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## TCATA - EV CHARGING STATION

OWNER  
TWIN CITY AREA TRANSPORTATION AUTHORITY

PROJECT ADDRESS  
275 E WALL ST  
BENTON HARBOR, MI 49022

ISSUE DATE  
10/26/2023

ISSUED  
PERMIT SET

CSBD PROJECT NUMBER  
CSBD 2313001-01

REVISIONS	No.	Description	Date
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DRAWING TITLE  
SITE PLAN -  
EXISTING

DRAWING NO.  
**A1.00**

1 PROPOSED SITE  
A1.01 1" = 20'-0"



NEW CONCRETE FLATWORK NOTES:

1. CONCRETE THICKNESS TO MATCH EXISTING BUT NOT LESS THAN 6".
2. PLACE MINIMUM #4 REBAR BOTH WAYS AT 12" ON CENTER IN THE CENTER OF THE CONCRETE FLATWORK.
3. CONCRETE STRENGTH TO BE A MINIMUM OF 4,500 PSI.
4. CONTRACTOR TO PROVIDE MINIMUM 4" DENSE GRADED AGGREGATE BASE COURSE.
5. PROVIDE #4 DOWEL INTO EXISTING ADJACENT CONCRETE FLATWORK. DOWEL SPACING TO BE NO GREATER THAN 12" ON CENTER. DOWEL EMBEDMENT LENGTH TO BE 18" IN BOTH THE EXISTING FLATWORK AND NEW FLATWORK

LOCATION OF RELOCATED CONCRETE PEDESTAL AND LIGHT POLE. CONTRACTOR TO PROVIDE NEW WIRING/CONDUIT AND CONCRETE AS REQUIRED. CONCRETE PEDESTAL TO BE RECONSTRUCTED IN SIMILAR FASHION

LOCATION OF RELOCATED ELECTRIFIED SIGNAGE. CONTRACTOR TO PROVIDE NEW WIRING/CONDUIT AS REQUIRED

(4) NEW PROPOSED EV BUS PARKING SPACES. CONTRACTOR TO PROVIDE NEW CONCRETE FLATWORK. INSTALL NEW FLATWORK TO MATCH EXISTING NEARBY CONCRETE CONSTRUCTION. SEE NOTES



COMMUNITY  
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BY DESIGN

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GENERAL SCOPE OF WORK AND ELECTRICAL SPECIFICATIONS:

1. GENERAL SCOPE OF WORK: FURNISH AND INSTALL ALL LABOR, MATERIALS, TOOLS, ETC. TO PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION, AS INDICATED ON THE PLANS. CONTRACTOR SHALL REFER TO THE WORK INDICATED ON THE ASSOCIATED MECHANICAL, PLUMBING, ARCHITECTURAL AND STRUCTURAL PLANS, ETC. AS WORK SHOWN THEREON MAY AFFECT OR INCLUDE ADDITIONAL ELECTRICAL WORK. ALL MATERIALS INCLUDED IN THE WORK SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE; EACH ITEM SHALL BE U.L. LISTED OR LABELED TO ASSURE ITS SUITABILITY AND APPROVAL FOR THE PURPOSE SHOWN. ALL LABOR SHALL BE PERFORMED BY QUALIFIED AND SKILLED WORKERS, IN A NEAT AND WORKMANLIKE MANNER, AND IN ACCORDANCE WITH INDUSTRY STANDARDS AND PRACTICES.
2. PRIOR TO RELEASING ANY ORDER FOR MATERIAL FOR THIS PROJECT, THE CONTRACTOR SHALL SUBMIT FOR REVIEW, DETAILED DRAWINGS AND/OR EQUIPMENT CUT SHEETS, SHOWING DIMENSIONS, SIZES, WEIGHTS, ELECTRICAL RATINGS AND OPERATING CHARACTERISTICS, CAPACITIES, MATERIALS, COLORS AND ROUGH-IN REQUIREMENTS, FOR ALL MAJOR EQUIPMENT SUPPLIED. SUBMITTALS SHALL BE MADE SUFFICIENTLY IN ADVANCE OF THE REQUIRED ORDER RELEASE DATE TO ALLOW THE OWNER AMPLE TIME TO REVIEW SUCH INFORMATION. MULTIPLE COMPONENTS INTENDED TO FUNCTION TOGETHER, SHALL BE COORDINATED AND SUBMITTED AS A UNIT.
3. CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE OWNER AND THE OPERATIONS OF THE OWNER. ALL SHUTDOWN WORK SHALL BE PERFORMED AT TIMES WHICH WILL NOT INTERFERE WITH THE REGULAR OPERATION OF THE FACILITY AND THE OWNER. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES AT LEAST FOURTEEN DAYS PRIOR TO SHUTDOWNS AND CUT-OVERS.
4. ELECTRICAL WORK SHALL COMPLY WITH REQUIREMENTS OF NATIONAL ELECTRICAL CODE, NATIONAL ELECTRICAL SAFETY CODE OF BUREAU OF STANDARDS, STATE BUILDING RULES AND REGULATIONS AND LOCAL ORDINANCES, AND SUCH OTHER STATUTORY PROVISIONS THAT PERTAIN TO THIS CLASS OF WORK.
5. CONTRACTOR SHALL GUARANTEE THIS INSTALLATION AGAINST DEFECTS IN EQUIPMENT AND/OR WORKMANSHIP FOR A PERIOD OF TWELVE (12) MONTHS FROM DATE OF FINAL ACCEPTANCE.
6. CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE PREMISES AND SHALL FULLY INFORM HIMSELF AS TO THE CONDITIONS UNDER WHICH WORK IS TO BE DONE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE FULL PERFORMANCE OF THE CONTRACT.
7. CONTRACTOR SHALL PROVIDE ALL MATERIALS NECESSARY FOR PROPER EXECUTION OF THE WORK. ALL MATERIALS SHALL BE NEW AND BEST OF THEIR RESPECTIVE KINDS FOR USE INTENDED. MATERIAL SHALL BE APPROVED BY U.L. INC. OF NATIONAL BOARD OF UNDERWRITERS.
8. SUPPLY UPDATED PANELBOARD DIRECTORIES, NEATLY TYPED FOR ALL PANELS.
9. CONDUCTORS FOR POWER SHALL BE 300 VOLT STRANDED COPPER THHN/THW NO. 12 AWG MIN. (#14 AWG FOR CONTROL WIRING), CONDUIT SHALL BE 1/2" EMT MIN., (GFS AND PVC CONDUIT FOR OUTDOOR WORK).
10. CONTRACTOR SHALL OBTAIN ALL NECESSARY ELECTRICAL PERMITS AND CERTIFICATES OF INSPECTION FOR CONSTRUCTION.
11. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE. ELECTRICAL WORK SHALL BE INSTALLED BY JOURNEYMAN ELECTRICIANS, UNDER THE DIRECT SUPERVISION OF A COMPETENT FOREMAN. AT NO TIME SHALL ELECTRICAL WORK BE INSTALLED BY APPRENTICE ELECTRICIANS OR LABORERS WITHOUT THE IMMEDIATE, ON THE JOB SUPERVISION OF A JOURNEYMAN ELECTRICIAN.
12. CONTRACTOR SHALL COORDINATE HIS WORK WITH BUILDING OWNER. CONTRACTOR SHALL DO ALL CUTTING, FITTING AND PATCHING THAT MAY BE REQUIRED.
13. ELECTRICAL CONTRACTOR SHALL USE CONDUIT WHERE CALLED FOR ON DRAWINGS OR REQUIRED BY NATIONAL, STATE OR LOCAL CODES, MINIMUM SIZE SHALL BE 1/2".
14. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL POWER WIRING, SAFETY DISCONNECT MEANS, MOTOR CONTROL AND CONTROL WIRING FOR HEATING EQUIPMENT WITH THE EQUIPMENT SHOP DRAWINGS, MANUFACTURER RECOMMENDATIONS AND IN ACCORDANCE WITH THE N.E.C.

SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION
	LIGHTING FIXTURE - LETTER INDICATES TYPE. SEE LIGHTING FIXTURE SCHEDULE
	LIGHTING FIXTURE EQUIPPED WITH EMERGENCY BATTERY BACKUP - SEE LIGHTING FIXTURE SCHEDULE
	LED TYPE FLOOD LIGHT, SEE LIGHTING FIXTURE SCHEDULE
	NON-FUSED DISCONNECT SWITCH, 600V, 3-POLE UNO. SWITCH SIZE AS INDICATED.
	MANUAL MOTOR STARTER, 120V., WITH H.O.A. SWITCH
	FUSIBLE DISCONNECT SWITCH, 600V, 3-POLE UNO. FUSE & SWITCH SIZE AS INDICATED.
	MOTOR, HORSEPOWER AS INDICATED
	CONTROL PANEL, FBO
	PHOTOCELL UNIT, WP AND MOUNTED ABOVE ROOF FACING NORTH
	ASTRONOMICAL TIME CLOCK, 120V., TORK OR EQUAL
	CONDUIT CONCEALED IN OR UNDER FLOOR OR BURIED
	CONDUIT EXPOSED OR ABOVE CEILING OR IN JOIST SPACE
	EXIT SIGN WITH EMERGENCY LIGHTING HEADS, SEE LIGHTING FIXTURES SCHEDULE
	MOUNTING HEIGHT - FROM FINISHED FLOOR TO CENTER OF EQUIPMENT
	ELECTRICAL CONTRACTOR
	WEATHERPROOF
	NOT TO SCALE
	FURNISHED BY OTHERS
	UNLESS NOTED OTHERWISE
	INDICATES CIRCUITS TO PANEL, UNLESS NOTED.
	EMERGENCY LIGHTING UNIT, SEE LIGHTING FIXTURE SCHEDULE
	WEATHERPROOF EMERGENCY REMOTE UNIT, SEE LIGHTING FIXTURE SCHEDULE
	EXISTING DISTRIBUTION PANEL 120/208V., 3PH. 4W.
	JUNCTION BOX - MAKE REQUIRED ELECTRICAL CONNECTION AT LOCATION SHOWN FOR DOOR ACCESS CONTROLS
	DUPLEX RECEPTACLE, 20A, 125V., GROUNDING TYPE, MH = 1'-4" U.N.O.
	GROUND FAULT INTERRUPTING TYPE DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE 20A., 125V., 2P., 3W., GROUNDING TYPE, M.H. = 1'-4" U.N.O.
	DOUBLE DUPLEX RECEPTACLE GFI TYPE, 20A., 125V., 2P., 3W., GROUNDING TYPE, M.H. = 1'-4" U.N.O.
	SINGLE POLE LIGHTING SWITCH, 20A., 277V., GROUNDING TYPE, MH = 4'-0"
	3-WAY - SINGLE POLE LIGHTING SWITCH, 20A., 277V., GROUNDING TYPE, MH = 4'-0"
	DIMMING TYPE - SINGLE POLE LIGHTING SWITCH, 20A., 277V., GROUNDING TYPE, MH = 4'-0"
	CEILING MOUNTED MOTION SENSOR, 20A., 120V., 360° COVERAGE. PROVIDES 12 FT RADIAL DETECTION OF SMALL MOTION. WHEN MOUNTED AT 9FT.
	OCCUPANCY SWITCH WITH DIMMING AND OVERRIDE CONTROL - SINGLE POLE, 20A., 277.V, GROUNDING TYPE, MH = 4'-0" (INFRARED SENSING)
	OCCUPANCY SWITCH WITH ON/OFF OVERRIDE - SINGLE POLE, 20A., 277V., GROUNDING TYPE, MH = 4'-0" (INFRARED SENSING)
	TELEPHONE OUTLET, MH=1'-4" UNO, (4" SQ. J-BOX 1-GANG PLASTER RING & 1 1/4" CONDUIT TO TELEPHONE BACKBOARD).
	DATA OUTLET, MH=1'-4" UNO, (4" SQ. J-BOX 1-GANG PLASTER RING & 1 1/4" CONDUIT TO ABOVE CEILING).
	COMBINATION DATA/RECEPTACLE 20A., 125V., GROUNDING TYPE FLOOR OUTLET BOX

