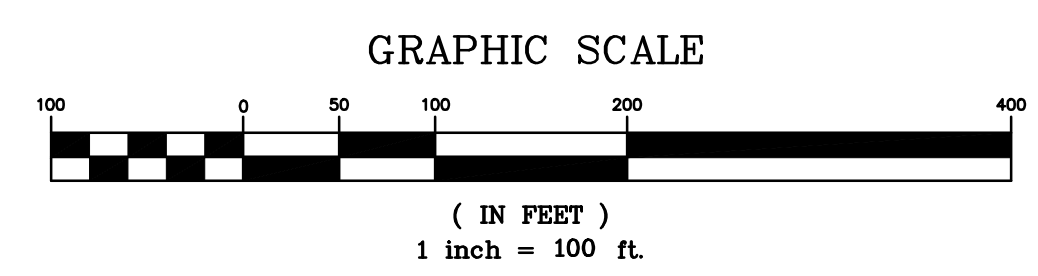
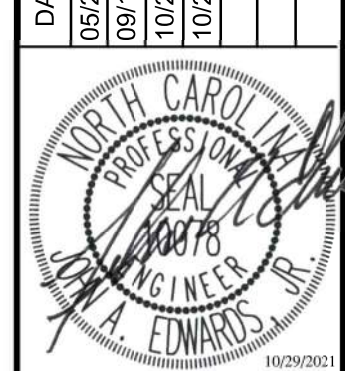


- LEGEND**
- DB DEED BOOK
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 - PG PAGE
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 - EIP EXISTING IRON PIPE
 - COR CITY OF RALEIGH
 - ESMT EASEMENT
 - EX EXISTING
 - ⊙ EX. SANITARY SEWER MANHOLE
 - ⊕ EX. WATER VALVE
 - ⚡ PROPOSED FIRE HYDRANT (FH)
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 - PROPOSED CLEANOUT (CO)
 - BLOWOFF ASSEMBLY (BOA)
 - PROPOSED CATCH BASIN (CB)
 - W — PROPOSED WATER LINE
 - SS — PROPOSED SANITARY SEWER
 - SS — PROPOSED STORM MAIN
 - — — EX STORM MAIN
 - — — PROPERTY LINE
 - — — RIGHT-OF-WAY
 - — — EXISTING LOT LINE
 - — — EXISTING WETLAND

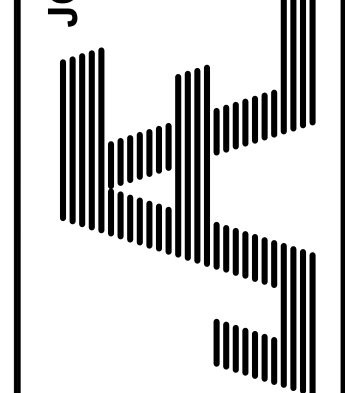
NOTE: 50' NEUSE RIVER BUFFER SHOWN HEREIN IS BASED ON THE "BUFFER DETERMINATION LETTER" (NBRRO #21-286) ISSUED SEPTEMBER 9, 2021 AND FLAGGING OF THE SAME BY S&E.C.



