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ARTICLE 1 - PROJECT DESCRIPTION

Scope of Work

- 1.1 The work to be performed shall consist of the construction of the **Old County Home Road Private Sewer Rehabilitation (MSD Project No. 2015221)** project for the Metropolitan Sewerage District of Buncombe County, North Carolina. The project shall generally consist of the furnishing of all services, supplies, materials and equipment, and performing of all labor for the construction and installation of approximately 4,592 L.F. mainline sewer, including manholes and all appurtenances related thereto. This 4,592 L.F. will consist of 1,704 L.F. of 8-inch DIP, 2,293 L.F. of 12" of DIP, 507 L.F. DIP, and 88 LF of 8" HDPE pipe.
- 1.2 The work shall be performed under unit price contract, and shall consist of furnishing all materials, supplies, and equipment; performing all labor and services incidental to or necessary for the complete construction of the project in accordance with the Plans and Specifications; and maintenance of each completed portion of the work until final acceptance of the entire project by the DISTRICT, unless otherwise approved by the ENGINEER.

ARTICLE 2 - PHYSICAL CONDITIONS/CONTRACT PLANS

- 2.1 **Physical Conditions.** There have been no subsurface explorations or reports utilized in the preparation of these contract documents.
- 2.2 **Contract Plans.** The work shall be performed in accordance with these specifications and contract plans, which are incorporated herein as part of the contract and which are identified by the following numbers and titles:

Construction Plans

<u>Sheet No.</u>	<u>Description</u>
C-1	Index of Drawings and Vicinity Map
PL-1	Overall Sanitary Sewer Plan
PL-2	Sanitary Sewer Plan & Profile – Line “A” & “D”
PL-3	Sanitary Sewer Plan & Profile – Line “A” & “E”
PL-4	Sanitary Sewer Plan & Profile – Line “A”
PL-5	Sanitary Sewer Plan & Profile – Line “A” & “F”
PL-6	Sanitary Sewer Plan & Profile – Line “B”
PL-7	Sanitary Sewer Plan & Profile – Line “C”
PL-8	Sanitary Sewer Plan & Profile – Line “C”
D-1	Sanitary Sewer Details
D-2	Sanitary Sewer Details & FM to MH#16 Schematic
TC-1	Traffic Control Plan (Detour routing)
TC-2	Traffic Control Details
TC-3	Traffic Control Plan Positive Shoring Details

ARTICLE 3 - PROJECT COORDINATION

3.1 Intent of Plans and Specifications

The intent of the Plans and Specifications is to prescribe the complete work that the CONTRACTOR undertakes to do in full compliance with the Contract. The CONTRACTOR shall do all work as provided in the Plans, Special Conditions Detail Sheets, Specifications and other parts of the Contract and shall do such additional, extra, and incidental work as may be considered necessary to complete the work in a satisfactory and acceptable manner. Any work or material not shown on the Plans or described in the Specifications, but which may be fairly implied as included in any item of the Contract, shall be performed and/or furnished by the CONTRACTOR without additional charge therefore. The CONTRACTOR shall furnish all labor, materials, tools, equipment and incidentals necessary to the prosecution of the work.

3.2 Interpretation of Estimate

The quantities of the work and materials shown on the Proposal form or on the Plans are believed to approximately represent the work to be performed and materials to be furnished and are to be used for comparison of bids. Payment to the CONTRACTOR will be made only for the actual quantities of work performed or materials furnished in accordance with the Plans and Specifications and it is understood that the quantities may be increased or decreased as hereinafter provided without in any way invalidating the bid prices.

3.3 Time of Completion

The CONTRACTOR shall commence work to be performed on the project under this agreement on a date to be specified in a written Notice to Proceed from the DISTRICT and shall duly complete all work under this agreement within **Two Hundred Ten (210) consecutive calendar days** from said date. For each day in excess of the completion time limits specified above, the CONTRACTOR shall pay the DISTRICT the sum of Three Hundred Dollars (\$300.00) as liquidated damages reasonably estimated in advance to cover the losses incurred by the DISTRICT by reason of failure of said CONTRACTOR to complete the work within the time specified, such time being in the essence of this Contract and a material consideration thereof.

3.4 Pre-Construction Conference

Prior to starting any construction work on this project, a conference will be held in the Construction Office of the DISTRICT for the purpose of verifying general construction procedures, expediting the handling of shop drawings and schedules,

Section V: Special Conditions

and to establish a working understanding between the parties concerned on the project. Present at the conference shall be a responsible representative of the CONTRACTOR and the CONTRACTOR's job superintendent. The time of the conference shall be as agreed upon by the CONTRACTOR and DISTRICT.

3.5 **Progress Meetings**

The CONTRACTOR and any subcontractors, material suppliers or vendors whose presence is necessary or requested shall attend meetings, referred to as Progress Meetings, when requested by the DISTRICT for the purpose of discussing the execution of the work. Each meeting will be held at the time and place designated by the DISTRICT. A schedule for monthly meetings will be agreed upon at the pre-construction conference. The ENGINEER will call for and schedule additional meetings if necessary. All decisions, instructions and interpretations made at these meetings shall be binding and conclusive on the CONTRACTOR and such decisions, instructions and interpretations shall be confirmed in writing by the DISTRICT.

The proceedings of these meetings will be recorded, and the CONTRACTOR will be furnished with a reasonable number of copies for his use and for his distribution to the subcontractors' material suppliers and vendors involved.

- 3.6 Utility owners within the vicinity of the Project may include, but are not limited to, those listed below. The CONTRACTOR shall contact N.C. OneCall Center for utility locations within public rights of way and easements before digging, as required by NC State Statutes.

Call NC OneCall Center, Inc. (locators for Buncombe County) at “811”.

<u>Utility / Agency</u>	<u>Phone</u>
Asheville Dispatch City Road Closures	828-252-1122
Asheville	
Public Works Department	828-232-4567
Streets Division	828-259-5852
Chad Bandy	828-782-0546
Jerry Yates	828-778-8938
Rick Gath	828-777-4053
Storm Water	828-259-5973
Tony Chapman	828-777-5665
Amy Deyton	828-782-0755
Water Department	828-259-5975
Travis Mortier	828-778-0191

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	Jeremy Godfrey	828-778-0953
	Michele Smith	828-777-3539
Asheville Transit Bus Lines		828-253-5691
AT&T Telephone Co.		877-737-2478
	Chip Lance	828-258-7058
	Jenny Stamey	828-251-8949
Black Mountain		828-669-8610
Public Works Director	Jamie Matthews	828-778-5525
Water Department		828-419-9300 x 1
Buncombe County Board of Education		
Transportation Department		828-232-4240
Buncombe Co. Emergency Services		828-250-6650
Fire, Police - NON EMERGENCIES ONLY		
County Road Closures		
Buncombe County Planning Director		828-250-4830
Charter Spectrum	Don Pullen	828-367-8763
	Karen Allison	864-598-0816
Dominion Gas		877-776-2427
	Richard Walsh	828-273-8446
Duke Energy	Guard House	828-687-5206
	Power Outages	800-827-5118
	Seth McFee	828-271-6271
ERC Fiber	Lewis Lance	828-350-2415
		866-372-7110
M.S.D. of Buncombe County		
Construction Director		828-225-8262
Sewer Maintenance Division		828-255-0061
Norfolk Southern RR		
	James Peck	828-808-0366
NCDOT Highway Division	Nick Dorato	828-298-2741

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Weaverville Town Hall
Public Works

828-645-7116
828-645-0606 x 400

Woodfin
Street Department
Water District

828-253-4887
828-253-5551 x 8

ARTICLE 4- USE OF EASEMENTS AND RIGHT OF WAY

4.1 Right of Way Special Provision Detail Sheets and Easements

Nineteen (19) easements, sixteen (16) Special Provision Detail Sheets (SPDS), and fourteen (14) Service Line Permission to Enter forms have been acquired and are attached at the end of this section.

Easement widths are shown on the Plans and Easement Plats. The Plats (not to scale) are included at the end of the Specifications. If requested, scaled copies of the same will be provided to the CONTRACTOR. Exceptions to the typical details are shown as applicable on the Plans.

The CONTRACTOR shall comply with all provisions of the SPDS and easement agreement that may be applicable to his construction process or the general construction of this project.

Unless otherwise specified, all items in these SPDS shall be considered incidental to the mainline sewer construction. Any compensation to the CONTRACTOR for these items shall be included in the per linear foot bid unit price for the mainline sewer pipe, unless otherwise specified herein or listed in the Bid Schedule.

The SPDS and easement maps are attached for the following properties:

Name of Property Owner	PIN No.	SPDS
Bradley, Jonathan	9629232787	Yes
Calloway, Teresa	9629242167	No
Culbertson, Mark	9629241104	No
Hines, Rickie	9629234172	Yes
Holt, Amy	9629243308	Yes
Justice, Ronald	9629233571	Yes
Kieffer, Susan	9629236472	Yes
Loyd, Terry	9629148366	Yes
Lyerly, Matthew	9629241922	No
McFarland, Kimberly	9629243406	Yes
Mill Creek Planned Community Assoc.,	9629229314	Yes
RENPRO, LLC,	9629149676	Yes
Rice, Bradley	9629242392	Yes
Scheuer, Matthew	9629233613	Yes
Shook, Shay	9629237097	Yes
Sloan, Robert	9629236102	Yes
Spivey & Son Investments, LLC,	9629230925	Yes
Stewart, Guy	9629233152	Yes
Zhang, Xiu	9629237168	Yes

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Bradley, Jonathan, PIN 9629232787: All items are incidental to the contract.

Hines, Rickie & Robin, PIN 9629234172: Item 3 shall be paid at the unit price for “Bituminous Asphalt Resurfacing (Type SF 9.5A) 2" Min. Depth” and “Compacted Aggregate Base Course”. All other items are incidental to the contract.

Holt, Herndon, & Mondek, PIN 9629243308: Item 2 shall be paid at the unit price for “Gravel Surface Driveway Repair”. All other items are incidental to the contract.

Justice, Ronald & Jacqueline PIN 9629233571: Item 4 shall be paid at the unit price for “Gravel Surface Driveway Repair”. All other items are incidental to the contract.

Kiefer, Susan & William PIN 9629237301: Item 2 shall be paid at the unit price for “Gravel Surface Driveway Repair”. All other items are incidental to the contract.

Lloyd, PIN 9629148306: Erosion control matting for item 2 shall be paid at the unit price for “Coir Matting”. All other items are incidental to the contract.

McFarland, Dana & Kimberly, PIN 9629243406: Item 2 shall be paid at the unit price for “Gravel Surface Driveway Repair”. All other items are incidental to the contract.

Mill Creek Planned Community Association, PIN 9629229314: All items are incidental to the contract.

Renpro, LLC, PIN 9629149676: Item 2 shall be paid at the unit price for “Gravel Surface Driveway Repair”. All other items are incidental to the contract.

Rice (&Kraus), PIN 9629242392: Item 2 shall be paid at the unit price for “4" Cleanout Assembly”, “8" x 8" x 4" DI Wye”, and ”4" PVC (Sch 40) All Depths, Including Bedding”. All other items are incidental to the contract.

Scheuer, Matthew, PIN 9629233613: Item 2 shall be paid at the unit price for “Gravel Surface Driveway Repair”. Item 4 and 5 shall be paid at the unit price for “Tree Replacement – General”, All other items are incidental to the contract.

Shook, Shay, PIN 9629237097: All items are incidental to the contract.

Sloan, Robert & Lillie, PIN 9629236102: Item 3 shall be paid at the unit price for “Bituminous Asphalt Resurfacing (Type SF 9.5A) 2" Min. Depth” and

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“Compacted Aggregate Base Course”. All other items are incidental to the contract.

Spivey & Sons Investments, LLC, PIN 9629230925: Item 2 shall be paid at the unit price for “Gravel Surface Driveway Repair”. All other items are incidental to the contract.

Stewart, Guy, PIN 9629233152: All items are incidental to the contract.

Zhang & Feng, PIN 9629234172: Item 2 shall be paid at the unit price for “Bituminous Asphalt Resurfacing (Type SF 9.5A) 2" Min. Depth” and “Compacted Aggregate Base Course”. All other items are incidental to the contract.

The Service Line Permission to Enter forms and exhibit maps are attached for the following properties:

Name of Property Owner	Address
Johnson, Robert	312 & 316 Old County Home Rd
Janice Slagle Estate	320 Old County Home Rd
Austell, Andrew & Catherine	324 Old County Home Rd
McArthur, Nathan & Mailie Brunner-Nguyen	328 Old County Home Rd
Sigmon, Zukhra & Simon	330 Old County Home Rd
Holley, Keith & April	332 & 334 Old County Home Rd
Alachoyan, Joseph	336 Old County Home Rd
Renpro, LLC	356 Old County Home Rd
Ross, Gregory & Alyssa	360 Old County Home Rd
Ross, Alyssa Huntsman	364 Old County Home Rd
Spivey & Sons Investments, LLC	380 Old County Home Rd
Renpro, LLC	384 Old County Home Rd
Stines, James & Judith	388 Old County Home Rd
Renpro, LLC	402 New Leicester Hwy

ARTICLE 5 - SPECIAL REQUIREMENTS

5.1 Street Cut Permits and Project Access

NCDOT Roads

Work within NCDOT maintained roadways shall be performed under the NCDOT encroachment permit, which is obtained by the ENGINEER.

City of Asheville Roads

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Work performed within City of Asheville streets will require a street-cut permit. It shall be the CONTRACTOR's responsibility to obtain such permits prior to beginning work within said public right of way.

Other Municipalities

Work performed in other municipally-owned public roadways may require a street-cut permit. It shall be the CONTRACTOR's responsibility to obtain such permits prior to beginning work within said public right of way.

All costs associated with NCDOT Encroachments, street-cut permits, and their conditions/requirements shall be included within the various bid items, and no extra or separate payment will be made by the DISTRICT to the CONTRACTOR.

This also includes parking-meter closure fees, where there is an additional charge for existing parking meters on a closed public street.

Where the project work area is not within a Public Street or roadway, the CONTRACTOR shall use existing drives and parking lots as may be reasonable and necessary; however, he shall keep such usage to the minimum required and in accordance to the terms and conditions of the DISTRICT's Right of Way Policy and the recorded Easement Agreement between the DISTRICT and the Property Owner(s).

The CONTRACTOR shall maintain reasonable access to all properties and drives during construction. Any trench excavations within drive or parking lot that is used for direct access to such property shall be backfilled and provided with an all-weather surface at the end of each day's work. Where the Property Owner SPDS specifies conditions different from the above, the SPDS shall take precedent.

5.2 Maintenance of Traffic

Access to homes and businesses shall be maintained at all times to the properties along and abutting streets disturbed by construction, unless otherwise approved by the ENGINEER. On streets disturbed by construction, a minimum of one lane (with flagmen) shall be maintained at all times and further provided that adequate signing and control is provided as required by the AASHTO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS and NCDOT Guidelines.

All lane closures and traffic measures shall be coordinated with and meet the minimum requirements of each municipality. Flagmen shall be provided on each end of the closed section or at intermediate points where the closed section is in excess of 250' or where the line of sight is impaired.

5.3 Sewer Service Line Connections

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Sewer service connections to the existing lines shall be re-connected to the new lines in accordance to the NC Plumbing Codes. Payment for sewer service cleanouts shall be paid on a per unit installed basis at the bid unit price. Where more than 5 feet of 4" or 6" PVC or DIP service line is required to reconnect the existing service to the new sewer mains and/or manholes, the CONTRACTOR shall be compensated for the appropriate linear footage of 4" or 6" pipe installed at the bid unit price for the appropriate size pipe. The first 5 feet of sewer service lateral beyond the point of reconnection, shall be considered as incidental to the project work scope and shall not be included in above calculations of 4" or 6" PVC or DIP service line installed.

Section V: Special Conditions

5.4 **Non-Discharge Permit**


Copy of permit will be provided.

5.5 **NCDOT Primary and Secondary Highway Encroachment**

Copy of permit will be provided.

SPECIAL PROVISIONS DETAIL SHEET


February 6, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-2787
Owner:	Jonathan Bradley
Phone:	(864) 513-1754
Owner Email:	jbrad130@gmail.com
Address:	32 Spivey Place, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two weeks prior to entering the property to perform sewer line work (excepting emergencies). Further, notice will be required regarding the anticipated future closure dates of Spivey place.
2. Restoration following service line construction shall include seeding all disturbed areas where disturbed.

SPECIAL PROVISIONS DETAIL SHEET


August 15, 2023

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-4172
Owner:	Rickie & Robin Hines
Phone:	(828) 776-9604
Owner Email:	robinbird60@att.net
Address:	19 Rolling Hill Drive, Asheville, NC 28804
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two days prior to the closure of Rolling Hill Drive so they can make alternate parking arrangements (excepting emergencies). Further, notice will be required regarding the anticipated future closure dates of Rolling Hill Drive. All affected owners will need to be provided notice prior to final paving that will also result in the closure of Rolling Hill Drive.
2. The contractor shall restore the grassed areas of the yard where disturbed due to service line construction. This includes matching the existing topo of the yard and the removal of roots, rocks, and other undesirable materials.
3. Rolling Hill Drive is a private road and it is understood that full width asphalt overlay will be required after construction is complete per the approved construction drawings dated 12/05/2022.

SPECIAL PROVISIONS DETAIL SHEET

January 16, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-24-3308
Owner:	Amy Holt, Rachel Mariah Herndon & Jake Jordan Mondek
Phone:	(970) 689-2780
Owner Email:	rachelmondek@gmail.com
Address:	6 Spivey Place, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two weeks prior to entering the property to perform sewer line work (excepting emergencies). This notice requirement shall also include two weeks notice prior to service line construction so the owner can remove their wood panel fencing. Further, notice will be required regarding the anticipated future closure dates of Spivey place.
2. MSD's contractor shall restore the gravel parking area within the temporary construction easement where disturbed due to sewer line construction using wash stone.
3. There are several large poplar trees located along the edge of the permanent sewer easement along Spivey Place. The MSD Inspector shall make contact with the owner to determine which trees they desire to be removed. The contractor shall be responsible for removing all logs, stumps, and slash associated with said tree removal.

SPECIAL PROVISIONS DETAIL SHEET

May 28, 2024

Project: Old County Home Road PSR
MSD of Buncombe County Project #2015221

Agent: Wesley G. Banner

Parcel Number: 9629-23-3571

Owner: Ronald Eugene Justice & Jacqueline Justice

Phone: (828) 280-1634

Owner Email: justiceappliance@yahoo.com


Address: 42 Spivey Place, Asheville, NC 28806

Engineer Approval: 

1. The MSD Inspector shall contact the property owner at the phone number listed above at least one week prior to the closure of Spivey Place so they can make alternate parking arrangements (excepting emergencies). ***Further, the MSD Inspector shall coordinate with the contractor before closure of Spivey Place with the property owner listed above to coordinate ingress/egress during construction.***
2. The Contractor shall intercept the service line where it exits the house and reconnect it to the new cleanout to be provided at the end of Spivey Place. The portion of the service line located adjacent to the large diameter oak tree shall be hand excavated in efforts to avoid root disturbance. The MSD Inspector shall contact the owner at the phone number listed above at least 48 hours in advance so that he may observe excavation to ensure root disturbance is minimized near the large oak tree. During excavation work, all personnel involved must exercise caution and diligence to avoid disturbing the protected root zones of trees. Contractor shall restore the grassed area of the yard immediately following service line construction to include matching of the existing topography prior to seeding and strawing of all disturbed areas. Restoration shall also include the replanting of any removed flora, hostas, and lilies. The contractor will reset walking stones and blocks back as close to their original location and flush with the ground after installation of the new service line.
3. The MSD Inspector shall contact the property owner and meet with him and the Utility Contractor to mark the locations of the existing water service line.
4. The gravel driveway shall be restored by the contractor where disturbed due to sewer line construction per MSD standards.

SPECIAL PROVISIONS DETAIL SHEET


September 20, 2023

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-7301
Owner:	Susan Lynn Kieffer & William Melvin Kieffer
Phone:	(608) 393-9903
Owner Email:	kieffer41@gmail.com
Physical Address:	302 Old County Home Road, Asheville, NC 28806
Mailing Address:	9 Ganser Drive, Waunakee, WI 53597
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two weeks prior to entering the property to perform sewer line work so they can notify their tenants (excepting emergencies).
2. The contractor shall restore the gravel driveway where disturbed due to sewer line construction per MSD standards.

SPECIAL PROVISIONS DETAIL SHEET


April 9, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-14-8306
Owner:	Terry Vernon Loyd, Sanford Wesley Loyd, & Peggy S. Loyd
Phone:	(252) 799-8154
Owner Email:	tvloyd@gmail.com
Address:	11 Spivey Place, Asheville, NC 28806
Engineer Approval:	 4-9-2024

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two days prior to the closure of Spivey Place so they can make alternate parking arrangements (excepting emergencies). ***Further, the MSD Inspector shall coordinate with the contractor before closure of Spivey Place should a medical emergency arise concerning the property owner a plan to expedite ingress/egress.***
2. The steep embankment along the road shall be stabilized immediately following service line construction where disturbed to include erosion control matting per MSD standards. The existing topography shall be matched during the restoration process of said embankment.
3. The Contractor shall intercept the service line in the yard and reconnect it to the new cleanout to be provided at P.I. Sta. 02+57 (Right). The exact cleanout location shall be verified prior to mainline construction of Line-C. This is to ensure the service line has a straight route between where it exists the house to the proposed cleanout location resulting in fewer bends.

SPECIAL PROVISIONS DETAIL SHEET


January 19, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-24-3406
Owner:	Dana Marie McFarland & Kimberly Ann McFarland
Phone:	(937) 361-9349
Owner Email:	dmmcfarland17@gmail.com
Address:	5 Spivey Place, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two weeks prior to entering the property to perform sewer line work (excepting emergencies). This notice requirement shall also include two weeks notice prior to service line construction. Further, notice will be required regarding the anticipated future closure dates of Spivey place.
2. MSD's contractor shall restore the gravel parking area within the temporary construction easement where disturbed due to sewer line construction using wash stone.
3. There is a wood panel privacy fence that will require partial removal to allow for service line construction. The Contractor shall restore any fencing that is removed or damaged due to sewer line construction with the same type and quality materials as the existing fence. Owner understands contractor may re-install the existing fence material as long as it has not been damaged. Fencing shall be re-installed in the same location as existed prior to construction.
4. There is a landscaped area inside of the fenced enclosure consisting of brown pea gravel and a burn pit. The contractor shall restore the brown pea gravel surface where disturbed due to service line construction including the weed barrier under the gravel. Any other improvements in this area shall be restored where disturbed. The MSD Inspector shall take good quality photos and video to document this area in detail prior to construction.

SPECIAL PROVISIONS DETAIL SHEET


October 6, 2023

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-22-9314
Owner:	Mill Creek Planned Community Association, Inc. c/o Matt McKim, HOA President
Phone:	(321) 356-1204
Owner Email:	tmckim4@charter.net
Physical Address:	1 Mill Creek Loop, Asheville, NC 28806
Mailing Address:	14 Mill Creek Loop, Unit D, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least one week notice prior to work beginning on this property (excepting emergencies).
2. The contractor shall perform all necessary erosion control measures and relevant surface restoration after construction is complete per MSD standards.
3. The contractor shall remove all slash, logs and the stump from the removal of the walnut tree located within the permanent sewer easement.

SPECIAL PROVISIONS DETAIL SHEET


September 25, 2023

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-14-9676
Owner:	RENPRO, LLC c/o Lynda Spivey
Phone:	(828) 231-7001
Owner Email:	lp_spivey@me.com
Site Address:	368 Old County Home Rd, Asheville, NC 28806
Mailing Address:	399 New Leicester Hwy, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two days prior to the closure of the private gravel drive so she can notify her tenants to make alternate parking arrangements (excepting emergencies).
2. The contractor shall restore the gravel driveway where disturbed due to sewer line construction per MSD standards.

SPECIAL PROVISIONS DETAIL SHEET


January 11, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-24-2392
Owner:	Bradley Rice & Anna Krauss
Phone:	(828) 275-8765
Owner Email:	brad@bellwetherbuilders.com
Physical Address:	8 Spivey Place, Asheville, NC 28806
Mailing Address:	17 Cornelia St, Asheville, NC 28801
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two weeks prior to entering the property to perform sewer line work so they can notify their tenants (excepting emergencies). Further, notice will be required regarding the anticipated future closure dates of Spivey place.
2. MSD's contractor shall install the four-inch sewer tap to serve this property connecting to Line A within Old County Home Road. It is understood that MSD's contractor shall intercept the existing sewer service line where it connects to the existing sewer line (to be abandoned) adjacent to the creek and connect it to the new four-inch cleanout. If during construction any issues arise concerning maintaining grade on the four inch service a tap will be made on Line C in Spivey Place. If the tap is made on Spivey Place the four inch cleanout located at the edge of the permanent sewer easement shall be located on the subject property. Further, the contractor shall be responsible for intercepting the service line in the backyard and to reconnect it to the cleanout installed along the shoulder of Spivey Place.
3. Restoration following service line construction shall include seeding all disturbed areas, restoration of gravel drive and/or asphalt apron if disturbed.

SPECIAL PROVISIONS DETAIL SHEET

June 14, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-3613
Owner:	Matthew Joseph Scheuer
Phone:	(404) 307-3673
Owner Email:	shoe18@gmail.com
Address:	36 Spivey Place, Asheville, NC 28806
Engineer Approval:	


1. The MSD Inspector shall contact the property owner at the phone number listed above at least one week prior to the closure of Spivey Place so they can make alternate parking arrangements (excepting emergencies). ***Further, the MSD Inspector shall coordinate with the contractor before closure of Spivey Place with the property owner listed above to coordinate ingress/egress during construction.***
2. The gravel road (Spivey Place) shall be restored to a condition of as good or better than exists prior to construction using CABC (Compacted Aggregate Base Course) per the MSD specifications.
3. The contractor shall protect the mailbox from damage along with the concrete sidewalk that is adjacent to the mailbox. If any of these improvements are damaged due to construction activities, they shall be repaired or replaced at the sole expense of the contractor. The MSD Inspector shall take good quality photos and or video to document the existing improvements prior to construction beginning to document the existing conditions.
4. Contractor shall replace, one for one, all trees (excepting scrub and dead trees) that are removed from the permanent easement. Replacement trees are to be same species obtained from a local nursery and a minimum of six feet (6') in height (excepting specialty trees which minimum heights shall be species specific). Replacement trees are to be planted by the contractor in mutually agreeable areas outside the limits of the permanent easement that are reasonably accessible to contractor. All replacement trees shall be covered by a one-year warranty from

date of installation provided the property owner regularly waters and maintains the trees provided. The one-year warranty shall not apply if owner does not provide regular watering and maintenance. MSD inspector shall contact owner as to replacement tree locations.

5. Contractor shall use his best efforts to save as many trees as possible within the temporary construction easements. Contractor shall replace, one for one, all trees (excepting scrub and dead trees) that are removed from the temporary construction easement. Replacement trees are to be same species and healthy specimens obtained from a local nursery and a minimum of six feet (6') in height (excepting specialty trees which minimum heights shall be species specific). Replacement trees are to be planted by the contractor in mutually agreeable areas outside the limits of the permanent easement that are reasonably accessible to contractor. All replacement trees shall be covered by a one-year warranty from date of installation provided the property owner regularly waters and maintains the trees provided. The one-year warranty shall not apply if owner does not provide regular watering and maintenance. MSD inspector shall contact owner as to replacement tree locations.
6. The Contractor shall intercept the service line where it exits the rear of the house and reconnect it to the new cleanout to be provided along the edge of Spivey Place at a location that provides adequate slope. The design of the Line C is deep enough that gravity sewer service will be maintained to the subject property. The end of the old service line that is not in use shall be capped off with grout during construction. The contractor shall restore the grassed area of the yard immediately following service line construction to include matching of the existing topography prior to seeding and strawing of all disturbed areas.

SPECIAL PROVISIONS DETAIL SHEET


September 18, 2023

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-7097
Owner:	Shay Shook
Phone:	(828) 280-9526
Owner Email:	abshook@aol.com
Address:	290 Old County Home Road, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least one week prior to any work being performed on this property (excepting emergencies).
2. The contractor shall restore the grassed areas of the yard where disturbed due to service line construction and manhole abandonment of existing manhole 12-18010. This includes matching the existing topo of the yard and the removal of roots, rocks, and other undesirable materials.
3. The existing fencing Contractor shall restore any fencing (chain link) that is removed or damaged due to sewer line construction with the same type and quality materials as the existing fence (chain link). Owner understands contractor may re-install the existing fence material as long as it has not been damaged. The chain link fencing shall not be cut during the removal process. The contractor shall remove the fasteners and roll back the chain link fencing from the end of the fence. Fencing shall be re-installed in the same location as existed prior to construction.
4. The contractor shall not use any portions of this yard for access outside of the temporary construction easement during the construction of "Line-B" on Rolling Hill Road.

SPECIAL PROVISIONS DETAIL SHEET


August 29, 2023

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-6102
Owner:	Robert V. Sloan & Lillie E. Sloan
Phone:	(828) 275-4253
Owner Email:	bobzx12r@yahoo.com
Address:	15 Rolling Hill Drive, Asheville, NC 28804
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two days prior to the closure of Rolling Hill Drive so they can make alternate parking arrangements (excepting emergencies). Further, notice will be required regarding the anticipated future closure dates of Rolling Hill Drive. All affected owners will need to be provided notice prior to final paving that will also result in the closure of Rolling Hill Drive.
2. The contractor shall protect the two HDPE culverts from damage that will be crossed during sewer line construction that run under Rolling Hill Drive. If any damage occurs the culvert shall be repaired or replaced with the same size and type as the existing culverts.
3. Rolling Hill Drive is a private road and it is understood that full width asphalt overlay will be required after construction is complete per the approved construction drawings dated 12/05/2022.
4. There is a steep embankment located adjacent to MH#B1 (Right) where the large culvert is located that carries Smith Mill Creek. This embankment shall be stabilized by the contractor where disturbed using rip-rap material and filter fabric per MSD standards. There is heavy vegetation that overhangs Rolling Hill Drive in this area as well. The contractor shall trim back this vegetation in a good workmanlike manner behind the edge of pavement to allow for equipment passage.

SPECIAL PROVISIONS DETAIL SHEET


February 14, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-0925
Owner:	Spivey & Sons Investments, LLC
Phone:	(828) 273-7011
Site Address:	25 Spivey Place, Asheville, NC 28806
Mailing Address:	123 Jasper Lane, Weaverville, NC 28787
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two weeks prior to the closure of Spivey Place so he can notify his tenants (excepting emergencies).
2. MSD's contractor shall restore the gravel driveway within the temporary construction easement where disturbed due to sewer line construction per MSD standards.

SPECIAL PROVISIONS DETAIL SHEET

January 4, 2024

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-3152
Owner:	Guy Stewart
Phone:	(217) 414-7757
Owner Email:	guyrstewart@gmail.com
Physical Address:	23 Rolling Hill Road, Asheville, NC 28806
Mailing Address:	141 Louisiana Ave, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two days prior to the closure of Rolling Hill Drive so they can make alternate parking arrangements (excepting emergencies). Further, notice will be required regarding the anticipated future closure dates of Rolling Hill Drive. All affected owners will need to be provided notice prior to final paving that will also result in the closure of Rolling Hill Drive.

SPECIAL PROVISIONS DETAIL SHEET

August 15, 2022

Project:	Old County Home Road PSR MSD of Buncombe County Project #2015221
Agent:	Wesley G. Banner
Parcel Number:	9629-23-4172
Owner:	Xiu Qing Zhang & Xiaozhi Feng
Phone:	(646) 321-0073
Owner Email:	ZTQ2654264477@gmail.com
Address:	294 Old County Home Road, Asheville, NC 28806
Engineer Approval:	

1. The MSD Inspector shall contact the property owner at the phone number listed above at least two days prior to the closure of Rolling Hill Drive so they can make alternate parking arrangements (excepting emergencies). Further, notice will be required regarding the anticipated future closure dates of Rolling Hill Drive. All affected owners on Rolling Hill Drive will need to provided notice prior to final paving that will also result in the closure of Rolling Hill Drive.
2. Rolling Hill Drive is a private road and it is understood that full width asphalt overlay will be required after construction is complete per the approved construction drawings dated 12/05/2022.

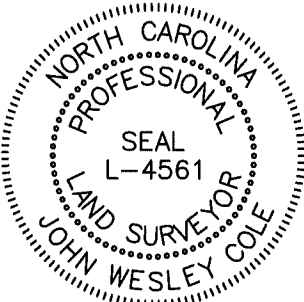
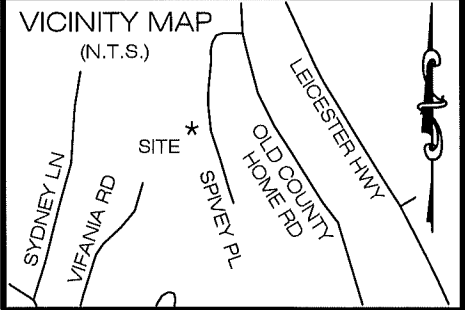
LINE	BEARING	DISTANCE
L1	N 17°19'33" W	117.53'
L2	N 06°09'03" W	54.86'
L3	N 58°29'38" E	22.13'
L4	S 06°09'03" E	62.38'
L5	S 17°19'33" E	58.18'
L6	S 16°01'58" E	13.65'
L7	S 16°01'58" E	34.12'
L8	S 21°38'13" E	5.70'
L9	S 61°08'23" W	19.75'
L10	S 61°08'23" W	4.83'

L11	S 81°35'57" W	10.39'
L12	N 17°19'33" W	118.35'
L13	N 06°09'03" W	49.22'
L14	N 58°29'38" E	16.60'
L15	N 58°29'38" E	16.60'
L16	S 06°09'03" E	29.01'
L17	S 61°46'48" W	12.96'
L18	S 19°56'15" E	106.63'
L19	S 73°58'02" W	15.00'
L20	N 73°58'02" E	15.07'
L21	S 21°38'13" E	4.71'
L22	S 73°49'13" W	10.75'
L23	S 61°08'23" W	4.33'
L24	S 73°49'13" W	6.77'

L25	N 64°13'51" E	35.07'
L26	N 65°57'58" E	11.44'
L27	S 61°58'37" E	12457.12'

LINE LEGEND:		
	BOUNDARY LINE	
	NEW SEWER LINE (NSL)	
	NEW PERM. EASEMENT LINE	
	NEW T.C.E. LINE	
	TIE LINE ONLY	
	OHU OVERHEAD UTILITY LINE	
	20' EASEMENT PER PB 73 PG 103	

SYMBOL LEGEND:	
	CALCULATED POINT (CP)
	EXISTING IRON ROD (EIR)
	EXISTING IRON PIPE (EIP)
	GEODETIC MONUMENT
	MAILBOX (MB)
	GUY WIRE
	NEW SEWER MANHOLE (NMH)
	CLEAN OUT (CO)
	BOLLARD
	T.C.E...TEMPORARY CONSTRUCTION EASEMENT



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 6236, PAGE 488 & PLAT BOOK 73, PAGE 103); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 6236, PAGE 488 & PLAT BOOK 73, PAGE 103; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000±; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

JOHN WESLEY COLE, P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

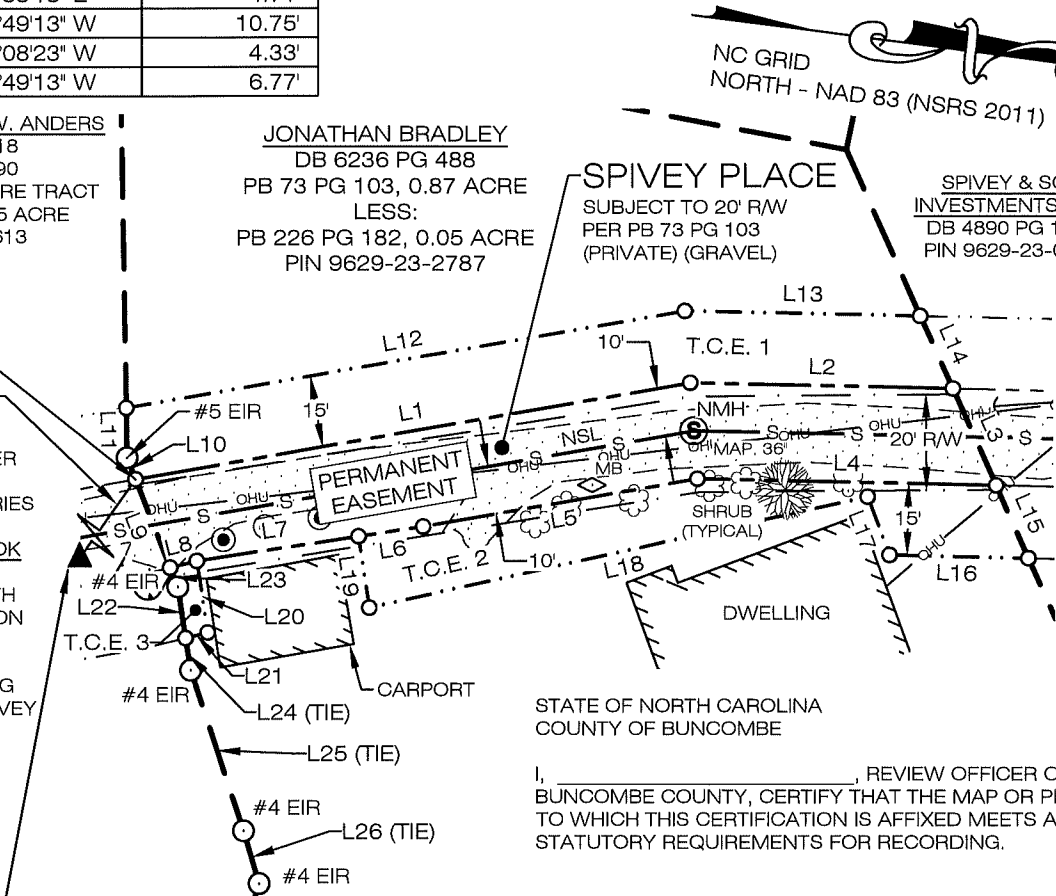
THOMAS J. & PEGGY W. ANDERS
DB 2131 PG 518
DB 6227 PG 290
PB 73 PG 103, 0.72 ACRE TRACT
PB 226 PG 182, 0.05 ACRE
PIN 9629-23-3613

JONATHAN BRADLEY
DB 6236 PG 488
PB 73 PG 103, 0.87 ACRE
LESS:
PB 226 PG 182, 0.05 ACRE
PIN 9629-23-2787

SPIVEY & SON
INVESTMENTS, LLC
DB 4890 PG 1498
PIN 9629-23-0925

OP-NC
GRID COORDINATES:
N: 693679.39'
E: 922281.12'
NAD 83/11

(TIE ONLY)



NCGS LONG JOHN (PUBLISHED)
NO GRID COORDINATES
N: 687826.71' NAD 83/11
E: 933277.76' NAD 83/11
ELEV.: 2028.37' NAVD 88
C.F.: 0.9997856

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE
I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE



NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.079 ACRES	3,432.0 SQ. FT.
T.C.E. 1:	0.059 ACRES	2,558.5 SQ. FT.
T.C.E. 2:	0.037 ACRES	1,615.4 SQ. FT.
T.C.E. 3:	0.002 ACRES	73.0 SQ. FT.
TOTAL EASEMENT AREA:	0.177 ACRES	7,678.9 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

JONATHAN BRADLEY

SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

LINE	BEARING	DISTANCE
L1	S 77°30'41" W	11.27'
L2	N 02°49'44" E	172.43'
L3	N 75°41'50" E	6.56'
L4	S 04°31'03" W	27.71'
L5	S 02°19'56" W	122.82'
L6	S 08°57'01" E	21.32'
L7	N 75°41'50" E	4.96'
L8	N 75°41'50" E	10.88'
L9	S 04°31'03" W	32.54'
L10	S 02°19'56" W	121.05'
L11	S 08°57'01" E	18.91'
L12	S 77°30'41" W	15.03'
L13	S 60°25'50" E	12709.98'

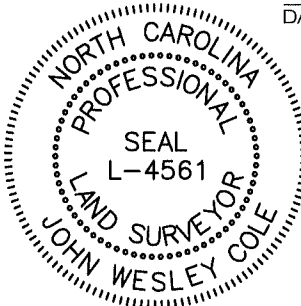


STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
5598, PAGE 1736 & PLAT BOOK 65, PAGE 158); THAT THE
BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN
FROM INFORMATION FOUND IN DEED BOOK 5598, PAGE 1736 & PLAT
BOOK 65, PAGE 158; THAT THE RATIO OF PRECISION AS CALCULATED
IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S. L-4561

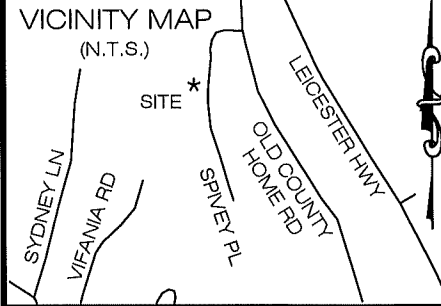
COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- EXISTING IRON ROD (EIR)
- EXISTING IRON PIPE (EIP)
- ▲ GEODETIC MONUMENT
- ⊙ NEW SEWER MANHOLE (NMH)
- ◇ MAILBOX (MB)
- ⌵ GUY WIRE
- ⚡ POWER POLE
- ⌒ T.C.E...TEMPORARY CONSTRUCTION EASEMENT
- POP...POPLAR TREE

LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- — — NEW PERM. EASEMENT LINE
- · · · · NEW T.C.E. LINE
- — — TIE LINE ONLY
- OHU — OVERHEAD UTILITY LINE
- — — STORM PIPE
- — — RIGHT OF WAY



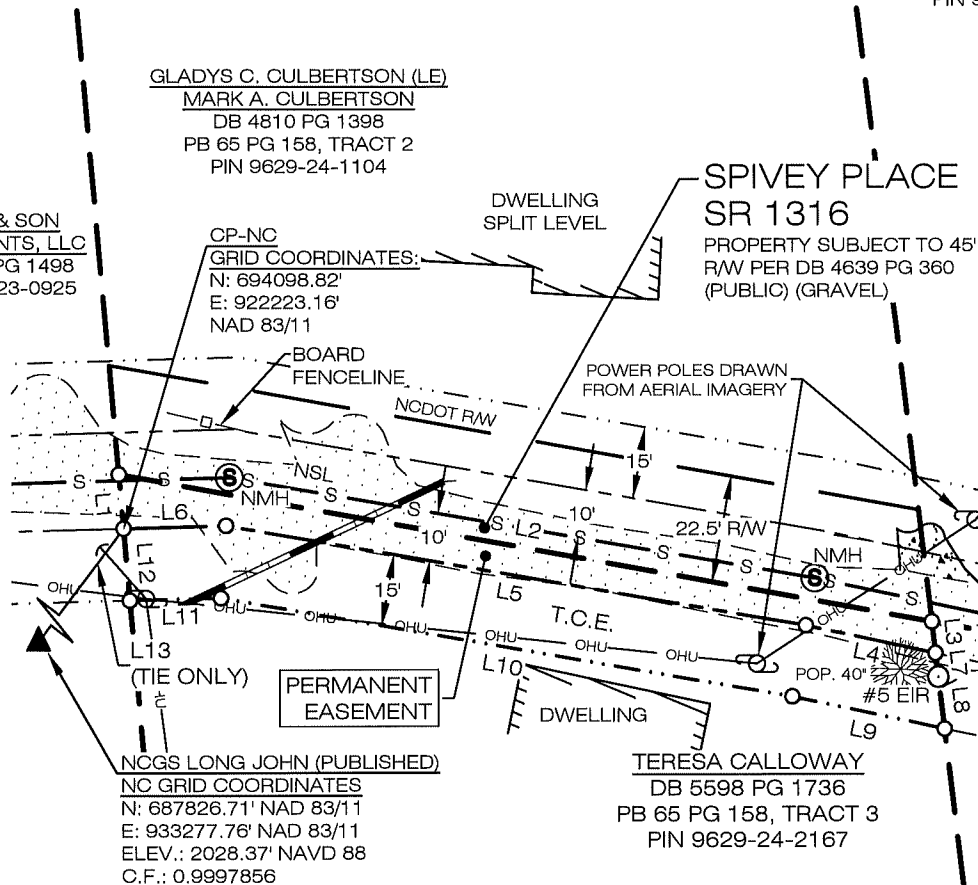
TERRY VERNON LLOYD &
SANFORD WESLEY LLOYD
DB 4489 PG 842, TRACT 1
PIN 9629-14-8366

NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD
THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND
UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID
DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS
RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.025 ACRES	1,089.5 SQ. FT.
T.C.E.:	0.059 ACRES	2,582.6 SQ. FT.
TOTAL EASEMENT AREA:	0.084 ACRES	3,672.1 SQ. FT.



REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC			
OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221			
SEWER LINE EASEMENT ACROSS THE PROPERTY OF: TERESA CALLOWAY			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

LINE	BEARING	DISTANCE
L1	S 02°49'44" W	172.43'
L2	S 77°30'41" W	8.77'
L3	N 08°57'01" W	24.53'
L4	N 02°19'56" E	125.18'
L5	N 04°31'03" E	21.26'
L6	N 75°38'03" E	14.57'
L7	S 77°30'41" W	15.03'
L8	N 08°57'01" W	26.94'
L9	N 02°19'56" E	126.95'
L10	N 04°31'03" E	16.41'
L11	N 75°38'03" E	15.85'
L12	N 75°41'50" E	11.53'
L13	S 59°46'29" E	12796.77'

NC GRID
NORTH - NAD 83 (NSRS 2011)

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

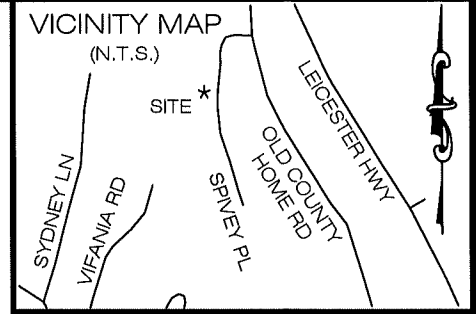
I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- EXISTING IRON ROD (EIR)
- EXISTING IRON PIPE (EIP)
- ▲ GEODETIC MONUMENT
- ◇ MAILBOX (MB)
- ⊕ GUY WIRE
- ⊕ POWER POLE (PER AERIAL IMAGERY)
- ⊕ NEW SEWER MANHOLE (NMH)
- ⊕ T.C.E...TEMPORARY CONSTRUCTION
- ⊕ EASEMENT
- ⊕ POP...POPLAR TREE

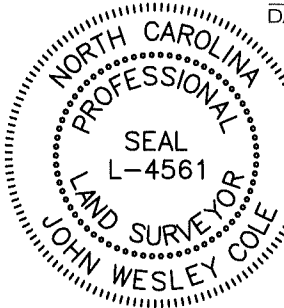
LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- NEW PERM. EASEMENT LINE
- ... NEW T.C.E. LINE
- TIE LINE ONLY
- OHU — OVERHEAD UTILITY LINE
- RIGHT OF WAY



REVIEW OFFICER

DATE



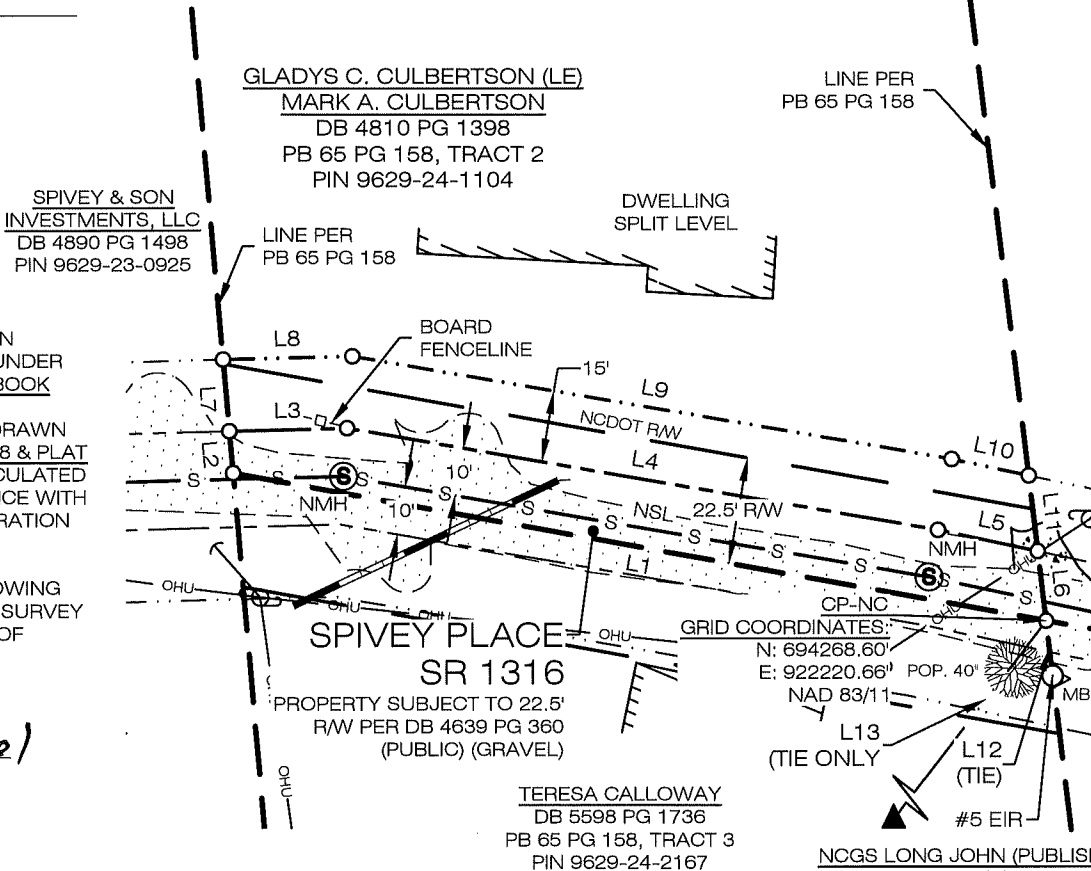
STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
4810, PAGE 1398 & PLAT BOOK 65, PAGE 158); THAT THE
BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN
FROM INFORMATION FOUND IN DEED BOOK 4810, PAGE 1398 & PLAT
BOOK 65, PAGE 158; THAT THE RATIO OF PRECISION AS CALCULATED
IS 1:10,000±; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052



TERRY VERNON LLOYD &
SANFORD WESLEY LLOYD
DB 4489 PG 842, TRACT 1
PIN 9629-14-8366

NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.054 ACRES	2,338.8 SQ. FT.
T.C.E.:	0.059 ACRES	2,559.5 SQ. FT.
TOTAL EASEMENT AREA:	0.113 ACRES	4,898.3 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221 SEWER LINE EASEMENT ACROSS THE PROPERTY OF: GLADYS C. CULBERTSON (LE) MARK A. CULBERTSON			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			



LINE	BEARING	DISTANCE
L1	N 85°23'34" W	119.01'
L2	N 05°43'22" W	20.33'
L3	S 85°23'34" E	119.48'
L4	S 04°26'09" E	20.25'
L5	S 04°26'09" E	5.45'
L6	N 86°01'49" W	118.66'
L7	N 05°43'22" W	6.81'
L8	N 05°43'22" W	15.25'
L9	S 85°23'34" E	119.82'
L10	S 04°26'09" E	15.19'
L11	S 64°04'50" E	11923.29'

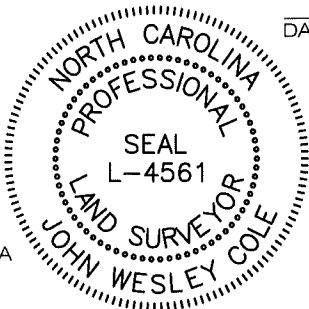


STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER _____

DATE _____



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
3034, PAGE 517 & PLAT BOOK 77, PAGE 76); THAT THE BOUNDARIES
NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM
INFORMATION FOUND IN DEED BOOK 3034, PAGE 517 & PLAT BOOK
77, PAGE 76; THAT THE RATIO OF PRECISION AS CALCULATED IS
1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S. L-4561

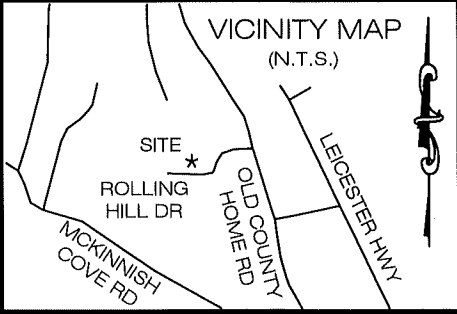
COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- EXISTING IRON PIPE (EIP)
- ▲ GEODETIC MONUMENT
- ⊙ NEW SEWER MANHOLE (NMH)
- ◇ MAILBOX (MB)
- TRANSFORMER (TRAN.)
- T.C.E...TEMPORARY CONSTRUCTION EASEMENT
- OAK...OAK TREE

LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- NEW PERM. EASEMENT LINE
- · · · · · NEW T.C.E. LINE
- · · · TIE LINE ONLY
- x — x — WOVEN WIRE FENCELINE
- ROAD R/W

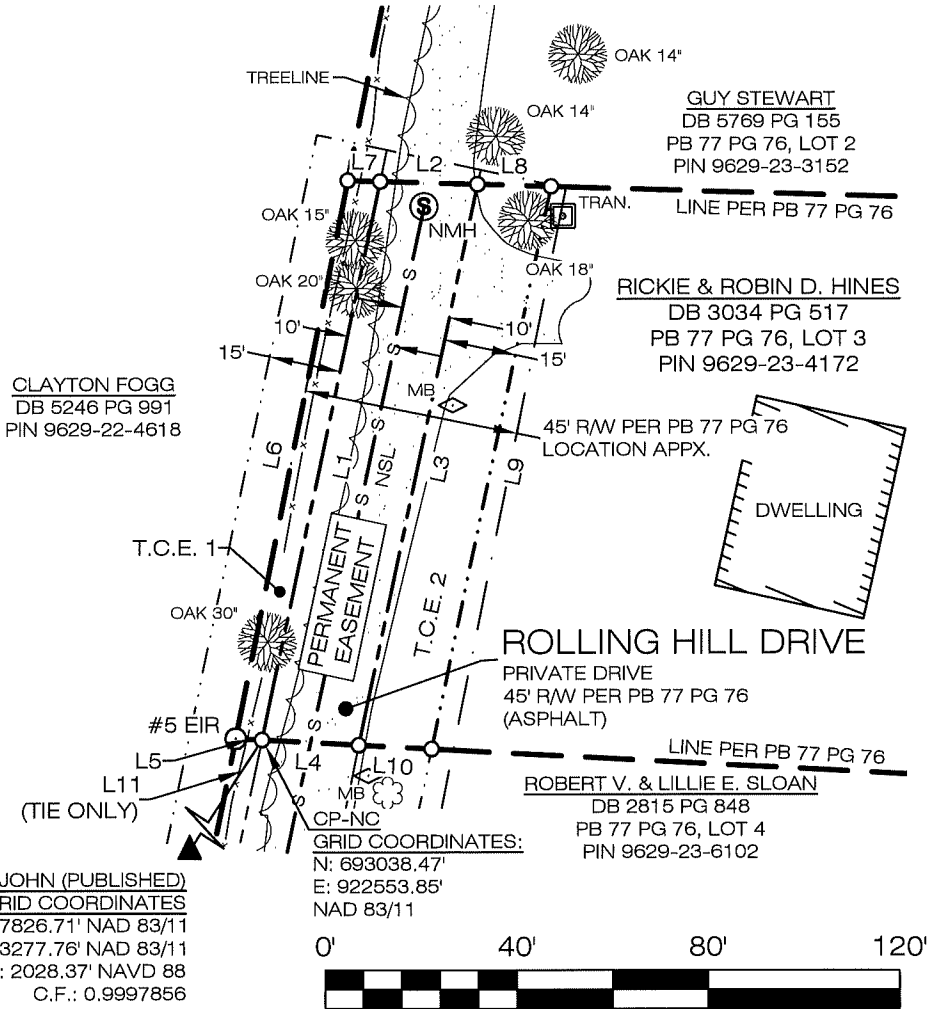


NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.055 ACRES	2,384.9 SQ. FT.
T.C.E. 1:	0.016 ACRES	718.3 SQ. FT.
T.C.E. 2:	0.041 ACRES	1,794.7 SQ. FT.
TOTAL EASEMENT AREA:	0.112 ACRES	4,897.9 SQ. FT.



REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC			
OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221			
SEWER LINE EASEMENT ACROSS THE PROPERTY OF: RICKIE & ROBIN D. HINES			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

LINE	BEARING	DISTANCE
L1	S 04°59'19" E	3.71'
L2	N 84°52'50" W	135.84'
L3	S 32°39'07" W	46.91'
L4	S 04°31'03" W	14.74'
L5	N 85°44'30" W	9.50'
L6	N 02°38'00" E	24.99'
L7	N 32°53'48" E	37.19'
L8	S 85°44'30" E	24.99'
L9	S 85°44'40" E	124.99'
L10	N 02°38'00" E	12.17'
L11	N 32°39'07" E	38.61'
L12	S 86°28'07" E	147.31'
L13	S 04°59'18" E	15.56'

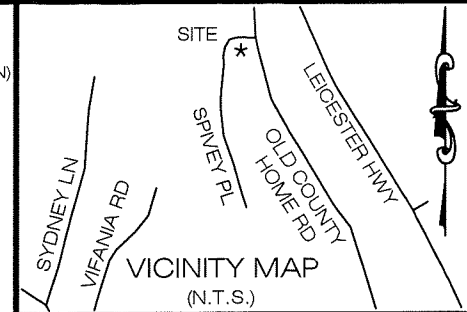
L14	S 04°59'19" E	15.24'
L15	N 84°52'50" W	13.86'
L16	N 06°11'14" W	3.85'
L17	S 83°57'51" W	19.53'
L18	N 84°52'50" W	95.65'
L19	S 32°39'07" W	34.06'
L20	S 04°31'03" W	10.92'
L21	N 85°44'30" W	15.00'
L22	N 02°38'00" E	29.98'
L23	N 32°39'07" E	4.30'
L24	S 86°28'07" E	17.17'
L25	N 02°38'00" E	3.75'
L26	S 58°48'46" E	12719.87'

LINE LEGEND:

—	BOUNDARY LINE
— S —	NEW SEWER LINE (NSL)
— SS —	EXISTING SEWER LINE (ESL)
— — — —	NEW PERM. EASEMENT LINE
— · · · —	NEW T.C.E. LINE
— — — —	TIE LINE ONLY
— OHU —	OVERHEAD UTILITY LINE
— — — —	ROAD EASEMENT PER DB 5325 PG 748
— — — —	STORM DRAIN
— CIS — W —	WATERLINE PER GIS
— W — W —	WATERLINE PER FIELD LOCATION

SYMBOL LEGEND:

○	CALCULATED POINT (CP)
○	EXISTING IRON ROD (EIR) OR MAG NAIL (EMN)
▲	GEODETIC MONUMENT
□	MAILBOX (MB)
⊙	POWER POLE
⊙	NEW SEWER MANHOLE (NMH)
⊙	CLEAN OUT (CO)
⊙	WATER METER (WM)
⊙	SIGN
⊙	FIRE HYDRANT
—	T.C.E...TEMPORARY CONSTRUCTION EASEMENT
POP	POP...POPLAR TREE
HEM	HEM...HEMLOCK TREE



NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.
- PERMANENT EASEMENT 2 & T.C.E. 2 ARE THE AREA WITHIN THE R/W AREA PER PB 148 PG 56. OWNERSHIP UNKNOWN.

AREA TABLE

PERMANENT EASEMENT 1:	0.026 ACRES	1,145.7 SQ. FT.
PERMANENT EASEMENT 2:	0.055 ACRES	2,380.3 SQ. FT.
T.C.E. 1:	0.063 ACRES	2,751.9 SQ. FT.
T.C.E. 2:	0.007 ACRES	321.8 SQ. FT.
TOTAL EASEMENT AREA:	0.151 ACRES	6,599.3 SQ. FT.



REVISIONS:	DATE	REVISIONS MADE	BY:
	4/27/23	PROPERTY OWNERSHIP CORRECTION	BJO

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

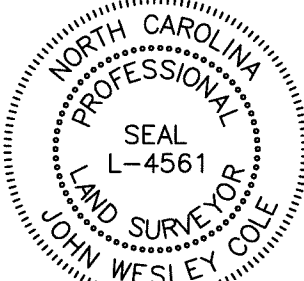
OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

**AMY HOLT &
RACHEL MARIAH HERNDON**

SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC



STATE OF NORTH CAROLINA

COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 5450, PAGE 1336 & PLAT BOOK 148, PAGE 56); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 5450, PAGE 1336 & PLAT BOOK 148, PAGE 56; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 27TH DAY OF APRIL, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S.

L-4561

COLE SURVEYING & DESIGN, PA

549 ELK PARK DRIVE, SUITE 707

ASHEVILLE, NC 28804

PHONE: 828-251-7025

NC FIRM #C-3106 | SC COA #4052

NC GRID
NORTH - NAD 83 (NSRS 2011)

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE

**AMY HOLT &
RACHEL MARIAH HERNDON**
DB 5450 PG 1336
PB 148 PG 56, LOT 2
PIN 9629-24-3308

BRADLEY RICE
DB 5854 PG 1816
PB 148 PG 56, LOT 3
PIN 9629-24-2392

**AMY HOLT &
RACHEL MARIAH HERNDON**
DB 5450 PG 1336
PB 148 PG 56, LOT 2
PIN 9629-24-3308

LINE PER
PB 148 PG 56

PERMANENT
EASEMENT 1

PERMANENT
EASEMENT 2

DWELLING

CP-NC
GRID COORDINATES:
N: 694413.54'
E: 922396.18'
NAD 83/11

NCGS LONG JOHN (PUBLISHED)
NC GRID COORDINATES
N: 687826.71' NAD 83/11
E: 933277.76' NAD 83/11
ELEV.: 2028.37' NAVD 88
C.F.: 0.9997856

OLD COUNTY HOME ROAD
SR 1315

30' MAINTENANCE R/W PER NCDOT OFFICIAL
(ASPHALT)

LINE	BEARING	DISTANCE
L1	S 46°50'01" W	4.00'
L2	N 43°09'59" W	6.66'
L3	N 77°40'21" E	4.66'
L4	S 43°09'59" E	4.27'
L5	S 62°16'19" E	12359.41'

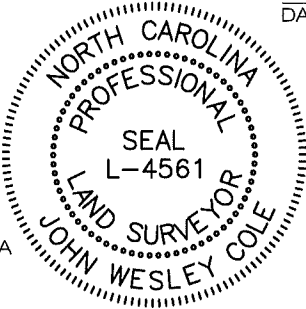


STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER _____

DATE _____



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
2375, PAGE 659); THAT THE BOUNDARIES NOT SURVEYED ARE
CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN
DEED BOOK 2375, PAGE 659 & PLAT BOOK 73, PAGE 103; THAT THE
RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT
WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.
MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS
2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(h)(11)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole L-4561
JOHN WESLEY COLE, P.L.S. L-4561

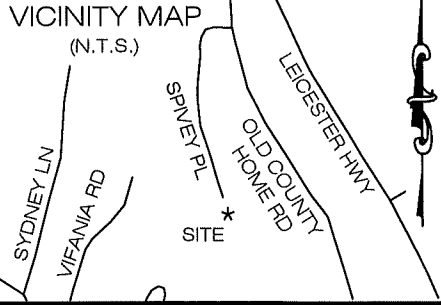
COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- GEODETIC MONUMENT
- ⊙ NEW SEWER MANHOLE (SMH)
- ◇ MAILBOX (MB)
- ⚡ TRANSFORMER (TRAN.)
- T.C.E...TEMPORARY CONSTRUCTION EASEMENT
- MAP...MAPLE TREE
- R.O...RED OAK TREE

LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- — — NEW PERM. EASEMENT LINE
- · · · — NEW T.O.E. LINE
- · — TIE LINE ONLY
- OHU — OVERHEAD UTILITY LINE

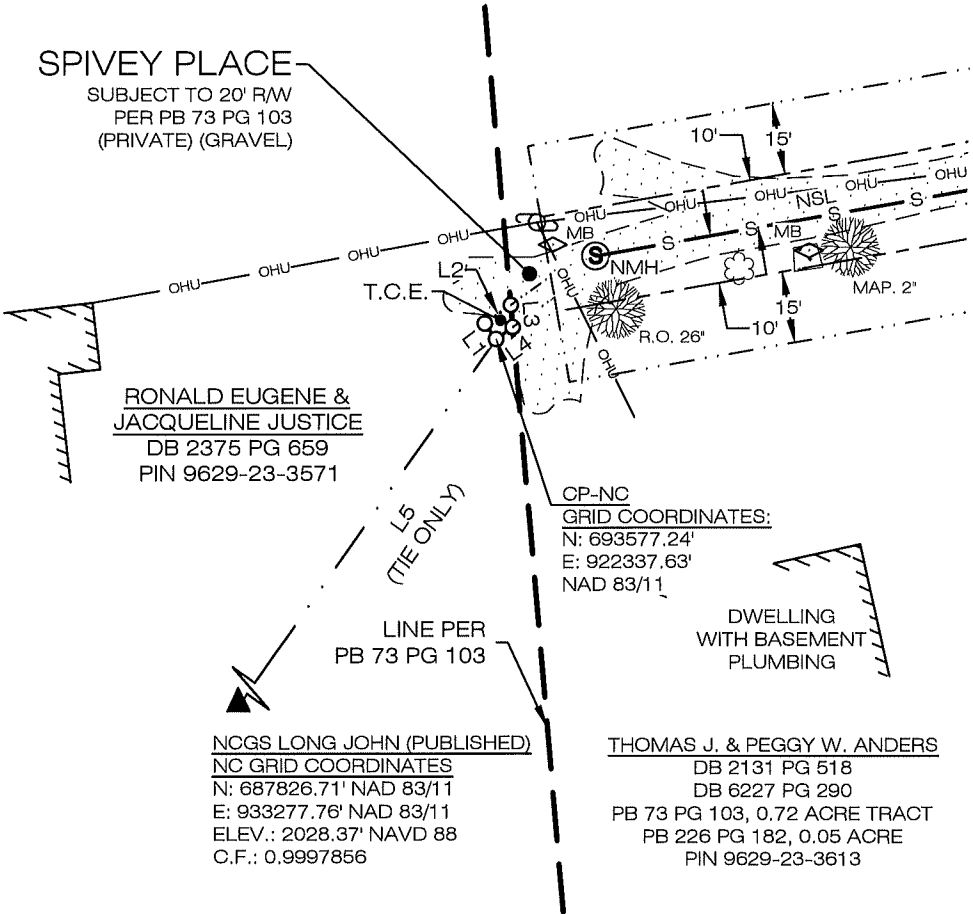


NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

T.C.E.:	0.001 ACRES	21.9 SQ. FT.
TOTAL EASEMENT AREA:	0.001 ACRES	21.9 SQ. FT.



REVISIONS:	DATE	REVISIONS MADE	BY:

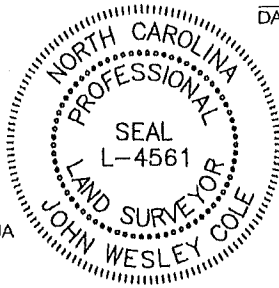
METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC
OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221
SEWER LINE EASEMENT ACROSS THE PROPERTY OF:
**RONALD EUGENE &
JACQUELINE JUSTICE**

SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

LINE	BEARING	DISTANCE
L1	S 62°04'09" E	11940.43'
L2	N 25°49'30" W	9.08'
L3	N 64°33'32" E	100.46'
L4	S 30°26'15" E	9.08'
L5	S 64°32'26" W	101.19'

This map may not be a certified survey and has not been reviewed by a local government agency for compliance with any applicable land development regulations and has not been reviewed for compliance with recording requirements for plats.



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 6232, PAGE 1365 & PLAT BOOK 44, PAGE 5); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 6232, PAGE 1365 & PLAT BOOK 44, PAGE 5; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 10TH DAY OF OCTOBER, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(1)(1)(c): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S. L-4561
COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER _____

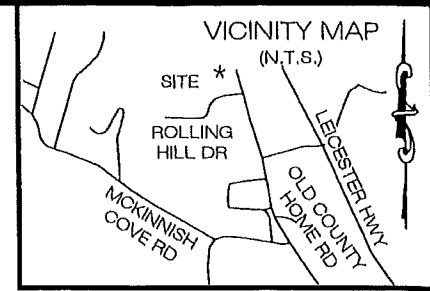
DATE _____

SYMBOL LEGEND:

- O CALCULATED POINT (CP)
- ▲ GEODETIC MONUMENT
- SS EXISTING SEWER MANHOLE (SMH)
- NS NEW SEWER MANHOLE (NMH)
- CO CLEAN OUT (CO)
- WM WATER METER
- T.C.E...TEMPORARY CONSTRUCTION
- EASEMENT
- MAP...MAPLE TREE
- HOL...HOLLY TREE

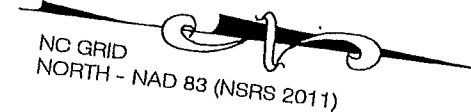
LINE LEGEND:

- BOUNDARY LINE
- SS EXISTING SEWER LINE (ESL)
- S NEW SEWER LINE (NSL)
- NEW PERM. EASEMENT LINE
- NEW T.O.E. LINE
- TIE LINE ONLY
- OHU OVERHEAD UTILITY LINE
- GIS-W WATER LINE PER GIS



NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.



AREA TABLE

T.O.E.:	0.021 ACRES	913.9 SQ. FT.
TOTAL EASEMENT AREA:	0.021 ACRES	913.9 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:

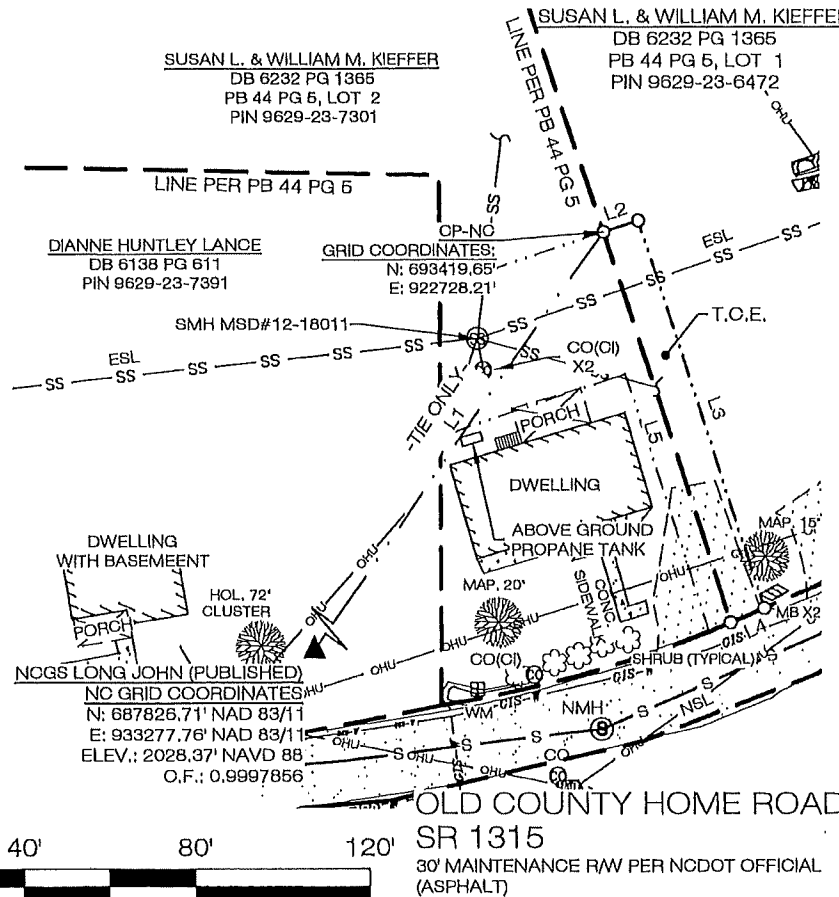
METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:
SUSAN L. & WILLIAM M. KIEFFER

SCALE: 1"=40' PROJECT #: 17-032 DATE: 10/10/2023

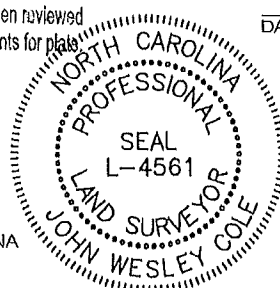
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC



CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	308.81'	5.97'	S 29°33'41" E	5.97'

LINE	BEARING	DISTANCE
L1	S 62°05'22" E	11875.55'
L2	S 82°38'37" W	36.90'
L3	N 25°49'30" W	43.11'
L4	N 64°32'26" E	101.19'
L5	S 64°32'26" W	66.58'
L6	S 25°49'30" E	48.62'

This map may not be a certified survey and has not been reviewed by a local government agency for compliance with any applicable land development regulations and has not been reviewed for compliance with recording requirements for plats.



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 6232, PAGE 1365 & PLAT BOOK 44, PAGE 5); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 6232, PAGE 1365 & PLAT BOOK 44, PAGE 5; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000±; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 10TH DAY OF OCTOBER, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

JOHN WESLEY COLE P.L.S.

L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.









