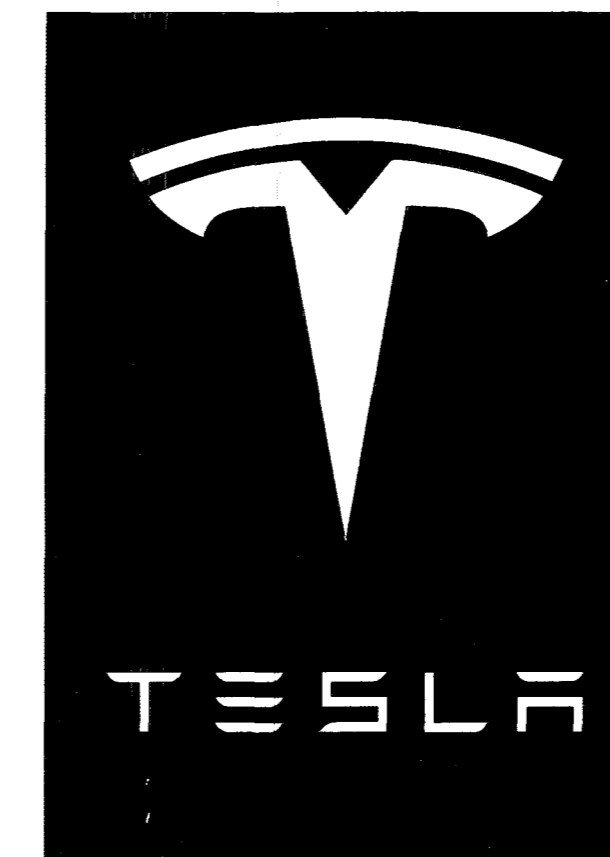


# TESLA

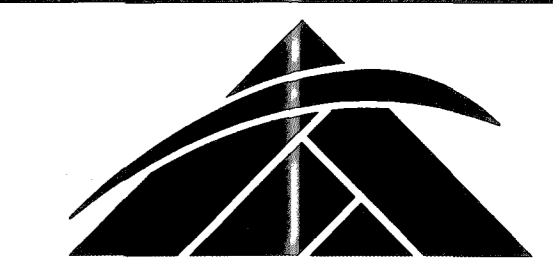
## CHARGING STATION 465 MAPLE AVE. (TESLA STATION) VIENNA, VA 22180



PLANS REVIEWED BY ELECTRICAL  
PLAN REVIEW AS NOTED:  
 APPROVED  
 APPROVED FOR BUILDING PERMIT ONLY  
 REVISIONS APPROVED  
DATE: 8/7/19 BY: LY



3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-8000



**GPD GROUP, INC.**

520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER: 2019141.07

DRAWN BY: HD

CHECKED BY: RPI/EM

INSTALLATION MANAGER: JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH

COMMONWEALTH OF VIRGINIA  
LEONARDO A. SFERRA  
Lic. No. 402056147  
PROFESSIONAL ENGINEER  
07/22/19  
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
TITLE SHEET &  
PROJECT DATA

SHEET NUMBER  
T-1

### SITE INFORMATION

ADDRESS:  
465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

LATITUDE (NAD83)  
N 38°53'43.41"  
38.8953616

POWER COMPANY:  
DOMINION ENERGY  
CONTACT: DUNCAN COCKERILL  
(703) 934-2594

LONGITUDE (NAD83)  
W 77°16'27.38"  
-77.2742721

PROPERTY OWNER:  
WAWA  
CONTACT: VINCENT CIPOLLONE  
(610) 306-5462

PERMITTING JURISDICTION:  
FAIRFAX COUNTY BUILDING PERMITS  
12055 GOVERNMENT CENTER PKWY,  
FAIRFAX, VA 22035  
CONTACT: TBD  
(703) 222-0801

EQUIPMENT SUPPLIER:  
TESLA, INC.  
6900 DUMBARTON CIRCLE  
FREMONT, CA 94555  
(650) 681-5000

COUNTY:  
FAIRFAX

GPD GROUP, INC. CONTACTS:

PROJECT MANAGER:  
ZACHERY SHEETS, PE - OH# 77870  
(330)572-2148  
ZSHEETS@GPDGROUP.COM

PROJECT COORDINATOR:  
TROY EVELSLAGE, PE - IN# PE11500164  
(317) 295-3179  
TEVESLAGE@GPDGROUP.COM

UTILITY COORDINATOR:  
BRIAN GUTHRIDGE  
(330) 572-2249  
BGUTHRIDGE@GPDGROUP.COM

PERMIT COORDINATOR:  
SARAH HONEYCUTT  
(330) 572-3508  
SHONEYCUTT@GPDGROUP.COM

MISS UTILITY  
SERVING DELAWARE, MARYLAND, NORTHERN  
VIRGINIA, AND WASHINGTON, D.C.

THREE FULL WORKING DAYS BEFORE YOU DIG,  
CALL THE MISS DIG SYSTEM AT  
1-(800)-257-7777

THE MISS UTILITY MEMBER UTILITIES WILL MARK  
THE APPROXIMATE LOCATION OF THEIR  
UNDERGROUND PUBLIC UTILITY LINES AT NO  
CHARGE.

### APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:  
2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (2015 IBC w/ AMENDMENTS)  
2014 NATIONAL ELECTRICAL CODE  
IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

#### DESIGN CRITERIA:

WIND SPEED = 115 MPH 3-SECOND GUST, ULTIMATE  
EXPOSURE = C  
CATEGORY = II  
FROST DEPTH = 30"

### PROJECT DESCRIPTION

- INSTALL (2) 430KW TESLA CHARGING CABINETS
- INSTALL (8) 250KW TESLA CHARGING POSTS
- INSTALL (3) SERVICE ENTRANCE DISCONNECTS
- INSTALL (1) UTILITY TRANSFORMER
- INSTALL (1) MASTER CONTROLLER

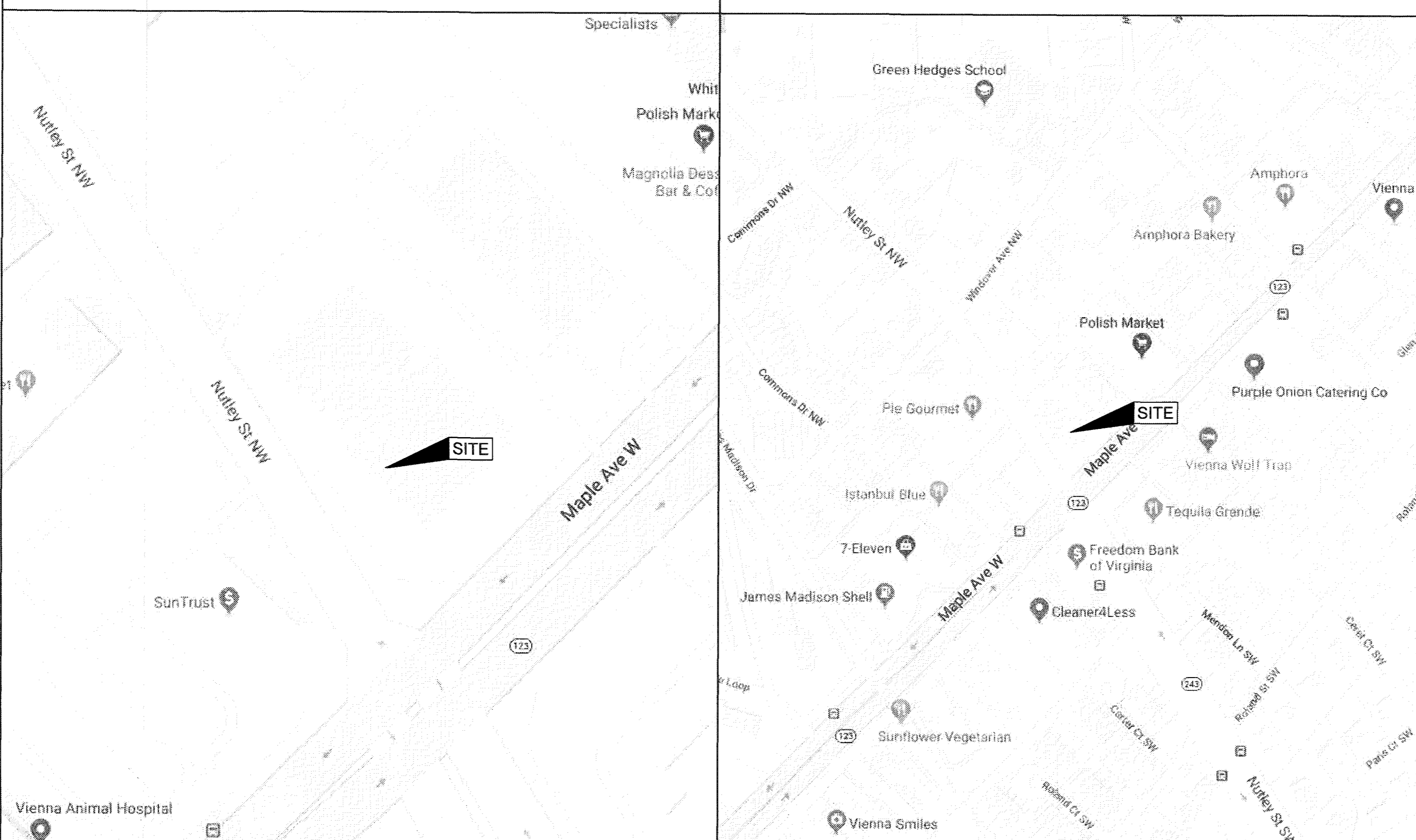
FAIRFAX COUNTY  
REVIEWED  
JUL 30 2019  
LIFE SAFETY/VAULTING  
BUILDING DIVISION

COUNTY OF FAIRFAX, VIRGINIA  
FAST TRACK PLAN REVIEW

These plans are approved for permit issuance subject to corrections noted herein. Approval does not prevent county inspectors from requiring further corrections in the field.

Building  Approved  Conditional Approval  N/A

### LOCATION MAP



Construction type IB Group(s) U Code year 2015  
Permit # 191690390 Reviewer DH2

VICINITY MAP

### DRAWING INDEX

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GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
--	TOPOGRAPHIC SURVEY (BY OTHERS)
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C-2	DEMOLITION PLAN
C-3	SITE PLAN
C-5	EQUIPMENT DIMENSION PLAN
C-6	CIVIL DETAILS
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ELECTRICAL	SHEET TITLE
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### FLOOD HAZARD AREA NOTE

THE SITE IS LOCATED IN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER FLOOD INSURANCE MAP NUMBER 51059C0145E, EFFECTIVE DATE - 09/17/2010.

### BEFORE SCALING & PLAN REPRODUCTION WARNING

CONTRACTORS SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND FIELD CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

**GENERAL CONSTRUCTION NOTES**

- FOR THE PURPOSE CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:  
GENERAL CONTRACTOR: TBD  
CONTRACTOR: TBD  
OWNER: TESLA
- THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE BASED ON EXISTING FILES PROVIDED BY WAWA. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS/HER WORK FORCE.
- ALL DIMENSIONS, GRADES, AND UTILITY LOCATIONS SHOWN ON THESE PLANS WERE BASED ON EXISTING FILES PROVIDED BY WAWA. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION/PROJECT MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- THE GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD DOCUMENTS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUES ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTION CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATION ON THE DRAWINGS.
- 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 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 JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
- THE GENERAL CONTRACTOR 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.
- THE GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
- CONSTRUCTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE.
- WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- 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.
- 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.
- 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 CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. THE 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.
- ONLY ITEMS SPECIFICALLY CALLED OUT TO BE REMOVED OR DEMOLISHED SHALL BE AFFECTED. ANY ITEMS INCLUDING, BUT NOT LIMITED TO, CURBS, PAVEMENT, UTILITY ITEMS, LANDSCAPING, ETC. SHALL REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY AFFECTED ITEMS AT OWNERS DISCRETION.
  - 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 OWNER AND/OR LOCAL UTILITIES.
  - THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
  - CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
  - 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.
  - THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
  - ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
  - ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
  - THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
  - THE CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
  - 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 FOR SERVICE EQUIPMENT). HANDICAP ACCESS MAY BE REQUIRED FOR CHARGING POSTS. SEE PLAN.
  - NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
  - CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
  - THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
  - INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

	SIGN ON POST		CURB
	SIGN ON POST IN BOLLARD		CURB AND GUTTER
	LIGHT POLE		TRANSVERSE STRIPING
	METER		PROPOSED CONCRETE
	CHARGING POST		PROPOSED ASPHALT
	CHARGING CABINET		PROPOSED RIVER ROCK
			WATER MAIN
			WATER LINE
			IRRIGATION LINE
			GAS LINE
			STORM LINE
			SANITARY LINE
			ELECTRIC MAIN
			ELECTRIC LINE
			LIGHT POLE CONDUIT
	UTILITY METER, CT CABINET, SERVICE ENTRANCE DISCONNECTS, & MASTER CONTROLLER MOUNTED TO H-FRAME		

	PROPERTY LINE		CATCH BASIN
	RIGHT OF WAY		CURB INLET
	CENTERLINE		STORM MANHOLE
	WATER MAIN		SANITARY MANHOLE
	WATER LINE		UNKNOWN MANHOLE
	IRRIGATION LINE		SANITARY VALVE
	GAS LINE		SEPTIC TANK
	STORM LINE		FIRE HYDRANT
	SANITARY LINE		WATER METER
	OVERHEAD ELECTRIC		WATER VALVE
	ELECTRIC MAIN		SPRINKLER HEAD
	ELECTRIC LINE		WATER MANHOLE
	LIGHT POLE CONDUIT		GAS VALVE
	EXISTING BUILDING		GAS METER
	LIGHT POLE		GAS MANHOLE
	POWER POLE		GAS SERVICE METER
	POWER/TELEPHONE POLE		TELEPHONE PEDESTAL
	LIGHT/TELEPHONE POLE		TELEPHONE MANHOLE
	TELEPHONE POLE		CABLE TV PEDESTAL
	POWER/LIGHT POLE		BOLLARD
	POWER/LIGHT/TELE POLE		SIGN
	UNKNOWN POLE		LUMINESCENT SIGN
	ELECTRIC METER		CLEANOUT
	ELECTRIC MANHOLE		YARD LIGHT
	TRANSFORMER		FLAG POLE
	ELECTRIC PULLBOX		GAS PUMP
			MAIL BOX

- TRAFFIC CONTROL NOTES**
- DURING THE CONSTRUCTION PERIOD, SIDEWALKS, SHOULDERS, TRAVEL LANE(S), OR STREETS MAY HAVE TO BE TEMPORARILY CLOSED OR RESTRICTED FOR THE UNLOADING / LOADING OF EQUIPMENT OR AS A RESULT OF CONSTRUCTION ACTIVITIES THEMSELVES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE DIRECTLY WITH THE LOCAL GOVERNING AUTHORITIES ON ANY SUCH CLOSURES AND MUST OBTAIN WRITTEN PERMISSION FROM THE APPROPRIATE AUTHORITIES PRIOR TO IMPLEMENTING SUCH CLOSURES OR RESTRICTIONS. ANY CLOSURE OR RESTRICTION MUST COMPLY WITH THE STATE MANUAL OF UNIFORM CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION AND REVISION), AND WITH ANY AND ALL ADDITIONAL APPLICABLE CITY, VILLAGE, OR COUNTY REQUIREMENTS. THE CONTRACTOR SHALL PREPARE AND SUBMIT A FORMAL TRAFFIC CONTROL / MOT PLAN TO THE LOCAL GOVERNING AUTHORITIES IF REQUESTED. ALL REQUIRED CONSTRUCTION TRAFFIC MAINTENANCE DEVICES SHALL BE PROVIDED, ERECTED AND MAINTAINED, AND ULTIMATELY REMOVED BY THE CONTRACTOR.
  - THE CONTRACTOR SHALL MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES AND INTERSECTING STREET AT ALL TIMES DURING THE CONSTRUCTION OF THE IMPROVEMENTS ANTICIPATED. DRIVEWAYS MUST BE MAINTAINED AND ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH WORK DAY. PER THE STATE MUTCD AND OTHER APPLICABLE APPROPRIATE GOVERNING REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, SATISFACTORY BARRIERS, CONES, SIGNAGE, BARRELS, MESSAGE BOARDS, LIGHTING, FLAGMEN, LAW ENFORCEMENT OFFICERS, ETC. TO AVOID DAMAGE AND / OR INJURY TO VEHICLES AND PERSONS TRAVERSING THE CONSTRUCTION AREA.

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

520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

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465 MAPLE AVE.  
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VIENNA, VA 22180

SHEET TITLE  
GENERAL NOTES

SHEET NUMBER  
GN-1

**GENERAL SITE WORK NOTES CONTINUED**

**PART 1 - GENERAL**

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE PROPOSED WORK SHOWN IN THESE PLANS.

**1.1 REFERENCES:**

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

**1.2 INSPECTION AND TESTING:**

- A. FIELD TESTING OF EARTHWORK COMPACTION AND CONCRETE CYLINDERS SHALL BE PERFORMED BY AN INDEPENDENT TESTING LAB. THIS WORK TO BE COORDINATED BY THE CONTRACTOR.
- B. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR 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 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 TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
- C. KEEP SITE FREE OF ALL PONDING WATER.
- D. PROVIDE EROSION CONTROL MEASURES 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. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE CONSTRUCTION MANAGER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.
- G. PROVIDE A MINIMUM 48-HOUR NOTICE TO THE CONSTRUCTION MANAGER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

**PART 2 - PRODUCTS**

- 2.1 GRANULAR BACKFILL: SHALL MEET THE FOLLOWING GRADATION:
- 2.2 GRANULAR BEDDING AND TRENCH BACKFILL: WELL-GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SE OR SW-SM).
- 2.3 UNSUITABLE MATERIAL: HIGH AND MODERATELY PLASTIC SILTS AND CLAYS (LL>45); MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND DEBRIS AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICAL THESE WILL BE SOILS CLASSIFIED BY ASTM AS PT, MH, CH, OH, ML, AND OL.

SIEVE SIZE	TOTAL PERCENT PASSING
1 1/2 INCH (37.5 MM)	100
1 INCH (25.0 MM)	75 TO 100
3/4 INCH (19.00 MM)	80 TO 100
3/8 INCH (9.5 MM)	35 TO 75
NO. 4 (4.75 MM)	30 TO 60
NO. 30 (0.600 MM)	7 TO 30
NO. 200 (0.75 MM)	3 TO 15

**PART 3 - EXECUTION**

**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 RAIN THE SITE WILL BE DRAINED AT ALL TIMES.
- 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 OTHER UNDESIRABLE MATERIALS.

- F. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.
- G. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.
- H. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- I. SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
- J. DURING EXCAVATION, THE CONTRACTOR SHALL PROVIDE SHORING, SHEETING, AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF EXCAVATION.
- K. THE BASE OF ALL FOUNDATION EXCAVATIONS SHOULD BE FREE OF WATER AND LOOSE SOIL PRIOR TO PLACING CONCRETE. CONCRETE SHOULD BE PLACED AS SOON AS POSSIBLE AFTER EXCAVATING TO MINIMIZE BEARING SOIL DISTURBANCE. SHOULD THE SOILS AT BEARING LEVEL BECOME EXCESSIVELY DRY, SATURATED, DISTURBED OR OTHERWISE ALTERED, THE AFFECTED SOIL SHOULD BE REMOVED PRIOR TO PLACING CONCRETE.

**3.2 BACKFILL:**

- 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 APPROVED 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. DO NOT PLACE FROZEN MATERIAL IN AS BACKFILL.
- D. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8-INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.
- E. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR 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 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.
- F. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

**3.3 TRENCH EXCAVATION:**

- A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.
- B. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.
- C. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, CONTACT ENGINEER IMMEDIATELY.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6-INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.
- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8-INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

**3.4 TRENCH BACKFILL:**

- A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
- B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
- C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6-INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.
- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8-INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

**3.5 FINISH GRADING:**

- 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 BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.
- B. UTILIZE SATISFACTORY FILL MATERIAL 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 CONDITION.
- D. CONTRACTOR TO GRADE SITE TO DRAIN AND NOT POND WATER.
- 3.6 ASPHALT PAVING:
  - A. CONTRACTOR RESPONSIBLE FOR RE-STRIPING AND APPLYING SEALCOATING PER LOCAL DOT SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED.


**SIGN POST NOTES**

- 1. ACCEPTABLE COLOR SUBSTITUTIONS:
- 2. OTHER ACCEPTABLE COLORS CAN BE FOUND ON ENCYCOLORPEDIA.COM
- 3. CONTRACTOR SHALL COORDINATE WITH CITY WHEN SPECIAL JURISDICTIONAL/CITY REQUESTS ARE NECESSARY FOR ANY SIGN POST INSTALLATIONS, I.E. POST MATERIAL, PAINT COLORS, HARDWARE, ETC. CONTRACTOR IS RESPONSIBLE FOR ENSURING CITY APPROVES ALL MATERIALS PRIOR TO INSTALLATION.

PAINT COLOR SUBSTITUTIONS	
BRAND	COLOR
PANTONE	COOL GRAY #7 #a6a19e
BENJAMIN MOORE	FUSION / Af-675 #a6a3a1
BEHR	EQUINOX FF31-1 #9fa29d
SHERWIN - WILLIAMS	STAMPED CONCRETE - 7655 #a2a29b
VALSPAR	STONE MASON GRAY #a19c99

**LANDSCAPE/IRRIGATION NOTES**

- 1. ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED OR MULCHED SHALL BE GRADED TO MATCH EXISTING CONDITIONS AND SODDED AT A 3:1 MAXIMUM SLOPE.
- 2. SOD SHALL BE SELECTED PER ZONE AND MATCHED TO EXISTING SITE. SOD SHALL BE A FIRST GRADE CERTIFIED BLEND CONTAINING NO MORE THAN 30 PERCENT OF OTHER GRASSES AND CLOVERS, AND FREE FROM ALL NOXIOUS WEEDS.
  - ZONES 3, 4 & 5: APPROVED BLUE GRASS BLEND
  - ZONE 6: APPROVED FESCUE BLEND
  - ZONES 7 & 8: APPROVED BERMUDA BLEND
  - ZONES 9 & 10: APPROVED ST AUGUSTINE FLORATAM BLEND
- 3. ALL DISTURBED AND PROPOSED LANDSCAPE AREAS SHALL RECEIVE 3" OF PINE STRAW MULCH TO MATCH EXISTING CONDITIONS.
- 4. PLANT GUARANTEE (IF APPLICABLE): CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF PROJECT ACCEPTANCE BY THE OWNER.
- 5. IRRIGATION RELOCATION: CONTRACTOR FIELD VERIFY IF EXISTING IRRIGATION IS PRESENT, DETERMINE POINT OF CONNECTION, SYSTEM PRESSURE, FIXTURE TYPES, AND POTENTIAL FOR EXPANSION. IF FOUND THAT THE EXISTING IRRIGATION SYSTEM IS CAPABLE OF EXPANSION AND REUSE THAN IT SHALL BE MODIFIED TO PROVIDE 100% COVERAGE OF THE LANDSCAPE AREA. IF THE EXISTING IRRIGATION SYSTEM IS NOT CAPABLE OF EXPANSION, CONTRACTOR TO INSTALL A NEW CONTROLLER, BOOSTER PUMP, AND OTHER APPARATUSES NEEDED FOR A COMPLETE IRRIGATION SYSTEM. IRRIGATED AREAS SHALL BE IRRIGATED BY DRIP IRRIGATION OR SIMILAR FIXTURES BY THE SAME SUPPLIER. CONTRACTOR SHALL ENSURE BUILDING WALLS AND WINDOWS WILL NOT BE DAMAGED OR STAINED BY IMPROPER IRRIGATION INSTALLATION OR POOR SELECTION OF FIXTURES. SYSTEM SHALL INCLUDE ALL SPRINKLER FIXTURES, DRIP TUBING, PIPING, VALVES, WIRING AND CONTROLS TO PROVIDE A COMPLETE FUNCTIONAL SYSTEM THAT SHALL COMPLY WITH CITY CODE. PRIOR TO UPDATING THE IRRIGATION SYSTEM, A CERTIFIED IRRIGATION DESIGNER SHALL PROVIDE SHOP DRAWINGS TO ENGINEER FOR APPROVAL. UPON APPROVAL OF SHOP DRAWINGS, THE UPDATED IRRIGATION SYSTEM SHALL BE APPROVED BY OWNER FOR FINAL ACCEPTANCE.



