

INTRODUCED: September 22, 2025

AN ORDINANCE No. 2025-227

To authorize the special use of the property known as 3100 North Arthur Ashe Boulevard for the purpose of electric vehicle charging stations, upon certain terms and conditions. (2nd District)

Patron – Mayor Avula (By Request)

Approved as to form and legality
by the City Attorney

PUBLIC HEARING: NOV 10 2025 AT 6 P.M.

WHEREAS, the owner of the property known as 3100 North Arthur Ashe Boulevard, which is situated in a TOD-1 Transit-Oriented Nodal District, desires to use such property for the purpose of electric vehicle charging stations, which use, among other things, is not currently allowed by section 30-457.2 of the Code of the City of Richmond (2020), as amended; and

WHEREAS, in accordance with section 17.11 of the Charter of the City of Richmond (2020), as amended, it has been made to appear that, if granted subject to the terms and conditions set forth in this ordinance, the special use granted by this ordinance will not be detrimental to the safety, health, morals and general welfare of the community involved, will not tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, will not

AYES: _____ NOES: _____ ABSTAIN: _____

ADOPTED: _____ REJECTED: _____ STRICKEN: _____

create hazards from fire, panic or other dangers, will not tend to overcrowding of land and cause an undue concentration of population, will not adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, and will not interfere with adequate light and air; and

WHEREAS, (i) the City Planning Commission has conducted a public hearing to investigate the circumstances and conditions upon which the Council is empowered to authorize such use, (ii) the City Planning Commission has reported to the Council the results of such public hearing and investigation and its recommendations with respect thereto, and (iii) the Council has conducted a public hearing on this ordinance at which the person in interest and all other persons have had an opportunity to be heard;

NOW, THEREFORE,

THE CITY OF RICHMOND HEREBY ORDAINS:

§ 1. **Finding.** Pursuant to section 30-1050.1 of the Code of the City of Richmond (2020), as amended, the Council hereby finds that the special use set forth in and subject to the terms and conditions of this ordinance will not (i) be detrimental to the safety, health, morals and general welfare of the community involved, (ii) tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, (iii) create hazards from fire, panic or other dangers, (iv) tend to overcrowding of land and cause an undue concentration of population, (v) adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, or (vi) interfere with adequate light and air.

§ 2. **Grant of Special Use Permit.**

(a) Subject to the terms and conditions set forth in this ordinance, the property known as 3100 North Arthur Ashe Boulevard and identified as Tax Parcel No. N000-1316/051 in the 2025 records of the City Assessor, being more particularly shown on a survey entitled “Engineering Design Survey, Parcels 1 & 2 as Described in, Instrument Number 130026127, City of Richmond, Richmond City County [sic], Virginia,” prepared by Clark Land Surveying Inc., and dated March 23, 2022, a copy of which is attached to and made a part of this ordinance, hereinafter referred to as “the Property,” is hereby permitted to be used for the purpose of electric vehicle charging stations, hereinafter referred to as “the Special Use,” substantially as shown on the plans entitled “Plan of Development for: Tesla, Wawa # 8648 – Richmond, VA,” prepared by Dewberry Engineers Inc., and dated March 7, 2025, hereinafter referred to as “the Plans,” copies of which are attached to and made a part of this ordinance.

(b) The adoption of this ordinance shall constitute the issuance of a special use permit for the Property. The special use permit shall inure to the benefit of the owner or owners of the fee simple title to the Property as of the date on which this ordinance is adopted and their successors in fee simple title, all of which are hereinafter referred to as “the Owner.” The conditions contained in this ordinance shall be binding on the Owner.

§ 3. **Special Terms and Conditions.** This special use permit is conditioned on the following special terms and conditions:

(a) The Special Use of the Property shall be as electric vehicle charging stations, substantially as shown on the Plans.

(b) All building materials, elevations, and site improvements shall be substantially as shown on the Plans.

(c) No off-street parking shall be required for the Special Use.

§ 4. **Supplemental Terms and Conditions.** This special use permit is conditioned on the following supplemental terms and conditions:

(a) All required final grading and drainage plans, together with all easements made necessary by such plans, must be approved by the Director of Public Utilities prior to the issuance of the building permit.

(b) Storm or surface water shall not be allowed to accumulate on the land. The Owner, at its sole cost and expense, shall provide and maintain at all times adequate facilities for the drainage of storm or surface water from the Property so as not to adversely affect or damage any other property or public streets and the use thereof.

(c) Facilities for the collection of refuse shall be provided in accordance with the requirements of the Director of Public Works. Such facilities shall be located or screened so as not to be visible from adjacent properties and public streets.

(d) Any encroachments existing, proposed on the Plans or contemplated in the future shall require separate authorization and shall be subject to the applicable provisions of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws.

(e) In all other respects, the use of the Property shall be in accordance with the applicable underlying zoning regulations.

§ 5. **General Terms and Conditions.** This special use permit is conditioned on the following general terms and conditions:

(a) No permit implementing this special use permit shall be approved until satisfactory evidence has been presented to the Zoning Administrator that any delinquent real estate taxes applicable to the Property have been paid.

(b) The Owner shall be bound by, shall observe and shall comply with all other laws, ordinances, rules and regulations applicable to the Property, except as otherwise expressly provided in this ordinance.

(c) Words and phrases used in this ordinance shall be interpreted to have the meanings ascribed to them by section 30-1220 of the Code of the City of Richmond (2020), as amended, unless the context clearly indicates that a different meaning is intended.

(d) Notwithstanding any other provision of law, this special use permit is being approved due, in part, to the mitigating effects of each and every condition attached hereto; consequently, if any portion of this ordinance is determined to be invalid for any reason by a final, non-appealable order of any Virginia or federal court of competent jurisdiction, the invalidity shall cause the entire ordinance to be void and of no further effect from the effective date of such order.

(e) The privileges granted by this ordinance may be revoked pursuant to the provisions of sections 30-1050.7 through 30-1050.11 of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws. Failure to comply with the terms and conditions of this ordinance shall constitute a violation of section 30-1080 of the Code of the City of Richmond (2020), as amended, and all future amendments to such law, or any other applicable laws or regulations.

(f) When the privileges granted by this ordinance terminate and the special use permit granted hereby becomes null and void, whether as a result of the Owner relinquishing this special use permit in a writing addressed to the Director of Planning and Development Review or otherwise, use of the Property shall be governed thereafter by the zoning regulations prescribed for the district in which the Property is then situated.

§ 6. **Implementation.** The Commissioner of Buildings is authorized to issue a building permit substantially in accordance with the Plans for the Special Use subject to the terms and conditions set forth in this ordinance. An application for the building permit shall be made within 1,096 calendar days following the date on which this ordinance becomes effective. If either the application for the building permit is not made within the time period stated in the previous sentence or the building permit terminates under any provision of the Virginia Statewide Building Code, this ordinance and the special use permit granted hereby shall terminate and become null and void.

§ 7. **Effective Date.** This ordinance shall be in force and effect upon adoption.

City of Richmond

Intracity Correspondence

O&R Transmittal

DATE: August 18, 2025

TO: The Honorable Members of City Council

THROUGH: The Honorable Dr. Danny Avula, Mayor (by request)
(This in no way reflects a recommendation on behalf of the Mayor)

THROUGH: Odie Donald II, Chief Administrative Officer

THROUGH: Sharon L. Ebert, DCAO for Economic Development and Planning

FROM: Kevin J. Vonck, Director of Planning & Development Review

RE: To authorize the special use of the property known as 3100 North Arthur Ashe Boulevard for the purpose of electric vehicle charging stations, upon certain terms and conditions.

ORD. OR RES. No. _____

PURPOSE: The applicant is requesting a Special Use Permit to authorize EV chargers in a TOD-1 district. This use is not permitted within the district as it is considered a fueling station. A Special Use Permit is therefore necessary to proceed with this request.

BACKGROUND: The property is located in The Diamond neighborhood at the corner of North Arthur Ashe Boulevard and Ellen Road. The property is a 1.44-acre parcel of land improved with a fueling station (Wawa). The City's Richmond 300 Master Plan designates a future land use for the subject property as Industrial Mixed Use, which is defined as formerly traditional industrial areas that are transitioning to mixed-use because of their proximity to growing neighborhoods and changes in market conditions. These areas may still retain some light industrial uses.

Intensity: Medium- to high-density, three to eight stories.

Primary Uses: Retail/office/ personal service, multi-family residential, cultural, and open space.

Secondary Uses: Institutional and government.

The current zoning for the property is TOD-1.

COMMUNITY ENGAGEMENT: The Greater Scott's Addition Civic Association was notified of the application; additional community notification will take place after introduction.

STRATEGIC INITIATIVES AND OTHER GOVERNMENTAL: Richmond 300 Master Plan

FISCAL IMPACT: \$2,400 application fee.

DESIRED EFFECTIVE DATE: Upon adoption

REQUESTED INTRODUCTION DATE: September 22, 2025

CITY COUNCIL PUBLIC HEARING DATE: November 10, 2025

REQUESTED AGENDA: Consent

RECOMMENDED COUNCIL COMMITTEE: Planning Commission October 21, 2025

AFFECTED AGENCIES: Office of Chief Administrative Officer

Law Department (for review of draft ordinance)

RELATIONSHIP TO EXISTING ORD. OR RES.: None

ATTACHMENTS: Draft Ordinance, Authorization from Property Owner, Applicant's Report, Plans, Survey

STAFF:

Alyson Oliver, Program and Operations Manager, Land Use Administration (Room 511) 646-3709

Shaianna Trump, Planner Associate, Land Use Administration (Room 511) 646-7319



CITY OF RICHMOND, VA
Department of Planning and Development Review
Land Use Administration Division
900 East Broad Street, City Hall - Room 511, Richmond, Virginia 23219

AUTHORIZATION FROM PROPERTY OWNER

TO BE COMPLETED BY THE APPLICANT
Applicant must complete ALL items

HOME/SITE ADDRESS: 3100 N. Arthur Ashe Blvd APARTMENT NO/SUITE _____

APPLICANT'S NAME: Tim Nies, Design Manager EMAIL ADDRESS: [REDACTED]

BUSINESS NAME (IF APPLICABLE): Tesla, Inc.

SUBJECT PROPERTY OR PROPERTIES: Tax Map# N0001316051

APPLICATION REQUESTED

- ☐ Plan of Development (New or Amendment)
- ☐ Wireless Plan of Development (New or Amendment)
- ☒ Special Use Permit (New or Amendment)
- ☐ Rezoning or Conditional Rezoning
- ☐ Certificate of Appropriateness (Conceptual, Administrative Approval, Final)
- ☐ Community Unit Plan (Final, Preliminary, and/or Amendment)
- ☐ Subdivision (Preliminary or Final Plat Correction or Extension)

TO BE COMPLETED BY THE AUTHORIZED OWNER
Owner must complete ALL items

Signing this affidavit acknowledges that you, as the owner or lessee of the property, authorize the above applicant to submit the above selected application/s on your behalf.

PROPERTY OWNER: JWMS, LLC

PROPERTY OWNER ADDRESS: 3328 W. Franklin St., Richmond, VA 23221

PROPERTY OWNER EMAIL ADDRESS: [REDACTED]

PROPERTY OWNER PHONE NUMBER: 518-569-8910

Property Owner Signature: *James A. Williams IV*

The names, addresses, telephone numbers and signatures of all owners of the property are required. Please attach additional sheets as needed. If a legal representative signs for a property owner, please attach an executed power of attorney.



Dewberry Engineers Inc. | 919.881.9939
2610 Wycliff Road, Suite 410 | 919.881.9923 fax
Raleigh, NC 27607-3073 | www.dewberry.com

May 12, 2025

City of Richmond
Department of Planning and Development Review
Land Use Administration Division
900 East Broad Street, City Hall – Room 511
Richmond, VA 23219

RE: Special Use Permit application
Tesla Electric Vehicle (EV) Charging Stations
3100 N. Arthur Ashe Blvd
Richmond, VA 23230
TM# N0001316051

Dear Sir or Madam:

On behalf of Tesla, Inc. ("Applicant"), please accept the attached Special Use Permit ("SUP") application for Tesla electric vehicle charging stations ("ECVS") at 3100 N. Arthur Ashe Blvd, Richmond, VA 23230. Please find the enclosed documents for the Applicant's SUP application submittal:

- Special Use Permit application/owner authorization form
- Email from Joshua Young dated 4/26/22;
- Fire Department checklist form;
- Survey dated 3/24/22;
- Site plan drawings dated 3/7/25.

If you have any questions or need additional information, please contact me at (757) 817-6628 or [REDACTED] Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Holland", with a stylized flourish at the end.

Jeff Holland, AICP
Senior Site Acquisition Specialist
(agent for Tesla)

cc: Tim Nies, Design Manager, Tesla (via email)
Justin Yoon, P.E., Dewberry Engineers (via email)

Project Narrative

Project Address: 3100 N. Arthur Ashe Blvd, Richmond, VA 23230

Special Use Permit application:

The current use of the property at 3100 North Arthur Ashe Blvd as a convenience store/gas station (Wawa) is nonconforming. The property was rezoned to TOD-1 on July 26, 2021. The TOD-1 zoning district does not permit any facilities for the dispensing of motor fuels. Because the rezoning was recent this project/expansion of a nonconforming use requires a Special Use Permit.

Supercharger overview and operation:

A Tesla supercharger station is an electric vehicle fast-charging facility that is owned and operated by Tesla, where EV's can be plugged in to have their batteries charged up. The supercharger network provides EV owners with the freedom to travel anywhere.

Tesla's superchargers are simple and safe to use. All Tesla vehicles have onboard navigation connected to the internet that provides a real-time map of all of their public superchargers and their availability. The vehicle owner simply selects the supercharger on the map or the final desired destination, and the vehicle will navigate the driver to the supercharger as needed to complete the trip. Once at the supercharger station, the owner will park at any unoccupied charging stall and plug the charging cable into the car. Once the charging session and payment process is complete, the owner will unplug and drive away. A typical supercharger session will last between 10 and 30 minutes.

The supercharger station consists of electrical equipment, including the utility transformer, switchgear, supercharger cabinets, and supercharger posts. All of the equipment is rated for outdoor weather conditions. The cabinets perform power conversion from AC to DC power. The posts contain charging cables that plug into the vehicles. In every charging session, the equipment automatically performs safety checks to ensure there are no electrical or mechanical faults, and power only flows into the vehicles if all safety parameters are satisfied. The vehicles cannot drive while the charging cable is plugged. Tesla is responsible for the long-term maintenance of the supercharger equipment and they have a dedicated service team.

Proposed equipment and other improvements:

Nine (9) existing parking spaces on the western part will be used for the proposed eight (8) Tesla V4 Super Charger posts. Two (2) Tesla Supercharger cabinets with EVLite disconnect will be installed. Additional ground equipment includes: one (1) utility transformer, CT cabinet and meter, one (1) waste management bin and all associated underground conduit routing & site work. Some existing shrubs at the entrance off of Ellen Road will be removed.

Parking signs and use of spaces for non-EV vehicles:

Tesla will enable all charging spaces to be used for non-EV vehicle parking. There will be no parking signs installed to restrict non-EV use.

NOTES:

- This is a topographic map. This is not a boundary survey and is only intended to depict those topographic features or improvements shown. The property lines shown are record lines only and are shown for graphical reference only.
- Any underground utilities shown have been located from field survey information. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from the information available. This site was located by standard RF and GPR methods.
- FEDERAL EMERGENCY MANAGEMENT AGENCY, FEMA FIRMette published March 23, 2022, referencing Flood Insurance Rate Map, Map Number 5101290029D effective date April 2, 2009, indicates this parcel of land is located in Zone X (Area of minimal flood hazard).
- This survey does not constitute a title search by Clark Land Surveying, Inc. to determine ownership or easements of record. For all information regarding easements, rights of way and title of record, Clark Land Surveying, Inc. relied upon a Search Report, prepared by Nationwide Abstrax, LLC with an order number of 2022-0102465-VA, dated 03/03/2022.
- Elevations are based on NAVD 88 datum.
- BENCHMARK: Capped rebar in grass, as shown. Elevation: 203.05' (NAVD 88).
- BASIS OF BEARINGS: Bearings are based upon (NAD83) Virginia State Plane, south zone (4502).
- Field work for this survey was completed on March 15, 2022.
- The owner names and tax parcel data shown hereon are based upon the public records available at the original date of this survey. Current ownership and tax parcel data should be verified for accuracy.
- This site is zoned "M-1" (Light Industrial District) per City of Richmond Planning Department.

Building Setbacks:
Front: None, Side: None, Rear: None

No zoning information provided by the client. Any Zoning setbacks shown hereon are the interpretation of the surveyor. For clarification of exact zoning designations and setback locations, please, contact the City of Richmond Planning and Zoning Department at (804) 646-6340.

SCHEDULE B2 EXCEPTIONS:

Item No.


- Subject to Stormwater Utility Maintenance Agreement, recorded in book 115, page 390 in the official records of the Richmond City Recording Office.
-IS LOCATED ON SURVEY AREA, AS SHOWN HEREON.
- Subject to Agreement, recorded in Instrument number 18-17585 in the official records of the Richmond City Recording Office.
-IS LOCATED ON SURVEY AREA, BLANKET IN NATURE.
- Subject to Ingress and Egress Easement Agreement, recorded in Instrument number 190010832 in the official records of the Richmond City Recording Office.
-IS LOCATED ON SURVEY AREA, AS SHOWN HEREON.

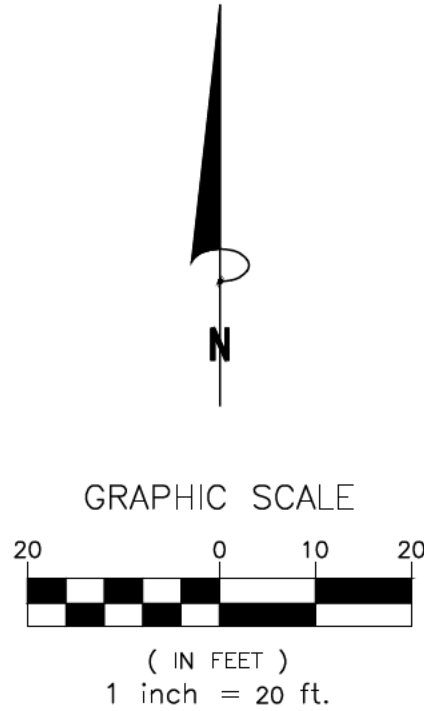
Items not listed above are determined non-survey related items and are not plotted hereon.

