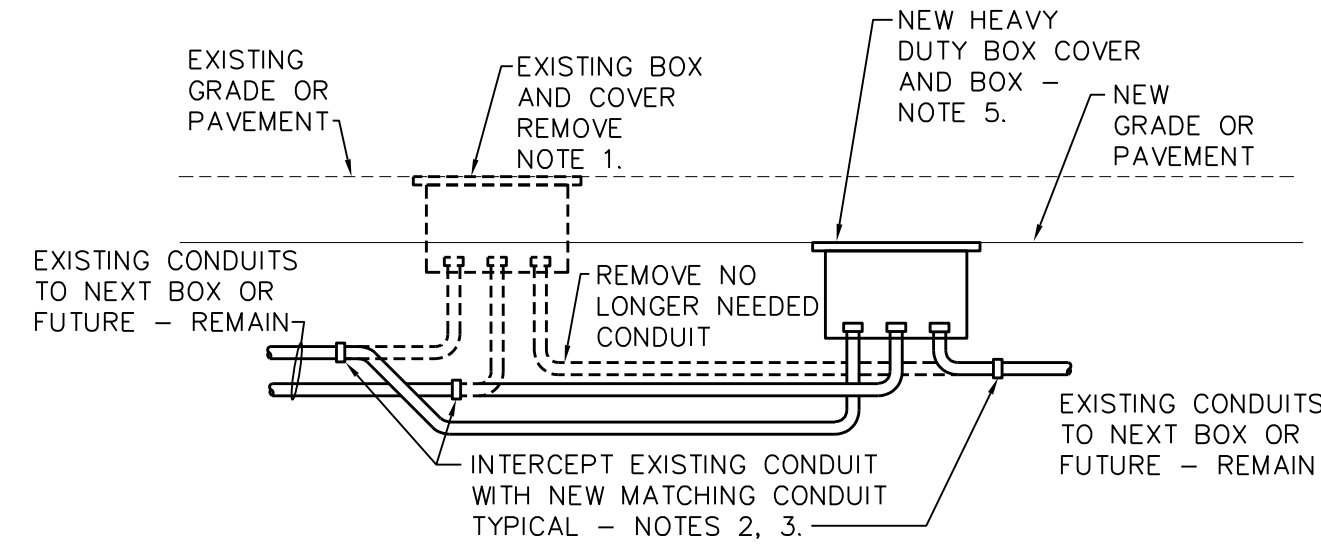


1A TYPICAL HANDHOLE BOX RELOCATION

NOT TO SCALE

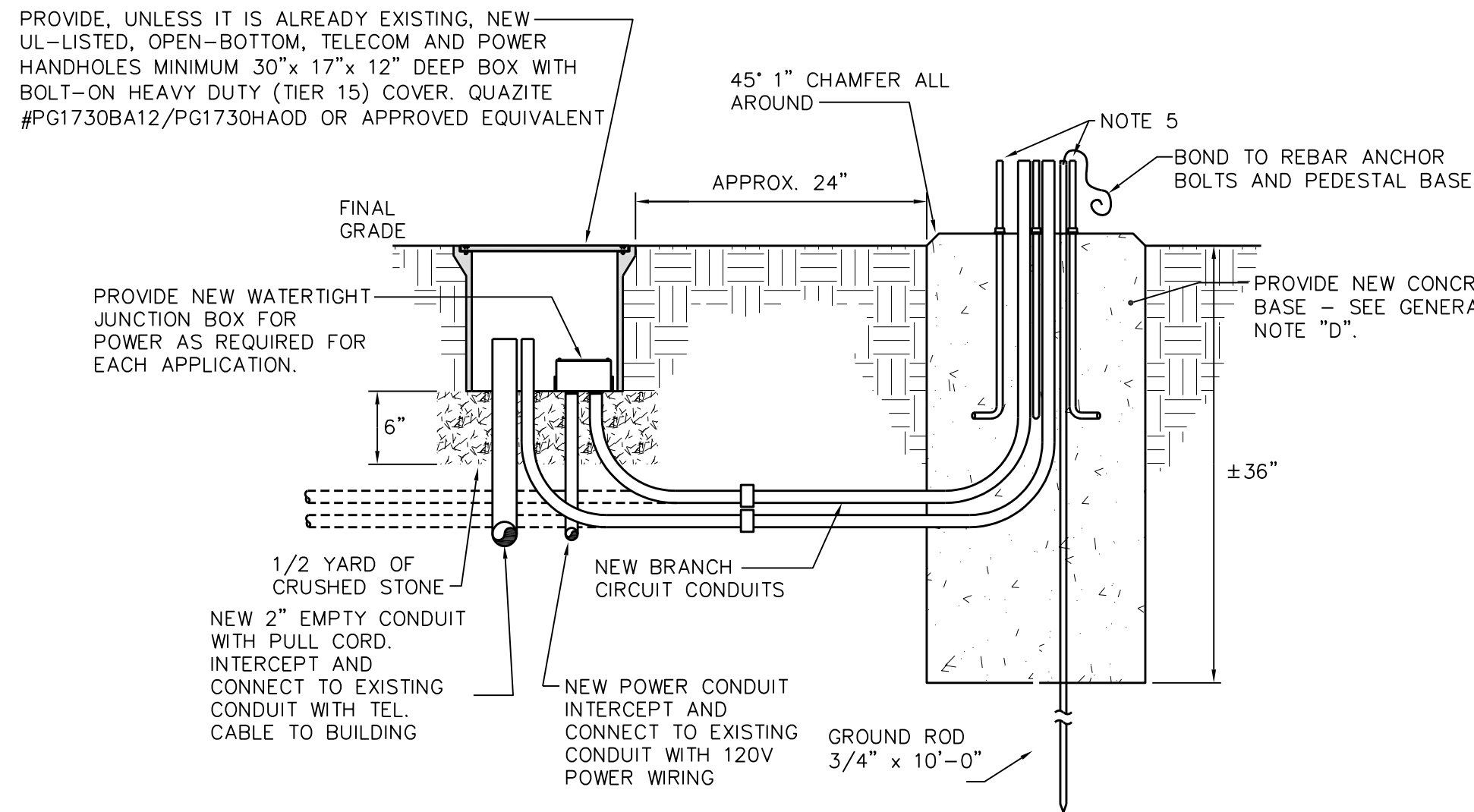


HANDHOLE BOX RELOCATION ALTERNATE

NOT TO SCALE

NOTES:

- REMOVE ALL EXISTING POWER CONDUCTORS FROM EXISTING HANDHOLE OR BOX BEING RELOCATED TO EXISTING LIGHT FIXTURE, OUTLET BOX OR PULL BOX. MAINTAIN CIRCUIT CONTINUITY FOR ANY LIGHT POLE OR TRAFFIC SIGNAL BY PROVIDING TEMPORARY BYPASS WIRING AS REQUIRED IN COMPLIANCE WITH UNIVERSITY STANDARDS AND NEC ARTICLE 590. REMOVE OLD HANDHOLE OR BOX, EXCEPT AS OTHERWISE NOTED ON NOTE 4.
- TELECOMMUNICATIONS WIRING WILL BE REMOVED BY THE UNIVERSITY UPON NOTIFICATION. CONTRACTOR TO REMOVE HANDHOLE OR BOX AND OLD CONDUIT AS REQUIRED TO ACCOMPLISH RELOCATION AND PROVIDE PULL CORD FROM NEXT BOX OR BLUE TELEPHONE, AS DIRECTED BY UNIVERSITY.
