

### STRUCTURE TABLE

STRUCTURE ID	TYPE	RIM	INVERT IN (U/S STR.)	INVERT OUT (D/S STR.)	PIPE OUT
CB-3	CB (DOUBLE)	395.55		386.13 (JB-2)	156.00LF 15" RCP @ 1.00%
CB-5	CB	368.49	363.35 (CB-6)	363.10 (FES-4)	58.03LF 18" RCP @ 1.03%
CB-6	CB	368.48	363.75 (CB-7)	363.65 (CB-5)	27.01LF 15" RCP @ 1.11%
CB-7	CB	376.49	370.50 (CB-9) 371.50 (CB-8)	370.39 (CB-6)	136.43LF 15" RCP @ 4.87%
CB-8	CB	376.49		372.30 (CB-7)	27.00LF 15" RCP @ 2.96%
CB-9	CB	392.00	387.23 (CB-10)	387.00 (CB-7)	220.94LF 15" RCP @ 7.47%
CB-10	CB	392.00		387.50 (CB-9)	27.00LF 15" RCP @ 1.00%
FES-1	FES	385.68	384.16 (JB-2)		
FES-4	FES	364.79	362.50 (CB-5)		
JB-2	MH	387.03	384.58 (CB-3)	384.38 (FES-1)	21.57LF 15" RCP @ 1.00%

**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 **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 impacted 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.

- 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.

### IMPERVIOUS AREA SUMMARY

ROW	0.80 AC
19 LOTS (5,000 SF MIA PER LOT)	2.18 AC
<b>TOTAL</b>	<b>2.98 AC</b>

- 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:**

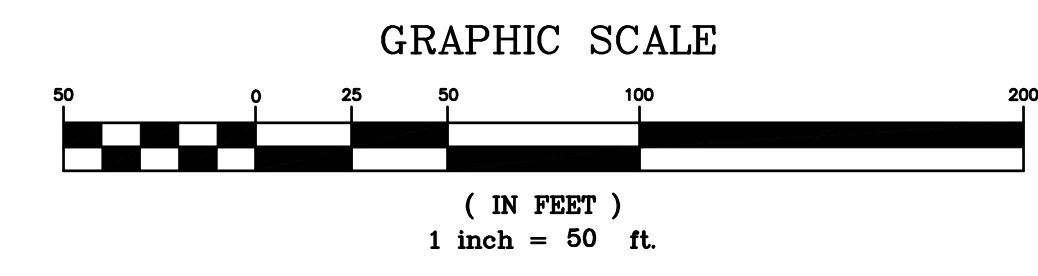
**WATER MAINS** - SHALL BE DUCTILE IRON WATER PIPE IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF RALEIGH UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS.

**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.

### RIPRAP SCHEDULE

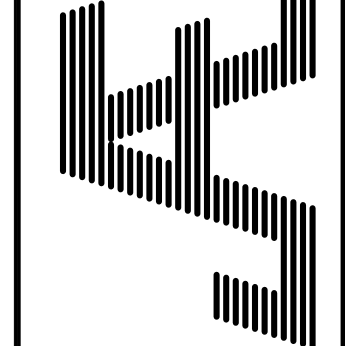
	W <sub>min</sub> [FT]	W <sub>max</sub> [FT]	L <sub>s</sub> [FT]	d <sub>50</sub> [IN]	d <sub>max</sub> [IN]	THICKNESS [IN]
#1	4	7.5	5	3	4.5	12
#2	4.5	8.5	6	3	5	12

- LEGEND**
- DB DEED BOOK
  - BM BOOK OF MAPS
  - PG PAGE
  - N/F NOW OR FORMERLY
  - R/W RIGHT OF WAY
  - EX EXISTING IRON PIPE
  - COR CITY OF RALEIGH
  - ESMT EASEMENT
  - EX EXISTING
  - EX SANITARY SEWER MANHOLE
  - ⊕ EX WATER VALVE
  - ⬇ PROPOSED FIRE HYDRANT (FH)
  - ⬆ PROPOSED WATER VALVE (WV)
  - ⊕ PROPOSED WATER METER (WM)
  - PROPOSED MANHOLE (MH)
  - PROPOSED JUNCTION BOX (JB)
  - PROPOSED CLEANOUT (CO)
  - BLOWOFF ASSEMBLY (BOA)
  - PROPOSED CATCH BASIN (CB)
  - PROPOSED WATER LINE
  - PROPOSED SANITARY SEWER
  - PROPOSED STORM MAIN
  - EX STORM MAIN
  - PROPERTY LINE
  - RIGHT-OF-WAY
  - EXISTING LOT LINE