REVIEW OFFICER

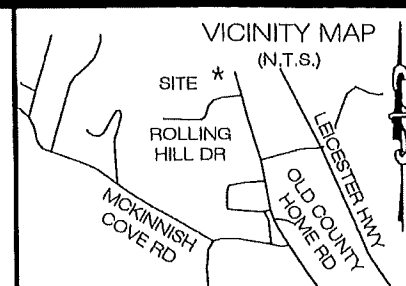
DATE _____

SYMBOL LEGEND:

- CALCULATED POINT (CP)
 ▲ GEODETIC MONUMENT
 (SS) EXISTING SEWER MANHOLE (SMH)
 (SN) NEW SEWER MANHOLE (NMH)
 (CO) CLEAN OUT (CO)
 [W] WATER METER
 T.C.E...TEMPORARY CONSTRUCTION
 EASEMENT
 MAP...MAPLE TREE
 HOL...HOLLY TREE

LINE LEGEND:

-  BOUNDARY LINE
 SS EXISTING SEWER LINE (ESL)
 S NEW SEWER LINE (NSL)
 NEW PERM. EASEMENT LINE
 NEW T.O.E. LINE
 TIE LINE ONLY
 OHU OVERHEAD UTILITY LINE
 GIS-W WATER LINE PER GIS



NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NO GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

NC GRID
NORTH - NAD 83 (NSRS 2011)

AREA TABLE

T.O.E.:	0.048 ACRES	2,104.5 SQ. FT.
TOTAL EASEMENT AREA:	0.048 ACRES	2,104.5 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY
	10/10/23	REVISED EASEMENTS	BJ

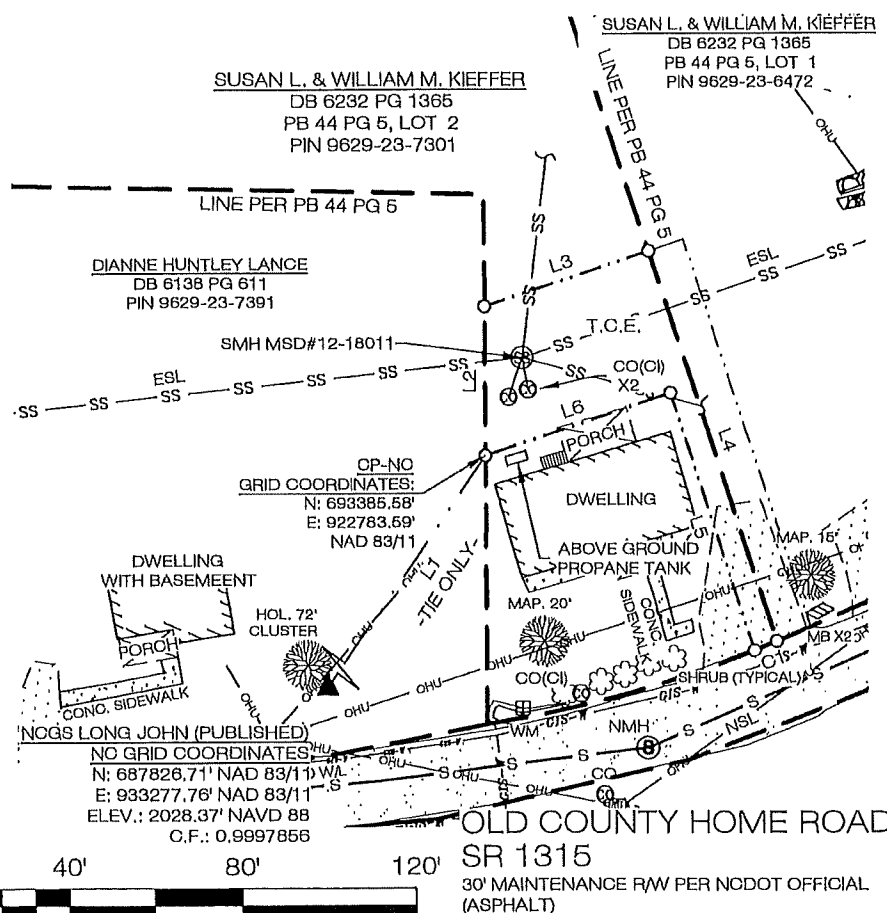
METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:
SUSAN L. & WILLIAM M. KIEFFER

SCALE: 1"=40' PROJECT #: 17-032 DATE: 10/10/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC





STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 4498, PAGE 842); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 4498, PAGE 842; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 27TH DAY OF APRIL, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

LINE	BEARING	DISTANCE
L1	S 75°38'03" W	14.57'
L2	N 04°31'03" E	124.44'
L3	N 32°39'07" E	19.68'
L4	S 02°38'00" W	12.17'
L5	S 02°38'00" W	24.99'
L6	S 02°38'00" W	99.98'
L7	S 75°38'03" W	15.85'
L8	N 04°31'03" E	133.33'
L9	N 32°39'07" E	49.40'
L10	S 02°38'00" W	29.98'
L11	N 02°38'00" E	3.75'
L12	S 59°46'29" E	12796.77'

NC GRID
NORTH - NAD 83 (NSRS 2011)

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER _____

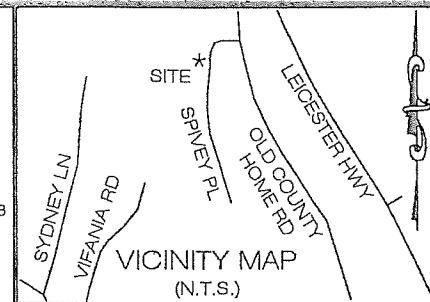
DATE _____

LINE LEGEND:

— BOUNDARY LINE
— S — NEW SEWER LINE (NSL)
— — NEW PERM. EASEMENT LINE
- - - NEW T.O.E. LINE
— TIE LINE ONLY
— OHU — OVERHEAD UTILITY LINE
— ROAD EASEMENT PER DB 5325 PG 748

SYMBOL LEGEND:

○ CALCULATED POINT (CP)
● EXISTING IRON ROD (EIR)
▲ GEODETIC MONUMENT
◇ MAILBOX (MB)
⊕ POWER POLE
⊙ NEW SEWER MANHOLE (NMH)
T.O.E...TEMPORARY CONSTRUCTION
EASEMENT
POP...POPLAR TREE



NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NOGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.035 ACRES	1,532.8 SQ. FT.
T.C.E.:	0.056 ACRES	2,451.3 SQ. FT.
TOTAL EASEMENT AREA:	0.091 ACRES	3,984.1 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
	4/27/23	PROPERTY OWNERSHIP CORRECTION	BJO

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

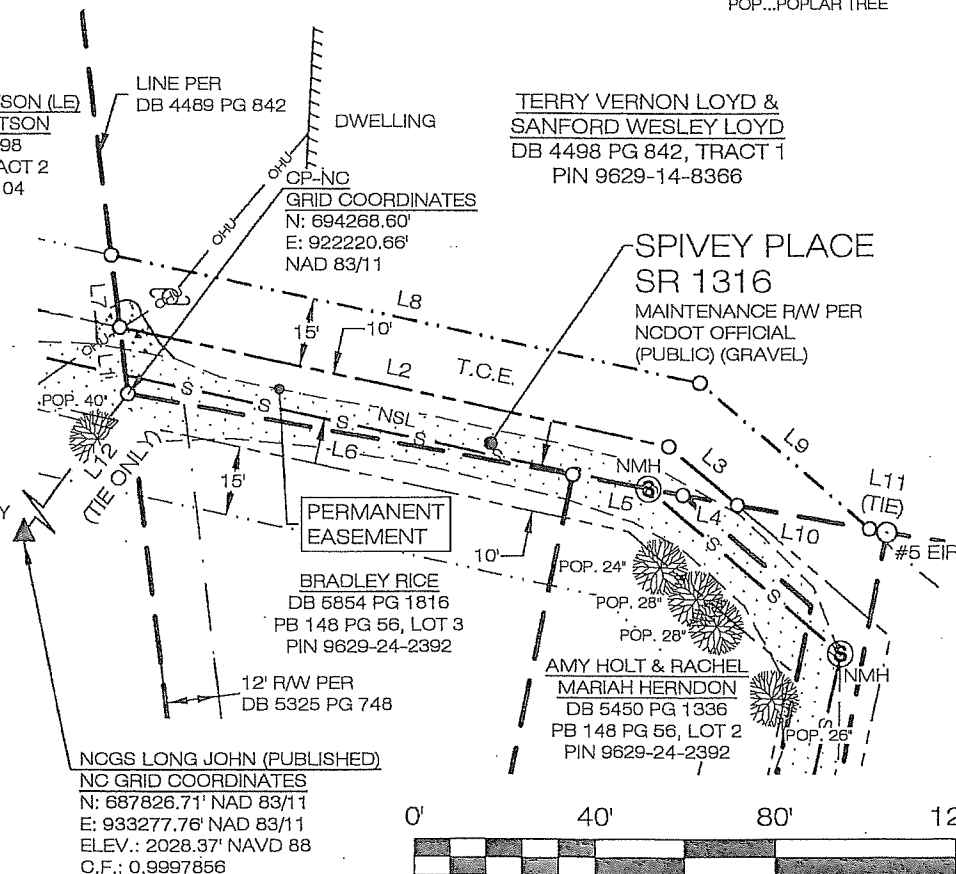
OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

**TERRY VERNON LOYD &
SANFORD WESLEY LOYD**

SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC



LINE	BEARING	DISTANCE
L1	S 89°47'47" W	137.76'
L2	N 00°41'10" W	1.18'
L3	N 89°18'50" E	137.68'
L4	S 02°31'41" E	2.34'
L5	S 02°11'55" E	15.01'
L6	S 89°47'47" W	138.15'

L7	N 00°41'10" W	15.00'
L8	N 00°41'10" W	15.00'
L9	N 89°18'50" E	137.19'
L10	S 02°31'41" E	15.01'
L11	S 57°10'11" E	12980.92'

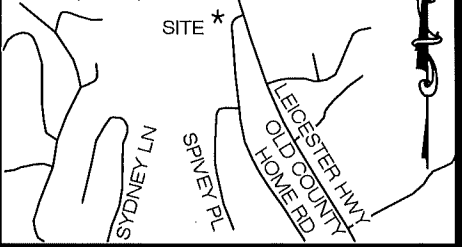
SYMBOL LEGEND:

- CALCULATED POINT (CP)
- RIGHT OF WAY MONUMENT (R/W MON)
- GEODETIC MONUMENT
- MAILBOX (MB)
- COMMUNICATIONS PEDESTAL (CPED)
- GAS VALVE (GV)
- NEW SEWER MANHOLE (NMH)
- CLEAN OUT (CO)
- WATER METER (WM)
- SIGN
- T.C.E...TEMPORARY CONSTRUCTION EASEMENT

LINE LEGEND:

- BOUNDARY LINE
- NEW SEWER LINE
- EXISTING SEWER LINE
- NEW PERM. EASEMENT LINE
- NEW T.C.E. LINE
- TIE LINE ONLY
- OVERHEAD UTILITY LINE
- ROAD EASEMENT
- RIGHT OF WAY
- WATERLINE PER GIS

VICINITY MAP
(N.T.S.)



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE

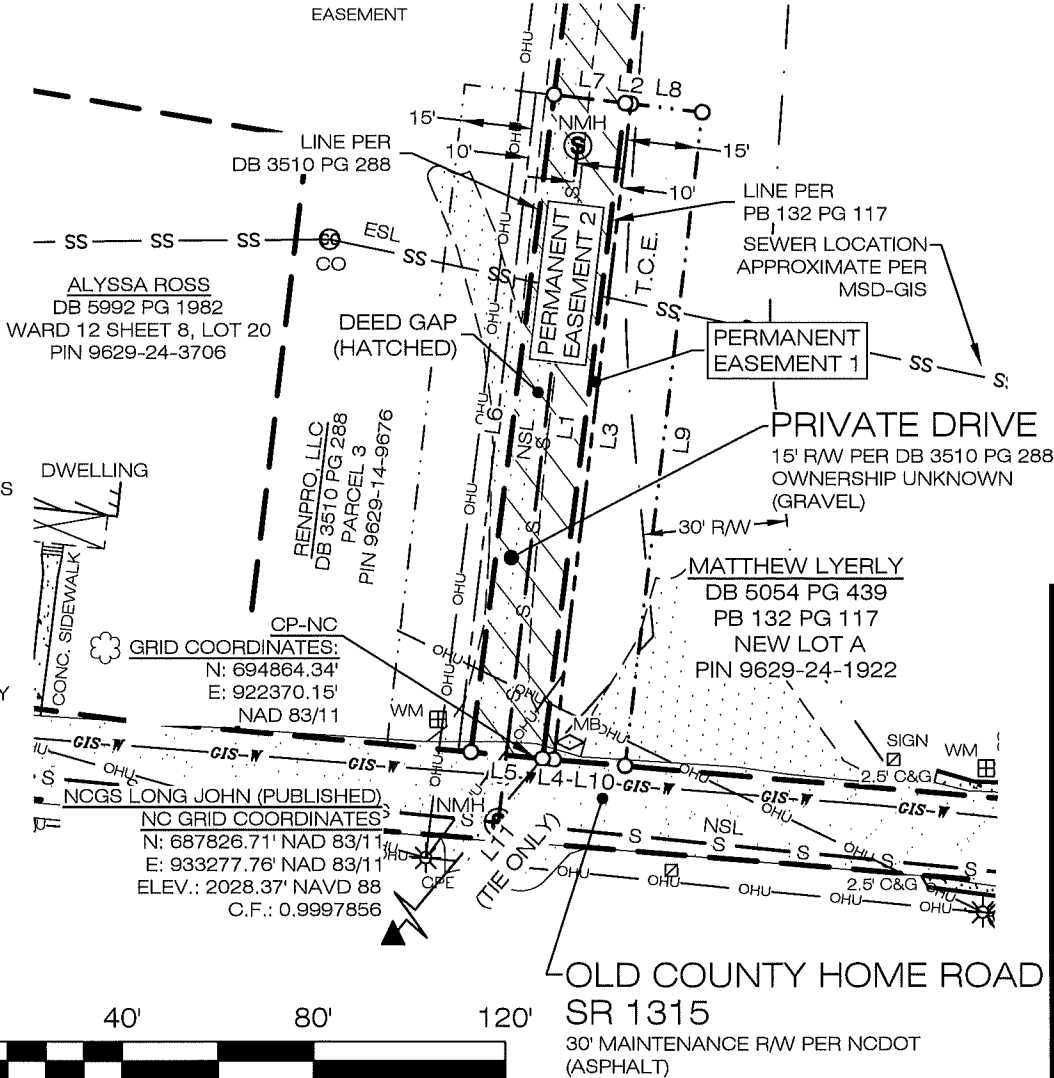
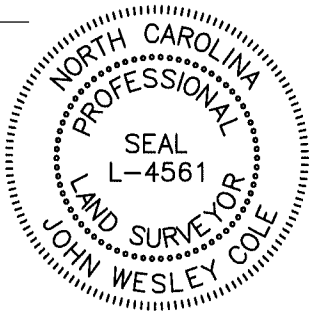
STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK,
5054 PAGE 439 & PLAT BOOK 132, PAGE 117); THAT THE BOUNDARIES
NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM
INFORMATION FOUND IN DEED BOOK, 5054 PAGE 439 & PLAT BOOK
132, PAGE 117; THAT THE RATIO OF PRECISION AS CALCULATED IS
1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole L-4561
JOHN WESLEY COLE, P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052



NC GRID
NORTH - NAD 83 (NSRS 2011)

NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.
- PERMANENT EASEMENT 2 IS THE AREA WITHIN THE DEED GAP. OWNERSHIP UNKNOWN.

AREA TABLE

PERMANENT EASEMENT 1:	0.006 ACRES	241.8 SQ. FT.
PERMANENT EASEMENT 2:	0.048 ACRES	2,069.3 SQ. FT.
T.C.E.:	0.047 ACRES	2,061.5 SQ. FT.
TOTAL EASEMENT AREA:	0.101 ACRES	4,372.6 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC			
OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221			
SEWER LINE EASEMENT ACROSS THE PROPERTY OF: MATTHEW LYERLY			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

LINE	BEARING	DISTANCE
L1	S 04°59'18" E	1.04'
L2	N 86°28'07" W	147.31'
L3	N 32°39'07" E	5.76'
L4	S 84°52'50" E	144.41'
L5	S 04°59'18" E	15.56'
L6	N 85°44'40" W	124.99'
L7	N 85°44'30" W	24.99'
L8	S 32°53'48" W	37.19'
L9	N 02°38'00" E	12.17'
L10	N 32°39'07" E	38.61'

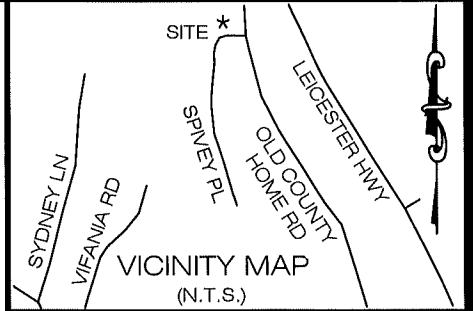
L11	N 86°28'07" W	17.17'
L12	N 32°39'07" E	23.21'
L13	S 84°52'50" E	81.38'
L14	S 04°19'48" E	7.29'
L15	N 85°40'12" E	43.77'
L16	S 84°52'50" E	25.07'
L17	S 04°59'18" E	15.24'
L18	N 02°38'00" E	29.98'
L19	N 32°39'07" E	4.30'
L20	N 02°38'00" E	3.75'
L21	S 58°45'08" E	12729.68'

LINE LEGEND:

- BOUNDARY LINE
- S NEW SEWER LINE (NSL)
- SS EXISTING SEWER LINE (ESL)
- NEW PERM. EASEMENT LINE
- NEW T.C.E. LINE
- TIE LINE ONLY
- OHU OVERHEAD UTILITY LINE
- ROAD EASEMENT PER DB 5325 PG 748
- STORM DRAIN
- GIS WATERLINE PER GIS
- W WATERLINE PER FIELD LOCATION

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- EXISTING IRON ROD (EIR) OR MAG NAIL (EMN)
- GEODETIC MONUMENT
- NEW SEWER MANHOLE (NMH)
- GAS VALVE
- FIRE HYDRANT
- MAILBOX (MB)
- POWER POLE
- CLEAN OUT (CO)
- WATER METER (WM)
- SIGN
- T.C.E...TEMPORARY CONSTRUCTION EASEMENT
- POP...POPLAR TREE



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE

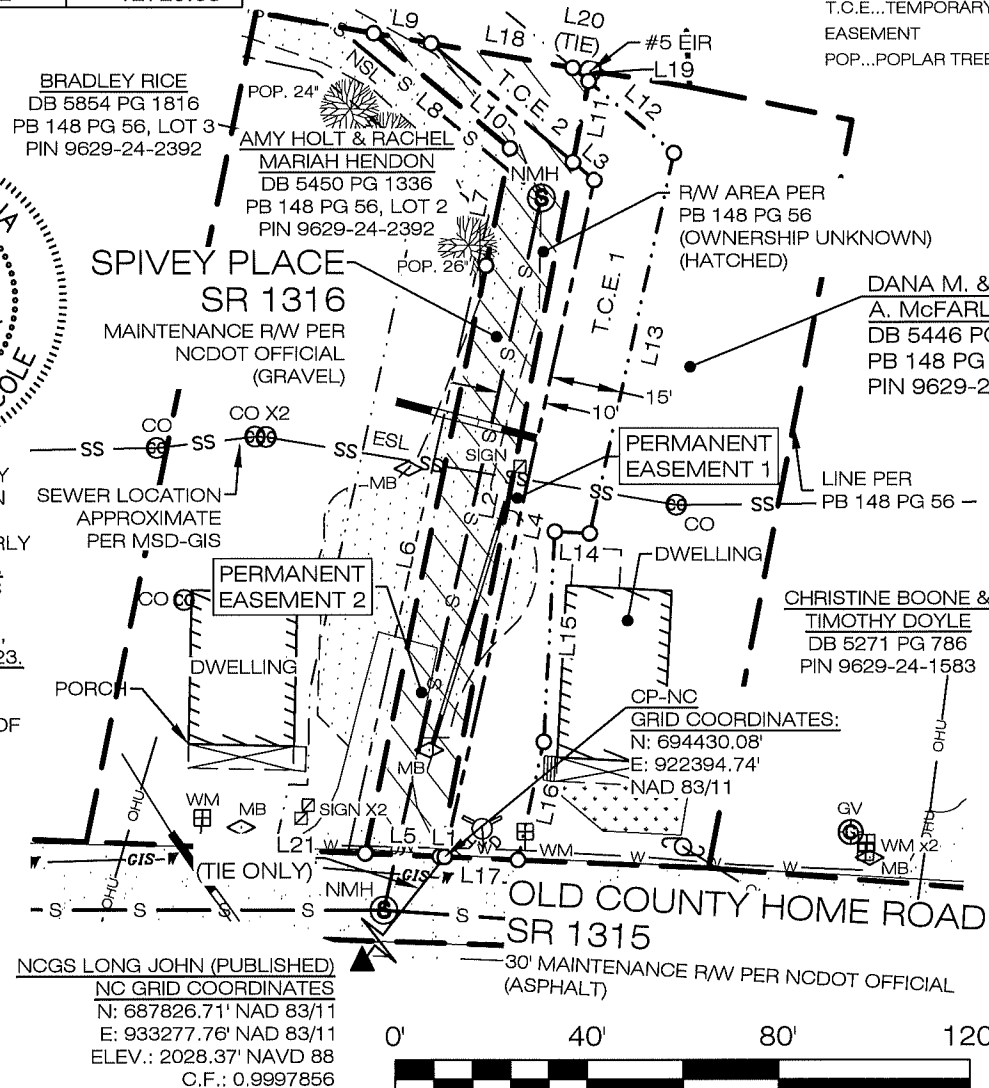
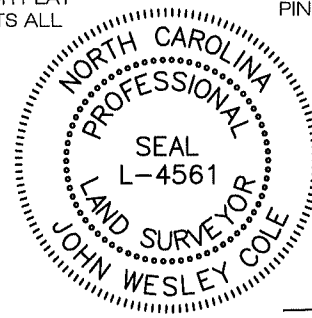
STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY
SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION
(DEED DESCRIPTION RECORDED IN DEED BOOK 5446, PAGE 978 & PLAT
BOOK 148, PAGE 56); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY
INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 5446,
PAGE 978 & PLAT BOOK 148, PAGE 56; THAT THE RATIO OF PRECISION AS
CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN
ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE,
REGISTRATION NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY IS OF
ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING
PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE
DEFINITION OF SUBDIVISION.

John Wesley Cole L-4561
JOHN WESLEY COLE, P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052



NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.
- PERMANENT EASEMENT 2 & T.C.E. 2 ARE THE AREA WITHIN THE R/W AREA PER PB 148 PG 56. OWNERSHIP UNKNOWN.

AREA TABLE

PERMANENT EASEMENT 1:	0.010 ACRES	444.9 SQ. FT.
PERMANENT EASEMENT 2:	0.055 ACRES	2,380.3 SQ. FT.
T.C.E. 1:	0.052 ACRES	2,272.1 SQ. FT.
T.C.E. 2:	0.007 ACRES	321.8 SQ. FT.
TOTAL EASEMENT AREA:	0.124 ACRES	5,419.1 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

DANA M. &
KIMBERLY A. McFARLAND

SCALE: 1"=40'

PROJECT #: 17-032

DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

LINE	BEARING	DISTANCE
L1	S 02°11'55" E	2.66'
L2	S 89°18'50" W	138.22'
L3	N 00°41'10" W	3.82'
L4	N 89°47'47" E	138.15'
L5	N 00°41'10" W	15.00'

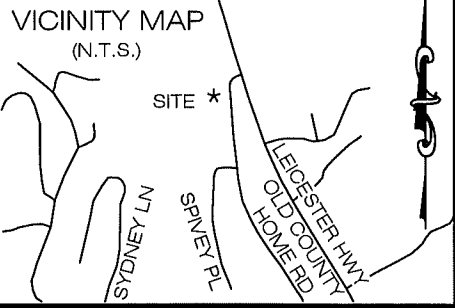
L6	N 89°47'47" E	137.76'
L7	S 02°11'55" E	15.01'
L8	S 02°11'55" E	15.01'
L9	S 89°18'50" W	138.61'
L10	N 00°41'10" W	15.00'
L11	S 57°13'27" E	12972.31'

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- RIGHT OF WAY MONUMENT (R/W MON)
- ▲ GEODETIC MONUMENT
- ◇ MAILBOX (MB)
- ⊗ COMMUNICATIONS PEDESTAL (CPED)
- ⊙ GAS VALVE (GV)
- ⊕ NEW SEWER MANHOLE (NMH)
- CLEAN OUT (CO)
- ⊞ WATER METER (WM)
- ⊠ SIGN
- T.C.E. TEMPORARY CONSTRUCTION EASEMENT

LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- SS — EXISTING SEWER LINE (ESL)
- — NEW PERM. EASEMENT LINE
- · · · NEW T.C.E. LINE
- · · — TIE LINE ONLY
- OHU — OVERHEAD UTILITY LINE
- — ROAD EASEMENT
- — RIGHT OF WAY
- CIS — WATERLINE PER GIS

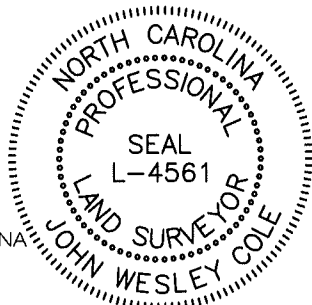


STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE



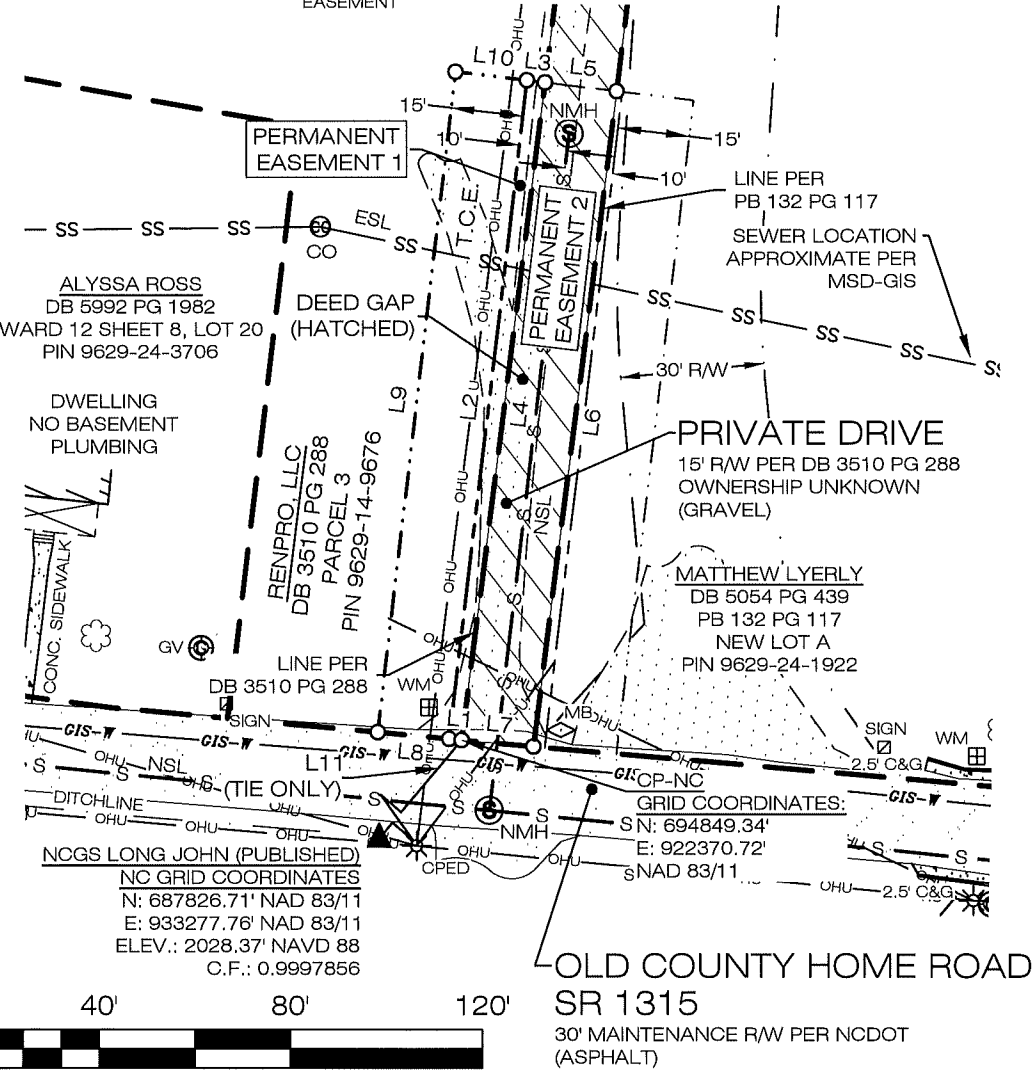
STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
3510, PAGE 288); THAT THE BOUNDARIES NOT SURVEYED ARE
CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN
DEED BOOK 3510, PAGE 288; THAT THE RATIO OF PRECISION AS
CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN
ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL
SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 2ND DAY OF
JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole L-4561
JOHN WESLEY COLE, P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052



NC GRID
NORTH - NAD 83 (NSRS 2011)

NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.
7. PERMANENT EASEMENT 2 IS THE AREA WITHIN THE DEED GAP. OWNERSHIP UNKNOWN.

AREA TABLE

PERMANENT EASEMENT 1:	0.010 ACRES	448.0 SQ. FT.
PERMANENT EASEMENT 2:	0.048 ACERS	2,069.3 SQ. FT.
T.C.E.:	0.048 ACRES	2,076.2 SQ. FT.
TOTAL EASEMENT AREA:	0.106 ACRES	4,593.5 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTRY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

RENPRO, LLC

SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

LINE	BEARING	DISTANCE
L1	S 75°41'50" W	6.56'
L2	N 02°38'00" E	99.98'
L3	S 85°44'30" E	9.50'
L4	S 04°31'03" W	97.85'
L5	S 85°44'30" E	15.00'
L6	S 04°31'03" W	92.81'
L7	S 75°41'50" W	10.88'
L8	S 75°41'50" W	4.96'
L9	N 02°38'00" E	70.90'
L10	S 59°45'15" E	12792.09'

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE

STATE OF NORTH CAROLINA

COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
5854, PAGE 1816 & PLAT BOOK 148, PAGE 56); THAT THE
BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN
FROM INFORMATION FOUND IN DEED BOOK 5854, PAGE 1816 & PLAT
BOOK 148, PAGE 56 THAT THE RATIO OF PRECISION AS CALCULATED
IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

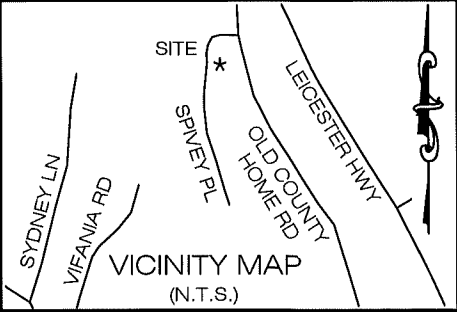
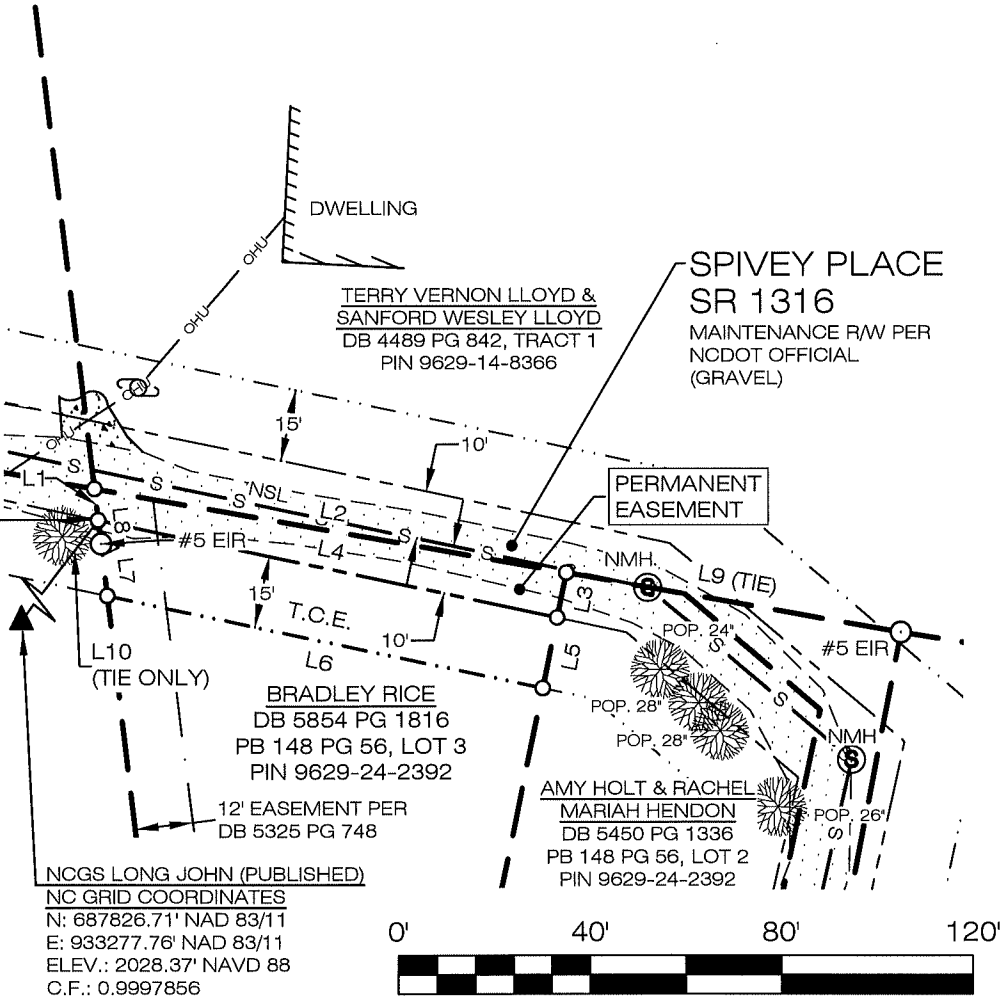
John Wesley Cole
JOHN WESLEY COLE, P.L.S.

L-4561
L-4561



COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

OP-NC
GRID COORDINATES:
N: 694270.22'
E: 922227.02'
NAD 83/11



NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.018 ACRES	778.7 SQ. FT.
T.C.E.:	0.033 ACRES	1,429.9 SQ. FT.
TOTAL EASEMENT AREA:	0.051 ACRES	2,208.6 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC			
OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221			
SEWER LINE EASEMENT ACROSS THE PROPERTY OF: BRADLEY RICE			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

LINE	BEARING	DISTANCE
L1	S 21°38'13" E	8.64'
L2	S 17°19'33" E	96.21'
L3	S 72°40'27" W	3.00'
L4	S 72°40'27" W	4.44'
L5	S 72°40'27" W	12.55'
L6	N 17°19'33" W	100.87'
L7	N 61°08'23" E	19.75'
L8	N 61°08'23" E	4.33'
L9	N 73°49'13" E	10.75'
L10	S 21°38'13" E	8.73'
L11	S 17°19'33" E	96.77'
L12	S 72°40'27" W	15.00'
L13	S 43°09'59" E	10.71'
L14	S 77°40'21" W	4.66'
L15	N 43°09'59" W	10.25'
L16	S 72°40'27" W	15.00'
L17	N 17°19'33" W	101.52'
L18	N 81°35'57" E	10.39'
L19	N 61°08'23" E	4.83'
L20	N 73°49'13" E	6.77'
L21	N 64°13'51" E	35.07'
L22	S 61°54'03" E	12446.35'

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 6318, PAGE 644 & PLAT BOOK 234, PAGE 165); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 6318, PAGE 644 & PLAT BOOK 234, PAGE 165; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 6TH DAY OF DECEMBER, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S. L-4561
COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

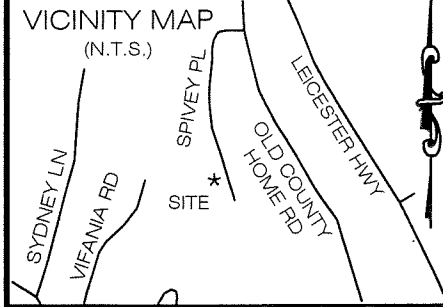
DATE

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- ⊙ EXISTING IRON ROD (EIR)
- ▲ GEODETIC MONUMENT
- ✉ MAILBOX (MB)
- ⚡ TRANSFORMER (TRAN.)
- ⊙ NEW SEWER MANHOLE (NMH)
- Ⓢ T.C.E. TEMPORARY CONSTRUCTION
- EASEMENT
- MAP...MAPLE TREE
- R.O. RED OAK TREE

LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- — — NEW PERM. EASEMENT LINE
- · · · — NEW T.C.E. LINE
- · — TIE LINE ONLY
- OHU — OVERHEAD UTILITY LINE
- · — 20' EASEMENT PER PB 73 PG 103



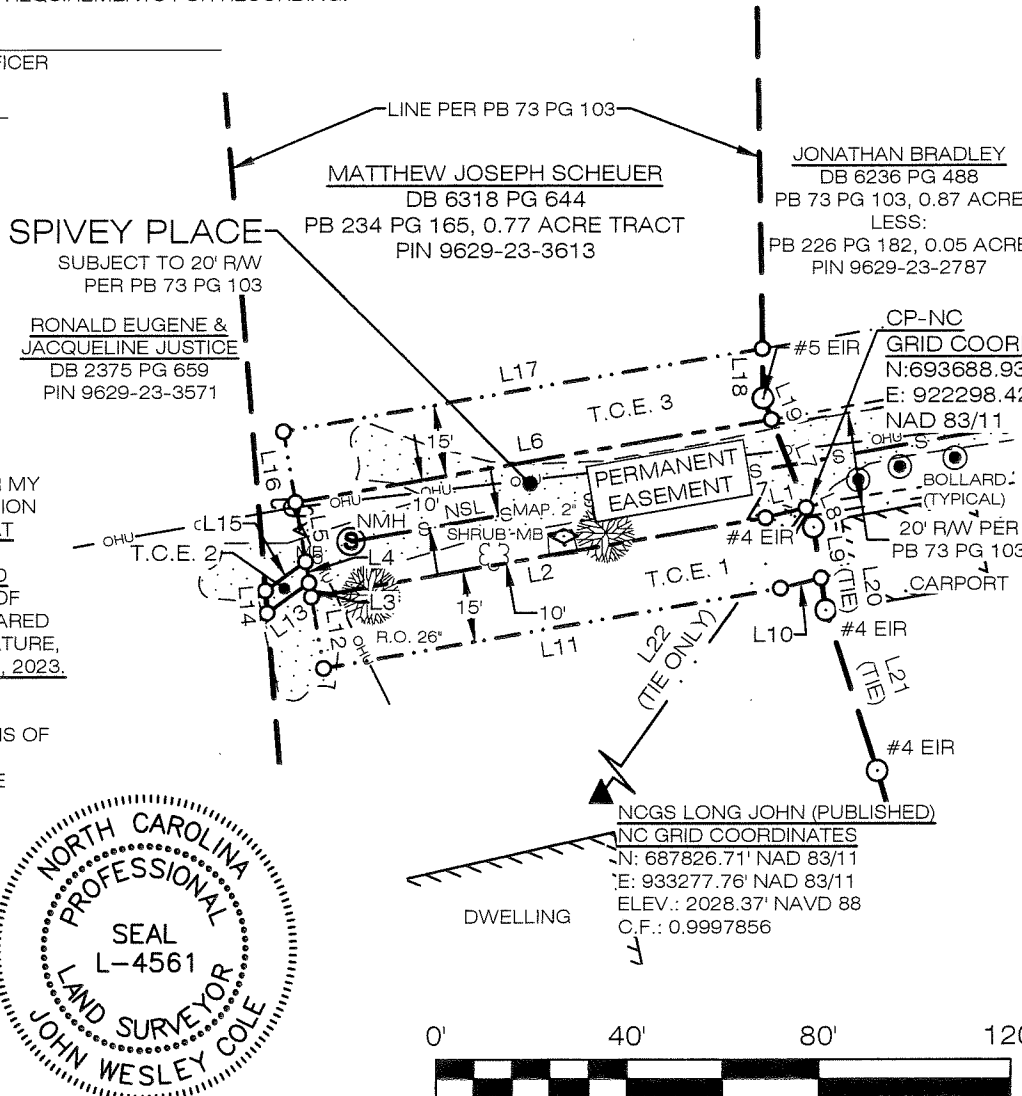
NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL. GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.047 ACRES	2,055.4 SQ. FT.
T.C.E. 1:	0.036 ACRES	1,582.7 SQ. FT.
T.C.E. 2:	0.001 ACRES	41.9 SQ. FT.
T.C.E. 3:	0.035 ACRES	1,509.1 SQ. FT.
TOTAL EASEMENT AREA:	0.119 ACRES	5,189.1 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
	12/6/23	OWNERSHIP UPDATE	BO
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221 SEWER LINE EASEMENT ACROSS THE PROPERTY OF: MATTHEW JOSEPH SCHEUER			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			



LINE	BEARING	DISTANCE
L1	S 18°08'55" W	80.70'
L2	S 45°14'55" W	9.25'
L3	S 61°46'09" W	44.80'
L4	N 85°23'34" W	43.53'
L5	N 04°26'09" W	20.25'
L6	S 85°23'34" E	40.82'
L7	N 61°46'09" E	37.01'
L8	N 18°08'55" E	94.74'
L9	N 37°52'57" E	12.03'
L10	S 10°11'39" E	33.57'

L11	S 10°11'39" E	14.86'
L12	S 10°11'39" E	16.73'
L13	S 18°08'55" W	52.79'
L14	N 44°45'05" W	13.31'
L15	S 45°14'55" W	6.93'
L16	S 45°14'55" W	11.98'
L17	S 44°45'05" E	12.09'
L18	S 61°46'09" W	22.21'
L19	N 85°59'41" W	63.03'
L20	N 04°26'09" W	5.45'
L21	N 04°26'09" W	15.19'
L22	S 85°23'34" E	38.79'
L23	N 61°46'09" E	26.58'

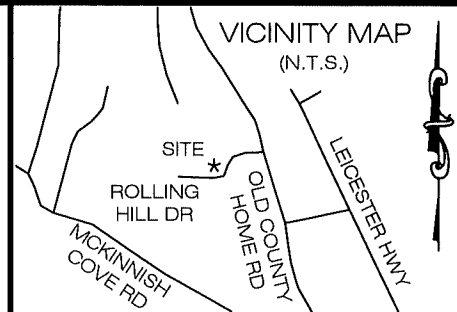
L24	N 18°08'55" E	91.34'
L25	N 37°52'57" E	28.11'
L26	S 10°11'39" E	20.16'
L27	S 63°24'02" E	11865.18'

LINE LEGEND:

- BOUNDARY LINE
- S NEW SEWER LINE (NSL)
- NEW PERM. EASEMENT LINE
- NEW T.C.E. LINE
- TIE LINE ONLY
- STORM PIPE (TYPE AS NOTED)
- WOVEN WIRE FENCELINE
- ROAD EASEMENT

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- EXISTING IRON ROD (EIR)
- GEODETIC MONUMENT
- NEW SEWER MANHOLE (NMH)
- CLEAN OUT (CO)
- MAILBOX (MB)
- WELL
- T.C.E...TEMPORARY CONSTRUCTION EASEMENT
- PINE...PINE TREE
- POP...POPLAR TREE
- W.O...WHITE OAK TREE



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE

STATE OF NORTH CAROLINA

COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
2815, PAGE 848 & PLAT BOOK 77, PAGE 76); THAT THE BOUNDARIES
NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM
INFORMATION FOUND IN DEED BOOK 2815, PAGE 848 & PLAT BOOK
77, PAGE 76; THAT THE RATIO OF PRECISION AS CALCULATED IS
1:10,000±; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S.

