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9/1/2025 11:28:11 AM AutoCAD 2025 02890001 - Detroit Wayne County Port Authority EV 02890001 - Detroit Police Harbor Master ELEC.rvt
THIS SHEET
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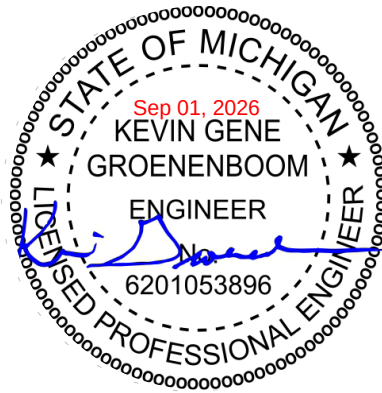
DETROIT/WAYNE COUNTY PORT AUTHORITY EV

DETROIT POLICE HARBOR MASTER

PLEASURE DRIVE, DETROIT, MI 48207

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DETROIT/WAYNE COUNTY PORT AUTHORITY EV
DETROIT POLICE HARBOR MASTER

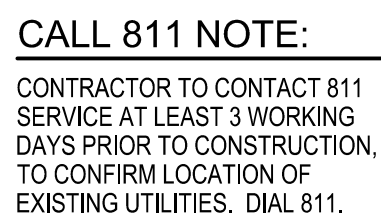
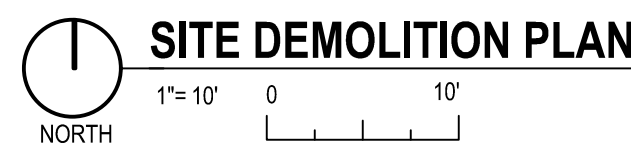


This item has been electronically signed and sealed by Kevin Groenenboom using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
09/01/2025 BID AND PERMIT SET

PROJECT NUMBER
2089001
PROJECT MANAGER
D. DICKERSON
PROFESSIONAL
K. GROENENBOOM
DRAWN BY
H. KHALETA
CHECKED BY
K. GROENENBOOM

TITLE SHEET
G001

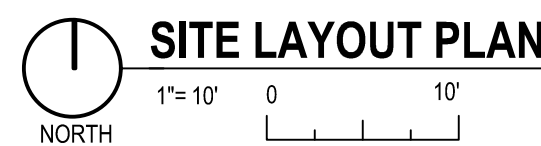


1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND BECOMING FAMILIAR WITH THE DEMOLITION AND CLEARING REQUIREMENTS.
2. NO REMOVAL, DEMOLITION, CLEARING OR TOPSOIL REMOVAL SHALL BE UNDERTAKEN UNTIL THE SEGE AND STORMWATER PERMITS HAVE BEEN ISSUED AND THE CONTRACTOR HAS VERIFIED AND STAKED THE LIMITS OF REMOVAL IN THE FIELD. NOTIFY SITE CONSULTANT OF THE STATUS OF THE DEMOLITION RESTRICTIONS. THE LIMITS LINE WILL BE ESTABLISHED FOR REVIEW AND APPROVAL.
3. ALL MATERIALS NOTED TO BE SALVAGED SHALL BE TURNED OVER TO THE OWNER OR REINSTEALLED ON SITE AS NOTED.
4. NO BURNING OR BURYING OF CLEARED OR DEMOLITION MATERIAL SHALL BE ALLOWED ON SITE.
5. REMOVE ALL STRUCTURES, FOUNDATIONS, BITUMINOUS PAVEMENT, CONCRETE SIDEWALK STEPS AND OTHER EXISTING SITE FEATURES AS NOTED ON THE DRAWINGS. REMOVE ALL DEBRIS FROM WITHIN CONSTRUCTION LIMITS ON SITE. ALL DEMOLITION MATERIALS SHALL BE REMOVED FROM THE SITE AND, UNLESS OTHERWISE NOTED, SHALL BE PLACED IN A MANDATORY ACCESSIBLE TO LOCAL JURISDICTION HAVING AUTHORITY.
6. THE CONTRACTOR SHALL BE LICENSED BY THE STATE OF MICHIGAN FOR DEMOLITION REMOVAL AND HAULING OF MATERIALS.
7. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL PERMITS AND FEES FOR THIS WORK.
8. EXISTING UTILITIES ARE LOCATED TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING UTILITY SERVICES AT ALL TIMES.
9. ALL EXCESS OR UNSUITABLE TOPSOIL OR SUBSOIL TO BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED OFFSITE.
10. PROTECT EXISTING TREES UNLESS OTHERWISE NOTED. NO PARKING OR STORAGE OF MATERIALS WITHIN TREE ZONE. PLACE TREE PROTECTION FENCE WHERE SHOWN ON PLAN.
11. TREE PROTECTION FENCE - ORANGE SAFETY FENCE AROUND TREES AND 2' TALL STEEL POSTS. 2" X 2" FIBER TO POSTS INSTALL PRIOR TO ANY CONSTRUCTION ACTIVITY AND MAINTAIN DURING ENTIRE CONSTRUCTION PERIOD.
12. CONTRACTOR TO CALL 811 AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION, TO CONFIRM LOCATION OF EXISTING UTILITIES.
13. CONTRACTOR MUST RESTORE AND REPAIR ANY EXISTING CONDITIONS DISTURBED BY CONSTRUCTION.
14. ANY AREA DISTURBED BY CONSTRUCTION TO BE RESTORED TO CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION BEGAN. PATCH PAVEMENT INSPIDE IF REQUIRED.
15. SAWCUT FILL DEPTH ALL EDGES OF PAVEMENT TO BE REMOVED.
16. ALL GROUND AREAS DISTURBED BY CONSTRUCTION TO BE TOPSOILED AND RESEED OR RESEED THE SITE LANDSCAPE PLAN UNLESS SHOWN OTHERWISE ON PLANS.

	BITUMINOUS PAVEMENT REMOVAL
	WOODED / BRUSH REMOVAL
	REMOVE ITEM
	SAWCUT

ALL ITEMS IN **BOLD** TO BE REMOVED UNLESS OTHERWISE NOTED.

**SITE DEMOLITION
PLAN
C102**



CONTRACTOR TO CONTACT 811
SERVICE AT LEAST 3 WORKING
DAYS PRIOR TO CONSTRUCTION
TO CONFIRM LOCATION OF
EXISTING UTILITIES. DIAL 811.

1. ALL WORKSMANSHIP AND MATERIALS SHALL BE ACCORDING TO THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION (M.D.O.T) STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. NO DIMENSION MAY BE SCALED. REFER UNCLER ITEMS TO THE ENGINEER FOR INTERPRETATION.
3. UPON REQUEST, ELECTRONIC INFORMATION WILL BE PROVIDED FOR SITE LAYOUT PURPOSES. CONTRACTOR SHALL REQUEST ALL INFORMATION IN WRITING THREE WEEKS PRIOR TO THE LAYOUT OF ALL NEW CONSTRUCTION SHALL BE DONE BY A LICENSED SURVEYOR.
4. ALL CONCRETE JOINTS SHALL BE TOOLED PER SPECIFICATIONS.
5. CONTRACTOR MUST RESTORE AND REPAIR ANY EXISTING CONDITIONS DISTURBED BY CONSTRUCTION. THIS IS TO INCLUDE BURIED UTILITIES, LIGHTING, LANDSCAPING, SPRINKLING, ETC.
6. ANY AREA DISTURBED BY CONSTRUCTION TO BE RESTORED TO CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION BEGUN.
7. ALL PAVEMENT, CURB & GUTTER, SIDEWALK AND UTILITIES WITHIN PUBLIC RIGHT OF WAY SHALL MEET CITY OF DETROIT STANDARDS.
8. CONTRACTOR TO PROTECT EXISTING IRRIGATION SYSTEM AS MUCH AS POSSIBLE. REPAIR DAMAGE TO EXISTING IRRIGATION SYSTEM AND RELOCATE SPRINKLER LAYOUT TO ACCOMMODATE THE NEW IMPROVEMENTS.

