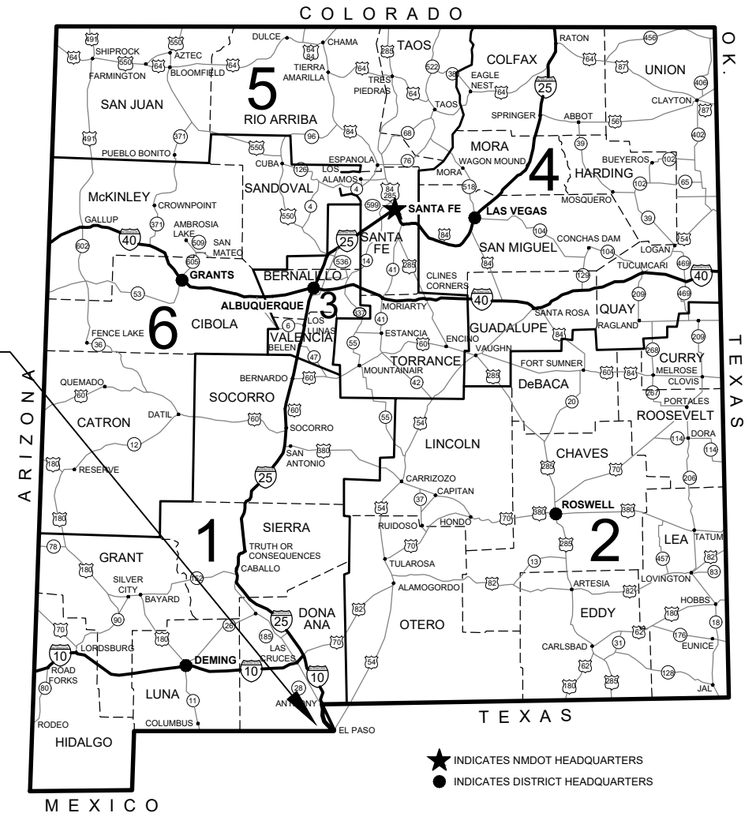
New Mexico
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS

Issue For Bid & Construction
October 15,2025

CN E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID



CN E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID

South Central Regional Transit

2001 Futurity Drive
Sunland Park NM
88063

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM CADD MANAGER
(JOSE)
6-Oct-25

Drawing File: H:\2025 PROJECTS\25038\DRAWINGS\03_CAD FILES\SHTS-ELEC\E1004801COVER.DWG
8:46 AM

PROJECT CONTROL NUMBER: E100480

1
1 – 2

VICINITY MAP

SCALE: N.T.S.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
VICINITY MAP

RBM CADD MANAGER (JOSE)
6-Oct-25

Drawing File: H:\2025 PROJECTS\25038\DRAWINGS\03_CAD FILES\SHTS-ELEC\E1004801VM02.DWG
8:46 AM

PROJECT DEVELOPED BY: RBM

DRAWING SCALE: N.T.S.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
SERIES 1	
1-1	COVER SHEET
1-2	VICINITY MAP
1-3	INDEX OF SHEETS
1-4	SUMMARY OF QUANTITIES
1-5	QUANTITY SHEET
1-6	QUANTITY SHEET
1-7	QUANTITY SHEET
1-8	GENERAL NOTES
1-9	SITE BOUNDARY MAP
1-10	2022 PROPERTY BOUNDARY
1-11	2019 PROPERTY BOUNDARY
1-12	TOPOGRAPHIC MAP
1-13	0.25 MILE RADIUS RAILROAD SEPERATION MAP
1-14	0.5 MILE RADIUS RAILROAD SEPERATION MAP
1-15	1.0 MILE RADIUS RAILROAD SEPERATION MAP
1-16	ENVIRONMENTAL COMMITMENTS
	SUBTOTAL = 16
SERIES 2	
	SUBTOTAL = 0
SERIES 3	
	SUBTOTAL = 0
SERIES 4	
	SUBTOTAL = 0
SERIES 5	
	SUBTOTAL = 0

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
SERIES 6	
	SUBTOTAL = 0
SERIES 7	
	SUBTOTAL = 0
SERIES 8	
	SUBTOTAL = 0
SERIES 9	
	SUBTOTAL = 0
SERIES 10	
	SUBTOTAL = 0
SERIES 11	
11-1	**ELECTRICAL SITE PLAN**
11-2	**ELECTRICAL RISER DIAGRAMS KEY NOTES**
11-3	**ELECTRICAL RISER DIAGRAMS SOLAR SYSTEM A**
11-4	**ELECTRICAL RISER DIAGRAMS SOLAR SYSTEM B**
11-5	**SOLAR ARRAY BASIS OF DESIGN**
11-6	**PV MODULE DC CABLE DETAILS**
11-7	**WIRING AND COMBINER DETAILS**
11-8	**PV RACK DETAILS**
11-9	**PV RACK DETAILS**
11-10	**UNDERGROUND DC CABLE INTERCONNECT**
11-11	**RACK GROUNDING DETAILS**
	SUBTOTAL = 11
SERIES 12	
	SUBTOTAL = 0
SERIES 13	
	SUBTOTAL = 0
SERIES 14	
	SUBTOTAL = 0
	PROJECT SHEET TOTAL = 27

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
INDEX OF SHEETS

SUMMARY OF QUANTITIES

BID ITEM #	DESCRIPTION	UNIT	QTY.
621000	MOBILIZATION	LS	1
663213	SOLAR SYSTEM (REFER TO SECTION 5 NTC ITEMIZED LIST)	LS	1
802000	POST CONSTRUCTION PLANS	LS	1
803030	TRAINING FOR INVERTERS, PV MODULES, BATTERY STORAGE	LS	1

