

# Cedar Ridge High School **Outdoor Agricultural Lab**

## 1125 New Grady Brown School Road **Orange County Board of Education** Hillsborough, North Carolina

**Electrical Engineers** 

	ALLO	WABLE AREA	N N		
ipancy Classification cupancy Classification	n(s): <u>Educational</u> on(s): Assembly	<u>N/A N/A</u> A-3	<u>N/A</u>	<u>N/A N/A</u>	
es (Table 509):					
Chapter 4 – List Co	de Sections):				
sions: (Chapter 5 – I	list Code Sections	s):			
ancy: <u>No</u> Separati rated Use (508.3) tual Area of Occupan vable Area of Occupan	on: <u>Select one</u> $\frac{cy A}{ncy A} + \frac{Ac}{Allow}$	Exception: <u>etual Area of Oc</u> wable Area of O	$\begin{array}{c} \underline{cupancy \ B} \\ \underline{cupancy \ B} \\ + & \dots \end{array}$	= ≤ 1.00	
DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 <sup>4</sup> AREA	(C) AREA FOR FRONTAGE INCREASE <sup>1,5</sup>	(D) ALLOWABLE AREA PER STORY OR UNLIMITED <sup>2,3</sup>	
First Floor	2,288	6,000	4,500	10,500	
a increases from Secti- neter which fronts a pu- Building Perimeter (F/P) = 1.00 (F/P) Minimum width of pu- nt of frontage increas ea applicable under co- uilding Area = total n m area of open parkin ers must comply with rease is based on the u	on 506.2 are comp ublic way or open = 194'-0" (P) blic way = 30'-( $e I_f = 100[F/P - 0]$ onditions of Section umber of stories in g garages must co Table 412.3.1. unsprinklered area	puted thus: space having 20 0.25] x $W/30 = 7on 507.In the building ximply with Tablevalue in Table 2$	) feet minimum widt 75 (%) D (maximum3 storie e 406.5.4. The maxi 506.2.	h = 194'-0" (F) es) (506.2). mum area of air traffic	
	Ipancy Classification         cupancy Classification         cupancy Classification         es (Table 509):	ALLO         apancy Classification(s): Educational N         cupancy Classification(s): Assembly A         es (Table 509):         Chapter 4 – List Code Sections):         sions: (Chapter 5 – List Code Sections):         ancy: No         Separation: Select one         rated Use (508.3)         trade of Occupancy A         trade of Occupancy A         Allow         bable Area of Occupancy A         +         DESCRIPTION AND         USE         BLDG AREA PER         STORY (ACTUAL)         First Floor         2,288         Image: Strong Section 506.2 are completer which fronts a public way or open         Building Perimeter         Building Perimeter         = 194'-0" (P)         (F/P) = 1.00 (F/P)         Minimum width of public way         Minimum width of public way         applicable under conditions of Section         appl	ALLOWABLE AREA         apancy Classification(s): EducationalN/A       N/A         cupancy Classification(s): Assembly A-3         es (Table 509):         Chapter 4 – List Code Sections):         construct Code Sections):         construct Code Sections):         ancy: No       Separation: Select one       Exception:         ancy: No       Separation: Select one         Second Occupancy A       +       Actual Area of Occupancy A         Actual Area of Occupancy A         Actual Area of Occupancy A         Actual Area of Occupancy A <td>ALLOWABLE AREA         upancy Classification(s): EducationalN/A       N/A       N/A       N/A         cupancy Classification(s): Assembly A-3         es (Table 509):         Chapter 4 – List Code Sections):         colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;No       Separation: Select one       Exception:         colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;No       Separation: Select one       Exception:         colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;Chapter 4 – List Code Sections):         colspan="2"&gt;Colspan="2"&gt;Colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"&gt;colspan="2"           <td c<="" td=""></td></td>	ALLOWABLE AREA         upancy Classification(s): EducationalN/A       N/A       N/A       N/A         cupancy Classification(s): Assembly A-3         es (Table 509):         Chapter 4 – List Code Sections):         colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">No       Separation: Select one       Exception:         colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">No       Separation: Select one       Exception:         colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">Chapter 4 – List Code Sections):         colspan="2">Colspan="2">Colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2">colspan="2" <td c<="" td=""></td>	

### **ALLOWABLE HEIGHT** SHOWN ON PLANS CODE REFERENCE ALLOWABLE Building Height in Feet (Table 504.3) 40 17'-7 1/4" Building Height in Stories (Table 504.4) Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0					
Bearing Walls							
Exterior							
North		N/A					
East		N/A					
West		N/A					
South		N/A					
Interior		0					
Nonbearing Walls and Partitions		0					
Exterior walls							
North		N/A					
East		N/A					
West		N/A					
South		N/A					
Interior walls and partitions		N/A					
Floor Construction Including supporting beams and joists		0					
Floor Ceiling Assembly		0					
Columns Supporting Floors		0					
Roof Construction, including supporting beams and joists		0					
Roof Ceiling Assembly		0					
Columns Supporting Roof		0					
Shaft Enclosures - Exit		N/A					
Shaft Enclosures - Other		N/A					
Corridor Separation		N/A					
Occupancy/Fire Barrier Separat	ion	N/A					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Smoke Partition		N/A					
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A					
Incidental Use Separation		N/A					
Indicate section number perm	nitting reduction						

LIFE SAFETY SYSTEM REQUIREMENTS Emergency Lighting: Exit Signs: Fire Alarm: Smoke Detection Systems:

2018 NC Administrative Code and Policies

Carbon Monoxide Detection: No

2018 NC Administrative Code and Policies

## **Architects and Civil Engineers**

### **Structural Engineers**

## January 10, 2024

### LIST OF DRAWINGS

### G000 Cover Sheet CIVIL C1.0 Existing Conditions Plan

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A100

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C2.0 Site Plan C2.1 Enlarged Site Plan C2.2 Site Details C3.0 Grading and Storm Drainage Plan

### STRUCTURAL S0.0 General Notes S1.0 Foundation and Framing Plan/Details ARCHITECTURAL A100 Plans & Details A200 Building Elevations & Section

A300 Wall Sections & Details ELECTRICAL

E0.1 Electrical Symbols, Schedules, Notes, Riser & Plan

### SYMBOL LEGEND

Spot Elevation

Elevation Target

Detail Target

### LOCATOR MAP





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N:838,495.25 E:1,963,391.90 0

CONSTRUCTION WASTE: 1. BY ORANGE COUNTY ORDINANCE, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATED CARDBOARD; ALL PRESENT IN CONSTRUCTION WASTE MUST BE

- RECYCLED. 2. BY ORANGE COUNTY ORDINANCE, ALL HAULERS OF CONSTRUCTION WASTE MUST BE PROPERLY LICENSED.
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### GENERAL NOTES:

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EXISTING CO	NDITIONS LEGEND
ی ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا	EXISTING IRON PIPE BOLLARD CURB INLET CATCH BASIN FIRE HYDRANT LIGHT POLE WATER VALVE SIGN HANDICAP ACCESS ELECTRIC MANHOLE ELECTRIC BOX
°∼ X	GAS VALVE
◆ ○ 7	BOLLARD (SQ.) TREE (SIZE AND TYPE) TRANSFORMER
	UNDERGROUND GAS PIPE UNDERGROUND ELECTRIC WIRE(S CHAINLINK FENCE OVERHANG TREE LINE UNDERGROUND WATER PIPE
50 50 50	RIP-RAP STORM DRAIN







