

ABBREVIATIONS

(ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

A	A/C AIR CONDITIONING ABOVE ABV ALTERNATING CURRENT ACC AIR COOLED CHILLER ACCU AIR COOLED CONDENSING UNIT ADJ ADJUSTABLE AF AMPERE FUSE AFC ABOVE FINISHED CEILING AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AIC AMPERE INTERRUPTING CURRENT AL ALUMINUM AMPS AMPERES ANSI AMERICAN NATIONAL STANDARDS INSTITUTE ARCH ARCHITECT, ARCHITECTURAL ARI AIR CONDITIONING AND REFRIGERATION INSTITUTE ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS ASTM AMERICAN SOCIETY OF TESTING AND MATERIALS AUX AUXILIARY AV AIR VENT AWG AMERICAN WIRE GAUGE AWS AMERICAN WELDING SOCIETY AWWA AMERICAN WATER WORKS ASSOCIATION	B	BD BACKDRAFT DAMPER BFF BELOW FINISHED FLOOR BFW BOILER FEED WATER BKR BREAKER BLDG BUILDING BDD BOTTOM OF DUCT BOP BOTTOM OF PIPE BOS BOTTOM OF STRUCTURE BTU BRITISH THERMAL UNIT	C	C CONDUIT CATV CABLE TELEVISION SYSTEM CCTV CLOSED CIRCUIT TELEVISION CFM CUBIC FEET PER MINUTE CFM CUBIC FEET PER MINUTE CFS CUBIC FEET PER SECOND CI CAST IRON CIRC CIRCULATING CKT CIRCUIT CL CENTERLINE CLC CEILING CMU CONCRETE MASONRY UNIT CD COLUMN COL COLUMN CPVC CHLORINATED POLYVINYL CHLORIDE CU COPPER CW COLD WATER °C DEGREES CELSIUS	D	D DEPTH DB DRY BULB dB DECIBEL DC DIRECT CURRENT DEG DEGREES DESIGN DESIGNATION DIA DIAMETER DIM DIMENSION DISC DISCONNECT DN DOWN DPST DOUBLE-POLE, DOUBLE-THROW DPST DOUBLE-POLE, SINGLE-THROW DS DOWNSPOUT DWG DRAWING DX DIRECT EXPANSION	E	EA EACH EAT ENTERING AIR TEMPERATURE ECC ECCENTRIC EDB ENTERING DRY BULB EF EXHAUST FAN EL ELEVATION ELEC ELECTRICAL ENCL ENCLASURE EQUIP EQUIPMENT ESP EXTERNAL STATIC PRESSURE EWB ENTERING WET BULB EWC ELECTRICAL WATER COOLER EWT ENTERING WATER TEMPERATURE EXH EXHAUST EXIST EXISTING	F	FA FIRE ALARM FACP FIRE ALARM CONTROL PANEL FCO FLOOR CLEANOUT FL FLOW LINE FLA FULL LOAD AMPS FLEX FLEXIBLE FPM FEET PER MINUTE FT FOOT, FEET FVNR FULL-VOLTAGE, NON-REVERSING °F DEGREES FAHRENHEIT	G	G, GND GROUND GA GAUGE CAL GAL CALV GALV GC GENERAL CONTRACTOR GFI GROUND FAULT INTERRUPTER GFR GROUND FAULT RELAY GPD GALLONS PER DAY GPH GALLONS PER HOUR GPM GALLONS PER MINUTE	H	H HEIGHT HD HEAD, HUB DRAIN HID HIGH INTENSITY DISCHARGE HDA HAND-OFF-AUTOMATIC HORIZ HORIZONTAL HP HORSEPOWER HSTAT HUMIDISTAT HSTM HIGH PRESSURE STEAM HTG HEATING HTR HEATER HVAC HEATING, VENTILATING AND AIR CONDITIONING HW HOT WATER HYD HYDRANT HZ HERTZ	I	IO INSIDE DIAMETER IE INVERT ELEVATION IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS IES ILLUMINATING ENGINEERING SOCIETY IC ISOLATED GROUND IN INCH IN WC INCHES OF WATER COLUMN	J	J-BOX JUNCTION BOX	K	KCMIL 1000 CIRCULAR MILS KV KILOVOLT KVA KILOVOLT-AMPS KW KILOWATT KWH KILOWATT-HOUR	L	L LENGTH LAT LEAVING AIR TEMPERATURE LB* POUNDS LDB LEAVING DRY BULB LF LINEAR FEET LP LOW PRESSURE LRA LOCKED ROTOR AMPS LSTM LOW PRESSURE STEAM (HS PSIG) LTC LIGHTING LWB LEAVING WET BULB LWT LEAVING WATER TEMPERATURE	M	M MAXIMUM MBH 1000 BTU PER HOUR MCA MINIMUM CIRCUIT AMPACITY MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER MD MECHANICAL MECH MECHANICAL MFR MANUFACTURER MG MOTOR GENERATOR MH MANHOLE, METAL HALIDE MIN MINIMUM MLO MAIN LUGS ONLY MOUNTED MTD MOUNTED	N	N/A NOT APPLICABLE NC NOISE CRITERIA, NORMALLY CLOSED NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NFPA NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT N.O. NORMALLY OPEN N.T.S. NOT TO SCALE	O	OA OUTSIDE AIR OBD OPPOSED BLADE DAMPER O.C. ON CENTER OD OUTSIDE DIAMETER OH OVERHEAD OPG OPENING OS&Y OUTSIDE STEM AND YOKE OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	P	PD PRESSURE DROP PF POWER FACTOR PH PHASE PIV POST INDICATOR VALVE PLBG PLUMBING PNL PANEL PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE PSIG POUNDS PER SQUARE INCH GAUGE PSV PRESSURE SAFETY VALVE, RELIEF VALVE PV PLUG VALVE PVC POLYVINYL CHLORIDE	Q	QTY QUANTITY	R	RA RETURN AIR RCP REFLECTED CEILING PLAN, REINFORCED CONCRETE PIPE RD ROOF DRAIN REF REFERENCE, REFER RECIRC RECIRCULATE REIN REINFORCING REDD REQUIRED REV REVISION, REVISE RHS RIGID GALVANIZED STEEL RH RELATIVE HUMIDITY RHG REFRIGERANT HOT GAS RL REFRIGERANT LIQUID RLA RUNNING LOAD AMPS RPM REVOLUTIONS PER MINUTE RS REFRIGERANT SUCTION	S	SA SUPPLY AIR SD SMOKE DAMPER, STORM DRAIN SECT SECTION SF SQUARE FEET SHT SHEET SIM SIMILAR SMT SHEET METAL SMT MTL SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION SPEC SPECIFICATION SD SQUARE SS STAINLESS STEEL, SANITARY SEWER STD STANDARD STL STEEL SURF SURFACE SUSP SUSPEND	T	TDH TOTAL DYNAMIC HEAD THRU THROUGH TP TOTAL PRESSURE TSP TOTAL STATIC PRESSURE TSTAT THERMOSTAT TYP TYPICAL	U	U/F UNDERFLOOR U/G UNDERGROUND UNSLAB UNDERSLAB UNWR UNDERWRITERS LABORATORIES, INC. UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY	V	V VOLT VA VOLT-AMPERE VAC VACUUM VAV VARIABLE AIR VOLUME VCP VITRIFIED CLAY PIPE VD VOLUME DAMPER VEL VELOCITY VERT VERTICAL VTR VENT THROUGH ROOF	W	W WATT, WIDTH W/ WITH W/O WITHOUT WB WET BULB WC WATER COLUMN WG WATER GONG WPD WATER PRESSURE DROP WP WEATHER PROOF WT WATERTIGHT, WEIGHT	X	XFMR TRANSFORMER
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ELECTRICAL SYMBOLS

(ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

LIGHTING

- A SURFACE OR RECESSED LIGHTING FIXTURE, LETTER DENOTES TYPE
- B WALL WASHER LIGHTING FIXTURE, LETTER DENOTES TYPE
- ⊙ EXIT SIGN, ARROWS AS INDICATED, LETTER DENOTES TYPE DARKENED AREA DENOTES LIGHTED FACE
- ⊙ B STRIP FLUORESCENT LIGHTING FIXTURE, LETTER DENOTES TYPE
- ⊙ B LIGHT FIXTURE ON EMERGENCY OR UNSWITCHED CIRCUIT, LETTER DENOTES TYPE
- ⊙ B FLUORESCENT OR HD LIGHT FIXTURE, LETTER DENOTES TYPE, DRAW TO SCALE
- ⊙ B WALL MOUNTED LIGHT FIXTURE, LETTER DENOTES TYPE
- ⊙ B EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK

SWITCHES

- S SWITCH, SPST, 20A, 120/277V
- S₃ SWITCH, 20A, 120/277V, "2" DENOTES DPST, "3" DENOTES THREE-WAY, "4" DENOTES FOUR-WAY
- S_L SWITCH, SPDT, CENTER OFF, MOMENTARY CONTACT
- S_K SWITCH, SPST, 20A, 120/277V, "K" DENOTES KEY SWITCH, "P" DENOTES PILOT LIGHT, "N" DENOTES NARROW MULLION SWITCH
- S_D DIMMER CONTROL SWITCH, 1500 WATT UNLESS OTHERWISE NOTED

