



COASTAL CAROLINA UNIVERSITY

SOCCER COMPLEX - FIELD LIGHTING

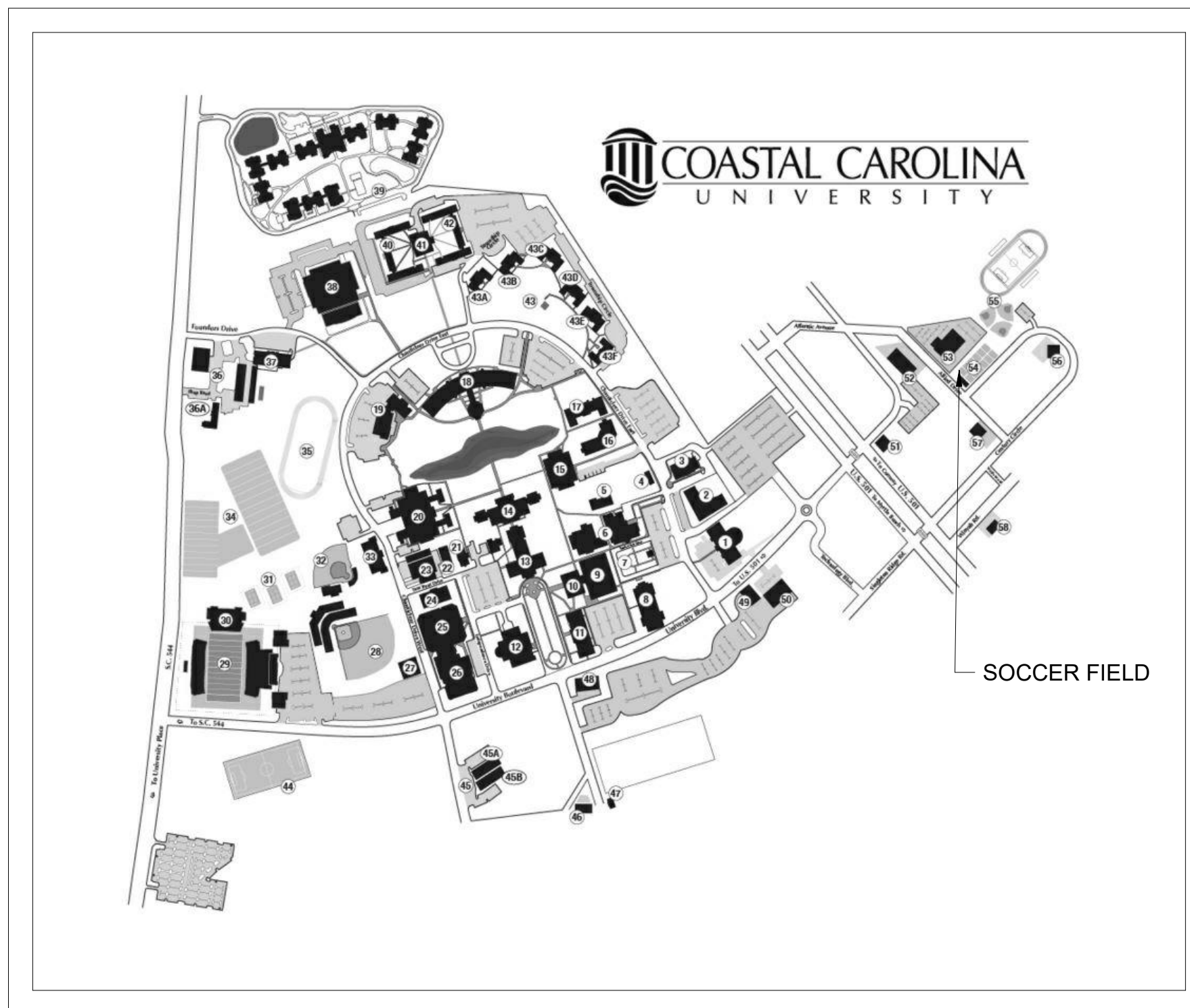
STATE PROJECT NUMBER: H17-9609-MJ-A

CONWAY, SC 29528



CONSULTING ENGINEERS
EMPLOYEE OWNED

1009 ANNA KNAPP BLVD., SUITE 200
MT. PLEASANT, SC 29464
PHONE: (843) 849-1141

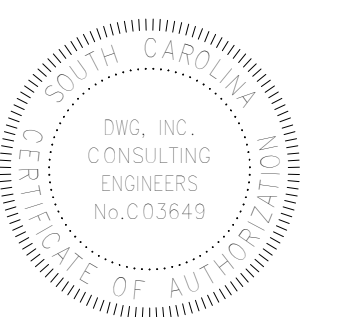


SCOPE OF WORK

PROVIDE 75FC REGIONAL BROADCAST LIGHTING TO THE CURRENT RECREATIONAL SOCCER FIELD NEXT TO THE STEVENS TENNIS COMPLEX. A NEW SERVICE WILL BE ESTABLISHED FROM THE EXISTING TRANSFORMER SERVING THE TENNIS COMPLEX. PROVIDE STADIUM LIGHTING, SCOREBOARD, ROUGH-IN FOR TELECOMMUNICATIONS AND A FOOD TRUCK POWER PEDESTAL.

SHEET INDEX SHEET NAME

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T000	TITLE SHEET
E001	ELECTRICAL NOTES, LEGENDS, SCHEDULES, & DETAILS
E010	ELECTRICAL ONE-LINE DIAGRAM & DETAILS
E101	SOCCER FIELD ELECTRICAL POWER SITE PLAN
E102	SOCCER FIELD SYSTEMS SITE PLAN



DWG
CONSULTING ENGINEERS
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UNIVERSITY
SOCCER COMPLEX - FIELD LIGHTING
CHANTICLEER DR E
CONWAY, SOUTH CAROLINA 29528
TITLE SHEET