- INTERCEPT EXISTING CONDUITS AND EXTEND THEM TO NEW HANDHOLE OR BOX USING NEW CONDUIT AND WATERTIGHT CONNECTION. PROVIDE NEW MATCHING POWER WIRING TO RESTORE EXISTING CIRCUITS TO PERMANENT STATUS. REMOVE ANY TEMPORARY BYPASS WIRING INSTALLED.
- IN CASES WHERE THE EXISTING HANDHOLE OR BOX IS BEING IMPACTED BY NEW GRADE OR PAVEMENT ELEVATION, PROVIDE SIMILAR RELOCATION WORK AS SHOWN HERE EXCEPT THAT IT IS ACCEPTABLE, IF FEASIBLE, TO RELOCATE VERTICALLY THE EXISTING HANDHOLE BOX TO MATCH NEW GRADE, OR TO PROVIDE A MATCHING EXTENSION BOX ON TOP OF EXISTING BOX, OR TO REPLACE EXISTING BOX WITH NEW SUITABLE DEEPER BOX AND COVER.
- EXCEPT AS OTHERWISE NOTED, FOR NEW TELECOMMUNICATION HANDHOLE/BOXER USE QUAZITE 30" x 17" x 12" DEEP MINIMUM, STACKABLE, NO-BASE BOXES WITH HEAVY DUTY (TIER 15) COVERS, #PG1730BA12/PG1730HA00, OR EQUIVALENT. FOR POWER ONLY HANDHOLE/BOXES USE QUAZITE 30" x 17" x 12" DEEP MINIMUM NO-BASE BOXES WITH HEAVY DUTY COVERS, NO-BASE BOXES WITH HEAVY DUTY (TIER 15) BOLTED COVERS, #PC1212BA12/PC121HA00 OR EQUIVALENT.