REVISION	DATE	BY	TT	TT	TT
PER TRC COMMENTS	02/27/21				
PER TRC COMMENTS	09/16/21				
PER TRC COMMENTS	10/28/21				
PER TRC COMMENTS	10/29/21				

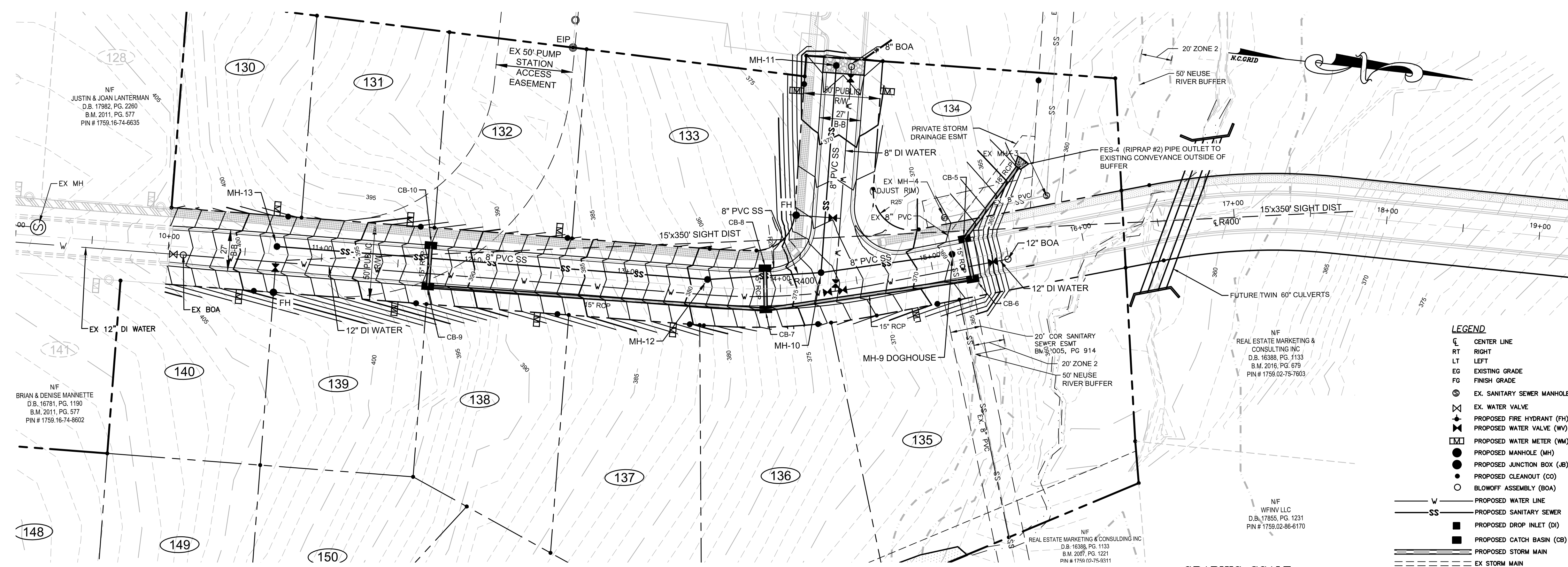
**JOHN A. EDWARDS & COMPANY**  
 Consulting Engineers  
 NC License F-0289  
 333 Wade Ave., Raleigh, N.C. 27605  
 Phone: (919) 828-4428  
 Fax: (919) 828-4711  
 E-mail: info@jaeco.com



**GRANITE CREST SUBDIVISION**  
**PHASE IIIIC**  
 NORTH CAROLINA  
 WAKE COUNTY  
 ROLESVILLE  
**GRADING & STORMDRAINAGE PLAN**

