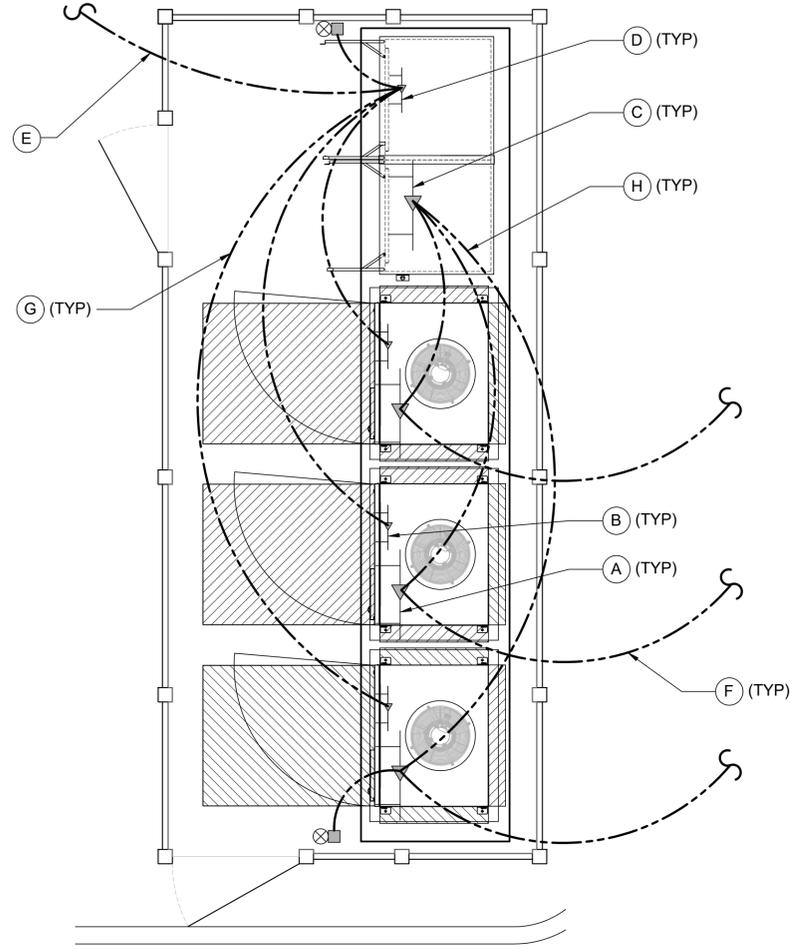


GROUNDING LEGEND

- 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 AND 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 BUSBAR WITHIN PROPOSED SUPERCHARGER CABINET
 - (B) NEUTRAL BUSBAR WITHIN PROPOSED SUPERCHARGER CABINET
 - (C) GROUND BUSBAR WITHIN PROPOSED MAIN SERVICE EQUIPMENT
 - (D) NEUTRAL BUSBAR WITHIN PROPOSED MAIN SERVICE EQUIPMENT
 - (E) GROUNDED CONDUCTOR AND CONNECTION PER UTILITY REQUIREMENTS FROM MAIN SERVICE EQUIPMENT TO TRANSFORMER
 - (F) EGC, TYP. "DC#" FROM PROPOSED SUPERCHARGER CABINET TO PROPOSED SUPERCHARGER POST.
 - (G) NEUTRAL, TYP. "SPR#" FROM MAIN SERVICE EQUIPMENT TO SUPERCHARGER CABINET
 - (H) EGC, TYP. "SPR#" FROM MAIN SERVICE EQUIPMENT TO SUPERCHARGER CABINET
- PROPOSED GROUND CONDUCTOR
 - CADWELD CONNECTION (EXOTHERMIC WELD)
 - ▲ MECHANICAL CONNECTION
 - ⊗ GROUND ROD

TRENCHING NOTES

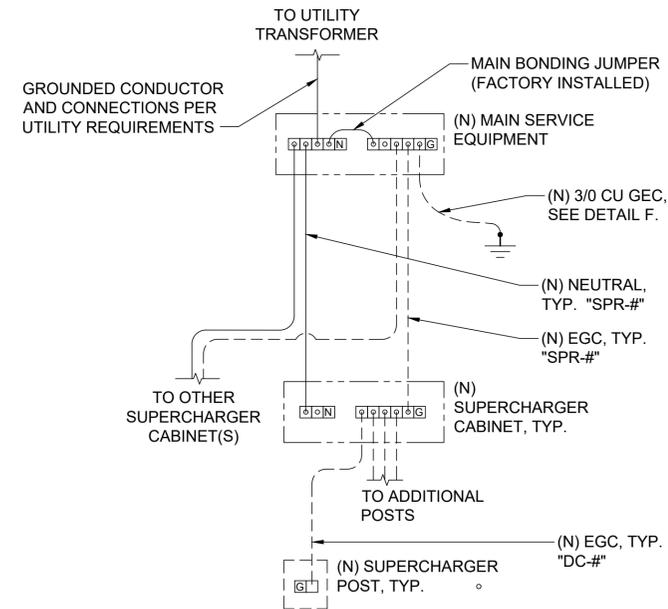
- THE TRENCH DESIGNS ARE THE RESULT OF A THERMAL ANALYSIS OF THE CONDUCTORS UNDER LOAD. FOR PROPER PROTECTION THEY MUST BE FOLLOWED.
- APPROVED BACKFILL IS REQUIRED TO MEET THE DESIGNED RHO VALUES. USE THE SPECIFIED BACKFILL LISTED BELOW OR TEST NATIVE SOIL CONDITIONS TO CONFIRM MAX DEFINED RHO VALUES
- RHO 90 BACKFILL** - LOW STRENGTH FLUIDIZED THERMAL (SLURRY) BACKFILL WITH MIN 28 DAY COMPRESSIVE STRENGTH OF 150 PSI MUST BE USED TO ACHIEVE MAX RHO 90.
- FOR TRENCHES WITH MIXED CIRCUIT TYPES, APPLY THE CONDUIT SPACING FOR THE CIRCUIT TYPE WITH THE LARGER SPACING REQUIREMENT.
- CONDUIT TO BE INSTALLED TO A MAX COVER OF 24". COVER MAY BE REDUCED PER THE NEC TABLE 300.5.

