

REVISIONS	BY

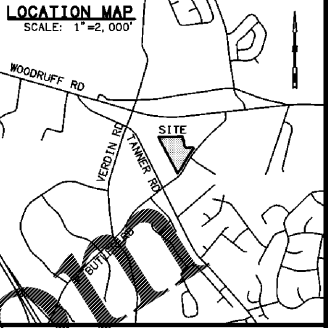
FREELAND and KAUFFMAN, INC.
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NO BID SET FOR CONSTRUCTION



CALIBER COLLISION
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GREENVILLE, SC 29607
CROSS DEVELOPMENT CC FIVE FORKS, LLC.
4838 MARSH RIDGE
CARROLTON, TX 75010
TEL. (214) 614-8252

DRAWN	EAC
CHECKED	TMB
DATE	01/04/2021
SCALE	
DRAWING	24



UTILITY CONTACTS	
WATER: GREENVILLE WATER SYSTEM CONTACT: CHRIS JOHNSON PHONE: (864) 247-6077	ELECTRIC: LAURENS ELECTRIC COOP. CONTACT: GREG YOUNG PHONE: (864) 449-2534
SEWER: RENEWABLE WATER RESOURCES CONTACT: ROBERT ARMS PHONE: (864) 277-4442	TELEPHONE/CABLE: CHARTER - SPECTRUM CONTACT: CUSTOMER SERVICE PHONE: (855) 234-8006
GAS: Piedmont Natural Gas CONTACT: JAY LESTER PHONE: (864) 209-6202	

LEGEND		
EXISTING	PROPOSED	DESCRIPTION
---	---	2" DOMESTIC WATER LINE
---	---	15" DOMESTIC WATER LINE
---	---	6" FIRE LINE
---	---	7" IRRIGATION WATER LINE
---	---	FIRE HYDRANT
---	---	UNDERGROUND ELECTRIC LINE
---	---	UNDERGROUND TELEPHONE LINE
---	---	STORM DRAIN
---	---	SANITARY SEWER LINE
---	---	GAS LINE
---	---	SS MANHOLE
---	---	SS CLEAN-OUT