DATE: 03-10-2021  
 DRAWN BY: JAE  
 FILE NO: CE-4

SHEET: **CE-4**



- UTILITY NOTES:**
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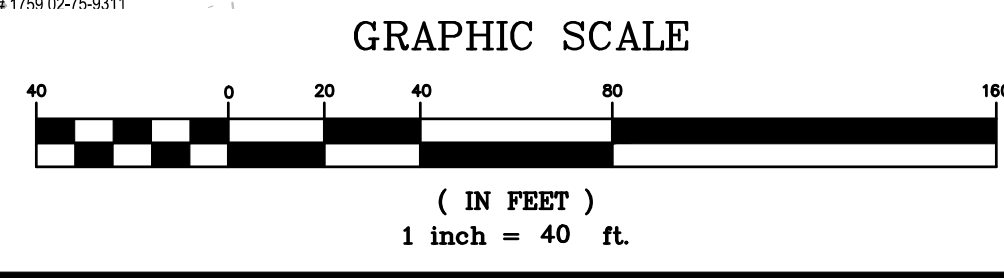
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ALL MATERIALS AND CONSTRUCTION STANDARDS TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

- LEGEND**
- CL CENTER LINE
  - RT RIGHT
  - LT LEFT
  - EG EXISTING GRADE
  - FG FINISH GRADE
  - EX SANITARY SEWER MANHOLE
  - EX WATER VALVE
  - PROPOSED FIRE HYDRANT (FH)
  - PROPOSED WATER VALVE (WV)
  - PROPOSED WATER METER (WM)
  - PROPOSED MANHOLE (MH)
  - PROPOSED JUNCTION BOX (JB)
  - PROPOSED CLEANOUT (CO)
  - BLOWOFF ASSEMBLY (BOA)
  - PROPOSED WATER LINE
  - PROPOSED SANITARY SEWER
  - PROPOSED DROP INLET (DI)
  - PROPOSED CATCH BASIN (CB)
  - PROPOSED STORM MAIN
  - EX STORM MAIN



SMOKE WILLOW WAY  
27' B-B / 50' RW

**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 Permit # 34853.

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 Permit # 34853.

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

BY	REVISION	DATE
TT	PER TRC COMMENTS	05/27/21
TT	PER TRC COMMENTS	09/16/21
TT	PER TRC COMMENTS	10/28/21
TT	PER TRC COMMENTS	10/29/21
TT	ROAD PROFILE SLIPSHEETS	11/09/21

**JOHN A. EDWARDS & COMPANY**  
Consulting Engineers  
NC License F-0289  
333 Wade Ave., Raleigh, N.C. 27605  
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Fax: (919) 828-4771  
E-mail: info@jaeco.com

**GRANITE CREST SUBDIVISION**  
PHASE III C  
ROLESVILLE WAKE COUNTY NORTH CAROLINA

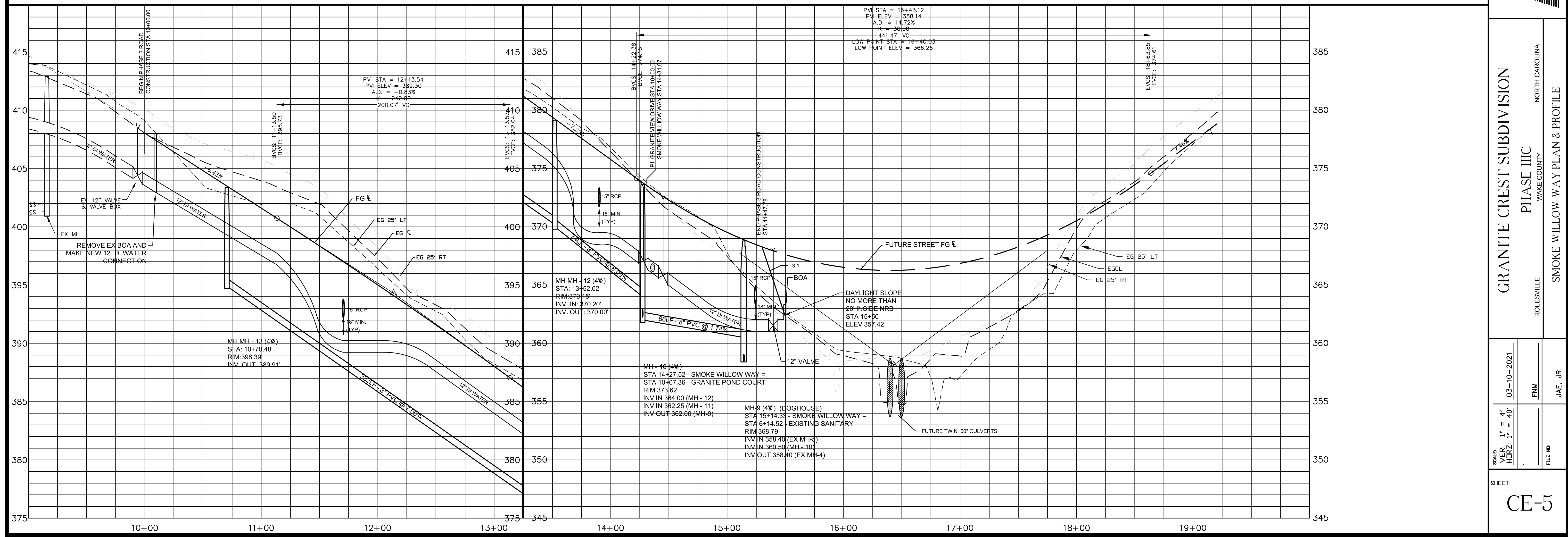
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HORIZ: 1" = 40'