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### SITE LEGEND

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- CONCRETE SIDEWALK
- PROPOSED PARKING
- PROPOSED BUILDING
- PROPOSED GRAVEL
- PROPOSED FENCE
- PROPOSED TREELINE
- LIMITS OF DISTURBANCE

### EXISTING CONDITIONS LEGEND

•	EXISTING IRON PIPE BOLLARD
Ē.	CURB INLET
	CATCH BASIN
Ý YV	FIRE HYDRANT
- <b>\$</b>	LIGHT POLE
	WATER VALVE
	SIGN
Ĕ.	HANDICAP ACCESS
Ð	ELECTRIC MANHOLE
e	ELECTRIC BOX
	GAS VALVE
<b>\$</b>	BOLLARD (SQ.)
0	TREE (SIZE AND TYPE)
$\overline{T}$	TRANSFORMER
g	UNDERGROUND GAS PIPE
<i>Ue</i>	UNDERGROUND ELECTRIC WIRE(S
X X	CHAINLINK FENCE
	OVERHANG
~~~~~~~	TREE LINE
W	UNDERGROUND WATER PIPE
	RIP-RAP
SD	STORM DRAIN







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C2.0 sheet SITE PLAN

1/10/24

project no. 2231

date

Bid Set



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### SITE LEGEND

	CONCRETE SIDEWALK
	PROPOSED PARKING
	PROPOSED BUILDING
3666666666	PROPOSED GRAVEL
OO	PROPOSED FENCE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	PROPOSED TREELINE
	LIMITS OF DISTURBANCE

### EXISTING CONDITIONS LEGEND

•	EXISTING IRON PIPE BOLLARD
Ē.	CURB INLET
	CATCH BASIN
*\$\$ *\$\$	FIRE HYDRANT
*	LIGHT POLE
$\bowtie$	WATER VALVE
	SIGN
بل	HANDICAP ACCESS
Ē	ELECTRIC MANHOLE
e	ELECTRIC BOX
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0	TREE (SIZE AND TYPE)
Τ	TRANSFORMER
g	UNDERGROUND GAS PIPE
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C2ENLARGED SITE PLAN project no. 2231

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### TOTAL DISTURBED AREA: 0.50 ACRES

### GRADING LEGEND



### EXISTING CONDITIONS LEGEND

•	EXISTING IRON PIPE BOLLARD
	CURB INLET
	CATCH BASIN
\$Y\$	FIRE HYDRANT
- <b>*</b> *-	LIGHT POLE
$\bowtie$	WATER VALVE
	SIGN
É	HANDICAP ACCESS
Ē	ELECTRIC MANHOLE
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0	TREE (SIZE AND TYPE)
$\overline{T}$	TRANSFORMER
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<i>Ue</i>	UNDERGROUND ELECTRIC WIRE(S
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date

<b>DESIGN CRI</b>	ITERIA
LOCATION: ORANGI BUILDING CODE:	E COUNTY, NORTH CAROLINA 2018 NORTH CAROLINA STATE BUILDING CODE (2015 IBC WITH NORTH CAROLINA AMENDMENTS)
RICK CATEGORY BASIC LATERAL FOR TIMBER FRAMES	II RCE RESISTING SYSTEM:
DESIGN LIVE LOADS ROOF FLOORS STORAGE	20 PSF 80 PSF 100 PSF
ROOF SNOW LOAD	$P_{g} = 15 PSF$ $C_{e} = 0.9$ $I_{s} = 1.1$ $C_{t} = 1.0$
RAIN ON SNOW	15 PSF
WIND LOAD	V = 115 MPH (3 SECOND GUST) EXPOSURE C DESIGN (DESIGN/ULTIMATE) WIND BASE SHEAR: $V_x = 20.4k$ V <sub>y</sub> = 16.0k INTERNAL PRESSURE COEFFICIENT = 0 (±0.18 FOR ENCLOSED DESIGN TO ACCOMODATE FUTURE WALLS) COMPONENTS & CLADDING PER ASCE 7-10 FIGURES 30

WIN	WIND LOADS ON COMPONENTS & CLADDING FOR GIVEN TRIBUTARY AREAS (psf)						
	ZONE	10 SQ FT	20 SQ FT	50 SQ FT	100 SQ FT	500 SQ FT	
	1	+25.6/-20.1	+25.6/-20.1	+25.6/-20.1	+25.6/-20.1	+25.6/-20.1	
ROOF	2	+39.5/-31.2	+39.5/-31.2	+39.5/-31.2	+39.5/-31.2	+39.5/-31.2	
	3	+51.3/-40.2	+51.3/-40.2	+39.5/-31.2	+39.5/-31.2	+39.5/-31.2	
OF ANG	2	N/A	N/A	N/A	N/A	N/A	
RO 0'H/	3	N/A	N/A	N/A	N/A	N/A	
١L	4	+28.9/-31.3	+28.9/-31.3	+25.8/-28.3	+23.2/-25.7	+21.5/-24.0	
M	5	+28.9/-38.6	+28.9/-38.6	+25.8/-32.6	+23.2/-27.4	+21.5/-24.0	

DETERMINE WIND LOADS ON COMPONENTS IN ACCORDANCE WITH THE 1 NCSBC AND ASCE-7 OR WITH THIS TABLE. REFERENCE ASCE 7-10 FIGURES 30.4. TRIBUTARY AREA = GREATER OF LxW OR LxL/3. DESIGN FOR ALLOWABLE CAPACITY USING LOADS FROM ASCE-7 OR FROM 2.

THIS TABLE. DEFLECTIONS MAY BE CALCULATED BASED ON 70% OF THESE LOADS.

POSITIVE PRESSURES ARE DIRECTED TOWARD THE INTERIOR. NEGATIVE LOADS ARE DIRECTED AWAY FROM THE INTERIOR. NEGATIVE ROOF

LOADS ARE UPLIFT LOADS. NET UPLIFT IS EQUAL TO THE GROSS UPLIFT LOAD CALCULATED FROM ASCE-7 OR FROM THIS TABLE MINUS 60% OF THE ROOF DEAD LOAD.

SEISMIC CRITERIA SEISMIC DESIGN VALUES DETERMINED UTILIZING 2008 USGS HAZARD DATA

DEIGINIC DECICIT VALUES DETERMINED OTTEIZIN	0 2000 000001	
SPECTRAL RESPONSE ACCELERATIONS	S <sub>s</sub> = 0.154	$S_1 = 0.077$
SITE CLASS C		
SPECTRAL RESPONSE COEFFICIENTS	$S_{ds} = 0.165$	$S_{d1} = 0.123$
SEISMIC DESIGN CATEGORY B		
DESIGN ULTIMATE SEISMIC BASE SHEAR:	$V_v = TBDk$	$V_v = TBDk$
IMPORTANCE FACTOR	l <sub>e</sub> = 1.0	2
DESIGN SEISMIC RESPONSE COEFFICIENT	C <sub>s</sub> = 0.071	
RESPONSE MODIFICATION FACTOR	R = 1.5	

SPECIAL INSPECTION REQUIREMENTS

THE FOLLOWING SYSTEMS ARE SUBJECT TO THE SPECIAL INSPECTION REQUIREMENTS OF THE NCSBC, CHAPTER 17.

### **GENERAL NOTES**

- GENERA DESIGN, FURNISH, AND INSTALL TEMPORARY SHORING, BRACING, AND OTHER TEMPORARY SUPPORTS REQUIRED FOR CONSTRUCTING THE STRUCTURE AND TO MAINTAIN THE STABILITY THROUGHOUT ALL PHASES OF CONSTRUCTION UNTIL THE STRUCTURE IS COMPLETED. ALL TEMPORARY SUPPORTS ARE TO BE REMOVED UNLESS NOTED OTHERWISE. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND THE DRAWINGS OF OTHER TRADES.
