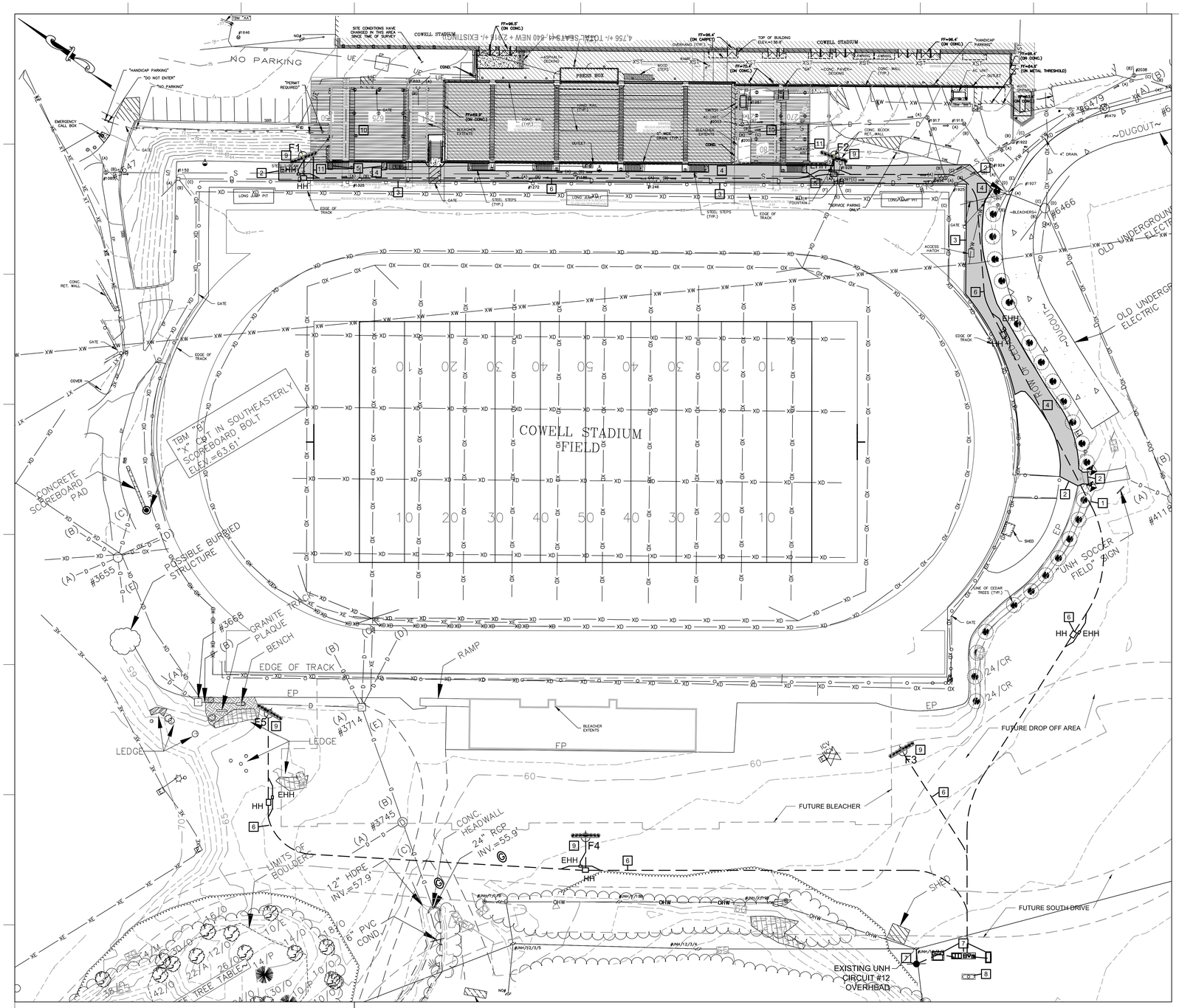


LEGEND

- UTILITY POLE & GUY WIRE
- LIGHT POLE (ONE ARM)
- I-BEAM SUPPORT
- 3" BUILDING DRAIN
- SIGN
- WATER GATE VALVE
- CLEANOUT
- ELECTRIC BOX
- CATCH BASIN (ROUND)
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- MANHOLE
- CONCRETE
- CRUSHED STONE
- BORING
- BOLLARD
- DRAINAGE FLOW DIRECTION ARROW
- TYP. TYPICAL
- RET. RETAINING
- FF FINISHED FLOOR
- EP EDGE OF PAVEMENT
- SWL SINGLE WHITE LINE
- CONC. CONCRETE
- SBB SLOPED BITUMINOUS BERM
- COND. CONDUIT
- STOCKADE FENCE
- CHAINLINK FENCE
- OHW OVERHEAD WIRES
- S SEWER LINE
- D DRAIN LINE
- U UNDERGROUND UTILITY LINE
- E UNDERGROUND ELECTRIC LINE
- GUARDRAIL
- CONTOUR LINE

UNDERGROUND UTILITY LINE DATA
(PER UNH CAMPUS PLANNING GIS DEPARTMENT)

- XD DRAIN LINE
- XW WATER LINE
- XE UNDERGROUND ELECTRIC LINE
- XT UNDERGROUND TELEPHONE LINE
- XST STEAM LINE
- (NAME) NEW PIPING (BOLD)

SEWER STRUCTURES

SMH #1085
RIM ELEV.=70.9'
(A) 8" PVC INV.=59.7'
(B) 8" PVC INV.=59.7'

SMH #1186
RIM ELEV.=63.2'
(A) 8" PVC INV.=57.6'
(B) 8" PVC INV.=57.5'

SMH #1917
RIM ELEV.=64.9'
(A) 8" PVC INV.=60.6'
(B) 8" PVC INV.=60.5'

SMH #1922
RIM ELEV.=63.0'
(A) 15" UNKN. INV.=54.8'
(B) 6" CIP INV.=60.2'
(C) 15" UNKN. INV.=54.8'

SMH #1926
RIM ELEV.=62.9'
(A) 15" UNKN. INV.=55.1'
(B) 8" PVC INV.=59.0'
(C) 15" UNKN. INV.=55.1'

SMH #2002
RIM ELEV.=68.6'
(A) 8" CIP INV.=62.2'
(B) 6" CIP INV.=62.9'
(C) 8" CIP INV.=62.1'

SMH #2038
RIM ELEV.=62.9'
(A) 15" UNKN. INV.=54.6'
(B) 8" PVC INV.=59.4'
(C) 15" UNKN. INV.=54.5'

DRAINAGE STRUCTURES

CB #1152
RIM ELEV.=62.9'
(A) 6" HDPE INV.=59.4'
(B) 6" HDPE INV.=59.4'
(C) 12" HDPE INV.=59.1'