LEGAL DESCRIPTION:

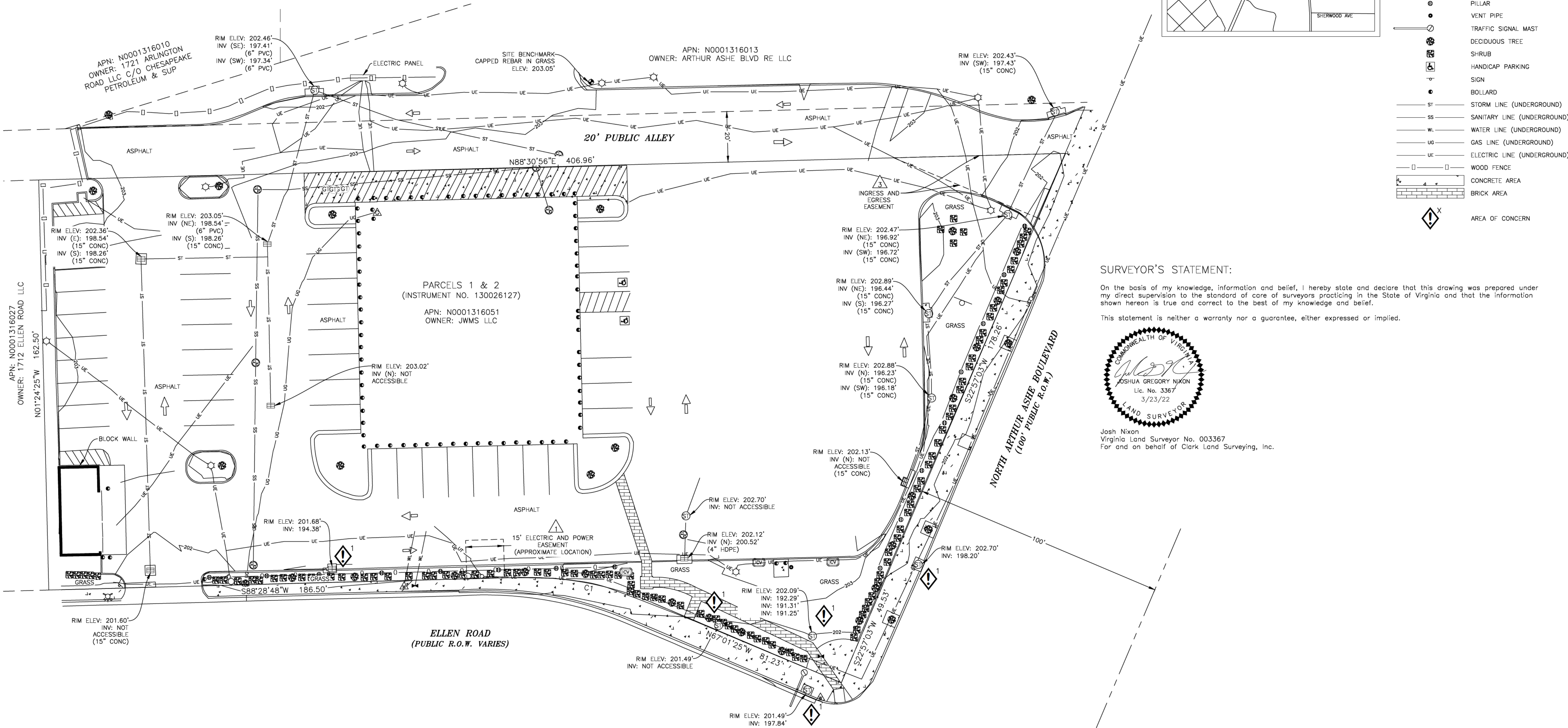
Parcels 1 & 2 of that Special Warranty Deed recorded November 22, 2013, as Instrument No. 130026127, in the Clerk's Office of City of Richmond, Virginia.

AREAS OF CONCERN:

-  ¹ Location, terminus, and/or direction of underground storm line indeterminate. Surveyor may update survey; if provided with as-built drawings and/or utility maps.



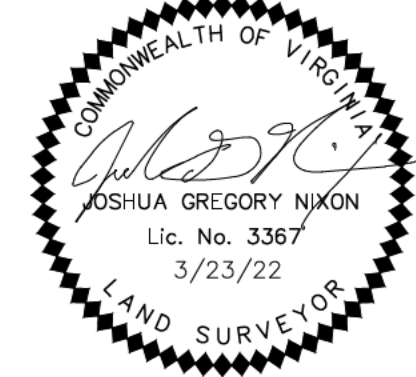
CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL BEARING
C1	126.61'	54.14'	24°30'00"	S22°58'49"W



SURVEYOR'S STATEMENT:

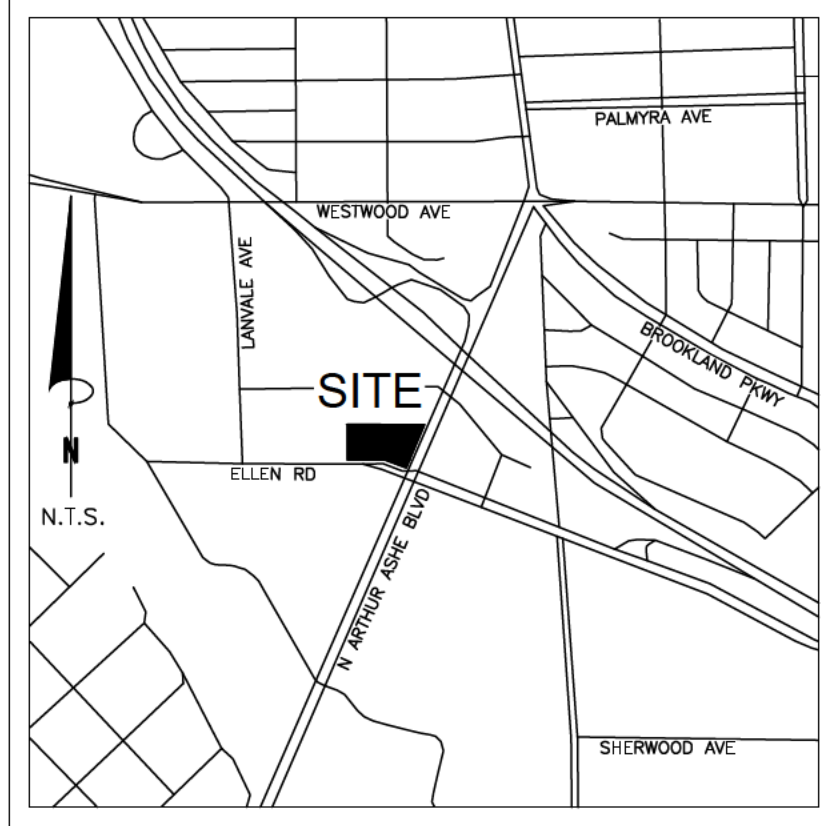
On the basis of my knowledge, information and belief, I hereby state and declare that this drawing was prepared under my direct supervision to the standard of care of surveyors practicing in the State of Virginia and that the information shown hereon is true and correct to the best of my knowledge and belief.

This statement is neither a warranty nor a guarantee, either expressed or implied.

































Josh Nixon
Virginia Land Surveyor No. 003367
For and on behalf of Clark Land Surveying, Inc.

VICINITY MAP



LEGEND

-  SITE BENCHMARK
-  SANITARY MAN-HOLE
-  SANITARY CLEANOUT
-  GREASE TRAP
-  STORM INLET (RECTANGLE)
-  STORM MAN-HOLE
-  STORM CLEANOUT
-  FIRE HYDRANT
-  IRRIGATION CONTROL VALVE
-  WATER VALVE
-  WATER METER
-  UTILITY POLE
-  GAS METER
-  PILLAR
-  VENT PIPE
-  TRAFFIC SIGNAL MAST
-  DECIDUOUS TREE
-  SHRUB
-  HANDICAP PARKING
-  SIGN
-  BOLLARD
-  STORM LINE (UNDERGROUND)
-  SANITARY LINE (UNDERGROUND)
-  WATER LINE (UNDERGROUND)
-  GAS LINE (UNDERGROUND)
-  ELECTRIC LINE (UNDERGROUND)
-  WOOD FENCE
-  CONCRETE AREA
-  BRICK AREA
-  AREA OF CONCERN

ENGINEERING DESIGN SURVEY

PARCELS 1 & 2 AS DESCRIBED IN,
INSTRUMENT NUMBER 130026127,
CITY OF RICHMOND, RICHMOND CITY COUNTY, VIRGINIA.

Project No. 220475
Drawn By: EKH
Checked By: JN
Date: 3/23/2022
Sheet 1 of 1

SITE NAME:
3100 North Arthur Ashe
Boulevard, Richmond, VA

Revisions
Description
By
Date

No.	Description	By	Date

PLAN OF DEVELOPMENT FOR:



WAWA # 8648 - RICHMOND, VA

SITE ADDRESS:
3100 NORTH ARTHUR ASHE BLVD.
RICHMOND, VA 23230
TRT ID: 26853



3500 DEER CREEK ROAD
PALO ALTO, CA 94304
(650) 681-5000



Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

NOT FOR
CONSTRUCTION

SITE INFORMATION	APPLICABLE CODES	PROJECT DESCRIPTION	ZONING INFORMATION	DRAWING INDEX																																	
<p>PROPOSED TESLA EV SITE ADDRESS: 3100 NORTH ARTHUR ASHE BLVD. RICHMOND, VA 23230</p> <p>PROPERTY OWNER: JWMS LLC C/O A/P DEPT 260 W BALTIMORE PIKE, WAWA, PA 19063</p> <p>PARCEL ID: PARCEL ID: N0001316051</p> <p>POWER COMPANY: DOMINION ENERGY CONTACT: TYLER COLGIN PHONE: (804) 912-5902 EMAIL: TYLER.W.COLGIN@DOMINIONENERGY.COM WORK ORDER: 10756516</p> <p>CITY: RICHMOND</p> <p>LATITUDE*: 37° 34' 28.40" N</p> <p>LONGITUDE*: 77° 27' 54.08" W *BASED ON GOOGLE EARTH</p> <p>CONTACT ENGINEER: JUSTIN YOON, PE DEWBERRY ENGINEERS INC. 540.926.3857 JYOON@Dewberry.com</p>	<p>ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:</p> <p>VIRGINIA UNIFORM BUILDING & ENERGY CODES, CONSISTENT WITH THE FOLLOWING CODES:</p> <p>2021 VIRGINIA CONSTRUCTION CODE 2021 INTERNATIONAL BUILDING CODE (IBC) W/VA STATE AMENDMENTS. 2021 INTERNATIONAL EXISTING BUILDING CODE (IBC) W/AMENDMENTS. 2020 NATIONAL ELECTRIC CODE (NEC). 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) W/AMENDMENTS.</p> <p>IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.</p>	<ul style="list-style-type: none">• INSTALL (2) TESLA SUPERCHARGER CABINETS W/ EVLITE DISCONNECT• INSTALL (8) TESLA V4 SUPER CHARGER POSTS• INSTALL (1) UTILITY TRANSFORMER, CT CABINET & METER• INSTALL (1) WASTE MANAGEMENT BINS	<p>JURISDICTION: CITY OF RICHMOND, VA APN: N0001316051 LAND USE: GAS STATION/CONVENIENCE STORE ZONING: TOD-1 (TRANSIT-ORIENTED NODAL DISTRICT) PROPERTY CLASS: 415 - B CONVENIENCE STORE LOT AREA: 62765.75 SQ. FT. (1.441 ACRES) PARCELS: 1 & 2 FLOOD ZONE: ZONE X (AREA OF MINIMAL FLOOD HAZARD) PROPOSED USE GROUP: (UTILITY) TESLA ELECTRIC VEHICLE CHARGING STATIONS PROPOSED CONSTRUCTION TYPE: IIB LIMIT OF DISTURBANCE: ±800 SF (±0.02 ACRES)</p>	<table><tr><th>SHT. NO.</th><th>SHEET TITLE</th></tr><tr><td>T-1</td><td>TITLE SHEET</td></tr><tr><td>GN-1</td><td>GENERAL NOTES I</td></tr><tr><td>GN-2</td><td>GENERAL NOTES II</td></tr><tr><td>C-1</td><td>DETAILED SITE PLAN</td></tr><tr><td>C-2</td><td>EXISTING CONDITIONS PLAN</td></tr><tr><td>C-3</td><td>EQUIPMENT/PARKING PLAN</td></tr><tr><td>C-4</td><td>CONSTRUCTION DETAILS I</td></tr><tr><td>C-5</td><td>CONSTRUCTION DETAILS II</td></tr><tr><td>C-6</td><td>CONSTRUCTION DETAILS III</td></tr><tr><td>E-1</td><td>ELECTRICAL SPECIFICATIONS AND ABBREVIATIONS</td></tr><tr><td>E-2</td><td>PARKING LOT SITE PLAN AND POWER PLAN</td></tr><tr><td>E-3</td><td>ELECTRICAL ONE-LINE DIAGRAM</td></tr><tr><td>E-4</td><td>ELECTRICAL & UTILITY DETAILS I</td></tr><tr><td>E-5</td><td>ELECTRICAL & UTILITY DETAILS II</td></tr><tr><td>G-1</td><td>GROUNDING SCHEMATIC & DETAILS</td></tr></table>	SHT. NO.	SHEET TITLE	T-1	TITLE SHEET	GN-1	GENERAL NOTES I	GN-2	GENERAL NOTES II	C-1	DETAILED SITE PLAN	C-2	EXISTING CONDITIONS PLAN	C-3	EQUIPMENT/PARKING PLAN	C-4	CONSTRUCTION DETAILS I	C-5	CONSTRUCTION DETAILS II	C-6	CONSTRUCTION DETAILS III	E-1	ELECTRICAL SPECIFICATIONS AND ABBREVIATIONS	E-2	PARKING LOT SITE PLAN AND POWER PLAN	E-3	ELECTRICAL ONE-LINE DIAGRAM	E-4	ELECTRICAL & UTILITY DETAILS I	E-5	ELECTRICAL & UTILITY DETAILS II	G-1	GROUNDING SCHEMATIC & DETAILS	
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<p>CONTRACTOR NOTE</p> <p>CONTRACTOR SHALL COMPLETE INSTALL PER THE SIGNED AND SEALED SET OF DRAWINGS. ANY NECESSARY DEVIATIONS FROM THE DRAWINGS MUST BE SUBMITTED THROUGH AN RFI REQUEST PROCESS WITH ENGINEERING FOR AN APPROVAL PRIOR TO CONTRACTOR PROCEEDING WITH A DEVIATION OF THE SIGNED AND SEALED SET OF DRAWINGS.</p>		<p>BEFORE SCALING</p> <p>CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE TESLA REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.</p> <table><tr><th>CALL BEFORE YOU DIG</th><th>POD APPROVAL</th></tr><tr><td> Dig With CAES</td><td></td></tr><tr><td>Dial 811 in Virginia or 1-800-552-7001</td><td></td></tr></table>			CALL BEFORE YOU DIG	POD APPROVAL	 Dig With CAES		Dial 811 in Virginia or 1-800-552-7001																												
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- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
GENERAL CONTRACTOR(S) OR SUB-CONTRACTOR(S) — CIVIL CONTRACTOR AND/OR ELECTRICIAN CONTRACTOR
PROJECT OWNER/CONSTRUCTION MANAGER — TESLA
PROJECT HOST — LEGAL PROPERTY OWNER
ENGINEER — DEWBERRY ENGINEERS INC.
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING THE GENERAL CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF PROJECT OWNER PRIOR TO THE COMMENCEMENT OF WORK.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE THE INSTALLATION AS INDICATED ON THE DRAWINGS FOR A FULLY FUNCTIONAL CHARGING STATION AND COMPLETE PROJECT.
6. THE SUB-CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON DRAWINGS, THE GENERAL CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE PROJECT ENGINEER. ONLY WRITTEN APPROVALS SHALL BE DEEMED TO CONFIRM ANY SUCH CHANGES AS BEING APPROVED.
8. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT UNIQUE JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK.
9. THE GENERAL CONTRACTOR SHALL REVIEW ROUTING OF CONDUIT, POWER AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING PLAN DRAWING. THE GENERAL CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONSTRUCTION MANAGER AND PROJECT HOST.
10. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE PROJECT HOST. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF GENERAL CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY.
12. APPLICABLE BUILDING CODES:
THE GENERAL CONTRACTORS WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
THE GENERAL CONTRACTOR WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION
13. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.
14. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
15. THE GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER GENERAL CONTRACTOR(S) AND/OR SUB-CONTRACTOR(S).
16. CONSTRUCTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE.
17. THE GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND GENERAL CONTRACTOR(S) AND/OR SUB-CONTRACTOR(S) TO THE SITE AND/OR BUILDING.
18. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
19. THE GENERAL CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
20. THE GENERAL CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE PROJECT HOST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
21. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
22. THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OR 2-A:10-B-C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
23. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE PROJECT OWNER AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
24. GENERAL CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES AND ALL SPECIFIED CLOSE-OUT DOCUMENTATION TO THE PROJECT OWNER UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
25. THE GENERAL CONTRACTOR SHALL LEAVE THE WORK AREA AND SURROUNDING PREMISES IN A CLEAN CONDITION.
26. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
27. NO TRASH CORRAL/SOLID WASTE STORAGE AREA IS TO BE INSTALLED AS PART OF PROJECT.

REFERENCES:

- A. DOT (STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION-CURRENT EDITION).
- B. ASHTO (AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS)
- C. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS).
- D. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION).

