Illinois Tollway Base Sheet Revisions

on M	Base Sheet	Drawings				
	Drawing	Modification Summary      Effective: 03-01-2024				
	In	Intermediate Power Distribution and Communication Facility (ITS)-Series 1800				
	M-ITS-1800	IPDC-Legend Abbrev And Schedules				
		Title changed to: IPDC-Legend Abbrev And Schedules.				
		Symbol List, Legend and Abbreviations were on drawing M-ITS-1801 previously.				
	M-ITS-1801	IPDC Facility Cable - Conduit Schedule and Notes				
		Title changed to: IPDC Facility Cable - Conduit Schedule and Notes.				
		IPDC Facility Communications and Grounding Cable/Conduit Schedule, IPDC Facility Power Cable/Conduit Schedule and Notes were previously on drawing M-ITS-1800.				
		IPDC Facility to Remote Device Cable/Conduit Schedule table added.				
	M-ITS-1802	IPDC Facility Site Plan				
		IPDC plan view layout changed to show conduits for power and communication going through the walls instead from concrete slab into interior of IPDC building.				
		Renamed notes to Designer as Note to Designer 1, Note to Designer 2, Note to Designer 3 and Note To Designer 4.				
		Added air filter for generator intake louver.				
		Revised identification Generator Exhaust Louver W/hood.				
		Added details of power and fiber handholes location.				
		fins.				
		Layout revised to show generator room to the left and the IPDC main room to the right when facing the IPDC doors.				
		Fiber pull box and power pull box have been added to the right side of IPDC when facing IPDC doors				
		Underground conduits for power and communication shown from their handholes to their pull box.				
		Rearrangement of equipments and electrical cabinets inside the IPDC main room.				
		Added arrow for traffic orientation.				
		Added Note 4 pertaining to 120V/240V outlets				
		Added details for Removable Lockable Steel Bollard				
	M-ITS-1803	Standard IPDC Exterior Elevation				
		Title changed to: Standard IPDC Exterior Elevation				
		Show the generator exhaust louver and hood with 90 degrees sweep and stainless steel bird and rodent mesh.				
	Added Note that all door thresholds to have a vertical leg at the back (interior) side of the door with weatherstripping to prevent water intrusion, flat door thresholds are not acceptable. All door closers too have a hold-open function.					
		Generator Exhaust Louver and hood with 90 degree sweep.				
		Revised Note 10: added: exhaust hoods only need 1/4" square stainless steel mesh to prevent birds and rodents entering.				
		Generator intake louver with hood and hinged access panel for removeable pad type filter media.				
		Details for Elevation A updated to show noise abatement wall, details of generator intake louver, location of gas meter, show location of single face barrier wall.				
		Elevation B: show pull box for communication conduits and pull box for power conduits, distance to noise abatment wall, side view of HVAC units, added distance to single face barrier wall.				
		Added plan view of IPDC showing general arrangement of various equipment attached to the walls and also inside IPDC room and Generator room.				

Illinois Tollway Base Sheet Revisions

	1	
ction M	Base Sheet	Drawings
	Drawing	Modification Summary
	In	termediate Power Distribution
		Elevention Or details un detaid to also
		Elevation C: details updated to sho
		Show generator intake louver with
		Elevation D: showing the back of the
		vent, IPDC building service meter,
		Added Notes 1 to Note 11.
		Added Note to Designer to preven
	M-ITS-1804	Standard IPDC Building Interior
		Title changed to: Standard IPDC E
		Revised Note 2 to say: all cabinet
		replacement.
		Added Note 5.: It is recommended
		walls.
		Added Note 6.: It is recommended
		Sections renamed as Section A-A
		Added a IRPC Plan View for elevit
		Added a IPDC Plan view for clarity
	M-ITS-1805	IPDC Facility Site Plan
		Title changed to: IPDC Facility Site
		Generator intake louver with hood
		Revised Note 3 to say: Provide an
		Added Note 4 to say: The contract
		manufacturer's representative pres
		completed per manufacturer's reco
		Added Note 5 to say: All 120/240V
		Added underground conduits for p
		box.
		Added details for lighting handhole
	M-ITS-1806	Standard IPDC Grounding-Light
		Title changed to: Standard IPDC (
		This drawing replaced previous ve
		Added details of IPDC Facility Elec
		Added details of IPDC Facility - Gr
		Added details for gas meter
		Added Section A-A.
		Added Section B-B.
		Added Section C-C.
	M-ITS-1807	Combination Plaza-IPDC Buildin
	W-110-1007	Title changed to: Combination Dia
		This drawing replaced providers vie
		This drawing replaced previous ve
		This drawing applies to combination
		equipment integrated into an exter
	1	iony to so reet to accommodate th

# Effective: 03-01-2024

## and Communication Facility (ITS)-Series 1800

ow generator doors on the left side and IPDC rom on the right side, removable stainless steel mesh filter.

he IPDC building with HVAC units installed, generator exhaust Roadway lighting service meter and disconnect switch.

t water intrusion into IPDC building.