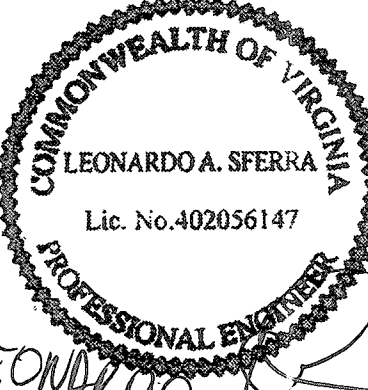
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GPD PROJECT NUMBER	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH



07/22/19

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
GENERAL NOTES

SHEET NUMBER  
GN-2

FAIRFAX COUNTY  
REVIEWED  
JUL 30 2019  
LIFE SAFETY/2019  
BUILDING DIVISION

**GOVERNING BUILDING CODE:**

GOVERNING BUILDING CODE: 2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (2015 IBC w/ AMENDMENTS)

**DESIGN LOADINGS:**

SNOW LOADS:  
GROUND SNOW LOAD (P<sub>s</sub>) 25 PSF

LATERAL LOAD DESIGN DATA:  
WIND DESIGN DATA (ASCE 7-10):

BASIC WIND SPEED (V<sub>br</sub>) 115 MPH  
BASIC WIND SPEED (V<sub>brd</sub>) 89 MPH  
IMPORTANCE FACTOR 1.0  
EXPOSURE CATEGORY C

SEISMIC DESIGN DATA (ASCE 7-10):

SEISMIC IMPORTANCE FACTOR (I) 1.0  
RISK CATEGORY II  
SITE CLASS D (ASSUMED)

MAPPED SPECTRAL RESPONSE

SHORT PERIODS (S<sub>s</sub>) 0.121  
1 SEC. PERIODS (S<sub>1</sub>) 0.052

SPECTRAL RESPONSE COEFF.

SHORT PERIODS (S<sub>0s</sub>) 0.129  
1 SEC. PERIODS (S<sub>01</sub>) 0.083

SEISMIC DESIGN CATEGORY B

**GENERAL PROVISIONS:**

TYPICAL DETAILS AND GENERAL NOTES APPLY TO ALL PARTS OF THE WORK EXCEPT WHERE SPECIFICALLY DETAILED OR UNLESS OTHERWISE NOTED.

DRAWINGS ARE NOT TO BE SCALED.

THE CONTRACTOR SHALL CAREFULLY REVIEW THE DRAWINGS TO IDENTIFY THE SCOPE OF WORK REQUIRED, VISIT THE SITE TO RELATE THE SCOPE OF WORK TO EXISTING CONDITIONS, AND DETERMINE THE EXTENT OF WHICH THOSE CONDITIONS AND PHYSICAL SURROUNDINGS WILL IMPACT THE WORK.

EXISTING CONDITIONS, AS SHOWN ON THESE PLANS, ARE FOR REFERENCE ONLY. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

THE CONTRACTOR SHALL ASSUME THE MOST STRINGENT REQUIREMENTS APPLY IN CASE OF CONFLICT AMONG SPECIFICATIONS, STANDARDS, CODES AND DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY TO RESOLVE THE CONFLICT.

ANY DEVIATION, MODIFICATION, OR SUBSTITUTION FROM THE BID SET OF STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW/APPROVAL PRIOR TO ITS USE OR INCLUSION ON THE SHOP DRAWINGS. WITHOUT SUCH PRIOR APPROVAL, DEVIATIONS, MODIFICATIONS, OR SUBSTITUTIONS WILL BE REJECTED. COSTS FOR DEMOLITION AND REWORK OF SUCH ITEMS WILL BE BORNE BY THE CONTRACTOR.

THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED FOR IN-SERVICE LOADS ONLY. THE MEANS, METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, WHICH INCLUDE THE DETERMINATION OF ALLOWABLE CONSTRUCTION LOADING OF THE STRUCTURE. THE CONTRACTOR SHALL PROVIDE, DESIGN, MONITOR, AND MAINTAIN ALL NECESSARY TEMPORARY AND PERMANENT SYSTEMS (SHORING, BRACING, GUYS, FALSEWORK, FORMWORK, SHEETING, ETC.) TO ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION. ANY SYSTEMS SHOWN ON THE DOCUMENTS ARE PARTIAL AND SCHEMATIC IN NATURE AND EXTENTS ARE NOT ALL INCLUSIVE. ALL WORK SHALL BE PERFORMED WITHOUT DAMAGE TO ADJACENT EXISTING WORK.

THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW THE STRUCTURAL CONTRACT DOCUMENTS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY CONFLICTS BETWEEN THOSE DOCUMENTS AND ANY SAFETY REGULATIONS. SUCH REVIEW AND NOTIFICATION SHALL OCCUR PRIOR TO PRODUCTION OF SHOP DRAWINGS.

THE CONTRACTOR SHALL PROTECT ALL WORK, MATERIALS, AND EQUIPMENT FROM DAMAGE AND SHALL PROVIDE PROPER STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING CONSTRUCTION.

SITE VISITS PERFORMED BY THE ARCHITECT/ENGINEER DO NOT INCLUDE INSPECTIONS OF MEANS AND METHODS OF CONSTRUCTION PERFORMED BY THE CONTRACTOR.

STRUCTURAL OBSERVATIONS PERFORMED BY THE ARCHITECT/ENGINEER DURING CONSTRUCTION ARE NOT THE CONTINUOUS AND SPECIAL INSPECTION SERVICES AND DO NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING DEPARTMENT INSPECTOR OR THE TESTING AGENCY. ALSO, OBSERVATIONS DO NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSIDERED AS SUPERVISION OF CONSTRUCTION.

NO STRUCTURAL ELEMENTS ARE TO BE CUT UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.

**FOUNDATION SYSTEMS:**

**GENERAL:**

THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL VERIFY ANY EXISTING FIELD CONDITION THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM.

THE CONTRACTOR SHALL EXERCISE GREAT CARE DURING EXCAVATION. UNDERGROUND UTILITY LOCATIONS, IF SHOWN, ARE APPROXIMATE. THE CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE SUPPORT OF UTILITIES ACROSS EXCAVATIONS.

SHEETING, SHORING, AND DEWATERING IS THE RESPONSIBILITY OF THE CONTRACTOR.

NO GEOTECHNICAL REPORT WAS PROVIDED AT THE TIME OF FOUNDATION DESIGN. A SOILS TESTING LABORATORY SHALL BE RETAINED BY THE OWNER TO PROVIDE CONSTRUCTION REVIEW TO ENSURE CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS DURING THE EXCAVATIONS, BACKFILL, AND FOUNDATION PHASES OF THE PROJECT.

**SPREAD/TRENCH FOOTINGS:**

DETERMINATION OF FINAL BEARING ELEVATIONS, TOPSOIL AND EXCAVATION STRIPPING DEPTH, INSPECTION OF ALL SUBSOIL EXPOSED DURING STRIPPING, SITE GRADING, EXCAVATION OPERATIONS, APPROVAL OF FILL MATERIALS, DENSITY TESTING OF FILLS TO ENSURE PLACEMENT PER SPECIFICATION REQUIREMENTS, INSPECTION OF FOUNDATION BEARING SURFACES, AND VERIFICATION OF ALLOWABLE BEARING PRESSURES ARE THE TESTING LABORATORY'S RESPONSIBILITY.

ALL FOUNDATIONS ARE TO REST ON FIRM UNDISTURBED SOIL OR COMPACTED FILL FREE FROM ORGANIC MATTER. IF POOR SOIL CONDITIONS ARE ENCOUNTERED AT FOUNDATION DEPTHS SHOWN, NOTIFY OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH CONSTRUCTION.

CONTRACTOR SHALL COMPACT SUBGRADE. SEE FROST/NO FROST DESIGN NOTES BELOW.

FOUNDATIONS HAVE BEEN DESIGNED BASED ON AN ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF.

NEW FOOTINGS PLACED ADJACENT TO EXISTING FOOTINGS SHALL BEAR AT THE SAME ELEVATION, UNLESS NOTED OTHERWISE.

STEP FOOTINGS AT A RATIO OF ONE (1) VERTICAL TO TWO (2) HORIZONTAL WITH A MAXIMUM VERTICAL STEP OF 2'-0" UNLESS NOTED OTHERWISE.

INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES, WHICH WILL RESULT IN DETERIORATION OF BEARING FORMATIONS, SHALL BE PREVENTED. FOOTINGS SHALL BE PLACED IMMEDIATELY FOLLOWING FOOTING EXCAVATIONS AND BEARING SURFACE INSPECTION.

UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.

GROUNDWATER ASSUMED TO BE BELOW EXCAVATION DEPTH. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION ON SITE, CONTRACTOR SHALL PROVIDE FOR ANY SITE DRAINAGE AND DE-WATERING REQUIRED.

CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING PUBLIC AND PRIVATE UTILITIES PRIOR TO EXCAVATION. IF NECESSARY, UTILITIES SHALL BE RELOCATED PRIOR TO FOUNDATION INSTALLATION.

**CHARGING CABINET PRE-FABRICATED ASSEMBLY FOUNDATION & ALL CHARGING POST FOUNDATIONS - FROST DESIGN NOTES (I.E. BOTTOM OF FOUNDATION ABOVE FROST LEVEL):**

CONCRETE FOUNDATIONS SHOULD BEAR DIRECTLY ON A PROPERLY COMPACTED FREE-DRAINING GRANULAR FILL CONSISTING OF NO. 57 STONE OR AN APPROVED EQUIVALENT.

GRANULAR FILL SHOULD EXTEND VERTICALLY TO THE MINIMUM RECOMMENDED REGIONAL FROST DEPTH AND Laterally 2/3D FROM THE FOUNDATION PERIMETER (EXCLUDING SIDE OF PERIMETER ADJACENT TO CURB). GRANULAR FILL SHOULD BE PLACED IN 8 INCH LOOSE LIFTS AND COMPACTED WITH A VIBRATORY COMPACTOR. THE COMPACTION EQUIPMENT SHOULD BE OPERATED OVER THE FULL WIDTH OF THE FOUNDATION UNDERCUT AREA UNTIL VISIBLE DEFORMATION OF THE BACKFILL CEASES. SEE SHEET T-1 FOR LOCAL FROST DEPTH.

GEOTEXTILE (FILTER FABRIC) SHOULD BE PLACED BETWEEN THE GRANULAR BACKFILL AND COHESIVE SOILS TO PRECLUDE THE INFILTRATION OF FINES.

**CHARGING CABINET PRE-FABRICATED ASSEMBLY FOUNDATION & ALL CHARGING POST FOUNDATIONS - NO FROST DESIGN NOTES (I.E. BOTTOM OF FOUNDATION BELOW FROST LEVEL):**

CONCRETE FOUNDATIONS SHOULD BE SUPPORTED ON A 6 INCH COMPACTED LAYER OF APPROVED FREE-DRAINING GRANULAR MATERIAL.

APPROVED MATERIAL SHOULD BE COMPACTED OVER THE FULL WIDTH OF THE INFILL AREA UNTIL VISIBLE DEFORMATION OF THE BACKFILL CEASES.

**SPECIAL INSPECTIONS:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND OVERSEEING OF ALL SPECIAL INSPECTIONS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. SPECIAL INSPECTIONS MUST BE COMPLETED PRIOR TO FINAL INSPECTION APPROVAL.

**EXISTING SLAB REINFORCEMENT INVESTIGATION/X-RAY:**

CONTRACTOR SHALL VERIFY POST TENSIONING AND REINFORCEMENT LOCATION IN EXISTING CONCRETE SLAB PRIOR TO DRILLING

**CONCRETE:**

**GENERAL:**

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301-10, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 302, 305 AND 306 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE LATEST ACI "MANUAL OF STANDARD PRACTICE FOR DETAIL REINFORCED CONCRETE STRUCTURES" UNLESS NOTED OTHERWISE.

SAFETY AND PERFORMANCE OF THE STRUCTURE ARE THE RESPONSIBILITY OF THE CONTRACTOR INSOFAR AS THEY ARE AFFECTED BY THE LOCATION AND DETAILS OF CONSTRUCTION JOINTS. SHOP DRAWINGS OF THE PROPOSED CONSTRUCTION JOINT LOCATIONS AND DETAILS ARE TO BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.

MAXIMUM SIZE OF AGGREGATE SHALL NOT EXCEED SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR 1/3 CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING. MAXIMUM SIZE MAY BE INCREASED TO 2/3 CLEAR DISTANCE PROVIDED WORKABILITY AND METHODS OF CONSOLIDATION SUCH AS VIBRATING WILL PREVENT HONEYCOMBS OR VOIDS.

ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS AS FOLLOWS:

ALL CONCRETE - 4000 PSI

ALL CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 6% (± 1%) AIR ENTRAINMENT.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

WELDED WIRE FABRIC REINFORCING SHALL CONFORM TO ASTM A1064 AND BE FURNISHED IN FLAT SHEETS AND INSTALLED ON CHAIRS OR PRECAST CONCRETE BLOCKS.

NO TACK WELDING OF REINFORCING IN THE FIELD IS PERMITTED.

PROVIDE CORNER BARS AT ALL LOCATIONS WHERE REINFORCEMENT CHANGES DIRECTION.

PROVIDE STRAIGHT AND DIAGONAL BARS AT EDGES OF ALL OPENINGS.

REINFORCING EMBEDMENT AND LAP SPLICES (INCHES) FOR 4000 PSI CONCRETE

BAR SIZE	ANCHORAGE	OTHER		TOP*	
		SPLICE	ANCHORAGE	SPLICE	
# 3	15	19	19	24	24
# 4	19	25	25	33	33
# 5	24	31	31	41	41
# 6	29	37	37	49	49

\* HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW BAR

NON-SHRINK GROUT SHALL MEET A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 6000 PSI.

**STRUCTURAL STEEL**

**GENERAL:**

MATERIAL PROPERTIES:

PLATE: ASTM A36 UNO  
PIPE: ASTM A53, TYPE E OR S, GRADE B  
TUBE: ASTM A500 GRADE B (F<sub>y</sub> = 46 KSI)

DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE 2010 AISC (360-10) SPECIFICATIONS.

ALL WELDING SHALL BE DONE USING E-70XX ELECTRODES IN ACCORDANCE WITH AWS D1.1 SPECIFICATIONS.

FIELD VERIFY ALL CONDITIONS AT AND CONNECTIONS TO THE EXISTING CONSTRUCTION BEFORE FABRICATION.

ALL EXPOSED STRUCTURAL STEEL, ANCHOR RODS AND BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A123.

UNLESS NOTED OTHERWISE ON THE DRAWING, ALL ANCHOR RODS SHALL CONFORM TO ASTM F1554 WITH HEAVY HEXAGONAL NUT.

SUBMIT FABRICATION AND ERECTION DRAWINGS SHOWING ALL DETAILS, CONNECTIONS, MATERIAL DESIGNATIONS, AND TOP STEEL ELEVATIONS FOR APPROVAL. THE SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL CONFORMANCE TO THE CONTRACT DRAWINGS. SUCH APPROVAL SHALL NOT RELIEVE THE FABRICATOR/CONTRACTOR OF THE RESPONSIBILITY FOR EITHER THE ACCURACY OF THE DETAILED DIMENSIONS IN THE SHOP AND ERECTION DRAWINGS OR THE GENERAL FIT-UP OF PARTS THAT ARE TO BE ASSEMBLED IN THE FIELD.



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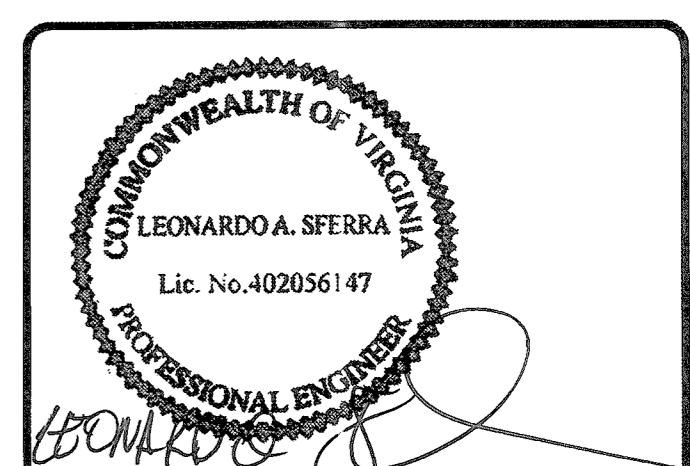
GPD PROJECT NUMBER: 2019141.07

DRAWN BY: HD

CHECKED BY: RPE/PM

INSTALLATION MANAGER: JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH



07/22/19

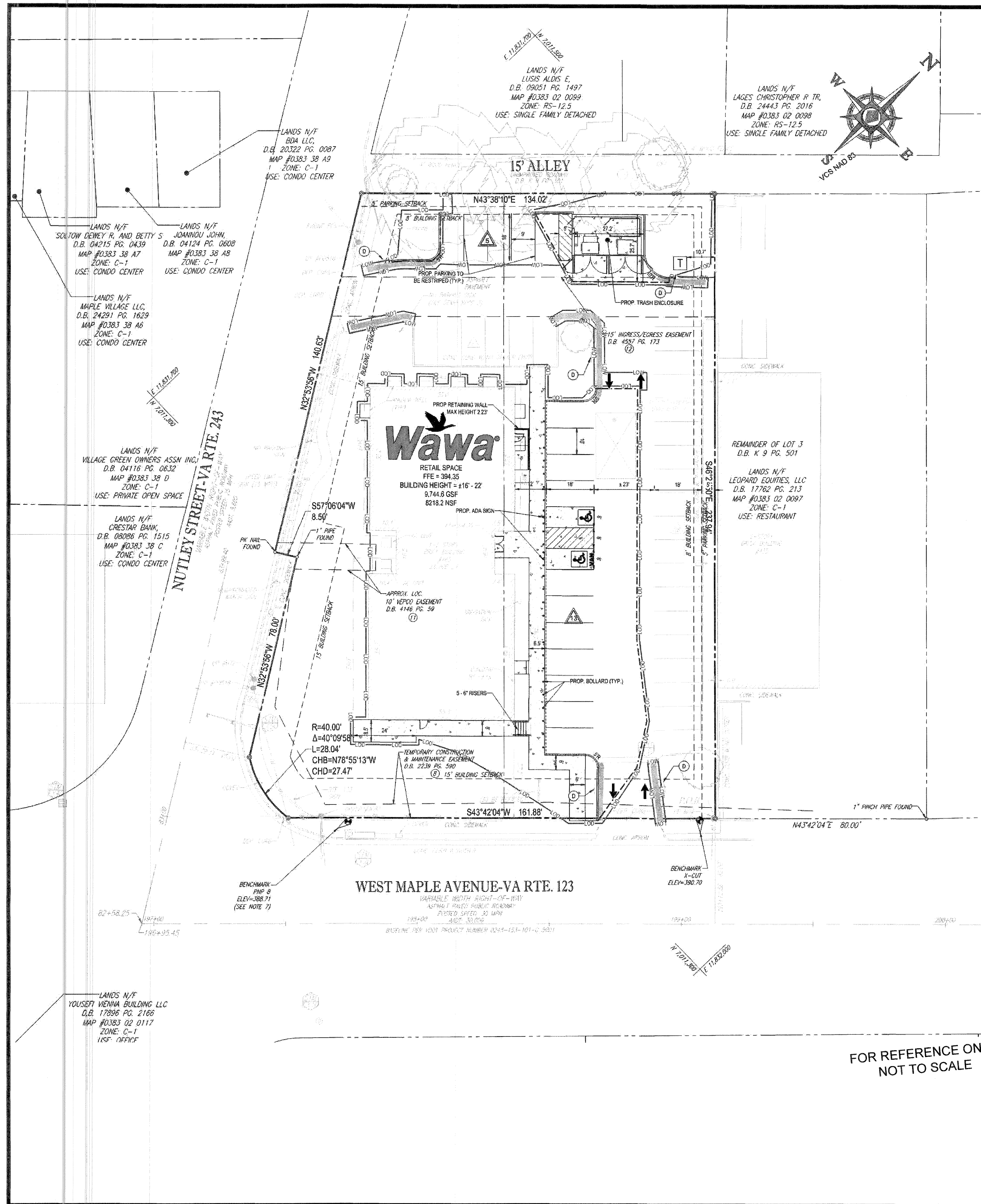
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465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
GENERAL NOTES

SHEET NUMBER  
GN-3





FOR REFERENCE ONLY  
NOT TO SCALE

**SITE PLAN NOTES**

1. THIS PLAN DOES NOT PROPOSE ANY CHANGES TO THE EXISTING LIGHTING FIXTURES. LIGHTING PLAN PER THE PREVIOUSLY APPROVED PLAN.

**LEGEND**

	LIMITS OF DISTURBANCE
	LIMITS OF WORK
	PROP. SAWCUT
	PROP. STANDARD CONCRETE
	PROP. HEAVY DUTY CONCRETE
	FIRE LANE (CURB TO BE PAINTED YELLOW)

**FIRE LANE DESIGNATIONS**

Under Section 505 of the Fairfax County Fire Prevention Code, the Office of the Fire Marshal is authorized to designate fire lanes on public streets and on private property where necessary. This is to prevent blocking in front of, or adjacent to, the hydrants and to provide access for fire-fighting equipment. Markings and signs are to be provided by the owner or agent of the property involved. Parking or otherwise obstructing areas across is prohibited.

**I. HYDRANTS**

A. Parking is prohibited within 10' of a fire hydrant located along the curb line or edge of any public or private roadway. No special curb marking is required for enforcement.

B. Fire hydrants installed in parking lots are to be located within a fire lane. Curb and/or roadway markings is required in accordance with Sections III and IV below.

**II. FIRE LANES**

A. Fire lanes shall be installed where required by the Office of the Fire Marshal. Fire lanes shall be marked with both signs and curb delineation per Section III and IV below. Parking and fire lane markings shall be required as follows:

Street Width	Parking	Fire Lane Markings
Up to 28 feet	No parking allowed on either side	Both sides marked as fire lanes
28 feet up to 30 feet	Permitted parking allowed on one side as determined by the fire code official	One side marked as a fire lane
30 feet and over	Permitted parking allowed on both sides	No fire lane markings required. Required access to public fire department apparatus access roads and similar areas shall be painted as fire lanes.

**III. SIGN SPECIFICATIONS**

A. Metal construction, 18" X 18"

B. Red letters on reflective white background with 6/8" red trim strip around entire outer edge of sign.

C. Lettering on sign to be: "NO PARKING ON STATUTORY FIRE LANE"

D. Lettering also to be as follows: "NO PARKING" and "STATUTORY FIRE LANE" in 1" "BOLD LANE" in 2 1/2" and the arrow with the solid right is 1" x 6" with the solid band 1 1/2" wide and 2" deep.

E. Signs are to be mounted 1" from the ground to the bottom of the sign unless otherwise directed by the Office of the Fire Marshal.

F. Post fire signs, when required, shall be metal and securely mounted, unless written permission for alternatives is obtained prior to installation from the Office of the Fire Marshal. Signs should be spaced as shown on approved plans. In long stretches, the maximum distance between signs is 100'.

G. Other special signs may be approved by the Office of the Fire Marshal.

**IV. CURB DESIGNATION**

A. All curbs or paved spaces designated as fire lanes shall be indicated by yellow paint as approved by the Office of the Fire Marshal. In areas without curbs, a 6" wide yellow strip shall be applied to the edge of the pavement. Paint shall be highway traffic grade.

**NOTES:** Fire lane markings, types of signs, locations, etc. shall be subject to the approval by Office of the Fire Marshal.

**Ref. Sec. 9-6008.2a(1)**

<b>FIRE LANES</b>	PLATE NO.	STD. NO.
	6-9	FH-7

Rev. 1-00, 2-07, 2011  
Reprint, 4-10

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**REVISIONS**

REV.	DATE	COMMENT	BY

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PROJECT NO.: S184507  
DRAWN BY: CDB  
CHECKED BY: TWO  
DATE: 12/27/18  
SCALE: 1"=20'  
CAD ID.: SSD

PROJECT: **PROP. MINOR SITE PLAN DOCUMENTS FOR Wawa**

LOCATION OF SITE  
465 MAPLE AVE W  
TA: MAP #0383-02-010  
TOWN OF VIENNA, VIRGINIA

**BOHLER ENGINEERING**

22638 DAVIS DRIVE, SUITE 250  
STERLING, VIRGINIA 20154  
Phone: (703) 709-9500  
Fax: (703) 709-9501  
VA@BohlerEng.com

SHEET TITLE:

**SITE / FIRE MARSHAL PLAN**

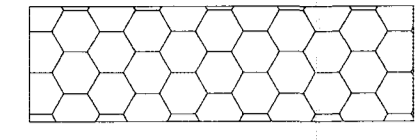
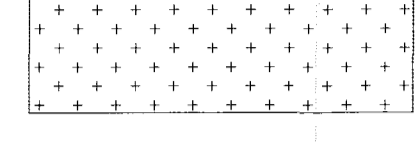
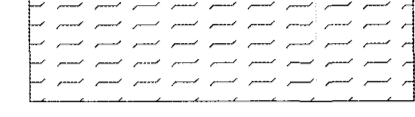
SHEET NUMBER:  
**C-300**


FAIRFAX COUNTY  
REVIEWED  
JUL 30 2019  
LIFE SAFETY/BLDG  
BUILDING DIVISION

NOTE:  
 "EXISTING CONDITIONS PLAN" IS CURRENTLY PROPOSED  
 UNDER SEPARATE PROJECT BY OTHERS AND IS  
 INDICATED AS "EXISTING" FOR TESLA CHARGING  
 STATION PROJECT.



