Date of Issue:	FEBRUARY 29, 2024
Project:	CONTRACT NO. 23-1 ELECTRICAL SERVICE UPGRADE SCHUYLKILL HAVEN HIGH RISE
Project Owner:	SCHUYLKILL COUNTY HOUSING AUTHORITY 245 Parkway, Schuylkill Haven, PA 17972
Pre-Bid Date:	FEBRUARY 22, 2024 at 10:00 AM At the office of the Schuylkill County Housing Authority
Bid Due Date:	MARCH 7, 2024 at 10:00 AM At the office of the Schuylkill County Housing Authority

Prior to submission of a bid for this project, all Contractors are urged to visit the Levkulic Associates website at www.levkulicgroup.com to view the most current information pertaining to this project.

I. GENERAL CLARIFICATIONS:

- 1. As a clarification, Utility Company Removal of Facility Transformers: The Utility Company will be removing the transformers during the Electrical shutdown. The transformers will either be pulled forward so they are out of the way for the contractor to perform the work in the room or, if it appears the transformers will be in the way, they will be moved out of the room and remain there until the oil can be tested.
- 2. As a clarification, the Utility will require a cut-in card for the energization of the new service. The Utility indicated they will have the inspector at the site during the shutdown and the cut-in card will be issued during the shutdown period. This will minimize the operation time of the facility on the temporary generator.
- 3. As a clarification, the Utility will remove the CT wiring between the switchboard and their existing meter socket when they remove the CT's.

Date of Issue:	FEBRUARY 9, 2024
Project:	CONTRACT NO. 23-1 ELECTRICAL SERVICE UPGRADE SCHUYLKILL HAVEN HIGH RISE
Project Owner:	SCHUYLKILL COUNTY HOUSING AUTHORITY 245 Parkway, Schuylkill Haven, PA 17972
Pre-Bid Date:	FEBRUARY 22, 2024 at 10:00 AM At the office of the Schuylkill County Housing Authority
Bid Due Date:	MARCH 7, 2024 at 10:00 AM At the office of the Schuylkill County Housing Authority

Prior to submission of a bid for this project, all Contractors are urged to visit the Levkulic Associates website at www.levkulicgroup.com to view the most current information pertaining to this project.

I. GENERAL CLARIFICATIONS:

- 1. The non-mandatory Pre-Bid Meeting for this project will be held on Thursday, February 22, 224 at 10:00 AM at the office of the Schuylkill County Housing Authority.
- 2. Bids for this project will be received until 10:00 AM on Thursday, March 7, 2024 at the office of the Schuylkill County Housing Authority.
- 3. Drawing sheets E002, E100, E200 and E201 have been reissued to modify details for the cable entrance to the building and eliminating the need for UL to inspect the project. Refer to attached drawing sheets.

GENERAL NOTES

- DISCREPANCIES FOUND BETWEEN THE SPECIFICATIONS, THE DRAWINGS, AND/OR THE ACTUAL SITE CONDITIONS SHALL BE SUBMITTED TO THE ENGINEER IN THE FORM OF AN RFI FOR CLARIFICATION PRIOR TO ANY WORK INVOLVING THE DISCREPANCY
- DRAWINGS ARE DIAGRAMMATIC; THEREFORE, THE CONTRACTORS SHALL MAKE ADJUSTMENTS AS REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTORS SHALL CLOSELY EXAMINE ALL PROJECT DRAWINGS TO UNDERSTAND WORK REQUIRED AND TO AVOID INTERFERENCE WITH EXISTING SITE CONDITIONS AND NEW WORK, SUCH AS EXISTING PIPING, STRUCTURES/UTILITIES, ETC.
- 3. ALL DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- 4. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES AND WILL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES AND STRUCTURES AT ALL TIMES.
- 5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AND COMPLETELY AT THEIR EXPENSE. PRIOR TO PERFORMING ANY EXCAVATION ACTIVITIES, PENNSYLVANIA ONE-CALL MUST BE CONTACTED AT 1-800-242-1776.
- 6. PROTECT ALL EQUIPMENT STORED OR SET IN PLACE ON THE JOB.
- 7. THE CONTRACTOR SHALL REFER TO EQUIPMENT PLANS FOR DIMENSIONS, INSTALLATION PROCEDURES & DETAILS, AND COORDINATION WITH SITE PLANS, BEFORE COMMENCING WORK.
- 8. ELECTRICAL MATERIALS COMPLY WITH U.L., CE, TUV, MCS, IEC61215, IEC61730 AND IP66.
- 9. AMBIENT TEMPERATURE RANGE OF TO 105F.
- 10. THE EXACT LOCATION AND TYPE OF ALL ELECTRICAL TIE-INS ARE TO BE CONFIRMED WITH EQUIPMENT VENDORS, OWNER AND SITE CONDITIONS.
- 11. CONTRACTOR TO VERIFY ALL MANUFACTURER EQUIPMENT DIMENSIONS AND CONDITIONS IN THE FIELD. DETAILS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ALL DETAILS MUST BE CONSISTENT WITH SHOP DRAWINGS AND EQUIPMENT
- 12. DETAILS OF WORK MAY BE OMITTED FOR CLARITY. CONTRACTOR SHALL PROVIDE A FULL AND FUNCTIONING SYSTEM.
- 13. ALL EXPOSED FASTENERS SHALL BE TAMPER RESISTANT TORX OR HOLLOW KEY TYPE. ONE-WAY SCREWS ARE NOT ACCEPTABLE.
- 14. ELECTRICAL CONTRACTOR SHALL PROVIDE GROUNDING OF EQUIPMENT AS PER NATIONAL ELECTRICAL CODE REQUIREMENTS.
- 15. ELECTRICAL CONTRACTOR SHALL PROVIDE OWNER WITH A CERTIFICATE OF ELECTRICAL INSPECTION UPON COMPLETION OF WORK.
- 16. ALL CONCRETE TO BE AT LEAST 4000 PSI AVERAGE AT 28 DAYS. ANY FLAT WORK CONCRETE SHALL BE SPECIFIED AS: MINIMUM 4000 PSI CONCRETE, 7-BAG MIX, NO SLAG AND NO FLY ASH. EXTERIOR CONCRETE TO RECEIVE AIR ENTRAINMENT. PROVIDE MIX DESIGN WITH SHOP DRAWINGS.
- 17. THE CONTRACTOR SHALL PAY AND ARRANGE FOR PERMITS AND INSPECTIONS BY LOCAL AUTHORITIES.
- 18. NO WORK SHALL COMMENCE UNTIL ALL PERMITS ARE SECURED.
- 19. "GRAYED AREAS" ARE ORIGINAL DRAWING SCANS PROVIDED FOR REFERENCE ONLY. THESE AREAS ARE NOT INTENDED TO DEPICT WORK.