TYPICAL NEW PEDESTAL MOUNT BLUE LIGHT EMERGENCY TELEPHONE PHONE ASSEMBLY REQUIREMENTS

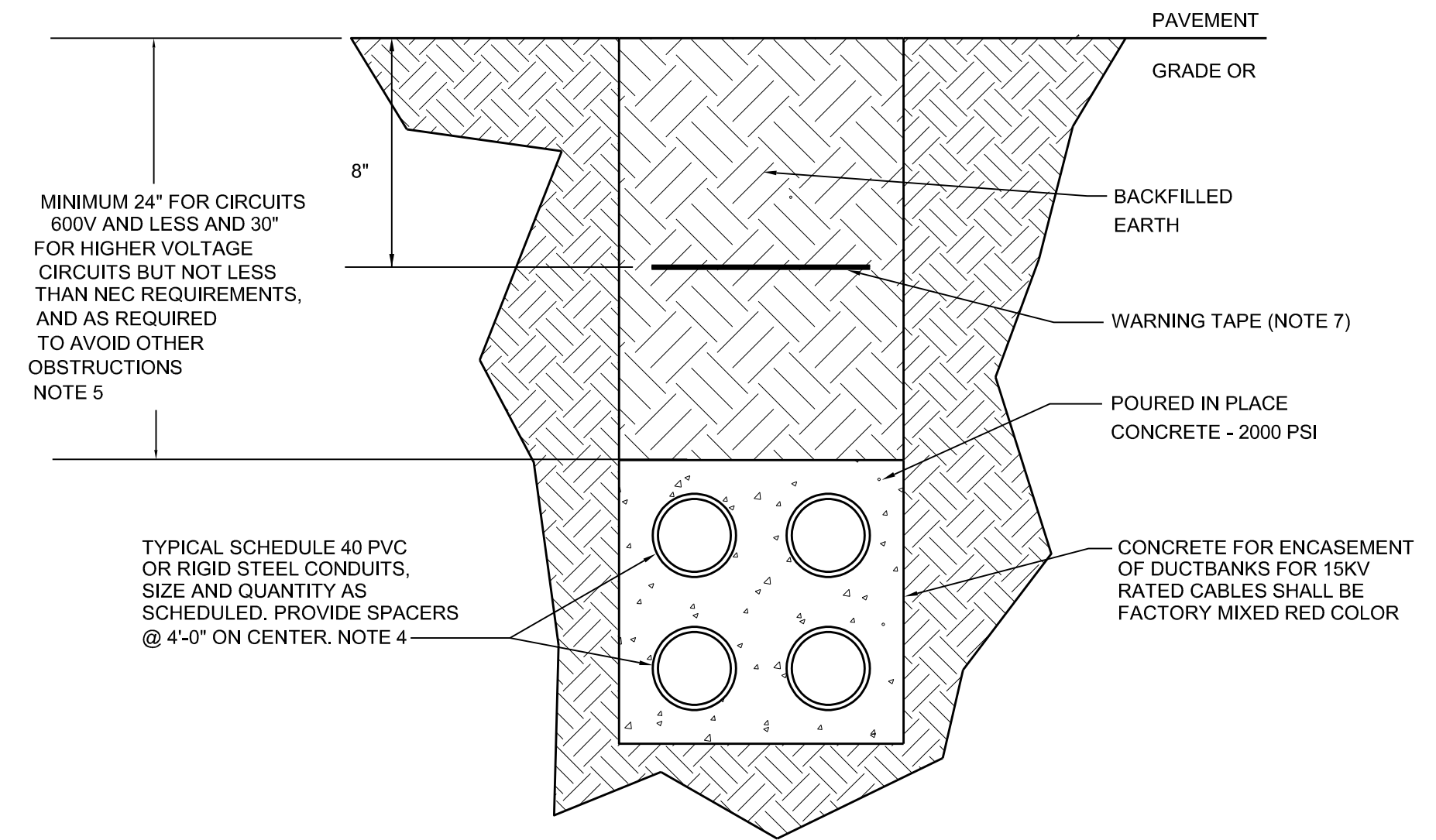
SCALE: NONE

NOTES:

- FOR EACH OUTDOOR BLUE LIGHT TELEPHONE LOCATION, THE CONTRACTOR SHALL INSTALL CONDUIT, HANDHOLES, BOXES AND EMERGENCY PHONE POLE BASE. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR.
- THE CONTRACTOR SHALL EXTEND EXISTING 120V CIRCUIT TO NEW ELECTRICAL HANDHOLE OR TO J-BOX WITHIN HANDHOLE AS SHOWN IN DETAIL 1 ADJACENT TO EACH PHONE POLE BASE, THEN TO BLUE LIGHT PHONE, AND MAKE CONNECTION TO STEP-DOWN TRANSFORMER IN POLE.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING 2-INCH CONDUIT FROM TELECOM PEDESTAL, OR "HAND HOLE" TO THE NEW "HAND HOLE" AND THEN SHALL INTERCEPT EXISTING STUBBED OUT CONDUIT AS REQUIRED TO PROVIDE TELECOM WIRING PATHWAY.
- UNC-CHARLOTTE ITS DEPARTMENT WILL INSTALL AN OUTDOOR RATED, GEL-FILLED, CATEGORY 6 CABLE FROM TELECOM ROOM TO BLUE LIGHT PHONE AND MAKE TERMINATIONS ON BOTH ENDS. CONTRACTOR IS RESPONSIBLE TO PROVIDE NEW "HANDHOLE".