EASEMENT LEGEND

-  EXISTING BUILDING SETBACK
-  EXISTING 15' INGRESS/EGRESS EASEMENT
-  EXISTING 10' VEPCO EASEMENT

**TESLA** 

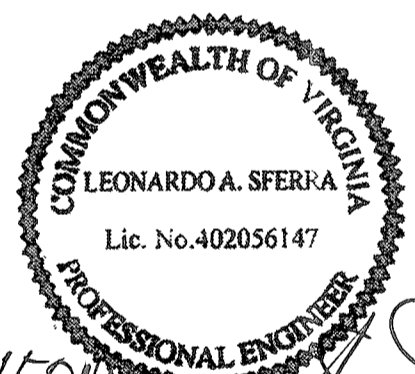
3500 DEER CREEK RD  
 PALO ALTO, CA 94304  
 (650) 681-5000

  
**GPD GROUP, INC.**

520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH



LEONARDO A. SFERIA  
 Lic. No. 402056147  
 PROFESSIONAL ENGINEER

07/22/19

FAIRFAX COUNTY  
 REVIEWED  
 JUL 30 2019  
 LIFE SAFETY/BLDG

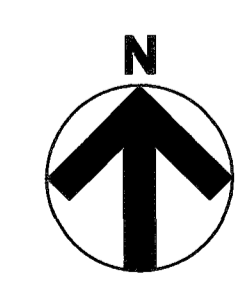
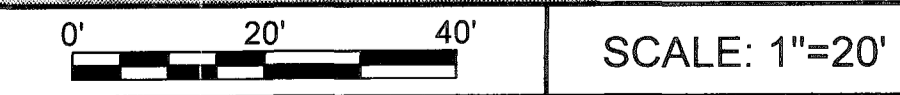
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465 MAPLE AVE.  
 (TESLA STATION)  
 VIENNA, VA 22180

SHEET TITLE  
 OVERALL SITE  
 PLAN

SHEET NUMBER  
 C-1

OVERALL SITE PLAN



NOTE:  
 "EXISTING CONDITIONS PLAN" IS CURRENTLY PROPOSED UNDER SEPARATE PROJECT BY OTHERS AND IS INDICATED AS "EXISTING" FOR TESLA CHARGING STATION PROJECT.

- GENERAL SHEET NOTES**
1. CONTRACTOR SHALL REMOVE EXISTING PAVEMENT AND/OR CURB TO INSTALL PROPOSED UNDERGROUND CONDUITS AND REPLACE PAVEMENT AND/OR CURB AFTER CONDUITS HAVE BEEN INSTALLED. SEE ELECTRICAL SHEETS FOR CONDUIT ROUTING, APPROXIMATE CONDUIT RUN LENGTHS AND TRENCH DETAIL. CONTRACTOR SHALL MEET OR EXCEED EXISTING PAVEMENT SPECIFICATIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.
  2. APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT AND WHERE PROPOSED ASPHALT MEETS EXISTING, INCLUDING SAW CUT JOINTS.
  3. FOR TRAFFIC CONTROL PROCEDURES (IF APPLICABLE), SEE TRAFFIC CONTROL NOTES ON SHEET GN-1.

**DEMOLITION KEYNOTES AND LEGEND #**

1. EXISTING CURB TO BE REMOVED.
2. EXISTING SIGN TO BE REMOVED AND RELOCATED. CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE FINAL LOCATION.

3500 DEER CREEK RD  
 PALO ALTO, CA 94304  
 (650) 881-5000

520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax: 330.572.2102

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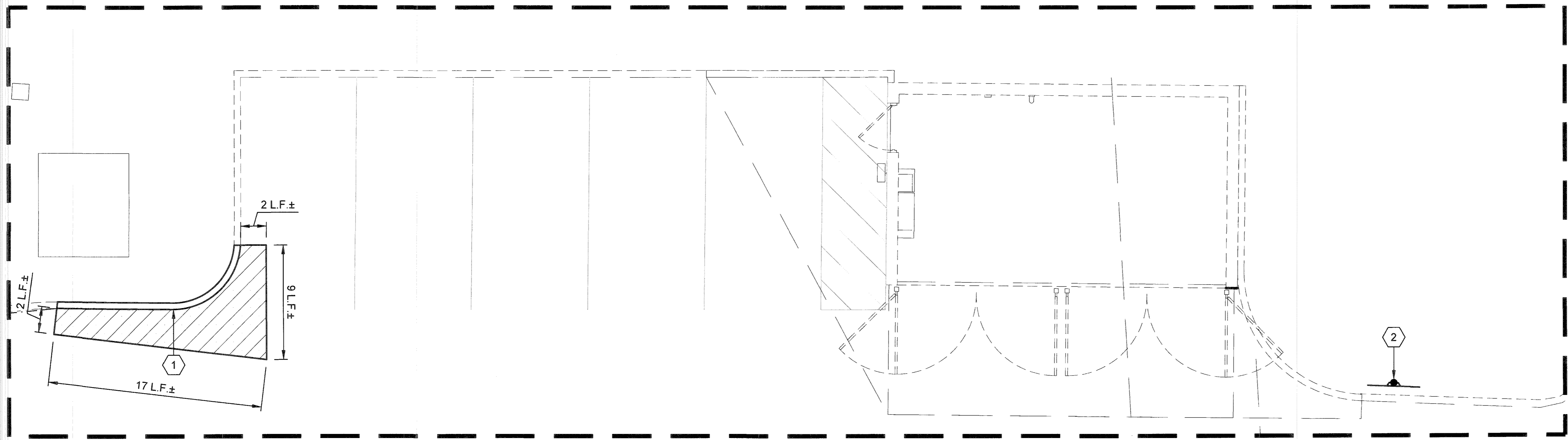
LEONARDO A. SFERRA  
 07/22/19

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SHEET TITLE  
 DEMOLITION PLAN

SHEET NUMBER  
 C-2



ENLARGEMENT A  
 SEE SHEET C-1 FOR LOCATION

FAIRFAX COUNTY  
 REVIEWED  
 JUL 30 2019  
 LIFE SAFETY/BLDG  
 BUILDING DIVISION

0' 5' 10'  
 SCALE: 1"=5'

DEMOLITION PLAN

**GENERAL SHEET NOTES**

- CONTRACTOR SHALL REMOVE EXISTING PAVEMENT AND/OR CURB TO INSTALL PROPOSED UNDERGROUND CONDUITS AND REPLACE PAVEMENT AND/OR CURB AFTER CONDUITS HAVE BEEN INSTALLED. SEE ELECTRICAL SHEETS FOR CONDUIT ROUTING, APPROXIMATE CONDUIT RUN LENGTHS AND TRENCH DETAIL. CONTRACTOR SHALL MEET OR EXCEED EXISTING PAVEMENT SPECIFICATIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.
- APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT AND WHERE PROPOSED ASPHALT MEETS EXISTING, INCLUDING SAW CUT JOINTS.
- FOR TRAFFIC CONTROL PROCEDURES (IF APPLICABLE), SEE TRAFFIC CONTROL NOTES ON SHEET GN-1.

**NOTE:**  
"EXISTING CONDITIONS PLAN" IS CURRENTLY PROPOSED UNDER SEPARATE PROJECT BY OTHERS AND IS INDICATED AS "EXISTING" FOR TESLA CHARGING STATION PROJECT.

**CONSTRUCTION KEYNOTES AND LEGEND #**

- PROPOSED PAD MOUNTED ELECTRICAL UTILITY TRANSFORMER (BY UTILITY). CONTRACTOR SHALL PROVIDE CONCRETE PAD PER UTILITY SPECIFICATIONS. COORDINATE FINAL LOCATION WITH UTILITY. SEE ELECTRICAL PLANS FOR PROPOSED ROUTING.
- PROPOSED EQUIPMENT CLEAR SPACE (TYPICAL).
- PROPOSED ELECTRIC METER & CT CABINET MOUNTED TO H-FRAME PER ELECTRIC COMPANY SPECIFICATIONS AND DETAILS ON ELECTRICAL SHEETS.
- PROPOSED SERVICE ENTRANCE DISCONNECT MOUNTED TO H-FRAME (TYPICAL OF 3). SEE ELECTRICAL DRAWINGS.
- PROPOSED TESLA CHARGE POST WITH INDIVIDUAL PRECAST CONCRETE FOUNDATION (TYPICAL OF 8). SEE DETAILS ON SHEET C-6.
- PROPOSED TESLA NON-ILLUMINATED PARKING SIGN IN BOLLARD (TYPICAL OF 8). SEE DETAILS ON SHEETS C-6 & C-7. SEE CHARGING POST SCHEDULE THIS SHEET.
- PROPOSED TESLA CHARGING CABINET WITH INDIVIDUAL PRECAST CONCRETE FOUNDATION (TYPICAL OF 2). SEE DETAILS ON SHEET C-6.
- PROPOSED LANDSCAPE: SCREENING. (9) TOTAL QUANTITY OF LIGUSTRUM JAPONICUM 'TEXANUM', WAXLEAF PRIVET. TO BE PLANTED AT 5' HEIGHT, SPACED AT 3.5' O/C. SEE PLANTING DETAIL 4 SHEET C-7. SEE LANDSCAPE NOTES, SHEET GN-2.
- PROPOSED 6" CONCRETE CURB. SEE DETAIL ON SHEET C-7.
- PROPOSED BOLLARD (TYPICAL OF 4). SEE DETAIL ON SHEET C-7.
- PROPOSED LANDSCAPE BED SHALL BE MULCHED PER LANDSCAPE NOTES ON SHEET GN-2.
- PROPOSED MASTER CONTROLLER. SEE ELECTRICAL SHEETS.
- ALL DISTURBED AREAS NOT TO BE PAVED OR MULCHED SHALL BE SODDED PER LANDSCAPE NOTE ON SHEET GN-2.

PROPOSED ASPHALT PAVEMENT TO MATCH EXISTING IN TYPE AND DEPTH. INCLUDE ENGINEERED COMPACTED BACKFILL BELOW PAVEMENT SECTION. (APPROXIMATELY 48 SF) TRENCHING NOT INCLUDED

**250kW TESLA OUTDOOR EQUIPMENT SCHEDULE**

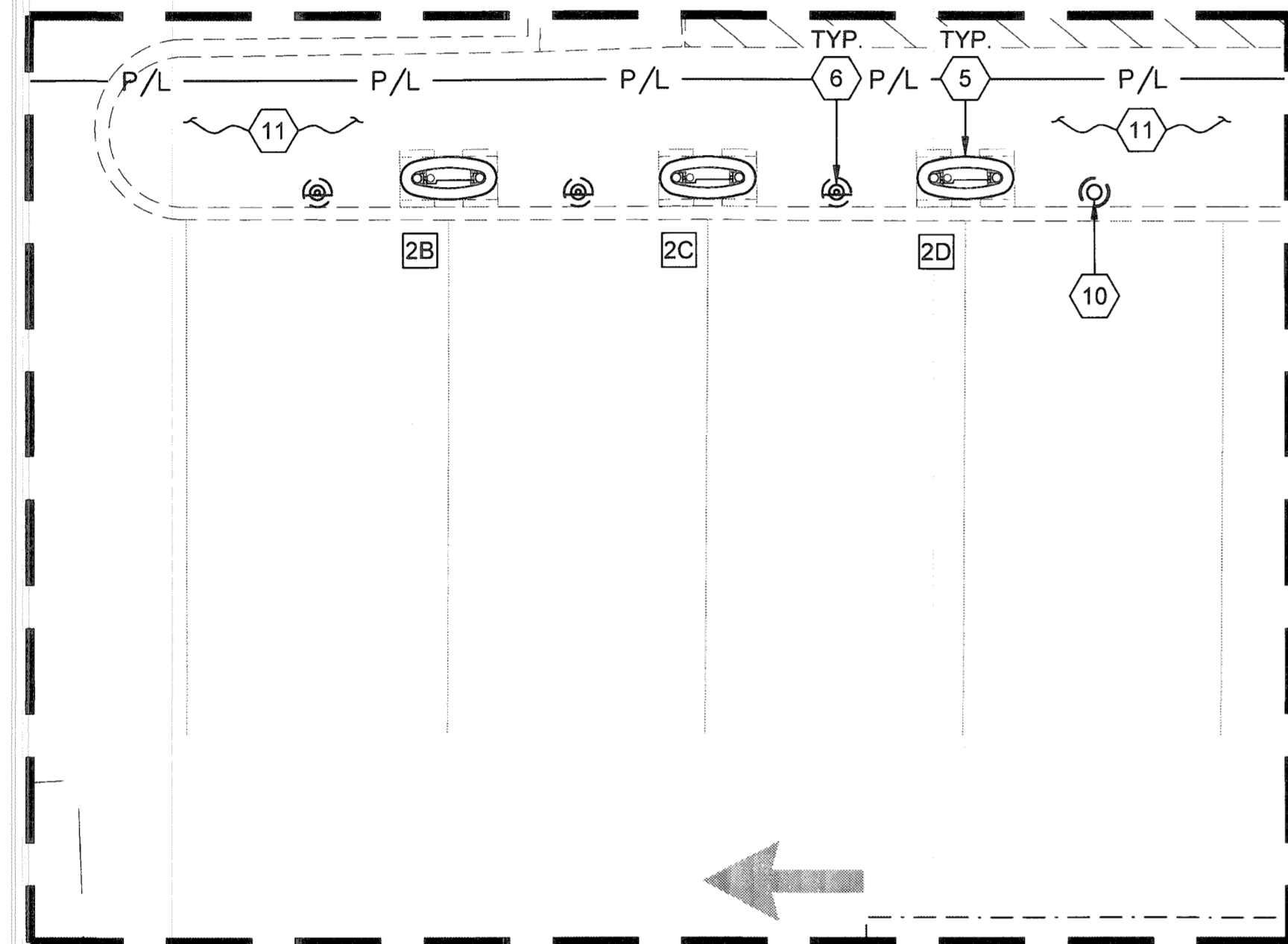
TESLA EQUIPMENT	DESCRIPTION	PART NUMBER	QUANTITY
CHARGING CABINET	VERSION 3	1450758-00-D	2
CHARGING POST	VERSION 3	1088585-00-D	8
SITE MASTER CONTROLLER	INDUSTRIAL SITE CONTROLLER	1137202-02-C	1
CHARGING CABINET FOUNDATION	UNIVERSAL PRECAST	1507222-00-A	2
CHARGING POST FOUNDATION	UNIVERSAL PRECAST	1478598-00-A	8

**PARKING STALL SCHEDULE**

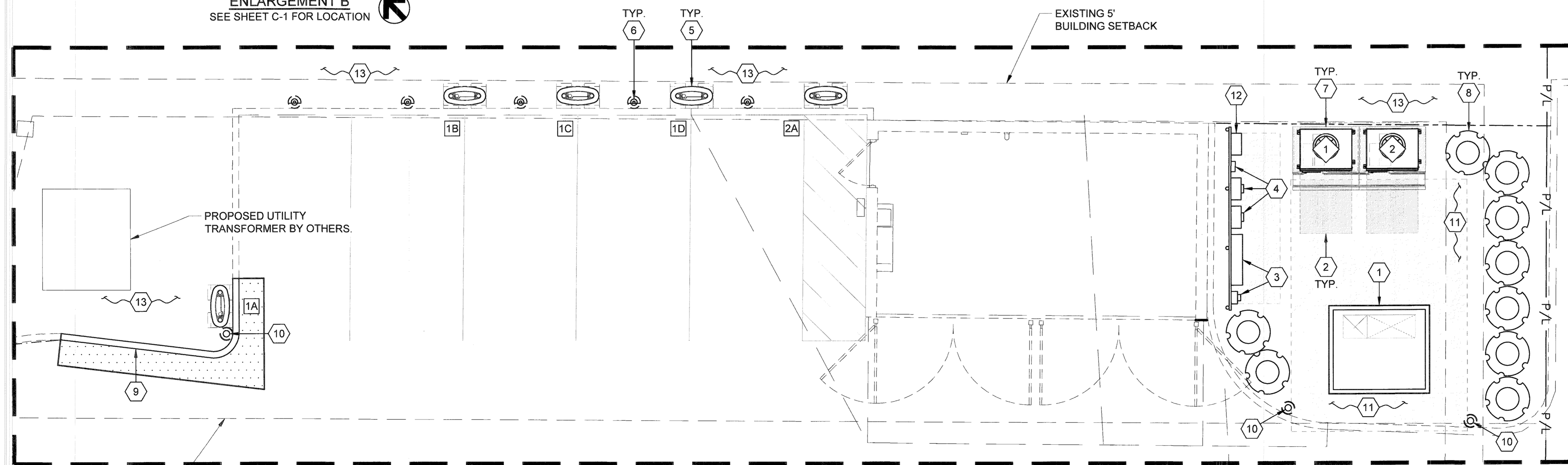
EXISTING STANDARD STALLS UTILIZED AS A RESULT OF THIS PROJECT	8
PROPOSED TESLA STALLS	8
PROPOSED STANDARD STALLS	0
NET STALL COUNT	+0

**CHARGING POST CIRCUIT SCHEDULE**

CHARGING CABINET	CHARGE POST	DEDICATED/ENABLED
1	1A	DEDICATED
	1B	DEDICATED
	1C	ENABLED
	1D	ENABLED
2	2A	ENABLED
	2B	ENABLED
	2C	ENABLED
	2D	ENABLED

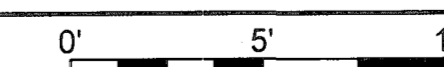


**ENLARGEMENT B**  
SEE SHEET C-1 FOR LOCATION



**ENLARGEMENT A**  
SEE SHEET C-1 FOR LOCATION

**SITE PLAN**



SCALE: 1"=5'



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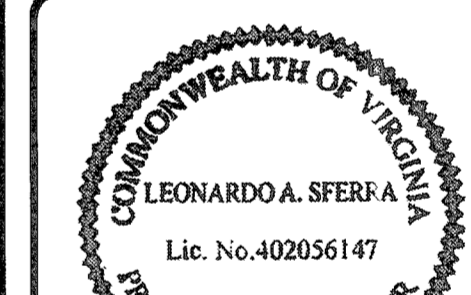
GPD PROJECT NUMBER: 2019141.07

DRAWN BY: HD

CHECKED BY: RP/EPM

INSTALLATION MANAGER: JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
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B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH



LEONARDO A. SFERA

07/22/19

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VIENNA, VA 22180

SHEET TITLE

SITE PLAN

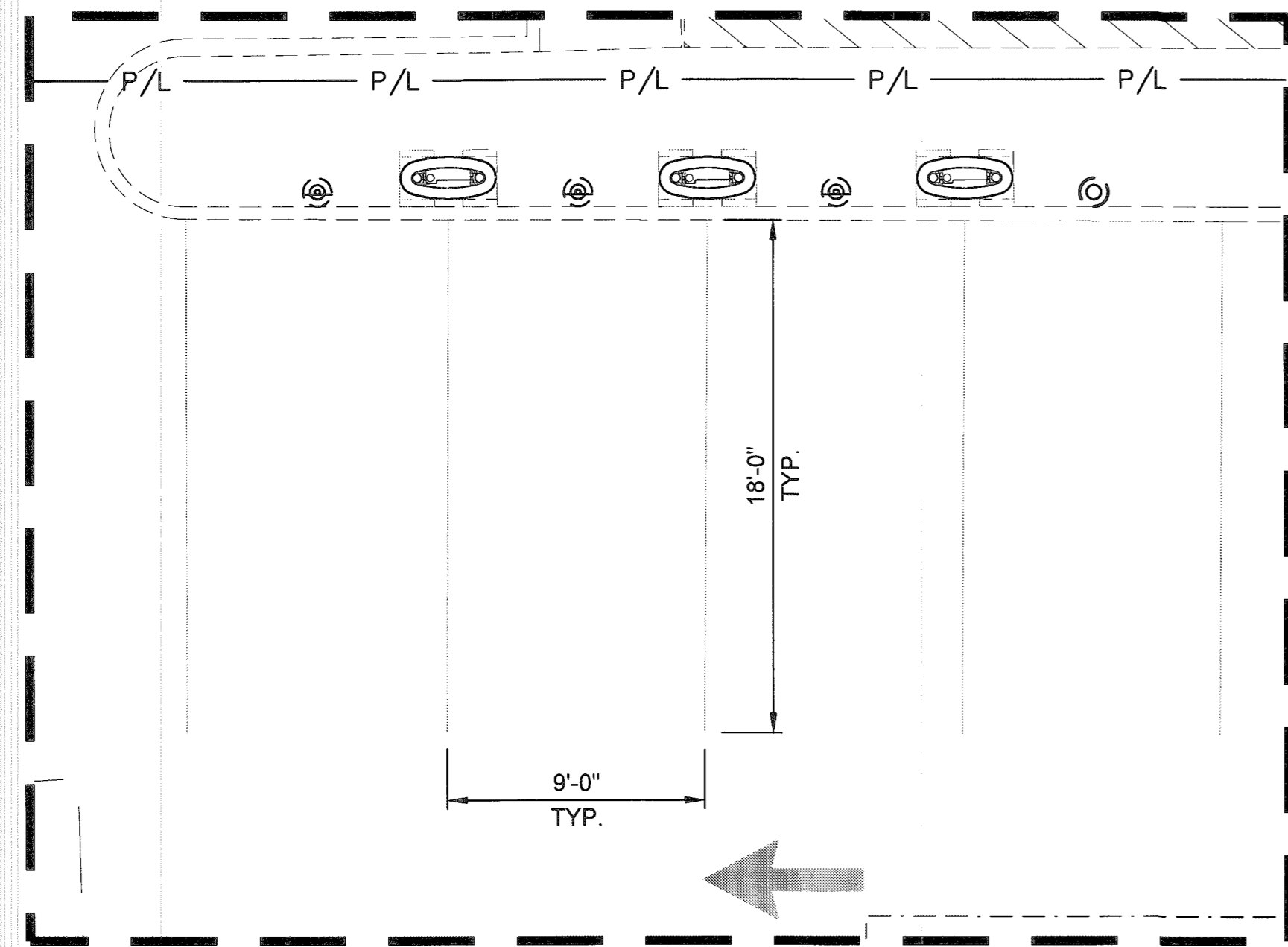
SHEET NUMBER

C-3

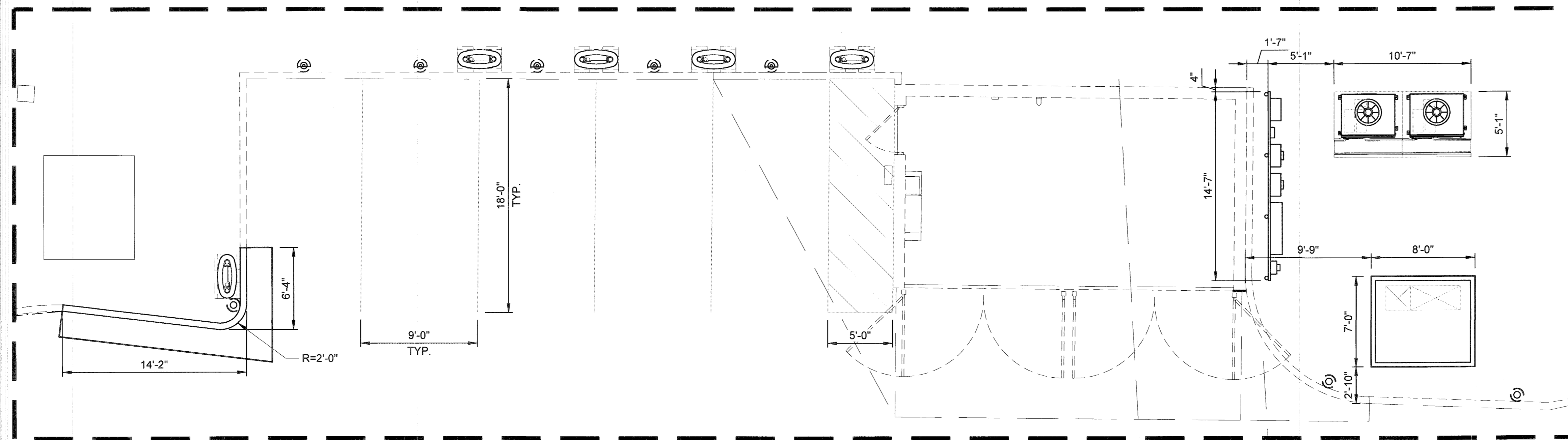
FAIRFAX COUNTY  
REVIEWED  
JUL 30 2019  
LIFE SAFETY/BLDG  
BUILDING DIVISION



NOTE:  
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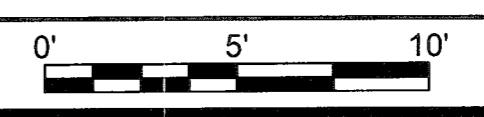