1.2 INSPECTION AND TESTING:

- A. FIELD TESTING OF EARTH-WORK COMPACTION AND CONCRETE CYLINDERS SHALL BE PERFORMED BY AN INDEPENDENT TESTING LAB. THIS WORK IS TO BE COORDINATED BY THE GENERAL CONTRACTOR.
- B. ALL WORK SHALL BE INSPECTED AND VERIFIED FOR CONFORMANCE AND RELEASED BY THE ENGINEER WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. IT IS THE GENERAL CONTRACTOR(S) RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

1.3 SITE MAINTENANCE AND PROTECTION:

- A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE CONTRACT.
- B. AVOID DAMAGE AND TAKE PROTECTIVE MEASURES TO THE SITE AND TO EXISTING FACILITIES, IMPROVEMENTS, STRUCTURES, PAVEMENTS, CURBS, AND LANDSCAPING DESIGNATED TO REMAIN. ANY DAMAGED PART SHALL BE REPAIRED AT SUB-CONTRACTOR(S) EXPENSE TO THE SATISFACTION OF THE PROJECT HOST.
- C. KEEP SITE FREE OF ALL PONDING OR STANDING WATER.
- D. PROVIDE EROSION CONTROL MEASURES, IF REQUIRED, SHALL BE IN ACCORDANCE WITH STATE DOT, LOCAL PERMITTING AGENCY AND EPA REQUIREMENTS.
- E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
- F. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUB-CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. THE GENERAL CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
- G. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE PROJECT OWNER AND/OR LOCAL UTILITIES.
- H. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE PROJECT HOST OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE PROJECT HOST AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.
- I. PROVIDE A MINIMUM 48-HOUR NOTICE TO THE PROJECT HOST AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.
- J. SOD PLANTED IN THE FALL MUST ESTABLISH ITS ROOTS BEFORE THE FIRST WINTER FROST. DETERMINE WHEN THE FIRST FROST USUALLY OCCURS, AND PLANT THE SOD NO LATER THAN ONE MONTH BEFORE THE FIRST FROST. IF THE CONSTRUCTION IS FINISHED LATER THAN ONE MONTH BEFORE THE FIRST FROST, USE STRAW UNTIL SOD CAN BE INSTALLED.
- K. THE GENERAL CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS, RUBBISH, DEBRIS, STUMPS, STICKS, AND STONES.
- L. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH DEBRIS FROM THE SITE ON A DAILY BASIS.
- M. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO PROTECT TREES, VEGETATION, AND ROOT SYSTEMS DURING CONSTRUCTION.
- N. CONTRACTOR TO COORDINATE POST CONSTRUCTION LANDSCAPING FINISHES WITH OWNER AND TESLA.

<u>SIEVE SIZE</u>	<u>TOTAL PERCENT PASSING</u>
1-1/2 INCH	100
1 INCH	75 TO 100
3/4 INCH	80 TO 100
3/8 INCH	35 TO 75
NO. 4	30 TO 60
NO. 30	7 TO 30
NO. 200	3 TO 15

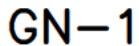
	<u>SIEVE SIZE</u>	<u>TOTAL PERCENT PASSING</u>
	4 INCH	100
NO. 40	0 TO 70	
NO. 200	0 TO 40	

- 3.1 GENERAL:
 - A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF A RAIN EVENT, NO SEDIMENT WILL LEAVE THE WORK SITE.
 - B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.
 - C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.
 - D. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE, RAKE, DISK OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.
 - E. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR UNDESIRABLE MATERIALS.

- A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST-IN-PLACE CONCRETE, BACKFILL THE EXCAVATION WITH SPECIFIED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
- B. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.
- C. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW, OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- D. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 12-INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12-INCHES IN LOOSE DEPTH AND COMPACTED.
- E. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS ESTABLISHED BY THE STANDARD PROCTOR TEST, ASTM D 698.
- F. WHENEVER THE DENSITY TESTING INDICATES THAT THE SUB-CONTRACTOR(S) HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE CONSTRUCTION MANAGER. THE SUB-CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY, SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTIVE EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.
- G. THE SUB-CONTRACTOR SHALL OBTAIN GRAB SAMPLES OF SUFFICIENT QUANTITY TO PROVIDE TO LAB FOR PURPOSE OF DETERMINING MAX DRY DENSITY. ALL LOOSE AND/OR ORGANIC MATERIAL SHALL BE REMOVED PRIOR TO PREPARATION OF THE AREA FOR PLACEMENT OF STRUCTURAL BACKFILL. OVERALL PLAIN AREA OF WORK SHALL EXTEND 3'-0" MINIMUM BEYOND THE FINAL DIMENSIONS.

- A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL MATCH SURROUNDING TOPOGRAPHY AND STRUCTURES.
- B. UTILIZE GRANULAR FILL RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.
- C. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL OR BETTER CONDITION.
- D. AREAS OF THE PROJECT HOST'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT OR PARKING/DRIVING AREAS SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION.

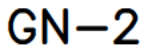
C. THE SUB-CONTRACTOR IS RESPONSIBLE FOR RE-STRIPING AND APPLYING SEALCOATING, UNLESS OTHERWISE SPECIFIED.

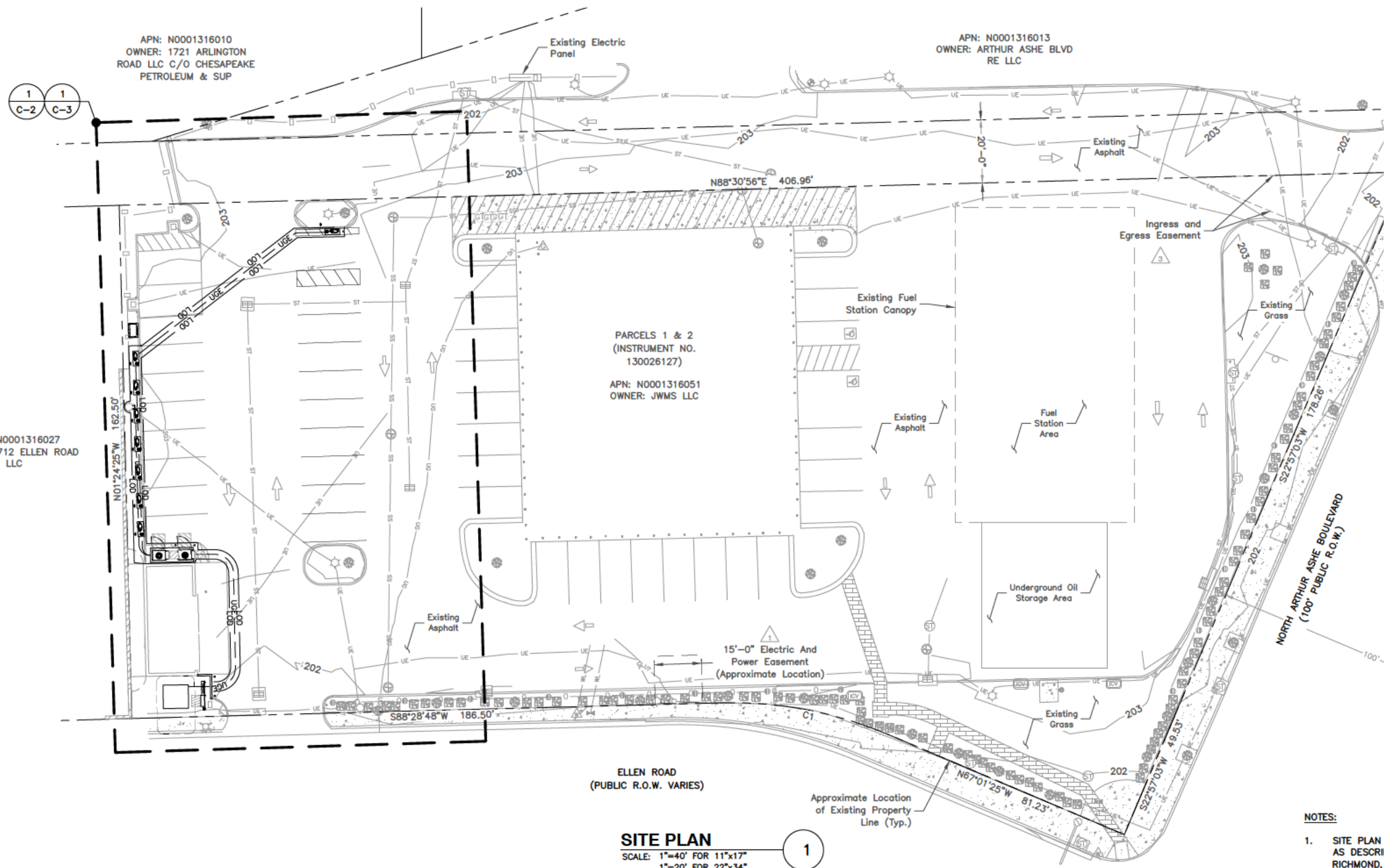


3. THE GENERAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS. ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, SUB-CONTRACTOR SHALL NOTIFY THE PROJECT HOST AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE PROJECT HOST HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
2. THE GENERAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE SUB-CONTRACTOR, PRIOR TO THE SUBMITTAL OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE THE SUBCONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
 - A. UL - UNDERWRITERS LABORATORIES
 - B. NEC - NATIONAL ELECTRICAL CODE
 - C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
 - D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
 - E. SBC - STANDARD BUILDING CODE
 - F. NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
4. DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH ENGINEER ANY SIZES AND LOCATIONS WHEN NEEDED.
5. EXISTING SERVICES: THE GENERAL CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE PROJECT HOST.
6. THE GENERAL CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. THE GENERAL CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
7. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL, UNLESS OTHERWISE SPECIFIED BY CONSTRUCTION MANAGER OR BY PROJECT DEVELOPER.
8. THE GENERAL CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE PROJECT HOST'S CONFIRMATION, ETC. ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
9. CONDUCTORS: THE CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER OR ALUMINUM WITH TYPE (THWN-2) INSULATION, 600 VOLT, COLOR CODED UNLESS SPECIFIED DIFFERENTLY ON DRAWINGS.
10. ALL (THWN-2) WIRING INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
11. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
12. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER. SUB-CONTRACTOR IS TO PROVIDE ALL ELECTRICAL EQUIPMENT UNLESS OTHERWISE DIRECTED.
13. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL SUB-CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY THE CONSTRUCTION MANGER.
14. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
15. THE GENERAL CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
17. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
18. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IEEE.
19. GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
20. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE CONTRACTOR(S) RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE CONSTRUCTION MANAGER UPON FINAL ACCEPTANCE.
21. THE SUBCONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES.
22. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
23. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NOALOX" BY IDEAL INDUSTRIAL INC. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED ALUMINUM & COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
24. ALL EXTERIOR AND INTERIOR ABOVE GROUND CONDUIT SHALL BE RIGID GALVANIZED STEEL UNLESS SPECIFIED OTHERWISE. RACEWAYS: ALL CONDUITS SHALL BE SCHEDULE 40 EMT MEETING OR EXCEEDING NEMA TC2 - 1990 UNLESS SPECIFIED OTHERWISE. THE SUB-CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 3 FT. RADIUS. EMT CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITZ ZINC' OR 'GOLD GALV'.

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. DO NOT USE RETEMPERED CONCRETE, OR ADD WATER TO READY-MIX CONCRETE AT THE JOB SITE. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
3. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS (UNLESS OTHERWISE NOTED). ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
4. MAXIMUM AGGREGATE SIZE SHALL BE 3/4".
5. THE FOLLOWING MATERIALS SHALL BE USED:
- | | |
|--------------------------|-------------------------|
| PORTLAND CEMENT: | ASTM C 150, TYPE I |
| REINFORCEMENT: | ASTM A 615, GRADE 60 |
| NORMAL WEIGHT AGGREGATE: | ASTM C 33 |
| WATER: | DRINKABLE |
| ADMIXTURES: | NON-CHLORIDE CONTAINING |
6. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH "DETAILING MANUAL-2004 PUBLICATION SP-66" AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI-318-08.
7. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B"; ALL HOOKS SHALL BE STANDARD, UNO.
8. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
- | | |
|--|---|
| CONCRETE CAST AGAINST EARTH: | 3 IN. |
| CONCRETE EXPOSED TO EARTH OR WEATHER: | #6 AND LARGER 2 IN.
#5 AND SMALLER & WWF 1-1/2 IN. |
| CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND: | SLAB AND WALL 3/4 IN.
BEAMS AND COLUMNS 1-1/2 IN. |
9. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
10. INSTALLATION OF CONCRETE ANCHOR, SHALL BE PER MANUFACTURERS WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
11. CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
12. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
13. DO NOT WELD OR TACKWELD REINFORCING STEEL.
14. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
15. LOCATE ADDITIONAL EXPANSION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
16. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
17. PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
18. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
19. DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
20. MAINTAIN TEMPERATURE OF CAST IN PLACE CONCRETE BETWEEN 50 DEGREES AND 90 DEGREES FAHRENHEIT. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALT, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
21. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, REINFORCEMENT SPLICES SHALL MEET CLASS B, TENSION LAP REQUIREMENTS IN ACCORDANCE WITH ALL PROVISIONS OF ACI 318 LATEST EDITION, UNLESS NOTED OTHERWISE.
22. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING.

3. THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING AND INSTALLING UNDERGROUND UTILITIES USING THE DIRECTIONAL BORING (HORIZONTAL DIRECTIONAL DRILLING, HDD) METHOD OF INSTALLATION, ALSO COMMONLY REFERRED TO AS GUIDED HORIZONTAL BORING. THIS WORK SHALL INCLUDE ALL SERVICES, EQUIPMENT, MATERIALS, AND LABOR FOR THE COMPLETE AND PROPER INSTALLATION, TESTING, RESTORATION OF UNDERGROUND UTILITIES AND ENVIRONMENTAL PROTECTION AND RESTORATION.
2. WORK PLAN: PRIOR TO BEGINNING WORK, THE CONTRACTOR MUST SUBMIT TO THE ENGINEER A GENERAL WORK PLAN OUTLINING THE PROCEDURE AND SCHEDULE TO BE USED TO EXECUTE THE PROJECT. PLAN SHOULD DOCUMENT THE THOUGHTFUL PLANNING REQUIRED TO SUCCESSFULLY COMPLETE THE PROJECT.
3. ENVIRONMENTAL PROTECTION: CONTRACTOR SHALL PLACE SILT FENCE BETWEEN ALL BORING OPERATIONS AND ANY DRAINAGE, WETLAND, WATERWAY OR OTHER AREA DESIGNATED FOR SUCH PROTECTION BY CONTRACT DOCUMENTS, STATE, FEDERAL AND LOCAL REGULATIONS. ADDITIONAL ENVIRONMENTAL PROTECTION NECESSARY TO CONTAIN ANY HYDRAULIC OR BORING FLUID SPILLS SHALL BE PUT IN PLACE, INCLUDING BERMS, LINERS, TURBIDITY CURTAINS AND OTHER MEASURES. CONTRACTOR SHALL ADHERE TO ALL APPLICABLE ENVIRONMENTAL REGULATIONS. FUEL OR OIL MAY NOT BE STORED IN BULK CONTAINERS WITHIN 200' OF ANY WATER-BODY OR WET-LAND.
4. UTILITY LOCATES: CONTRACTOR SHALL NOTIFY ALL COMPANIES WITH UNDERGROUND UTILITIES IN THE WORK AREA VIA THE STATE OR LOCAL "ONE-CALL" TO OBTAIN UTILITY LOCATES. ONCE THE UTILITIES HAVE BEEN LOCATED CONTRACTOR SHALL PHYSICALLY IDENTIFY THE EXACT LOCATION OF THE UTILITIES BY VACUUM OR HAND EXCAVATION, WHEN POSSIBLE, IN ORDER TO DETERMINE THE ACTUAL LOCATION AND PATH OF ANY UNDERGROUND UTILITIES WHICH MIGHT BE WITHIN 20 FEET OF THE BORE PATH. CONTRACTOR SHALL NOT COMMENCE BORING OPERATIONS UNTIL THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE WORK AREA HAVE BEEN VERIFIED.
5. SAFETY: CONTRACTOR SHALL ADHERE TO ALL APPLICABLE STATE, FEDERAL AND LOCAL SAFETY REGULATIONS AND ALL OPERATIONS SHALL BE CONDUCTED IN A SAFE MANNER. SAFETY MEETINGS SHALL BE CONDUCTED AT LEAST WEEKLY WITH A WRITTEN RECORD OF ATTENDANCE AND TOPIC SUBMITTED TO ENGINEER.
6. SITE RESTORATION: FOLLOWING BORING OPERATIONS, CONTRACTOR WILL DE-MOBILIZE EQUIPMENT AND RESTORE THE WORK-SITE TO ORIGINAL CONDITION. ALL EXCAVATIONS WILL BE BACKFILLED AND COMPACTED TO 95% OF ORIGINAL DENSITY. LANDSCAPING WILL BE RESTORED TO ORIGINAL.
7. RECORD KEEPING: CONTRACTOR SHALL MAINTAIN A DAILY PROJECT LOG OF BORING OPERATIONS AND A GUIDANCE SYSTEM LOG WITH A COPY GIVEN TO ENGINEER AT COMPLETION OF PROJECT. AS-BUILT DRAWINGS SHALL BE CERTIFIED AS TO ACCURACY BY CONTRACTOR.