- COORDINATE WITH OTHER TRADES THE ACTUAL LOCATIONS AND SIZES OF
- OPENINGS AND PENETRATIONS REQUIRED BY THEIR WORK. COORDINATE WITH OTHER TRADES THE ACTUAL LOCATIONS AND ELEVATIONS 4 OF BURIED SERVICES PASSING NEAR FOUNDATIONS. UNDERGROUND SERVICES WHICH PASS BENEATH WALL FOOTINGS SHALL HAVE AT LEAST 12" OF CLEARANCE BELOW THE BOTTOM OF THE FOOTING. WHERE THIS IS NOT ACHIEVED, EITHER STEP THE FOOTING DOWN BENEATH THE SERVICE OR INSTALL A STEEL PIPE SLEEVE FOR THE SERVICE TO PASS THROUGH. SLEEVES ARE FURNISHED AND INSTALLED BY THE TRADE INSTALLING THE SERVICE. NO SERVICE IS TO BE INSTALLED BENEATH COLUMN FOOTINGS UNLESS APPROVED BY THE ARCHITECT.
- COORDINATE WITH OTHER TRADES THE ACTUAL LOCATIONS AND TYPES OF ATTACHMENTS AND ANCHORS THAT ARE REQUIRED BY THE TRADES TO FASTEN THEIR WORK TO THE STRUCTURE.
- MODIFICATIONS TO STRUCTURAL COMPONENTS AND INSTALLATION OF 6. PENETRATIONS THROUGH STRUCTURAL MEMBERS ARE NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE ARCHITECT.
- VERIFY ACTUAL DIMENSIONS, ELEVATIONS, AND CONDITIONS OF EXISTING 7. CONSTRUCTION PRIOR TO PROCEEDING WITH WORK OR ORDERING MATERIALS WHICH COULD BE AFFECTED BY EXISTING CONDITIONS.

### FOUNDATIONS

- THE FOUNDATION DESIGN IS BASED ON REPORT OF SUBSURFACE INVESTIGATION PREPARED BY FROEHLING & ROBERTSON, INC. DATED DECEMBER 17, 2015.
- ALL FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED 2. STRUCTURAL FILL. ALLOWABLE BEARING PRESSURE IS 2000 PSF. ALL STRUCTURAL EARTH FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES AND BE COMPACTED TO AT LEAST 95 PERCENT OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698. THE TOP 12 INCHES OF FILL IN LOAD BEARING AREAS SHOULD BE COMPACTED TO AT LEAST 98 ERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. ALL STRUCTURAL FILL MATERIAL SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN 3 PERCENT OF THE SOIL'S OPTIMUM MOISTURE CONTENT (AS DETERMINED BY ASTM D-698). ALL STRUCTURAL FILL SHALL BE PLACED UNDER THE FULL-TIME CONTROL OF AN ENGINEERING TECHNICIAN WORKING UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER. THE PLACEMENT AND COMPACTION OF ALL FILL MATERIAL SHALL BE MONITORED AND TESTED IN ORDER TO CONFIRM THAT THE RECOMMENDED DEGREE OF COMPACTION IS BEING OBTAINED. IF AN IMPORTED STRUCTURAL FILL IS REQUIRED TO COMPLETE SITE GRADING, IT SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO USE. IMPORTED STRUCTURAL FILL SHOULD TYPICALLY CONSIST OF LOW PLASTICITY SOIL (LL<50, PI<25), HAVE A STANDARD PROCTOR MAXIMUM DRY DENSITY OF AT LEAST 100 PCF, AND BE FREE OF ORGANIC AND OTHER DELETERIOUS MATERIALS. IF CLEAN SAND FILL IS NECESSARY TO REPLACE LOWER CONSISTENCY SOILS IN THE BUILDING AREA, THE SAND SHOULD CONTAIN LESS THAN 10 TO 12 PERCENT FINES.

### FOUNDATIONS (CONT.)

- FINISHED SUBGRADES IN BUILDING AREA FEET OF FILL SHALL BE MONITORED FOR FILL LOADING. SETTLEMENT MONUMENT THE TOP OF THE FILL IMMEDIATELY UPO SETTLEMENT MEASUREMENTS TAKEN A UNTIL SETTLEMENTS HAVE STABILIZED. FOUNDATIONS AND PAVEMENTS SHALL N CONFIRMED THAT SETTLEMENT DUE TO NO FOUNDATIONS SHALL BE PLACED IN V GROUND.
- ALL FOOTING EXCAVATIONS ARE TO BE F ALL FINISHED FOUNDATION EXCAVATIONS APPROVED BY THE ARCHITECT OR HIS DE
- CONCRETE IS PLACED. UNLESS OTHERWISE NOTED, ALL FOOTIN BE CENTERED UNDER SUPPORTED MEME
- DOWELS FROM FOUNDATIONS INTO PIER OR WALLS ABOVE SHALL BE THE SAME S VERTICAL REINFORCEMENT IN PIERS, CO WALLS ABOVE, EXCEPT AS OTHERWISE 10. CAREFULLY FOLLOW THE REQUIREMENT
- FOR BACKFILL UNDER OR ADJACENT TO BUILDING. 11. WHERE FOUNDATION ELEMENTS ARE TO EACH SIDE SHALL BE FILLED SIMULTANED
- COMMON ELEVATION. 12. COORDINATE UNDERFLOOR DRAIN REQU
- ARCHITECTURAL AND MECHANICAL DRAV REQUIREMENTS OF THE GEOTECHNICAL 13 CONTRACTOR SHALL PROVIDE CONTINUO AND UNDERGROUND WATER AS REQUIRE SUCH THAT THE WORK IS DONE IN THE D

### WOOD FRAMING

- MATERIALS DIMENSION LUMBER: #2 SYP 19% M.C. Α. STEEL CONNECTORS G90 GALVANIZED FOR EXPOSED В. CONNECTIONS; G60 GALVANIZED FC PSL COLUMNS: TRUSS JOIST PLUS C. PRESERVATIVE PROTECTION. AWP
- SERVICE LEVEL 2. SILLS AND MEMBERS EXPOSED DIRECTLY CONTACT WITH CONCRETE OR MASONRY
- TREATED. PLYWOOD SHALL CONFORM TO THE LATE STANDARD PS-1. INSTALL IN STAGGERED I SUPPORTING AFTERS @ BOUNDARY AND COMMON NAILS @ 6". NAIL TO SUPPORTIN FRAMING W/ 8d COMMON NAILS @ 12".
- FRAMING CONNECTIONS SHALL BE SIMPS 4. THE CATALOG DESIGNATIONS INDICATED. STANDARD NAILS IN ALL HOLES PROVIDED NAILS SHALL BE STRONGHOLD, GALVANIZI SIZES INDICATED.
- ALL BOLTS AND LAG SCREWS SHALL BE AM 6. MANUFACTURE.
- BOLT HOLES IN WOOD SHALL BE DRILLED 7. HOLES FOR SCREWS AND LAG SCREWS S THE SAME DEPTH AND DIAMETER OF THE OCCUPIED BY THE THREADED PORTION S IN DIAMETER THAN THE ROOF OF THE THF SCREWED, NOT DRIVEN INTO PLACE.
- PROVIDE WASHERS UNDER ALL NUTS AND SCREWS, WASHERS SHALL BE EITHER RO SQUARE CUT STEEL WASHERS 1/4" THICK ALL TIMBER FRAMING SHALL BE ACCURA