L-4561
L-4561

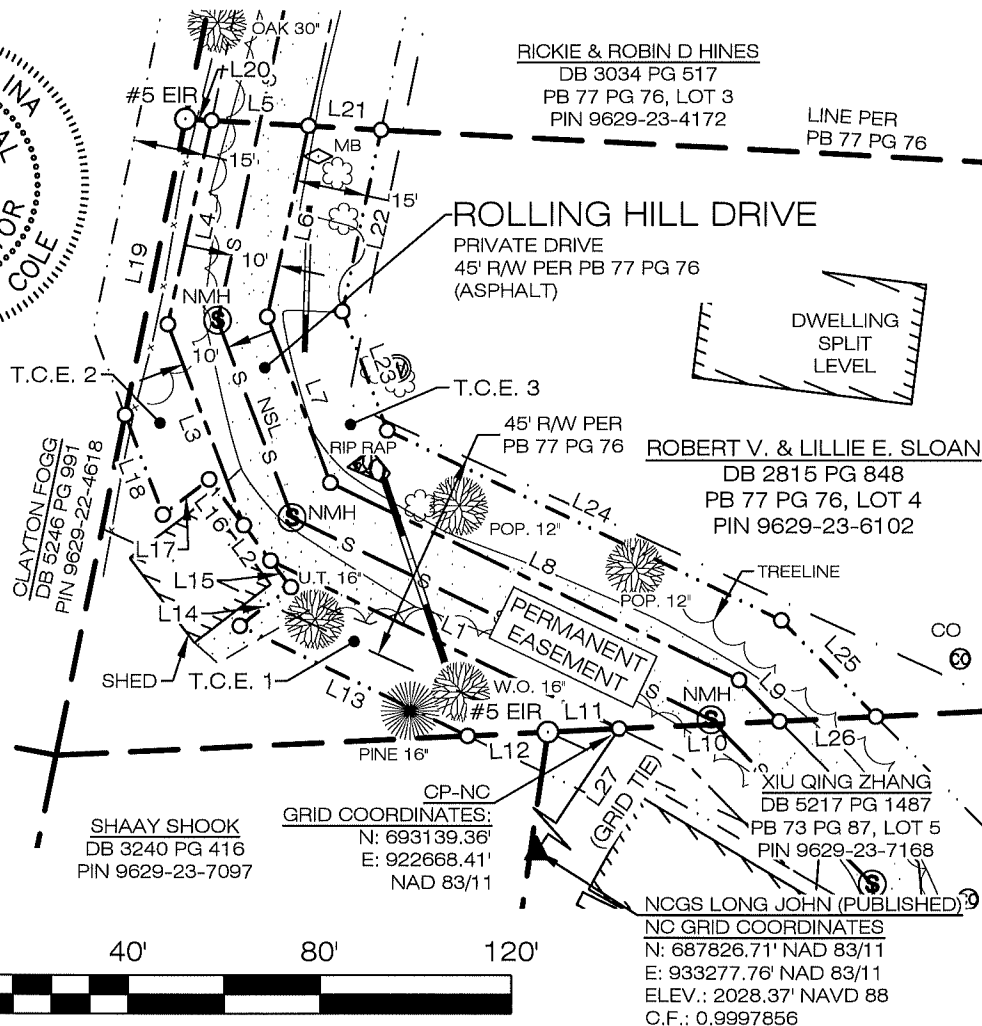
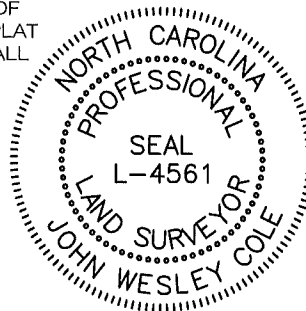
COLE SURVEYING & DESIGN, PA

549 ELK PARK DRIVE, SUITE 707

ASHEVILLE, NC 28804

PHONE: 828-251-7025

NC FIRM #C-3106 | SC COA #4052



NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD
THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND
UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID
DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS
RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.084 ACRES	3,657.3 SQ. FT.
T.C.E. 1:	0.022 ACRES	955.1 SQ. FT.
T.C.E. 2:	0.016 ACRES	702.6 SQ. FT.
T.C.E. 3:	0.064 ACRES	2,770.6 SQ. FT.
TOTAL EASEMENT AREA:	0.186 ACRES	8,085.6 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD HOME COUNTY ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

ROBERT V. & LILLIE E. SLOAN

SCALE: 1"=40'

PROJECT #: 17-032

DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

MAP SET
SHEET 1 OF 2

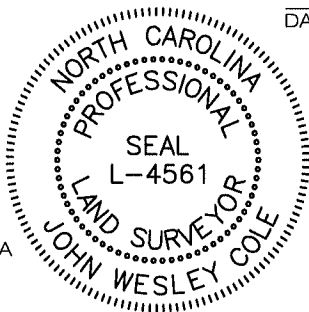
THIS SHEET IS PART OF A MAP SET AND IS INTENDED TO ACCOMPANY ALL OTHER SHEETS IN THIS SET AND IS TO BE CONSIDERED INCOMPLETE WITHOUT ALL OTHER SHEETS TO SUPPORT IT.

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE



STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 4890, PAGE 1498); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 4890, PAGE 1498; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE, P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

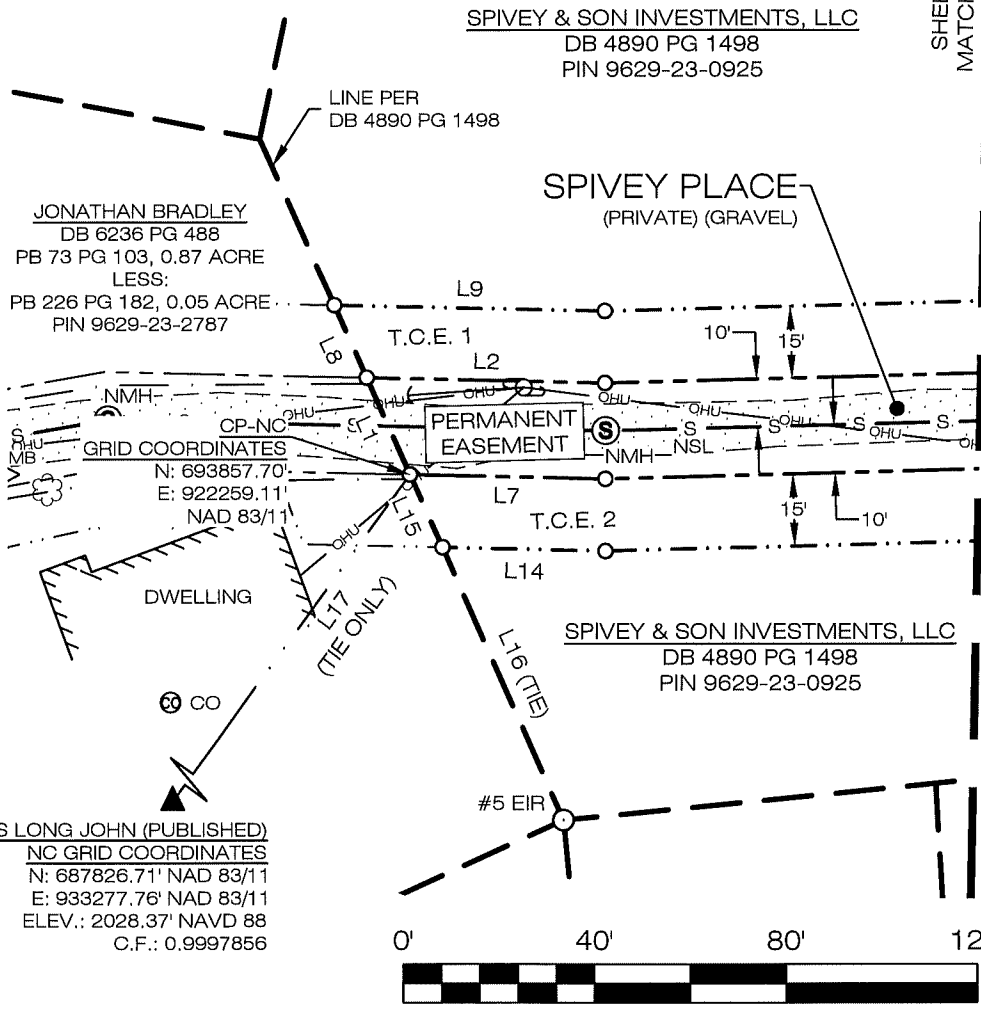
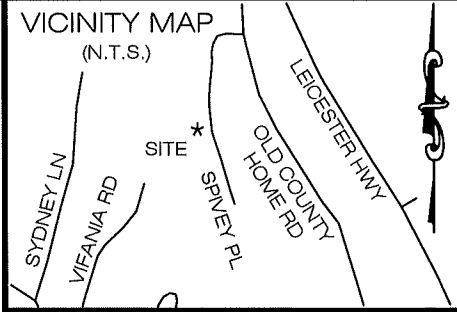


SYMBOL LEGEND:

- CALCULATED POINT (CP)
- EXISTING IRON ROD (EIR)
- ▲ GEODETIC MONUMENT
- Ⓢ NEW SEWER MANHOLE (NMH)
- ◇ MAILBOX (MB)
- ⌵ GUY WIRE
- ⌋ POWER POLE
- T.C.E...TEMPORARY CONSTRUCTION
- EASEMENT
- MAP...MAPLE

LINE LEGEND:

- BOUNDARY LINE
- S NEW SEWER LINE (NSL)
- NEW PERM. EASEMENT LINE
- NEW T.C.E. LINE
- TIE LINE ONLY
- OHU OVERHEAD UTILITY LINE
- 20' EASEMENT PER PB 73 PG 103
- STORM PIPE (SIZE & TYPE NOTED)
- MATCHLINE
- RIGHT OF WAY



NOTES

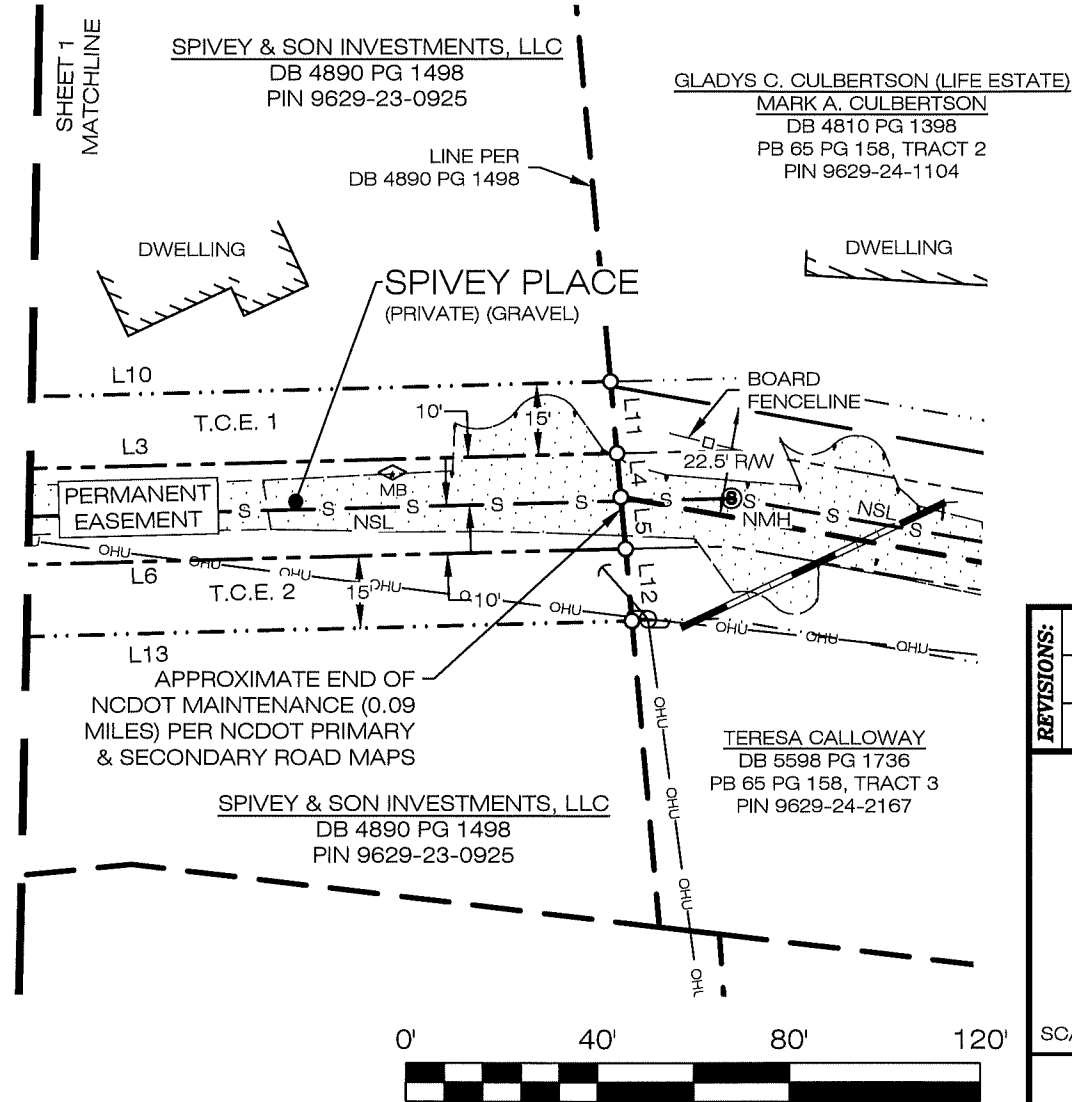
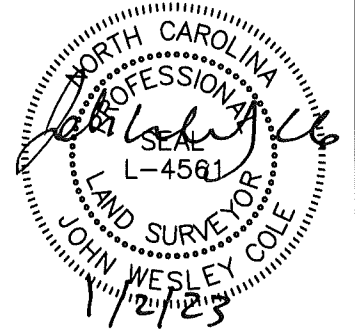
- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.114 ACRES	4,947.5 SQ. FT.
T.C.E. 1:	0.087 ACRES	3,805.4 SQ. FT.
T.C.E. 2:	0.083 ACRES	3,615.8 SQ. FT.
TOTAL EASEMENT AREA:	0.284 ACRES	12,368.7 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221 SEWER LINE EASEMENT ACROSS THE PROPERTY OF: SPIVEY & SON INVESTMENTS, LLC SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023 HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

LINE	BEARING	DISTANCE
L1	S 58°29'38" W	22.13'
L2	N 06°09'03" W	49.88'
L3	N 08°57'01" W	201.11'
L4	N 77°24'15" E	9.20'
L5	N 77°24'15" E	10.84'
L6	S 08°57'01" E	202.87'
L7	S 06°09'03" E	40.89'
L8	S 58°29'38" W	16.60'
L9	N 06°09'03" W	56.62'
L10	N 08°57'01" W	199.79'
L11	N 77°24'15" E	15.03'
L12	N 77°24'15" E	15.03'
L13	S 08°57'01" E	204.20'
L14	S 06°09'03" E	34.15'
L15	S 58°29'38" W	16.60'
L16	N 58°29'38" E	62.06'
L17	S 61°18'22" E	12561.19'



MAP SET
SHEET 2 OF 2

THIS SHEET IS PART OF A MAP SET AND
IS INTENDED TO ACCOMPANY ALL
OTHER SHEETS IN THIS SET AND IS TO
BE CONSIDERED INCOMPLETE WITHOUT
ALL OTHER SHEETS TO SUPPORT IT.

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221 SEWER LINE EASEMENT ACROSS THE PROPERTY OF: SPIVEY & SON INVESTMENTS, LLC SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023 HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

LINE	BEARING	DISTANCE
L1	N 85°23'34" W	6.74'
L2	N 04°36'26" E	20.00'
L3	S 85°23'34" E	3.09'
L4	S 05°43'22" E	20.33'
L5	S 05°43'22" E	6.81'
L6	N 86°01'49" W	7.96'
L7	N 04°36'26" E	6.79'
L8	N 04°36'26" E	15.00'
L9	S 85°23'34" E	0.36'
L10	S 05°43'22" E	15.25'
L11	S 64°17'11" E	12034.24'

NC GRID
NORTH - NAD 83 (NSRS 2011)

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

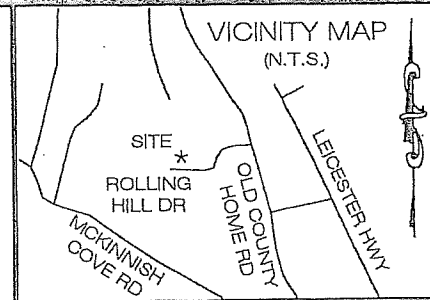
DATE

SYMBOL LEGEND:

- CALCULATED POINT (CP)
- ⊙ EXISTING IRON PIPE (EIP)
- ▲ GEODETIC MONUMENT
- ◇ MAILBOX (MB)
- ⊞ TRANSFORMER (TRAN.)
- ⊙ NEW SEWER MANHOLE (NMH)
- T.C.E...TEMPORARY CONSTRUCTION
- EASEMENT
- OAK...OAK TREE

LINE LEGEND:

- BOUNDARY LINE
- S — NEW SEWER LINE (NSL)
- NEW PERM. EASEMENT LINE
- NEW T.C.E. LINE
- TIE LINE ONLY
- * — * — WOVEN WIRE FENCELINE
- ROAD EASEMENT



NOTES

- THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
- ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
- ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
- NO MISSING CORNERS SET.
- BEARINGS ARE BASED ON NC GRID NORTH USING THE NC GS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
- AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.002 ACRES	98.4 SQ. FT.
T.C.E. 1:	0.001 ACRES	49.6 SQ. FT.
T.C.E. 2:	0.001 ACRES	25.9 SQ. FT.
TOTAL EASEMENT AREA:	0.004 ACRES	173.9 SQ. FT.

REVISIONS:	DATE	REVISIONS MADE	BY:
METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NC			
OLD COUNTY HOME ROAD PRIVATE SANITARY SEWER REHAB MSD PROJECT # 2015221			
SEWER LINE EASEMENT ACROSS THE PROPERTY OF: GUY STEWART			
SCALE: 1"=40'		PROJECT #: 17-032	DATE: 1/2/2023
HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC			

EXHIBIT A

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN
UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER
MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK
5769, PAGE 155 & PLAT BOOK 77, PAGE 76); THAT THE BOUNDARIES
NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM
INFORMATION FOUND IN DEED BOOK 5769, PAGE 155 & PLAT BOOK
77, PAGE 76; THAT THE RATIO OF PRECISION AS CALCULATED IS
1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH
G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION
NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING
CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(1)(d): THAT THE SURVEY
IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF
EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER
EXCEPTION TO THE DEFINITION OF SUBDIVISION.

John Wesley Cole
JOHN WESLEY COLE P.L.S. L-4561

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052

NC GS LONG JOHN (PUBLISHED)
NC GRID COORDINATES
N: 687826.71' NAD 83/11
E: 933277.76' NAD 83/11
ELEV.: 2028.37' NAVD 88
C.F.: 0.9997856

CLAYTON FOGG
DB 5246 PG 991
PIN 9629-22-4618

GUY STEWART
DB 5769 PG 155
PB 77 PG 76, LOT 2
PIN 9629-23-3152

ROLLING HILL DRIVE
PRIVATE DRIVE
(ASPHALT)

RICKIE & ROBIN D HINES
DB 3034 PG 517
PB 77 PG 76, LOT 3
PIN 9629-23-4172

CP-NC
GRID COORDINATES:
N: 693048.03'
E: 922435.22'
NAD 83/11



SYMBOL LEGEND:

- CALCULATED POINT (CP)
⊙ EXISTING IRON PIPE (EIP)
⊙ EXISTING IRON ROD (EIR)
▲ GEODETIC MONUMENT
⊙ EXISTING SEWER MANHOLE (SMH)
⊙ NEW SEWER MANHOLE (NMH)
◇ MAILBOX (MB)
⊞ WATER METER
⊞ SIGN
⊙ UTILITY POLE
→ GUY WIRE
T.C.E...TEMPORARY CONSTRUCTION
EASEMENT

BIR...BIRCH TREE
CHR...CHERRY TREE
MIM...MIMOSA TREE
PINE...PINE TREE
POP...POPLAR TREE
U.T...UNKNOWN TREE
W.O...WHITE OAK TREE

LINE LEGEND:

- BOUNDARY LINE
— SS — EXISTING SEWER LINE (ESL)
— S — NEW SEWER LINE (NSL)
- - - NEW PERM. EASEMENT LINE
· · · NEW T.C.E. LINE
— TIE LINE ONLY
— OHU — OVERHEAD UTILITY LINE
— STORM PIPE (TYPE AS NOTED)
— WATER LINE PER GIS
— MATCHLINE
— ROAD EASEMENT
— x — x — WOVEN WIRE FENCELINE
— // — SPLIT RAIL FENCELINE

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

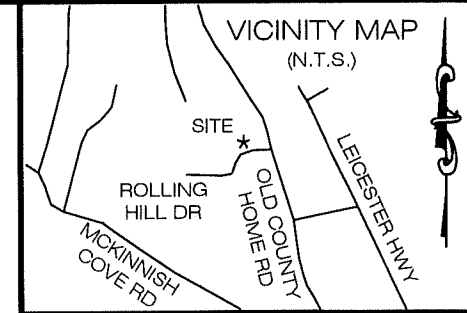
I, _____, REVIEW OFFICER OF
BUNCOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT
TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL
STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

DATE

MAP SET
SHEET 1 OF 2

THIS SHEET IS PART OF A MAP SET AND
IS INTENDED TO ACCOMPANY ALL
OTHER SHEETS IN THIS SET AND IS TO
BE CONSIDERED INCOMPLETE WITHOUT
ALL OTHER SHEETS TO SUPPORT IT.



NC GRID
NORTH - NAD 83 (NSRS 2011)

NOTES

1. THIS PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD THAT WOULD BE REVEALED BY A TITLE SEARCH.
2. ALL CORNERS ARE MARKED AS SHOWN IN THE LEGEND UNLESS OTHERWISE NOTED.
3. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES UNLESS OTHERWISE NOTED.
4. NO MISSING CORNERS SET.
5. BEARINGS ARE BASED ON NC GRID NORTH USING THE NCGS RTK NETWORK.
SITE COMBINED FACTOR: 0.9997902
POSITIONAL ACCURACY: 0.02' HORIZ. (NAD 83/11)
0.03' VERT. (NAVD88) (GEOID 18).
6. AREA COMPUTED BY THE COORDINATE METHOD.

AREA TABLE

PERMANENT EASEMENT:	0.113 ACRES	4,913.3 SQ. FT.
T.C.E. 1:	0.010 ACRES	428.0 SQ. FT.
T.C.E. 2:	0.058 ACRES	2,517.7 SQ. FT.
T.C.E. 3:	0.062 ACRES	2,704.2 SQ. FT.
TOTAL EASEMENT AREA:	0.243 ACRES	10,563.2 SQ. FT.

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, JOHN WESLEY COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DEED BOOK 5217, PAGE 1487 & PLAT BOOK 73, PAGE 87); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 5217, PAGE 1487 & PLAT BOOK 73, PAGE 87; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 2ND DAY OF JANUARY, A.D., 2023.

I ALSO HEREBY CERTIFY THAT THIS SURVEY IS OF THE FOLLOWING CATEGORIES AS DESCRIBED IN G.S. 47-30(f)(11)(d): THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

JOHN WESLEY COLE (P.L.S.)

L-4561
L-4561

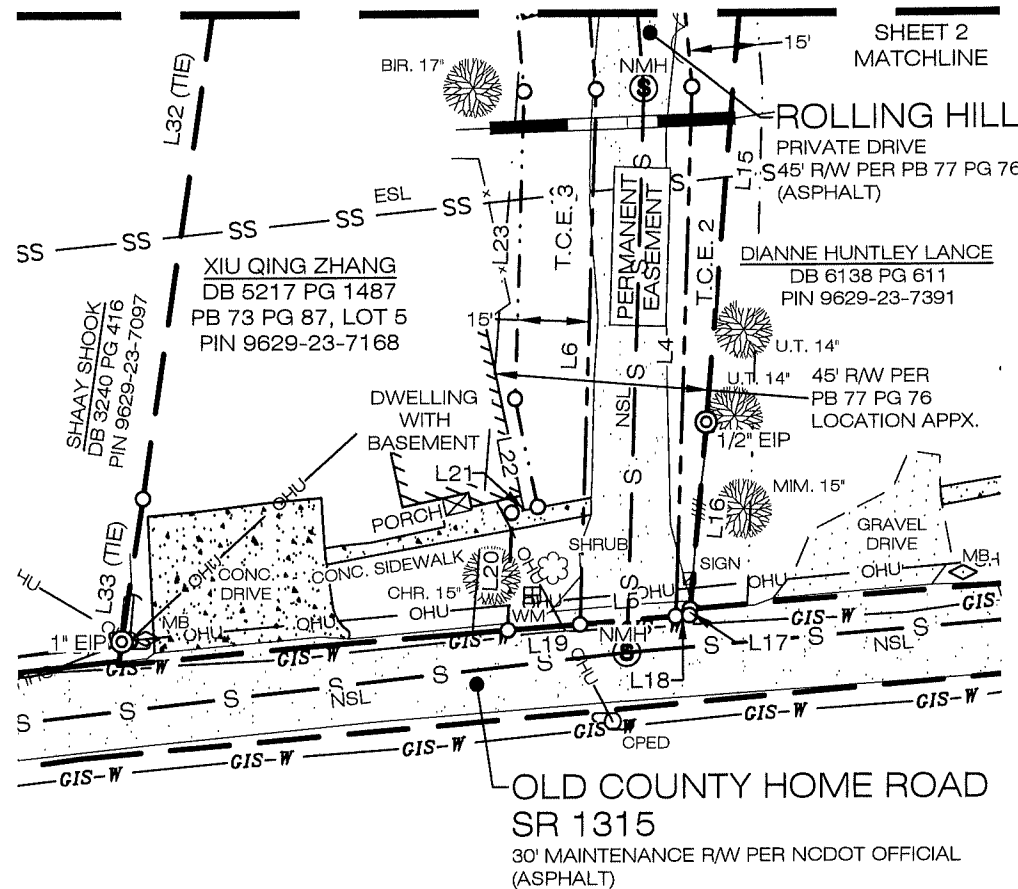
COLE SURVEYING & DESIGN, PA

549 ELK PARK DRIVE, SUITE 707

ASHEVILLE, NC 28804

PHONE: 828-251-7025

NC FIRM #C-3106 | SC COA #4052



REVISIONS:	DATE	REVISIONS MADE	BY:

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:

XIU QING ZHANG

SCALE: 1"=40'

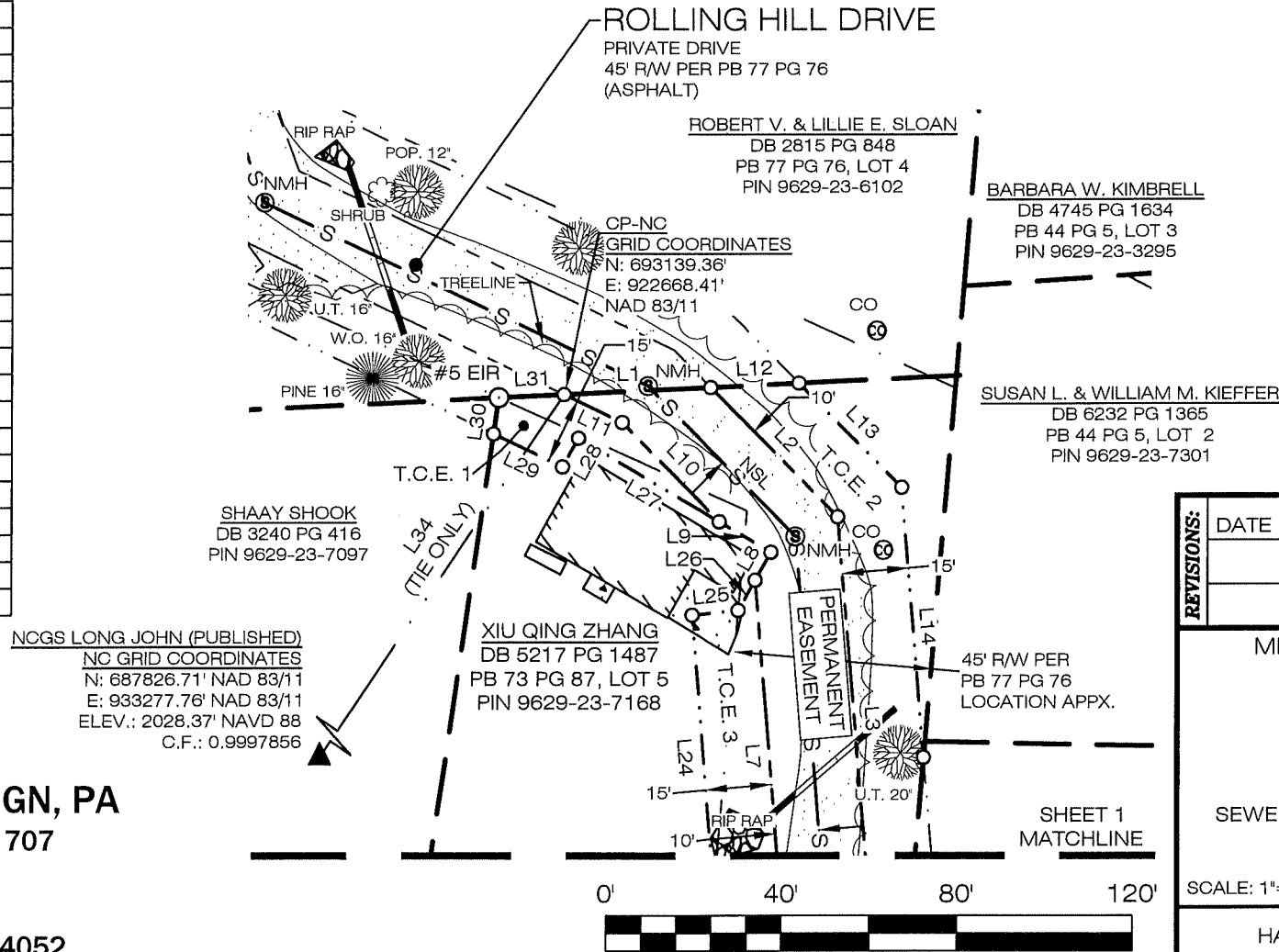
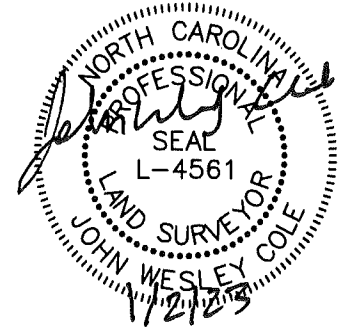
PROJECT #: 17-032

DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

LINE	BEARING	DISTANCE
L1	N 10°11'39" W	33.57'
L2	N 37°52'57" E	41.34'
L3	N 77°44'37" E	92.21'
L4	N 84°23'36" E	110.80'
L5	S 11°54'57" E	20.12'
L6	S 84°23'36" W	111.85'
L7	S 77°44'37" W	78.35'
L8	N 67°42'03" W	7.28'
L9	S 22°57'49" W	13.68'
L10	S 37°52'57" W	31.64'
L11	S 18°08'55" W	14.75'
L12	N 10°11'39" W	20.16'
L13	N 37°52'57" E	33.31'
L14	N 77°44'37" E	61.21'
L15	N 87°22'13" E	108.30'
L16	N 87°34'30" E	39.06'
L17	N 87°36'33" E	1.27'
L18	S 11°54'57" E	2.83'
L19	S 11°54'57" E	15.09'
L20	S 84°23'36" W	24.45'
L21	N 19°44'37" W	5.62'
L22	S 70°43'30" W	23.07'
L23	S 84°23'36" W	64.40'
L24	S 77°44'37" W	70.87'
L25	N 13°01'51" W	10.54'
L26	N 67°42'03" W	7.86'
L27	S 22°57'49" W	37.39'
L28	S 68°16'26" E	7.47'
L29	S 18°08'55" W	17.41'
L30	N 89°07'34" W	8.32'
L31	N 10°11'39" W	14.86'
L32	S 89°07'34" E	198.68'
L33	S 88°55'10" E	29.99'
L34	S 63°24'02" E	11865.18'

NC GRID
NORTH - NAD 83 (NSRS 2011)



MAP SET
SHEET 2 OF 2

THIS SHEET IS PART OF A MAP SET AND
IS INTENDED TO ACCOMPANY ALL
OTHER SHEETS IN THIS SET AND IS TO
BE CONSIDERED INCOMPLETE WITHOUT
ALL OTHER SHEETS TO SUPPORT IT.

REVISIONS:	DATE	REVISIONS MADE	BY:

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NC

OLD COUNTY HOME ROAD
PRIVATE SANITARY SEWER REHAB
MSD PROJECT # 2015221

SEWER LINE EASEMENT ACROSS THE PROPERTY OF:
XIU QING ZHANG

SCALE: 1"=40' PROJECT #: 17-032 DATE: 1/2/2023

HAZEL TOWNSHIP, BUNCOMBE COUNTY, NC

COLE SURVEYING & DESIGN, PA
549 ELK PARK DRIVE, SUITE 707
ASHEVILLE, NC 28804
PHONE: 828-251-7025
NC FIRM #C-3106 | SC COA #4052



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

June 21, 2023

MSD of Buncombe County
C/O Shaun Armistead, P.E.-Project Engineer
2028 Riverside Drive
Asheville, NC 28804

COUNTY: **Buncombe- E132-011-23-00088**

SUBJECT: **RIGHT OF WAY ENCROACHMENT – NC 63, SR(s) 1315, 1316, & 1318**

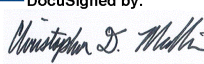
Attached is an executed Encroachment Agreement relative to the proposed **installation of approximately 4,416 linear feet of sanitary sewer line, including all manholes and appurtenances to connect to existing sewer main per NCDOT and OSHA standards and specifications**, as shown on the attached plans. The agreement is approved subject to the attached **Special Provisions**.

- **Positive Shoring in accordance with NCDOT Standards/Specifications shall be installed to perform this work in all sections within NCDOT Right-of-way.**
- **Traffic shall always be maintained during construction. All lane closures shall be performed by a certified Traffic Control supervisor. Any work requiring a lane closure on NC-63 shall be performed between the hours of 9:00 AM and 3:00 PM ONLY.**
- **A Third-Party Certified NCDOT Inspector, the cost of which shall be borne by the party of the second part, is required to be always assigned to this project during construction. Inspector shall provide all testing results in relation to pavement restoration in accordance to NCDOT Standards and Specifications associated to the work being performed within NCDOT Right-of-Way. All inspector certifications shall be submitted to the District Engineer's Office for verification prior to the start of construction.**
- **A pre-construction meeting shall be held prior to any work within NCDOT Right-of-way.**

- A Performance and Indemnity Bond, in the amount of Fifty-Thousand Dollars (\$50,000.00) shall be posted with the District Engineer's Office prior to beginning construction. Or submit an engineer's estimate (signed) with a bond in the amount of 110% of the estimate.
- The roadway shall be resurfaced after patching for the full width typical section of the roadway and the entire limits of the project within NCDOT Right-of-Way. The trench shall be patched immediately after installation. Milling will be required to perform this work to tie new pavement into existing pavement. All testing results shall be performed by a third-party geotechnical firm during pavement restoration and made available to the District Office for verification.
- Pavement shall be replaced to NCDOT standards and specifications. Edges to be sawed with a concrete saw to a neat, squared edge swept clean of dust before tack coat is applied.
- All asphalt work shall be performed by a QMS Certified Asphalt Contractor.
- All work shall be guaranteed for a period of one year after completion of the project.
- All OSHA regulations and guidelines shall be performed during construction.
- Encroacher shall contact the NCDOT District Office (828-250-3200) at least 72 hours in advance prior to any work scheduled to be performed within the NCDOT Right-of-Way. The contractor shall also provide the attached Notification Form accordingly.
- Manholes, valves, meters, and any other appurtenances shall be installed in areas that do not impede maintenance and shall be located a minimum of 3'-Feet from edge of pavement within the shoulder sections. Must be placed behind any ditches along the roadway and out of the wheel path under the asphalt pavement.

All work is to be done in strict compliance with the Agreement, which requires that the North Carolina Department of Transportation be advised before work is started, and when work is completed. Please call our District Office at (828) 250-3200 for this purpose.

Sincerely,

DocuSigned by:

 6D92D71E27C94A3...

Christopher D. Medlin, P.E.
 District Engineer

CDM: nkd
 Attachments

DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCROACHMENT AGREEMENT
PRIMARY AND SECONDARY HIGHWAYS

-AND-
Metropolitan Sewerage District of Buncombe County, NC

06/21/2023

THIS AGREEMENT, made and entered into this the 12 day of April 20 23 by and between the Department of Transportation, party of the first part; and Metropolitan Sewerage District of Buncombe County, NC party of the second part,

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) NC63, SR1315,SR1316,SR1318 , located Beginning at the intersection of SR1315 (Old County Home Rd) and NC63 (New Leicester Hwy), extending approximately 2617 LF to the intersection of SR1315 and SR1318 (Eliada Home Rd). Sewer lines will also be installed in SR1316 (Spivey Pl) and several private roads off of Old County Home Rd. with the construction and/or erection of: 4,416 LF of sanitary sewer line, including all manholes and appurtenances. Construction will include installation of approximately 70 LF of 8" sewer line installed by bore and jack across NC63 (New Leicester Hwy), 507 LF of 18" sewer line, 2004 LF of 12" sewer line, and 1815 LF of 8" sewer line.

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

- That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest UTILITIES ACCOMMODATIONS MANUAL, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utilities Manager of the party of the first part.
- That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to the installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.
- That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices, for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part.
- That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.
- That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.
- That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.
- That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.
- Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.
- That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.
- That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.
- During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:
- a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

b. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials

and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

- c. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,
- (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. Incorporation of Provisions: The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

R/W (161) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (161) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

DEPARTMENT OF TRANSPORTATION

BY:

DocuSigned by:

Christopher D. Madala

~~XXXXXXXXXXXX~~

District Engineer

ATTEST OR WITNESS:

Chas K. Smith

Steven E. Hardy

Second Party

INSTRUCTIONS

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered City official is on file in the Raleigh office of the State Utilities Manager. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

This agreement must be accompanied, in the form of an attachment, by plans or drawings showing the following applicable information:

1. All roadways and ramps.
2. Right of way lines and where applicable, the control of access lines.
3. Location of the existing and/or proposed encroachment.
4. Length, size and type of encroachment.
5. Method of installation.
6. Dimensions showing the distance from the encroachment to edge of pavement, shoulders, etc.
7. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road, intersection, etc. (To assist in preparation of the encroachment plan, the Department's roadway plans may be seen at the various Highway Division Offices, or at the Raleigh office.)
8. Drainage structures or bridges if affected by encroachment (show vertical and horizontal dimensions from encroachment to nearest part of structure).
9. Method of attachment to drainage structures or bridges.
10. Manhole design.
11. On underground utilities, the depth of bury under all traveled lanes, shoulders, ditches, sidewalks, etc.
12. Length, size and type of encasement where required.
13. On underground crossings, notation as to method of crossing - boring and jacking, open cut, etc.
14. Location of vents.