ENLARGEMENT B  
 SEE SHEET C-1 FOR LOCATION



ENLARGEMENT A  
 SEE SHEET C-1 FOR LOCATION

EQUIPMENT DIMENSION PLAN



SCALE: 1"=5'

**TESLA**

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

**GPD GROUP, INC.**

520 South Main Street, Suite 2531  
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COMMONWEALTH OF VIRGINIA  
 LEONARDO A. SFERRA  
 Lic. No. 402056147  
 PROFESSIONAL ENGINEER

07/22/19

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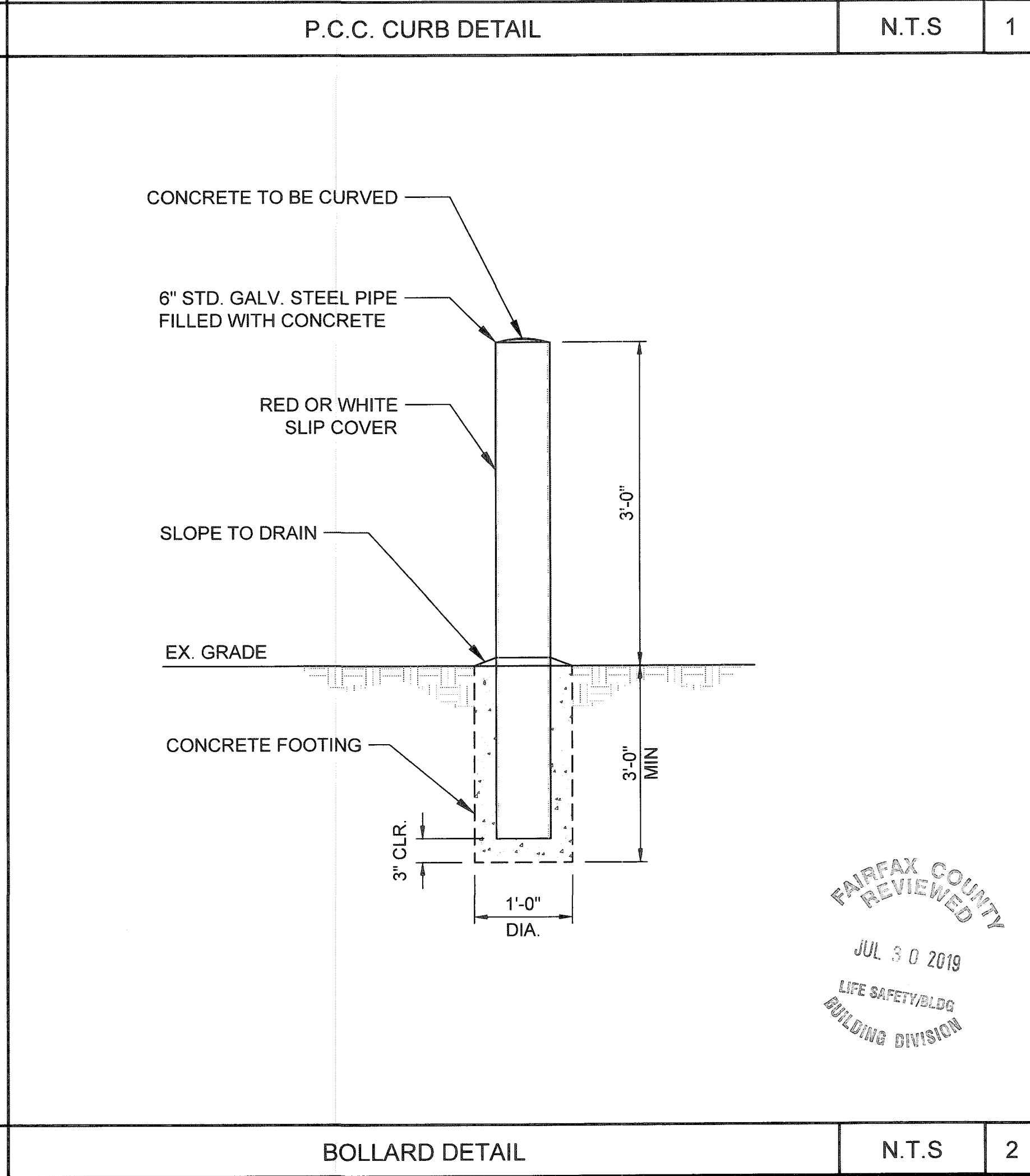
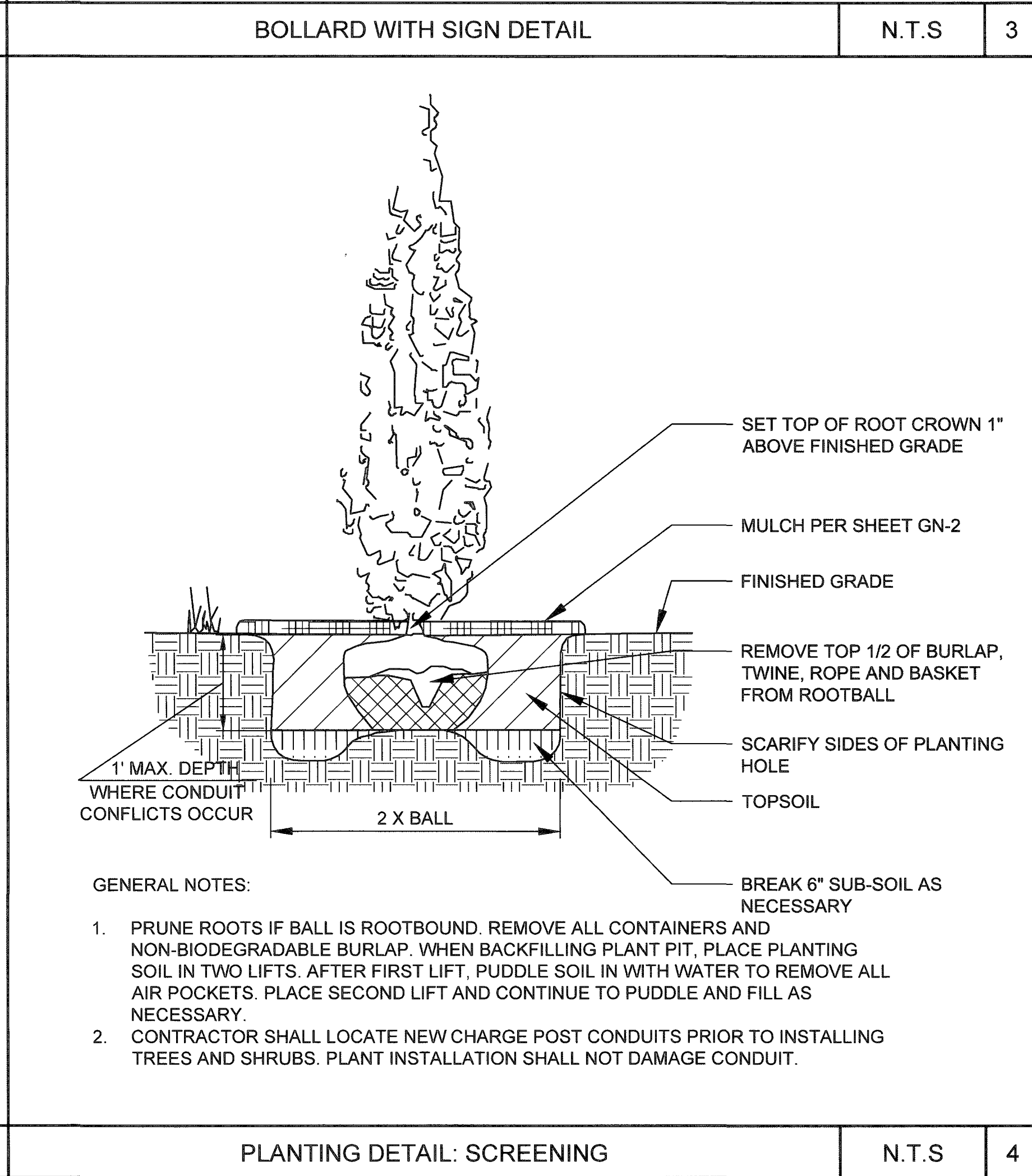
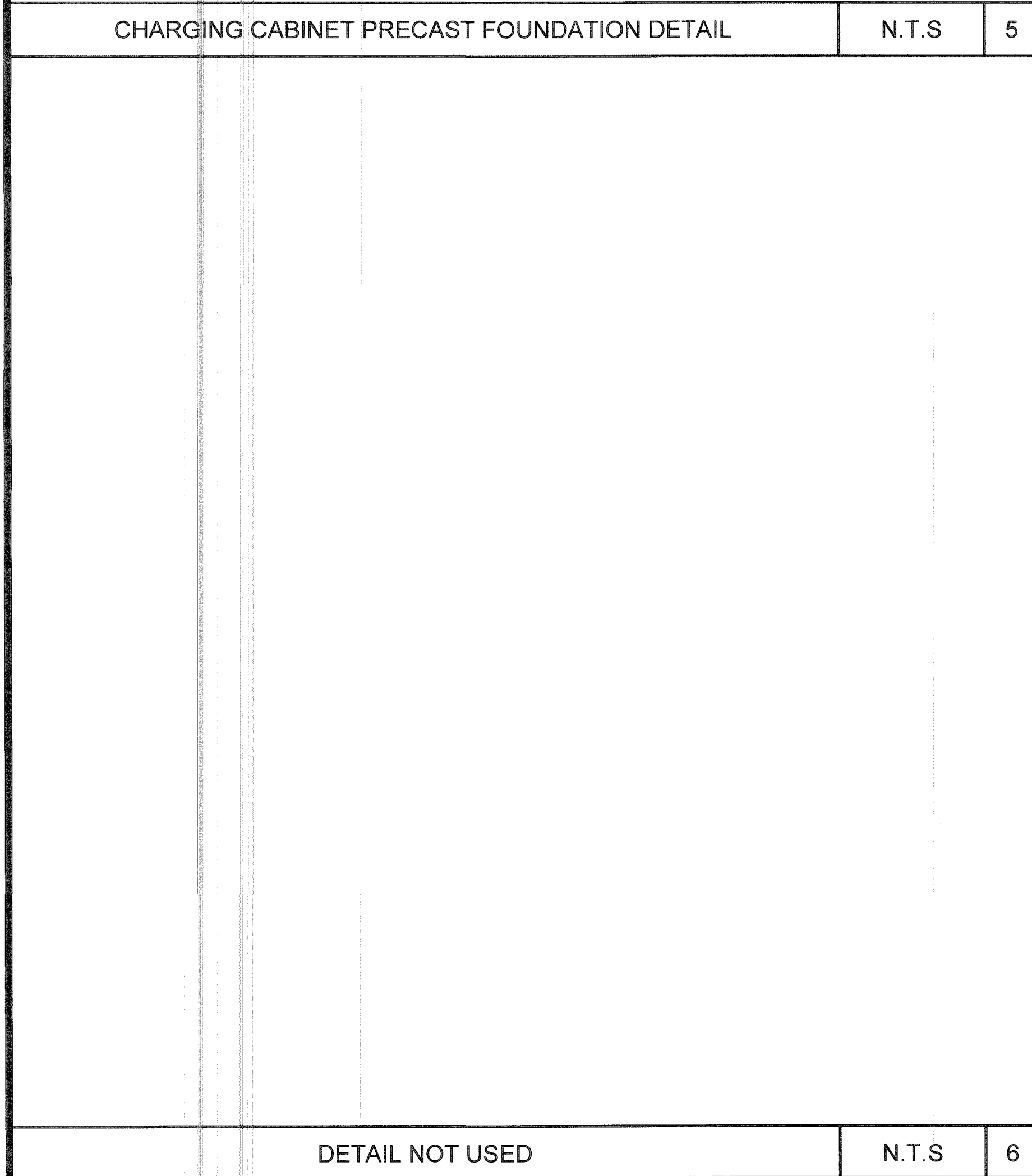
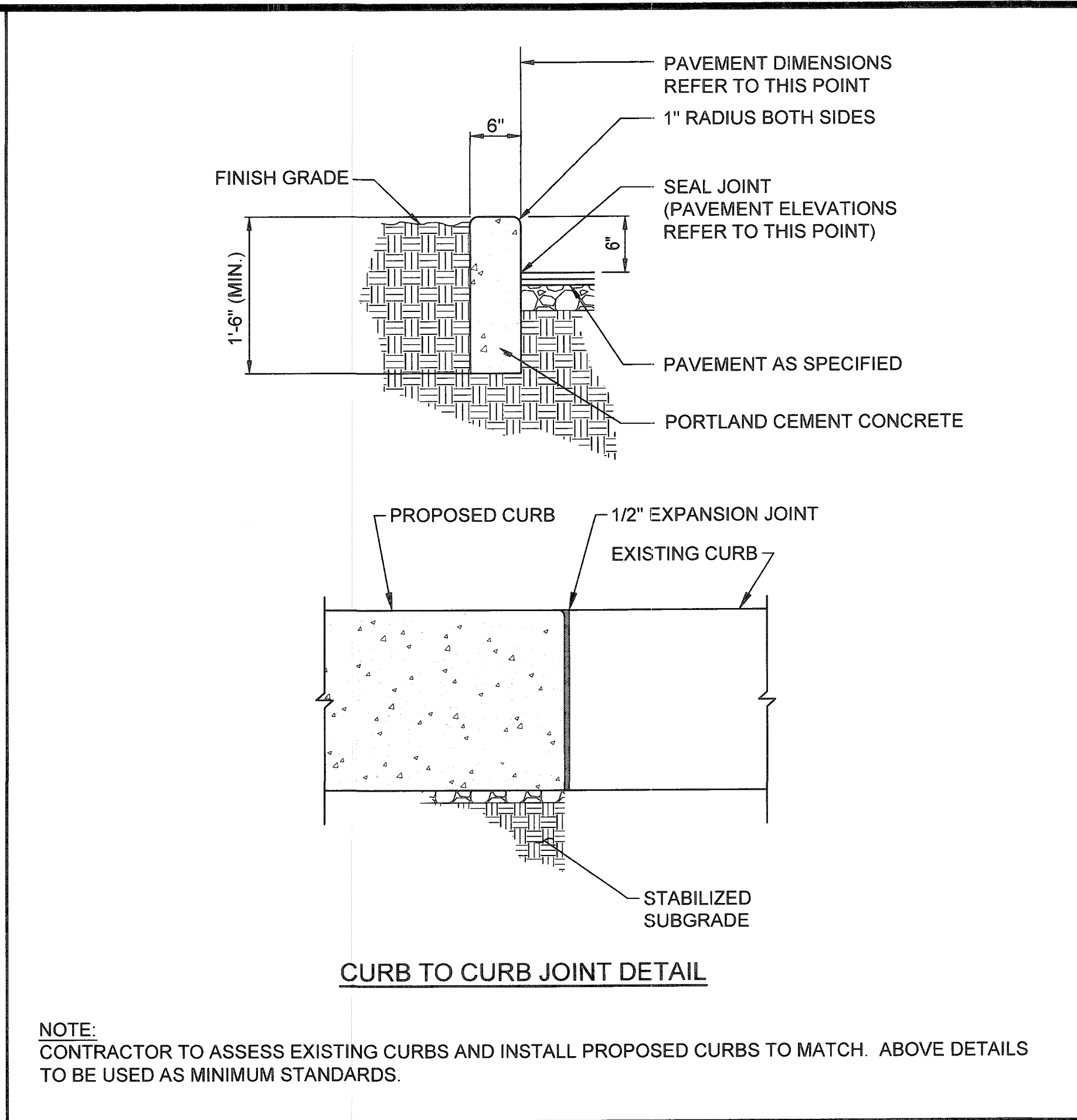
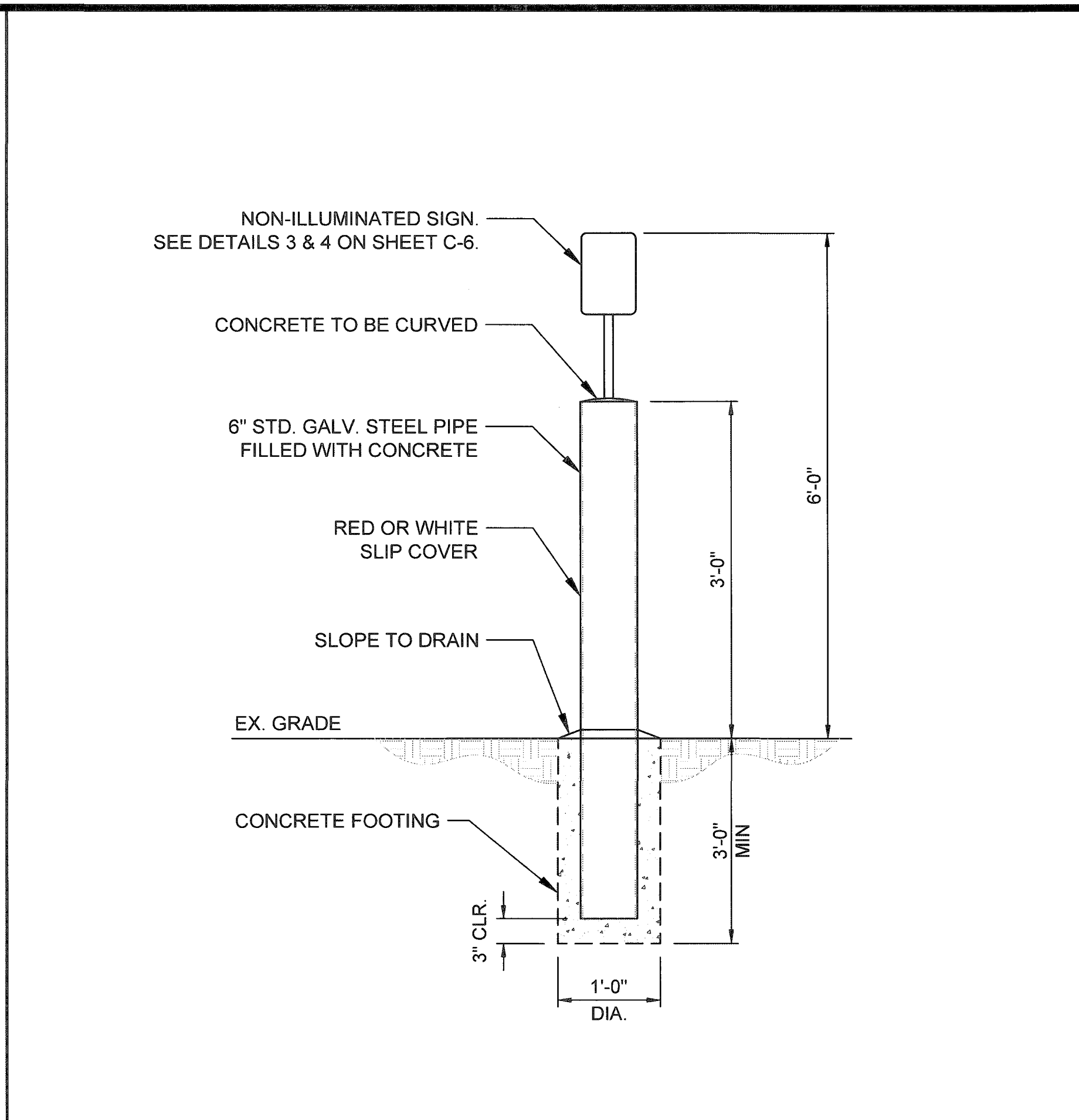
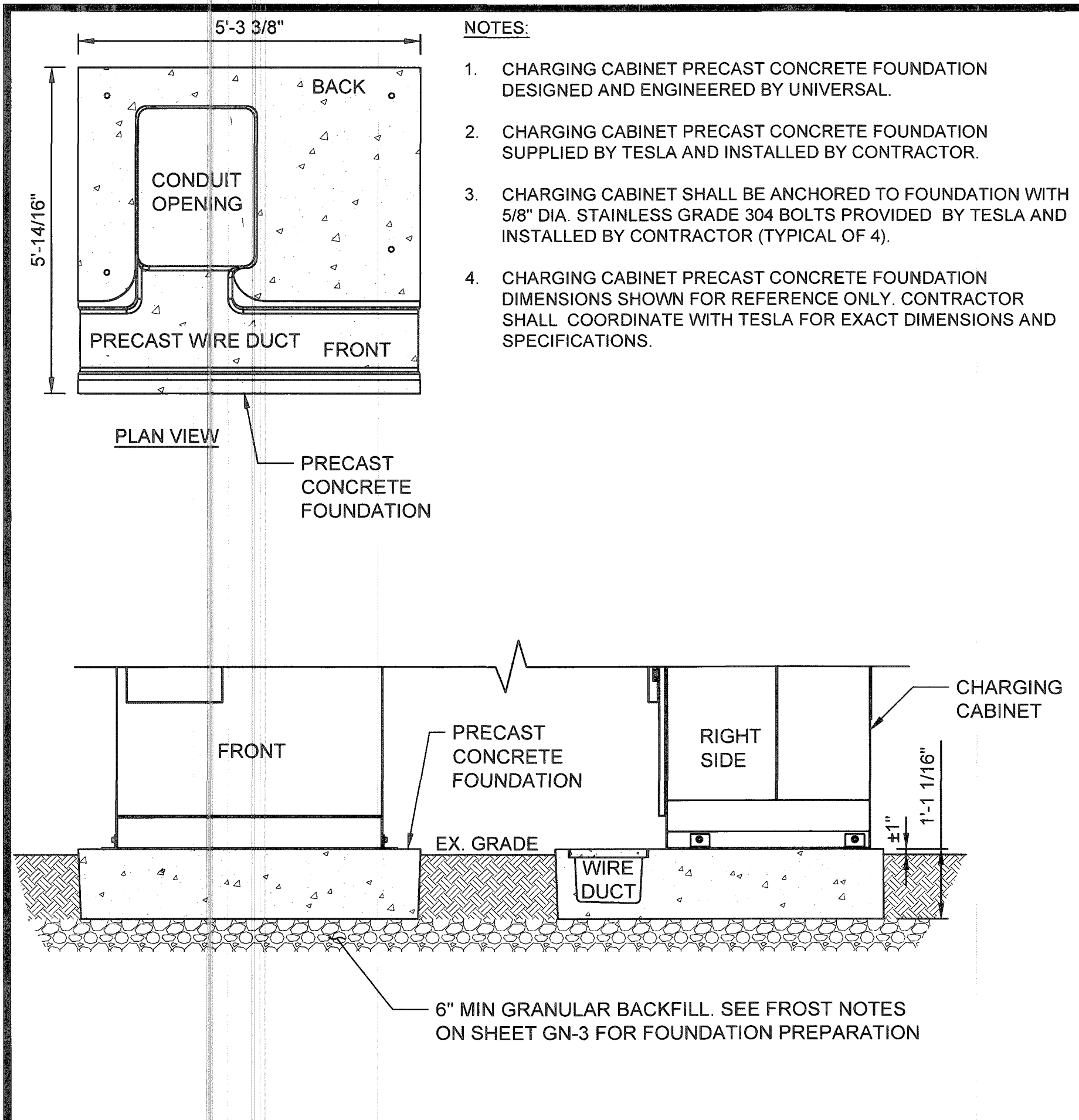
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 VIENNA, VA 22180

SHEET TITLE  
 EQUIPMENT  
 DIMENSION PLAN

SHEET NUMBER  
 C-5

FAIRFAX COUNTY  
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465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
CIVIL DETAILS

SHEET NUMBER  
C-7

**GENERAL ELECTRICAL SPECIFICATIONS**

- THE FOLLOWING ARE ABBREVIATED SPECIFICATIONS. ALL ITEMS NECESSARY FOR A COMPLETE AND OPERABLE JOB (TO THE SATISFACTION OF OWNER) WHETHER SHOWN OR IMPLIED SHALL BE HELD AS THE RESPONSIBILITY OF THE CONTRACTOR
- IMPORTANT NOTE:** "CONTRACTOR" REFERENCED IN THESE SPECIFICATIONS SHALL INDICATE WORK BY ELECTRICAL CONTRACTOR OR ANY OF HIS SUBCONTRACTORS UNLESS NOTED OTHERWISE.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT ONLY. COORDINATE INSTALLATION WITH OTHER TRADES TO VERIFY THE ACTUAL SPACE CONDITIONS THAT ARE TO BE MAINTAINED. NO ADDITIONAL PAYMENT WILL BE APPROVED FOR FAILURE TO COMPLY.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- CONTRACTOR SHALL NOTE SCALE ELECTRICAL DRAWINGS. REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT AND CONFIRM WITH CONSTRUCTION MANAGER ANY SIZES AND LOCATIONS WHEN NEEDED.
- CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE ALL ITEMS DEFINED IN THE CONTRACT DOCUMENTS. THE CONTRACT DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: THE CONTRACT, SPECIFICATIONS, AND CONSTRUCTION DRAWINGS. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO INSTALL ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING ETC. AS SHOWN OR IMPLIED ON THE DRAWINGS AND TO PROVIDE A COMPLETE OPERATIVE SYSTEM TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL PROVIDE ON-SITE SUPERVISION AT ALL TIMES WHILE THE WORK IS BEING PERFORMED AND SHALL DIRECT ALL WORK, USING HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- INSTALLATION OF ALL ELECTRICAL EQUIPMENT, DEVICES, CONDUITS, ETC. MUST BE COORDINATED WITH ALL OTHER TRADES. COORDINATE SHUTDOWN TIMES AND WORKING HOURS WITH BUILDING OWNER, INCLUDING OFF HOURS, WEEKEND, AND HOLIDAY WORK AS REQUIRED.
- ANY DISCREPANCIES FOUND WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE OWNER IN WRITING PRIOR TO THE AWARD OF THE CONTRACT AND AN ADDENDUM WILL BE ISSUED TO COVER SAME.
- GUARANTEE - CONTRACTOR SHALL FURNISH OWNER WITH A WRITTEN GUARANTEE TO PROMPTLY REMEDY ALL DEFECTS OF WORK OR MATERIALS WITHOUT CHARGE FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE AND INSPECTION.
- MATERIALS - ALL MATERIALS AND EQUIPMENT SHALL BE NEW, IN ORIGINAL CONTAINERS/WRAPPINGS, SHALL BE SPECIFICATION GRADE, AND LABELED OR LISTED BY U.L. OR AN ACCREDITED TESTING ORGANIZATION AS REQUIRED BY LOCAL INSPECTORS.
- CONTRACTOR SHALL PROVIDE ADEQUATE AND REQUIRED LIABILITY INSURANCE FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK
- ALL EQUIPMENT SHALL BE DESIGNED TO OPERATE ON VOLTAGE AND PHASE SPECIFIED. CONTRACTOR FURNISHING EQUIPMENT OTHER THAN INDICATED SHALL BE RESPONSIBLE FOR ANY CHANGES IN CONDUCTORS, RACEWAYS, SWITCHES, MAIN FEEDERS, AND APPURTENANCES AND PAY ALL ASSOCIATED COSTS. REQUIREMENTS FOR ANY INCREASE IN CAPACITIES SHALL BE REVIEWED BY ENGINEER.
- 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 OWNERS' CONFIRMATION, ETC. ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.

