RUTLAND WEST SOLAR FARM, LLC
KANE COUNTY, ILLINOIS

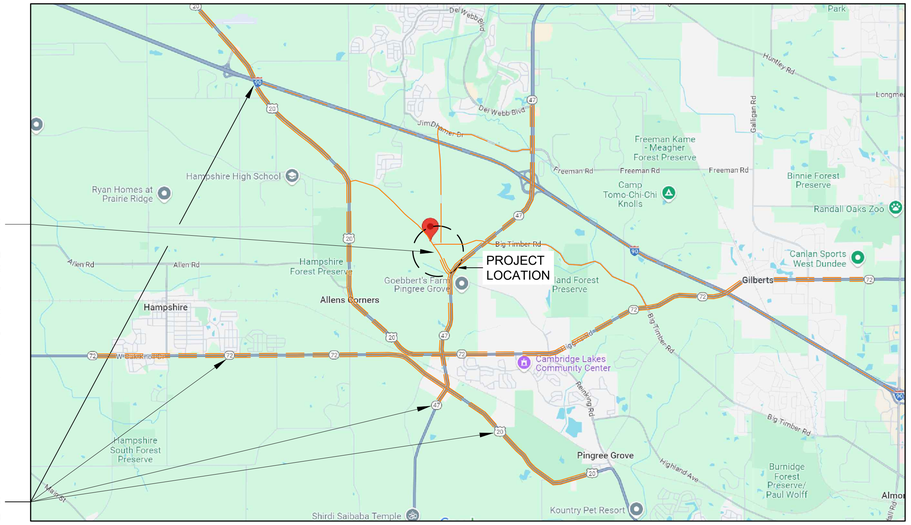
PROJECT ADDRESS PRIMARY CONSTRUCTION LOGISTICS ROUTE

ANY INTERSTATE VIA (I-90)
HEADING NORTH/SOUTH WEST/EAST TOWARDS
(IL-20, IL-47, IL-72),

PARCEL LOCATED NORTH OF (IL-72) HIGGINS ROAD & EAST OF (IL-20) US GRANT MEM HWY ROUTE
AT THE SOUTHEAST INTERSECTION OF REINKING ROAD & BIG TIMBER ROAD,

SITE CONSTRUCTION ENTRANCE GATE VIA (IL-47), REINKING ROAD WEST
LOCATED NORTH OFF REINKING ROAD, SOUTH OF BIG TIMBER ROAD & NORTH OF IL-47, ON WEST SIDE.

VARIOUS MEANS OF TRANSPORTATION ACCESS
(TYP.)

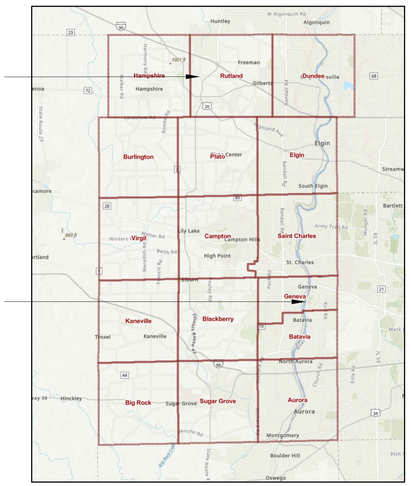


3 IDOT CONSTRUCTION LOGISTICS ROUTE(S)
NOT TO SCALE

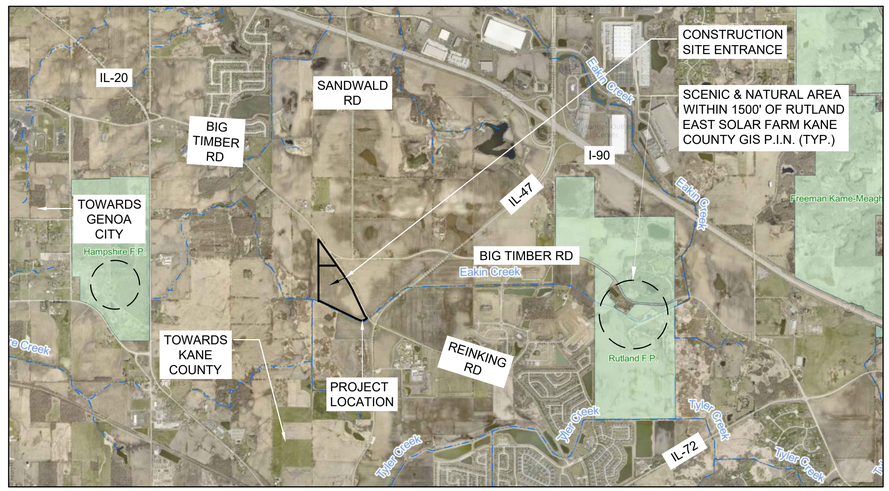
1 KANE COUNTY, IL
NOT TO SCALE

RUTLAND TWP & PROJECT LOCATION

KANE COUNTY CLERK HOUSE



2 KANE COUNTY LOCATION PLAN
NOTE TO SCALE



4 P.I.N. VICINITY MAP
NOT TO SCALE

SHEET LIST :

SITE INFORMATION

PARCEL ZONING :	A-1 AGRICULTURE

PROJECT DESCRIPTION

PROJECT LOCATION :	REINKING RD. & IL-21, HAMPSHIRE, IL 60140
PROJECT PARCEL :	56.09
P.I.N. :	02-19-200-006 02-18-400-009
UTILITY :	COMED
AC SYSTEM SIZE :	5,000 KW / 5,000 KVA
DC SYSTEM SIZE :	7,500 KW
AZIMUTH / TILT :	180 ° / ± 60
GCR :	40%
MODULE MODEL :	TRINA SOLAR VERTEX 550W TSM-DEG19C20
MODULE WATTAGE :	550 W
MECHANICAL SYSTEM :	HORIZONTAL TRACKER
INVERTER MODEL :	CHINT STRING INVERTER

GENERAL NOTES:

LEGAL DESCRIPTION OF THE PROJECT SITE IN RELATION TO THE DEVELOPMENT PARCEL SUBMITTED TO KANE COUNTY OF RECORD.

REFER TO DETAIL 1 / W-DEV.06-ES FOR EQUIPMENT SPECIFICATION CUT SHEET: PV MODULE 550 WATT (DC) INFORMATION.

REFER TO DETAIL 2 / W-DEV.06-ES FOR EQUIPMENT SPECIFICATION CUT SHEET: STRING INVERTER 125 KWATT (DC) INFORMATION.

Date	Revision Details	PM	ENG	CHK
01/03/2025	ISSUED FOR SUP			
11/29/2024	ISSUED FOR BPLER			
10/03/2024	ISSUED FOR IX			

Revision Table

Engineer :

ANATOLIY ZELTSER
PROJECT ENGINEER
SURYA POWERED LLC
RUTLAND WEST SOLAR FARM LLC
141 W. JACKSON BLVD STE 1692
CHICAGO, IL 60604

Developer :

RUTLAND WEST SOLAR FARM LLC

141 W JACKSON BLVD, STE 1692
CHICAGO, IL 60604
WWW.SURYAPOWERED.COM

Project Name & Address :