1 1/2" (165 LB/SY) MDOT 36A BIT. WEARING COURSE

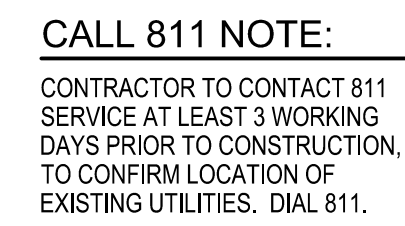
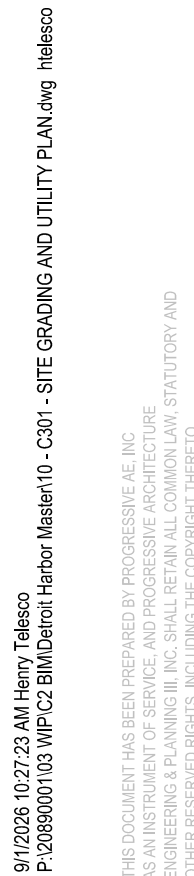
MDOT TACK COAT @ 0.15 GAL/SY

1 1/2" (165 LB/SY) MDOT 13A BIT. LEVELING COURSE

6" AGGREGATE BASE, MDOT 21AA MOD

12" SUBBASE, CL II SAND OR APPROVED NATIVE MATERIAL

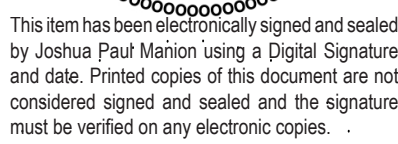
BITUMINOUS PAVEMENT



1. EARTHWORK AND PAVEMENT CONSTRUCTION ARE TO BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE MOST STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
2. THE SUBGRADE SHALL BE THOROUGHLY PROCCOLOFFED USING THE EQUIVALENT OF A FULLY LOADED TANDEM AXLE TRUCK HAVING A MINIMUM AXLE WEIGHT OF 10 TONS. SOFT OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REMOVED AND REPLACED WITH ENGINEERED FILL.
3. PROCCOLOFFING SHALL BE PERFORMED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER.
4. FINISHED SUBGRADE SURFACE SHALL NOT BE MORE THAN 0.1 FEET ABOVE OR BELOW ESTABLISHED FINISHED SUBGRADE ELEVATIONS AND ALL GRADE SURFACES SHALL VARY UNIFORMLY BETWEEN INDICATED ELEVATIONS. FINISHED DITCHES SHALL BE GRADED TO ALLOW FOR PROPER DRAINAGE WITHOUT PONDING AND IN A MANNER THAT WILL MINIMIZE EROSION.
5. GRADE THE AGGREGATE BASE MATERIAL TO PROVIDE POSITIVE DRAINAGE AT A MINIMUM OF 1.5 PERCENT.
6. THE AGGREGATE BASE AND SUBBASE SHALL EXTEND 12 INCHES BEYOND THE PAVED EDGE.
7. THE EXISTING SOIL TYPE MAY BE UTILIZED AS ENGINEERED FILL PROVIDED ALL DELETERIOUS OR ORGANIC MATERIALS ARE REMOVED FROM THE SOILS. ANY ON-SITE SOILS USED FOR ENGINEERED FILL SHALL BE EVALUATED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
8. ENGINEERED FILL LOCATED WITHIN PAVEMENT AND BUILDING AREAS SHALL BE COMPACTED TO 98 PERCENT OF OPTIMUM MOISTURE CONTENT CONDITIONED TO 100 PERCENT OF OPTIMUM MOISTURE CONTENT. COMPACT TO MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY PER ASTM D-1557, MODIFIED PROCTOR METHOD
9. ALL FILL OPERATIONS SHALL BE OBSERVED BY A QUALIFIED SOILS ENGINEER. A MINIMUM OF ONE COMPARISON TEST SHALL BE CONDUCTED PER 2,500 SQ FT AREA AT EACH LIFT, WITHIN TRENCH EXCAVATIONS, ONE TEST SHALL BE CONDUCTED FOR EACH 100 LINEAR FEET PER LIFT.
10. SIDE SLOPES SHALL NOT EXCEED 1 VERTICAL OVER 3 HORIZONTAL. SLOPE UNLESS SHOWN OTHERWISE.
11. EXCESS TOPSOIL SHALL BE SPOILED ON SITE IN LOCATION DETERMINED WITH OWNER AND ENGINEER AND SEEDDED.
12. PARKING LOT CURBS SHALL BE BUILT WITH REVERSE SLOPE ON THE DOWNSIDE SIDE OF THE ISLAND TO ASSURE POSITIVE STORM WATER RUNOFF TO CATCH BASINS.
13. UNLESS NOT SPECIFIED, FINISH GRADES OF LAWNLANDSCAPE ADJACENT TO BUILDING WALLS SHALL BE 6" BELOW FINISH FLOOR ELEVATION.
14. PLACE 4" MINIMUM PAVEMENT ON LANDSCAPE AREAS TO BE SEEDDED. PROVIDE POSITIVE DRAINAGE AT ALL TIMES TO ENSURE NO STANDING WATER WITHIN PAVEMENT, BUILDING PAD, OR GREEN AREAS.
15. FOR ALL CURB ISLANDS, CURBS OF ISLANDS TO BE A MINIMUM OF 6" HIGHER THAN 2'00" OF CURB.
16. THE SITE MAY BE DESIGNATED AS A FACILITY BECAUSE OF ENVIRONMENTAL IMPACTS. IN THE EVENT MATERIALS MUST BE REMOVED FROM THE SITE, TRANSPORTATION, HANDLING AND DISPOSAL OF EXCESS MATERIAL SHOULD BE PERFORMED IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS.

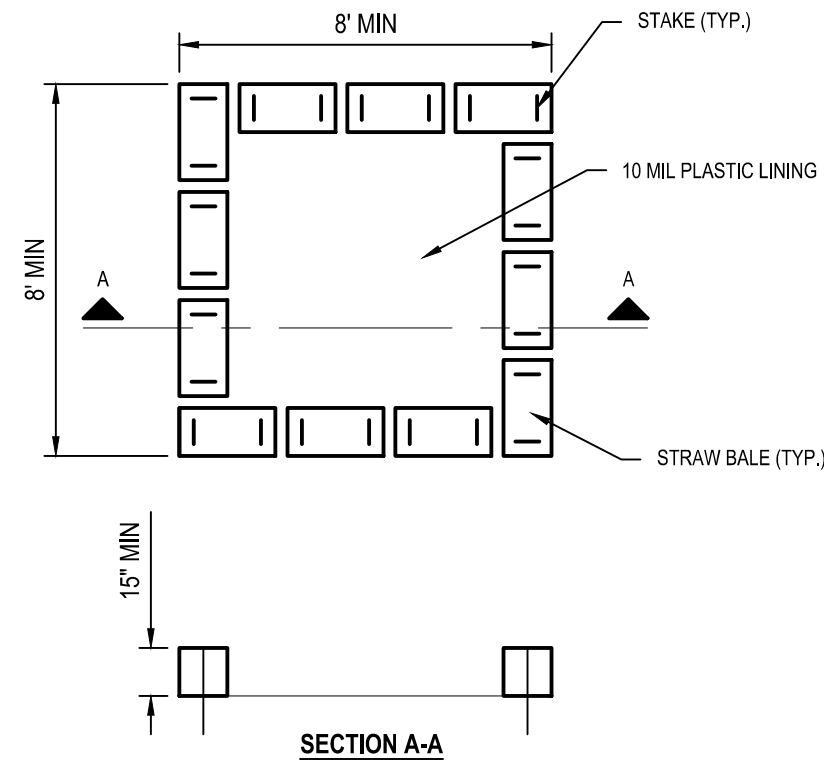
	FLOW ARROW
TP	TOP OF PAVEMENT
TC	TOP OF CURB
GR	GROUND
GP	GUTTER PAN
EX	EXISTING ELEVATION
EW	EDGE OF WALK