GENERAL REQUIREMENTS

1. Any attachment to a bridge or other drainage structure must be approved by the State Utilities Manager in Raleigh prior to submission of encroachment agreement to the Division Engineer.
2. All crossings should be as near as possible normal to the centerline of the highway.
3. Minimum vertical clearances of overhead wires and cables above all roadways must conform to clearances set out in the National Electric Safety Code.
4. Encasements shall extend from ditch line to ditch line in cut sections and 5' beyond toe of slopes in fill sections.
5. All vents should be extended to the right of way line or as otherwise required by the Department.
6. All pipe encasements as to material and strength shall meet the standards and specifications of the Department.
7. Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment agreement provided that such information cannot be shown on plans or drawings.
8. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installation included in this agreement.

NOTIFICATION FORM

NOTIFICATION FOR UTILITY / NON-UTILITY ENCROACHMENT WITHIN NCDOT R/W AND DRIVEWAY ACCESS CONSTRUCTION

Instructions for use:

This form must be completed in its entirety and submitted directly to the designated personnel in the District Engineer's office via email, fax or hand delivery a minimum of one week prior to construction for the encroachment/driveway access. If the designated NCDOT personnel names are unknown by the person completing this form, please contact the District Engineer's office to determine that contact info.

Date: _____ Submitted by Name: _____

To: District Personnel Name: _____
District Personnel Email: _____
District Fax No.: _____

This notification is to inform you that we (encroaching party or their contractor) will begin construction work on the following project in a minimum of one week.

Encroachment/Driveway Permit number
(assigned by NCDOT) for the project: _____

Construction start date: _____

Approximate ending date: _____

Contact NCDOT inspector a minimum of 72 hrs. in advance to set-up Preconstruction meeting in the District Engineer's office or other location as directed by the District Engineer

Preconstruction meeting date & time: _____

Preconstruction meeting address: _____

Type of project: _____
[Examples: power, telecommunication, water, sewer, gas, petroleum, access, roadway improvements other (describe)]

Contact Info for this project:

Contractor Company Name: _____

Contractor Contact Name: _____

Contractor Phone Number: _____

Contractor Email: _____

NCDOT Utility Inspector Name: _____

NCDOT Utility Inspector Phone: _____

NCDOT Utility Inspector Email: _____

NCDOT Project Manager Name: _____
Nick Dorato

NCDOT Project Manager Phone: _____

828-250-3203 Direct Line

NCDOT Project Manager Email: _____
nkdorato@ncdot.gov

District II Engineer's Office
(Division 13-Buncombe, Madison, & Yancey County)
828-250-3200
11 Old Charlotte Hwy, Asheville NC 28803

PERFORMANCE AND INDEMNITY BOND
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION – HIGHWAY ENCROACHMENT INSTALLATION

PRINCIPAL (Contractor for second party to encroachment agreement)

SURETY

DESCRIPTION OF ENCROACHMENT AGREEMENT:

ENCROACHMENT NUMBER _____

Route(s) or Highway No(s). _____

County _____

Amount of Bond _____

Date of Encroachment Agreement _____

Specific Location of Encroachment:

Between _____ & _____

Date of Bond _____

Type of Encroachment _____

(Water, sewer, gas, etc.)

Second Party to Encroachment Agreement _____

KNOW ALL MEN BY THESE PRESENTS, That we the PRINCIPAL and SURETY above named, are held and firmly bound unto the Department of Transportation, an agency of the State of North Carolina, hereinafter called the DEPARTMENT, in amount stated above for the payment for which sum we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the above indicated second party to an Encroachment Agreement named above entered into an Encroachment Agreement with the DEPARTMENT, and the PRINCIPAL (contractor) entered into a contract with the said second party to an Encroachment Agreement named above to perform certain work, including the installation or relocation of certain encroachments described in a certain Encroachment Agreement with the DEPARTMENT hereinabove described and incorporated herein by reference; NOW, THEREFORE, if the PRINCIPAL shall well and truly install the said encroaching facilities on and along the highway in accordance the "Utilities Accommodations Manual" and any supplements thereto and in accordance with the other provisions of the said Encroachment Agreement, then, this obligation to be void; otherwise to remain in full force and effect.

IN WITNESS THEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, then name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Seal of Principal)

PRINCIPAL (Type Name of Principal)

ATTEST:

Clerk or Secretary

BY: _____
President or Vice President
(Cross out Inappropriate Title)

(Name of SURETY)

(Seal of Surety)

BY: _____
Attorney-in-Fact

NOTE: Attach Power of Attorney and Certificate of Authority of Attorney-in-Fact.

FORM R/W 16A (This form to be used only by Contractor for second party to encroachment agreement.)

Revised April 2021 (Previously revised July 1978)



Metropolitan Sewerage District

OF BUNCOMBE COUNTY, NORTH CAROLINA

Dear Sirs:

Per discussion on April 26, 2023, MSD staff is submitting the following:

1. Revised plans for Old County Home Private Sewer Rehabilitation. As discussed, a center line has been added to the plan view, and several manhole locations have been shifted to avoid placing manholes within the tire paths (MH's A6, A12, and A14). MSD staff feels that at the depths proposed, sewer pipes located beneath the tire paths pose less danger to the integrity of the road or its subgrade than placing additional manholes to realign the pipe to be out of the tire paths.
2. A traffic control plan and positive shoring detail has been included in the submitted plan set.
3. A request for a lateral installation variance detailing the engineering decisions made while designing the proposed sewer line replacement.

Regarding NCDOT's new policy of requiring MSD to cover the cost of an inspector employed or contracted by NCDOT during pavement restoration, MSD staff believes that the performance bond MSD requires from the Contractor, combined with the testing performed by a third-party geotechnical firm during pavement restoration (with results made available to NCDOT staff) constitutes a sufficient guarantee by MSD and its contractors as to the quality of the pavement restoration. NCDOT may choose to employ their own inspector to independently verify the quality of the restoration at their cost.

Thank you,

Shaun Armistead, P.E.
Project Engineer
Metropolitan Sewerage District of Buncombe County

~Protecting Our Natural Resources~



Metropolitan Sewerage District

OF BUNCOMBE COUNTY, NORTH CAROLINA

Dear Sirs:

The Metropolitan Sewerage District is requesting a variance to NCDOT's rules regarding lateral installation of utilities be granted for installation of a 12" and 18" mainline sewer in Old County Home Rd (SR 1315), 12" mainline sewer in Eliada Home Rd (SR 1318), and 8" mainline sewer in Spivey Pl (SR 1316) as part of the Old County Home Rd Private Sewer Rehabilitation project.

MSD is requesting this variance based on the following circumstances:

1. The existing sewer line runs along Smith Mill Creek. The close proximity of the houses to the creek and the edge of pavement, combined with the steep topography on both sides of the creek makes utilizing the existing alignment infeasible and leads to the proposed alignment in Old County Home Rd.
2. Existing utilities, including water lines, fiber optic communication, and overhead power are already installed on both shoulders of Old County Home Rd, preventing MSD from installing sewer in the shoulder of the road.
3. Many of the properties along Old County Home Rd have finished floor elevations (FFE) lower than the elevation of the surface of the road fronting the properties, so the line must be designed at a depth that will serve these properties, necessitating depths of as much as 16' in some cases.
4. Locations of existing utilities (sewer, water, storm, and overhead power) confined the location of line "D" in Eliada Home Rd to the location shown on the plans.
5. Steep topography on both sides of Spivey Pl and the need to serve properties on both sides of the road necessitates the sewer line alignment in the center of Spivey Pl.

All due diligence has been utilized in designing this sewer line replacement and all options for locations for the new sewer line have been examined. As the product of extensive time and effort by MSD staff, the sewer line alignments shown on these construction plans represent MSD staff's best efforts to continue to serve our ratepayers while meeting all regulatory requirements.

Thank you for your consideration,

Shaun Armistead, P.E.
Project Engineer
Metropolitan Sewerage District of Buncombe County

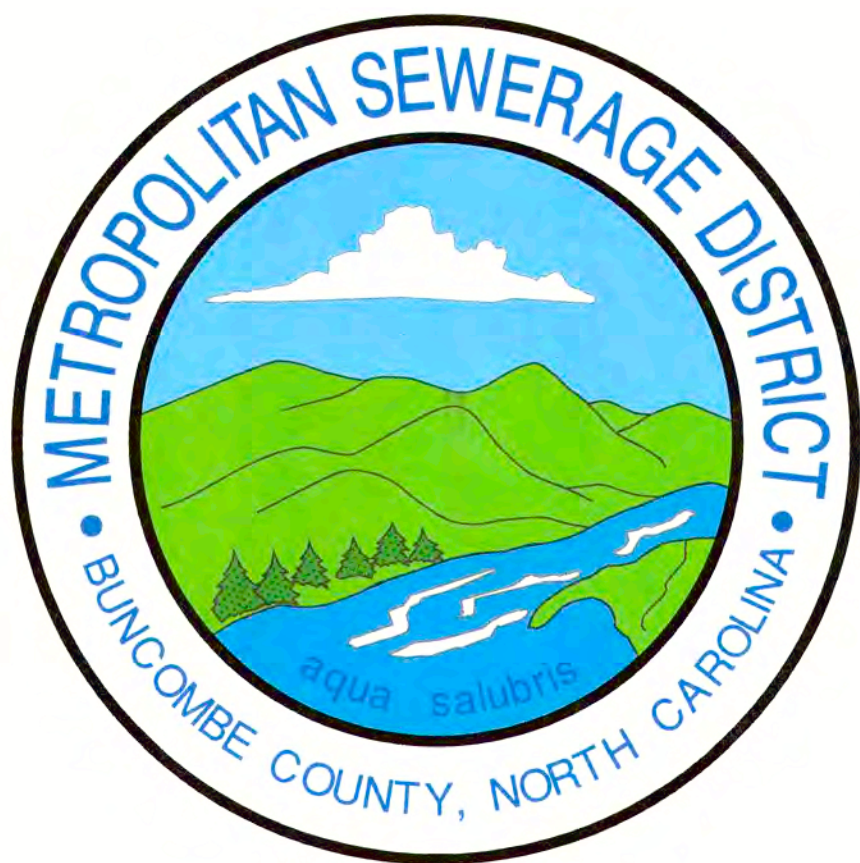
~Protecting Our Natural Resources~

OLD COUNTY HOME ROAD

PRIVATE SANITARY SEWER REHABILITATION

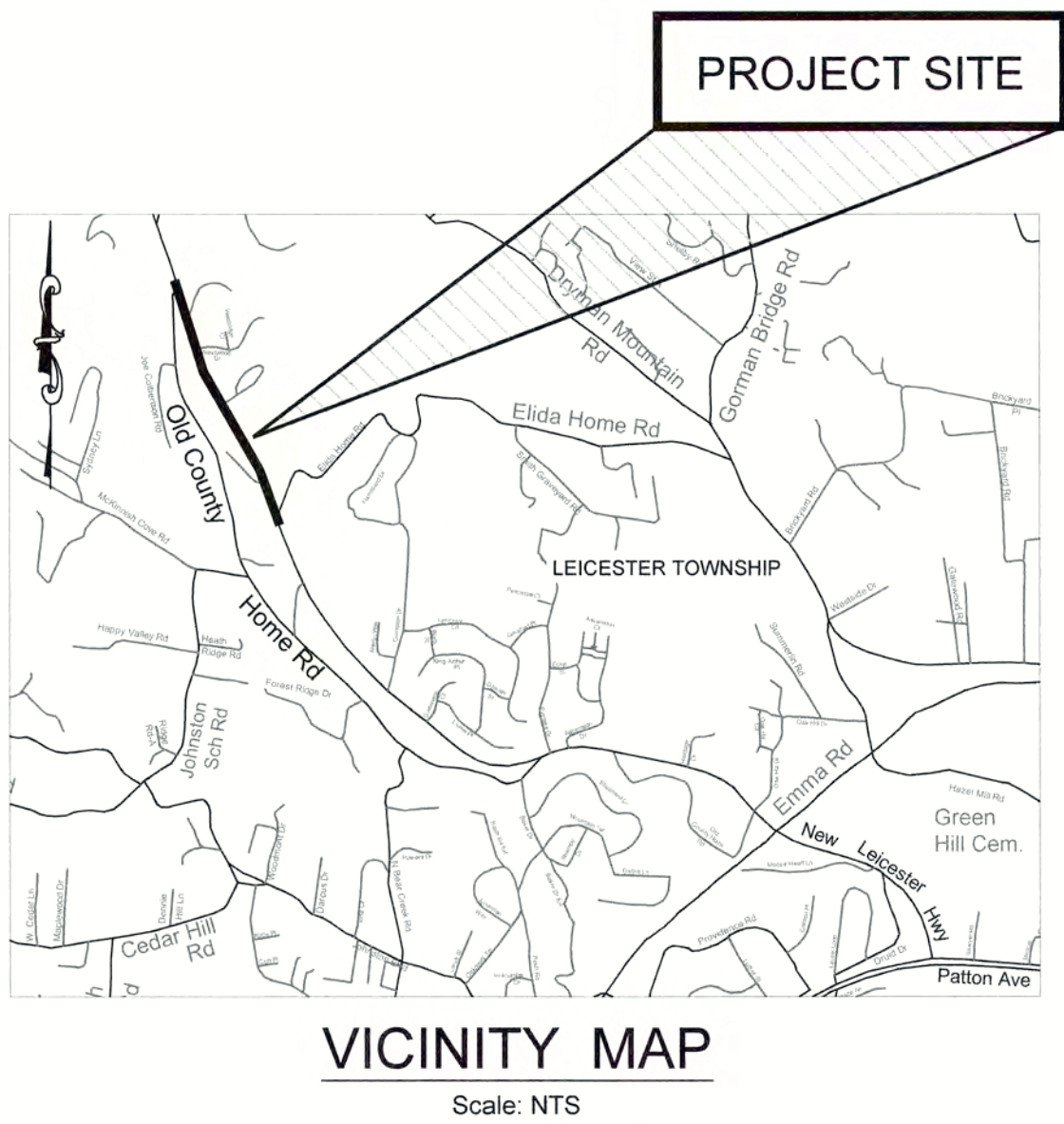
(PROJECT NO. 2015221)

MSD OF BUNCOMBE COUNTY

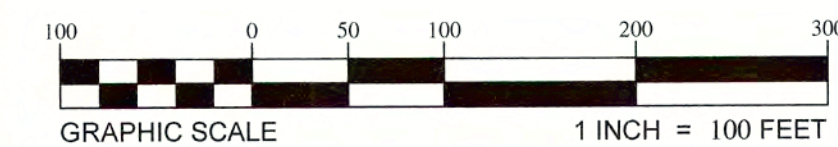


INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
C-1	INDEX OF DRAWINGS AND VICINITY MAP
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PL-2	SANITARY SEWER PLAN & PROFILE LINE "A" & LINE "D"
PL-3	SANITARY SEWER PLAN & PROFILE LINE "A" & LINE "E"
PL-4	SANITARY SEWER PLAN & PROFILE LINE "A"
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LEGEND	
	FFE = FINISHED FLOOR ELEV. CM = CONCRETE MONUMENT PK FIND = PK NAIL FOUND EIP = EXISTING IRON PIN FOUND REBAR FOUND
	SIGN GAS VALVE GAS METER TELEPHONE MANHOLE TELEPHONE PEDESTAL SHRUB
	TREE
	PROPOSED SANITARY SEWER LINE (DIG & REPLACE)
	PROPOSED SANITARY SEWER LINE (DIRECTIONAL BORE)
	EXISTING SANITARY SEWER LINE
	EXISTING PERMANENT EASEMENT
	PROPOSED PERMANENT EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED SILT FENCE LINE
	PROPOSED ASPHALT SURFACE REPAIR
	PROPOSED GRAVEL SURFACE REPAIR
	PROPOSED CONCRETE SURFACE REPAIR
	PROPERTY LINE
	RIGHT OF WAY LINE
	EXISTING WATER LINE
	EXISTING ROCK WALL LINE
	EXISTING STREAM/CREEK
	EXISTING GAS LINE
	EXISTING OVER HEAD UTILITY LINE
	EXISTING UNDERGROUND UTILITY
	EXISTING STORM DRAINAGE PIPE
	EXISTING FENCE LINE
	DITCH LINE
	TOE/TOP OF SLOPE
	TREE LINE
	SHRUB LINE
	CONCRETE
	GRAVEL AREA (RIP-RAP)
	ASPHALT ROADWAY
	EXISTING BUILDINGS
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR



- GENERAL NOTES:
- LENGTHS SHOWN ARE NOT ACTUAL PIPE LENGTHS BUT ARE DISTANCES STATION TO STATION. SLOPES SHOWN ON THE PROFILE ARE CALCULATED USING LENGTHS FROM INSIDE EDGES OF MANHOLE.
 - ALL WORK ON THIS PROJECT SHALL COMPLY WITH THE CURRENT STANDARD DETAILS AND SPECIFICATIONS OF THE METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY. SPECIAL CONDITIONS AND SPECIAL PROVISIONS MAY APPLY TO THIS PROJECT - SEE SPECIFICATIONS.
 - ALL WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS, AS MAY BE APPLICABLE TO THIS PROJECT AND THE WORK DONE HEREUNDER.
 - WHERE FEDERAL, STATE, OR LOCAL LAWS REQUIRE THAT A PERMIT BE ISSUED AND OBTAINED FOR WORK DONE UNDER THIS PROJECT, ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE TERMS AND CONDITIONS SET FORTH IN THE PERMIT.
 - ANY MODIFICATIONS TO THESE CONSTRUCTION PLANS OR SPECIFICATIONS SHALL BE APPROVED BY THE MSD PROJECT ENGINEER.
 - THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO KEEP THE SEWER AND ALL OTHER UTILITIES IN SERVICE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS OF ANY KIND FOR DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES.
 - THE CONTRACTOR SHALL LOCATE ALL SERVICES CURRENTLY SERVED BY THE EXISTING SEWER AND RECONNECT TO THE NEW SEWER, INSTALLING A CLEANOUT ASSEMBLY AS REQUIRED (SEE DETAIL).
 - THE CONTRACTOR SHALL RESTORE ALL STREETS, PROPERTIES, AND IMPROVEMENTS TO AS GOOD OR BETTER CONDITION THAN EXISTED PRIOR TO CONSTRUCTION.
 - PROPERTY LINES SHOWN ON PLANS ARE APPROXIMATE ONLY. PROPERTY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A LICENSED NC PROFESSIONAL LAND SURVEYOR.
 - CONTRACTOR SHALL COMPLY WITH NCDOT MANUAL ON UNIFORM TRAFFIC CONTROL.
 - FLAGGERS SHALL BE USED ON OLD COUNTY HOME ROAD DURING ALL CONSTRUCTION ACTIVITIES.
 - DESIGN BASED ON SURVEY INFORMATION PROVIDED BY WES COLE LAND SURVEYING, PA (828) 251-7025.



N.C. GRID NORTH
NAD83 (NSRS 2011) EPOCH 2010.00 (H) & NAVD 88 (V)

Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Overall Sanitary Sewer Plan

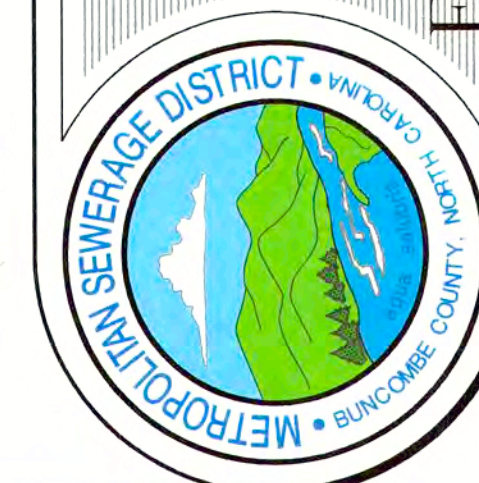
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PL-1

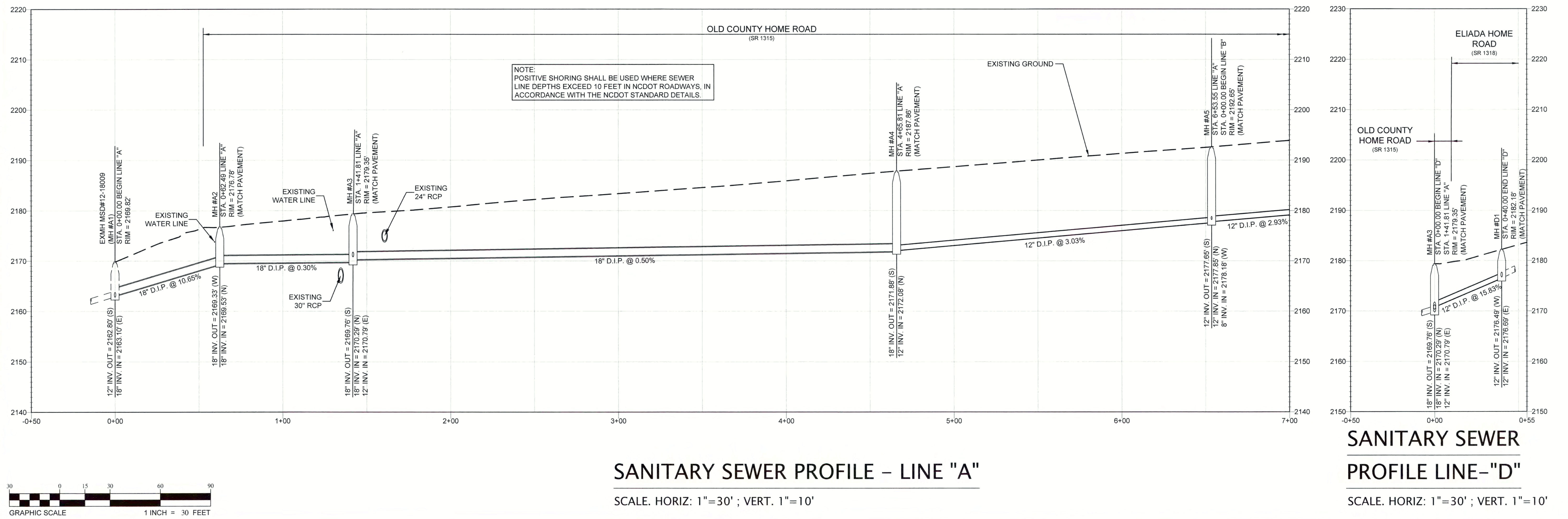
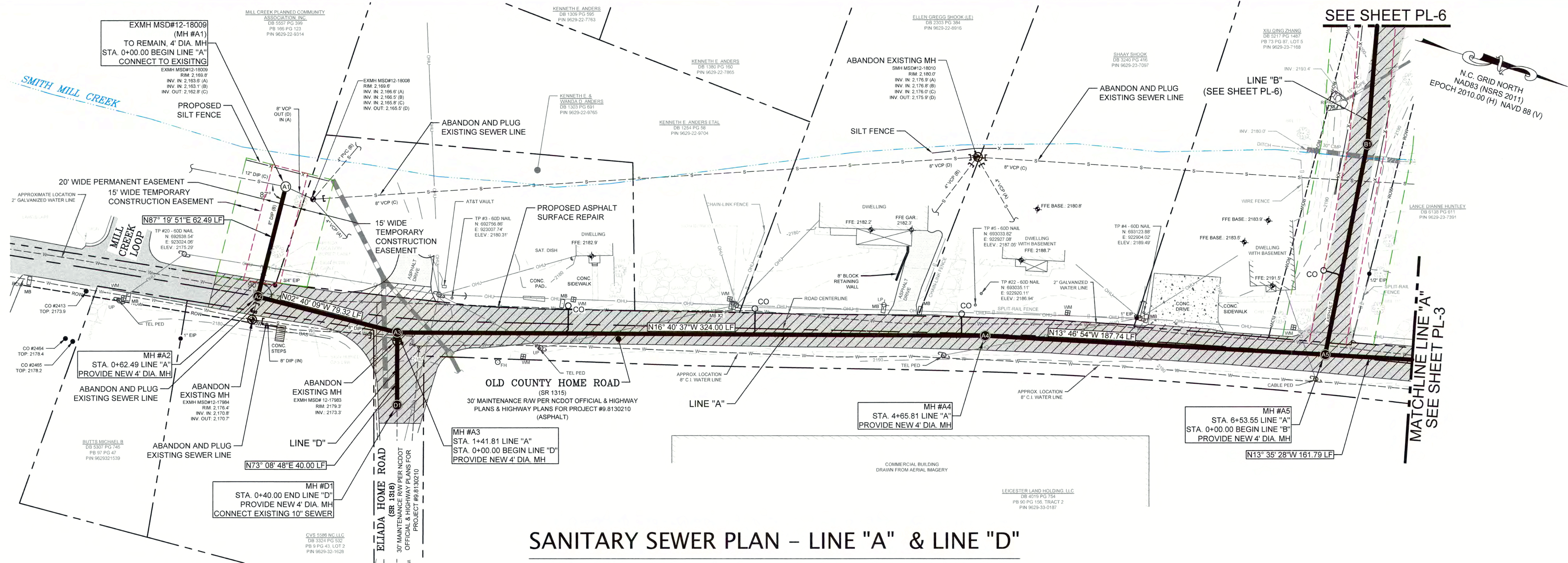
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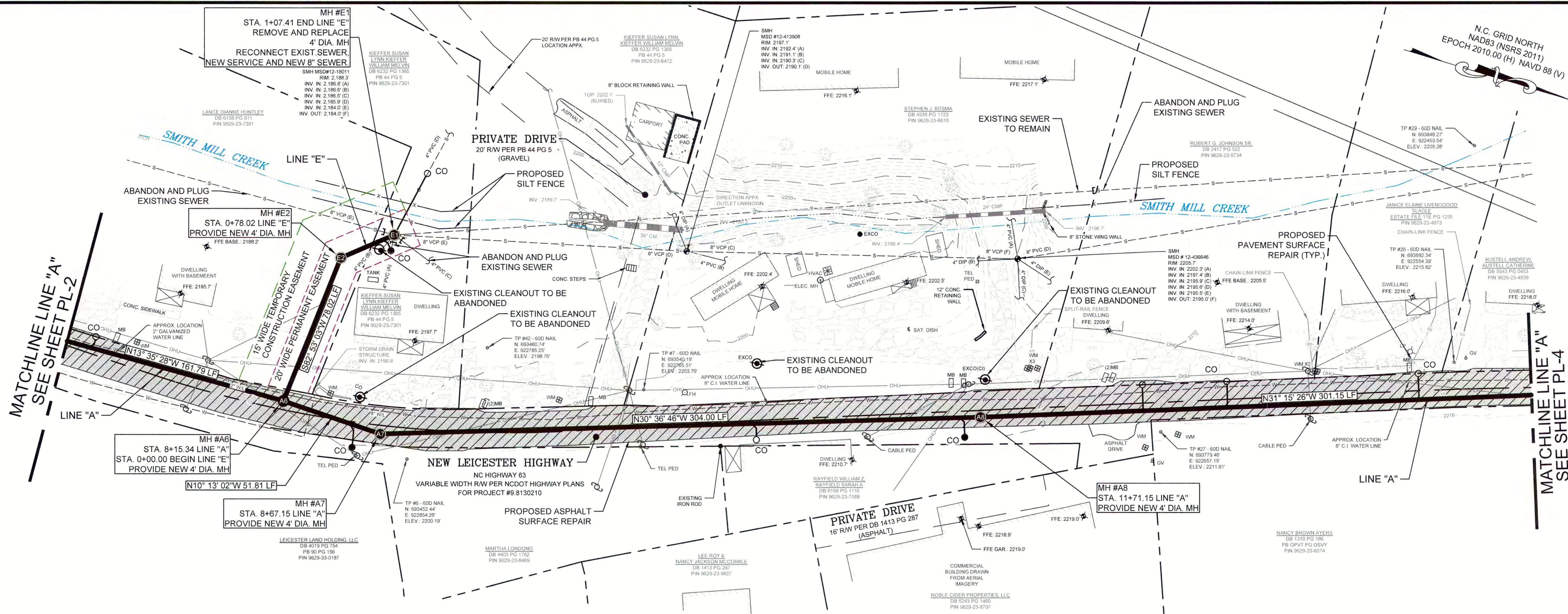
MSD

Engineering Division

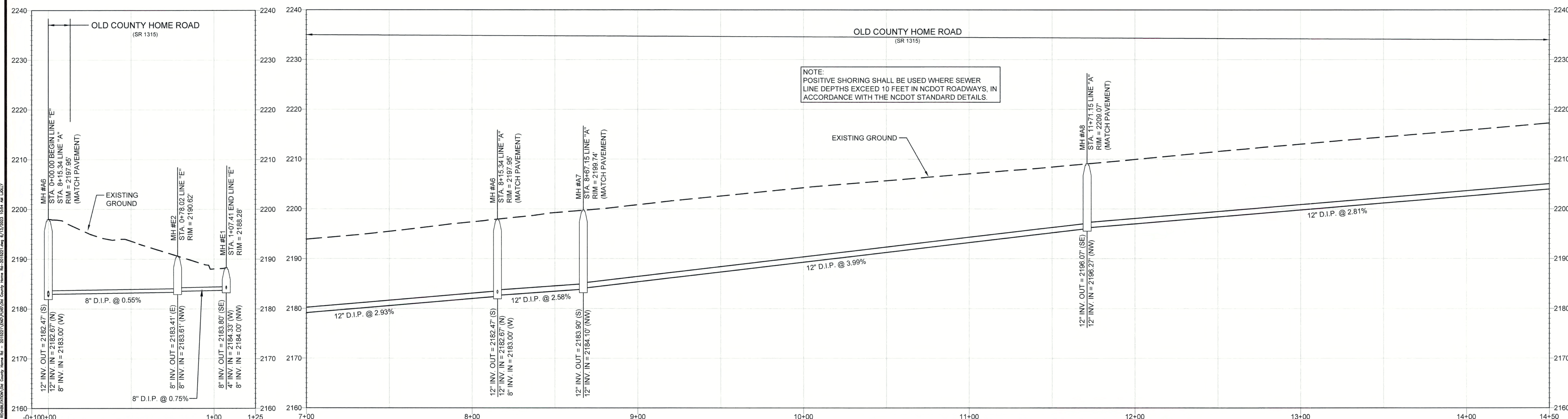


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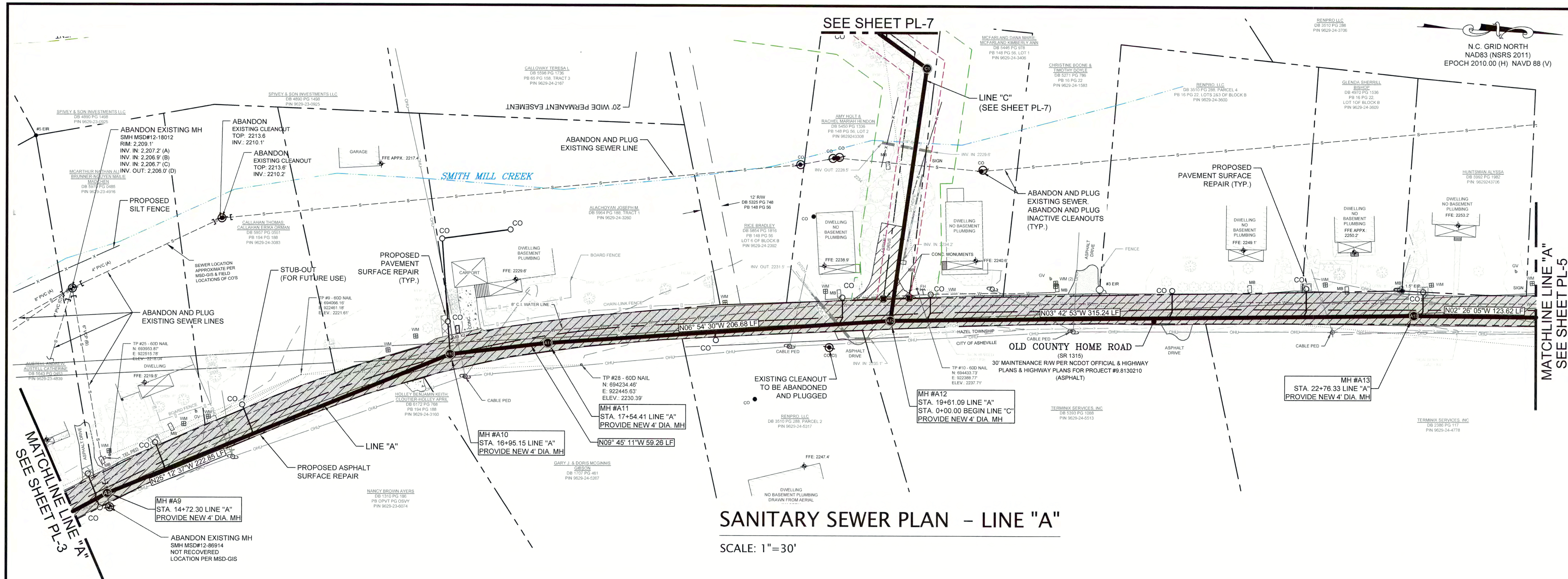


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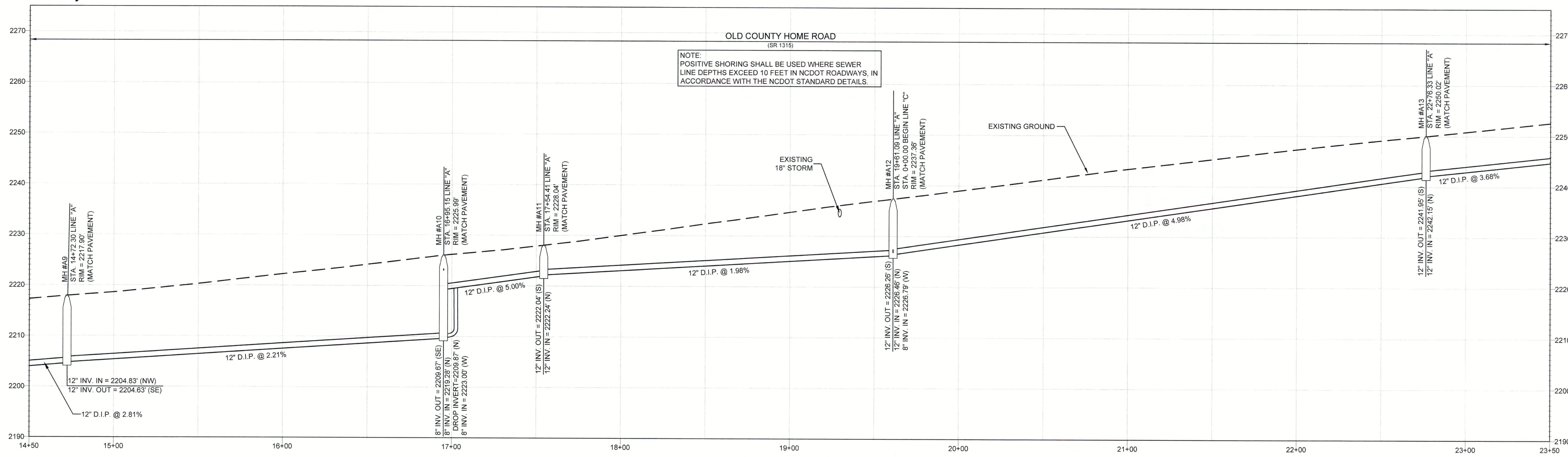
SCALE. HORIZ: 1"=30' ; VERT. 1"=10'

SCALE. HORIZ: 1"=30' ; VERT. 1"=10'



SANITARY SEWER PLAN - LINE "A"

SCALE: 1"=30'



SANITARY SEWER PROFILE - LINE "A"

SCALE: HORIZ. 1"=30' ; VERT. 1"=10'

Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Sanitary Sewer Plan & Profile
LINE "A"

PL-4

DRAWN: LU
CHECKED BY: KMA
DATE: 12/05/2022
APPROVED: SKA
SCALE: 1"=30'

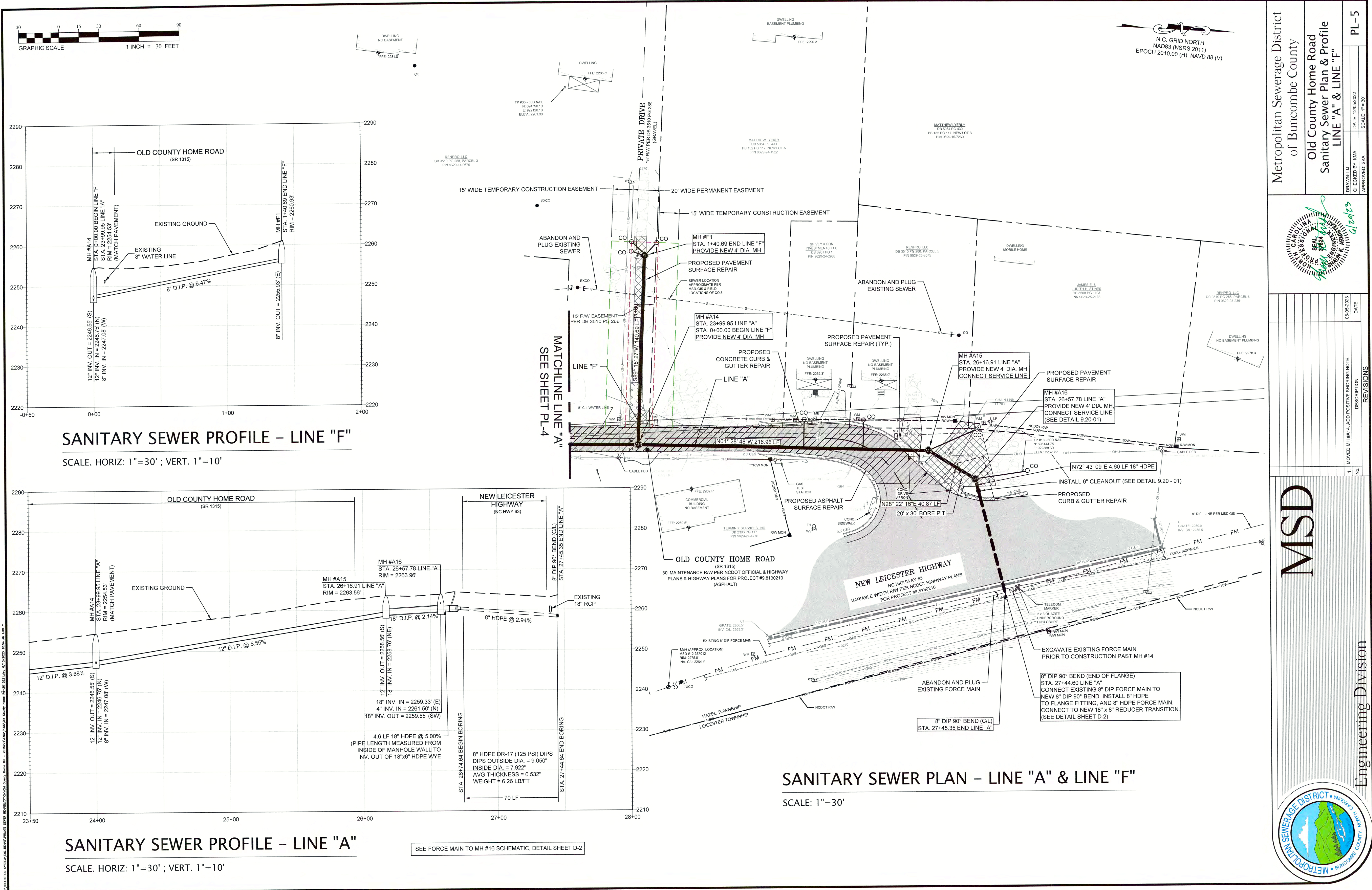
Seal of the Metropolitan Sewerage District of Buncombe County

