CEDAR RIDGE HIGH SCHOOL OUTDOOR AGRICULTURAL LAB ORANGE COUNTY SCHOOLS

ADDENDUM NO.1

1.1 PROJECT INFORMATION

- A. Project Name: Cedar Ridge High School Outdoor Agricultural Laboratory
- B. Owner: Orange County Schools.
- C. Architect: CRA Associates, Inc.
- D. Architect Project Number: 2231CR.
- E. Date of Addendum: January 19, 2024.

1.2 NOTICE TO BIDDERS

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids is unchanged by this Addendum, at same time and location.

1.3 ATTACHMENTS

- A. This Addendum includes the following attached Documents and Specification Sections:
 - 1. Document: Minutes of Pre-Bid Meeting, January 17, 2024.
 - 2. Section 012100 Allowances, dated January 19, 2024, (new).
- B. This Addendum includes the following attached Sheets:
 - 1. Civil Sheet C2.0, dated January 19, 2024, (reissued).
 - 2. Civil Sheet C2.1, dated January 19, 2024, (reissued).
 - 3. Civil Sheet C2.2, dated January 19, 2024, (reissued).
 - 4. Structural Sheet S100, dated January 19, 2024, (reissued).
 - 5. Architectural Sheet A100, dated January 19, 2024, (reissued).
 - 6. Architectural Sheet A200, dated January 19, 2024, (reissued).
 - 7. Architectural Sheet A300, dated January 19, 2024, (reissued).
 - 8. Electrical Sheet E0.1, dated January 19, 2024, (reissued).

END OF ADDENDUM NO. 1

ADDENDUM AD1 - 1

PREBID MEETING AGENDA: Meeting minutes from Jan 17, 2024

- A. Procurement and Contracting Requirements:
 - 1. Advertisement for Bids.
 - 2. Instructions to Bidders. Bids to be received on Thursday Feb.1 by 3:00 at Orange County Schools at 200 East King St. Hillsborough NC
 - 3. Bidder Qualifications.
 - 4. Bonding. A Bid bond is required for the project and must be provided in a separate envelope from the bid.
 - 5. Insurance.
 - 6. Bid Security.
 - 7. Bid Form and Attachments.
 - 8. Bid Submittal Requirements.
 - 9. Bid Submittal Checklist.
 - 10. Notice of Award.
- B. Communication during Bidding Period: Communications will be through emails to the Architect of record.
 - 1. Obtaining documents.
 - 2. Access to Project Web site.
 - 3. Bidder's Requests for Information. All questions from the bidders must be sent to Architect via email by Jan,26th. Final addendum will be issued on Monday January 29, 2024
 - 4. Bidder's Substitution Request/Prior Approval Request.
 - 5. Addenda. Addendum #1 will be issued this week.
- C. Contracting Requirements:
 - 1. Agreement.
 - 2. The General Conditions.
 - 3. The Supplementary Conditions.
 - 4. Other Owner requirements.
- D. Construction Documents:
 - 1. Scopes of Work. The designer reviewed the scope of work with the attendees.
 - 2. Temporary Facilities. Contractors must provide all temporary facilities. The fencing proposed for this site will act as the construction fencing to allow a staging and laydown area for the site.
 - 3. Use of Site. Contractors will have full use of the site every day except it was noted that bus traffic will occur each weekday starting at 8:15 and they will be arriving again around 3:15 in the afternoon. The elementary school across the street will also have parent drop off and pickup daily and so it may impact delivery times during construction.
 - 4. Work Restrictions. The project is on a school site and so work must conform to school policies and procedures.
 - 5. Alternates, Allowances, and Unit Prices.
 - 6. Substitutions following award.
- E. Separate Contracts:

Cedar Ridge High School Outdoor Agricultural Lab Orange County Schools

- 1. Work by Owner.
- 2. Work of Other Contracts.

F. Schedule:

- 1. Project Schedule. Anticipated start date is March.
- 2. Contract Time.
- 3. Liquidated Damages.
- 4. Other Bidder Questions.

Post-Meeting Addendum. Addendum #1 will be issued on Friday Jan.19,2024.

CEDAR RIDGE HIGH SCHOOL OUTDOOR AGRICULTURAL LAB ORANGE COUNTY SCHOOLS

CRA JOB NO. 2231CR

ATTENDANCE REGISTER FOR THE JANUARY 17, 2024 PRE-BID MEETING

NAME	COMPANY	TELEPHONE	eMAIL
JASES Kervey	HM K-DN	(336) 207-0733	ESTIMATING @ MAKERN. COM
Jason Marshall	Riggs Harrow Builders	1619) 730-2194	imarshall Orbasharrod.com
Church Kill	Harred & Assac.	916-828-7782	Postinxting Chawadandas socicon
Chad Watron	O.C. Motobell	0522 754-616	chool ocurtchell, com
JASON KNOEKNISHILD	BERLY BULLOWE GROUP	919-810-4120	JASON K @ BERRYBG.COM
Joseph (1939)	Hamlett Associates	336-402-9963	joseph Dhamlettai.com
Justin Graves	Hamilett Associates	336-214-4379	J Graves & hemiettai, com
HONK Mekee	CCIM		
FAMILY FLOCKERS	30,00		
Jeffrey Rofer	Sunford Contractors	919-777-3011	the fer & son ford contractors, com
Sharper Brayth	DCS CTE Director	500h-5h2-516	Shanna bayba Coange, K12.nc.US

2

December 20,2023

LEGAL ADVERTISEMENT DEPARTMENT

TO WHOM IT MAY CONCERN:

Please run the following advertisement for bids as soon as possible for one time only:

"ADVERTISEMENT FOR BIDS"

Sealed proposals for a Single Prime Construction Contract will be received by Orange County Schools in the Central Office Meeting Room, 200 East King St. Hillsborough, NC, until 3 PM on Thursday, February 1,2024, and immediately thereafter publicly opened and read, for the furnishing of labor, material, and equipment entering into the work for the following project:

Outdoor Agricultural Lab Building - Cedar Ridge High School 1125 New Grady Brown School Road Hillsborough , NC

After January 10, 2024, complete plans and specifications may be obtained from the Architect, CRA Associates, Inc., Chapel Hill, NC. Construction bid documents will be distributed electronically through the Architect's file transfer site. Interested firms should email Mr. Kenneth Redfoot project architect, with a request for the documents and complete contact information at kredfoot@cra-ae.com

A non-mandatory, Pre-Bid Conference will be held for interested parties on Wednesday, January17,2024 at 2pm at the bus parking lot adjacent to the site.

The Owner reserves the unqualified right to reject any and all proposals.

Signed:

Mr. Patrick Florence, Capital and Facilities Director Orange County Schools"

Sincerely,

Kenneth E. Redfoot, AIA President

CEDAR RIDGE HIGH SCHOOL OUTDOOR AGRICULTURAL LAB ORANGE COUNTY SCHOOLS

SECTION 012100 – ALLOWANCES (Addendum No.1)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
- C. Related Requirements:
 - 1. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 INFORMATIONAL SUBMITTALS

- A. Submit invoices or receipts to show actual cost incurred in fulfillment of each allowance.
- B. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

ALLOWANCES 012100 - 1

CEDAR RIDGE HIGH SCHOOL OUTDOOR AGRICULTURAL LAB ORANGE COUNTY SCHOOLS

1.6 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
 - 1. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

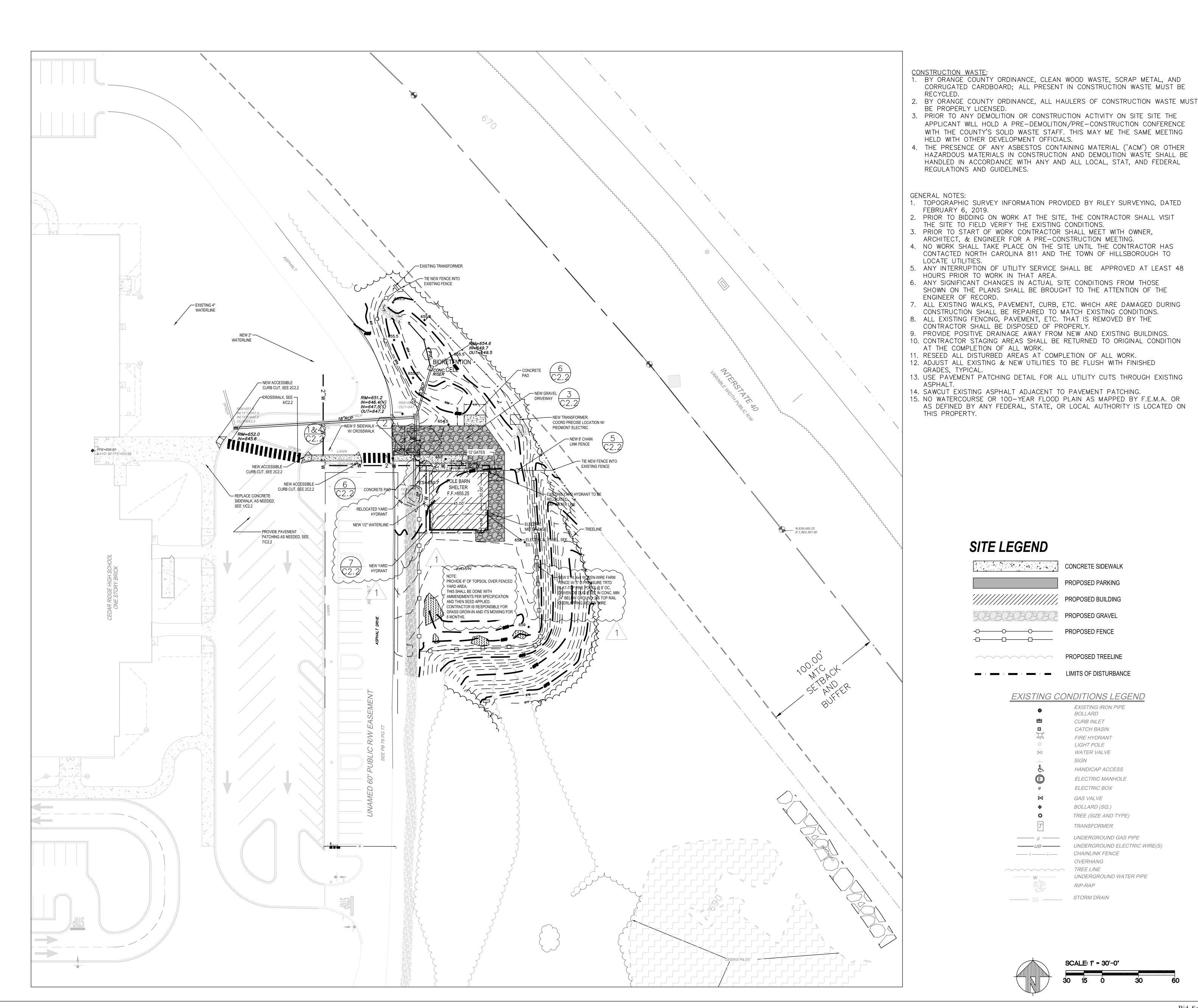
A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Lump-Sum Allowance: Permit Fees: Include the sum of \$5,000.00 to cover all permit fees required for the project. See Section 4.8.1 of the General Conditions.
 - 1. The Contractor shall use this allowance to pay all permit fees. If permit fees exceed or are less than the amount of the allowance the Contractor shall initiate a Change Proposal for the difference, whether more or less. Receipts must be included in the back-up of the proposed change proposal.