	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	POWER POLE
	TRANSFORMER
	ELECTRIC MANHOLE
	ELECTRIC HANDHOLE
	ELECTRIC SWITCHGEAR
	AIR CONDITIONER

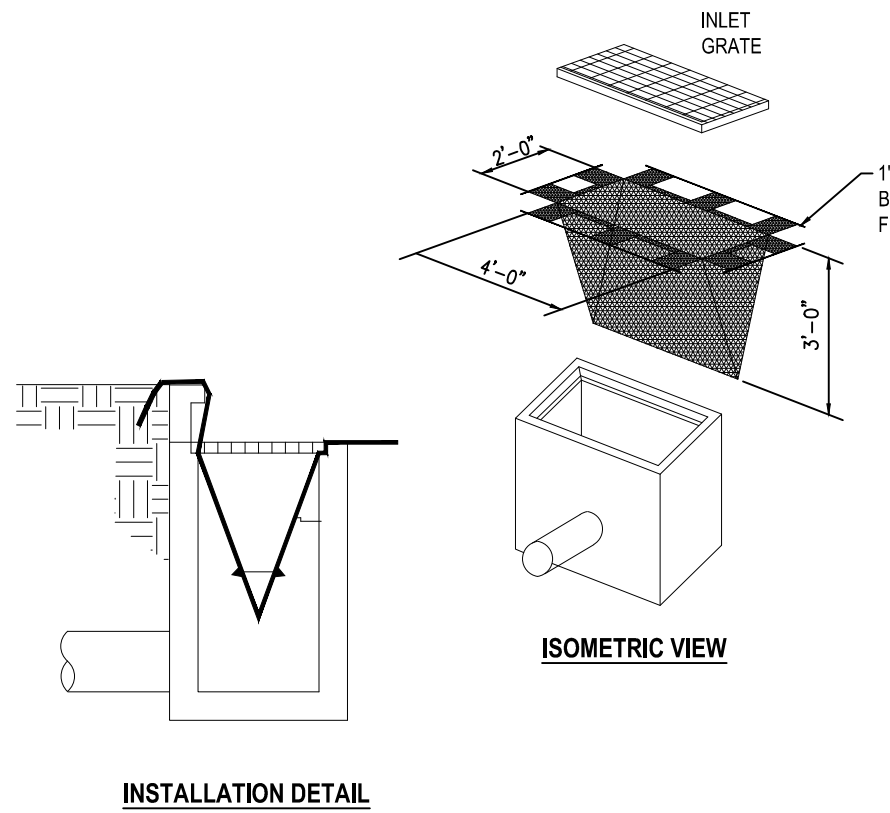


PROJECT NUMBER
20890001
PROJECT MANAGER
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J. MANION
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H. TELESKO
CHECKED BY
J. MANION