RUTLAND WEST SOLAR FARM

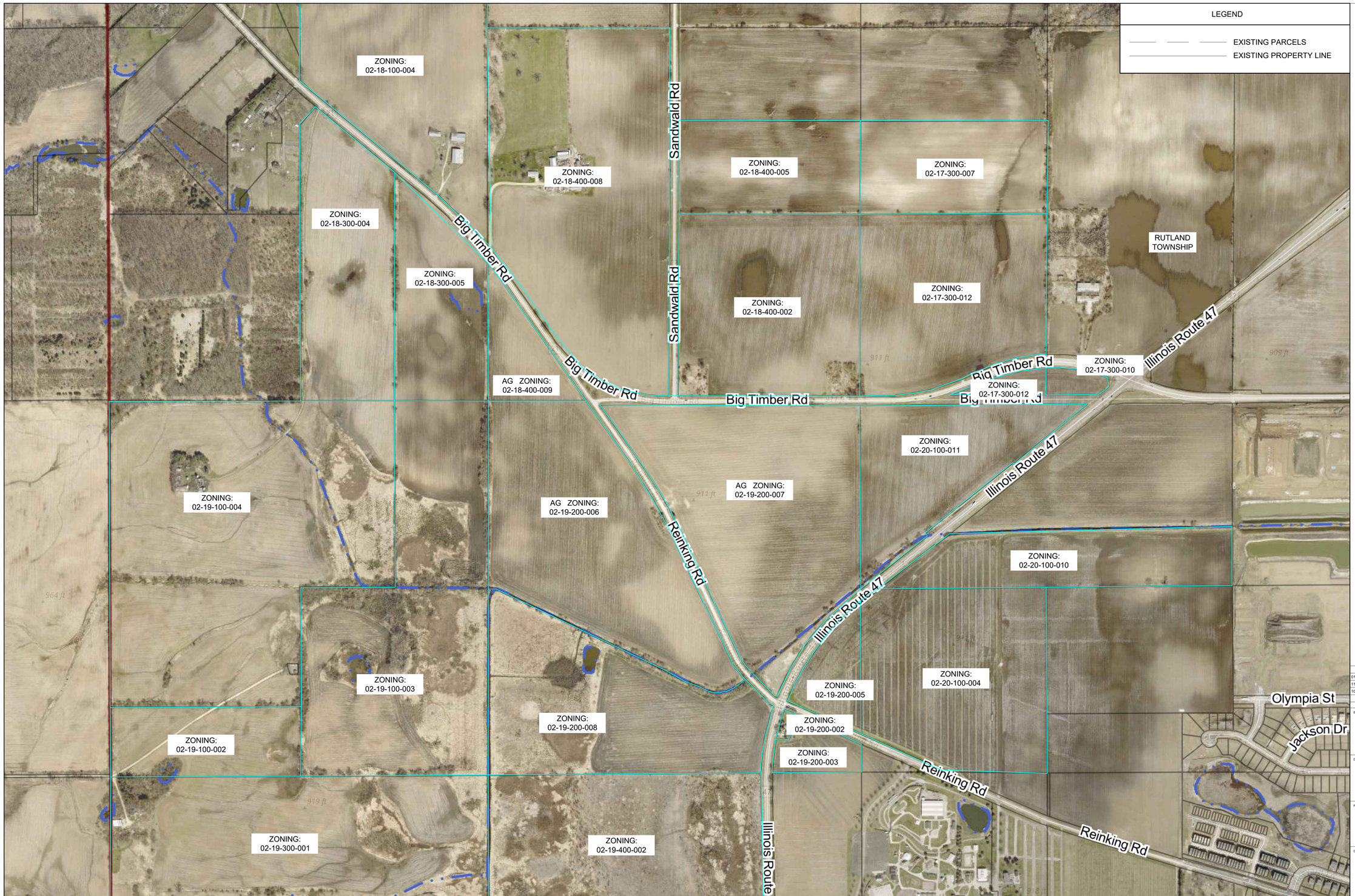
REINKING RD. & IL-21,
HAMPSHIRE, IL 60140
KANE COUNTY
P.I.N. 02-19-200-006 & 02-18-400-009

Drawing Title :

COVER PAGE

STATE COUNTY MAP,
SATELLITE LOCATION MAP,
VICINITY MAP, ROADS,
SITE PRELIMINARY INFORMATION

Project Number :	Drawing Number :
8884 b	W - DEV.01 - CP
Paper Size :	Sheet Number :
24" X 36"	01



LEGEND

EXISTING PARCELS

EXISTING PROPERTY LINE

GENERAL NOTES:

LEGAL DESCRIPTION OF THE PROJECT SITE IN RELATION TO THE DEVELOPMENT PARCEL SUBMITTED TO KANE COUNTY OF RECORD.

NO WETLANDS OR FLOODZONES ARE PRESENT NOR HAVE BEEN IDENTIFIED ON THE PROJECT SITE HOWEVER A WETLAND DELINEATION STUDY MAY IMPACT PV MODULE PANEL ARRAY LOCATION.

N

1 EXISTING GENERAL CONDITIONS PLAN

SCALE: 1 " = 299 '

Date	Revision Details	PM	ENG	CHK
01/03/2025	ISSUED FOR SUP			
11/29/2024	ISSUED FOR BPLER			
10/03/2024	ISSUED FOR IX			

Revision Table

Engineer :

ANATOLIY ZELTSER
PROJECT ENGINEER
SURYA POWERED LLC
RUTLAND WEST SOLAR FARM LLC
141 W. JACKSON BLVD STE 1692
CHICAGO, IL 60604

Developer :

RUTLAND WEST SOLAR FARM LLC

141 W JACKSON BLVD, STE 1692
CHICAGO, IL 60604
WWW.SURYAPOWERED.COM

Project Name & Address :

RUTLAND WEST SOLAR FARM

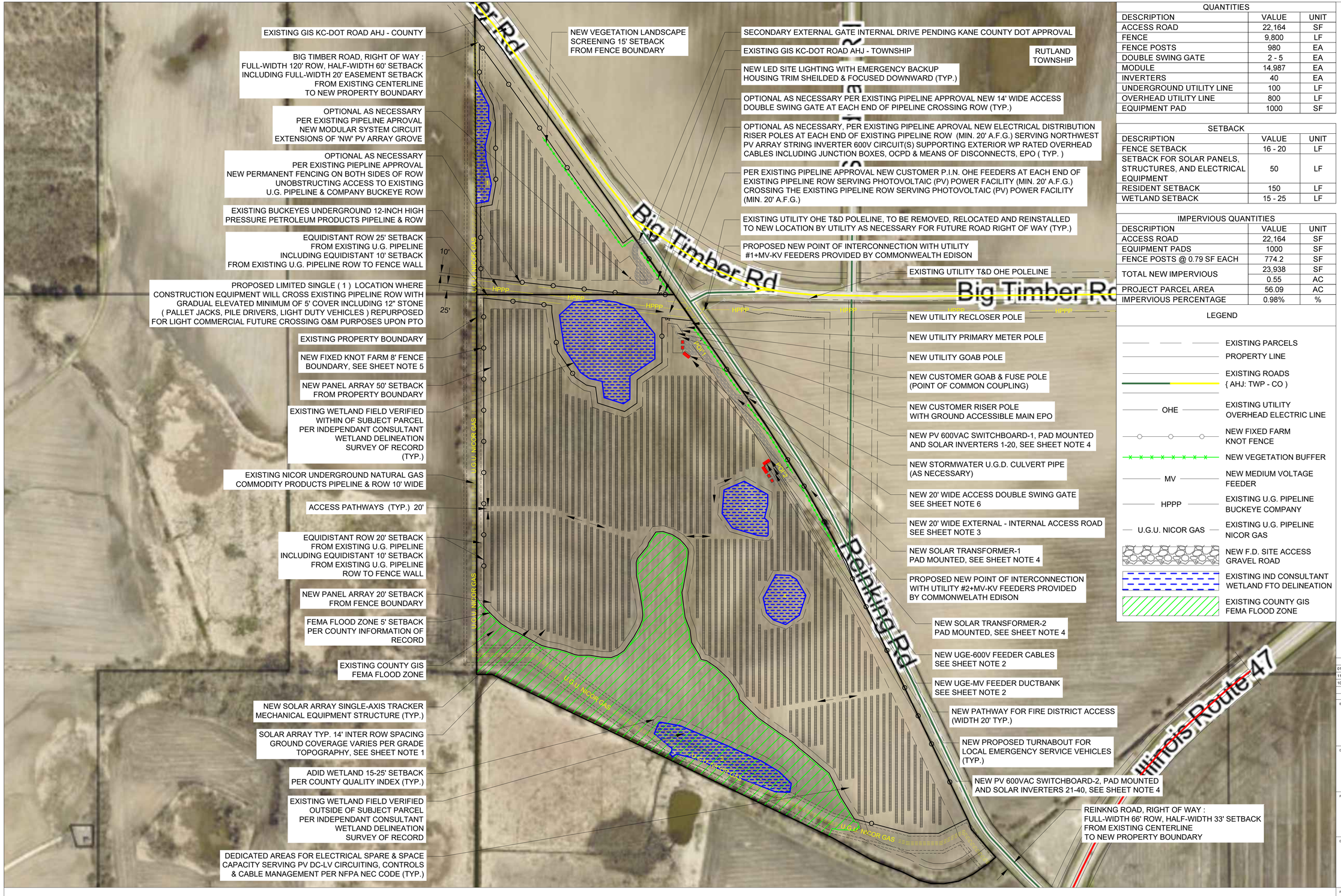
REINKING RD. & IL-21,
HAMPSHIRE, IL 60140
KANE COUNTY
P.I.N. 02-19-200-006 & 02-18-400-009

Drawing Title :