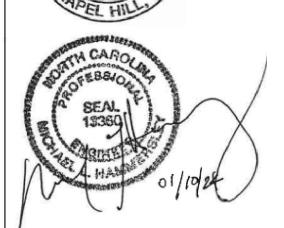
END OF SECTION 012100

ALLOWANCES 012100 - 2





100 europa drive suite 565 chapel hill, nc 27517 919.401.8586 www.cra-ae.com





no. revisions

1 Addendum #1, 01-19-24

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.

SITE PLAN

project no. 2231

8. ALL EXISTING FENCING, PAVEMENT, ETC. THAT IS REMOVED BY THE CONTRACTOR SHALL BE DISPOSED OF PROPERLY. 9. PROVIDE POSITIVE DRAINAGE AWAY FROM NEW AND EXISTING BUILDINGS. 10. CONTRACTOR STAGING AREAS SHALL BE RETURNED TO ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. 11. RESEED ALL DISTURBED AREAS AT COMPLETION OF ALL WORK. 12. ADJUST ALL EXISTING & NEW UTILITIES TO BE FLUSH WITH FINISHED 13. USE PAVEMENT PATCHING DETAIL FOR ALL UTILITY CUTS THROUGH EXISTING 14. SAWCUT EXISTING ASPHALT ADJACENT TO PAVEMENT PATCHING. 15. NO WATERCOURSE OR 100-YEAR FLOOD PLAIN AS MAPPED BY F.E.M.A. OR AS DEFINED BY ANY FEDERAL, STATE, OR LOCAL AUTHORITY IS LOCATED ON

SITE LEGEND

4 4 4 4 CONCRETE SIDEWALK PROPOSED PARKING PROPOSED BUILDING

PROPOSED TREELINE

EXISTING CONDITIONS LEGEND

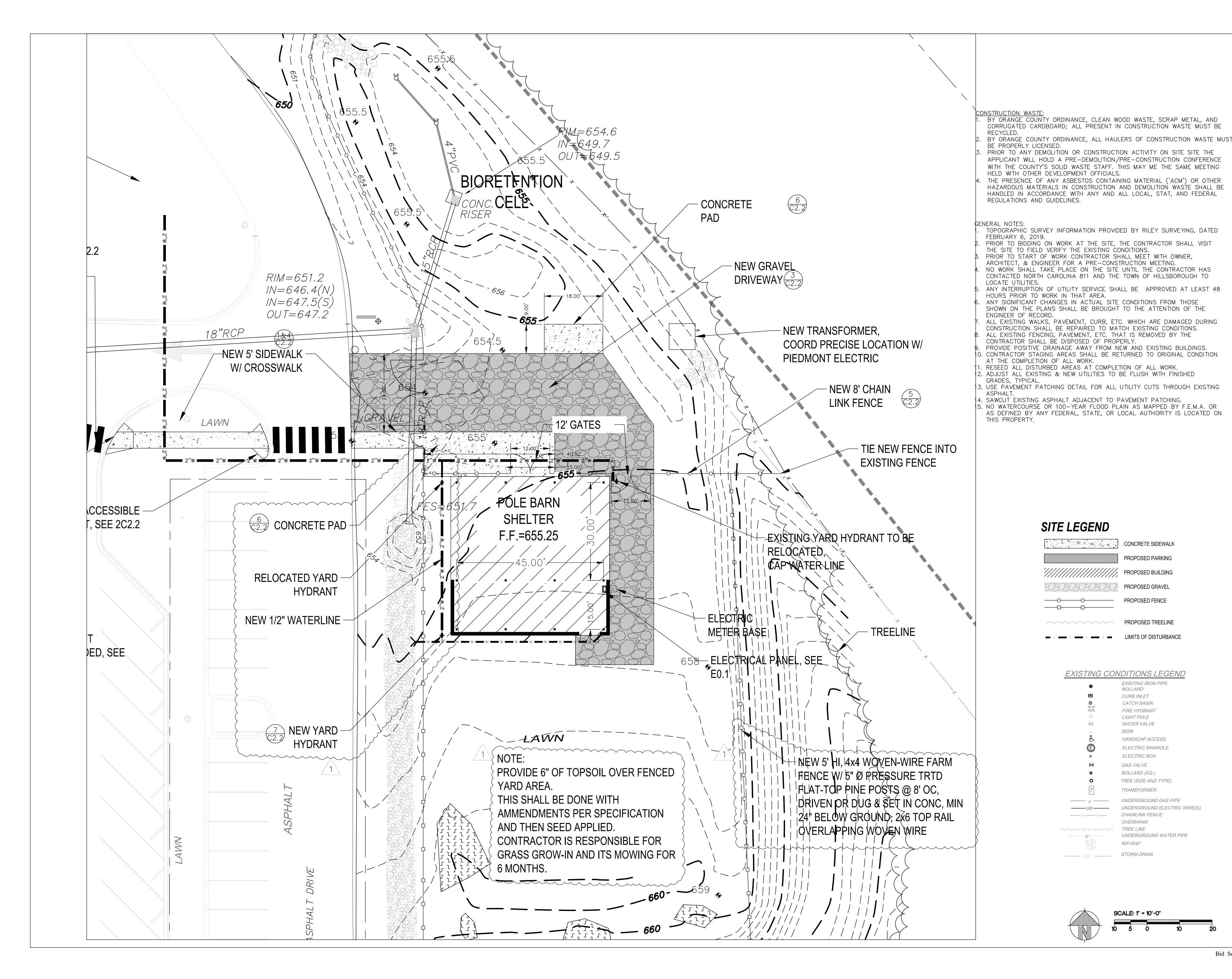
EXISTING IRON PIPE **BOLLARD** CURB INLET CATCH BASIN FIRE HYDRANT LIGHT POLE WATER VALVE HANDICAP ACCESS ELECTRIC MANHOLE ELECTRIC BOX GAS VALVE BOLLARD (SQ.) TREE (SIZE AND TYPE) TRANSFORMER

UNDERGROUND GAS PIPE UNDERGROUND ELECTRIC WIRE(S) OVERHANG

TREE LINE

———— SD ————— STORM DRAIN

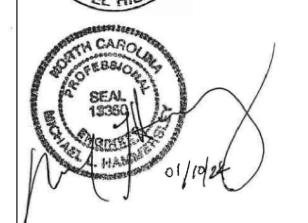
UNDERGROUND WATER PIPE



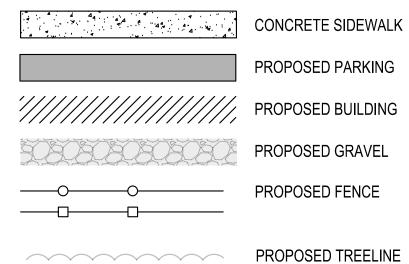


100 europa drive suite 565 chapel hill, nc 27517 919.401.8586 www.cra-ae.com

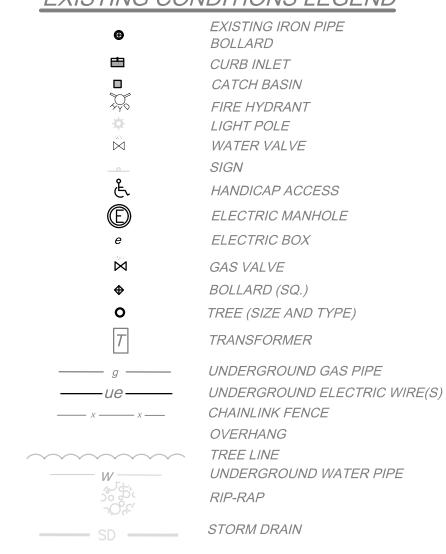
CERT. NO.