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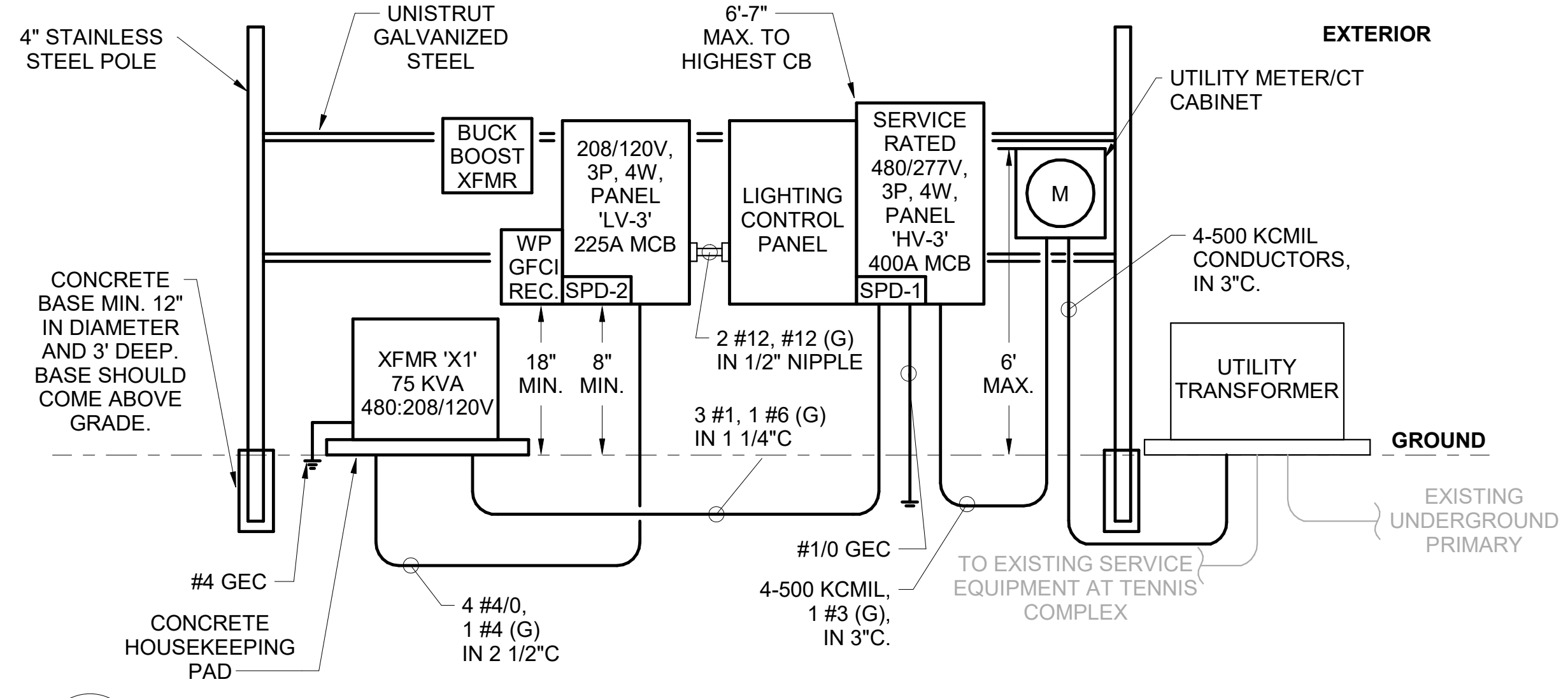
SHEET
T000

ELECTRICAL SERVICE GENERAL NOTES:

- CONTRACTOR SHALL COORDINATE INSTALLATION OF METER WITH UTILITY COMPANY. CONTRACTOR SHALL INSTALL PER REQUIREMENTS OF UTILITY COMPANY.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED ELECTRICAL COMPONENTS TO MAKE UTILITY CONNECTION IN ACCORDANCE WITH UTILITY COMPANY'S REQUIREMENTS. UTILITY COMPANY SHALL INSPECT WORK PRIOR TO PROVIDING CONNECTION TO UTILITY SERVICE TRANSFORMER.
- SERVICE DISCONNECTS SHALL BE PROPERLY LABELED IN ACCORDANCE WITH UTILITY REQUIREMENTS. UTILITY COMPANY SHALL NOT PROVIDE CONNECTION TO SERVICES WITHOUT PROPER IDENTIFICATION.
- ALL EQUIPMENT SHALL BE ENCLOSED IN NEMA 4X SS RATED ENCLOSURES.
- XFMR 'X1' SHALL BE AN EPOXY ENCAPSULATED, PAD-MOUNTED, DRY TYPE TRANSFORMER.
- SPD IS INTEGRAL TO THE PANELBOARD, MEANING THAT THE SPD SERIES IS MOUNTED DIRECTLY TO THE PANELBOARD'S BUS BARS. IN TURN TAKING UP NO CIRCUIT BREAKER SPACES ON THE PANELBOARDS.

HANDHOLE SCHEDULE				DIMENSIONS		
HANDHOLE NO.	LOAD CAPACITY	COVER LOGO	"A"	"B"	"C"	
HH1	TIER 15	ELECTRICAL	28.31"	39.94"	36.0"	
HH2	TIER 15	ELECTRICAL	20.5"	33.5"	24.0"	
HH3	TIER 15	TELECOMMUNICATIONS	20.5"	33.5"	24.0"	

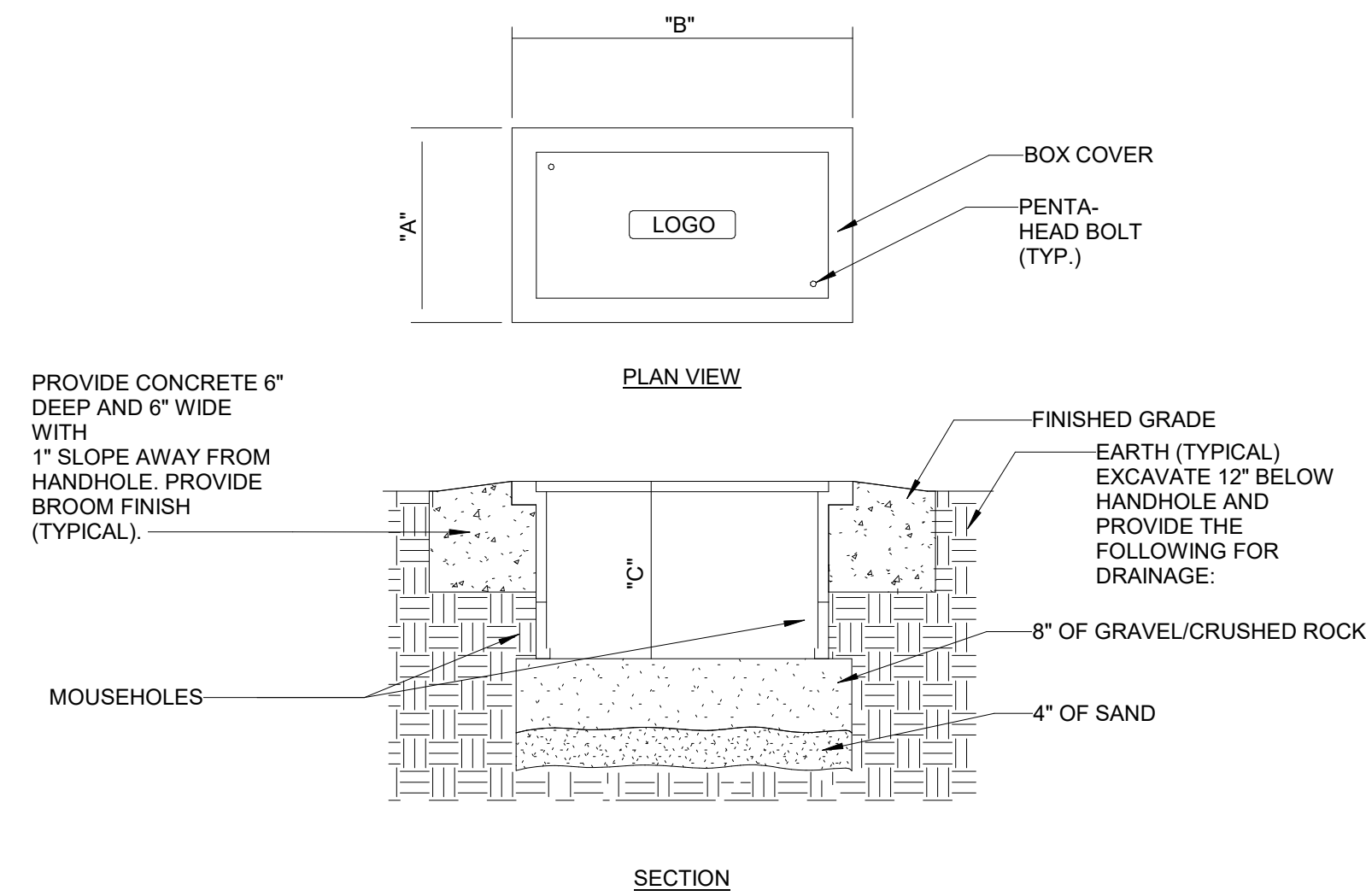
* BASIS OF DESIGN IS DURALITE HANDHOLES.
 * ALL HANDHOLES SHALL BE UL LISTED TO MEET ANSI T7 REQUIREMENTS.
 * PROVIDE TWO (2) PENTA-SOCKET LUG WRENCHES TO OWNER.
 * DIMENSIONS INDICATED IN SCHEDULES INDICATES THE MINIMUM.