**LICENSES, CERTIFICATIONS OF INSPECTION**

- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF ALL GOVERNING AGENCIES THAT REQUIRE SITE INSPECTION OF THE WORK AND/OR SIMPLY NOTIFICATION. THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK.
- CONTRACTOR AND ALL OF HIS SUBCONTRACTORS THAT PERFORM ANY WORK ON THIS PROJECT SHALL BE CURRENTLY LICENSED BY ALL AGENCIES WHICH GOVERN OVER THE LAND(S) ON WHICH CONSTRUCTION IS TO TAKE PLACE. CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS AS REQUIRED. ALL COSTS SHALL BE BORNE BY CONTRACTOR.
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS INCIDENTAL TO WORK UNDER THIS CONTRACT. WHEN THE WORK IS COMPLETED, THE REQUIRED CERTIFICATES OF APPROVAL SHALL BE FURNISHED TO THE BUILDING OWNER. CONTRACTOR MUST BE LICENSED IN THE STATE, COUNTY AND CITY OF THE PROJECT SITE.

**CODES AND ORDINANCES**

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LATEST EDITION OF NEC AND ALL APPLICABLE CODES AND ORDINANCES, INCLUDING SUCH AS PERTAIN TO THE SAFETY AND HEALTH RELATIONS. CODES AND ORDINANCES SHALL TAKE PRECEDENCE OVER THE DRAWINGS AND SPECIFICATIONS ONLY IN CASE OF CONFLICT 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 ACT
  - E. SBC - STANDARD BUILDING CODE
  - F. NFPA - NATIONAL FIRE CODES

**CHARGING CABINET NOTE**

- PER NEC 625.22 - THE USER INTERFACE (CHARGE POST) IS CONTROLLED BY THE ELECTRICAL EQUIPMENT (CHARGING 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.

**POST CONSTRUCTION AND PROJECT CLOSEOUT DOCUMENTATION**

- AS-BUILT REQUIREMENTS:** DO NOT USE RECORD DOCUMENTS FOR CONSTRUCTION PURPOSES. TO PROTECT RECORD DOCUMENTS FROM DETERIORATION AND LOSS, STORE IN A SECURE, FIRE-RESISTANT LOCATION. PROVIDE ACCESS TO RECORD DOCUMENTS FOR THE OWNER'S REFERENCE DURING NORMAL WORKING HOURS. MAINTAIN A CLEAN, UNDAMAGED SET OF BLUE OR BLACK LINE PRINTS OF CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK THE SET TO SHOW THE ACTUAL INSTALLATION WHERE THE INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK DRAWINGS THAT ARE MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE. MARK RECORD SETS WITH RED ERASABLE PENCIL. USE OTHER COLORS TO DISTINGUISH BETWEEN VARIATIONS IN SEPARATE CATEGORIES OF THE WORK. MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER BUT WAS NOT SHOWN ON THE CONTRACT DRAWINGS, DETAILS OR SHOP DRAWINGS. NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE. NOTE RELATED RECORD DRAWING INFORMATION AND PRODUCT DATA. UPON COMPLETION OF THE WORK, SUBMIT ONE (1) COMPLETE SET OF RECORD DOCUMENTS TO THE CONSTRUCTION MANAGER FOR THE OWNER'S RECORDS. CONTRACTOR SHALL SUBMIT AS-BUILT SET OF PLANS TO THE ENGINEER WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION.

**EXISTING CONDITIONS AND DEMOLITION**

- ALL ELECTRICAL DEMOLITION WORK, INCLUDING MATERIAL REMOVAL FROM THE SITE, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. BEFORE PROCEEDING WITH THE DEMOLITION WORK, THE CONTRACTOR SHALL OBTAIN FROM THE BUILDING OWNER A LIST OF ANY REMOVED ITEMS TO BE SALVAGED. ALL OTHER REMOVED MATERIALS AND EQUIPMENT SHALL BE PROPERLY DISCARDED OFF THE PREMISES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PROPERTY RESULTING FROM THE CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE AT THE COMPLETION OF WORK.
- EXISTING UTILITIES AND CONDITIONS ARE SHOWN FROM FIELD DATA AND EXISTING DOCUMENTS AND ARE NOT NECESSARILY COMPLETE OR ACCURATE. ALL FIELD CONDITIONS SHALL BE VERIFIED BY CONTRACTOR BEFORE START OF CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE, EXPOSE, AND DETERMINE IF CONFLICTS EXIST WITH THE PROPOSED IMPROVEMENTS. CONTRACTOR SHALL NOTIFY THE OWNER IN ORDER TO RESOLVE ANY CONFLICTS. EXISTING ELECTRICAL CONDUIT, WIRING, ETC. DAMAGED DURING RENOVATION SHALL BE REPLACED IN LIKE KIND AND CHARACTER, AND AT THE EXISTING UTILITY LINES, DRAIN OR FIELD TILE DAMAGED SHALL BE REPAIRED OR REPLACED, AS NEEDED, IN LIKE KIND AND CHARACTER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING CONDUITS, CONTROL WIRING, ETC., WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONFLICTS OR DISCREPANCIES IN THE CONTRACT DOCUMENTS OR FIELD CONDITIONS PRIOR TO EXECUTING THE WORK IN QUESTION. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IF DETAILS ARE CONSIDERED UNSOUND, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO THE DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.
- SITE VISIT - CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK. NO EXTRAS WILL BE PERMITTED FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS. QUANTITIES OF MATERIALS SHALL BE PER CONTRACTOR'S MEASUREMENTS.

**BASIC ELECTRICAL MATERIALS AND METHODS**

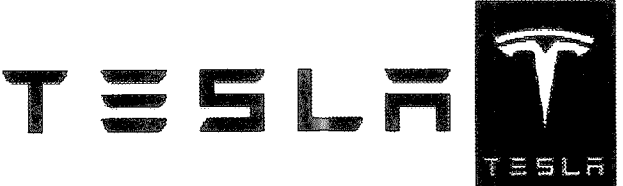
- WHERE STRUCTURAL OPENINGS ARE NOT AVAILABLE, THE CONTRACTOR SHALL CORE DRILL OR CUT CHASES IN WALLS AND FLOORS AS REQUIRED. ALL NEW OPENINGS SHALL BE COORDINATED WITH THE ENGINEER. ALL PENETRATIONS OF THE BUILDING WALLS, CEILING AND FLOORS, THE CONTRACTOR SHALL SEAL WITH QUALITY CAULK, FIRE RATED AND WATERTIGHT, SUBMITTED FOR APPROVAL BY THE OWNER.
- TRASH REMOVAL: CONTRACTOR SHALL REMOVE ALL TRASH CREATED BY HIMSELF OR HIS SUBCONTRACTORS DUE TO DEMOLITION OR CONSTRUCTION. THE CONTRACTOR SHALL ALSO REMOVE TRASH CREATED BY OTHER SUBCONTRACTORS INCLUDING CABLE REELS, CARDBOARD BOXES AND PACKING. PROMPTLY CLEAN-UP ALL SOILING, DEBRIS AND OTHER UNSIGHTLY OR HAZARDOUS CONDITIONS, CAUSED BY WORK OR DELIVERIES UNDER THIS CONTRACT, FROM THE BUILDING GROUNDS, ENTRIES, CORRIDORS, STAIRWAYS, ELEVATORS OR OTHER PUBLIC AREAS. ALL SHALL BE REMOVED FROM THE SITE IN A TIMELY FASHION TO A LEGAL DISPOSAL FACILITY.
- SIGNAGE: CONTRACTOR SHALL MAINTAIN SECURITY AROUND PERIMETER OF CONSTRUCTION SITE DURING ALL HOURS BY INSTALLING A TEMPORARY RIBBON FOR INTERIOR WORK TO IDENTIFY CONSTRUCTION AREAS AS REQUIRED. SIGNAGE SHALL BE POSTED WITH NOTIFICATIONS OF "NO TRESPASSING" AND "CONSTRUCTION AREA".
- CHECK ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS OFF SITE, NOR DO ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAVE BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CUTTING, SUBSEQUENT PATCHING, AND REQUIRED FLASHING FOR ALL ITEMS NECESSARY FOR ELECTRICAL PART OF THE CONTRACT. PATCH, PAINT, AND REPAIR ANY AREA DAMAGED TO THE SATISFACTION OF THE BUILDING OWNER.
- THE EXACT LOCATIONS OF ALL ELECTRICAL DEVICES, EQUIPMENT AND CONDUIT, AS SHOWN ON THE DRAWING, IS APPROXIMATE. WHEN NOT SHOWN IN DETAIL, THE EXACT LOCATION OR ROUTING SHALL BE DETERMINED BY THE CONTRACTOR, SUBJECT TO THE APPROVAL OF OWNER.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR OTHER SUPPORT FOR THE MOUNTING AND SUPPORT OF ALL ITEMS REQUIRING THE SAME AS REQUIRED BY N.E.C.
- TRENCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION.
- WHEN DIRECTIONAL BORING IS REQUIRED, CONTRACTOR SHALL INSTALL A LOOSE TONING WIRE WITHIN INSTALLED CONDUIT TO ALLOW FOR IDENTIFICATION OF UNDERGROUND CONDUITS.
- ALL BOLTS SHALL BE STAINLESS STEEL.
- FOR UNDERGROUND RACEWAYS, PROVIDE ADDITIONAL SLACK IN CONDUCTORS AND CONDUIT EXPANSION JOINTS IN ORDER TO ALLOW FOR EARTH MOVEMENT FROM SETTLEMENT, FROST, ETC. IN ORDER TO PREVENT DAMAGE TO THE CONDUCTORS OR TO THE EQUIPMENT CONNECTED TO THE RACEWAYS PER THE NEC.

The Electrical Installation shall comply w/ the following articles of the NEC currently adopted by the VUSBC.  
 110-200-210-215-220-230-240-250-300  
 314-404-406-408-410-422-424-430-440-460  
 500-517-518-645-685-700

BRANCH CIRCUITS SHALL COMPLY WITH ARTICLE 220

PLANS REVIEWED BY ELECTRICAL  
 PLAN REVIEWS NOTED:  
 APPROVED  
 APPROVED FOR BUILDING PERMIT ONLY  
 REVISIONS APPROVED  
 DATE: 8/7/19 BY: LY

ELECTRICAL CIRCUITS AND EQUIPMENT SUBJECT TO FIELD INSPECTION



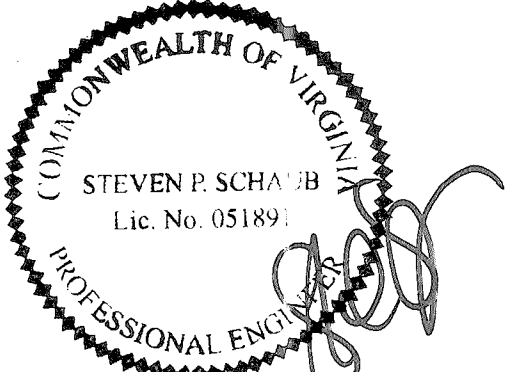
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GPD PROJECT NUMBER:	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH



STEVEN P. SCHAUB  
 Lic. No. 05189

07/22/19

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

465 MAPLE AVE.  
 (TESLA STATION)  
 VIENNA, VA 22180

SHEET TITLE  
 ELECTRICAL  
 GENERAL NOTES

SHEET NUMBER  
 EN-1

**ELECTRICAL EQUIPMENT**

- 1. ALL EQUIPMENT SHALL BE DESIGNED TO OPERATE ON VOLTAGE AND PHASE SPECIFIED. CONTRACTOR FURNISHING EQUIPMENT OTHER THAN INDICATED SHALL BE RESPONSIBLE FOR ANY CHANGES IN CONDUCTORS, RACEWAYS, SWITCHES, MAIN FEEDERS, AND APPURTENANCES AND PAY ALL ASSOCIATED COSTS. REQUIREMENTS FOR ANY INCREASE IN CAPACITIES SHALL BE REVIEWED BY ENGINEER.

**FIRESTOPPING AND SEALING ELECTRICAL PENETRATIONS**

- 1. CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOPPING FOR SEALING AROUND ELECTRICAL PENETRATIONS THROUGH FIRE OR SMOKE BARRIERS, AND FLOORS.
- 2. PROVIDE SHOP DRAWINGS OF EACH CONDITION REQUIRING PENETRATION SEALS AND THE PROPOSED UL SYSTEMS MATERIALS, ANCHORAGE, METHODS OF INSTALLATION, AND ACTUAL ADJACENT CONSTRUCTION. SUBMITTAL PACKAGE SHALL ALSO INCLUDE A COPY OF THE UL ILLUSTRATION OF EACH PROPOSED SYSTEM INDICATING MANUFACTURER APPROVED MODIFICATIONS (IF APPLICABLE) AND THE MANUFACTURER'S SPECIFICATIONS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, AND MAINTENANCE INSTRUCTIONS.
- 3. FIRESTOPPING MATERIALS SHALL BE INTUMESCENT SAFETY BARRIERS DESIGNED TO BLOCK THE SPREAD OF FIRE AND SMOKE THROUGH PENETRATIONS CREATED BY ELECTRICAL INSTALLATIONS IN FIRE RATED WALLS AND FLOORS. MATERIALS SHALL BE FLAME, TOXIC FUME, AND WATER RESISTANT AND SHALL HAVE A MINIMUM 3 HOUR FIRE RATING. FIRE RATING SHALL BE DEFINED BY TESTS CONDUCTED BY ASTM, UL OR OTHER TESTING AND INSPECTION AGENCIES ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
- 4. PROVIDE MATERIALS BY THE FOLLOWING MANUFACTURERS TO SUIT THE APPLICATION: SPECIFIED TECHNOLOGIES, INC (STI), SOMERVILLE, NJ; TREMCO, INC., BEACHWOOD, OH; OR 3M INC., MINNEAPOLIS, MN

**FAULT CURRENT, COORDINATION STUDY, AND ARC FLASH**

- 1. CONTRACTOR SHALL CONDUCT A FAULT CURRENT CALCULATION AND COORDINATION STUDY TO ENSURE THE CORRECT AIC RATING OF NEW ELECTRICAL PANELBOARDS AND THE SETTINGS OF ANY ADJUSTABLE BREAKERS. THE RESULTS OF THESE STUDIES SHALL BE SUBMITTED WITH THE PANELBOARD SHOP DRAWINGS. ANY PANELS SUBMITTED WITHOUT THIS DOCUMENTATION WILL BE REJECTED WITHOUT BEING REVIEWED AT THE CONTRACTOR'S EXPENSE.
- 2. CONTRACTOR SHALL PROVIDE AN ARC-FLASH STUDY AND LABEL ALL EQUIPMENT AS REQUIRED PER THE N.E.C.

**GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

- 1. ALL RACEWAYS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE N.E.C. AND ANY LOCAL CODES.
- 2. ALL CONDUITS SHALL CONTAIN A CODE SIZE GROUNDING CONDUCTOR.
- 3. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSULATED WITH GREEN-COLORED INSULATION.
- 4. GROUNDING ELECTRODE CONDUCTORS SHALL BE STRANDED CABLE.
- 5. MATERIALS AND CONNECTION COMPONENTS FOR GROUNDING AND BONDING SHALL BE MANUFACTURED BY ERICO, THOMAS & BETTS, OR BURNDY.

**ELECTRICAL IDENTIFICATION**

- 1. PROVIDE NAMEPLATES FOR ALL MAJOR ELECTRICAL EQUIPMENT AND ON EQUIPMENT AS DIRECTED BY OWNER.
- 2. PROVIDE ALL FEEDERS AND BRANCH CIRCUIT WIRING WITH COLOR CODED VINYL TAPE WRAPPED A MINIMUM OF 1.5 TIMES AROUND CIRCUMFERENCE OF JACKET/SHIELDING TO DESIGNATE PHASE.
- 3. COLOR CODING OF CONDUCTORS SHALL BE PER OWNERS REQUIREMENTS.
- 4. 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"

**CONDUCTORS AND CABLES**

- 1. WIRING - ALL CONDUCTORS SHALL BE EQUAL TO OR BETTER THAN MINIMUM #12 AWG FOR POWER, #14 AWG FOR CONTROL WITH 98% CONDUCTIVITY STRANDED COPPER, 600V, COLOR CODED, UNLESS NOTED ALUMINUM (AL). REFER TO "ALUMINUM CONDUCTOR REQUIREMENTS" THIS SHEET. PROVIDE 75°C RATED CONDUCTORS FOR AMPACITIES ABOVE 100A AND 60°C RATED CONDUCTORS FOR AMPACITIES OF 100 AMPS OR LESS. PROVIDE SOLID OR STRANDED FOR #10 AWG AND SMALLER, STRANDED FOR #8 AWG AND LARGER. UNLESS NOTED OTHERWISE ON DRAWINGS.
- 2. WIRE SIZE OF BRANCH CIRCUITS SHALL BE ADJUSTED TO COMPENSATE FOR VOLTAGE DROP BASED UPON ACTUAL CONDUIT ROUTING. CONTRACTOR SHALL MAINTAIN VOLTAGE DROP AS RECOMMENDED BY N.E.C. (NOT TO EXCEED 3%).
- 3. PROVIDE A SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT, FEEDER, ETC. NEUTRALS ARE NOT PERMITTED TO BE SHARED.
- 4. CONNECTORS FOR POWER CONDUCTORS: 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.
- 5. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
- 6. CABLES - MC CABLE IS NOT PERMITTED.
- 7. PROVIDE WIRE AND CABLE MANUFACTURED BY ONE OF THE FOLLOWING: AMERICAN INSULATED WIRE CORPORATION; NEXANS; CERROWIRE; SOUTHWIRE; OR ENCORE WIRE.
- 8. PROVIDE CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING: AMP INCORPORATED; GENERAL SIGNAL, O-Z/GEDNEY UNIT; SQUARE D COMPANY, ANDERSON; ILSCO; OR BURNDY.

**ALUMINUM CONDUCTOR REQUIREMENTS**

- 1. ALUMINUM CONDUCTOR GRADE SHALL BE MINIMUM AA-8000 OR THE NEWEST ALUMINUM CONDUCTOR SPECIFICATION BEING USED BY THE INDUSTRY.
- 2. THE CONTRACTOR SHALL ABIDE BY ALL ARTICLES RELATED TO ALUMINUM CONDUCTORS IN THE LATEST ISSUE OF THE NEC.
- 3. ALUMINUM CONDUCTORS SHALL ONLY BE TERMINATED USING ALUMINUM RATED CONNECTIONS. CONTRACTOR SHALL VERIFY TERMINATIONS ON EACH DEVICE OR EQUIPMENT BEFORE START OF WORK FOR RATED ALUMINUM CONNECTORS.
- 4. THE CONTRACTOR SHALL ABIDE BY ALL ALUMINUM WIRING INSTALLATION STANDARDS AS REQUIRED BY THE NEIS ( NATIONAL ELECTRICAL INSTALLATION STANDARDS) PUBLISHED BY THE NECA ( NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION). THE CONTRACTOR SHALL ABIDE BY ALL STANDARDS IN THE NECA / AA - 2006, WHICH DEFINES MINIMUM STANDARDS OF QUALITY AND WORKMANSHIP. A SUMMARY OF SOME OF THE REQUIREMENTS FOLLOW:
  - A. TERMINATE WITH COMPRESSION CONNECTORS, NO RING CUTS OF THE INSULATION, CRIMP ONLY WITH A CRIMP TOOL AND THE CORRECT DIE AS REQUIRED BY THE MANUFACTURER.
  - B. ALL CONDUCTORS TO RECEIVE ANTI-OXIDATIVE COATING DURING INSTALLATION.
  - C. TERMINATING WITH A SET SCREW CONNECTOR, THE SCREW SHALL BE TIGHTENED USING ONLY A TORQUE WRENCH.
  - D. NECA / AA RECOMMENDS BELLVILLE WASHERS WHEN CONNECTING ALUMINUM CONDUCTORS TO COPPER BUS BARS. ABIDE BY ALL NECA / AA RECOMMENDATIONS.
  - E. DO NOT USE PIN CONNECTORS ( WIRE ADAPTERS) UNLESS ABSOLUTELY NECESSARY. USE ALL / ANY OTHER OPTIONS, AND IF REQUIRED, PROVE TO ENGINEER BEFORE INSTALLING. IF USED, FOLLOW U.L. GUIDE FOR WIRE CONNECTORS ( ZMOW ), AND PROVIDE THE SPECIAL TOOLS REQUIRED BY THE MANUFACTURER. DIE-LESS CRIMPERS WILL NOT BE ACCEPTED.