CBR #1246
RIM ELEV.=62.9'
(A) 12" PVC INV.=57.9'
(B) 12" PVC INV.=57.9'

CBR #1272
RIM ELEV.=62.9'
(A) 12" PVC INV.=58.1'
(B) 12" PVC INV.=58.1'

CBR #1325
RIM ELEV.=62.9'
(A) 12" PVC INV.=58.8'
(B) 12" PVC INV.=58.8'

CB #1397
RIM ELEV.=63.0'
(A) 12" HDPE INV.=57.3'
(B) 6" HDPE INV.=59.4'
(C) 18" HDPE INV.=57.1'
(D) 4" HDPE INV.=57.9'
(E) 15" HDPE INV.=57.3'
(F) 4" HDPE INV.=57.9'

MH #1646
RIM ELEV.=76.2'
(UNABLE TO OPEN)

CBR #1693
RIM ELEV.=69.6'
(A) 4" CIP INV.=66.9'
(B) 6" PVC INV.=66.8'

DMH #1918
RIM ELEV.=64.1'
(A) 12" HDPE INV.=58.1'
(B) 15" HDPE INV.=57.7'

DMH #1924
RIM ELEV.=62.7'
(A) 15" HDPE INV.=56.6'
(B) 18" HDPE INV.=56.7'
(C) 15" HDPE INV.=56.8'

CB #1925
RIM ELEV.=62.7'
(A) 18" HDPE INV.=57.0'
(B) 18" HDPE INV.=57.0'
(C) 8" HDPE INV.=58.0'

CB #1928
RIM ELEV.=63.2'
6" HDPE INV.=60.5'

CBR #1927
RIM ELEV.=62.1'
(A) 15" RCP INV.=56.1'
(B) 6" CLAY INV.=59.2'
(C) 12" RCP INV.=56.6'
(D) 15" ASBESTOS INV.=56.3'
(E) 15" RCP INV.=56.7'

MH #1987
RIM ELEV.=69.6'
(UNABLE TO OPEN)

MH #2003
RIM ELEV.=69.0'
(A) 12" RCP INV.=63.8'
(B) 12" HDPE INV.=63.0'

CBR #6476
RIM ELEV.=62.4'
(A) 15" CLAY INV.=57.7'
(B) 6" CI INV.=58.7'
(C) 12" CLAY INV.=57.7'
(D) 10" RCP INV.=59.3'

CBR #6479
RIM ELEV.=62.3'
FULL OF SILT

BENCHMARK TABLE

TBM "AA"
CHISLED BOX SET IN SOUTH CORNER OF GRANITE STEP
ELEV.=77.58'

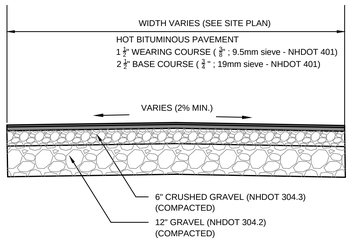
TBM "BB"
CHISLED BOX SET IN NORTHWEST CORNER OF CONCRETE PAD
ELEV.=64.99'

GRAPHIC SCALE

0 30 60 90 150
(IN FEET)
1 INCH = 30 FT.

SITE CONSTRUCTION NOTES:

1. REMOVE TREE IN ITS' ENTIRETY.
2. SAW CUT PAVEMENT. APPROXIMATE LIMIT SHOWN.
3. SAW CUT PAVEMENT 1'-0" FROM FACE OF FENCE.
4. REMOVE PAVEMENT. RESTORE UPON COMPLETION OF WORK. SEE PAVEMENT SECTION FOR MATERIAL THICKNESSES.
5. REMOVE CONCRETE. RESTORE WITH PAVEMENT UPON COMPLETION OF WORK. SEE PAVEMENT SECTION FOR MATERIAL THICKNESSES
6. NEW ELECTRICAL CONDUITS AND HANDHOLES . SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
7. NEW ELECTRICAL EQUIPMENT ON CONCRETE EQUIPMENT PAD. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
8. NEW PROPANE TANK ON CONCRETE EQUIPMENT PAD. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
9. NEW FIELD LIGHTS. SEE DRAWINGS FOR ADDITIONAL INFORMATION.
10. NEW BLEACHERS SYSTEM. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
11. INSTALL 6" SCH 40 SOLID PVC PIPE FROM BLEACHER GUTTER TO TOP OF EXISTING DRAIN LINE.



TYPICAL PAVEMENT SECTION
NOT TO SCALE

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RFS PROJECT NO.: 7417.001

UNIVERSITY OF NEW HAMPSHIRE

Cowell Stadium Project

22 Colovos Road

NO.	DESCRIPTION	DATE

CONTENT: SITE PLAN

DRAWN BY:	JRI
PROJECT NO:	13-039-00
DATE:	03/07/14
REVISED:	
SCALE:	1" = 30'