6/20/23

NO.	DESCRIPTION	DATE
1	MOVED MH #A12, ADD POSITIVE SHORING NOTE	05-05-2023

MSD

Engineering Division



SANITARY SEWER PROFILE – LINE "F"

SCALE. HORIZ: 1"=30' ; VERT. 1"=10'

SANITARY SEWER PROFILE – LINE "A"

SCALE. HORIZ: 1"=30' ; VERT. 1"=10'

SANITARY SEWER PLAN – LINE "A" & LINE "F"

SCALE: 1"=30'

Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Sanitary Sewer Plan & Profile
LINE "A" & LINE "F"

PL-5

DATE: 12/05/2023
SCALE: 1"=30'

APPROVED SKA

CHECKED BY: HMA

DRAWN BY: LU

NO. 1

DATE

DESCRIPTION

REVISIONS

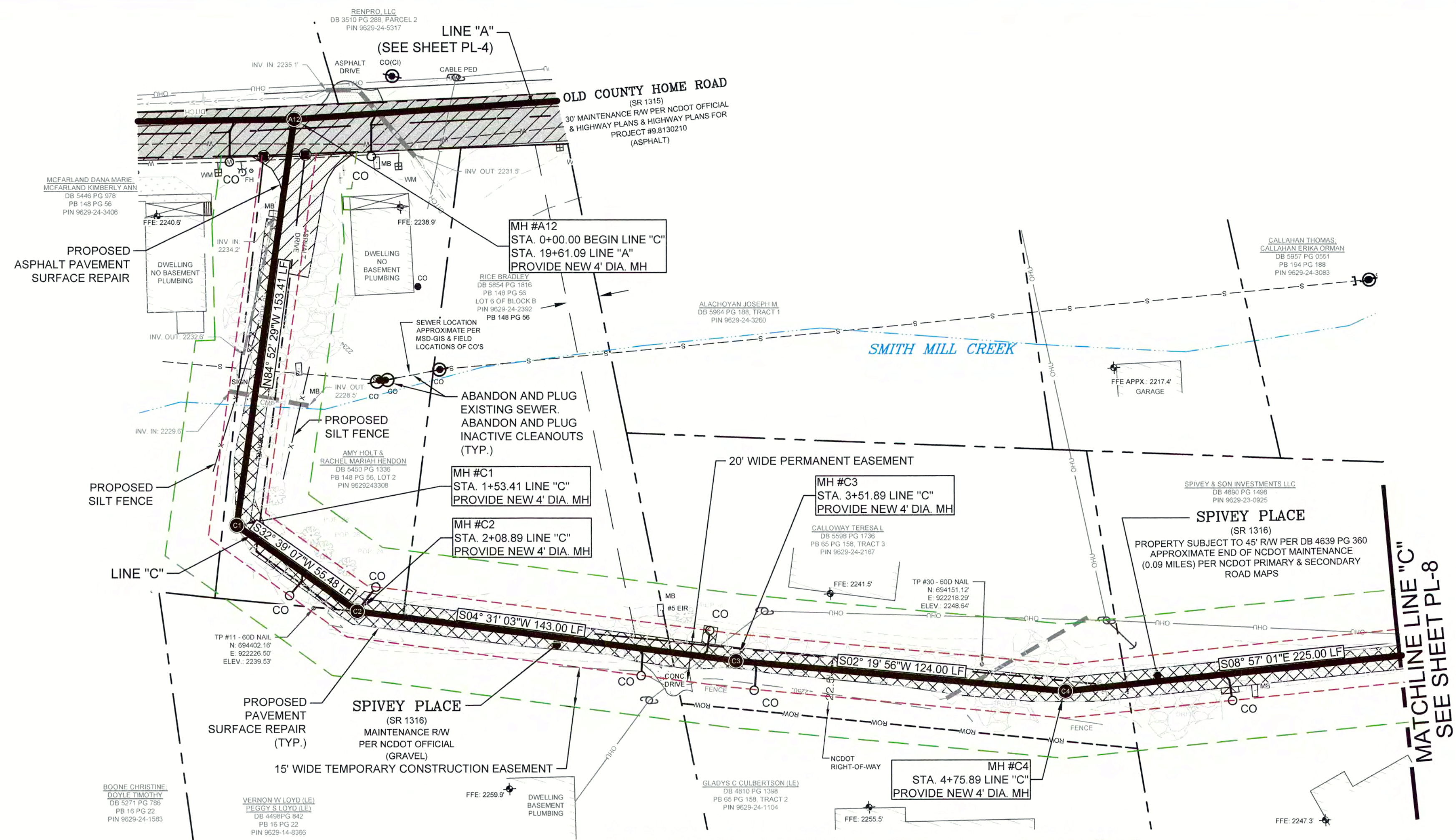
06-05-2023

1. MOVED MH #14. ADD POSITIVE SHORING NOTE

MSD

Metropolitan Sewerage District
of Buncombe County

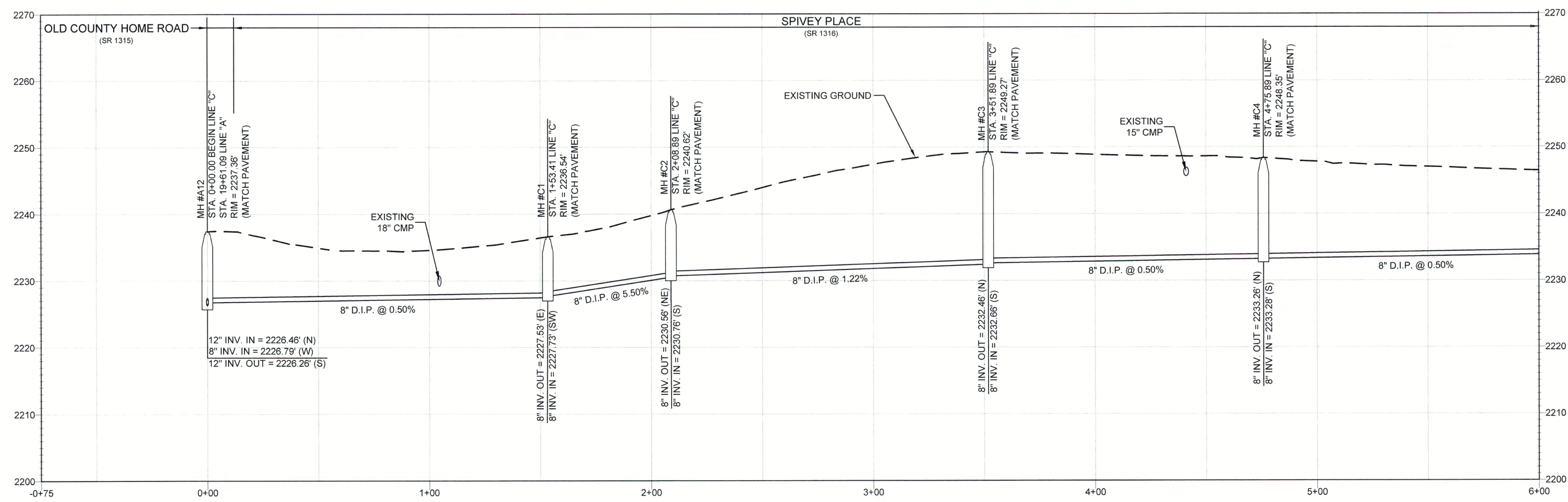
Engineering Division



SANITARY SEWER PLAN – LINE "C"

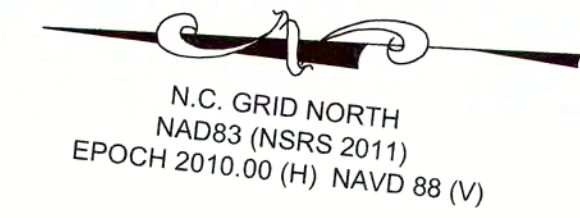
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NOTE:
POSITIVE SHORING SHALL BE USED WHERE SEWER
LINE DEPTHS EXCEED 10 FEET IN NCDOT ROADWAYS, IN
ACCORDANCE WITH THE NCDOT STANDARD DETAILS.



SANITARY SEWER PROFILE – LINE "C"

SCALE. HORIZ: 1"=30' ; VERT. 1"=10'

Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Sanitary Sewer Plan & Profile
LINE "C"

DRAWN: LJ	
CHECKED BY: KMA	DATE: 12/05/2022
APPROVED: SKA	SCALE: 1" = 30'

PL-7

DRAWN: LIJ	DATE: 12/05/2022
CHECKED BY: KMA	SCALE: 1" = 30'
APPROVED: SKA	

DRAWN: LIJ
CHECKED BY: KMA
APPROVED: SKA

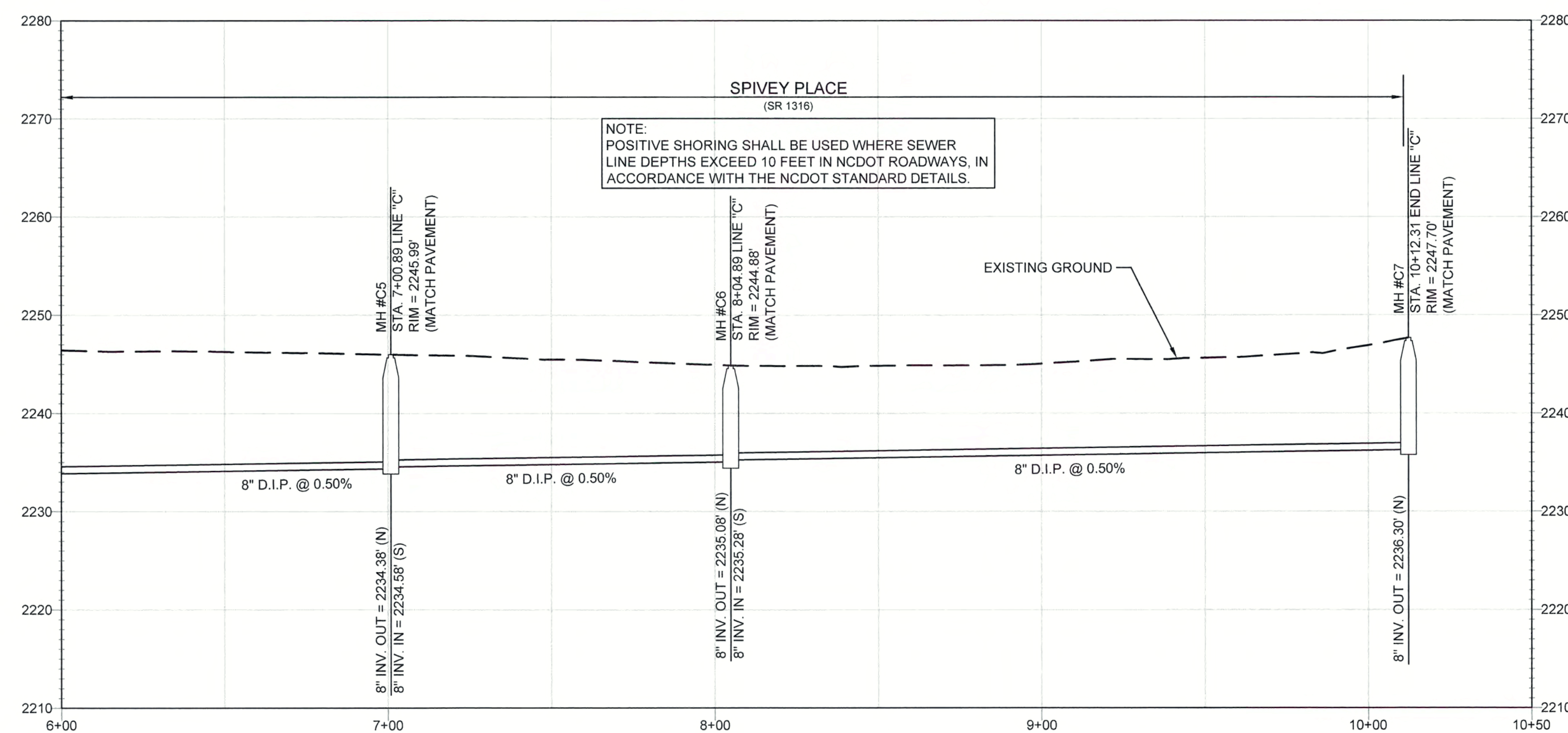
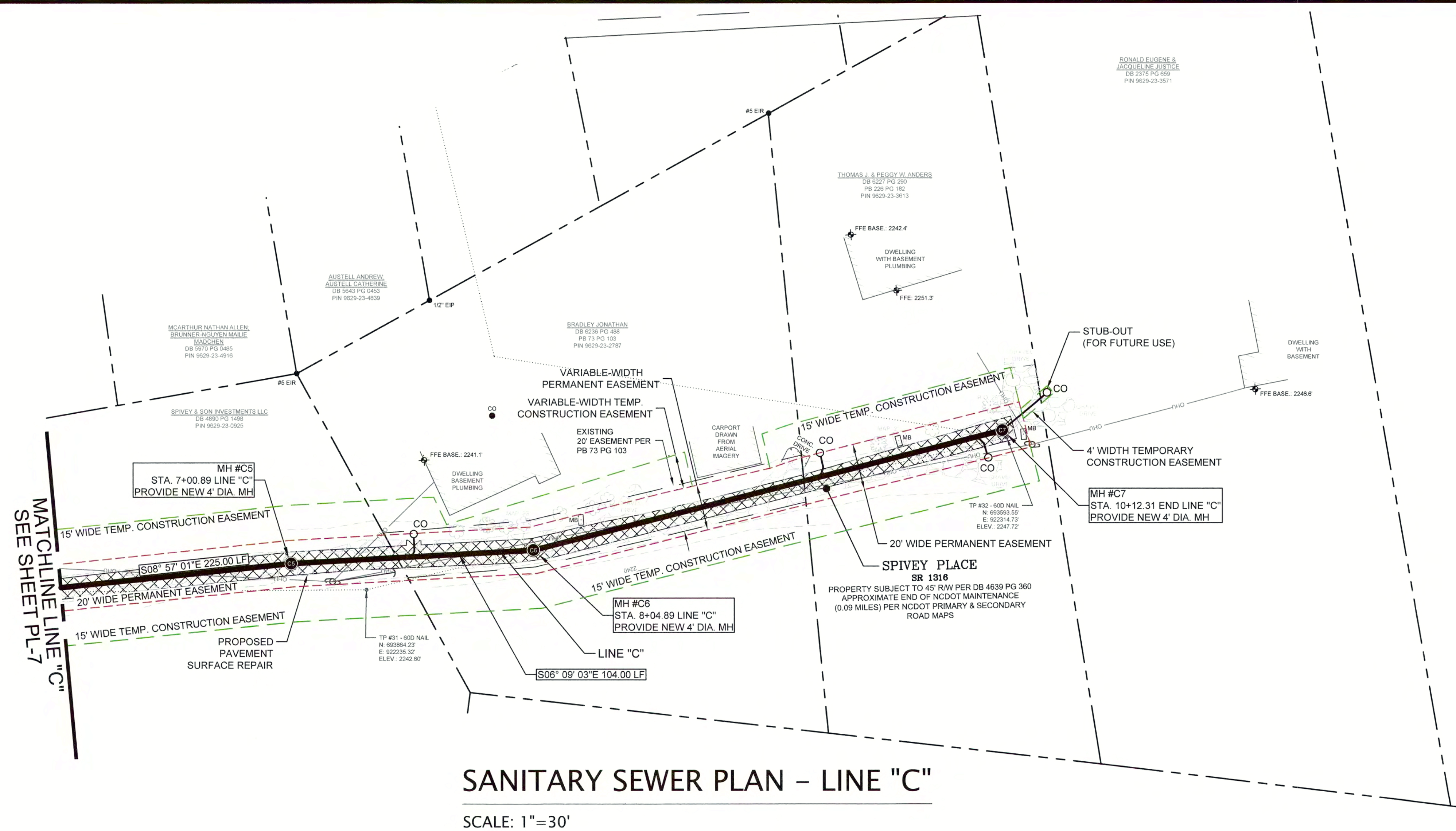


REVISIONS		
No.	DESCRIPTION	DATE
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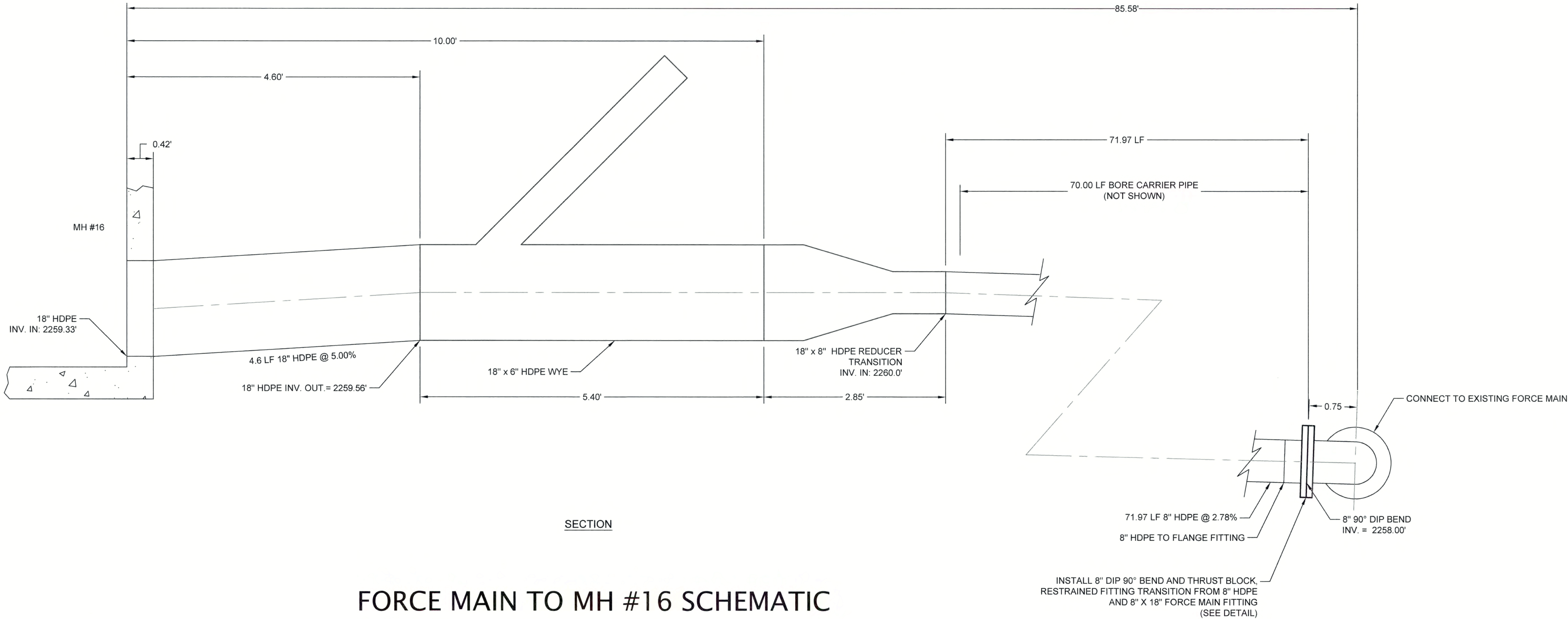
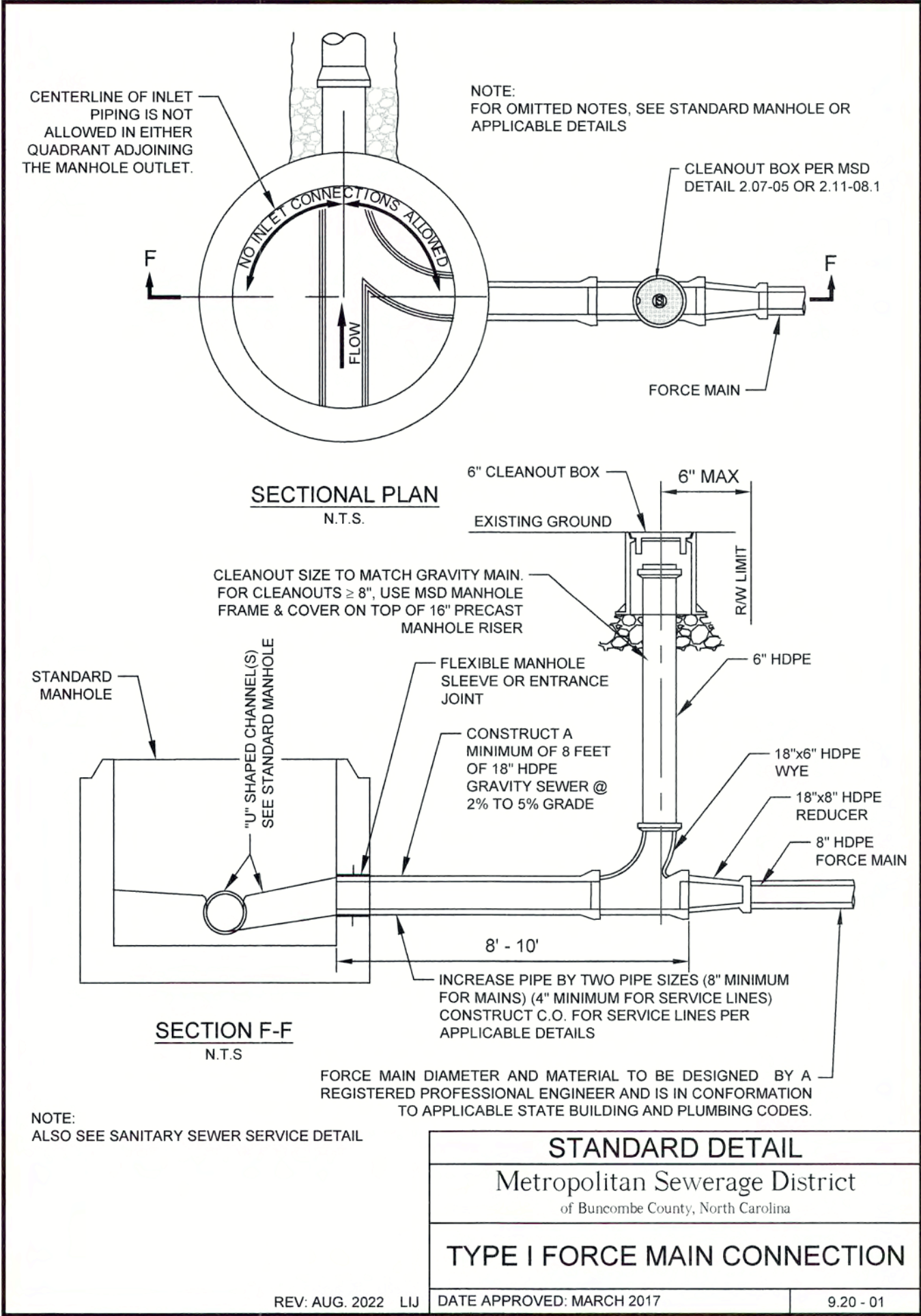
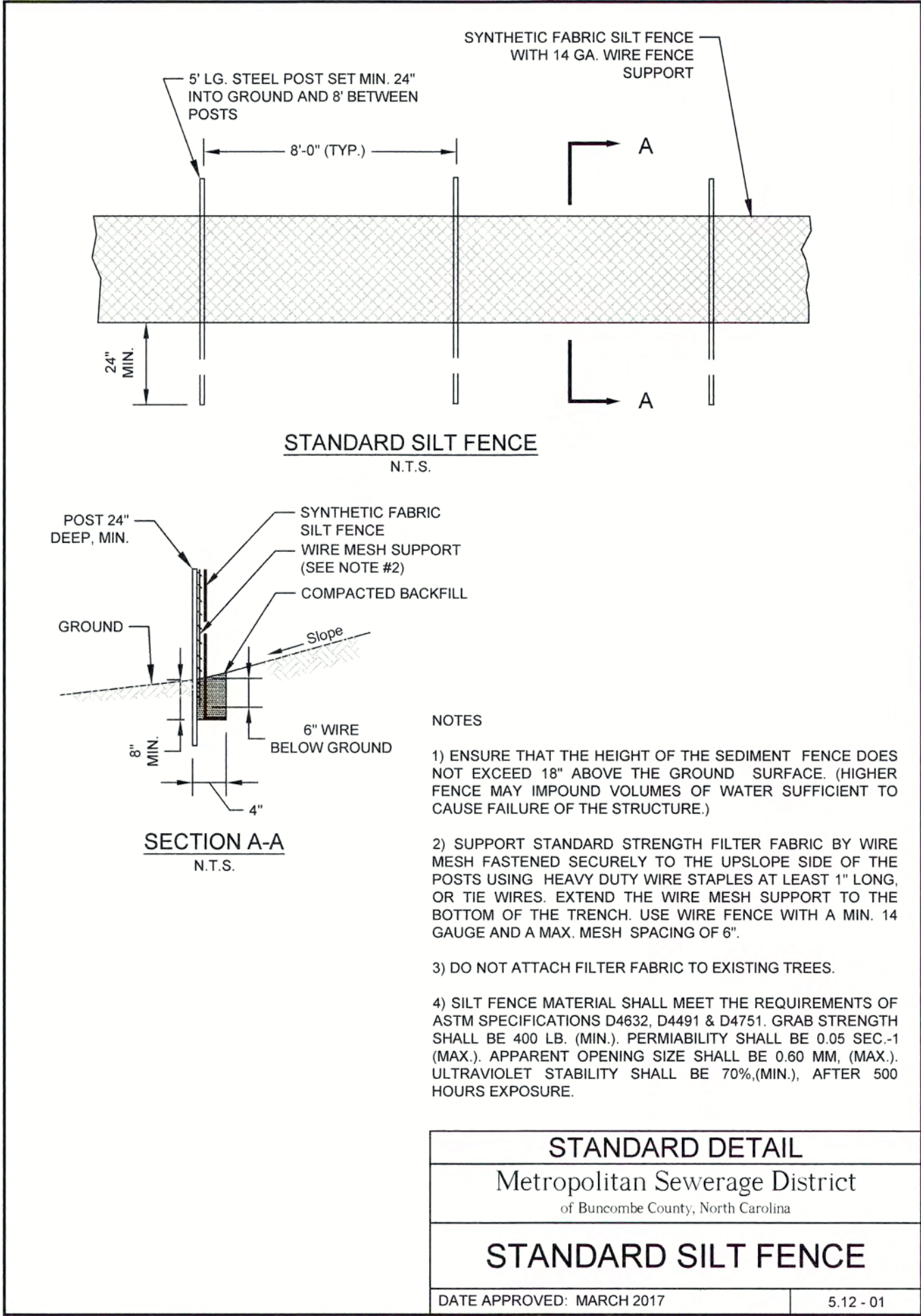
MSD

Engineering Division



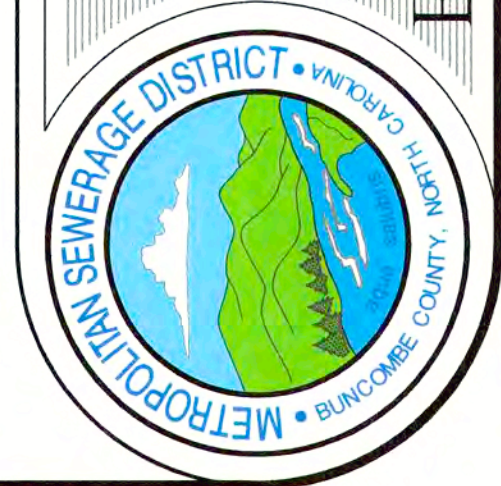


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FORCE MAIN TO MH #16 SCHEMATIC
SCALE: NTS

MSD



Engineering Division

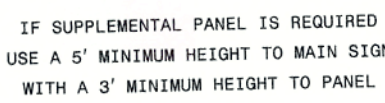
Metropolitan Sewerage District of Buncombe County		Old County Home Road Sanitary Sewer Details		D-2	
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	CHECKED BY: KMA	DATE: 12/05/2022		APPROVED BY: KMA	
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REVISIONS		DESCRIPTION		DATE	
No					



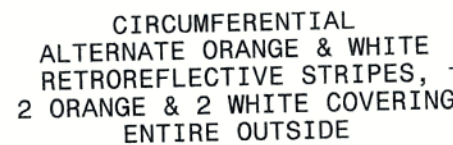
- 1- IF NECESSARY USE THIS RSD. FOR CROSS-ROADS AS SHOWN OR FOR "T" INTERSECTIONS ON 2-LANE, 2-WAY AND MULTILANE UNDIVIDED AND DIVIDED ROADWAYS.
- 2- INSTALLATION OF DETOUR ROUTING PANELS, TEMPORARY ROUTE MARKERS, DESTINATION SIGNS, AND ANY NECESSARY MODIFICATIONS TO EXISTING OR PROPOSED REGULATORY OR WARNING SIGNS WILL BE MADE BY OTHERS (STATE OR CITY FORCES) UNLESS OTHERWISE DESIGNATED IN THE PLANS. A MINIMUM 30 CALENDAR DAY NOTICE IS REQUIRED TO BE PROVIDED TO STATE FORCES BEFORE A ROADWAY IS CLOSED TO TRAFFIC SUCH THAT THE NECESSARY PROVISIONS CAN BE MADE TO INSTALL DETOUR ROUTE SIGNS, AND TO INFORM LOCAL EMERGENCY AND LAW ENFORCEMENT PERSONNEL, SCHOOLS, OR ANY OTHER PARTIES AFFECTED BY THE ROAD CLOSURE.
- 3- INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING THE ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING THE ROADWAY TO TRAFFIC. INSTALL/REMOVE SIGNS AND BARRICADES WITHIN THE SAME CALENDAR DAY.
- 4- POSITION BARRICADES SUCH THAT THE STRIPES ARE SLOPED DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING.
- 5- USE PORTABLE SIGNS IF ROAD CLOSURE IS TO BE IMPLEMENTED FOR LESS THAN THREE DAYS, OR FOR EMERGENCIES. IN THIS CASE, NO STOP BAR IS NECESSARY.

└ STATIONARY SIGN
← DIRECTION OF TRAFFIC FLOW

1-18 STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



1. DIMENSIONS SHOWN ARE MINIMUM VALUES. MOUNT SIGNS SO THEY WILL BE CLEARLY VISIBLE TO APPROACHING TRAFFIC EVEN WHEN SIGNS ARE MOUNTED BEHIND TRAFFIC CONTROL DEVICES SUCH AS DRUMS, BARRIER, OR OTHER OBJECTS.
2. ALL PORTABLE SIGNS AND STANDS MUST MEET OR EXCEED THE REQUIREMENTS OF NCHRP 350 FOR CATEGORY II DEVICES. USE PORTABLE WORK ZONE SIGNS AND STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER.
3. ALL PORTABLE WORK ZONE SIGNS AND STANDS MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.

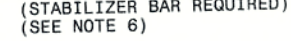
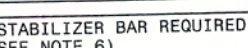


ALL RUBBER COLLARS MUST BE BLACK IN COLOR
AND FREE OF ANY COLORED PAINT

BALLAST COLLAR SHOULD HAVE GOOD CONTACT
WITH THE BARREL FLANGE AND BALLAST OUTER
EDGE MUST LAY FLAT WITH ROAD SURFACE

DRUMS THAT USE TIRE BALLASTS ARE MANUFACTURED
SPECIFICALLY FOR THAT PURPOSE. DO NOT USE
BALLASTS WITH OTHER DRUM DESIGNS.

1. BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL, OR PREFORMED WEIGHTED BASE METHODS. USE THE TIRE BALLAST AS SPECIFIED BY THE MANUFACTURER. DO NOT PLACE BALLAST ON TOP OF THE DRUM.
2. IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.
3. ALL DRUMS MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCT LIST.
4. REFER TO THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES FOR ADDITIONAL INFORMATION.



1. HORIZONTAL RAILS FOR MAY BE CONSTRUCTED OF APPROVED COMPOSITE, HOLLOW/CORRUGATED, EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED MATERIAL.
2. BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCHRP 350 CRASH TESTED FOR CATEGORY II DEVICES AND NCDOT APPROVED.
3. ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE RAILS. MOUNT SIGNS TO BARRICADE RAILS TO ENSURE SIGN WILL NOT BECOME DETACHED UNDER NORMAL WIND AND TRAFFIC CONDITIONS.
4. SIGNS SHOULD BE MOUNTED A MINIMUM OF 1 FOOT FROM THE GROUND TO THE BOTTOM OF THE SIGN UNLESS SIGNS R11-3 OR R11-4 ARE REQUIRED BY THE PLANS OR DIRECTED BY THE ENGINEER.
5. BARRICADE MUST BE NCHRP 350 FOR CATEGORY II DEVICES AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
6. ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
7. BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.
8. STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.
9. USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.
10. ALL BARRICADES MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.
11. PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE FRAME.
12. PLACE SANDBAGS OR OTHER APPROVED BALLASTING METHODS ON THE FEET OF THE FRAME. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL OR STABILIZER BAR. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

ROADWAY STANDARD DRAWING FOR
PORTABLE WORK ZONE SIGNS
MOUNTING HEIGHT & LATERAL CLEARANCE

1-18 STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Sanitary Sewer Rehabilitation
Traffic Control Details

DRAWN: LIJ	DATE: 05/01/2023
CHECKED BY: SKA	SCALE: 1" = 120'
APPROVED: SKA	



MSD

1-18 STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR BARRICADES TYPE - III

SHEET 1 OF 1
1145.01

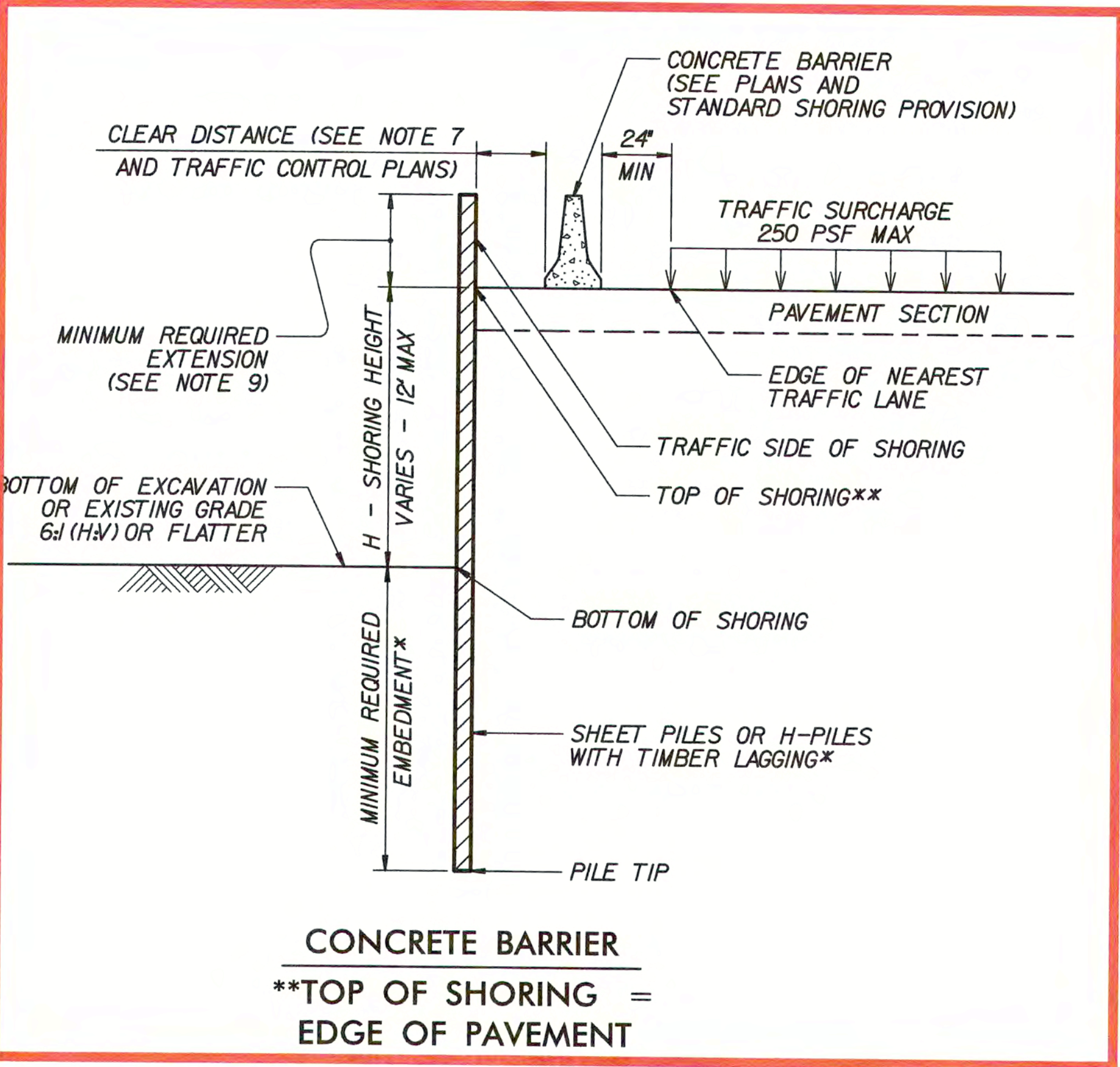
Engineering Division



GROUNDWATER CONDITION (SEE NOTE 6)	H SHORING HEIGHT (FT)	SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT						SURCHARGE CASE WITH TRAFFIC IMPACT					
		SHEET PILES		H-PILES WITH TIMBER LAGGING			MINIMUM REQUIRED EMBEDMENT* (FT) (SEE NOTE 10)	SHEET PILES		H-PILES WITH TIMBER LAGGING			MINIMUM REQUIRED EMBEDMENT* (FT) (SEE NOTE 10)
		MINIMUM REQUIRED EMBEDMENT (FT)	MINIMUM REQUIRED SECTION MODULUS (IN ³ /FT)	HP 10x42	HP 12x53	HP 14x73		MINIMUM REQUIRED EMBEDMENT (FT)	MINIMUM REQUIRED SECTION MODULUS (IN ³ /FT)	HP 10x42	HP 12x53	HP 14x73	
GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND PILE TIP	< 6	11.5	4.5	11.5	11.5	11.5		16.0	12.0	13.0	13.0	13.0	
	7	13.0	7.0	13.0	13.0	13.0		17.0	14.5	14.5	14.5	14.5	
	8	15.0	10.0	--	15.0	15.0		18.0	17.0	--	15.5	15.5	
	9	17.0	14.0	--	17.0	17.0		19.0	20.0	--	17.0	17.0	
	10	18.5	19.5	--	--	18.5		20.0	23.5	--	--	18.5	
	11	20.5	26.0	--	--	--		21.0	28.0	--	--	20.0	
	12	22.5	33.0	--	--	--		22.0	33.0	--	--	21.5	
GROUNDWATER ELEVATION BELOW PILE TIP	< 6	7.5	3.0	8.0	8.0	8.0		11.0	10.0	9.5	9.5	9.5	
	7	8.5	4.5	9.5	9.5	9.5		12.0	12.0	10.5	10.5	10.5	
	8	10.0	6.5	10.5	10.5	10.5		12.5	14.0	11.5	11.5	11.5	
	9	11.0	9.5	--	12.0	12.0		13.5	16.5	--	12.5	12.5	
	10	12.5	13.0	--	--	13.5		14.0	19.5	--	13.5	13.5	
	11	13.5	17.0	--	--	14.5		15.0	22.5	--	--	14.5	
	12	15.0	21.5	--	--	16.0		16.0	25.5	--	--	15.5	

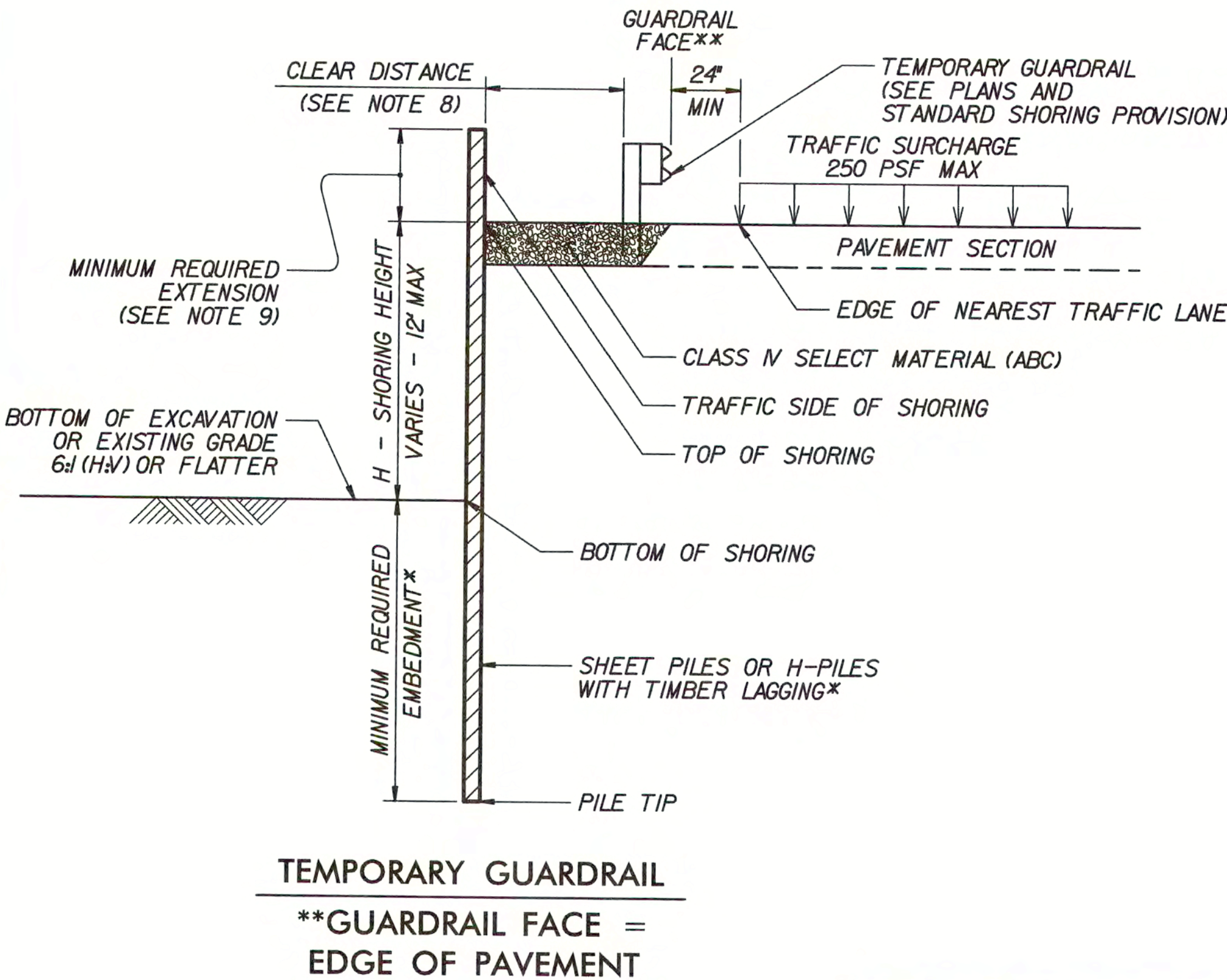
MINIMUM REQUIRED EMBEDMENT AND SECTION MODULUS

*DO NOT USE H-PILES WITH TIMBER LAGGING FOR GROUNDWATER CONDITION, SHORING HEIGHT AND H-PILE SIZE SHOWN IF MINIMUM REQUIRED EMBEDMENT IS "—".