EXISTING CONDITIONS

EXISTING GENERAL CONDITIONS PLAN
SHOWING ADJACENT LAND PARCELS
ZONING & PIN NUMBER, ROADS,
GEOGRAPHY PROPERTIES,
SATELLITE VIEW

Project Number :	Drawing Number :
8884 b	W - DEV.02 - EC
Paper Size :	Sheet Number :
24" X 36"	02



EXISTING GIS KC-DOT ROAD AHJ - COUNTY

BIG TIMBER ROAD, RIGHT OF WAY :
FULL-WIDTH 120' ROW, HALF-WIDTH 60' SETBACK
INCLUDING FULL-WIDTH 20' EASEMENT SETBACK
FROM EXISTING CENTERLINE
TO NEW PROPERTY BOUNDARY

OPTIONAL AS NECESSARY
PER EXISTING PIPELINE APROVAL
NEW MODULAR SYSTEM CIRCUIT
EXTENSIONS OF 'NW' PV ARRAY GROVE

OPTIONAL AS NECESSARY
PER EXISTING PIEPLINE APPROVAL
NEW PERMANENT FENCING ON BOTH SIDES OF ROW
UNOBSTRUCTING ACCESS TO EXISTING
U.G. PIPELINE & COMPANY BUCKEYE ROW

EXISTING BUCKEYES UNDERGROUND 12-INCH HIGH
PRESSURE PETROLEUM PRODUCTS PIPELINE & ROW

EQUIDISTANT ROW 25' SETBACK
FROM EXISTING U.G. PIPELINE
INCLUDING EQUIDISTANT 10' SETBACK
FROM EXISTING U.G. PIPELINE ROW TO FENCE WALL

PROPOSED LIMITED SINGLE (1) LOCATION WHERE
CONSTRUCTION EQUIPMENT WILL CROSS EXISTING PIPELINE ROW WITH
GRADUAL ELEVATED MINIMUM OF 5' COVER INCLUDING 12" STONE
(PALLET JACKS, PILE DRIVERS, LIGHT DUTY VEHICLES) REPURPOSED
FOR LIGHT COMMERCIAL FUTURE CROSSING O&M PURPOSES UPON PTO

EXISTING PROPERTY BOUNDARY

NEW FIXED KNOT FARM 8' FENCE
BOUNDARY, SEE SHEET NOTE 5

NEW PANEL ARRAY 50' SETBACK
FROM PROPERTY BOUNDARY

EXISTING WETLAND FIELD VERIFIED
WITHIN OF SUBJECT PARCEL
PER INDEPENDANT CONSULTANT
WETLAND DELINEATION
SURVEY OF RECORD
(TYP.)

EXISTING NICOR UNDERGROUND NATURAL GAS
COMMODITY PRODUCTS PIPELINE & ROW 10' WIDE

ACCESS PATHWAYS (TYP.) 20'

EQUIDISTANT ROW 20' SETBACK
FROM EXISTING U.G. PIPELINE
INCLUDING EQUIDISTANT 10' SETBACK
FROM EXISTING U.G. PIPELINE
ROW TO FENCE WALL

NEW PANEL ARRAY 20' SETBACK
FROM FENCE BOUNDARY

FEMA FLOOD ZONE 5' SETBACK
PER COUNTY INFORMATION OF
RECORD

EXISTING COUNTY GIS
FEMA FLOOD ZONE

NEW SOLAR ARRAY SINGLE-AXIS TRACKER
MECHANICAL EQUIPMENT STRUCTURE (TYP.)

SOLAR ARRAY TYP. 14' INTER ROW SPACING
GROUND COVERAGE VARIES PER GRADE
TOPOGRAPHY, SEE SHEET NOTE 1

ADID WETLAND 15-25' SETBACK
PER COUNTY QUALITY INDEX (TYP.)

EXISTING WETLAND FIELD VERIFIED
OUTSIDE OF SUBJECT PARCEL
PER INDEPENDANT CONSULTANT
WETLAND DELINEATION
SURVEY OF RECORD

DEDICATED AREAS FOR ELECTRICAL SPARE & SPACE
CAPACITY SERVING PV DC-LV CIRCUITING, CONTROLS
& CABLE MANAGEMENT PER NFPA NEC CODE (TYP.)

NEW VEGETATION LANDSCAPE
SCREENING 15' SETBACK
FROM FENCE BOUNDARY

SECONDARY EXTERNAL GATE INTERNAL DRIVE PENDING KANE COUNTY DOT APPROVAL

EXISTING GIS KC-DOT ROAD AHJ - TOWNSHIP

RUTLAND
TOWNSHIP

NEW LED SITE LIGHTING WITH EMERGENCY BACKUP
HOUSING TRIM SHEILDED & FOCUSED DOWNWARD (TYP.)

OPTIONAL AS NECESSARY PER EXISTING PIPELINE APPROVAL NEW 14' WIDE ACCESS
DOUBLE SWING GATE AT EACH END OF PIPELINE CROSSING ROW (TYP.)

OPTIONAL AS NECESSARY, PER EXISTING PIPELINE APROVAL NEW ELECTRICAL DISTRIBUTION
RISER POLES AT EACH END OF EXISTING PIPELINE ROW (MIN. 20' A.F.G.) SERVING NORTHWEST
PV ARRAY STRING INVERTER 600V CIRCUIT(S) SUPPORTING EXTERIOR WP RATED OVERHEAD
CABLES INCLUDING JUNCTION BOXES, OCPD & MEANS OF DISCONNECTS, EPO (TYP.)

PER EXISTING PIPELINE APPROVAL NEW CUSTOMER P.I.N. OHE FEEDERS AT EACH END OF
EXISTING PIPELINE ROW SERVING PHOTOVOLTAIC (PV) POWER FACILITY (MIN. 20' A.F.G.)
CROSSING THE EXISTING PIPELINE ROW SERVING PHOTOVOLTAIC (PV) POWER FACILITY
(MIN. 20' A.F.G.)

EXISTING UTILITY OHE T&D POLELINE, TO BE REMOVED, RELOCATED AND REINSTALLED
TO NEW LOCATION BY UTILITY AS NECESSARY FOR FUTURE ROAD RIGHT OF WAY (TYP.)

PROPOSED NEW POINT OF INTERCONNECTION WITH UTILITY
#1+MV-KV FEEDERS PROVIDED BY COMMONWEALTH EDISON

EXISTING UTILITY T&D OHE POLELINE

NEW UTILITY RECLOSER POLE

NEW UTILITY PRIMARY METER POLE

NEW UTILITY GOAB POLE

NEW CUSTOMER GOAB & FUSE POLE
(POINT OF COMMON COUPLING)

NEW CUSTOMER RISER POLE
WITH GROUND ACCESSIBLE MAIN EPO

NEW PV 600VAC SWITCHBOARD-1, PAD MOUNTED
AND SOLAR INVERTERS 1-20, SEE SHEET NOTE 4

NEW STORMWATER U.G.D. CULVERT PIPE
(AS NECESSARY)

NEW 20' WIDE ACCESS DOUBLE SWING GATE
SEE SHEET NOTE 6

NEW 20' WIDE EXTERNAL - INTERNAL ACCESS ROAD
SEE SHEET NOTE 3

NEW SOLAR TRANSFORMER-1
PAD MOUNTED, SEE SHEET NOTE 4

PROPOSED NEW POINT OF INTERCONNECTION
WITH UTILITY #2+MV-KV FEEDERS PROVIDED
BY COMMONWELATH EDISON

NEW SOLAR TRANSFORMER-2
PAD MOUNTED, SEE SHEET NOTE 4

NEW UGE-600V FEEDER CABLES
SEE SHEET NOTE 2

NEW UGE-MV FEEDER DUCTBANK
SEE SHEET NOTE 2

NEW PATHWAY FOR FIRE DISTRICT ACCESS
(WIDTH 20' TYP.)

NEW PROPOSED TURNABOUT FOR
LOCAL EMERGENCY SERVICE VEHICLES
(TYP.)