GROUNDING NOTES

- REFER TO ONE-LINE DIAGRAM FOR SPECIFIC CIRCUIT IDENTIFIERS BETWEEN EQUIPMENT.
- REFER TO AC & DC CIRCUIT SCHEDULES FOR NEUTRAL/GROUND SIZING PER CIRCUIT.

SYMBOLS LEGEND

- NEUTRAL BUSBAR
- GROUND BUSBAR
- PRIMARY OR SECONDARY COMMON TERMINAL, AS APPLICABLE
- TERMINAL ON NEUTRAL OR GROUND BUSBAR
- IRREVERSIBLE SPLICE OR CRIMP PER NEC 250.64(C)
- ⏏ NEC 250.52(A)-COMPLIANT GROUNDING ELECTRODE



GROUNDING PLAN

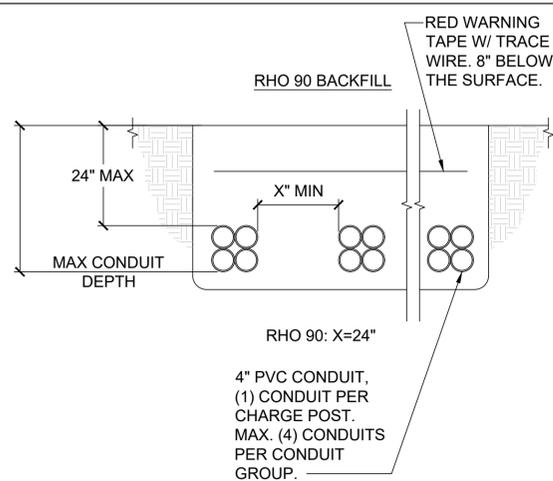
NO SCALE

A

CONCRETE ENCASED ELECTRODE DETAIL

NO SCALE

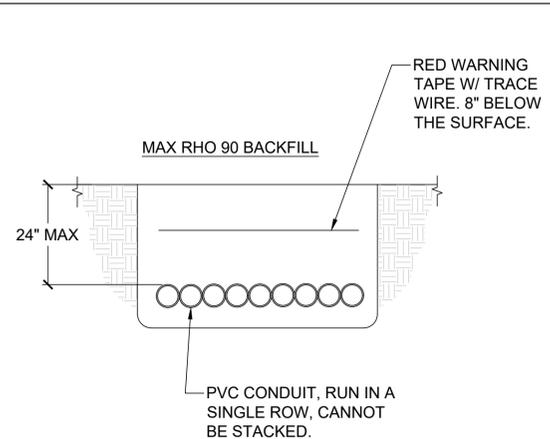
B



DC CIRCUIT TRENCH - RHO 90

NO SCALE

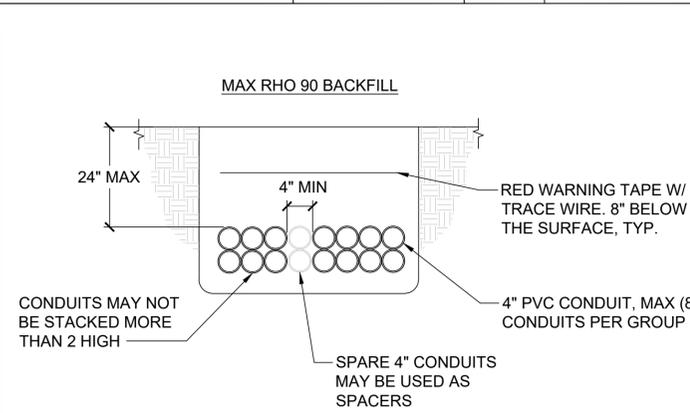
C



"DC-BUS" CIRCUITS TRENCH - MAX RHO 90

NO SCALE

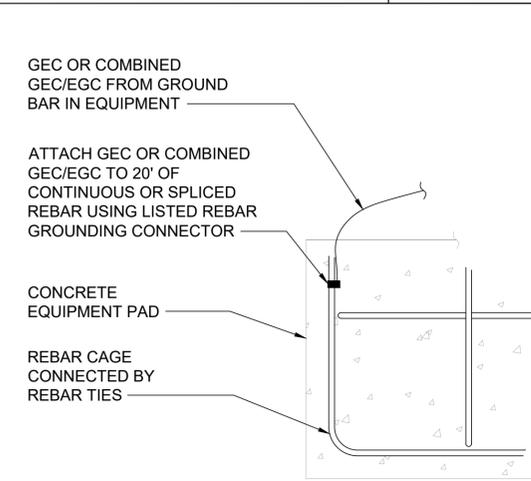
D



AC CIRCUIT TRENCH - MAX RHO 90

NO SCALE

E



CONCRET PAD GROUNDING DETAIL

NO SCALE

F



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(650) 681-5000



