

TESLA SUPERCHARGERS_SIMON MALL

12 SUPERCHARGERS

APN: 46-24-0

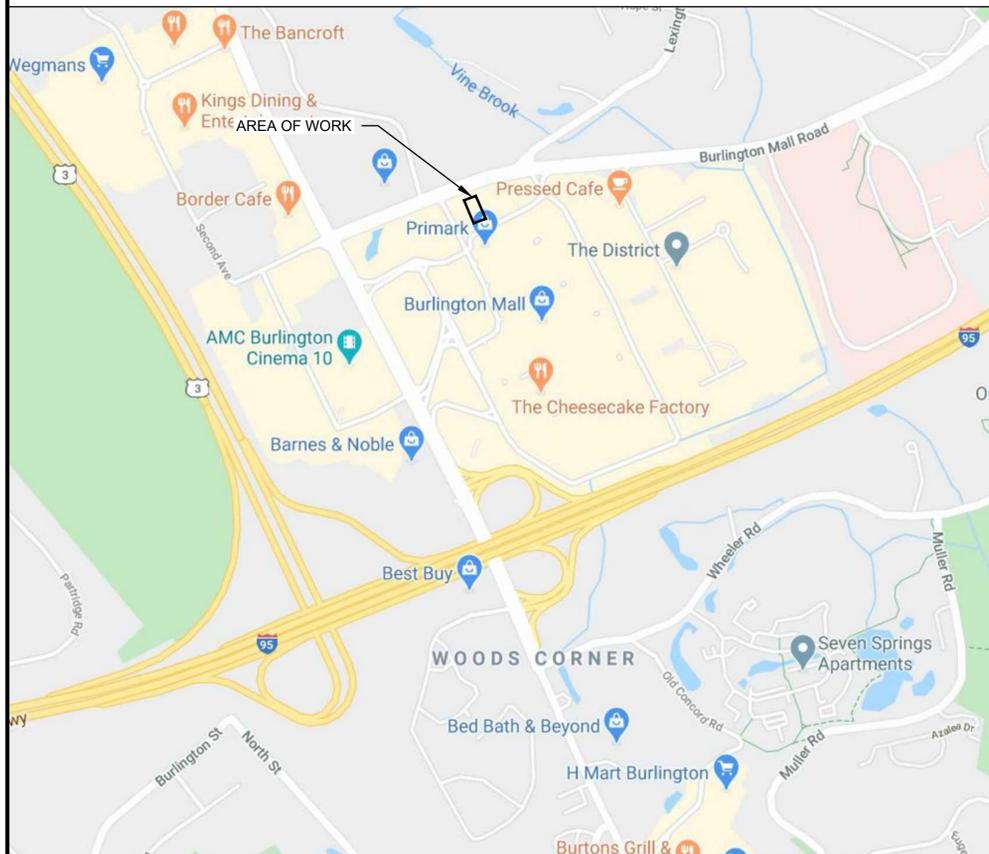


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(650) 681-5000

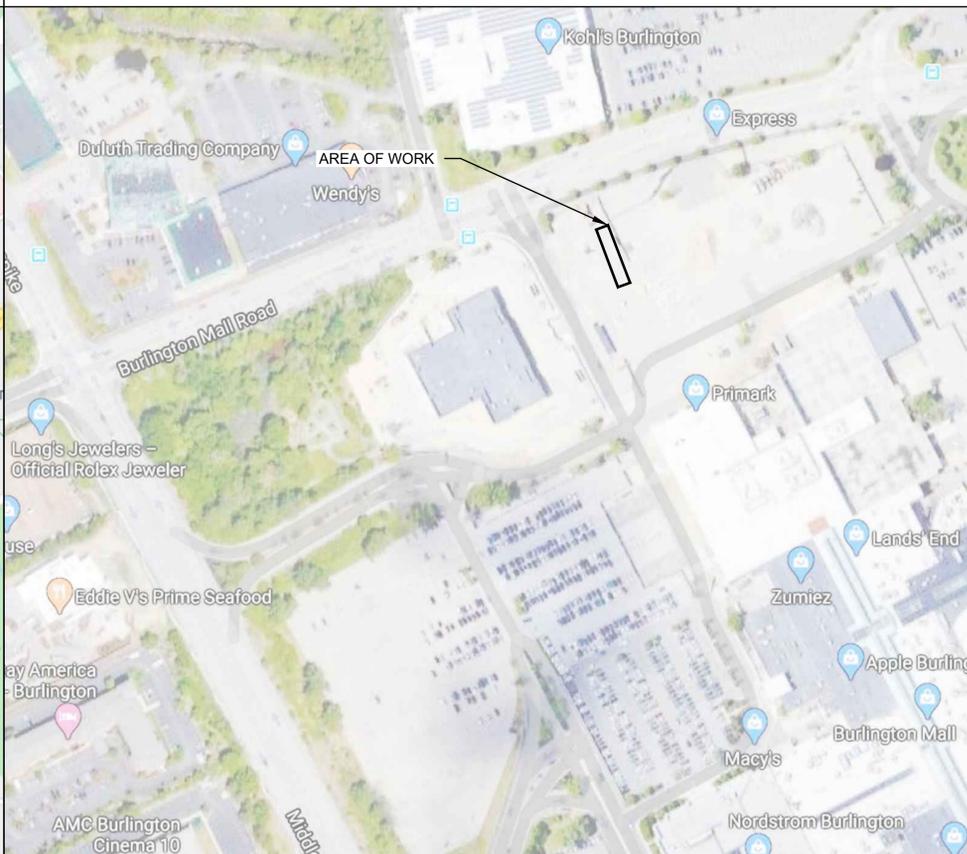
ORIGINAL SIZE 24"x36"
SHEET SIZE ARCH "D"



VICINITY MAP



AERIAL MAP



SYSTEM SUMMARY

SUPERCHARGER SYSTEM SUMMARY	
V3 SUPERCHARGER CABINETS	3
V3 SUPERCHARGER POSTS	12
UTILITY TRANSFORMER	1
1600 A SWITCHBOARD	1

PROJECT SCOPE

INSTALLATION OF SUPERCHARGERS AND ASSOCIATED AC AND DC EQUIPMENT.

INSTALLATION OF CONCRETE EQUIPMENT PADS AND FIBERGLASS SWITCH VAULT.

INSTALLATION OF NEW PARKING STRIPING, SIGNAGE.

SHEET INDEX

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DESIGN CRITERIA

WIND SPEED: 125 MPH
RISK CATEGORY: II
EXPOSURE: C
SNOW LOAD: 50 PSF
SEISMIC DESIGN CAT. B
S_s - 0.223
S₁ - 0.071
SDS - 0.238
SD1 - 0.114

APPLICABLE CODES

IBC 2015
NEC 2017

REFERENCED DOCUMENTS

SUPERCHARGER INSTALLATION MANUAL
SUPERCHARGER POST INSTALLATION MANUAL
TOPOGRAPHIC SURVEY
UTILITY DESIGN

TESLA SUPERCHARGERS_SIMON MALL
 12 SUPERCHARGERS
 TESLA SUPERCHARGERS_SIMON MALL
 75 MIDDLESEX TURNPIKE
 BURLINGTON, MA 01803

NO.	REVISION	DATE

COVER PAGE

G-001

JB-0185366-00

REV: 0 CD90

ABBREVIATIONS

AC	ALTERNATING CURRENT	MV	MEDIUM-VOLTAGE
ADA	AMERICANS WITH DISABILITIES ACT	(N)	NEW
BESS	BATTERY ENERGY STORAGE SYSTEM	NEC	NATIONAL ELECTRIC CODE
BLDG	BUILDING	NIC	NOT IN CONTRACT
CLR	CLEAR	NRTL	NATIONALLY-RECOGNIZED TESTING LABORATORY
CONC	CONCRETE	NTS	NOT TO SCALE
DC	DIRECT CURRENT	OC	ON CENTER
DIA	DIAMETER	PCC	POINT OF COMMON COUPLING
DIST	DISTANCE	PL	PROPERTY LINES
EQ	EQUAL	PV	PHOTOVOLTAIC
EGC	EQUIPMENT GROUNDING CONDUCTOR	PP	POWERPACK
(E)	EXISTING	PVC	POLYVINYL CHLORIDE
EA	EACH	SCH	SCHEDULE
EMT	ELECTRICAL METALLIC TUBING	SQ. IN.	SQUARE INCHES
EV	ELECTRIC VEHICLE	SS	STAINLESS STEEL
GAB	GRADED AGGREGATE BASE	SSD	SEE STRUCTURAL DRAWINGS
GALV	GALVANIZED	STC	STANDARD TESTING CONDITIONS
GEC	GROUNDING ELECTRODE CONDUCTOR	TYP	TYPICAL
GND	GROUND	UON	UNLESS OTHERWISE NOTED
HVAC	HEATING, VENTILATION, & AIR CONDITIONING	VIF	VERIFY IN FIELD
I	CURRENT	W	WATT
IMP	CURRENT AT MAX POWER		
INV	INVERTER		
ISC	SHORT CIRCUIT CURRENT		
KVA	KILOVOLT AMPERE		
KW	KILOWATT		
KWH	KILOWATT-HOUR		
LV	LOW-VOLTAGE		
MAX	MAXIMUM		
MIN	MINIMUM		

PROJECT TEAM

ELECTRICAL ENGINEER OF RECORD:
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PROJECT DESIGNER:
ROHIT PATIL
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GENERAL NOTES

ALL WORK SHALL COMPLY WITH ALL STATE AND LOCAL CODES AND ANY OTHER REGULATING AUTHORITIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK.

PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FROM TESLA OF ANY DISCREPANCIES. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED AT THE SUBCONTRACTORS SOLE EXPENSE.

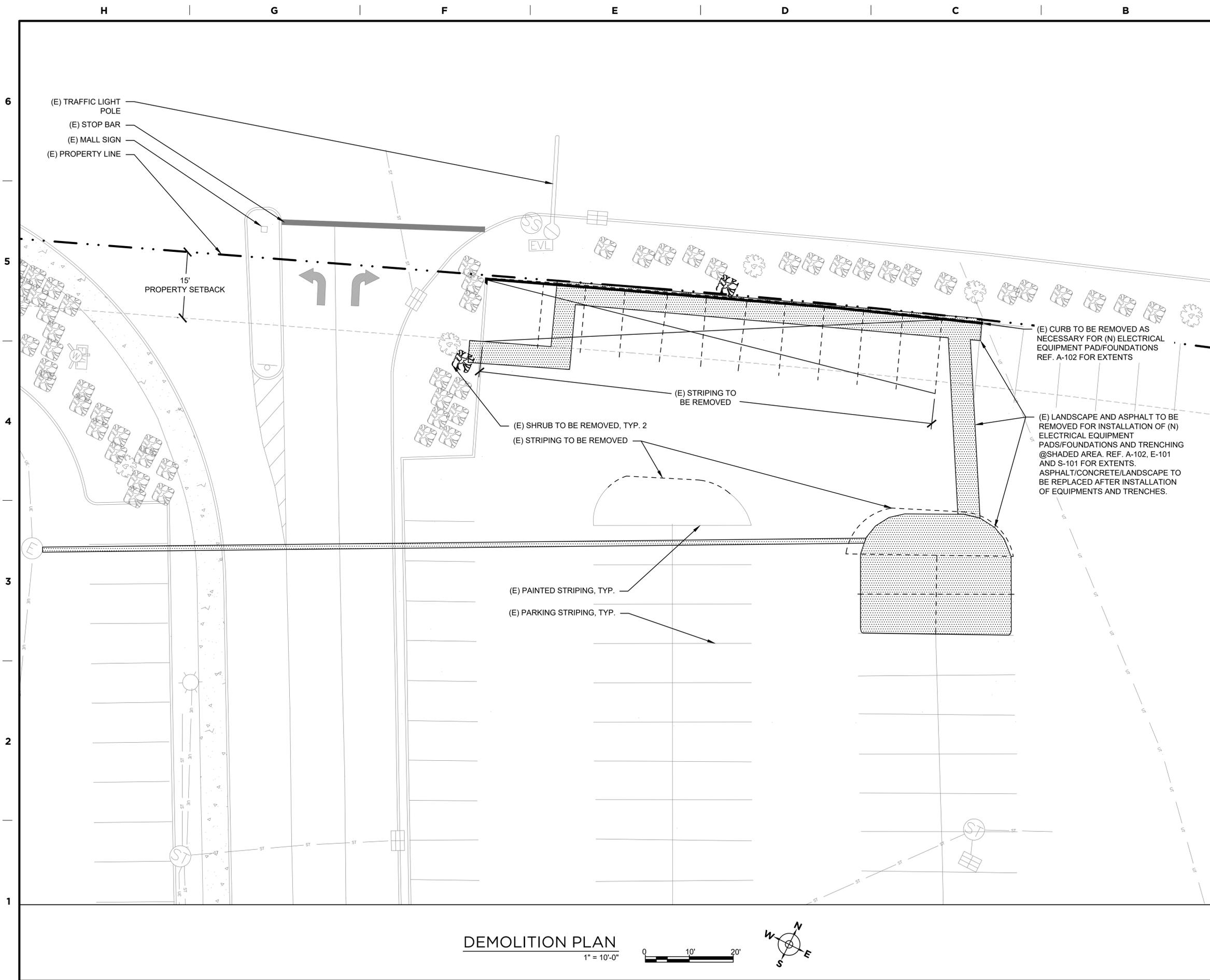
SUBCONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO TESLA FOR APPROVAL BEFORE MAKING ANY CHANGES. DEVIATION FROM PLANS BEFORE WRITTEN APPROVAL FROM TESLA PLACES LIABILITY ON THE SUBCONTRACTOR.

ALL EQUIPMENT SHALL BE MOUNTED AS SHOWN. WHERE DETAILS ARE NOT PROVIDED, CONTRACTOR SHALL USE STANDARD CONSTRUCTION PRACTICES.

ALL SURFACES SHALL BE PATCHED AND PAINTED AROUND NEW DEVICES AND EQUIPMENT TO MATCH EXISTING FINISHES.

ANY METAL SHAVINGS FROM SITE WORK SHALL BE CLEANED FROM ALL SURFACES WHERE OXIDIZED OR CONDUCTIVE METAL SHAVINGS MY CAUSE RUST, ELECTRICAL SHORT CIRCUITS, OR OTHER DAMAGE.

APPROVALS FROM BUILDING INSPECTORS SHALL NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE DRAWINGS.



SITE LEGEND

- ✕ ANY (E) OBJECT TO BE DEMOLISHED
- - - ANY (E) ELEMENT TO BE DEMOLISHED
- [Hatched Box] ANY (E) LANDSCAPE AREA TO BE DEMOLISHED
- [Solid Black Box] ANY (E) CURB AREA TO BE DEMOLISHED
- [Dotted Box] ANY (E) ASPHALT AREA TO BE DEMOLISHED
- [Sun Symbol] (E) POLE-MOUNTED LIGHT FIXTURE
- [Sign Symbol] (E) SIGN
- [Tree Symbol] (E) TREE
- [Shrub Symbol] (E) SHRUB
- [Square Symbol] (E) CONCRETE
- [SS Symbol] (E) SANITARY MANHOLE
- [ST Symbol] (E) STORM MANHOLE
- [SI Symbol] (E) STORM INLET
- [WYH Symbol] (E) WATER YARD HYDRANT
- [E Symbol] (E) ELECTRIC MANHOLE
- [EVL Symbol] (E) ELECTRIC VAULT
- [UTL Symbol] (E) UNDERGROUND TELEPHONE LINE
- [USL Symbol] (E) UNDERGROUND STORM LINE
- [UEL Symbol] (E) UNDERGROUND ELECTRIC LINE

TESLA

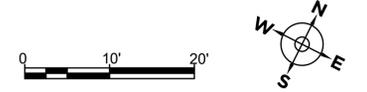
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ORIGINAL SIZE 24"X36"
 SHEET SIZE ARCH "D"

TESLA SUPERCHARGERS_SIMON MALL
 12 SUPERCHARGERS
 TESLA SUPERCHARGERS_SIMON MALL
 75 MIDDLESEX TURNPIKE
 BURLINGTON, MA 01803

NO.	REVISION	DATE

DEMOLITION PLAN
 1" = 10'-0"