NEW PV 600VAC SWITCHBOARD-2, PAD MOUNTED
AND SOLAR INVERTERS 21-40, SEE SHEET NOTE 4

REINKNG ROAD, RIGHT OF WAY :
FULL-WIDTH 66' ROW, HALF-WIDTH 33' SETBACK
FROM EXISTING CENTERLINE
TO NEW PROPERTY BOUNDARY

QUANTITIES		
DESCRIPTION	VALUE	UNIT
ACCESS ROAD	22,164	SF
FENCE	9,800	LF
FENCE POSTS	980	EA
DOUBLE SWING GATE	2 - 5	EA
MODULE	14,987	EA
INVERTERS	40	EA
UNDERGROUND UTILITY LINE	100	LF
OVERHEAD UTILITY LINE	800	LF
EQUIPMENT PAD	1000	SF

SETBACK		
DESCRIPTION	VALUE	UNIT
FENCE SETBACK	16 - 20	LF
SETBACK FOR SOLAR PANELS, STRUCTURES, AND ELECTRICAL EQUIPMENT	50	LF
RESIDENT SETBACK	150	LF
WETLAND SETBACK	15 - 25	LF

IMPERVIOUS QUANTITIES		
DESCRIPTION	VALUE	UNIT
ACCESS ROAD	22,164	SF
EQUIPMENT PADS	1000	SF
FENCE POSTS @ 0.79 SF EACH	774.2	SF
TOTAL NEW IMPERVIOUS	23,938	SF
	0.55	AC
PROJECT PARCEL AREA	56.09	AC
IMPERVIOUS PERCENTAGE	0.98%	%

LEGEND

- EXISTING PARCELS / PROPERTY LINE
- EXISTING ROADS (AHJ: TWP - CO)
- OHE — EXISTING UTILITY OVERHEAD ELECTRIC LINE
- NEW FIXED FARM KNOT FENCE
- NEW VEGETATION BUFFER
- MV — NEW MEDIUM VOLTAGE FEEDER
- HPPP — EXISTING U.G. PIPELINE BUCKEYE COMPANY
- U.G.U. NICOR GAS — EXISTING U.G. PIPELINE NICOR GAS
- NEW F.D. SITE ACCESS GRAVEL ROAD
- EXISTING IND CONSULTANT WETLAND FTO DELINEATION
- EXISTING COUNTY GIS FEMA FLOOD ZONE

GENERAL NOTES :

LEGAL DESCRIPTION OF THE PROJECT SITE IN RELATION TO THE DEVELOPMENT PARCEL SUBMITTED TO KANE COUNTY OF RECORD.

WETLAND DELINEATION REPORT MAY IMPACT PV MODULE PANEL ARRAY LOCATION - WETLANDS OR FLOODZONES HAVE BEEN IDENTIFIED ON THE PROJECT SITE.

EMERGENCY TURNAROUND FOR PROPOSED ACCESS WAY STILL TO BE DETERMINED BY LOCAL EMERGENCY SERVICES.

PROPOSED ACCESSWAY IS TO BE FURTHER REVIEWED BY CIVIL ENGINEERS AND LOCAL AHJ.

PROPOSED ACCESSWAY MAY CHANGE DUE TO PUBLIC ROW.

PROPOSED ACCESSWAY GATE MAY BE CHANGED DUE TO PUBLIC ROW.

STORMWATER DRAINAGE PLAN PER RUTLAND-PLATO TOWNSHIP DRAINAGE DISTRICT OF RECORD.

EXISTING UNDERGROUND COMMODITY UTILITIES FOR OIL AND NATURAL GAS PIPELINES FIELD VERIFIED WITHIN OR ADJACENTLY SURROUNDING SUBJECT PARCEL PER INDEPENDANT CONSULTANT ALTA SURVEY OF RECORD.

SHEET NOTES :

1. REFER TO DETAIL 1 / W-DEV.04-CD FOR MECHANICAL SINGLE AXIS TRACKER RACKING STRUCTURE SYSTEM INFORMATION.
2. REFER TO DETAIL 2 / W-DEV.04-CD FOR U.G.E. DIRECT BURIED ELECTRICAL CONDUIT TRENCH DETAIL INFORMATION.
3. REFER TO DETAIL 3 / W-DEV.04-CD FOR FIRE DEPARTMENT ACCESS ROAD INFORMATION INFORMATION.
4. REFER TO DETAIL 4 / W-DEV.04-CD FOR SUBGRADE EQUIPMENT REINFORCED FOUNDATION INFORMATION.
5. REFER TO DETAIL 1 / W-DEV.05-FD FOR FIXED KNOT FARM FENCE INFORMATION.
6. REFER TO DETAIL 2 / W-DEV.05-FD FOR FIXED KNOT FARM FENCE 20' WIDE DOUBLE SWING GATE INFORMATION.

EXISTING U.G. PIPELINE ROW NOTES & SPECIFICATIONS :

OPERATING EQUIPMENT SPECIFICATIONS SHALL BE PROVIDED AT GMP EPC CONTRACTOR ONBOARDING DETERMINATION,

VEGETATION LANDSCAPING, FENCE WALLS AND UTILITY POLES WHICH WILL CREATE AN OBSTRUCTION OR PREVENT THE INSPECTION OF THE RIGHT-OF-WAY BY AIR OR FOOT, SHALL NOT BE ERECTED WITHIN THE RIGHT-OF-WAY.

TREES, SHRUBS, AND BUSHES ARE NOT PERMITTED WITHIN THE RIGHT-OF-WAY. TREES PLANTED OUTSIDE OF THE RIGHT-OF-WAY SHOULD BE PLACED SO BRANCHES AND LIMBS WILL NOT OVERHANG THE PIPELINE RIGHT-OF WAY AS THE TREE MATURES. BUCKEYE MAY TRIM/REMOVE OVERHANGING BRANCHES AND LIMBS THAT ENCROACH INTO THE RIGHT-OF-WAY.

WHEN ANY CONSTRUCTION ACTIVITY IS CONDUCTED IN OR AROUND THE EXISTING U.G. PIPELINE OR RIGHT-OF-WAY, PIPELINE COMPANY BUCKEYE'S ON-SITE INSPECTOR MUST BE PRESENT AT ALL TIMES. NO WORK SHALL TAKE PLACE WITHOUT A BUCKEYE ON-SITE INSPECTOR PRESENT. FOR THIS FREE-OF-CHARGE SERVICE, CONTACT LOCAL FIELD OPERATIONS MANAGER AT THE BUCKEYE FACILITY NEAREST TO YOUR PROPOSED PROJECT.

BEFORE ANY PRELIMINARY FIELD WORK OR CONSTRUCTION BEGINS IN THE VICINITY OF BUCKEYE'S PIPELINE, A DETERMINATION OF THE EXACT LOCATION AND ELEVATION OF THE PIPELINE MUST BE MADE.

FIELD TAKE OFF OF LOCATION EASEMENT TRACK & DEPTH OF EXISTING U.G. PIPELINE TO BE PROVIDED BY PIPELINE COMPANY BUCKEYE CONTRACTOR.

G.C. SHALL CONTACT AND COORDINATE WITH EXISTING PIPELINE COMPANY CONTRACTOR (BUCKEYE) ON ALL GROUND DISTURBANCES (PILE DRIVING) WITHIN 1,500' OF EXISTING U.G. PIPELINE & ROW.

CONSTRUCTION ACTIVITIES THAT GENERATE GROUND VIBRATIONS, INCLUDING, BUT WITHOUT LIMITATION, PILE DRIVING, SHEET DRIVING, SOIL COMPACTION WORK, JACKHAMMERING, OR RAMMING, SHALL BE REVIEWED BY BUCKEYE ON A CASE-BY-CASE BASIS.

DEEP FOUNDATIONS WHICH INCLUDE PIERS, CAISSONS, DRILLED SHAFTS, BORED PILES, AND CAST-IN-SITU PILES LOCATED WITHIN 500 FEET OF THE PIPELINE SHALL BE INSTALLED/DRILLED USING AN AUGER.

ANY MODIFICATIONS TO AN EXISTING DRAINAGE PATTERN SHALL BE DESIGNED SUCH THAT THE EROSION OF THE PIPELINE COVER IS CONTROLLED.

ABOVEGROUND CABLES:
1) A MINIMUM OF 20' OF ABOVE-GRADE CLEARANCE FOR A DISTANCE OF 25' ON EACH SIDE OF THE PIPELINE IS REQUIRED.
2) MECHANICAL SUPPORTS AND SERVICE DROPS INCLUDING POLES, TOWERS, GUY WIRES, GROUND RODS, ANCHORS, ETC., ARE NOT PERMITTED WITHIN 25' OF THE PIPELINE.

