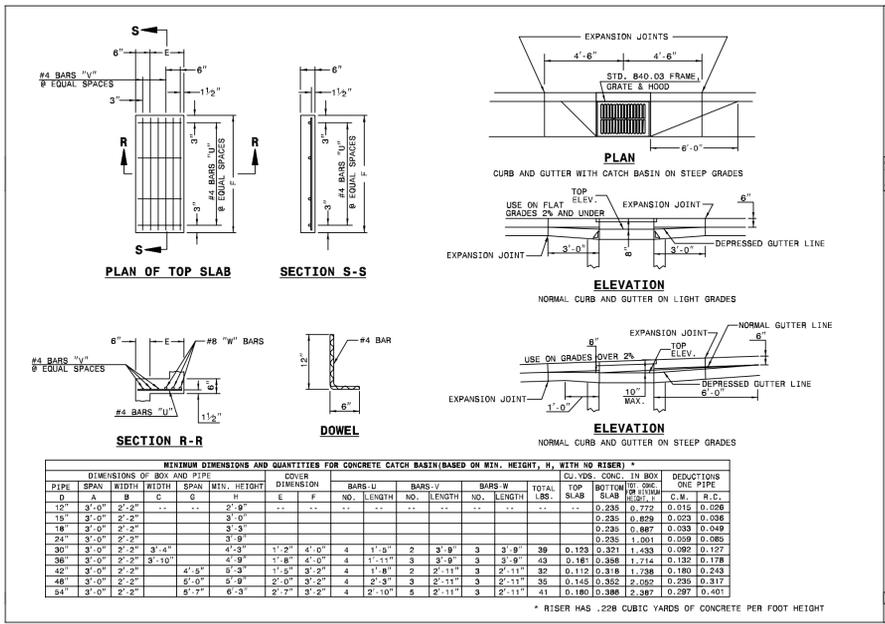


STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE CATCH BASIN**  
 12" THRU 54" PIPE

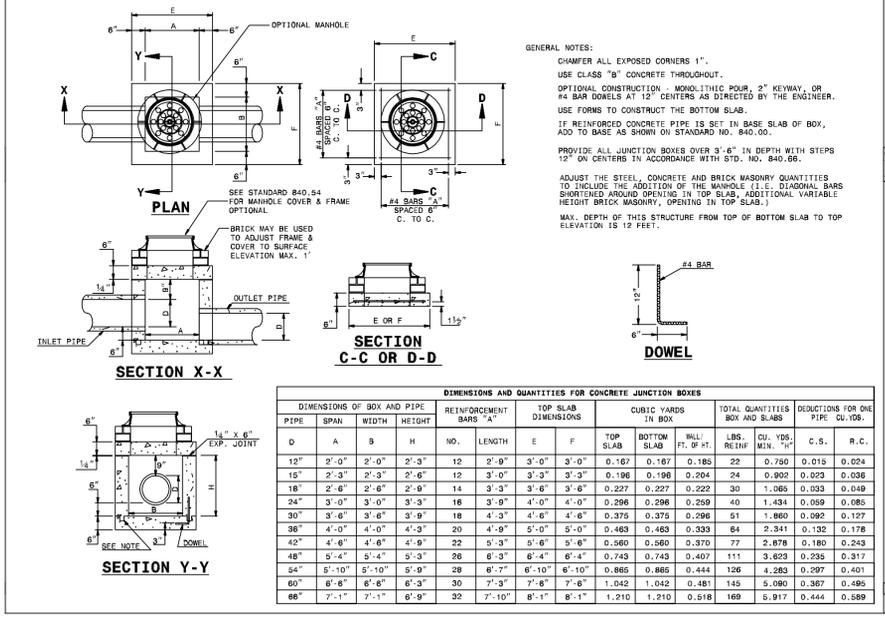
SHEET 1 OF 2  
**840.02**



STATE OF NORTH CAROLINA  
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 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE CATCH BASIN**  
 12" THRU 54" PIPE