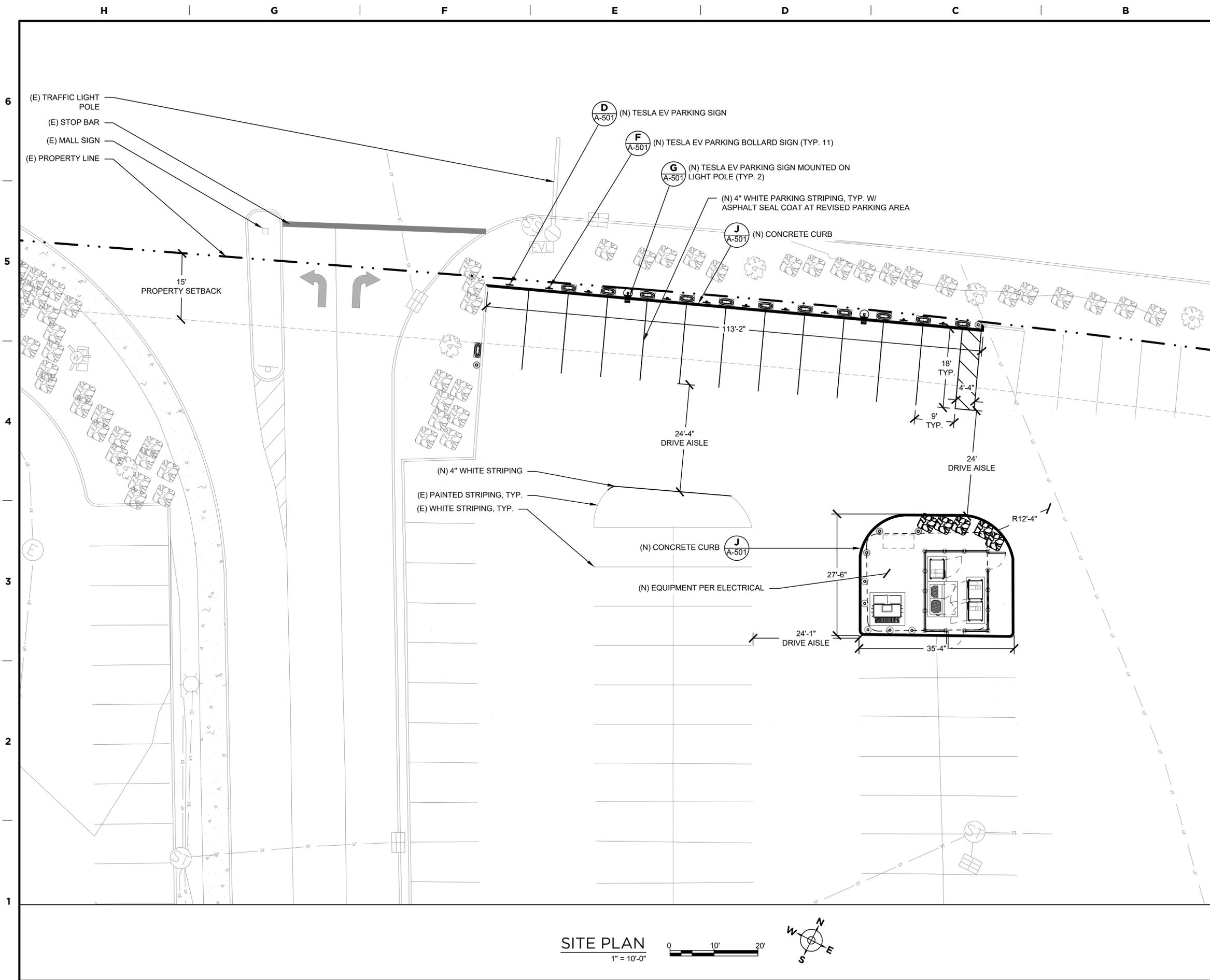


DEMOLITION PLAN

A-101

JB-0185366-00

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SITE LEGEND

- (N) SUPERCHARGER POST
- (E) POLE-MOUNTED LIGHT FIXTURE
- (E) SIGN
- (E) TREE
- (E) SHRUB
- (E) CONCRETE
- (E) SANITARY MANHOLE
- (E) STORM MANHOLE
- (E) STORM INLET
- (E) WATER YARD HYDRANT
- (E) ELECTRIC MANHOLE
- (E) ELECTRIC VAULT
- (N) CONCRETE BOLLARD, REF STRUCTURAL
- (N) REMOVABLE BOLLARD, REF STRUCTURAL
- (N) SINGLE LIGHT POLE WITH DOUBLE SIGN
- (N) BOLLARD SIGN
- (E) UNDERGROUND TELEPHONE LINE
- (E) UNDERGROUND STORM LINE
- (E) UNDERGROUND ELECTRIC LINE
- (N) CURB

PARKING STALL SCHEDULE

EXISTING STANDARD STALLS UTILIZED AS A RESULT OF THIS PROJECT	16
PROPOSED TESLA STALLS	12
PROPOSED STANDARD STALLS	0
NET STALL COUNT	-4

NOTES

GENERAL NOTES:
 NEW PAVEMENT INSTALLED AS PART OF THIS PROJECT SHALL MATCH EXISTING PAVEMENT SECTION. ASPHALT AND GAB DEPTHS SHALL BE MAINTAINED.

