determine its sufficiency. If it is found to be insufficient the subdivider will be notified and given the chance to resubmit a guarantee. If it is found to be sufficient, the subdivider will be notified that the final plat can be recorded as soon as recordable copies (2 mylars) have been filed with the Planning and Development Department and all fees are paid.

Step 5: The subdivider may request a one-time reduction in the financial guarantee not to exceed 50% of the original amount of the guarantee once at least 50% of the required improvements have been made. Steps 1, 2, and 3 of the process outlined above are repeated for this process.

All subdividers are encouraged to work closely with City staff to ensure that unexpected delays are prevented whenever possible. City staff may require as many as ten (10) working days to review a request for financial guarantee, so please submit your requests and required information as soon as possible. The actual time required for review and approval of the requests will vary depending upon staff workload and the completeness of the request.

07.17 SUBDIVISION BOND ESTIMATE FORM

Typical listing of items for roadway, storm drainage, water, and sewer improvements

DATE: _____ BY: _____

ITEM	QUANTITY	UNIT COST	AMOUNT
ROADWAY & STORM DRAINAGE CONSTRUCTION			
Mobilization	Lump Sum		
Clearing & Grubbing	Lump Sum		
Unclassified Excavation	C.Y.		
Borrow	C.Y.		
Curb & Gutter	L.F.		
CABC	Ton		
Asphalt Base B25.0	Ton		
Intermediate Course I19.0	Ton		
Asphalt Surface Course Type S9.5	Ton		
Asphalt Cement	Ton		
4" Concrete Walk	S.Y.		
6" Concrete Drive	S.Y.		
Accessible Ramp with Detectable Warning Strip	Each		
Drainage Structure	Each		
Drainage Structure Frame & Grate	Each		
Manholes	Each		
Manhole Frame & Cover	Each		
Adjusting Street Structures	Each		
Reinforced Concrete Pipe - _____ inch	L.F.		
Reinforced Concrete Pipe - _____ inch	L.F.		
Reinforced Concrete Pipe - _____ inch	L.F.		
Reinforced Concrete Pipe - _____ inch	L.F.		
Foundation Condition Material	Ton		
Flared End Section	Each		
End Wall/Head Wall	C.Y.		

ITEM	QUANTITY	UNIT COST	AMOUNT
Street Trees	Each		
Street Tree Root Protection (Both Sides)	LF		
Seeding	S.Y.		
Concrete Steps	C.Y.		
Reset Fence	L.F.		
Rip-Rap	S.Y.		
Pavement Sawing (Unclassified Excavation)	L.F.		
Tree Removal (Unclassified Excavation)	Lump Sum		
Other:			
SUB-TOTAL			

WATER MAIN CONSTRUCTION

Mobilization	Lump Sum		
Water Distribution Pipe			
12" Water Main	L.F.		
10" Water Main	L.F.		
8" Water Main	L.F.		
6" Water Main	L.F.		
2" Water Main	L.F.		
Gate Valves			
12"	Each		
10"	Each		
8"	Each		
6"	Each		
2"	Each		
Fire Hydrant Assemblies with 6" Gate Valve	Each		
Fire Hydrant Extensions 0 > 1	V.F.		
Fire Hydrant Extensions 1 <	V.F.		

ITEM	QUANTITY	UNIT COST	AMOUNT
Fittings			
Tapping Sleeve and Valve - 12"	Each		
Tapping Sleeve and Valve - 8"	Each		
Tapping Sleeve and Valve - 6"	Each		
3/4" Water Services			
Services on Same Side as Water Main	Each		
Services involving a Road Crossing	Each		
Testing of Water Mains	L.F.		
Other:			
SUB-TOTAL			
SEWER MAIN CONSTRUCTION			
Mobilization	Lump Sum		
Sanitary Sewer Pipe - 12" Sanitary Sewer Main			
0' - 6' Depth	L.F.		
6' - 8' Depth	L.F.		
8' - 10' Depth	L.F.		
10' - 12' Depth	L.F.		
12' and Deeper	L.F.		
Sanitary Sewer Pipe - 10" Sanitary Sewer Main			
0' - 6' Depth	L.F.		
6' - 8' Depth	L.F.		
8' - 10' Depth	L.F.		
10' - 12' Depth	L.F.		
12' and Deeper	L.F.		
Sanitary Sewer Pipe - 8" Sanitary Sewer Main			
0' - 6' Depth	L.F.		
6' - 8' Depth	L.F.		
8' - 10' Depth	L.F.		
10' - 12' Depth	L.F.		
12' and Deeper	L.F.		

ITEM	QUANTITY	UNIT COST	AMOUNT
Substituting Ductile Iron Pipe			
12" DIP	L.F.		
10" DIP	L.F.		
8" DIP	L.F.		
4' Diameter Manholes (0' - 6')			
Grouted in Place	Each		
Bolted Down Frame and Cover	Each		
Extra Depth Manholes	V.F.		
4" Sanitary Sewer Service Laterals	Each		
Connections to Existing Sanitary Sewer Main	Each		
Solid Rock Excavation	C.Y.		
Testing for Exfiltration	L.F.		
Other:			
Sub-Total Sanitary Sewer			
TOTAL SUBDIVISION BOND ESTIMATE			
(Roadway, Storm Drainage, Water and Sewer Improvements)			

07.18 CUSTOMER PETITION TO PERMANENTLY CLOSE A PUBLIC STREET OR PUBLIC ALLEY

Any citizen, business, institution, or other entity wishing to request that the City of Monroe abandon a publicly dedicated street or alley must submit the following information to the Engineering Department. City consideration will be based on the procedure outlined below.

1. Preliminary Review Requirements – complete the following:
 - A. Petitioner to acquire the signature of all adjoining property owners, along the street or alley that is requested abandoned, indicating the owners support to the street abandonment. (per table below)
 - B. Petitioner submits letter of request along with a drawing showing the area to be abandoned for review by staff, the appropriate council committee for review.
 - 1) Engineering Technician responds back to Petitioner with additional needs from the various committees.
 - 2) Regardless of the recommendation for or against the abandonment of the petitioned street, the petitioner may fulfill the requirements for City Council as outlined below. Any discrepancies between the original description and the finished plat for City Council may require additional review by the previous committees.
2. City Council Review Requirements – Complete the following
 - A. Petitioners submit the nonrefundable fee in accordance with the City of Monroe fee schedule.
 - B. A list of all current property owners adjoining the street or alley as shown on Union County tax records (including addresses and tax identification numbers) and a mailing label for each.
 - C. A written description of the street to be abandoned is submitted along with a map showing the area to be abandoned. Map may be a recorded subdivision plat or tax map with the area to be abandoned clearly defined. In cases where a new plat is required to define the area, plat must meet requirements of GS 47-30 mapping standards and prepared by a Registered Land Surveyor. The written description must be provided in digital format accepted by the City of Monroe.
 - D. Petition **will not** be placed on the City Council agenda without a map or completed plat, written description or payment of applicable fees.

TAX ID#	OWNER'S MAILING ADDRESS (including Company Name)	NAME (signers name printed legibly)	SIGNATURE	AGAINST CLOSING	FOR CLOSING

*i.e. an exhibit referencing existing city and/or state maintained intersections at both ends of the street to be closed, along with a tax parcel numbers, north arrow and drawing scale