RECEPTACLES AND OUTLETS

- ⊖ SIMPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V "C" DENOTES CLOCK OUTLET
- ⊖ DUPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V, "H" DENOTES HORIZONTAL MOUNTING, "R" SPECIFICATIONS
- ⊖ DUPLEX WALL RECEPTACLE ON EMERGENCY CIRCUIT, RED COLOR
- ⊖ DUPLEX WALL RECEPTACLE MOUNTED 6" ABOVE COUNTER OR BACKSPLASH
- ⊖ DUPLEX WALL RECEPTACLE, "WP" DENOTES WEATHERPROOF, "TR" DENOTES SAFETY TYPE, "GF" DENOTES GROUND FAULT INTERRUPTER, "SS" DENOTES SURGE SUPPRESSION "IS" DENOTES ISOLATED GROUND
- ⊖ FOURPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V
- ⊖ SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED
- ⊖ FLOOR RECEPTACLE, "F" DENOTES FLUSH
- ⊖ TELEVISION CABLE OUTLET 6"-8" A.F.F.
- ⊖ CLOCK OUTLET 7"-8" A.F.F.
- ⊖ MULTI-OUTLET SURFACE RACEWAY WITH NEMA 5-20R, 20A, 125V AT 12" ON CENTER
- ⊖ JUNCTION BOX
- ⊖ POWER/TELEPHONE/DATA POLE (FOR MODULAR FURNITURE)
- ⊖ FLOOR TELEPHONE OUTLET "F" DENOTES FLUSH
- ⊖ FLOOR DATA OUTLET "F" DENOTES FLUSH
- ⊖ FLOOR RECEPTACLE/TELEPHONE OUTLET "F" DENOTES FLUSH
- ⊖ FLOOR RECEPTACLE/DATA OUTLET "F" DENOTES FLUSH
- ⊖ TELEPHONE OUTLET "P" DENOTES PAY/PUBLIC TELEPHONE
- ⊖ DATA OUTLET

CIRCUITING AND WIRING

- CIRCUIT CONCEALED IN WALL OR CEILING
- - - CIRCUIT BELOW SLAB OR GRADE
- U/G UNDERGROUND CIRCUIT/DUCTBANK
- HASH MARKS INDICATE NUMBER OF CONDUCTORS (LEFT TO RIGHT: NEUTRAL/PHASE/SWITCH LEG/GROUND). NO HASH MARKS INDICATE 2*12 AND 1*12 GROUND, UNLESS OTHERWISE NOTED.
- L1A-2,4 HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED.
- CONDUIT STUB UP
- CONDUIT STUB DOWN
- CONDUIT TERMINATION, BELOW GRADE

ELECTRICAL EQUIPMENT

- ⊖ DISTRIBUTION PANEL
- ⊖ SWITCHBOARD OR MOTOR CONTROL CENTER ON HOUSEKEEPING PAD.
- ⊖ PANELBOARD (FLUSH OR SURFACE MOUNT) AS INDICATED ON PANEL SCHEDULE.
- ⊖ DRY-TYPE TRANSFORMER
- ⊖ AUTOMATIC TRANSFER SWITCH
- ⊖ PLYWOOD TERMINAL BOARD, TYPE AS NOTED, 4" X 8" X 3/4" UNLESS OTHERWISE NOTED
- ⊖ TERMINAL CABINET, TYPE AS NOTED 24" X 48" X 3-1/2" UNLESS OTHERWISE NOTED.

MOTORS AND CONTROLS

- ⊖ SINGLE OR THREE PHASE MOTOR (NUMBER INSIDE SYMBOL CAN INDICATE HORSEPOWER)
- ⊖ ELECTRIC DUCT HEATER
- ⊖ DISCONNECT (SAFETY) SWITCH "200/3/150" DENOTES AMPERES/POLE/FUSE, "NF" DENOTES NON-FUSED
- ⊖ MOTOR STARTER, NEMA SIZE AS NOTED
- ⊖ COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER, "3D/3/15/1" DENOTES AMPERES/POLES/ FUSE/STARTER BREAKER/ NEMA STARTER SIZE, "NF" DENOTES NON-FUSED.
- S_M MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
- ⊖ LIGHTING CONTACTOR
- ⊖ PHOTOCELL
- ⊖ PUSH BUTTON STATION
- ⊖ DOOR CONTACT SWITCH
- ⊖ TIME CLOCK