- | KEYNOTES | |
|--|--|
| (A) 2" DOMESTIC WATER METER & VALVE BY GREENVILLE WATER SYSTEM - SEE NOTES. TRANSITION WATERLINE FROM 2" TO 15" AFTER METER. | (V) 1" GAS SERVICE LINE |
| (B) SANITARY SEWER EXIT @ ARCH FOR EXACT LOCATION. | (W) GAS SERVICE POINT OF CONNECTION. GREENVILLE NATURAL GAS TO EXTEND SERVICE FROM MAIN. |
| (C) 6" PVC SANITARY SEWER LATERAL. SEE PLAN FOR SLOPE @ ARCH FOR BUILDING ENTRY. | (X) WATER LINE TEES WITH THRUST BLOCKS (SEE DETAIL) |
| (D) SEWER CLEAN-OUT (SEE DETAIL) | (Y) 6" DP WATERLINE PER GREENVILLE WATER SYSTEM STANDARDS |
| (E) TRANSFORMER PAD AND METER. SEE ELECTRIC SERVICE NOTES THIS SHEET FOR LIST OF RESPONSIBILITIES. | (Z) 10" TELEPHONE CONDUIT & FILLWIRE BY CONTRACTOR - SERVICE BY COMCAST |
| (F) UNDERGROUND TELEPHONE POINT OF CONNECTION AT POLE BY CHARTER - SPECTRUM | (AA) GATE VALVE PER GREENVILLE WATER SYSTEM AND MALLON FIRE MARSHAL STDS |
| (G) UNDERGROUND ELECTRIC POINT OF CONNECTION AT POLE BY LAURENS ELECTRIC COOPERATIVE, INC. | (AB) 1" WATER LINE TO SITE IRRIGATION BY OTHERS |
| (H) CONTRACTOR TO PROVIDE 40 3/4" CONDUIT AND SERVICE FOR SECONDARY UNDERGROUND ELECTRIC UTILITY. RESEARCH FOR BUILDING ENTRY. | (AC) SHAPING WELL @ ARCH |
| (I) 15" DOMESTIC WATERLINE PER GREENVILLE WATER SYSTEM STANDARDS | (AD) FIRE HYDRANT PER GREENVILLE WATER SYSTEM AND MALLON FIRE DEPARTMENT STDS |
| (J) 6" WATERLINE FOR FIRE SERVICE PER GREENVILLE WATER SYSTEM STANDARDS | (AE) 2" WATERLINE PER GREENVILLE WATER SYSTEM STANDARDS |
| (K) GAS SERVICE ENTRY AND METER @ ARCH | (AF) 6" X 6" TAP SLEEVE & VALVE PER GREENVILLE WATER SYSTEM STANDARDS |
| (L) WATER LINE BEND WITH THRUST BLOCKS (SEE DETAIL) | (AG) 6" X 2" TAP SLEEVE & VALVE PER GREENVILLE WATER SYSTEM STANDARDS |
| (M) TELEPHONE SERVICE ENTRY @ ARCH | (AH) 2" X 1/2" TEE & GATE VALVE PER GREENVILLE WATER SYSTEM STANDARDS |
| (N) DOMESTIC WATERLINE ENTRY @ ARCH | (AI) SANITARY SEWER EXIT FROM DETAIL BAY @ ARCH FOR EXACT LOCATION |
| (O) ELECTRIC SERVICE ENTRY @ ARCH FOR EXACT LOCATION | (AJ) 15" BPP EFF DEVICE IN ABOVE GROUND HEATED ENCLOSURE BY CONTRACTOR (SEE DETAIL) |
| (P) 10" X 10" SANDIOL SEPARATOR @ ARCH | (AK) NEW UTILITY POLE TO RELOCATE OVERHEAD ELECTRICAL AND TELEPHONE SERVICE. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS FOR EXACT LOCATION. |
| (Q) 10" X 10" SANDIOL SEPARATOR @ ARCH | (AL) PROPOSED OVERHEAD ELECTRIC AND TELEPHONE SERVICE |
| (R) 1" BPP EFF DEVICE IN ABOVE GROUND HEATED ENCLOSURE @ 1" VALVE BY CONTRACTOR (SEE DETAIL) | (AM) 7" WATER POLE FOR FUTURE DEVELOPMENT'S IRRIGATION SERVICE |
| (S) 7" IRRIGATION WATER METER & VALVE BY GREENVILLE WATER SYSTEM - SEE NOTES | (AN) 2" WATER LINE FOR FUTURE DEVELOPMENT'S DOMESTIC WATER SERVICE |
| (T) IRRIGATION WATERLINE PER GREENVILLE WATER SYSTEM STANDARDS | (AO) 6" WATER LINE FOR FUTURE DEVELOPMENT'S FIRE LINE SERVICE |
| (U) FIRE LINE ENTRY @ ARCH | (AP) 2" DOMESTIC WATER METER & VALVE BY GREENVILLE WATER SYSTEM |
| (V) SITE LIGHTING TYPICAL @ PHOTO METRIC | |

SANITARY SEWER SERVICE NOTES

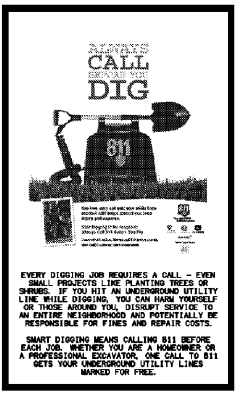
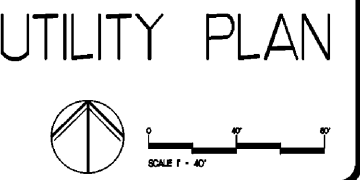
- THIS PROJECT WILL CONNECT TO AN EXISTING SANITARY MANHOLE ON THE NEIGHBORING PROPERTY TO THE NORTH. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CONNECTION TO EXISTING MANHOLE UNDER SUPERVISION OF A METRO CONNECT REPRESENTATIVE. CONTRACTOR SHALL OBTAIN A COPY OF THE COUNTY PERMITS BEFORE ORDERING MATERIALS.
- DUCTILE IRON PIPE (DIP) SHALL HAVE A MINIMUM PRESSURE CLASS OF 250 PSI. PVC PIPE SHALL BE SDR 35.
- CONCRETE ANCHORS ARE REQUIRED ON SEWER LINES WITH SLOPES OF 20% OR GREATER. CONTRACTOR SHALL ENSURE THAT SANITARY SEWER LINES DO NOT EXCEED THE SLOPES SHOWN IN PLANS.