C1.0

Project Phase
100% CONSTRUCTION DOCUMENTS

DRAWING NOTES

1. THE FOLLOWING NOTES ONLY APPLY TO THIS DRAWING.

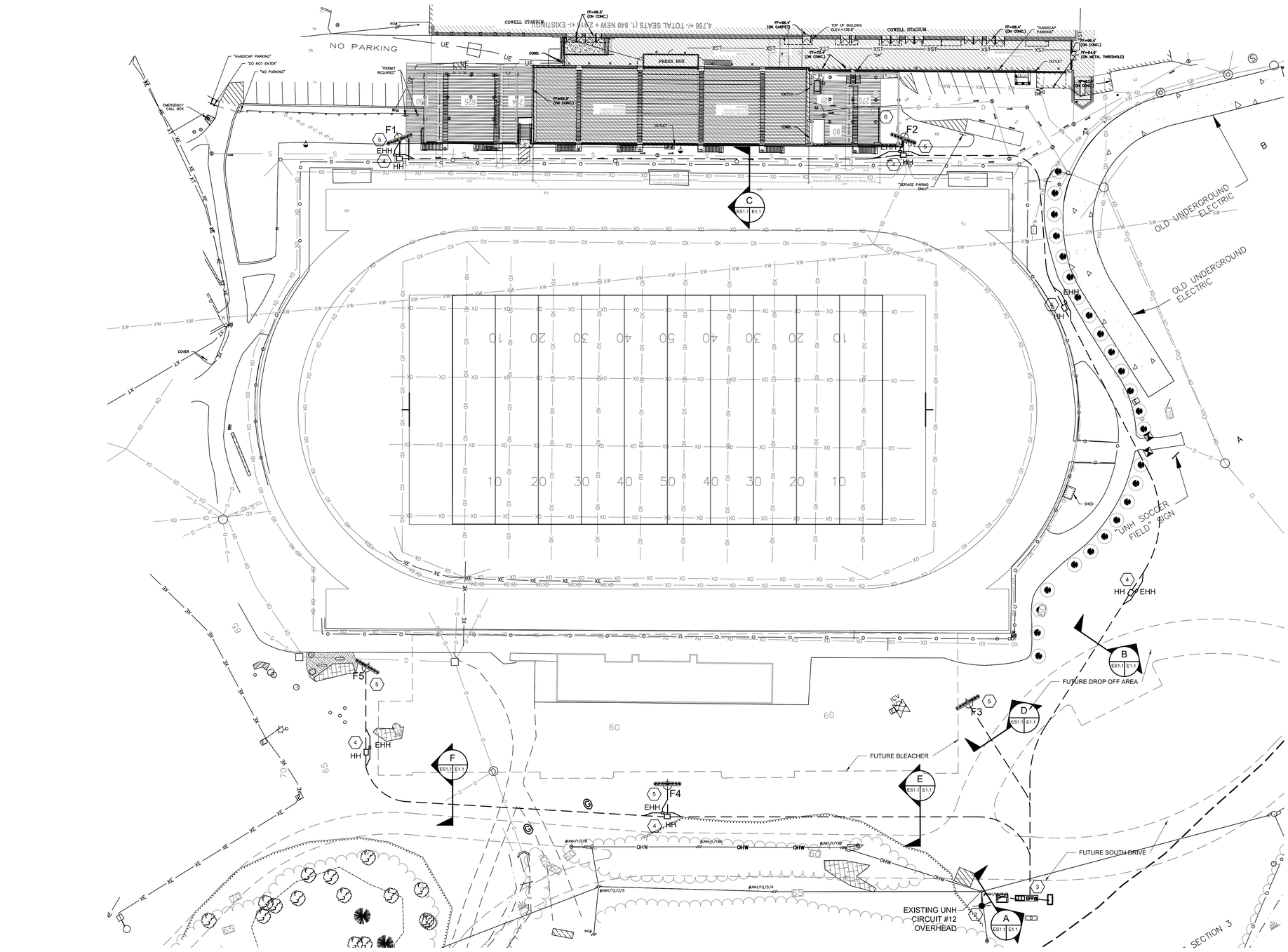
2. PROVIDE NEW WOOD POWER POLE WITH REQUIRED CROSSARMS, HARDWARE AND ACCESSORIES IN THIS VICINITY ADJACENT TO THE EXISTING OVERHEAD (UNH CIRCUIT #12) SYSTEM. PROVIDE CONDUCTORS AND ACCESSORIES TO TAP THE EXISTING LINES, EXTEND TO THE NEW POLE, AND PROVIDE A RISER TO A NEW PAD-MOUNTED TRANSFORMER. COORDINATE LOCATION WITH OWNER.

3. PROVIDE PAD-MOUNTED EQUIPMENT AT THIS LOCATION TO FEED NEW FIELD LIGHTING SYSTEM. FOR INFORMATION AND DETAILS ON EQUIPMENT AND ELECTRICAL REQUIREMENTS, REFER TO DRAWINGS E1.1, E1.2, E1.3, AND E1.4.

4. PROVIDE HANDHOLES (INDICATED "HH" AND "EHH" ON DRAWING E1.1) FOR THE FIELD LIGHTING CIRCUITS AND THE EMERGENCY EGRESS LIGHTING CIRCUITS.

5. CONDUITS AND WIRING TO MUSCO LIGHT POLE (FOR FIELD LIGHTING, EMERGENCY LIGHTING, AND BLUE LIGHTING, INCLUDING SPARES) SHALL BE PROVIDED OVER TO, AND UP, THE POLE TO THE MUSCO JUNCTION BOX(ES) LOCATED APPROXIMATELY TWENTY (20) FEET ABOVE GRADE (LEAVE APPROXIMATELY 10 FEET OF SPARE CONDUCTOR AT THE JUNCTION BOX). THE CONDUITS AT THE BASE OF THE POLE (ENCASED IN A LARGE CONCRETE POLE FOUNDATION, BY OTHERS) AND RISING UP THE POLE SHALL BE RIGID GALVANIZED STEEL (RGS). CONTRACTOR SHALL PROVIDE GROUND RODS ADJACENT TO THE CONCRETE FOUNDATION, AND EXTEND #4 AWG BARE GROUND IN 1" PVC THROUGH THE FOUNDATION AND STUB UP AT THE BASE OF THE POLE FOR FUTURE CONNECTION BY OTHERS.

6. ALTERNATE: PROVIDE ALL CONDUITS REQUIRED BETWEEN LIGHTING POLES F2 AND F1 ROUTED THROUGH (UP UNDER - SURFACE MOUNTED) THE EXISTING BLEACHERS, INSTEAD OF UNDERGROUND.



GRAPHIC SCALE

0 30 60 90 150

(IN FEET)
1 INCH = 30 FT.

ELECTRICAL SITE PLAN
1" = 30'-0"

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RFS PROJECT NO.: 7417.001

UNIVERSITY OF NEW HAMPSHIRE

Cowell Stadium Project

22 Colovos Road

NO.	DESCRIPTION	DATE

CONTENT:
ELECTRICAL SITE PLAN

DRAWN BY:	B. A. NEWELL
PROJECT NO:	13-039-00
DATE:	03/07/14
REVISED:	
SCALE:	AS NOTED

ES1.1

Project Phase
100% CONSTRUCTION DOCUMENTS

DRAWING NOTES

1. THE FOLLOWING NOTES ONLY APPLY TO THIS DRAWING.

(2) PANELBOARD SHALL BE A COMPONENT OF A PACKAGED OUTDOOR SYSTEM IN A WEATHERPROOF ENCLOSURE.

PANELBOARD: HP1

BUS SIZE: 600 AMPS
VOLTAGE: 480 Y/277V 3PH,4W
NEUTRAL: (X)100% ( )200% ( )NONE
ISOLATED GND BUS: ( )YES (X)NO
SHORT CIR. CURRENT RATING 25K

MAIN: (X)MCB ( )MLO
MAIN CB AMPS: 600
LOCATION: PAD-MTD IPACS UNIT
MOUNTING: SURFACE
TVSS: ( ) YES (X) NO

SERVICE RATED: (X) YES ( ) NO

(2)