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PHONE: 248-705-9212

DRAWN BY: JSR
CHECKED BY: RCH

REV	DATE	DESCRIPTION
D	11/29/2021	CD100
C	10/16/2021	CD90
B	09/08/2021	CD50
A	08/11/2021	CD50

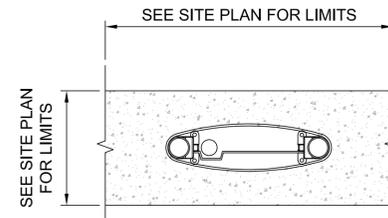
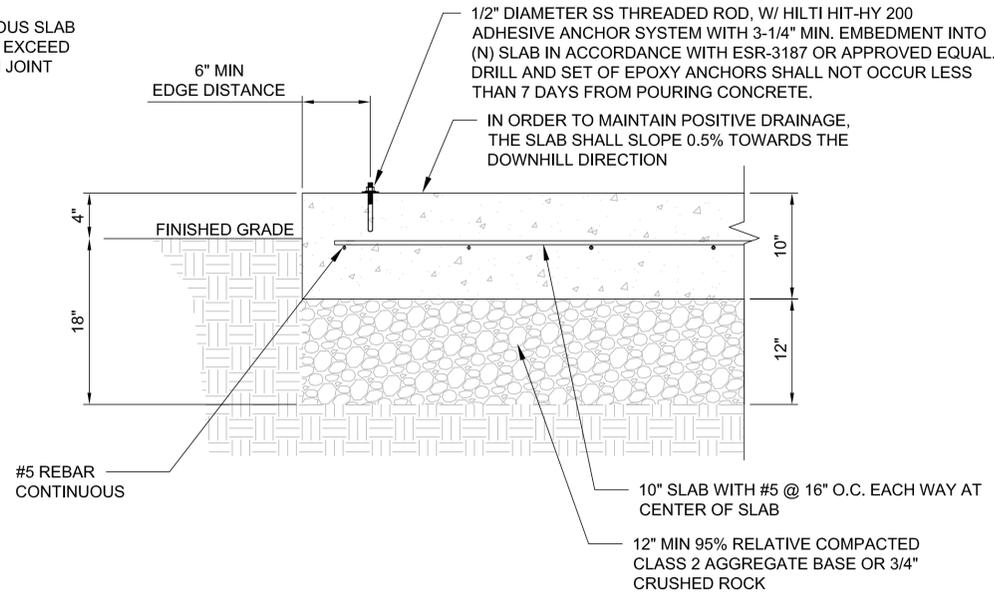


SITE NAME: DETROIT, MI
1301 W 8 MILE RD
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SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-1

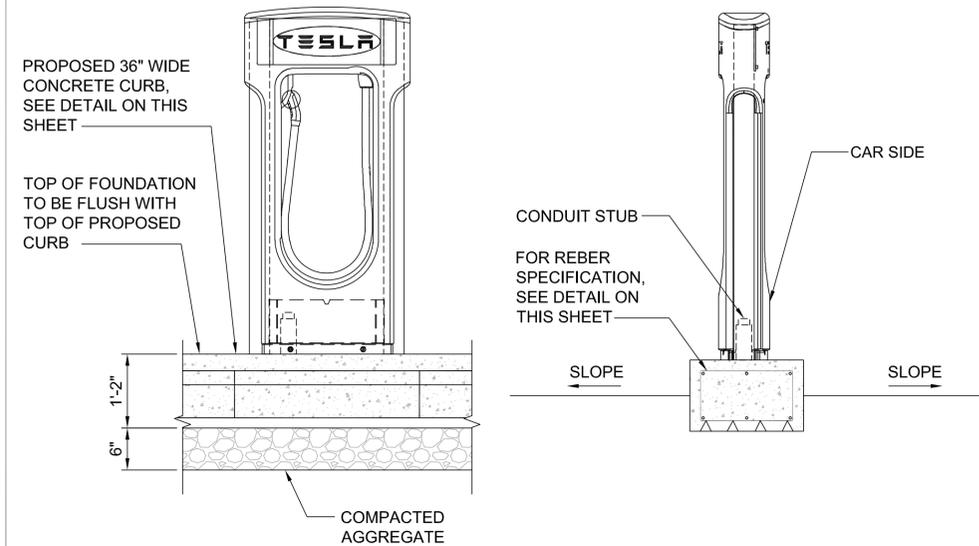
NOTE: MAX. CONTINUOUS SLAB LENGTH SHOULD NOT EXCEED 50 FT W/O EXPANSION JOINT



ANCHORING NOTES

ANCHORS- (4) 5/8" DIAMETER HILTI KWIK BOLT STAINLESS STEEL ANCHORS 3' Ø EFFECTIVE EMBEDMENT MIN 6" EDGE DISTANCE

FASTENERS-(2) TOTAL 5/8" NUTS AND (2) TOTAL 5/8" WASHERS PER ANCHOR. NUT AND WASHER MATERIAL TYPE TO MATCH ANCHOR MATERIAL. (2) 5/8" NUT AND WASHERS ABOVE BOLLARD FLANGE (1) BELOW.