ELECTRIC SERVICE NOTES:

- CONTRACTOR RESPONSIBLE FOR COORDINATING TIMING AND EXACT CONDUIT ROUTING WITH DUKE ENERGY.
- DUKE ENERGY SHALL INSERT EXISTING TRANSFORMER, METER, AND PRIMARY CONDUIT TO ENSURE SUFFICIENT SERVICE CAN BE PROVIDED TO THE DEVELOPMENT.
- CONTRACTOR SHALL PROVIDE AND INSTALL SECONDARY CONDUIT FOR SERVICE (SEE KEYNOTES FOR SIZE AND QUANTITY).
- DUKE ENERGY SHALL PROVIDE AND INSTALL SECONDARY SERVICE FROM THE BUILDING ENTRY TO THE TRANSFORMER.
- DUKE ENERGY IS RESPONSIBLE FOR CONNECTING TO EXISTING TRANSFORMER AND PRIMARY SERVICE.
- CONTRACTOR IS RESPONSIBLE FOR INSPECTION OF PROPER ELECTRICAL SERVICE INSTALLATION UPON COMPLETION.

GAS SERVICE NOTES

- PIEDMONT NATURAL GAS SHALL PERFORM THE SERVICE LINE CONNECTION TO THE GAS MAIN LOCATED ON THE NORTHEAST MARGIN OF THE RIGHT-OF-WAY OF CHARLOTTE HIGHWAY.
- PIEDMONT NATURAL GAS SHALL INSTALL GAS SERVICE (SEE KEYNOTES FOR SIZE AND MATERIAL) FROM THE PROPOSED POINT OF CONNECTION TO THE METER AT THE BUILDING.
- PIEDMONT NATURAL GAS SHALL PROVIDE AND INSTALL GAS METER @ ARCHITECTURAL PLANS FOR GAS METER LOCATION AND REQUIREMENTS.



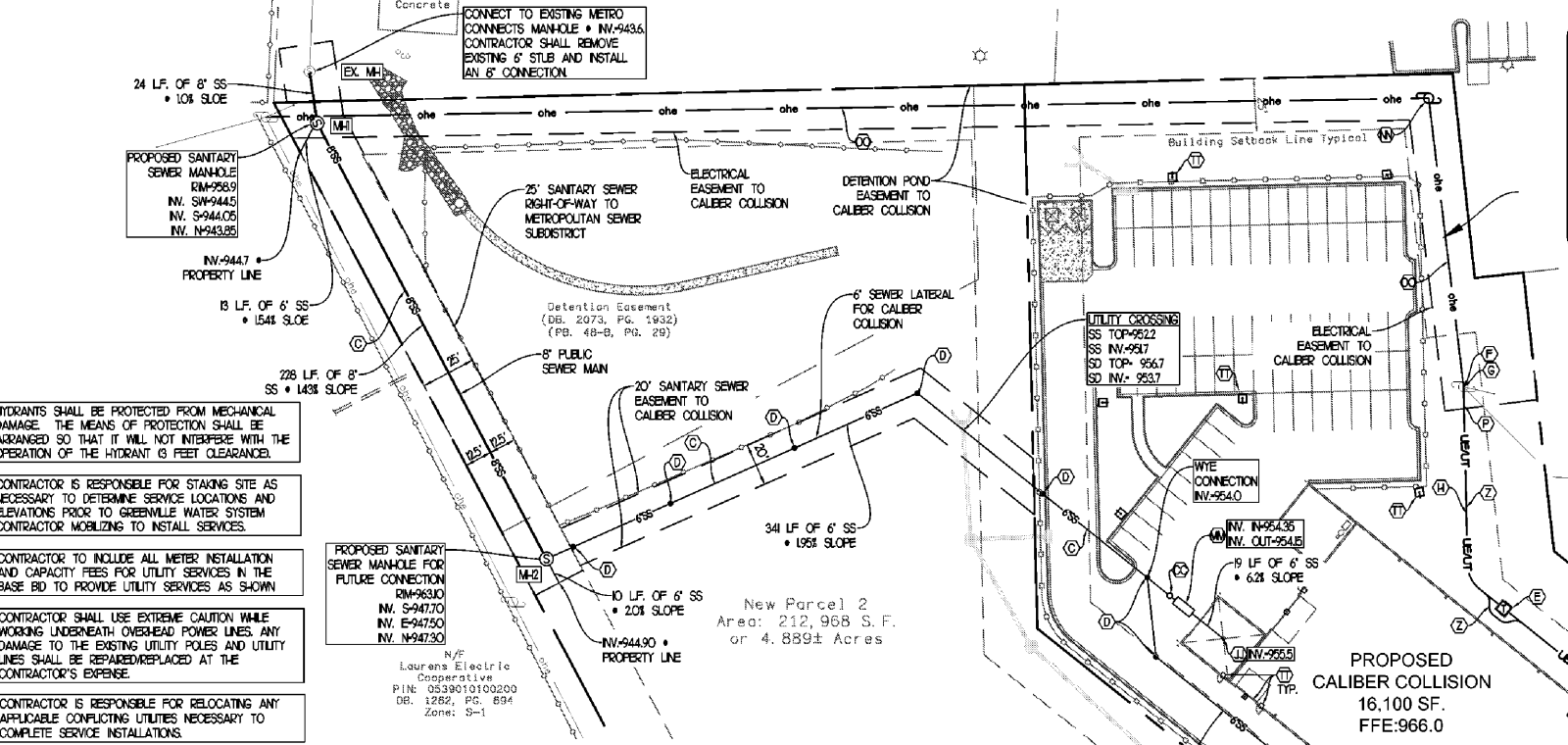
EVERY DIGGING JOB REQUIRES A CALL - EVEN SMALL PROJECTS! LINE PLANTING IS THE KEY TO SUCCESS. IF YOU HIT AN UNDERGROUND UTILITY LINE WHILE DIGGING, YOU CAN HARM YOURSELF OR THOSE AROUND YOU. DISRUPT SERVICE TO ALL UTILITIES. BE RESPONSIBLE AND REPORT ALL CALLS TO 811. BE RESPONSIBLE FOR FINES AND REPAIR COSTS. SMART DIGGING BEGINS CALLING 811. WORK SAFELY. EACH JOB, WHETHER YOU ARE A HOMEOWNER OR A PROFESSIONAL CONTRACTOR, SHOULD CALL TO 811 GETS YOUR UNDERGROUND UTILITY LINES MARKED FOR FREE.