DIRECTORY	WATTS OF LOAD L1	L2	L3	CKT BKR AMPS	POLES		CKT BKR AMPS	WATTS OF LOAD L1	L2	L3	DIRECTORY
	11279				1	2		11279			
POLE F1 – CONTACTOR C1 GAME LIGHTS		11279		50	3	4	50		11279		POLE F2 – CONTACTOR C2 GAME LIGHTS
			11279		5	6				11279	
	6152				7	8		6152			
POLE F3 – CONTACTOR C3 GAME LIGHTS		6152		30	9	10	30		6152		POLE F4 – CONTACTOR C4 GAME LIGHTS
			6152		11	12				6152	
	6152				13	14		6152			
POLE F5 – CONTACTOR C5 GAME LIGHTS		6152		30	15	16	30		6152		POLE F1 – CONTACTOR C6 PRACTICE/GAME LIGHTS
			6152		17	18				6152	
	6152				19	20		6152			
POLE F2 – CONTACTOR C7 PRACTICE/GAME LIGHTS		6152		30	21	22	30		6152		POLE F3 – CONTACTOR C8 PRACTICE/GAME LIGHTS
			6152		23	24				6152	
	6152				25	26		6152			
POLE F4 – CONTACTOR C9 PRACTICE/GAME LIGHTS		6152		30	27	28	30		6152		POLE F5 – CONTACTOR C10 PRACTICE/GAME LIGHTS
			6152		29	30				6152	
	6152				31	32		6152			
POLE F1 – CONTACTOR C11 PRACTICE/GAME/CLEAN-UP LTS		6152		30	33	34	30		6152		POLE F2 – CONTACTOR C12 PRACTICE/GAME/CLEAN-UP LTS
			6152		35	36				6152	
	6152				37	38		6152			
POLE F3 – CONTACTOR C13 PRACTICE/GAME/CLEAN-UP LTS		6152		30	39	40	30		6152		POLE F4 – CONTACTOR C14 PRACTICE/GAME/CLEAN-UP LTS
			6152		41	42				6152	
	10260										
SUB-FEED LUGS TO PANEL HP2		9392									
			6392								
SUBTOTAL	58451	57583	54583					48191	48191	48191	SUBTOTAL

NOTES:

FEED-THRU LUGS

TOTAL PANEL RECPT LOAD = 0 WATTS

S=SHUNT TRIP G=GFCI
L=LOCK ON C.B. H=HACR C.B.
A=AFCI

TOTAL WATTS L1: 106642
TOTAL WATTS L2: 105774
TOTAL WATTS L3: 102774
TOTAL WATTS: 315190
TOTAL AMPS @ 100%: 380 AMPS
TOTAL AMPS @ 125%: 474 AMPS

PANELBOARD: HP2

BUS SIZE: 600 AMPS
VOLTAGE: 480 Y/277V 3PH,4W
NEUTRAL: (X)100% ( )200% ( )NONE
ISOLATED GND BUS: ( )YES (X)NO
SHORT CIR. CURRENT RATING 25K

MAIN: ( )MCB (X)MLO
MAIN AMPS: 600
LOCATION: PAD-MTD IPACS UNIT
MOUNTING: SURFACE
TVSS: ( ) YES (X) NO

SERVICE RATED: (X) YES ( ) NO

(2)

DIRECTORY	WATTS OF LOAD L1	L2	L3	CKT BKR AMPS	POLES		CKT BKR AMPS	WATTS OF LOAD L1	L2	L3	DIRECTORY
	6152				1	2		3000			
POLE F5 – CONTACTOR C15 PRACTICE/GAME/CLEAN-UP LTS		6152		30	3	4	30		3240		PANEL LP1 VIA 15KVA TRANSFORMER
			6152		5	6				240	
	1108				7	8					
PANELBOARD ELS1 VIA ATS-LS		0		30	9	10	30				SPARE
			0		11	12					
					13	14					
SPARE				30	15	16	30				SPARE
					17	18					
					19	20					
SPARE				20	21	22	20				SPARE
					23	24					
					25	26					
SPACE					27	28					SPACE
					29	30					
					31	32					
SPACE					33	34					SPACE
					35	36					
SPACE					37	38					SPACE
SPACE					39	40					SPACE
SPACE					41	42					SPACE
SUBTOTAL	7260	6152	6152					3000	3240	240	SUBTOTAL

NOTES:

TOTAL PANEL RECPT LOAD = 0 WATTS

S=SHUNT TRIP G=GFCI
L=LOCK ON C.B. H=HACR C.B.
A=AFCI

TOTAL WATTS L1: 10260
TOTAL WATTS L2: 9392
TOTAL WATTS L3: 6392
TOTAL WATTS: 26044
TOTAL AMPS @ 100%: 31 AMPS
TOTAL AMPS @ 125%: 39 AMPS

PANELBOARD: LP1

BUS SIZE: 50 AMPS
VOLTAGE: 208 Y/120V 3PH,4W
NEUTRAL: (X)100% ( )200% ( )NONE
ISOLATED GND BUS: ( )YES (X)NO
SHORT CIR. CURRENT RATING 22K

MAIN: (X)MCB ( )MLO
MAIN CB AMPS: 50
LOCATION: PAD-MTD IPACS UNIT
MOUNTING: SURFACE
TVSS: ( ) YES (X) NO

SERVICE RATED: ( ) YES (X) NO

(2)

DIRECTORY	WATTS OF LOAD L1	L2	L3	CKT BKR AMPS	POLES		CKT BKR AMPS	WATTS OF LOAD L1	L2	L3	DIRECTORY
GENERATOR BATTERY CHARGER	1800			30	1	2	20	1200			GENERATOR HEATER
		1800			3	4			1200		
SPARE				20	5	6	20			240	SPARE
					7	8	30				SPARE
POLE BLUE LIGHT CIRCUIT		240		20	9	10	20				SPARE
SPARE				30	11	12	20				SPARE
SPARE				20	13	14	20				SPARE
SPARE				20	15	16	20				SPARE
SPARE				20	17	18	20				SPARE
SPARE				20	19	20	20				SPARE
SPARE				20	21	22	20				SPARE
SPARE				20	23	24	20				SPARE
SUBTOTAL	1800	2040	0					1200	1200	240	SUBTOTAL

NOTES:

TOTAL PANEL RECPT LOAD = 0 WATTS

S=SHUNT TRIP G=GFCI
L=LOCK ON C.B. H=HACR C.B.
A=AFCI

TOTAL WATTS L1: 3000
TOTAL WATTS L2: 3240
TOTAL WATTS L3: 240
TOTAL WATTS: 6480
TOTAL AMPS @ 100%: 18 AMPS
TOTAL AMPS @ 125%: 23 AMPS

PANELBOARD: ELS1

BUS SIZE: 50 AMPS
VOLTAGE: 480 Y/277V 3PH,4W
NEUTRAL: (X)100% ( )200% ( )NONE
ISOLATED GND BUS: ( )YES (X)NO
SHORT CIR. CURRENT RATING 25K

MAIN: ( )MCB (X)MLO
MAIN AMPS: 50
LOCATION: PAD-MTD PEDESTAL
MOUNTING: SURFACE
TVSS: ( ) YES (X) NO

SERVICE RATED: ( ) YES (X) NO

DIRECTORY	WATTS OF LOAD L1	L2	L3	CKT BKR AMPS	POLES		CKT BKR AMPS	WATTS OF LOAD L1	L2	L3	DIRECTORY
					1	2					
SPARE				20	3	4	20				SPARE
					5	6					
POLE F1 & F2 EGRESS LIGHTING	1108			20	7	8	20				FUTURE POLE F3, 4, 5 EGRESS
SPARE				20	9	10	20				SPARE
SPARE				20	11	12	20				SPARE
					13	14					
					15	16					
					17	18					
					19	20					
					21	22					
					23	24					
SUBTOTAL	1108	0	0					0	0	0	SUBTOTAL