ABBREVIATIONS:

A	AMPERES
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ALTERNATING CURRENT
ACI	AMERICAN CONCRETE INSTITUTE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL	ALUMINUM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GAUGE
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
COMM	COMMUNICATIONS
CU	COPPER
DC	DIRECT CURRENT
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION

EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRIC METALLIC TUBE
EPA	ENVIRONMENTAL PROTECTION AGENCY
FT.	FEET
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GN	GENERAL NOTES
HDPE	HIGH-DENSITY POLYETHYLENE
HSS	HOLLOW STRUCTURAL SECTION
IN.	INCHES
KVA	KILOVOLT AMPERE
LBS	POUNDS
LF	LINEAR FEET
mA	MILLIAMPERE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSANDS OF CIRCULAR MILS
MIL	THOUSANDTH OF AN INCH
MIN	MINIMUM
MLO	MAIN LUG ONLY
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NOM	NOMINAL
OC	ON CENTER
OSHA	OCCUPATION SAFETY AND HEALTH ADMINISTRATION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
ROW	RIGHT-OF-WAY
REP	REPRESENTATIVE
SBC	STANDARD BUILDING CODE
SCH	SCHEDULE
SF	SQUARE FEET
TBD	TO BE DETERMINED
TYP	TYPICAL
U/G	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
VA	VOLT-AMPERE
W	WATTS
W/	WITH

EQUIPMENT SHIPPED BY TESLA

EQUIPMENT	QTY
GRAY CRASH CORE BOLLARD	5
V3.5 CABINET	2
V3/V4 FLEX FOUNDATION (PRE-CAST)	8
ACCESSIBLE SIGN	1
STAR CENTER KIT	1
V4 POST	8
CABINET FUSE	2
4" DURALINE CONDUIT (FT)	1368
4" ADAPTER - DURALINE TO PVC	24
4" COUPLER - DURALINE TO DURALINE	10
WIFI SUPERKIT	1

NOTES:

1. SITE PLAN BASED ON ENGINEERING DESIGN SURVEY PARCELS 1 & 2 AS DESCRIBED IN, INSTRUMENT NUMBER 130026127, CITY OF RICHMOND, RICHMOND CITY COUNTY, VIRGINIA BY CLARK LAND SURVEYING INC. DATED 03/23/2022.
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4. EXISTING CUSTOMER OWNED ELECTRICAL & TELCO CONDUIT & EQUIPMENT TO BE RELOCATED AS NEEDED DURING CONSTRUCTION.
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7. CONTRACTOR TO CONFIRM ADA/ACCESSIBLE STRIPING & ASSOCIATED STALLS HAVE <2% GRADE IN ALL DIRECTIONS.
8. FEDERAL EMERGENCY MANAGEMENT AGENCY, FEMA FIRMETTE PUBLISHED MARCH 23, 2022, REFERENCING FLOOD INSURANCE RATE MAP, MAP NUMBERS 5101290029D EFFECTIVE DATE APRIL 2, 2009, INDICATED THIS PARCEL OF LAND IS LOCATED IN ZONE X (AREA OF MINIMAL FLOOD HAZARD)

LEGEND

	SITE BENCHMARK
	SANITARY MANHOLE
	SANITARY CLEANOUT
	GREASE TRAP
	STORM INLET (RECTANGLE)
	STORM MANHOLE
	STORM CLEANOUT
	FIRE HYDRANT
	IRRIGATION CONTROL VALVE
	WATER VALVE
	WATER METER
	UTILITY POLE
	GAS METER
	PILLAR
	VENT PIPE
	TRAFFIC SIGNAL MAST
	DECIDUOUS TREE
	SHRUB
	HANDICAP PARKING
	SIGN
	BOLLARD
	STORM LINE (UNDERGROUND)
	SANITARY LINE (UNDERGROUND)
	WATER LINE (UNDERGROUND)
	GAS LINE (UNDERGROUND)
	ELECTRIC LINE (UNDERGROUND)
	WOOD FENCE
	CONCRETE AREA
	BRICK AREA
	AREA OF CONCERN
	EXCEPTION NUMBER
	PROPERTY LINE



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PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

NOT FOR
CONSTRUCTION

DRAWN BY: FG

CHECKED BY: DER

APPROVED BY: JY

PROJECT #: 50123704

JOB #: 50181141

SUBMITTALS

REV.	DATE	DESCRIPTION
A	03/07/25	ISSUED FOR 90% REVIEW

SITE NAME:

WAWA # 8648 - RICHMOND, VA
(TRT ID: 26853)

SITE ADDRESS:

3100 NORTH ARTHUR ASHE BLVD.
RICHMOND, VA 23230

SHEET TITLE

DETAILED SITE PLAN

SHEET NUMBER

C-1



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A	03/07/25	ISSUED FOR 90% REVIEW

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(TRT ID: 26853)

SITE ADDRESS:

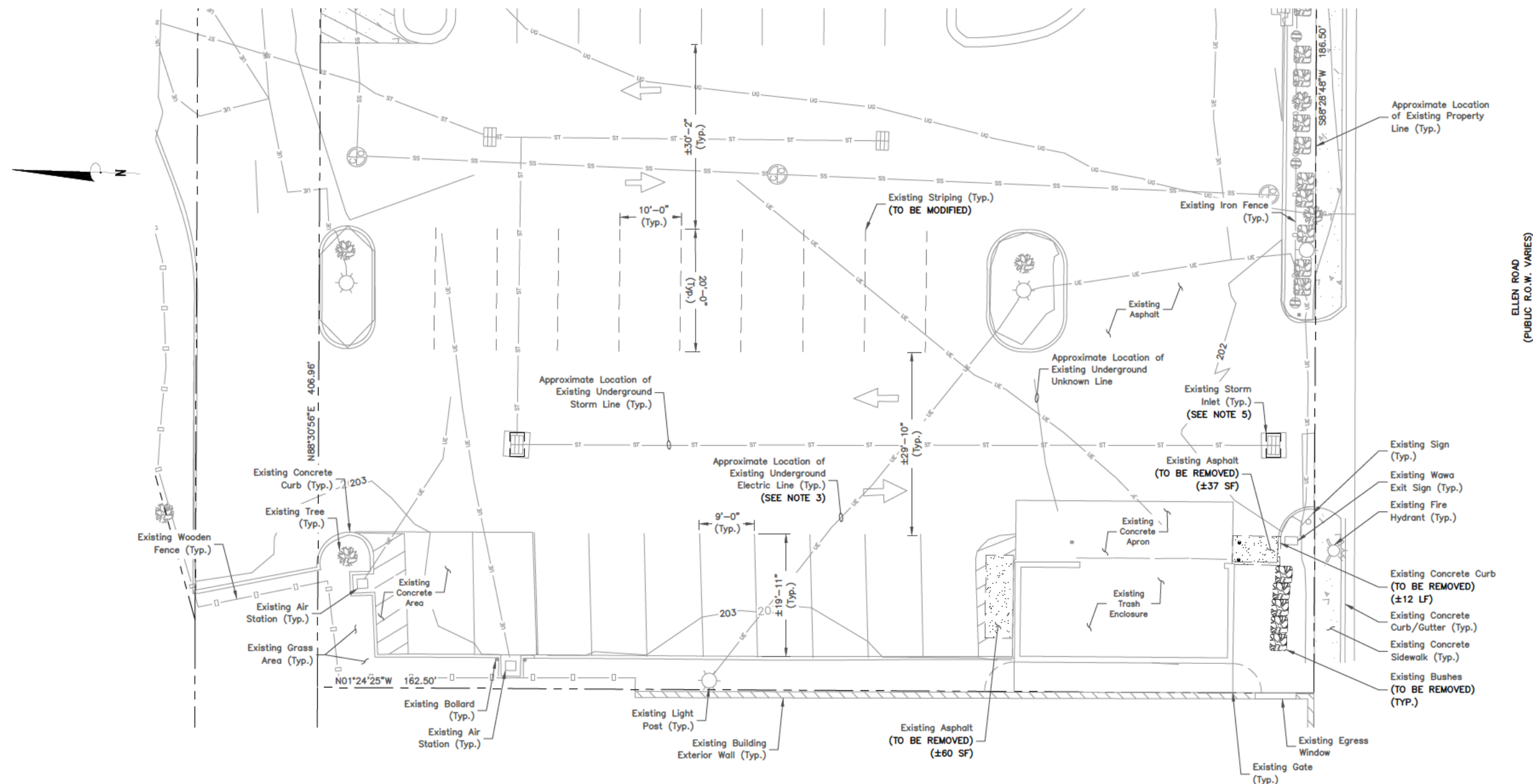
3100 NORTH ARTHUR ASHE BLVD.
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SHEET TITLE

EXISTING CONDITIONS
PLAN

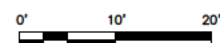
SHEET NUMBER

C-2



EXISTING CONDITIONS PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"



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(TRT ID: 26853)

SITE ADDRESS:

3100 NORTH ARTHUR ASHE BLVD.
RICHMOND, VA 23230

SHEET TITLE

EQUIPMENT/PARKING
PLAN

SHEET NUMBER

C-3

LEGEND	
①	TESLA 'STAR POINT' SUPERCHARGER
②	TESLA 'STAR CENTER' SUPERCHARGER
1A	TESLA V4 CHARGE POST
—	TESLA V4 CHARGE POST TERMINUS

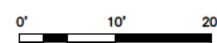
PROPOSED STALL SCHEDULE	
DESCRIPTION	QUANTITY
PROPOSED TESLA STALLS	8
TOTAL STALL SCHEDULE	
DESCRIPTION	QUANTITY
EXISTING STALL COUNT	10
PROPOSED STALL COUNT	10
NET STALL CHANGE	0

NOTES:

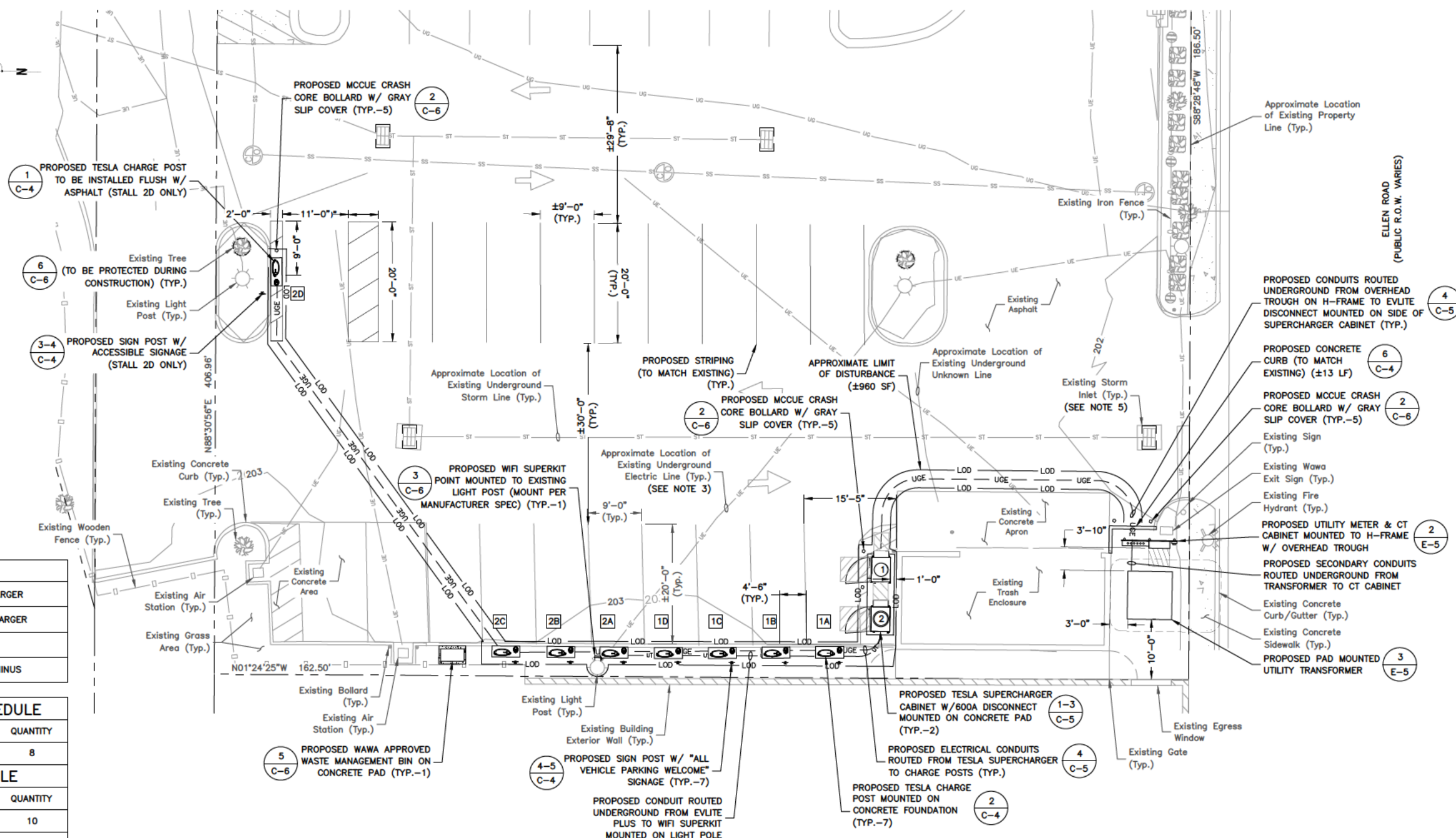
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EQUIPMENT/PARKING PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

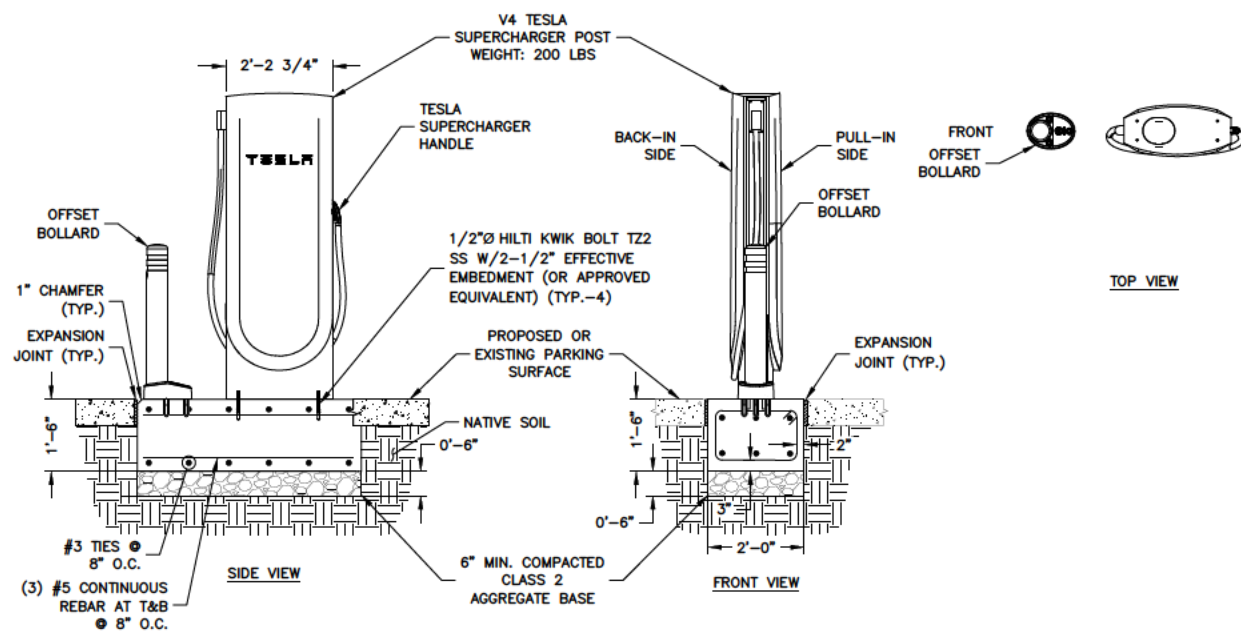


1



NOTES:

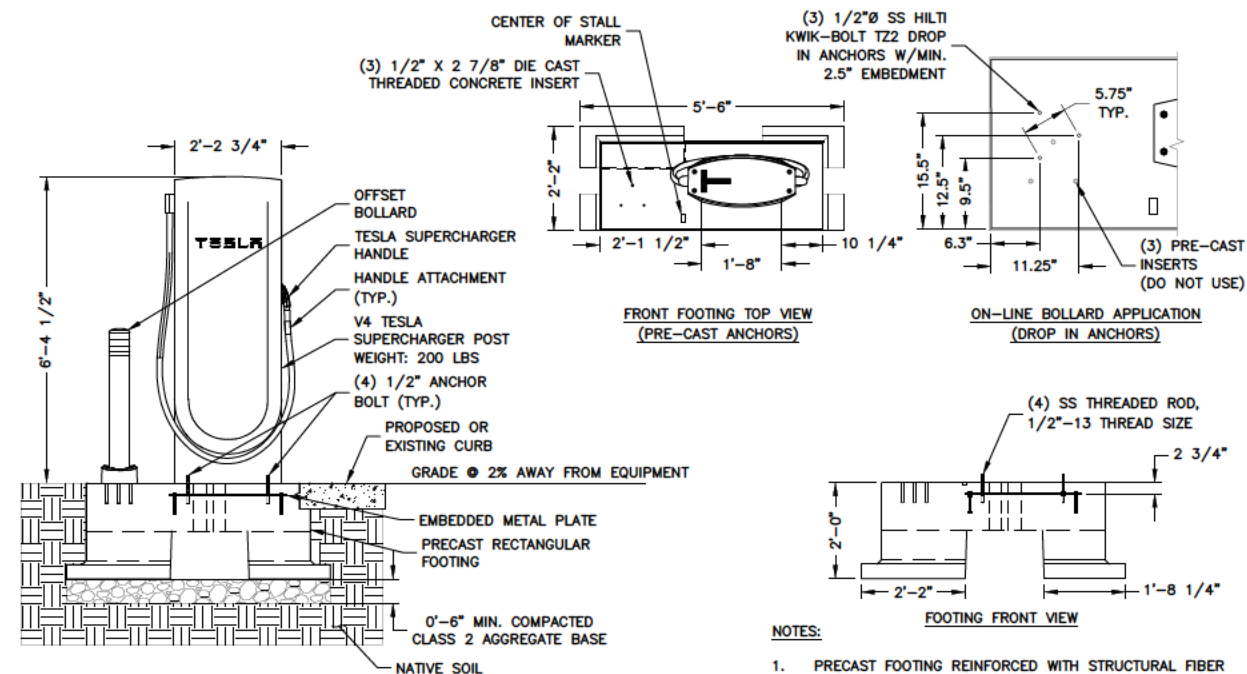
- SITE PLAN



V4 SUPERCHARGER POST CAST-IN-PLACE FOUNDATION DETAIL

SCALE: N.T.S.

1



TESLA SUPERCHARGER POST PRECAST FOUNDATION DETAIL

SCALE: N.T.S.

2

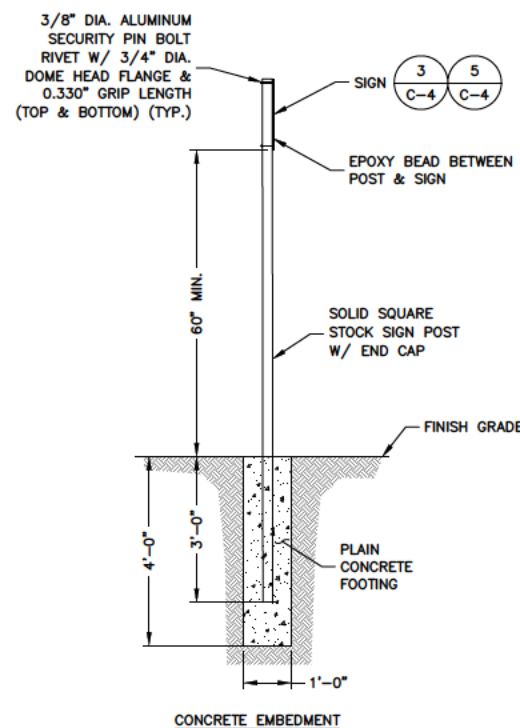
- NOTES:**
1. PRECAST FOOTING REINFORCED WITH STRUCTURAL FIBER
VOLUME: 0.483 CU YDS
WEIGHT: 1,990 LBS
SEE CUTSHEETS FOR ADDITIONAL INFORMATION
 2. S501.1333 SUPERCHARGER POST CENTER ON CENTER
PRECAST FOOTING DETAIL RA
WIND RATING (WITHOUT SIGN) = 134 MPH
WIND RATING (WITH SIGN) = 120 MPH



ACCESSIBLE SIGNAGE DETAIL

SCALE: N.T.S.

3



SQUARE SIGN POST DETAIL

SCALE: N.T.S.