- DAPPED AS INDICATED. NO OVERCUT IS DAPS. MEMBERS SHALL FIT TIGHT AND T DETRIMENTAL DAMAGE BEFORE INSTALL DEFLECTS AT CONNECTIONS. WHERE ST SHALL BE USED AS THE TEMPLATE FOR BO 10 DESIGN FABRICATION AND CONSTRUCTIO "NATURAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" CURRENT EDITION AS RECOMMEND BY THE NATIONAL LUMBER
- MANUFACTURER'S ASSOCIATION. ROOF SHEATHING SHALL BE NAILED AS INDICATED ON DRAWINGS. 11. 12. BEARING WALL TOP PLATES SHALL BE CONTINUOUS.

AS RECEIVING MORE THAN 7 R SETTLEMENT DUE TO THE S SHOULD BE INSTALLED AT N FILL COMPLETION WITH T LEAST TWO PER WEEK CONSTRUCTION F BUILDING NOT OCCUR UNTIL IT IS NEW FILL HAS STABILIZED. WATER OR ON FROZEN FINISHED BY HAND. IS SHALL BE INSPECTED AND ESIGNATE BEFORE ANY	<ol> <li>MATERIALS         <ol> <li>MATERIALS                 <ol> <li>PORTLAND CEMENT: ASTM C150, TYPE I.</li> <li>FLY ASH: ASTM A618, CLASS C OR F.</li> <li>NORMAL-WEIGHT AGGREGATE: ASTM ASTM C33, CLASS 3M.</li></ol></li></ol></li></ol>
NGS AND PILASTERS SHALL BERS. RS, COLUMNS, BUTTRESSES, BIZE AND NUMBER AS DLUMNS, BUTTRESSES, OR SHOWN ON THE DRAWINGS.	J. WATERSTOP: SELF EXPANDING. 2. CONCRETE MIXES A. FOOTINGS 3000 PSI NW B. SLABS-ON-GRADE: 3000 PSI NW. C. SLABS-ON-GRADE EXPOSED TO WEATHER: 4500 PSI NW, AIR- ENTRAINED
S OF THE SPECIFICATIONS ANY PORTION OF THE HAVE FILL ON BOTH SIDES,	<ol> <li>PERFORM CONCRETE WORK IN ACCORDANCE WITH ACI 318 AND ACI 301.</li> <li>PROVIDE CONCRETE COVER AS FOLLOWS:         <ul> <li>CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3".</li> </ul> </li> </ol>
OUSLY, MAINTAINING A JIREMENTS WITH WINGS AND THE ENGINEER. OUS CONTROL OF SURFACE ED DURING CONSTRUCTION	<ul> <li>B. CONCRETE EXPOSED TO EARTH OR WEATHER: <ul> <li>a. #5 OR SMALLER: 1 1/2".</li> <li>b. #6 OR LARGER: 2".</li> </ul> </li> <li>5. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE. SPLICE ONLY AS SHOWN OR APPROVED. MINIMUM LAP LENGTHS, EXPRESSED IN NUMBER OF BAR</li> <li>6. DIAMETERS, SHALL BE AS FOLLOWS:</li> </ul>

OR ALL OTHER APPLICATIONS. PSL WITH WOLMANIZED A USE CATEGORY UC4B.		#6
		#7
SHALL BE PRESERVATIVE		MUL
		LIGI
PATTERN. NAIL TO		LEN
SUPPORTED EDGES W/8d		BAR
NG RAFTERS @ INTERMEDIATE		BAR ACI
ON COMPANY OR EQUAL. OF		BAF
INSTALL MANUFACTURERS	7.	ACC
D UNLESS OTHERWISE NOTED.	0	SLE
ED COMMON NAILS OF THE	8. 9.	
MERICAN STANDARD		AND
	10.	PRC
HALL BE FIRST BORED FOR		
SHANK, THEN THE REMAINDER	11.	INS
		MAN
READ. ALL SCREW SHALL BE	12.	FLO
D HEADS OF BOLTS AND LAG		A.
OUND MALLEABLE IRON OR		
ELY CUT, NOTCHED, OR		В.
PERMITTED FOR NOTCHES OR		
RUE. EXAMINE MEMBERS FOR		C
EEL PLATES OCCUR, THEY		0.
ORING HOLES.		_
IN SHALL CONFORM TO THE		D.

	NORMAL WT. CONCRETE STRENGTH, fc (psi)				
DAIX SIZE	3000	4000	5000		
#6 OR SMALLER	57 DIA.	49 DIA.	44 DIA.		
#7 OR LARGER	71 DIA.	62 DIA.	55 DIA.		

LTIPLY THE ABOVE LENGTHS BY 1.3 FOR TOP BARS AND BY 1.3 FOR HTWEIGHT CONCRETE. WHERE BARS OF UNEQUAL DIAMETER ARE PPED, USE THE LAP LENGTH OF THE SMALLER BAR. THE ABOVE NGTHS ARE CLASS "B" TENSION LAP SPLICES BASED ON GRADE 60 RS WITH A COVER OF AT LEAST 1 BAR DIA. AND SPACING AT LEAST 3 R DIA. LAP LENGTHS SHALL BE INCREASED IN ACCORDANCE WITH I 318 IF COVER IS LESS THAN 1 BAR DIA. OR SPACING IS LESS THAN 3 r dia.

CURATELY INSTALL AND PROPERLY SECURE ANCHORS, BEARING PLATES, EEVES, AND OTHER EMBEDDED ITEMS.

- CURATELY LOCATE AND BLOCK OUT OPENINGS AND PENETRATIONS. ORDINATE WITH OTHER TRADES FOR ANCHORS, EMBEDDED ITEMS, SLEEVES, D PENETRATIONS REQUIRED AND/OR FURNISHED BY THE OTHER TRADES. OVIDE CONTRACTION JOINTS IN SLABS-ON-GRADE WHERE INDICATED ON THE ANS. PROVIDE A JOINT DEPTH EQUAL TO AT LEAST 25% OF THE SLAB
- ICKNESS. STALL AND SEAL VAPOR BARRIER IN ACCORDANCE WITH ASTM E1643 AND NUFACTURER'S INSTRUCTIONS. LAP JOINTS 6" AND SEAL WITH
- NUFACTURER'S RECOMMENDED TAPE. DOR FINISHES: FLOAT FINISH: SURFACES TO RECEIVE A TROWEL FINISH, TO BE COVERED WITH FLUID-APPLIED OR SHEET WATERPROOFING, OR TO BE
- COVERED WITH BUILT-UP OR MEMBRANE ROOFING. TROWEL FINISH: SURFACES EXPOSED TO VIEW OR COVERED WITH RESILIENT FLOORING, CARPET, WOOD FLOORING, PAINT, SEALER, OR
- OTHER THIN FILM FINISH. TROWEL AND FINE-BROOM FINISH: SURFACES TO BE COVERED WITH QUARRY OR CERAMIC TILE INSTALLED BY THE THIN-SET OR THICK-SET METHOD.
- BROOM FINISH: EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS 13. FINISH SLABS FLAT AND LEVEL





D. LVL COLUMNS SHALL BE VERSA-LAM 1.8E 2650 BY BOISE CASCADE OR 1.8E PARALLAM PSL COLUMNS BY TRUS-JOIST.

Bid Set















no. revisions



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Plan	s & Details
sheet	
A	100
project	no. 2231
	1/10/04







![](_page_9_Picture_13.jpeg)

![](_page_9_Picture_15.jpeg)

![](_page_9_Figure_16.jpeg)

![](_page_9_Picture_17.jpeg)

no. revisions