NOTES:

NEMA 3R

TOTAL PANEL RECPT LOAD = 0 WATTS

S=SHUNT TRIP G=GFCI
L=LOCK ON C.B. H=HACR C.B.
A=AFCI

TOTAL WATTS L1: 1108
TOTAL WATTS L2: 0
TOTAL WATTS L3: 0
TOTAL WATTS: 1108
TOTAL AMPS @ 100%: 1 AMPS
TOTAL AMPS @ 125%: 2 AMPS

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RFS PROJECT NO.: 7417.001

UNIVERSITY OF NEW HAMPSHIRE

Cowell Stadium Project

22 Colovos Road

NO.	DESCRIPTION	DATE

CONTENT:

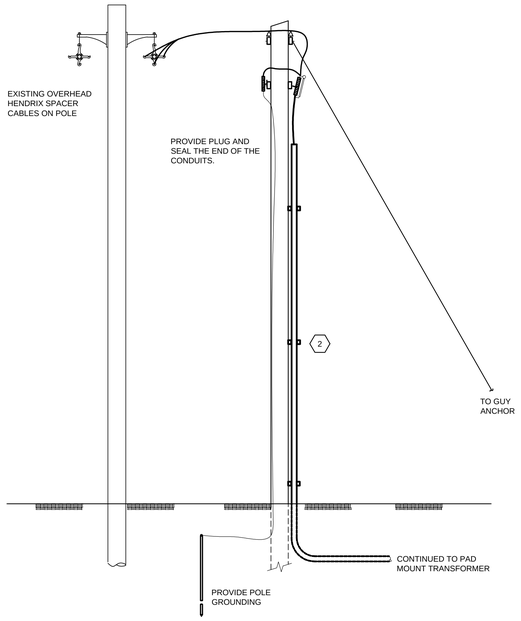
PANELBOARD SCHEDULES

DRAWN BY:	B.A. NEWELL
PROJECT NO:	13-039-00
DATE:	03/07/14
REVISED:	
SCALE:	NONE

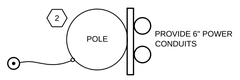
E1.3

Project Phase

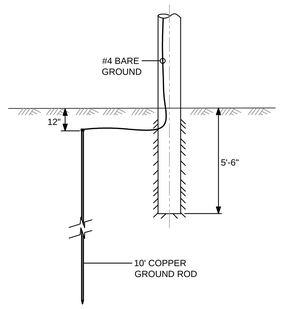
100% CONSTRUCTION DOCUMENTS



TYPICAL UTILITY RISER POLE DETAIL
NOT TO SCALE



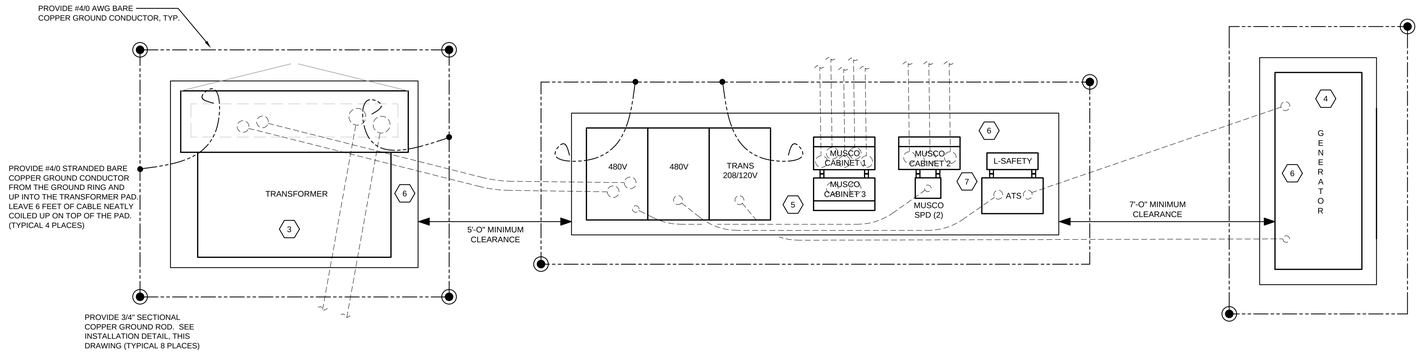
UTILITY POLE PLAN
NOT TO SCALE



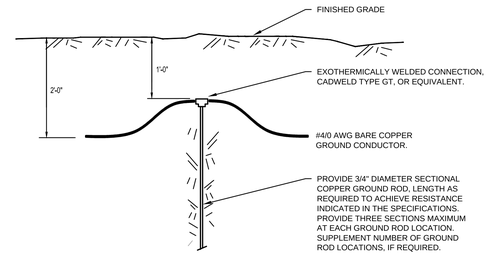
POLE BASE & GROUNDING DETAIL
NOT TO SCALE

DRAWING NOTES

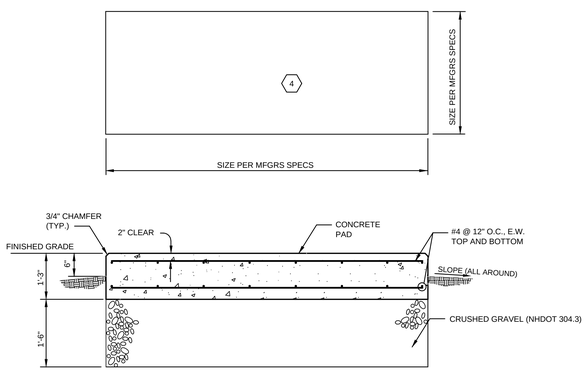
1. THE FOLLOWING NOTES ONLY APPLY TO THIS DRAWING.
2. PROVIDE WOOD UTILITY POLE WITH REQUIRED CROSSARMS, PIN INSULATORS, MOUNTING HARWARE, GUYING AND ANCHORS. PROVIDE CONDUIT RACKS AND RISERS UP THE POLE AS NEEDED. CONNECT THE NEW UNDERGROUND SYSTEM TO THE EXISTING OVERHEAD SYSTEM TO OPERATE IN THE SAME MANNER AS IT CURRENTLY OPERATES. FOR LOCATION OF POLE, SEE SITE PLAN AND NOTES ON DRAWINGS ES1.1.
3. CONCRETE TRANSFORMER PAD SHALL BE SIZED, AS A MINIMUM, TO EXTEND 4" BEYOND THE EDGE OF THE TRANSFORMER BEING SUPPLIED (IN ALL DIRECTIONS).
4. PAD SHALL BE CONSTRUCTED TO EXTEND 6" BEYOND THE GENERATOR ENCLOSURE IN ALL DIRECTIONS.
5. PAD SHALL BE CONSTRUCTED TO EXTEND 6" BEYOND THE LAYOUT OF ALL THE EQUIPMENT, IN ALL DIRECTIONS, ONCE THE EQUIPMENT IS SELECTED AND ARRANGED AS INDICATED.
6. ALL CONDUITS UNDER, BETWEEN, AND UP THROUGH THE PADS IN THIS LAYOUT SHALL BE RIGID GALVANIZED STEEL, UP TO AND INTO THE EQUIPMENT AND ENCLOSURES.
7. PROVIDE A 20 AMP, 120VAC GFCI RECEPTACLE IN A WEATHERPROOF BOX, MOUNTED TO ONE OF THE STRUT UPRIGHT SUPPORTS, AND CONNECTED TO PANEL LP1 (2#10&1#10G-3/4"C).
8. SEE DRAWING ES1.1 FOR ADDITIONAL SITE INFORMATION (POLE LIGHTS AND EQUIPMENT LOCATIONS, ETC.).
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUITS AND WIRING FOR THE SYSTEMS INDICATED FOR A COMPLETE AND OPERATIONAL SYSTEM.