REVISION	DATE
PER TRC COMMENTS	05/27/21
PER TRC COMMENTS	09/16/21
PER TRC COMMENTS	10/28/21
PER TRC COMMENTS	10/29/21



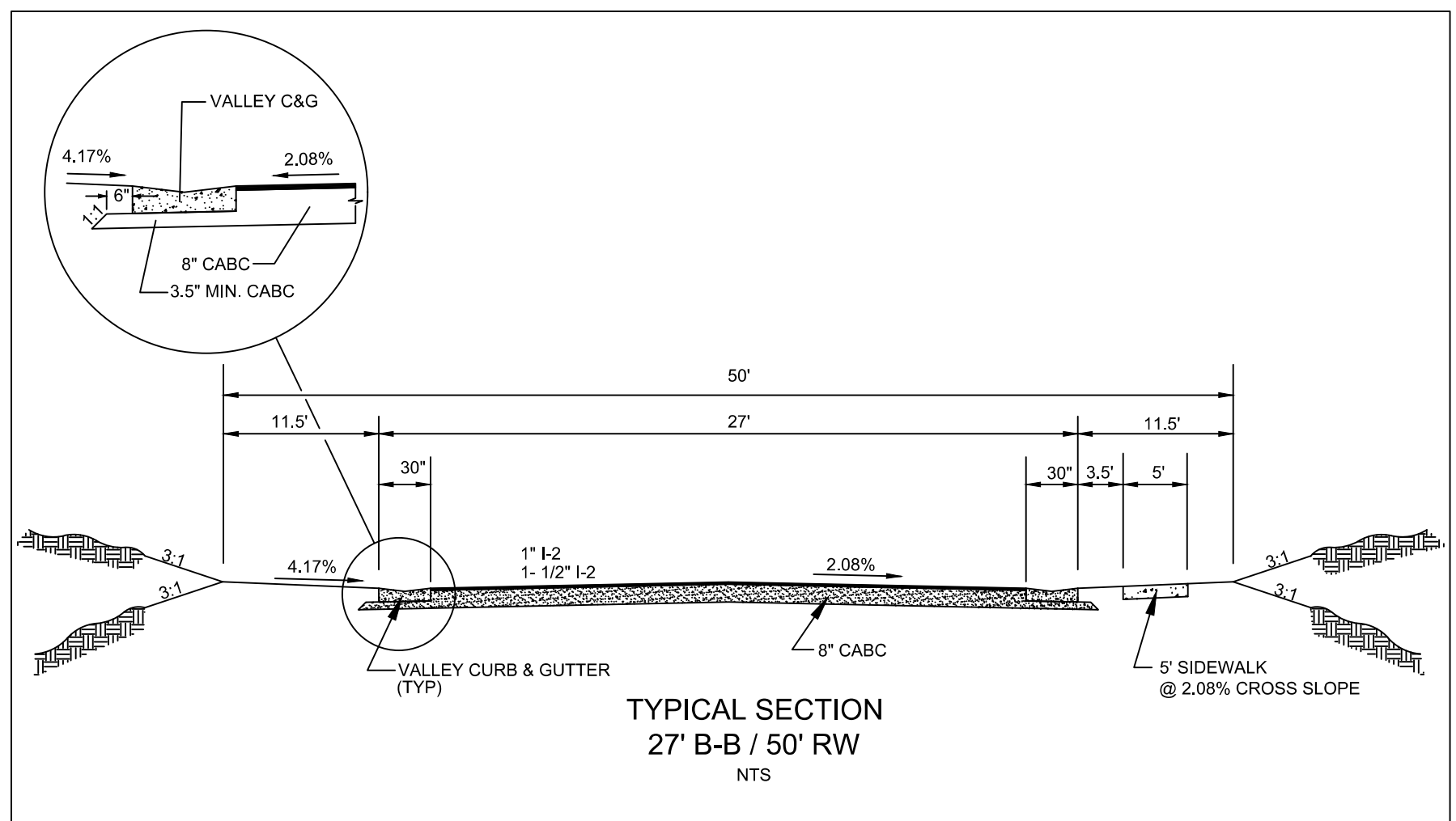
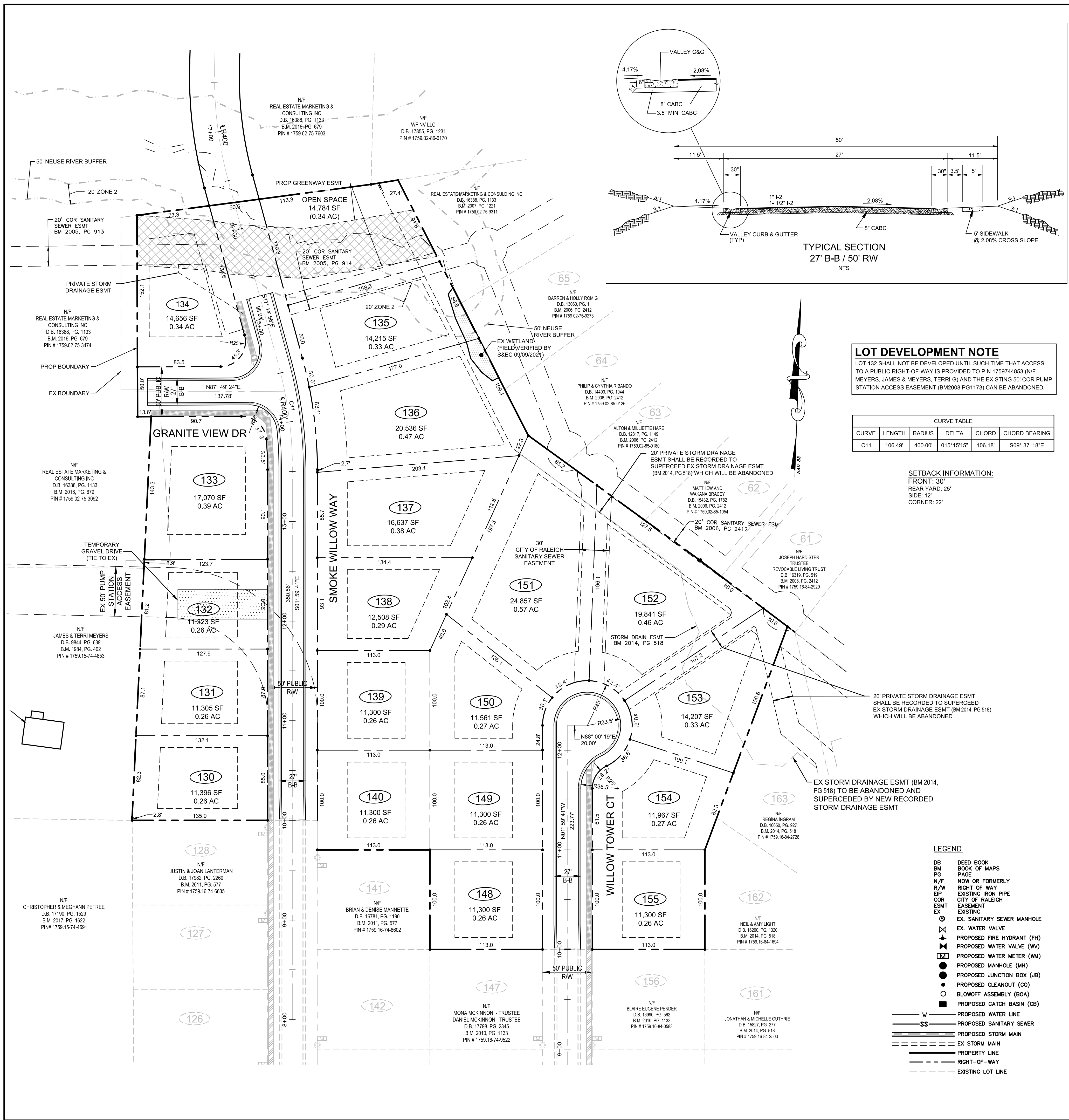
JOHN A. EDWARDS & COMPANY
 Consulting Engineers
 NC License F-02889
 333 Wade Ave., Raleigh, N.C. 27605
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 E-mail: info@jaeco.com