The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Re-use, reproduction, or publication by any method, in whole or in part, is prohibited. Title to the plans and specifications remain in the architect without prejudice. It is to be returned upon request to the architect. Visual contact with those plans and specifications shall constitute prima facie evidence of the acceptance of these restrictions.

![](_page_9_Picture_19.jpeg)

1/10/24

project no. 2231

🗕 date

![](_page_10_Figure_0.jpeg)

![](_page_10_Picture_1.jpeg)

![](_page_10_Picture_3.jpeg)

![](_page_10_Figure_4.jpeg)

![](_page_10_Picture_5.jpeg)

![](_page_10_Picture_6.jpeg)

The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Re-use, reproduction, or publication by any method, in whole or in part, is prohibited. Title to the plans and specifications remain in the architect without prejudice. It is to be returned upon request to the architect. Visual contact with those plans and Visual contact with those plans and specifications shall constitute prima facie evidence of the acceptance of these restrictions.

![](_page_10_Picture_8.jpeg)

	ELECTRICAL SYMBOL SCHEDULE		ELECTRICAL	FIXTURE SCHEDULE	
	ALL SYMBOLS MAY NOT BE USED		SYMBOL DESCRIPTION	LAMPS MOUNTING INPUT WATTS	DF
SYMBOL DESCRIPTION RECEPTACLE. COMMERCIAL GRADE. DUPLEX. H	MOUNTING     SYMBOL     DESCRIPTION       HUBBELL #8300I 15 AMPERE RATED.     1'-6" AFF OR AS NOTED     SWITCH, SINGLE POLE, 20 AMP, COMMERCIAL DUTY, HUBBELL #CSB120I	MOUNTING I 120/277 VOLT 4'-0" AFF TO TOP OR AS NOTED	A1 18" ROUND CANOPY, LED, LOW BAY, PENDANT MOUNT, COLOR BY ARCHITECT, WIDE DISTRIBUTION, 15000 LUMENS, 3000K COLOR TEMPERATURE McGRAW EDISON #TT-D7-830-U-WQ-STM-72L	LED INCLUDED PENDANT MOUNT, 14' AFF 125W	LEI
Ψ         GROUNDING TYPE, 2 POLE, 3 WIRE, 125 VOLTS.           Φ         RECEPTACLE, SAME AS ABOVE EXCEPT MOUNT	TING HEIGHT.	I, 120/277 VOLT 4'-0" AFF TO TOP OR AS NOTED	A2 18" ROUND CANOPY, LED, LOW BAY, PENDANT MOUNT, COLOR BY ARCHITECT, WIDE DISTRIBUTION, 8000 LUMENS, 3000K COLOR TEMPERATURE MCRAWERDSON #TT DA 920 LUMO, STM 721	LED INCLUDED PENDANT MOUNT, 9' AFF 58W	LEI
RECEPTACLE, SAME AS ABOVE EXCEPT MOUNT LOCATION TO AVOID LIGHTING.	TING HEIGHT. COORDINATE MOUNTING IN CEILING SINGLE POLE DIMMER SWITCH STATION - BUTTON ACTION HUBBELL 'NX'		OUTDOOR AREA FIXTURE, LED, WIDE/FORWARD THROW, 180° DISTRIBUTION, POLE MOUNT. COLOR BY ARCHITECT. 21000 LUMENS. 3000K COLOR TEMP. PHOTOCELL	LED INCLUDED POLE MOUNT, 18' AFG 154W	
DOUBLE DUPLEX RECEPTACLE, (2) HUBBELL #8 TYPE. WHERE SUBSCRIPT 'R' IS INDICATED, PR	32001, 15 AMPERE RATED, GROUNDING 1'-6" AFF OR AS NOTED FOR OPTIMUM PERFORMANCE. OVIDE RED DEVICE PLATE.	AXSW-ORLO. 4'-0" AFF TO TOP OR AS NOTED	D     HUBBELL #RAR2-320L-165-3K7-4W-UNV-BC       DUAL-HEAD EMERGENCY EGRESS, LED, WET LOCATION, BLACK HOUSING, HOUSING	(C) = CFII ING	+
RECEPTACLE, SAME AS ABOVE EXCEPT MOUN	TING HEIGHT.	20/277 VOLT 4'-0" AFF TO TOP OR AS NOTED	COLOR BY ARCHITECT, 90-MINUTE BATTERY (SEE PLANS FOR MOUNTING) SURE-LITES # SELW29	LED INCLUDED (W) = WALL, 7'-6" AFF 2W	
HUBBELL #GF8300I.	USE" COVER, 20 AMP, GROUNDING TYPE, 1'-6" AFG WALL SWITCH, DUAL RELAY, DUAL TECHNOLOGY, OCCUPANCY SEN	NSOR. HUBBELL 4'-0" AFF TO TOP OR AS NOTED	REQUIRED.	IND FROVIDE DRIVALE MOUNTING HARDWARE OR SURFACE INSTALLATION F	
RECEPTACLE, 125/250 VOLT RATED, 30 AMP, 3 P #HBL9430-A WITH MATING PLUG AND CORD.	POLE, 4 WIRE, GNDING HUBBELL     1-6" AFF OR AS NOTED     90s     #LHDCMTD2-N. WIRE PER MFG'S RECOMMENDATIONS.       1'-6" AFF OR AS NOTED COORD.     90s     #LHDCMTD2-N. WIRE PER MFG'S RECOMMENDATIONS.	ENSOR. 4'-0" AFF TO TOP OR AS NOTED			
50ARECEPTACLE, 125/250 VOLT RATED, 50 AMP, 3 P#HBL9450A WITH MATING PLUG AND CORD.	POLE, 4 WIRE, GNDING HUBBELL LOCATION W/OWNER'S EQUIPMENT LAYOUT PRIOR TO ROUGH IN.	RS-3-N-WH. WIRE	<u>GENERAL ELECTRI</u>	CAL NOTES	
ELECTRICAL PANELBOARD, SEE PANEL SCHEDU	ULE FOR DESCRIPTION. 6'-6" TO TOP OSD PER MFG'S RECOMMENDATIONS.	ER. SEE CEILING SURFACE, COORDINATE	<ol> <li>THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS &amp; TRADES TO</li> <li>ALL LIGHT FIXTURES ARE TYPE "A" UNLESS SPECIFICALLY NOTED OTHERWISE. CONT TYPE OF CELLING ACTUALLY INSTALLED IN THESE AREAS. TYPICAL</li> </ol>	) LOCATE HIS WORK TO AVOID CONFLICTS. RACTOR TO COORDINATE FIXTURE MOUNTING METHOD (FLANGED, GRID, SPLINE ETC.) \	
DISCONNECT SWITCH, 600V. WHERE EXPOSED       3R.	) TO WEATHER SHALL BE NEMA AFF AFF		<ol> <li>THIS CONTRACTOR SHALL NOT UTILIZE "THRU TYPE" OUTLET BOXES WHERE DEVICES A</li> <li>ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S IN</li> </ol>	RE SHOWN BACK TO BACK IN SOUND INSULATED OR SOUND SECURE AREAS, TYPICAL. STALLATION INSTRUCTIONS.	