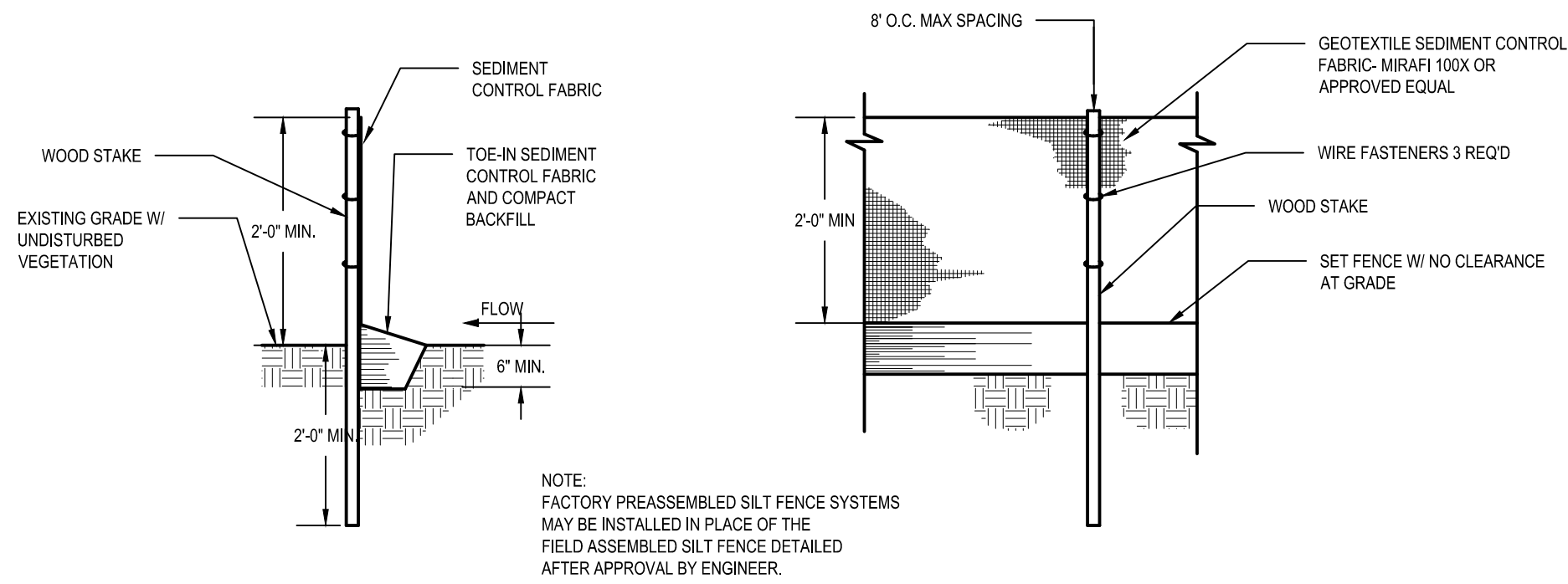
SITE GRADING AND UTILITY PLAN C301



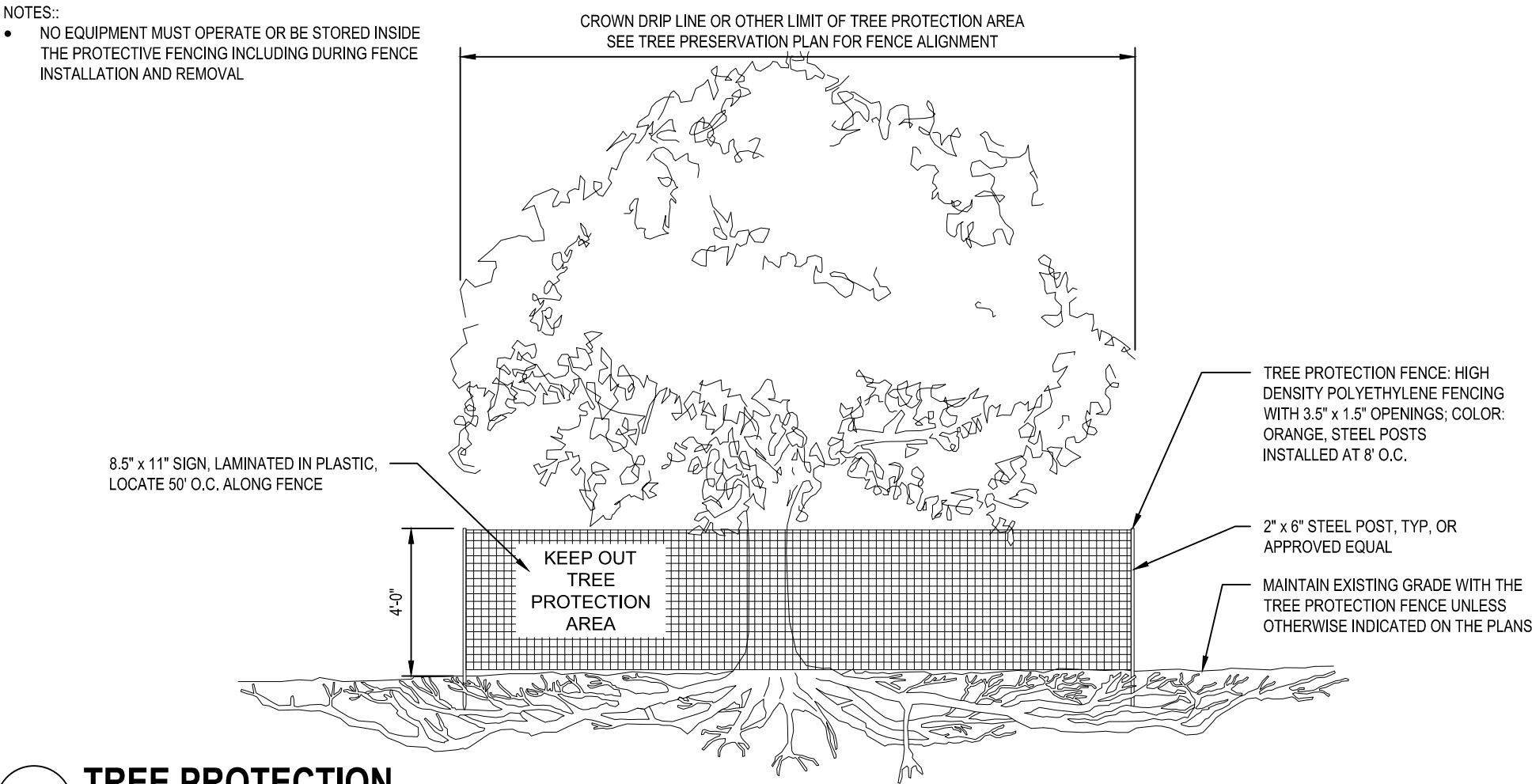
A1 CONCRETE WASHOUT AREA
NOT TO SCALE



B1 INLET PROTECTION - FABRIC DROP
NOT TO SCALE



A3 SILT FENCE DETAIL
NOT TO SCALE



B3 TREE PROTECTION
NOT TO SCALE

GENERAL NOTES

- GN.1 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN CRITERIA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.
- GN.2 COORDINATE THESE DRAWINGS WITH THE ELECTRICAL AND CIVIL DRAWINGS.
- GN.3 FOR SECTIONS AND DETAILS NOT EXPLICITLY INDICATED ON THE DRAWINGS, USE TYPICAL DETAILS PROVIDED FOR CONDITIONS THAT ARE SIMILAR. OTHERWISE BRING TO THE ATTENTION OF THE STRUCTURAL ENGINEER-OF-RECORD FOR CLARIFICATION.
- GN.4 ANY ALTERATION TO A STRUCTURAL ITEM OR MEMBER SHALL BE APPROVED BY THE STRUCTURAL ENGINEER-OF-RECORD.
- GN.5 TYPICAL DETAILS ARE NOTED AS SUCH AND SHALL APPLY AT ALL RELATED CONDITIONS, UNLESS NOTED OTHERWISE.

REINFORCED CONCRETE

- RC.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'_c) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE. THE CONTRACTOR SHALL SUBMIT MIX DESIGNS WITH SUBSTANTIATING STRENGTH TEST DATA FOR REVIEW FOR EACH MIX DESIGN USED PER SPECIFICATION REQUIREMENTS PRIOR TO CONCRETE PLACEMENT.
- RC.2 MIX DESIGNS ARE THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR/SUPPLIER FOLLOWING THE REQUIREMENTS OUTLINED IN THIS SPECIFICATION AND FOR THE LOCATION IN WHICH THE CONCRETE IS BEING DEPOSITED. MAXIMUM AGGREGATE SIZE SHALL BE SELECTED TO FALL WITHIN THE RANGE SPECIFIED FOR THE REQUIRED STRENGTH INDICATED AS WELL AS TO FACILITATE PLACEMENT CONSIDERING REBAR SPACING AND CONFINEMENT, PLACEMENT AND CONSOLIDATION METHOD, AND CONSTRUCTION SEQUENCING. SLUMPS INDICATED ARE RECOMMENDATIONS FOR TYPICAL CONDITIONS ENCOUNTERED AND SHALL BE VERIFIED AND MODIFIED WITH APPROVAL FOR ACTUAL FIELD CONDITIONS.
- RC.3 ENTRAIN AIR FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOUNDATIONS, SLAB TURNDOWNS, EXTERIOR SLABS AND SLABS-ON-GRADE, AND EXTERIOR RETAINING WALLS.)
- RC.4 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.
- RC.5 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AND CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.
- RC.6 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH $3/4" \times 45$ DEGREE CHAMFER, UNLESS NOTED OTHERWISE.
- RC.7 CONCRETE REINFORCEMENT BARS SHALL BE DEFORMED AND CONFORM TO ASTM A615, GRADE 60. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE DOCUMENTS. ALL LAPS SHALL BE TENSION SPLICES UNLESS NOTED OTHERWISE.
- RC.8 HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A TENSION SPLICE AT CORNERS AND INTERSECTIONS, UNLESS NOTED OTHERWISE.
- RC.9 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 318, LATEST EDITION.
- RC.10 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
- RC.11 FOR ALL WALLS AND PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERTICAL REINFORCEMENT BAR, UNLESS NOTED OTHERWISE, DOWEL SIZE SHALL BE SAME AS VERTICAL REINFORCEMENT.

FOUNDATION NOTES

- FN.1 NO FOUNDATIONS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE, OR LOOSE MATERIAL.

