

### **ADDENDUM**

Addendum No: 5

**Project:** UNC Charlotte East Village Infrastructure

**State Project No: 13-11004-02** 

**Date:** October 27, 2020

By: Josh Craft, Shiel Sexton Co.

This addendum is issued and to be included as part of the bid documents. This Addendum includes:

Supplemental Information To Bidders:

- 1. Due to addendum 5 the bid day has been extended to Tuesday Nov 3 at 1:30
  - a. The bid opening will be at 2:00 in Conference Room 123A of the Facilities Operations & Parking Services building (#92 on the campus map http://facilities.uncc.edu/maps).
  - b. Only one person per company can attend due to COVID-19 but a live ZOOM meeting invitation will be sent to all bidders for the opening.
  - c. All other instructions to bidders on the Notice to Bidders letter still applies.
- 2. Bid forms for each package have been updated:
  - a. Added acknowledgement for addendum 5
  - b. Added the signature page 3 that was missing in the original bid forms.
- 3. Updates to electrical drawings have been included in this addendum 5 to address electrical bid questions.
  - a. Refer to E-9 for updates on high voltage cabling
  - b. All pedestrian light poles will be contractor provided. All non-pedestrian light poles will be provided by Owner, adequate supply is available in storage per University. Contractor to provide all light fixtures and add to poles provided by owner.
  - c. Site lighting conduits are direct buried, only the 4" conduits shown in duct bank are concrete encased. Note added to E-9 for clarity.
- 4. Drawings included:
  - a. E-1 SCHEDULES & NOTES
  - b. E-4 ELECTRICAL DETAILS
  - c. E-4.1 ELECTRICAL DETAILS
  - d. E-9 ELECTRICAL PLANS

### **END OF SHIEL SEXTON ADDENDUM 5**

	Bid Package 01	– Sitework
	UNCC East Village	
То:	The University of North Carolina at Charlotte Attn: Ms. Kathy Fisher – Facilities Operations	From:Contact:
	9201 University City Boulevard Charlotte, NC 28223 704/687-0596	Phone:Email:
1.	The undersigned Bidder proposes to furnish all necessary for the <b>Bid Package 01 – Sitework</b> in prepared by Kimley Horn and the Scope of Wo Addendum 1 for the lump sum price of:	·
		Dollars (\$(Numerical Value Here)
	(Enter Base Bid Amount in Words Here)	(Numerical Value Here)
2.	and represents that any additions or modificat these addenda, have been taken into considera	receipt of the following addenda as listed below cions to, or deletions from the work called for in ration and included in the Base Bid Sum.
	Addendum No.: Addendum	n No.:
	Addendum No.: Addendum	n No.:
	The undersigned Bidder understands that the that this bid shall remain open and may not be opening.	Owner reserves the right to reject this bid, but e withdrawn for ninety (60) days from the date of
3.	Alternates	
	a. Alternate 1: Martin Village Connector	
		Dollars (\$
	(Enter Alternate Amount in Words Here)	(Numerical Value Here)
	b. Alternate 2: Installation of Sediment Trap i	in Lot 5A sand filter location
		Dollars (\$
	(Enter Alternate Amount in Words Here)	(Numerical Value Here)

c. Alternate 3: Installation of wooden guiderail around Lot 5A sand filter

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		SUBCONTRACTOR BID FORM-	Addendum 5	
			Dollars (\$	)
	(Enter Alternate A	Amount in Words Here)	(Numerical Value Here)	
	d. Alternate 4:	Relocation of Entrance to Lot 5		
			Dollars (\$	)
	(Enter Alternate A	Amount in Words Here)	(Numerical Value Here)	
	e. Alternate 5:	Owner preferred alternate "Unit Pav	vers" – Provide Pine Hall, English Edge P	avers
			Dollars (\$	)
	(Enter Alternate A	Amount in Words Here)	(Numerical Value Here)	
4.	Work Sequence:			
		e conducted in the sequences outline for to sheets TCP-1 through TCP-8.	ed in the project plans. Specifically, the	
5.	Unit Pricing:			
	No. 1 Unit Price 1:	Removal of unsatisfactory soil and i	eplacement with satisfactory soil mater	ʻial.
	•	Unit of Measurement: Cubic yar	d	
	•	\$		
	•	bid. Unit price shall be utilized to	ic yards of unsuitable soil removal in the make adjustments in actual quantities ude replacement with suitable fill. No emove unsuitable soil.	base
	No. 2 Unit Price 2:	Removal of trench rock replacemen	t with satisfactory soil material.	
	•	Unit of Measurement: Cubic yar	d	
	•	\$		
	•	price shall be utilized to make ad	ic yards of trench rock in the base bid. Ustments in actual quantities encounterent with suitable fill. No additional time	ed.
	No. 3 Unit Price 3:	Rock.		
	•	Unit of Measurement: Cubic yar	d	
	•	\$		
	•	*	asure payment for actual quantities ude replacement with suitable fill. No ncountering rock.	

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### Proposal Signature Page

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned. (Bid bond requirements will be waived for bids less than \$500,000)

Respectfully submitted this day of								
(Name of firm or corporation making bid)								
WITNESS:	By:Signature							
	Name:							
(Proprietorship or Partnership)	Print or type							
	Title(Owner/Partner/Pres./V.Pres)							
	Address							
ATTEST:								
Ву <u>:</u>	License No							
Title:(Corp. Sec. or Asst. Sec. only)	Federal I.D. No.							
(Corp. Sec. of Asst. Sec. only)	Email Address:							
(CORPORATE SEAL)								

