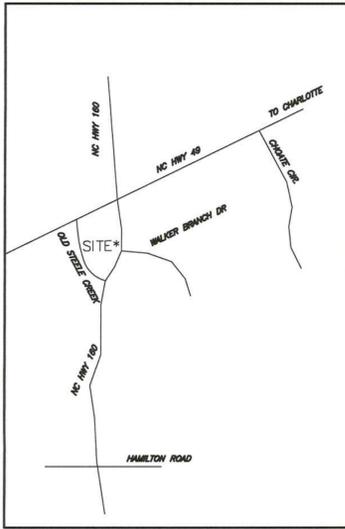


INDEX OF SHEETS

SHEET NO.	TITLE
1	COVER
2	PROPOSED 16" WATER MAIN RELOCATION

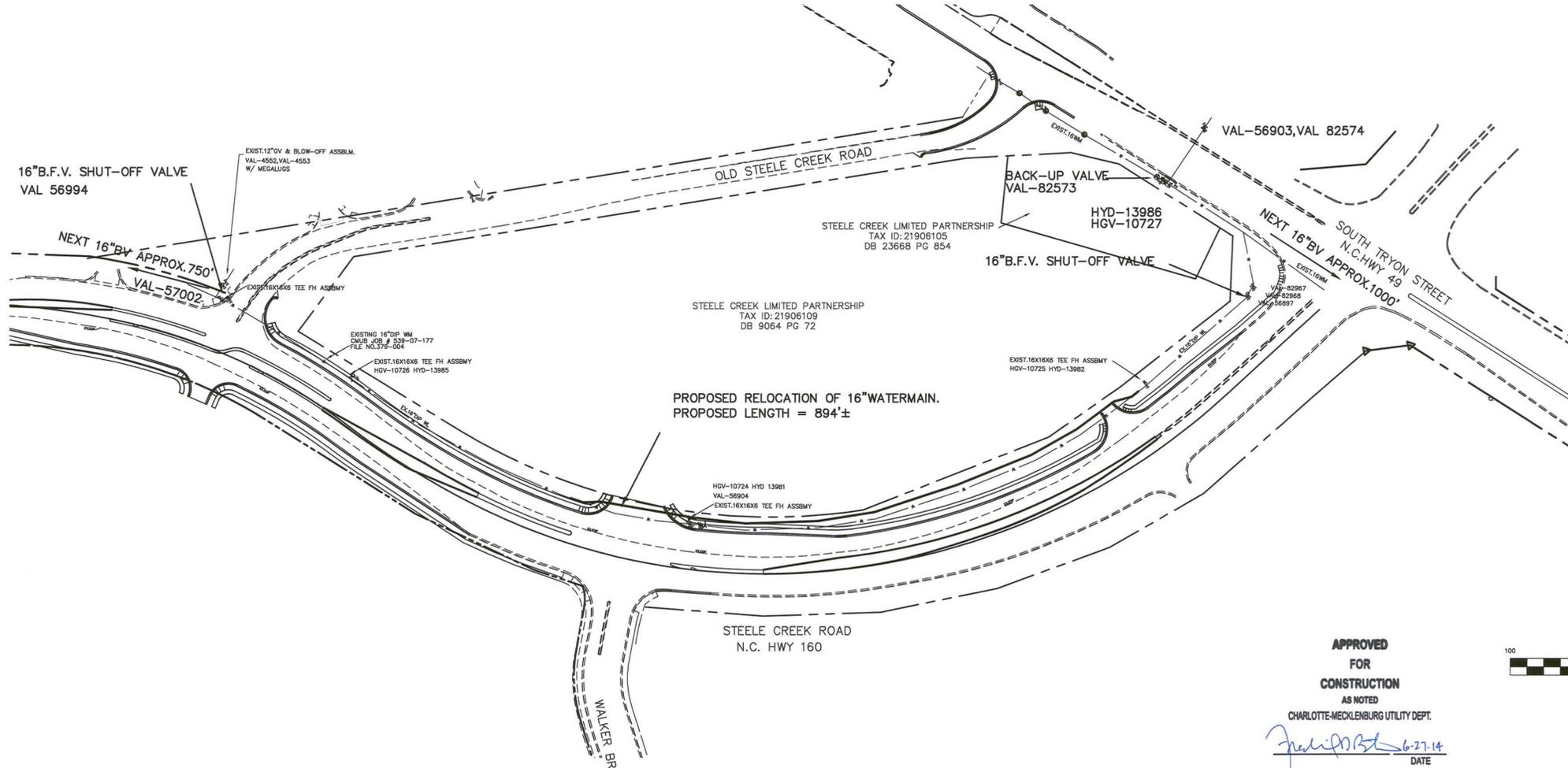


VICINITY MAP
NOT TO SCALE

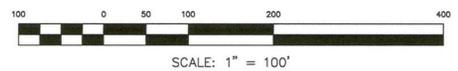

**CHARLOTTE-MECKLENBURG
UTILITY DEPARTMENT**
 CHARLOTTE, NORTH CAROLINA
ENGINEERING DIVISION
16" WATER MAIN RELOCATION
 AT
STEELE CREEK ROAD
 CHARLOTTE, NORTH CAROLINA
 May, 2014

LEGEND

EXISTING 8" SAN. SWR.	---	SS
PROPOSED 8" SAN.SWR.	---	SS
EXISTING SAN. SWR. MANHOLE	○	
PROPOSED SAN. SWR. MANHOLE	●	
EXISTING WATER MAIN	---	W
PROPOSED WATER MAIN	---	
EXISTING WATER VALVE	⊕	
PROPOSED WATER VALVE	⊕	
EXISTING FIRE HYDRANT	⊕	
PROPOSED FIRE HYDRANT	⊕	
WATER METER	□	
UNDERGROUND TELEPHONE	---	UT
UNDERGROUND CABLE	---	UC
OVERHEAD ELECTRIC	---	OE
UNDERGROUND ELECTRIC	---	UE
UTILITY POLE/GUY WIRE	---	
TOWER LINE	---	
EXISTING GAS MAIN	---	G
GAS VALVE	○	
EXISTING WATER R/W	---	
PROPOSED WATER R/W	---	
ROAD/STREET R/W	---	R/W
PROPERTY LINE	---	P
EDGE OF PAVEMENT	---	
GROUND PROFILE	---	
EXISTING IRON PIN	○	
MARSH	---	
CREEK OR BRANCH	---	
RIP - RAP	---	
TREE	---	
BUILDING	---	
RAILROAD	---	
GUARD RAIL	---	
PIERS	---	
BRIDGE	---	
FENCE (LABEL TYPE)	---	
STREET SIGN (LABEL TYPE)	---	
STORM DRAIN /CATCH BASIN	---	
SEDIMENT FENCE (SILT FENCE) STD. 6.62	---	
TEMPORARY SEDIMENT TRAP STD. 6.60	---	
CHECK DAM STD. 6.83	---	
TEMPORARY DIVERSION STD 6.20	---	
TEMPORARY STREAM CROSSING STD. 6.70	---	
FABRIC INLET PROTECTION STD. 6.51	---	



APPROVED
FOR
CONSTRUCTION
AS NOTED
CHARLOTTE-MECKLENBURG UTILITY DEPT.
[Signature] 6-27-14
DATE



DESIGN COMPANY:
GEO SCIENCE GROUP
500-K Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2001
Email: info@geosciencegroup.com

DESIGNED BY: KEVIN S. CALDWELL
ENGINEER: KEVIN S. CALDWELL
DESIGNED BY: SCOTT GREGORY

CONTRACTOR:
CHILDRESS KLEIN PROPERTIES
301 South College Street
Suite 2800
Charlotte, NC 28202
Phone: 704.333.0325
Fax: 704.332.3246

INSPECTOR:
DATE TO SYSTEMS & RECORDS:
BY:
INSIDE CHARLOTTE: (x) YES () NO
TOPO NO: 379.460

APPLICATION FOR PERMIT FOR WATER MAIN EXTENSION
PROJECT NAME: 16" WATER MAIN RELOCATION, STEELE CREEK ROAD HWY 160
CMUD PROJECT NO.: 100-14-037
PROJECT DESCRIPTION: INSTALL 894± LF OF 16" WATERLINE

DESIGNED BY: FIRM: GEO SCIENCE GROUP INC.
ENGINEER: KEVIN S. CALDWELL
DESIGNED BY: SCOTT GREGORY

ADDRESS: 500-K CLANTON ROAD
CHARLOTTE, NORTH CAROLINA 28217
PHONE: 704-525-2003

THIS APPLICATION IS MADE UNDER AND IN FULL ACCORD WITH THE PROVISIONS OF CHAPTER 130A-317 OF THE NORTH CAROLINA GENERAL STATUTES, AND SUCH OTHER STATUTES AS RELATED TO PUBLIC WATER SYSTEMS. CMUD HAS BEEN GRANTED AUTHORITY TO ISSUE PERMITS FOR EXTENSION OF WATER MAINS PURSUANT TO 15A NCAC 18C.1801. THE APPLICANT AGREES THAT NO SIGNIFICANT CHANGE OR DEVIATION FROM THE PLANS AND SPECIFICATIONS APPROVED BY CMUD WILL BE MADE WITHOUT THE WRITTEN CONSENT AND APPROVAL OF CMUD OR ITS AUTHORIZED REPRESENTATIVE. A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NORTH CAROLINA SHALL SUBMIT A STATEMENT REFLECTING THAT ADEQUATE OBSERVATIONS DURING AND UPON COMPLETION OF CONSTRUCTION INDICATES THAT CONSTRUCTION WAS COMPLETED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.