**RACEWAY AND BOXES**

- 1. RACEWAYS: UNLESS NOTED OTHERWISE, ALL EXPOSED CONDUIT SHALL BE R.G.S., SCHEDULE 80 AND COVERED 6" BELOW FINISHED GRADE TO BE PVC, SCHEDULE 40. PROVIDE WEATHERPROOF FLEX CONNECTIONS WHERE REQUIRED. CONTRACTOR SHALL PROVIDE JUNCTION AND/OR PULL BOXES WHERE SHOWN ON THE DRAWINGS, OR AS REQUIRED, WHETHER SHOWN ON THE DRAWINGS OR NOT, AND SIZED PER N.E.C. PROVIDE NON-METALLIC ENCLOSURE WITH OPEN BOTTOM AND GASKETED COVER MANUFACTURED BY QUAZITE OR EQUIVALENT WITH DRIVE-OVER COVER ABLE TO WITHSTAND OCCASIONAL NON-DELIBERATE LIGHT VEHICULAR TRAFFIC. LABEL COVER TO SUIT INSTALLATION (I.E. "POWER" "COMMUNICATIONS", "LIGHTING", ETC.) AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
  - A. ABOVE GRADE: R.G.S.
  - B. BELOW GRADE: SCHEDULE 40 PVC (UNLESS NOTED OTHERWISE)
- 2. ALL WIRING SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT SHALL BE A MINIMUM OF 3/4".
- 3. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. CONTRACTOR SHALL PROVIDE MANUFACTURED LONG RADIUS BENDS FOR ALL CONDUITS. RGS 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'.
- 4. OUTLET BOXES SHALL BE CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- 5. PROVIDE METAL CONDUIT AND TUBING MANUFACTURED BY ONE OF THE FOLLOWING: ALFLEX CORPORATION; ANAMET INCORPORATED, ANACONDA METAL HOSE; ANIXTER BROTHERS INCORPORATED; CAROL CABLE COMPANY INCORPORATED; ELECTRI-FLEX COMPANY; GRINNELL COMPANY, ALLIED TUBE AND CONDUIT DIVISION; MONOGRAM COMPANY, AFC; REPUBLIC CONDUIT; OR WHEATLAND TUBE COMPANY.
- 6. PROVIDE NONMETALLIC CONDUIT AND TUBING MANUFACTURED BY ONE OF THE FOLLOWING: ANAMET INCORPORATED, ANACONDA METAL HOSE; CANTEX INDUSTRIES, HARSCO CORPORATION; CONDEX INTERNATIONAL, ELECTRICAL PRODUCTS; HUBBELL INCORPORATED, RACO, INCORPORATED; THOMAS & BETTS CORPORATION, CARLON ELECTRICAL PRODUCTS; OR O-Z/GEDNEY, UNIT OF GENERAL SIGNAL.
- 7. PROVIDE CONDUIT BODIES AND FITTINGS MANUFACTURED BY ONE OF THE FOLLOWING: CROUSE-HINDS, DIVISION OF COOPER INDUSTRIES; EMERSON ELECTRIC COMPANY, APPLETON ELECTRIC COMPANY; HUBBELL INCORPORATED, KILLARK ELECTRIC MANUFACTURING COMPANY; THOMAS & BETTS CORPORATION, CARLON ELECTRICAL PRODUCTS; OR O-Z/GEDNEY, UNIT OF GENERAL SIGNAL.
- 8. PROVIDE METAL WIREWAYS MANUFACTURED BY ONE OF THE FOLLOWING: HOFFMAN ENGINEERING COMPANY; KEYSTONE/REES, INCORPORATED; OR SQUARE D COMPANY.
- 9. PROVIDE BOXES, ENCLOSURES, AND CABINETS MANUFACTURED BY ONE OF THE FOLLOWING: CROUSE-HINDS, DIVISION OF COOPER INDUSTRIES; HOFFMAN ENGINEERING COMPANY, FEDERAL-HOFFMAN INCORPORATED; HUBBELL INCORPORATED, RACO INCORPORATED; THOMAS & BETTS, CARLON ELECTRICAL PRODUCTS; O-Z/GEDNEY, UNIT OF GENERAL SIGNAL; ROBROY INDUSTRIES INCORPORATED, ELECTRICAL DIVISION; OR SCOTT FETZER COMPANY, ADALET-PLM.


**SAFETY SWITCHES**

- 1. ALL DISCONNECT SWITCHES SHALL BE HEAVY-DUTY CONSTRUCTION WITH LOCKABLE HANDLES SIZED AS NOTED ON THE DRAWINGS AND/OR RISER DIAGRAM. PROVIDE NEMA ENCLOSURE AS REQUIRED BY EXPOSURE TYPE. ALL FUSIBLE SWITCHES SHALL BE PROVIDED WITH DUAL ELEMENT FUSES SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATION.


**FUSES**

- 1. FUSES SHALL BE DUAL ELEMENT, TIME DELAY CURRENT LIMITING. CONTRACTOR SHALL COORDINATE FUSE SIZES WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND PER THE N.E.C.
- 2. PROVIDE FUSES MANUFACTURED FROM ONE OF THE FOLLOWING: COOPER BUSSMAN, INCORPORATED; EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED, COOPER INDUSTRIES INCORPORATED; FERRAZ SHAWMUT INCORPORATED.

NOTE: ALL ELECTRICAL NOTATIONS ON EN-1 SHALL COMPLY AS NOTED.



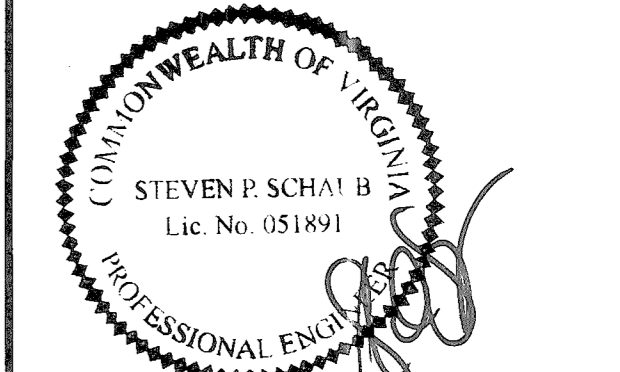
3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000



520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER:	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
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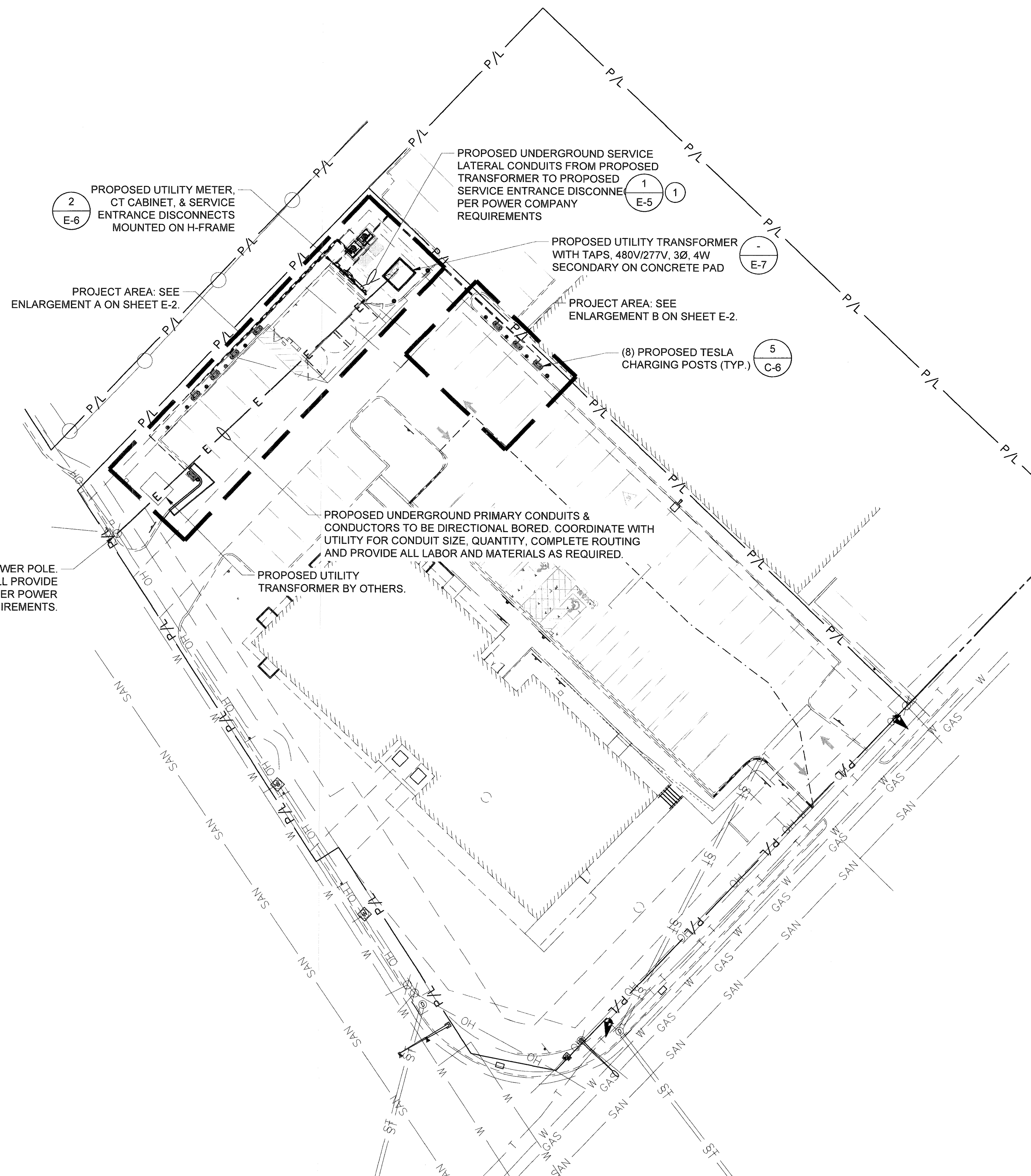
07/22/19

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465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
ELECTRICAL  
GENERAL NOTES

SHEET NUMBER  
EN-2



GENERAL SHEET NOTES

- UTILITY EQUIPMENT INSTALLATIONS AND PREP WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY ENGINEER TO ENSURE ACCURACY OF INSTALLATION.
- ALL PROPOSED CONDUITS MUST MEET MINIMUM DEPTH REQUIREMENTS AS OUTLINED IN DETAILS ON SHEET E-5, AS WELL AS MAINTAIN A MINIMUM OF 18" CLEAR OF ALL EXISTING OBSTRUCTIONS INCLUDING (BUT NOT LIMITED TO) STORM PIPES, SANITARY PIPES, WATER LINES AND OTHER UNDERGROUND UTILITIES.
- FOR TRAFFIC CONTROL PROCEDURES (IF APPLICABLE), SEE TRAFFIC CONTROL NOTES ON SHEET GN-1.

ELECTRICAL SCOPE OF WORK RESPONSIBILITIES

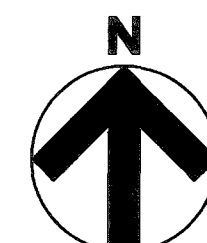
SCOPE	BY UTILITY	BY CONTRACTOR
PROVIDE PRIMARY SIDE TRENCHING		X
PROVIDE & INSTALL PRIMARY SIDE CONDUITS W/ PULLWIRE		X
PROVIDE & INSTALL PRIMARY SIDE CONDUCTORS	X	
PROVIDE & INSTALL UTILITY POLE (RISER BY CONTRACTOR)	X	
PROVIDE & INSTALL UTILITY TRANSFORMER PAD	X	
PROVIDE UTILITY TRANSFORMER	X	
INSTALL UTILITY TRANSFORMER	X	
INSTALL CONNECTIONS AT UTILITY TRANSFORMER (PRIMARY)	X	
INSTALL CONNECTIONS AT UTILITY TRANSFORMER (SECONDARY)	X	
PROVIDE METER PEDESTAL		X
INSTALL METER PEDESTAL		X
PROVIDE METER BASE	X	
INSTALL METER BASE		X
PROVIDE METER	X	
INSTALL METER	X	
PROVIDE CT CABINET	X	
INSTALL CT CABINET		X
PROVIDE CTs	X	
INSTALL CTs (INSIDE CT CABINET ON H-FRAME)		X
PROVIDE SECONDARY SIDE TRENCHING		X
PROVIDE & INSTALL SECONDARY SIDE CONDUITS W/ PULLWIRE		X
PROVIDE & INSTALL SECONDARY SIDE CONDUCTORS		X
PROVIDE ROAD CUTS / ROAD BORES	BORES	CUTS
PROVIDE & INSTALL PAVEMENT REPLACEMENT		X

NOTE: SCOPE SHOWN ABOVE WAS PROVIDED BY DOMINION ENERGY. FIELD VERIFY PRIOR TO CONSTRUCTION.

NOTE: ALL ELECTRICAL NOTATIONS ON EN-1 SHALL COMPLY AS NOTED.

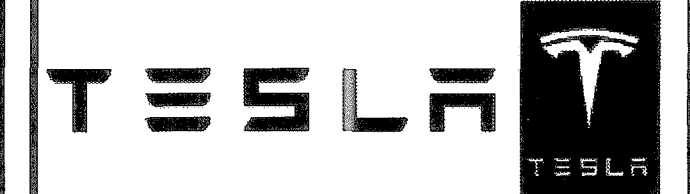
POWER COMPANY CONTACTS

DOMINION ENERGY  
ATTN: DUNCAN COCKERILL  
(703) 934-2594  
DUNCAN.COCKERILL@DOMINIONENERGY



SCALE: 1"=20'

OVERALL UTILITY PLAN



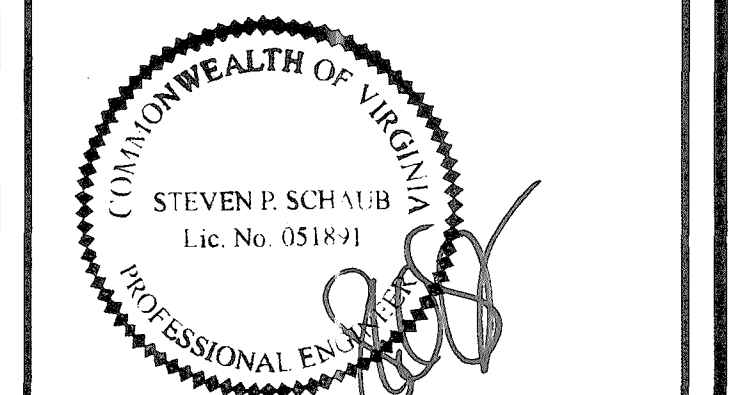
3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 581-8000



520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER: 2019141.07  
DRAWN BY: HD  
CHECKED BY: RP/EPM  
INSTALLATION MANAGER: JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH



07/22/19

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465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
OVERALL  
UTILITY PLAN

SHEET NUMBER

E-1

AC CHARGING CABINET LENGTHS (FEET)			
S.E. DISCONNECT	CABINET	LF	**EST**
DISCONNECT #1	1	10	26
DISCONNECT #2	2	13	29
TOTAL LENGTH OF AC WIRE=			660
TOTAL LENGTH OF GND Cu WIRE=			165

SEE SHEET E-3 FOR FEEDER SCHEDULE  
 TOTAL LENGTH OF AC WIRE =  
 SUM OF EST LENGTH x  
 12 WIRES PER CABINET  
 TOTAL LENGTH OF GND Cu =  
 SUM OF EST LENGTHS x (3) SETS

DC CHARGING POST LENGTHS (FEET)			
CABINET	POST	LF	***EST***
1	1A	114	136
	1B	77	99
	1C	68	90
	1D	58	80
2	2A	52	74
	2B	61	83
	2C	71	93
	2D	80	102
TOTAL LENGTH OF DC WIRE=			3028
TOTAL LENGTH OF GND Cu =			757
TOTAL LENGTH OF COMM CABLE =			757

SEE SHEET E-3 FOR FEEDER SCHEDULE  
 TOTAL LENGTH OF DC WIRE =  
 SUM OF EST LENGTH x  
 4 WIRES PER CHARGE POST  
 TOTAL LENGTH OF GND Cu =  
 SUM OF EST LENGTHS  
 TOTAL LENGTH OF COMM CABLE =  
 SUM OF EST LENGTHS

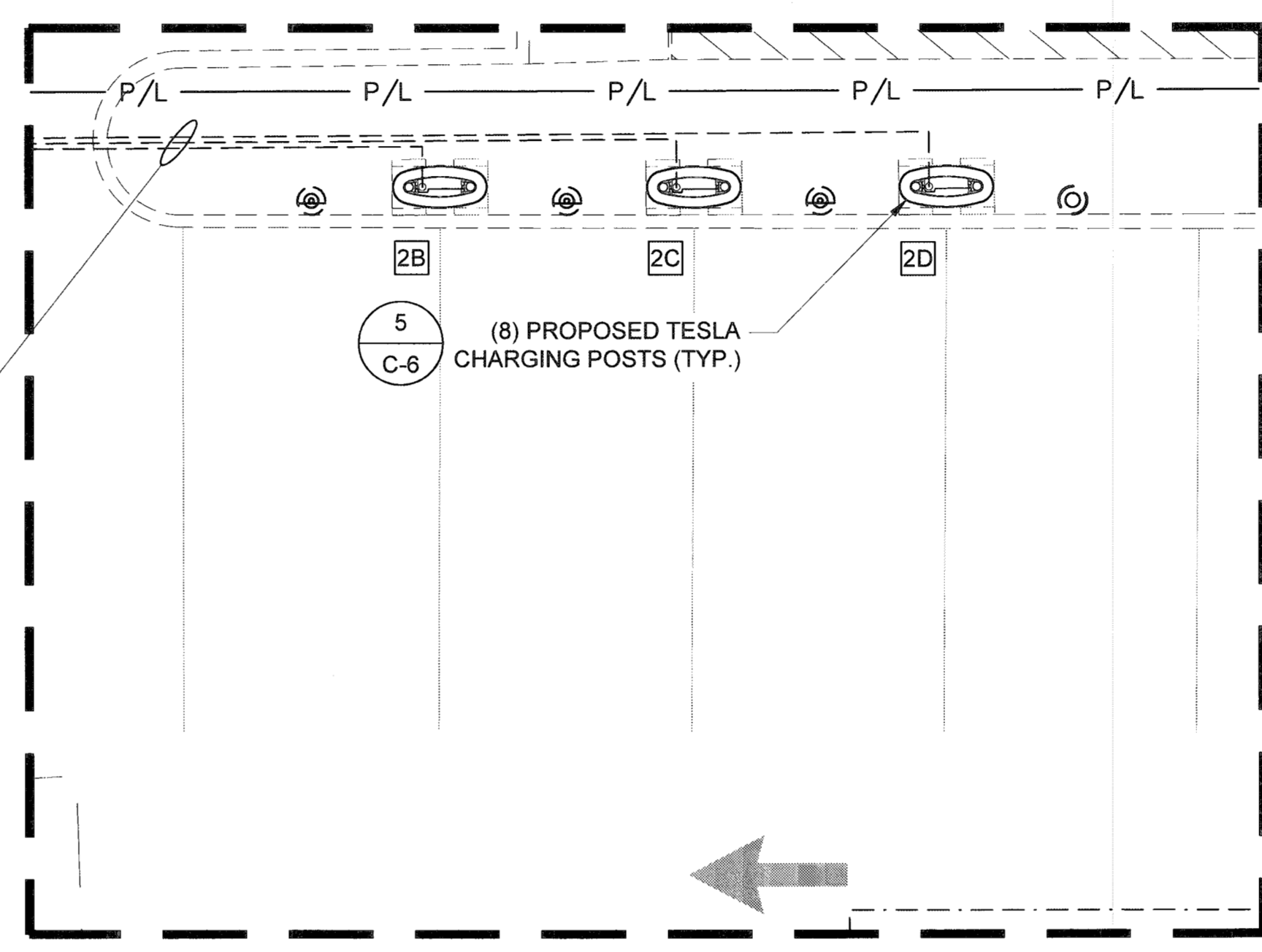
ELECTRICAL KEYNOTES #		
1.	UNDERGROUND CONDUITS SHALL BE ROUTED UP THROUGH CONCRETE SLAB.	
2.	CONTRACTOR SHALL COORDINATE EXACT LOCATION OF H-FRAME MOUNTED METER WITH UTILITY.	
UTILITY SERVICE LATERAL LENGTHS (FEET)		
UTILITY TRANSFORMER TO CT CABINET	LF	*EST*
	11	33
TOTAL LENGTH OF WIRE PER CONDUIT=		132
NUMBER OF WIRE FILLED CONDUIT=		6
TOTAL LENGTH OF WIRE=		792

\* AC UTILITY SERVICE CONDUCTORS:  
 22 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH.  
 \*\* AC CONDUCTORS:  
 16 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR VERTICAL RUN.  
 \*\*\* DC CONDUCTORS:  
 22 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR VERTICAL RUN.

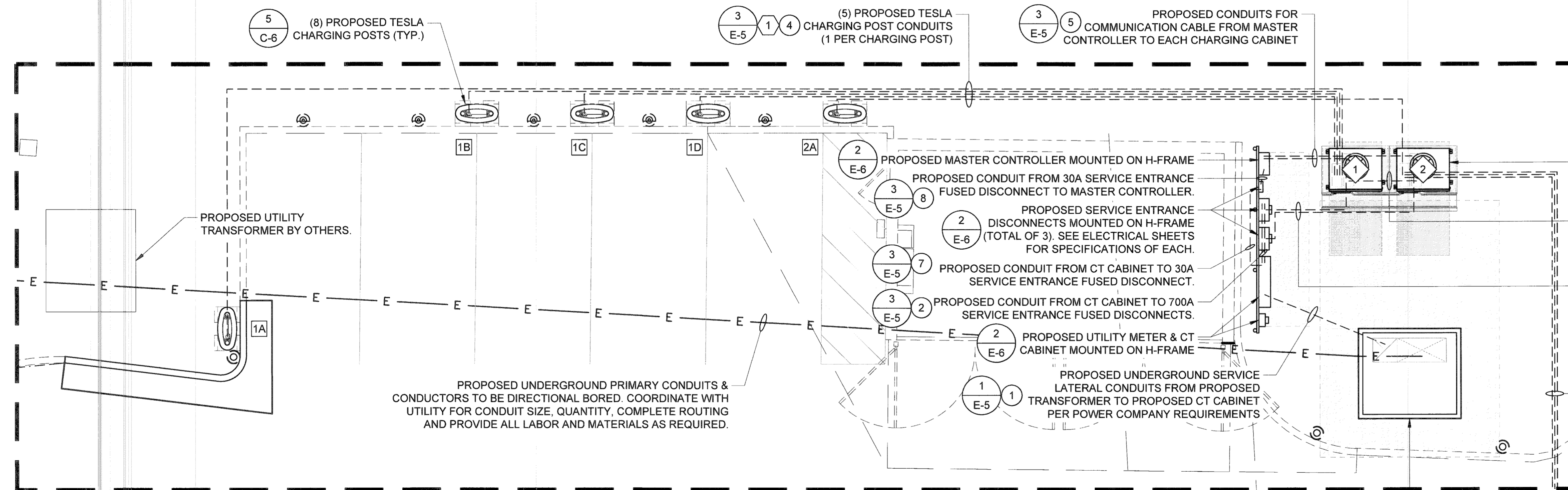
(3) PROPOSED TESLA CHARGING POST CONDUITS (1 PER CHARGING POST)

GENERAL SHEET NOTES

- CONDUCTOR LENGTHS ARE ESTIMATES ONLY. LENGTHS ARE BASED ON DIAGRAMMATICAL MEASUREMENTS AND APPROXIMATED BURIED DEPTHS. THE EXACT ROUTING PATH AND CONDUCTOR RUN LENGTHS SHALL BE DETERMINED BY CONTRACTOR IN FIELD BASED ON PHYSICAL MEASUREMENTS. CONTRACTOR SHALL ORDER CONDUCTORS BASED ON FIELD MEASUREMENTS (MUST BE APPROVED BY TESLA INSTALLATION MANAGER).
- "# " DENOTES FEEDER REFERENCE. REFER TO SHEET E-3 FOR FEEDER/CIRCUIT SCHEDULE.
- CONTRACTOR SHALL REFER TO CIVIL SHEETS FOR EXISTING LANDSCAPING TO REMAIN AND PROPOSED LANDSCAPING.
- CONTRACTOR SHALL HAND DIG AROUND ALL EXISTING UTILITIES.
- CONDUIT ELBOWS SHALL BE SIZED PER NEC. CONTRACTOR SHALL VERIFY MANUFACTURER ALLOWABLE FILL. SEE FEEDER SCHEDULE FOR CONDUIT & CONDUCTOR SPECIFICATIONS.
- ALL CONDUITS ACCESSIBLE TO THE PUBLIC OR WHICH CAN BE DAMAGED SHALL BE RIGID GALVANIZED STEEL.



ENLARGEMENT B  
 SEE SHEET C-1 FOR LOCATION



ENLARGEMENT A  
 SEE SHEET C-1 FOR LOCATION

NOTE: ALL ELECTRICAL NOTATIONS ON EN-1 SHALL COMPLY AS NOTED.

PROPOSED UNDERGROUND PRIMARY CONDUITS & CONDUCTORS TO BE DIRECTIONAL BORED. COORDINATE WITH UTILITY FOR CONDUIT SIZE, QUANTITY, COMPLETE ROUTING AND PROVIDE ALL LABOR AND MATERIALS AS REQUIRED.