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	Bid Package 02	– Electrical						
	UNCC East Village	Infrastructure						
То:	The University of North Carolina at Charlotte Attn: Ms. Kathy Fisher – Facilities Operations 9201 University City Boulevard Charlotte, NC 28223 704/687-0596	From: Contact: Phone: Email:						
1.	The undersigned Bidder proposes to furnish all labor and material, and to perform all work necessary for the <b>Bid Package 02</b> — <b>Electrical</b> in accordance with the Project Documents, as prepared by Kimley Horn and the Scope of Work - Contract #02 Electrical Bid Package issued in Addendum 1 for the lump sum price of:							
			Dollars (\$	)				
	(Enter Base Bid Amount in Words Here)		Dollars (\$(Numerical Value Here)	,				
2.	· · · · · · · · · · · · · · · · · · ·	ions to, or dele	tions from the work called for in ded in the Base Bid Sum.					
	Addendum No.: Addendum	n No.:						
	The undersigned Bidder understands that the Other that this bid shall remain open and may not be opening.		-					
3.	Alternates							
	a. Alternate 1: Martin Village Connector							
	-		Dollars (\$	)				
	(Enter Alternate Amount in Words Here)		(Numerical Value Here)	,				
	b. Alternate 4: Relocation of Entrance to Lot 5	5						
			Dollars (\$	)				
	(Enter Alternate Amount in Words Here)		(Numerical Value Here)	•				

Subcontractor Bid Form Page 1 of 3

4.	Work	Seq	uence:
• •	***	<b></b>	aciice.

The Work shall be conducted in the sequences outlined in the project plans. Specifically, the Contractor will refer to sheets TCP-1 through TCP-8.

#### 5. Unit Pricing:

No. 1 Unit Price 1: Removal of unsatisfactory soil and replacement with satisfactory soil material.

- Unit of Measurement: Cubic yard
- Unit price shall include replacement with suitable fill. No additional time will be given to remove unsuitable soil.

No. 2 Unit Price 2: Removal of trench rock replacement with satisfactory soil material.

- Unit of Measurement: Cubic yard
- \$
- Unit price shall include replacement with suitable fill. No additional time will be given to remove trench rock.

#### No. 3 Unit Price 3: Rock.

- Unit of Measurement: Cubic yard
- \$
- Unit price shall include replacement with suitable fill. No additional time will
  be given to encountering rock during duct bank installation or directional
  drilling operations.

Subcontractor Bid Form Page 2 of 3

### Proposal Signature Page

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned. (Bid bond requirements will be waived for bids less than \$500,000)

Respectfully submitted this day of	
(Name o	of firm or corporation making bid)
WITNESS:	By:Signature
	Name:
(Proprietorship or Partnership)	Print or type
	Title(Owner/Partner/Pres./V.Pres)
	Address
ATTEST:	
Ву <u>:</u>	License No
Title:	Federal I.D. No.
(Corp. Sec. or Asst. Sec. only)	<del></del>
	Email Address:
(CORPORATE SEAL)	

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	Bid Package 03 –	Landscaping						
	UNCC East Village	Infrastructure						
То:	The University of North Carolina at Charlotte Attn: Ms. Kathy Fisher – Facilities Operations 9201 University City Boulevard Charlotte, NC 28223 704/687-0596	From: Contact: Phone: Email:						
1.	The undersigned Bidder proposes to furnish all labor and material, and to perform all work necessary for the <b>Bid Package 03 – Landscaping</b> in accordance with the Project Documents, as prepared by Kimley Horn and the Scope of Work - Contract #03 Landscape Package issued in Addendum 1 for the lump sum price of:							
			Dollars (\$) (Numerical Value Here)					
	(Enter Base Bid Amount in Words Here)		(Numerical Value Here)					
2.	The undersigned Bidder further acknowledges and represents that any additions or modificat these addenda, have been taken into considerate Addendum No.: Addendum	ions to, or dele	tions from the work called for in ded in the Base Bid Sum.					
	Addendum No.: Addendum	n No.:						
	Addendum No.: Addendum	n No.:						
	The undersigned Bidder understands that the Other that this bid shall remain open and may not be opening.		-					
3.	Alternates							
	a. Alternate 1: Martin Village Connector							
			Dollars (\$					
	(Enter Alternate Amount in Words Here)		(Numerical Value Here)					
	b. Alternate 4: Relocation of Entrance to Lot 5	5						
			Dollars (\$					
	(Enter Alternate Amount in Words Here)		(Numerical Value Here)					

Subcontractor Bid Form Page 1 of 3

### 4. Work Sequence:

The Work shall be conducted in the sequences outlined in the project plans. Specifically, the Contractor will refer to sheets TCP-1 through TCP-8.

5. Unit Pricing: Not applicable

Subcontractor Bid Form Page 2 of 3

### Proposal Signature Page

(CORPORATE SEAL)

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned. (Bid bond requirements will be waived for bids less than \$500,000)

(Nan	ne of firm or corporation making bid)
WITNESS:	By:Signature
	Name:
(Proprietorship or Partnership)	Print or type
	Title(Owner/Partner/Pres./V.Pres)
	Address
ATTEST:	
Ву <u>:</u>	License No
Title: (Corp. Sec. or Asst. Sec. only)	Federal I.D. No
	Email Address:

Subcontractor Bid Form Page 3 of 3

# TYPICAL PANEL DIAGRAM

BRANCH CIRCUIT WIRE COLOR									
,	120/208 OR	POLE N	IUMI	BER /	120/208 OR	`			
277/480	120/240	ı	ı	I	120/240	277/480			
BROWN	BLACK	1 —		_ 2	BLACK	BROWN			
ORANGE	RED	3	-	<del>-</del> 4	RED	ORANGE			
YELLOW	BLUE	5	<del>                                     </del>	6	BLUE	YELLOW			
BROWN	BLACK	7		8	BLACK	BROWN			
ORANGE	RED	9 —	-	10	RED	ORANGE			
YELLOW	BLUE	11	-	12	BLUE	YELLOW			
	E	TC.		ETC.					

120/240 OR 120/208 VOLTS - WHITE

277/480 VOLTS - WHITE WITH IDENTIFIABLE COLOR STRIPE (NOT GREEN). IF NOT AVAILABLE AT TIME OF INSTALLATION, CLEAR USE OF GRAY WITH ELECTRICAL INSPECTOR.