Elevations

Building Interior Elevations.

doors shall be able to open 90 degrees min, to allow for parts

to use treated plywood for the sheathing of the roof, floor and

to use cold formed metal framing for floor, roof, walls in lieu of

Section B-B, Section C-C and Section D-D.

•

e Plan.

and hinged access panel for filters.

automatic rodent exterminator system inside both rooms.

tor shall install the generator inside the IPDC building with a esent to verify any required disassembly and reassembly is commendations ensuring all warranties are maintained.

V outlet on the UPS system must be orange in color.

e and underground conduits.

## ting Protection Plan

Grounding-Lighting Protection Plan.

ersion.

ctrical Grounding Layout.

rounding of Lighting Protection System.

## ng Exterior Elevations

za-IPDC Building Exterior Elevations.

ersion.

ion of IPDC and Business System Remote Control Building ended version of the IPDC, length changed from standard 30 feet he additional Business System equipment and cabinets. Illinois Tollway Base Sheet Revisions

ion M	Base Sheet Drawings				
	Drawing	Modification Summary Effective: 03-01-2024			
	In	ntermediate Power Distribution and Communication Facility (ITS)-Series 1800			
		Corrected the length of combo IPDC to 38 feet instead of 30 feet			
		Added Section A-A.			
		Added Section B-B.			
		Added Section C-C.			
		Added Section D-D.			
	M-ITS-1808	Combination Plaza-IPDC Building Interior Elevations			
		This drawing replaced previous version.			
		Added Section A-A.			
		Added Section B-B.			
		Added Section C-C.			
		Added Section D-D.			
		Added a simplified plan view of the combination IPDC/Plaza Facility Site Plan.			
		Added Legend for list of equipment to install inside building.			
		Added Note 1, Note 2 and Note 3.			
	M ITS 1900	IPDC and Combination Plaza IPDC Excility Congrets Foundation			
	WI-113-1609	Title revised to: IPDC and Combination Plaza-IPDC Facility Concrete Foundation			
		This drawing replaced previous version			
		Note revised to say: Anchor holts will be specified by the contractor/supplier of the building			
		Added Section A-A			
		Added Section B-B			
		Added Foundation Length Table.			
	M-ITS-1810	IPDC and Combination Plaza-IPDC Facility Mechanical Plan			
		Title revised to: IPDC and Combination Plaza-IPDC Facility Mechanical Plan.			
		This drawing replaced previous version.			
		Added details of IPDC Building Mechanical Plan .			
		Added Electrical Mechanical Plan Table.			
		Added Exhaust Fan Table.			
		Added Exhaust Dampers Table.			
		Added Electrical Unit Heater Schedule (UH) Table.			
	M-ITS-1811	IPDC and Plaza-IPDC Combination Facility Lighting and Receptacle Plan			
		Title revised to: IPDC and Plaza-IPDC Combination Facility Lighting and Receptacle Plan.			
		This drawing replaced previous version.			
		Electrical cable mask added			
		Added details for IPDC Facility Lighting and Receptable Plan.			
		Added details for Combination Plaza/IPDC Facility Lighting and Receptacle Plan.			
		Note 1: made reference to drawing M-ITS-1801			
		Added Note 1, Note 2 and Note 3.			
	MITO (040				
	WI-IIS-1812	Title revised to: IPDC and Plaza-IPDC Combination Facility Grounding Plan			
	1	This revised to. If DO and Thaza-IF DO COMPINIATION FACILITY GIVENUM FIAM.			

Illinois Tollway Base Sheet Revisions

Section M	Base Sheet	Drawings
	Drawing	Modification Summary
	In	termediate Power Distribution
		This drawing replaced previous ve
		Added details for IPDC Facility Lig
		Added details for Combination Pla
	M-ITS-1813	IPDC and Combination Plaza-IP
		Title revised to: IPDC and Combin
		This drawing replaced previous ve
		Added details for IPDF Facility Gro
		Added Ground Well Elevation De
		Added Ground Triad Detail.
		Added Master Ground Bus Bar Su
		Added Note 1, Note 2, Note 3 and
		Added generic Note1 to Note 12.
		Added Master Ground Bus Bar Co
	M-ITS-1814	IPDC and Combination Plaza-IP
		Title revised to: IPDC and Combin
		This drawing replaced previous ve
		Added details of Single Line Diagr
		Added detail of Outdoor Lighting C
		Added Note 1, Note 2 and Note 3.
	M-ITS-1815	IPDC and Combination Plaza-IP
		Title revised to: IPDC and Combin
		This drawing replaced previous ve
		Added details of Master Panelboa
	M-ITS-1816	IPDC Facility Identification Sign
		Title revised to: IPDC Facility Iden
		This drawing replaced previous ve
		Added IPDC Identification Sign de

New Sheet



# Effective: 03-01-2024

# and Communication Facility (ITS)-Series 1800

ersion.

ghting and Receptable Plan.

aza/IPDC Facility Lighting and Receptacle Plan.