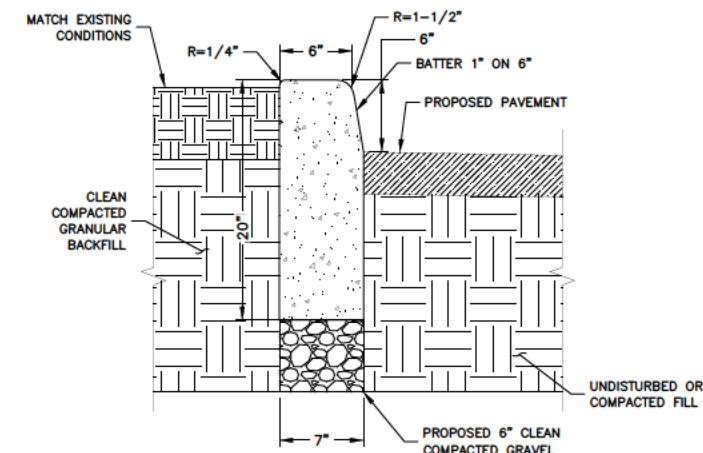
4



PARKING SIGNAGE DETAIL

SCALE: N.T.S.

5



- NOTES:**
1. SAW CUT AREA TO BE REPAIRED/REPLACED. DISPOSE OF DEBRIS PROPERLY OFF SITE.
 2. INSTALL FORMS AS NECESSARY.
 3. COMPACT EXISTING SUBGRADE MATERIAL TO ACHIEVE 95% COMPACTION.
 4. CONCRETE TO BE 4000 PSI AIR ENTRAINED CONCRETE.
 5. INSTALL CONTROL JOINTS EVERY 10 LINEAR FEET.

CONCRETE CURB DETAIL

SCALE: N.T.S.

6



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CHECKED BY: DER

APPROVED BY: JY

PROJECT #: 50123704

JOB #: 50181141

SUBMITTALS

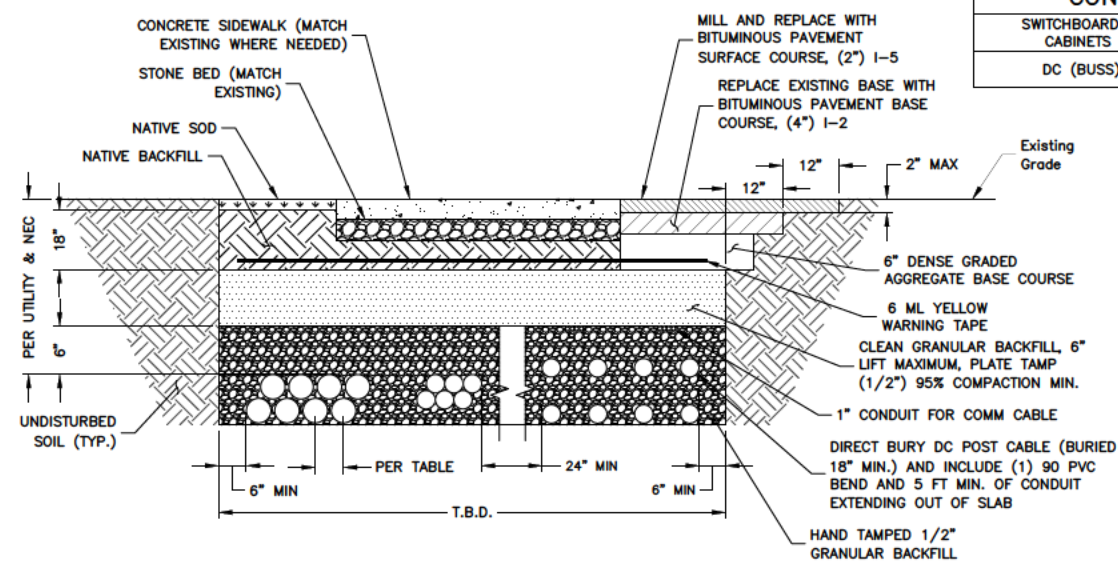
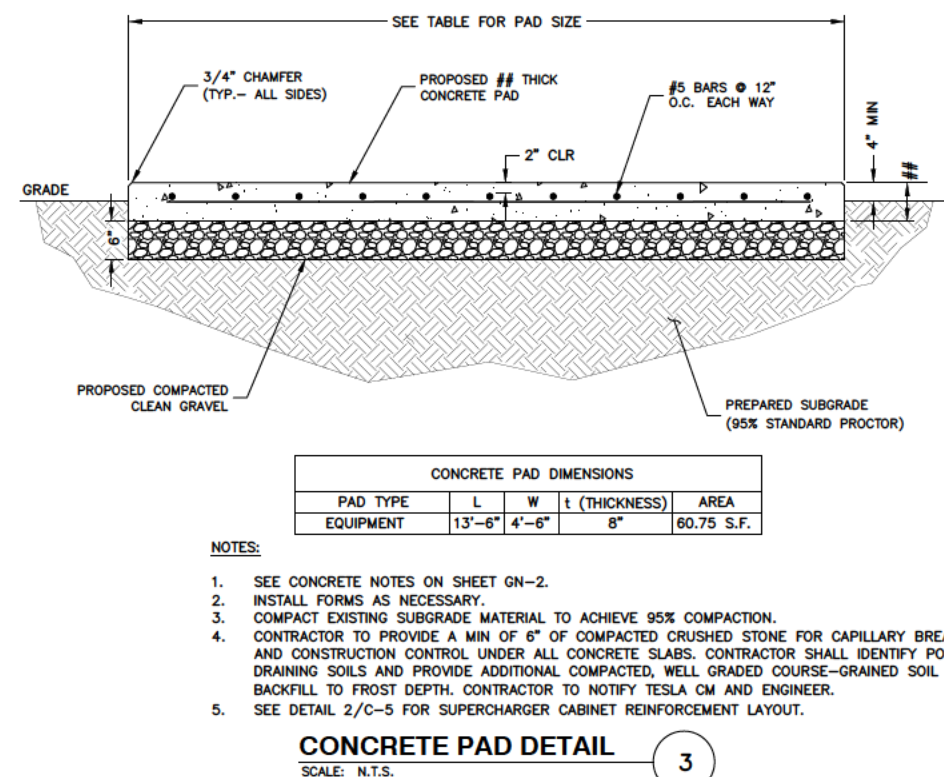
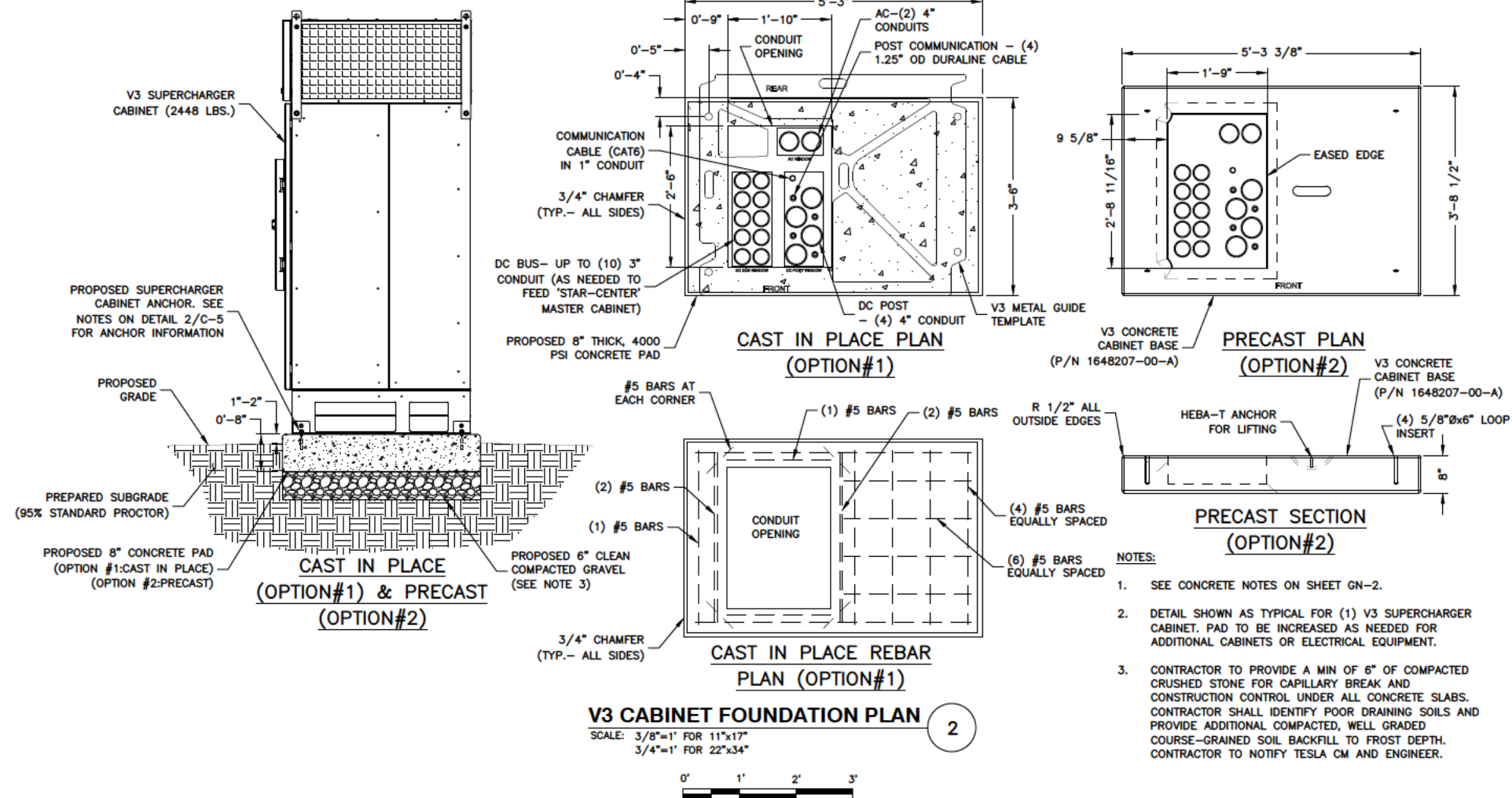
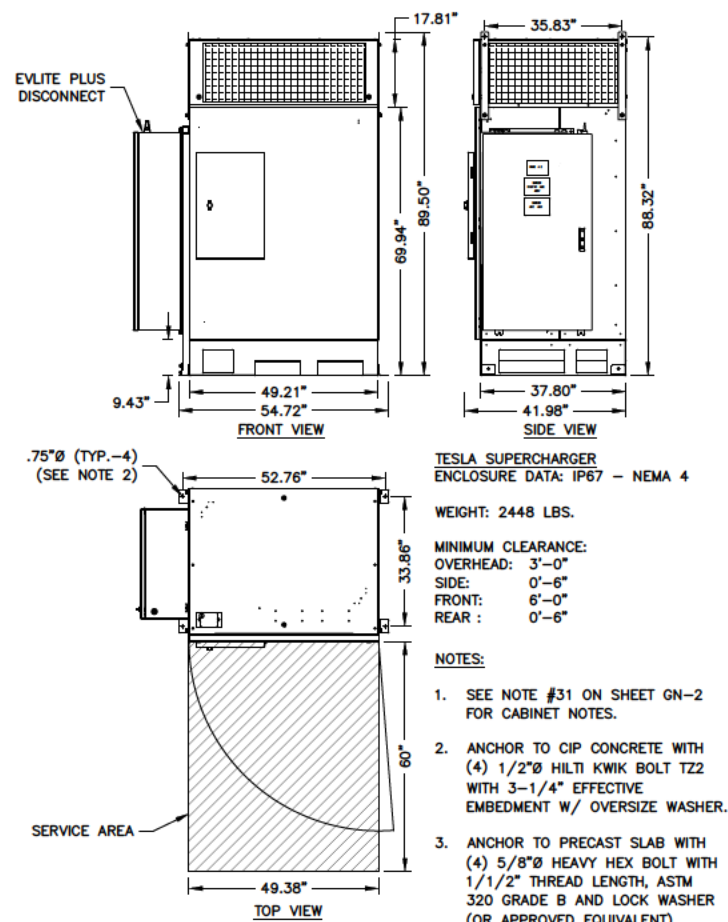
REV.	DATE	DESCRIPTION
A	03/07/25	ISSUED FOR 90% REVIEW

SITE NAME:
WAWA # 8648 - RICHMOND, VA
(TRT ID: 26853)

SITE ADDRESS:
3100 NORTH ARTHUR ASHE BLVD.
RICHMOND, VA 23230

SHEET TITLE
CONSTRUCTION
DETAILS I

SHEET NUMBER
C-4



MINIMUM CENTER TO CENTER CONDUIT SPACING	
SWITCHBOARD TO CABINETS	7.5" O.C.
DC (BUSS)	7.5" O.C.

- NOTES:**
- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
 - IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
 - CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.
 - ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE CONSTRUCTION CONDITIONS OR BETTER.
 - MAINTAIN 12" SEPARATION MIN. BETWEEN AC OR DC CONDUCTORS AND COMMUNICATION CABLES.
 - MAINTAIN 2" SEPARATION MINIMUM BETWEEN OUTER WALLS OF CONDUITS.
 - CONFIRM ALL DEPTHS W/UTILITY & NEC PRIOR TO CONSTRUCTION.
 - DIRECT BURIAL SHALL BE EMBEDDED WITH A MINIMUM DEPTH OF FOUR INCHES OF SAND OR FINE COARSE MATERIAL BELOW CABLE, THREE INCH ON THE SIDES, ADDITIONAL FOUR-SIX COVERAGE.
 - TRENCH SHALL NOT HAVE ROCKS 3" OR SHARP OBJECTS GREATER IN DIAMETER NEAR OR AROUND DIRECT CABLE INSTALLATION.



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 600 PARSIPPANY ROAD
 SUITE 301
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 FAX: 973.739.9710

NOT FOR
 CONSTRUCTION

DRAWN BY: FG

CHECKED BY: DER

APPROVED BY: JY

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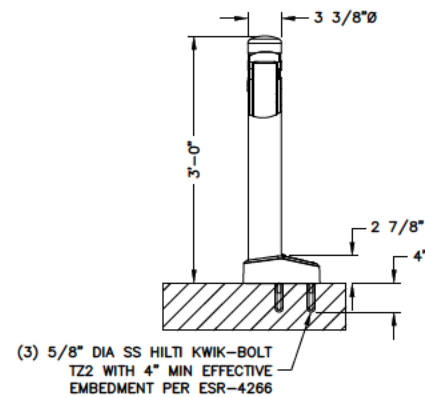
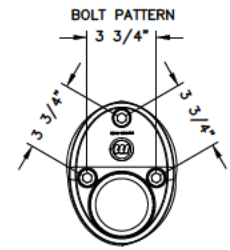
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 DETAILS II

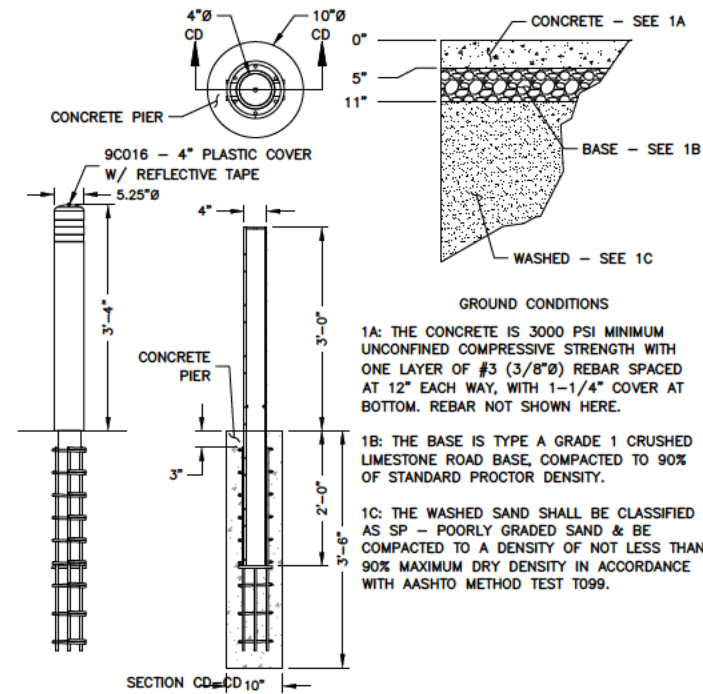
SHEET NUMBER
 C-5



McCUE MINI REBOUNING BOLLARD DETAIL

SCALE: N.T.S.

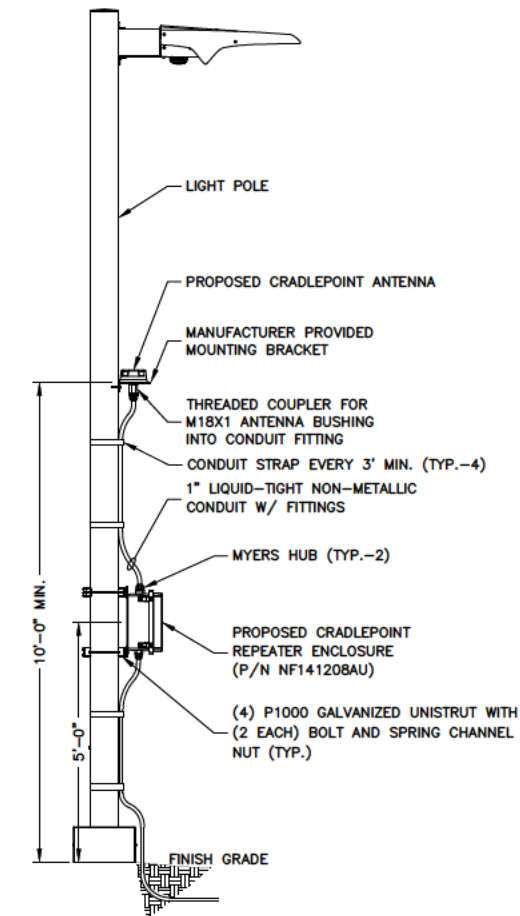
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McCUE CRASH CORE BOLLARD DETAIL

SCALE: N.T.S.