STANDARD TEMPORARY SHORING

(SURCHARGE CASE)
*SEE TABLE ABOVE.



TEMPORARY GUARDRAIL

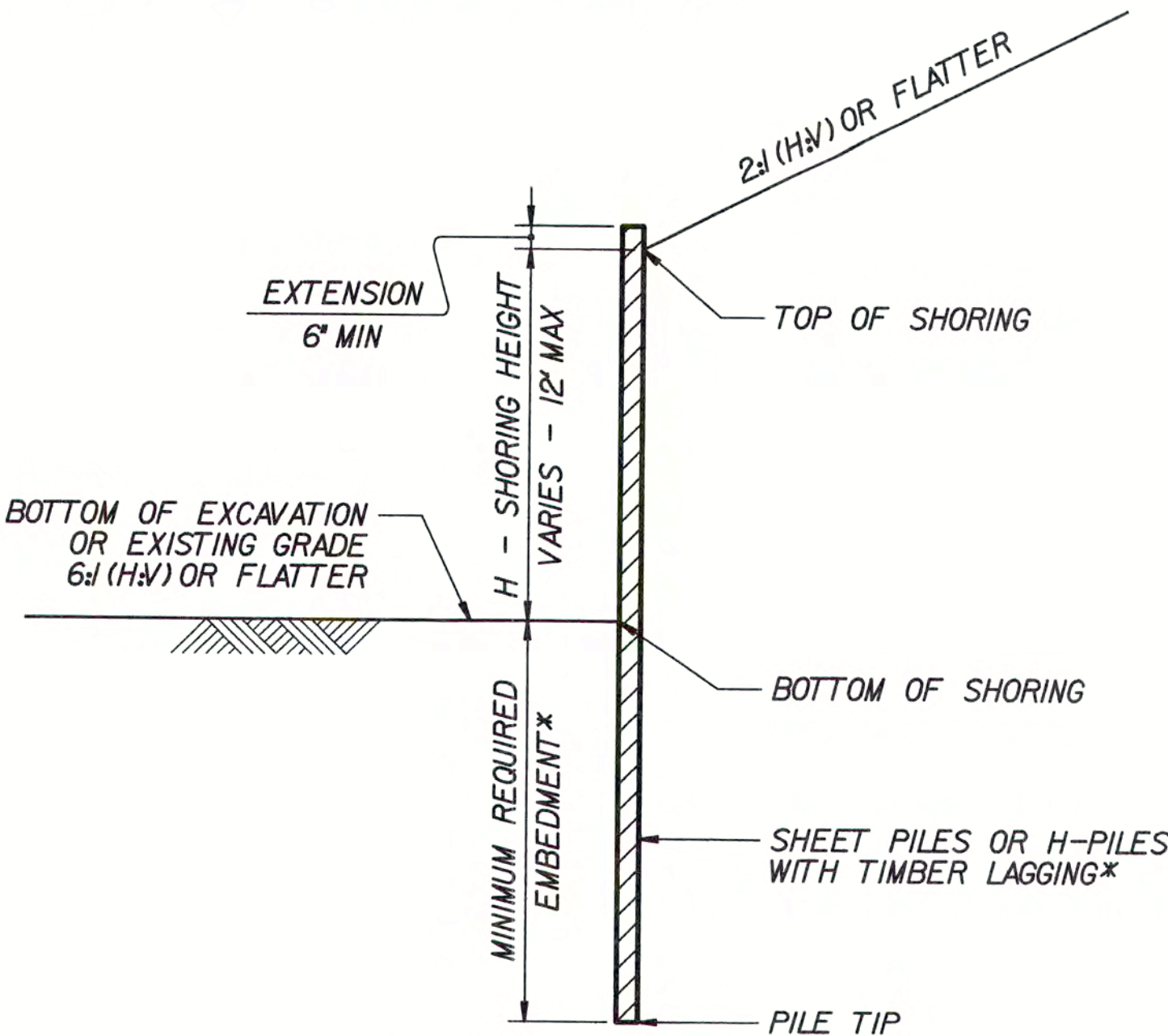
**GUARDRAIL FACE =
EDGE OF PAVEMENT

NOTES:

1. AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING AS NOTED IN THE PLANS.
2. FOR STANDARD TEMPORARY SHORING, SEE STANDARD SHORING PROVISION.
3. STANDARD TEMPORARY SHORING IS BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
UNIT WEIGHT, $\gamma = 120$ PCF
FRICTION ANGLE, $\phi = 30$ DEGREES
COHESION, $c = 0$ PSF
4. DO NOT USE STANDARD TEMPORARY SHORING IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE.
5. DO NOT USE STANDARD TEMPORARY SHORING WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS WITHIN THE EMBEDMENT DEPTH.
6. USE GROUNDWATER ELEVATION NOTED IN THE PLANS. IF NO GROUNDWATER ELEVATION IS SHOWN IN THE PLANS, USE "GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND PILE TIP" FOR GROUNDWATER CONDITION. DO NOT USE STANDARD TEMPORARY SHORING IF GROUNDWATER IS ABOVE BOTTOM OF SHORING.
7. AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN THE MINIMUM REQUIRED FOR CONCRETE BARRIER, SET BARRIER NEXT TO AND UP AGAINST TRAFFIC SIDE OF PILES AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
8. AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN 4' FOR TEMPORARY GUARDRAIL, ATTACH GUARDRAIL TO TRAFFIC SIDE OF PILES AS SHOWN IN THE PLANS AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
9. MINIMUM REQUIRED EXTENSION IS 6' FOR "SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT" AND 32' FOR "SURCHARGE CASE WITH TRAFFIC IMPACT".
10. MINIMUM REQUIRED EMBEDMENT FOR H-PILES WITH TIMBER LAGGING IS BASED ON DRIVEN H-PILES AT MAXIMUM 6' SPACING. AT THE CONTRACTOR'S OPTION, EMBEDMENT DEPTHS MAY BE REDUCED BY 25% FOR DRILLED-IN H-PILES.
11. SUBMIT A "STANDARD TEMPORARY SHORING SELECTION FORM" AT LEAST 7 DAYS BEFORE STARTING TEMPORARY SHORING CONSTRUCTION. UP TO 3 SHORING LOCATIONS MAY BE INCLUDED ON EACH FORM. STANDARD SHORING SELECTION FORMS ARE AVAILABLE FROM:
connect.ncdot.gov/resources/Geological/Pages/Geotech_Forms_Details.aspx
12. CONTACT THE ENGINEER IF PILES DO NOT ATTAIN THE MINIMUM REQUIRED EMBEDMENT.

PROJECT REFERENCE NO. SHEET NO.

GEOTECHNICAL ENGINEER	ENGINEER PAUL K. ARMISTEAD 5/2/2023
SIGNATURE	DATE
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



STANDARD TEMPORARY SHORING

(SLOPE CASE)
*SEE TABLE ABOVE.



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

STANDARD DETAIL NO. 1801.01

STANDARD
TEMPORARY SHORING

DATE: 11-19-13

MSD



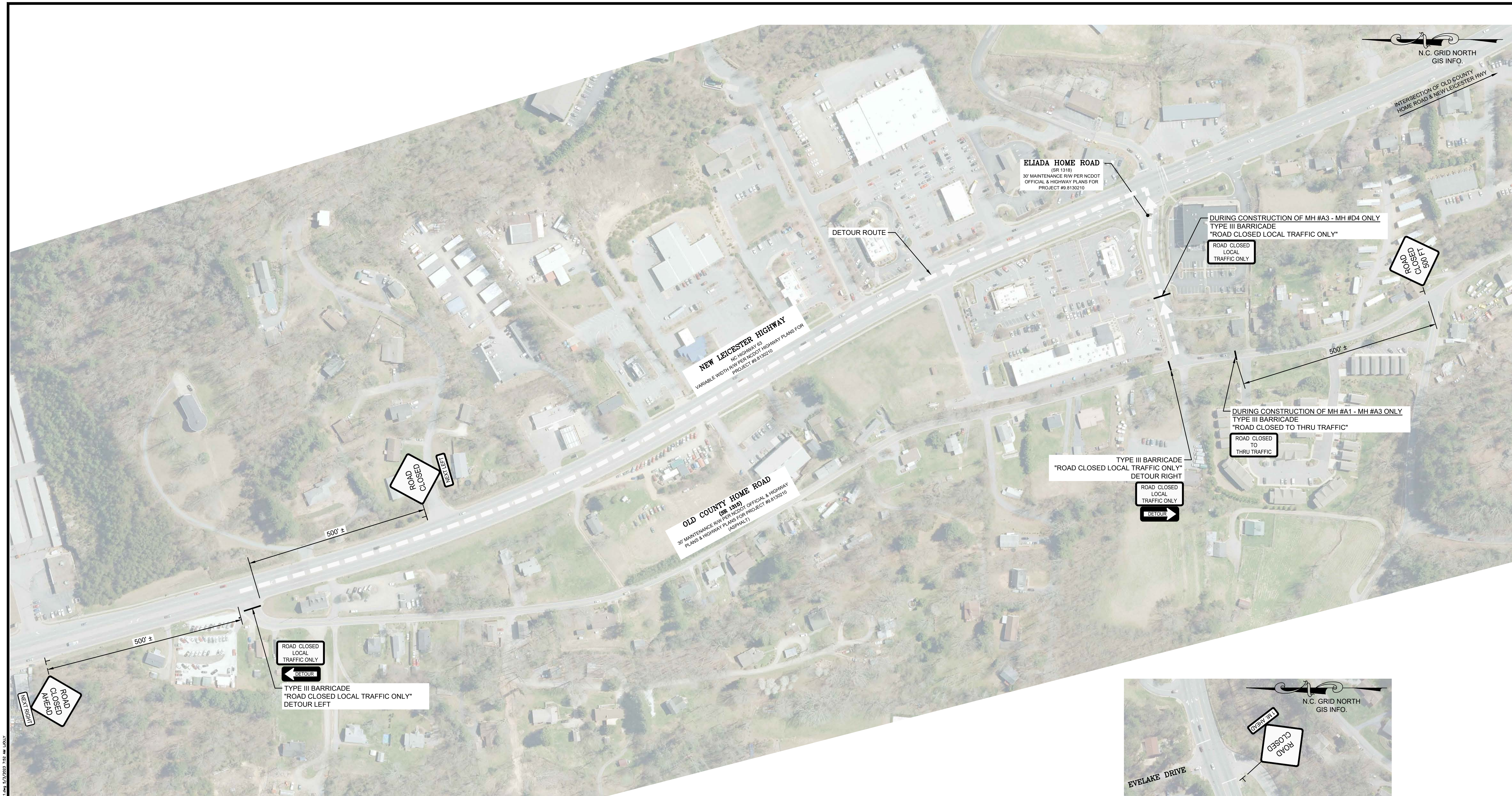
Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Sanitary Sewer Rehabilitation
Traffic Control Details

REVISIONS

Engineering Division

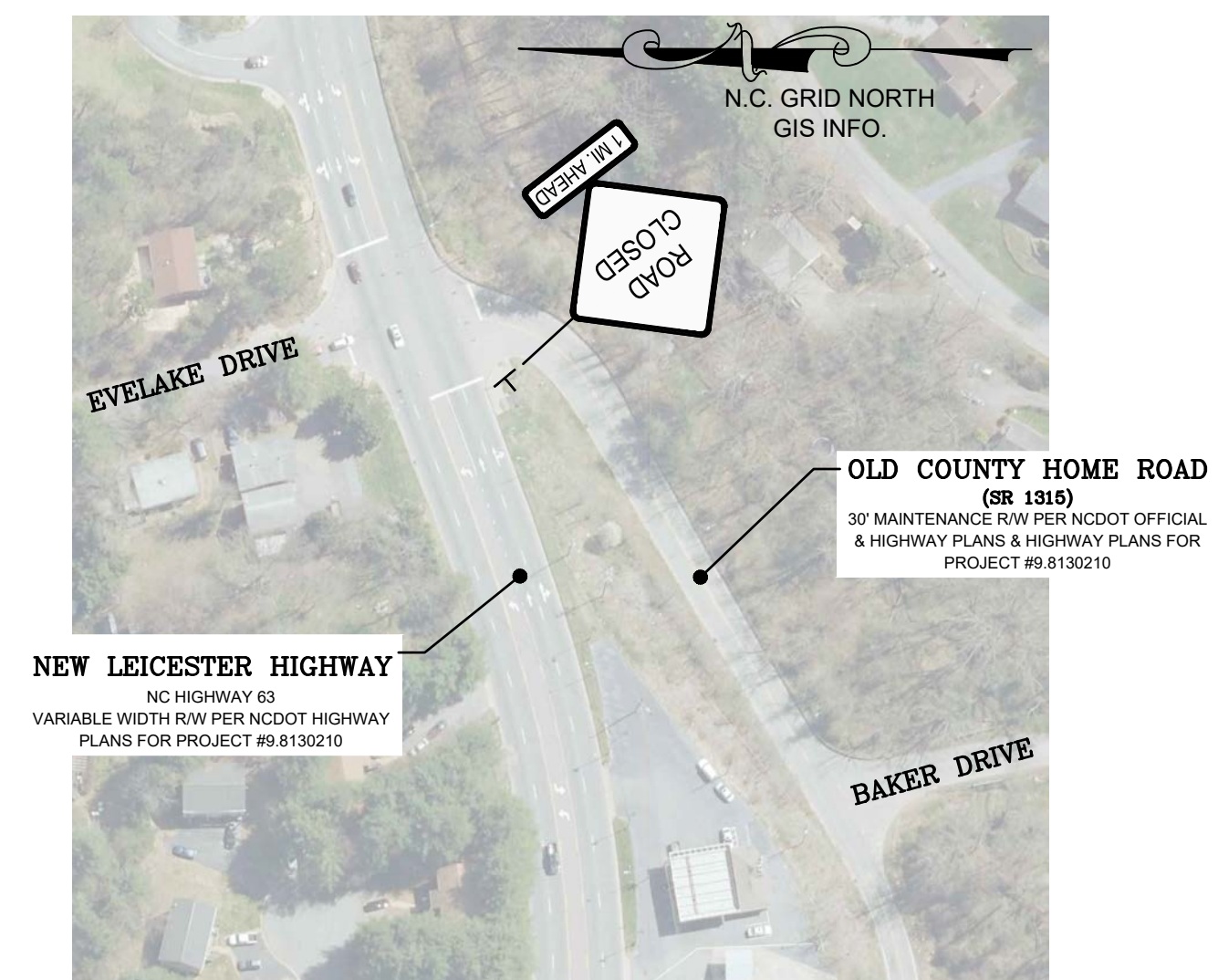
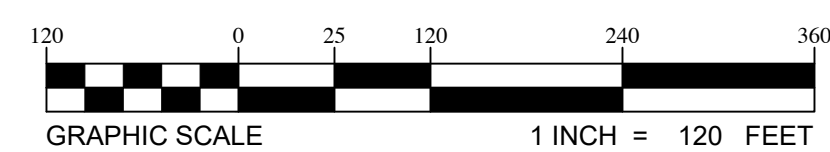
TC-3



TRAFFIC CONTROL PLAN

SCALE: 1"=120'

- | |
|--|
| <p><u>TRAFFIC CONTROL NOTES:</u></p> <ul style="list-style-type: none"> • CONTRACTOR SHALL COMPLY WITH NCDOT MANUAL ON UNIFORM TRAFFIC CONTROL. • FLAGGERS SHALL BE USED ON OLD COUNTY HOME ROAD DURING ALL CONSTRUCTION ACTIVITIES. |
|--|



INTERSECTION OF OLD COUNTY HOME ROAD & NEW LEICESTER HIGHWAY

SCALE: 1"=120'

MSD

Engineering Division

Metropolitan Sewerage District
of Buncombe County

Old County Home Road
Sanitary Sewer Rehabilitation
Traffic Control Plan

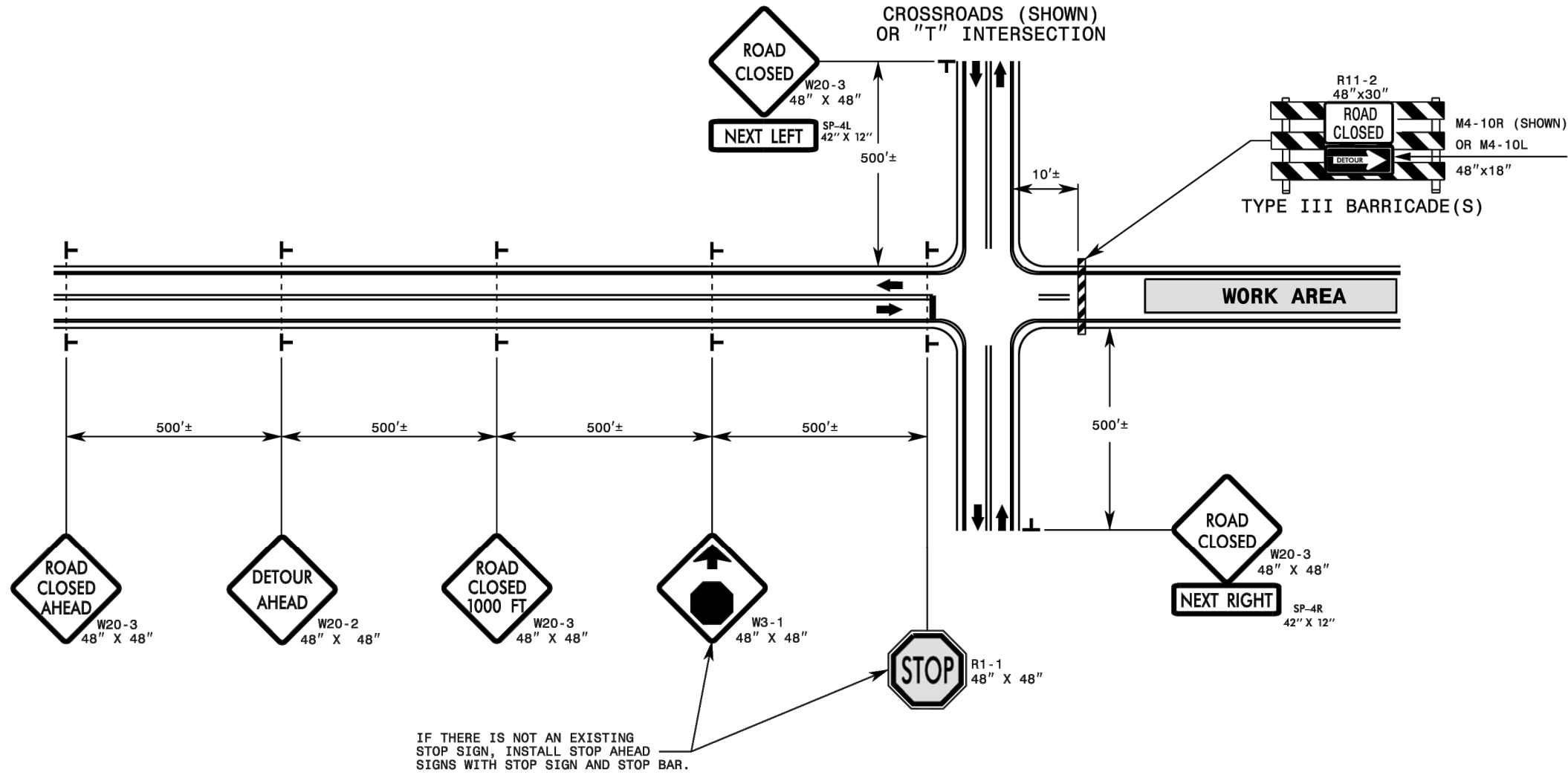
AWN: LJJ	DATE: 05/01/2023	TC-1
CHECKED BY: SKA	SCALE: 1" = 120'	

[illegible]

Engineering Division

MSD

\\COLLAPSE\SYSTEMS\BUREAU\PROJECTS\ROADWAY\STANDARD DRAWING\1110.03.dwg 5/7/2023 7:29 AM LALY

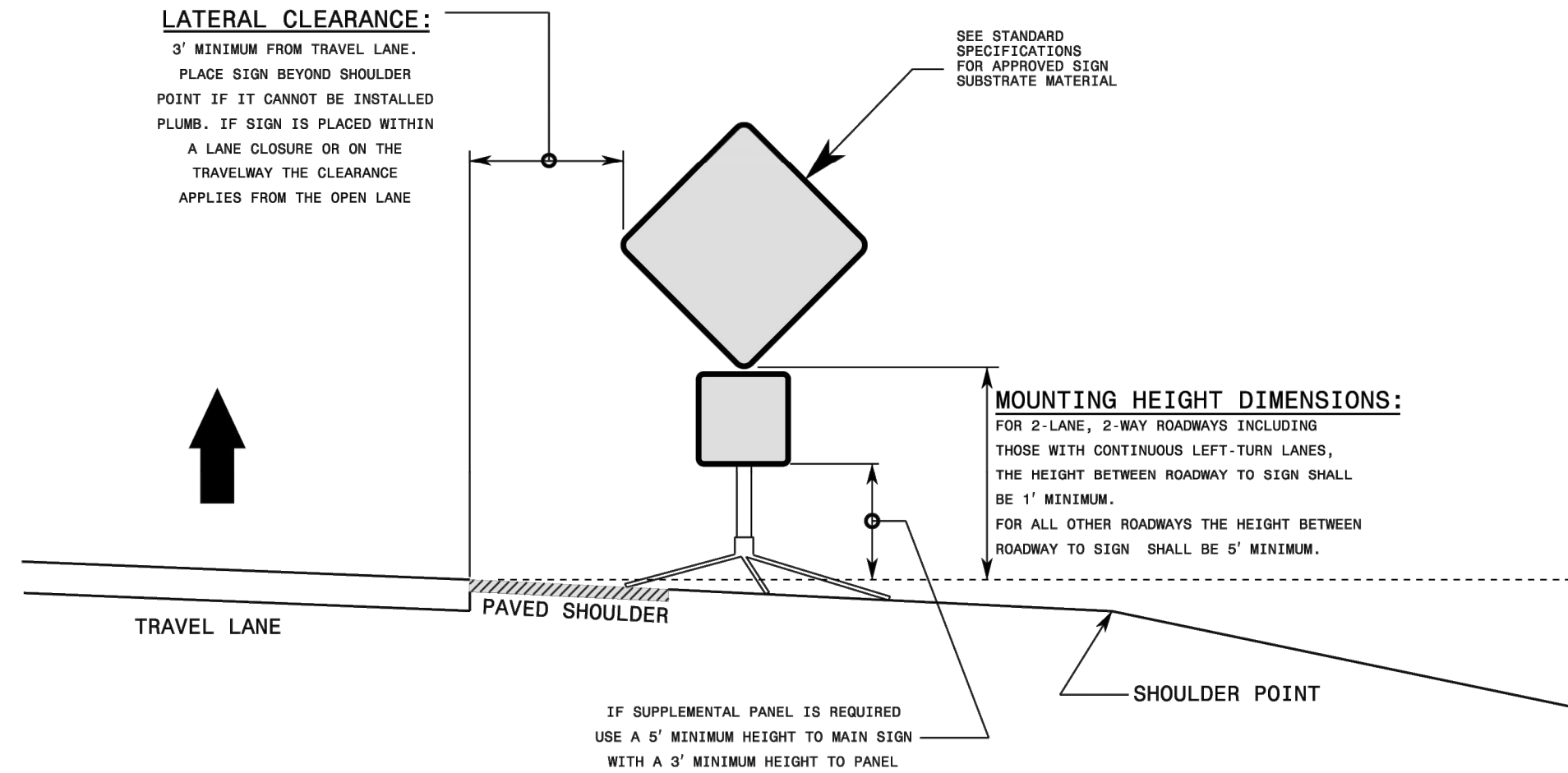


GENERAL NOTES

- 1- IF NECESSARY USE THIS RSD. FOR CROSS-ROADS AS SHOWN OR FOR "T" INTERSECTIONS ON 2-LANE, 2-WAY AND MULTILANE UNDIVIDED AND DIVIDED ROADWAYS.
- 2- INSTALLATION OF DETOUR ROUTING PANELS, TEMPORARY ROUTE MARKERS, DESTINATION SIGNS, AND ANY NECESSARY MODIFICATIONS TO EXISTING OR PROPOSED REGULATORY OR WARNING SIGNS WILL BE MADE BY OTHERS (STATE OR CITY FORCES) UNLESS OTHERWISE DESIGNATED IN THE PLANS. A MINIMUM 30 CALENDAR DAY NOTICE IS REQUIRED TO BE PROVIDED TO STATE FORCES BEFORE A ROADWAY IS CLOSED TO TRAFFIC SUCH THAT THE NECESSARY PROVISIONS CAN BE MADE TO INSTALL DETOUR ROUTE SIGNS, AND TO INFORM LOCAL EMERGENCY AND LAW ENFORCEMENT PERSONNEL, SCHOOLS, OR ANY OTHER PARTIES AFFECTED BY THE ROAD CLOSURE.
- 3- INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING THE ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING THE ROADWAY TO TRAFFIC. INSTALL/REMOVE SIGNS AND BARRICADES WITHIN THE SAME CALENDAR DAY.
- 4- POSITION BARRICADES SUCH THAT THE STRIPES ARE SLOPED DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING.
- 5- USE PORTABLE SIGNS IF ROAD CLOSURE IS TO BE IMPLEMENTED FOR LESS THAN THREE DAYS, OR FOR EMERGENCIES. IN THIS CASE, NO STOP BAR IS NECESSARY.



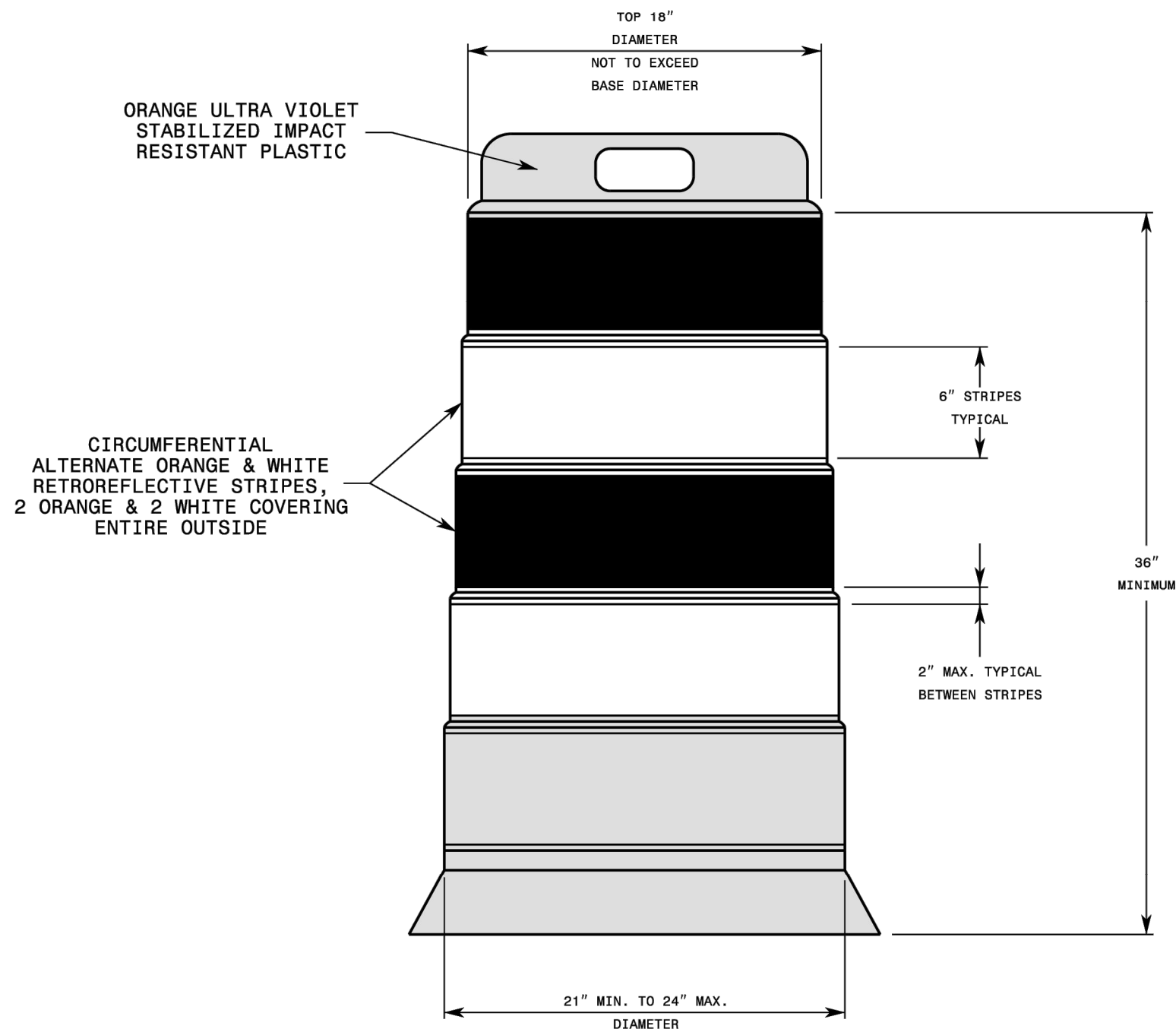
SHEET 2 OF 9
1101.03



GENERAL NOTES

- 1- DIMENSIONS SHOWN ARE MINIMUM VALUES. MOUNT SIGNS SO THEY WILL BE CLEARLY VISIBLE TO APPROACHING TRAFFIC EVEN WHEN SIGNS ARE MOUNTED BEHIND TRAFFIC CONTROL DEVICES SUCH AS DRUMS, BARRIER, OR OTHER OBJECTS.
- 2- ALL PORTABLE SIGNS AND STANDS MUST MEET OR EXCEED THE REQUIREMENTS OF NCHRP 350 FOR CATEGORY II DEVICES. USE PORTABLE WORK ZONE SIGNS AND STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER.
- 3- ALL PORTABLE WORK ZONE SIGNS AND STANDS MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.

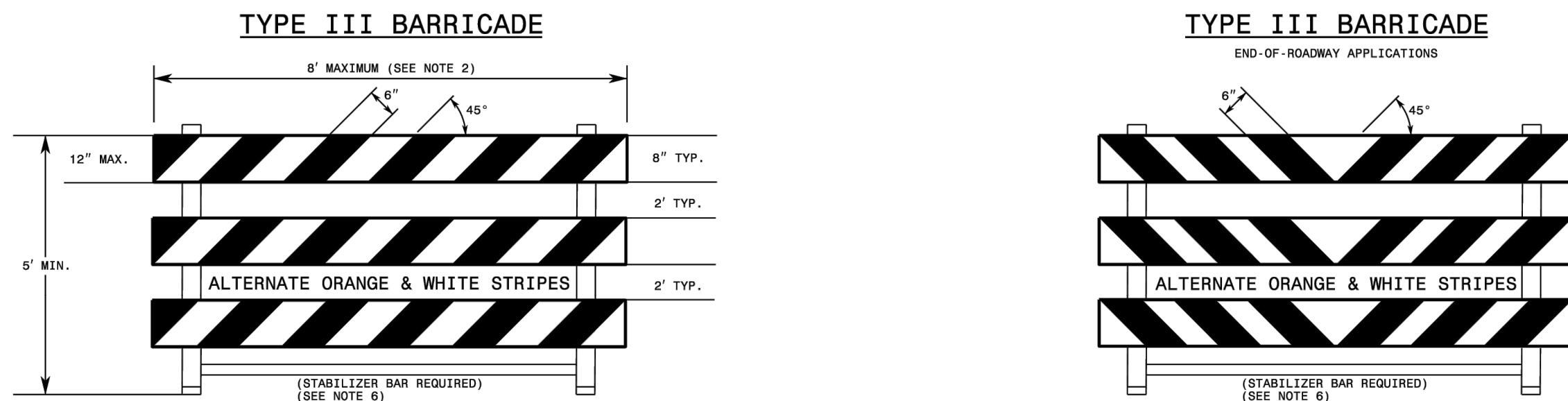
SHEET 1 OF 1
1110.02



GENERAL NOTES

- 1- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL, OR PREFORMED WEIGHTED BASE METHODS. USE THE TIRE BALLAST AS SPECIFIED BY THE MANUFACTURER. DO NOT PLACE BALLAST ON TOP OF THE DRUM.
- 2- IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.
- 3- ALL DRUMS MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCT LIST.
- 4- REFER TO THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES FOR ADDITIONAL INFORMATION.