# PDC Grounding Schematic and Details

nation Plaza-IPDC Grounding Schematic and Details.

ersion.

rounding Schematic.

tail.

upport Spacing Detail.

Note 4 pertaining to IPDC Facility Grounding Schematic.

onnection Detail.

## PDC Single Line Diagram

nation Plaza-IPDC Single Line Diagram.

ersion.

ram.

Contractor Wiring Diagram.

## PDC Facility Panelboard Schedule

nation Plaza-IPDC Facility Panelboard Schedule. ersion.

ard.

ntification Sign.

ersion.

etails.

	SYMBOL LIST
SYMBOL	DESCRIPTION
25 KVA 480-120/240 10, 3W	TRANSFORMER 25 KVA DENOTES TRANSFORMER RATING 480-120/240V DENOTES VOLTAGE 1Ø DENOTES 1 PHASE 3W DENOTES 3 WIRE
۲	LEGEND NUMBER FOR CABLE & CONDUIT (SEE CABLE AND CONDUIT SCHEDULES)
N E ATS 400 2P,3W	AUTOMATIC TRANSFER SWITCH (ATS) N DENOTES NORMAL SOURCE E DENOTES EMERGENCY SOURCE L DENOTES LOAD 400 DENOTES 400 AMPERE ATS RATING 2P DENOTES 2 POLE 3W DENOTES 3 WIRE
JB OR J	JUNCTION BOX
60A	DISCONNECT SWITCH 60A DENOTES 60 AMPERES
50A   )	CIRCUIT BREAKER 50A DENOTES 50 AMPERES
400A 2PDT. SW.	MANUAL TRANSFER SWITCH 400A DENOTES 400 AMPERES 2PDT DENOTES 2 POLE DOUBLE-THROW
	SELF CONTAINED UTILITY METERING
G	STANDBY GENERATOR
  ) 30A  ) 2P	PANEL CIRCUIT BREAKER 30A DENOTES 30 AMPERES 2P DENOTES 2 POLES
Ō	MECHANICALLY HELD LIGHTING COIL
CR	CONTROL RELAY COIL
SPD WITH LP	SURGE PROTECTION DEVICE WITH LIGHTNING PROTECTION
S	SMOKE DETECTOR
M	DOOR ALARM SWITCH
$\diamond$	EXHAUST FAN
R R	GENERATOR RUNNING LIGHT
	1





LEGE	ND
	EXPOSED CONDUIT
	CONDUIT IN SLAB
	UNDERGROUND CONDUIT OR CABLE DUCT
	CONDUIT OR CABLE DUCT IN CASING
	HOME RUN TO PANEL AS NOTED
8	INDICATES CIRCUIT TURNING DOWN
0	INDICATES CIRCUIT TURNING UP
•	INDICATES 'LB' OR PULL BOX
$\langle \bullet \rangle$	GROUND ROD
	GROUNDING TRIAD
G	EXPOSED GROUND CONDUCTOR
— — G - — —	UNDERGROUND GROUND CONDUCTOR

ABBREVIATIONS
ABOVE FINISH FLOOR
AUTOMATIC TRANSFER SWITCH
CLOSED CIRCUIT TELEVISION
EXISTING
FIRE ALARM PANEL
GENERATOR CONTROL SWITCH
GROUND
GROUND FAULT INTERRUPTER
HANDHOLE
INTERMEDIATE POWER DISTRIBUTION AND COMMUNICATION
JUNCTION BOX
LINE CONDITIONER
LIGHTNING PROTECTION
MAIN CIRCUIT BREAKER
MAIN DISTRIBUTION PANEL
MAIN LUG ONLY
MULTI-MODE FIBER
MAIN SERVICE DISCONNECT
MANUAL TRANSFER SWITCH
PROPOSED
SHIELDED
SINGLE MODE FIBER
SURGE PROTECTION DEVICE
TERMINAL STRIP INTERCONNECT CENTER
TRANSIENT VOLTAGE SURGE SUPPRESSION
UNINTERRUPTIBLE POWER SUPPLY
VIDEO POWER JUNCTION BOX
WEATHERPROOF
TRANSFORMER



# IPDC-LEGEND ABBREV AND SCHEDULES

version: 2024**-**03

M-ITS-1800

SHEET: 1 OF 1

GROUNDING CABLE/CONDUIT SCHEDULE					
SYMBOL	CABLE DESCRIPTION	REMARKS			
1	1-6PR #22 SHLD				
2	1-3/C #12 SHLD	NOTE 2			
3	1-3PR #22 SHLD				
4	1-4/C #12 SHLD	NOTE 1 & 2			
5	2-1/C #12, 1-1/C #12 (GRD)	NOTE 1			
6	1-1/C #6 (GRD)				
7	1-9/C #12 SHLD	NOTE 1 & 2			
8	1-3/C #16 SHLD	NOTE 3			
9	1PR #22 SHLD	NOTE 1			
10	1-4PR #24 (RS-422)	NOTE 4			
11	1-9/C #22 IND SHLD				
12	12 1-1/C #4/0 (GRD BUS)				
13	1-1/C #8 (GRD)				
14)	1-1/C #2 (GRD)				
15	1-4PR #24 (CATEGORY 6)	NOTE 4			