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
SUMMARY OF QUANTITIES

QUANTITIES SHEET

LINE	DESCRIPTION	UNITS	EST. QTY.
1	2" PVC SCH 40, 24" BURY DC INTERCONNECT CABLES. SEE SHEET 1-5.	LF	223
2	UNDERGROUND DC CABLES FROM THE RESPECTIVE SOLAR ARRAY TO THE RESPECTIVE INVERTER. SEE SHEET 1-5.	LS	1
3	2" PVC SCH 40, BURY 24" FOR INTERCONNECT CONTROL WIRES. SEE SHEET 11-3.	LF	322
4	INTERCONNECT CONTROL WIRES, SEE SHEET 11-3.	LF	360
5	2" PVC SCH 40, BURY 24" FOR FEEDER TO PV METER SEE SHEET 11-3.	LF	322
6	4-3/0 CU, 1-#4 CU G. SEE SHEET 11-3.	LF	360
7	2" PVC SCH 40, BURY 24" FOR FEEDER TO ATS SEE SHEET 11-3.	LF	322
8	4-3/0 CU, 1-#4 CU G. SEE SHEET 11-3.	LF	360
9	2" PVC SCH 40, BURY 24" FOR INTERCONNECT CONTROL WIRES. SEE SHEET 11-4	LF	273
10	INTERCONNECT CONTROL WIRES, SEE SHT 11-4	LF	293
11	2" PVC SCH 40, BURY 24" FOR FEEDER TO PV METER SEE SHEET 11-4	LF	273
12	4-3/0 CU, 1-#4 CU G. SEE SHEET 11-4	LF	293
13	2" PVC SCH 40, BURY 24" FOR FEEDER TO ATS SEE SHEET 11-4	LF	273
14	4-3/0 CU, 1-#4 CU G. SEE SHEET 11-4	LF	293
15	60 PV MODULES ATTACHED TO A GROUND MOUNT METAL FRAME. A COMPLETE METAL FRAME SYSTEM TILTED 28 DEGREES WITH ALL BOLTED CONNECTIONS. FRAME IS ANCHORED WITH MULTIPLE HELIX ANCHORS. GROUNDING WIRING AND CONNECTIONS. ALL OTHER MISC. ITEMS	EA.	8
16	30 PV MODULES ATTACHED TO A GROUND MOUNT METAL FRAME. A COMPLETE METAL FRAME SYSTEM TILTED 28 DEGREES WITH ALL BOLTED CONNECTIONS. FRAME IS ANCHORED WITH MULTIPLE HELIX ANCHORS. GROUNDING WIRING AND CONNECTIONS. ALL OTHER MISC. ITEMS	EA.	1
17	DEMOLITION OF CONDUIT, WIRE AND METER AT TRANSFORMER T-A. NEW SERVICE LATERAL CONDUIT AND WIRE, BURY 24". NEW ELECTRICAL GEAR, CONDUIT AND WIRE AT SOLAR SYSTEM A ELECTRICAL SERVICE. NEW METER CAN AT CT ENCLOSURE, NEW CT ENCLOSURE, NEW PV METER CAN, NEW GUTTER, NEW DISCONNECTS 200A AND 400A. NEW ATS FOR BESS. NEW SERVICE ENTRANCE GROUND. SEE SHEET 11-3. ALL OTHER MISC. ITEMS.	LS	1
18	DEMOLITION OF CONDUIT, WIRE AND METER AT TRANSFORMER T-B. NEW SERVICE LATERAL CONDUIT AND WIRE, BURY 24". NEW ELECTRICAL GEAR, CONDUIT AND WIRE AT SOLAR SYSTEM B ELECTRICAL SERVICE. NEW METER CAN AT CT ENCLOSURE, NEW CT ENCLOSURE, NEW PV METER CAN, NEW GUTTER, NEW DISCONNECTS 200A AND 400A. NEW ATS FOR BESS. NEW SERVICE ENTRANCE GROUND. SEE SHEET 11-4. ALL OTHER MISC. ITEMS.	LS	1
19	SOLAR DC COMBINER, INVERTER, AC COMBINER BOX, MICROGRID CONTROLLER, BATTERY STORAGE WITH CONCRETE PAD. INTERCONNECT CONDUITS AND WIRES FOR DC CONNECTIONS. INTERCONNECT CONDUITS AND WIRES FOR AC CONNECTIONS. INTERCONNECT CONDUIT AND WIRES FOR COMMUNICATIONS AND CONTROLS. TERMINATIONS AND PROGRAMMING. SEE SHEET 11-3. ALL OTHER MISC. ITEMS.	LS	1
20	SOLAR DC COMBINER, INVERTER, AC COMBINER BOX, MICROGRID CONTROLLER, BATTERY STORAGE WITH CONCRETE PAD. INTERCONNECT CONDUITS AND WIRES FOR DC CONNECTIONS. INTERCONNECT CONDUITS AND WIRES FOR AC CONNECTIONS. INTERCONNECT CONDUIT AND WIRES FOR COMMUNICATIONS AND CONTROLS. TERMINATIONS AND PROGRAMMING. SEE SHEET 11-4. ALL OTHER MISC. ITEMS.	LS	1

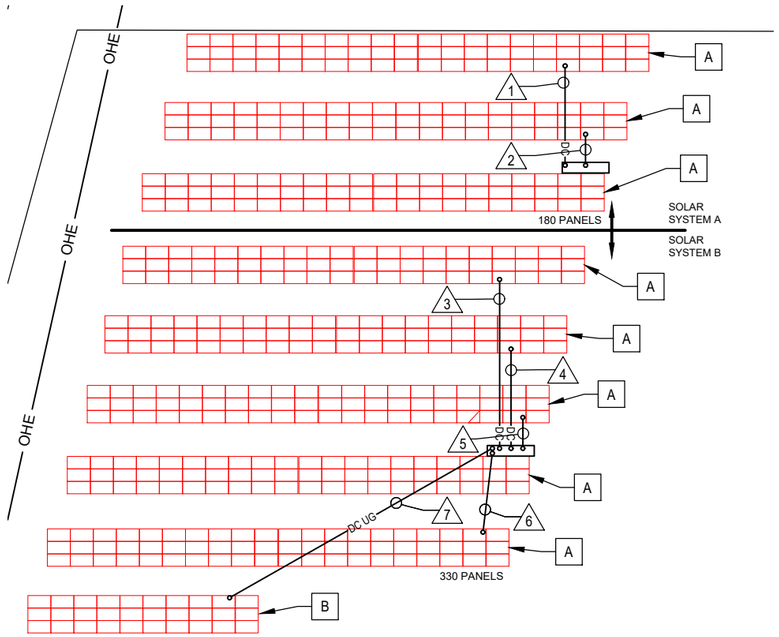
663213 – Solar System

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

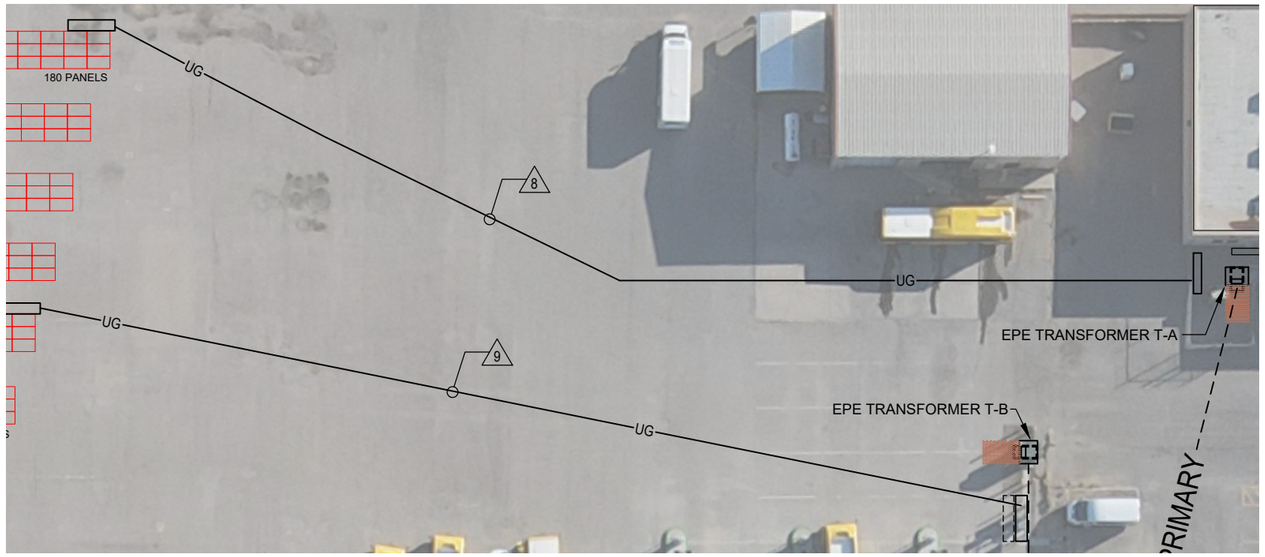
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
QUANTITIES SHEET