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SITE PLAN
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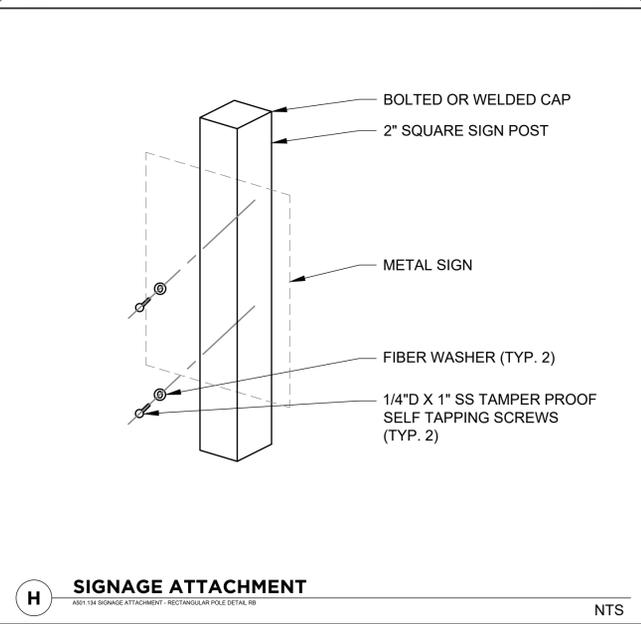
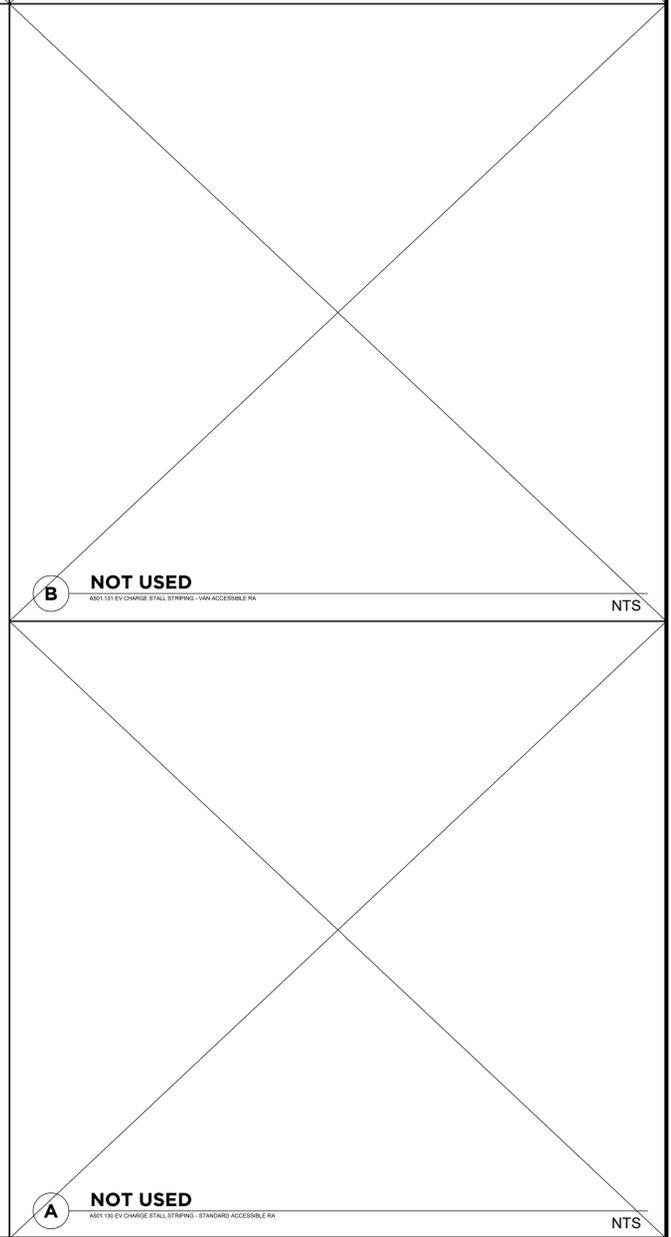
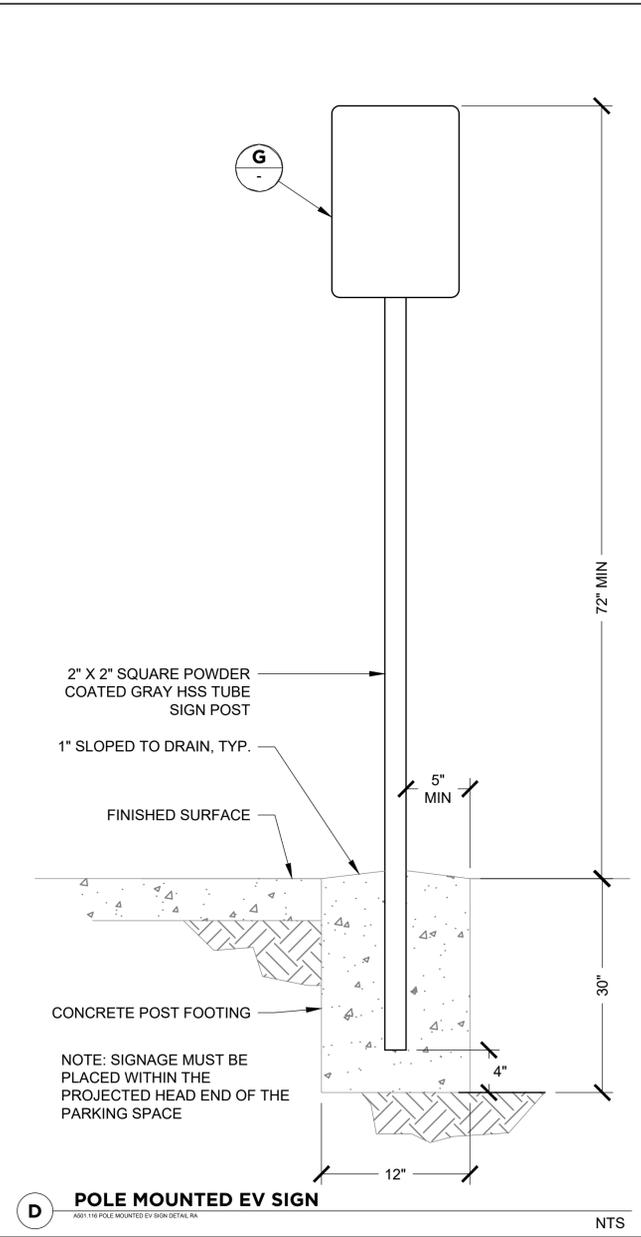
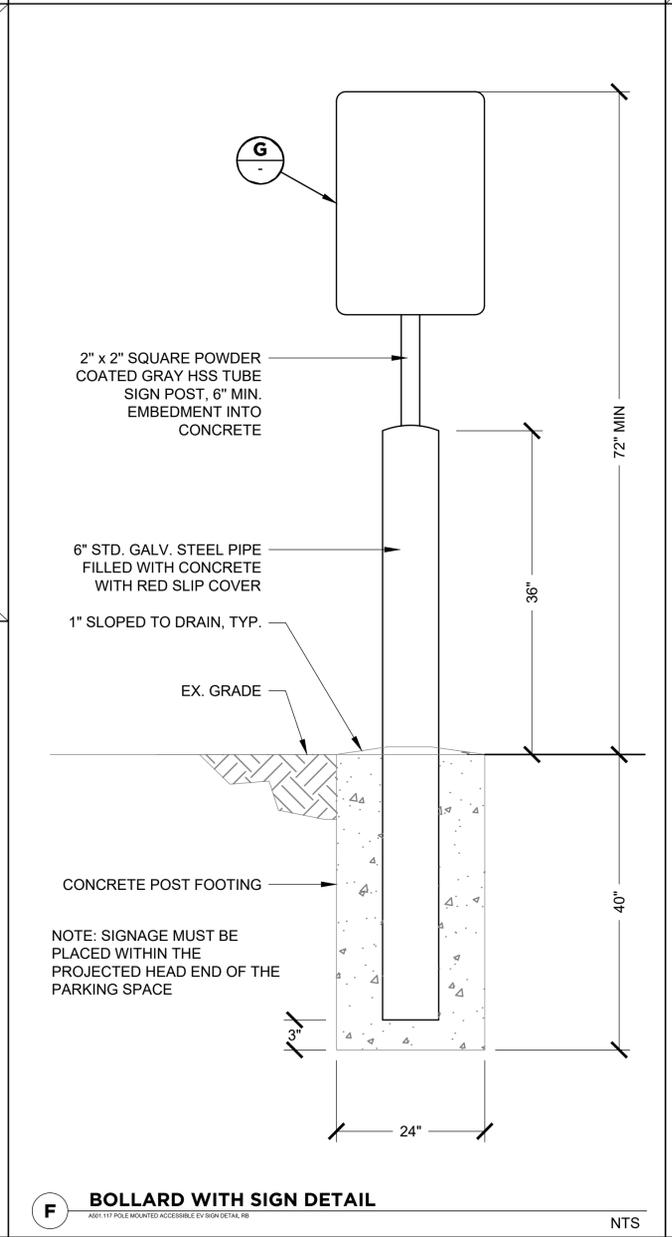
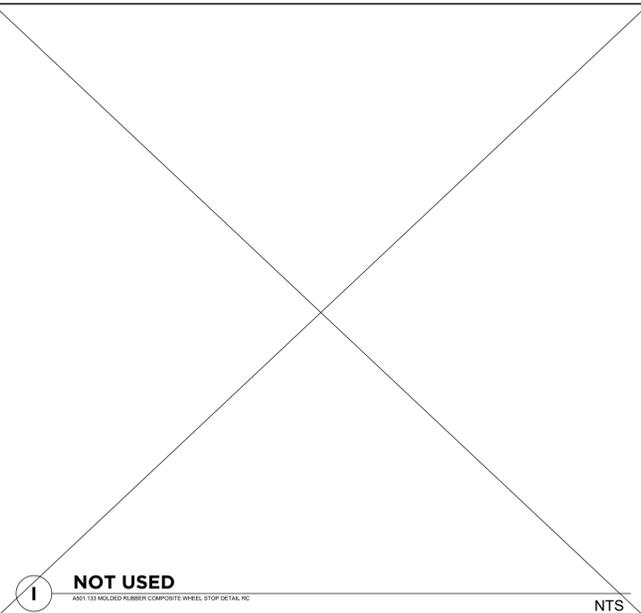
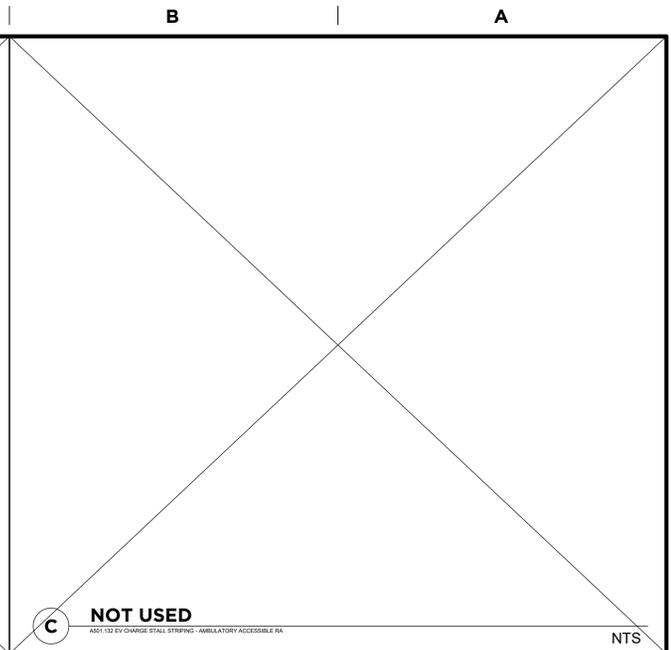
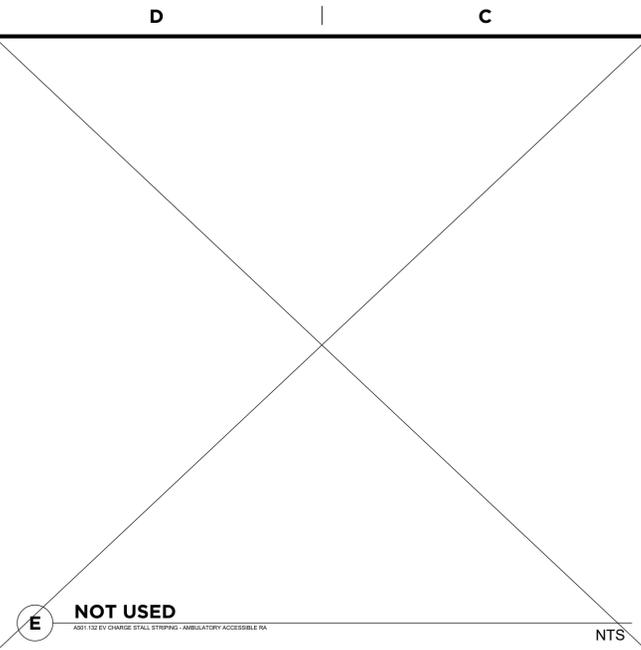
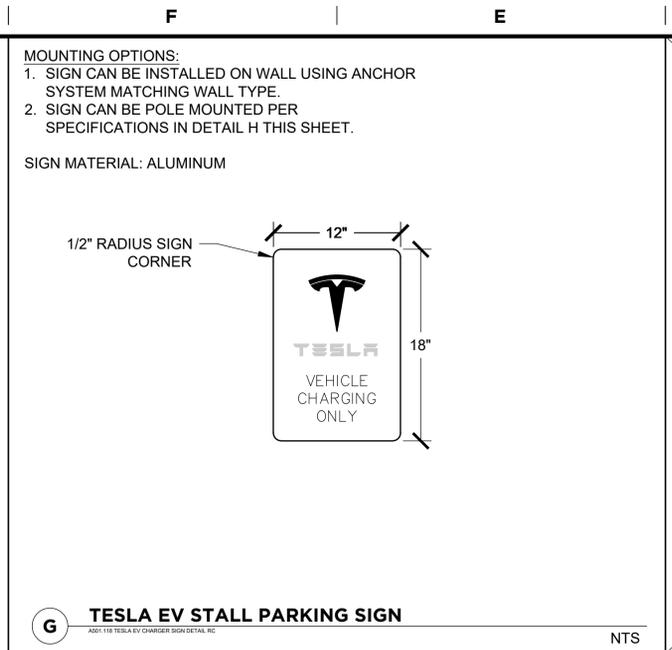
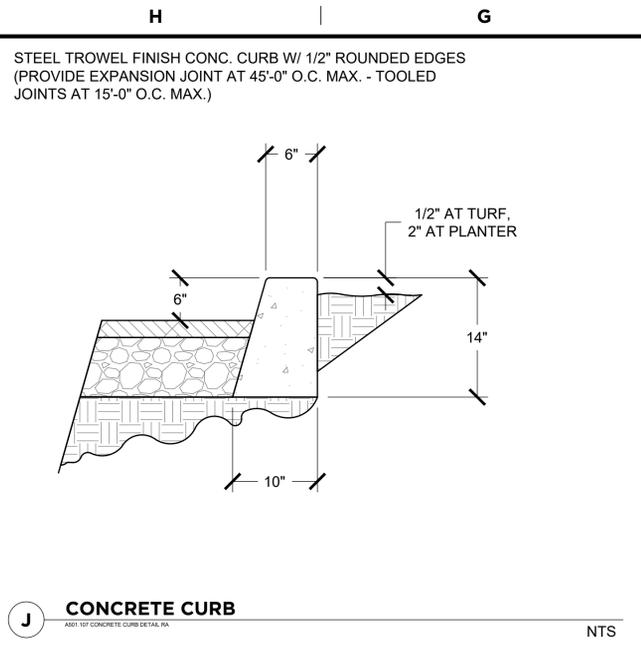