FENCES AND WALLS:
A) PRIVACY FENCES OR FENCES THAT PREVENT ACCESS TO THE RIGHT-OF-WAY ARE NOT PERMITTED.
B) ALL OTHER FENCE INSTALLATIONS WITHIN THE RIGHT-OF-WAY WILL BE REVIEWED FOR APPROVAL BY BUCKEYE ON A CASE-BY-CASE BASIS. UPON BUCKEYE'S WRITTEN APPROVAL, FENCES SHALL BE CONSTRUCTED WITH A 14' GATE OR REMOVABLE SECTIONS ACROSS THE RIGHT-OF-WAY.
C) FENCE POSTS SHALL NOT BE INSTALLED WITHIN 5' OF THE PIPELINE AND MUST BE EQUIDISTANT IF CROSSING THE PIPELINE.
D) NO FENCE SHALL CROSS THE RIGHT-OF-WAY AT LESS THAN A 60-DEGREE ANGLE.
E) FENCES THAT RUN PARALLEL TO THE PIPELINE SHALL BE INSTALLED OUTSIDE THE RIGHT-OF-WAY.

ATTACHMENT 1: BUCKEYE FACILITY LOCATIONS & CONTACT NUMBERS

ILLINOIS: ARGO (708) 259-1352, LEMONT (WEST SHORE) (888) 625-7310
KANKAKEE (815) 932-3029, HARTFORD (618) 255-1100

ATTACHMENT 2: RIGHT OF WAY & ENCROACHMENT CONTACTS

JANA OLTHOFF - SPECIALIST, RIGHT OF WAY II, JOLTHOFF@BUCKEYE.COM
WEST REGION NORTHERN & CENTRAL ILLINOIS, INDIANA, WISCONSIN
5521 WEST LINCOLN HIGHWAY, CROWN POINT, IN (219) 741-0201

ATTACHMENT 3: STATE ONE CALL SYSTEMS (NATIONAL - DIAL 811)

ILLINOIS: NON-CHICAGO - JULIE, INC. (800) 892-0123
WWW.ILLINOIS1CALL.COM

CHICAGO - DIGGER – UTILITY ALERT NETWORK (800) 744-7000
WWW.CITYOFCHICAGO.ORG/TRANS

Date	Revision Details	PM	ENG	CHK
01/02/2025	ISSUED FOR SUP			
11/29/2024	ISSUED FOR BPLER			
10/03/2024	ISSUED FOR IX			

Revision Table

Engineer :
ANATOLIY ZELTSER
PROJECT ENGINEER
SURYA POWERED LLC
RUTLAND WEST SOLAR FARM LLC
141 W. JACKSON BLVD STE 1692
CHICAGO, IL 60604

Developer :
RUTLAND WEST SOLAR FARM LLC
141 W JACKSON BLVD, STE 1692
CHICAGO, IL 60604
WWW.SURYAPOWERED.COM

Project Name & Address :
RUTLAND WEST SOLAR FARM
REINKING RD. & IL-21,
HAMPSHIRE, IL 60140
KANE COUNTY
P.I.N. 02-19-200-006 & 02-18-400-009

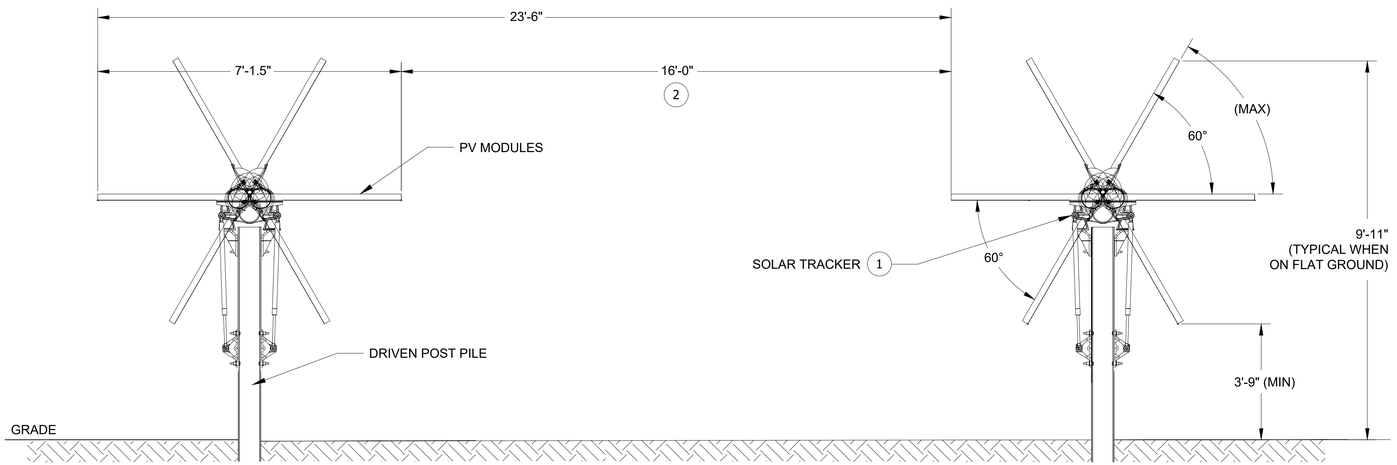
Drawing Title :
SITE PLAN - WEST
NEW SITE PLAN LAYOUT OF
SOLAR FARM EQUIPMENT,
INTERNAL ROADS
AND SETBACKS

Project Number :	Drawing Number :
8884 b	W - DEV.03 - SP
Paper Size	Sheet Number :
24" X 36"	03

N

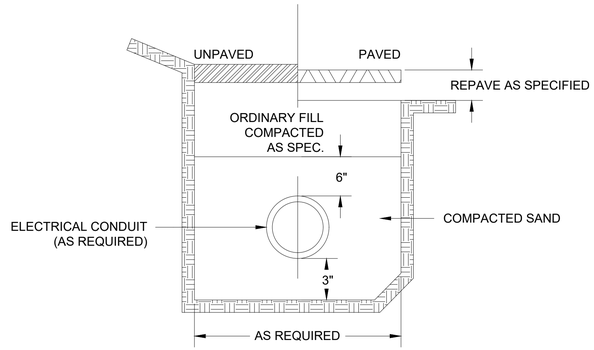
1 NEW POWER FACILITY SITE PLAN - WEST

SCALE: 1 " = 149.5 '



1 MECHANICAL SINGLE AXIS TRACKER RACKING STRUCTURE SYSTEM DETAIL: SCHEMATIC DESIGN

NOT TO SCALE

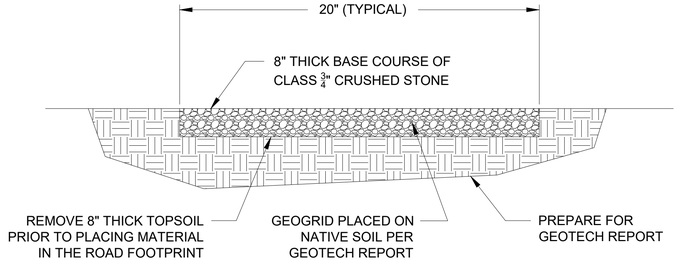


2 U.G.E. DIRECT BURIED ELECTRICAL CONDUIT TRENCH DETAIL

NOT TO SCALE

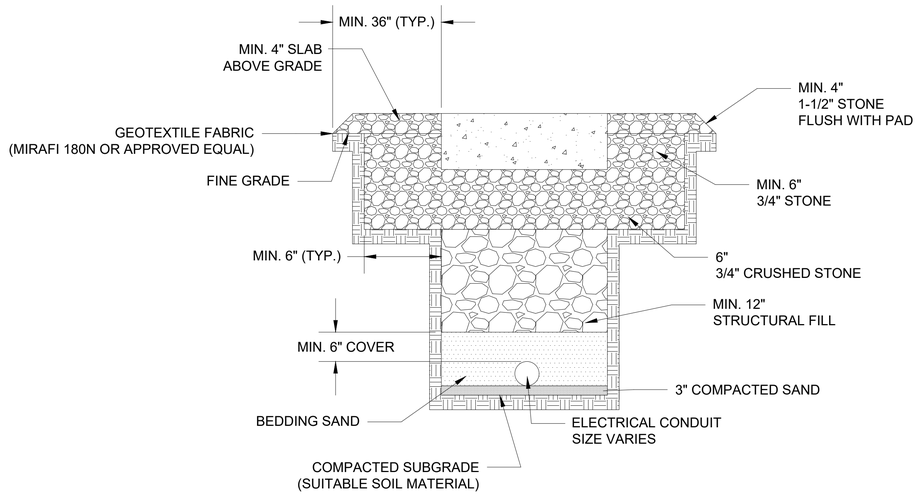
SHEET NOTES:

1. SINGLE AXIS TRACKER MECHANICAL RACKING SYSTEM BY AXIAL TRACKER, SEE MANUFACTURER DRAWINGS FOR ADDITIONAL INFORMATION.
2. STRUCTURE DIMENSIONS SHOWN ARE TYPICAL FOR FLAT GRADE. DIMENSIONS MAY VARY WHERE SLOPES EXIST.