ONE LINE AND RISER DIAGRAMS

- T1 45KVA TRANSFORMER, DESIGNATION AND RATINGS AS NOTED
- ⊖ 800A SWITCH, RATINGS AS SHOWN, 3 POLE UNLESS OTHERWISE NOTED
- ⊖ 400A FUSE, RATING AS SHOWN
- ⊖ 800A CIRCUIT BREAKER, TRIP RATING AS SHOWN, 3 POLE UNLESS OTHERWISE NOTED
- ⊖ 800A DRAWOUT CIRCUIT BREAKER, TRIP RATING AS SHOWN, 3 POLE UNLESS OTHERWISE NOTED
- ⊖ MOTOR STARTER IN MOTOR CONTROL CENTER, NEMA SIZE AS NOTED
- ⊖ SHUNT TRIP
- ⊖ GROUND FAULT RELAY
- ⊖ ELECTRIC INTERLOCK WITH LOGIC CONNECTION
- ⊖ KIRK-KEY INTERLOCK WITH LOGIC CONNECTION
- ⊖ AMMETER, RANGE AS SHOWN
- ⊖ AMMETER SWITCH
- ⊖ VOLTMETER, RANGE AS SHOWN
- ⊖ VOLTMETER SWITCH
- ⊖ WATT-HOUR METER, "D" DENOTES DEMAND REGISTER "15" DENOTES MINUTES OF DEMAND INTERVAL
- ⊖ 1200:5 CURRENT TRANSFORMER(CT), RATED AS SHOWN
- ⊖ 12.47KV X 120V POTENTIAL TRANSFORMER(PT), RATING AS SHOWN
- ⊖ GROUND CONNECTION
- ⊖ LIGHTNING ARRESTOR
- ⊖ GENERATOR SET
- ⊖ AUTOMATIC TRANSFER SWITCH
- ⊖ BUS DUCT PLUG, SIZE AS NOTED

DRAWING/DETAIL REFERENCE KEY

SITE

EXISTING	EXISTING TO BE REMOVED	NEW	DESCRIPTION
— A/P —	— X EP —	— A/P —	AERIAL PRIMARY
— U/S —	— X-E-X —	— U/S —	UNDERGROUND SECONDARY
— U/E —	— X-E-X —	— U/E —	UNDERGROUND ELECTRICAL
— U/T —	— X-T-X —	— U/T —	UNDERGROUND TELECOM/SECURITY CONDUIT
— A/T —	— X-ET-X —	— A/T —	AERIAL TELEPHONE
— O/E —	— X-O/E-X —	— O/E —	OVERHEAD ELECTRICAL
— H —	— X-H-X —	— H —	HANDHOLE

GENERAL NOTES

- REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR ELECTRICAL CONSTRUCTION, INSTALL ALL WORK IN ACCORDANCE WITH NFPA 70, LATEST EDITION.
- PROVIDE 2*12, 1*12G, FOR ALL CIRCUITING UNLESS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
- MINIMUM SIZE CONDUIT FOR HOMERUNS IS 3/4" C.
- COORDINATE ALL SLAB PENETRATIONS AND SLEEVES PRIOR TO EACH CONCRETE POUR.
- PROVIDE ACCESS DOORS FOR INSTALLATION IN WALLS AND CEILING, WHERE ACCESS IS REQUIRED TO CONCEALED ELECTRICAL EQUIPMENT.
- HOMERUNS INDICATED TO BE ROUTED DIRECTLY TO PANELS, COMBINING MORE THAN THREE CIRCUITS IN ONE HOMERUN IS NOT ALLOWED.
- PROVIDE A LOCAL DISCONNECT FOR ALL MOTORS, PROVIDE DISCONNECTS WITH LOCK-OUT PROVISIONS, LOCATE DISCONNECT IN AN ACCESSIBLE LOCATION AFTER EQUIPMENT IS ACTUALLY IN PLACE.
- PERMANENTLY LABEL ALL RECEPTACLES, MOTOR DR POWER DISCONNECTS AND REMOTE LOADS WITH THE PANEL AND CIRCUIT NUMBER FEEDING THE RECEPTACLE OR DEVICE.
- WHERE APPROVAL CODES HAVE BEEN ESTABLISHED BY OSHA UNDERWRITERS LABORATORY, AMERICAN CODES, ANSI, ASME, ASHRAE, ASTM, ARI, NEC, NFPA, SMACNA OR THE STATE FIRE INSURANCE REGULATORY BODY, FOLLOW THESE STANDARDS WHETHER OR NOT INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
- PROVIDE THE ENTIRE SYSTEM AND ITS COMPONENT ITEMS OF EQUIPMENT IN OPERATING CONDITION AND FREE OF OBJECTIONABLE VIBRATION OR NOISE.
- ALL EXPOSED CONDUIT OUTSIDE BUILDING SHALL BE GALVANIZED RIGID STEEL WITH HEAVY DUTY CAST FITTINGS.
- PROVIDE SCHEMATICS FOR ALL CONTROL WIRING WITH EACH WIRE HAVING IDENTIFICATION MATCHING THE SCHEMATIC DIAGRAM NUMBERING.