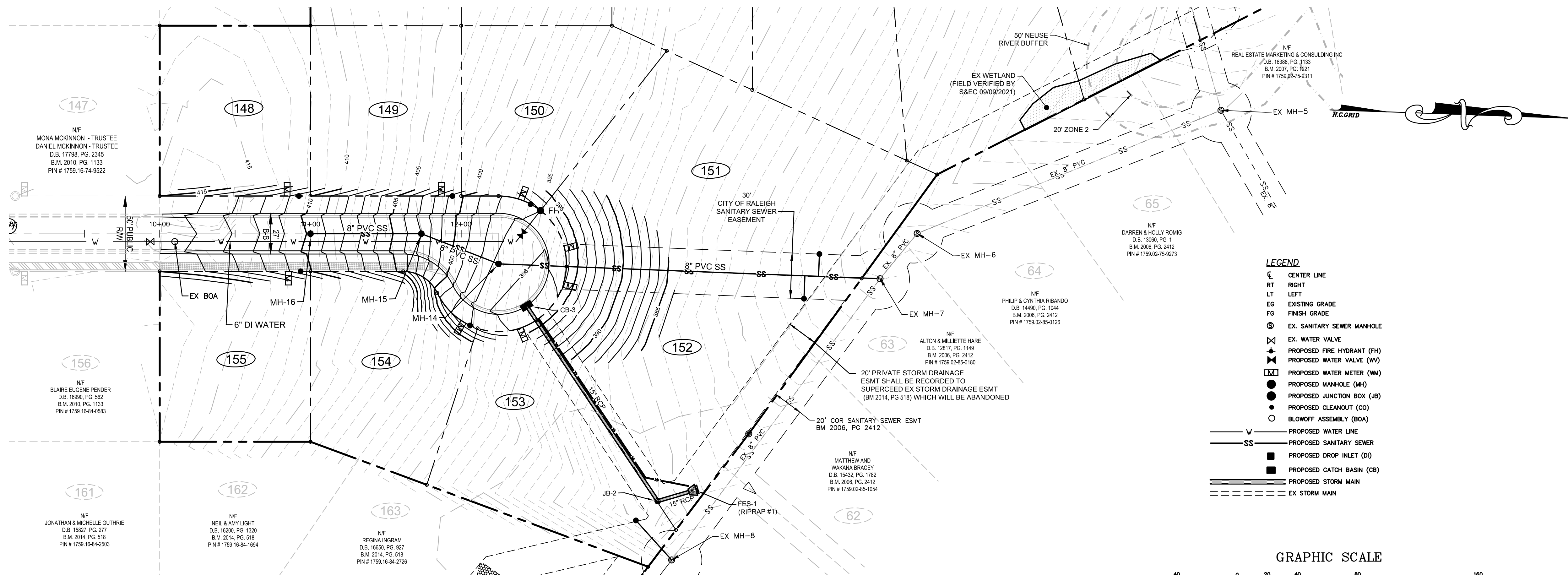
DATE: 03-10-2021

FILE NO: FNM

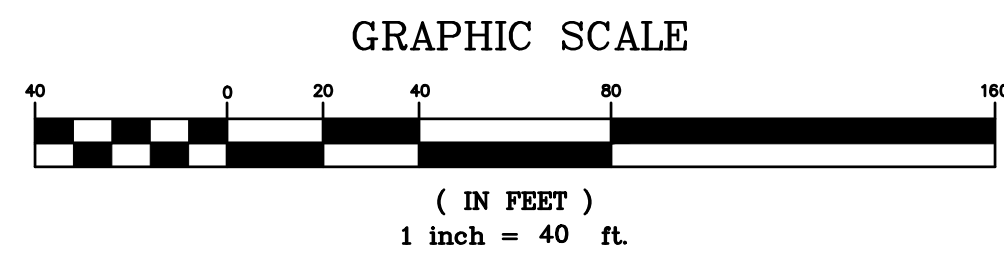
FILE NO: JAE, JR.

SHEET: CE-5





WILLOW TOWER COURT  
27' B-B / 50' RW



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- CL CENTER LINE
  - RT RIGHT
  - LT LEFT
  - EG EXISTING GRADE
  - FG FINISH GRADE
  - SS EX. SANITARY SEWER MANHOLE
  - EX. WATER VALVE
  - PROPOSED FIRE HYDRANT (FH)
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**SITE PERMITTING APPROVAL**

Water and Sewer Permits (if applicable)