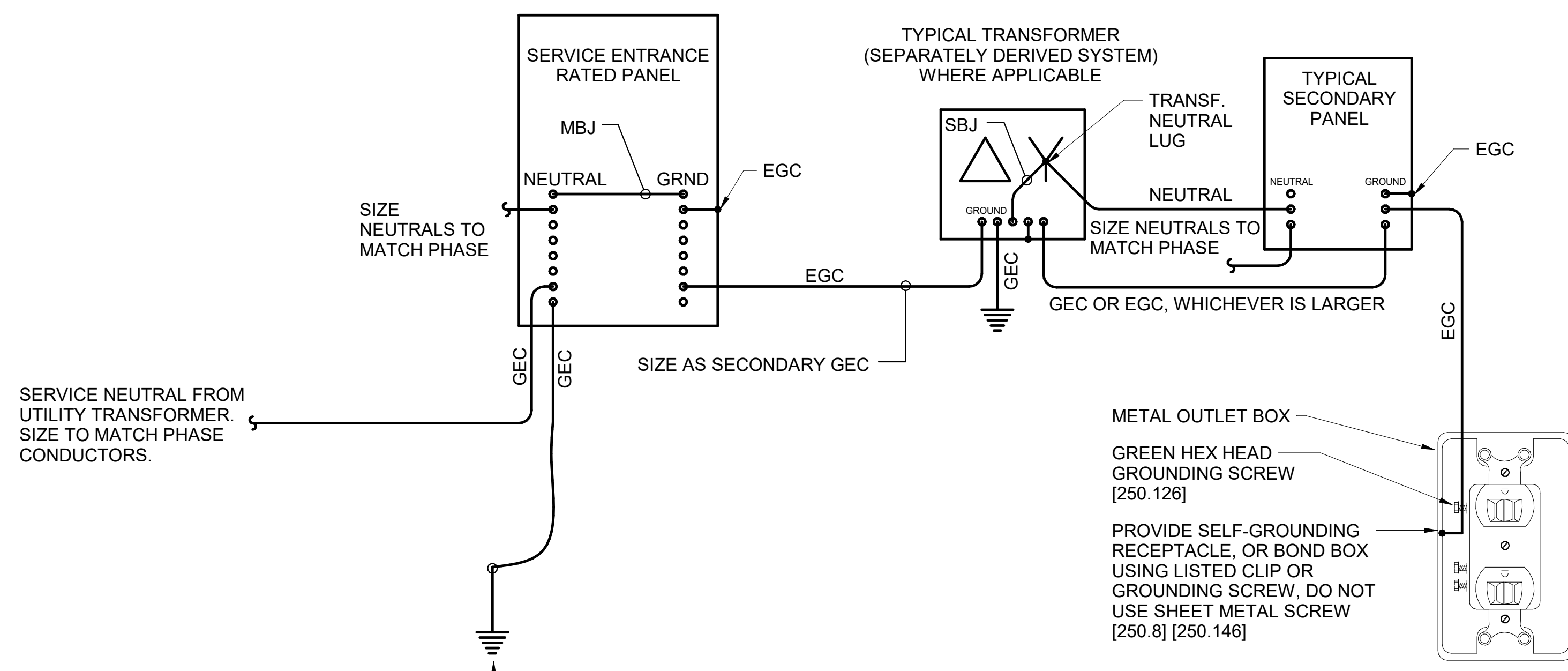
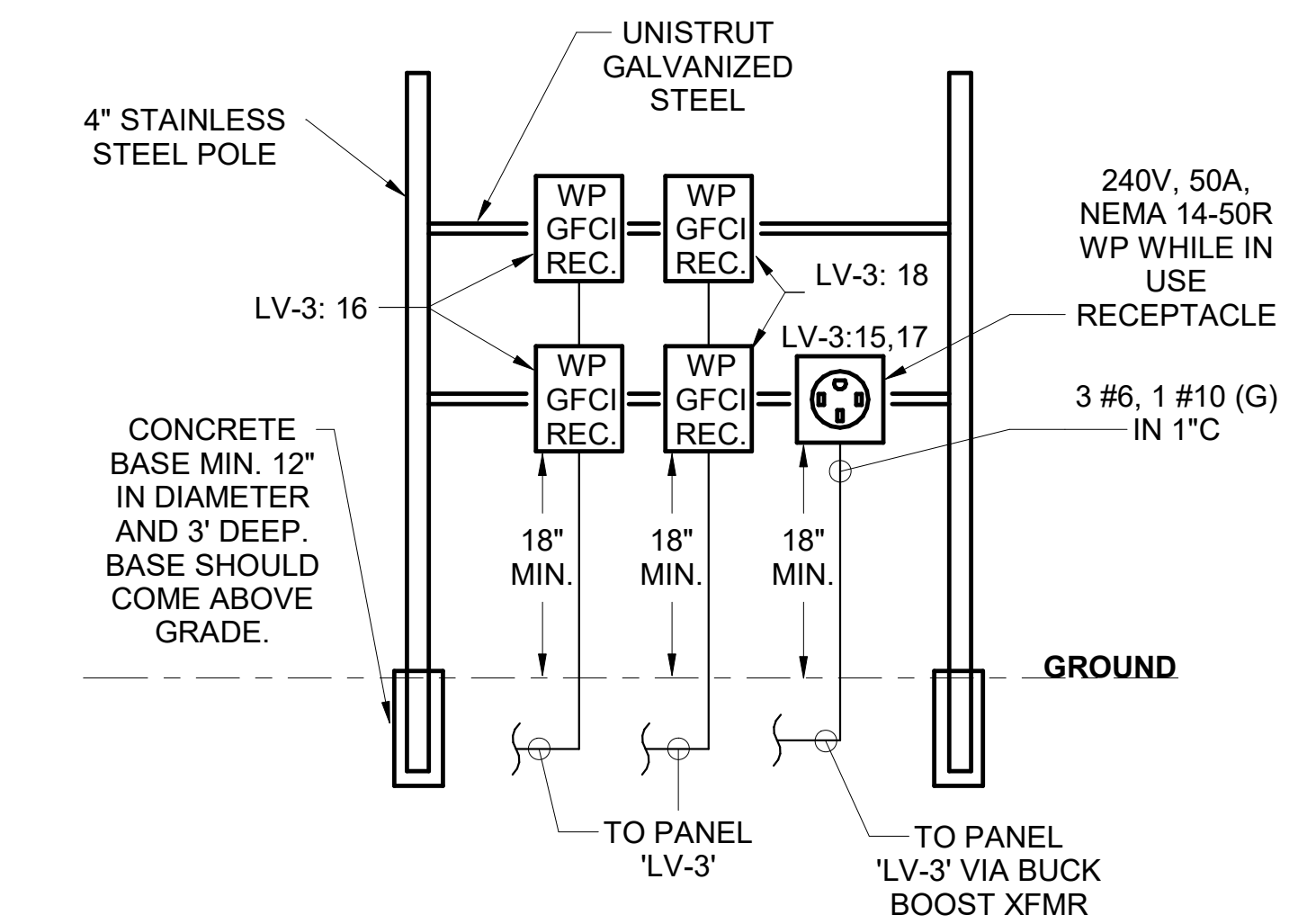
1 ONE-LINE DIAGRAM
E010 NOT TO SCALE