3 FIRE DEPARTMENT ACCESS ROAD DETAIL

NOT TO SCALE



4 SUBGRADE EQUIPMENT REINFORCED FOUNDATION DETAIL

NOT TO SCALE

Date	Revision Details	PM	ENG	CHK
01/03/2025	ISSUED FOR SUP			
11/29/2024	ISSUED FOR BPLER			
10/03/2024	ISSUED FOR IX			

Revision Table

Engineer :

ANATOLIY ZELTSER
PROJECT ENGINEER
SURYA POWERED LLC
RUTLAND WEST SOLAR FARM LLC
141 W. JACKSON BLVD STE 1692
CHICAGO, IL 60604

Developer :

RUTLAND WEST SOLAR FARM LLC

141 W JACKSON BLVD, STE 1692
CHICAGO, IL 60604
WWW.SURYAPOWERED.COM

Project Name & Address :

RUTLAND WEST SOLAR FARM

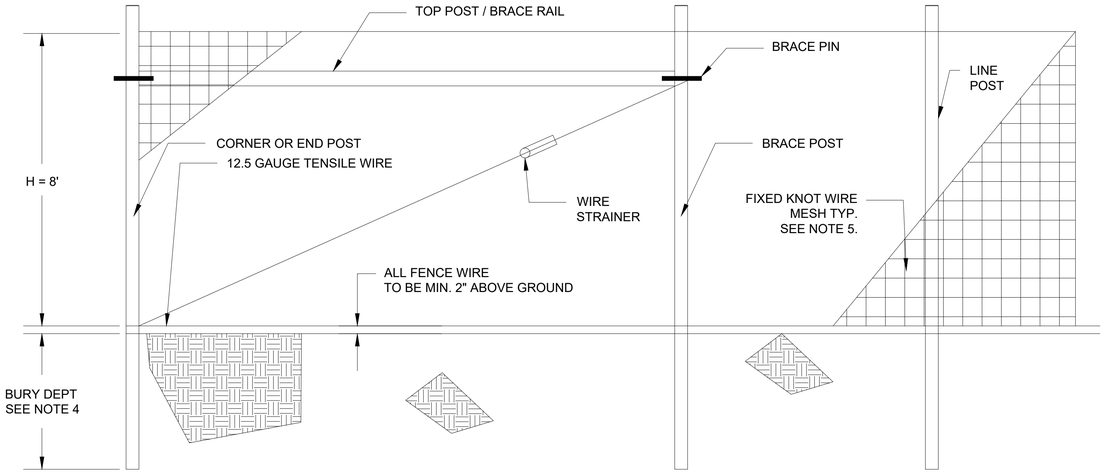
REINKING RD. & IL-21,
HAMPSHIRE, IL 60140
KANE COUNTY
P.I.N. 02-19-200-006 & 02-18-400-009

Drawing Title :

CONSTRUCTION DETAILS

TYPICAL DETAILS, CUT SECTIONS & ELEVATIONS OF
FIRE DEPARTMENT ACCESS ROAD, EQUIPMENT FOUNDATIONS,
PV MECHANICAL TRACKER RACKING STRUCTURE SYSTEM.
U.G.E. CONDUIT TRENCHING

Project Number :	Drawing Number :
8884 b	W - DEV.04 - CD
Paper Size :	Sheet Number :
24" X 36"	04

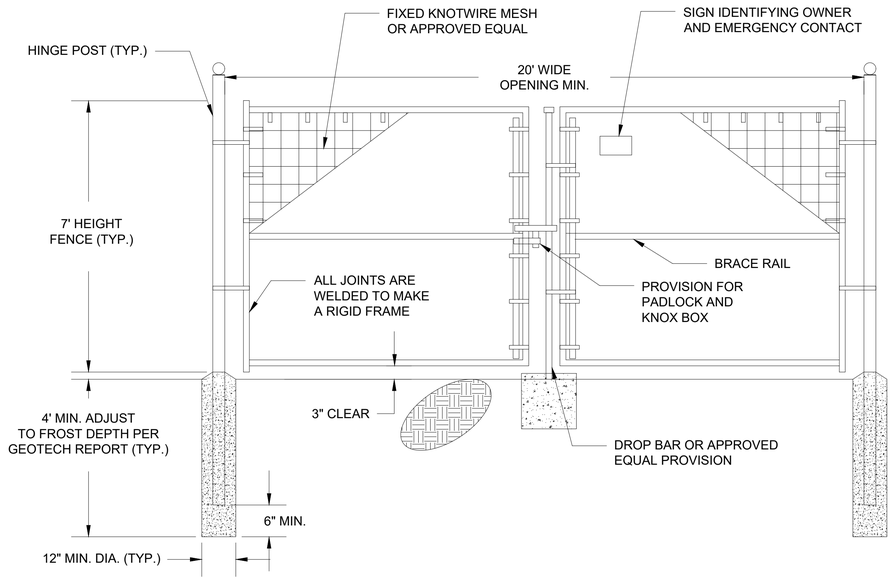


1 FIXED KNOT FARM FENCE DETAIL

NOT TO SCALE

NOTES:

1. INSTALL ALL FENCING COMPONENTS PER MANUFACTURERS SPECIFICATIONS.
2. ALL FENCING AND HARDWARE SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.
3. ALL SQUARE POSTS TO BE MIN. 5"X5" NOMINAL SIZE OR ROUND POST WITH MIN. 5" OR 6" DIAMETER PRESSURE TREATED WOOD OR APPROVED EQUAL. PREFER POSTS TO HAVE A CHAMFERED TOP.
4. ALL LINE POST TO BE SET TO A MIN. DEPTH OF 4' BELOW GRADE, ALL CORNER, END OR GATE POSTS SHALL BE SET TO A MIN. DEPTH OF 6' BELOW GRADE, UNLESS OTHERWISE NOTES.
5. FIXED KNOT WIRE MESH TO BE BEKAERT SOLID LOCK® PRO, 12.5 GUAGE, CLASS 3 GLAVANIZED, 6" VERTICAL SPACING OR APPROVED EQUAL.
6. BRACING IS REQUIRED AT ALL CORNER, END AND GATE POSTS, DOUBLE BRACING (TWO BRACE ASSEMBLIES IN A ROW) SHOULD BE USED FOR STRAIGHT RUNS OF FENCE THAT EXCEED 1,000 LF. AN ADDITIONAL BRACE ASSEBMLY SHOULD BE INSTALLED MID SPAN FOR STRAIGHT RUNS OF FENCE THAT EXCEED 1,320 LF. ADDITIONAL BRACING MAY BE STILL BE REQUIRED OVER UNEVEN TERRAIN, CONTRACTOR SHALL INSTALL ADDITIONAL BRACING AS NEEDED IF DEFLECTION IS NOTICED DURING TENSIONING.



2 FIXED KNOT FARM FENCE 20' WIDE DOUBLE SWING GATE DETAIL

NOT TO SCALE

NOTES:

1. INSTALL ALL FENCING COMPONENTS PER MANUFACTURER'S SPECIFICATIONS.
2. ALL FENCING AND HARDWARE SHALL BE GALVANIZED, UNLESS OTHERWISE NOTES.
3. HINGE POSTS MAY BE TIMBER IF CONTRACTOR DESIRES, TIMBER HINGE POSTS DO NOT NEED TO BE SET IN CONCRETE. UTILIZE HINGE THRU BOLTS TO CONNECT TO TIMBER HINGE POSTS OR LAG SCREWS, PER MANUFACTURERS RECOMMENDATIONS.
4. IF CONTRACTOR UTILIZES METAL HINGE POST THAN POSTS SHALL BE SET IN CONCRETE AS SHOWN IN DETAIL.
5. BRACING REQUIRED AT FOR ALL GATES. SEE FIXED KNOT FARM FENCE DETAIL.
6. FIXED KNOT WIRE MESH TO BE BEKAERT SOLIDLOCK® PRO, 12.5 GUAGE, CLASS 3 GLAVANIZED, 6" VERTICAL SPACING OR APPROVED EQUAL.
7. BRACE RAIL SHOWN FOR REFERENCE ADDITIONAL BRACE RAILS MAY BE REQUIRED (NOT SHOWN) OR TRUSS RODS MAY BE REQUIRED PER MANUFACTURER'S RECOMMENDATIONS.