2 / 1 - 6 **BID ITEM PLAN**

SCALE: 1" = 500'



1 / 1 - 6 **BID ITEM PLAN**

SCALE: 1" = 500'

SHEET TOTAL				
DESIGNATION	NTC ITEMIZED LIST FORM LINE ITEM (NOTE 1)	DESCRIPTION	UNIT	QTY.
1	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	26
2	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	9
3	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	47
4	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	27
5	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	9
6	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	22
7	1,2	2" PVC SCH 40 BURIED 24" WITH DC CABLES	LF	83
8	3,4,5,6,7,8	UNDERGROUND INTERCONNECT CONTROL CONDUIT, CONTROL WIRES, 208V 3 PHASE FEEDER TO ELECTRICAL SERVICE AT XFMR T-A. SEE SHEET 11-3 FOR SIZE	LF	322
9	9,10,11,12,13,14	UNDERGROUND INTERCONNECT CONTROL CONDUIT, CONTROL WIRES, 480V 3 PHASE FEEDER TO ELECTRICAL SERVICE AT XFMR T-B. SEE SHEET 11-4 FOR SIZE	LF	273
A	15	GROUND MOUNT SOLAR ARRAY, 60 PV MODULES, SUPPORTS, HELIX SUPPORT ANCHORS, GROUNDING, ALL OTHER MISC ITEMS	EA.	8
B	16	GROUND MOUNT SOLAR ARRAY, 30 PV MODULES, SUPPORTS, HELIX SUPPORT ANCHORS, GROUNDING, ALL OTHER MISC ITEMS	EA.	1

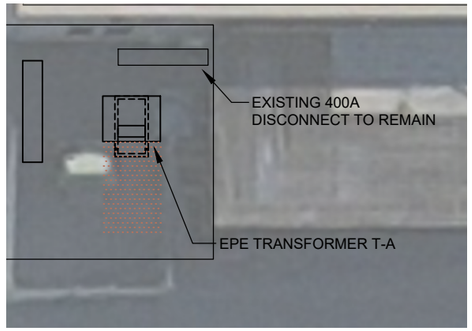
NOTE 1: ALL ITEMS ARE TO BE BID AS 663213 - SOLAR SYSTEM. REFER TO THE REFERENCED NTC FOR THE LINE NUMBER SHOWN HERE FOR MORE DETAIL FOR THE BID ITEM.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

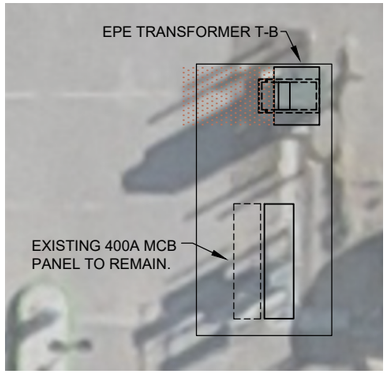
RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

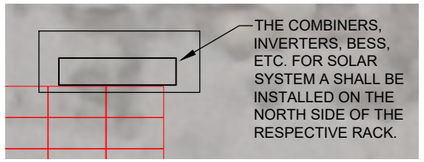
E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
QUANTITY SHEET



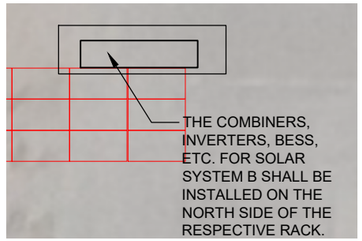
C ELECTRICAL SERVICE RENOVATIONS AT TRANSFORMER T-A
SEE RISER DIAGRAM ON SHEET 11-3



D ELECTRICAL SERVICE RENOVATIONS AT TRANSFORMER T-B
SEE RISER DIAGRAM ON SHEET 11-4



E SOLAR SYSTEM A - SOLAR DC COMBINER, AC COMBINER, INVERTER, MICROGRID CONTROLLER, BATTERY STORAGE, CONCRETE PAD. ALL OTHER MISC ITEMS. SEE SHEET 11-3



F SOLAR SYSTEM B - SOLAR DC COMBINER, AC COMBINER, INVERTER, MICROGRID CONTROLLER, BATTERY STORAGE, CONCRETE PAD. ALL OTHER MISC ITEMS. SEE SHEET 11-4

SHEET TOTAL

DESIGNATION	NTC ITEMIZED LIST FORM LINE ITEM (NOTE 1)	DESCRIPTION	UNIT	QTY.
C	17	SOLAR SYSTEM A ELECTRICAL SERVICE DEMOLITION AND NEW WORK. SEE SHEET 11-3.	LS	1
D	18	SOLAR SYSTEM B ELECTRICAL SERVICE DEMOLITION AND NEW WORK. SEE SHEET 11-4.	LS	1
E	19	SOLAR SYSTEM A - SOLAR DC COMBINER, AC COMBINER, INVERTER, MICROGRID CONTROLLER, BATTERY STORAGE, CONCRETE PAD, ALL OTHER MISC ITEMS. SEE SHEET 11-3.	LS	1
F	20	SOLAR SYSTEM B - SOLAR DC COMBINER, AC COMBINER, INVERTER, MICROGRID CONTROLLER, BATTERY STORAGE, CONCRETE PAD, ALL OTHER MISC ITEMS. SEE SHEET 11-4.	LS	1

NOTE 1: ALL ITEMS ARE TO BE BID AS 663213 - SOLAR SYSTEM. REFER TO THE REFERENCED NTC FOR THE LINE NUMBER SHOWN HERE FOR MORE DETAIL FOR THE BID ITEM.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
QUANTITY SHEET

GENERAL NOTES:

1. CONSULT THE ENGINEER OF RECORD BEFORE DEVIATING FROM THIS DRAWING PACKAGE.
2. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED AMONG SITE CONDITIONS, MANUFACTURER RECOMMENDATIONS, OR AUTHORITY HAVING JURISDICTION.
3. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE APPLICABLE STATE ELECTRICAL CODE, APPLICABLE STATE BUILDING CODE, BUILDING OR SITE MANAGEMENT AND ALL AUTHORITIES HAVING JURISDICTION AND APPLICABLE NATIONAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK. ALL FURNISHED AND INSTALLED ELECTRICAL COMPONENTS AND MATERIALS SHALL BE LISTED FOR ITS PURPOSE. CONTRACTOR IS TO INFORM ENGINEERS OF ANY EXISTING WORK OR MATERIALS WHICH MAY VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED AT CONTRACTORS EXPENSE AND AT NO EXPENSE TO CONEDISON.
4. THE DRAWINGS INDICATE THE INTENT OF THE DESIGN AND SHALL BE CONSIDERED AS DIAGRAMMATIC ONLY. EXACT EQUIPMENT LOCATIONS AND INSTALLATION MEANS SHALL BE DETERMINED AT THE SITE, AS WORK PROGRESSES DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE. FINAL WORK SHALL BE DOCUMENTED ON AS-BUILT RECORD DRAWINGS.
5. PRIOR TO SUBMISSION OF THE BID, THE CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATE TO THE WORK AS INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ATTENTION OF CONEDISON PRIOR TO SUBMISSION OF THE BID AND IF NOT RESOLVED TO SATISFACTION, SHALL BE SUBMITTED AS A WRITTEN QUALIFICATION OF THE ABOVE BID. SUBMISSION OF A BID SHALL BE EVIDENCE THAT SITE VERIFICATION HAS BEEN PERFORMED AS DESCRIBED ABOVE.
6. IF A CONFLICT EXISTS BETWEEN THE SPECIFICATIONS, EPC CONTRACT AND/OR DRAWINGS; THE EPC CONTRACT SHALL APPLY.
7. ANY EQUIPMENT, SUPPORTS, PARTS, MATERIALS, ACCESSORIES, OR LABOR THAT IS NECESSARY FOR PROPER PERFORMANCE OF THE ELECTRICAL WORK, ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED AS IF CALLED FOR IN DETAIL WITHOUT ADDITIONAL COST.
8. THE ELECTRICAL CONTRACTOR IS ADVISED THAT ALL DRAWINGS AND COMPONENT MANUALS ARE TO BE UNDERSTOOD PRIOR TO INSTALLATION. THE CONTRACTOR IS ADVISED TO HAVE ALL SWITCHES IN THE "OFF' POSITION AND FUSES REMOVED PRIOR TO INSTALLATION OF FUSE-BEARING COMPONENTS.
9. THIS SYSTEM IS INTENDED TO BE OPERATED IN PARALLEL WITH THE UTILITY SERVICE PROVIDER. ANTI-ISLANDING PROTECTION IS A REQUIREMENT OF UL 1741 AND IS INTENDED TO PREVENT THE OPERATION OF THE PV SYSTEM WHEN THE UTILITY GRID IS NOT OPERATIONAL.
10. PERMISSION TO OPERATE THE SYSTEM IS NOT AUTHORIZED UNTIL FINAL INSPECTIONS AND APPROVALS ARE OBTAINED FROM THE LOCAL AUTHORITY HAVING JURISDICTION AND THE LOCAL UTILITY SERVICE PROVIDER.
11. THIS SYSTEM IS INTENDED TO CONNECT TO THE EXISTING UTILITY POWER GRID SYSTEM AT ONE POINT, POINT OF COMMON COUPLING (PCC). THIS CONNECTION SHALL BE IN COMPLIANCE WITH NEC ARTICLE 705..
12. DO NOT SCALE DRAWINGS. ALL DIMENSIONS AND LAYOUT SHALL BE FIELD VERIFIED. REPORT ANY DIMENSIONAL CONFLICTS IMMEDIATELY TO SSI.

SCOPE OF WORK:

1. THE PROJECT SCOPE INCLUDES THE INSTALLATION OF A 200 KW DC RATED PHOTOVOLTAIC SYSTEM.
2. THE INSTALLATION CONSISTS OF A GROUND MOUNT SOLAR ARRAY, INVERTERS AND RELATED ELECTRICAL METERING AND SAFETY EQUIPMENT. ALL EQUIPMENT WILL BE INSTALLED AS REQUIRED BY APPLICABLE CODES AND THE LOCAL UTILITY COMPANY.
3. DURING DAYLIGHT HOURS, THIS PV SYSTEM (SOLAR ELECTRIC) WILL PROVIDE ELECTRICITY IN PARALLEL WITH THE LOCAL UTILITY SERVICE PROVIDER.

WIRING, EQUIPMENT AND INSTALLATION METHODS:

1. EXPOSED PV SOLAR PANEL WIRING WILL BE PV WIRE, 90 DEGREE C, WET RATED AND UV RESISTANT. ALL EXPOSED CABLES, SUCH AS MODULE LEADS SHALL BE SECURED WITH MECHANICAL OR OTHER SUNLIGHT RESISTANT MEANS.
2. FOR GROUNDED MONO-POLAR SYSTEMS, GROUNDED CONDUCTORS ARE WHITE. FOR UNGROUNDED MONO-POLAR SYSTEMS, POSITIVE CONDUCTORS ARE RED, NEGATIVE CONDUCTORS ARE BLACK. FOR BI-POLAR SYSTEMS, POSITIVE/HOT CONDUCTORS ARE RED, NEGATIVE/HOT CONDUCTORS ARE BLACK AND NEUTRAL (GROUNDED) CONDUCTORS ARE WHITE. REGARDLESS OF SYSTEM TYPE EQUIPMENT GROUNDING CONDUCTORS ARE GREEN OR BARE (NEC 200.6).
3. ALL FIELD WIRING LARGER THAN 6 AWG THAT IS NOT COLOR CODED SHALL BE TAGGED AT BOTH ENDS WITH PERMANENT WIRE MARKERS TO IDENTIFY POLARITY AND GROUND.
4. FOR BI-POLAR SYSTEMS, POSITIVE/HOT AND NEGATIVE/HOT WIRES MUST REMAIN SEPARATED AT ALL TIMES. LINE-TO-LINE FAULTS BETWEEN POLARITIES MUST BE AN IMPOSSIBLE OCCURRENCE.
5. ALL LV WIRING (</=1500V DC, </=600V AC) SHALL BE COPPER OR ALUMINUM WIRE AS NOTED, RATED AT 90 DEGREES C, AND RATED FOR 1500V IF DC AND 600V IF AC UNLESS NOTED OTHERWISE.
6. ALL DC MATERIALS SHALL BE LISTED FOR A MINIMUM OF 2,000V DC.
7. ALL OUTDOOR EQUIPMENT SHALL MEET APPROPRIATE NEMA STANDARDS.
8. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL OR GALVANIZED FOR PROTECTION FROM ENVIRONMENTAL ELEMENTS.
9. SPLIT BOLT/SPLICES/CONNECTORS SHALL BE INSULATED WITH APPROVED MEANS. ELECTRICAL TAPE ALONE IS NOT SUITABLE AS THE ONLY INSULATION MEANS. FOLLOW MANUFACTURERS INSTRUCTIONS FOR APPLICATION OF INSULATING PRODUCT.
10. ALL ENCLOSURES SHALL HAVE TOUCH UP PAINT APPLIED TO ALL SCRATCHES AND OTHER WEAR AND TEAR THAT MAY HAVE OCCURRED DURING CONSTRUCTION.
11. ALL HARDWARE AND CONNECTORS SHALL BE TORQUED PER DEVICE LISTING OR MANUFACTURERS RECOMMENDATIONS.
12. ALL EXPOSED CONDUIT & RAIL SHALL BE PAINTED TO MATCH THE EXISTING STRUCTURE COLOR SCHEME. ALL HARDWARE, CONDUIT, EQUIPMENT AND SUPPORTS SHALL BE COATED, PAINTED, TOUCHED UP AS NEEDED TO PREVENT CORROSION. CUT EDGES OF GALVANIZED MATERIALS SHALL BE COLD GALVANIZED.
13. FURNISH AND INSTALL ALL STEEL SUPPORTING MEMBERS, HANGERS, BRACKETS OR OTHER SPECIAL DETAILS REQUIRED AND NECESSARY FOR THE PROPER INSTALLATION OF ELECTRICAL EQUIPMENT.
14. WHEN ALL WORK UNDER THIS CONTRACT HAS BEEN COMPLETED AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN AND IS READY FOR FINAL INSPECTION, SUCH AN INSPECTION SHALL BE MADE AT THIS TIME, THE CONTRACTOR SHALL DEMONSTRATE THAT THE REQUIREMENTS OF THESE SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF CONEDISON.
15. ALL WIRE SHOULD BE SECURED IN A MANNER THAT ENSURES PROTECTION AGAINST ABRASION, SHARP EDGES AND POTENTIAL INSULATION DAMAGING ELEMENTS.
16. AFTER FINAL TORQUE CHECK, CONTRACTOR SHALL PROVIDE TORQUE MARKS.

GROUNDING:

1. FOR DC GROUNDED SYSTEMS, ONLY ONE CONNECTION TO DC CIRCUITS AND FOR ALL SYSTEMS ONE CONNECTION TO AC CIRCUITS WILL BE USED FOR SYSTEM GROUNDING (NEC 690.42) (REFERENCED TO THE SAME POINT).
2. EQUIPMENT GROUNDING CONDUCTORS AND SYSTEM GROUNDING CONDUCTORS WILL HAVE AS SHORT A DISTANCE TO GROUND AS POSSIBLE AND A MINIMUM NUMBER OF TURNS.
3. NON-CURRENT CARRYING METAL PARTS SHALL BE CHECKED FOR PROPER GROUNDING; NOTING THAT TERMINAL LUGS BOLTED ON AN ENCLOSURE'S FINISHED SURFACE MAY BE INSULATED BECAUSE OF PAINT/FINISH. PAINT/FINISH AT POINT OF CONTACT SHALL BE PROPERLY REMOVED.
4. THE CONNECTION TO THE MODULE OR PANEL OF THE PROPOSED SOLAR ELECTRIC SYSTEM SHALL BE SO ARRANGED THAT REMOVAL OF A MODULE OR A PANEL FROM THE PHOTOVOLTAIC SOURCE CIRCUIT DOES NOT INTERRUPT A GROUNDED CONDUCTOR TO ANOTHER PHOTOVOLTAIC SOURCE CIRCUIT.

CONDUIT AND RACEWAY:

1. ALL WIRES SHALL BE RUN IN CONDUIT AS SPECIFIED HEREINAFTER, AND EACH LENGTH OF CONDUIT SHALL BEAR THE MANUFACTURER'S TRADEMARK OR STAMP. THE PLANS INDICATE GENERAL ROUTING. THE CONDUIT RUNS FOR THESE CIRCUITS MAY BE MODIFIED AT THE TIME OF INSTALLATION TO ADAPT SAME TO BUILDING CONSTRUCTION WITH APPROVAL FROM CONEDISON.
2. CONDUIT SHALL BE SECURELY FASTENED IN PLACE AND HANGERS, SUPPORTS OR FASTENING SHALL BE PROVIDED AT EACH ELBOW AND AT EACH END OF EACH STRAIGHT RUN TERMINATED AT EQUIPMENT.
3. ALL CONDUITS WILL ENTER ENCLOSURES FROM BELOW OR THE SIDE UNLESS NOTED OTHERWISE. ENTRY FROM THE TOP OR SIDE IS ONLY PERMITTED IF THE ENCLOSURE IS DESIGNED IN SUCH A WAY AS TO PERMIT WATERTIGHT SIDE ENTRY.
4. USE ONLY LISTED RAINTIGHT COUPLINGS FOR ALL EXTERIOR CONDUIT. USE ONLY MYERS CONDUIT HUBS, OR EQUAL APPROVED BY SSI, FOR ALL ENTRIES INTO BOXES OR EQUIPMENT.
5. FURNISH GROUNDING/BONDING BUSHINGS ONTO ALL CONDUIT ENTERING/LEAVING BOXES.
6. UNLESS MARKED AS UV RESISTANT, PVC IS NOT APPROVED FOR INSTALLATION IN LOCATIONS SUBJECTED TO DIRECT SUNLIGHT AND SHALL NOT BE EMPLOYED IN ANY SUCH LOCATION.
7. ZINC AND DIECAST CONDUIT FITTINGS ARE NOT PERMITTED UNLESS SPECIFICALLY APPROVED IN WRITING BY CONEDISON.
8. ALL CONDUIT ENTERING INVERTERS, COMBINER PANELS OR OTHER ENCLOSURES WILL HAVE THE FIRST 3-5 INCHES OF THE CONDUIT SEALED FROM THE INSIDE OF THE ENCLOSURE WITH A SILICONE OR SIMILAR EXPANDING GAP-FILLER COMPOUND TO STOP INTRUSION INTO THE ENCLOSURE BY INSECTS.
9. ALL CONDUIT FITTINGS AND CONNECTORS SHALL BE OF THE SAME MANUFACTURER AND BE SIMILAR IN STYLE AND DESIGN.
10. ALL CONDUIT TRANSITIONS FROM BELOW GRADE TO ABOVE GRADE SHALL BE RIGID GALVANIZED CONDUIT STARTING AT THE BEGINNING OF THE 90° SWEEP.