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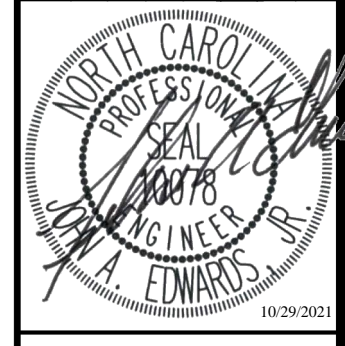
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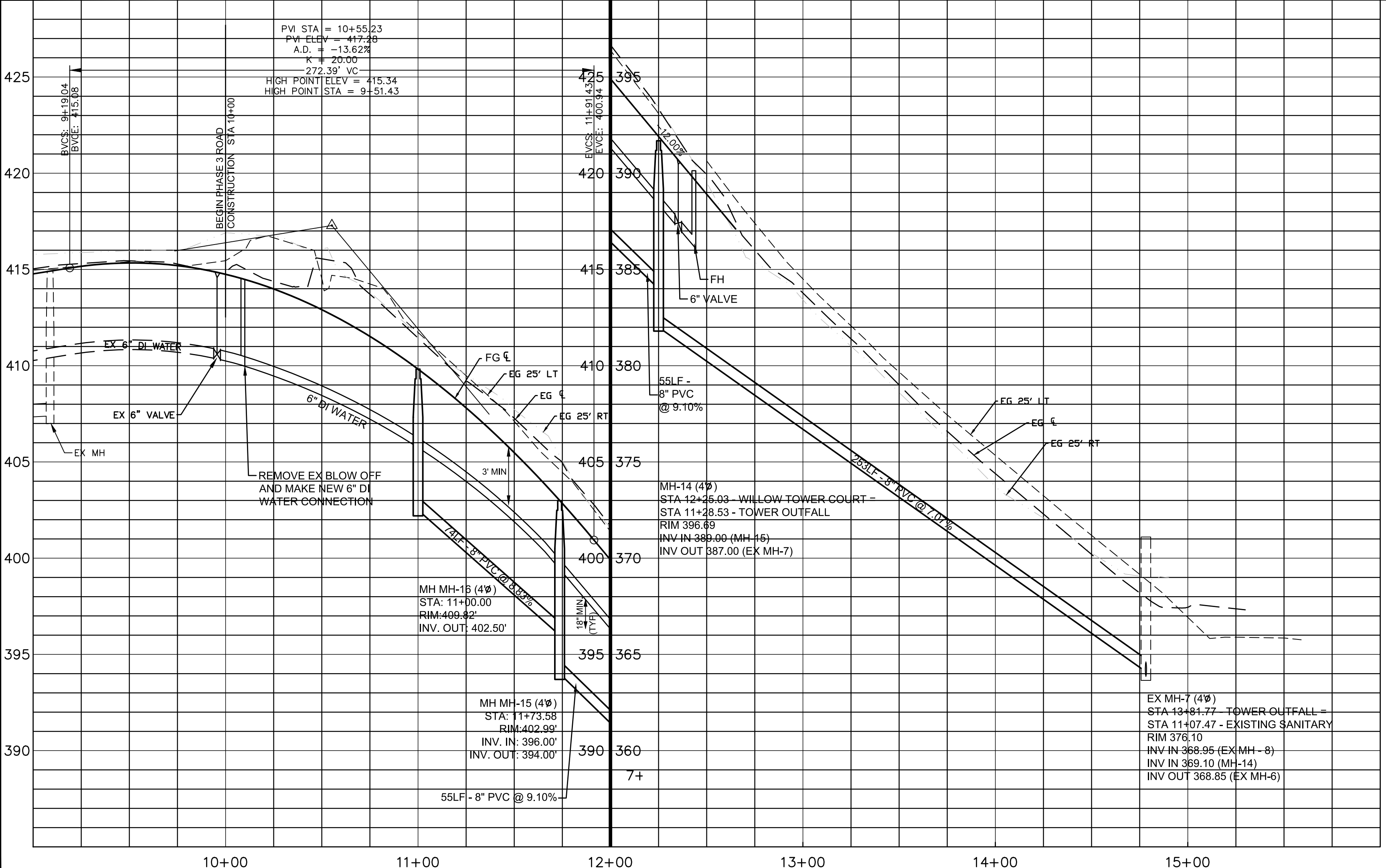
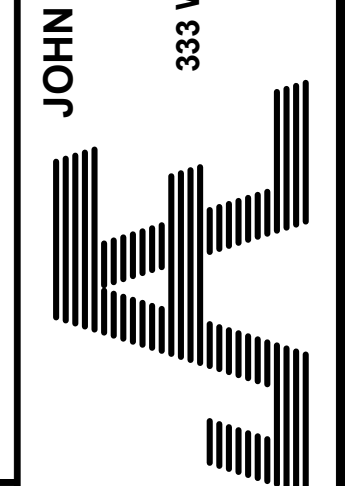