FIELD LIGHTING EQUIPMENT UTILITY PADS
1/2" = 1'-0"

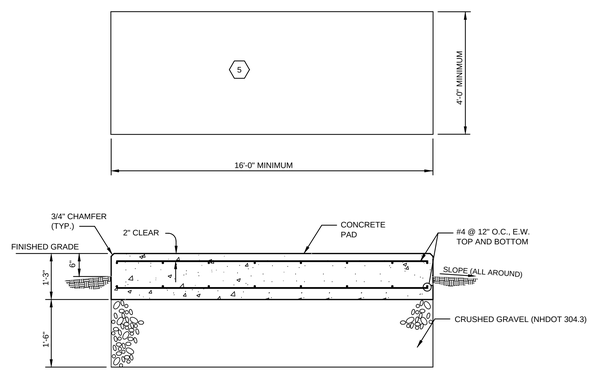


TYPICAL GROUND ROD INSTALLATION
NOT TO SCALE



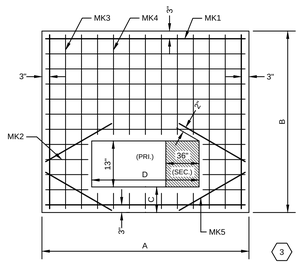
NOTES:
1. CRUSHED GRAVEL GRADATION SHALL BE IN ACCORDANCE WITH NHDOT 304.3 SPECIFICATIONS.
2. ANCHOR EQUIPMENT PER MFGR. SPECS.

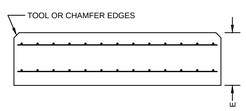
CONCRETE GENERATOR PAD DETAIL
NOT TO SCALE



NOTES:
1. CRUSHED GRAVEL GRADATION SHALL BE IN ACCORDANCE WITH NHDOT 304.3 SPECIFICATIONS.
2. ANCHOR EQUIPMENT PER MFGR. SPECS.

CONCRETE EQUIPMENT PAD DETAIL
NOT TO SCALE





PAD TYPE	EQUIPMENT	DIMENSIONS IN INCHES *					REINFORCING BARS				
		A	B	C	D	E	MK1	MK2	MK3	MK4	MK5
#1	500KVA - 3 PHASE TRANSFORMER	97	65	9	81	12	6 #4 93"	6 #4 6"	6 #4 61"	13 #4 39"	4 #4 18"

* COORDINATE EXACT SIZE OF PAD REQUIRED WITH ACTUAL EQUIPMENT BEING FURNISHED BY THE OWNER.

NOTES:
1 CONCRETE TESTING, 4000 PSI, 4% TO 6% ENTRAINED AIR, 1/2" MAXIMUM SIZE AGGREGATE.
2 REINFORCING STEEL ATSM-A615 GRADE 60, PLACE APPROX. 6" O.C. EACH WAY AND SECURELY TIED TOGETHER.
3 MINIMUM CONCRETE COVER OVER REINFORCING STEEL 2 INCHES UNLESS NOTED.
4 WOOD FLOAT FINISH, LEAVING NO DEPRESSIONS.