UTILITY INFORMATION:

UTILITY: EL PASO ELECTRIC ACCOUNT#: TBD

BRYAN R. MORRIS NEW MEXICO 20195 PROFESSIONAL ENGINEER

10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
GENERAL NOTES

Source: Google Earth Aerial Imagery, dated 2/27/2020

LEGEND

Project Boundary	DEF Tote	55-gallon Drum	Tire Storage	Storm water Pond
Used Oil AST	Pole-mounted Transformer	Chemical Storage Areas	275 gal. Tote	
Diesel AST	Pad-mounted Transformer	Portable Generator	Air Compressor	

zia engineering & environmental consultants, llc	**SITE VICINITY MAP**	Zia Project No.: NLCE.23.011
	Phase I Environmental Site Assessment Approximately 11.16 Acre Commercial Property 295 Quinella Road Sunland Park, Doña Ana County, New Mexico	Recon Date: May 17, 2023
		Appendix A-2

THE ATTACHED SITE MAPS ARE FROM THE 2023 ENVIRONMENTAL ASSESSMENT REPORT. THEY ARE PROVIDE AS INFORMATION REGARDING THE SITE AND EXISTING INFORMATION.

THE PROPOSED NEW SOLAR ARRAY WILL COVER APPROXIMATELY 0.50 ACRES IN THE NORTHWEST CORNER OF THE SITE

BRYAN R. MORRIS NEW MEXICO 20195 PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
SITE BOUNDARY MAP

Year: 2022
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: 295 Quinella Drive, Sunland Park, NM
Approx Center: -106.57172162,31.80567986

Order No: 23051600203

ERIS

THE ATTACHED SITE MAPS ARE FROM THE 2023 ENVIRONMENTAL ASSESSMENT REPORT. THEY ARE PROVIDE AS INFORMATION REGARDING THE SITE AND EXISTING INFORMATION.

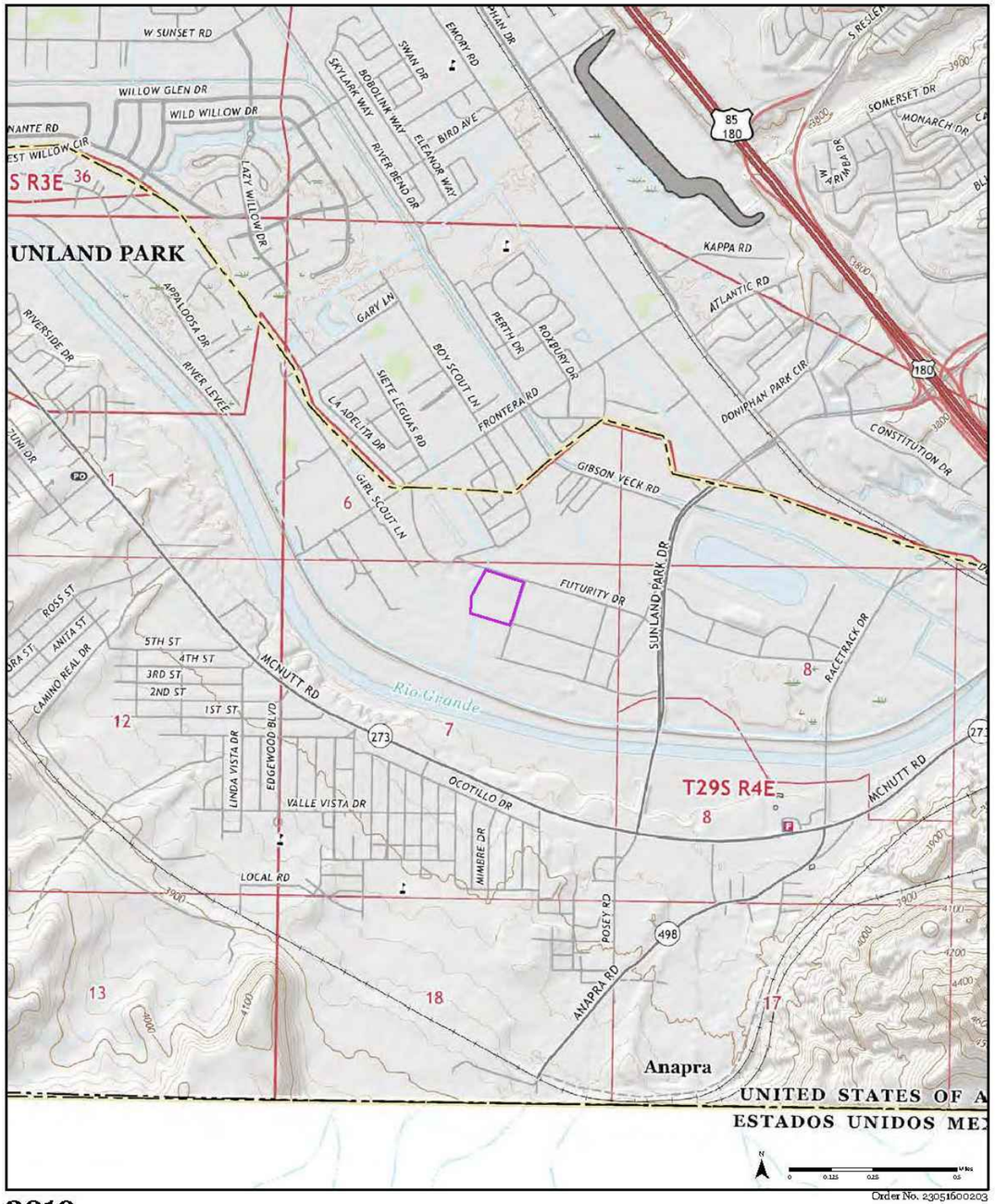
THE PROPOSED NEW SOLAR ARRAY WILL COVER APPROXIMATELY 0.50 ACRES IN THE NORTHWEST CORNER OF THE SITE

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
2022 PROPERTY BOUNDARY



Order No. 23051600203

2019

Available Quadrangle(s): Smeltertown, TX

Source: USGS 7.5 Minute Topographic Map

ERIS

THE ATTACHED SITE MAPS ARE FROM THE 2023 ENVIRONMENTAL ASSESSMENT REPORT. THEY ARE PROVIDE AS INFORMATION REGARDING THE SITE AND EXISTING INFORMATION.