FOUNDATION DESIGN CRITERIA

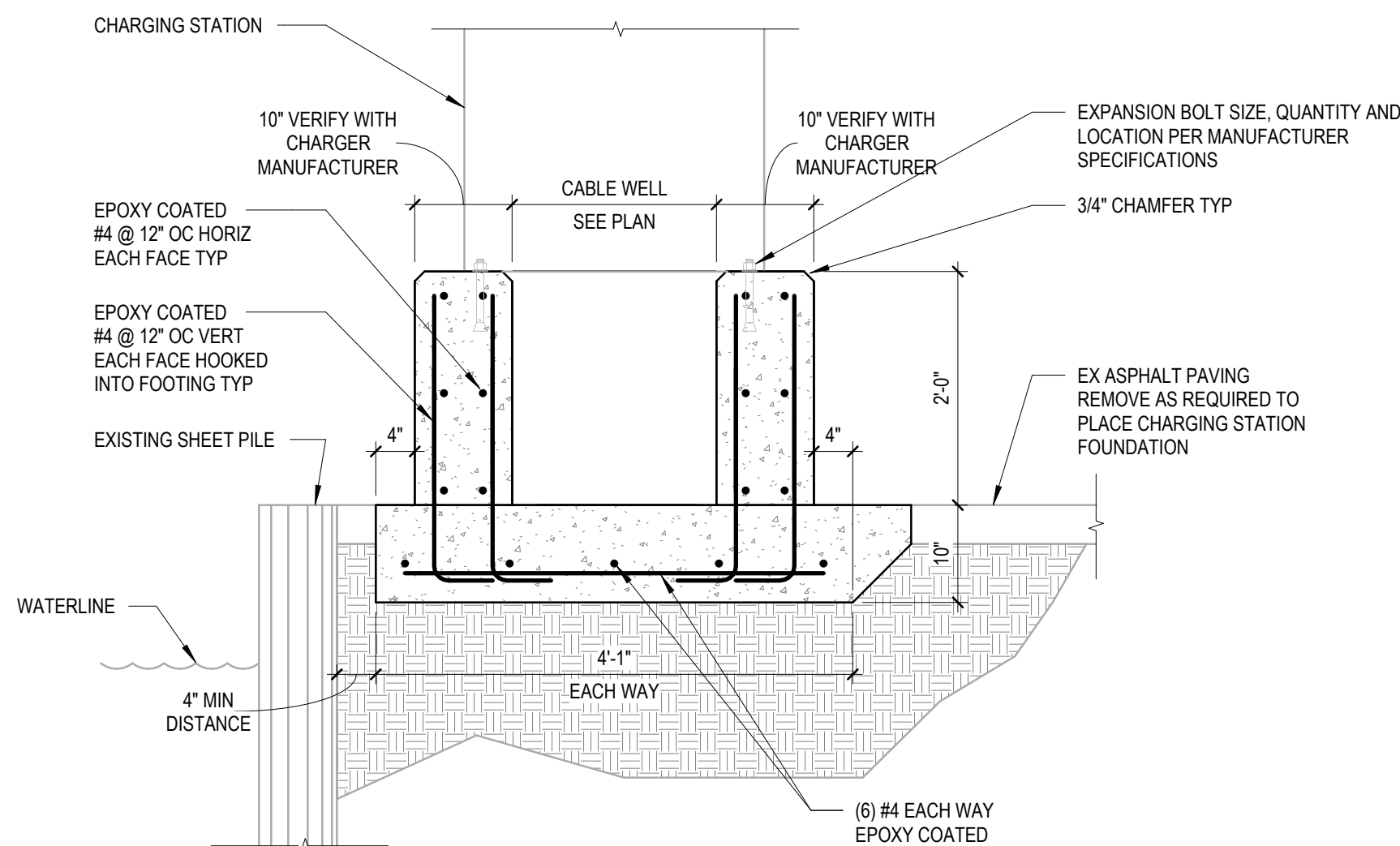
- F.1 ALLOWABLE SOIL BEARING CAPACITY: 1,500 PSF (ASSUMED)

CONCRETE MATERIALS AND MIX DESIGN SCHEDULE

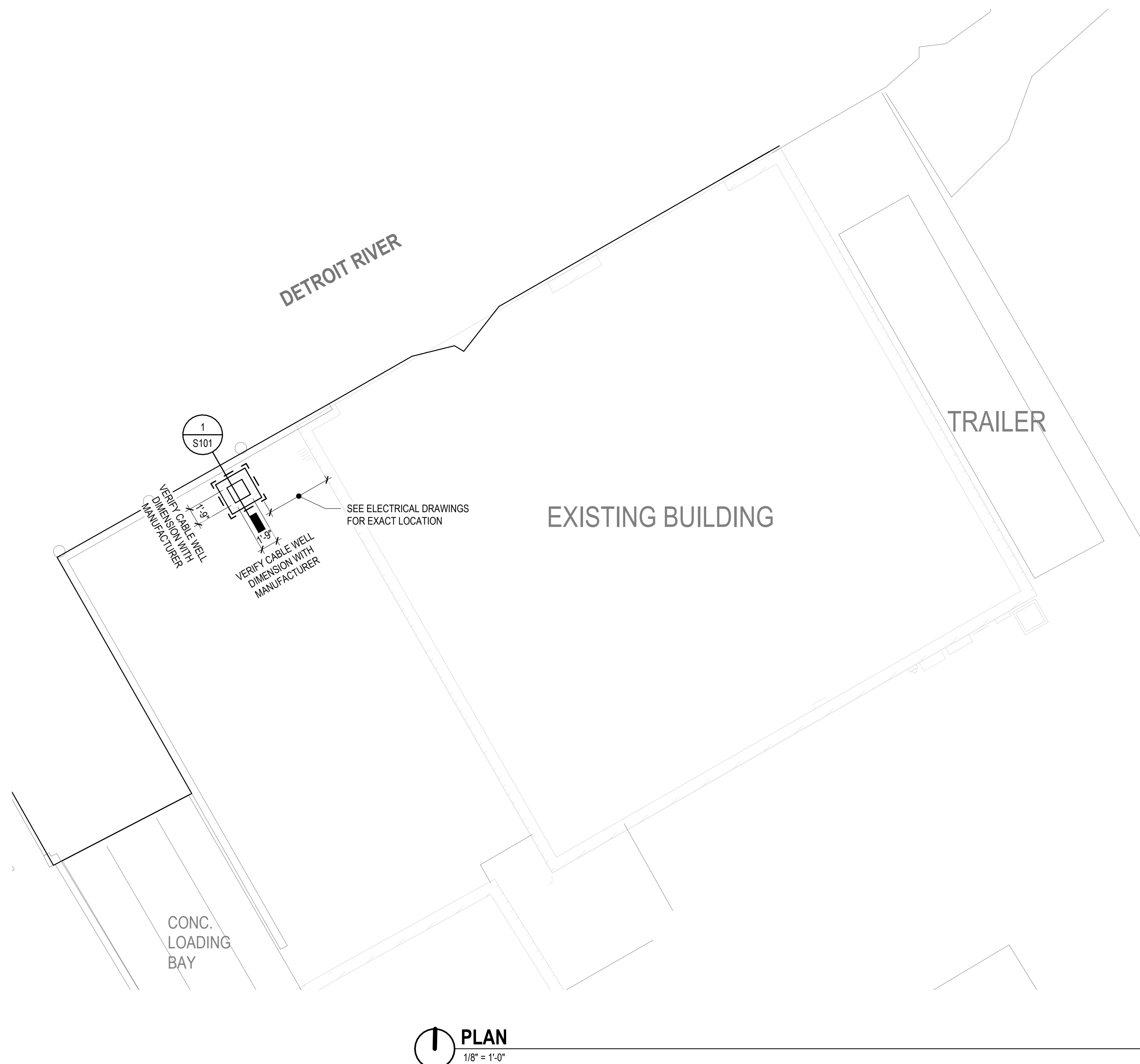
STRUCTURAL ELEMENT	ACI EXPOSURE CLASS	MAX W/C RATIO	f'_c (PSI)	AIR-ENTRAINMENT REQUIRED [SEE NOTE 3]	REMARKS
EXTERIOR FOOTINGS, FOUNDATION WALLS, PIERS	F2	0.5	4500	YES	-
NOTES: 1. FINAL MIX DESIGN TO BE BY THE CONCRETE SUPPLIER FOLLOWING THIS TABLE AS A MINIMUM. 2. SEE REINFORCED CONCRETE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. 3. SEE ACI 318 FOR AIR ENTRAINMENT RECOMMENDATIONS BASED ON EXPOSURE TYPE AND MAXIMUM AGGREGATE SIZE.					