GRANITE CREST SUBDIVISION
PHASE IIIC
 NORTH CAROLINA
 WAKE COUNTY
 ROLESVILLE
 EXISTING CONDITIONS

DATE	03-10-2021
DRAWN BY	FNM
CHECKED BY	JAE, JR.
SCALE	1" = 100'
FILE NO	

SHEET
CE-1

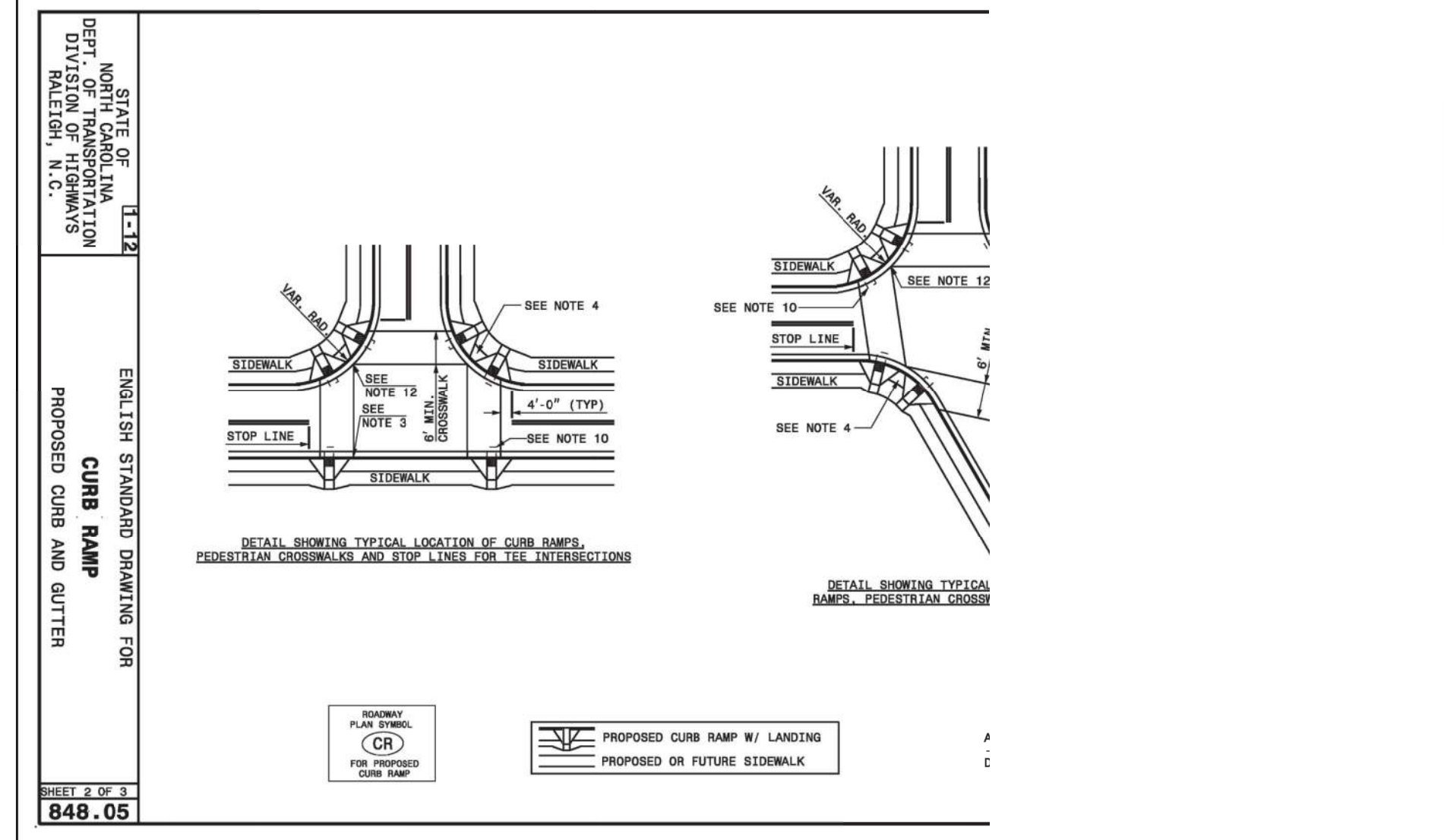
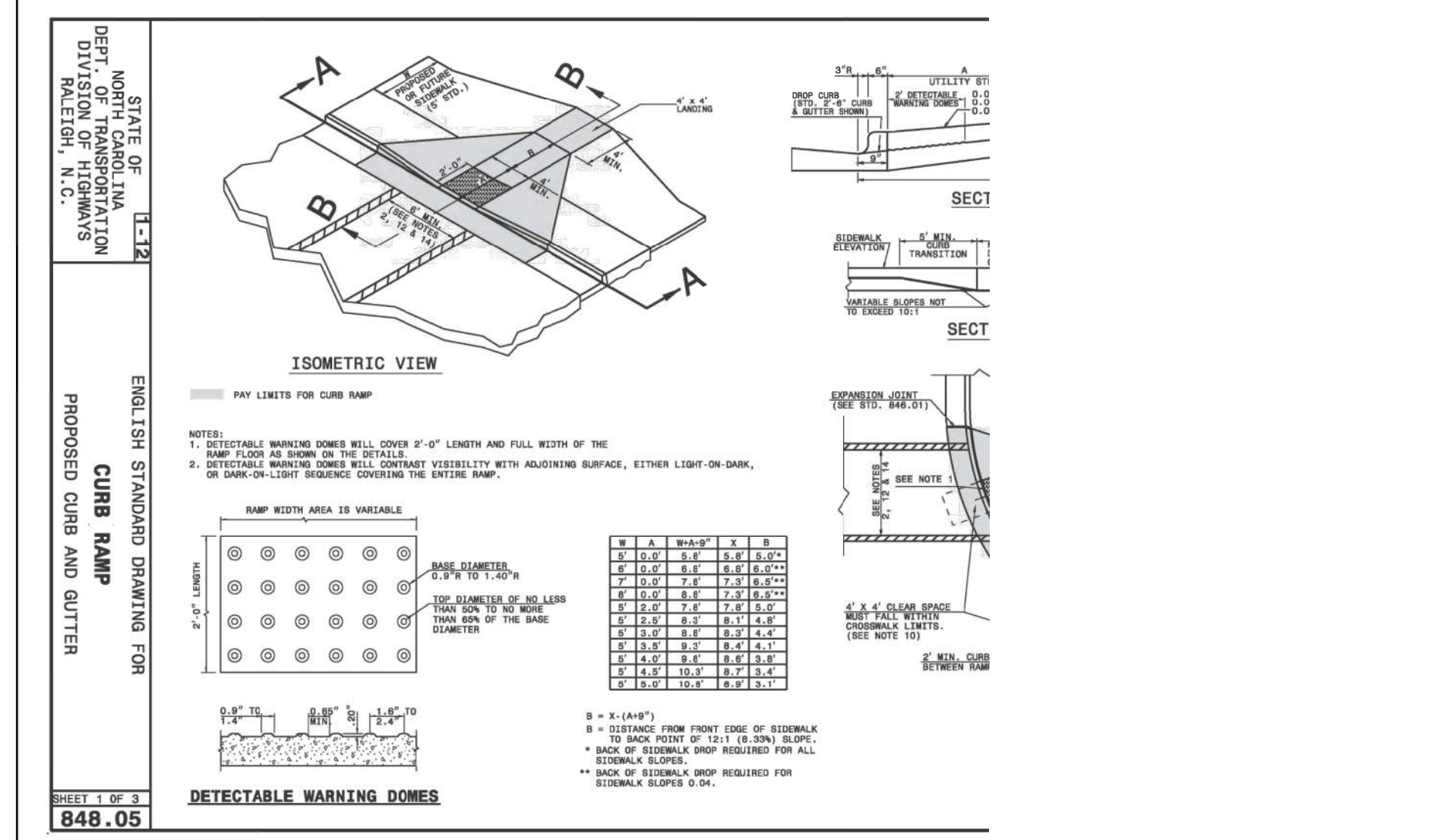