EQUIPMENT PAD & ANCHOR SECTION

NO SCALE

A

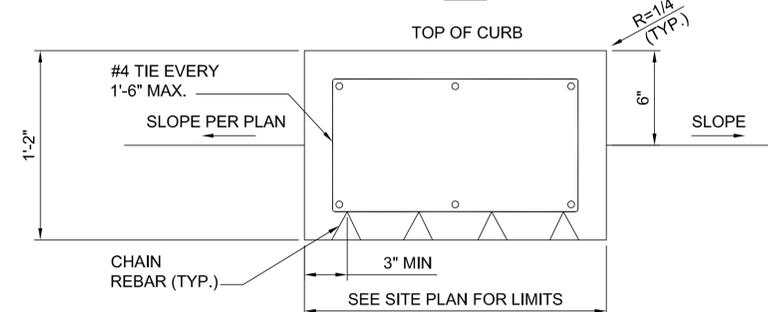
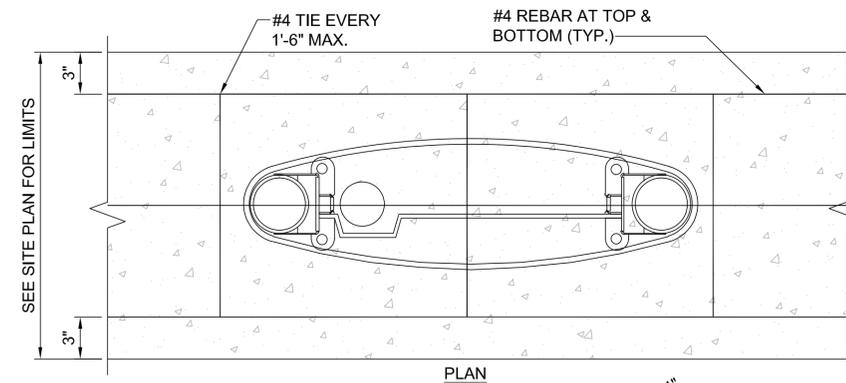
CHARGING POST CONTINUOUS CONCRETE SPLINE FOUNDATION (TYPICAL)

NO SCALE

B

NOTES

1. SEE CURB LENGTH ON SITE PLAN.
2. CHARGING POST AND PROPOSED FOUNDATION SHALL FOLLOW GRADE AS POSSIBLE
3. REINFORCING BAR TO BE #4
4. ALL REINFORCEMENTS TO HAVE MINIMUM CONCRETE COVER PER ACT SPECIFICATIONS.
5. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO ACI 318-14 AND APPLICABLE STATE BUILDING CODE.



NOT USED

NO SCALE

C

CHARGING POST CONTINUOUS CONCRETE SPLINE REINFORCEMENT DETAIL (TYPICAL)

D



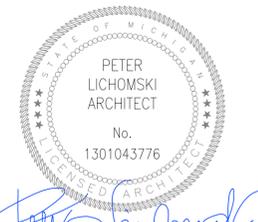
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CONSISTENT WITH APPLICABLE LICENSING LAWS THIS SEAL CERTIFIES ONLY THAT THE ARCHITECTURAL DESIGN WORK WAS PREPARED EITHER PERSONALLY BY ME OR UNDER MY IMMEDIATE AND DIRECT SUPERVISION AND CONTROL. THE SEAL IS NOT INTENDED TO AND DOES NOT IN FACT ATTEST TO ANY ENGINEERING WORK THAT WOULD FALL OUTSIDE THE SCOPE OF WHAT THE APPLICABLE LICENSING LAWS WOULD PERMIT AS THE PRACTICE OF ARCHITECTURE.

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1301 W 8 MILE RD
DETROIT, MI 48203

SHEET TITLE
INSTALLATION DETAILS

SHEET NUMBER
D-1



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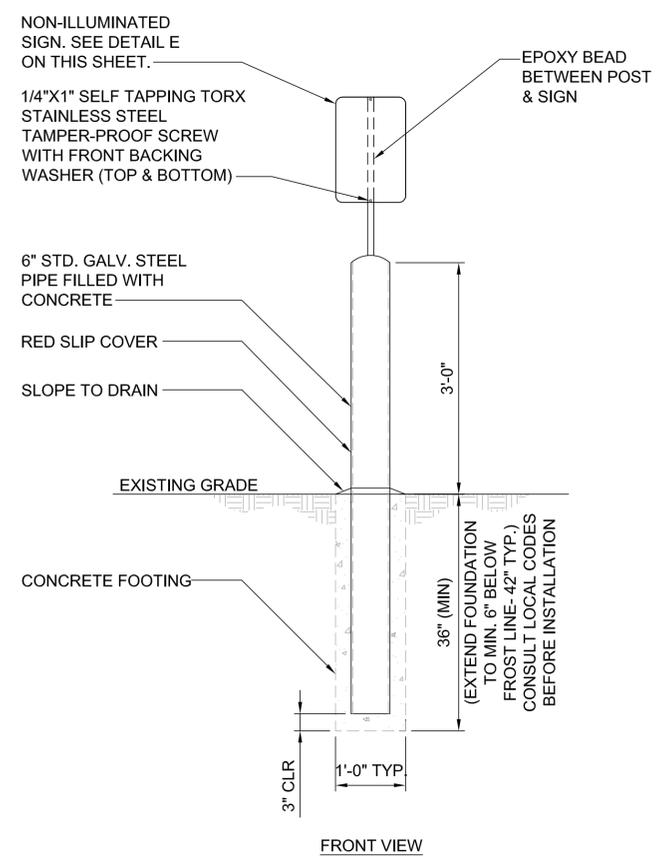
SHEET TITLE
INSTALLATION DETAILS