SURGE PROTECTION DEVICE (SPD) SCHEDULE						
SPD ID	LOCATION TYPE	SURGE CURRENT RATING	SURGE COUNTER	VISUAL & AUDIBLE ALARM	NETWORK MONITORING	ENCLOSURE
SPD-1	TYPE 1	100kA / mode	YES	YES	NO	NA
SPD-2	TYPE 1	60kA / mode	YES	YES	NO	NA

3 HANDHOLE DETAIL
E010 NOT TO SCALE



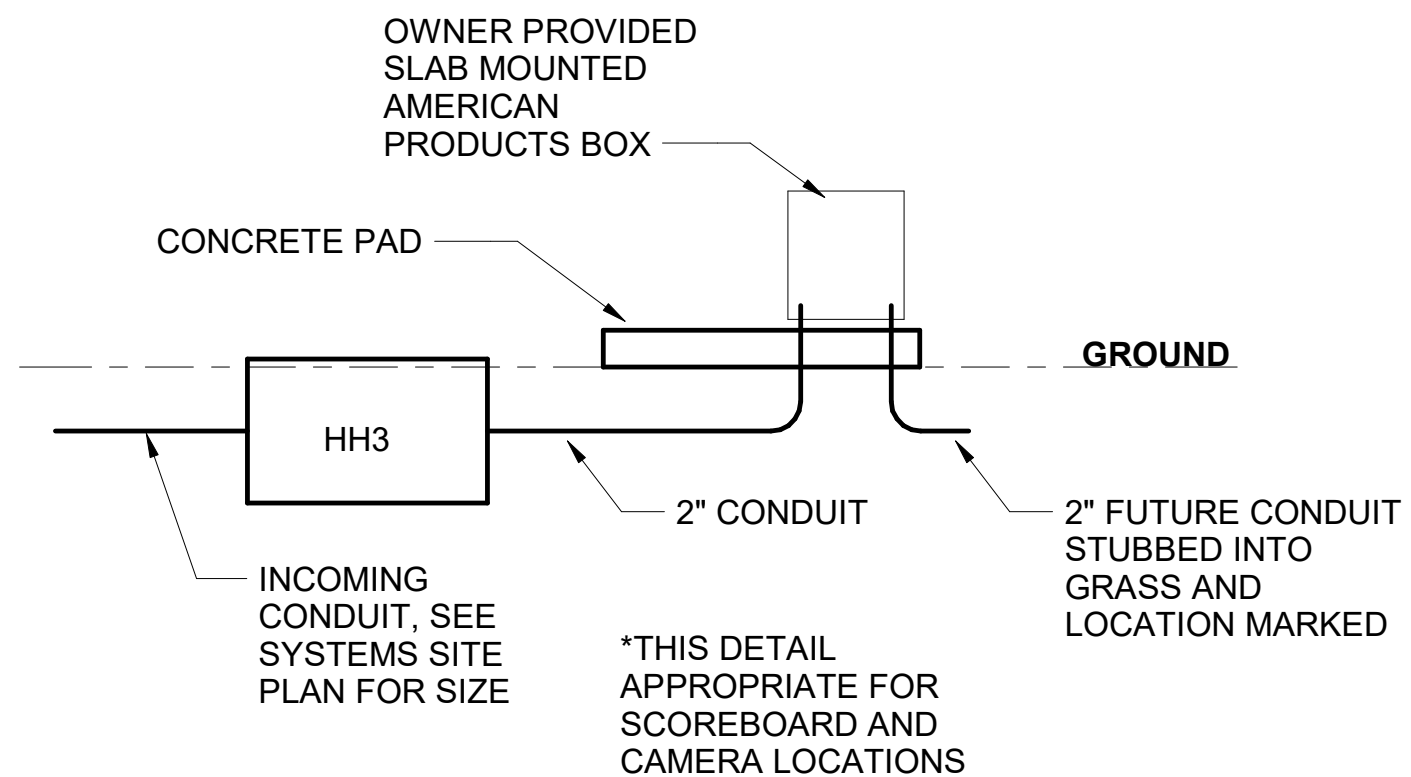
4 FOOD TRUCK POWER PEDESTAL
E010 NOT TO SCALE