LOT DEVELOPMENT NOTE
 LOT 132 SHALL NOT BE DEVELOPED UNTIL SUCH TIME THAT ACCESS TO A PUBLIC RIGHT-OF-WAY IS PROVIDED TO PIN 1759744853 (N/F MEYERS, JAMES & MEYERS, TERRI G) AND THE EXISTING 50' COR PUMP STATION ACCESS EASEMENT (BM2008 PG 1173) CAN BE ABANDONED.

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	CHORD
C11	106.49'	400.00'	015°15'15"	106.18'

SETBACK INFORMATION:
 FRONT: 30'
 REAR YARD: 25'
 SIDE: 12'
 CORNER: 22'

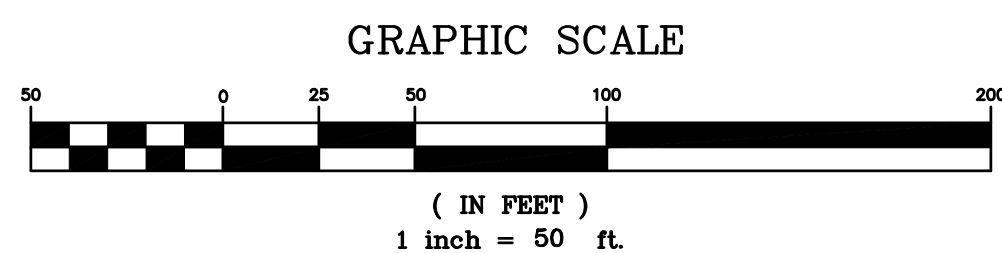
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 - - - PROPOSED STORM MAIN
 - - - EX. STORM MAIN
 - - - PROPERTY LINE
 - - - RIGHT-OF-WAY
 - - - EXISTING LOT LINE



- NOTES:**
- CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP PLANS OR AS DIRECTED BY THE ENGINEER.
 - LOCATE CURB RAMP AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING MOVING CURB RAMP OR MARKINGS AS SHOWN, CONTACT THE SIGNALING AND DELINEATION UNIT OR LOCATE.
 - COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE WITHIN THE PEDESTRIAN CROSSWALK LINES.
 - SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
 - REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED.
 - TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
 - CONSTRUCT CURB RAMP A MINIMUM OF 4' WIDE.
 - CONSTRUCT THE RUNNING SLOPE OF THE RAMP 0.33% MAXIMUM.
 - ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMP WILL BE 2% MAXIMUM.
 - CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
 - CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM 1 SMOOTH TRANSITION.
 - CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
 - TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' W TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
 - SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE THE SURFACE STREET.
 - CURB RAMP WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT BE PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIAL.
 - PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS
 - PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN I
 - CURB RAMP THROUGH MEDIAN ISLANDS, SINGLE RAMP AT DUAL CROSSWALKS OR LIM CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR

IMPERVIOUS AREA SUMMARY

ROW	0.80 AC
19 LOTS (5,000 SF MAX PER LOT)	2.18 AC
TOTAL	2.98 AC

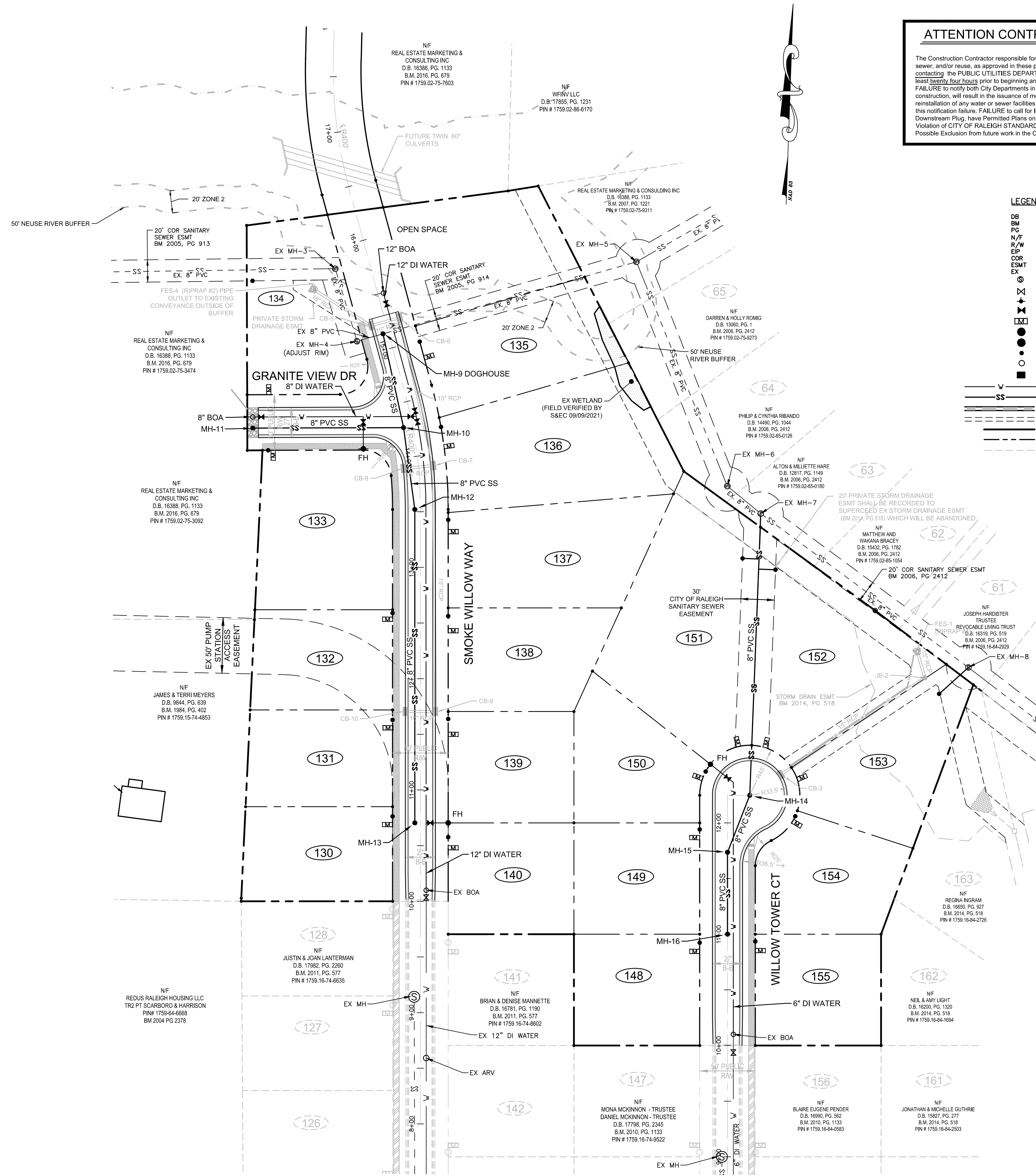


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GRANITE CREST SUBDIVISION
PHASE IIIIC
 WAKE COUNTY
 ROLESVILLE
 NORTH CAROLINA
 SITE PLAN

DATE	03-10-2021
DRAWN BY	JMN
CHECKED BY	JAE, JR.
SCALE	1" = 50'
FILE NO	
SHEET	CE-2



ATTENTION CONTRACTORS:

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the PUBLIC UTILITIES DEPARTMENT at (919) 996-4540 at least twenty four hours prior to beginning any of their construction. FAILURE to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure. FAILURE to call for inspection, install a Downstream Plug, have Permitted Plans on the jobsite, or any other Violation of CITY OF RALEIGH STANDARDS will result in a Fine and Possible Exclusion from future work in the CITY OF RALEIGH.