SITE PLAN

A-102

JB-0185366-00

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TESLA

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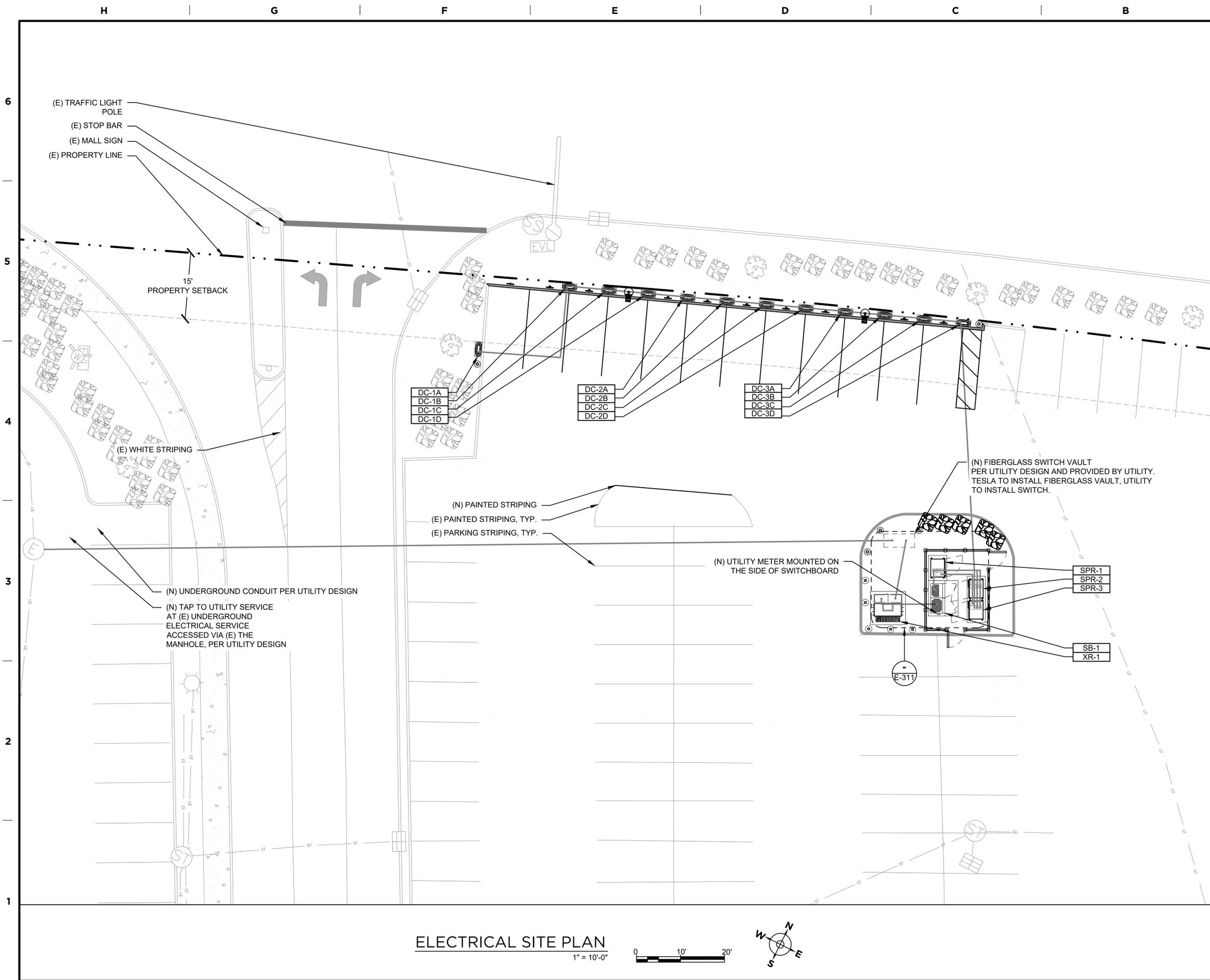
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DETAILS

A-501

JB-0185366-00

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SITE LEGEND

- (N) SUPERCHARGER POST
- (E) POLE-MOUNTED LIGHT FIXTURE
- (E) SIGN
- (E) TREE
- (E) SHRUB
- (E) CONCRETE
- (E) SANITARY MANHOLE
- (E) STORM MANHOLE
- (E) STORM INLET
- (E) WATER YARD HYDRANT
- (E) ELECTRIC MANHOLE
- (E) ELECTRIC VAULT
- (N) REMOVABLE BOLLARD
- (N) CONCRETE BOLLARD
- (N) BOLLARD SIGN
- (N) LIGHT POLE WITH SIGN
- (E) UNDERGROUND TELEPHONE LINE
- (E) UNDERGROUND STORM LINE
- (E) UNDERGROUND ELECTRIC LINE
- AREAS OF INTEREST
- (N) UNDERGROUND CONDUIT FOR POWER

EQUIPMENT LEGEND

- SWITCHBOARD SB-#
- SUPERCHARGER CABINET SPR-#
- SUPERCHARGER POST DC-#
- LIGHT LGT-#
- TRANSFORMER XR-#
- TESLA SITE CONTROLLER TSC

NOTES

CONDUIT/TRENCH ROUTES SHOWN ARE FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO CIRCUIT SCHEDULE ON SHEET E-201 FOR ADDITIONAL DETAILS.