GROUND WIRE SHALL BE GREEN FOR ALL VOLTAGES. POST COLORS ON PANELBOARD

### ELECTRICAL LEGEND

AMPERE

NEUTRAL

ABOVE FINISHED FLOOR - MEASURED FROM FLOOR TO CENTER OF DEVICE, EXCEPT AS OTHERWISE SPECIFICALLY NOTED.

AMERICANS WITH DISABILITIES ACT OF 1990 ABOVE FINAL GRADE

AR AS REQUIRED

CONDUIT

DE DUKE ENERGY

EMPTY CONDUIT

OUTDOOR. FLUSH IN GRADE OR PAVEMENT HANDHOLE BOX REFER TO SECTION 260543.

HPS HIGH PRESSURE SODIUM

GROUND ROD

LIGHT EMITTING DIOLE LED LTG LIGHTING

MCM Kcmil (THOUSAND CIRCULAR MILS)

NEUTRAL

NCSBC NC STATE BUILDING CODE

NEW ELECTRICAL CABLE NATIONAL ELECTRICAL CODE

NEW ELECTRICAL LIGHTING CIRCUIT EXTENSION (277V)

NΤ NEW TELECOM CABLE

POLE

PED PEDESTRIAN

PΗ PHASE PR PAIR

> EXISTING ITEM TO REMAIN. PROVIDE NEW POWER AND TELECOMMUNICATIONS AS APPLICABLE PER NEW WORK PLAN.

RL EXISTING ITEM - RELOCATE

RV EXISTING ITEM - REMOVE

SHORT CIRCUIT INTERRUPTING RATING

SPACE ONLY (WITH PROVISIONS FOR FUTURE OVERCURRENT PROTECTIVE DEVICE)

TELECOM/TELEPHONE CABLE

TV/TIME WARMER CABLE

INDICATES DEVICE TO HAVE WEATHERPROOF COVER

### GENERAL DEMOLITION NOTES

- DA. THE ELECTRICAL BIDDER SHALL VERIFY CIRCUIT CONFIGURATION, ROUTING AND CONDITIONS PRIOR TO BIDDING PROJECT. NO CLAIMS FOR EXTRA WORK SHALL BE ACCEPTED AFTER THE AWARDING OF BIDS FROM DISCREPANCIES BETWEEN VERIFIABLE FIELD CONDITIONS AND ITEMS SHOWN HERE.
- DB. ELECTRICAL DEMOLITION WORK SHALL BE COORDINATED WITH OTHER TRADES AND AS SCHEDULED BY THE CONTRACT DOCUMENTS. UTILITY OUTAGES FOR FEEDER AND BRANCH CIRCUITS SHALL BE KEPT TO A MINIMUM. TEMPORARILY RECONNECT UTILITIES TO AN ALTERNATE SOURCE UNTIL A PERMANENT SOURCE CAN BE PROVIDED.
- DC. WHEN A FEEDER OR BRANCH CIRCUIT IS SHOWN TO BE REMOVED, THE ASSOCIATED WIRING SHALL BE REMOVED BACK TO ITS ORIGIN. CONDUIT MAY BE ABANDONED UNDERGROUND AT THE OWNERS DISCRETION.
- DD. EQUIPMENT, CIRCUITS AND UTILITIES WHICH REMAIN BUT ARE SERVED BY FEEDERS OR CIRCUITS BEING REMOVED OR ALTERED SHALL BE RECONNECTED ACCORDING TO THE METHODS REQUIRED BY THIS SPECIFICATION AND THE NEC WITHOUT EXTRA COST TO THE OWNER.
- DE. TURN OVER TO THE OWNER, LIGHTING FIXTURES AND OTHER EQUIPMENT SHOWN TO BE REMOVED, EXCEPT THAT THE OWNER RESERVES THE RIGHT TO REJECT WHATEVER EQUIPMENT HE DOES NOT FIND FIT, IN WHICH CASE THE CONTRACTOR SHALL REMOVE IT FROM THE PREMISES.

### **GENERAL NOTES**

- A. ELECTRICAL DEVICES AND EQUIPMENT SHALL BE LISTED AND LABELED FOR USE WITH CONDUCTORS WHICH HAVE INSULATION RATED FOR 75°C OR HIGHER BY ONE OF THE THIRD PARTY AGENCIES WHICH HAVE BEEN APPROVED BY THE NCSBCC TO SAFETY TEST AND LABEL ELECTRICAL AND MECHANICAL EQUIPMENT. DERATING OF CONDUCTORS IS NOT ALLOWED.
- B. ALL ELECTRICAL CONDUCTORS SHALL BE COPPER, THWN/THHN C. MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE SHALL BE #12 AWG. MINIMUM ACCEPTABLE CONDUIT SIZE SHALL BE 3/4" TRADE SIZE. PROVIDE LARGER CONDUCTORS AND CONDUIT
- AS NOTED. D. AN INDIVIDUAL GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED WITH EACH 120-VOLT OR HIGHER VOLTAGE CIRCUIT.
- SIZE CONDUCTOR AS SHOWN, OR PER TABLE 250.122 OF NEC IF SIZE IS NOT GIVEN.
- E. PROVIDE CONDUITS AS SPECIFIED FOR ALL POWER CIRCUITS, SIZED PER NEC, NOT TO EXCEED 40% FILL. F. COORDINATE ROUTING OF CONDUITS WITH OTHER UTILITIES TO AVOID CONFLICTS.
- G. CONTRACTOR SHALL COORDINATE PHASING WITH THE UNIVERSITY AND OTHER TRADES. H. CONDUCTOR SPLICES WITHIN HANDHOLE BOXES SHALL BE MADE WATERTIGHT UTILIZING

LISTED COMPRESSION MECHANICAL CONNECTORS AND LISTED HEAT-SHRINK SPLICE KITS.

# PARTIAL SYMBOL SCHEDULE

**DESCRIPTION** <u>SYMBOL</u> INDICATES HOME RUN TO PANEL WITH PANEL AND CIRCUIT DESIGNATION. ELECTRICAL PANELBOARD

SURGE PROTECTION DEVICE ELECTRICAL HANDHOLE

HIGH VOLTAGE HANDHOLE

GROUNDING ELECTRODE BLUE LIGHT PHONE

NEW OR RELOCATED PEDESTRIAN POLE LIGHTING FIXTURE.