HOME RUN TO PANELBOARD. ARROWHEADS IN WIRE & CONDUIT AS SPECIFIED.	NDICATE NUMBER OF CIRCUITS. AS REQ'D DETAIL, SHEET E-3.1a.	WITH MANUFACTURER'S RECOMMENDATIONS	<ol> <li>SMOKE DETECTORS FOR AIR HANDLING UNITS SHALL BE LOCATED IN AIR DUCTS COORDINATE THE EXACT LOCATION &amp; REQUIREMENTS OF INSTALLATION WITH INDICATOR/RESET DEVICE IN AN ACCESSIBLE LOCATION AS DIRECTED BY THE ARCHITE</li> </ol>	OBSERVING ALL APPLICABLE CODES & ORDINANCES. ELECTRICAL CONTRACTOR S MECHANICAL CONTRACTOR PRIOR TO CUTTING DUCTWORK. LOCATE THE DETEC FCT & LABEL AS TO AREA & ROOFTOP UNIT SERVED TYPICAL	SHALL CTOR
CONDUIT, SIZED AS SPECIFIED	AS REQ'D WHERE 'WP' IS INDICATED IN SUBSCRIPT, PROVIDE WATER TIGHT ENCLO	OSURE FOR	<ol> <li>THE SYMBOL "*" DENOTED GROUNDING CONDUCTOR, TYPICAL UNLESS OTHERWISE NO</li> <li>THIS CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS &amp; PLACEMENT OF LIGHT F</li> </ol>	TED, ALL CONDUITS SHALL BE 3/4" MINIMUM. IXTURES, OUTLET BOXES, DEVICES, & EQUIPMENT WITH SITE & ARCHITECTURAL DRAWI	VINGS,
りついていてい bOX (b) AS MANDFACTORED BY AX SIZE AS APPLICABLE OR REQUIRED. E.C. TO MA FURNITURE SYSTEMS AND/OR EQUIPMENT, AS	AKE FINAL CONNECTIONS TO WALL MNTD, AS REQ'D REQUIRED.		INCLUDING REFLECTED CEILING PLANS, INTERIOR AND EXTERIOR ELEVATIONS, DETAIL ADDITIONAL COST TO THE OWNER. ELECTRICAL DRAWINGS ARE NOT TO BE SCALED FO MOUNTING HEIGHTS GIVEN ARE TO TOP OF OUTLET BOX. UNLESS OTHERWISE NOTED	LS, & SECTIONS, PRIOR TO ROUGH-IN; OR RELOCATE AS DIRECTED BY THE DESIGNER A` DR SUCH LOCATIONS. HEIGHTS MAY BE ADJUSTED TO MATCH MASONRY JOINTS, & MUST COMPLY WITH 2017 NET	AT NO
D SAME AS ABOVE EXCEPT MOUNTED ABOVE ACC	CESSIBLE CEILING. ABOVE ACCESSIBLE CEILING		<ol> <li>LIGHT FIXTURE WHIPS SHALL NOT EXCEED 6' IN LENGTH.</li> <li>ALL CONDUITS &amp; RACEWAYS ARE TO BE CONCEALED UNLESS OTHERWISE NOTED OR A</li> </ol>	PPROVED BY THE DESIGNER.	
			<ol> <li>ALL CONDUITS, SLEEVES, INSERTS, OUTLET BOXES, &amp; OTHER ROUGH-IN MATERIALS SH</li> <li>IN MECHANICAL ROOMS &amp; OTHER AREAS WHERE LIGHT FIXTURES ARE SPECIFIED, &amp; DU AFTER INSTALLATION OF MECHANICAL CONTRACTORS DUCT WORK &amp; DIPING</li> </ol>	IALL BE INSTALLED AS BUILDING CONSTRUCTION PROGRESSES. JCT WORK & PIPING IS INSTALLED, ELECTRICAL CONTRACTOR SHALL INSTALL LIGHT FIXTU	URES
ABBREVIATIONS	ELECTRICAL SPECIFICATIONS		<ol> <li>ALL ELECTRICAL PANELS TO BE LABELED WITH PHENOLIC LABELS.</li> <li><u>2018 NC ENERGY CODE COMMISSIONING REQUIREMENT</u>: PER 2018 NC ENERGY CODE,</li> </ol>	SECTION C408, THE CONTRACTOR FOR THE FOLLOWING TRADES (INDIVIDUALLY), PLUME	/IBING,
EXISTING NEW	IT IS THE INTENT OF THESE SPECIFICATIONS FOR THE ELECTRICAL CONTRACTOR TO FURNISH A COMPLETE ELECTRICAL S	YSTEM, FULLY ADJUSTED, &	MECHANICAL & ELECTRICAL ARE RESPONSIBLE FOR PROVIDING SYSTEM COMMISSIO DESIGN PROFESSIONAL (REGISTERED IN NC) TO PROVIDE COMMISSIONING PER THE RE OWNER & AHLI SHALL RE REQUIDED WITH A SEALED STATEMENT OF COMPLETION	DNING FOR THEIR CONTRACT WORK. THE CONTRACTOR SHALL HIRE EITHER REGISTE EQUIREMENTS IN THE NC ENERGY CONDE (SECTION C408). AT THE END OF THE PROJECT, DEP. THE DECLIDEMENTS ( TEMPLATE SHOWN IN ADDENDIX C1 OF THE ENERGY C	ERED T, THE
DEMOLISH RELOCATE AMPS	ALL ELECTRICAL WORK TO BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CON	DE OBSERVING ALL STATE &	CONTRACTOR SHALL DE PROVIDED WITH A SEALED STATEMENT OF COMPLETION CONTRACTOR SHALL PROVIDE SUBMITTALS SHOWING PROPOSED COMMISSIONING PL THE PROJECT TEAM PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE AL	L SUPPORT, MATERIALS, MANPOWER, EQUIPMENT, INFORMATION, ACCESS TO VENDO	AL BY DRS &
AIR CONDITIONING UNIT ABOVE COUNTER TOP	LOCAL CODES.		TECHNICIANS FOR EQUIPMENT FURNISHED & INSTALLED, ETC. AS REQUIRED, SO THAT OR EQUAL TO 10,000 SQUARE FEET OF CONDITIONED FLOOR AREA ARE EXEMPT FROM	COMMISSIONING AUTHORITY CAN COMPLETE THEIR WORK. NOTE: ALL BUILDINGS LESS T THE COMMISSIONING REQUIREMENTS.	THAN
AUTOMATIC DOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	ELECTRICAL CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS & PAY ALL SALES TAXES, UTILITY COMP/ PERMITS, FEES, & OTHER COSTS IN CONNECTION WITH HIS WORK.	ANY CHARGES FOR SERVICE,	L		
ABOVE FINISHED ROOF AUTHORITY HAVING JURISDICTION	ELECTRICAL CONTRACTOR TO ENSURE THAT ALL MATERIAL & EQUIPMENT FURNISHED FOR THIS PROJECT WHICH CAN BE U.L. LIS	STED SHALL BE.	PANEL AC1 SCHEDULE Description\Remarks:		
AIR HANDLING UNIT AMPS INTERUPTING CAPACITY	THE MATERIAL & EQUIPMENT HAS BEEN CAREFULLY SELECTED FOR THIS PROJECT & THE ELECTRICAL CONTRACTOR IS EXPECT AS CLOSELY AS POSSIBLE TO THE SPECIFICATIONS & AS CALLED FOR ON THE DRAWINGS.	CTED TO PROVIDE ALL ITEMS	Connected Load: 3.49 KVA. SQUARE "D" No. NQOD SERIES, 240 BAR, 200 AMPERE MAIN BREAKER, BREAKERS, SIZE AS INDICATED, M	D/120 VOLTS, 1Ø, 3 WIRE, SOLID NEUTRAL, TINNED COPPER BUS BARS, GROUND SURFACE MOUNTED, HINGED DOOR-IN-DOOR COVER, WITH BOLT IN BRANCH INIMUM FRAME SIZE AND A.I.C. RATING AS FOLLOWS:	
AUDIO VISUAL BOILER	ELECTRICAL CONTRACTOR SHALL SUBMIT THREE (3) SETS OF EQUIPMENT DATA SHOP DRAWINGS TO THE ENGINEER FOR ALL INSTALLED FOR APPROVAL.	L ITEMS TO BE FURNISHED &	Wire: 3#3/0 <i>MINIMUM BREAKER FRAME I</i> <i>NEMA3R</i> <i>SWITCH CRADE PREAKER</i>	FOR "NQOD" SERIES: 1POLE="QOB", 2,3 POLE="QOB" (10K AIC)	