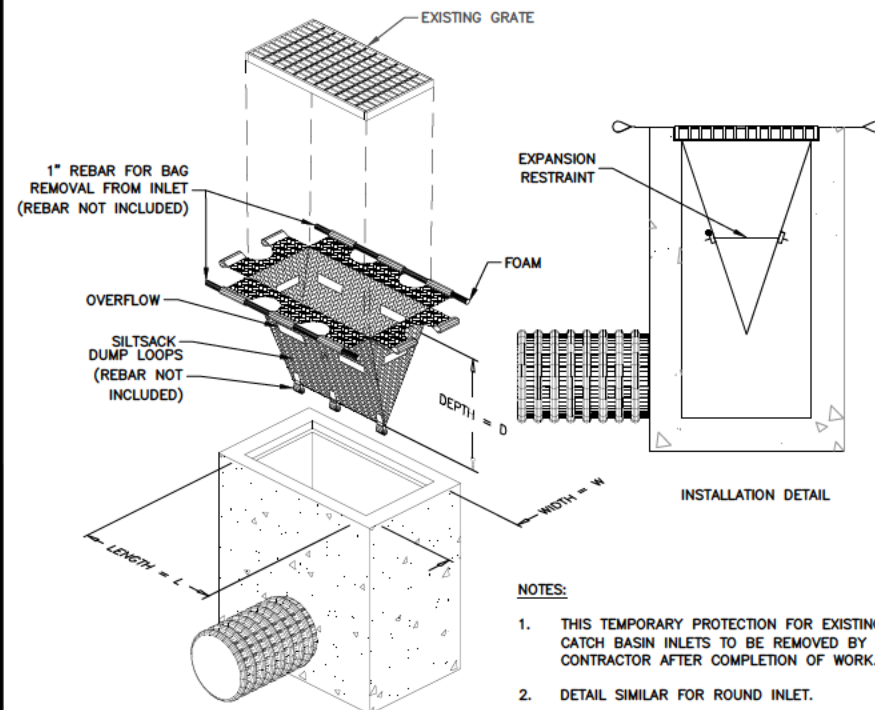
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WIFI SUPER KIT MOUNTING DETAIL

SCALE: N.T.S.

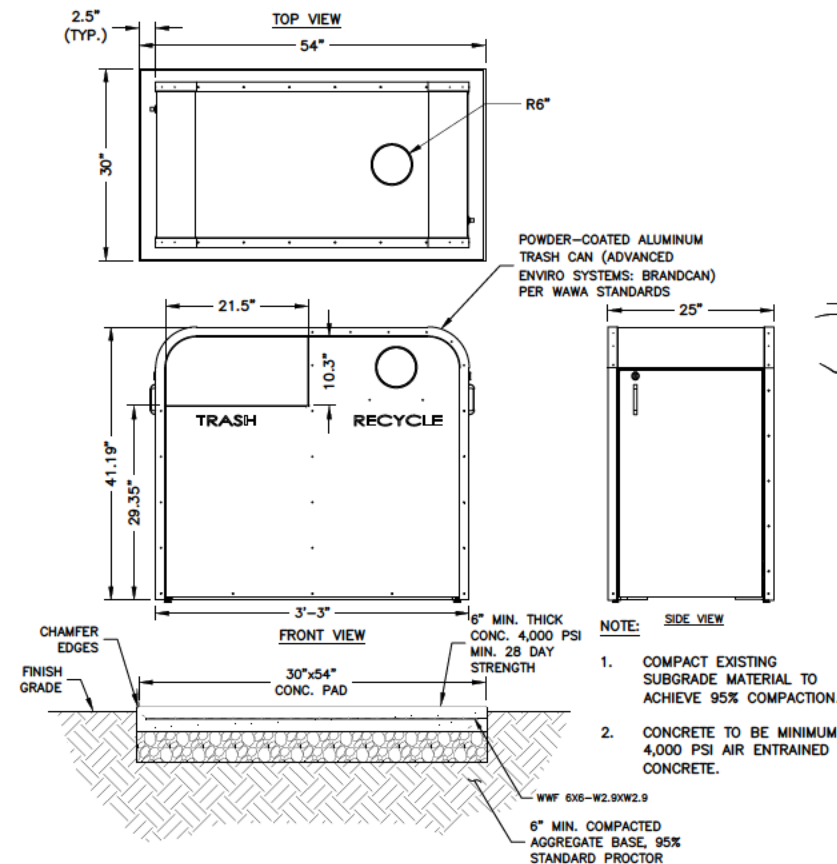
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CATCH BASIN INLET PROTECTION DETAIL

SCALE: N.T.S.

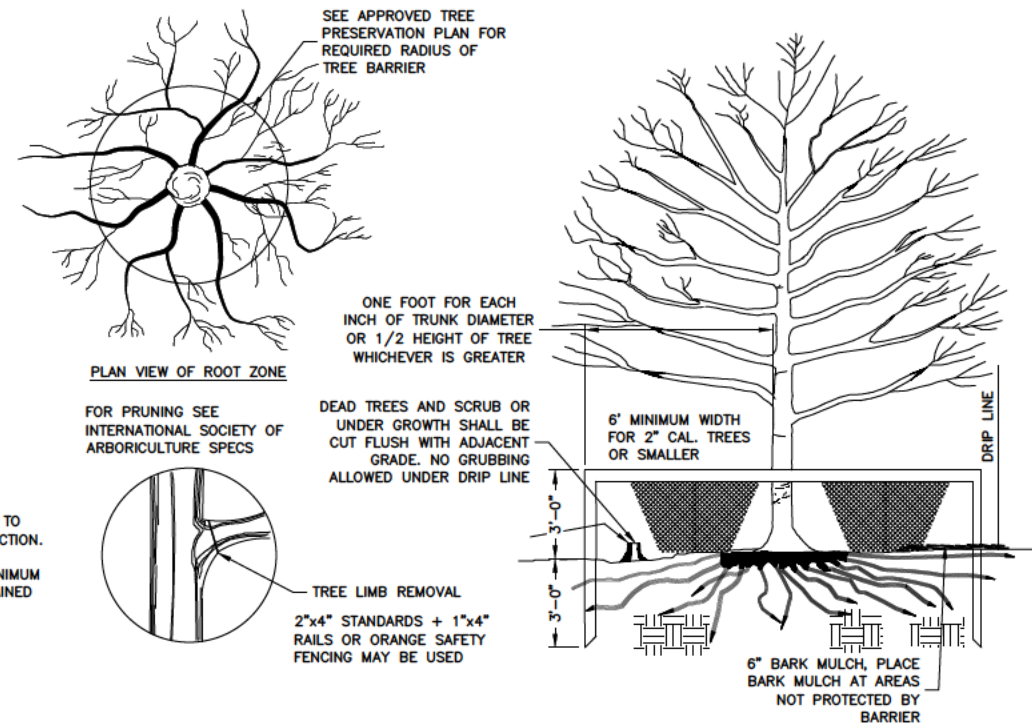
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WASTE MANAGEMENT BIN & PAD DETAIL

SCALE: N.T.S.

5



TREE PROTECTION DETAIL

SCALE: N.T.S.

6



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SHEET TITLE

CONSTRUCTION
DETAILS III

SHEET NUMBER

C-6

ELECTRICAL NOTES:

1.

THE GENERAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS. ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, SUB-CONTRACTOR SHALL NOTIFY THE PROJECT HOST AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE PROJECT HOST HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.

2.

THE GENERAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE SUB-CONTRACTOR, PRIOR TO THE SUBMITTAL OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE THE SUBCONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.

3.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:

A.

UL – UNDERWRITERS LABORATORIES

B.

NEC – NATIONAL ELECTRICAL CODE

C.

NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.

D.

OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

E.

SBC – STANDARD BUILDING CODE

F.

NFPA – NATIONAL FIRE PROTECTION ASSOCIATION

4.

DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH ENGINEER ANY SIZES AND LOCATIONS WHEN NEEDED.

5.

EXISTING SERVICES: THE GENERAL CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE PROJECT HOST.

6.

THE GENERAL CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. THE GENERAL CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.

7.

THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL, UNLESS OTHERWISE SPECIFIED BY CONSTRUCTION MANAGER OR BY PROJECT DEVELOPER.

8.

THE GENERAL CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE PROJECT HOST'S CONFIRMATION, ETC. ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.

9.

CONDUCTORS: THE CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER OR ALUMINUM WITH TYPE (THWN-2) INSULATION, 600 VOLT, COLOR CODED UNLESS SPECIFIED DIFFERENTLY ON DRAWINGS.

10.

ALL (THWN-2) WIRING INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

11.

OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.

12.

IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER. SUB-CONTRACTOR IS TO PROVIDE ALL ELECTRICAL EQUIPMENT UNLESS OTHERWISE DIRECTED.

13.

ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL SUB-CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY THE CONSTRUCTION MANGER.

14.

ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

15.

THE GENERAL CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.

16.

THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.

17.

ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.

18.

MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IEEE.

19.

GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.

20.

ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE CONTRACTOR(S) RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE CONSTRUCTION MANAGER UPON FINAL ACCEPTANCE.

21.

THE SUBCONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES.

22.

DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
23.

ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NOALOX" BY IDEAL INDUSTRIAL INC. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED ALUMINUM & COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED – NO SUBSTITUTIONS.
24.

ALL EXTERIOR AND INTERIOR ABOVE GROUND CONDUIT SHALL BE RIGID GALVANIZED STEEL UNLESS SPECIFIED OTHERWISE. RACEWAYS: ALL CONDUITS SHALL BE SCHEDULE 40 EMT MEETING OR EXCEEDING NEMA TC2 – 1990 UNLESS SPECIFIED OTHERWISE. THE SUB-CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS – 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 3 FT. RADIUS. EMT CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH "BRITE ZINC" OR "GOLD GALV".
25.

SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
26.

CONNECTORS FOR POWER CONDUCTORS: SUB-CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
27.

THE SUB-CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC".
28.

WHEN DIRECTIONAL BORING IS REQUIRED, SUB-CONTRACTOR SHALL INSTALL A LOOSE TONING WIRE WITHIN INSTALLED CONDUIT TO ALLOW FOR IDENTIFICATION OF UNDERGROUND CONDUITS.
29.

ALL BOLTS SHALL BE STAINLESS STEEL.
30.

ALL MATERIALS AND EQUIPMENT SUPPLIED AND INSTALLED BY THE SUBCONTRACTOR SHOULD BE NEW AND UNUSED.
31.

PER NEC 625.22 – THE USER INTERFACE (CHARGE POST) IS CONTROLLED BY THE ELECTRICAL EQUIPMENT (SUPERCHARGER CABINET) AND THE FOLLOWING PRECAUTIONS HAVE BEEN TAKEN TO ENSURE THE SAFETY OF CUSTOMERS AND THOSE AROUND THE EQUIPMENT. BEFORE ANY VOLTAGE OR CURRENT IS APPLIED TO THE CHARGE POST, THE CABINET MUST COMMUNICATE WITH THE TESLA VEHICLE. THERE IS A 'HANDSHAKE' BETWEEN THE CAR AND THE CABINET CONFIRMING THAT THE VEHICLE IS ACTUALLY A TESLA AND THAT THE VEHICLE CAN HANDLE THE SUPERCHARGING. VOLTAGE IS THEN APPLIED TO THE POWER SOCKETS IN THE CHARGE POST AND ONCE THE VOLTAGE READING FROM THE CAR IS VERIFIED AS THE SAME IN THE CHARGING CABINET, THEN CURRENT BEGINS TO FLOW. IF AT ANY POINT IN THIS PROCESS A FAULT IS DETECTED, THE CHARGING WILL STOP IMMEDIATELY, WITHIN A MATTER OF MILLISECONDS. DURING THE NORMAL CHARGING CYCLE, IF ANY FAULT OR IRREGULARITY IS DETECTED, THE CHARGING WILL AGAIN STOP WITHIN MILLISECONDS OF DETECTION. BEYOND THIS LOGIC PROTECTION, THERE IS PHYSICAL PROTECTION FROM OVER-CURRENT OR OVER-VOLTAGE WITHIN EACH OF THE CHARGERS. BEYOND THAT, FAST ACTING FUSES ALSO PROTECT THE VEHICLE OUTPUTS FROM OUTPUTTING TOO HIGH OF A CURRENT.

HORIZONTAL DIRECT DRILLING NOTES:

1.

THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING AND INSTALLING UNDERGROUND UTILITIES USING THE DIRECTIONAL BORING (HORIZONTAL DIRECTIONAL DRILLING, HDD) METHOD OF INSTALLATION, ALSO COMMONLY REFERRED TO AS GUIDED HORIZONTAL BORING. THIS WORK SHALL INCLUDE ALL SERVICES, EQUIPMENT, MATERIALS, AND LABOR FOR THE COMPLETE AND PROPER INSTALLATION, TESTING, RESTORATION OF UNDERGROUND UTILITIES AND ENVIRONMENTAL PROTECTION AND RESTORATION.
2.

WORK PLAN: PRIOR TO BEGINNING WORK, THE CONTRACTOR MUST SUBMIT TO THE ENGINEER A GENERAL WORK PLAN OUTLINING THE PROCEDURE AND SCHEDULE TO BE USED TO EXECUTE THE PROJECT. PLAN SHOULD DOCUMENT THE THOUGHTFUL PLANNING REQUIRED TO SUCCESSFULLY COMPLETE THE PROJECT.
3.

ENVIRONMENTAL PROTECTION: CONTRACTOR SHALL PLACE SILT FENCE BETWEEN ALL BORING OPERATIONS AND ANY DRAINAGE, WETLAND, WATERWAY OR OTHER AREA DESIGNATED FOR SUCH PROTECTION BY CONTRACT DOCUMENTS, STATE, FEDERAL AND LOCAL REGULATIONS. ADDITIONAL ENVIRONMENTAL PROTECTION NECESSARY TO CONTAIN ANY HYDRAULIC OR BORING FLUID SPILLS SHALL BE PUT IN PLACE, INCLUDING BERMS, LINERS, TURBIDITY CURTAINS AND OTHER MEASURES. CONTRACTOR SHALL ADHERE TO ALL APPLICABLE ENVIRONMENTAL REGULATIONS. FUEL OR OIL MAY NOT BE STORED IN BULK CONTAINERS WITHIN 200' OF ANY WATER-BODY OR WET-LAND.
4.

UTILITY LOCATES: CONTRACTOR SHALL NOTIFY ALL COMPANIES WITH UNDERGROUND UTILITIES IN THE WORK AREA VIA THE STATE OR LOCAL ?ONE-CALL? TO OBTAIN UTILITY LOCATES. ONCE THE UTILITIES HAVE BEEN LOCATED CONTRACTOR SHALL PHYSICALLY IDENTIFY THE EXACT LOCATION OF THE UTILITIES BY VACUUM OR HAND EXCAVATION, WHEN POSSIBLE, IN ORDER TO DETERMINE THE ACTUAL LOCATION AND PATH OF ANY UNDERGROUND UTILITIES WHICH MIGHT BE WITHIN 20 FEET OF THE BORE PATH. CONTRACTOR SHALL NOT COMMENCE BORING OPERATIONS UNTIL THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE WORK AREA HAVE BEEN VERIFIED.
5.

SAFETY: CONTRACTOR SHALL ADHERE TO ALL APPLICABLE STATE, FEDERAL AND LOCAL SAFETY REGULATIONS AND ALL OPERATIONS SHALL BE CONDUCTED IN A SAFE MANNER. SAFETY MEETINGS SHALL BE CONDUCTED AT LEAST WEEKLY WITH A WRITTEN RECORD OF ATTENDANCE AND TOPIC SUBMITTED TO ENGINEER.
6.

SITE RESTORATION: FOLLOWING BORING OPERATIONS, CONTRACTOR WILL DE-MOBILIZE EQUIPMENT AND RESTORE THE WORK-SITE TO ORIGINAL CONDITION. ALL EXCAVATIONS WILL BE BACKFILLED AND COMPACTED TO 95% OF ORIGINAL DENSITY. LANDSCAPING WILL BE RESTORED TO ORIGINAL.
7.

RECORD KEEPING: CONTRACTOR SHALL MAINTAIN A DAILY PROJECT LOG OF BORING OPERATIONS AND A GUIDANCE SYSTEM LOG WITH A COPY GIVEN TO ENGINEER AT COMPLETION OF PROJECT. AS-BUILT DRAWINGS SHALL BE CERTIFIED AS TO ACCURACY BY CONTRACTOR.

ELECTRICAL ABBREVIATIONS:

A	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCB	MAIN CIRCUIT BREAKER
AHJ	AUTHORITY HAVING JURISDICTION	MCM	THOUSANDS OF CIRCULAR MILS
AIC	AMPERE INTERRUPTING CAPACITY	MIL	THOUSANDTH OF AN INCH
AL	ALUMINUM	MIN	MINIMUM
AWG	AMERICAN WIRE GAUGE	MLO	MAIN LUG ONLY
CM	CONSTRUCTION MANAGER	NEC	NATIONAL ELECTRICAL CODE
COMM	COMMUNICATIONS	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CU	COPPER	NEUT	NEUTRAL
DC	DIRECT CURRENT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DIA	DIAMETER	NOM	NOMINAL
EGC	EQUIPMENT GROUNDING CONDUCTOR	OC	ON CENTER
EMT	ELECTRIC METALLIC TUBE	PSI	POUNDS PER SQUARE INCH
FT.	FEET	PVC	POLYVINYL CHLORIDE
GALV	GALVANIZED	SCH	SCHEDULE
GEC	GROUNDING ELECTRODE CONDUCTOR	SF	SQUARE FEET
GN	GENERAL NOTES	TBD	TO BE DETERMINED
HDPE	HIGH-DENSITY POLYETHYLENE	TYP	TYPICAL
IN.	INCHES	U/G	UNDERGROUND
KVA	KILOVOLT AMPERE	UL	UNDERWRITERS LABORATORIES
LF	LINEAR FEET	VA	VOLT-AMPERE
mA	MILLIAMP	W	WATTS

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

VIRGINIA UNIFORM BUILDING & ENERGY CODES, CONSISTENT WITH THE FOLLOWING CODES:

2021 INTERNATIONAL BUILDING CODE (IBC) W/AMENDMENTS.
2021 INTERNATIONAL EXISTING BUILDING CODE (IBC) W/AMENDMENTS.
2020 NATIONAL ELECTRIC CODE (NEC).
2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) W/AMENDMENTS.

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.



FAULT CURRENT LETTER

SCALE: N.T.S.