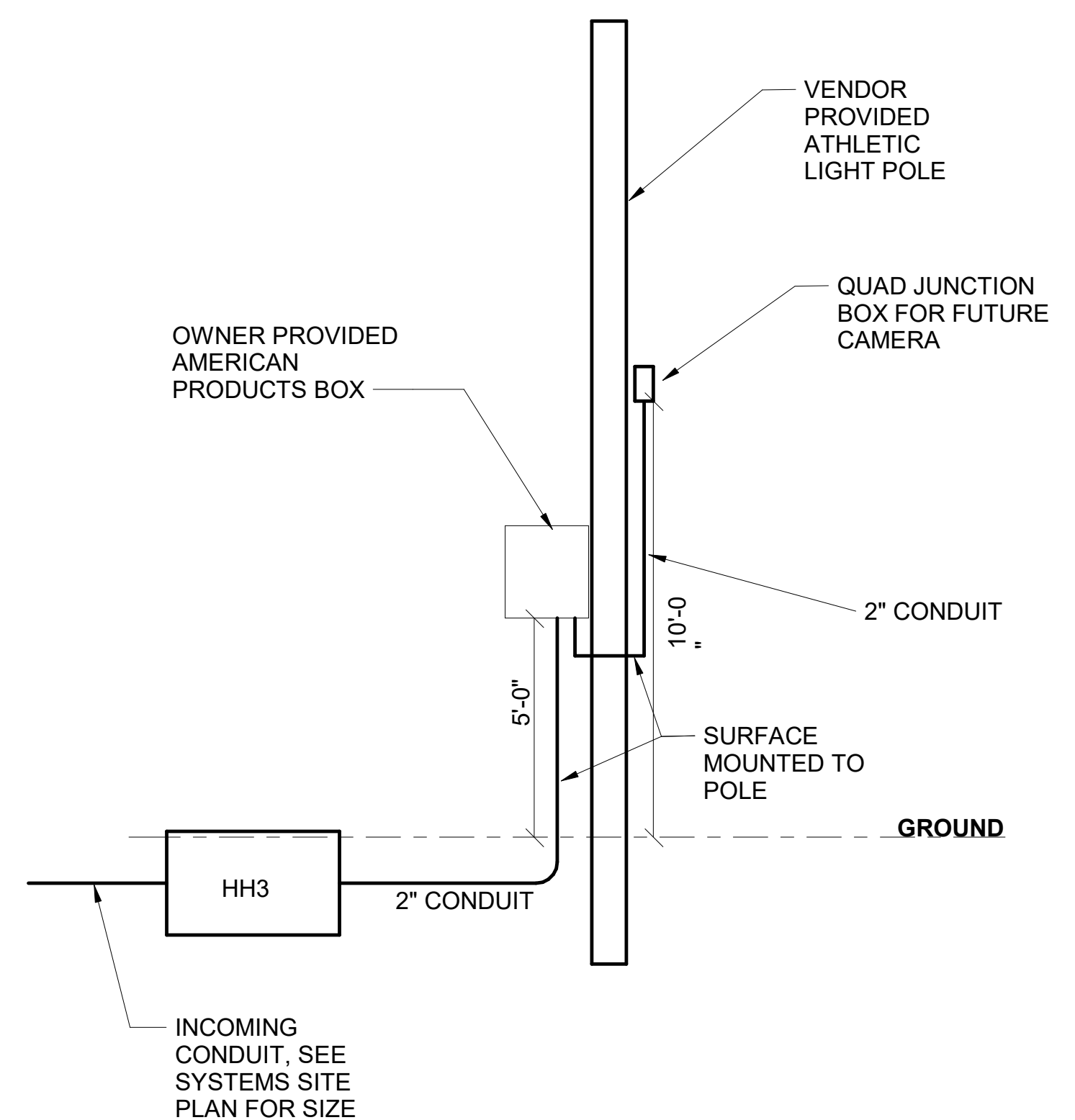
GROUNDING LEGEND		
ABBR.	DESCRIPTION	SIZE
MBJ	MAIN BONDING JUMPER	*
SBJ	SYSTEM BONDING JUMPER	*
GEC	GROUNDING ELECTRODE CONDUCTOR	*
EGC	EQUIPMENT GROUNDING CONDUCTOR	**
*	SIZE PER TABLE 250.66 OF THE NEC OR 12.5% OF CONDUCTOR SIZE [250.28].	
**	SIZE PER TABLE 250.122.	

- GROUNDING NOTES:**
- NUMBERS IN BRACKETS REFER TO SPECIFIC SECTIONS OF THE NATIONAL ELECTRICAL CODE.
 - ALL UNDERGROUND OR OTHERWISE INACCESSIBLE GROUND CONNECTIONS AND SPLICES SHALL BE EXOTHERMICALLY WELDED [250.68].
 - GROUND ELECTRODE FOR SEPARATELY DERIVED SYSTEMS SHALL BE THE NEAREST METAL WATER PIPE OR STRUCTURAL METAL. IF EITHER IS NOT AVAILABLE, PROVIDE GROUNDING CONDUCTOR BACK TO MAIN GROUND BUS AT SERVICE ENTRANCE.
 - PROVIDE A GROUND WIRE IN ALL CONDUITS.
 - EARTH SHALL NOT BE USED AS THE SOLE GROUND RETURN PATH FOR ANY EQUIPMENT POWERED UNDER THIS PROJECT. OTHERWISE OVERCURRENT PROTECTION MIGHT NOT WORK, OR IT MIGHT CAUSE POWER QUALITY PROBLEMS.
 - NO ALUMINUM SHALL BE USED FOR GROUNDING WORK WITHOUT THE SPECIFIC WRITTEN PERMISSION OF THE ENGINEER. EXCEPTION: ALUMINUM BUILDING STRUCTURAL MATERIALS SHALL BE BONDED WITH LISTED ALUMINUM EQUIPMENT WITH ALUMINUM TO COPPER CONNECTORS FOR ROUTING COPPER EGC'S.
 - PROVIDE GROUNDING BUSHING ON BOTH ENDS OF ALL SERVICE ENTRANCE RACEWAYS IF METAL RACEWAY IS USED, SIZE AS A GEC [250.80]. THIS INCLUDES RIGID STEEL ELBOWS ON PVC CONDUIT.
 - ALL METAL ENCLOSURES AND RACEWAYS SHALL BE BONDED TO GROUND [250.86]. FOR CIRCUITS OVER 250V PROVIDE BOND PER [250.97]. STANDARD LOCKNUTS ARE NOT ACCEPTABLE.
 - PROVIDE EGC CONNECTED TO ANY JUNCTION BOX WHERE SPLICE IS MADE [250.148].
 - PROVIDE BOND TO EXPOSED METAL ON ALL MOTORS, PUMPS, AND LIGHTING FIXTURES PER [250.112].