SYMBOLOGY NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

STANDARD ELECTRICAL SITE SYMBOL LEGEND

	CONDUIT – EXPOSED, ABOVE FLOOR/GRADE
	NEW ELECTRICAL DUCTBANK, CONDUITS DIRECT BURIED (UTILIZE PVC UNLESS NOTED OTHERWISE)
\////////////////////////////////////	NEW ELECTRICAL DUCTBANK, CONDUITS CONCRETE ENCASED
OE	OVERHEAD ELECTRIC
— — <i>UE</i> — —	EXISTING UNDERGROUND ELECTRIC SERVICE
	DUCTBANK CALLOUT, REFER TO ELECTRICAL DUCTBANK SCHEDULE
\mathcal{O}_{PL-x}	UTILITY POLE
EMH-x	MANHOLE

STANDARD ELECTRICAL WIRING SYMBOL LEGEND

	- WIRING - ABOVE FLOOR/GRADE	52	MEDIUM VOLTAGE CIRCUIT BREAKER
	 WIRING – UNDERGROUND COMMUNICATIONS WIRING – ROUTING AS NOTED 		CIRCUIT BREAKER, SINGLE POLE
M	METER		DISCONNECTING SWITCH
		NO	SINGLE POLE SWITCH, NORMALLY OPEN
\sim	TRANSFORMER, SIZE AS SHOWN ON PLANS	NC O O	SINGLE POLE SWITCH, NORMALLY CLOSED
5	INVERTER		DOUBLE POLE SWITCH
-3	CURRENT TRANSFORMER	11	CONTACTOR, NORMALLY OPEN
36	POTENTIAL TRANSFORMER	Ж	CONTACTOR, NORMALLY CLOSED
	FUSE, SIZE AS SHOWN ON PLANS	CRXXX	CONTROL RELAY COIL
Ŧ	GROUND	твххх О	TERMINAL BLOCK TERMINAL WITH NUMBER
	LIGHTNING ARRESTOR	0 0	
*	PLUG IN OR DRAW OUT		MISCELLANEOUS WIRING DEVICES
\bigtriangleup	DELTA	6 6 0 0	
Ύ	WYE, GROUNDED		