IPDC FACILITY TO REMOTE DEVICE CABLE/CONDUIT SCHEDULE							
SYMBOL	CABLE DESCRIPTION	CONDUIT SIZE (INCHES)	REMARKS				
1	NOT USED	-	DO NOT USE				
2	2-1/C #6 1-1/C #8 (GRD)	NOTE 6					
3	2-1/C #4 1-1/C #6 (GRD)	NOTE 6					
4	2-1/C #2 1-1/C #6 (GRD)	NOTE 6					
5	2-1/C #1 1-1/C #4 (GRD)	NOTE 6					
6	2-1/C #1/Ø 1-1/C #4 (GRD)	NOTE 6					
7	2-1/C #2/O 1-1/C #4 (GRD)	NOTE 6					
8	2-1/C #3/Ø 1-1/C #2 (GRD)	NOTE 6					
9	2-1/C #4/O 1-1/C #2 (GRD)	NOTE 6					
10	2-1/C 250 Kcmil 1-1/C #2 (GRD)	NOTE 6					
11	2-1/C 350 Kcmll 1-1/C #1 (GRD)	NOTE 6					
(12)	2-1/C #8 1-1/C #10 (GRD)	NOTE 6					

IPDC FAC	IPDC FACILITY POWER CABLE/CONDUIT SCHEDULE						
SYMBOL	CABLE DESCRIPTION	CONDUIT SIZE (INCHES)	REMARKS				
101	(01) 3-1/C 500 MCM						
102	3-1/C 500 MCM 1-1/C #4 (GRD)	4					
103	3-1/C #3/0 1-1/C #6 (GRD)	2					
104	3-1/C #10 1-1/C #10 (GRD)	3/4					
105	4-1/C #10 1-1/C #10 (GRD)	3/4					
106	2-1/C #12 1-1/C #12 (GRD)	NOTE 5					
107	3-1/C #12 1-1/C #12 (GRD)	NOTE 5					
108	4-1/C #12 1-1/C #12 (GRD)	NOTE 5					
109	5-1/C #12 1-1/C #12 (GRD)	NOTE 5					
(10)	5-1/C #12 1-1/C #12 (GRD)	NOTE 5					
111	6-1/C #12 1-1/C #12 (GRD)	1					
(112)	7-1/C #12 1-1/C #12 (GRD)	1					
(113)	6-1/C #22 SHLD	1	SECURITY-CARD ACCESS				
(114)	2-1/C #8 1-1/C #8 (GRD)	1					
115	3-1/C #2 1-1/C #8 (GRD)	2					
116	2-1/C #2 1-1/C #8 (GRD)	2					
117	2-1/C #1 1-1/C #6 (GRD)	2					
(118)	3-1/C #3/Ø 1-1/C #6 (GRD)		AERIAL				
(19	3-1/C #1 1-1/C #6 (GRD)	2					

### NOTES:

- 3. ICEA-NEC (K-2) STANDARD.
- 5.
- 6. FOR REFERENCE FOR ROADWAY CONTRACTS.
- ROADWAY AND ITS CONTRACTS.

WIRING DEVICE SCHEDULE							
SYMBOL	DESCRIPTION	RATING	MFR. AND CAT. NO.	MOUNTING HEIGHT			
\$	SINGLE-POLE SWITCH	20A, 120V	HUBBELL #HBL1221	4'-0"			
⊖_#	DUPLEX RECEPTACLE (# = BREAKER)	20A, 120V	HUBBELL #HBL5362	18" AS NOTED			
\$\$#	QUAD RECEPTACLE (# = BREAKER)	20A, 120V	(2) HUBBELL #HBL5362	18" AS NOTED			
C	3P, 3W, WEATHERPROOF RECEPTACLE WITH SPRING DOOR, BACK BOX, & ANGLE ADAPTER	400A, 600V	CROUSE-HINDS "ARKTITE" SERIES #AREX40318	3'-0" ABOVE GRADE			
B	3P, 3W, WEATHERPROOF RECEPTACLE WITH SPRING DOOR & BACK BOX	30A, 600V	CROUSE-HINDS "ARKTITE" SERIES #ARE3313	3'-0" ABOVE GRADE			
	WEATHERPROOF DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION (# = BREAKER)	20A, 120V	HUBBELL #GFR5362SG	3'-0" ABOVE GRADE			
A	3P, 3W, WEATHERPROOF RECEPTACLE	30A, 240V		3'-0" ABOVE GRADE			