PERMIT NO. 214-037
APPROVED: *[Signature]* DATE 6/30/14
BARRY SHEARIN, PE, CHIEF ENGINEER
CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT
5100 BROOKSHIRE BLVD.
CHARLOTTE, NORTH CAROLINA 28216

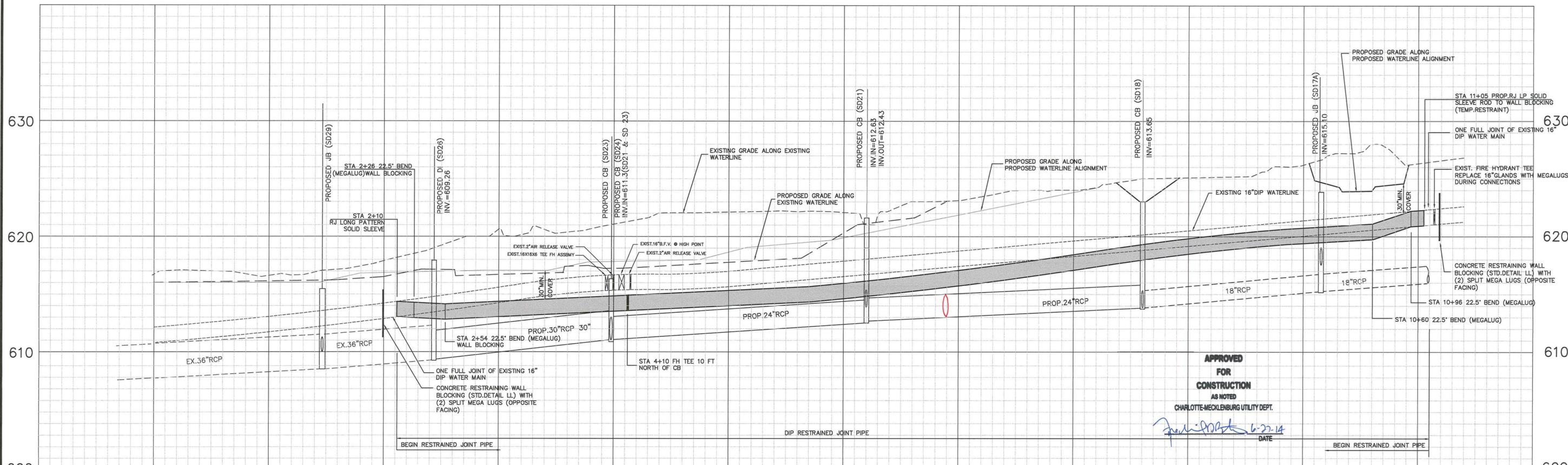
GENERAL NOTES:
1) CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT STANDARDS AND SPECIFICATIONS. PER WEBSITE AT WWW.CMUTILITIES.COM
2) ALL CONTRACTORS WORKING ON CMUD PROJECTS ARE REQUIRED TO OWN A COPY OF THE DESIGN MANUAL AND SHALL KEEP A COPY ON THE JOB SITE AT ALL TIMES.
3) CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING ALL APPROPRIATE PARTIES AND ASSURING THAT UTILITIES ARE LOCATED PRIOR TO THE PROJECT.
4) IF THE PROPOSED WATER AND/OR SANITARY SEWER MAIN IS INSTALLED WITHIN 12" IN ANY DIRECTION (VERTICALLY OR HORIZONTALLY) FROM GAS MAINS, THE CONTRACTOR SHALL CALL PIEDMONT NATURAL GAS COMPANY AT (704) 525-5585 AND INFORM THEM.
5) SANITARY SEWER LATERALS LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS.
6) SANITARY SEWER LATERALS ARE TO BE INSTALLED AT A DEPTH NO GREATER THAN FIVE (5) FEET WHERE PRACTICAL AT THE PROPERTY LINE UNLESS INDICATED ON THE PLANS TO BE INSTALLED AT "MINIMUM SLOPE".
7) MINIMUM COVER OF 36" FOR WATER MAINS.
8) DUCTILE IRON PIPE (RED BRASS FOR 2" WATER PIPE) REQUIRED FOR BOTH WATER & SANITARY SEWER LINES IF THE FOLLOWING CLEARANCES ARE NOT MET: *WATER LINE CROSSING UNDER SEWER LINE (FOR ANY CLEARANCE), *18" VERTICAL FOR WATER LINE INSTALLED ABOVE SEWER LINE. *12" CLEARANCE WITH STORM DRAINS, GAS MAINS, TELEPHONE DUCTS, AND UNDERGROUND CABLES.
9) RECORDED PLANS ARE REQUIRED FOR ACTIVATION OF WATER MAINS. EASEMENTS ARE NOT ACCEPTABLE.
10) ALL WATER MAINS & SERVICES SHALL BE INSTALLED WITH SOLID COPPER #2-GAUGE TRACER WIRE, 30 MILS BLUE HDPE INSULATION.
CDOT RIGHT-OF-WAY PERMITTING PROCESS
1) THE CONTRACTOR/DEVELOPER SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WITHIN CITY OF CHARLOTTE-MAINTAINED STREET RIGHTS-OF-WAY (R/W), PRIOR TO CONSTRUCTION. A CONTRACTOR'S EMPLOYEE SHALL HOLD A VALID EXCAVATION CERTIFICATION FROM CDOT'S STREET MAINTENANCE DIVISION (SMD) AND SHALL BE ON SITE DURING WORK IN THE STREET'S PAVEMENT, INCLUDING SIDEWALK AND DRIVEWAYS. CONTACT SMD AT (704) 336-3200 TO ENROLL IN THE NEXT CERTIFICATION CLASS.
2) THE PERMIT SHALL BE OBTAINED BY CALLING CDOT AT (704) 432-ROW1 (704-432-7691) OR COMPLETING AN APPLICATION SPREADSHEET BY E-MAIL TO ROWUSE@CI.CHARLOTTE.NC.US . THE APPLICATION CAN BE FOUND ONLINE AT HTTP://WWW.CHARMECK.ORG/DEPARTMENTS/TRANSPORTATION/ROW.HTM. SMD CHARGES A STREET DEGRADATION FEE WHICH MUST BE PAID BY THE CONTRACTOR/DEVELOPER BEFORE THE PERMIT WILL BE ISSUED.
3) THE CONTRACTOR SHALL CALL (704) 432-ROW1 AT LEAST 48 HOURS PRIOR TO COMMENCING WORK AUTHORIZED BY THE PERMIT. BY CITY ORDINANCE, ALL WORK IN THE R/W SHALL BE PERFORMED ACCORDING TO THE WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH), AND HAVE A VALID PERMIT.