GENERAL ABBREVIATIONS

A	AMPERES / AMPS	FT	FEET	PB	PULL BOX
ABV	AUTOMATIC BALL VALVE	GND	GROUND	PH	PHASE
ADA	AMERICANS WITH DISABILITIES ACT	НМІ	HUMAN MACHINE INTERFACE	PH2	PHASE 2
AF	AMPS FRAME	HT	HIGH TEMPERATURE	PLC	PROGRAMMABLE LOGIC CONTROLLER
AFF	ABOVE FINISHED FLOOR	IBC	INTERNATIONAL BUILDING CODE	PM	POWER MONITOR
AFG	ABOVE FINISHED GRADE	ICC	INTERNATIONAL CODE COUNCIL	PT	POTENTIAL TRANSFORMER
AFS	ALTERNATE FUEL SERVICE	ID	IDENTIFICATION	PTZ	PAN-TILT-ZOOM
AIC	AMPS INTERRUPTING CAPACITY	J–BOX	JUNCTION BOX	PVC	POLYVINYL CHLORIDE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	KA	KILO-AMPS	PVDF	POLYVINYLIDENE FLUORIDE
SME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	KAIC	KILO-AMPS INTERRUPTING CAPACITY	QTY	QUANTITY
٩T	AMPS TRIP	KW	KILOWATTS	REF	REFERENCE
ATS	AUTOMATIC TRANSFER SWITCH	LA	LIGHTNING ARRESTOR	RGS	RIGID GALVANIZED STEEL
BESS	BATTERY ENERGY STORAGE SYSTEM	LBS	POUNDS	RTD	RESISTANCE TEMPERATURE DEVICE
LDG	BUILDING	LN	LINEAR	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITIC
OP	BOTTOM OF PIPE	LT	LOW TEMPERATURE	SCH	SCHEDULE
V	BALL VALVE	М	METER	SF	SQUARE FOOT (SQUARE FOOTAGE)
;	CONDUIT	MAX	MAXIMUM	SPD	SURGE PROTECTIVE DEVICE
Ľ	CENTERLINE	MCC	MOTOR CONTROL CENTER	SS	STAINLESS STEEL
PU	CENTRAL PROCESSING UNIT	MFR	MANUFACTURER	TBD	TO BE DETERMINED
S	CARBON STEEL	MIN	MINIMUM	TELE	TELEPHONE
SA	CANADIAN STANDARDS ASSOCIATION	Ν	NORMAL	тос	TOP OF CONCRETE
т	CURRENT TRANSFORMER	NC	NORMALLY CLOSED	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
W	COLD WATER	NE	NORMAL/EMERGENCY	TYP	TYPICAL
AIG	DIAMETER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	UCC	UNIFORM COMMERCIAL CODE
VIV	DIVISION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	UL	UNDERWRITERS LABORATORY
TT	DIRECT TRIP TRANSFER	NO	NORMALLY OPEN	UPS	UNINTERRUPTIBLE POWER SUPPLY
	EMERGENCY	NTS	NOT TO SCALE	V	VOLT
L	ELEVATION	OC	ON CENTER	VFD	VARIABLE FREQUENCY DRIVE
.M	EMERGENCY	OD	OUTER DIAMETER	VDC	VOLTAGE DIRECT CURRENT
QP	EQUIPMENT	OPS	OPERATIONS	W/	WITH
-	FAHRENHEIT	PA	PENNSYLVANIA	www	WORLD WIDE WEB

GENERAL ABBREVIATIONS NOTES:

BE USED ON THIS PROJECT

ANSI/IEEE STANDARD C37.2 **RELAY FUNCTIONS**

<u>RELAY</u>	FUNCTION
27	UNDER-VOLTAGE DETECTION
50	INSTANTANEOUS OVERCURRENT
51	INVERSE TIME OVERCURRENT
51N	INVERSE TIME OVERCURRENT NEUTRAL
59	OVER-VOLTAGE DETECTION
810U	OVER/UNDER FREQUENCY

1. THE ABOVE ABBREVIATION LIST IS SHOWING COMMONLY USED ABBREVIATIONS. ALL ABBREVIATIONS MAY NOT

ELECTRICAL SPECIFICATIONS

GENERAL

1. WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, LATEST EDITION AS WELL AS ALL STATE AND LOCAL CODES.

B 2. (NOT USED)

- 3. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE FASHION. CUTTING SHALL BE KEPT TO A MINIMUM. ALL CUTTING, PATCHING, SEALING AND PAINTING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADE. ALL WORK MUST MEET THE APPROVAL OF THE PROFESSIONAL.
- 4. ALL AREAS SHALL BE MAINTAINED IN A NEAT AND ORDERLY FASHION AND DIRT AND DEBRIS REMOVED AS NEEDED TO SATISFY THE OWNER OR PROFESSIONAL.
- 5. ANY WORK PERFORMED SHALL BE IN A PROFESSIONAL MANNER AND SHALL MEET THE REQUIREMENTS OF THE PROFESSIONAL. ANY WORK DEEMED TO BE INFERIOR SHALL BE REWORKED OR REPLACED UNTIL ACCEPTABLE TO THE PROFESSIONAL.
- 6.ALL UTILITIES FOR THE FACILITY SHALL BE MAINTAINED IN SERVICE AT THE EXPENSE OF THE CONTRACTOR. IN THE EVENT THAT A SERVICE INTERRUPTION IS INEVITABLE, THE CONTRACTOR MUST PROVIDE THE OWNER WITH A SCHEDULE FOR THE INTERRUPTION AND SHALL PERFORM THE WORK AT A TIME AS APPROVED BY THE OWNER.