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

RAIL DIVISION

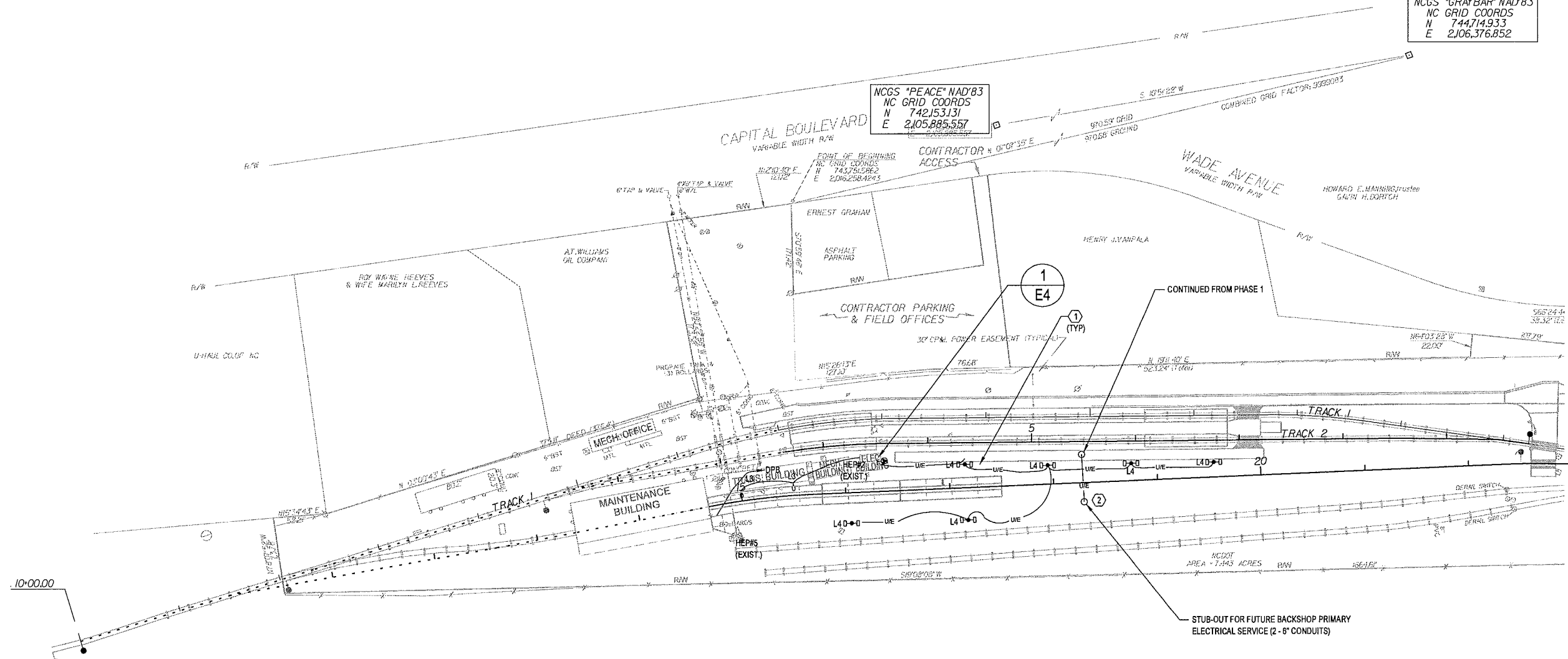
OPERATIONS BRANCH

PROJECT	CAPITAL YARD MAINTENANCE FACILITY		
TITLE	ELECTRICAL GENERAL NOTES		
LOCATION	860 CAPITAL BOULEVARD, RALEIGH, NC		
DGN BY	MRD	RAILROAD CSXT	MILE POST S-156.1
DWN BY	CWW	VAL SEC V1-NC, L-7, 5-16	
CHK BY	MRD	DATE 07-21-06	SCALE N/A
			SHEET E1 OF E6



NCGS "GRAYBAR" NAD83
 NC GRID COORDS
 N 744,714.933
 E 2,106,376.852

NCGS "PEACE" NAD83
 NC GRID COORDS
 N 742,153.131
 E 2,105,885.557

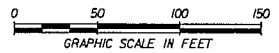


SHEET NOTES:

- ① 2 #10, #10G, 1" C.
- ② 6" DIP SLEEVES SHALL HAVE A MINIMUM OF 3" COVER BELOW EXISTING GRADE AND A MINIMUM OF 12" OF COVER BELOW TRACK RETAINING WALL STRUCTURE. LOCATOR RIBBONS SHALL BE PLACED IN TRENCH ABOVE SLEEVES AND SHALL EXTEND TO THE SURFACE AT THE ENDS OF THE SLEEVES. SLEEVES SHALL BE SEALED (WATERTIGHT) USING REMOVEABLE END CAPS OR PLUGS.