PROPOSED UTILITY TRANSFORMER WITH TAPS, 480V/277V, 3Ø, 4W SECONDARY ON CONCRETE PAD

ELECTRICAL EQUIPMENT PLAN

0' 5' 10' SCALE: 1"=5'

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

520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER:	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
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465 MAPLE AVE.  
 (TESLA STATION)  
 VIENNA, VA 22180

SHEET TITLE  
 ELECTRICAL EQUIPMENT PLAN

SHEET NUMBER  
 E-2

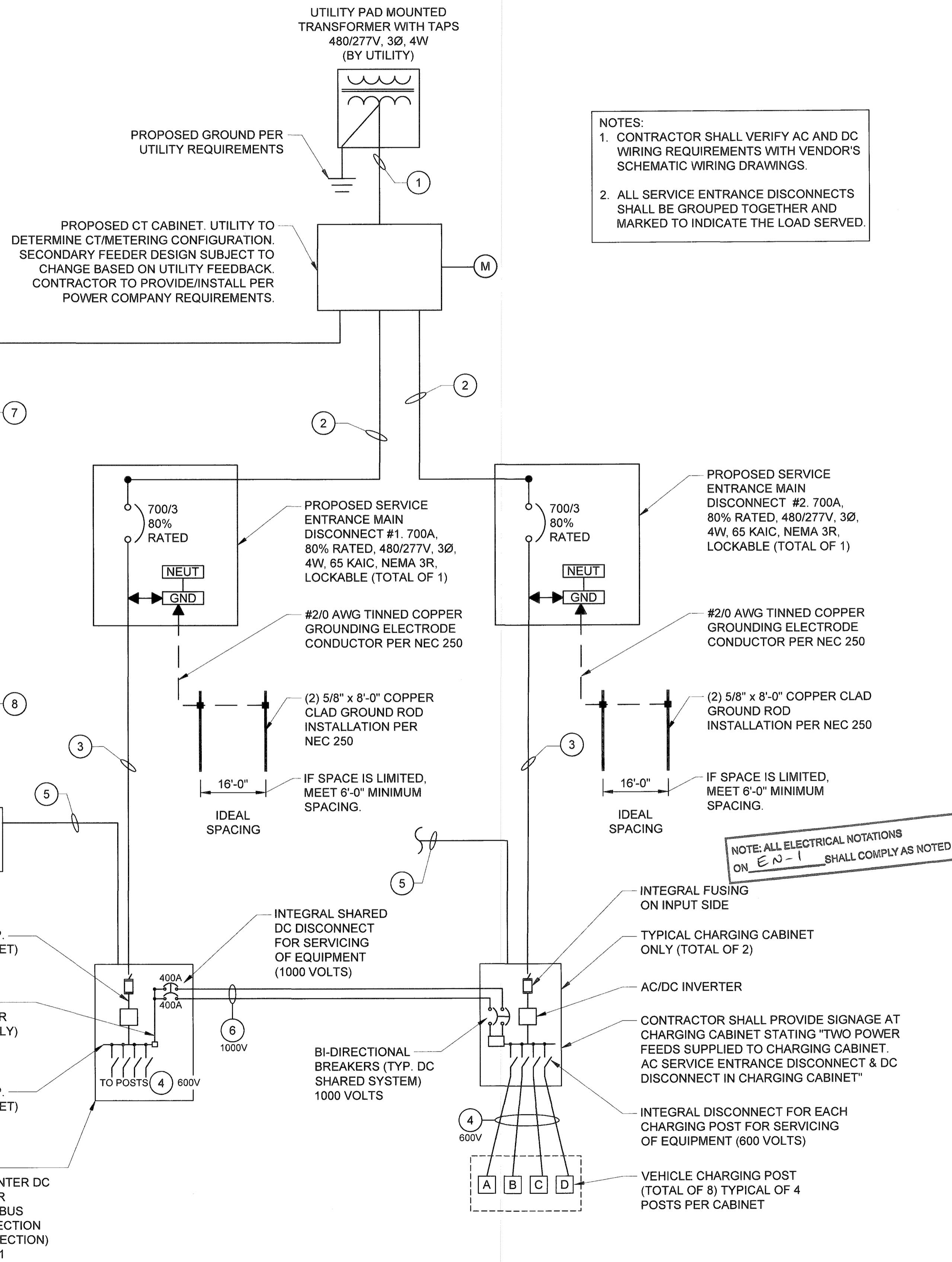
GENERAL SHEET NOTES

- NEUTRAL MUST BE INCLUDED FOR PROPER OPERATION OF TESLA SUPERCHARGERS.
- PROPOSED UTILITY CTs SHALL BE LOCATED IN UTILITY APPROVED CT COMPARTMENTS MOUNTED ON H-FRAME. PROPOSED METER SHALL BE MOUNTED ON H-FRAME.
- ALL CONDUIT FURNISHED AND INSTALLED BY CONTRACTOR. ALL WIRING FURNISHED BY TESLA AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. SEE SHEET E-1 FOR UTILITY/CONTRACTOR SCOPE OF WORK.
- ALL BUSHINGS AND INTERNAL WIRING OF PROPOSED SERVICE EQUIPMENT PROVIDED BY MANUFACTURER. ANY MODIFICATIONS SHALL REQUIRE ENGINEERING APPROVAL PRIOR TO ANY CHANGES BEING MADE.
- VERIFY AVAILABLE FAULT CURRENT AT THE SECONDARY OF THE UTILITY TRANSFORMER WITH THE POWER COMPANY. CONDUCT A FAULT CURRENT ANALYSIS TO DETERMINE THE INTERRUPTING CAPACITY (AIC RATING) OF THE ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL PERFORM ARC FLASH CALCULATIONS AS REQUIRED IN THE FOLLOWING: NFPA 70; NFPA 70E; OSHA 29; AND IEEE STANDARDS 1584. CONTRACTOR SHALL OBTAIN ALL NECESSARY INFORMATION FROM POWER COMPANY TO CALCULATE FLASH PROTECTION BOUNDARIES, INCIDENT ENERGY LEVELS, AND SHALL DETERMINE MINIMUM PPE REQUIREMENTS FOR COMPLETING THE WARNING LABELS. PROVIDE WARNING LABELS CONTAINING ALL THE LATEST INFORMATION AS REQUIRED BY LOCAL JURISDICTION, STATE AND FEDERAL CODES AND LAWS
- ALL ALUMINUM (AI) CONDUCTORS TO RECEIVE ANTI-OXIDATIVE COATING DURING INSTALLATION. ALL OTHER CONDUCTORS ARE COPPER UNLESS NOTED OTHERWISE.
- ALL CONDUITS ACCESSIBLE TO THE GENERAL PUBLIC OR WHICH CONDUITS CAN BE DAMAGED SHALL BE RIGID GALVANIZED STEEL.
- THE CHARGING CABINETS AND THE CHARGING POSTS USED ON THIS PROJECT COMPLY WITH THE FOLLOWING STANDARDS:
  - UL 2202
  - CSA 22.2 NO 107.1-16
  - UL 1998 PENDING
- THE AFOREMENTIONED STANDARDS IDENTIFY THE REQUIREMENTS MET BY THE EQUIPMENT, INCLUDING BUT NOT LIMITED TO:
  - PROTECTION AGAINST ELECTRIC SHOCK
  - OVERLOAD AND SHORT CIRCUIT PROTECTION
  - FAULT PROTECTION
  - DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS LIVE PARTS
  - THE INTERNAL COMPONENTS OF THE SYSTEM ARE PROPRIETARY. ANY QUESTIONS CONCERNING ACTUAL INTERNAL PROTECTIVE DEVICES MUST BE COORDINATED DIRECTLY WITH TESLA.

CHARGE POST MODEL	AC INPUT VOLTAGE TO CABINET	KVA INPUT TO CABINET	AC INPUT CURRENT TO CABINET	DC OUTPUT VOLTAGE TO CHARGE POST	DC OUTPUT CURRENT TO CHARGE POST	DC SHARED BUS CURRENT	SHORT CIRCUIT CURRENT RATING
250KW	480V	433KVA	521A	180V - 500V	428A (600V)	661A (1000V)	85 KAIC

FEEDER/CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY TRANSFORMER/METERING	PROPOSED CT CABINET	(3) 300 MCM AI (XHHW-2, 90°C) (1) 300 MCM AI NEUT (XHHW-2, 90°C) IN EACH (6) 4" PVC CONDUITS. VERIFY W/ UTILITY BEFORE CONSTRUCTION.
2	PROPOSED CT CABINET	PROPOSED SERVICE ENTRANCE DISCONNECT. 700A, 80% RATED BREAKER	(3) 300 MCM AI (XHHW-2, 90°C) (1) 300 MCM AI NEUT (XHHW-2, 90°C) IN EACH (3) 3" PVC CONDUITS
3	PROPOSED SERVICE ENTRANCE DISCONNECT. 700A, 80% RATED BREAKER	PROPOSED TESLA CHARGING CABINETS 1-2	(3) 300 MCM AI (XHHW-2, 90°C) (1) 300 MCM AI NEUT (XHHW-2, 90°C) (1) #1/0 AWG Cu GND (XHHW-2, 90°C) IN EACH (3) 3" PVC CONDUIT OR 3" NON-METALLIC FLEXIBLE CONDUIT. SEE FLEX SPEC ON SHEET E-5.
4	PROPOSED TESLA CHARGING CABINETS 1-2	PROPOSED TESLA CHARGING POSTS 1-8	(4) 350 MCM Cu (XHHW-2, 90°C) (1) #1 AWG Cu GND (XHHW-2, 90°C) (1) 600V COMM CABLE IN (1) 4" PVC CONDUIT OR 4" NON-METALLIC FLEXIBLE CONDUIT. SEE FLEX SPEC ON SHEET E-5.
5	SITE MASTER CONTROLLER	PROPOSED TESLA CHARGING CABINETS 1-2	COMMUNICATION CABLE BY TESLA IN 1" PVC CONDUIT. SEE SUPPLEMENTAL DOCUMENTS
6	CENTER CHARGING CABINET (SHARED DC BUS CABINET, 1000V)	DC SHARED BUS OF EACH CHARGING CABINET (1000 VOLTS)	(2) 600 MCM Cu (XHHW-2, 1000V RATED) (1) #1/0 AWG Cu GND (XHHW-2, 1000V RATED) EACH IN (2) 3" PVC CONDUIT
7	PROPOSED CT CABINET	PROPOSED SERVICE ENTRANCE FUSED DISCONNECT	(3) #10 AWG AI (XHHW-2, 90°C) (1) #10 AWG A NEUT (XHHW-2, 90°C) IN 1" PVC CONDUIT. VERIFY W/ UTILITY BEFORE CONSTRUCTION.
8	PROPOSED SERVICE ENTRANCE FUSED DISCONNECT	PROPOSED MASTER CONTROLLER	(1) #10 AWG Cu (XHHW-2, 90°C) (1) #10 AWG Cu NEUT (XHHW-2, 90°C) (1) #10 AWG Cu GND (XHHW-2, 90°C) IN 1" PVC CONDUIT.

NOTE:  
ALL CONDUCTORS ARE RATED @ 600 VOLTS, EXCEPT THOSE CONDUCTORS NOTED @ 1000 VOLTS



SYSTEM ONE-LINE DIAGRAM

**TESLA**

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

**GPD GROUP, INC.**

520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH

COMMONWEALTH OF VIRGINIA

STEVEN P. SCHAUB

PROFESSIONAL ENGINEER

Lic. No. 051891

07/22/19

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465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
SYSTEM ONE-LINE  
DIAGRAM

SHEET NUMBER  
E-3

A



# Superflex Ltd.

152 4th STREET  
BROOKLYN, NY 11232  
TEL: 718 768-1400  
FAX: 718 768-5065

July 26, 2018

Re: Sealproof non-metallic liquid tight conduit, 90c Wet Rating

To Whom it May Concern,

Recently, Underwriters Laboratories (UL) established requirements for non-metallic liquid tight conduit to be "listed and marked" for use at 90c wet temperatures. Superflex has obtained this listing for our trademarked Sealproof non-metallic liquid tight conduit. We have not changed any materials, constructions, or processing conditions to meet the requirements of UL for 90c wet temperatures on these products.

However, identical products made before the change in print legend was made may remain in our or our customers' inventory printed as 60c wet. Until that inventory is exhausted, products may be installed that are not marked 90c wet. Any non-metallic liquid tight conduit that is printed with Superflex's trademarked brand Sealproof and a 105c dry temperature rating, whether marked 60c wet or 90c wet, is covered under the UL listing for 90c wet temperatures.

Sincerely,




Michael Elbaz  
Vice President, Operations  
Superflex Ltd.

PART NUMBER	DESCRIPTION	OD	ID	BEND RADIUS
9438	3" LFNC-B	3.460 - 3.500"	3.070 - 3.150"	18 in

For Custom Orders:  
a. Available in Black  
b. Custom cut lengths available.  
Consult factory for details

**PRODUCT INFO:**  
Listed under the Underwriter's Laboratories  
CSA Certified by Canadian Standards Association  
3 inch trade size  
Use with SEALPROOF® zinc die cast straight or right angle connectors  
May also be used with metal connectors for liquid-tight conduit  
Resists corrosion, abrasion, oil, water, acid, metal shavings, and rough environments  
Smooth inside for easier wire pulling, no hazardous sharp edges or burrs, will not damage conductors

**COLOR: NA**  
Outdoor, sunlight resistant, direct burial  
CSA rating - 18°C to 105°C  
Light weight and lower installed cost  
Quick installation, cuts with utility knife or PVC cutter  
Integral rigid & flexible PVC construction  
Resists abuse, pull and crushing  
UL Rating: 105°C dry, 90°C wet, 70°C oil resistant

<b>MATERIAL:</b> PVC	<b>DESCRIPTION:</b> SPECIFICATION SHEET FOR SEALPROOF			
<b>CERTIFICATIONS:</b> UL 1660		<b>PART NO</b>	<b>REV DATE</b>	
<b>MARKING:</b> UL & CSA		Liquid Tight Conduit Type B		
<b>CERT#</b> E129973		3" size	REV: 1	07/25/2018
<b>CERT#</b> LL-84705		PROPERTY OF SUPERFLEX LTD		


PART NUMBER	DESCRIPTION	OD	ID	BEND RADIUS
9440	4" LFNC-B	4.460 - 4.500"	4.000 - 4.090"	24 in

For Custom Orders:  
a. Available in Black  
b. Custom cut lengths available.  
Consult factory for details

This detail has not been reviewed by the stamping party. Therefore, the stamping party makes no representation(s) with respect to its contents, and shall not be liable for such. This detail is for reference only. Any reliance on this detail shall be at the relying party(ies)'s own risk and hereby waives any and all claim(s) related to the existence of the stamp or otherwise.

**PRODUCT INFO:**  
Listed under the Underwriter's Laboratories  
CSA Certified by Canadian Standards Association  
4 inch trade size  
Use with SEALPROOF® zinc die cast straight or right angle connectors  
May also be used with metal connectors for liquid-tight conduit  
Resists corrosion, abrasion, oil, water, acid, metal shavings, and rough environments  
Smooth inside for easier wire pulling, no hazardous sharp edges or burrs, will not damage conductors

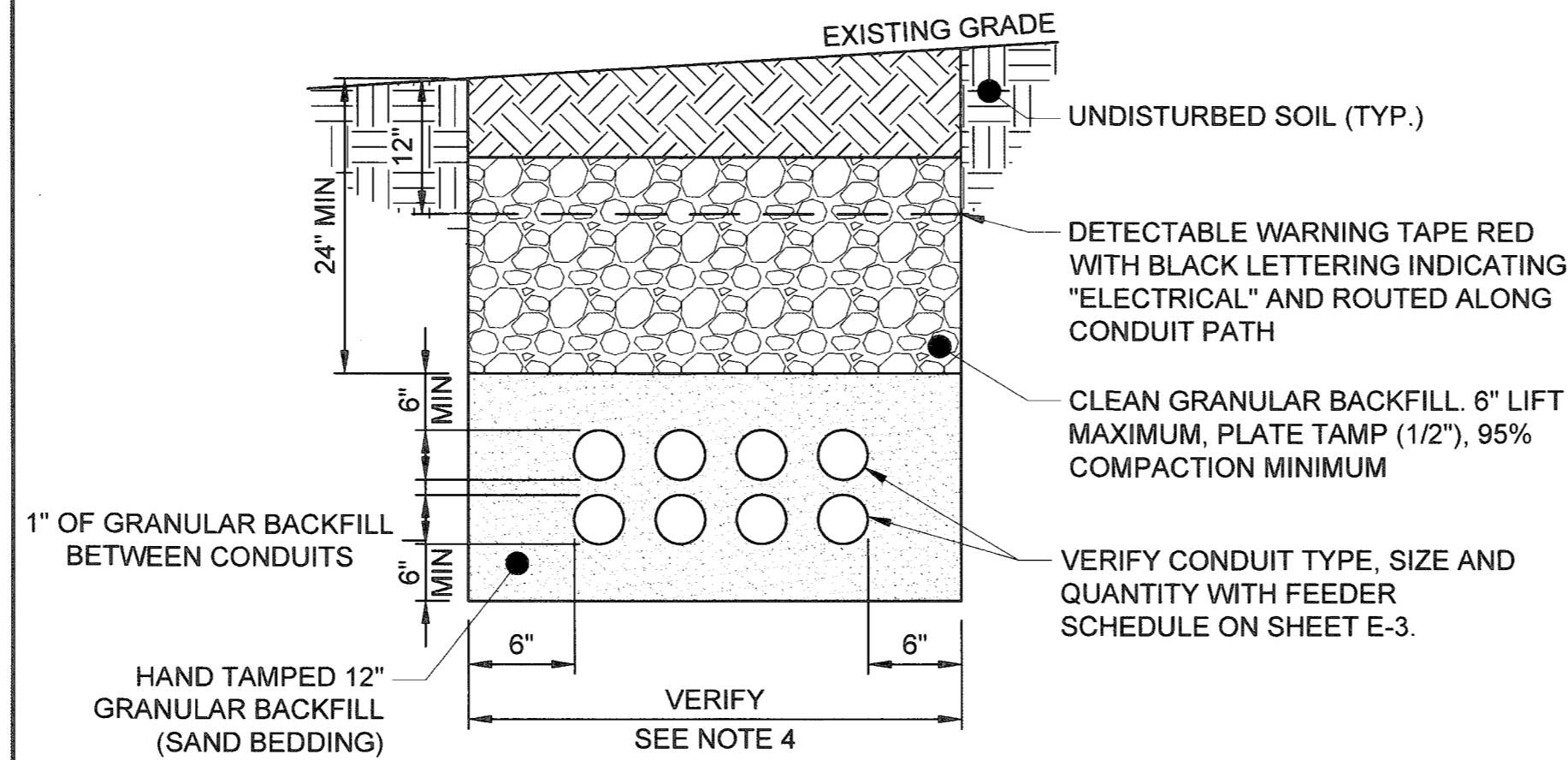
**COLOR: NA**  
Outdoor, sunlight resistant, direct burial  
CSA rating - 18°C to 105°C  
Light weight and lower installed cost  
Quick installation, cuts with utility knife or PVC cutter  
Integral rigid & flexible PVC construction  
Resists abuse, pull and crushing  
UL Rating: 105°C dry, 90°C wet, 70°C oil resistant

<b>MATERIAL:</b> PVC	<b>DESCRIPTION:</b> SPECIFICATION SHEET FOR SEALPROOF			
<b>CERTIFICATIONS:</b> UL 1660		<b>PART NO 9440</b>	<b>REV DATE</b>	
<b>MARKING:</b> UL & CSA		Liquid Tight Conduit Type B		
<b>CERT#</b> E129973		4" size	REV: 2	04/11/2019
<b>CERT#</b> LL-84705		PROPERTY OF SUPERFLEX LTD		

FLEXIBLE NON-METALLIC CONDUIT SPECIFICATION

N.T.S

5



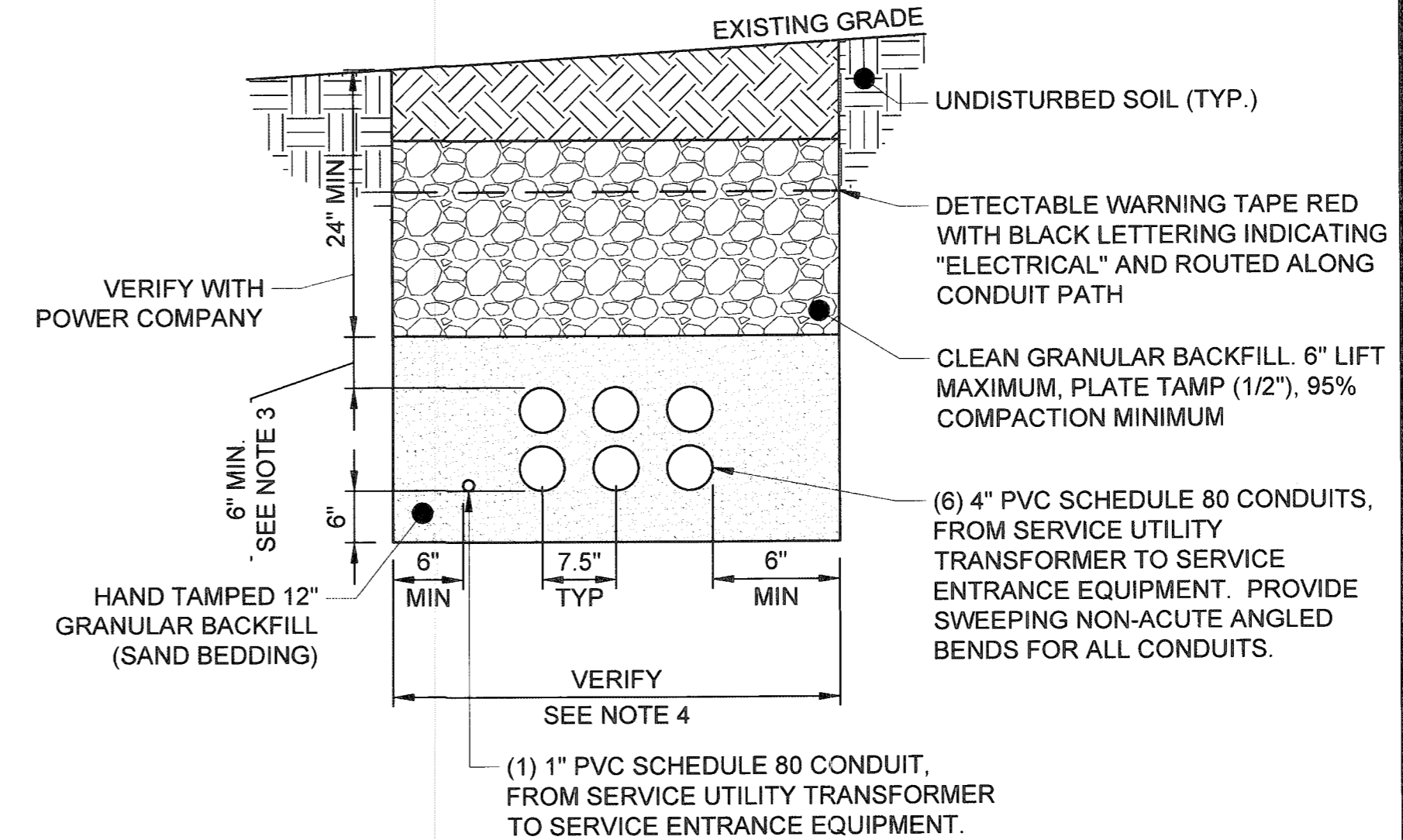
**NOTES:**

1. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF.
2. ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRECONSTRUCTION CONDITIONS OR BETTER.
3. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH CONTACT ENGINEER LISTED ON SHEET T-1.
4. VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING ON SHEET E-2 FOR ROUTING.