DEMOLITION

- 1. THE OWNER SHALL BE GIVEN THE OPPORTUNITY TO RETAIN OWNERSHIP OF ANY OR ALL REMOVED MATERIALS AND EQUIPMENT. ALL ITEMS SHALL BE CAREFULLY HANDLED AND PROTECTED AND SHALL BE STORED AT A LOCATION ON SITE AS DIRECTED BY THE OWNER. ANY ITEMS DEEMED NOT WANTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED PROMPTLY FROM THE SITE.
- 2.ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS THAT EXIST IN AREAS OF THE NEW WORK BUT NOT SHOWN ON THE DRAWINGS OR NOT SPECIFICALLY SCHEDULED TO BE REMOVED AND WHICH ARE AFFECTED BY THE NEW WORK SHALL BE RELOCATED BY THIS CONTRACTOR TO A LOCATION AS DIRECTED BY THE PROFESSIONAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE RECONNECTION OF RELOCATED ITEMS AND PROPER OPERATION OF THE SAME.
- 3. ANY EXISTING EQUIPMENT SCHEDULED TO BE RETAINED BUT LEFT DE-ENERGIZED BECAUSE OF THE REMOVAL OF EXISTING EQUIPMENT OR CIRCUITS SHALL HAVE A NEW HOMERUN CIRCUIT INSTALLED TO THE NEAREST PANEL AND CONNECTED TO A CIRCUIT BREAKER OF THE REQUIRED SIZE AND POLE.
- 4. WHERE CIRCUIT CONTINUITY OS INTERRUPTED DUE TO REMOVAL OR RELOCATION OF EXISTING ELECTRICAL EQUIPMENT, THE CONTRACTOR SHALL FURNISH AND INSTALL NEW BRANCH CIRCUITING OF REQUIRED SIZE AND RECONNECT.

CONDUIT SYSTEM INSTALLATION

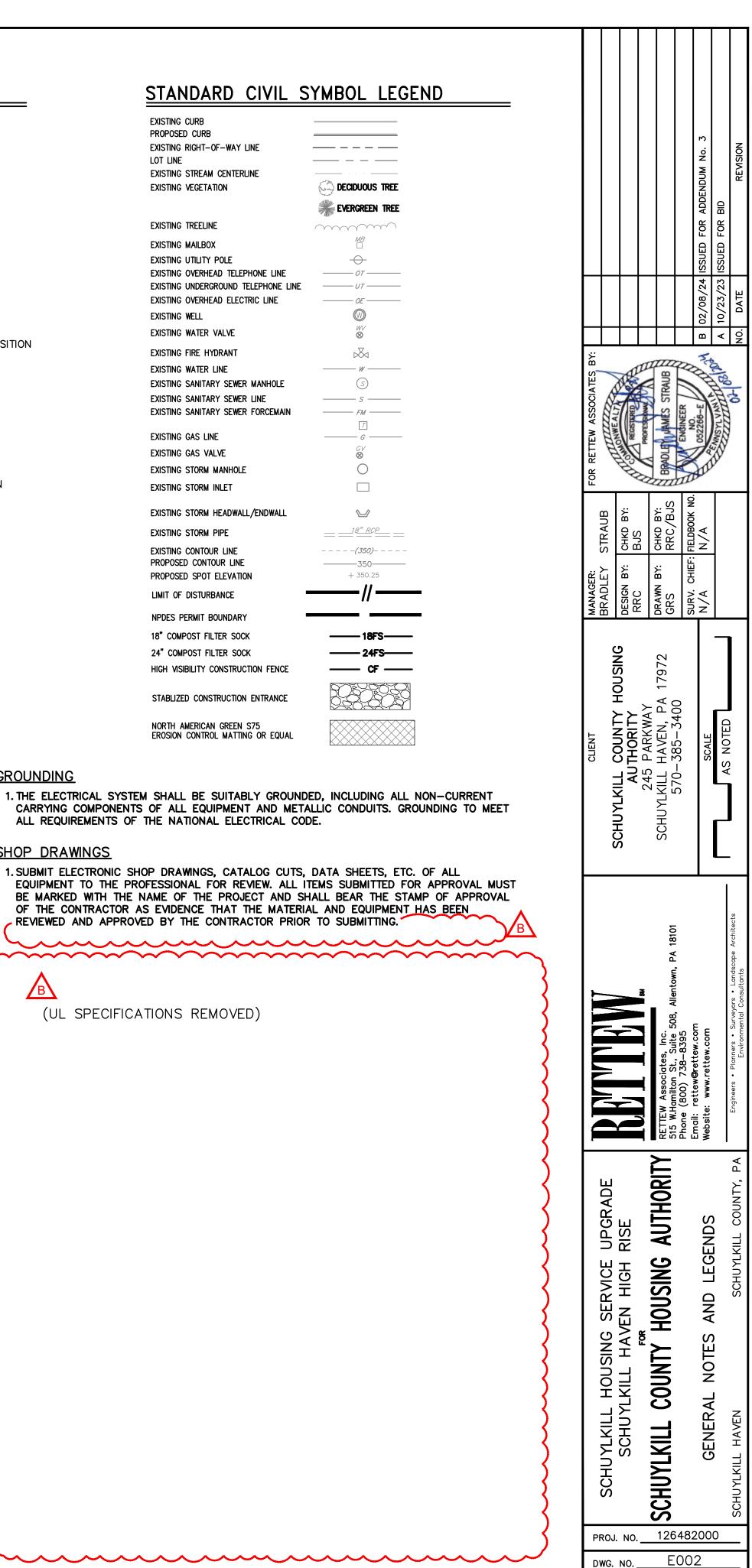
1. WHERE NEW EQUIPMENT IS INSTALLED IN EXISTING CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL CUT AND PATCH WALLS AND CEILINGS. WHERE THIS IS NOT PRACTICAL, CONDUIT SHALL BE INSTALLED EXPOSED AS INCONSPICUOUSLY AS POSSIBLE AND IN A MANNER AS APPROVED BY THE PROFESSIONAL. THREADED COUPLINGS SHALL BE USED WHERE SUCH CONSTRUCTION REQUIRES IT. SINGLE HOLE MALLEABLE IRON CONDUIT STRAPS SHALL BE USED TO SUPPORT ALL CONDUITS. ALL CONDUIT RUNS TERMINATING IN A BOX OR ENCLOSURE OR ANY TYPE SHALL BE PROVIDED WITH A GALVANIZED LOCKNUT AND BUSHING INSIDE AND A LOCKNUT OUTSIDE. COUPLINGS AND CONNECTIONS SHALL BE COMPRESSION TYPE. EXISTING CONDUITS SHALL BE UTILIZED WHERE POSSIBLE IF IN ACCEPTABLE CONDITION.