SHEET NUMBER
D-2

NOT USED

NO SCALE

A

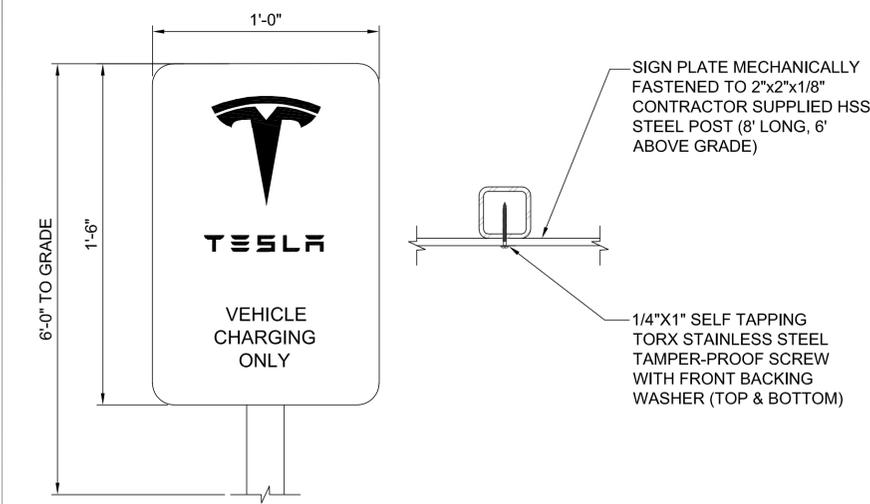
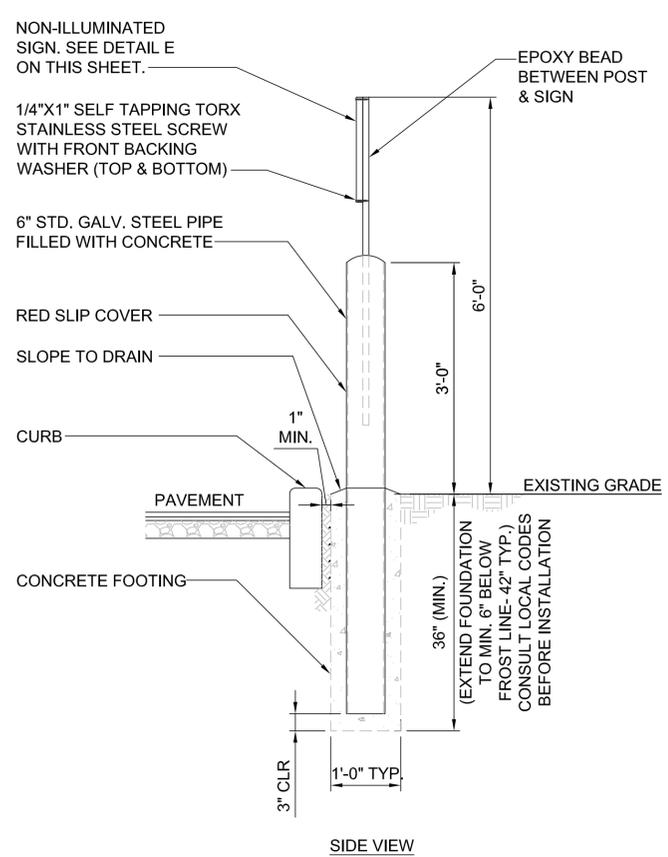


BOLLARD WITH SIGN INSTALLATION DETAIL

NOT USED

NO SCALE

B



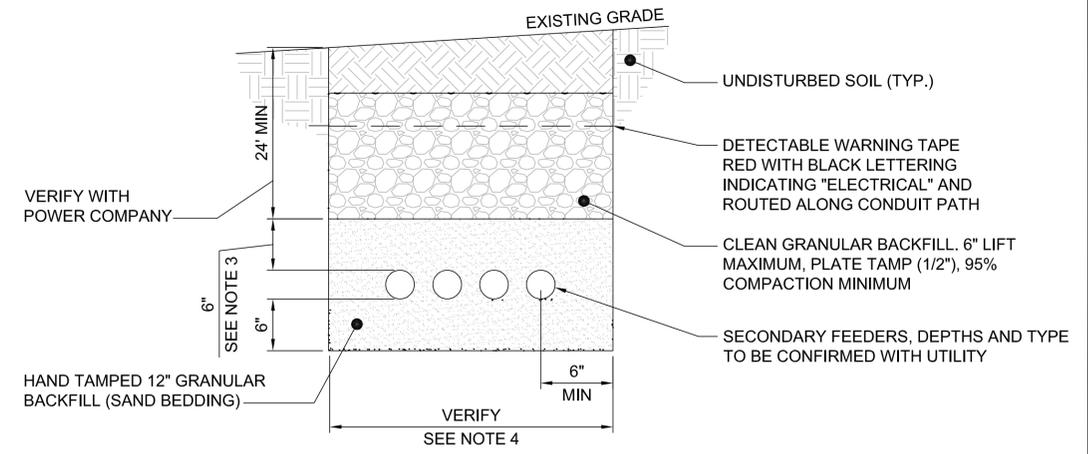
NOTES

- SIGN SHALL BE PROVIDED BY TESLA.
- POST SHALL BE PROVIDED BY CONTRACTOR.
- IF PAINT FINISH IS DAMAGED DURING INSTALLATION, CONTRACTOR SHALL REPAINT AS REQUIRED.
- NON-ILLUMINATED POLE MOUNT PARKING SIGN FACES AND RETURNS TO BE 0.090\"/>

TESLA DEDICATED NON-ILLUMINATED PARKING SIGN DETAIL

NO SCALE

D



- 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

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LAB

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PHONE: 248-705-9212

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CHECKED BY:	PL

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SHEET TITLE
INSTALLATION DETAILS