1



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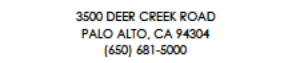
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SHEET TITLE
ELECTRICAL
SPECIFICATIONS &
ABBREVIATIONS

SHEET NUMBER

E-1



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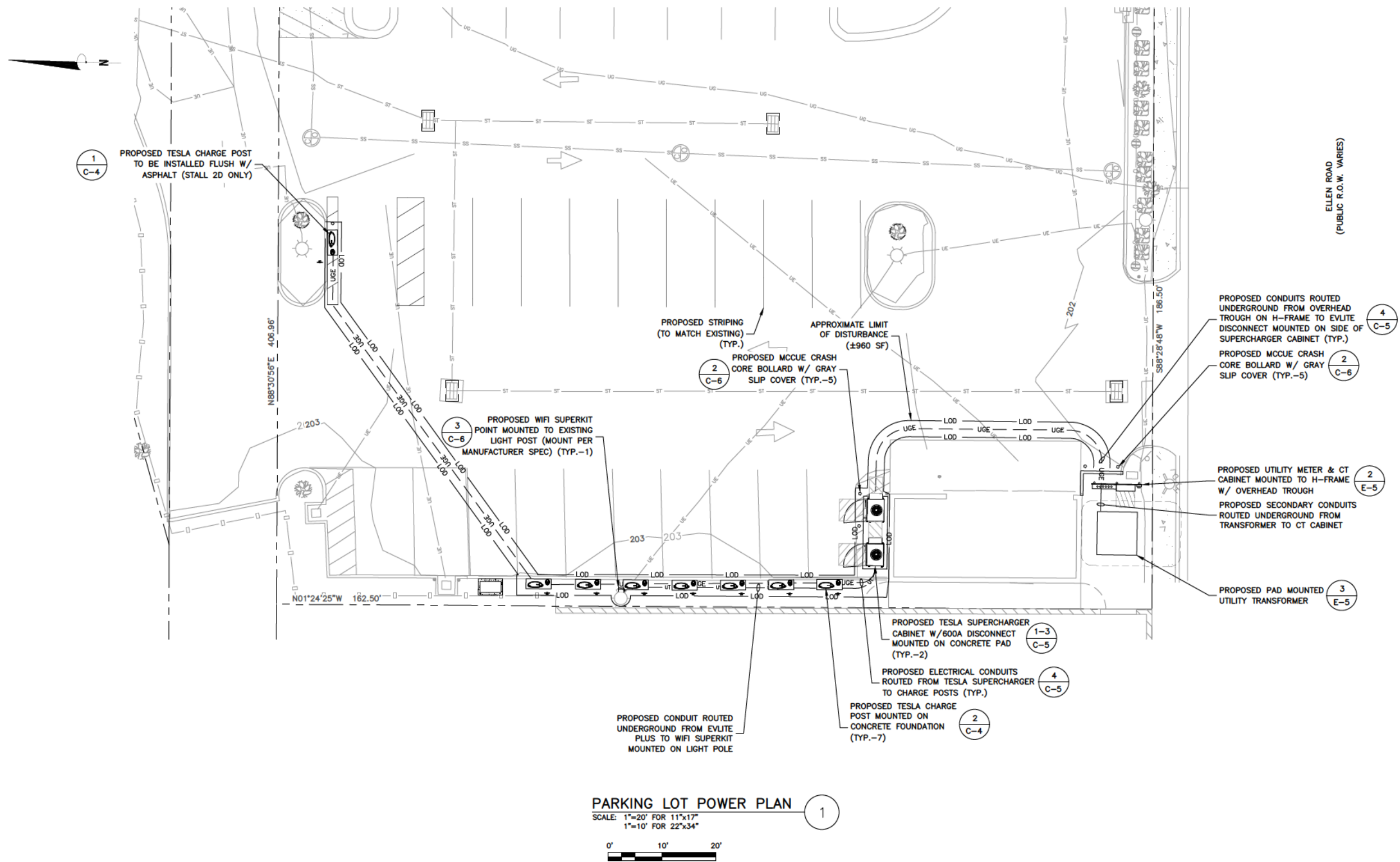
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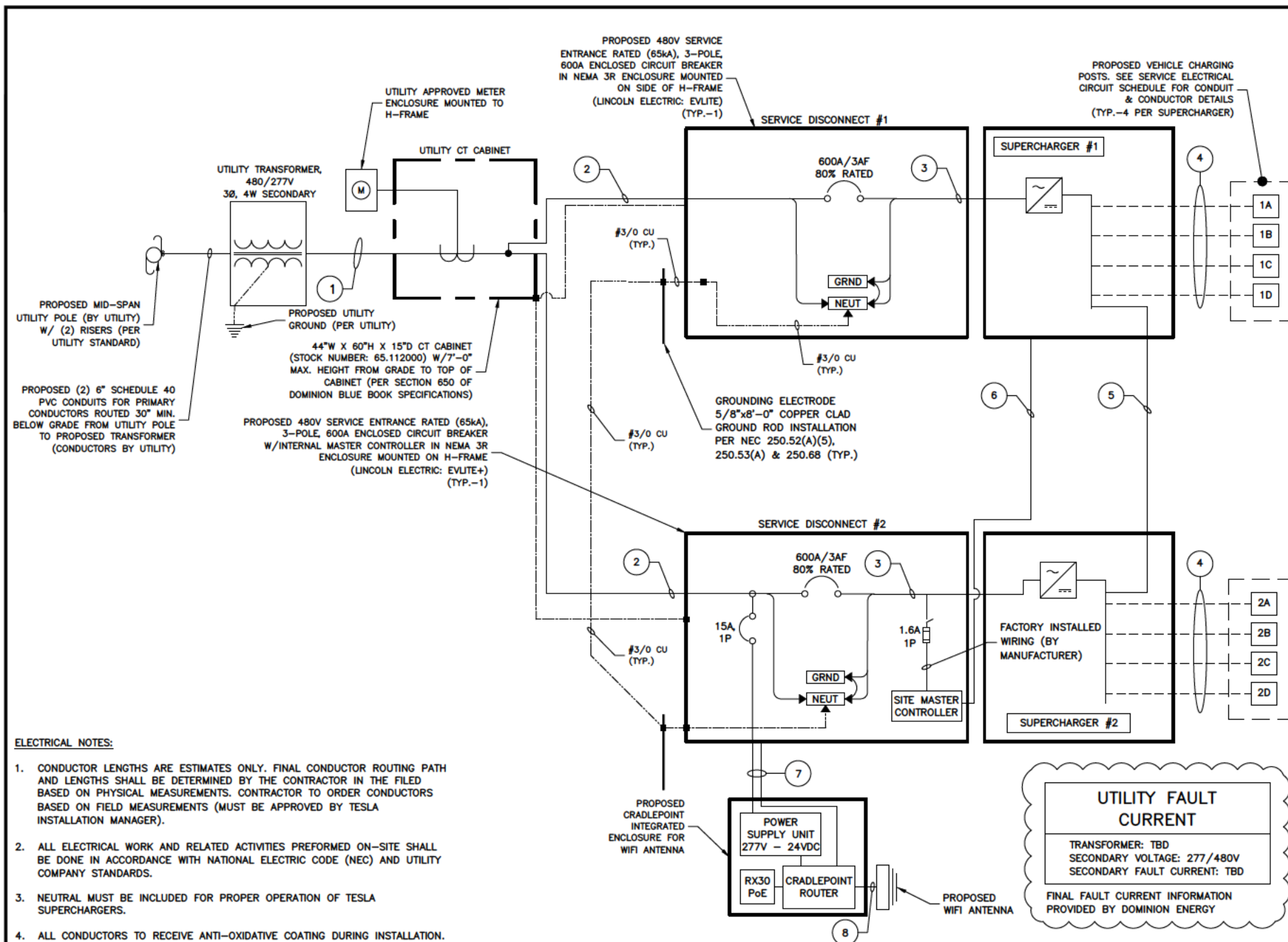
SHEET TITLE

PARKING LOT POWER PLAN

SHEET NUMBER

E-2





ELECTRICAL NOTES:

- CONDUCTOR LENGTHS ARE ESTIMATES ONLY. FINAL CONDUCTOR ROUTING PATH AND LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FILED BASED ON PHYSICAL MEASUREMENTS. CONTRACTOR TO ORDER CONDUCTORS BASED ON FIELD MEASUREMENTS (MUST BE APPROVED BY TESLA INSTALLATION MANAGER).
- ALL ELECTRICAL WORK AND RELATED ACTIVITIES PERFORMED ON-SITE SHALL BE DONE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC) AND UTILITY COMPANY STANDARDS.
- NEUTRAL MUST BE INCLUDED FOR PROPER OPERATION OF TESLA SUPERCHARGERS.
- ALL CONDUCTORS TO RECEIVE ANTI-OXIDATIVE COATING DURING INSTALLATION.
- ALL EQUIPMENT SHALL BE HOUSED IN LOCKABLE, NEMA 3R ENCLOSURE.
- USE OF DURALINE FOR SUPERCHARGER TO CHARGE POST DC CONDUITS IS AN APPROVED ASSEMBLY
- DC RUN LENGTH MAXIMUM IS 330' INCLUDING BURIED DEPTH. ANY DC RUN LENGTHS OVER THE MAXIMUM SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF TESLA.
- UTILITY EQUIPMENT INSTALLATIONS AND PREP WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY ENGINEER AT TIME OF PRE CONSTRUCTION MEETING TO ENSURE ACCURACY OF INSTALLATION.
- UTILITY CONDUITS, CONNECTORS, TRANSFORMER PAD & TRANSFORMER FOUNDATION TO BE INSTALLED PER UTILITY SPECIFICATION. CONFIRM LATEST SPECIFICATIONS PRIOR TO CONSTRUCTION.
- EXISTING UNDERGROUND UTILITIES LOCATED WITHIN AREA OF PROPOSED TRENCH & EQUIPMENT SITE AREA. HAND DIG AND RELOCATE AS REQUIRED.
- CONTRACTOR RESPONSIBLE FOR ALL TRAFFIC SAFETY MEASURES THROUGHOUT DURATION OF CONSTRUCTION. COORDINATE ANY ACCESS ROAD CLOSURES W/OWNER.
- CONTRACTOR TO GROUND SYSTEM TO CONCRETE-ENCASED GROUNDING ELECTRODE PER NEC 250.50. GROUNDING RESISTANCE SHALL BE LESS THAN 25Ω PER NEC. CONTRACTOR TO ADD GROUND RODS TO SYSTEM UNTIL PROPER RESISTANCE IS MET.
- THE DC BUS SHALL BE CONFIGURED IN A RADIAL FASHION WHERE ALL CONDUCTORS ROUTE FROM EACH 'TYPICAL' SUPERCHARGER CABINET, TO THE ONE, 'STAR-CENTER' SUPERCHARGER CABINET.
- USE OF DURALINE FOR SUPERCHARGER TO CHARGE POST DC CONDUITS IS AN APPROVED ASSEMBLY.

NOTES:

- PLACARDS TO BE MADE OF RED PHENOLIC PLASTIC W/ 1" WHITE LETTERING. ATTACH PLACARDS USING RIVETS OR SELF-TAPPING SCREWS.

SERVICE DISCONNECT 1
OF 2. DISCONNECT
LOCATED AT SC #1

PLACE ON EVLITE #1
SERVICE DISCONNECT

SERVICE DISCONNECT 2
OF 2. DISCONNECT
LOCATED AT SC #2

PLACE ON EVLITE #2
SERVICE DISCONNECT

TESLA EV SYSTEM
DISCONNECT

PLACE ON EACH
SERVICE DISCONNECT

SYSTEM PLACARDS

SCALE: N.T.S.

2

SERVICE ELECTRICAL CIRCUIT SCHEDULE

NO.	FROM	TO	CONFIGURATION
1	PROPOSED UTILITY TRANSFORMER	PROPOSED CT CABINET: INCOMING	[4 SETS] (3) 500MCM AL (THWN-2) & (1) 500MCM AL (THWN-2) NEUT IN 4" SCH. 40 PVC CONDUIT; 24" MIN. BELOW GRADE (2) 4" SCH. 40 PVC SPARE CONDUITS 24" MIN. BELOW GRADE
2	PROPOSED CT CABINET: OUTGOING	PROPOSED 600A 'EVLITE' DISCONNECT (100% RATED) (TYP.-2)	[2 SETS] (3) 500MCM AL (THWN-2) (1) 500MCM AL (THWN-2) NEUT IN 4" CONDUIT (INSTALL PVC CONDUIT BELOW GRADE AND RGS CONDUIT ABOVE GRADE)
3	PROPOSED SERVICE BREAKER (600A) (TYP.-2)	PROPOSED TESLA SUPERCHARGER (TYP.-2)	[2 SETS:] (3) 500 AL (THWN-2) (1) 500 AL (THWN-2) NEUT (1) #1 CU EGC OR 2/0 AL EGC* IN 4" CONDUIT (INSTALL PVC CONDUIT BELOW GRADE AND RGS CONDUIT ABOVE GRADE)
4	PROPOSED TESLA SUPERCHARGER	PROPOSED TESLA POST (TYP.-8)	[1 SET PER CHARGE POST:] (4) 600MCM AL (XHHW-2) (1000V), (1) #2/0 AWG CU EGC, AND (1) 1000V RATED LV+COMM CABLE*** IN 4" PVC/HDPE CONDUIT** OR (4) 600MCM AL (1000V) & (1) #2/0 AWG CU EGC VIA XHHW-2 DIRECT BURIAL DC CHARGER CABLE***. (1) 1000V RATED SIGNAL CABLE BUNDLE (TESLA SPEC) IN 1.25" DURALINE CONDUIT**
5	DC BUS BETWEEN PROPOSED SUPERCHARGERS	DC BUS BETWEEN PROPOSED SUPERCHARGERS	[2 SETS] (2) 600MCM AL (XHHW-2) (1) #1/0 CU GROUND & (1) #3/0 AWG AL DC MID 1000V RATED IN 3" PVC/HDPE**
6	SITE CONTROLLER	SUPERCHARGER (TYP.-2)	SHIELDED 600V CAT6+ IN 1" PVC/HDPE CONDUIT
7	PROPOSED SERVICE EQUIPMENT: PANEL (15A)	PROPOSED WIRELESS ROUTER	(2) #12AWG + (1) #12AWG GND FROM 1P/15A CB AND (1) CAT6 COMM CABLE FROM CONTROLS COMPARTMENT IN 1" PVC/HDPE CONDUIT**
8	PROPOSED WIRELESS ROUTER	PROPOSED WIFI ANTENNA	(1) CAT6 COMM CABLE IN 1" PVC/HDPE CONDUIT**

* MODIFIED PER NEC 250.64(A)(2)

** PER UL 615A AND NEC 253, LISTED HDPE CONDUIT PERMITTED. CONTRACTOR TO CONFIRM USE W/ TESLA CM
*** DIRECT BURIAL CABLE TO TRANSITION IN/OUT OF SUPERCHARGER CABINET AND CHARGE POST THROUGH 4"Ø SLEEVE
**** 1000V V4 COMM WIRE TO BE ROUTED W/IN 4" CONDUIT. 1.25" DURALINE CONDUIT CAN BE INSTALLED FOR LONG RUNS (+200 FT)

BREAKER TRIP SETTINGS

600A (80%) SUPERCHARGER BREAKER: (EATON PDG33G0600TFAN)	600A (80%) SUPERCHARGER BREAKER: (SQUARE-D LJL36600U31XYP)
LONG TIME PICK UP (I _r) = FIXED 600A INSTANTANEOUS = 5	LONG TIME PICK UP (I _r) = FIXED 600A INSTANTANEOUS = 9
600A (80%) SUPERCHARGER BREAKER: (EATON LGH3600FAG)	600A (80%) SUPERCHARGER BREAKER: (SQUARE-D LJL36600U31XYP)
LONG TIME PICK UP (I _r) = FIXED 600A INSTANTANEOUS = 10	LONG TIME PICK UP (I _r) = FIXED 600A LONG DELAY TIME (I _{tr}) = 0.5 INSTANTANEOUS = 5
600A (80%) SUPERCHARGER BREAKER: (ABB XT5HU360BFF000XXX)	NOTE: 1. CONTRACTOR TO CONFIRM BREAKER MODEL AND CORRECT BREAKER SETTINGS AT TIME OF INSTALLATION
LONG TIME PICK UP (I _r) = FIXED 600A INSTANTANEOUS = MED	

UTILITY S.O.W. RESPONSIBILITIES

SCOPE OF WORK	BY UTILITY	BY CONTRACTOR
PROVIDE & INSTALL PRIMARY CONDUCTORS	X	
PROVIDE & INSTALL PRIMARY CONDUITS		X
PROVIDE & INSTALL UTILITY TRANSFORMER	X	
INSTALL UTILITY TRANSFORMER PAD & ASSOCIATED GROUNDING	X	
INSTALL SECONDARY CONDUITS (TO LINE SIDE OF CT CABINET)		X
PROVIDE SECONDARY CONDUITS		X
PROVIDE & INSTALL SECONDARY CONDUCTORS (TO LINE SIDE OF CT CABINET)	X	
PROVIDE UTILITY CT CABINET W/ CTS & METER SOCKET	X	
INSTALL H-FRAME MOUNTED UTILITY CT CABINET & METER SOCKET		X
TERMINATE SECONDARY CONDUCTORS W/IN CT CABINET	X	
INSTALL UTILITY METER W/IN SOCKET	X	



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NOT FOR
CONSTRUCTION

DRAWN BY: FG

CHECKED BY: DER

APPROVED BY: JY

PROJECT #: 50123704

JOB #: 50181141

SUBMITTALS

REV.	DATE	DESCRIPTION
A	03/07/25	ISSUED FOR 90% REVIEW

SITE NAME:

WAWA # 8648 - RICHMOND, VA
(TRT ID: 26853)

SITE ADDRESS:

3100 NORTH ARTHUR ASHE BLVD.
RICHMOND, VA 23230

SHEET TITLE

ELECTRICAL
ONE-LINE DIAGRAM

SHEET NUMBER

E-3

LOAD CALCULATION	
SUPERCHARGER CABINET #1 SERVICE DISCONNECT:	387 KVA
SUPERCHARGER CABINET #2 SERVICE DISCONNECT W/ INTEGRATED SITE CONTROLLER:	388 KVA
TOTAL: 775 KVA = 932.61A @ 277/480V, 3Ø, 4W	

TOTAL KVA	968.75 KVA	***125% CONTINUOUS LOAD CALCULATION
TOTAL CURRENT	1165.76 A	
*** THE SUM OF THE TOTAL CONNECTED LOADS (NONCONTINUOUS LOAD PLUS THE CONTINUOUS LOAD) TERMINATE IN AN OVERCURRENT DEVICE WHERE BOTH, THE OVERCURRENT DEVICE AND ITS ASSEMBLY ARE LISTED FOR OPERATION AT 100% OF THEIR RATING.		
1. OCPD FOR CHARGING CABINETS ARE CALCULATED AS FOLLOWS:		
465A AC INPUT TO CABINET X 1.25 = 581.25A ==> 600A BREAKER UTILIZED		

SECONDARY SERVICE LENGTHS		
	LINEAR LENGTH	ESTIMATED LENGTH*
TRANSFORMER TO CT CABINET	5'	30'
TOTAL LENGTH OF AC AL WIRE**:		120'
NUMBER OF WIRE SETS:		2
TOTAL LENGTH OF AL WIRE***:		240'
NOTES:		
1. SEE SHEET E-2 FOR WIRE CONFIGURATION.		
* AC CONDUCTORS: 25 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH & TRANSITIONS.		
** ESTIMATED LENGTH OF AL WIRE = SUM OF ESTIMATED LENGTH X 4 WIRES PER SET		
*** LENGTH OF AL WIRE PER DISCONNECT = ESTIMATED TOTAL LENGTH OF AL WIRE X # WIRE SETS		

AC SUPERCHARGER LENGTHS		
SUPERCHARGER	LINEAR LENGTH CT CABINET TO SUPERCHARGER	ESTIMATED LENGTH*
1	68'	93'
LENGTH OF AC AL WIRE PER CONDUIT**:		372'
TOTAL NUMBER OF CONDUITS:		2
LENGTH OF AC AL WIRE ***:		744'
2	76'	101'
LENGTH OF AC AL WIRE PER CONDUIT**:		404'
TOTAL NUMBER OF CONDUITS:		2
LENGTH OF AC AL WIRE***:		808'
TOTAL LENGTH OF AC AL WIRE****:		1552'
TOTAL LENGTH OF EGC*****:		288
NOTES:		
* AC CONDUCTORS: 25 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH & TRANSITIONS.		
** ESTIMATED LENGTH OF AL WIRE = SUM OF ESTIMATED LENGTH X 4 WIRES PER SUPERCHARGER		
*** LENGTH = LENGTH OF AC AL WIRE PER CONDUIT X # OF CONDUITS		
**** TOTAL LENGTH = SUM OF AC LENGTHS		
***** TOTAL LENGTH OF EGC = LENGTH X # SETS		

DC CHARGING POST LENGTHS			
SUPERCHARGER	CHARGE POST	LINEAR LENGTH	ESTIMATED DC WIRE LENGTH*
1	1A	21'	43'
	1B	30'	52'
	1C	39'	61'
	1D	48'	70'
2	2A	57'	79'
	2B	66'	88'
	2C	75'	97'
	2D	152'	174'
CONDUIT LENGTH:			664'
TOTAL CONDUCTOR LENGTH**:			2656'
TOTAL LENGTH OF EGC & COMM CABLE:			664'
NOTES:			
1. ANY DC RUN OVER 340' SHALL BE BROUGHT TO THE ATTENTION OF TESLA CM.			
* 22 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH & TRANSITIONS.			
** ESTIMATED LENGTH OF DC AL WIRE = SUM OF ESTIMATED LENGTH X 4 WIRES PER SUPERCHARGER			

CONDUCTOR LENGTH TABLES

SCALE: N.T.S.

