

2016 / 2017 Streets Project:

W. Clark Street, Mustian Street,
W. Carlton Avenue, Anchor Court, Schooner Court
and Cooke Place
Street, Drainage and Water Improvements

Town of Kill Devil Hills
Dare County, North Carolina



North Carolina
One-Call Center Inc.

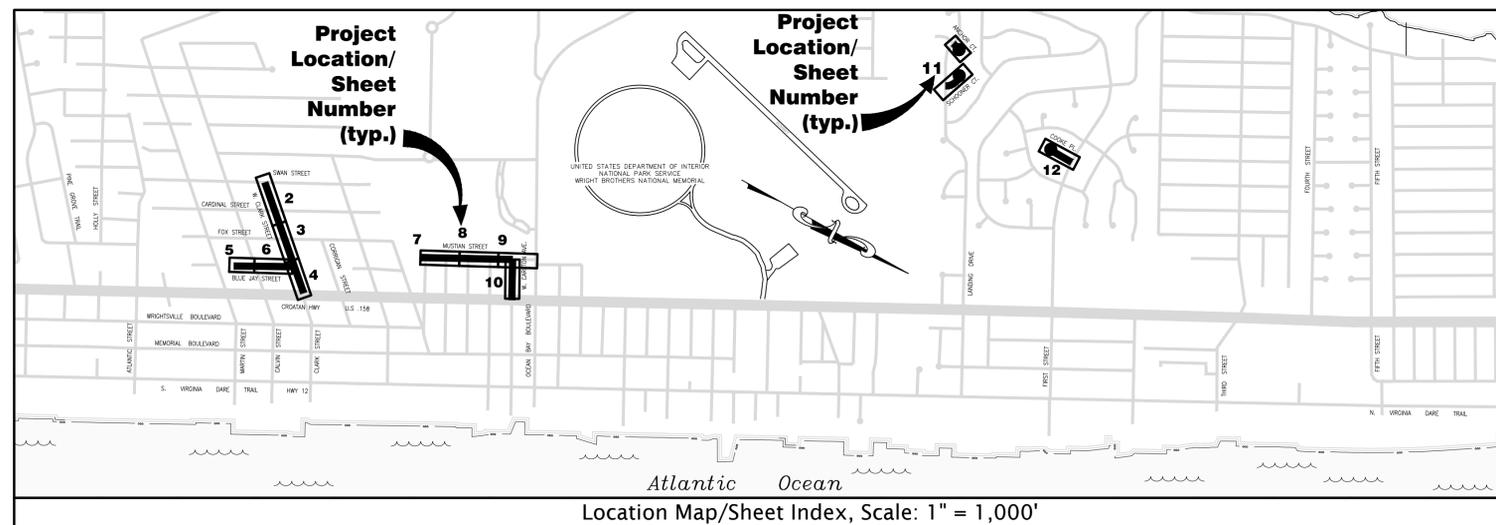


Know what's below
Call before you dig.

- UNDERGROUND UTILITIES
AS MARKED BY "UTILITY LOCATORS"
- CI COMMUNICATIONS (ORANGE PAINT)
 - EI ELECTRIC (RED PAINT)
 - GI GAS (YELLOW PAINT)
 - II IRRIGATION (PURPLE PAINT)
 - SI SEWER (GREEN PAINT)
 - WI WATER (BLUE PAINT)

Driveway Key

- Exposed Aggregate DW Denotes Driveways To Be Poured With Exposed Aggregate Finish.
- Asphalt DW Denotes Driveways To Be Replaced With Asphalt.
- Special Finish DW Denotes Driveways With Special Finish. Replacement By Homeowner Unless Otherwise Directed.
- 1/2 Denotes Left & Right Halves Of Driveways To Be Poured Separately To Assure Access. (Others may be required to be done in halves based on field determination by Town.)



DATUM NOTE:
Vertical Datum Reference:
North American Vertical Datum of 1988 (NAVD 88)

Horizontal Datum Reference:
North Carolina Coordinate System of 1983
NAD 1983 (2001 HARN)

TOPOGRAPHICAL SURVEY INFORMATION:

THE topographical information was prepared by:
American Engineering
448 Viking Drive, Suite 170
Virginia Beach, Virginia 23452
Phone: (757)468-6800
Fax: (757)468-4966

TOPOGRAPHICAL SURVEY INFORMATION:

The plan does not guarantee the existence, size, type, location, alignment or depth of any or all underground utilities or other facilities. Where surface features (manholes, catch basins, valves, etc.) are unavailable or inconclusive, information shown may be from utility owners records and/or electric line tracing, the reliability of which is uncertain. The contractor shall perform prior to installing affected pipes, whatever test evacuation or other investigation is necessary to verify locations and clearance and shall report immediately and discrepancies to American Engineering, at 1-757-468-6800.

AN APPROVED SET OF THESE PLANS SHALL
BE KEPT ON SITE DURING CONSTRUCTION

Sheet Index

Date	Sheet #	Title	Station to Station
09 / 13 / 2016	01	Cover Sheet	
Plan and Profile Sheets			
09 / 13 / 2016	02	Plan & Profile W. Clark Street	10 + 00 - 14 + 50
09 / 13 / 2016	03	Plan & Profile W. Clark Street	14 + 50 - 20 + 00
09 / 13 / 2016	04	Plan & Profile W. Clark Street	20 + 00 - 24 + 01
09 / 13 / 2016	05	Plan & Profile Blue Jay Street	07+ 00 - 10 + 50
09 / 13 / 2016	06	Plan & Profile Blue Jay Street	10+ 50 - 13 + 50
09 / 13 / 2016	07	Plan & Profile Mustian Street	10 + 00 - 14 + 50
09 / 13 / 2016	08	Plan & Profile Mustian Street	14 + 50 - 19 + 50
09 / 13 / 2016	09	Plan & Profile Mustian Street	19 + 50 - 24 + 40
09 / 13 / 2016	10	Plan & Profile W. Carlton Avenue	10 + 00 - 13 + 75
09 / 13 / 2016	11	Plan & Profile Anchor & Schooner Courts	
09 / 13 / 2016	12	Plan & Profile Cooke Place	
Detail Sheets			
09 / 13 / 2016	D1	General Notes and Details	
09 / 13 / 2016	D2	Details	
09 / 13 / 2016	D3	General Stormwater Details	
09 / 13 / 2016	D4	General Stormwater Details	
09 / 13 / 2016	ES1	General Details and Erosion & Sediment Control Notes	

#	Date	Post-Approval Revisions

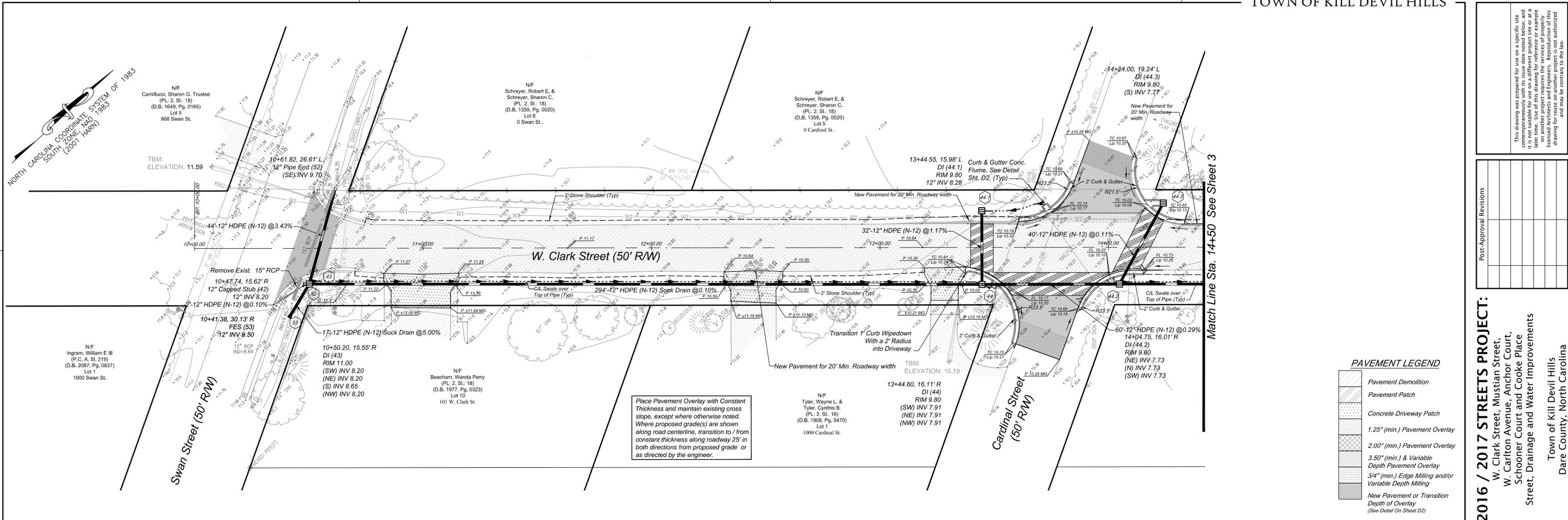


2016 / 2017 Streets Project:

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
448 Viking Drive | Suite 170
Virginia Beach, Virginia 23452 (757) 468 - 6800

Project #	V16020
Checked by	WPB
Drawn by	MGH
Issue Date	09 / 13 / 2016
Scale	Not to Scale
SwAm Certification	7155559
VA Firm #	0405001994