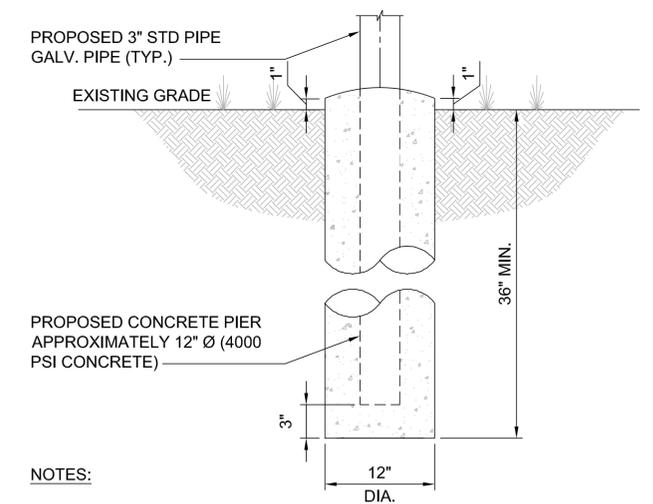
SHEET NUMBER
D-3

NOT USED

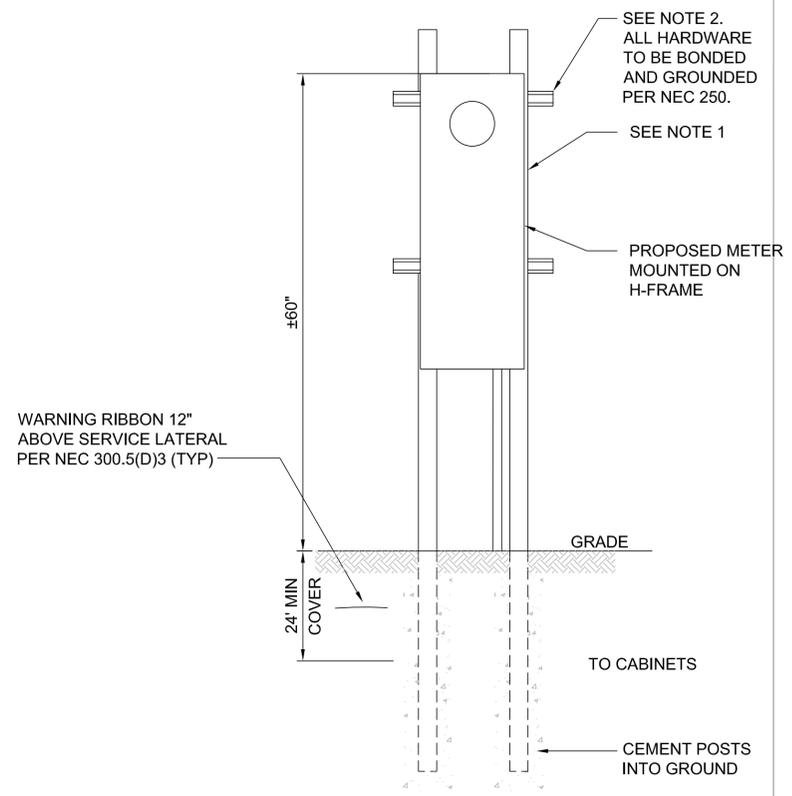
NO SCALE **A**

TYPICAL SECONDARY FEEDERS TRENCH DETAIL

NO SCALE **B**



- NOTES:**
1. SUPPORT POST: 2-3" STD GALVANIZED PIPE CEMENTED IN GROUND. BOND POSTS TO GROUND FIELD. 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. REFER TO FEEDER/CIRCUIT SCHEDULE ON SHEET E-3.
 4. ALL ABOVE GROUND CONDUITS SHALL BE RIGID GALVANIZED STEEL. PROVIDE PVC TO RGS COUPLER FOR TRANSITION.
 5. POSTS AND CABINETS SHALL BE GROUNDED WITH #2 BARE TINNED COPPER TO TWO (2) GROUND RODS, BOND TO SWITCHGEAR GROUND SYSTEM.
 6. ALL CUT POST & UNISTRUT ENDS SHALL BE FILED, GALVANIZED AND CAPPED.



FOLLOW UTILITY OR AHJ REQUIREMENTS AS REQUIRED

- NOTES**
1. 4" DIA MIN PAINTED STEEL PIPE
 2. FILL PIPE WITH CONC
 3. SPACED NOT MORE THAN 48" BETWEEN POSTS
 5. 12" MIN DIA CONCRETE FOOTING
 6. SET POST NOT LESS THAN 42" ABOVE GRADE
 7. LOCATED NOT LESS THAN 36" FROM THE PROTECTED OBJECT
 8. EXTEND FOUNDATION TO MIN. 6" BELOW FROST LINE- 42" TYP. CONSULT LOCAL CODES BEFORE CONSTRUCTION)