NEW OR RELOCATED SINGLE-HEAD, 30-FOOT POLE STREET LIGHT FIXTURE NEW OR RELOCATED TWO-HEAD, 30-FOOT POLE STREET LIGHT FIXTURE

	LIGHTING FIXTURE SCHEDUL	<u> </u>						
FIXTURE		LAMPS			ALLAST OR DRIV		TOTAL	
DESIGNATION	NEW TIME OF A DISTRICT CAMPUS "CTANDARD" DEDECTRIAN LED DOLE LIGHT	QTY	TYPE	WATTS	QTY	TYPE	WATTS	WATTS
SA	NEW UNC CHARLOTTE CAMPUS "STANDARD" PEDESTRIAN LED POLE LIGHT CONSISTING OF 12'-0" TAPERED ALUMINUM "ARCHITECTURAL" POLE WITH HEXAGONAL BASE, ACCESS PLATE AND 3-INCH I.D. SLIP FITTER. LUMINAIRE SHALL BE HEXAGONAL WITH CAST ALUMINUM "ROOF" AND FINIAL, AND UV STABILIZED ACRYLIC REFRACTIVE REMOVABLE PANELS. BOTH LUMINAIRE AND POLE SHALL BE FINISHED IN "MALAGA GREEN" - RAL 6012. TYPICAL. MULTI-TAP DRIVER. PROVIDE CONCRETE BASE FUSE PROTECTION AND BUILT-IN SURGE PROTECTION DEVICE AS SPECIFIED IN SECTION 265600 FOR ADDITIONAL REQUIREMENTS. HADCO "CITADEL V25" SERIES OR MATCHING PRODUCT FROM ANP, STEINBERG OR SPRING CITY. SEE DETAIL 1/E-3.	2	LED ARRAYS	40	2	ELECTRONIC MULTI-TAP 120/208/1 240/277V	42.5	85
SB	NEW LED STREET LIGHTING SINGLE LUMINAIRE ON 30'-0" ALUMINUM POLE WITH CONCRETE BASE. GE EVOLVE SERIES EASC OWNER PREFERRED TO MATCH EXISTING CAMPUS STANDARD OR EQUIVALENT.	1		82	1	ELECTRONIC MULTI-TAP 120/208/ 240/277V	82	82
SB2	SIMILAR TO "SB", EXCEPT TWO-LUMINAIRE FIXTURE.	2		82	2	ELECTRONIC MULTI-TAP 120/208/ 240/277V	82	164
SC	EXISTING STREET LIGHTING SINGLE ROUND LUMINAIRE ON 30-FOOT (NOMINAL) POLE ON RECESSED CONCRETE BASE FINISHED IN "MALAGA GREEN".	1	LED		1			
SCR	EXISTING TYPE "SC" LIGHTING FIXTURE RELOCATE TO NEW LOCATION TO AVOID INTERFERENCE WITH NEW ROAD IMPROVEMENTS. PROVIDE NEW CONCRETE BASE PER DETAIL 4/E-3 AND RE-LAMP WITH NEW LED LAMP.	1	LED		1			
SD	EXISTING CAMPUS "STANDARD" CITADEL PEDESTRIAN POLE LIGHT, SIMILAR TO TYPE "SA" ABOVE, EXCEPT WITH 150 WATT HPS LAMP/BALLAST INSTEAD OF LED.	1	HPS	150	1	HX-HPF	188	188
SE	EXISTING POST-TOP OLD HID PEDESTRIAN POLE FIXTURE WITH NATURAL ALUMINUM FINISH. ±12' POLE AND LUMINAIRE	1	HPS	150	1	HX-HPF	188	188
SF	EXISTING 30' HID PARKING LOT LIGHT POLE.	1	HPS	400	1	HX-HPF	465	465
SG	EXISTING 30' LED PARKING LOT LIGHT POLE. SINGLE HEAD.	1	LED		1			
SG2	EXISTING 30' LED PARKING LOT LIGHT POLE. DOUBLE HEAD.	2	LED		2			
SGR	EXISTING 30' LED PARKING LOT LIGHT POLE. RELOCATED TO NEW LOCATION.	1	LED		1			

# LIGHTING FIXTURE SCHEDULE NOTES

- EXACT LOCATION OF LIGHTING FIXTURES SHALL BE AS SHOWN ON THE CIVIL DRAWINGS. FIXTURES NOT SHOWN ON THE CIVIL DRAWINGS SHALL BE LOCATED AS SHOWN ON THE ELECTRICAL DRAWINGS.
- 2. CATALOG NUMBERS SHOWN IN THE LIGHTING FIXTURE SCHEDULE DO NOT NECESSARILY INCLUDE ALL ACCESSORIES SPECIFIED IN THE FIXTURE DESCRIPTION. THE CONTRACTOR SHALL PROVIDE ALL SPECIFIED FEATURES WHETHER THEY ARE INCLUDED IN THE FIXTURE CATALOG NUMBER OR NOT. EQUIVALENT FIXTURES OF OTHER MANUFACTURERS NOT LISTED IN THE SCHEDULE MAY BE SUBMITTED, SUBJECT TO ENGINEER'S REVIEW.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT THE LIGHTING FIXTURES FURNISHED ARE SUITABLE FOR THE PROPOSED INSTALLATION PRIOR TO SUBMITTING SHOP DRAWINGS. THE CONTRACTOR SHALL VERIFY THAT THE FIXTURES SPECIFIED ARE SUITABLE FOR THE ACTUAL MOUNTING CONDITIONS, AND THAT THE FIXTURES ARE OF THE PROPER VOLTAGE FOR THE CIRCUITING SHOWN ON THE DRAWINGS. NO EXTRA PAYMENT WILL BE PROCESSED FOR FAILURE TO COMPLY WITH THIS REQUIREMENT. LIGHT POLES FOR TYPES "SB" AND "SB2" TO BE PROVIDED BY OWNER. LUMINAIRES angleAND ANY ACCESSORIES REQUIRED FOR INSTALLATION OF THE COMPLETE UNIT SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL DRILL MOUNTING HOLES IF
- NECESSARY ON THE EXISTING POLES. 5. ALL PEDESTRIAN