Sheet Name	COVER SHEET
Sheet #	01

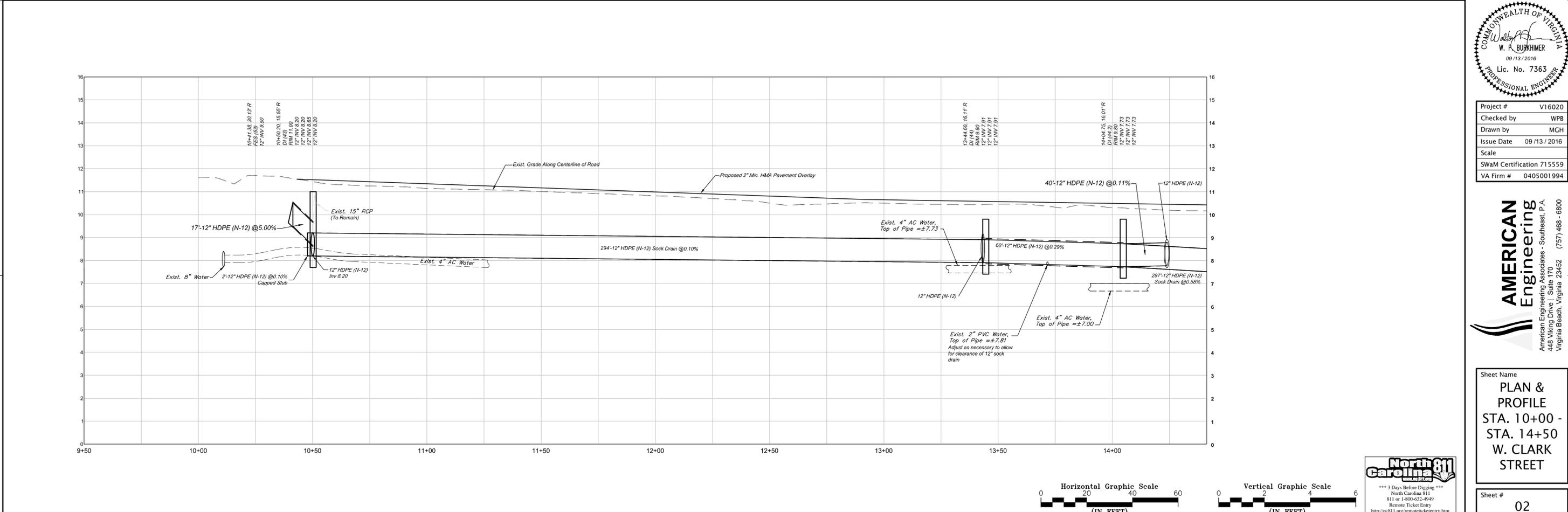


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STAPLE - FREE ZONE

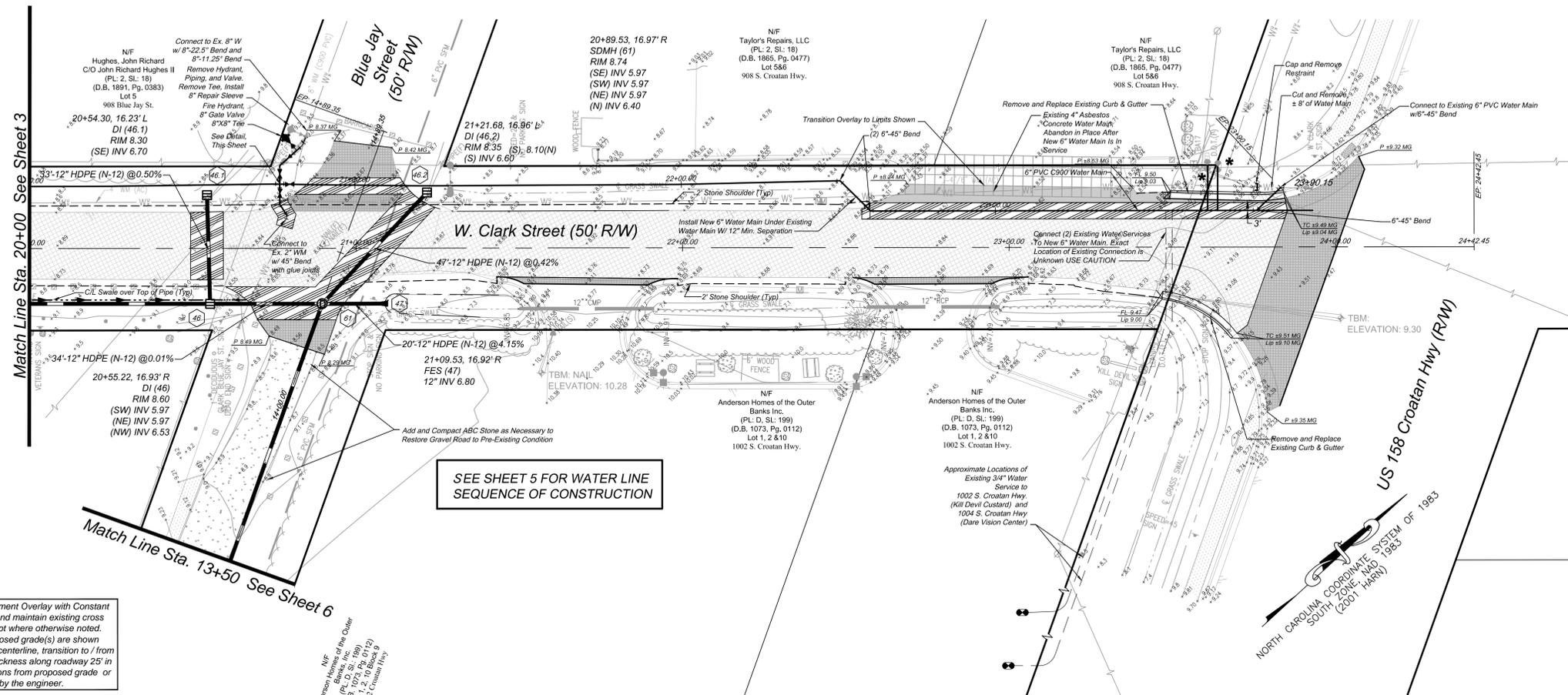


Project #	V16020
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Issue Date	09/13/2016
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VA Firm #	0405001994



Sheet Name
PLAN & PROFILE
 STA. 10+00 - STA. 14+50
 W. CLARK STREET

Sheet #
02

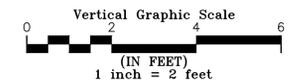
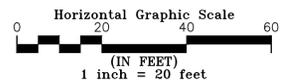
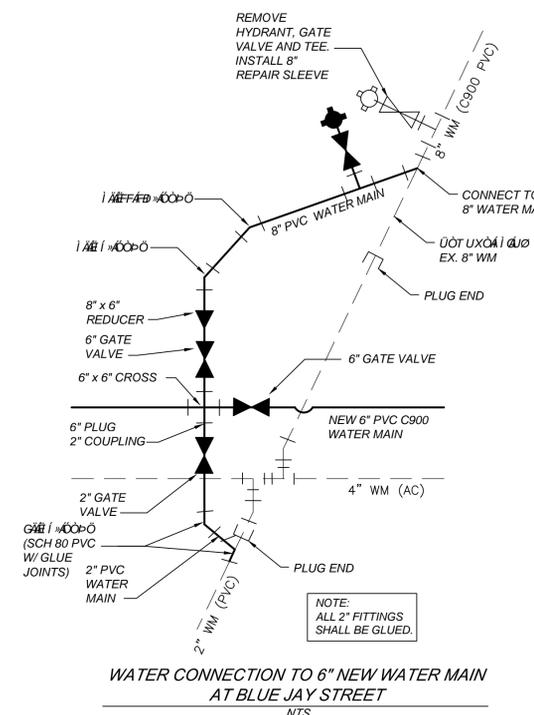
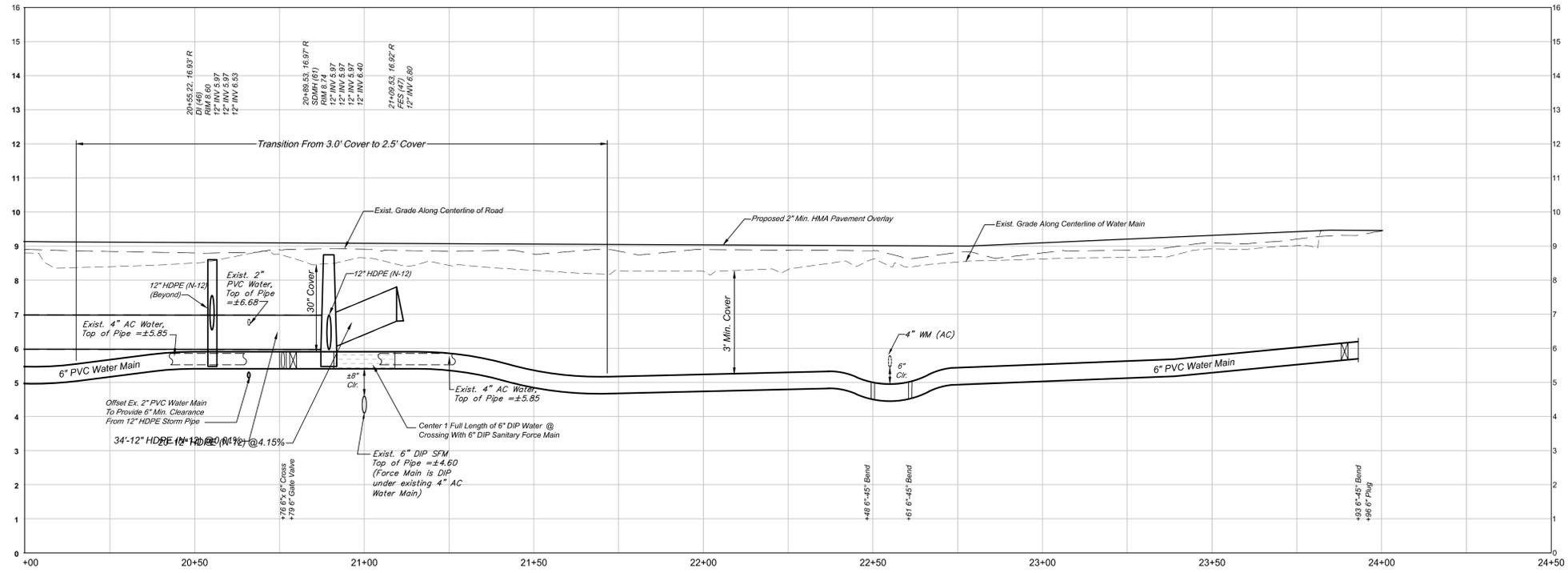


SEE SHEET 5 FOR WATER LINE SEQUENCE OF CONSTRUCTION

PAVEMENT LEGEND

[Symbol]	Pavement Demolition
[Symbol]	Pavement Patch
[Symbol]	Concrete Driveway Patch
[Symbol]	1.25" (min.) Pavement Overlay
[Symbol]	2.00" (min.) Pavement Overlay
[Symbol]	3.50" (min.) & Variable Depth Pavement Overlay
[Symbol]	3/4" (min.) Edge Milling and/or Variable Depth Milling
[Symbol]	New Pavement or Transition Depth of Overlay (See Detail On Sheet D2)

* Replace existing water service tubing only and service tube up to meter. (If applicable) Coordinate routing of new service tubing with KDH Water Superintendent, 1-252-216-7295.