SHEET 1 OF 1
1130.01



GENERAL NOTES

- 1- HORIZONTAL RAILS FOR MAY BE CONSTRUCTED OF APPROVED COMPOSITE, HOLLOW/CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED MATERIAL.
- 2- BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCHRP 350 CRASH TESTED FOR CATEGORY II DEVICES AND NCDOT APPROVED.
- 3- ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE RAILS. MOUNT SIGNS TO BARRICADE RAILS TO ENSURE SIGN WILL NOT BECOME DETACHED UNDER NORMAL WIND AND TRAFFIC CONDITIONS.
- 4- SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT FROM THE GROUND TO THE BOTTOM OF THE SIGN UNLESS SIGNS R11-3 OR R11-4 ARE REQUIRED BY THE PLANS OR DIRECTED BY THE ENGINEER.
- 5- BARRICADE MUST BE NCHRP 350 FOR CATEGORY II DEVICES AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
- 6- ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
- 7- BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.
- 8- STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.
- 9- USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.
- 10- ALL BARRICADES MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.
- 11- PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE FRAME.
- 12- PLACE SANDBAGS OR OTHER APPROVED BALLASTING METHODS ON THE FEET OF THE FRAME. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL OR STABILIZER BAR. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

SHEET 1 OF 1
1145.01

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

ROADWAY STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130.01

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

ROADWAY STANDARD DRAWING FOR
BARRICADES
TYPE - III

SHEET 1 OF 1
1145.01

MSD



Metropolitan Sewerage District
of Buncombe County
Old County Home Road
Sanitary Sewer Rehabilitation
Traffic Control Details



DATE: 05/01/2023
SCALE: 1" = 120'
DRAWN: LJ
CHECKED BY: SKA
APPROVED: SKA
TC-2

Pre-Construction

Contact Offices & Outside Agency issues/contacts/info

1. Approval may be rescinded upon failure to follow any of the provisions in this permit and may be considered a violation of the encroachment agreement.
2. The Encroaching party or their contractor shall provide the following notices prior to construction activity within the NCDOT Right of Way:
 - a. Three (3) business days advance phone call at telephone (828) 250-3200 or email to nkdorato@ncdot.gov to the District Engineer's office
 - b. If the construction falls within the limits of an NCDOT managed construction project, five (5) business days advance phone call to the Resident Engineer, W. Cody Weddle, PE at (828) 250-3270 or email to wweddle@ncdot.gov.Failure to provide these notifications prior to beginning construction is subject to the Division Engineer's discretion to cease construction activity for this encroachment. NCDOT reserves the right to cease any construction or maintenance work associated with this installation by the encroaching party until the construction or maintenance meets the satisfaction of the Division Engineer or their representative.
3. Prior to beginning work, it is the requirement of the Encroaching Party to contact the appropriate Utility Companies involved and make arrangements to adjust or relocate any utilities that conflict with the proposed work.
4. It shall be the responsibility of the encroaching party to determine the location of utilities within the encroachment area. NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act requires underground utilities to be located by calling 811 prior to construction. The encroaching party shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and maintain access to them.
5. The encroaching party shall notify the appropriate municipal office prior to beginning any work within the municipality's limits of jurisdiction.
6. Excavation within 1000 feet of a signalized intersection will require notification by the encroaching party to the Division Traffic Engineer at telephone number (828) 250-3000 no less than one week prior to beginning work. All traffic signal or detection cables must be located prior to excavation. Cost to replace or repair NCDOT signs, signals, pavement markings or associated equipment and facilities shall be the responsibility of the encroaching party.
7. This agreement does not authorize installations within nor encroachment onto railroad rights of way. Permits for installations within railroad right of way must be obtained from the railroad and are the responsibility of the encroaching party.
8. At the option of the District Engineer, a preconstruction meeting including representatives of NCDOT, the encroaching party, contractors and municipality, if applicable, shall be required. A pre-construction conference held between a municipality (or other facility owner) and a contractor without the presence of NCDOT personnel with subsequent construction commencing may be subject

to NCDOT personnel ceasing any work on NCDOT right-of-way related to this encroachment until such meeting is held. Contact the District office to schedule.

9. At the discretion of the District Engineer, a NOTIFICATION FOR UTILITY / NON-UTILITY ENCROACHMENT WITHIN NCDOT R/W form (See corresponding attachment) with the scheduled pre-construction meeting and associated construction schedule details must be completed and submitted to the District Engineer's office a minimum of one week prior to construction.
10. At the discretion of the District Engineer, the encroaching party (not the utility contractor) shall make arrangements to have a qualified inspector, under the supervision of a Professional Engineer registered in North Carolina, on site at all times during construction. The registered Professional Engineer shall be required to submit a signed and PE sealed certification that the utility was installed in accordance with the encroachment agreement.

Legal & Right-of-Way Issues

11. This approval and associated plans and supporting documents shall not be interpreted to allow any design change or change in the intent of the design by the Owner, Design Engineer, or any of their representatives. Any revisions or changes to these approved plans or intent for construction must be obtained in writing from the Division Engineer's office or their representative prior to construction or during construction if an issue arises during construction to warrant changes.
12. NCDOT does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought about by any property owner by reason of this installation. It is the responsibility of the encroaching party to verify the right of way.
13. Prior to the approval of any privately maintained facility within NCDOT right of way which the State of North Carolina is not the fee simple owner, written permission that each and every property owner affected by the installation shall be provided to NCDOT by the encroaching party. (See corresponding attachment.)
14. Encroaching party shall be responsible for obtaining all necessary permanent and/or temporary construction, drainage, utility and/or sight distance easements.
15. All Right of Way and easements necessary for construction and maintenance shall be dedicated to NCDOT with proof of dedication furnished to the District Engineer prior to beginning work.
16. No commercial advertising shall be allowed within NCDOT Right of Way.
17. The encroaching party shall obtain proper approval from all affected pole owners prior to attachment to any pole.
18. The installation within the Control of Access fence shall not adversely affect the design, construction, maintenance, stability, traffic safety or operation of the controlled access highway, and the utility must be serviced without access from the through-traffic roadways or ramps.

Bonds

19. A Performance and Indemnity Bond in the amount stated in the District Engineer's approval letter shall be posted with the District Engineer's Office by the Party of the Second Part prior to beginning any work within the NCDOT Right of Way. The bond shall be held for a minimum of one year after a satisfactory final inspection of the installation by NCDOT. The bond may be held for a period longer than one year after completion if, in the opinion of NCDOT, the size or complexity of the installation warrants a longer period.
20. The release of the bond is subject to a final inspection by NCDOT. Contact the District office to schedule a Final Inspection and to request release of the bond.

Work Zone Traffic

21. Traffic control shall be coordinated with the District Engineer, [Mr. Chris Medlin](#) at telephone (828) 250-3200, prior to construction.

22. WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM

All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenance / Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance /Utility Traffic Control Guidelines (MUTCG). All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to <https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx> or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

23. The party of the second part shall employ traffic control measures that are in accordance with the prevailing federal, state, local, and NCDOT policies, standards, and procedures. These policies, standards, and procedures include, but are not limited to the following:
 - a. Manual on Uniform Traffic Control Devices (MUTCD) – North Carolina has adopted the MUTCD to provide basic principles and guidelines for traffic control device design, application, installation, and maintenance. North Carolina uses the MUTCD as a minimum requirement where higher supplemental standards specific to North Carolina are not established. Use fundamental principles and best practices of MUTCD (Part 6, Temporary Traffic Control).

- b. NCDOT Maintenance / Utility Traffic Control Guidelines – This document enhances the fundamental principles and best practices established in MUTCD Part 6, Temporary Traffic Control, incorporating NCDOT-specific standards and details. It also covers important safety knowledge for a wide range of work zone job responsibilities.
24. If the Traffic Control Supervisor determines that portable concrete barrier (PCB) is required to shield a hazard within the clear zone, then PCB shall be designed and sealed by a licensed North Carolina Professional Engineer. PCB plans and design calculations shall be submitted to the District Engineer for review and approval prior to installation.
 25. Ingress and egress shall be maintained to all businesses and dwellings affected by the project. Special attention shall be paid to police, EMS and fire stations, fire hydrants, secondary schools, and hospitals.
 26. Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, **or as directed by the District Engineer**. Any violation of these hours will result in ceasing any further construction by the Encroaching Party or their contractor.
 27. Nighttime and weekend operations will NOT be allowed unless written approval is received from the District Engineer. If nighttime or weekend work is allowed or required, all signs must be retro-reflective, and a work zone lighting plan must be submitted for approval prior to construction.
 28. Two-way traffic shall be maintained at all times unless designated by the District Engineer. Traffic shall not be rerouted or detoured without the prior written approval from the District Engineer. No utility work will be allowed on state holidays from 7:00 PM the night before through 9:00 AM the day prior to, following or during local events without prior approval from the District Engineer. If the construction is within 1000 feet of a school location or on a designated bus route, the construction shall be coordinated with the school start and end times to avoid traffic delays.
 29. Work requiring lane or shoulder closures shall not be performed on both sides of the road simultaneously within the same area.
 30. Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current *NCDOT Roadway Standard Drawings or MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES*.
 31. At the discretion of the District Engineer, a traffic control plan shall be developed and submitted under the seal and signature of a Licensed North Carolina Professional Engineer prior to construction. The plan shall be specific to the site and adequately detailed. Issues such as the close proximity to intersections shall be addressed.
 32. Temporary and final pavement markings are the responsibility of the encroaching party. Final pavement markings and sign plans shall be submitted with the encroachment request to the Division Traffic Engineer prior to construction. Final pavement markings shall be thermoplastic unless otherwise directed by the Division Traffic Engineer or District Engineer.
 33. Any pavement markings that are damaged or obliterated shall be restored by the encroaching party at no expense to NCDOT.
 34. Sidewalk closures shall be installed as necessary. Pedestrian traffic shall be detoured around these closures and shall be signed appropriately and in accordance with The American with Disabilities Act

Accessibility Guidelines. The encroaching party must adhere to the guidelines for accommodating pedestrians in encroachment work zones as described in the NCDOT Pedestrian Work Zone Accommodations Training found at <https://www.youtube.com/watch?v=AOuYa5IW3dg&feature=youtu.be>

Roadside Environmental

35. The encroaching party shall comply with all applicable Federal, State and local environmental regulations and shall obtain all necessary Federal, State and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species and historical sites. Additional information can be obtained by contacting the NCDOT Roadside Environmental Engineer regarding the North Carolina Natural Heritage Program or the United States Fish and Wildlife Services. Contact the Division Roadside Environmental Engineer's Office at (828) 225-2763.
36. When surface area in excess of one acre will be disturbed, the Encroacher shall submit a Sediment and Erosion Control Plan which has been approved by the appropriate regulatory agency or authority prior to beginning any work on the Right of Way. Failure to provide this information shall be grounds for suspension of operations. Proper temporary and permanent measures shall be used to control erosion and sedimentation in accordance with the approved sediment and erosion control plan.
37. The Verification of Compliance with Environmental Regulations (VCER-1) form is required for all non-utility encroachment agreements or any utility encroachments when land disturbance within NCDOT right of way exceeds 1 acre. The VCER-1 form must be PE sealed by a NC registered professional engineer who has verified that all appropriate environmental permits (if applicable) have been obtained and all applicable environmental regulations have been followed.
38. All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Encroacher in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. Permanent vegetation shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer. All areas disturbed (shoulders, ditches, removed accesses, etc.) shall be graded and seeded in accordance with the latest *NCDOT Standards Specifications for Roads and Structures* and within 15 calendar days with an approved NCDOT seed mixture (all lawn type areas shall be maintained and reseeded as such). Seeding rates per acre shall be applied according to the Division Roadside Environmental Engineer. Any plant or vegetation in the NCDOT planted sites that is destroyed or damaged as a result of this encroachment shall be replaced with plants of like kind or similar shape.
39. No trees within NCDOT shall be cut without authorization from the Division Roadside Environmental Engineer. An inventory of trees measuring greater than 4 caliper inches (measured 6" above the ground) is required when trees within C/A right of way will be impacted by the encroachment installation. Mitigation is required and will be determined by the Division Roadside Environmental Engineer's Office.
40. Prior to installation, the Encroaching Party shall contact the District Engineer to discuss any environmental issues associated with the installation to address concerns related to the root system of trees impacted by boring or non-utility construction of sidewalk, roadway widening, etc.
41. The applicant is responsible for identifying project impacts to waters of the United States (wetlands, intermittent streams, perennial streams and ponds) located within the NCDOT right-of-way. The discharge of dredged or fill material into waters of the United States requires authorization from the United States Army Corps of Engineers (USACE) and certification from the North Carolina Division

of Water Quality (NCDWQ). The applicant is required to obtain pertinent permits or certification from these regulatory agencies if construction of the project impacts waters of the United States within the NCDOT right-of-way. The applicant is responsible for complying with any river or stream Riparian Buffer Rule as regulated by the NCDWQ. The Rule regulates activity within a 50-foot buffer along perennial streams, intermittent streams and ponds. Additional information can be obtained by contacting the NCDWQ or the USACE.

42. The contractor shall not begin the construction until after the traffic control and erosion control devices have been installed to the satisfaction of the Division Engineer or their agent.
43. The contractor shall perform all monitoring and record keeping and any required maintenance of erosion and sediment control measures to maintain compliance with stormwater regulations.

STIP (or Division Managed) Projects

44. State Transportation Improvement Project (STIP) ****XXXXXX** is scheduled for future construction. Any encroachment determined to be in conflict with the construction of this NCDOT project shall be removed and/or relocated at the encroaching party's expense.

Construction

General

45. An executed copy of the encroachment agreement, provisions and approved plans shall be present at the construction site at all times. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.
46. The Encroaching Party and/or their Contractor shall comply with all OSHA requirements. If OSHA visits the work area associated with this encroachment, the District Office shall be notified by the encroaching party immediately if any violations are cited.
47. Any REVISIONS marked in RED on the attached non-PE sealed plans shall be incorporated into and made part of the approved encroachment agreement.
48. All disturbed areas are to be fully restored to current NCDOT minimum roadway standards or as directed by the Division Engineer or their representative. Disturbed areas within NCDOT Right-of-Way include, but not limited to, any excavation areas, pavement removal, drainage or other features.
49. The encroaching party shall notify the Division Engineer or their representative immediately in the event any drainage structure is blocked, disturbed or damaged. All drainage structures disturbed, damaged or blocked shall be restored to its original condition as directed by the Division Engineer or their representative.
50. A minimum of 5 feet clearance is required for utility installations beneath or near drainage pipes, headwalls, and a minimum of two-foot clearance below the flowline of streams. If directional

drilling, a minimum ten-foot clearance distance is required from drainage structures and a minimum of 5 feet below flowline of streams.

51. At points where the utility is placed under existing storm drainage, the trench will be backfilled with excavatable flowable fill up to the outside diameter of the existing pipe.
52. Unless specified otherwise, during non-working hours, equipment shall be located away from the job site or parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Zone. Also, during non-working hours, no parking or material storage shall be allowed along the shoulders of any state-maintained roadway.
53. No access to the job site, parking or material storage shall be allowed along or from the **Control of Access Roadway**.
54. Guardrail removed or damaged during construction shall be replaced or repaired to its original condition, meeting current NCDOT standards or as directed by the Division Engineer or their representative.
55. The resetting of the Control of Access fence shall be in accordance with the applicable NCDOT standard and as directed by the Division Engineer or their representative.
56. Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.
57. All Traffic signs moved during construction shall be reinstalled as soon as possible to the satisfaction of the Division Engineer or their representative.
58. Any utility markers, cabinets, pedestals, meter bases and services for meter reading required shall be as close to the Right of Way line as possible. If it is not feasible to install at or near Right of Way line, then written approval shall be obtained from NCDOT prior to installation.
59. Detection tape, where required by NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act, shall be buried in the trench approximately 1 foot above the installed facility. Where conduit is installed in the right of way and is not of ferrous material, locating tape or detection wire shall be installed with the conduit.
60. All driveways disturbed during construction shall be returned to a state comparable with the condition of the driveways prior to construction.
61. Conformance with driveway permit review should be required in conjunction with this encroachment agreement. In the event there is a conflict between the driveway permit and the encroachment agreement, the District Engineer should resolve the conflict and notify the parties involved.
62. If the approved method of construction is unsuccessful and other means are required, prior approval must be obtained through the District Engineer before construction may continue.
63. The encroaching party and their construction contractor must sign and submit the NCDOT *Workforce Safety Plan for Encroachment Activities: COVID-19* form to the District Engineer prior to construction.
64. The attached Duke Energy response to the NCDOT *COVID-19 Workforce Safety Plan* shall be applied for all employees on the job site unless otherwise directed by the District Engineer.

Engineering

65. All traffic control, asphalt mixes, structures, construction, workmanship and construction methods, and materials shall be in compliance with the most-recent versions of the following resources: *ASTM Standards*, *Manual on Uniform Traffic Control Devices*, *NCDOT Utilities Accommodations Manual*, *NCDOT Standard Specifications for Roads and Structures*, *NCDOT Roadway Standard Drawings*, *NCDOT Asphalt Quality Management System* manual, **and the approved plans.**
66. Prior approval for any blasting must be obtained from the Division Engineer or their representative.
67. Regulator stations, metering stations, cathodic test stations, and anode beds are not permitted within NCDOT right of way. Header wires are permitted.
68. Non-Utility Communication and Data Transmission installations (ground mounted type or Small Cell pole-mounted type) must adhere to guidelines in the Utilities Accommodations Manual and, when located within municipal jurisdictions, are subject to review and approval by municipal ordinances and any additional municipal approval for proximity to historic districts and landmarks. All wiring and related telecommunications work shall conform to the latest regulations by the Federal Communications Commission.
69. All wiring and related electrical work shall conform to the latest edition of the National Electrical Safety Code.

Location within R/W

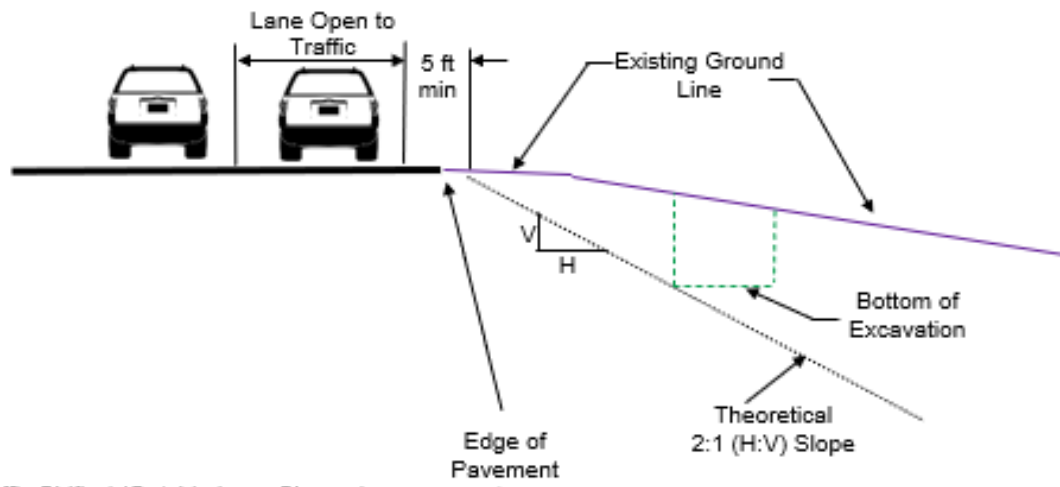
70. All utility access points, such as manholes, vaults, handholes, splice boxes and junction boxes shall be located as close to the right of way line as possible and shall not be placed in the ditch line, side slopes of the ditches or in the pavement. All manholes, handholes, splice boxes, junction boxes and vaults and covers shall be flush with the ground when located within the vehicle clear zone. Slack loops for telecommunications in industry standard housing units shall be buried a minimum of 18 inches when buried or meet minimum NCDOT vertical and horizontal clearances when installed aerially.
71. Fire Hydrants shall be of the breakaway type. Hydrants shall be placed near the right of way line. In curb and gutter sections with written approval from the District, the hydrants may be placed at 6' behind the back of the curb or minimum 2' back of sidewalk.
72. Luminaire and/or utility poles and guy wires shall be set as close to the Right of Way line as practical and outside the Clear Zone in accordance with the latest version of the AASHTO Roadside Design Guide (See corresponding attachment) or made breakaway in accordance with the requirements of NCHRP Report 350. Any relocation of the utility poles from the original design due to Clear Zone requirements shall require a re-submittal for the utility design.
73. Luminaire and/or utility poles shall be set a minimum of 5'-6" behind face of any guardrail or otherwise sufficiently protected. However, standard placement may be reduced to 3'-6" behind face of guardrail when posts are spaced 3'-1 1/2", or where speed limit is less than 55 MPH.

74. Hot box (aka ASSE 1060) or Safe-T-Cover type enclosures covering utility main pipe joints, backflow preventers, valves, vent pipes, cross connections, pumps, grinders, irrigation assemblies, transformers, generators, and other similar large appurtenances shall be located outside sight distance triangles and off of the NCDOT Right-of-Way.
75. Sprinkler heads shall be located a minimum of 10 feet from the edge of pavement, edge of shoulder, or back of curb whichever is greater and shall be directed so that water does not spray or drain on the roadway surface, sidewalk, or passing vehicles at any time. Upon completion of the installation and prior to activation of the system, the Encroacher shall contact the District Engineer to schedule a test of the system to verify the spray pattern. Sprinkler systems shall not be operated during periods of high wind or freezing weather, or to the extent that the subgrade adjacent to the pavement structure becomes saturated. NCDOT reserves the right to require immediate termination and removal of any sprinkler system which in its judgement and opinion adversely affects safety, maintenance, or operation of the roadway.

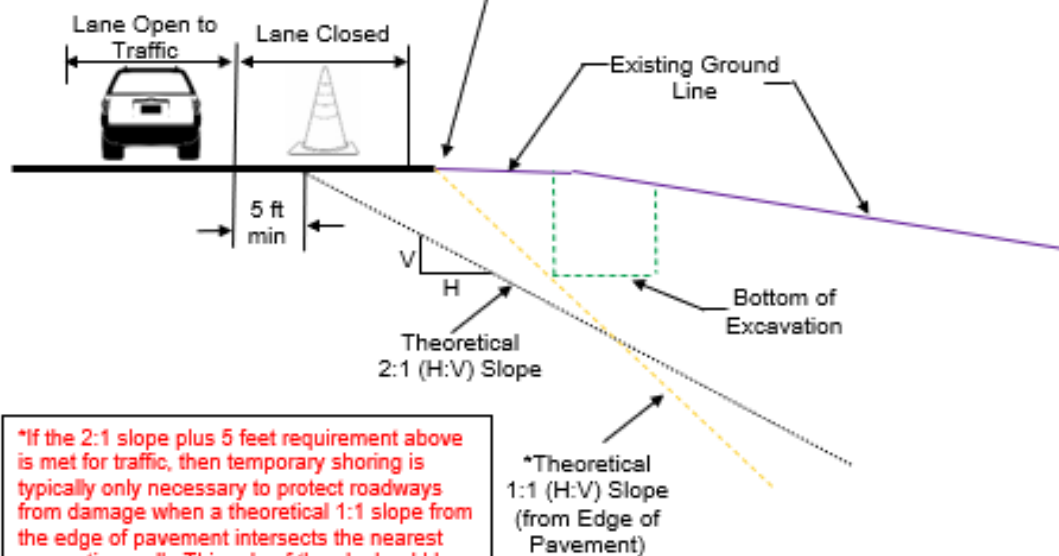
Excavation

76. Excavation material shall not be placed on pavement.
77. It is the responsibility of the encroaching party or their contractor to prevent any mud/dirt from tracking onto the roadway. Any dirt which may collect on the roadway pavement from equipment and/or truck traffic on site shall be immediately removed to avoid any unsafe traffic conditions.
78. The utility shall be installed within 5 feet of the right of way line and outside the 5-foot minimum from travel lane plus theoretical 2:1 slope from the edge of pavement to the bottom of the nearest excavation wall for temporary shoring. Temporary shoring is required when a theoretical 2:1 slope from the bottom of excavation will intersect the existing ground line less than 5 feet from the outside edge of an open travel lane as shown in the figure below or when a theoretical 2:1 slope from the bottom of excavation will intersect any existing structure, support, utility, property, etc. to be protected.

Traffic in Outside Lane



Traffic Shifted (Outside Lane Closure)



*If the 2:1 slope plus 5 feet requirement above is met for traffic, then temporary shoring is typically only necessary to protect roadways from damage when a theoretical 1:1 slope from the edge of pavement intersects the nearest excavation wall. This rule of thumb should be used with caution and does not apply to all subsurface conditions, surcharge loadings and excavation geometries. Additional guidance provided below.

If the 2:1 slope plus 5 feet requirement above is met for traffic, then temporary shoring is typically only necessary to protect roadways from damage when a theoretical 1:1 slope from the edge of pavement intersects the nearest excavation wall. This rule of thumb should be used with caution and does not apply to all subsurface conditions, surcharge loadings and excavation geometries. Situations where this 1:1 slope is not recommended include groundwater depth is above bottom of excavation or excavation is deeper than 10 feet or in [Type B or C soils as defined by OSHA Technical Manual](#). Temporary shoring may be avoided by locating trenches, bore pits, and other excavations far enough away from the open travel lane, edge of pavement and any existing structure, support, utility, property, etc. to be protected.

Temporary shoring shall be designed and constructed in accordance with current NCDOT Standard Temporary Shoring provisions (refer to <https://connect.ncdot.gov/resources/Specifications/Pages/2018-Specifications-and-Special-Provisions.aspx> and see SP11 R002

- a. Temporary excavation shoring, such as sheet piling, shall be installed. The design of the shoring shall include the effects of traffic loads. The shoring system shall be designed and sealed by a licensed North Carolina Professional Engineer. Shoring plans and design calculations shall be submitted to the Division Engineer for review and approval prior to construction. (See NCDOT *Utilities Accommodations Manual* for more information on requirements for shoring plans, design calculations, and subsurface investigation report.) **Trench boxes shall not be accepted as temporary shoring and will not be approved for use in instances where shoring is required to protect the highway, drainage structure, and/or supporting pavement or structure foundation.**
 - b. All trench excavation inside the limits of the theoretical two-to-one slope plus 5 feet requirement, as defined by the policy, shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight. Any excavation that is not backfilled by the end of the workday must address any safety and traveling public concerns including accommodations for bicycles, pedestrians and persons with disabilities.
 - c. The trench backfill material shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-7 of the latest *NCDOT Standard Specifications for Roads and Structures*, which basically requires the backfill material to be placed in layers not to exceed 6 inches loose and compacted to at least 95% of the density obtained by compacting a sample in accordance with AASHTO T99 as modified by DOT.
 - d. At the discretion of the Division Engineer, a qualified NCDOT inspector shall be on the site at all times during construction. The encroaching party shall reimburse NCDOT for the cost of providing the inspector. If NCDOT cannot supply an inspector, the encroaching party (not the utility contractor) should make arrangements to have a qualified inspector, under the supervision of a licensed North Carolina Professional Engineer, on the site at all times. The Professional Registered Engineer shall certify that the utility was installed in accordance with the encroachment agreement and that the backfill material meets the Statewide Borrow Criteria.
 - e. The length of parallel excavation shall be limited to the length necessary to install and backfill one joint of pipe at a time, not to exceed twenty-five (25) feet.
79. All material to a depth of 8 inches below the finished surface of the subgrade shall be compacted to a density equal to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. The subgrade shall be compacted at a moisture content which is approximately that required to produce the maximum density indicated by the above test method. The contractor shall dry or add moisture to the subgrade when required to provide a uniformly compacted and acceptable subgrade. The option to backfill any trenches with dirt or either #57 stone or #78 stone with consolidation with a plate tamp and without a conventional density test may be pursued with the written consent of the District Engineer. If this option is exercised, then roadway ABC stone and asphalt repair as required will also be specified by the District Engineer.

Directional bore

80. Boring equipment will be provided of a type and size to facilitate boring in the local geologic conditions and shall be able to facilitate the encroachment work.
81. When Horizontal Directional Drilling (HDD) is used, the following stipulations apply:
- a. Use drilling fluids as appropriate for the type soils but use of water alone is prohibited. Pump drilling fluids only while drilling or reaming. Directional boring using jetting with a

Bentonite (or equivalent material) slurry is recommended. Monitor flow rates to match the amount leaving the bore hole and do not increase pressure or flow to free stuck drill heads, reamers or piping. Open cutting to retrieve stuck drill heads is not allowed without prior permission from the District Engineer.

- b. The minimum depth shall adhere to the table below for transverse (under non-controlled access, partial controlled access, or limited controlled access roadway) installations and refers to maximum diameter of hole drilled and not the dimension of the carrier or encasement pipe.

<u>Diameter of Drilled Hole (Backream)</u>	<u>Minimum Depth of Cover</u>
2" to 6"	5 feet
>6" to 15"	12 times hole diameter (e.g. 6-inch hole means 6 feet minimum depth)
>15" to 36"	15 feet or greater

- c. Under fully controlled access roadway installations, the minimum depth for transverse crossings shall be 15 feet under any pavement (ramps or thru lanes)
- d. An overbore (backream diameter) shall not be more than 1.5 times the outside diameter of the pipe or encasement under any highway for pipes 12 inches in diameter or less. For pipes with outer diameter larger than 12 inches, the overbore may be no larger than outer diameter of pipe plus 6 inches. An overbore exceeding 1.5 times greater than the outside diameter of the pipe or encasement may be considered if the encroachment agreement includes a statement signed and sealed by a licensed North Carolina Professional Engineer indicating that an overbore in excess of 1.5 times the outside diameter of the pipe or encasement will appropriately arch and no damage will be done to the pavement or sub-grade.
- e. Directional boring is allowed beneath embankment material in naturally occurring soil.
- f. Any parallel installation utilizing the directional boring method shall be made at a minimum depth of three (3') feet (cover) below the ground surface and outside the theoretical 1:1 slope from the existing edge of pavement except where the parallel installation crosses a paved roadway.
- g. All directional bores shall maintain ten (10) feet minimum (clear) distance from the nearest part of any structure, including but not limited to bridges, footings, pipe culverts or box culverts. Directional bores are not allowed beneath bridge footings, culvert wingwall footings, slope protection or retaining walls.
- h. The tip of the drill string shall have a cutter head.
- i. Detection wire shall be installed with non-ferrous material.
- j. HDPE pipe installed by directional boring shall not be connected to existing pipe or fittings for one (1) week from the time of installation to allow tensional stresses to relax.

Aerial clearances

82. Vertical clearance of overhead power and communication lines shall meet the National Electrical Safety Code requirements except the minimum vertical clearance shall be 18' for crossings over NCDOT roadways (24' over Fully Controlled Access roadways) and 16' for parallel installations.

83. In relation to the bridge, the utility line shall be located with minimum clearances as indicated on the attachment for NCDOT **Required Clearances for Aerial Installations by Encroachment Near Bridge Structures**.

Pavement Detail and Repair

84. The paving of this roadway shall be in accordance with the latest version of NCDOT Standard Specifications, Sections 610, 1012 and 1020. The Contractor shall follow all procedures of the Quality Management System (QMS) for asphalt pavement - Maintenance Version (see <https://connect.ncdot.gov/resources/Materials/MaterialsResources/2018%20QMS%20Asphalt%20Manual.pdf>). The Contractor must adhere to all testing requirements and quality control requirements specified. The Contractor shall contact the NCDOT Division QA Supervisor prior to producing plant mix and make the Supervisor aware that the mix is being produced for a future NCDOT road. Contact the District Engineer to determine the NCDOT Division QA Supervisor. Only NCDOT approved mix designs will be acceptable. A Quality Control Plan shall be submitted (as Directed by the District Engineer) to the District Engineer's Office prior to asphalt production utilizing form QMS-MV1. Failing mixes and/or densities are subject to penalties including monetary payments or removal and replacement. To minimize traffic queuing in construction areas, the possibility of traffic detours may be considered when working on high traffic routes even if traffic control is used. The District Engineer may require traffic detours.
85. When paving beyond utility installation is involved, a Roadway certification report sealed by a Professional Engineer shall be submitted to the District Engineer's office indicating the following:
- Pavement thickness by type
 - Pavement density, core and/or test locations
 - Base thickness
 - Base density
 - Subgrade density
- Test frequency and method shall be in conformance with the NCDOT *Materials and Tests Manual*. Test must be performed by a Certified Technician including name and Certification number on report.
86. "Potholing" pavement cores to expose existing utilities shall be made with an 18" diameter keyhole pavement core. Pavement core locations shall not be placed in the wheel path whenever possible. Vacuum excavation shall be utilized to expose underground utilities. Pavement cores shall be repaired within the same working day. The pavement core shall be retained and reused to fill the core hole.
- The excavation shall be backfilled and compacted with select material to the bottom of the existing pavement structure or as indicated by the District Engineer. The retained core shall be placed in the hole and secured with a waterproof, mechanical joint. If the pavement core is damaged and cannot be re-used, the core may be replaced with the surface mix, S9.5B. The asphalt patch shall match the thickness of the existing asphalt or four inches, whichever is greater. All materials must be listed on the NCDOT Approved Products List (APL) found at: <https://apps.ncdot.gov/vendor/approvedproducts/>.
87. The minimum pavement design for pavement repair shall be according to NCDOT Standard Drawing 654.01 (<https://connect.ncdot.gov/resources/Specifications/2018StandardRdwyDrawings/Division%2006%20Asphalt%20Bases%20and%20Pavements.pdf>) and shall include a mechanical overlay extent to be a minimum of 25 feet each side of the pavement repair area OR as directed by the District Engineer.
88. Pavement cuts shall be repaired the same day the cuts are made unless an asphalt patch cannot be accomplished the same day due to material availability or time restrictions. When the asphalt patch is not feasible, the following apply:

- a. The pavement cut shall be filled to the surface with ABC stone or Flowable Fill per NCDOT's Standards and Specifications.
 - b. Once the cut is filled, a minimum ¾-inch steel plate shall be placed and pinned to prevent moving. Plates shall be designed large enough to span a minimum of 1-foot on all sides on the pavement cut.
 - c. When flowable fill is used, it shall cure for 24 hours prior to any asphalt material placement. Flowable fill bleed water shall not be present during paving operations. Paving shall not cause damage (shoving, distortion, pumping, etc.) to the flowable fill.
 - d. Install and leave "BUMP" signs according to MUTCD until the steel plate has been removed. Once the flowable fill has cured, remove the steel plate, and mill/fill according to the directions of the District Engineer.
 - e. All pavement cuts must be sealed with NCDOT approved sealant to prevent future pavement separation or cracking.
89. Any pavement damaged because of settlement of the pavement or damaged by equipment used to perform encroachment work, shall be re-surfaced to the satisfaction of the District Engineer. This may include the removal of pavement and a 50' mechanical overlay. All pavement work and pavement markings (temporary and final) are the responsibility of the Encroaching Party.

Post Construction

Close out/ Inspection

90. The Encroaching party shall notify the District Engineer's office within 2 business days after construction is complete. The District Engineer may perform a construction inspection. Any deficiencies may be noted and reported to the encroaching party to make immediate repairs or resolve any issues to restore the right-of-way to a similar condition prior to construction, including pavement, signage, traffic signals, pavement markings, drainage, structures/pipes, or other highway design features.
91. At the discretion of the District Engineer, a final inspection report may be provided to the encroaching party upon satisfactory completion of the work.
92. A written acknowledgement of the completed work by the District Engineer's office begins the one-year warranty period associated with the performance bond.
93. If the actual construction differs from the approved plans associated with this encroachment, a copy of "as-built" plans shall be submitted to the District Engineer's office in a PDF format and in a current ESRI GIS format within 4 weeks of construction.
94. The encroaching party shall provide the North Carolina Turnpike Authority (NCTA) with an electronic copy of coordinate correct as-built plans within two weeks of installation completion. Failure to provide the as-built plans may jeopardize future approvals within NCTA right of way.

95. A copy (in PDF format) of the completed ground water analysis shall be given to the District Engineer, including detailed drawings of the “as-built” wells showing location, depth and water level in well.

NCDOT Fiber Optic System

96. **The relocation of any overhead or underground fiber optic components within NCDOT’s fiber optic system will be the responsibility of the developer when they are impacted by the development. This relocation shall be completed by a contractor that is qualified with the NCDOT to complete this work. Materials for this work must be approved by NCDOT prior to installation. When fiber splicing occurs, any splicing would need to be completed the same day to ensure that NCDOT retains communication with the traffic signal system, traffic cameras, overhead message signs, and dynamic trailblazing signs. At no time can the fiber be disconnected/cut and left. Once any cut has been made, the re-splicing should occur immediately. When splicing is necessary, fusion splices will be required and the OTDR report will need to be provided to the Department. No mechanical splices will be permitted. Where extra fiber is required, it will be the responsibility of the Developer to provide the extra fiber. NCDOT’s current splice enclosures/cans must be maintained and cannot be impacted by the Development. If they are impacted, they must be moved and replaced. Any costs associated with NCDOT’s fiber relocation will be the responsibility of the development. The Developer shall contact the Deputy Division Traffic Engineer at (828)250-3300 to coordinate any fiber optic relocations prior to construction.**



Metropolitan Sewerage District

of Buncombe County, North Carolina

PERMIT

FOR THE DISCHARGE OF SEWAGE, INDUSTRIAL WASTES, OR OTHER WASTES

IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 21 OF CHAPTER 143, GENERAL STATUTES OF NORTH CAROLINA AS AMENDED, AND OTHER APPLICABLE LAWS, RULES, AND REGULATIONS FOR THE SANITARY SEWERAGE SYSTEM OF THE METROPOLITAN SEWERAGE DISTRICT.

PERMISSION IS HEREBY GRANTED TO:

METROPOLITAN SEWERAGE DISTRICT

**2028 RIVERSIDE DRIVE
ASHEVILLE, NC 28804**

INSTALLATION AND OPERATION OF THE OLD COUNTY HOME ROAD SANITARY SEWER REHABILITATION LOCATED IN BUNCOMBE COUNTY, NC. THIS PROJECT INCLUDES REPLACING/RELOCATING A PUBLIC SEWER WITH APPROXIMATELY 512 LF OF 18-INCH, 2,192 LF OF 12-INCH, AND 1,674 LF OF 8-INCH GRAVITY SEWER. NO NEW WASTEWATER FLOW IS EXPECTED DUE TO THESE IMPROVEMENTS. THE DISCHARGE OF COLLECTED DOMESTIC WASTEWATER INTO THE METROPOLITAN SEWERAGE DISTRICT'S EXISTING SYSTEM, PURSUANT TO THE APPLICATION RECEIVED 4/25/2023. THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ISSUANCE UNTIL RESCINDED, AND SHALL BE SUBJECT TO THE FOLLOWING SPECIFIED CONDITIONS AND LIMITATIONS.

1. THIS PERMIT SHALL BECOME VOIDABLE UNLESS THE FACILITIES ARE CONSTRUCTED IN ACCORDANCE WITH THE NON-DISCHARGE PERMIT APPLICATION, APPROVED PLANS, SPECIFICATIONS, AND OTHER SUPPORTING DATA.
2. CONSTRUCTION OF THE SEWERS SHALL BE SO SCHEDULED SO AS NOT TO INTERRUPT SERVICE BY THE EXISTING UTILITIES NOR RESULT IN AN OVERFLOW OR BYPASS OF WASTEWATER TO THE SURFACE WATERS OF THE STATE.
3. THIS PERMIT IS EFFECTIVE ONLY WITH RESPECT TO THE NATURE AND VOLUME OF WASTES DESCRIBED IN THE APPLICATION.
4. THE FACILITIES SHALL BE PROPERLY MAINTAINED AND OPERATED AT ALL TIMES.
5. THE SEWAGE AND WASTEWATER COLLECTED BY THIS SYSTEM SHALL BE ADEQUATELY TREATED IN THE METROPOLITAN SEWERAGE DISTRICT'S WASTEWATER TREATMENT PLANT PRIOR TO BEING DISCHARGED INTO THE RECEIVING STREAM.

PERMIT #: MSD P01354

SIGNATURE: _____


W. HUNTER CARSON, P.E.

ISSUED: June 22, 2023