SITE LEGEND



EXISTING CONDITIONS LEGEND



SCALE: 1" = 10'-0"





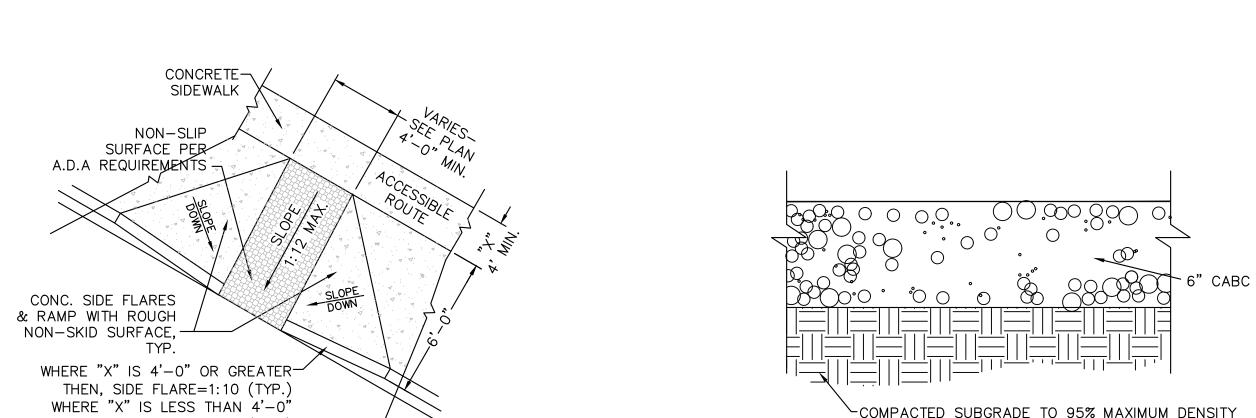
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1 Addendum #1, 01-19-24

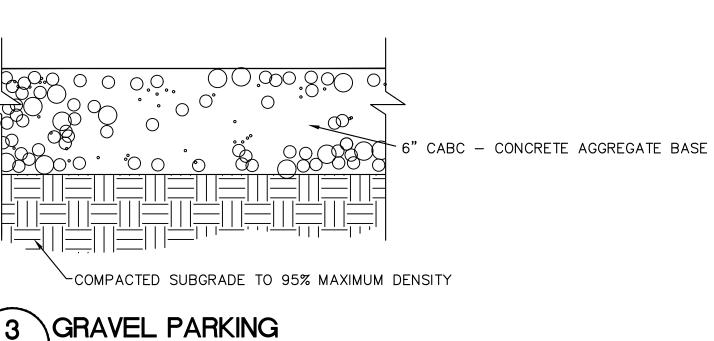
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ENLARGED SITE PLAN

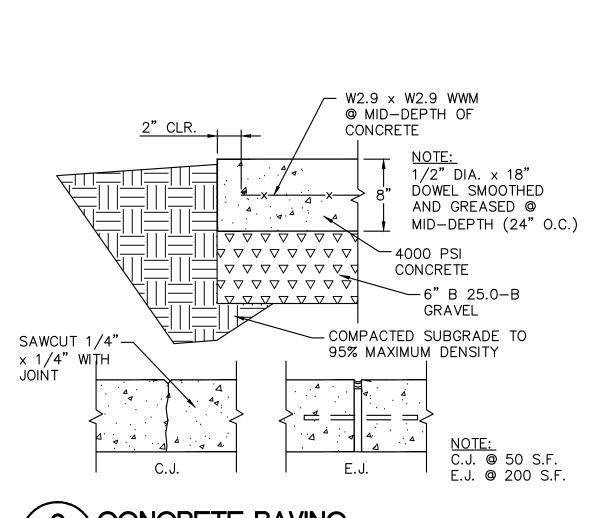
project no. 2231

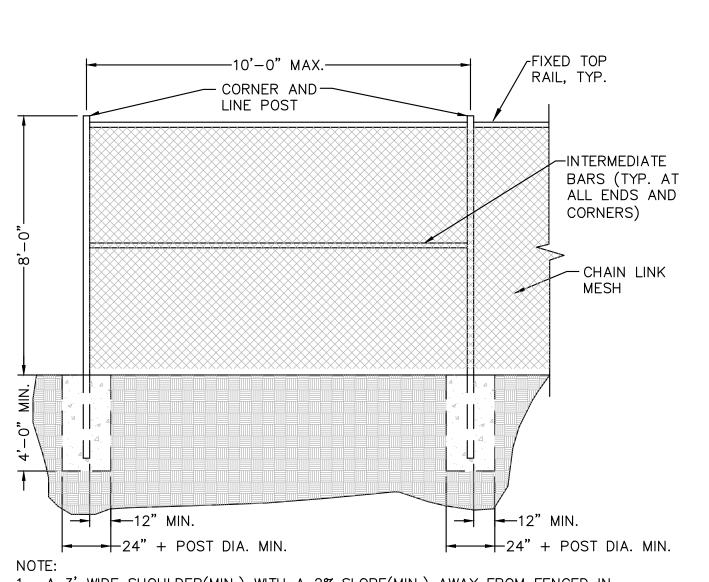


C2.2 SCALE: N.T.S.



0000/DIV-02/02500A19.DWG





THEN, SIDE FLARE=1:12 (TYP.)

OF THE PEDESTRIAN FACILITIES.

C2.2 SCALE: N.T.S.

NOTE: THERE SHALL BE FULL COMPLIANCE WITH NORTH CAROLINA

ACCESSABILITY CODE & THE AMERICANS WITH DISABILITY ACT(ADA)

STANDARDS(I.E.: TRUNCATED DOMES, CONTRASTING COLORS, RUNNING

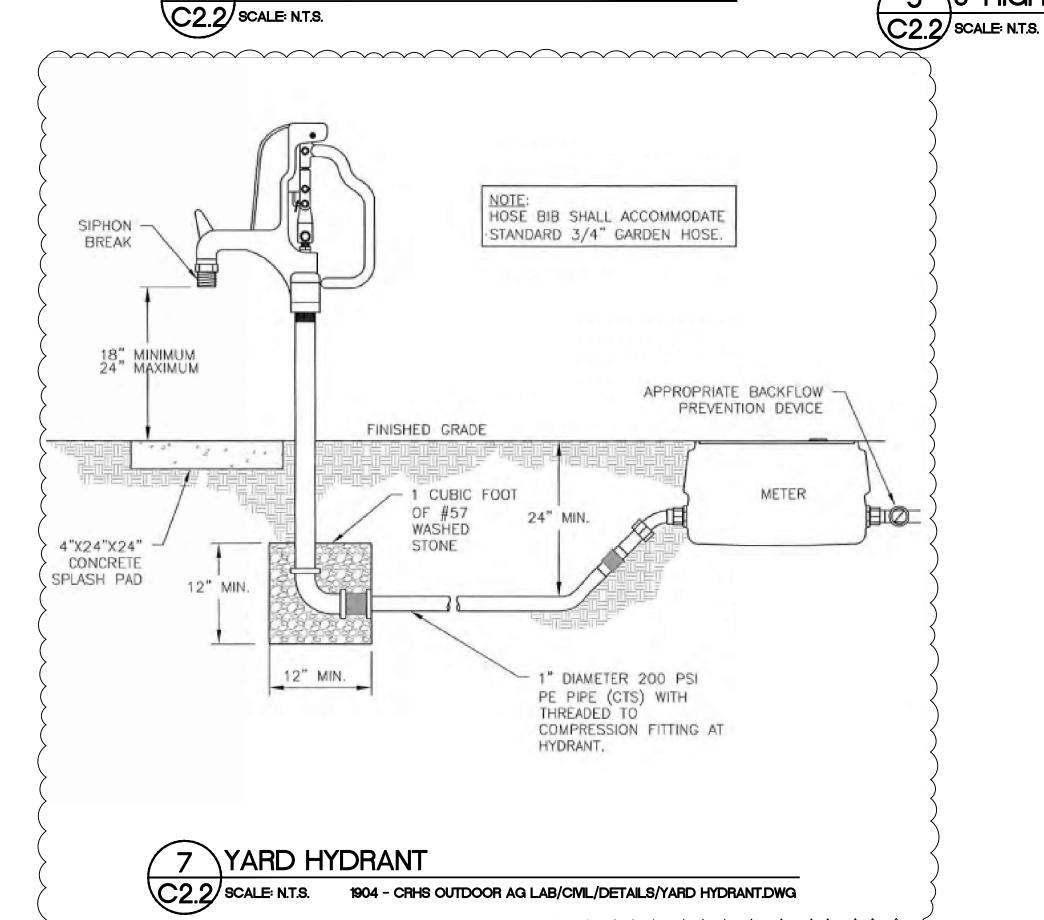
2 TYPICAL ACCESSIBLE CURB CUT

GRADES, CROSS SLOPES ETC.) IN FORCE AT THE TIME OF CONSTRUCTION

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MATCH EARTH TO

\ AWAY

SIDEWALK, SLOPE

C2.2 SCALE: N.T.S.

CONCRETE OR BRICK

WHITE CROSSWALK

ASPHALT PAVING

SIDEWALK

CURB AND GUTTER

STRIPING, TYP.

CURB AND

GUTTER

CONCRETE OR BRICK SIDEWALK

BERM THE EARTH

- 4" THICK CONCRETE

COMPACTED

SLAB C.J. @ 5'-0",

SUBGRADE TO 95%

MAXIMUM DENSITY

0000/DIV-02/02505A02.DWG

CONCRETE OR BRICK

CURB AND GUTTER

ASPHALT PAVING

CURB AND

GUTTER

CONCRETE OR BRICK

SIDEWALK

\SIDEWALK

E.J. @ 20'-0" (TYP.)

ON THE UPHILL

VARIES (SEE PLAN)

CONCRETE TO BE 3000 PSI.

ACCESSIBLE CURB CUT

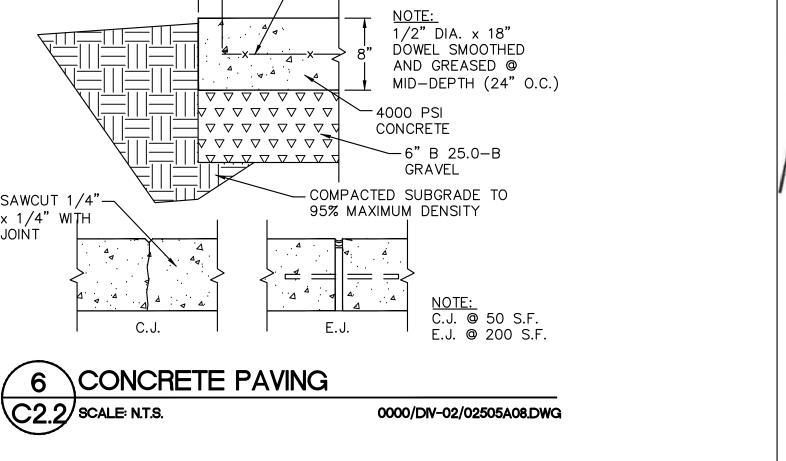
TYP.