CONCRETE TRANSFORMER PAD DETAIL
NOT TO SCALE

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RFS PROJECT NO.: 7417.001

UNIVERSITY OF NEW HAMPSHIRE

Cowell Stadium Project

22 Colovos Road

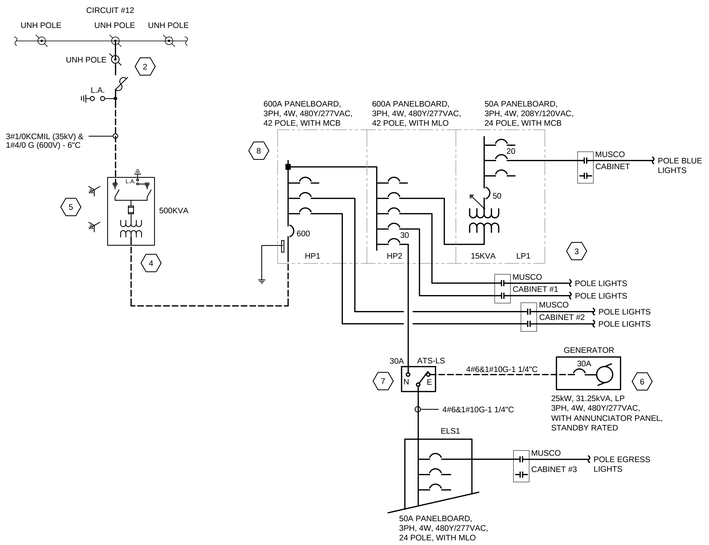
NO.	DESCRIPTION	DATE

CONTENT:
SITE ELECTRICAL DETAILS

DRAWN BY:	B.A. NEWELL
PROJECT NO:	13-039-00
DATE:	03/07/14
REVISED:	
SCALE:	AS NOTED

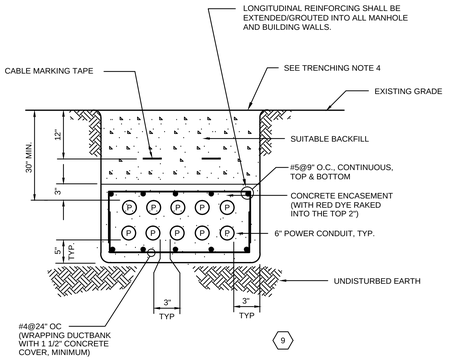
E1.2

Project Phase
100% CONSTRUCTION DOCUMENTS



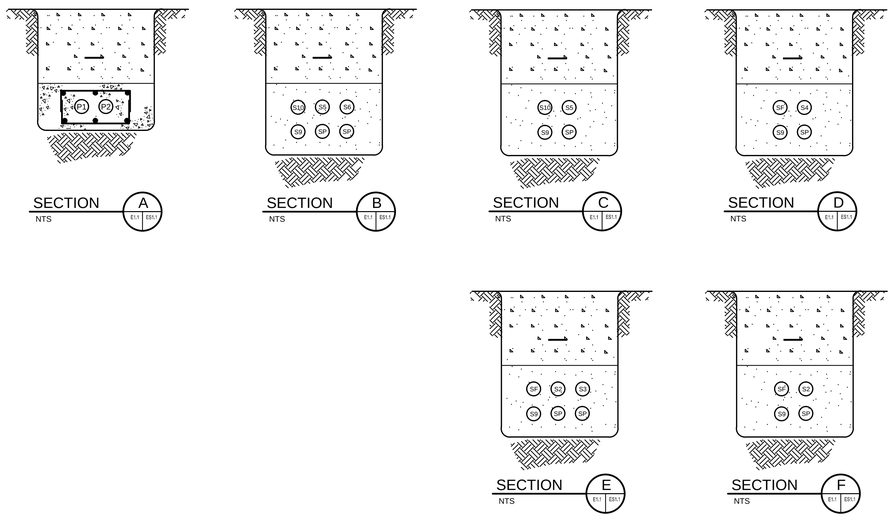
PROPOSED PARTIAL COWELL STADIUM ONE-LINE DIAGRAM

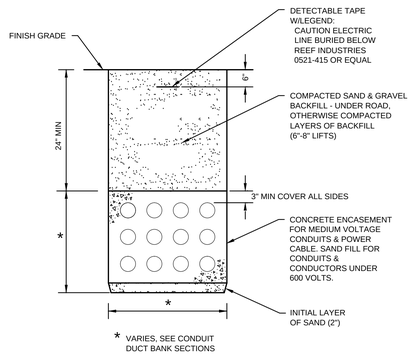
NOT TO SCALE



REINFORCED DUCTBANK DETAIL

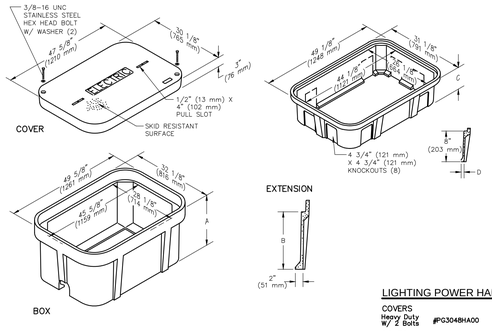
NOT TO SCALE





TYPICAL TRENCH SECTION

NOT TO SCALE



ELECTRICAL HANDHOLE DETAIL

NOT TO SCALE

(AS MANUFACTURED BY STRONGWELL)
(TYPE "HH SHOWN ABOVE)

LIGHTING POWER HANDHOLE

COVERS (TYPE HH)
Heavy Duty
W/ 2 Bolts #PG3048HA00

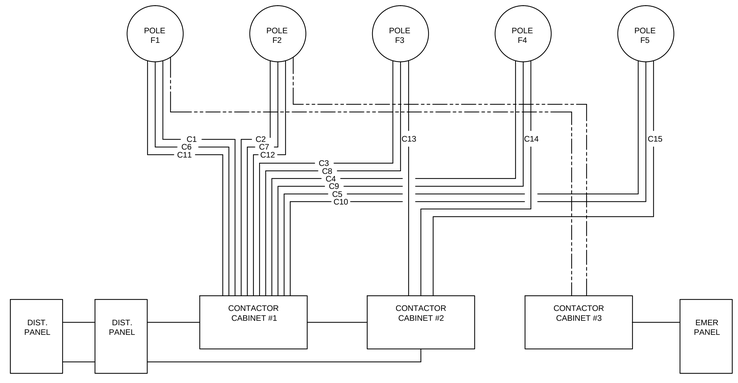
BOXES
W/ No Base #PG3048BA36

EXTENSIONS
W/ No Base #PG3048EA08

EMERGENCY POWER HANDHOLE

COVERS (TYPE EHH)
Heavy Duty
W/ 2 Bolts #PG1118HA00

BOXES
W/ No Base #PG1118BBA12



LIGHT POLE RISER DIAGRAM

NOT TO SCALE

TRENCHING NOTES

1 CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING. DIGGING TEST PITS ARE REQUIRED AT EVERY UTILITY CROSSING. THE MOST CRITICAL AREAS ARE INDICATED ON THE DRAWINGS. FAILURE TO PERFORM TEST PITS MAY RESULT IN UNNECESSARY DELAYS AND CONFLICTS FOR WHICH THE CONTRACTOR MAY BE HELD RESPONSIBLE.

2 TEST PITS SHALL BE COORDINATED WITH THE ENGINEER, AND ALL SHALL INCLUDE INFORMATION AS TO SIZE AND CONFIGURATION OF PIPES FOUND AS WELL AS INVERT ELEVATIONS.

3 TRENCH BOTTOM SHALL BE UNDISTURBED, FIRM, AND UNIFORM FOR ITS ENTIRE LENGTH.

4 KEEP THE TRENCH WIDTH AS NARROW AS POSSIBLE. THE SIDES OF THE CONCRETE DUCTBANKS SHALL BE FORMED VERTICAL OR SLIGHTLY INWARD TO MINIMIZE POTENTIAL FOR FROST HEAVING.

5 PLACE 2" LAYER OF SAND IN BOTTOM OF TRENCH AS BASE FOR CONCRETE PLACEMENT.

6 WHEN FINAL BACKFILLING IS PERFORMED, UTILIZE EXCAVATED MATERIAL. REMOVE ALL LARGE ROCKS, FOREIGN MATERIALS, ETC. TO AVOID DAMAGE TO CONDUITS.

7 ALL UNDERGROUND CONDUITS SHALL BE RIGID PVC SCHEDULE 40, ENCASED IN CONCRETE, UNLESS OTHERWISE INDICATED ON DRAWINGS. PROVIDE CONDUITS SIZE IN ACCORDANCE WITH THE CONDUIT SCHEDULE (THIS SHEET). ALL VERTICAL CONDUIT SWEEPS SHALL BE ASPHALTUM-COATED RIGID GALVANIZED STEEL (RGS). AT POLES, RGS SHALL EXTEND A MINIMUM OF 10' UP POLE BEFORE CHANGING TO SCHEDULE 40 PVC.