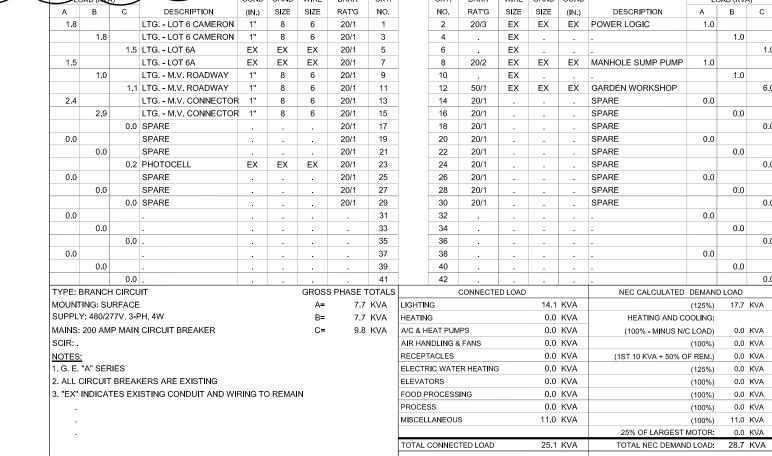
# SCHEDULE OF ELECTRICAL SHEETS

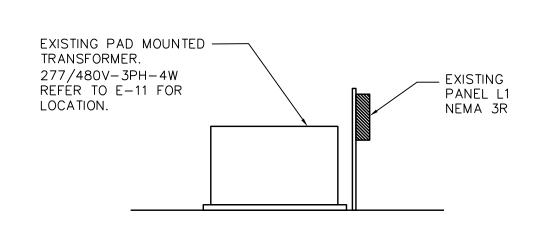
WORST PHASE (W/D.F.): 37.8 AMPS DEMAND LOAD CURRENT: 34.5 AMPS

- SCHEDULES AND NOTES
- E-2 OVERALL ELECTRICAL PLAN ELECTRICAL DETAILS E-3
- E-4 ELECTRICAL DETAILS
- E-4.1 ELECTRICAL DETAILS E-5 ELECTRICAL PLAN ELECTRICAL PLAN
- E-7ELECTRICAL PLAN ELECTRICAL PLAN
- ELECTRICAL PLAN E-9 E-10 ELECTRICAL PLAN
- E-11 ELECTRICAL PLAN E-12 ELECTRICAL PLAN

POLES/FIXTURES	TO	ΒE	PROVIDED	ΒY	CONTRACTOR.	
						~

**EXISTING PANEL L1** 





POWER RISER DIAGRAM

Know what's below. Call before you dig



BID SET



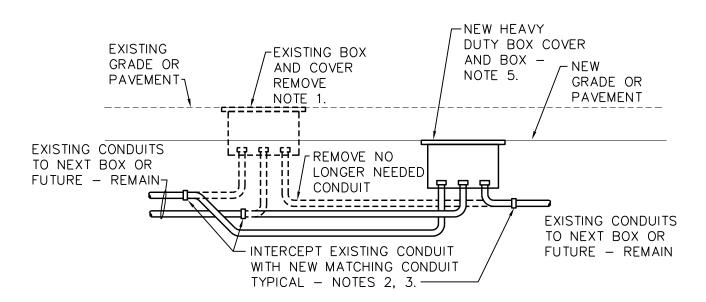


O

OF NORTH THE UNIVERSITY CAROLINA AT C

> SHEET NUMBER E-1

### TYPICAL HANDHOLE BOX RELOCATION

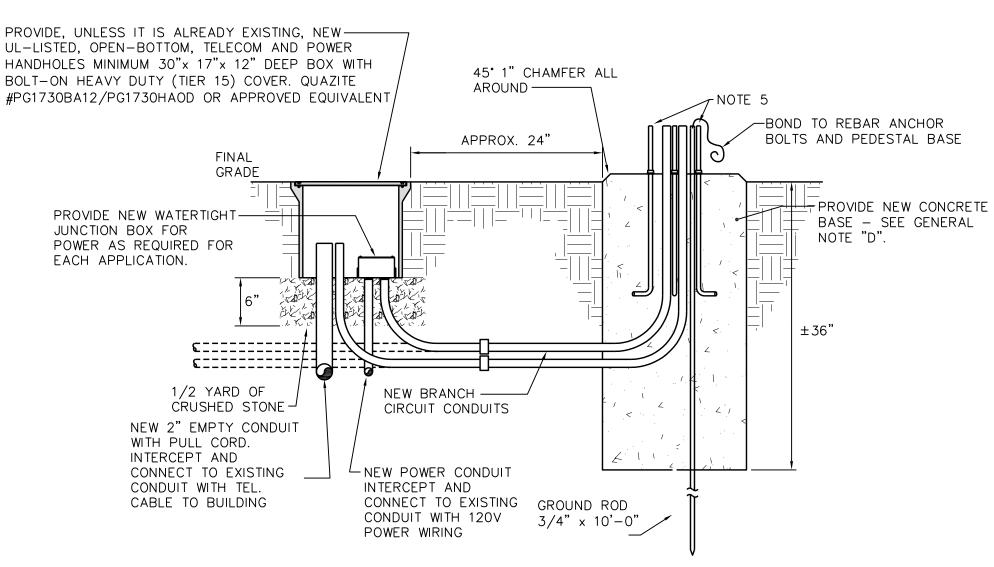


### HANDHOLE BOX RELOCATION ALTERNATE

NOTES:

1. 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

- 2. 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.
- 3. 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.
- 4. IN CASES WHERE THE EXISTING HANDHOLE OR BOX IS BEEN 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