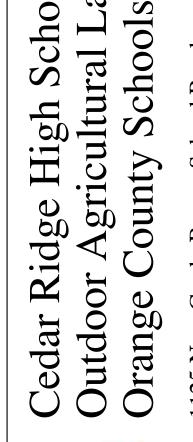
ACCESSIBLE CURB CUT

1. ACCESSIBLE CURB CUT AT EACH END OF CROSSWALK, TYP. SEE DETAIL
THIS SHEET.
2. USE THIS STRIPING ON THE TOP WALKING SURFACE OF RAISED CROSSWALKS.

4 CROSSWALK STRIPING DETAIL

CONCRETE SIDEWALK





100 europa drive

919.401.8586

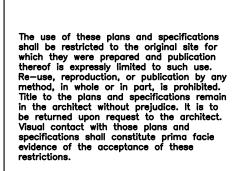
www.cra-ae.com

chapel hill, nc 27517

suite 565

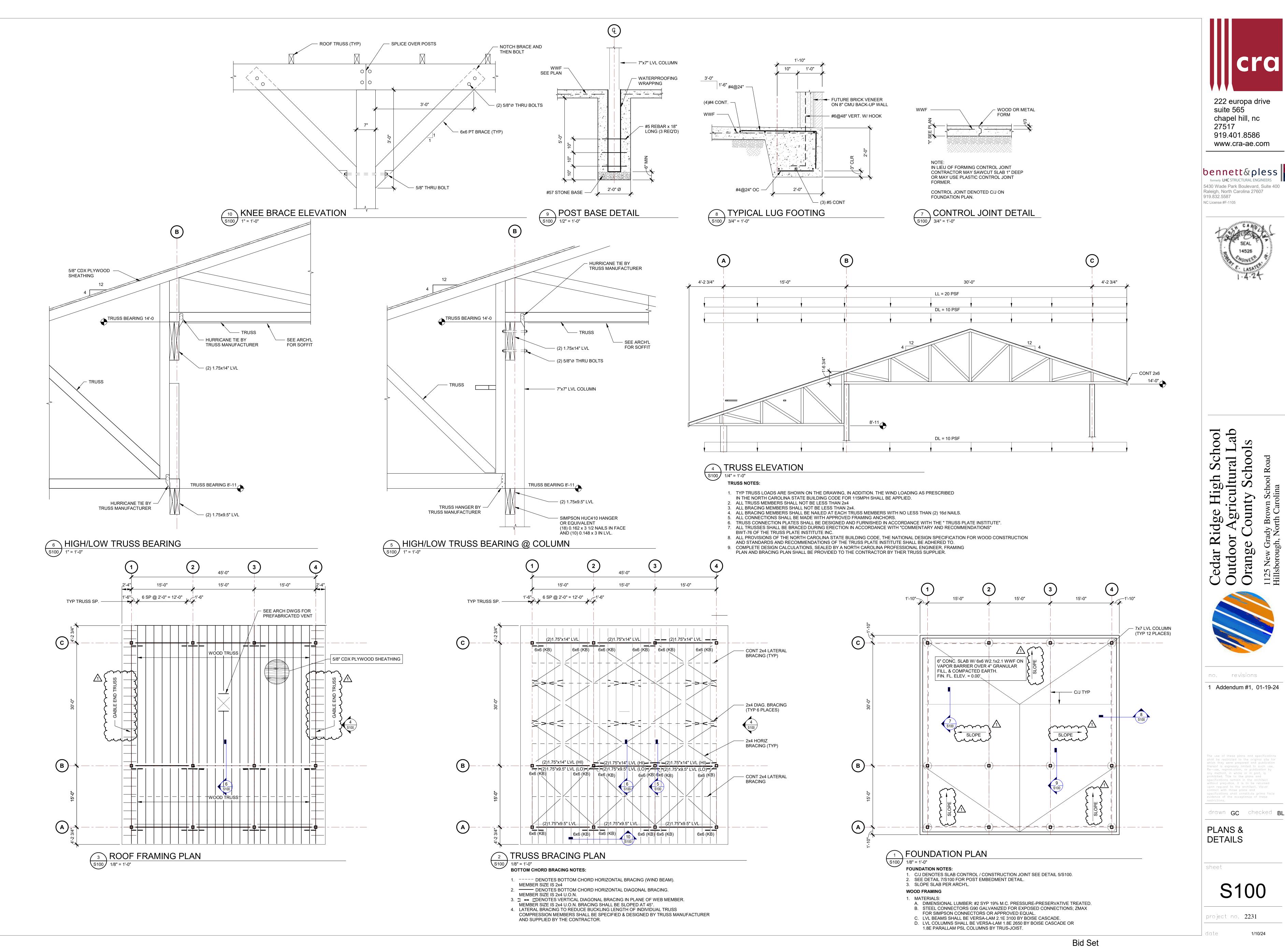


no. revisions 1 Addendum #1, 01-19-24



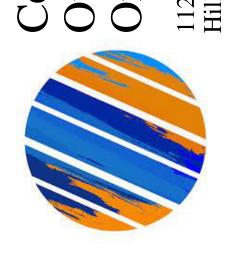
SITE PLAN **DETAILS**

project no. 2231

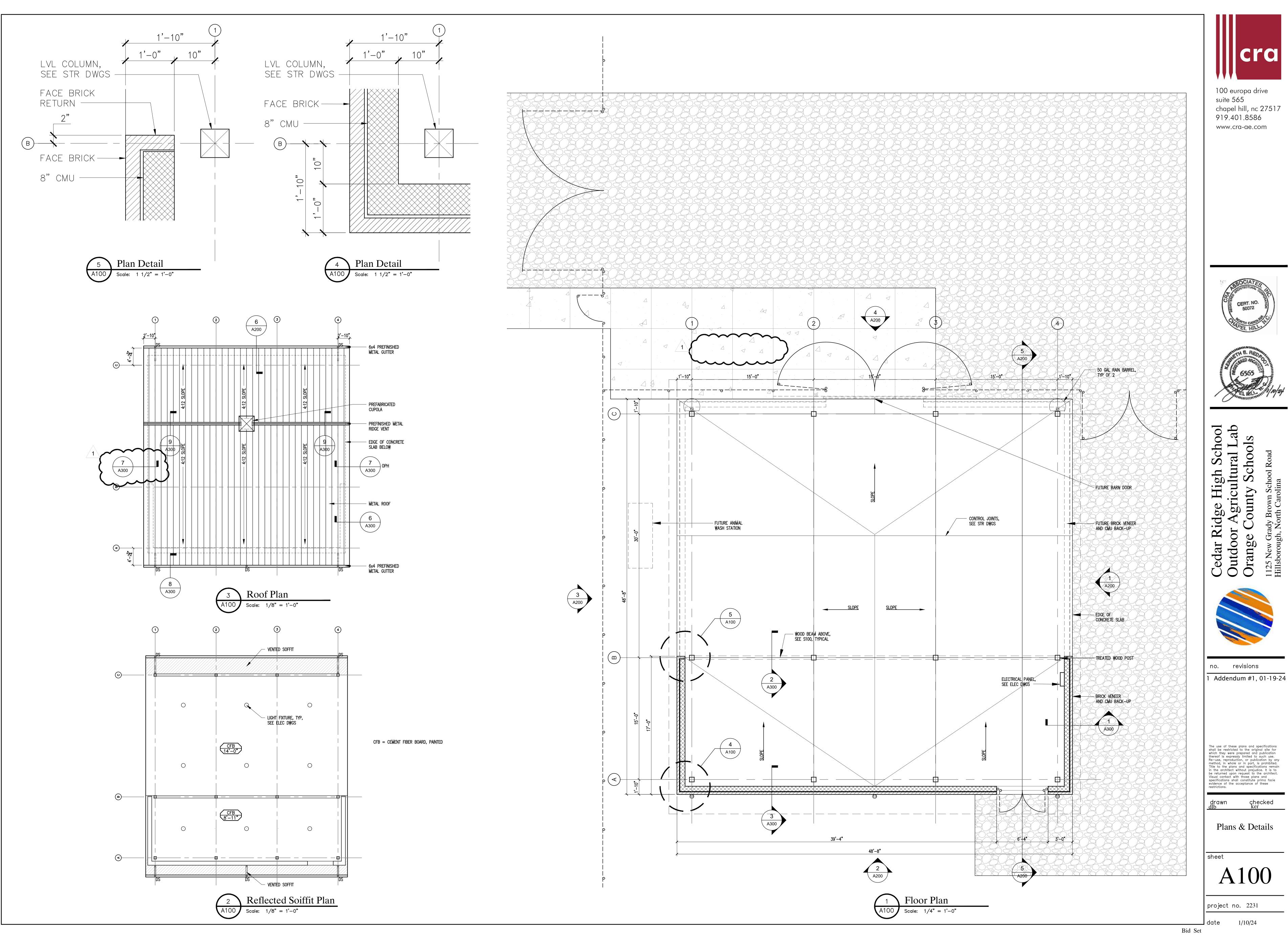


formerly LHC STRUCTURAL ENGINEERS 5430 Wade Park Boulevard, Suite 400





1 Addendum #1, 01-19-24



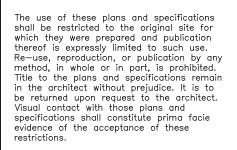


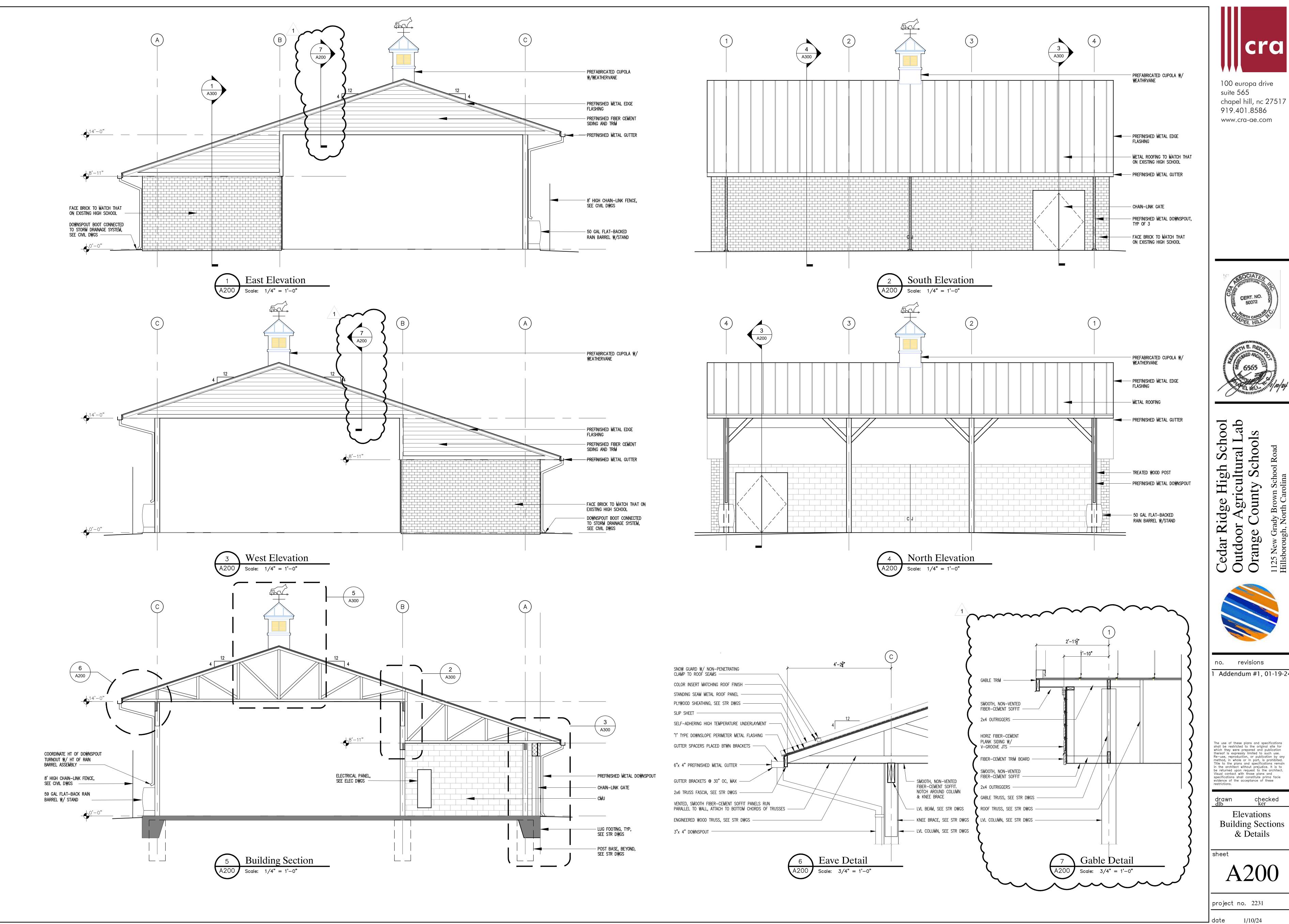
chapel hill, nc 27517







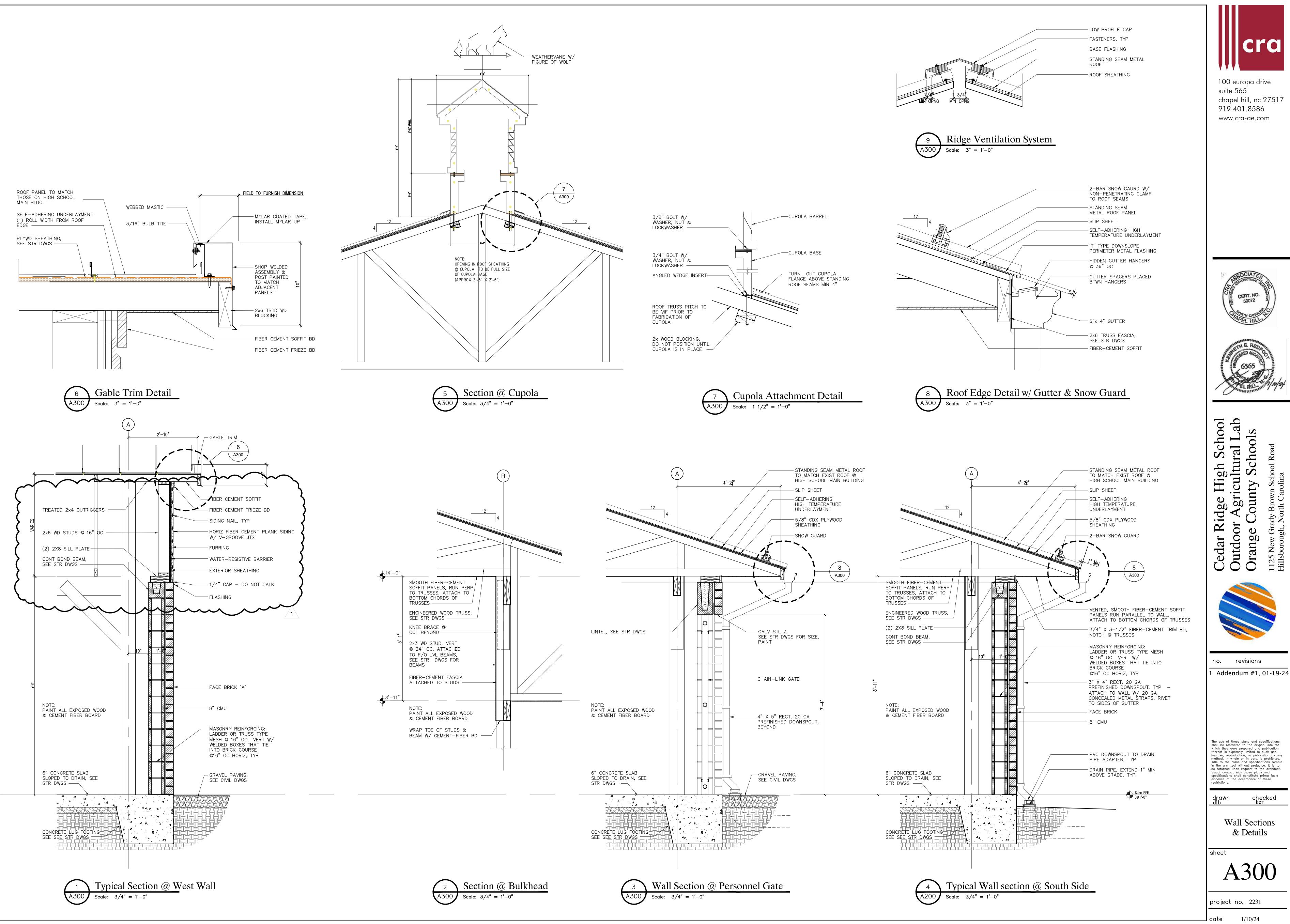








1 Addendum #1, 01-19-24











ELECTRICAL SYMBOL SCHEDULE								
ALL SYMBOLS MAY NOT BE USED								
SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTING			
φ	RECEPTACLE, COMMERCIAL GRADE, DUPLEX, HUBBELL #8300I 15 AMPERE RATED, GROUNDING TYPE, 2 POLE, 3 WIRE, 125 VOLTS.	1'-6" AFF OR AS NOTED	S	SWITCH, SINGLE POLE, 20 AMP, COMMERCIAL DUTY, HUBBELL #CSB120I 120/277 VOLT RATED, IVORY COLOR	4'-0" AFF TO TOP OR AS NOTED			
 ₽	RECEPTACLE, SAME AS ABOVE EXCEPT MOUNTING HEIGHT.	6" ACT TO BTM-WHEN THERE IS NO COUNTER, MNT AT 42" AFF TO BTM	S ₃	SWITCH, SINGLE POLE, 20 AMP, COMMERCIAL DUTY, HUBBELL #CSB320I, 120/277 VOLT RATED, IVORY COLOR	4'-0" AFF TO TOP OR AS NOTED			
Φ	RECEPTACLE, SAME AS ABOVE EXCEPT MOUNTING HEIGHT. COORDINATE MOUNTING LOCATION TO AVOID LIGHTING.	IN CEILING	SD	SINGLE POLE DIMMER SWITCH STATION - BUTTON ACTION HUBBELL 'NX' SMART SWITCH, #NXSW-ORLO. GANG ONLY PER MANUFACTURER'S RECOMMENDATIONS	4'-0" AFF TO TOP OR AS NOTED			
#	DOUBLE DUPLEX RECEPTACLE, (2) HUBBELL #8200I, 15 AMPERE RATED, GROUNDING TYPE. WHERE SUBSCRIPT 'R' IS INDICATED, PROVIDE RED DEVICE PLATE.	1'-6" AFF OR AS NOTED	S _{D3}	FOR OPTIMUM PERFORMANCE. THREE WAY DIMMER. BUTTON ACTION HUBBELL 'NX' SMART SWITCH, #NXSW-ORLO.	4'-0" AFF TO TOP OR AS NOTED			
#	RECEPTACLE, SAME AS ABOVE EXCEPT MOUNTING HEIGHT.	0'-6" ACT OR AS NOTED	S _{2P}	SWITCH, TWO-POLE, 20 AMP, COMMERCIAL DUTY, HUBBELL #CSB220I, 120/277 VOLT	4'-0" AFF TO TOP OR AS NOTED			
₩P	RECEPTACLE, GFI/WEATHER RESISTANT W/"IN USE" COVER, 20 AMP, GROUNDING TYPE, HUBBELL #GF8300I.	1'-6" AFG		RATED. WALL SWITCH, DUAL RELAY, DUAL TECHNOLOGY, OCCUPANCY SENSOR. HUBBELL	41.011.455.70.700.00.40.N0750			
30A	RECEPTACLE, 125/250 VOLT RATED, 30 AMP, 3 POLE, 4 WIRE, GNDING HUBBELL #HBL9430-A WITH MATING PLUG AND CORD.	1'-6" AFF OR AS NOTED	Sos	#LHDCMTD2-N. WIRE PER MFG'S RECOMMENDATIONS.	4'-0" AFF TO TOP OR AS NOTED			