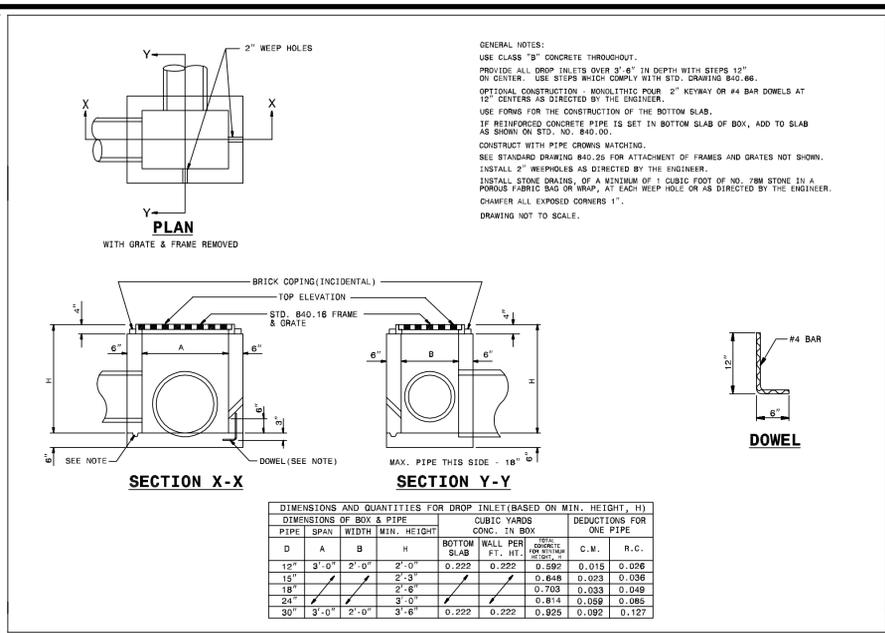
SHEET 2 OF 2  
**840.02**



STATE OF NORTH CAROLINA  
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 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE JUNCTION BOX**  
 (WITH OPTIONAL MANHOLE)  
 12" THRU 66" PIPE

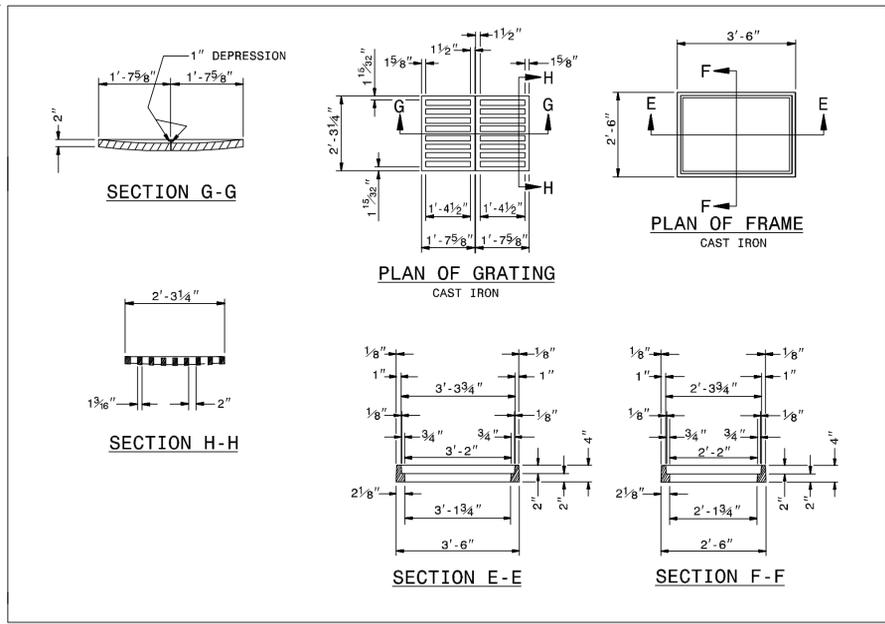
SHEET 1 OF 1  
**840.31**



STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE DROP INLET**  
 12" THRU 30" PIPE

SHEET 1 OF 1  
**840.14**



STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**DROP INLET FRAME AND GRATES**  
 FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1  
**840.16**