LIGHTING FIXTURE SCHEDULE							
SYMBOL	DESCRIPTION	VOLTAGE	LAMPS	MFR. AND CAT. NO.	REMARKS		
A	IPDC FACILITY INTERIOR LIGHTING 4' INDUSTRIAL LED FIXTURE	120 V	LED	ATLAS LIGHTING ILW48LED4D	MOUNT 8' ABOVE FINISHED FLOOR		
В	COMPACT WALL-MOUNTED LED EXTERIOR FIXTURE WITH WIRE GUARD & SINGLE FACTORY INSTALLED FUSE	120 V	LED	HOLOPHANE W4GLED10C100040KT3- M120SFTBWGBZ	MOUNT 9'-0" ABOVE FINISHED GRADE (NOTE 6)		
¢₽₽	EMERGENCY LIGHT UNIT WITH 2-1 WATT, LED LAMPS	120 V	2-1 WATT LED	H.E. WILLIAMS EMER/LED WHTSDT	MOUNT 8' ABOVE FINISHED FLOOR		

 
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 NOTE TO DESIGNER
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1 THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY X THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" X ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE Z DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNEET 2 X BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

1. EXPOSED CONDUIT SHALL BE A MINIMUM OF <sup>3</sup>/<sub>4</sub>". EMBEDDED OR UNDERGROUND CONDUIT SHALL BE A MINIMUM OF 1".

2. MULTI-CONDUCTOR SHIELDED CABLE #12 AWG SHALL BE COLOR CODED AS SPECIFIED IN THE ILLINOIS TOLLWAY SPECIAL PROVISION "INTERMEDIATE POWER DISTRIBUTION AND COMMUNICATION FACILITY ELECTRICAL WORK."

MULTI-CONDUCTOR SHIELDED CABLE #14 AWG THROUGH #18 AWG FOR CONTROL USE SHALL BE COLOR CODED PER

4. PROVIDE SURGE PROTECTION ADAPTERS FOR ALL RS-422 AND CATEGORY 6 CABLES ENTERING THE IPDC FACILITY. IN-LINE 485 ADAPTERS MUST BE INSTALLED AT ALL CONNECTIONS TO THE CISCO SWITCH. THE TVSS ADAPTER FOR RS-422 CABLES SHALL BE PHOENIX CONTACT (OR EQUIVALENT) DATATRAB D-UFB-V11/BS-B. THE TVSS ADAPTER FOR CATEGORY 6 CABLES SHALL BE PHOENIX CONTACT (OR EQUIVALENT) DATATRAB D-LAB-CAT- 6+.

ELEVATION WITH A MINIMUM MOUNTING HEIGHT AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE.

CONDUCTORS FROM IPDC FACILITY TO ITS DEVICES TO BE INSTALLED IN FUTURE CONTRACT AND ARE ONLY SHOWN

7. ALL CONDUIT AND CONDUCTORS SHOWN IN SCHEDULES MAY NOT NECESSARILY BE UTILIZED FOR ROADWAY CONTRACTS. ALL CONDUIT AND CONDUCTORS ARE INCLUDED IN SCHEDULES TO MAINTAIN CONSISTENCY BETWEEN





(SEE DESIGNER NOTE 3)

#### NOTES:

- SEE SPECIAL PROVISIONS FOR REQUIREMENTS ASSOCIATED 1. WITH IPDC FACILITY PREFABRICATED BUILDING.
- 2. CONTRACTOR SHALL SEAL DOOR OPENING, DOOR FRAMING, AND ANY PROTRUSION/ACCESS CUT THROUGH BUILDING WALLS AGAINST RODENT OR PEST INFESTATION OR ACCESS, TO THE SATISFACTION OF THE ENGINEER.
- 3. INSTALL REMOVABLE STAINLESS STEEL BOLLARDS WITH YELLOW REFLECTIVE TAPE TO PROTECT THE HVAC UNITS AND BUILDING.
- ALL 120/240v OUTLETS ON THE UPS SYSTEM MUST BE 4. ORANGE IN COLOR







SECTION A-A NOT TO SCALE



SECTION B-B NOT TO SCALE





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#### NOTES:

- 1. CONTRACTOR SHALL SEAL DOOR OPENING, DOOR FRAMING, AND ANY PROTUSION/ACCESS CUT THROUGH BUILDING WALLS AGAINST RODENT OR PEST INFESTATION OR ACCESS, TO THE SATISFACTION OF THE ENGINEER.
- 2. ALL CABINET DOORS SHALL BE ABLE TO OPEN 90 DEGREES MIN, TO ALLOW FOR PARTS REPLACEMENT, TYP.
- EQUIPMENT SHOWN IN GRAYSCALE IS EXISTING. 3.
- ALL CABINET DOORS SHALL BE ABLE TO OPEN 90 DEGREES MIN, TO ALLOW FOR PARTS 4. REPLACEMENT, TYP.
- 5. IT IS RECOMMENDED TO USE TREATED PLYWOOD FOR THE SHEATHING OF THE ROOF, FLOOR, WALLS, TYP.
- 6. IT IS RECOMMENDED TO USE COLD FORMED METAL FRAMING FOR THE FLOOR, ROOF, & WALLS IN LIEU OF WOOD FRAMING, TYP.