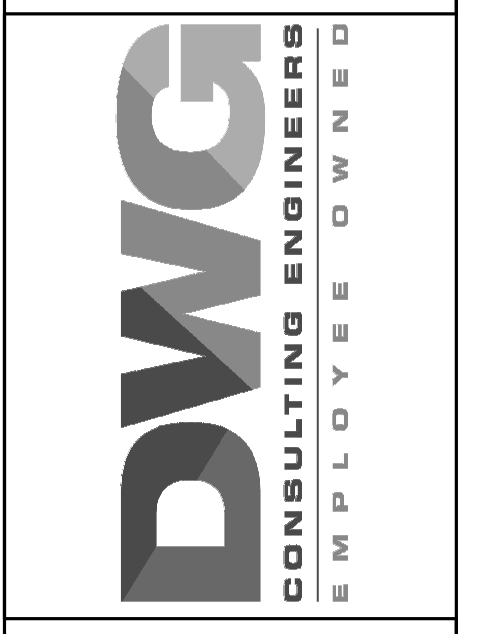
2 GROUNDING DETAIL
E010 NOT TO SCALE



5 BASE MOUNT TELECOMM CONDUIT DETAIL
E010 NOT TO SCALE



6 LIGHT POLE TELECOMM CONDUIT DETAIL
E010 NOT TO SCALE

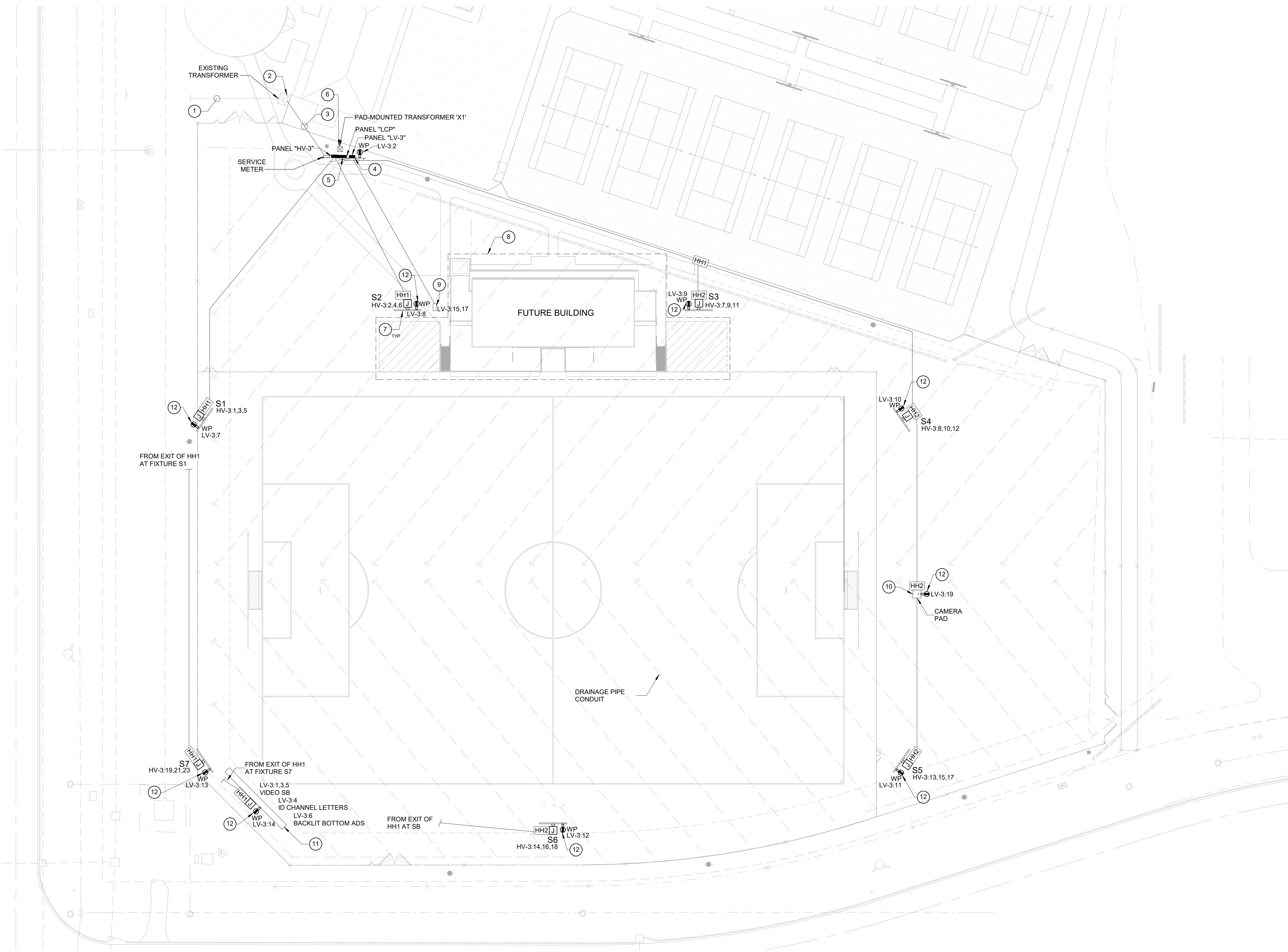


COASTAL CAROLINA UNIVERSITY
 SOCCER COMPLEX - FIELD LIGHTING
 ALLIED DRIVE AND CENTURY CIRCLE
 CONWAY, SOUTH CAROLINA 29528
ELECTRICAL ONE-LINE DIAGRAM & DETAILS

STATE PROJECT NO.:	H17-9609-MJ-A
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SHEET	

E010

PLOT DATE: DATE



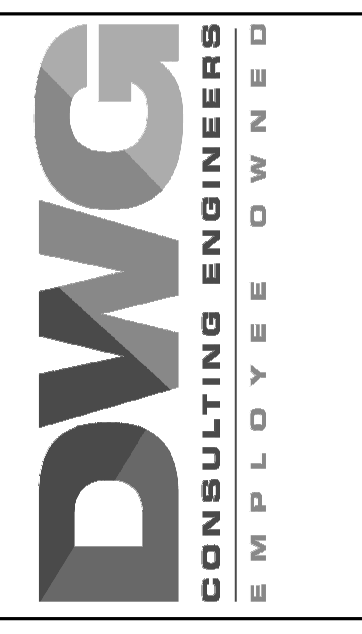
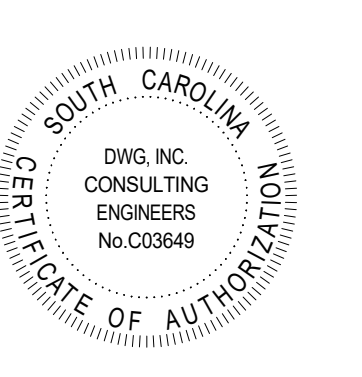
1 SOCCER FIELD ELECTRICAL POWER SITE PLAN
 E101 SCALE: 1" = 30'-0"

GENERAL NOTES

1. ALL 120V RECEPTACLES SHALL BE GFCI AND WEATHERPROOF WHILE-IN-USE.
2. ALL DUPLEX RECEPTACLE BRANCH CIRCUITS SHALL BE ROUTED THROUGH 3/4" CONDUIT.
3. ALL CONDUIT ROUTING SHOWN IS DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL BORE UNDERGROUND CONDUIT. HAND DIGGING SHALL ALSO BE ACCEPTABLE AT CLOSE TOGETHER LOCATIONS.
4. PROVIDE HAND DUG PILOT HOLES TO CONFIRM DEPTH OF EXISTING DRAINAGE AND IRRIGATION PIPE. BORES SHALL RUN BENEATH PIPE DEPTH. CONTRACTOR SHALL PROVIDE ALL DILIGENCE TO AVOID EXISTING DRAINAGE AND IRRIGATION PIPE, AND SHALL REPAIR IF DAMAGE OCCURS.
5. COORDINATE WITH LIGHTING PROVIDER FOR CONTROLS, AND INSTALLATION REQUIREMENTS. CONTRACTOR SHALL CONFIRM EXACT LIGHT LOCATIONS BASED ON LIGHT VENDOR RECOMMENDATIONS. COORDINATE EXACT LOCATIONS IN THE FIELD WITH OWNER PRIOR TO STARTING INSTALLATION.
6. DRAINAGE PIPE LOCATIONS INDICATED ARE APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED. IRRIGATION PIPING IS PRESENT AS WELL BUT IS NOT INDICATED.
7. CONDUITS SHOWN ON THIS SHEET ARE POWER ONLY. SEE E102 FOR TELECOMMUNICATIONS ROUGH-IN CONDUIT.