LUMINAIRE NOTES:

- L1: NEW CUT-OFF ENCLOSED COBRAHEAD ON WOODEN POLE INSTALLED AND MAINTAINED BY PROGRESS ENERGY.
- L2: EXISTING COBRAHEAD MAINTAINED BY PROGRESS ENERGY.
- L3: NEW BUILDING MOUNTED WALL PACK PROVIDED BY CONTRACTOR. 150W HPS LAMP, 480V BALLAST. LUMINAIRES TO MATCH EXISTING TYPE USED ON THIS BUILDING. MOUNT 9'-0" ABOVE FINISHED GRADE. FEED FROM TRACK 3 LIGHTING. PROVIDE EACH LUMINAIRE WITH PHOTOCELL CONTROL.
- L4: NEW FLOODLIGHTS (2) AIMED AT 45 DEGREES ON SQUARE STEEL, 30' METAL POLE PROVIDED BY ELECTRICAL CONTRACTOR. FLOODLIGHT SHALL BE 400 WATT PULSE START METAL HALIDE, 2H X 6V NEMA LIGHT DISTRIBUTION PATTERN, OPERATING AT 480 VOLTS. FEED FROM PANEL DPB FROM BREAKER INDICATED AS TRACK 1 AND 2 LIGHTING. LUMINAIRE SHALL BE LITHONIA 55V, OR KIM, OR GARDCO EQUAL.



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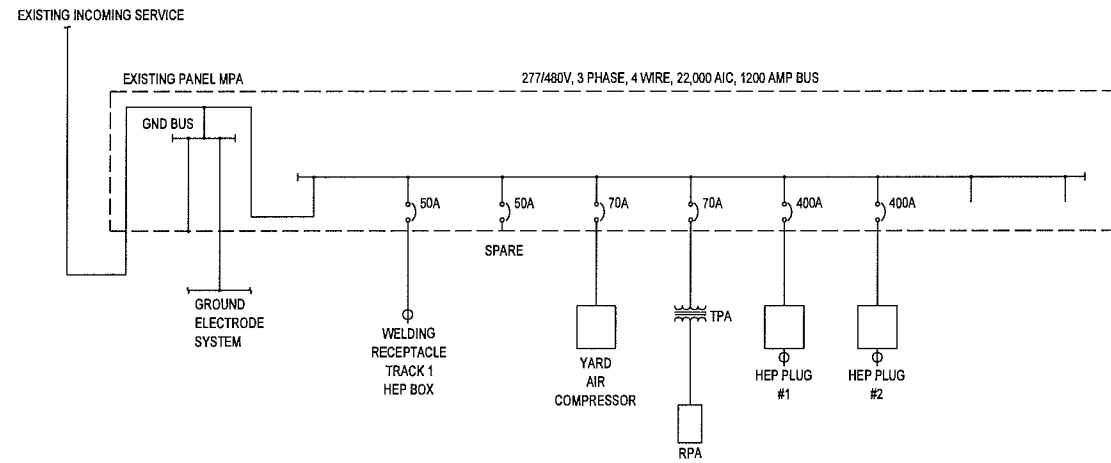
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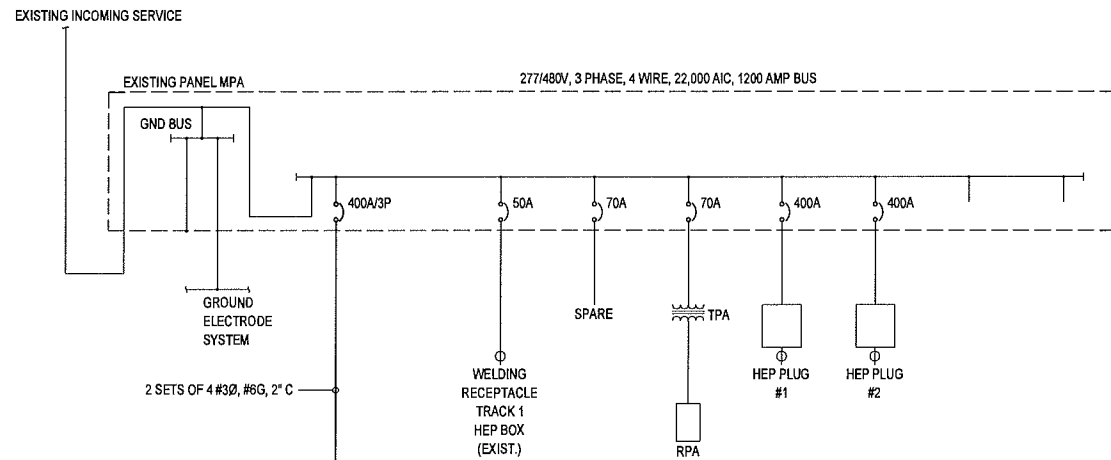
RAIL DIVISION
 OPERATIONS BRANCH