GENERAL NOTES:

ADDITIONAL FENCING AND GATE DETAILS TO BE FURTHER REVIEWED BY KANE COUNTY OF RECORD AUTHORITY HAVING JURISDICTION DURING BUILDING PERMIT APPROVAL. THE FOLLOWING PLAN IS CONCEPTUAL, PRELIMINARY SCHEMATIC DESIGN AND IS SUBJECT TO CHANGE.

Date	Revision Details	PM	ENG	CHK
01/03/2025	ISSUED FOR SUP			
11/29/2024	ISSUED FOR BPLER			
10/03/2024	ISSUED FOR IX			

Revision Table

Engineer :
ANATOLIY ZELTSER
PROJECT ENGINEER
SURYA POWERED LLC
RUTLAND WEST SOLAR FARM LLC
141 W. JACKSON BLVD STE 1692
CHICAGO, IL 60604

Developer :
RUTLAND WEST SOLAR FARM LLC
141 W JACKSON BLVD, STE 1692
CHICAGO, IL 60604
WWW.SURYAPOWERED.COM

Project Name & Address :
RUTLAND WEST SOLAR FARM
REINKING RD. & IL-21,
HAMPSHIRE, IL 60140
KANE COUNTY
P.I.N. 02-19-200-006 & 02-18-400-009

Drawing Title :
FENCE DETAILS
TYPICAL DETAILS, CUT SECTIONS & ELEVATIONS OF FENCING & DOUBLE SWING ACCESS GATE.

Project Number :	Drawing Number :
8884 b	W - DEV.05 - FD
Paper Size :	Sheet Number :
24" X 36"	05

GENERAL NOTES:

ADDITIONAL EQUIPMENT SPECIFICATION DETAILS TO BE FURTHER REVIEWED BY KANE COUNTY OF RECORD AUTHORITY HAVING JURISDICTION DURING BUILDING PERMIT APPROVAL. THE FOLLOWING PLAN IS CONCEPTUAL, PRELIMINARY SCHEMATIC DESIGN AND IS SUBJECT TO CHANGE.

CPS

Datasheet

100/125 kW, 1500 Vdc String Inverters for North America

CPS SCH100/125KTL-DO/US-600

The 100 and 125 kW high power CPS three-phase string inverters are designed for ground mount applications. The units are high performance, advanced, and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges, and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125 kW products ship with the Distributed or Centralized Wire Box, each fully integrated and separable with AC and DC disconnect switches. Enhanced DC Wire Boxes are available to allow DC disconnection under short circuit conditions. The CPS FlexOM Gateway enables communication, controls, and remote product upgrades.

Key Features

- NFPA 70 and NEC compliant
- Touch-safe DC Fuse holders add convenience and safety
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper- and aluminum-compatible AC connections
- NEMA Type 4X outdoor rated enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100 kW @ 0.9 PF and 125 kW @ 0.95 PF
- Generous 1.87 (100 kW) and 1.5 (125 kW) DC/AC inverter load ratios
- Separable wire box design for fast service
- Enhanced DC wire boxes available

Standard Wire Boxes

Enhanced DC Wire Boxes

This device complies with part 15 of the FCC Rules

Chint Power Systems America
1380 Presidential Drive, Suite 100, Richardson, TX 75081
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

CPS

Technical Data

Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV power	187.5 kW	
Max. DC input voltage	1500 V	
Operating DC input voltage range	860-1450 Vdc	
Start-up DC input voltage / power	900 V / 250 W	
Number of MPP trackers	1	
MPPT voltage range[1]	870-1300 Vdc	
Max. PV input current (Isc ×1.25)	275 A	
Number of DC inputs	Distributed Wire Box: 20 PV source circuits, positive and negative fused Centralized Wire Box: 1 input circuit, 1-2 terminations per pole, non-fused	
DC disconnection type	Load-rated DC switch	
DC surge protection	Type II MOV (with indicator/remote signaling)	
AC Output		
Rated AC output power[2]	100 kW	125 kW
Max. AC apparent power (selectable)	100 kVA (111 kVA @ PF > 0.9)	125 kVA (132 kVA @ PF > 0.95)
Rated output voltage	600 Vac	
Output voltage range[3]	528-660 Vac	
Grid connection type[4]	3Φ / PE / N (neutral optional)	
Max. AC output current @ 600 Vac	96.2 / 106.8 A	120.3 / 127.0 A
Rated output frequency	60 Hz	
Output frequency range[3]	57-63 Hz	
Power factor	>0.99 (±0.8 adjustable)	
Current THD	< 3%	
Max. fault current contribution (1 cycle RMS)	41.47 A	
Max. OCPD rating	200 A	
AC disconnection type	Load-rated AC switch	
AC surge protection	Type II MOV (with indicator/remote signaling)	
System		
Topology	Transformerless	
Max. efficiency	99.1%	
CEC efficiency	98.5%	
Standby / night consumption	< 4 W	
Environment		
Enclosure protection degree	NEMA Type 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range[2]	-22°F to 140°F / -30°C to 60°C	
Non-operating temperature range[5]	-40°F to 158°F / -40°C to 70°C	
Operating humidity	0-100%	
Operating altitude	8202 ft / 2500 m (no derating)	
Audible noise	< 65 dBA @ 1 m and 77°F (25°C)	
Display and Communication		
User interface and display	LED indicators, Wi-Fi and app	
Inverter monitoring	Modbus RS485	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W × H × D)	Distributed Wire Box: 45.28 × 24.25 × 9.84 in (1150 × 616 × 250 mm) Centralized Wire Box: 39.37 × 24.25 × 9.84 in (1000 × 616 × 250 mm)	
Weight	Inverter: 121 lbs (55 kg) Distributed Wire Box: 55 lbs (25 kg) Centralized Wire Box: 33 lbs (15 kg)	
Mounting / installation angle	15-90 degrees from horizontal (vertical or angled)	
AC termination	M10 stud type terminal [3Φ] (wire range: 1/0 AWG-500 kcmil CU/AL; lugs not supplied) Screw clamp terminal block [N] (#12-1/0 AWG CU/AL)	
DC termination	Distributed Wire Box: Screw clamp fuse holder (wire range: #12-#6 AWG CU) Centralized Wire Box: Busbar, M10 bolts (wire range: #1 AWG-500 kcmil CU/AL [1 termination per pole], #1 AWG-300 kcmil CU/AL [2 terminations per pole]; lugs not supplied)	
Fused string inputs	Standard/Distributed Wire Boxes: 25 A fuses provided (fuse values up to 30 A acceptable) Enhanced DC Wire Boxes: 20 A fuses provided (fuse values up to 30 A acceptable)	
Safety		
Certifications and standards	UL 1741-SA/SB Ed. 3, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART15	
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018[6], CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Vol-Watt	
Warranty		
Standard	5 years	
Extended terms	10, 15, and 20 years	

1) See user manual for further information regarding MPPT voltage range when operating at non-unity PF.
2) 100 kW active power derating begins at 113°F (45°C) when MPPT ≥ Vmin; 125 kW active power derating begins at 107.6°F (42°C) when PF = ±0.95 and MPPT ≥ Vmin, and at 113°F (45°C) when PF=1 and MPPT ≥ Vmin.
3) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.
4) Delta configurations must not be corner-grounded.
5) See user manual for further requirements regarding non-operating conditions.
6) Firmware version 12.0 or later required.