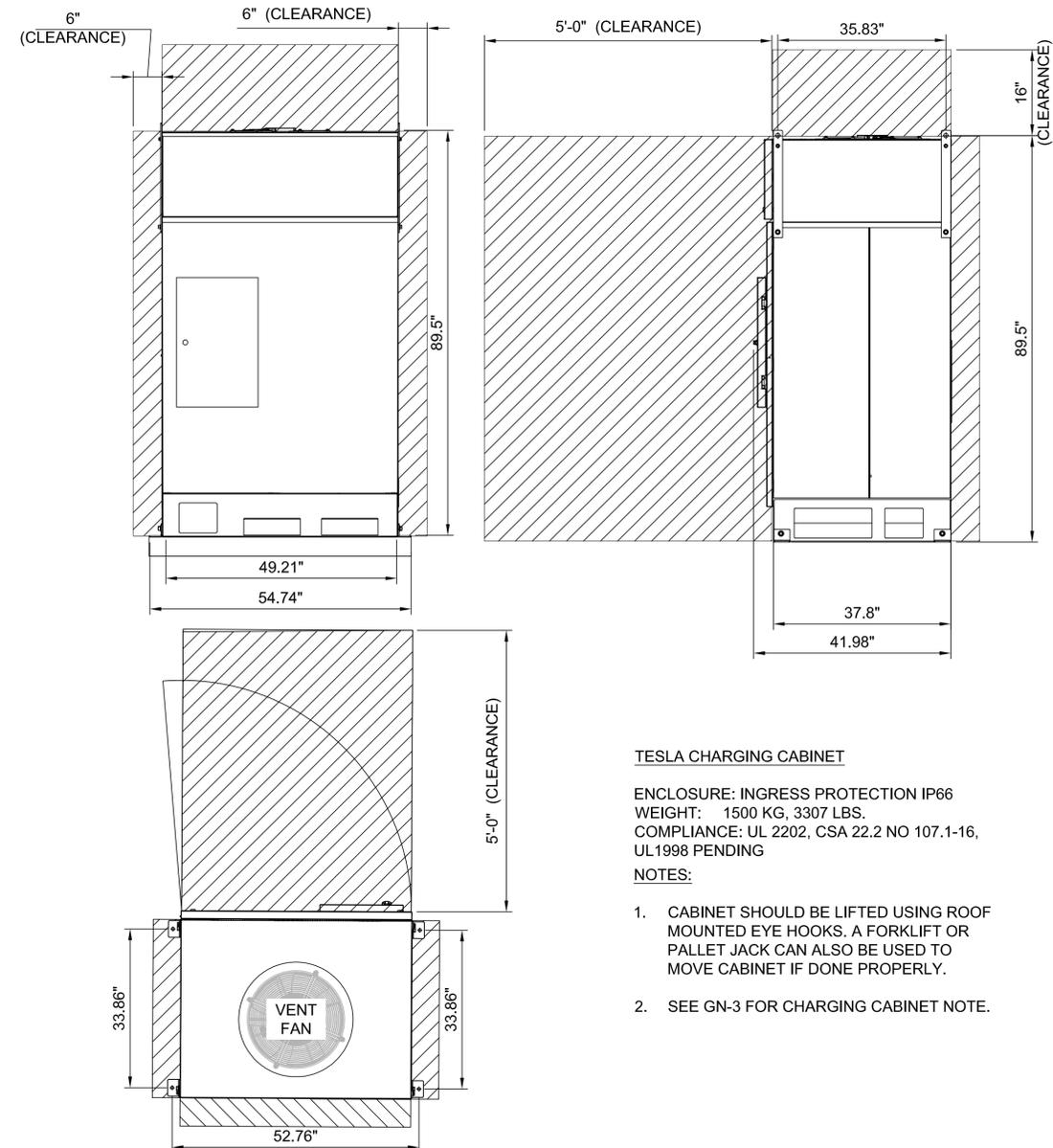
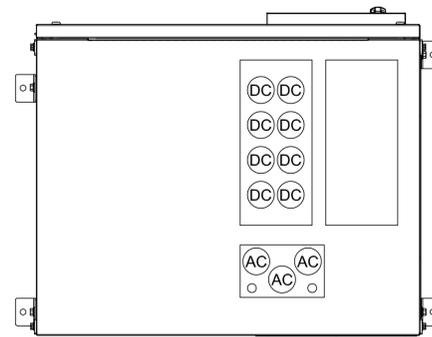
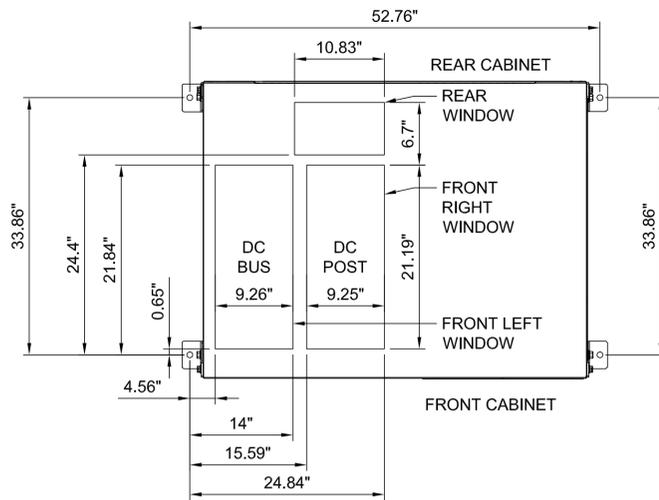
36" MIN. (EXTEND FOUNDATION TO MIN. 6" BELOW FROSTLINE-42" TYP.) CONSULT LOCAL CODES BEFORE INSTALLATION

METER & CT CABINET MOUNTED H-FRAME DETAIL

NO SCALE **C**

BOLLARD DETAIL

NO SCALE **D**



TESLA CHARGING CABINET

ENCLOSURE: INGRESS PROTECTION IP66
 WEIGHT: 1500 KG, 3307 LBS.
 COMPLIANCE: UL 2202, CSA 22.2 NO 107.1-16,
 UL1998 PENDING

NOTES:

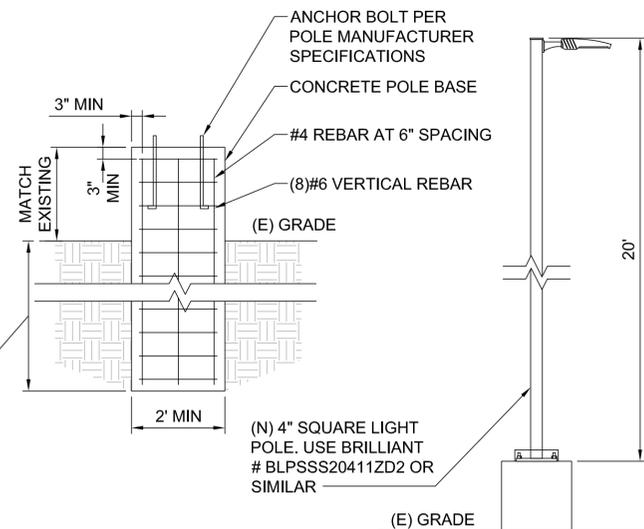
- CABINET SHOULD BE LIFTED USING ROOF MOUNTED EYE HOOKS. A FORKLIFT OR PALLET JACK CAN ALSO BE USED TO MOVE CABINET IF DONE PROPERLY.
- SEE GN-3 FOR CHARGING CABINET NOTE.