NOTE: NOT ALL SYMBOLS ARE USED.

LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	DESCRIPTION	VOLTS	MANUFACTURER
A	(1) 32W LED 3500K	EXTERIOR LED WALLPACK WITH RUGGED CAST-ALUMINUM HOUSING AND DARK BRONZE FINISH. BUILT-IN PHOTOCELL.	120V.	LITHONIA TW2 LED P2-35K-MVOLT-PE-DOBXD OR OWNER APPROVED EQUAL

Professional **Vision** Engineering  
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MBE / DBE CERTIFIED

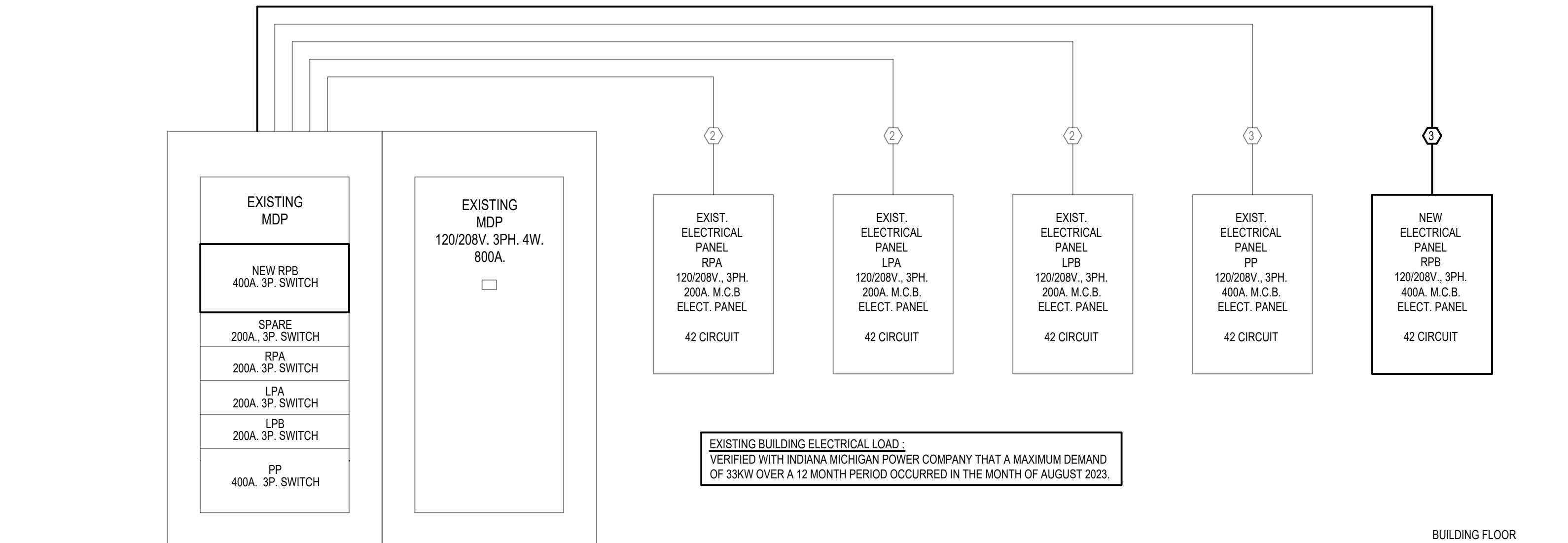
**COMMUNITY SOLUTIONS BY DESIGN**

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NEW ELECTRICAL PANEL SCHEDULE