TESLA

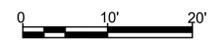
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ELECTRICAL SITE PLAN
1" = 10'-0"

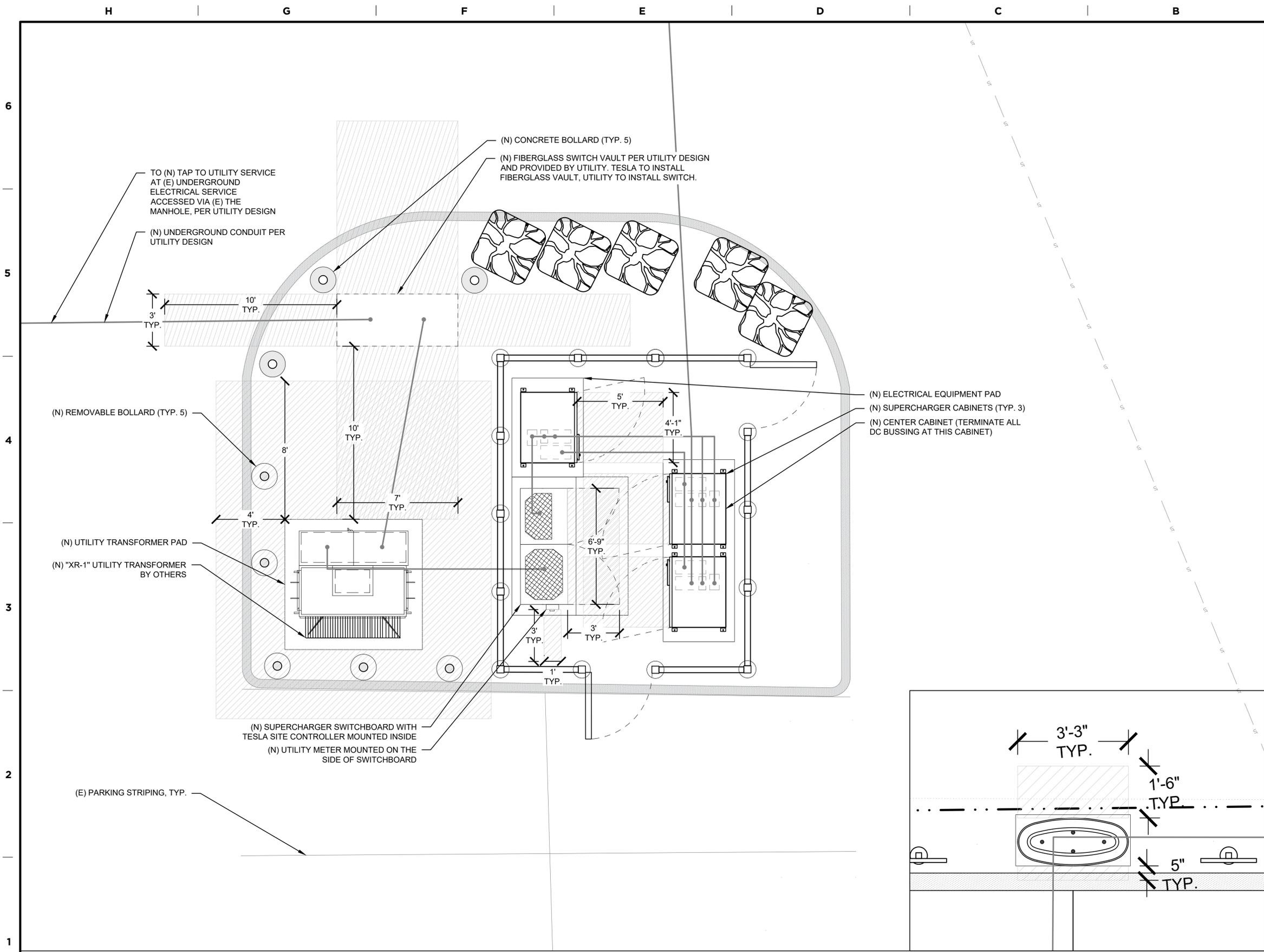


ELECTRICAL SITE PLAN

E-101

JB-0185366-00

REV: 0 | CD90



SITE LEGEND

- (N) SUPERCHARGER POST
- (N) REMOVABLE BOLLARD
- (N) CONCRETE BOLLARD
- (N) BOLLARD SIGN
- (N) UNDERGROUND CONDUIT FOR POWER
- WORKING CLEARANCES

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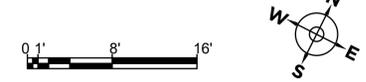
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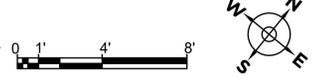
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REFERENCE STRUCTURAL SHEETS FOR EQUIPMENT ELEVATION DETAILS.

DETAILED PLAN VIEW
3/8" = 1'-0"



DETAILED PLAN VIEW
3/4" = 1'-0"

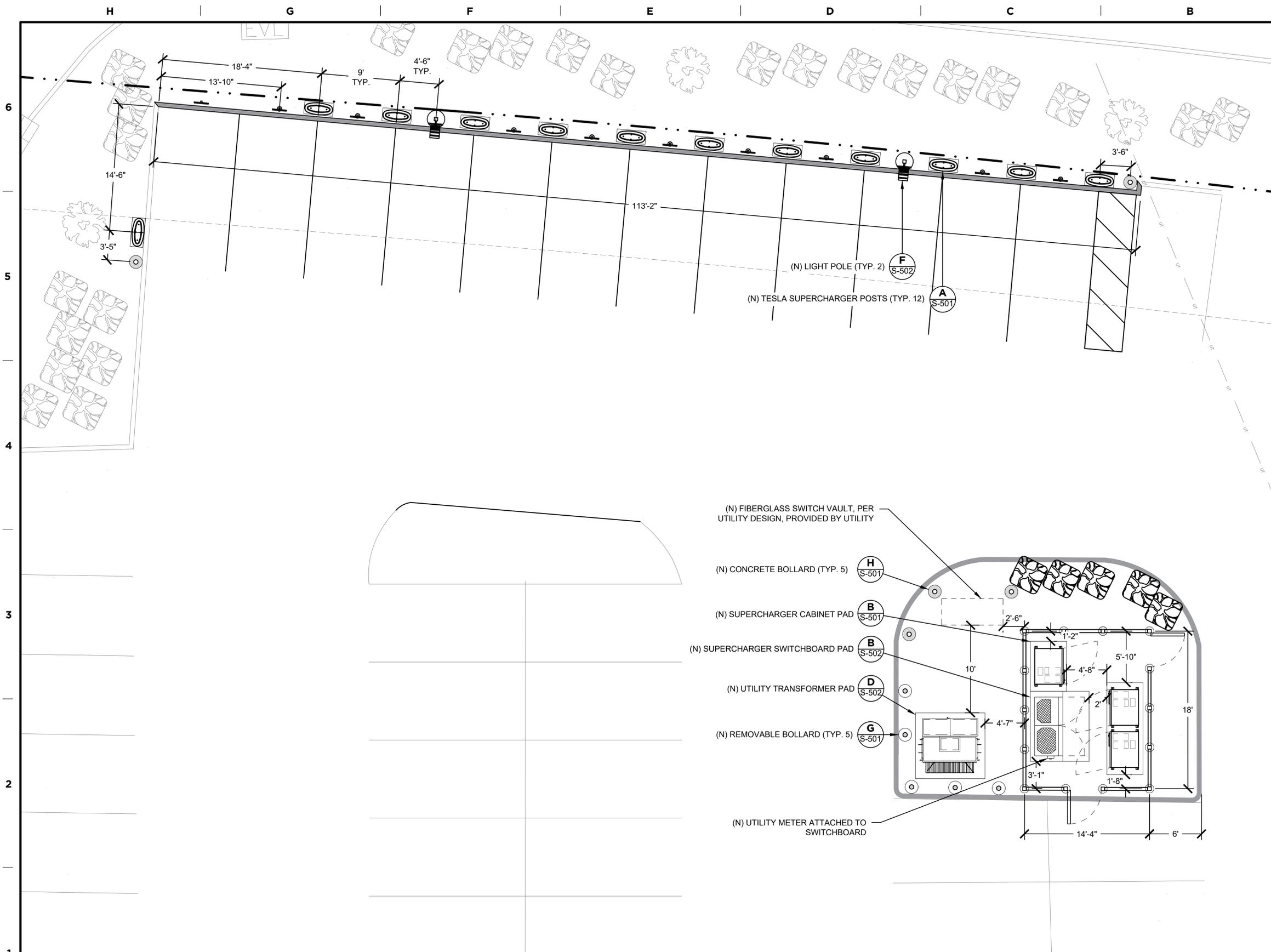


DETAILED PLAN VIEW

E-311

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SITE LEGEND

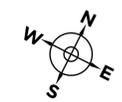
- (N) SUPERCHARGER POST
- (E) SIGN
- (E) TREE
- (E) SHRUB
- (N) REMOVABLE BOLLARD
- (N) CONCRETE BOLLARD
- (N) BOLLARD SIGN
- (N) DOUBLE LIGHT POLE WITH DOUBLE SIGN