PROJECT		CAPITAL YARD MAINTENANCE FACILITY	
TITLE		ELECTRICAL UTILITY PLAN - PHASE 2	
LOCATION		860 CAPITAL BOULEVARD, RALEIGH, NC	
DGN BY	MRD	RAILROAD	CSXT
DWN BY	CWW	VAL SEC	V1-NC, L-7, 5-16
CHK BY	MRD	DATE	07-21-06
SCALE		1" = 50'	
MILE POST		S-156.1	
SHEET		E3 OF E6	



1 EXISTING SINGLE LINE DIAGRAM
SCALE: NTS

PANEL RPB		VOLTAGE:	240/120	1 PH	3 W	AIC:	10,000	REMARKS:						
		MAINS:	150 AMP	MLO	X MCB	X SURFACE	FLUSH	* ALL CIRCUITS ARE 2#8, 1#10G, 3/4" UON						
		LUGS:				X NEMA 1	NEMA 3R	** PROVIDE LOCKABLE BREAKERS						
C**	WIRE*	LOAD DESCRIPTION	KVA	BKR	POLE	CKT	PHASE	CKT	POLE	BKR	KVA	LOAD DESCRIPTION	WIRE*	C**
1"	2#4,#8G	RECEPTACLE	3.0	50	2	1	A	2	2	50	3.0	RECEPTACLE	2#4,#8G	1"
1"	2#4,#8G	RECEPTACLE	3.0	50	2	5	A	6	2	50	3.0	RECEPTACLE	2#4,#8G	1"
1"	2#4,#8G	RECEPTACLE	3.0	50	2	7	B	8			3.0			
1"	2#4,#8G	RECEPTACLE	0.0	50	2	9	A	10	1	20	0.0	RECEPTACLE		
3/4"	2#12,#12G	LTG CONTACTOR	0.0	20	1	13	A	14	1	20	1.5	HOSE REEL HEATER		
		HOSE REEL HEATER	1.5	20	1	15	B	16	1	20	1.5	HOSE REEL HEATER		
		HOSE REEL HEATER	1.5	20	1	17	A	18	1	20	1.5	HOSE REEL HEATER		
		STORAGE CONTAINER	0.6	20	1	19	B	20	1	20	0.0	SPARE		
		SPARE	0.0	20	1	21	A	22	1	20	0.0	SPARE		
		SPARE	0.0	20	1	23	B	24	1	20	0.0	SPARE		
		SPARE	0.0	20	1	25	A	26	1	20	0.0	SPARE		
		SPACE	0.0			27	B	28			0.0	SPACE		
		SPACE	0.0			29	A	30			0.0	SPACE		
		SPACE	0.0			31	B	32			0.0	SPACE		
CONN KVA:			32.0	PHASE A:		16.8	PHASE B:		15.2					
DEMAND KVA:			26.7	DEMAND AMPS:					111.1					



2 NEW SINGLE LINE DIAGRAM
SCALE: NTS

SHEET NOTES:

- 1 TWIST-LOCK, 480V, 50A, 3 PHASE RECEPTACLE EQUAL TO HUBBELL CS8189 WITH WEATHERPROOF COVER PLATE HBL 7774W0.
- 2 TWIST-LOCK, 120/240V, 50A, SINGLE PHASE RECEPTACLE EQUAL TO HUBBELL CS6369 WITH WEATHERPROOF COVER PLATE 7774W0.
- 3 PANELS DPB, RPB, AND TRANSFORMER SHALL BE ALL IN ONE CABINET. RE: SPECIFICATION SECTION 16470.

EXIST. SWITCHBOARD	MDA	SERVICE:	480V	3 PH	4W+G	
		MAINS:	1200	AMPS CONT.		
		DEVICE I.C.:	22,000	AMPS MIN. I.C.		
CCT NO	SERVES	LOAD IN KVA	CONDUCTORS	CONDUIT	CB/ POLES	REMARKS
1	WELD RECPT	30.0	EXISTING	EXIST.	50/3	
2	SPARE	0.0	EXISTING	EXIST.	70/3	
3	RPA VIA TPA	40.0	EXISTING	EXIST.	70/3	
4	HEP PLUG #1	250.0	EXISTING	EXIST.	400/3	
5	HEP PLUG #2	250.0	EXISTING	EXIST.	400/3	
6	NEW DPB	294.3	4#3/0, #6G	2"	200/3	
7		0.0				
8		0.0				
CONNECTED KVA		864.3 KVA				
DEMAND KVA		864.3 KVA				
DEMAND AMPS		1040.0 AMPS				