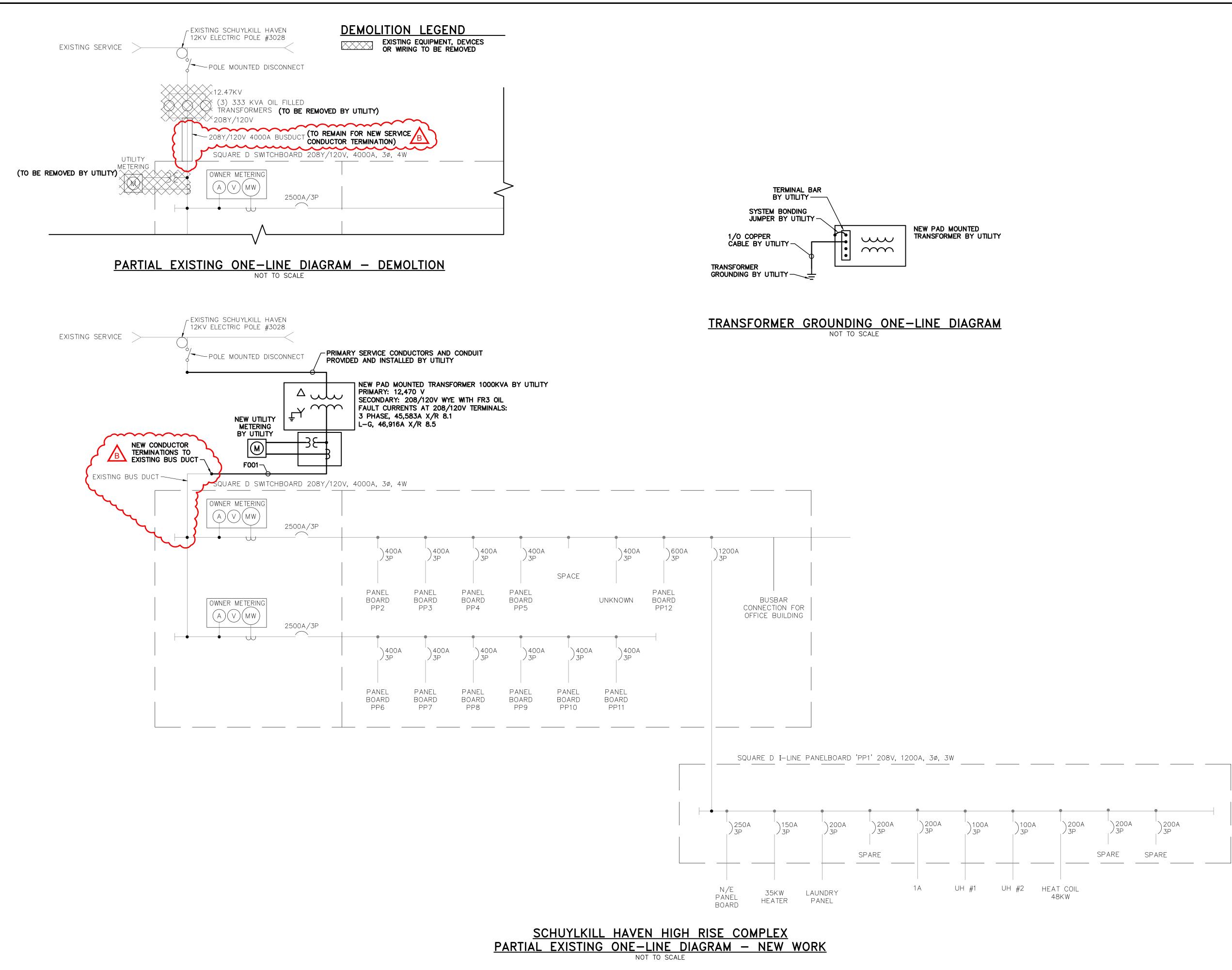
<u>WIRING</u>

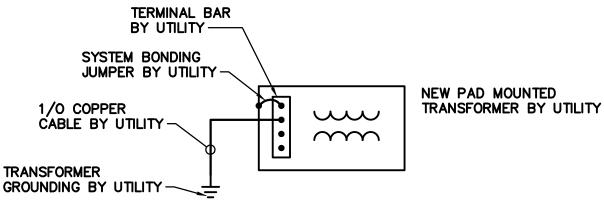
- 1. ALL CONDUCTORS FOR POWER FEEDERS SHALL BE RATED 600 VAC AND BE 98% COPPER. WIRE SIZES NUMBER 8 AND LARGER SHALL BE STRANDED. CONDUCTOR SIZES LESS THAN NUMBER 12 SHALL NOT BE UTILIZED WITH THE EXCEPTION OF CONTROL WIRING.
- 2. ALL 120 VAC WIRING SHALL HAVE THE GROUNDED CONDUCTOR (NEUTRAL) WITH WHITE INSULATION AND THE UNGROUNDED CONDUCTOR (HOT) IN BLACK. THE GROUNDING CONDUCTOR SHALL BE GREEN.