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Sheet Name
PLAN & PROFILE
 STA. 20+00 -
 STA. 24+01
 W. CLARK
 STREET

Sheet #
04

A Uj b Gyei YbWw'cZ7 cbgfrf WfcbzHjY'rc 'Yl Jgfrb[' * I ' A Uj b / ' bghU' Ujcb'cZ' I DJ7 KA ZGH5 & Z - to 16+85:

- Issue proper notice, then shut down ex. 4" WM, STA 16+85 to 23+95.
- Cut and remove section of ex. 4" WM STA 23+85+ - 23+93+.
- Cap and provide restraint for E end of ex. 4" AC WM.
- Return ex. 4" AC WM to service.
- Remove ex. 6" x 4" reducer.
- Tie new 6" PVC WM to ex. 6" PVC or DIP WM just W of ex. 6" GV.
- Extend new 6" PVC WM westward per plan.
- Follow Sequences of Construction at other Intersections and Tie-ins as noted.
- When all 6" PVC WM is installed, use ex. 6" GV at STA 23+95 as source for flushing.
- Flush, pressure-test, chlorinate, bacteriologically test 6" line.
- ...permanently open 6" GV at 23+95 and place line in service.
- Transfer all services from old 4" AC WM to new 6" PVC WM.

Sequence of Construction, Clark/Blue Jay Intersection:

- Install new 6" PVC per Main Sequence of Construction.
- New 6" PVC WM passes beneath ex. 2" WM and over ex. 6" SFM per profile.
- At STA 20+76, install 6" cross, (2) 6" GV's, 8" x 6" reducer, 6" plug tapped w/2" threaded tap.
- Provide 2" brass nipple w/temp. cap S and 8" nipple w/temp. cap N.
- When all steps of Main Sequence of Construction are complete.
- Issue proper notice, then shut down ex. 8" main N and 2" main S.
- Offset ex. 2" PVC WM at crossing with 12" HDPE (N-12) to provide min. 12" separation between 12" HDPE and 2" PVC WM.
- Connect new 2" brass nipple to ex. 2" PVC S.
 - with 2" thread x 2" PVC compression coupling, short 2" PVC nipple...
 - and 2" repair coupling.
 - Plug end of remnant 2" PVC S with "FastPlug" or equal.
- Remove ±8' of ex. 8" PVC C900 WM. Connect new 8" PVC WM to ex. 8" C900 PVC WM with 45° bend.
 - Install 8" C900 PVC WM, 8"x6" tee, 11-1/4" bend and 45° bend. Connect to new 45° bend and 8"x6" reducer.
 - Plug end of remnant ex. 8" C900 PVC WM with "FastPlug" or equal.
 - Provide 6" GV and new FH on branch of tee.
- Remove ex. FH assembly.
- Return 2" WM to S and 8" WM to N to service.

Gyei YbWw'cZ7 cbgfrf Wfcbz7' Uf # cl 'bhfgYwfc' UbX'HY'rc 'Yl Jgfrb[' (I DJ7' A Uj b.

- Install new 6" PVC per Main Sequence of Construction.
- New 6" PVC passes beneath ex. 2" WM per profile.
- At STA 17+29, install 6" cross with 6" plugs tapped w/2" threaded taps N and S, 6" GV E, (2) 2" BVs, 6"x6" tee and 6"x4" reducer and ±5' of 4" PVC.
- Provide temp. 4" cap on end of new 4" PVC W.
- Provide (2) 2" brass nipple w/temp. cap S and N.
- When all steps of Main Sequence of Construction are complete.
- Issue proper notice, then shut down ex. 2" mains N and S.
- Remove ±3' of ex 2" PVC mains N and S.
- Connect new 2" brass nipple to ex. 2" PVC N and S.
 - with 2" thread x 2" PVC compression coupling, short 2" PVC nipple and 2" repair coupling.
 - Plug end of remnants 2" PVC N and S with "FastPlug" or equal.
 - Connect to existing 2" BVs N and S.
- Install 6" GV and Hydrant at 6"x6" tee.
- Use Hydrant as outlet for flushing and testing as described in Main Sequence of Construction.
- Close valve at STA 23+95.
- Close valve at STA 16+85.
- Remove temp. 4" cap, install remainder of 4" PVC, (2) 4" 45° bends and connect to existing 4" GV.
- Open all valves.

Notes:

- Contractor may present alternate or modified Sequences of Construction for consideration by the Town, which may be approved if the Town finds them safe, effective and appropriate. No additional compensation will be considered if such alternate or modified methods are not approved.
- All 2" PVC fittings shall be SCH 80 / Glue Joints.
- Where valves on 2" PVC water lines are called for (i. e., 2" BV), they shall be 2" Ball Valve Curb Stops (Ford B11-777-NL).

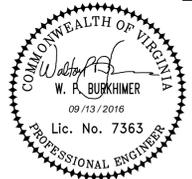
PAVEMENT LEGEND

- Pavement Demolition
- Pavement Patch
- Concrete Driveway Patch
- 1.25" (min.) Pavement Overlay
- 2.00" (min.) Pavement Overlay
- 3.50" (min.) & Variable Depth Pavement Overlay
- 3/4" (min.) Edge Milling and/or Variable Depth Milling
- New Pavement or Transition Depth of Overlay (See Detail On Sheet D2)

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Dare County, North Carolina

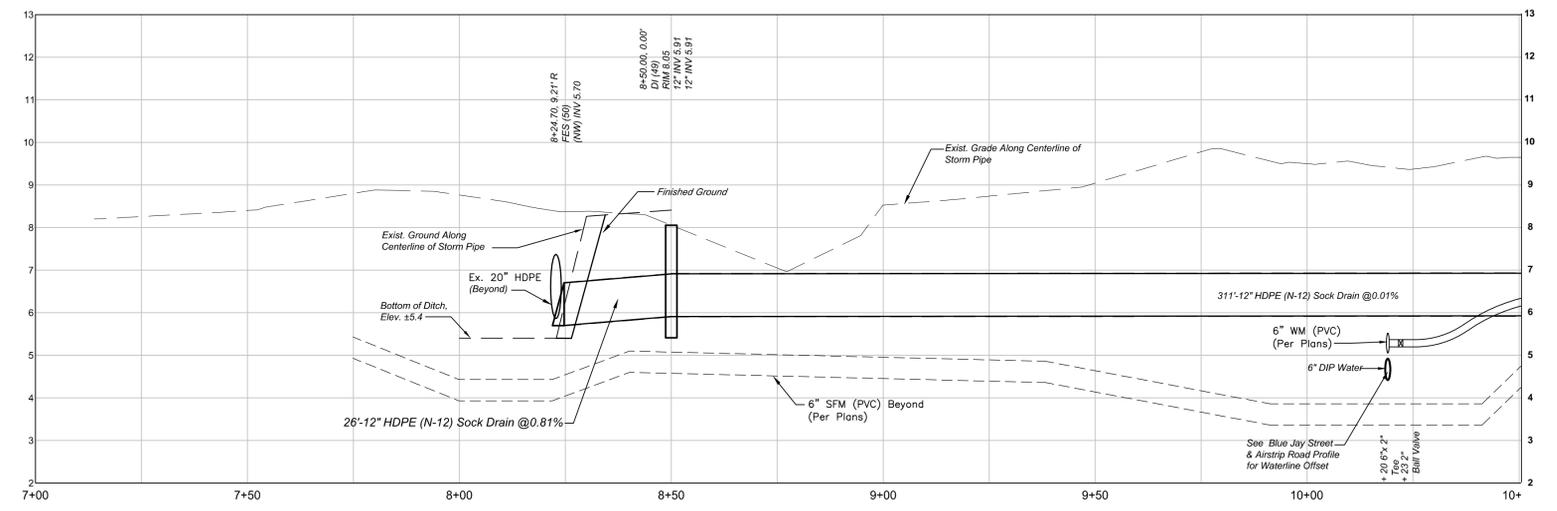
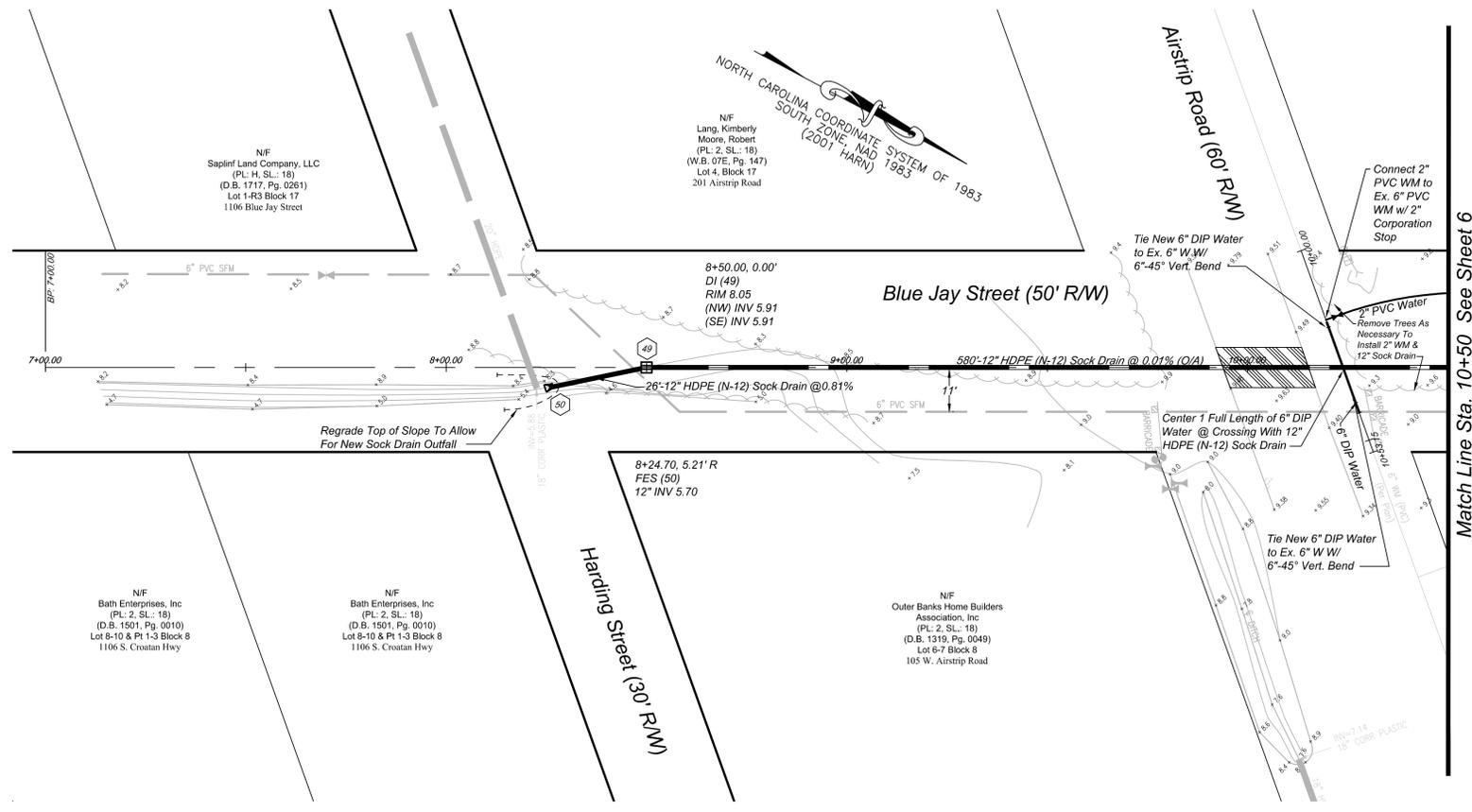