2

X X

## LEGEND

- 1 MAIN DISTRIBUTION PANELBOARD
- 2 AUTOMATIC TRANSFER SWITCH
- ③ FIRE ALARM PANEL
- (4) VPJB
- MANUAL TRANSFER SWITCH CONTROLS 5
- MANUAL TRANSFER SWITCH POWER 6
- ⑦ SURGE SUPPRESSOR
- (8) 4' x 4' WALLBOARD PAINTED WHITE OR BEIGE
- ROADWAY LIGHTING CONTROLLER (9)
- 10 HVAC CONTROL
- 1 ELECTRIC HEATER
- 12 THERMOSTAT
- 13 INTERIOR SECURITY CAMERA CCTV 1
- 14) HIRSCH PANEL
- FIRE EXTINGUISHER 15
- 16 CARD READER PANEL
- 17 GENERATOR RUNNING LIGHT
- UPS-1 PANELBOARD (18)
- 19 UPS/LC MTS
- (20) UPS-2 PANELBOARD
- 21 ITS LINE CONDITIONER
- 22 ITS STEP UP TRANSFORMER
- 27) VES WASH SYSTEMS CABINET



#### IPDC FACILITY SITE PLAN NOT TO SCALE



#### STANDARD IPDC BUILDING INTERIOR ELEVATIONS

2024-03

M-ITS-1804











NOT TO SCALE



SECTION B-B

NOT TO SCALE

THINK THATTATICS NOTE TO DESIGNER

NOT TO SCALE



SECTION D-D NOT TO SCALE



#### NOTES:

- CONTRACTOR SHALL SEAL DOOR OPENING, DOOR FRAMING, AND ANY PROTRUSION/ACCESS 1. CUT THROUGH BUILDING WALLS AGAINST RODENT OR PEST INFESTATION OR ACCESS, TO THE SATISFACTION OF THE ENGINEER.
- THIS LAYOUT SHOWS PLAZA REMOTE CONTROL BUILDING COMBINED TO IPDC BUILDING 2.

EQUIPMENT SHOWN IN GRAYSCALE IS EXISTING OR BY OTHERS. 3.



COMBINATION IPDC/PLAZA FACILITY SITE PLAN NOT TO SCALE

## LEGEND





- 1 MAIN DISTRIBUTION PANELBOARD
- 2 AUTOMATIC TRANSFER SWITCH
- ③ FIRE ALARM PANEL
- ④ VPJB
- MANUAL TRANSFER SWTICH CONTROLS (5)
- 6 MANUAL TRANSFER SWTICH - POWER
- ⑦ SURGE SUPPRESSOR
- 8 4' x 8' WALLBOARD
- ROADWAY LIGHTING CONTROLLER (9)
- 10 HVAC CONTROL
- 1 ELECTRIC HEATER
- 12 THERMOSTAT
- 13 INTERIOR SECURITY CAMERA CCTV 1
- 14 HIRSCH PANEL
- 15 FIRE EXTINGUISHER
- 16 CARD READER PANEL
- 17 GENERATOR RUNNING LIGHT
- 18 UPS-1 PANELBOARD
- 19 UPS/LC MTS
- 20 UPS-2 PANELBOARD
- 21 ITS LINE CONDITIONER
- 22 ITS STEP UP TRANSFORMER
- 23 BUS. SYSTEMS UPS
- 24 BUS. SYSTEMS LINE CONDITIONER
- BUS. SYSTEMS UPS BYPASS SWITCH 25
- BUS. SYSTEMS UPS PANELBOARD 26
- 27 VES WASH SYSTEMS CABINET
- BUS. SYSTEMS VPJB 28





COMBINATION PLAZA-IPDC BUILDING INTERIOR ELEVATIONS

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ŝ	2	0	2	4	-0	)3	

M-ITS-1808





2024-03

M-ITS-1809



#### IPDC BUILDING MECHANICAL PLAN

	ELECTRICAL ROOM																				
			NOM.	NOM TOTAL C		ESP	REFRIG.			COOL	NG DATA			HEATING DATA				ELECTRICAL DATA			MANUE
MARK	LOCATION	SERVES	TON	AIRFLOW	AIRFLOW	(IN	TYPE	TOTAL	SENS	EAT	EAT	OUTDOOR	MIN. EER	CAR	EAT	OUTDOOR	SUPPLEMENTAL				MODEL
				CFM	CFM	ŴG)		CAP	CAP	(DEG F)	(DEG F)	TEMP	AT ARI	MBH	(DEG F)	TEMP	HEATING	VOLTS	PH	HZ	
								МВН	МВН	DB	WB	(DEG F)	CONDITIONS		DB	(DEG F)	(KW)				
HVAC-01	OUTSIDE	BUILDING	4	1500	-	0.15	R410A	45.5	34.0	75	62	90	11	17.1	70	0	5	240	1	60	BARD WL4
HVAC-02	OUTSIDE	BUILDING	4	1500	-	0.15	R410A	45.5	34.0	75	62	90	11	17.1	70	0	5	240	1	60	BARD WA4