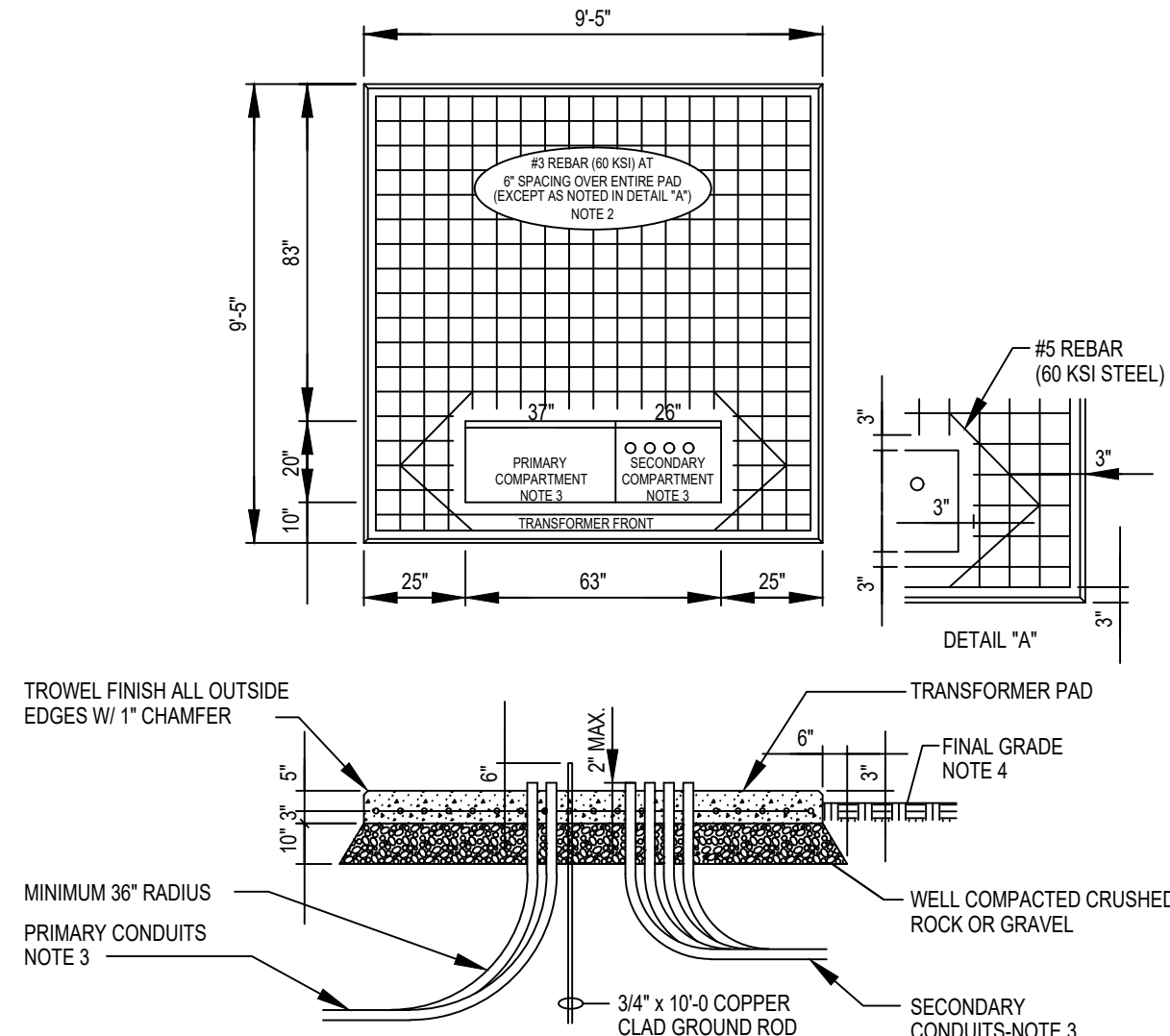
PANEL <u>RPB</u>				BLDG MAIN DATE <u>10-2-23</u>			
TYPE <u>120/208V 3PH 4W</u>				LOCATION <u>GARAGE AREA</u>			
SURFACE OR FLUSH <u>SURFACE</u>				FEEDER <u>SEE RISER DIAGRAM</u>			
MAIN LUGS <u>400A M.C.B.</u>				TOP OR BOTTOM <u>TOP</u>			
RATING <u>AS REQUIRED</u>				FED FROM <u>SEE RISER DIAGRAM</u>			
				NOTES <u>-</u>			