**Site Plan Notes**

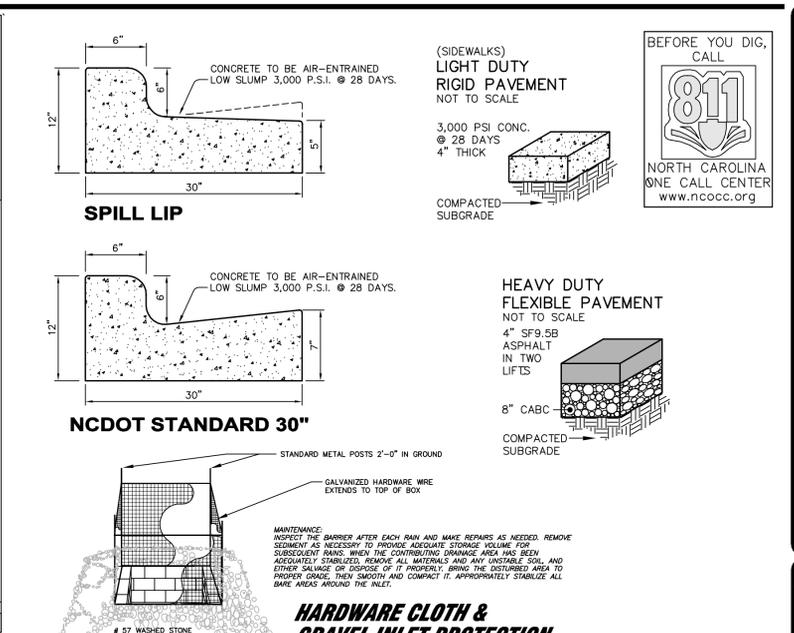
- Contractor to furnish all paint striping.
- All signs, pavement markings, and other traffic control devices are the Site Contractor's responsibility and shall conform to: Manual on Uniform Traffic Control Devices, current edition, as amended; ADA guidelines; and, ANSI A117.1.
- Contractor shall saw-cut to provide smooth transition at tie-in to existing edge of pavement when applicable.
- Do not pour any concrete before forms are inspected and approved by Engineer/Owner.
- Contractor shall comply with all pertinent provisions of the Manual of Accident Prevention in Construction" issued by AGC of America, Inc., and the Safety and Health Regulations for Construction issued by the U.S. Department of Labor.
- Storm drainage pipe is to be Class III reinforced concrete meeting ASTM C-76, latest revision.
- All handicap ramps are to meet "ADA Accessibility Guidelines for Buildings and Facilities" as detailed in Federal Register, Vol. 56, No. 144, dated July 26, 1991, rules and regulations activated January 26, 1992, latest revision. Also, refer to North Carolina State Building Code Volume I-C, Making Buildings and Facilities Accessible To and Usable by the Physically Handicapped", 1991, latest edition and ANSI A117.1, current edition, as amended.

**Drainage Notes**

- Boxes may be reinforced masonry, masonry, precast concrete or cast-in-place reinforced concrete.
- The maximum height of an un-reinforced masonry drainage structure with 8" walls shall be limited to 8' - 0" from invert of the outlet pipe to the top of the casting. Depths greater than 8' - 0" shall have walls 12" thick. Basins over 12' in total depth shall be designed by a NC Professional Engineer. 4" walls are not allowed on drainage structures.
- Steps are to be provided on all basins deeper than 42".
- Steps are to be PSI-PF as manufactured by M. A. Industries or an approved equal. Locate on non-pipe walls.
- Clay brick structures are not allowed.
- Concrete pipe is to be minimum Class III reinforced concrete meeting ASTM C-76, latest revision.
- Concrete building brick is to meet ASTM C-95, Grade N, Type 1.
- All iron castings are to be drilled and lagged to the drainage structure. The drainage structure as well is to be drilled.
- All cast-in-place or precast concrete drainage structures located in paved areas accessible to truck loadings to be designed to meet AASHTO HS 20-44 loading. See manufacturers details for wall, top and bottom thickness.
- All frames, grates, and hoods to receive a bituminous coating.

**General Notes:**

- The General Contractor is responsible for installing and maintaining all measures necessary to ensure that all sediment is contained on-site.
- Any relocation of existing utilities will be at the cost of the General Contractor.
- Contractor shall be responsible for all work zone traffic control in or adjacent to ROW. All signs, pavement markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition as amended.
- Plans are based on an actual field survey performed by STRICKLAND LAND SURVEYING, P.A.
- Reference horizontal datum is NAD 83, reference vertical datum is NAVD 83.
- Call NC One Call Center at (800) 632-4949 before digging to locate existing utilities.



STATE OF NORTH CAROLINA  
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 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**SPILL LIP**  
 AND  
**NCDOT STANDARD 30"**  
**CONCRETE DROP INLET**

SHEET 1 OF 1  
**840.14**

**Parking, Roadway and Building Subgrade Preparation**

- Subgrade on Precompacted Original Soil
  - Remove all the topsoil and all questionable organic soil and extend a minimum of four (4) feet beyond the outside edge of the pavement. Stockpile all topsoil that is free from trash and debris for re-use.
  - Precompact the exposed grade with a vibratory roller weighing a minimum of ten (10) tons (static load) or equal to stabilize the initial settlement of the top strata of the soil. The stability of the subgrade will be considered adequate when the total settlement after the last four (4) complete passes by the vibratory roller does not exceed 1/8". Any area that settles excessively and fails to stabilize under continued rolling should be further undercut and replaced with properly compacted select granular fill.
- Subgrade on Certified Compacted Fill
  - Prepare the site following the same procedures as outlined in items 1 and 2 above.
  - Using the same compaction equipment as outlined above, compact new fill soil in +/- 8-inch layers to a minimum 90-percent of the maximum dry density at its optimum moisture content in accordance with the Standard Proctor Method, ASTM Standard D 698-78 and field controlled in accordance with ASTM Standard D 2167-84, or equal. The top one (1) foot of the prepared fill subgrade should be compacted to 100-percent of the maximum dry density using the Standard Proctor Method.
  - The end of the fill should be terminated at the minimum slope of two (2) horizontal to one (1) vertical measured from three (3) feet beyond the outside edge of the pavement to the toe of the fill. The fill soil is to be select granular soil weighing a minimum of 110 pcf at its optimum moisture content.