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VA Firm #	0405001994

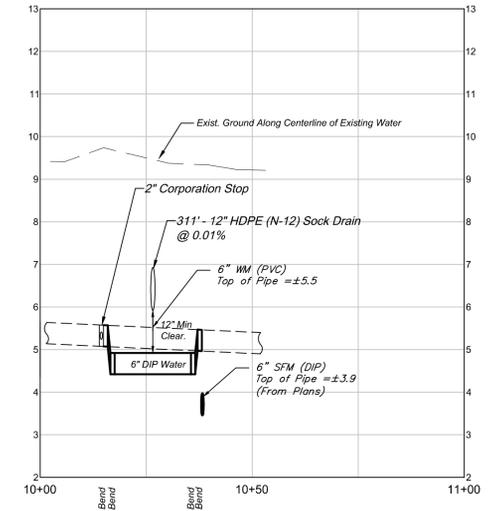
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American Engineering Associates - Southeast, P.A.
448 Viking Drive | Suite 170
Virginia Beach, Virginia 23462 (757) 468-6800

Sheet Name
PLAN & PROFILE
STA. 7+00 - STA. 10+50
BLUE JAY STREET

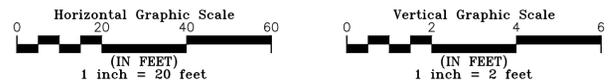
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05



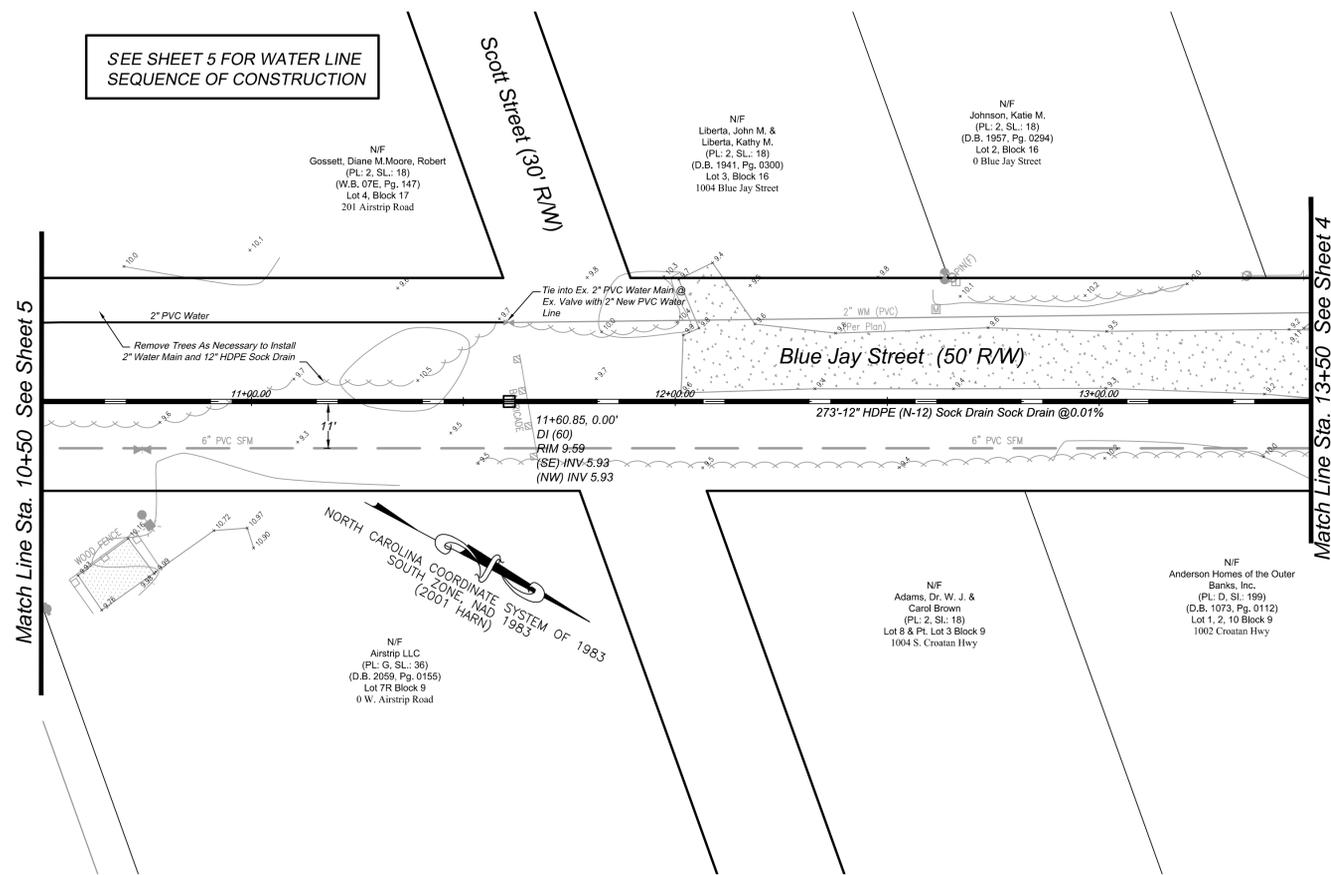
Blue Jay Street Sock Drain Profile



Blue Jay Street and Airstrip Road Waterline Profile



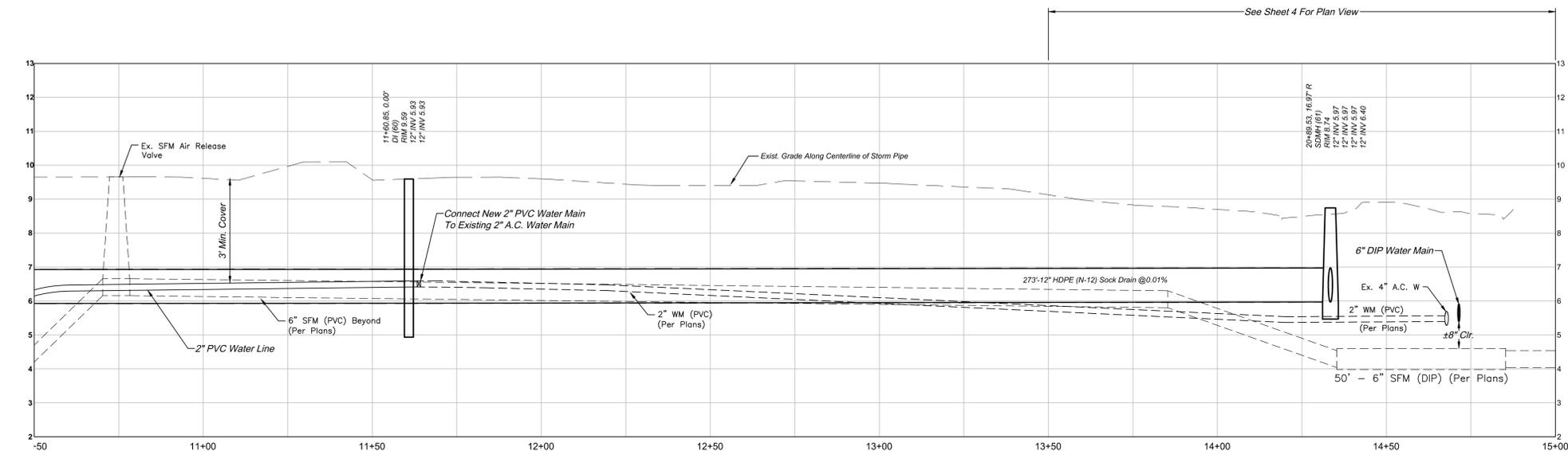
STABLE - FREE ZONE



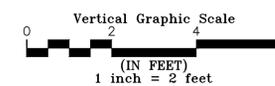
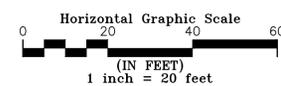
PAVEMENT LEGEND

	Pavement Demolition
	Pavement Patch
	Concrete Driveway Patch
	New Pavement or Transition

(See Detail On Sheet D2)