STRUCTURAL DESIGN CRITERIA:

- DESIGN CODE:**
- 2015 IBC
- DESIGN CRITERIA:**
1. WIND DESIGN
 - DESIGN WIND SPEED = 125 MPH (ULTIMATE)
 - RISK CATEGORY = II
 - WIND EXPOSURE = C
 2. SEISMIC DESIGN
 - RISK CATEGORY = II
 - SEISMIC IMPORTANCE FACTOR = 1.0
 - $S_S = 0.223$ g, $S_1 = 0.171$ g
 - SITE CLASS = D
 - $S_{DS} = 0.238$ g, $S_{D1} = 0.114$ g
 - SEISMIC DESIGN CATEGORY = B
 - BASIC SEISMIC-FORCE-RESISTING SYSTEM = NON-STRUCTURAL COMPONENT
 - $R = 2.5 / a_p = 1.0$
 3. GEOTECHNICAL INFORMATION
 - ALLOWABLE BEARING PRESSURE = 1,500 PSF USED FOR EQUIPMENT FOUNDATION

STRUCTURAL SITE PLAN

3/16" = 1'-0"



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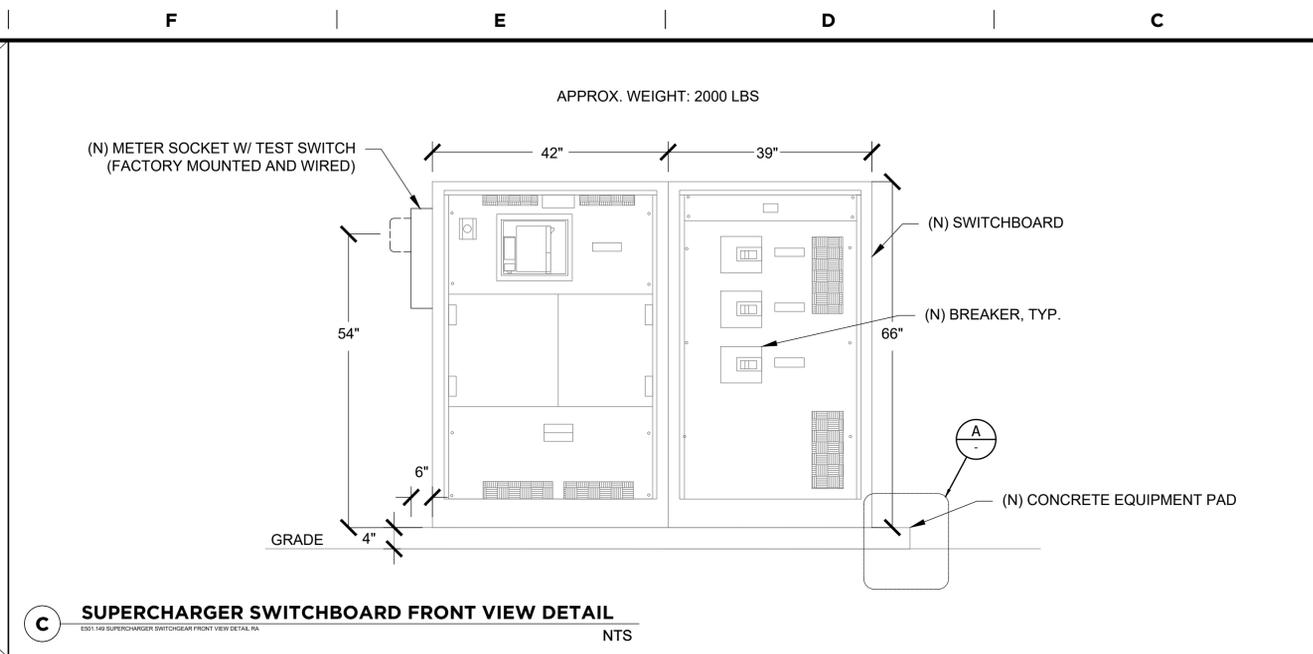
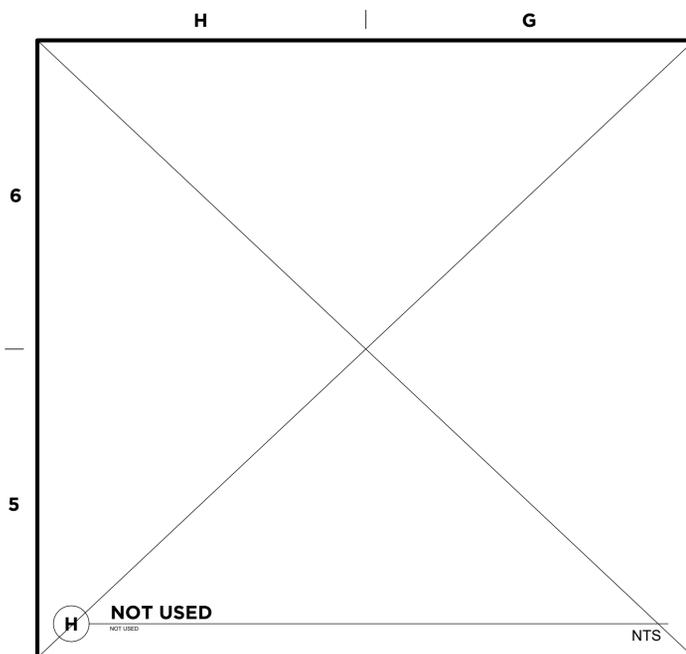
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STRUCTURAL SITE PLAN