CONDUIT AND CONDUCTOR POSITIONING	
REAR WINDOW	AC CONDUITS
FRONT LEFT WINDOW	DC BUS CONDUITS
FRONT RIGHT WINDOW	DC POST CONDUITS ETHERNET CABLE FOR TESLA SITE CONTROLLER 24V DC OPTIONAL BACKUP POWER FOR TESLA SITE CONTROLLER

CONDUIT POSITIONING AND ANCHORING LOCATIONS

NO SCALE

A



6" MIN
CONFIRM DEPTH WITH LOCAL CODES
AND LIGHT MANUFACTURER
RECOMMENDATION

LIGHT POLE FOUNDATION

NO SCALE

C

NOT USED

NO SCALE

D

**TYPICAL TESLA SUPERCHARGER V3 CABINET
MANUFACTURER DETAILS - FOR REFERENCE ONLY**

NO SCALE

B

NOT USED

NO SCALE

E



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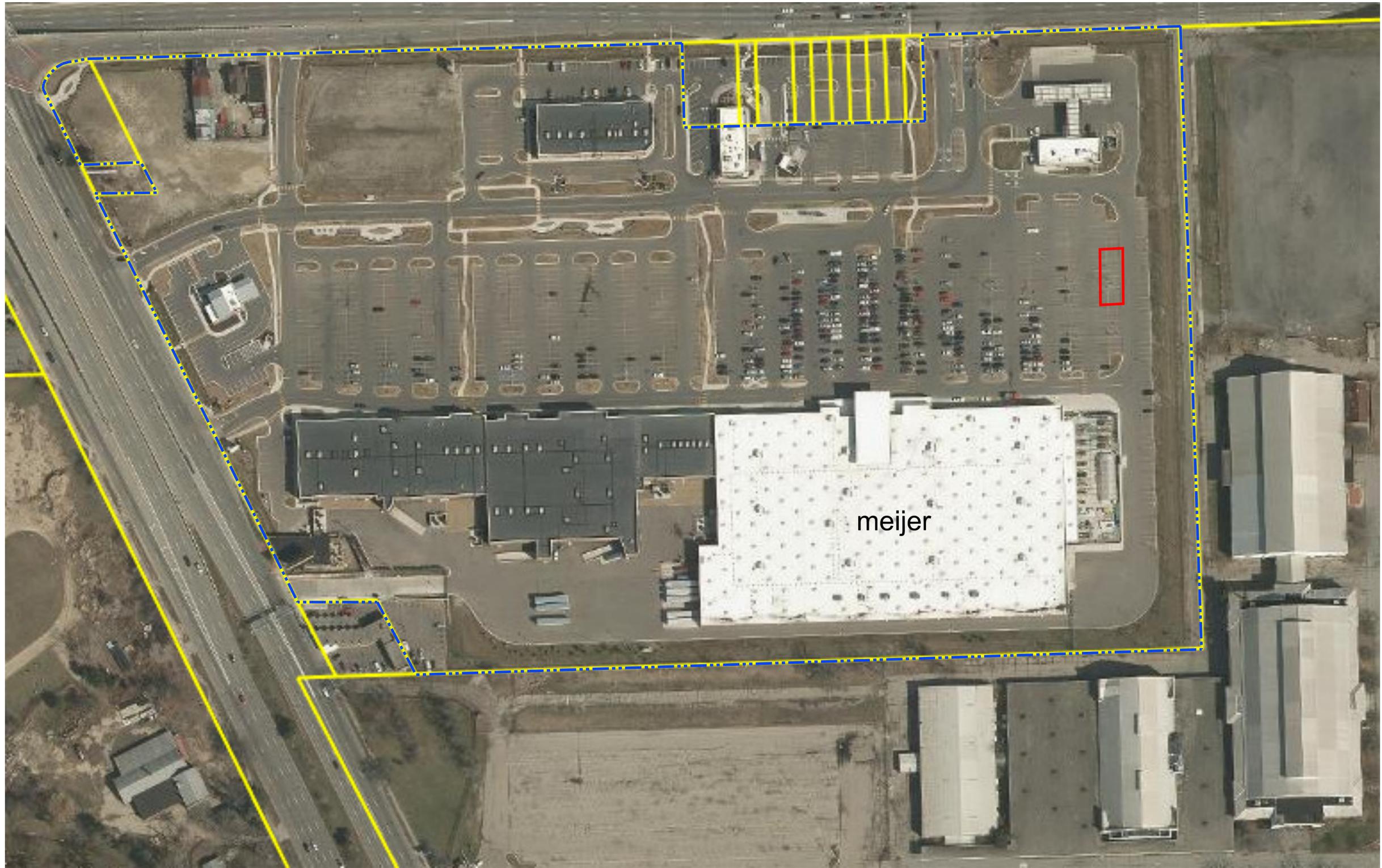


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D-4



AERIAL SITE PLAN (STORE # 268)