Blue Jay Street Sock Drain Profile



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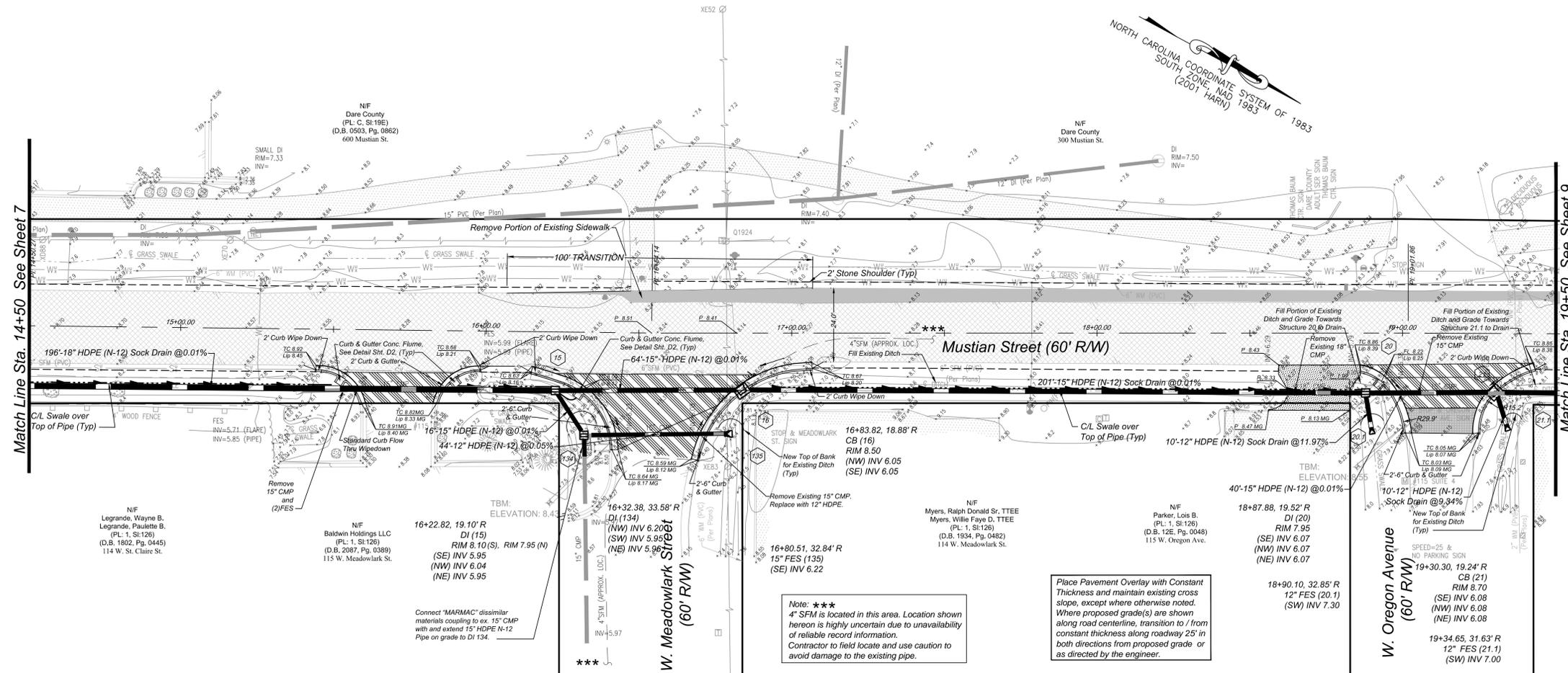
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Sheet Name
PLAN & PROFILE
 STA. 10+50 - STA. 14+00
BLUE JAY STREET

Sheet #
06

STABLE - FREE ZONE



PAVEMENT LEGEND

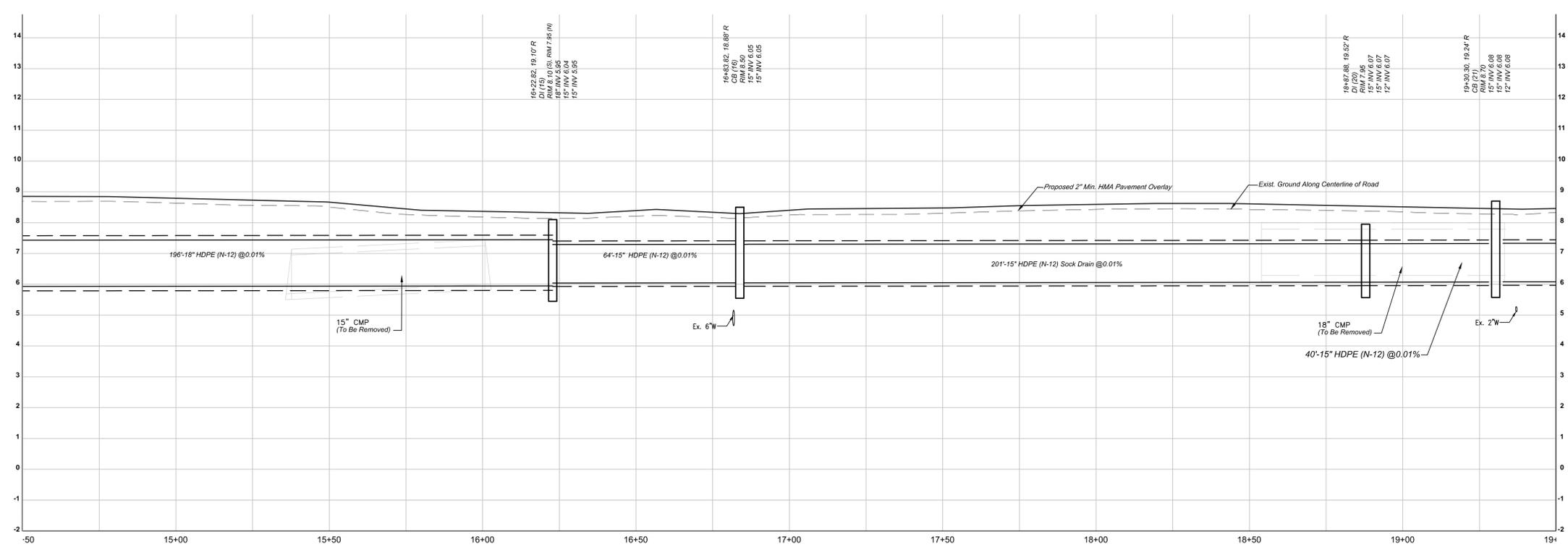
- Pavement Demolition
- Pavement Patch
- Concrete Driveway Patch
- 1.25" (min.) Pavement Overlay
- 2.00" (min.) Pavement Overlay
- 3.50" (min.) & Variable Depth Pavement Overlay
- 3/4" (min.) Edge Milling and/or Variable Depth Milling
- New Pavement or Transition Depth of Overlay (See Detail On Sheet D2)

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STAPLE - FREE ZONE

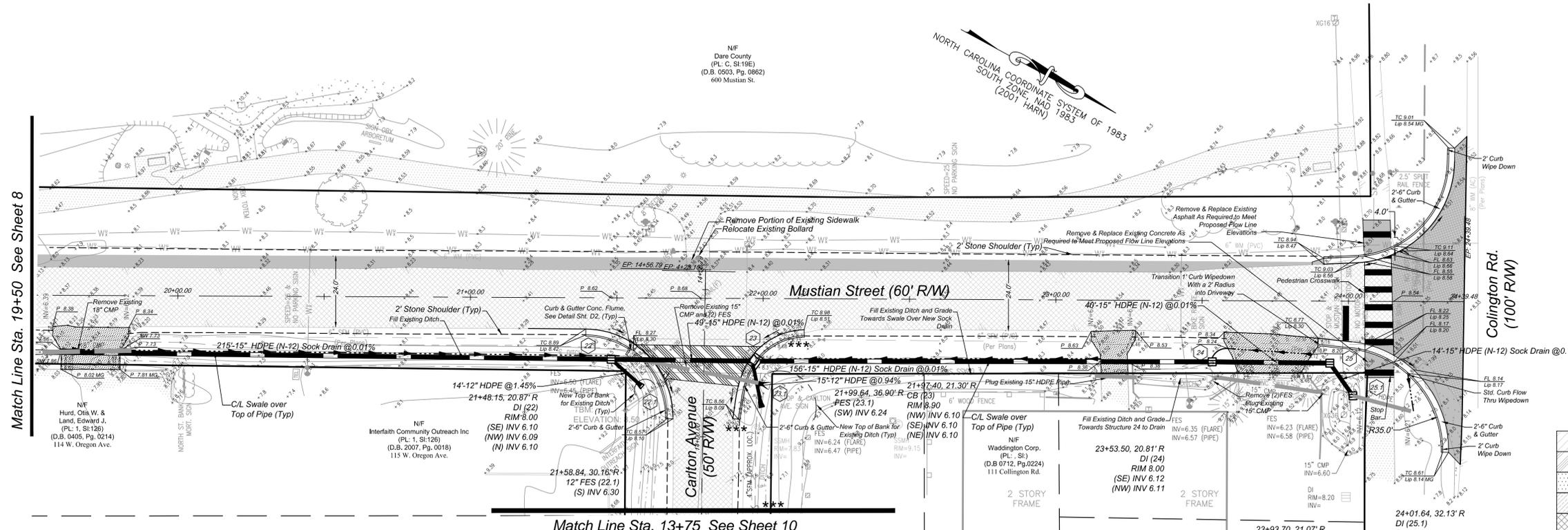


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Sheet Name
PLAN & PROFILE
STA. 14+50 - STA. 19+50
MUSTIAN STREET