NCRS (AS BUILT) _____ NCE _____

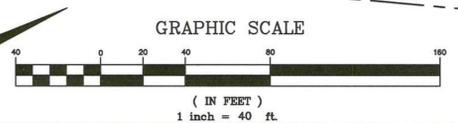
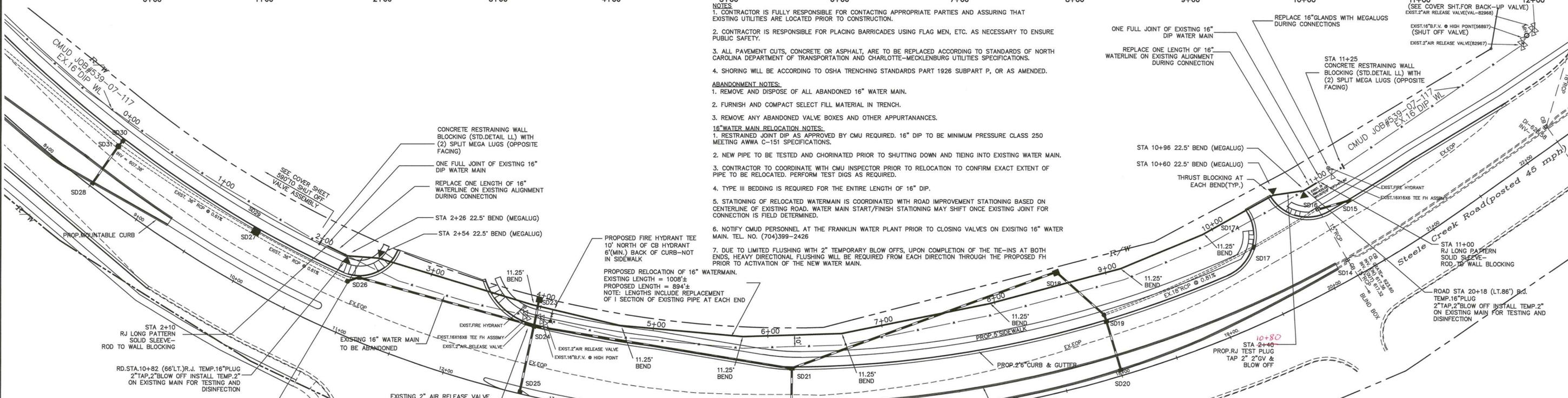
SUMMARY OF WATER MAINS & FIRE HYDRANTS