**Concrete and Asphalt Testing**

Portland Cement Concrete Testing Requirements  
 Initial Test: The initial test (from first ready-mix truck) is to be taken after the second cubic yard is dispensed from the mixer and is to consist of the following:  
 1. One slump test  
 2. Three cylinders pulled, prepared and stored on-site for 24 hours  
 3. Temperature recording  
 Subsequent Tests: After the above tests are pulled from the initial truck, every 5th truck thereafter is to be tested in the same manner as noted above.

Asphalt Concrete Testing Requirements  
 Compaction: Testing for asphalt density is to follow NCDOT "Standard Specifications for Roads and Structures", Section 609-9, "Field Compaction Quality Management," latest revision.  
 Thickness: The minimum frequency of coring for thickness testing shall be on the basis of test sections consisting of not more than 1500 linear feet of lay down width, exclusive of intersections and irregular areas. The test sample is to be a 6-inch cored sample. The sample is to be numbered and logged for identification purposes.  
 Contractor's Quality Control System: Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-5, "Contractor's Quality Control System," latest revision.  
 Mixture and Job Mix Formula Adjustments: Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-4, "Field Verification of Mixture and Job Mix Formula Adjustments," latest revision.  
 General: All other applicable sections of Section 609 of the NCDOT "Standard Specifications for Roads and Structures" shall apply relating to Quality Control Plan, mix design, control limits, corrective action, equipment and measurement.  
 Testing Cost: Site Contractor is responsible for cost of testing.

**Gospel Notes**

The following notes do not represent the belief of any municipality, government organization, or client of Stocks Engineering. The detail is included to show the foundation of Stocks Engineering and its employees. Our prayer is that through the truth outlined below you will clearly see what it means to have a personal relationship with Christ.

**1. GOD'S LOVE**  
 God loves you and he created you to know him personally. He has a wonderful plan for your life. John 3:16 "For God so loved the world that he gave his only son, that whoever believes in him shall not perish but have eternal life." What prevents us from knowing God personally?  
 Romans 3:23 "For all have sinned and fall short of the glory of God."  
 Romans 6:23 "For the wages of sin is death (Spiritual separation from God)."

**2. OUR CONDITION**  
 We are spiritually separated from God, so we cannot know him personally and experience his love and plan.  
 Romans 7:14 "For we know that God is holy and people are sinful. A great gulf separates the two. The arrows illustrate people continually trying to reach God through our own efforts, but we inevitably fail."  
 There is only one way to bridge this gulf...

**3. GOD'S RESPONSE**  
 Jesus Christ is God's only provision for sin, through Him alone we can know God personally and experience his love and plan.  
 Romans 5:8 "But God demonstrated His love for us in that while we were still sinners, Christ died for us. John 14:6 Jesus answered, 'I am the way the Truth and the Life. No one comes to the Father except through me.'"  
 It is not enough just to know these truths...

**4. OUR RESPONSE**  
 We must individually receive Jesus Christ as Savior and Lord; only then can we know God personally and experience His love and plan.  
 Ephesians 2:8-9 "For it is by grace you have been saved, through faith - and this is not from yourselves, it is the gift of God - not by works, so no one can boast."  
 John 1:12 "Yet to all who received Him, to those who believed in His name, he gave the right to become children of God."  
 Which circle best represents your life?  
 "Which circle would you like to have represent your life?"  
 You can receive Christ - not one by faith in prayer.  
 "Lord Jesus, I need you. Thank you for dying on the cross for my sins. I open the door to my life and let you in. Thank you for forgiving my sins and giving me eternal life. Take control of the throne of my life. Make me the kind of person you want me to be."  
 If this prayer expresses the desire of your heart, then you can pray this prayer and Christ will come into your life as promised.  
 For more information on what it means to have a relationship with God, or if you have any questions or prayer requests please submit them at www.stocksengineering.com or call us at 252.459.8196

**STOCKS ENGINEERING**  
 801 EAST WASHINGTON STREET  
 NASHVILLE, N.C. 27856  
 WWW.STOCKSENGINEERING.COM

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 MICHAEL STOCKS  
 10/20/20

**NOTES & DETAILS**

REVISIONS

FILE NO. 2017-040  
 HORZ. SCALE: NONE  
 VERT. SCALE: NONE

**D-01**