Sheet #
08



Match Line Sta. 19+50 See Sheet 8

Match Line Sta. 13+75 See Sheet 10

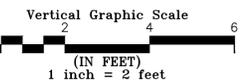
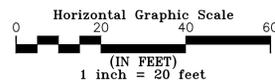
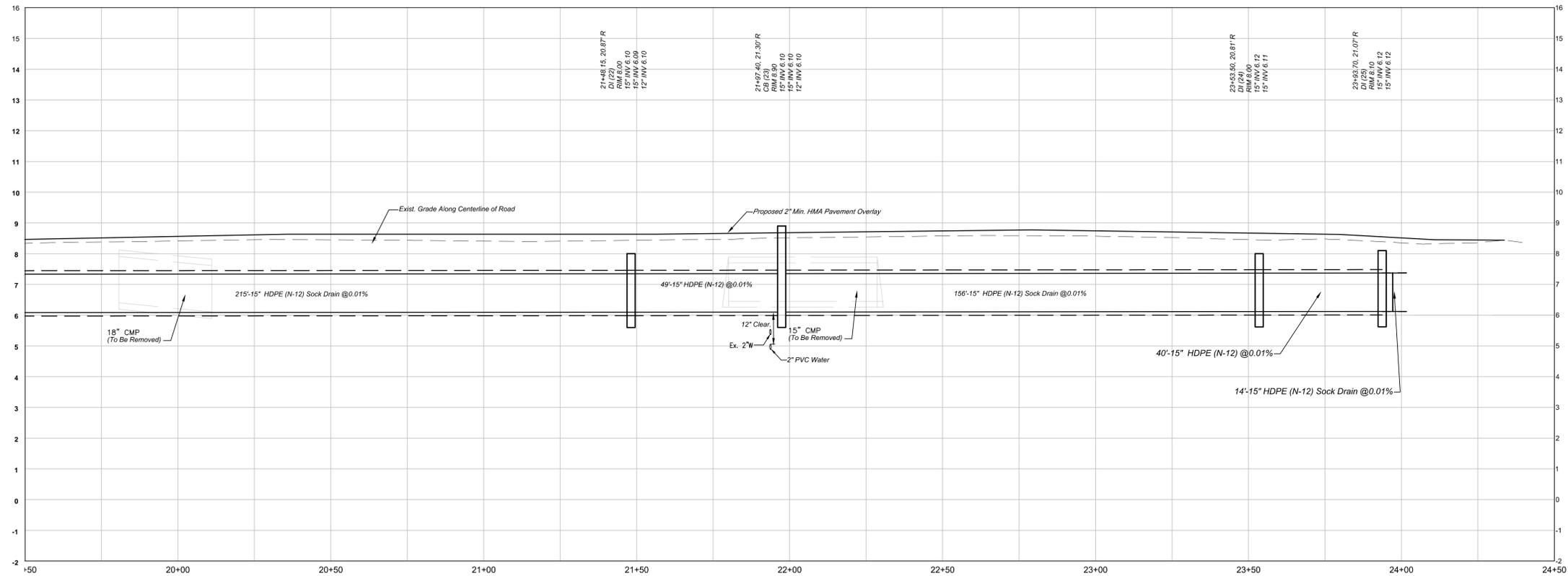
Place Pavement Overlay with Constant Thickness and maintain existing cross slope, except where otherwise noted. Where proposed grade(s) are shown along road centerline, transition to / from constant thickness along roadway 25' in both directions from proposed grade or as directed by the engineer.

Note: ***
4" SFM is located in this area. Location shown hereon is highly uncertain due to unavailability of reliable record information. Contractor to field locate and use caution to avoid damage to the existing pipe.

PAVEMENT LEGEND

	Pavement Demolition
	Pavement Patch
	Concrete Driveway Patch
	1.25" (min.) Pavement Overlay
	2.00" (min.) Pavement Overlay
	3.50" (min.) & Variable Depth Pavement Overlay
	3/4" (min.) Edge Milling and/or Variable Depth Milling
	New Pavement or Transition Depth of Overlay (See Detail On Sheet D2)

STAPLE - FREE ZONE



*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-452-4949
Remote Ticket Entry
<http://nc811.org/remoticketentry.htm>

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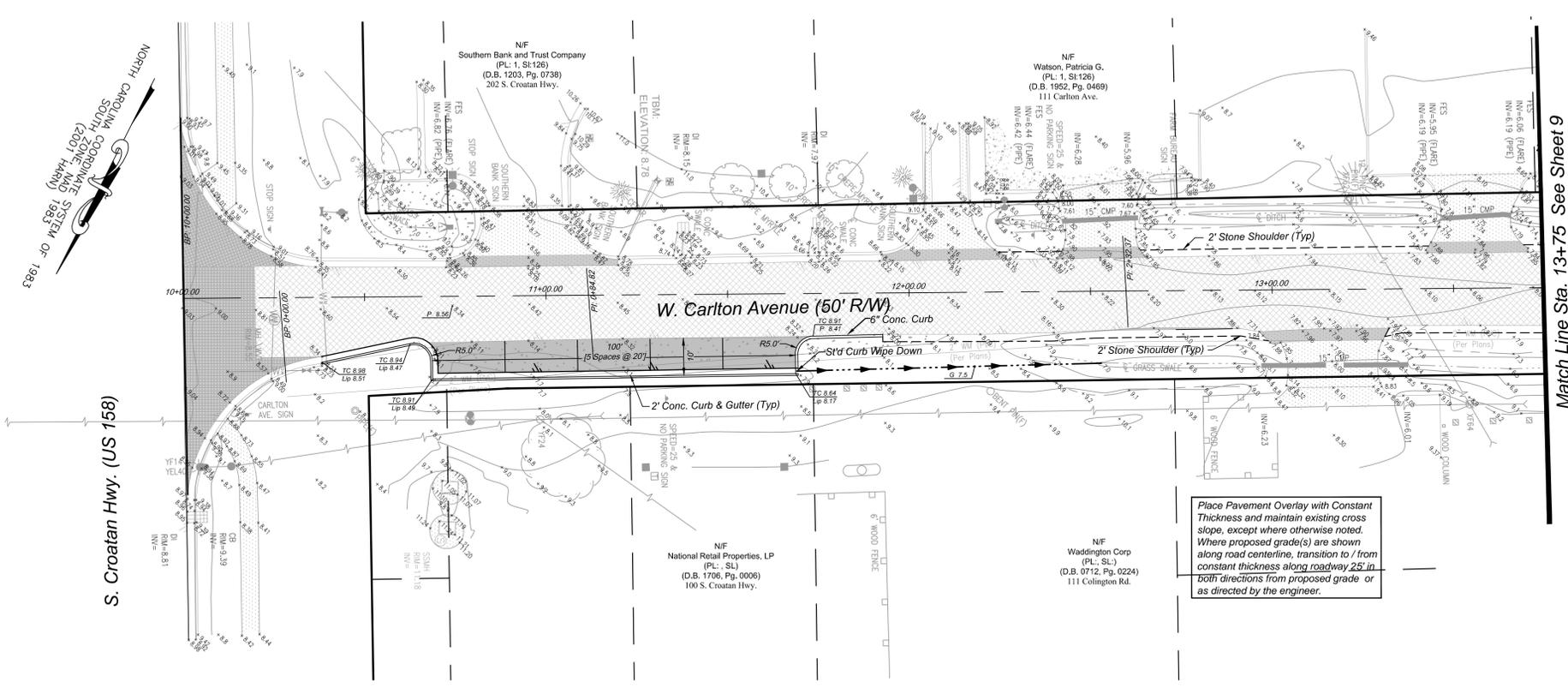


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Sheet Name
PLAN & PROFILE
STA. 19+50 - STA. 24+40
MUSTIAN STREET

Sheet #
09



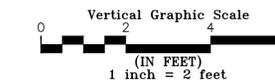
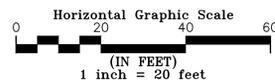
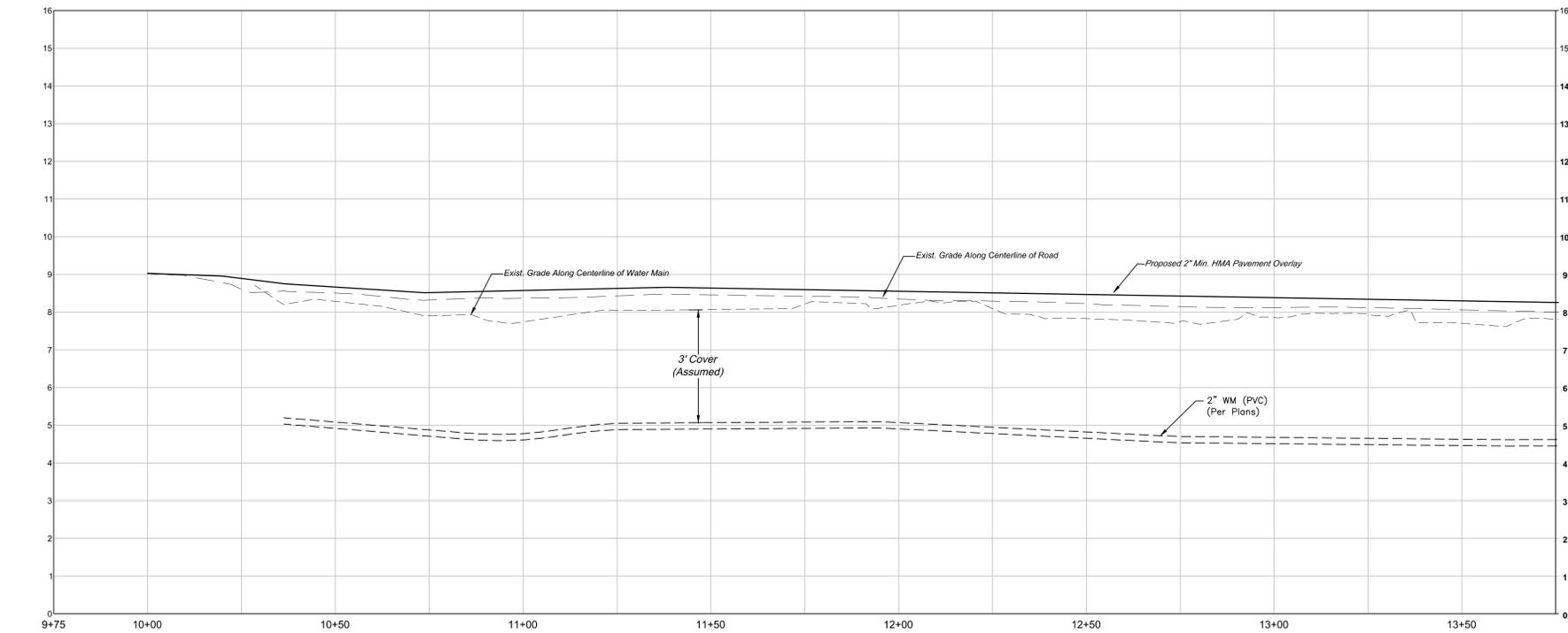
Match Line Sta. 13+75 See Sheet 9

Place Pavement Overlay with Constant Thickness and maintain existing cross slope, except where otherwise noted. Where proposed grade(s) are shown along road centerline, transition to / from constant thickness along roadway 25' in both directions from proposed grade or as directed by the engineer.