JUILDING AUTOMATION SYSTEM JYPASS CONTACTOR	ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIA DRAWINGS INCIDENTAL CONSTRUCTION WORK FTC. IN OPDER TO COMPLY WITH ALL ADDITIONS FOR ADDITION WORK FTC. IN OPDER TO COMPLY WITH ALL ADDITIONS OF ADDITION WORK FTC.	ALS, SERVICES, APPARATUS,	1#6*		
JELOW FINISHED GRADE CONDUIT	SHOWN ON DRAWINGS AND/OR SPECIFIED. NO CLAIM FOR EXTRAS WILL BE APPROVED WITHOUT PRIOR COORDINATION FOR CO WRITTEN REQUEST & APPROVAL PRIOR TO PERFORMING WORK.	NFLICTS BY CONTRACTOR, &	2" * DENOTES GROUNDING CONDUC AREA SERVED SQ.FT. COMPU DESCRIPTION COND WIRE LOAD DEAKED OPDITE NUMBER	TED LOAD DEMAND FACTOR %	
CUIT BREAKER	ALL WORK & EQUIPMENT TO BE GUARANTEED BY CONTRACTOR FOR ONE (1) YEAR.				
ILING NDUIT ONLY	UPON COMPLETION OF ALL WORK & ALL TESTS, ELECTRICAL CONTRACTOR SHALL INSTRUCT THE OWNER OR HIS REPROPERATIONS, ADJUSTMENTS, & MAINTENANCE OF EQUIPMENT FURNISHED. ELECTRICAL CONTRACTOR SHALL PROVIDE OF	RESENTATIVE FULLY IN THE OWNER WITH MAINTENANCE	LTG: DRIVE INTERIOR         3/4"         3#12"         930W         1P-20         1         A           LTG: BARN EXTERIOR         3/4"         3#12*         1463W         1P-20         3         B	2         1F-20         3400V         3#12"         3/4"         RCPT: POST RECEPTACLES           4         1P-20         360W         3#12*         3/4"         RCPT: POST RECEPTACLES	
MPRESSOR INDENSATE PUMP	SCHEDULE FOR THE PRINCIPAL ITEMS OF EQUIPMENT FURNISHED. MANUFACTURER'S ADVERTISING LITERATURE OR CATALOGS ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS & GOOD RECOMMENDED REACTICES	5 WILL NOT BE ACCEPTABLE.	SPARE         1P-20         5         A           SPARE         1P-20         7         B	0         1P-2U         360UW         3#12*         3/4"         RCPT: POST RECEPTACLES           8         1P-20         SPARE	
CRITICAL BRANCH CURRENT TRANSFORMER	ELECTRICAL CONTRACTOR SHALL GIVE FULL COOPERATION TO OTHER TRADES. WHERE THE WORK OF ELECTRICAL CONTRA		SPARE         1P-20         9         A         4           SPARE         1P-20         11         B         4	10         1P-20         SPARE           12         1P-20         SPARE	
OPPER ABINET UNIT HEATER	CLOSE PROXIMITY TO, OR WILL INTERFERE WITH WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITION ADJUSTMENTS. IF ELECTRICAL CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES, HE SHA CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.	UNS TO MAKE SATISFACTORY IALL MAKE THE NECESSARY	SPARE         1P-20         13         A         A           SPARE         1P-20         15         B         A	14         1P-20         SPARE           16         1P-20         SPARE	
DRAWING ELECTRICAL CONTRACTOR	THE DRAWINGS ARE DIAGRAMMATIC & INDICATE THE GENERAL ARRANGEMENTS OF SYSTEMS & WORK INCLUDED IN THE CONTRACT TO BE SCALED.	TRACT. THE DRAWINGS ARE	SPARE         1P-20         17         A         2           SPARE         1P-20         19         B         2	18         1P-20         SPARE           20         1P-20         SPARE	
EMERGENCY DISTRIBUTION PANEL EXHAUST FAN ELECTRICAL INTERLOCK	NUT TO BE SCALED. EXISTING INFORMATION SHOWN ON DRAWINGS TAKEN FROM OWNER FURNISHED AS BUILT DRAWINGS & LIMITED SITE SURV	/EY. CONTRACTOR TO FIELD	SPARE         1P-20         21         A         22           SPARE         1P-20         23         B         22	22 1P-20 SPARE 24 1P-20 SPARE	
EMERGENCY END OF LINE RESISTOR	VERIFY ALL EXISTING EQUIPMENT, CIRCUITS, & WIRING.		SPARE         1P-20         25         A         22           SURGE SUPPRESSOR         20         25         A         22	26 1P-20 SPARE	
PLOSION PROOF QUIPMENT BRANCH ECTRIC WATER COOLER	ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATION OF EQUIPMENT, ROUTING PIPE, ETC., & WORK CLOSELY WITH OTHER TR ELECTRICAL CONTRACTOR TO LOCATE & INSTALL ELECTRICAL CONTROL PANELS IN SUITABLE LOCATION WITH APPROPRIATE	CLEARANCES & OVERLOAD	. 2P 2/ B 2 . 30 29 A 3	OFFARE         OFFARE           30         1P-20         SPARE	
ING COLL UNIT	PROTECTION FOR ALL ITEMS REQUIRED.				
SED DISCONNECT SWITCH LL LOAD AMPS OOR	THE OWNER, ARCHITECT & ELECTRICAL CONTRACTOR TO COORDINATE FOR PROPER CUTOUT HOLES. ALL STUB-UPS & JUN	ICTION BOXES, & TO VERIFY			
EEZESTAT INERAL CONTRACTOR			REFER TO PANEL SCHEDULES FOR FEEDER SIZES		
GROUND FAULT INTERUPTER GROUND FAULT PROTECTION GROUND	ALL CONDUCTORS, THROUGH #10 AWG, TO BE SOLID COPPER WITH TYPE THWN/THHN OR XHHW INSULATION UNLESS NOTED OTH	HERWISE.			
ANDS-OFF-AUTO SELECTOR SWITCH ORSE POWER	ALL CONDUCTORS, #8 AWG AND LARGER, TO BE CLASS B STRANDED COPPER WITH TYPE THWN/THHN OR XHHW INSULATION UNL	LESS NOTED OTHERWISE.	DIGITAL METER BY UTILITY COMPANY	VOLT	:D