WATER SERVICE NOTES

- WATER SERVICE FOR THIS DEVELOPMENT WILL CONNECT TO AN 8" DIP WATER MAIN LOCATED ON THE SOUTH-EAST SIDE OF EAST BUTLER ROAD VIA A JACK AND BORE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE BORE AND GREENVILLE WATER SYSTEM SHALL BE RESPONSIBLE FOR TAPPING THE EXISTING WATER MAIN. CONTRACTOR SHALL OBTAIN A COPY OF THE CITY/COUNTY PERMITS BEFORE ORDERING MATERIALS.
- GREENVILLE WATER SYSTEM SHALL INSTALL ALL WATER METERS FOR SERVICE.
- THE DEVELOPER'S CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR, CONSTRUCT THE WATER LINES AS SHOWN ON THE DRAWINGS, INCLUDING ALL CLEANING, GRUBBING, EXCAVATION, SHEATHING, BACKFILLING, AND OTHER APPURTENANCES. WORK SHALL INCLUDE ALL DITCHING, PUMPING, BARRING, DRAINING, FLUSHING, TESTING, AND ALL PROVISIONS NECESSARY TO PROTECT AND MAINTAIN BUILDINGS, PERMITS, WATER AND GAS PIPES, OVERPASS, COLLECTORS, POWER AND TELEPHONE LINES, AND CABLES, AND OTHER STRUCTURES.
- ALL WATERLINES SHALL HAVE A 3" MINIMUM COVER.
- ALL WATERLINE SERVICE INSTALLATION AND APPURTENANCES SHOULD BE PER GREENVILLE WATER SYSTEMS STANDARDS AND SPECIFICATIONS.
- DUCTILE IRON PIPE (DIP) AND UNDER SHALL BE PRESSURE CLASS 350. PVC PIPES 4" OR 6" SHALL BE PRESSURE CLASS 250. PVC PIPES LESS THAN 4" SHALL BE RATED FOR 200 PSI (SDR 35).