KEYNOTES

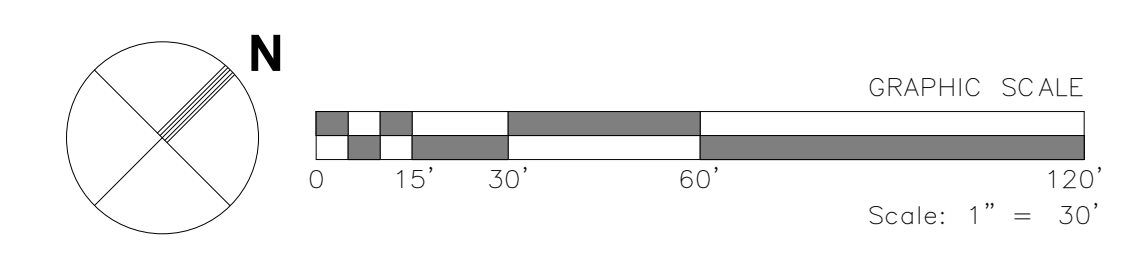
- 1 EXISTING UNDERGROUND UTILITY PRIMARY CONDUCTORS.
- 2 EXISTING 150KVA, 480/277V, PAD MOUNTED UTILITY TRANSFORMER CURRENTLY FEEDING THE ADJACENT TENNIS COMPLEX.
- 3 NEW UNDERGROUND SECONDARY SERVICE, TAPPED FROM THE EXISTING 150KVA TRANSFORMER. SEE ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
- 4 MOUNTING RACK FOR NEW PANELS, SEE ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
- 5 COORDINATE INSTALLATION OF LIGHTING CONTROL PANEL WITH MANUFACTURER'S RECOMMENDATIONS. CIRCUIT LV-3:30 IS POWERING THE LCP.
- 6 NEW 75KVA, 480:208Y/120V, PAD-MOUNTED TRANSFORMER. SEE ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
- 7 90' POLE MOUNTED FIELD LIGHTS PROVIDED AND INSTALLED BY FIELD LIGHTING PROVIDER, CIRCUITED BY ELECTRICAL CONTRACTOR.
- 8 BOXED IN AREA IS FOR A FUTURE BUILDING. AVOID ROUTING ANY CONDUIT WITHIN THIS AREA
- 9 PROVIDE FOOD TRUCK PEDESTAL WITH A SPECIAL PURPOSE, 240V, 50A RECEPTACLE AND GENERAL PURPOSE WEATHERPROOF DUPLEX RECEPTACLES. SEE FOOD TRUCK POWER PEDESTAL FOR MORE DETAILS.
- 10 PROVIDE 5' X 5' CONCRETE PAD. DUPLEX RECEPTACLE SHALL BE PROVIDED WITHIN THE OWNER PROVIDED AMERICAN PRODUCTS BOX. COORDINATE TERMINATION LOCATION WITH OWNER AND AMERICAN PRODUCTS BOX LOCATION BEFORE POURING PAD.
- 11 COORDINATE WITH SB PROVIDER TO PROVIDE POWER / CONTROLS TO SB. COORDINATE INSTALLATION WITH MANUFACTURER'S RECOMMENDATIONS.
- 12 DUPLEX RECEPTACLE SHALL BE PROVIDED WITHIN THE OWNER PROVIDED AMERICAN PRODUCTS BOX. COORDINATE INSTALLATION WITH OWNER.



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SOCCER FIELD ELECTRICAL POWER SITE PLAN

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E101

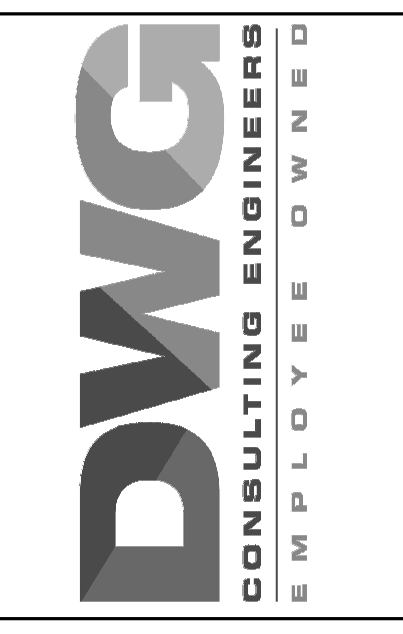
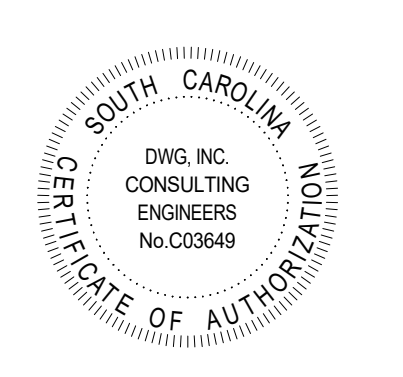
PLOT DATE: DATE

GENERAL NOTES

1. ALL CONDUIT ROUTING SHOWN IS DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL BORE UNDERGROUND CONDUIT. HAND DIGGING SHALL ALSO BE ACCEPTABLE AT CLOSE TOGETHER LOCATIONS.
2. ON EVERY LIGHT POLE, A POLE MOUNTED AMERICAN PRODUCTS BOX SHALL BE PROVIDED BY OWNER WHERE TELECOMMUNICATIONS CONDUIT SHALL TERMINATE AND RECEPTACLE SHALL BE MOUNTED INSIDE. COORDINATE THIS INSTALLATION WITH OWNER.
3. PROVIDE HAND DUG PILOT HOLES TO CONFIRM DEPTH OF EXISTING DRAINAGE AND IRRIGATION PIPE. BORES SHALL RUN BENEATH PIPE DEPTH. CONTRACTOR SHALL PROVIDE ALL DILIGENCE TO AVOID EXISTING DRAINAGE AND IRRIGATION PIPE, AND SHALL REPAIR IF DAMAGE OCCURS.
4. DRAINAGE PIPE LOCATIONS INDICATED ARE APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED. IRRIGATION PIPING IS PRESENT AS WELL BUT IS NOT INDICATED.
5. CONDUITS SHOWN ON THIS SHEET ARE TELECOMMUNICATIONS ROUGH-IN ONLY. SEE E101 FOR POWER CONDUITS REQUIREMENTS.