CONCRETE COVER SCHEDULE

LOCATION		CLEAR COVER
CONCRETE PLACED AGAINST EARTH		3"
CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER OR EARTH	#5 BARS AND SMALLER	1 1/2"
	#6 BARS AND LARGER	2"
COLUMNS, PIERS		1 1/2"
SLABS OR WALLS NOT EXPOSED TO WEATHER OR EARTH		3/4"
NOTES: 1. MINIMUM CONCRETE COVER APPLIES TO OUTER MOST LAYER OF REINFORCING BARS. 2. SPECIFIC DIMENSIONS FOR BAR PLACEMENT SHOWN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM SCHEDULED REQUIREMENTS. 3. PROVIDE ACCESSORIES AS REQUIRED TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE FABRIC TO MAINTAIN CONCRETE PROTECTION SPECIFIED.		



1
3/4" = 1'-0"



1
PLAN
1/8" = 1'-0"

ELECTRICAL ABBREVIATIONS

A	AMPERES
ACU	AIR CONDITIONING UNIT
AFG	ABOVE FINISH GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AP	ACCESS PANEL
APPROX	APPROXIMATE
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BF	BARRIER FREE
BFG	BELOW FINISHED GRADE
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DEVICE
BSMT	BASEMENT
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED-CIRCUIT TELEVISION
CF	CEILING FAN
CH	CABINET HEATER
CL	CENTERLINE
CLR	CLEAR, CLEARANCE
CMPR	COMPRESSOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CR	CARD READER
CT	COOLING TOWER
CU	COPPER
DEPT	DEPARTMENT
DET	DETAIL
DISC	DISCONNECT
DIST	DISTRIBUTION
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EF	EXHAUST FAN
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EWG	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
F	FAHRENHEIT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FLEXIBLE CONNECTION
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FL	FLUORESCENT
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FMC	FLEXIBLE METAL CONDUIT
FURN	FURNISH, FURNISHED
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTOR
GND	GROUND
HP	HORSEPOWER
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
IBC	INTERNATIONAL BUILDING CODE
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JBOX	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
KWH	KILOWATT-HOURS
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LTD	LIGHTING
LV	LOW VOLTAGE
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MOP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFDS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MSBD	MAIN SWITCH BOARD
MT	MOUNT
MTR	MOTOR, MOTORIZED
MTS	MANUAL TRANSFER SWITCH
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NL	NIGHT-LIGHT
OH	OVERHEAD
OHD	OVERHEAD DOOR
P	PUMP
PH	PHASE
PNL	PANEL
PP	POWER POLE
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
PWR	POWER
RECEPT	RECEPTACLE
RTU	ROOFTOP UNIT
TEL	TELEPHONE
TR	TAMPER RESISTANT
TV	TELEVISION
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WH	WATER HEATER
XFER	TRANSFER
XFMR	TRANSFORMER
Ø	PHASE

POWER SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (IN, O, U)
	SINGLE RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "TR" = TAMPER RESISTANT)	18"
	GFCI RATED SINGLE RECEPT	18"
	ISOLATED GROUND SINGLE RECEPT	18"
	SWITCHED SINGLE RECEPT	18"
	DUPLEX RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "U" = CONNECTED TO UPS "TR" = TAMPER RESISTANT)	18"
	GFCI RATED DUPLEX RECEPT ("WP" = WEATHER RESISTANT)	18"
	ISOLATED GROUND DUPLEX RECEPT	18"
	SWITCHED DUPLEX RECEPT (SPLIT-WIRE)	18"
	USB DUPLEX RECEPT	18"
	ABOVE COUNTERTOP DUPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	FOURPLEX RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "U" = CONNECTED TO UPS)	18"
	GFCI RATED FOURPLEX RECEPT	18"
	ISOLATED GROUND FOURPLEX RECEPT	18"
	SWITCHED FOURPLEX RECEPT (SPLIT-WIRE)	18"
	ABOVE COUNTERTOP FOURPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	SPECIAL RECEPT OR CONNECTION, PROVIDE DIRECT POWER CONNECTION OR MATCHING RECEPTACLE AS REQUIRED, COORDINATE W/ EQUIPMENT MANUFACTURER	18"
	MULTIOUTLET WIREMOLD ASSEMBLY, MOUNT 4" ABOVE BACKSPLASH OR PROVIDE POWER RECEPTS AS SHOWN ON DRAWING	48"
	FLOOR RECEPT (DUPLEX SHOWN)	
	CEILING RECEPT (DUPLEX SHOWN)	
	JUNCTION BOX (FLOOR, WALL, CEILING SHOWN RESPECTIVELY)	AS NOTED
	PUSH BUTTON STATION	48"
	FLOOR MOUNT FURNITURE CONNECTION - POWER AND DATA	
	WALL MOUNT FURNITURE CONNECTION - POWER AND DATA	18"
	MOTOR HORSEPOWER RATED SWITCH	48"
	FUSED SWITCH	48"
	SAFETY DISCONNECT SWITCH (NON-FUSED)	72"
	SAFETY DISCONNECT SWITCH (FUSED)	72"
	COMBO MOTOR STARTER/DISCONNECT SWITCH (FUSED)	72"
	VARIABLE FREQUENCY DRIVE	
	SINGLE PHASE MOTOR (SEE SCHEDULE)	
	THREE PHASE MOTOR (SEE SCHEDULE)	
	CIRCUIT BREAKER PANEL	72"
	POWER OR DISTRIBUTION PANEL	72"
	SPECIAL CABINET (TYPE DENOTED)	72"
	TRANSFORMER (TYPE DENOTED)	

GENERAL ELECTRICAL NOTES

1. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS ADOPTED BY THE AHJ FOR THE PROJECT LOCATION, INCLUDING (NOT LIMITED TO) ELECTRICAL CODES, BUILDING CODES, ENERGY CODES, ETC.
2. COORDINATE INSTALLATION WITH VENDOR/ CONTRACTOR SHOP DRAWINGS WHERE APPROPRIATE.
3. FIELD COORDINATE INSTALLATION WITH THE INSTALLATION OF OTHER TRADES TO AVOID CLASHES AND CONFLICTS.
4. WHERE MOUNTING HEIGHTS ARE SHOWN, THEY ARE TO BE CONSIDERED TO BE TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE.
5. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY OR PART OF A LISTED CABLE ASSEMBLY SUITABLE FOR THE INSTALLED PURPOSE AND LOCATION, AND ALLOWED BY PROJECT SPECIFICATIONS.
6. FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS, USE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 150 FEET, UNO. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
7. FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS, USE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 150 FEET, UNO. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
8. WHERE CONFLICTS EXIST IN DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS, ISSUE REQUEST FOR INTERPRETATION TO DESIGN TEAM FOR CLARIFICATION PRIOR TO INSTALLATION.
9. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY.