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REVISION	DATE	BY
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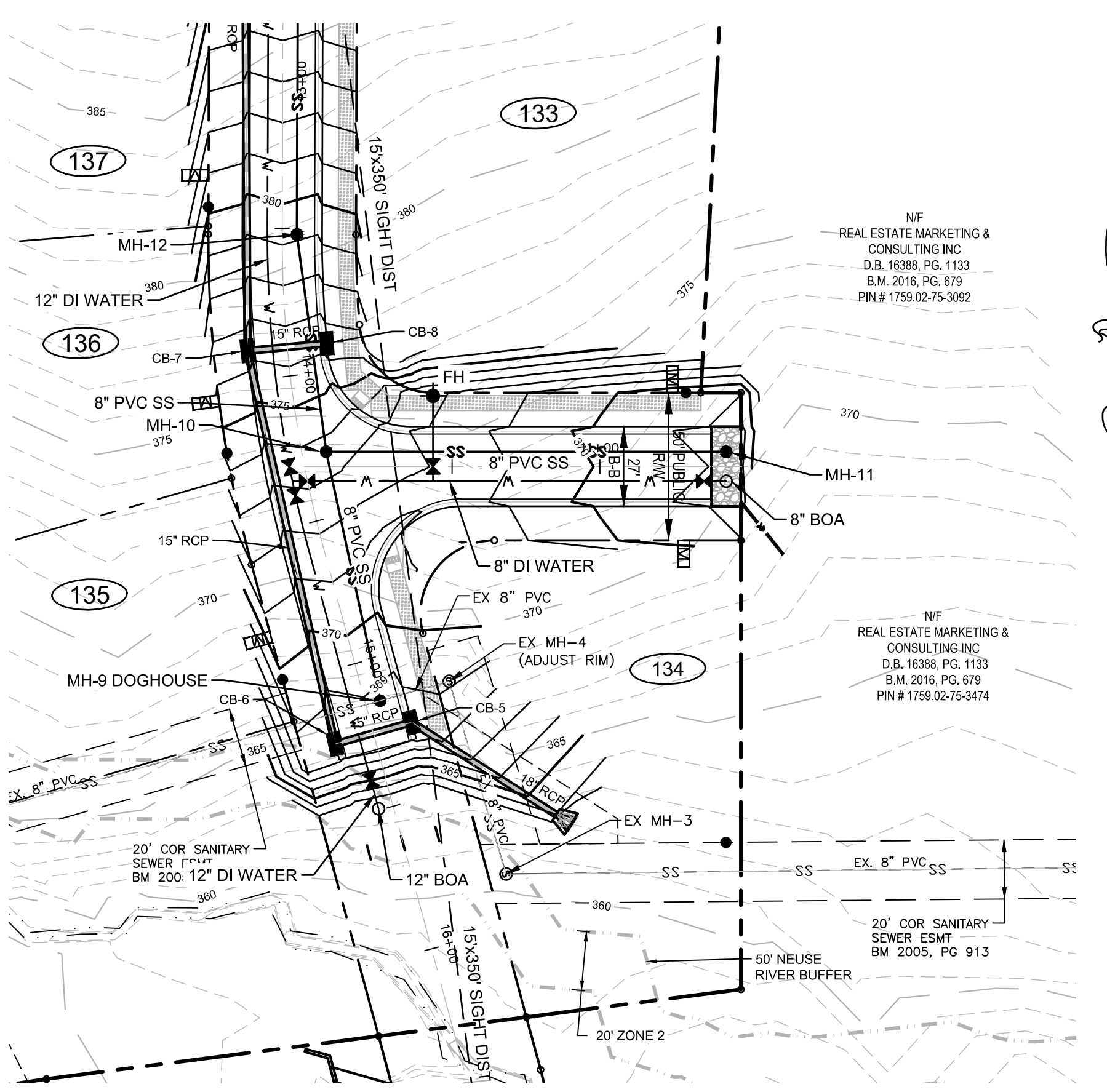
**GRANITE CREST SUBDIVISION**  
PHASE III C  
ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