CIRCUIT	DESCRIPTION	WIRE SIZE	VA	C.B.		A	B	C	C.B.		VA	WIRE SIZE	DESCRIPTION	CIRCUIT
				AMP	P				AMP	P				
1a	75 KVA TRANSFORMER	4/0	20000	225	3	25000			60	2	5000	6	EVC-3	2a
3b	↓	-	20000	-	-		25000		-	-	5000	-	↓	4b
5c	↓	-	20000	-	-			25000	60	2	5000	6	EVC-4	6c
7a	EVC-1	6	5000	60	2	10000			-	-	5000	-	↓	8a
9b	↓	-	5000	-	-		5000		20	1	-	12	SPARE	10b
11c	EVC-2	6	5000	60	2			5000	20	1	-	12	SPARE	12c
13a	↓	-	5000	-	-	5000			-	-	-	-	-	14a
15b	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	16b
17c	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	18c
19a	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	20a
21b	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	22b
23c	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	24c
25a	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	26a
27b	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	28b
29c	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	30c
31a	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	32a
33b	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	34b
35c	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	36c
37a	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	38a
39b	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	40b
41c	SPACE	-	-	-	-	-	-	-	-	-	-	-	SPACE	42c
						40000	30000	30000						
TOTAL CONN. LOAD: 100,000 VA														
TOTAL CONN. AMPS: 277.5AMPS														



FEEDER SCHEDULE:

- ① 30A. - 4#10 & 1#10G. - 3/4".  
② 200A. - 4#3/0 & 1#6G. - 2".  
③ 400A. - 4#500KCMIL & 1#2G. - 3 1/2".  
④ 800A. - 2(4#600KCMIL & 1#1/0G. - 3-1/2").  
⑤ REUSE EXISTING 200A FEEDER WIRE AND CONDUIT



NOTES:

1. E.C. SHALL COORDINATE PAD CONSTRUCTION DIMENSION REQUIREMENTS WITH TRANSFORMER MANUFACTURER'S APPROVED SHOP DRAWINGS PRIOR TO CONSTRUCTION.
2. PROVIDE 3,500 PSI CONCRETE W/ A MIN. 3" COVER OVER ALL REBAR. WIRE MESH W/ A MIN. CROSS SECTIONAL AREA OF 0.175 SQ.IN. PER FOOT OF PAD WIDTH MAY BE USED IN PLACE OF REBAR.
3. SIZE AND LOCATION OF CONDUIT ENTRANCE AREA IN CONCRETE PAD SHALL COMPLY WITH TRANSFORMER MANUFACTURER'S REQUIREMENTS. PRIMARY AND SECONDARY CONDUITS MAY EXTEND IN ANY DIRECTION AS REQUIRED. MINIMUM CONDUIT BURIAL DEPTH SHALL BE 3'-0" BELOW FINISH GRADE.
4. FINAL GRADE SHALL BE ESTABLISHED BEFORE INSTALLATION OF PAD.