2



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PROJECT #: 50123704

JOB #: 50181141

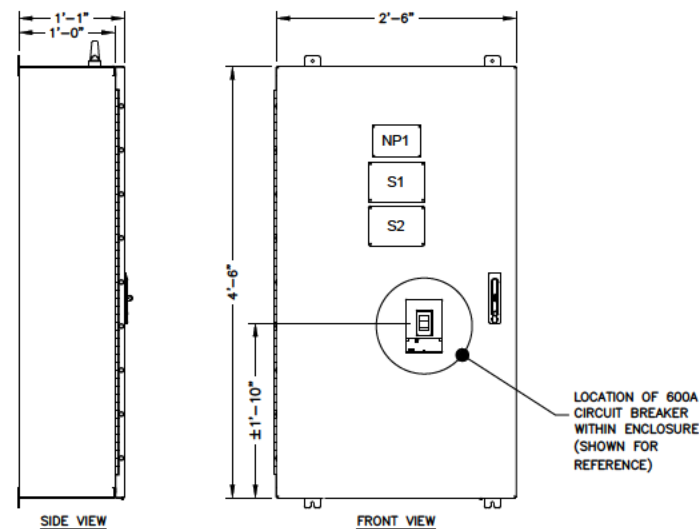
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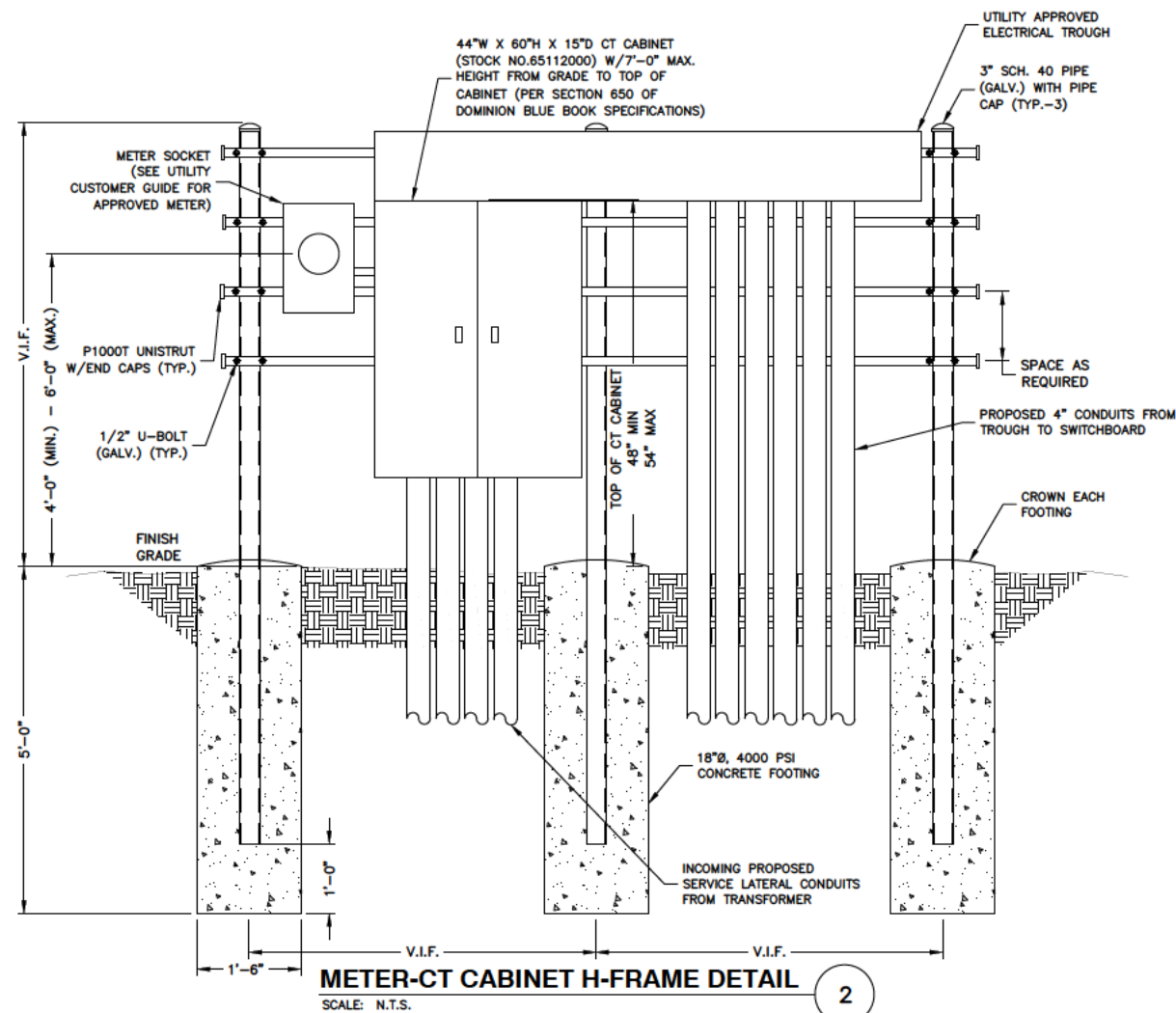
SHEET TITLE
ELECTRICAL & UTILITY
DETAILS I

SHEET NUMBER
E-4

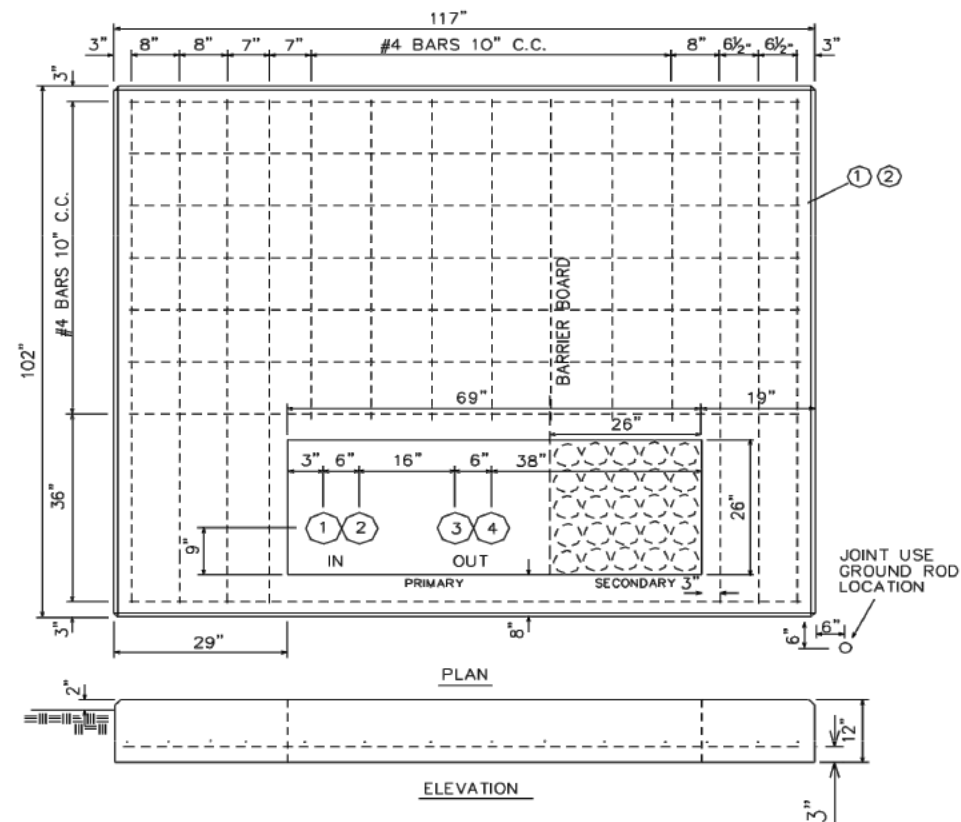


ENCLOSED BREAKER
600A/3P, 480/277V
65KA SHORT CIRCUIT RATING
INCOMING - BOTTOM FEED
NEMA 3R - UL LISTED ENCLOSURE
PAINTED WHITE

EVLITE/ EVLITE+ SERVICE DISCONNECT 1
SCALE: N.T.S.



METER-CT CABINET H-FRAME DETAIL 2
SCALE: N.T.S.



- NOTES:
1. CONCRETE SHALL HAVE A MINIMUM ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 psi OR 4500 psi IF PRECAST. (2 3/4 CU YDS.)
 2. PADS SHALL BE POURED TO 2" ABOVE GRADE. GROUT SHALL NOT BE SUBSTITUTED FOR CONCRETE MIX.
 3. ALL EDGES OF CONCRETE EXPOSED ABOVE GROUND SHALL HAVE 1" CHAMFER.
 4. PADS SHALL BE REINFORCED WITH #4 RODS (165').
 5. ANY DISTURBED EARTH OR FILL SHALL BE COMPACTED PRIOR TO INSTALLING PAD.
 6. GROUT INSIDE OF CABINET AROUND BASE TO MAKE IT TAMPER PROOF.
 7. THIS PAD WILL FIT MOST 1000, 1500, 2000, AND 2500 KVA TRANSFORMERS BUILT SINCE 1977 AND OLDER 1000 KVA TRANSFORMERS.
 8. A MAXIMUM OF 25 - 4" SECONDARY CONDUITS MAY BE INSTALLED IN THIS PAD.
 9. ALL 3 PHASE CABLES MUST BE INSTALLED IN THE SAME CONDUIT; OUTSIDE CONDUIT (POSITIONS 1 & 4) PREFERRED.

TRANSFORMER PAD DETAIL 3
SCALE: N.T.S.



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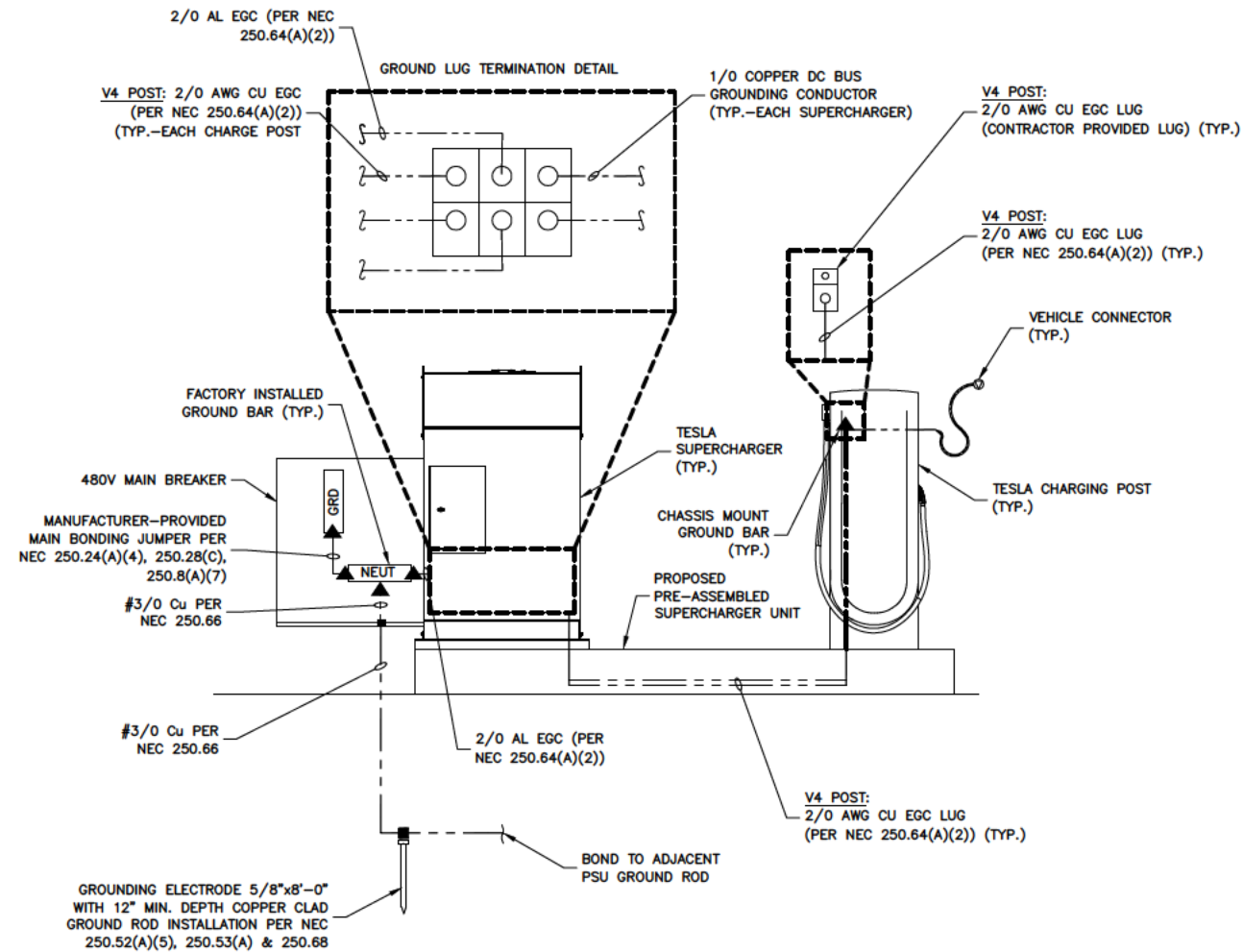
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REV.	DATE	DESCRIPTION
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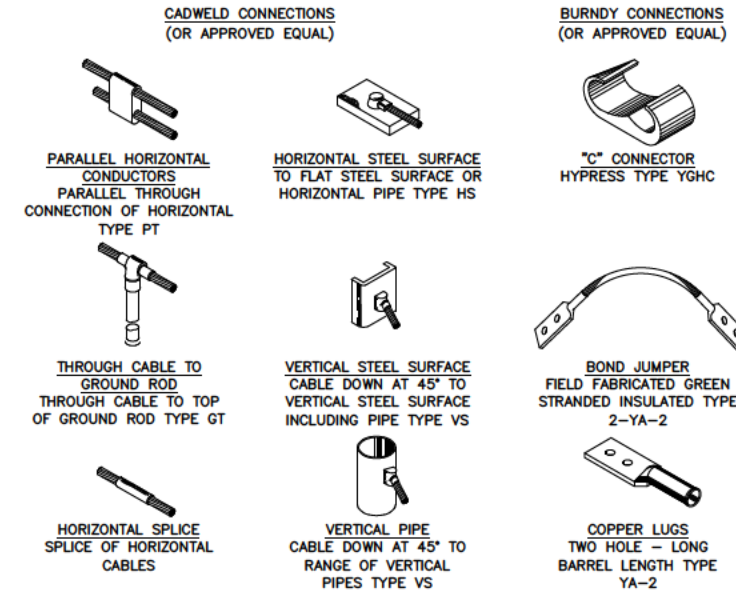
SHEET TITLE
ELECTRICAL & UTILITY
DETAILS II

SHEET NUMBER
E-5



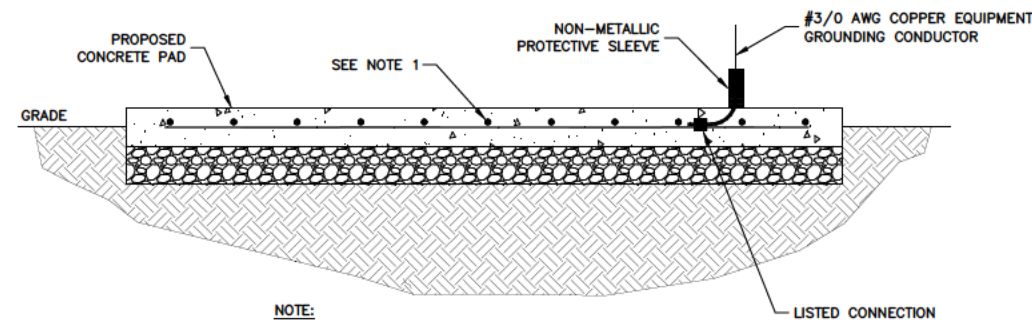
GROUNDING SCHEMATIC
SCALE: N.T.S.

1



GROUND CONNECTION DETAILS
SCALE: N.T.S.

2



CONCRETE ENCASED ELECTRODE DETAIL
SCALE: N.T.S.

3



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SHEET TITLE

GROUNDING
SCHEMATIC & DETAILS

SHEET NUMBER

G-1