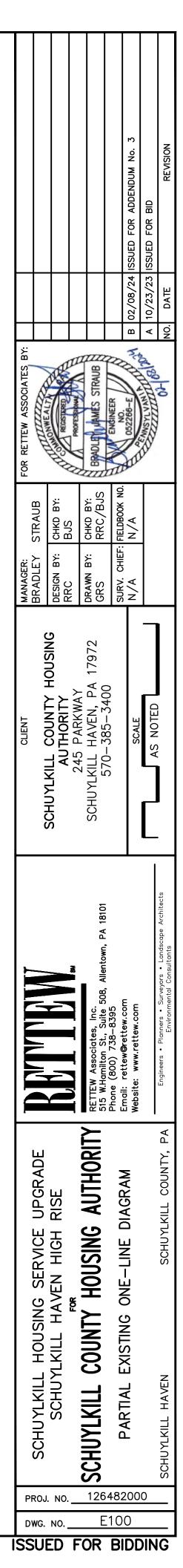
GROUNDING

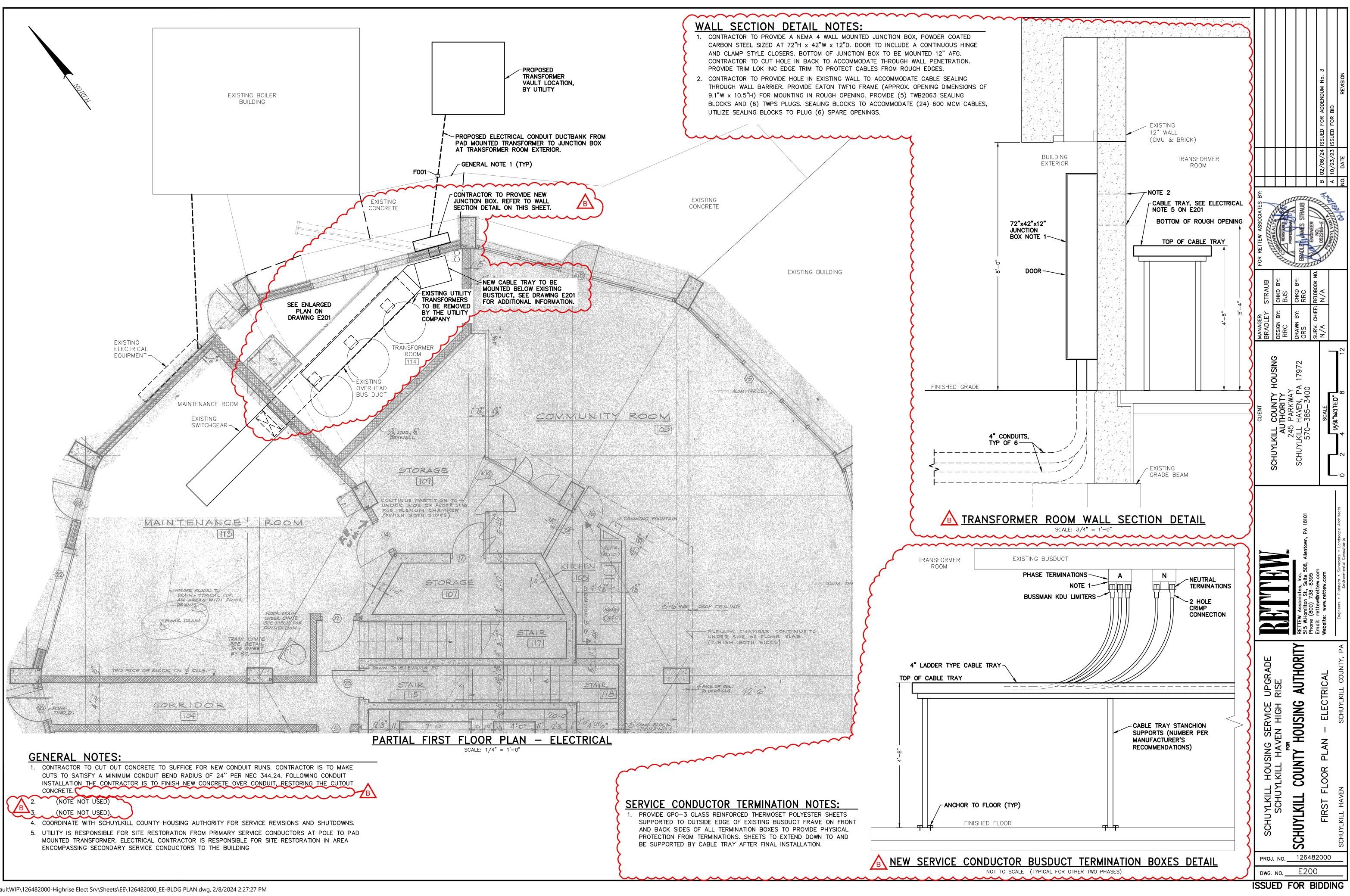
SHOP DRAWINGS

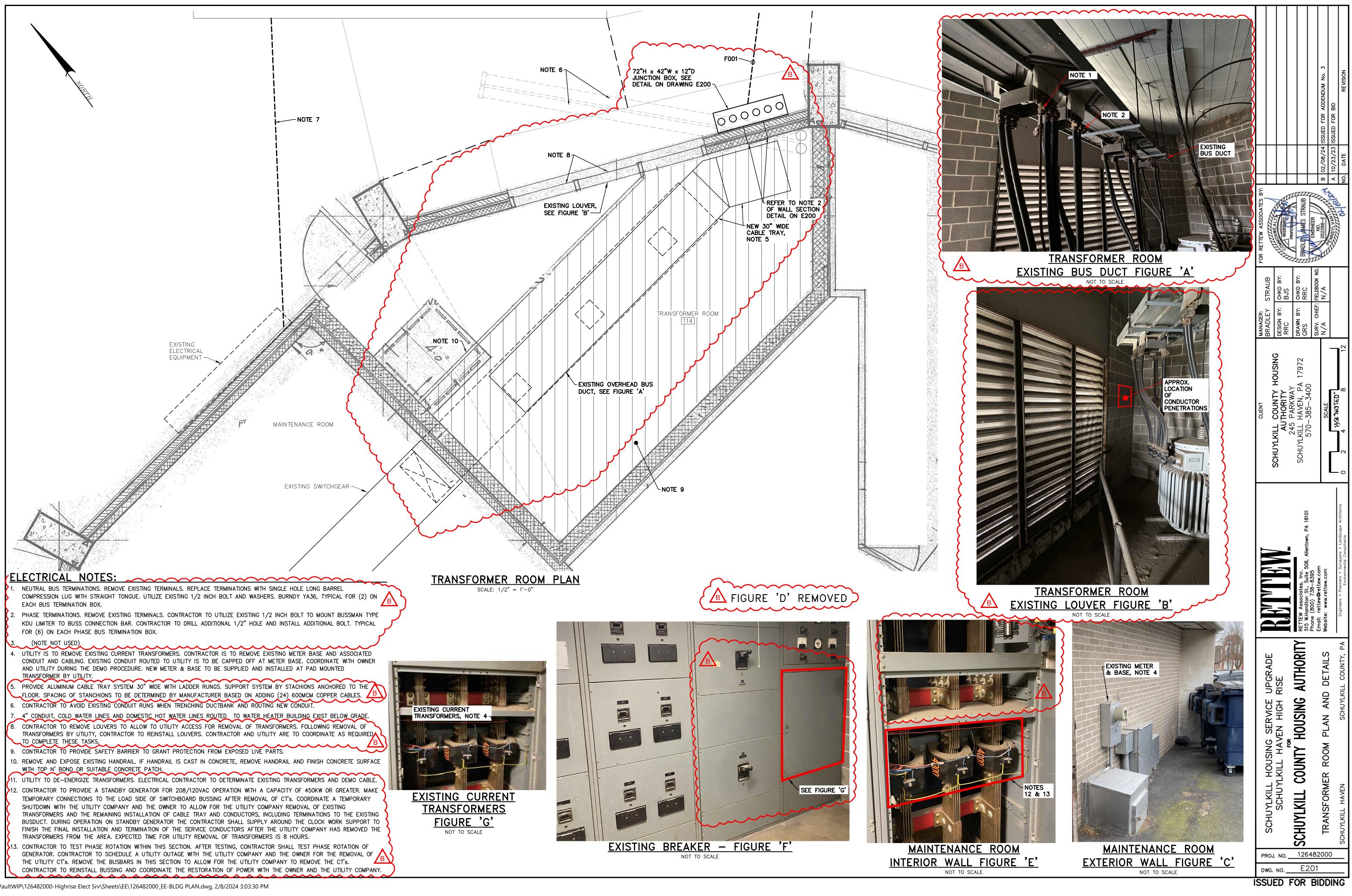












Date of Issue:	JANUARY 22, 2024
Project:	CONTRACT NO. 23-1 ELECTRICAL SERVICE UPGRADE SCHUYLKILL HAVEN HIGH RISE
Project Owner:	SCHUYLKILL COUNTY HOUSING AUTHORITY 245 Parkway, Schuylkill Haven, PA 17972
Bid Due Date:	TBD (SEE CLARIFICATION BELOW) At the office of the Schuylkill County Housing Authority

Prior to submission of a bid for this project, all Contractors are urged to visit the Levkulic Associates website at www.levkulicgroup.com to view the most current information pertaining to this project.

I. GENERAL CLARIFICATIONS:

- 1. The pre-bid meeting scheduled for Tuesday, January 23, 2024 will be postponed. We are working to modify details for the cable entrance to the building and eliminating the need for UL to inspect the project. Details have been forwarded to the Municipality and we are awaiting approval. Upon receipt, revised pre-bid and bid due dates will be provided.
- 2. An RFI was received from Bruce and Merrilees. Questions are listed below. Answers follow each question.