8 SEAL ALL CONDUIT JOINTS AND AROUND EACH CONDUIT AT WALL PENETRATIONS.

9 ALL DUCTS SHALL BE CAPPED DURING CONCRETE POURING AND LEFT CAPPED UNTIL CABLE PULLING BEGINS.

10 ALL CONDUIT SHALL BE SLOPED @ 3"/100' MINIMUM TO DRAIN.

11 INDICATED DIMENSIONS FOR THE SPACING OF CONDUIT IN THE DUCT BANKS ARE MINIMUMS. INSTALL RIGID PLASTIC SPACERS AT INTERVALS OF 10'-0" OR LESS FOR DUCTBANKS ENCASED IN CONCRETE.

12 PROVIDE A MINIMUM OF 12" SEPARATION BETWEEN MEDIUM VOLTAGE CONDUITS AND TELECOMMUNICATIONS CONDUITS.

DRAWING NOTES

1. THE FOLLOWING NOTES ONLY APPLY TO THIS DRAWING.

2 PROVIDE RISER POLE ADJACENT TO THE EXISTING OVERHEAD (CIRCUIT #12) CONDUCTORS AND TAP CABLES TO NEW UNDERGROUND RISER POLE. OVERHEAD CONDUCTORS SHALL BE OF THE SAME SIZE AND TYPE AS THE EXISTING BEING TAPPED. PROVIDE POLE, CROSSARMS, INSULATORS, LIGHTNING ARRESTERS, CUTOUTS, GROUNDING, GUYING AND ANCHORS, ETC., FOR A COMPLETE RISER SYSTEM.

3 INSTALL MUSCO EQUIPMENT CONTACTOR AND CONTROL CABINETS, FURNISHED AS PART OF THE FIELD LIGHTING SYSTEM EQUIPMENT, AND PROVIDE ALL WIRING IN CONDUIT FOR A COMPLETE INSTALLATION.

4 PROVIDE TWO (2) 6" CONDUIT STUBOUTS FROM THE SECONDARY ENCLOSURE CABINET (APPROX. 15 FT.) FOR FUTURE EXTENSION TO NEXT TRANSFORMER, BY OTHERS.

5 INSTALL PAD-MOUNTED TRANSFORMER (FURNISHED BY OWNER) ON CONCRETE PAD TO FEED FIELD LIGHTING EQUIPMENT.

6 INSTALL 25 KW, 480Y/277 VOLT PROPANE-FUELED EMERGENCY GENERATOR (FURNISHED BY OWNER), WITH OUTDOOR WEATHER PROTECTIVE HOUSING, CONCRETE PAD-MOUNTED.

7 INSTALL NEMA 3R, 30 AMPERE, 480Y/277 VOLT 3 PHASE AUTOMATIC TRANSFER SWITCH (FURNISHED BY OWNER), MOUNTED ON GALVANIZED SUPPORT STRUCTURE. PROVIDE ASSOCIATED WIRING.

8 PROVIDE POWER DISTRIBUTION EQUIPMENT AS A PACKAGED UNIT IN A WEATHERPROOF ENCLOSURE.

9 THE REINFORCED CONCRETE DUCTBANK DETAIL SHOWN ON THIS DRAWING IS TYPICAL FOR ALL DUCTBANK SECTIONS INDICATED REGARDLESS OF SUBGRADE CONDITION. DUCTBANK CONCRETE MAY BE DYED RED OR RED DYE MAY BE RAKED INTO THE TOP TWO INCHES OF CONCRETE.

CONDUIT & CONDUCTOR SCHEDULE

CONDUIT	SIZE	TYPE	CABLE SIZE	CONDUIT USE DESCRIPTION
P1	6"	PVC	3#1/0KCMIL (35kV) & 1#4/0G (600V)	35kV PRIMARY CIRCUIT
P2	6"	PVC	PULL ROPE	SPARE PRIMARY CONDUIT
S1	4"	PVC	4#350KCMIL (600V)	TRANSFORMER SECONDARIES TO POWER PANEL HP1
S2	4"	PVC	3#4&1#8G (600V) (C1) 3#4&1#8G (600V) (C6) 3#4&1#8G (600V) (C11)	LIGHTING CIRCUITS TO FIELD POLE F5
S3	4"	PVC	3#6&1#8G (600V) (C2) 3#6&1#8G (600V) (C7) 3#6&1#8G (600V) (C12)	LIGHTING CIRCUITS TO FIELD POLE F4
S4	4"	PVC	3#6&1#8G (600V) (C3) 3#6&1#8G (600V) (C8) 3#6&1#8G (600V) (C13)	LIGHTING CIRCUITS TO FIELD POLE F3
S5	4"	PVC	3#2/0&1#6G (600V) (C4) 3#2&1#6G (600V) (C9) 3#2&1#6G (600V) (C14)	LIGHTING CIRCUITS TO FIELD POLE F1
S6	4"	PVC	3#1&1#6G (600V) (C5) 3#4&1#8G (600V) (C10) 3#4&1#8G (600V) (C15)	LIGHTING CIRCUITS TO FIELD POLE F2
S7	2"	RGS	4#8&1#8G (600V)	EMERGENCY GENERATOR POWER TO ATS-LS
S8	2"	RGS	12#8 AWG (600V)	EQUIPMENT POWER FROM PANEL LP1 TO GENERATOR
S9	2"	PVC	2#4&1#8G (600V)	POWER TO POLE BLUE LIGHTS
S10	2"	PVC	2#4&1#8G (600V)	POWER FROM PANEL ELS1 TO POLE EGRESS LIGHTS
SF	2"	PVC	PULL ROPE	SPARE (FUTURE EMER) POWER FROM PANEL ELS1 TO POLE EGRESS LIGHTS (POLES F3, F4, F5)
SP	4"	PVC	PULL ROPE	SPARE POWER
C1	1 1/4"	RGS	4#10 AWG	GENERATOR START CIRCUIT FROM ATS-LS

CONDUIT SPACING WHEN USING SPACERS

CONDUIT SIZE	CONDUIT SIZE O.D.	STANDARD CONDUIT SEPARATIONS ℄ TO ℄
4"	4.50"	HOR. 7 1/2"
		VERT. 7 1/2"
		* E.O.C. 5 1/4"
5"	5.50"	HOR. 8 9/16"
		VERT. 8 9/16"
		* E.O.C. 5 3/4"
6"	6.625"	HOR. 9 5/8"
		VERT. 9 5/8"
		* E.O.C. 6 5/16"

* DENOTES ℄ OF CONDUIT TO EDGE OF CONCRETE

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RFS PROJECT NO.: 7417.001

UNIVERSITY OF NEW HAMPSHIRE

Cowell Stadium Project

22 Colovos Road

NO.	DESCRIPTION	DATE

CONTENT:
PRIMARY ONE-LINE DIAGRAM & SITE LIGHTING DETAILS

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REVISED:	
SCALE:	AS NOTED

E1.1

Project Phase
100% CONSTRUCTION DOCUMENTS