TYPICAL CONDUIT UNDER SOLID TRENCH DETAIL

N.T.S

3



**NOTES:**

1. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF.
2. ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRECONSTRUCTION CONDITIONS OR BETTER.
3. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH CONTACT ENGINEER LISTED ON SHEET T-1.
4. VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING ON SHEET E-2 FOR ROUTING.
5. VERIFY ALL REQUIREMENTS WITH POWER COMPANY

SECONDARY FEEDERS TRENCH DETAIL

N.T.S

1

FLEXIBLE NON-METALLIC CONDUIT SPECIFICATION

N.T.S

5

DETAIL NOT USED

N.T.S

2



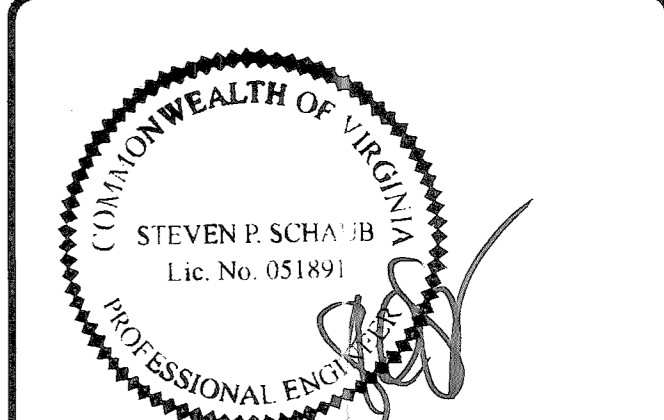
3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000



520 South Main Street, Suite 2531  
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330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER:	2019141.07
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INSTALLATION MANAGER:	JESSE KARP

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C	04.12.19	ISSUED FOR 100% REVIEW
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A	01.18.19	ISSUED SITE SKETCH



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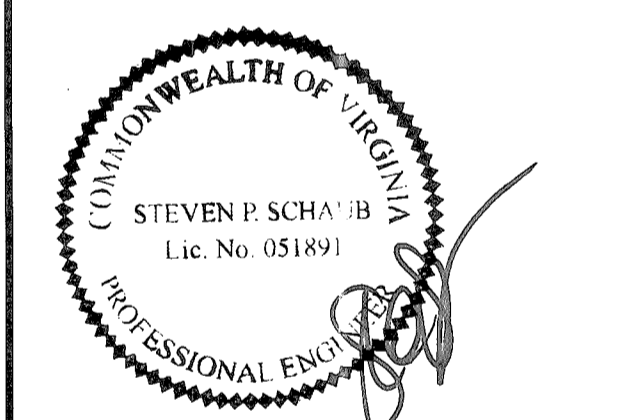
NOTE: ALL ELECTRICAL NOTATIONS ON E-N-1 SHALL COMPLY AS NOTED.

SHEET TITLE  
ELECTRICAL DETAILS

SHEET NUMBER  
E-5

GPD PROJECT NUMBER	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

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(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
ELECTRICAL DETAILS

SHEET NUMBER  
E-6

NOTE: ALL ELECTRICAL NOTATIONS ON EN-1 SHALL COMPLY AS NOTED.

DETAIL NOT USED

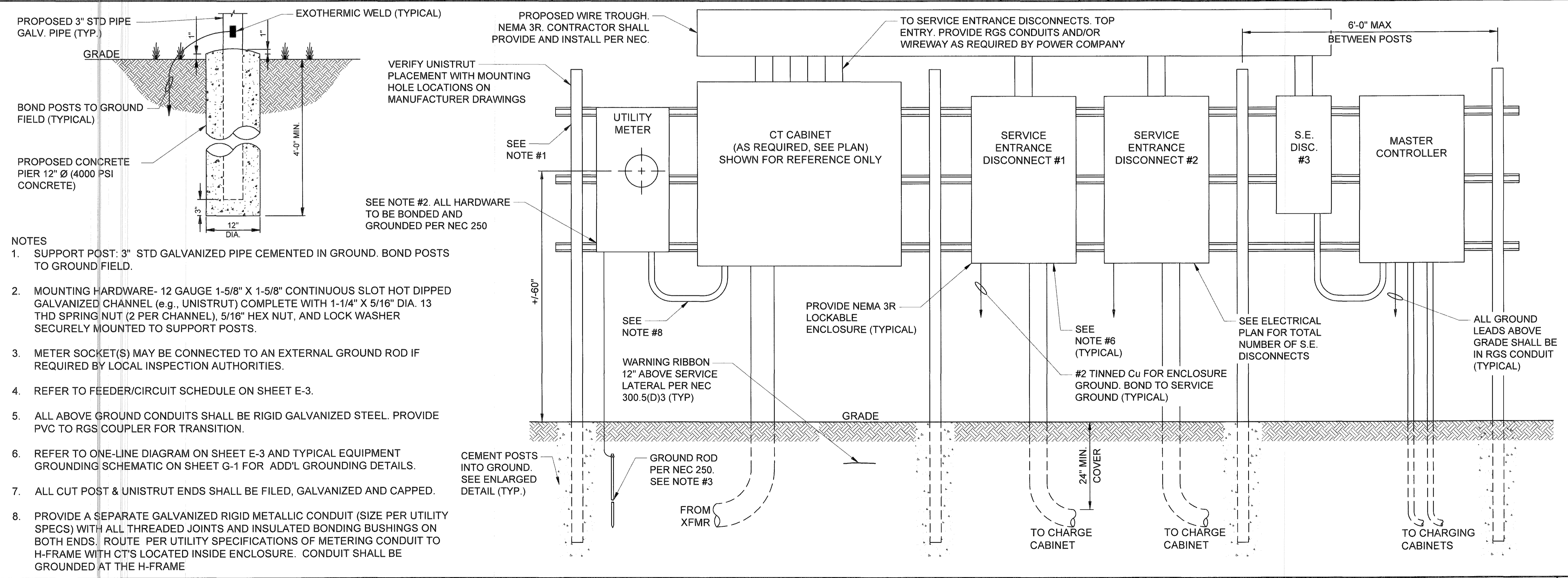
N.T.S 5

DETAIL NOT USED

N.T.S 3

DETAIL NOT USED

N.T.S 1



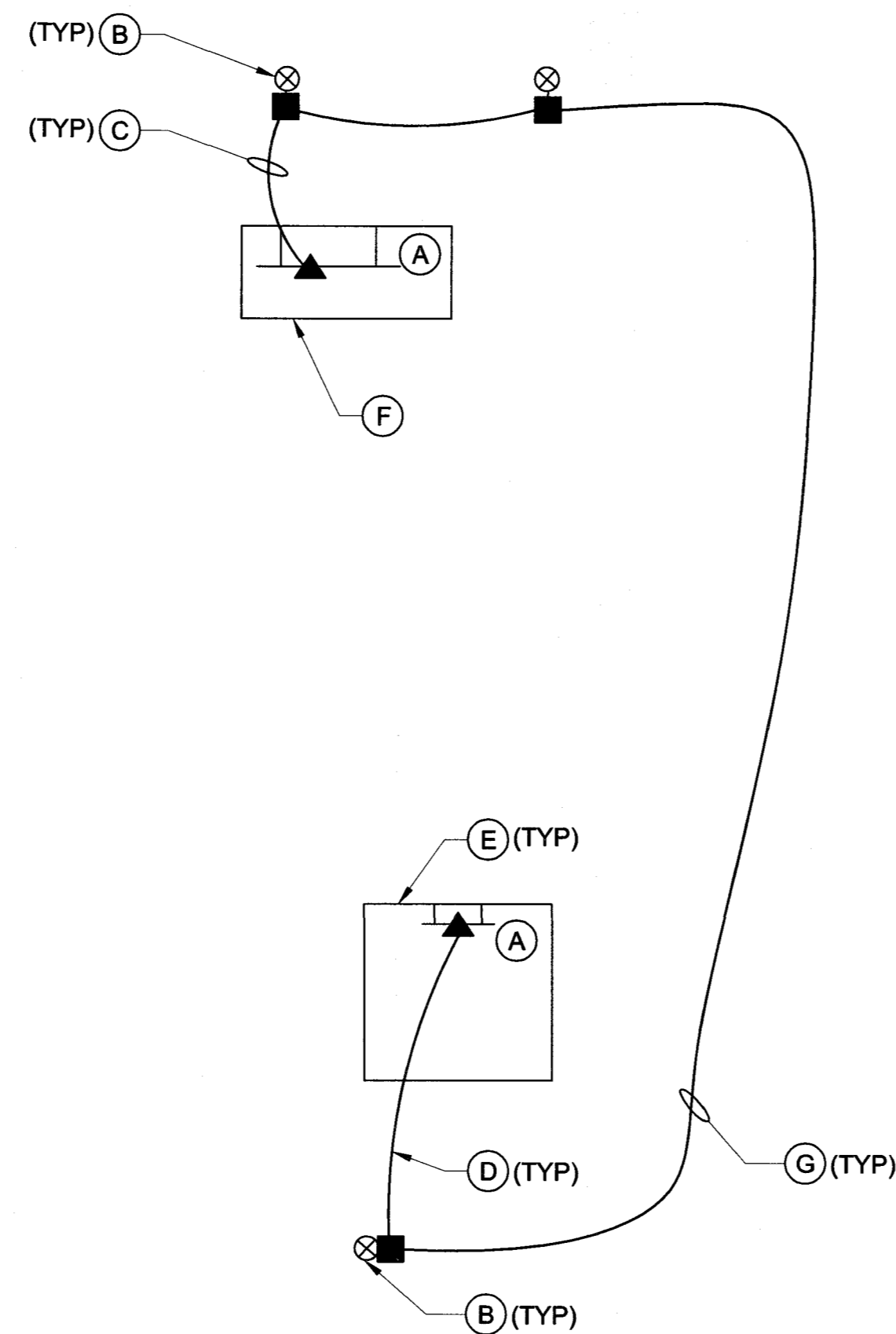
- NOTES
1. SUPPORT POST: 3" STD GALVANIZED PIPE CEMENTED IN GROUND. BOND POSTS TO GROUND FIELD.
  2. MOUNTING HARDWARE- 12 GAUGE 1-5/8" X 1-5/8" CONTINUOUS SLOT HOT DIPPED GALVANIZED CHANNEL (e.g., UNISTRUT) COMPLETE WITH 1-1/4" X 5/16" DIA. 13 THD SPRING NUT (2 PER CHANNEL), 5/16" HEX NUT, AND LOCK WASHER SECURELY MOUNTED TO SUPPORT POSTS.
  3. METER SOCKET(S) MAY BE CONNECTED TO AN EXTERNAL GROUND ROD IF REQUIRED BY LOCAL INSPECTION AUTHORITIES.
  4. REFER TO FEEDER/CIRCUIT SCHEDULE ON SHEET E-3.
  5. ALL ABOVE GROUND CONDUITS SHALL BE RIGID GALVANIZED STEEL. PROVIDE PVC TO RGS COUPLER FOR TRANSITION.
  6. REFER TO ONE-LINE DIAGRAM ON SHEET E-3 AND TYPICAL EQUIPMENT GROUNDING SCHEMATIC ON SHEET G-1 FOR ADD'L GROUNDING DETAILS.
  7. ALL CUT POST & UNISTRUT ENDS SHALL BE FILED, GALVANIZED AND CAPPED.
  8. PROVIDE A SEPARATE GALVANIZED RIGID METALLIC CONDUIT (SIZE PER UTILITY SPECS) WITH ALL THREADED JOINTS AND INSULATED BONDING BUSHINGS ON BOTH ENDS. ROUTE PER UTILITY SPECIFICATIONS OF METERING CONDUIT TO H-FRAME WITH CT'S LOCATED INSIDE ENCLOSURE. CONDUIT SHALL BE GROUNDED AT THE H-FRAME

METER, CT CABINET, SERVICE ENTRANCE DISCONNECT, & MASTER CONTROLLER H-FRAME DETAIL

N.T.S 2

**NOTES:**

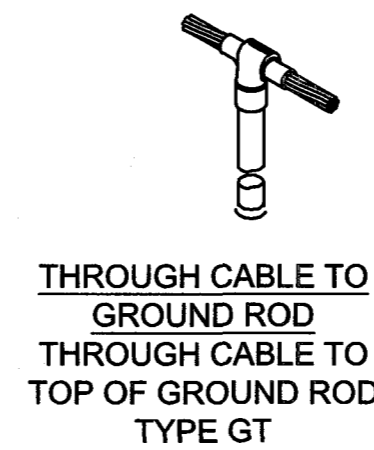
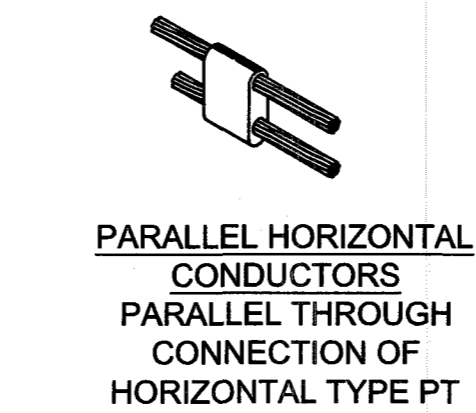
- EXOTHERMIC WELD (2) TWO, #6 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR/LUG. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- ALL GROUND BARS SHALL BE STAMPED IN TO THE METAL "IF STOLEN DO NOT RECYCLE."
- ALL HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUND BUS.
- NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE. INSTALL BLACK HEAT-SHRINKING TUBE, 600 VOLT INSULATION, ON ALL GROUND TERMINATIONS. THE INTENT IS TO WEATHERPROOF THE COMPRESSION CONNECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED, PROVIDING 50% SPARE CONNECTION POINTS.
- ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).
- TESLA CHARGERS HAVE INTERNAL HIGH IMPEDANCE GROUND FAULT PROTECTION (10MΩ).
- EMC - ELECTROMAGNETIC COMPATIBILITY.
- ALL GROUNDING HARDWARE SUPPLIED AND INSTALLED BY CONTRACTOR.



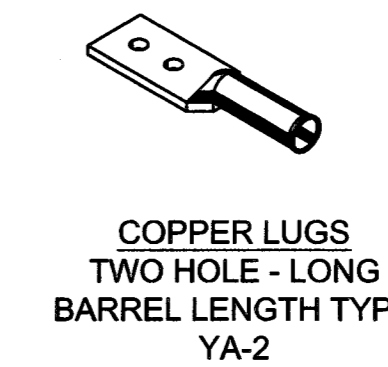
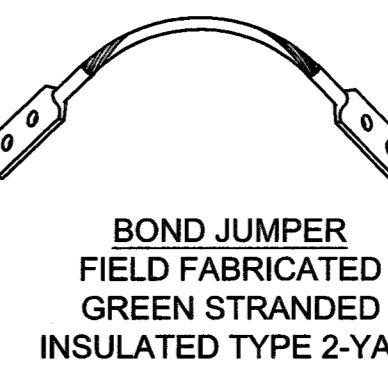
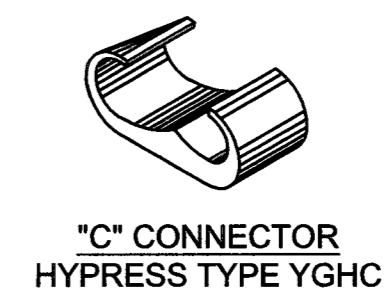
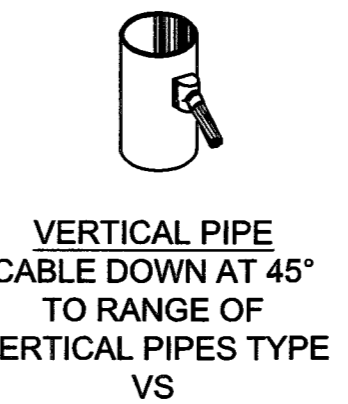
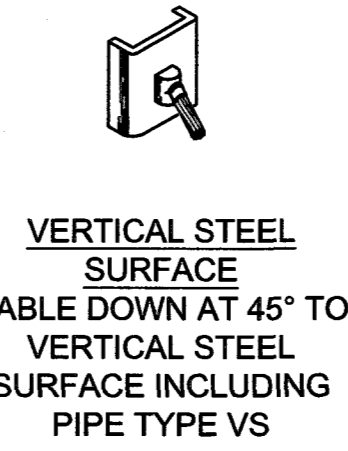
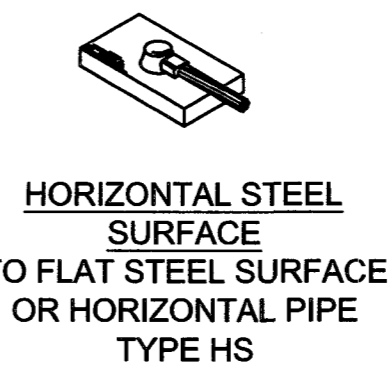
**GROUNDING LEGEND**

- (A) GROUND BAR/LUG WITHIN PROPOSED EQUIPMENT
- (B) PROPOSED 5/8"x8'-0" GROUND ROD, SEE DETAIL 4, THIS SHEET
- (C) PROPOSED SERVICE GROUND, SEE DETAIL 4, THIS SHEET
- (D) PROPOSED CHARGING CABINET GROUND FOR EMC, SEE DETAIL 2, THIS SHEET
- (E) PROPOSED CHARGING CABINET. SEE PLAN FOR EXACT QUANTITY
- (F) PROPOSED SERVICE ENTRANCE DISCONNECT. TYPICAL OF (1) PER CHARGING CABINET.
- (G) #2 SOLID TINNED COPPER
- PROPOSED GROUND RING
- CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD

**CADWELD CONNECTIONS (OR APPROVED EQUAL)**



**BURNDY CONNECTIONS (OR APPROVED EQUAL)**



GROUNDING NOTES

N.T.S

5

TYPICAL EARTH GROUNDING PLAN

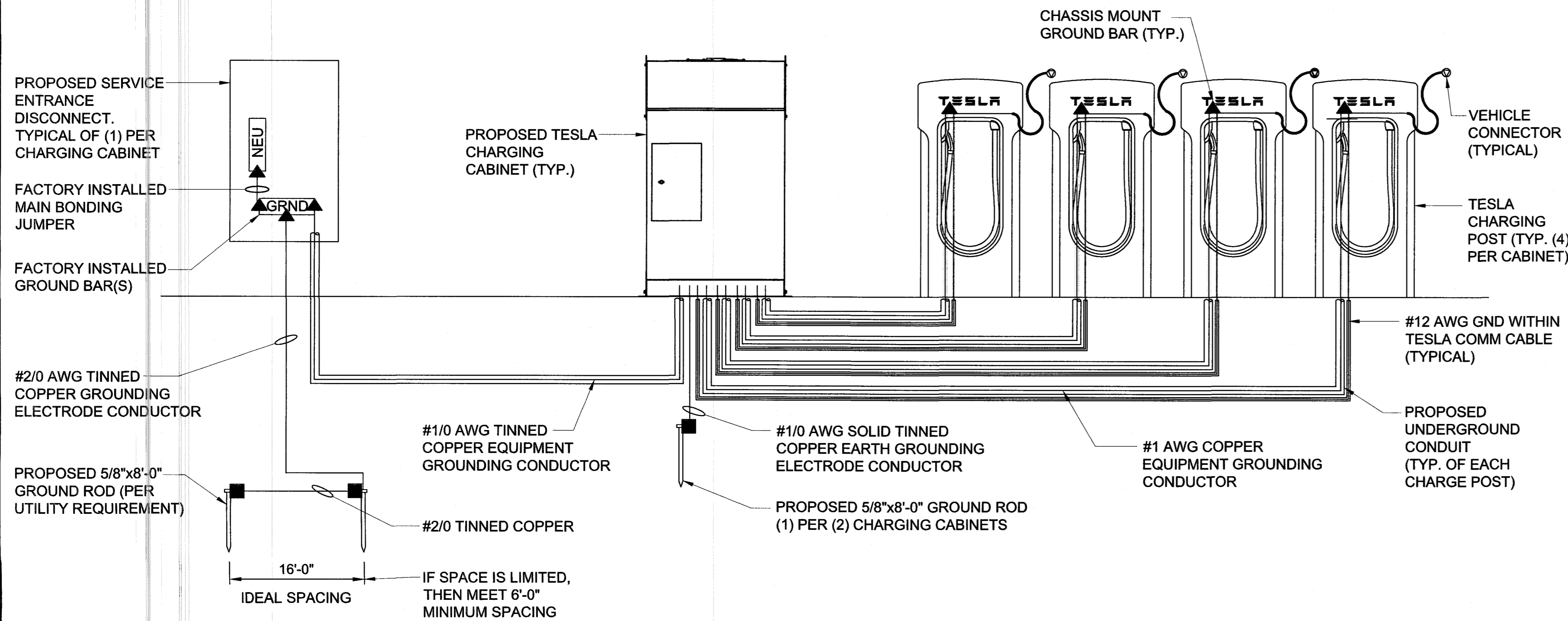
N.T.S

3

CADWELD CONNECTION DETAIL

N.T.S

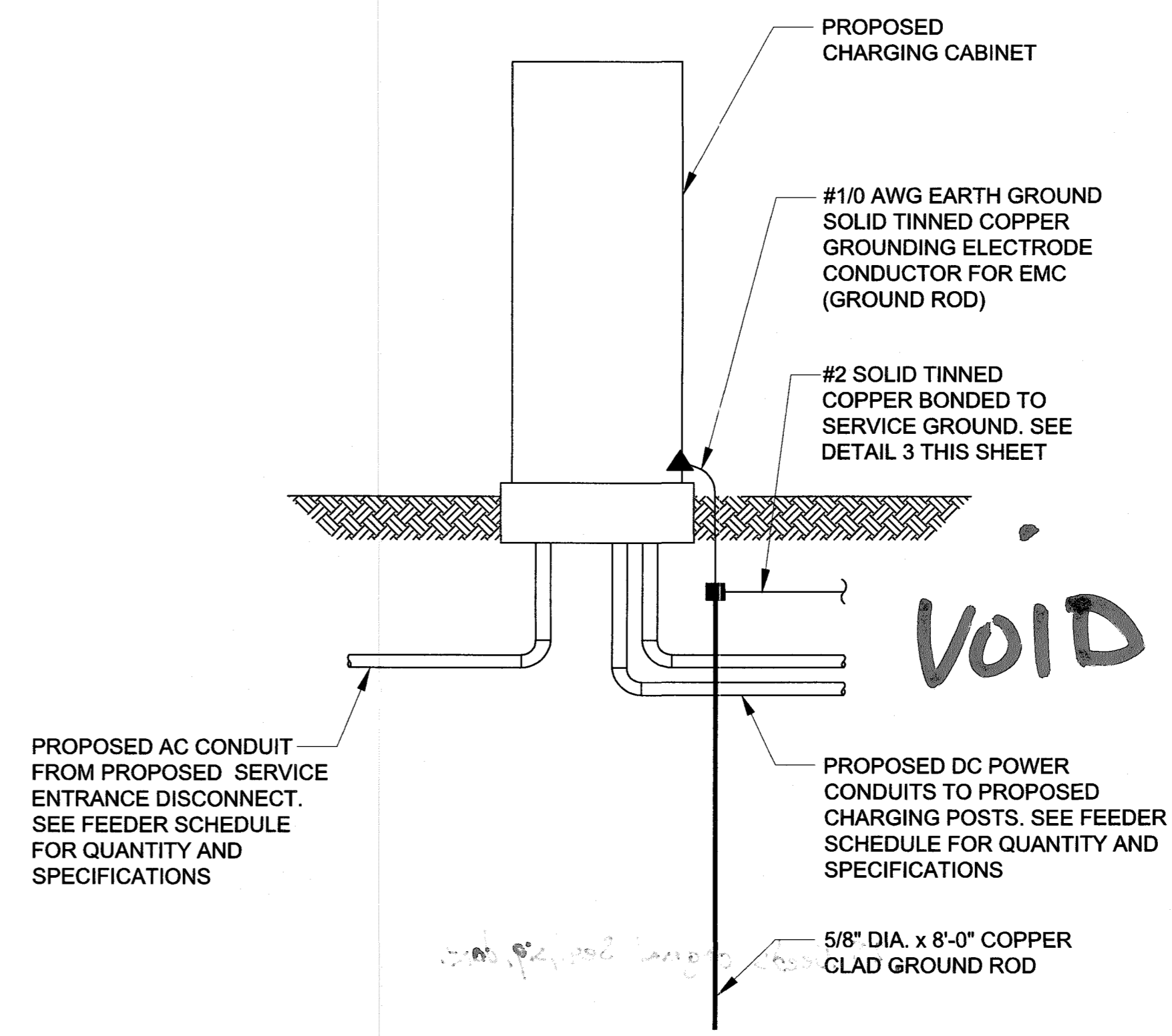
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TYPICAL EQUIPMENT GROUNDING SCHEMATIC

N.T.S

4



CHARGING CABINET EARTH GROUNDING DETAIL

N.T.S

2

**TESLA**

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(650) 681-5000

**GPD GROUP, INC.**

520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

GPD PROJECT NUMBER:	2019141.07
DRAWN BY:	HD
CHECKED BY:	RP/EPM
INSTALLATION MANAGER:	JESSE KARP

REV	DATE	DESCRIPTION
D	05.31.19	SIGNED AND SEALED
C	04.12.19	ISSUED FOR 100% REVIEW
B	03.07.19	ISSUED FOR 50% REVIEW
A	01.18.19	ISSUED SITE SKETCH

COMMONWEALTH OF VIRGINIA

STEVEN P. SCHAIK  
Lic. No. 051821  
PROFESSIONAL ENGINEER

05/31/19

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

465 MAPLE AVE.  
(TESLA STATION)  
VIENNA, VA 22180

SHEET TITLE  
**GROUNDING DETAILS**

SHEET NUMBER  
**G-1**