50A	RECEPTACLE, 125/250 VOLT RATED, 50 AMP, 3 POLE, 4 WIRE, GNDING HUBBELL	1'-6" AFF OR AS NOTED COORD. LOCATION W/OWNER'S EQUIPMENT LAYOUT PRIOR TO ROUGH IN.	Sosi	WALL SWITCH, SINGLE RELAY, DUAL TECHNOLOGY, OCCUPANCY SENSOR. HUBBELL #LHMTS1-N. WIRE PER MFG'S RECOMMENDATIONS.	4'-0" AFF TO TOP OR AS NOTED			
•••	#HBL9450A WITH MATING PLUG AND CORD. ELECTRICAL PANELBOARD, SEE PANEL SCHEDULE FOR DESCRIPTION.	6'-6" TO TOP	Sosd	WALL SWITCH / OCCUPANCY SENSOR W/ DIMMER, HUBBELL #LHD-IRS-3-N-WH. WIRE PER MFG'S RECOMMENDATIONS.	4'-0" AFF TO TOP OR AS NOTED			
	DISCONNECT SWITCH, 600V. WHERE EXPOSED TO WEATHER SHALL BE NEMA	AS REQ'D, NO HIGHER THAN 6'-6"		CEILING MOUNTED VACANCY SENSOR WITH DUAL-DIMMING CONTROLLER. SEE DETAIL, SHEET E3.1a.	CEILING SURFACE, COORDINATE WITH MANUFACTURER'S RECOMMENDATIONS			
	HOME RUN TO PANELBOARD. ARROWHEADS INDICATE NUMBER OF CIRCUITS. WIRE & CONDUIT AS SPECIFIED.	AS REQ'D	0,	CEILING MOUNTED OCCUPANCY SENSOR WITH DUAL-DIMMING CONTROLLER. SEE DETAIL, SHEET E-3.1a.	CEILING SURFACE, COORDINATE WITH MANUFACTURER'S RECOMMENDATIONS			
$-\bigcirc$	CONDUIT, SIZED AS SPECIFIED	AS REQ'D	WP	WHERE 'WP' IS INDICATED IN SUBSCRIPT, PROVIDE WATER TIGHT ENCLOSURE FOR SWITCHING.				
\bigcirc	JUNCTION BOX (JB) AS MANUFACTURED BY RACO, STEEL CITY, OR UNIVERSAL. SIZE AS APPLICABLE OR REQUIRED. E.C. TO MAKE FINAL CONNECTIONS TO FURNITURE SYSTEMS AND/OR EQUIPMENT, AS REQUIRED.	WALL MNTD, AS REQ'D		Similarino.				
0	SAME AS ABOVE EXCEPT MOUNTED ABOVE ACCESSIBLE CEILING.	ABOVE ACCESSIBLE CEILING						

ABBREVIATIONS

- NEW DEMOLISH
- RELOCATE
- AIR CONDITIONING UNIT ABOVE COUNTER TOP AUTOMATIC DOOR
- AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AFR ABOVE FINISHED ROOF AHJ AUTHORITY HAVING JURISDICTION
- AHU AIR HANDLING UNIT AMPS INTERUPTING CAPACITY AUTOMATIC TRANSFER SWITCH
- AUDIO VISUAL BOILER BAS BUILDING AUTOMATION SYSTEM
- BC BYPASS CONTACTOR BLDG BUILDING
- BFG BELOW FINISHED GRADE CONDUIT
- CHILLER CIRCUIT CLG CEILING
- CONDUIT ONLY COMP COMPRESSOR CP CONDENSATE PUMP CPT CONTROL POWER TRANSFORMER
- CRITICAL BRANCH CURRENT TRANSFORME COPPER CUH CABINET UNIT HEATER
- DP DISTRIBUTION PANEL DWG DRAWING EC ELECTRICAL CONTRACTOR
- EDP EMERGENCY DISTRIBUTION PANEL EXHAUST FAN ELECTRICAL INTERLOCK
- EMERGENCY END OF LINE RESISTOR EXPLOSION PROOF
- **EQUIPMENT BRANCH** EWC ELECTRIC WATER COOLER EXIST EXISTING FCU FAN COIL UNIT

FDS FUSED DISCONNECT SWITCH

- FLO FULL LOAD AMPS FLOOR FREEZESTAT GENERAL CONTRACTOR
- GFI GROUND FAULT INTERUPTER GFP GROUND FAULT PROTECTION GND GROUND
- HOA HANDS-OFF-AUTO SELECTOR SWITCH HP HORSE POWER HVAC HEATING, VENTILATION, AIR CONDITIONING
- IG ISOLATED GROUND JUNCTION BOX KIRK KEY
- KVA KILOVOLT AMPS KW KILOWATT LRA LOCKED ROTOR AMPS LRHF LINE REACTOR/HARMONIC TRAP FILTER
- LIFE SAFETY BRANCH LIGHT LTG LIGHTING MAX MAXIMUM
- MC MECHANICAL CONTRACTOR MCC MOTOR CONTROL CENTER MCCB MOLDED CASE CIRCUIT BREAKER MIN MINIMUM MLO MAIN LUG ONLY
- MT MOUNT MTD MOUNTED MTG MOUNTING MW MICROWAVE NORMAL BRANCH NORMALLY CLOSED