TRANSFORMER PAD DETAIL  
NO SCALE

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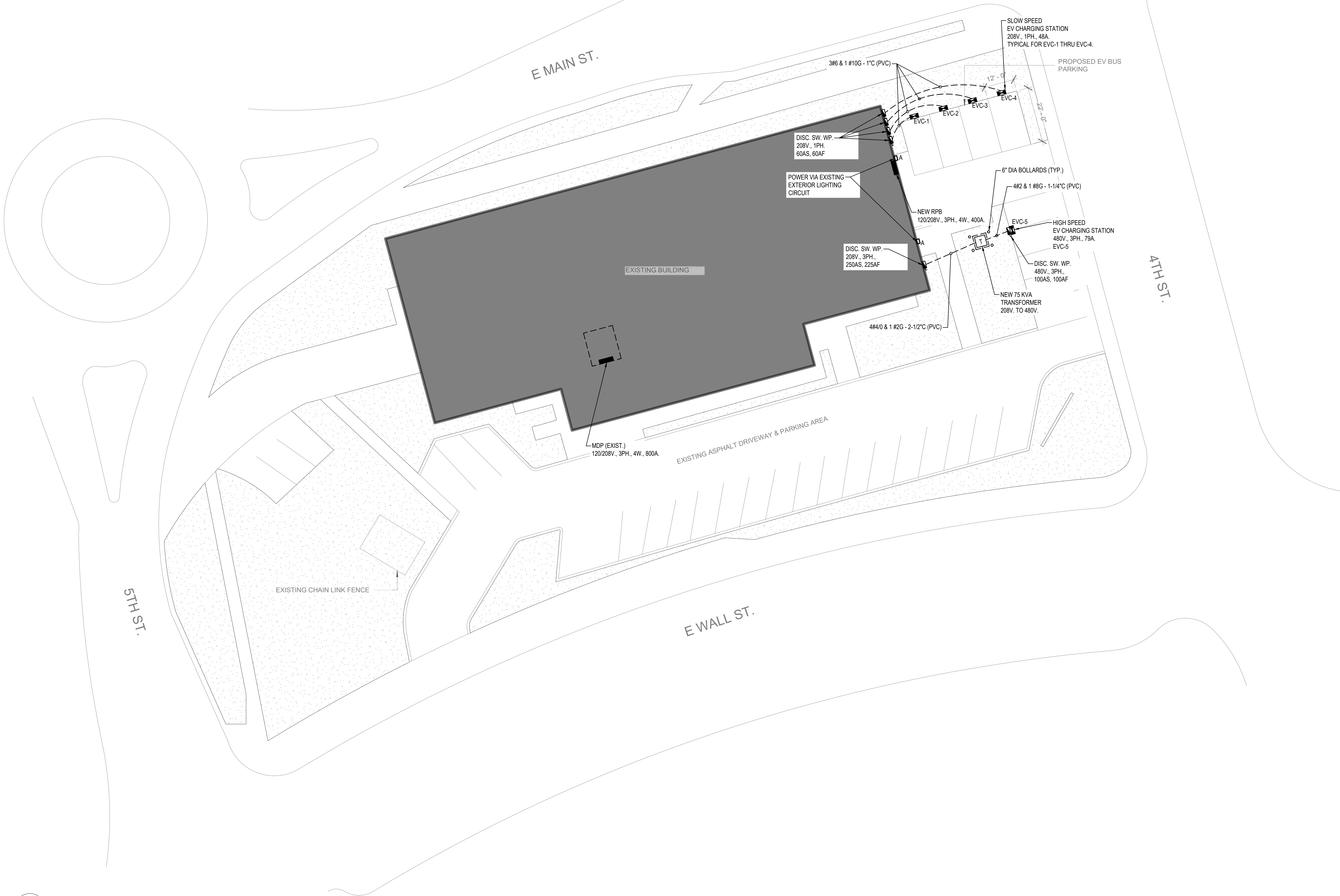
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ELECTRICAL,  
SCHEDULES,  
SPECIFICATIONS &  
RISER DIAGRAM  
DRAWING NO.

E1.00

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1  
E1.01 ELECTRICAL POWER PLAN  
1" = 20'-0"

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