DETROIT/WAYNE COUNTY PORT AUTHORITY EV
DETROIT POLICE HARBOR MASTER

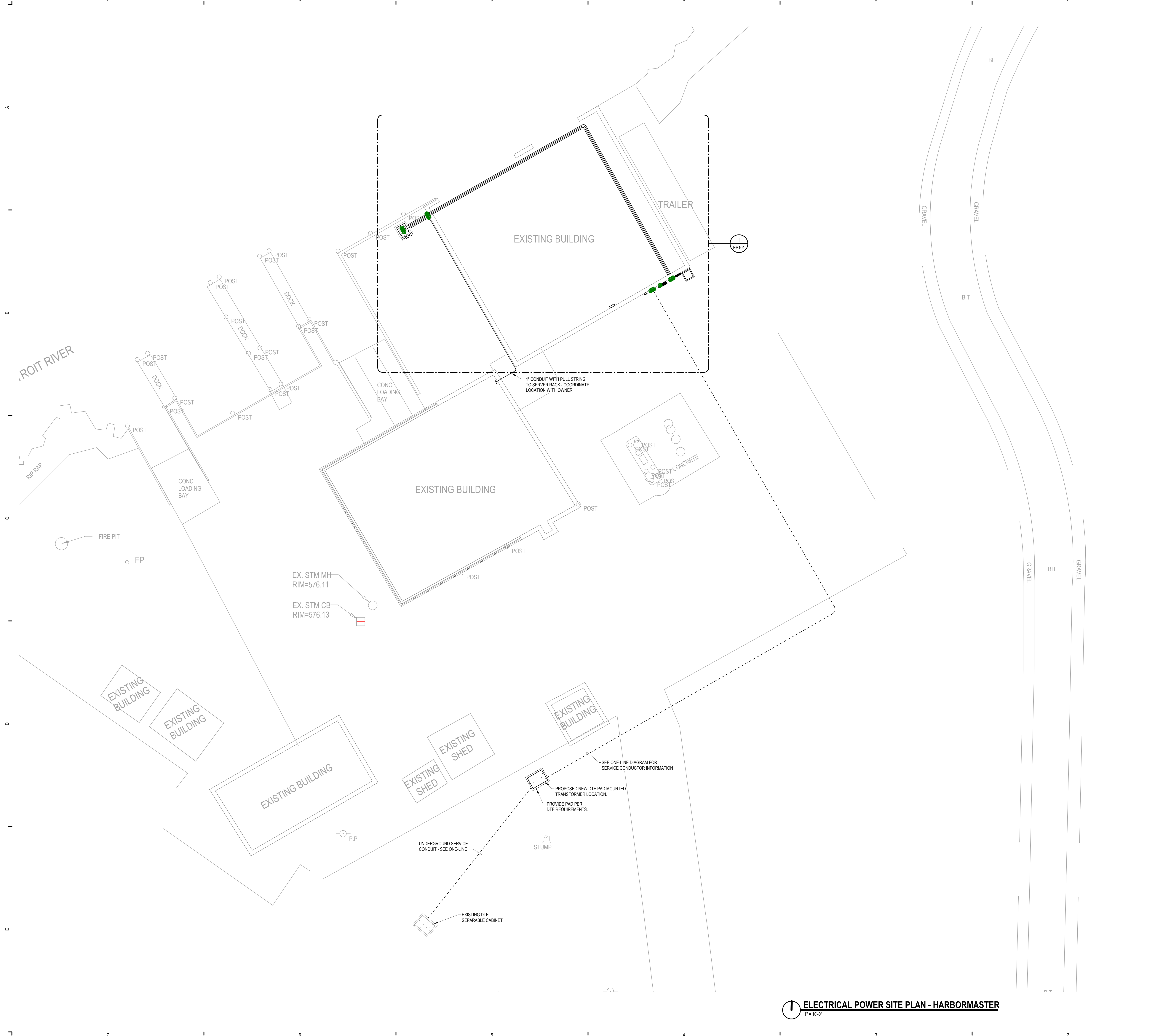


This item has been electronically signed and sealed by Kevin Groenenboom using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
09/01/2025 BID AND PERMIT SET

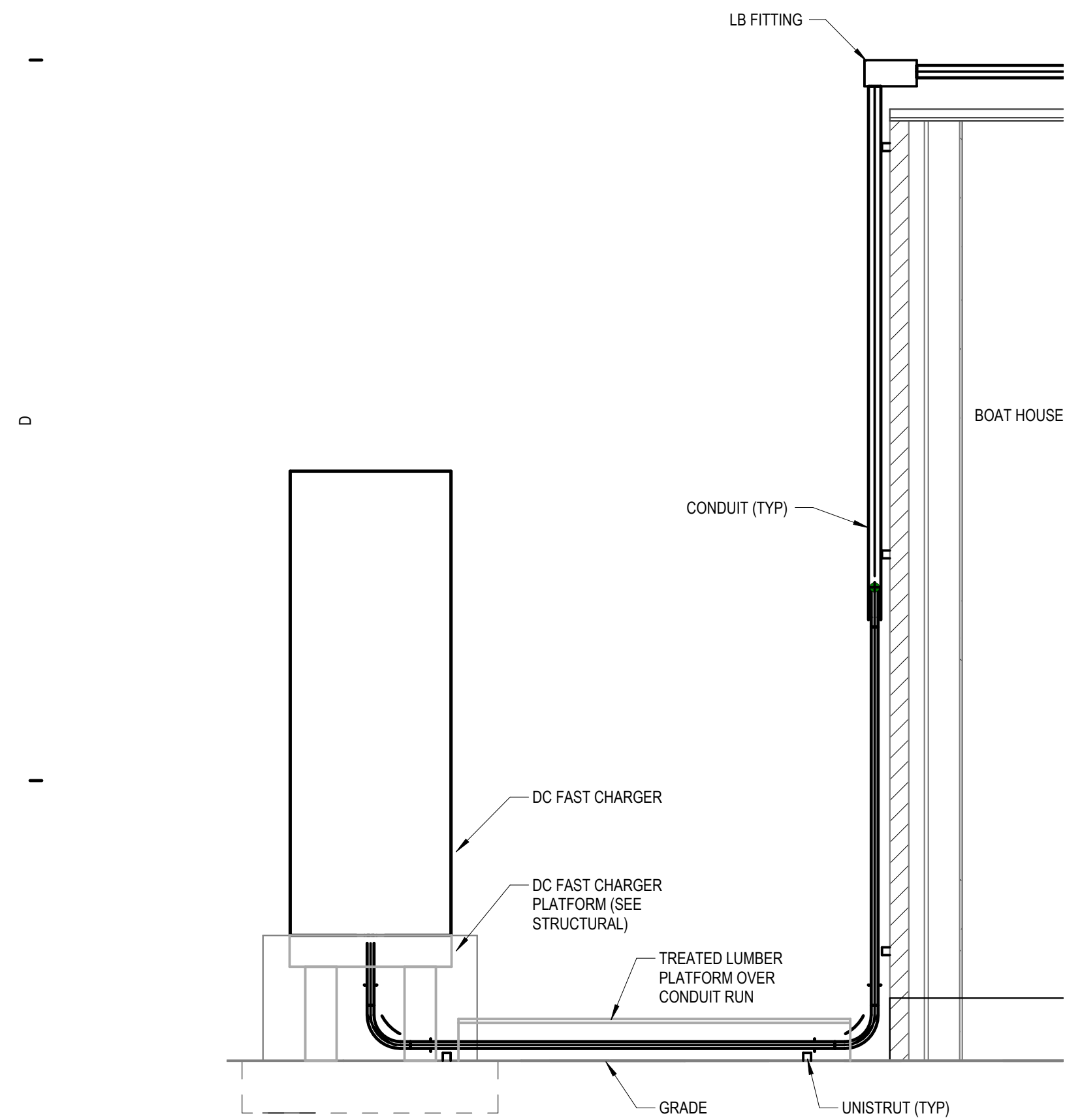
PROJECT NUMBER
2089001
PROJECT MANAGER
D. DICKERSON
PROFESSIONAL
K. GROENENBOOM
DRAWN BY
H. KHALIFA
CHECKED BY
K. GROENENBOOM