- NOT IN CONTRACT NORMALLY OPEN NOT TO SCALE OVERLOAD RELAY PUMP
- PB PUSH BUTTON PLUMBING CONTRACTOR PHS PHASE PANEL PWR POWER RF RETURN AIR FAN
- RTU ROOF TOP UNIT SF SUPPLY AIR FAN SPEC SPECIFICATION S/C SOUND SYSTEM CONSULTANT SW SWITCH TCC TEMPERATURE CONTROL CONTRACTOR
- TYP TYPICAL UNDERGROUND UNIT HEATER UNDERWRITERS' LABORATORIES, INC.
- VOLTS VA VOLT AMPS VFD VARIABLE FREQUENCY DRIVE W WATTS
- W/O WITH OUT WP WEATHERPROOF XFMR TRANSFORMER

ELECTRICAL SPECIFICATIONS

IT IS THE INTENT OF THESE SPECIFICATIONS FOR THE ELECTRICAL CONTRACTOR TO FURNISH A COMPLETE ELECTRICAL SYSTEM, FULLY ADJUSTED, & READY FOR USE.

ALL ELECTRICAL WORK TO BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE OBSERVING ALL STATE & ELECTRICAL CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS & PAY ALL SALES TAXES, UTILITY COMPANY CHARGES FOR SERVICE,

PERMITS, FEES, & OTHER COSTS IN CONNECTION WITH HIS WORK. ELECTRICAL CONTRACTOR TO ENSURE THAT ALL MATERIAL & EQUIPMENT FURNISHED FOR THIS PROJECT WHICH CAN BE U.L. LISTED SHALL BE.

THE MATERIAL & EQUIPMENT HAS BEEN CAREFULLY SELECTED FOR THIS PROJECT & THE ELECTRICAL CONTRACTOR IS EXPECTED TO PROVIDE ALL ITEMS AS CLOSELY AS POSSIBLE TO THE SPECIFICATIONS & AS CALLED FOR ON THE DRAWINGS.

ELECTRICAL CONTRACTOR SHALL SUBMIT THREE (3) SETS OF EQUIPMENT DATA SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS TO BE FURNISHED & INSTALLED FOR APPROVAL.

ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS, INCIDENTAL CONSTRUCTION WORK, ETC., IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, & REGULATIONS, WHETHER OR NOT SHOWN ON DRAWINGS AND/OR SPECIFIED. NO CLAIM FOR EXTRAS WILL BE APPROVED WITHOUT PRIOR COORDINATION FOR CONFLICTS BY CONTRACTOR, & WRITTEN REQUEST & APPROVAL PRIOR TO PERFORMING WORK.

ALL WORK & EQUIPMENT TO BE GUARANTEED BY CONTRACTOR FOR ONE (1) YEAR.

UPON COMPLETION OF ALL WORK & ALL TESTS, ELECTRICAL CONTRACTOR SHALL INSTRUCT THE OWNER OR HIS REPRESENTATIVE FULLY IN THE OPERATIONS, ADJUSTMENTS, & MAINTENANCE OF EQUIPMENT FURNISHED. ELECTRICAL CONTRACTOR SHALL PROVIDE OWNER WITH MAINTENANCE SCHEDULE FOR THE PRINCIPAL ITEMS OF EQUIPMENT FURNISHED. MANUFACTURER'S ADVERTISING LITERATURE OR CATALOGS WILL NOT BE ACCEPTABLE. ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS & GOOD RECOMMENDED PRACTICES.

ELECTRICAL CONTRACTOR SHALL GIVE FULL COOPERATION TO OTHER TRADES. WHERE THE WORK OF ELECTRICAL CONTRACTOR WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR WILL INTERFERE WITH WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS. IF ELECTRICAL CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES, HE SHALL MAKE THE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.

THE DRAWINGS ARE DIAGRAMMATIC & INDICATE THE GENERAL ARRANGEMENTS OF SYSTEMS & WORK INCLUDED IN THE CONTRACT. THE DRAWINGS ARE NOT TO BE SCALED.