PAVEMENT LEGEND

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	Pavement Patch
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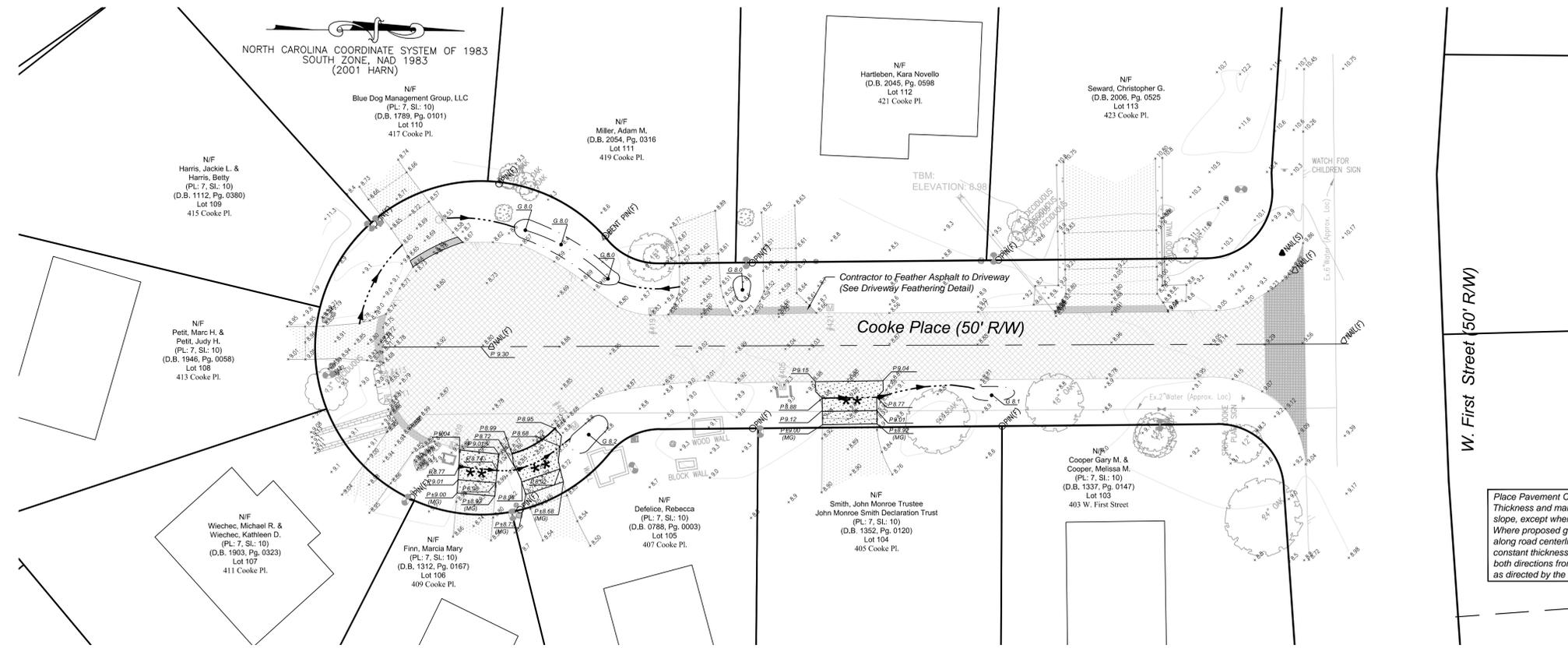


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Sheet Name
PLAN & PROFILE
 STA. 10+00 - STA. 13+75
 W. CARLTON AVENUE

Sheet #
10



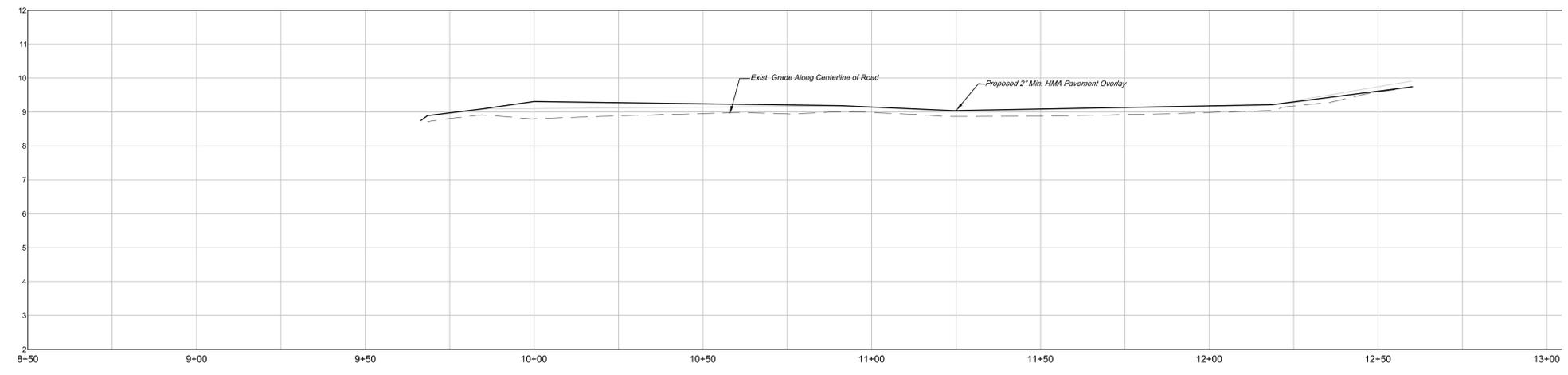
**** Indicates Driveway Patch With "Hump"**
(See Detail, Sheet D1)

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Place Pavement Overlay with Constant Thickness and maintain existing cross slope, except where otherwise noted. Where proposed grade(s) are shown along road centerline, transition to / from constant thickness along roadway 25' in both directions from proposed grade or as directed by the engineer.

STABLE - FREE ZONE

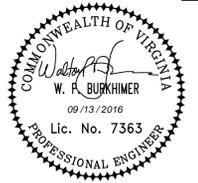


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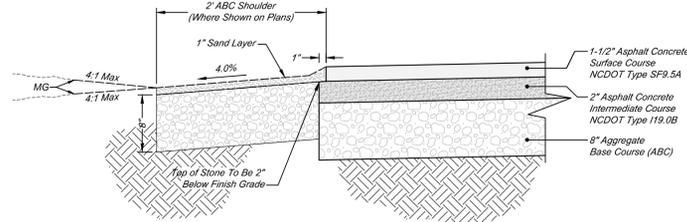


Project #	V16020
Checked by	WPB
Drawn by	MGH
Issue Date	09/13/2016
Scale	
SWaM Certification	715559
VA Firm #	0405001994

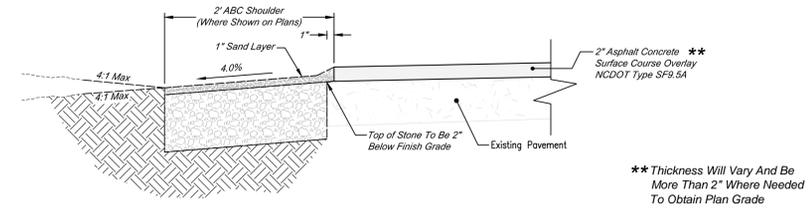


Sheet Name
PLAN & PROFILE COOKE PLACE

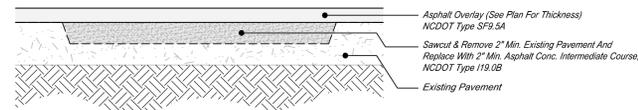
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12



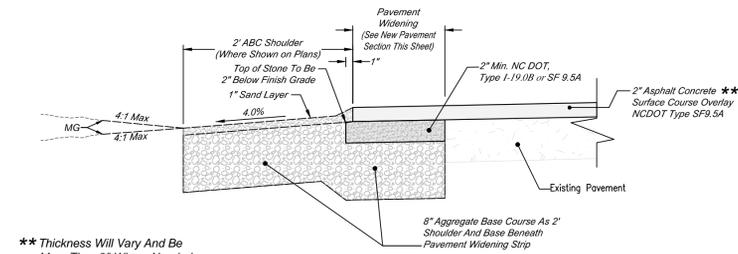
New Pavement Section



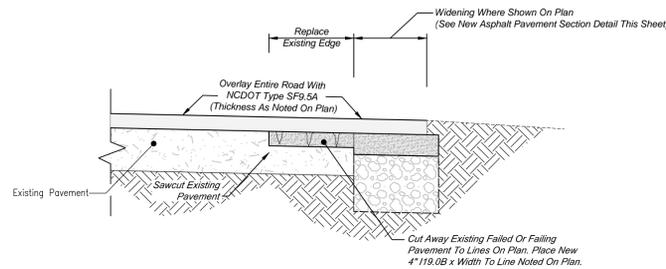
2.00" Pavement Overlay



Asphalt Pavement Spot Patch Repair (where noted on plan)



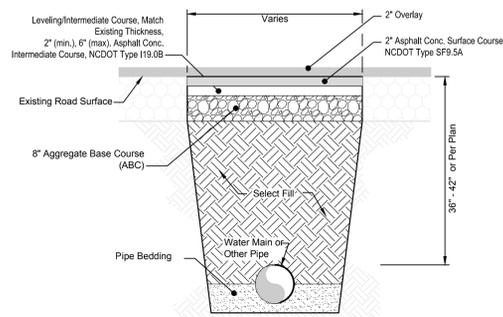
2.00" Pavement Overlay With Pavement Widening



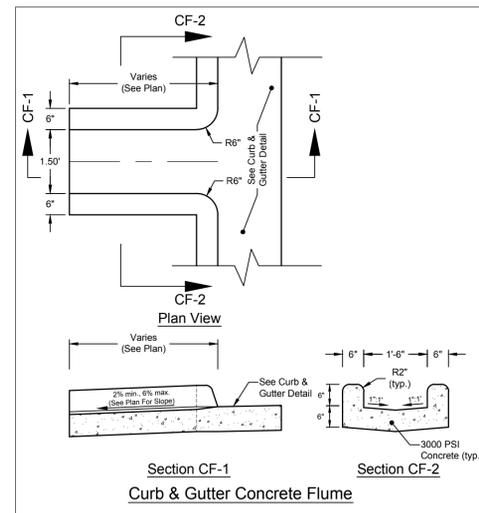
Asphalt Pavement Edge Repair/Widening (where noted on plan)