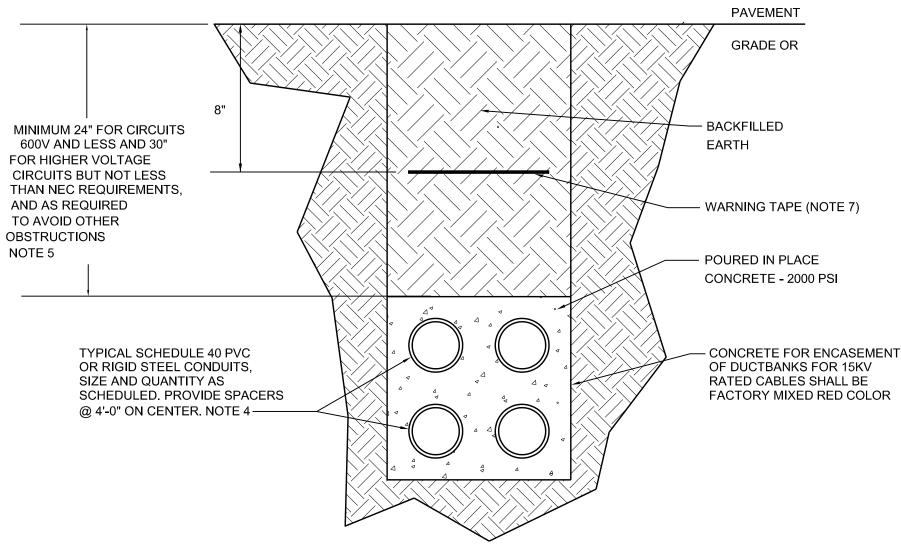
### TYPICAL NEW PEDESTAL MOUNT BLUE LIGHT EMERGENCY TELEPHONE PHONE ASSEMBLY REQUIREMENTS

SCALE: NONE

- I. 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.
- 2. 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.
- 3. 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
- 4. 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".
- 5. UNC-CHARLOTTE WILL PROVIDE ANCHOR BOLT TEMPLATE AND ANCHOR BOLT KITS. FACTORY ANCHOR BOLTS MUST BE USED.

### BLUE LIGHT TELEPHONE GENERAL NOTES

- A. 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
- B. 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.
- C. PROVIDE ALL MATERIALS REQUIRED FOR CONCRETE BASE, AS REQUIRED BY MANUFACTURER, BUT NOT LESS FOUR #4 REBARS
  - THREE #4 TIES AND POURED-IN-PLACE, 3000 PSI CONCRETE BASE
- D. 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)



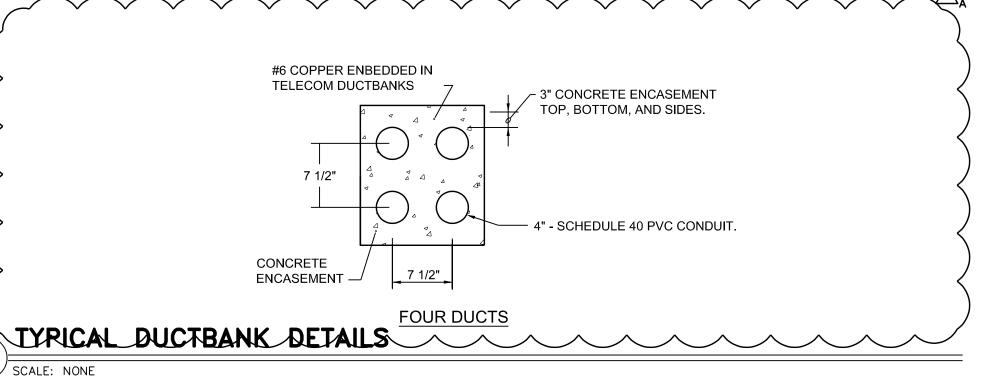
# TYPICAL SECTION THROUGH DUCTBANK RUN

1. ALL FEEDERS AND SERVICES RUN OUTSIDE BUILDING FOOTPRINT REQUIRE CONCRETE ENCASEMENT.

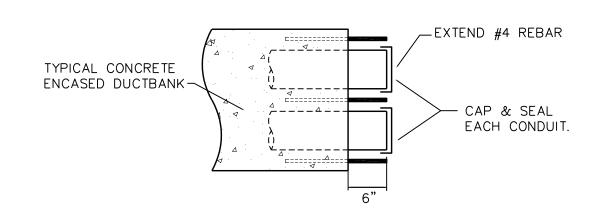
CONDUIT STUB-UPS SHALL BE RIGID GALVANIZED STEEL CONDUIT. PROVIDE 3"OR MORE, IF SO NOTED, SEPARATION BETWEEN ADJACENT POWER CONDUITS.

DEPTH SHALL BE INCREASED TO CROSS UNDER NEW AND EXISTING UTILITY LINES LIKE STEAM,

- WHEN CROSSING UNDER OR OVER STEAM LINE OR STEAM TUNNEL, PROVIDE 4-INCH 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



- 1. UTILITY LOCATION: BEFORE DIGGING, THE CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES.
- 2. UTILITY CROSSINGS: IN ALL AREAS WHERE NEW DUCTBANK CROSSES EXISTING UTILITIES OF ALL TYPES, CONTRACTOR SHALL HAND EXCAVATE.
- 3. ASPHALT AND CONCRETE CUTS: SAW CUT ALONG ROUTE OF PROPOSED DUCTBANK, UNSUITABLE MATERIALS SHALL BE DISPOSED OF LEGALLY AT NO EXPENSE TO THE OWNER.
- 4. 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.
- 5. SEE PLANS FOR THE SIZE AND QUANTITY OF CONDUITS IN ALL DUCTBANKS.
- 6. MINIMUM SEPARATION BETWEEN DUCTBANKS IS 48".
- 7. 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