WILLOW TOWER COURT PLAN & PROFILE

DATE: 03-10-2021  
SCALE: 1" = 40'  
VER. 1" = 40'  
FILE NO:

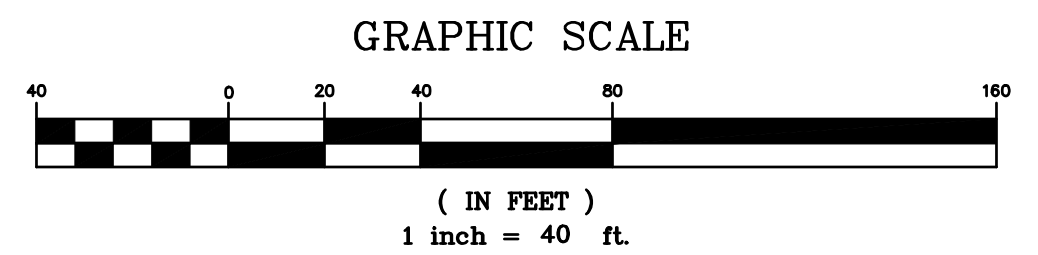
DRAWN BY: JNM  
CHECKED BY: JAE, JR.

SHEET: CE-6



GRANITE VIEW DRIVE  
27' B-B / 50' RW

- LEGEND**
- CL CENTER LINE
  - RT RIGHT
  - LT LEFT
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  - FG FINISH GRADE
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  - SV EX. WATER VALVE
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**SITE PERMITTING APPROVAL**