- UNC-CHARLOTTE WILL PROVIDE ANCHOR BOLT TEMPLATE AND ANCHOR BOLT KITS. FACTORY ANCHOR BOLTS MUST BE USED.

BLUE LIGHT TELEPHONE GENERAL NOTES

- SCOPE OF WORK FOR THIS PROJECT SHALL CONSIST OF NEW BLUE LIGHT PHONES INCLUDING NEW CONCRETE BASES, NEW CONDUIT FEEDS, ELECTRICAL POWER, TELEPHONE CABLE, POWER WIRING GROUNDING PROVISIONS.
- UNC CHARLOTTE ITS DEPARTMENT (OWNER) SHALL PROVIDE INSTALLATION OF THE FOLLOWING: CROSS CONNECTION OF THE TELEPHONE DROP WIRE TO ACTIVE DIAL TONE (AT TELEPHONE AND AT CAMPUS BUILDING TERMINAL). OWNER WILL BE RESPONSIBLE FOR PROGRAMMING AND INSTALLING PHONE DEVICES IN BLUE-LIGHT EMERGENCY PHONE ENCLOSURES. CONTRACTOR SHALL BE RESPONSIBLE FOR MOUNTING POLE ON BASE ONCE PEDESTAL IS READY.
- PROVIDE ALL MATERIALS REQUIRED FOR CONCRETE BASE, AS REQUIRED BY MANUFACTURER, BUT NOT LESS THAN:
 - FOUR #4 REBARS
 - THREE #4 TIES AND POURED-IN-PLACE, 3000 PSI CONCRETE BASE
- ANCHOR BOLTS AS SUPPLIED BY MANUFACTURER (ANCHOR BOLTS FOR BOTH, AND MOUNTING TEMPLATE WILL BE PROVIDED TO CONTRACTOR BY UNCC ITS DEPARTMENT AT CONTRACTOR'S REQUEST)