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 - EX STORM MAIN
 - PROPERTY LINE
 - RIGHT-OF-WAY
 - EXISTING LOT LINE

- UTILITY NOTES:**
- CONTRACTOR TO FIELD VERIFY LOCATION & ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
- UTILITY SEPARATION:**
- Water & Sewer Mains
 - Minimum lateral separation 10'
 - Separate ditches with 18" min. vertical distance
 - Water & storm drainage lines 18" min.
 - Sanitary sewer & storm drain lines 18" min.
 - Minimum cover over water mains shall be 3.0'

PIPE MATERIAL:

WATER MAINS - SHALL BE DUCTILE IRON WATER PIPE IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF RALEIGH UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS.

SEWER MAINS - SHALL BE PVC OR DIP GRAVITY SANITARY SEWER PIPE, ASTM D-3034 SDR 35, TYPE PSM OR EQUAL AS SPECIFIED BY THE CITY OF RALEIGH UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS.

SITE PERMITTING APPROVAL

Water and Sewer Permits (if applicable)

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook, City of Raleigh Public Utilities Department Form # 5-4899.

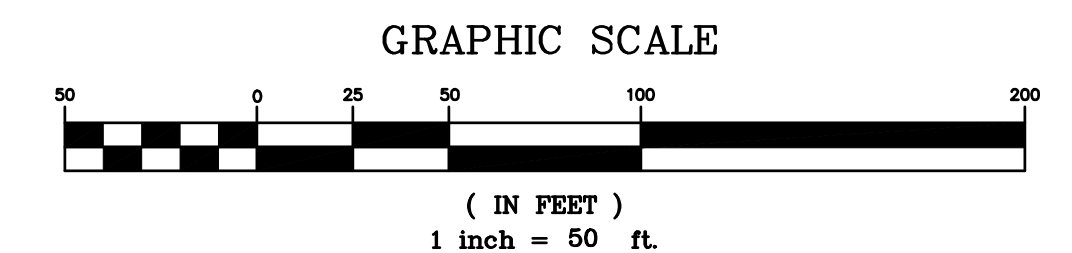
The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook, City of Raleigh Public Utilities Department Form # 30-2855.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval
Raleigh Water Review Officer

- STANDARD UTILITY NOTES (as applicable):**
- All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
 - Utility separation requirements:
 - A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to watertight specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well
 - When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter
 - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10" on each side of crossing must be specified & installed to watertight specifications
 - 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
 - Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49)
 - All other underground utilities shall cross water & sewer facilities with 15" min. vertical separation required
 - Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction
 - Developer shall provide 15 days advance notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property
 - Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department
 - 3.0' minimum cover is required on all water mains & sewer forcemains. 4.0' minimum cover is required on all reuse mains
 - It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure
 - Install 3/4" copper water service with 5/8" meter located within private ROW. NOTE: It is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure
 - Install 4" PVC sewer service @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum
 - Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole
 - All environmental permits applicable to the project must be obtained from MCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
 - NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction
 - Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPUD FOG Program Coordinator prior to issuance of a Building Permit.
- Contact Stephen Calverley at (919) 996-2334 or Stephen.calverley@raleighnc.gov for more information
Contact Joanie Hartley at (919) 996-5923 or joanie.hartley@raleighnc.gov for more information



DATE	02/27/21	REVISION	PER TRC COMMENTS
	09/16/21		PER TRC COMMENTS
	10/29/21		PER TRC COMMENTS
	10/29/21		PER TRC COMMENTS

BY: _____

SCALE: 1" = 50'

DATE: 03-10-2021

DRAWN BY: _____

FILE NO: _____

CHECKED BY: JAE, JR.

SHEET: CE-3

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UTILITY PLAN

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