ELECTRICAL
NOTES AND
ABBREVIATIONS
E001

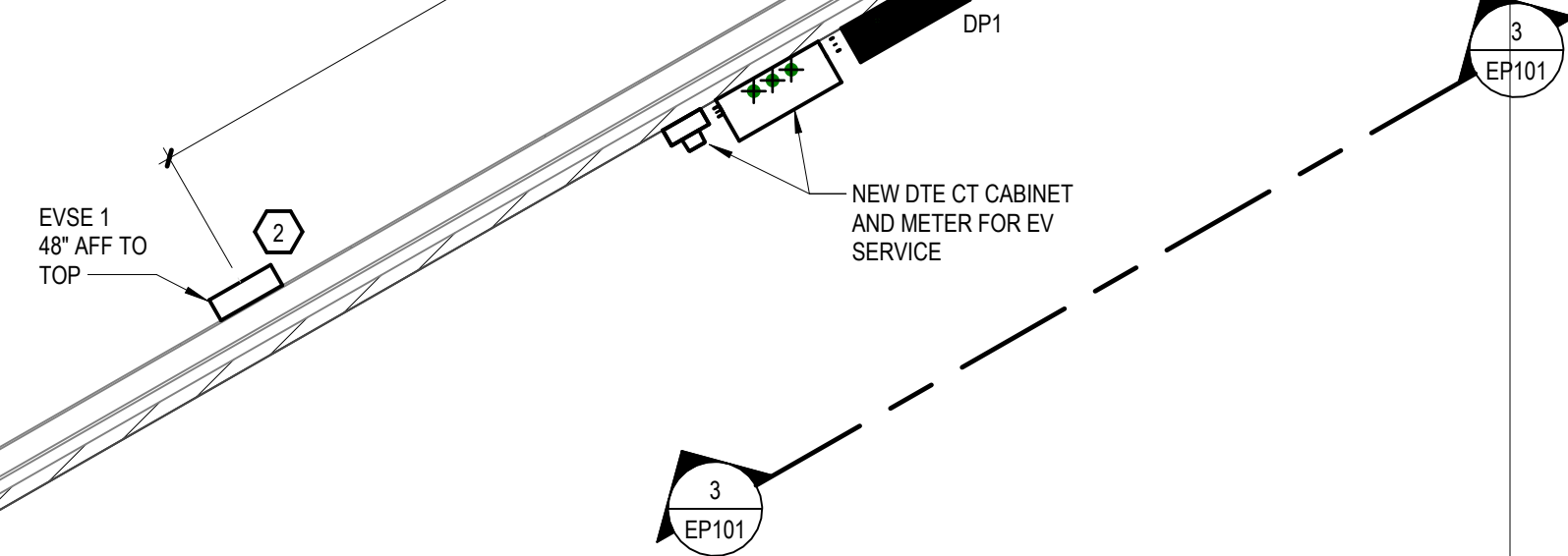


SITE GENERAL NOTES

- A. ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 38" (MAXIMUM) ABOVE FINISHED GRADE.
- B. CONDUIT ROUTING SHOWN IN DIAGRAMMATIC FIELD COORDINATE ACTUAL ROUTING PLACEMENT WITH OTHER TRADES AND OWNER.
- C. PROVIDE MANHOLES IN CONDUIT RUNS SO THAT THERE IS NO MORE THAN 50 FEET AND/OR 270 DEGREES OF BENDS BETWEEN PULL POINTS.
- D. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS ADOPTED BY THE AIIJ FOR THE PROJECT LOCATION, INCLUDING (NOT NOT LIMITED TO) ELECTRICAL CODES, BUILDING CODES, ENERGY CODES, ETC.
- E. COORDINATE INSTALLATION WITH VENDOR/ CONTRACTOR SHOP DRAWINGS WHERE APPROPRIATE.
- F. FIELD COORDINATE INSTALLATION WITH THE INSTALLATION OF OTHER TRADES TO AVOID CLASHES AND CONFLICTS.
- G. WHERE CONFLICTS EXIST IN DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS, ISSUE REQUEST FOR INTERPRETATION TO DESIGN TEAM FOR CLARIFICATION PRIOR TO INSTALLATION.
- H. SEE ONE-LINE DIAGRAM FOR CONDUCTOR INFORMATION.



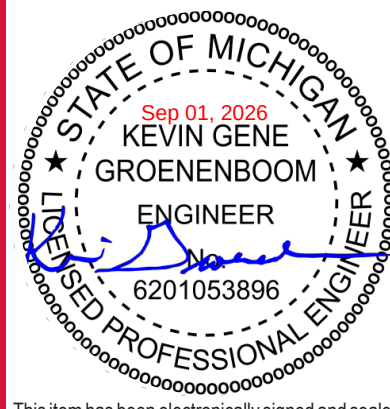
2 SECTION AT DC FAST CHARGER
1/2" = 1'-0"



1 ELECTRICAL POWER PLAN

DETROIT/WAYNE COUNTY PORT AUTHORITY EV
DETROIT POLICE HARBOR MASTER

1. DC FAST CHARGER ON ELEVATED PLATFORM. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. WALL MOUNTED LEVEL 2 EVSE ON INTERIOR WALL OF BOATHOUSE.



ISSUANCE
03/01/2026 BID AND PERMIT SET

POWER PLAN
EP101

PANELBOARD: RP1																		
LOCATION: MOUNTING: SURFACE NEMA 1 FED FROM: XFMR 1 FEEDER: SEE ONE-LINE DIAGRAM					PANEL TYPE: VOLTAGE: 120/240V / 1 ø / 3W BUS AMPS: 225 AMPS MAIN DEVICE: 225 A MAIN CB A.I.C. RATING: 10,000 AMPS SYMMETRICAL SPECIAL:													
LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION			
EVSE	EVSE	L	2	100 A	1	9600	9600			2	100 A	2	L	EVSE	EVSE			
					3			9600	9600	4								
SPARE	--		1	20 A	5	0	0			6	20 A	1		--	SPARE			
SPARE	--		1	20 A	7			0	0	8	20 A	1		--	SPARE			
SPARE	--		1	20 A	9	0	0			10	20 A	1		--	SPARE			
SPARE	--		1	20 A	11			0	0	12	20 A	1		--	SPARE			
SPARE	--		1	20 A	13	0	0			14	20 A	1		--	SPARE			
SPARE	--		1	20 A	15			0	0	16	20 A	1		--	SPARE			
					17					18								
Load Classification			CONNECTED LOAD				DEMAND FACTOR				ESTIMATED DEMAND				PANEL TOTALS			
EVSE			38400 VA				125.00%				48000 VA				CONNECTED LOAD: 38400 VA			
															EST. DEMAND LOAD: 48000 VA			
															CONNECTED CURRENT: 160 A			
															EST. DEMAND CURRENT: 200 A			