SIZE	LENGTH	SIZE	LENGTH
16"	894±		

TOTAL NO. OF FIRE HYDRANTS: 1
TOTAL NO. LOTS SERVED: N/A
PROJECT NAME: 16" WATER MAIN RELOCATION, STEELE CREEK ROAD-N.C. HWY 160
JOB NO: 100-14-037
DATE OF ACTIVATION:
DATE AS BUILT: 6-25-14 BY: RD MOODY



- NOTES:**
- CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO CONSTRUCTION.
 - CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAG MEN, ETC. AS NECESSARY TO ENSURE PUBLIC SAFETY.
 - ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CHARLOTTE-MECKLENBURG UTILITIES SPECIFICATIONS.
 - SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.
- ABANDONMENT NOTES:**
- REMOVE AND DISPOSE OF ALL ABANDONED 16" WATER MAIN.
 - FURNISH AND COMPACT SELECT FILL MATERIAL IN TRENCH.
 - REMOVE ANY ABANDONED VALVE BOXES AND OTHER APPURTANANCES.
- 16" WATER MAIN RELOCATION NOTES:**
- RESTRAINED JOINT DIP AS APPROVED BY CMU REQUIRED. 16" DIP TO BE MINIMUM PRESSURE CLASS 250 MEETING AWWA C-151 SPECIFICATIONS.
 - NEW PIPE TO BE TESTED AND CHORINATED PRIOR TO SHUTTING DOWN AND TIEING INTO EXISTING WATER MAIN.
 - CONTRACTOR TO COORDINATE WITH CMU INSPECTOR PRIOR TO RELOCATION TO CONFIRM EXACT EXTENT OF PIPE TO BE RELOCATED. PERFORM TEST DIGS AS REQUIRED.
 - TYPE III BEDDING IS REQUIRED FOR THE ENTIRE LENGTH OF 16" DIP.
 - STATIONING OF RELOCATED WATERMAIN IS COORDINATED WITH ROAD IMPROVEMENT STATIONING BASED ON CENTERLINE OF EXISTING ROAD. WATER MAIN START/FINISH STATIONING MAY SHIFT ONCE EXISTING JOINT FOR CONNECTION IS FIELD DETERMINED.
 - NOTIFY CMU PERSONNEL AT THE FRANKLIN WATER PLANT PRIOR TO CLOSING VALVES ON EXISITNG 16" WATER MAIN. TEL. NO. (704)399-2426
 - DUE TO LIMITED FLUSHING WITH 2" TEMPORARY BLOW OFFS, UPON COMPLETION OF THE TIE-INS AT BOTH ENDS, HEAVY DIRECTIONAL FLUSHING WILL BE REQUIRED FROM EACH DIRECTION THROUGH THE PROPOSED FH PRIOR TO ACTIVATION OF THE NEW WATER MAIN.



NOTE:
SEE STEELE CREEK ROAD PLANS FOR TRAFFIC CONTROL, GRADING, DRAINAGE AND EROSION CONTROL PLANS

No.	Date	By	Revision

GEOSCIENCE GROUP
INCORPORATED
500-K Clanton Road
Charlotte, NC 28217
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Fax: 704.525.2051
www.geosciencegroup.com
Email: kcallidwell@geosciencegroup.com



CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT ENGINEERING DIVISION CHARLOTTE, NORTH CAROLINA

100-14-037 Job No.	File No.	16" WATER MAIN RELOCATION
PLAN	Scales 1"=40'	
PROFILE	Hor. 1"=40' Vert. 1"=4'	STEELE CREEK ROAD AT WALKER BRANCH ROAD
As Built	Date	
Surveyed By	SG Designed By	Sheet 2 of 2
Drawn By	KSC Project-Engr	Approved By 6-25-14
Date	5/14	Date