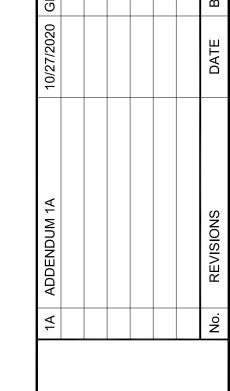
SCALE: NONE

NOTES:

1. STEEL REINFORCEMENT SHALL BE INSTALLED WHERE DUCTBANKS CROSS UNDER

2. THE STEEL REINFORCING OF THE DUCT BANK SHALL BE TIED TO THE WALL REINFORCING AT THE MANHOLES.





BID SET

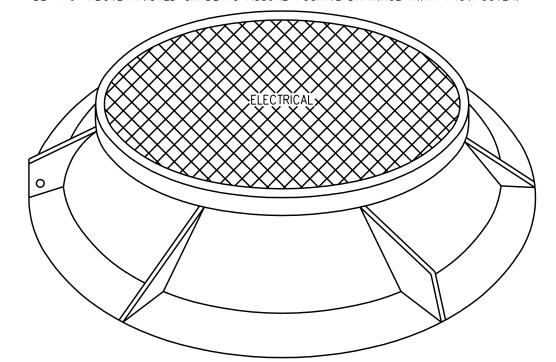


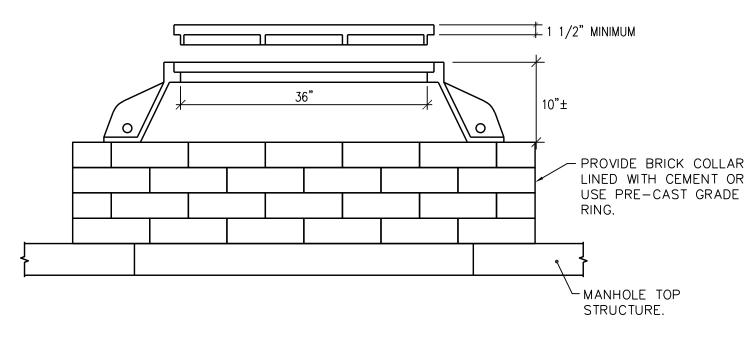


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SHEET NUMBER

THE INSTALLATION OF MANHOLES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. FOR THIS NON-ROADWAY INSTALLATION, THE TOP ELEVATION OF THE MANHOLE COVER SHALL BE 4-6" ABOVE FINISHED GRADE TO ASSURE POSITIVE DRAINAGE AWAY FROM COVER.



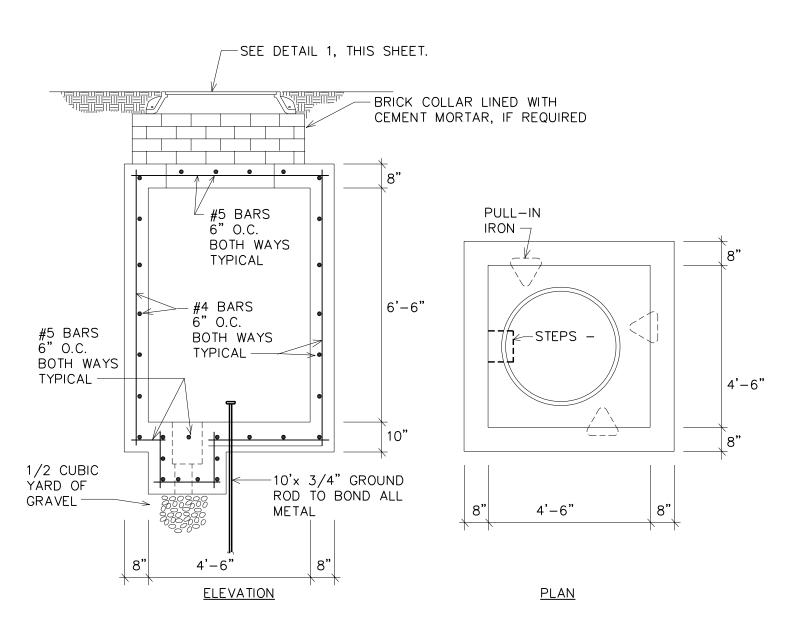


### MANHOLE COVER

NOT TO SCALE

# GENERAL NOTE FOR HANDHOLE AND MANHOLE INSTALLATION

COMPACT SOIL AROUND HANDHOLE OR MANHOLE IN ACCORDANCE WITH RECOMMENDATIONS OF SOIL TESTING AGENCY TO WITHSTAND HIGHWAY LOADING. ENGAGE SOIL TESTING AGENCY TO VERIFY SOIL BEARING PRESSURE.



# ELECTRIC MANHOLE

CONCRETE:

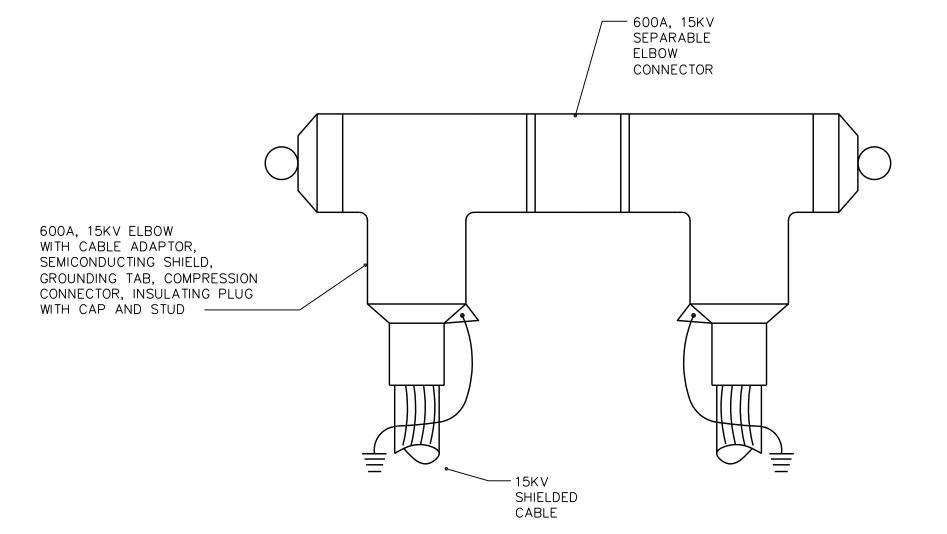
4000 PSI AT 28 DAYS

NOT TO SCALE

NOTES:

1. WHERE CONDUCTORS REQUIRING SEPARATE RACEWAYS FROM THE EMERGENCY POWER CONDUCTORS PASS THROUGH THE EMERGENCY POWER MANHOLE PROVIDE NEMA 4 ENCLOSURES WITHIN THE MANHOLE AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT TO THE RACEWAYS ENTERING THE MANHO
TO PROVIDE THE REQUIRED SEPARATION.