UTILITY PLAN NOTES

- ALL SITE WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE PLANS PREPARED BY FREELAND & KAUFFMAN, CURRENT REQUIREMENTS OF GREENVILLE WATER SYSTEM GREENVILLE COUNTY, AND ALL OTHER PERTINENT FEDERAL AND STATE LAWS.
- THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-554), FEDERAL REGISTER, CHAPTER XVII, PART 1926 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SUBMISSION OF A BID SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE.
- BEFORE EXCAVATION ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL EXISTING UTILITIES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BID AND PERFORM ALL UTILITY WORK IN COMPLIANCE TO ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL PROPOSED UTILITIES.
- CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY ON THE ADDITION, REMOVAL AND/OR RELOCATION OF UTILITIES AND UTILITY POLES AND THE EXTENSION OF ALL PROPOSED UTILITIES TO THE BUILDING.
- ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL UTILITIES ARE INSTALLED CORRECTLY TO MEET PROJECT REQUIREMENTS WHETHER PERFORMED BY THE CONTRACTOR OR NOT.
- A SEALED AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE ENGINEER/SURVEYOR AND SUBMITTED TO GREENVILLE WATER SYSTEM UPON COMPLETION & PRIOR TO ACTIVATION OF THE PROJECT.
- REFER TO THE BUILDING PLANS FOR ALL CONDUIT SIZES, NUMBER AND LOCATIONS FOR SERVICE TO THE SIGN AND SITE LIGHT POLES. COORDINATE FINAL CONDUIT LOCATIONS WITH THE OWNER.
- CONTRACTOR SHALL COORDINATE WITH THE OWNER ON CONDUIT ROUTE TO THE STORE FROM THE TRANSFORMER AND/OR SERVICE UTILITY POLE FOR TELEPHONE AND ELECTRICAL SERVICES.
- ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED PRIOR TO INSTALLATION OF PROPOSED UTILITIES.
- CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY'S INSPECTORS 72 HOURS BEFORE CONNECTION OR DEMOLITION OF ANY EXISTING LINE.
- MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE GREENVILLE WATER SYSTEM WATER STANDARDS AND SPECIFICATIONS AND GREENVILLE COUNTY - METRO CONNECTS SEWER STANDARDS AND SPECIFICATIONS.
- MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- WATER LINES TO HAVE MECHANICAL JOINTS WITH THRUST BLOCKING.
- ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
- MAINTAIN A MINIMUM OF 3'-0" COVER ON ALL WATERLINES.
- IN THE EVENT OF A VERTICAL CROSSING LESS THAN 18" BETWEEN WATERLINES AND SANITARY LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED MEETING REQUIREMENTS OF ANSI A21.01 OR ANSI A21.11 (AWWA C900 CLASS 50).
- ALL UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- ALL CONCRETE FOR ENCASUREMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 PSI.
- REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
- REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLED ABOVE-GROUND WITH HEATED INSULATED ENCLOSURE PER GREENVILLE WATER SYSTEM REQUIREMENTS. ENCLOSURE TO INCLUDE DRAIN PORT(S) FOR DISCHARGE WATER PER GREENVILLE WATER SYSTEM REQUIREMENTS. SEE DETAIL ON UTILITY DETAILS SHEET.



HYDRANTS SHALL BE PROTECTED FROM MECHANICAL DAMAGE. THE MEANS OF PROTECTION SHALL BE ARRANGED SO THAT IT WILL NOT INTERFERE WITH THE OPERATION OF THE HYDRANT IF FEET CLEARANCE.

CONTRACTOR IS RESPONSIBLE FOR STAKING SITE AS NECESSARY TO DETERMINE SERVICE LOCATIONS AND ELEVATIONS PRIOR TO GREENVILLE WATER SYSTEM CONTRACTOR MOBILIZING TO INSTALL SERVICES.

CONTRACTOR TO INCLUDE ALL METER INSTALLATION AND CAPACITY FEES FOR UTILITY SERVICES IN THE BASE BID TO PROVIDE UTILITY SERVICES AS SHOWN.

CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING UNDERNEATH OVERHEAD POWER LINES. ANY DAMAGE TO THE EXISTING UTILITY POLES AND UTILITY LINES SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR IS RESPONSIBLE FOR RELOCATING ANY APPLICABLE CONFLICTING UTILITIES NECESSARY TO COMPLETE SERVICE INSTALLATIONS.