EXISTING INFORMATION SHOWN ON DRAWINGS TAKEN FROM OWNER FURNISHED AS BUILT DRAWINGS & LIMITED SITE SURVEY. CONTRACTOR TO FIELD VERIFY ALL EXISTING EQUIPMENT, CIRCUITS, & WIRING.

ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATION OF EQUIPMENT, ROUTING PIPE, ETC., & WORK CLOSELY WITH OTHER TRADES TO AVOID CONFLICTS. ELECTRICAL CONTRACTOR TO LOCATE & INSTALL ELECTRICAL CONTROL PANELS IN SUITABLE LOCATION WITH APPROPRIATE CLEARANCES & OVERLOAD PROTECTION FOR ALL ITEMS REQUIRED.

ELECTRICAL CONTRACTOR MAY COMBINE CONDUITS WHERE APPLICABLE, BUT MUST HOOK UP ITEMS TO PROPER CIRCUITS AS SHOWN.

THE OWNER, ARCHITECT & ELECTRICAL CONTRACTOR TO COORDINATE FOR PROPER CUTOUT HOLES, ALL STUB-UPS & JUNCTION BOXES, & TO VERIFY LOCATIONS.

WHERE ALUMINUM CONDUCTORS ARE UTILIZED THEY SHALL BE TERMINATED WITH BURNDY HY-PLUG, HYDRAULIC COMPRESSION TERMINATORS. ALL CONDUCTORS, THROUGH #10 AWG, TO BE SOLID COPPER WITH TYPE THWN/THHN OR XHHW INSULATION UNLESS NOTED OTHERWISE.

ALL CONDUCTORS, #8 AWG AND LARGER, TO BE CLASS B STRANDED COPPER WITH TYPE THWN/THHN OR XHHW INSULATION UNLESS NOTED OTHERWISE.

THE COLOR CODE FOR CONDUCTORS SHALL BE BLACK, RED, WHITE (120/240V,1Ø, Y).

PROVIDE GREEN GROUNDING CONDUCTOR WITH ALL CIRCUITS.

P.V.C. CONDUIT SHALL NOT BE USED IN AREAS OF ASSEMBLY ALL WIRING TO BE IN CONDUIT OR APPROVED RACEWAY.

U.L. METHODS BY THE ELECTRICAL CONTRACTOR.

ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL SMOOTH PLASTIC DEVICE PLATES BRYANT 70000 SERIES LEVITON 85/86000 SERIES OR APPROVED EQUAL. PLATES SHALL BE OF THE SAME COLOR AS THE DEVICE (REFER TO SYMBOL SCHEDULE). EXTERIOR MOUNTED BOXES SHALL HAVE APPROVED WEATHERPROOF PLATES &/OR COVERS. ALL SURFACE INSTALLED BOXES SHALL HAVE STAMPED STEEL DEVICE PLATES.

ALL DEVICE OUTLETS SHALL BE FLUSH MOUNTED UNLESS SPECIFICALLY NOTED.

DRIVERS SUPPLIED WITH RECESSED LED FIXTURES SHALL BE APPROVED BY UNDERWRITERS' LABORATORIES & SHALL BE, ELECTRONIC, ENERGY SAVINGS, PREMIUM GRADE, PROPERLY APPLIED TO EACH INSTALLATION. DRIVERS SUPPLIED WITH SURFACE MOUNTED LED FIXTURES SHALL BE, ELECTRONIC, ENERGY SAVINGS EXTRA LOW HEAT, SUPER PREMIUM TYPES. DRIVERS TO BE AS MANUFACTURED BY ADVANCE, UNIVERSAL, JEFFERSON, OR APPROVED EQUAL.

SUPPLEMENTAL ELECTRICAL SPECIFICATIONS

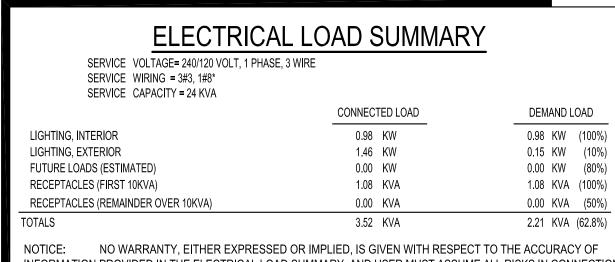
- ALL CONDUCTORS SHALL BE MARKED WITH CIRCUIT NUMBER WHEN TERMINATING AT THE PANELBOARD.
- ALL 15 A, 20 A, & 30 AMPERE HOME RUN CONDUCTORS EXCEEDING 150' SHALL BE INCREASED ONE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP. ADJUST CONDUIT SIZE ACCORDINGLY.
- ALL CONDUIT COUPLINGS AND CONNECTORS SHALL BE "T&B" INSULATED THROAT COMPRESSION TYPE. NO "INDENTER" OR SET SCREW DEVICES WILL BE

ALL PENETRATIONS OF RATED PARTITIONS, FLOOR SLABS BY EITHER NEW OR EXISTING CONDUITS SHALL BE FIRE CAULKED OR CLOSED BY APPROVED

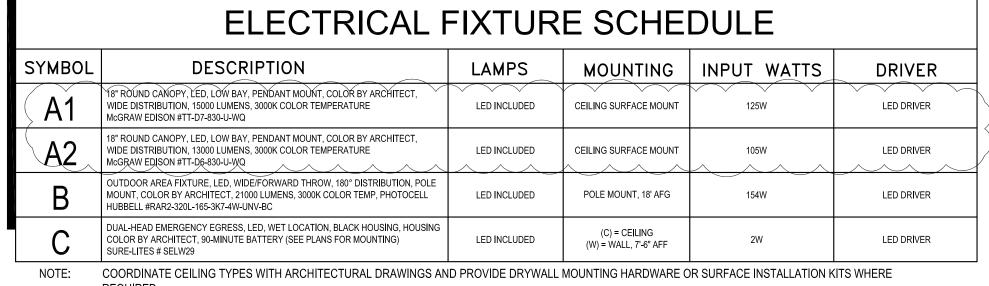
ALL EXISTING EQUIPMENT, CONDUIT, WIRING, BOXES ETC. RENDERED UNUSED, SHALL BE REMOVED & DISPOSED OF AS DIRECTED BY THE OWNER.

LECTRICAL SUMMARY - ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE: NERGY CODE: ☐ PERFORMANCE ■ PRESCRIPTIVE SHRAE 90.1: □ PERFORMANCE □ PRESCRIPTIVE GHTING SCHEDULE LAMP TYPE REQUIRED IN FIXTURE SEE FIXTURE SCHEDULE SHOWN ON E0.1 NUMBER OF LAMPS IN FIXTURE SEE FIXTURE SCHEDULE SHOWN ON E0.1 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 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 | TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED | SPECIFIED: 1.46 kW ALLOWED: 2.99 kW DITIONAL PRESCRIPTIVE COMPLIANCE ☐ C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE ■ C406.3 REDUCED LIGHTING POWER DENSITY ☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS ☐ C406.5 ON-SITE RENEWABLE ENERGY ☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM

☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING



INFORMATION PROVIDED IN THE ELECTRICAL LOAD SUMMARY, AND USER MUST ASSUME ALL RISKS IN CONNECTION WITH USE THEREOF. THE VOLTAGE AND PHASE REQUIREMENT OF ELECTRICAL SYSTEM LOAD DATA ARE BASED ON CONVENTIONAL ENGINEERING PRINCIPLES AT THE TIME OF DESIGN, AND ARE INTENDED TO BE USED ONLY AS A GUIDE IN ESTIMATING LOADS TO BE SERVED. FOR ACTUAL LOADS, USER IS ADVISED TO REFER TO NAMEPLATE DATA OF EXACT EQUIPMENT PURCHASED AND INSTALLED. -REECE, NOLAND & McELRATH, INC. ENGINEERS



GENERAL ELECTRICAL NOTES

INDICATOR/RESET DEVICE IN AN ACCESSIBLE LOCATION AS DIRECTED BY THE ARCHITECT & LABEL AS TO AREA & ROOFTOP UNIT SERVED, TYPICAL.

ALL CONDUITS, SLEEVES, INSERTS, OUTLET BOXES, & OTHER ROUGH-IN MATERIALS SHALL BE INSTALLED AS BUILDING CONSTRUCTION PROGRESSES.

ALL LIGHT FIXTURES ARE TYPE "A" UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR TO COORDINATE FIXTURE MOUNTING METHOD (FLANGED, GRID, SPLINE ETC.) WITH

SMOKE DETECTORS FOR AIR HANDLING UNITS SHALL BE LOCATED IN AIR DUCTS OBSERVING ALL APPLICABLE CODES & ORDINANCES. ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION & REQUIREMENTS OF INSTALLATION WITH MECHANICAL CONTRACTOR PRIOR TO CUTTING DUCTWORK, LOCATE THE DETECTOR

THIS CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS & PLACEMENT OF LIGHT FIXTURES, OUTLET BOXES, DEVICES, & EQUIPMENT WITH SITE & ARCHITECTURAL DRAWINGS. INCLUDING REFLECTED CEILING PLANS, INTERIOR AND EXTERIOR ELEVATIONS, DETAILS, & SECTIONS, PRIOR TO ROUGH-IN; OR RELOCATE AS DIRECTED BY THE DESIGNER AT NO

MOUNTING HEIGHTS GIVEN ARE TO TOP OF OUTLET BOX, UNLESS OTHERWISE NOTED. HEIGHTS MAY BE ADJUSTED TO MATCH MASONRY JOINTS, & MUST COMPLY WITH 2017 NEC.