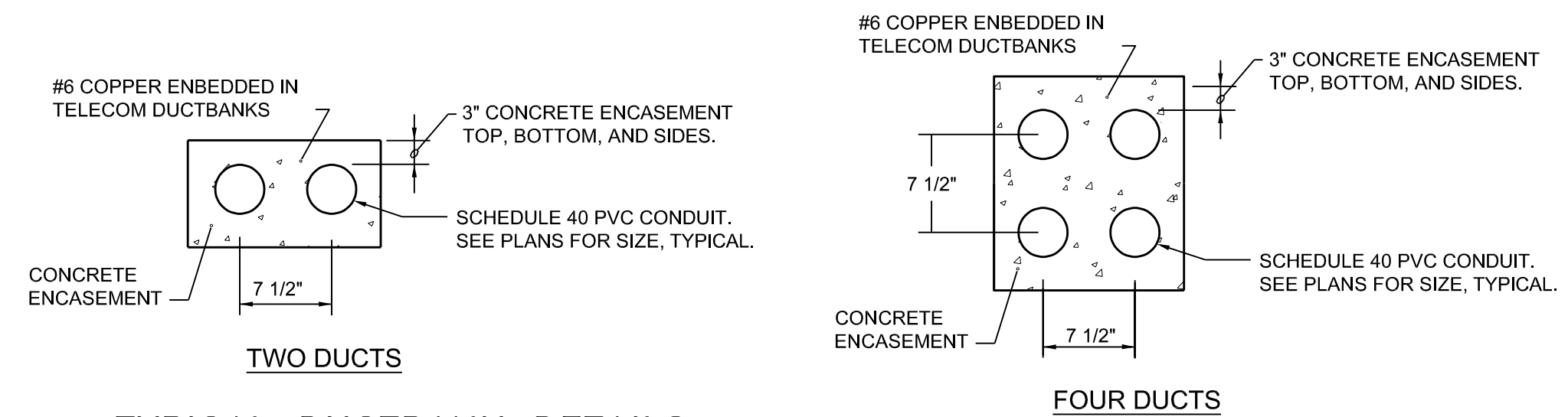


TYPICAL SECTION THROUGH DUCTBANK RUN

NOT TO SCALE

NOTES:

- ALL FEEDERS AND SERVICES RUN OUTSIDE BUILDING FOOTPRINT REQUIRE CONCRETE ENCASUREMENT.
- CONDUIT STUB-UPS SHALL BE RIGID GALVANIZED STEEL CONDUIT.
- PROVIDE 3" OR MORE, IF SO NOTED, SEPARATION BETWEEN ADJACENT POWER CONDUITS.
- USE RIGID STEEL CONDUIT FOR CROSSING UNDER FOUNDATION OR GRADE BEAMS.
- DEPTH SHALL BE INCREASED TO CROSS UNDER NEW AND EXISTING UTILITY LINES LIKE STEAM, WATER AND SEWAGE, WHEN THESE LINES ARE NOT DEEP ENOUGH TO ALLOW FOR THE STATED MINIMUM DEPTH.
- WHEN CROSSING UNDER OR OVER STEAM LINE OR STEAM TUNNEL, PROVIDE 4INCH FIBERBOARD INSULATION OVERLAPPING THE STEAM LINE BY 24" IN EVERY DIRECTION.
- UNDERGROUND LINE MARKING TAPE SHALL BE PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED, PLASTIC TAPE WITH MAGNETIC LOCATOR COMPONENT, COMPOUNDED FOR DIRECT BURIAL, NOT LESS THAN 6 INCHES WIDE AND 4 MILS THICK. PRINTED LEGEND SHALL BE INDICATIVE OF GENERAL TYPE OF UNDERGROUND LINE BELOW.