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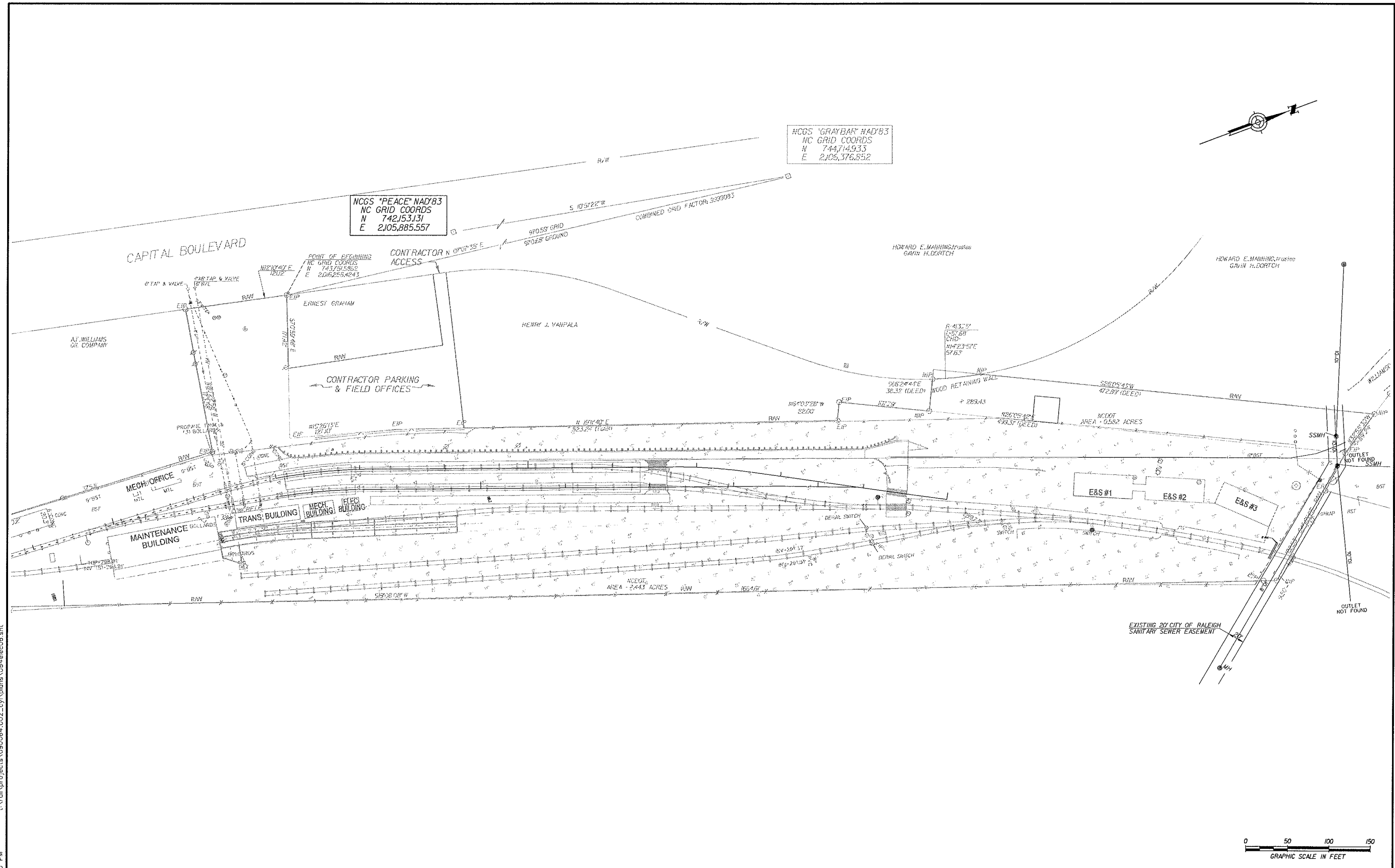
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RAIL DIVISION
 OPERATIONS BRANCH

PROJECT	CAPITAL YARD MAINTENANCE FACILITY		
TITLE	ELECTRICAL ONE LINE DIAGRAM		
LOCATION	860 CAPITAL BOULEVARD, RALEIGH, NC		
DGN BY	MRD	RAILROAD	CSXT
DWN BY	CWW	VAL SEC	V1-NC, L-7, 5-16
CHK BY	MRD	DATE	07-21-06
SCALE	NTS		SHEET E5 OF E6
MILE POST	S-156.1		



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NO.	BY	DATE	REVISION

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 MICHAEL R. DURMAN, 21376,
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

RAIL DIVISION
 OPERATIONS BRANCH

PROJECT CAPITAL YARD MAINTENANCE FACILITY			
TITLE LIGHT POINT CALCULATION			
LOCATION 860 CAPITAL BOULEVARD, RALEIGH, NC			
DGN BY MRD	RAILROAD CSXT	MILE POST S-156.1	SHEET E6 OF E6
DWN BY CWW	VAL SEC V1-NC, L-7, 5-16		
CHK BY MRD	DATE 07-21-06	SCALE 1" = 50'	