IEATING, VENTILATION, AIR CONDITIONING SOLATED GROUND UNCTION BOX	THE COLOR CODE FOR CONDUCTORS SHALL BE BLACK, RED, WHITE (120/240V,1Ø, Y).			CURRENT TRANSFORMER. TYPICAL	-
KIRK KEY KILOVOLT AMPS	PROVIDE GREEN GROUNDING CONDUCTOR WITH ALL CIRCUITS. P.V.C. CONDUIT SHALL NOT BE USED IN AREAS OF ASSEMBLY		PAD MOUNT MAIN POWER	BREAKER	
LICKED ROTOR AMPS	ALL WIRING TO BE IN CONDUIT OR APPROVED RACEWAY.		TRANSFORMER AG BLDG BY UTILITY		
FE SAFETY BRANCH GHT	ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL SMOOTH PLASTIC DEVICE PLATES BRYANT 70000 SERIES LEVITON 85/8 EQUAL. PLATES SHALL BE OF THE SAME COLOR AS THE DEVICE (REFER TO SYMBOL SCHEDULE). EXTERIOR MOUNTED BOX	86000 SERIES OR APPROVED XES SHALL HAVE APPROVED	200		
IGHTING AXIMUM MECHANICAL CONTRACTOR	WEATHERPROOF PLATES &/OR COVERS. ALL SURFACE INSTALLED BOXES SHALL HAVE STAMPED STEEL DEVICE PLATES.		PAD BY ELECTRICAL CONTRACTOR		
MOTOR CONTROL CENTER MOLDED CASE CIRCUIT BREAKER	ALL DEVICE OUTLETS SHALL BE FLUSH MOUNTED UNLESS SPECIFICALLY NOTED.				
MAIN LUG ONLY MOUNT	PREMIUM GRADE, PROPERLY APPLIED TO EACH INSTALLATION. DRIVERS SUPPLIED WITH SURFACE MOUNTED LED FIXTUR ENERGY SAVINGS EXTRA LOW HEAT, SUPER PREMIUM TYPES. DRIVERS TO BE AS MANUFACTURED BY ADVANCE, UNIVERSAL,	RES SHALL BE, ELECTRONIC, , JEFFERSON, OR APPROVED			
	EQUAL.		1#4 CU. (NEC 250-66) 1#6 CU. (NEC 250-66)		
ORMAL BRANCH IORMALLY CLOSED					
NOT IN CONTRACT NORMALLY OPEN	SUPPLEMENTAL ELECTRICAL SPECIFICATION	ONS	FOOTINGS REBAR (NEC 250-52(3)) GROUND TO MAIN	— 1#30 CU, 3/4"C. (NEC TABLE 250.66)	
I TO SUALE IERLOAD RELAY JMP	ALL PENETRATIONS OF RATED PARTITIONS, FLOOR SLABS BY EITHER NEW OR EXISTING CONDUITS SHALL BE FIRE CAULKED O	OR CLOSED BY APPROVED	10X3/4*00 GROUND TO METALLIC COLD COPPERCLAD DEMICIN CROUND	1.20 MILLE BUY VY	
JSH BUTTON LUMBING CONTRACTOR	U.L. METHODS BY THE ELECTRICAL CONTRACTOR. ALL CONDUCTORS SHALL BE MARKED WITH CIRCUIT NUMBER WHEN TERMINATING AT THE PANEL BOARD		UKIVEN GROUND		
se l EL VER	ALL 15 A, 20 A, & 30 AMPERE HOME RUN CONDUCTORS EXCEEDING 150' SHALL BE INCREASED ONE WIRE SIZE TO COMPENSAT	TE FOR VOLTAGE DROP.	<sup>3</sup> Aariculture Blda Riser	Diagram	
ETURN AIR FAN OOF TOP UNIT	ADJUST CONDUIT SIZE ACCORDINGLY.		E0.1 SCALE: N.T.S.		
SUPPLY AIR FAN SPECIFICATION SOUND SYSTEM CONSULTANT	ALL COMPRESSION TYPE, NO "INDENTER" OR SI ALLOWED, TYPICAL.		-		
SWITCH TEMPERATURE CONTROL CONTRACTOR	ALL EXISTING EQUIPMENT, CONDUIT, WIRING, BOXES ETC. RENDERED UNUSED, SHALL BE REMOVED & DISPOSED OF AS DIREC	CTED BY THE OWNER.			
TYPICAL UNDERGROUND UNIT HEATER					
UNDERWRITERS' LABORATORIES, INC. UNLESS NOTED OTHERWISE	ELECTRICAL SUMMARY - ELECTRICAL SYSTEM AND FOLIIPMENT				
	METHOD OF COMPLIANCE: ENERGY CODE: □ PERFORMANCE ■ PRESCRIPTIVE	ELECTRICAL	L LOAD SUMMARY		
VARTAGLE FREQUENCY URIVE VATTS VITH	ASHRAE 90.1: DPERFORMANCE PRESCRIPTIVE	SERVICE VOLTAGE= 240/120 VOLT, 1 PHASE, 3 SERVICE WIRING = 3#3, 1#8*	3 WIRE		
WITH OUT WEATHERPROOF TRANSFORMED	LAMP TYPE REQUIRED IN FIXTURE     SEE FIXTURE SCHEDULE SHOWN ON E0.1       NUMBER OF LAMPS IN FIXTURE     SEE FIXTURE SCHEDULE SHOWN ON E0.1		CONNECTED LOAD DEMAND LOAD		
	BALLAST TYPE USED IN THE FIXTURE     SEE FIXTURE SCHEDULE SHOWN ON E0.1       NUMBER OF BALLASTS IN FIXTURE     SEE FIXTURE SCHEDULE SHOWN ON E0.1	LIGHTING, INTERIOR LIGHTING, EXTERIOR EUTURE LOADS (ESTIMATED)	0.98 KW 0.98 KW (100%) 1.46 KW 0.15 KW (10%) 0.00 KW 0.00 KW (20%)		
	TOTAL WATTAGE PER FIXTURE       SEE FIXTURE SCHEDULE SHOWN ON E0.1         TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED       SPECIFIED:       0.98 kW       ALLOWED:       1.70 kW	RECEPTACLES (FIRST 10KVA) RECEPTACLES (FIRST 10KVA) RECEPTACLES (REMAINDER OVER 10KVA)	0.00 KW (80%) 1.08 KVA 1.08 KVA (100%) 0.00 KVA 0.00 KVA 50%		
	TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED SPECIFIED: 1.46 kW ALLOWED: 2.99 kW ADDITIONAL PRESCRIPTIVE COMPLIANCE	TOTALS	3.52 KVA 2.21 KVA (62.8%)		
	C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE     C406.3 REDUCED LIGHTING POWER DENSITY	NOTICE: NO WARRANTY, EITHER EXPRESSED INFORMATION PROVIDED IN THE ELECTRICAL LOAD WITH USE THEREOF. THE VOI TAGE AND PHASE RE	D OR IMPLIED, IS GIVEN WITH RESPECT TO THE ACCURACY OF D SUMMARY, AND USER MUST ASSUME ALL RISKS IN CONNECTION EQUIREMENT OF ELECTRICAL SYSTEM LOAD DATA ARE BASED ON		
		CONVENTIONAL ENGINEERING PRINCIPLES AT THE GUIDE IN ESTIMATING LOADS TO BE SERVED. FOR A	E TIME OF DESIGN, AND ARE INTENDED TO BE USED ONLY AS A ACTUAL LOADS, USER IS ADVISED TO REFER TO NAMEPLATE		
	□ C406.6 DEDICATED OUTDOOR AIR SYSTEM □ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING	DATA OF EXACT EQUIPMENT PURCHASED AND INST -REECE. NOLAND & McELRATH. INC. EI	TALLED. ENGINEERS		

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![](_page_11_Figure_28.jpeg)

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![](_page_11_Picture_32.jpeg)

![](_page_11_Figure_33.jpeg)

![](_page_11_Picture_34.jpeg)