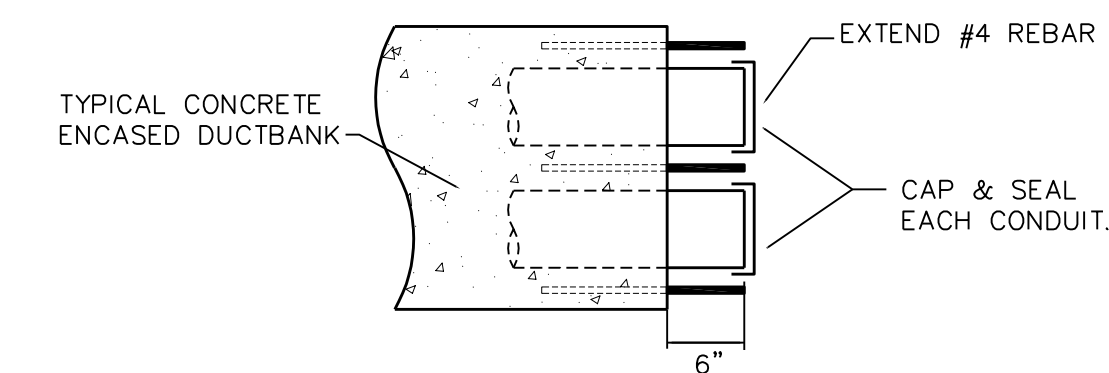


TYPICAL DUCTBANK DETAILS

SCALE: NONE

NOTES:

- UTILITY LOCATION: BEFORE DIGGING, THE CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES.
- UTILITY CROSSINGS: IN ALL AREAS WHERE NEW DUCTBANK CROSSES EXISTING UTILITIES OF ALL TYPES, CONTRACTOR SHALL HAND EXCAVATE.
- ASPHALT AND CONCRETE CUTS: SAW CUT ALONG ROUTE OF PROPOSED DUCTBANK. UNSUITABLE MATERIALS SHALL BE DISPOSED OF LEGALLY AT NO EXPENSE TO THE OWNER.
- MARKING TAPE: ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED BY DETECTABLE UNDERGROUND LINE MARKING TAPE LOCATED DIRECTLY ABOVE THE RACEWAY AT 6 TO 8 INCHES BELOW FINAL GRADE. TAPE SHALL BE PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED, PLASTIC TAPE COMPOUNDED FOR DIRECT BURIAL NOT LESS THAN 6 INCHES WIDE AND 4 MILS THICK. PRINTED LEGEND SHALL BE INDICATIVE OF THE GENERAL TYPE UNDERGROUND LINE BELOW.
- SEE PLANS FOR THE SIZE AND QUANTITY OF CONDUITS IN ALL DUCTBANKS.
- MINIMUM SEPARATION BETWEEN DUCTBANKS IS 48".
- DO NOT COMBINE POWER AND COMMUNICATION CONDUITS IN A SINGLE DUCTBANK. MAINTAIN SEPARATION.



DETAIL - SIDE VIEW OF TYPICAL CONDUIT DUCTBANK END WITH PROVISIONS FOR EXPANSION

SCALE: NONE

NOTES:

- STEEL REINFORCEMENT SHALL BE INSTALLED WHERE DUCTBANKS CROSS UNDER ROADWAYS AND WITHIN 10 FEET OF ALL MANHOLES.
- THE STEEL REINFORCING OF THE DUCT BANK SHALL BE TIED TO THE WALL REINFORCING AT THE MANHOLES.

| NO. | REVISIONS | DATE | BY |
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BID SET



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| MC&L PROJECT # | DATE | SCALE | DESIGNED BY | CHECKED BY |
| 10/09/2020 | AS SHOWN | JRM | GEJ | GEC |



ELECTRICAL DETAILS

THE UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE
EAST VILLAGE
INFRASTRUCTURE
PROJECT ID #13-11004-02A

SHEET NUMBER

E-4



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