FOR NON-ROADWAY INSTALLATIONS, MANHOLE TOP ELEVATION SHALL BE 4-6 INCHES ABOVE FINISHED GRADE TO ASSURE POSITIVE DRAINAGE AWAY FROM COVER.

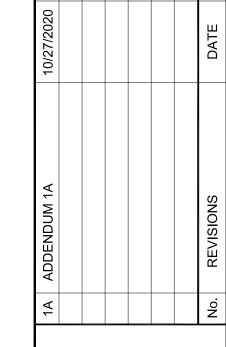


# 600A, 15KV, NON-LOAD BREAK, SHIELDED, SUBMERSIBLE, SEPARABLE CABLE SPLICE SYSTEM DETAIL

- NOTES:

  1. ASSEMBLY SHALL MEET ANSI/IEEE STANDARD 386. 2. INSTALL HOLD DOWN BAILS SUPPLIED WITH ELBOWS.
- 3. ACCOMPLISH WORK IN ACCORDANCE WITH SPLICE SYSTEM MANUFACTURER'S INSTRUCTIONS.







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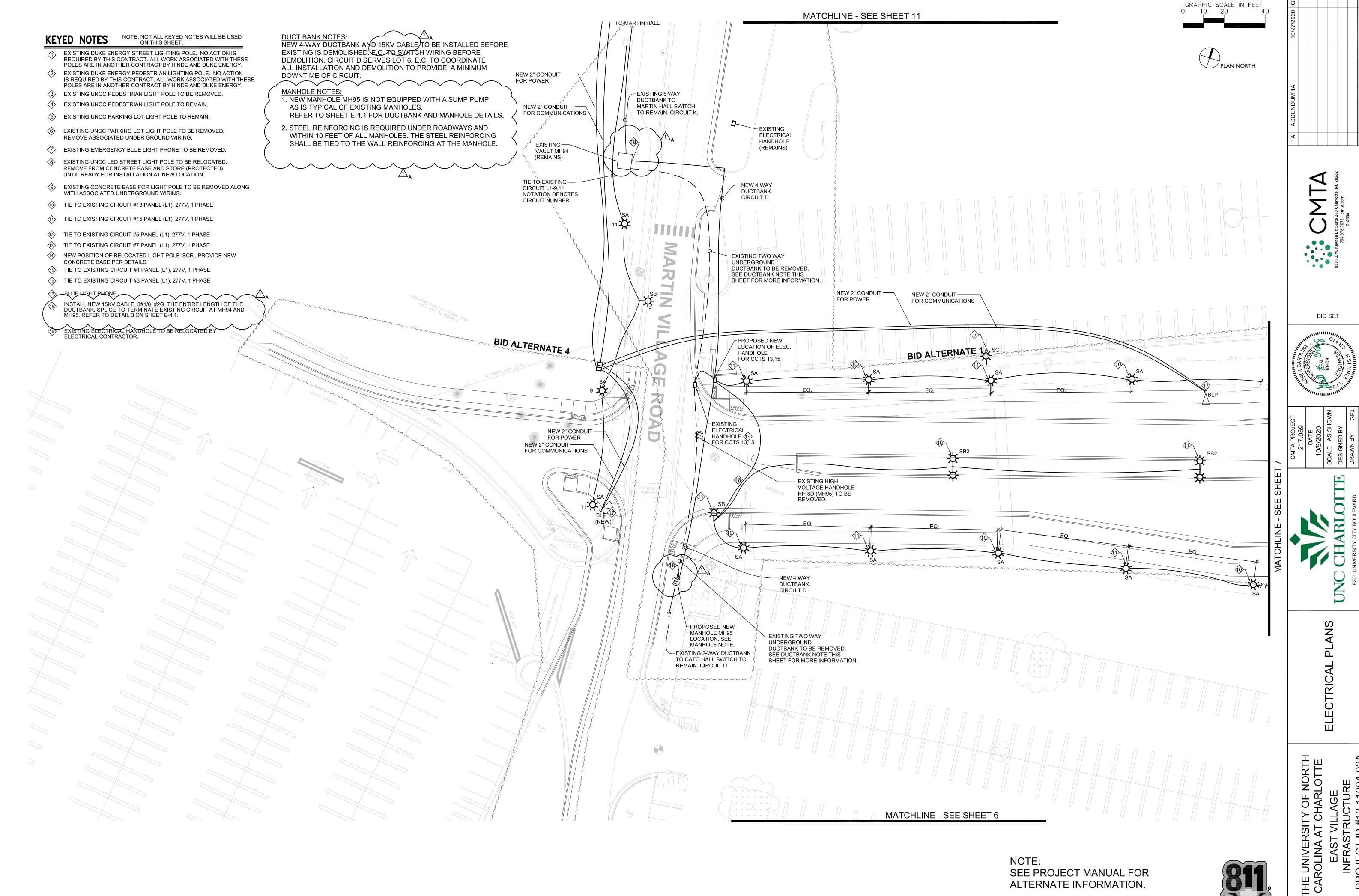




**DETAILS** ELECTRICAL

THE UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

SHEET NUMBER E-4.1



SEE PROJECT MANUAL FOR ALTERNATE INFORMATION.



SHEET NUMBER E-9