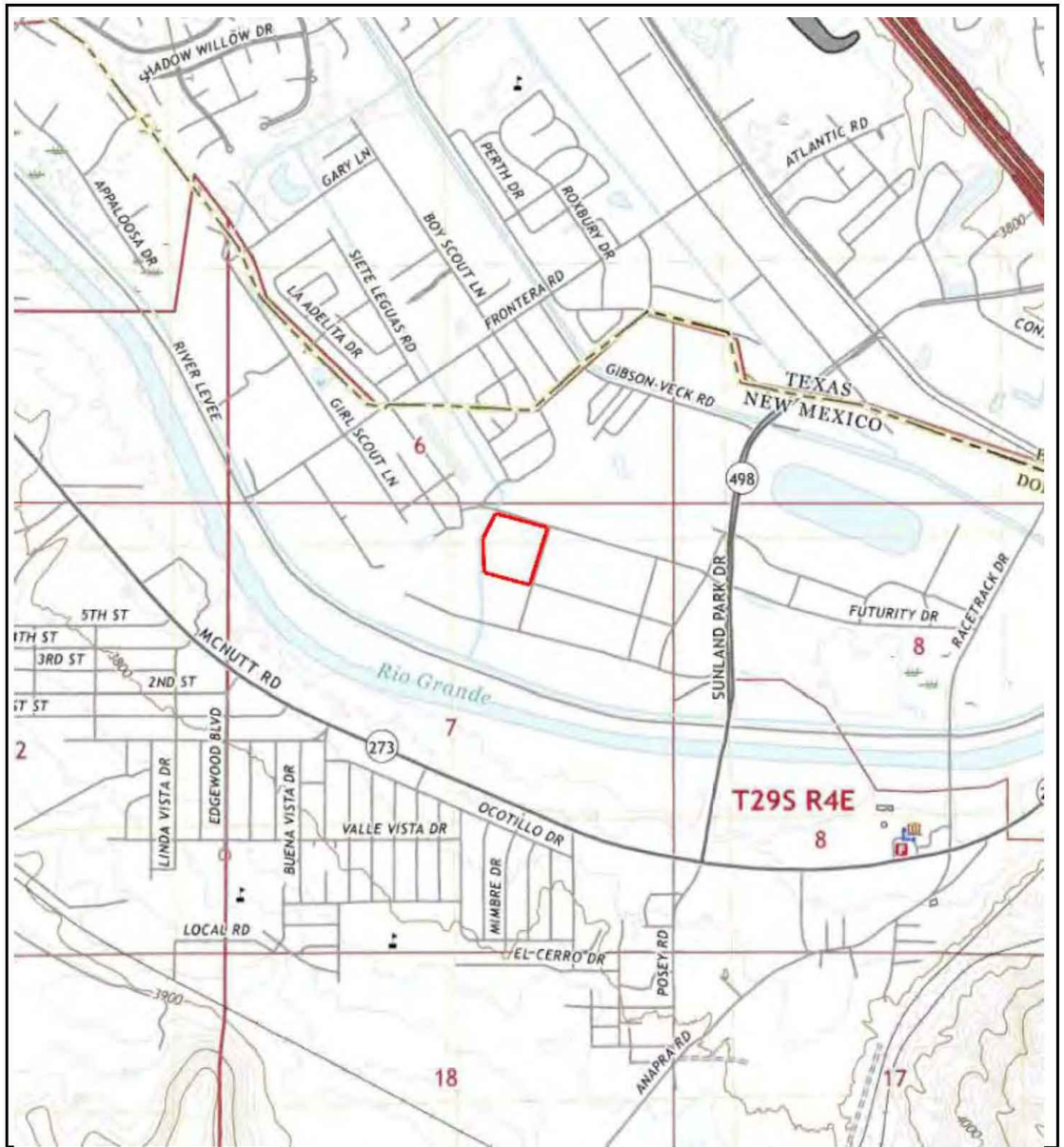
THE PROPOSED NEW SOLAR ARRAY WILL COVER APPROXIMATELY 0.50 ACRES IN THE NORTHWEST CORNER OF THE SITE

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
2019 PROPERTY BOUNDARY

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25



Source: USGS topo maps, Smeltertown, TX 2020

LEGEND

Project Boundary

THE ATTACHED SITE MAPS ARE FROM THE 2023 ENVIRONMENTAL ASSESSMENT REPORT. THEY ARE PROVIDE AS INFORMATION REGARDING THE SITE AND EXISTING INFORMATION.

THE PROPOSED NEW SOLAR ARRAY WILL COVER APPROXIMATELY 0.50 ACRES IN THE NORTHWEST CORNER OF THE SITE

zia engineering & environmental consultants, llc

TOPOGRAPHIC MAP

Phase I Environmental Site Assessment
Approximately 11.16 Acre Commercial Property
295 Quinella Road
Sunland Park, Doña Ana County, New Mexico

Zia Project No.: NLCE.23.011

Recon Date: May 17, 2023

Appendix A-1

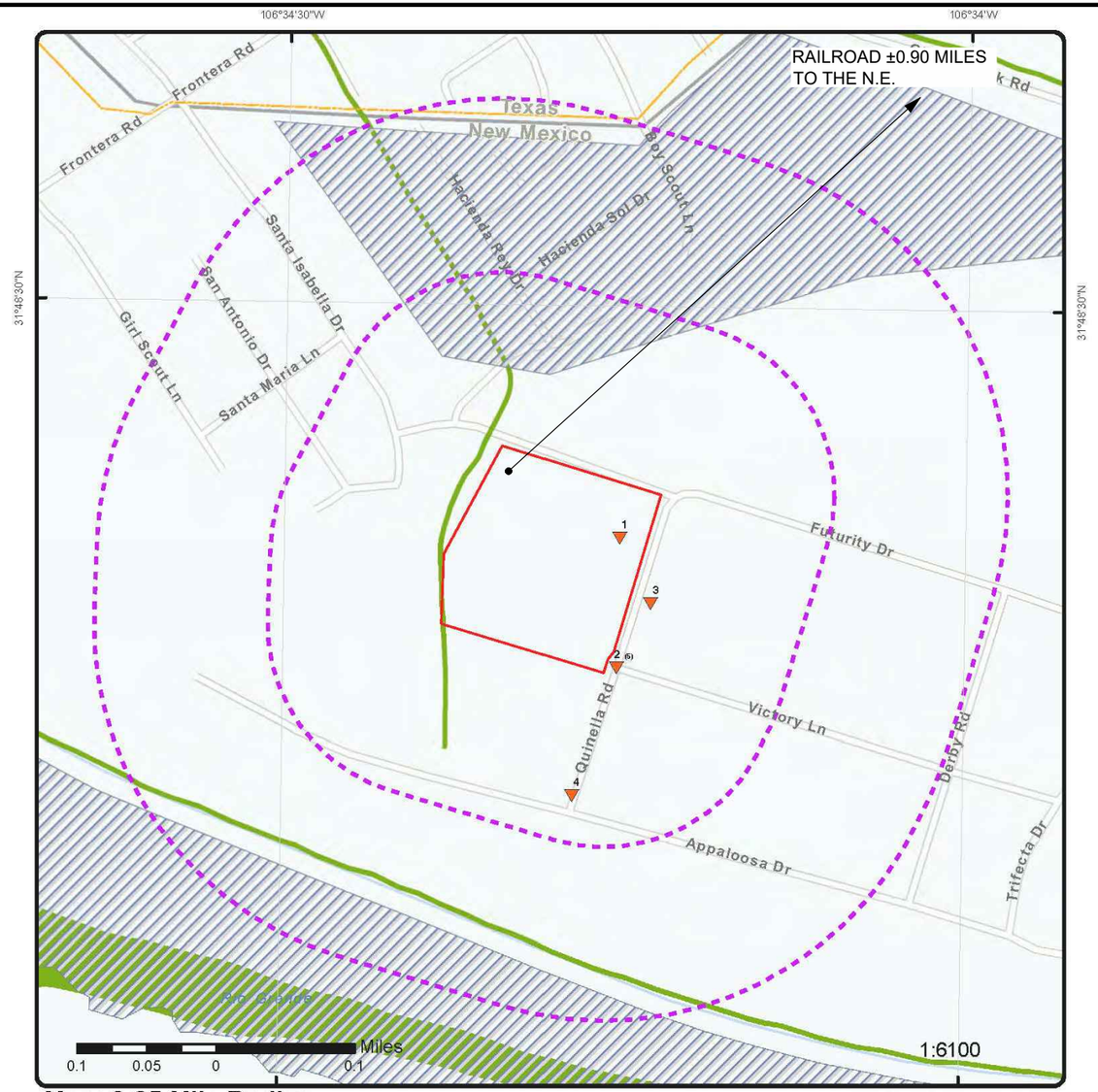
RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
TOPOGRAPHIC MAP