S-101

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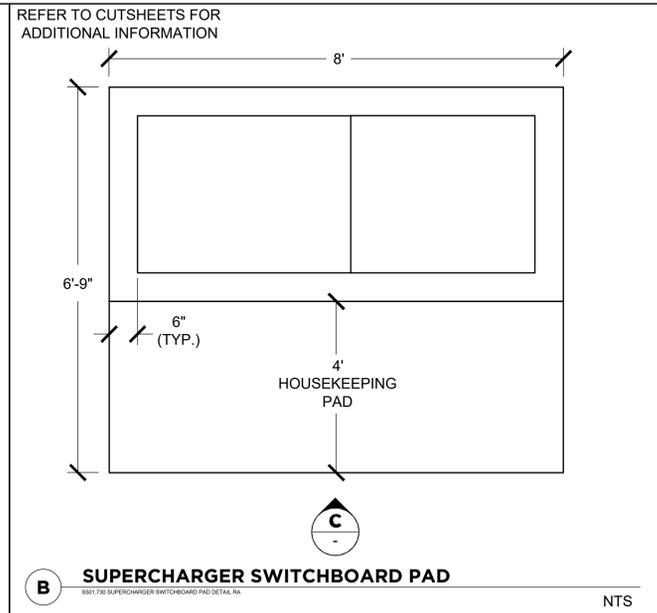
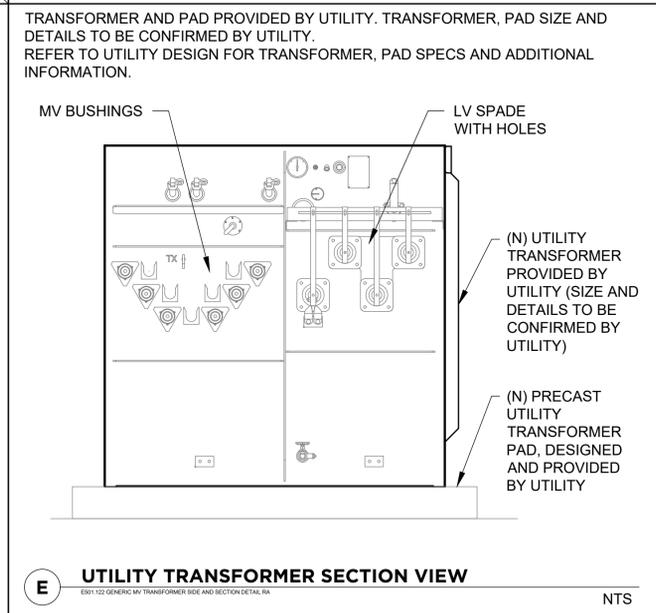
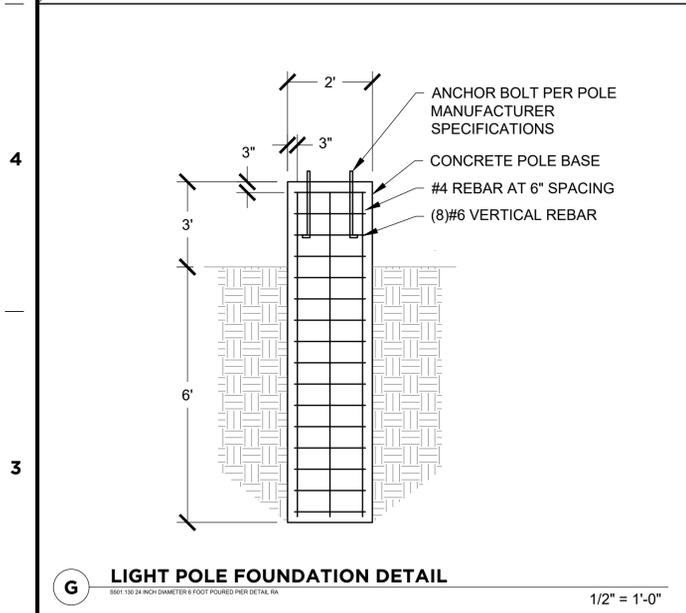
CONCRETE NOTES

- CONCRETE STRENGTH -PROVIDE CONCRETE WITH THE FOLLOWING STRENGTHS AT THE LOCATIONS NOTED. MIX DESIGN, SLUMP, AIR ENTRAINMENT, AGGREGATE SIZE, ETC. SHALL BE IN CONFORMANCE WITH THE ACI CODE, LATEST EDITION.
LOCATION: ANY
STRENGTH AT 28 DAYS: 4500 PSI
A. ALL CONCRETE AGGREGATE IS HARD ROCK UON
B. DESIGN MIX SHALL CONTAIN 5-1/2 SACKS OF CEMENT, MIN.
C. TYPE III CEMENT TO MEET ASTM C150.
D. MAX AGGREGATE SIZE SHALL BE 3/4"
E. MAX WATER/CEMENT RATIO SHALL BE 0.45
F. MAX SLUMP SHALL BE 4"
- REINFORCING STEEL -ASTM A615 WITH THE FOLLOWING STRENGTHS:
SIZE STRENGTH:
#4 AND SMALLER GRADE 60 (fy = 60000 PSI)
#5 AND LARGER GRADE 60 (fy = 60000 PSI)
- FABRICATE AND PLACE REINFORCEMENT IN ACCORDANCE WITH ACI PUBLICATION SP-66, ACI DETAILING MANUAL - LATEST EDITION.
- PLACE CONCRETE IN COMPLIANCE WITH ACI 304. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
- CONCRETE COVER FOR REINFORCEMENT FOR NON-PRESTRESSED, CAST IN PLACE CONCRETE SHALL BE AS FOLLOWS:

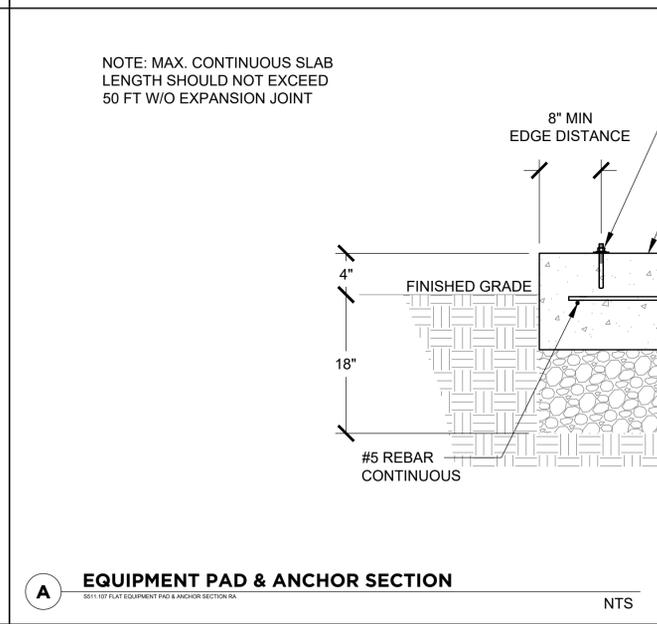
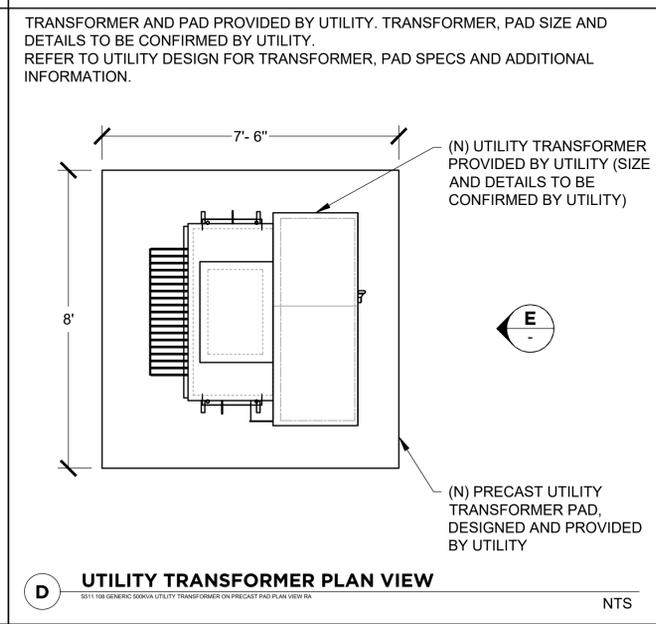
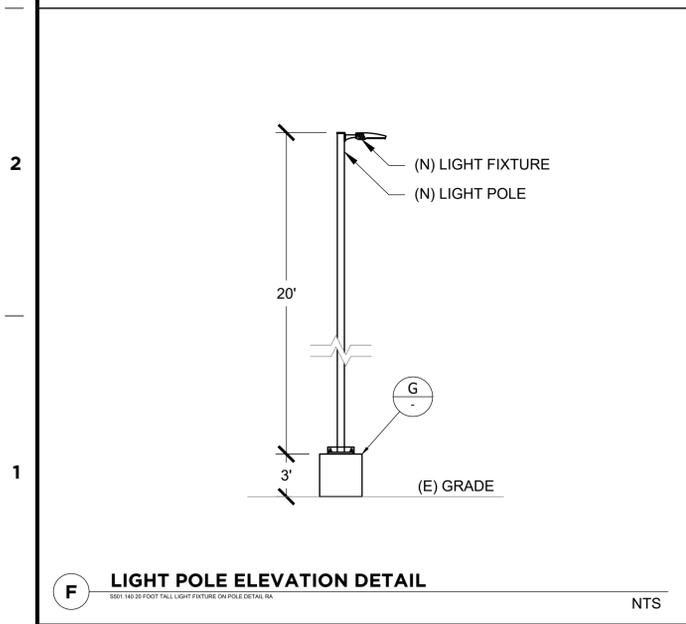
CONDITION	COVER
CAST AGAINST EARTH	3"
EXPOSED TO WEATHER	
#5 AND SMALLER	1-1/2"
#6 AND LARGER	2"
SLAB-ON-GRADE	2"
- EMBEDS -ALL ITEMS TO BE CAST INTO CONCRETE SUCH AS REINFORCING DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC., SHALL BE SECURELY AND ACCURATELY POSITIONED INTO THE FORMS PRIOR TO PLACING THE CONCRETE.

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DATE

NO.	REVISION

STRUCTURAL DETAILS

S-502

JB-0185366-00

REV: 0 CD90