2 EQUIPMENT SPECIFICATION CUT SHEET DETAIL: STRING INVERTER 125 KWATT (DC)

NOT TO SCALE

Mono Multi Solutions

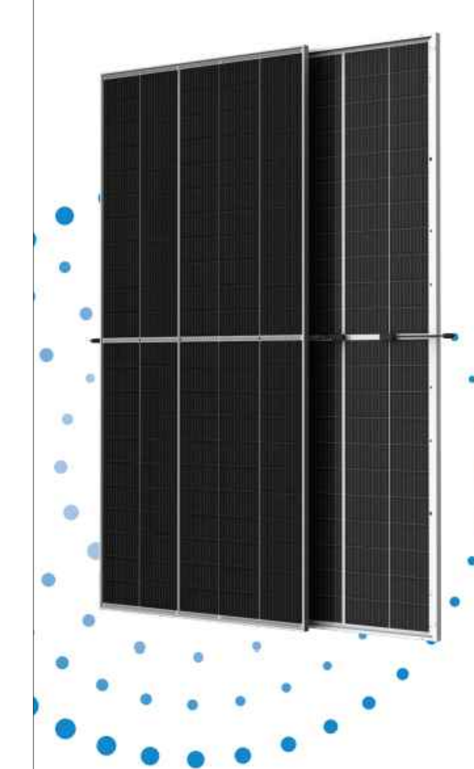
Vertex

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

PRODUCT: TSM-DEG19C.20

PRODUCT RANGE: 535-555W

555W	0~+5W	21.2%
MAXIMUM POWER OUTPUT	POSITIVE POWER TOLERANCE	MAXIMUM EFFICIENCY



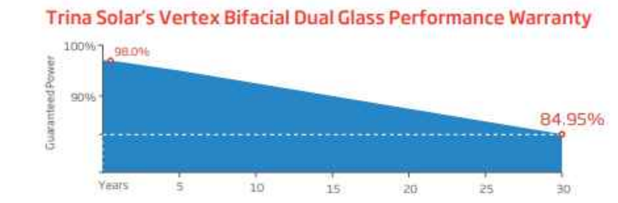
High customer value
- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lowest guaranteed first year and annual degradation;
- Designed for compatibility with existing mainstream system components
- Higher return on Investment

High power up to 555W
- Up to 21.2% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

High reliability
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load

High energy yield
- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions
- Lower temperature coefficient (-0.34%) and operating temperature
- Up to 25% additional power gain from back side depending on albedo

Trina Solar's Vertex Bifacial Dual Glass Performance Warranty



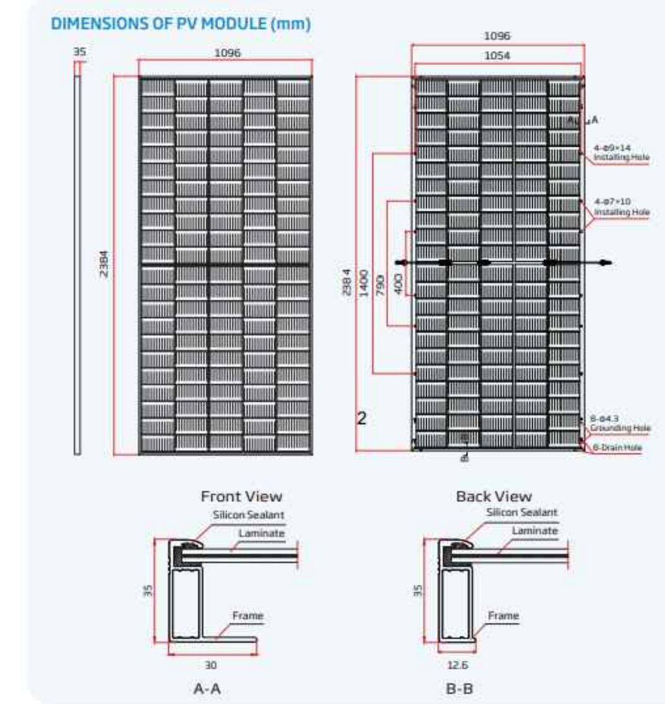
Comprehensive Products and System Certificates

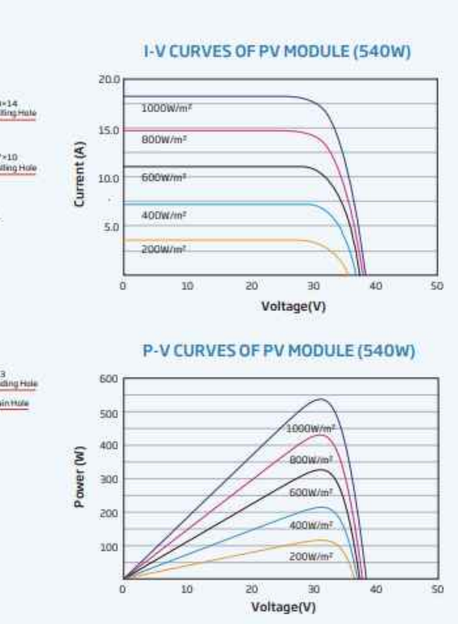
IEC61215/IEC61730/IEC61701/IEC62716/UL61730
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System

Trinasolar

Vertex BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

DIMENSIONS OF PV MODULE (mm)





ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	535	540	545	550	555
Power Tolerance-PMAX (W)			0 ~ +5		
Maximum Power Voltage-VMPP (V)	31.2	31.4	31.6	31.8	32.0
Maximum Power Current-IMPP (A)	17.16	17.21	17.24	17.29	17.35
Open Circuit Voltage-VOC (V)	37.5	37.7	37.9	38.1	38.3
Short Circuit Current-ISC (A)	18.24	18.30	18.35	18.39	18.43
Module Efficiency η m (%)	20.5	20.7	20.9	21.0	21.2

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

Electrical characteristics with different power bin (reference to 10% Irradiance ratio)

Total Equivalent power -PMAX (Wp)	573	578	583	589	594
Maximum Power Voltage-VMPP (V)	31.2	31.4	31.6	31.8	32.0
Maximum Power Current-IMPP (A)	18.36	18.41	18.45	18.50	18.56
Open Circuit Voltage-VOC (V)	37.5	37.7	37.9	38.1	38.3
Short Circuit Current-ISC (A)	19.52	19.58	19.63	19.68	19.72
Irradiance ratio (rear/front)			10%		

Power Bifaciality: 70±5%.

ELECTRICAL DATA (NOCT)

Maximum Power-PMAX (Wp)	405	409	413	416	420
Maximum Power Voltage-VMPP (V)	29.0	29.2	29.4	29.5	29.7
Maximum Power Current-IMPP (A)	13.97	14.02	14.08	14.10	14.14
Open Circuit Voltage-VOC (V)	35.3	35.5	35.7	35.9	36.1
Short Circuit Current-ISC (A)	14.70	14.75	14.79	14.82	14.85

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline 210mm PERC
No. of cells	110 cells
Module Dimensions	2384×1096×35 mm (93.86×43.15×1.38 in)
Weight	32.3 kg (71.2 lb)
Front Glass	2.0 mm (0.08 in), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Back Glass	2.0 mm (0.08 in), Heat Strengthened Glass (White Grid Glass)
Frame	35mm (1.38 in) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 in²) Portrait: 350/280 mm (13.78/11.02 in)* Landscape: 1400/1400 mm (55.1/55.1 in)*
Connector	MC4 EVO2 / TS4

*Lengths can be customized.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of PMAX	- 0.34%/°C
Temperature Coefficient of VOC	- 0.25%/°C
Temperature Coefficient of ISC	0.04%/°C

*Recommended.

MAXIMUMRATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC) 1500V DC (UL)
Max Series Fuse Rating	35A*

WARRANTY

12 year Product Workmanship Warranty
30 year Power Warranty
2% first year degradation
0.45% Annual Power Attenuation
(Please refer to product warranty for details)

PACKAGING CONFIGUREATION

Modules per box: 31 pieces
Modules per 40' container: 527 pieces

Trinasolar

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_DEG19C.20_NA_EN_2022_C www.trinasolar.com

1 EQUIPMENT SPECIFICATION CUT SHEET DETAIL: PV MODULE 550 WATT (DC)

NOT TO SCALE

Date	Revision Details	PM	ENG	CHK
01/03/2025	ISSUED FOR SUP			
11/29/2024	ISSUED FOR BPLER			
10/03/2024	ISSUED FOR IX			

Revision Table

Engineer :
ANATOLIY ZELTSER
PROJECT ENGINEER
SURYA POWERED LLC
RUTLAND WEST SOLAR FARM LLC
141 W. JACKSON BLVD STE 1692
CHICAGO, IL 60604

Developer :
RUTLAND WEST SOLAR FARM LLC
141 W JACKSON BLVD, STE 1692
CHICAGO, IL 60604
WWW.SURYAPOWERED.COM

Project Name & Address :

RUTLAND WEST SOLAR FARM

REINKING RD. & IL-21,
HAMPSHIRE, IL 60140
KANE COUNTY
P.I.N. 02-19-200-006 & 02-18-400-009

Drawing Title :

EQUIPMENT SPECIFICATIONS

TYPICAL DETAILS, CUT SHEETS & SPECIFICATIONS OF PV MODULE & STRING INVERTER EQUIPMENT.

Project Number :	Drawing Number :
8884 b	W - DEV.06 - ES
Paper Size :	Sheet Number :
24" X 36"	06