	EXHAUST FAN													
MARK	LOCATION	MAKE	MODEL	TYPE	CFM	ESP	FAN	DRIVE	МС	TOR DATA	NOTES			
	Lookinon					IN WG	RPM	TYPE	HP	V / PH / HZ				
EF-1	GENERATOR ROOM	GREENHECK	SE1	EXHAUST FAN	750	0.25	1307	DIRECT	1/8	115/ 1/ 60	WITH MOTORIZED LOUVERS AND GALV. HOUSING, THERMOSTAT CONTROLLED			

	EXHAUST DAMPERS													
MARK	LOCATION	DESCRIPTION	TYPE	MAKE	MODEL	SIZE	ELECTRICAL	NOTES						
							V / PH / HZ							
DMPR-01	GENERATOR ROOM	SUPPLY DAMPER	MOTORIZED DAMPER	GREENHECK	VCD-23	48" x 48"	115/ 1/ 60	LOUVERS FAIL OPEN ON LOSS OF POWER, INSTALL HOOD WITH SS MESH FILTER ON EXTERIOR						
DMPR-02	GENERATOR ROOM	EXHAUST DAMPER	MOTORIZED DAMPER	GREENHECK	135 TLCD	48" x 48"	460 / 3 / 60	LOUVERS FAIL OPEN ON LOSS OF POWER, INSTALL PARTIAL HOOD WITH STAINLESS STEEL WIRE GRID						

	ELECTRIC UNIT HEATER SCHEDULE (UH)													
1	MARK	ARK ROOM MAKE MODEL TYPE					CFM	V / PH / HZ	NOTES					
	UH-1	GENERATOR	INDEECO	ULI	WALL MOUNTED	2KW/1.5KW	300	240/ 1 / 60	INCLUDE DISCONNECT					

UNIT SHALL HAVE ARI CERTIFIED COILS, AIWCA RATED FANS, AND UL LISTED & LABELED ELECTRICAL

HVAC PROVIDE LEAD/LAG THERMOSTAT CONTROLLER BARD MODEL #MC4001-AC WITH BASE ALARMS

ALL MANUFACTURERS AND PART NUMBERS ARE FOR REFERENCE. THE CONTRACTOR SHALL PROVIDE CALCULATIONS FOR HVAC AND HEATING SYSTEM BASED ON BUILDING CONSTRUCTION AND INTERNAL

INSERTION OF THE SHEET INTO THE PLAN SET. ~ れれれれれれれれれれれれれれ

ACTURER/ L NUMBER	REMARKS
S2-A05TPXXXJ	
S3-A05TPXXXJ	

ABBREVIATION LEGEND CFM - CUBIC FEET PER MINUTE





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<u>Q</u>	-21
8	-81
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30 ± <sup>1</sup>/<sub>8</sub>"

#### NOTES:

- DETAIL SHOWS INSTALLATION IN UNPAVED AREA. WHEN INSTALLING IN A PAVED AREA, 1. INCORPORATE GROUND WELL IN THE POUR.
- GROUND WELLS ARE REQUIRED AT EVERY GROUND ROD. 2.
- PROVIDE 1" SCHEDULE 40 PVC CONDUIT FOR ALL GROUND CABLES UNDER BUILDING. 3.
- ALL COPPER GROUND BARS SHALL BE OF HARD DRAWN, COMMERCIALLY PURE, 4. ELECTROLYTIC COPPER, FOR USE AS AN ELECTRICAL CONDUCTOR AND SHALL COMPLY WITH THE CURRENT VERSION OF ASTM SPEC. B-187 OF LATEST DATE.
- BOLTS, NUTS, AND WASHERS USED FOR CONNECTION TO GROUND BUS BARS SHALL BE 5. SOLID COPPER.
- WELD PER MANUFACTURER SPECIFICATION (ERICO PRODUCTS OR BURNDY CORP.). 6
- THE COPPER GROUND BUS BAR SHALL BE MOUNTED TO THE CABLE TRAY ABOVE 7. EQUIPMENT RACKS.
- PROVIDE A #2 AWG GROUND CABLE FROM THE FRAME OF EACH EQUIPMENT RACK TO 8. THE GROUND BUS AS SHOWN. THE CABLE SHALL BE BOLTED TO THE RACK USING A SEAMLESS HEAVY DUTY COMPRESSION TERMINAL.
- 9. A 4 INCH GAP SHALL BE PROVIDED BETWEEN THE ENDS OF THE TWO CONDUCTORS THAT MAKE UP THE INTERNAL PERIMETER GROUND BUS CONDUCTOR.
- 10. ALL EQUIPMENT LOCATED INSIDE THE IPDC FACILITY PREFABRICATED BUILDING SHALL BE BONDED TO THE MAIN GROUND BUS OR THE INTERNAL PERIMETER GROUND CONDUCTOR WITH A #2 AWG GROUND CABLE. ALL CONNECTIONS MUST BE EXOTHERMICALLY WELDED.
- THE INTERNAL PERIMETER GROUND BUS CONDUCTOR MUST BE INSTALLED 11 HORIZONTALLY ALONG THE WALL APPROXIMATELY 8 FEET ABOVE FINISHED FLOOR. THE CONDUCTOR SHALL BE SUPPORTED 2 INCHES FROM THE WALL SURFACE ON INSULATED STANDOFFS. THE STANDOFFS SHALL BE INSTALLED AT INTERVALS AS NECESSARY TO KEEP THE CONDUCTOR SECURELY IN PLACE WITHOUT NOTICEABLE SAGS AND BENDS.
- THE GROUND BUS BARS MUST BE MOUNTED APPROXIMATELY 8 FEET ABOVE FINISHED 12. FLOOR AND MOUNTED TO WALL USING A MOUNTING BRACKET WITH INSULATOR.