KEYNOTES

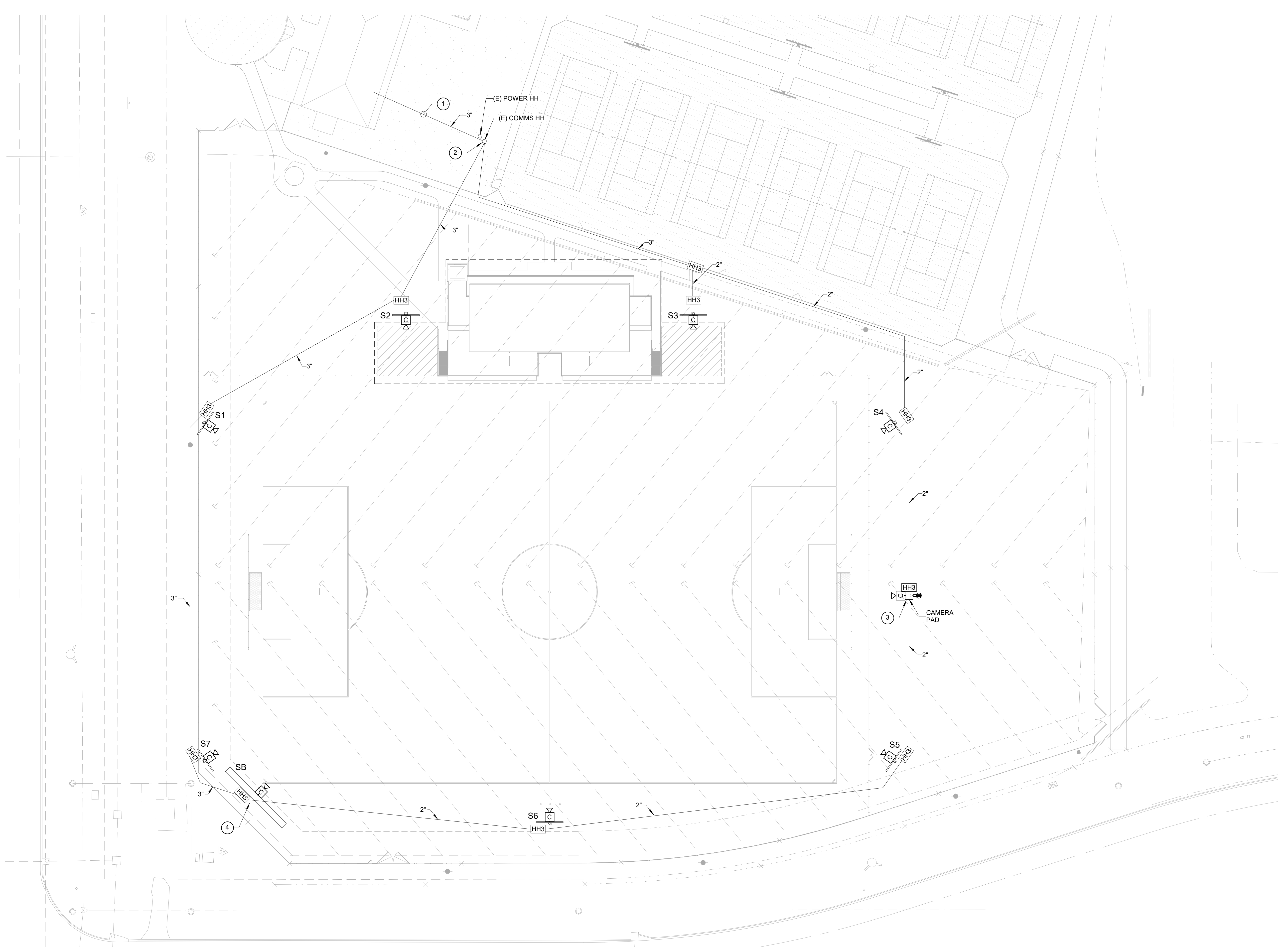
- 1 EXISTING CONDUITS ARE PRESENT FROM THIS BOX. HOWEVER, THE CONDITION IS NOT KNOWN. PROVIDE A NEW TELECOMMUNICATIONS CONDUIT FROM THE IT / ELECTRICAL ROOM TO THE EXISTING COMMUNICATIONS HANDHOLE. CONDUIT SHALL BE SURFACE MOUNTED VERTICALLY ALONG EXTERIOR WALL FROM UNDERGROUND INTO ELECTRICAL ROOM.
- 2 APPROXIMATE LOCATION OF EXISTING TELECOMMUNICATIONS HANDHOLE. CONNECT NEW CONDUIT TO EXISTING BOX AS INDICATED.
- 3 PROVIDE 5' X 5' CONCRETE PAD. TELECOMMUNICATIONS CONDUIT SHALL TERMINATE WITHIN THE OWNER PROVIDED SLAB MOUNTED AMERICAN PRODUCTS BOX. BOX SHALL BE MOUNTED IN THE CORNER OF THE PAD. COORDINATE TERMINATION LOCATION WITH OWNER AND AMERICAN PRODUCTS BOX LOCATION BEFORE POURING PAD.
- 4 PROVIDE 3' X 3' CONCRETE PAD. TELECOMMUNICATIONS CONDUIT SHALL TERMINATE WITHIN THE OWNER PROVIDED SLAB MOUNTED AMERICAN PRODUCTS BOX. COORDINATE TERMINATION LOCATION WITH OWNER AND AMERICAN PRODUCTS BOX LOCATION BEFORE POURING PAD.



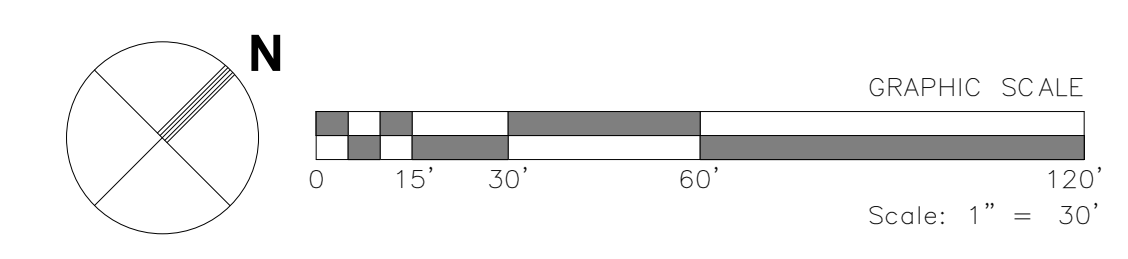
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1 SOCCER FIELD TELECOM SITE PLAN
 E102 SCALE: 1" = 30'-0"



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