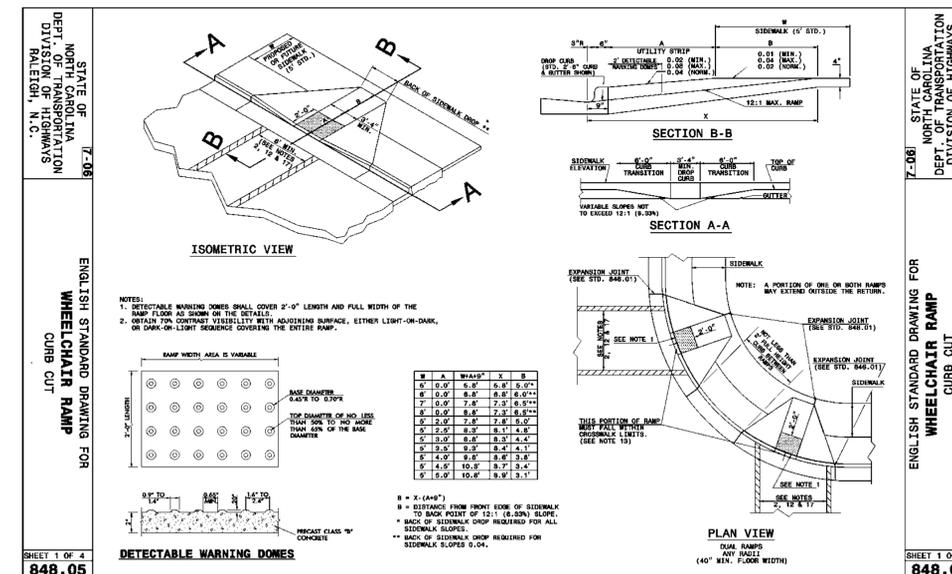
Driveway Feathering in Overlay Areas



Pavement Patch Section



Curb & Gutter Concrete Flume



848.05

848.05

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Post-Approval Revisions

2016 / 2017 STREETS PROJECT:
 W. Clark Street, Mustian Street,
 W. Carlton Avenue, Anchor Court,
 Schooner Court and Cooke Place
 Street, Drainage and Water Improvements
 Town of Kill Devil Hills
 Dare County, North Carolina



Project #	V16020
Checked by	WPB
Drawn by	MGH
Issue Date	09/13/2016
Scale	
SwAm Certification	715559
VA Firm #	0405001994



Sheet Name	DETAILS
Sheet #	D2



STABLE - FREE ZONE

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

ENGLISH STANDARD DRAWING FOR BRICK CATCH BASIN 12" THRU 54" PIPE

NOTES: MORTAR JOINTS 1/2" +/- 1/8" THICK. USE CLASS "B" CONCRETE THROUGHOUT. USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB. DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY. USE #4 BAR DOWELS AT 12" CENTERS. PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED. USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL, OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY. CONSTRUCT WITH PIPE CROWNS MATCHING. CHAMFER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

SECTION X-X, SECTION Y-Y, SECTION J-J, SECTION M-M

DETAIL SHOWING METHOD OF RISER CONSTRUCTION

SHEET 1 OF 2 840.01

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

ENGLISH STANDARD DRAWING FOR BRICK CATCH BASIN 12" THRU 54" PIPE

EXPANSION JOINTS

CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES

USE ON FLAT GRADES 2% AND UNDER

EXPANSION JOINT

DEPRESSED GUTTER LINE

NORMAL CURB AND GUTTER ON LIGHT GRADES

EXPANSION JOINT

NORMAL GUTTER LINE

USE ON GRADES OVER 2% ELEV.

EXPANSION JOINT

DEPRESSED GUTTER LINE

NORMAL CURB AND GUTTER ON STEEP GRADES

EXPANSION JOINT

DEPRESSED GUTTER LINE

MINIMUM DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER)*

PIPE DIMENSIONS	DIMENSIONS OF BOX & PIPE				CUBIC YARDS OF CONCRETE IN BOX				DEDUCTIONS FOR ONE PIPE					
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	C.M.	R.C.
12" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.020	0.042
15" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.025	0.052
18" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.030	0.058
24" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.035	0.063
30" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.040	0.068
36" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.045	0.073
42" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.050	0.078
48" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.055	0.083
54" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.060	0.088

* RISER HAS .321 CUBIC YARDS OF BRICK MASONRY PER FOOT HEIGHT

SHEET 2 OF 2 840.01

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

GENERAL NOTES: USE CLASS "B" CONCRETE THROUGHOUT. PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER. USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL, OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY. CONSTRUCT WITH PIPE CROWNS MATCHING. CHAMFER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

SECTION X-X, SECTION Y-Y, SECTION J-J, SECTION M-M

DETAIL SHOWING METHOD OF RISER CONSTRUCTION

SHEET 1 OF 2 840.02

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

EXPANSION JOINTS

CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES

USE ON FLAT GRADES 2% AND UNDER

EXPANSION JOINT

DEPRESSED GUTTER LINE

NORMAL CURB AND GUTTER ON LIGHT GRADES

EXPANSION JOINT

NORMAL GUTTER LINE

USE ON GRADES OVER 2% ELEV.

EXPANSION JOINT

DEPRESSED GUTTER LINE

NORMAL CURB AND GUTTER ON STEEP GRADES

EXPANSION JOINT

DEPRESSED GUTTER LINE

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER)*

PIPE DIMENSIONS	DIMENSIONS OF BOX & PIPE				CUBIC YARDS OF CONCRETE IN BOX				DEDUCTIONS FOR ONE PIPE					
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	C.M.	R.C.
12" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.020	0.042
15" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.025	0.052
18" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.030	0.058
24" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.035	0.063
30" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.040	0.068
36" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.045	0.073
42" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.050	0.078
48" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.055	0.083
54" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.060	0.088

* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

SHEET 2 OF 2 840.02

Where An Existing Drop Inlet Rim Is Denoted "Convert", This Shall Mean Replace Existing Frame & Grate With Capitol Foundry CB2436*PED, Adjusting Structure As Required.

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

ENGLISH STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE

GENERAL NOTES: USE CLASS "B" CONCRETE THROUGHOUT. PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER. USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL, OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY. CONSTRUCT WITH PIPE CROWNS MATCHING. DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC. CHAMFER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN WITH GRATE & FRAME REMOVED

SECTION X-X

SECTION Y-Y

Substitute Pedestrian / Bike Safe Grate In All Cases

Substitute Pedestrian / Bike Safe Grate In All Cases

MINIMUM DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)

PIPE DIMENSIONS	DIMENSIONS OF BOX & PIPE				CUBIC YARDS OF CONCRETE IN BOX				DEDUCTIONS FOR ONE PIPE					
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	C.M.	R.C.
12" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.015	0.028
15" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.020	0.036
18" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.025	0.048
24" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.030	0.063
30" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.035	0.085

SHEET 1 OF 1 840.14

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

ENGLISH STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

GENERAL NOTES: USE CLASS "B" CONCRETE THROUGHOUT. PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER. USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL, OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY. CONSTRUCT WITH PIPE CROWNS MATCHING. DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC. CHAMFER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN WITH COPING REMOVED

SECTION X-X

SECTION Y-Y

Substitute Pedestrian / Bike Safe Grate In All Cases

Substitute Pedestrian / Bike Safe Grate In All Cases

MINIMUM DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)

PIPE DIMENSIONS	DIMENSIONS OF BOX & PIPE				CUBIC YARDS OF CONCRETE IN BOX				DEDUCTIONS FOR ONE PIPE					
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	C.M.	R.C.
12" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.015	0.028
15" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.020	0.036
18" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.025	0.048
24" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.030	0.063
30" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.035	0.085

SHEET 1 OF 1 840.15

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

GENERAL NOTES: USE CLASS "B" CONCRETE THROUGHOUT. PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER. USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL, OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY. CONSTRUCT WITH PIPE CROWNS MATCHING. CHAMFER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

SECTION X-X, SECTION Y-Y, SECTION J-J, SECTION M-M

DETAIL SHOWING METHOD OF RISER CONSTRUCTION

SHEET 1 OF 2 840.02

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

EXPANSION JOINTS

CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES

USE ON FLAT GRADES 2% AND UNDER

EXPANSION JOINT

DEPRESSED GUTTER LINE

NORMAL CURB AND GUTTER ON LIGHT GRADES

EXPANSION JOINT

NORMAL GUTTER LINE

USE ON GRADES OVER 2% ELEV.

EXPANSION JOINT

DEPRESSED GUTTER LINE

NORMAL CURB AND GUTTER ON STEEP GRADES

EXPANSION JOINT

DEPRESSED GUTTER LINE

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER)*

PIPE DIMENSIONS	DIMENSIONS OF BOX & PIPE				CUBIC YARDS OF CONCRETE IN BOX				DEDUCTIONS FOR ONE PIPE					
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	C.M.	R.C.
12" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.020	0.042
15" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.025	0.052
18" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.030	0.058
24" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.035	0.063
30" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.040	0.068
36" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.045	0.073
42" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.050	0.078
48" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.055	0.083
54" 3'-0" 2'-2"	3'-0"	2'-2"	2'-2"	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	1	2'-2"	0.060	0.088

* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

SHEET 2 OF 2 840.02

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

ENGLISH STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

GENERAL NOTES: USE CLASS "B" CONCRETE THROUGHOUT. PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER. USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL, OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY. CONSTRUCT WITH PIPE CROWNS MATCHING. DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC. CHAMFER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN WITH GRATE & FRAME REMOVED

SECTION X-X

SECTION Y-Y

Substitute Pedestrian / Bike Safe Grate In All Cases

Substitute Pedestrian / Bike Safe Grate In All Cases

MINIMUM DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)

PIPE DIMENSIONS	DIMENSIONS OF BOX & PIPE				CUBIC YARDS OF CONCRETE IN BOX				DEDUCTIONS FOR ONE PIPE					
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	C.M.	R.C.
12" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.015	0.028
15" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.020	0.036
18" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.025	0.048
24" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.030	0.063
30" 3'-0" 2'-0"	3'-0"	2'-0"	2'-0"	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	0.035	0.085

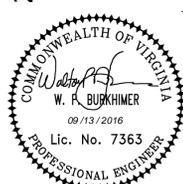
SHEET 1 OF 1 840.15

This drawing was prepared for use on a specific site. It is not suitable for use on a different project site or at a later time. Use of this drawing for reference or example without the express written consent of the engineer is prohibited. The engineer and architect are not responsible for any errors or omissions in this drawing. Reproduction of this drawing for use on another project is not authorized and may be contrary to the law.

Post-Approval Revisions

2016 / 2017 STREETS PROJECT:
 W. Clark Street, Mustian Street,
 W. Carleton Avenue, Anchor Court,
 Schooner Court and Cooke Place
 Street, Drainage and Water Improvements

Town of Kill Devil Hills
 Dare County, North Carolina



Project #	V16020
Checked by	WPB
Drawn by	MGH
Issue Date	09/13/2016
Scale	
SwAm Certification	715559
VA Firm #	0405001994