# BOND LUG TO COPPER GROUND BAR USING EXOTHERMIC WELD (NOTE 6)

GROUND CABLE (TYP.)

V	0000	0 0 0	0 0 0	0 0 0	<
		/PE LP QUAL.	FITTI TO BE	NG OR SIZED	⊣ APPROVED AS REQUIRED.

MASTER GROUND BUS BAR CONNECTION DETAIL NOT TO SCALE



PLAZA-IPDC GROUNDING SCHEMATIC AND DETAILS

2024-03

M-ITS-1813

1 OF 1



P	ANELB VOL <sup>-</sup> PHASE/	OARD: TAGE: /WIRE:	MDP 120/240 1/3	MAIN: <u>350A</u> BUS RATING <u>400A</u> MOUNTING: <u>SURFACE</u>												
скт	CB SIZE	POLES	DESCRIPTION	WA	ΠS						WA	ΠS	DESCRIPTION	POLES	CB SIZE	скт
	0122			A	В			-			A	В			0.22	<u> </u>
1	225	2	LIPS-1	10571		—o´	<u>~</u>	•	- oʻ	<u>`</u> o	0			2	30	2
3	225		0131		13537		<u>`</u>	-	•	<u>_</u>	-	0	Sonder no rector	2		4
5	20			4560		ے ا	<u>`</u>	<b>—</b>		م	4560				20	6
7	20		HVAC UNIT I		4560	$\square$	6	-	- o	<u>_</u>	-	4560	HVAC UNIT 2		20	8
9	15	1	EMERGENCY LIGHTS	50		-0	6	•	6	6	100		GEN. ROOM EXHAUST FAN	1	20	10
11	15	1	OUTDOOR LIGHTS		126	-0	<u>~</u>	-	6	<u>_</u>		100	GEN. BAT. CHARGER	1	20	12
13		1	INDOOR LIGHTS	300		<u> </u>	6	•		6	1500		GEN. JACKET WATER HTR	1	20	14
15	20	1	INTERIOR RECEPTACLE 1		600	$\square$	<u>\</u>	$\vdash$		$\mathcal{P}$	-	1000		2	15	16
17	20	1	INTERIOR RECEPTACLE 2	300		$\vdash$	6	•		Ò	1000		GEN. KOOIVI HEATER		15	18
19	20	1	GENERATOR ROOM RECEPT.		450	$\vdash \circ$	6	-		<u>_</u>	-	0	SPARE	1	20	20
21						$\neg$	6	•		6	150		OUTDOOR RECEPTACLE 1	1	20	22
23						$\vdash$	6			<u></u>	-	150	OUTDOOR RECEPTACLE 2	1	20	24
25						-	6	•		6	450		OUTDOOR RECEPTACLE 3	1	20	26
27							6	$\vdash$		<u>_</u>	-	2750		2	20	28
29						$\neg$	<u>\</u>	•	O	$\sim$	2750		OUTDOOR 240V RECEPTACLE	2	30	30
				15781	19273	WATTS					10510	8560	WATTS			
T(	OTAL W	VATTS:	54124													
		KW:	54.1													
		KVA:	67.7													

\* PROVIDE WITH HANDLE LOCKING DEVICE

\*

MDP





1.5" RADIUS, 0.5" BORDER, BLACK ON WHITE

IPDC IDENTIFICATION SIGN

#### NOTES:

1. IPDC FACILITY IDENTIFICATION SIGN MATERIAL SHALL MEET THE REQUIREMENTS OF ARTICLE 720.02 OF THE STANDARD SPECIFICATIONS.

2. IPDC FACILITY IDENTIFICATION SIGNS SHALL BE MOUNTED ONTO THE BUILDING USING BOLTS AND WASHERS ACCORDING TO ARTICLE 720.04 OF THE STANDARD SPECIFICATIONS.