 - Q1: Is the vault provided by the EC or the Utility Co.
 - A1: Per Project Drawing Sheet E003, Vault is by utility. Vault was installed in November by the Utility company.
 - Q2: How long will we be allowed for the outage to change over of the service.
 - A2: Down time shall be kept to a minimum. All down time shall be closely coordinated with the Owner no less than three days prior to shut down. During whole building shut downs, Contractor shall continuously staff the project until service is restored.
 - Q3: Will it have to be done on weekend.
 - A3: No, but overtime may be required depending on anticipated down time.
 - Q4: Do w have to provide temporary power to building during outage. If so what size generator is needed.
 - A4: Existing building generator may be utilized for shut down.
 - Q5: Are there any utility costs.
 - A5: Contractor shall contact the Schuylkill Haven Electric Department for any costs. Additionally, permit costs shall be coordinated with the Borough of Schuylkill Haven Code Office. Borough of Schuylkill Haven 570.385.2841
 - Q6: Can the individual breakers that need to be change out be done during normal hours (M-F, 7am-3:30 pm.)
 - A6: Yes.

- Q7: Can EMT be used once transition above ground inside the building.
- A7: This item will be addressed once a project determination (see item #1 above) is addressed by the local code official.

Date of Issue:	DECEMBER 4, 2023
Project:	CONTRACT NO. 23-1 ELECTRICAL SERVICE UPGRADE SCHUYLKILL HAVEN HIGH RISE
Project Owner:	SCHUYLKILL COUNTY HOUSING AUTHORITY 245 Parkway, Schuylkill Haven, PA 17972
Bid Due Date:	DECEMBER 11, 2023 AT 10:00 AM (Local Prevailing Time) At the office of the Schuylkill County Housing Authority

Prior to submission of a bid for this project, all Contractors are urged to visit the Levkulic Associates website at www.levkulicgroup.com to view the most current information pertaining to this project.

I. GENERAL CLARIFICATIONS:

1. As a clarification, the chart below shall replace the Electrical Feeder Schedule on Drawing E300.

DE SIG.	FROM	то	VOLTAGE	CONDUCTORS - Qty / Size			CONDUIT	REMARKS
DE 510.				RATING	PHASE	NEUTRAL	SIZE/TYPE	REMARKS
F001	1000 KVA TRANSFORMER	EXISTING SWITCHBOARD BUS in Maintenance Room	208/120	600V	6 SETS - (3) #600 kcmil	6 SETS - (1) #600 kcmil	4" PVC SCHEDULE 40	PROVIDE BUSSMAN TYPE KDU CABLE LIMITERS AT BOTH ENDS OF FEEDER CIRCUIT
NOTES:								