*Water and Sewer Permits (if applicable)*

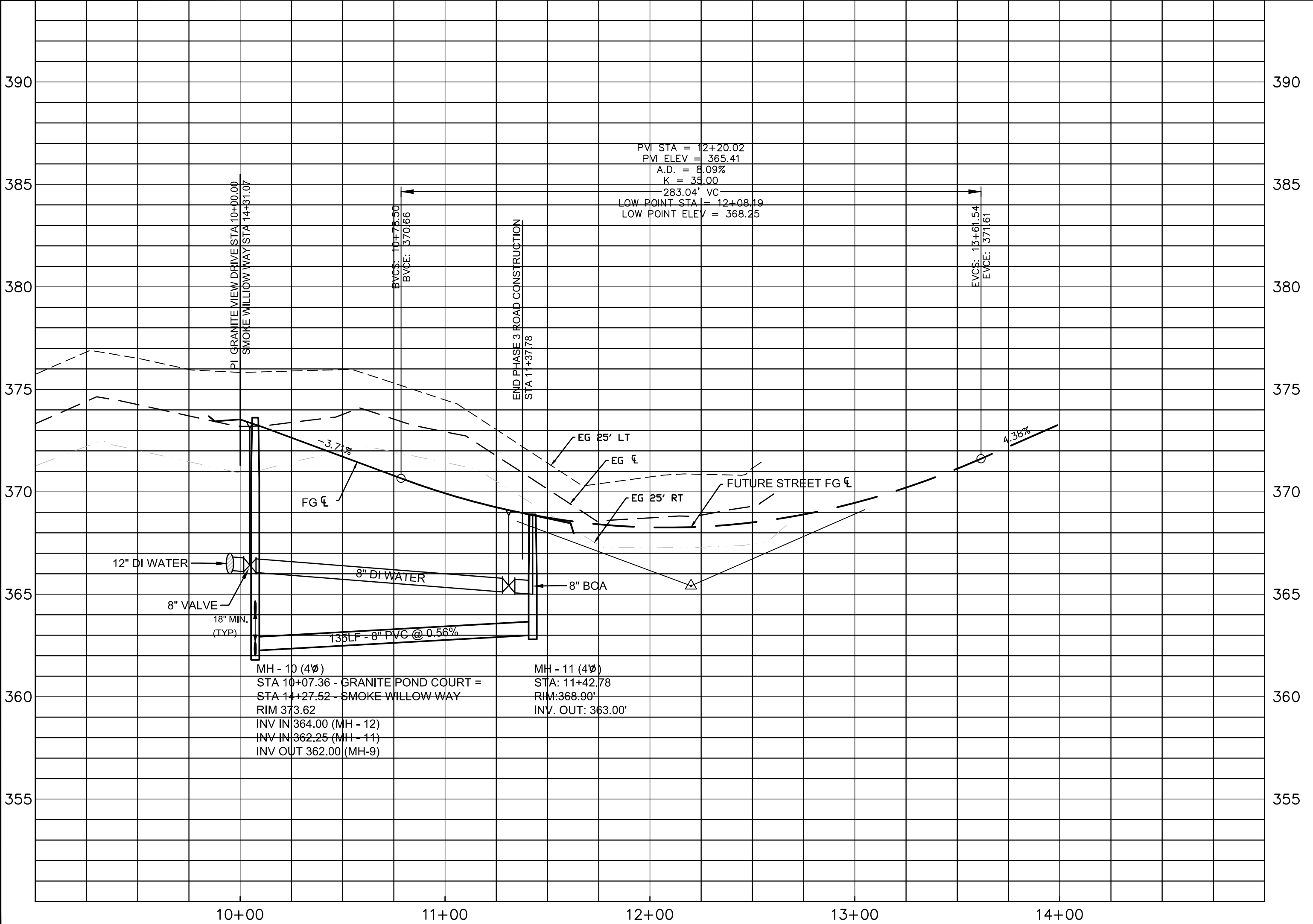
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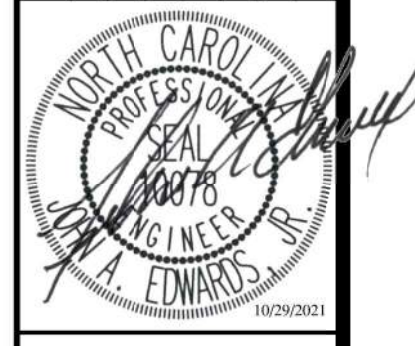
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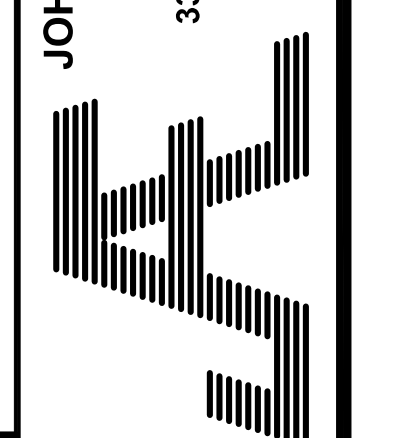
City of Raleigh Development Approval  
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REVISION	DATE	BY	DATE	BY
PER TRC COMMENTS	05/27/21	TT	PER TRC COMMENTS	TT
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GRANITE CREST SUBDIVISION  
 PHASE III C  
 ROLESVILLE WAKE COUNTY NORTH CAROLINA  
 GRANITE VIEW DRIVE PLAN & PROFILE

DATE: 03-10-2021	DRAWN BY: JAE
SCALE: 1" = 40'	CHECKED BY: JAE, JR.
VER: HORIZ: 1" = 40'	FILE NO:

SHEET  
**CE-7**