IN MECHANICAL ROOMS & OTHER AREAS WHERE LIGHT FIXTURES ARE SPECIFIED, & DUCT WORK & PIPING IS INSTALLED, ELECTRICAL CONTRACTOR SHALL INSTALL LIGHT FIXTURES

2018 NC ENERGY CODE COMMISSIONING REQUIREMENT: PER 2018 NC ENERGY CODE, SECTION C408, THE CONTRACTOR FOR THE FOLLOWING TRADES (INDIVIDUALLY), PLUMBING, MECHANICAL & ELECTRICAL ARE RESPONSIBLE FOR PROVIDING SYSTEM COMMISSIONING FOR THEIR CONTRACT WORK. THE CONTRACTOR SHALL HIRE EITHER REGISTERED DESIGN PROFESSIONAL (REGISTERED IN NC) TO PROVIDE COMMISSIONING PER THE REQUIREMENTS IN THE NC ENERGY CONDE (SECTION C408). AT THE END OF THE PROJECT, THE

OWNER & AHJ SHALL BE PROVIDED WITH A SEALED STATEMENT OF COMPLETION, PER THE REQUIREMENTS / TEMPLATE SHOWN IN APPENDIX C1 OF THE ENERGY CODE.

CONTRACTOR SHALL PROVIDE SUBMITTALS SHOWING PROPOSED COMMISSIONING PLAN, TEMPLATES, DOCUMENTS & PEOPLE PERFORMING COMMISSIONING, FOR APPROVAL BY

THE PROJECT TEAM PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL SUPPORT, MATERIALS, MANPOWER, EQUIPMENT, INFORMATION, ACCESS TO VENDORS &

TECHNICIANS FOR EQUIPMENT FURNISHED & INSTALLED, ETC. AS REQUIRED, SO THAT COMMISSIONING AUTHORITY CAN COMPLETE THEIR WORK. NOTE: ALL BUILDINGS LESS THAN

BREAKERS, SIZE AS INDICATED, MINIMUM FRAME SIZE AND A.I.C. RATING AS FOLLOWS:

--SWITCH GRADE BREAKER FOR 20A LIGHTING CIRCUITS

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AREA SERVED SQ.FT. COMPUTED LOAD DEMAND FACTOR %

COND. | WIRE | LOAD | BREAKER | CIRCUIT NUMBERS | BREAKER | LOAD | WIRE | COND. |

1P-20 | 15 | B | 16 | 1P-20

1P-20 | 17 | A | 18 | 1P-20

1P-20 19 B 20 1P-20

1P-20 | 21 | A | 22 | 1P-20

1P-20 | 23 | B | 24 | 1P-20

30 | 29 | A | 30 | 1P-20

27 B 28 1P-20

AG1

3 WIRES

POWER

(NEC 250-66)

3 Agriculture Bldg Riser Diagram
O.1 SCALE: N.T.S.

GROUND TO BLDG. STEEL

METALLIC COLD

AG BLDG

MAIN BREAKER

1P-20 5

* DENOTES GROUNDING CONDUCTOR ** DENOTES LOCKING BREAKER

SQUARE "D" No. NQOD SERIES, 240/120 VOLTS, 1Ø, 3 WIRE, SOLID NEUTRAL, TINNED COPPER BUS BARS, GROUND

1P-20 | 540W | 3#12* | 3/4" | RCPT: POST RECEPTACLES

SPARE

M — CHECK METERING LOCATION TO BE PROVIDED

CURRENT TRANSFORMER. TYPICAL

STEEL, LOCKING ENCLOSURE TO

PREVENT VANDALISM. ENCLOSURE

EQUAL TO SQUARE D #NSYS3X12830

- PANEL TO BE ENCLOSED IN STAINLESS

AT ALL PANELBOARDS. PROVIDE SUFFICIENT

SPACE TO ATTACH CLAMP-ON OR SPLIT CORE

B 4 1P-20 360W 3#12* 3/4" RCPT: POST RECEPTACLES

 A
 6
 1P-20
 360W
 3#12*
 3/4"
 RCPT: POST RECEPTACLES

 B
 8
 1P-20
 1000W
 3#12*
 3/4"
 JB: CEILING FAN

BAR, 200 AMPERE MAIN BREAKER, SURFACE MOUNTED, HINGED DOOR-IN-DOOR COVER, WITH BOLT IN BRANCH

MINIMUM BREAKER FRAME FOR "NQOD" SERIES: 1POLE="QOB", 2,3 POLE="QOB" (10K AIC)

1P-20 9 A 10 1P-20 1000W 3#12* 3/4" JB; CEILING FAN

THIS CONTRACTOR SHALL NOT UTILIZE "THRU TYPE" OUTLET BOXES WHERE DEVICES ARE SHOWN BACK TO BACK IN SOUND INSULATED OR SOUND SECURE AREAS, TYPICAL.

THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS & TRADES TO LOCATE HIS WORK TO AVOID CONFLICTS.

THE SYMBOL "*" DENOTED GROUNDING CONDUCTOR, TYPICAL UNLESS OTHERWISE NOTED, ALL CONDUITS SHALL BE 3/4" MINIMUM.

ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ADDITIONAL COST TO THE OWNER. ELECTRICAL DRAWINGS ARE NOT TO BE SCALED FOR SUCH LOCATIONS.

ALL CONDUITS & RACEWAYS ARE TO BE CONCEALED UNLESS OTHERWISE NOTED OR APPROVED BY THE DESIGNER.

OR EQUAL TO 10,000 SQUARE FEET OF CONDITIONED FLOOR AREA ARE EXEMPT FROM THE COMMISSIONING REQUIREMENTS.

Description\Remarks:

3/4" 3#12* 1065W 1P-20

3/4" | 3#12* | 1463W | 1P-20 |

REFER TO PANEL SCHEDULES FOR FEEDER SIZES

NOT SHOWN

TYPE OF CEILING ACTUALLY INSTALLED IN THESE AREAS, TYPICAL.

LIGHT FIXTURE WHIPS SHALL NOT EXCEED 6' IN LENGTH.

5.79

Connected Load:

Wire

3#3/0

Conduit:

TG: BARN INTERIOR

LTG: BARN EXTERIOR

SURGE SUPPRESSOR

DIGITAL METER

BY UTILITY COMPANY

PAD MOUNT

BY UTILITY

TRANSFORMER

PAD BY ELECTRICAL CONTRACTOR

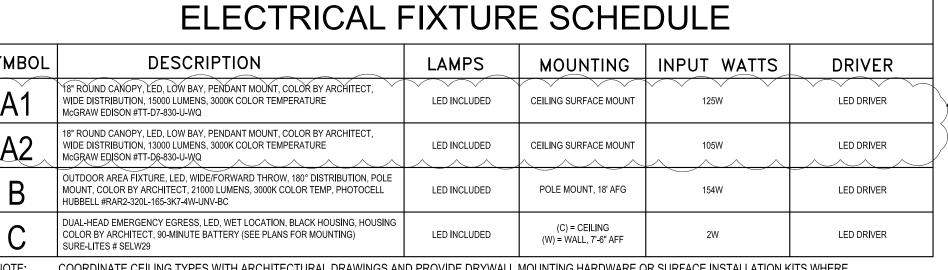
(NEC 250-66)

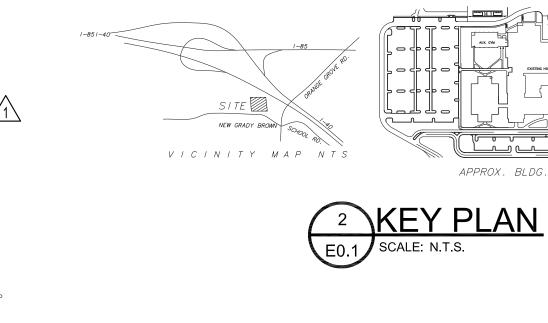
(NEC 250-52(3))

1#6*

AFTER INSTALLATION OF MECHANICAL CONTRACTORS DUCT WORK & PIPING.

ALL ELECTRICAL PANELS TO BE LABELED WITH PHENOLIC LABELS.





BOOT WASH STATION

RECEPTACLES TO BE SURFACE MOUNTED

COORDINATED EXACT LOCATION & HEIGHT

WITH OWNER PRIOR TO ROUGH-IN, TYPICAL

b — — • — — • — — • — — — • — — - • — —

COORDINATE EXACT LOCATION

W/ OWNER OR ARCHITECT.

FOR CEILING MOUNTED LIGHT FIXTURES & FANS - COORDINATE WITH ARCHITECT & MANUFACTURER'S

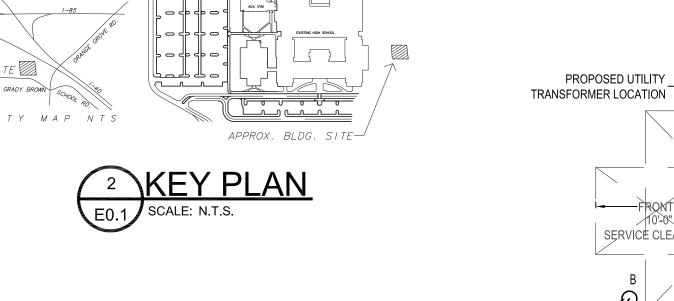
1) SPECIFICATIONS THAT SUFFICIENT BRACING TO STRUCTURE IS PROVIDED TO SUPPORT THE WEIGHT OF THE

FOR CEILING MOUNTED JUNCTION BOXES & FANS - COORDINATE WITH ARCHITECT & MANUFACTURER'S

© SPECIFICATIONS FOR ALL REQUIREMENTS. COORDINATE CONTROL SWITCHING REQUIREMENTS &

ELECTRICAL KEYED NOTES

LOCATION(S) WITH ARCHITECT PRIOR TO ROUGH-IN.



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- (FENCING (TYPICAL)

- - - - - - - - -

/--- 50 GAL RAIN BARREL

TYP OF 2

EDGE OF CONCRETE SLAB









revisions

shall be restricted to the original site fo thereof is expressly limited to such use method, in whole or in part, is prohibited in the architect without prejudice. It is to Visual contact with those plans and evidence of the acceptance of these

drawn	checke	
JWC	JSD	
Electrical Symbols, Schedules, Notes &		

sheet

Riser & Plan

project no. 2231

1/10/24

Bid Set