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

PROJECT CONTROL NUMBER: E100480



Map: 0.25 Mile Radius
Order Number: 23051600203
Address: 295 Quinella Drive, Sunland Park, NM

ERIS

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

THESE SITE PLANS ARE INCLUDED TO DOCUMENT THE PROXIMIITY OF THE NEAREST RAILROAD TRACKS. THE NEAREST RAILROAD IS APPROXIMATELY 0.90 MILES FROM THE CONSTRUCTION AREA.

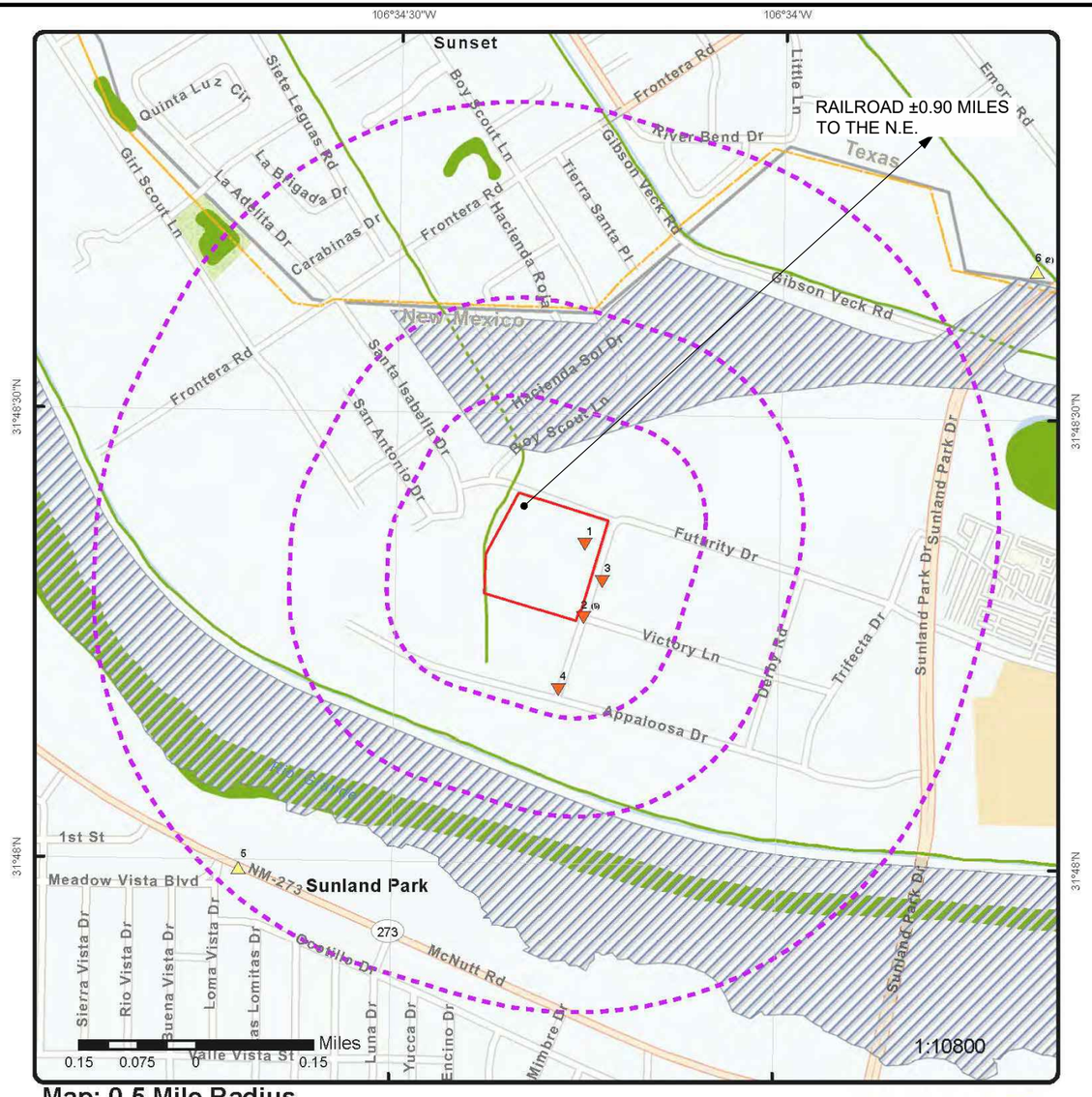
BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
0.25 MILE RAILROAD SEPARATION MAP

PROJECT CONTROL NUMBER: E100480



Map: 0.5 Mile Radius
Order Number: 23051600203
Address: 295 Quinella Drive, Sunland Park, NM

ERIS

Project Property
Buffer Outline
Sites with Higher Elevation
Sites with Same Elevation
Sites with Lower Elevation
Sites with Unknown Elevation
Areas with Higher Elevation
Areas with Same Elevation
Areas with Lower Elevation
Areas with Unknown Elevation
Freeways; Highways
Traffic Circle; Ramp
Major & Minor Arterial
Traffic Circle; Ramp
Local Road
Rail
State
Country
National Wetland
Indian Reserve Land
Plume
100 Year Flood Zone
500 Year Flood Zone
FWS Special Designation Areas
National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.

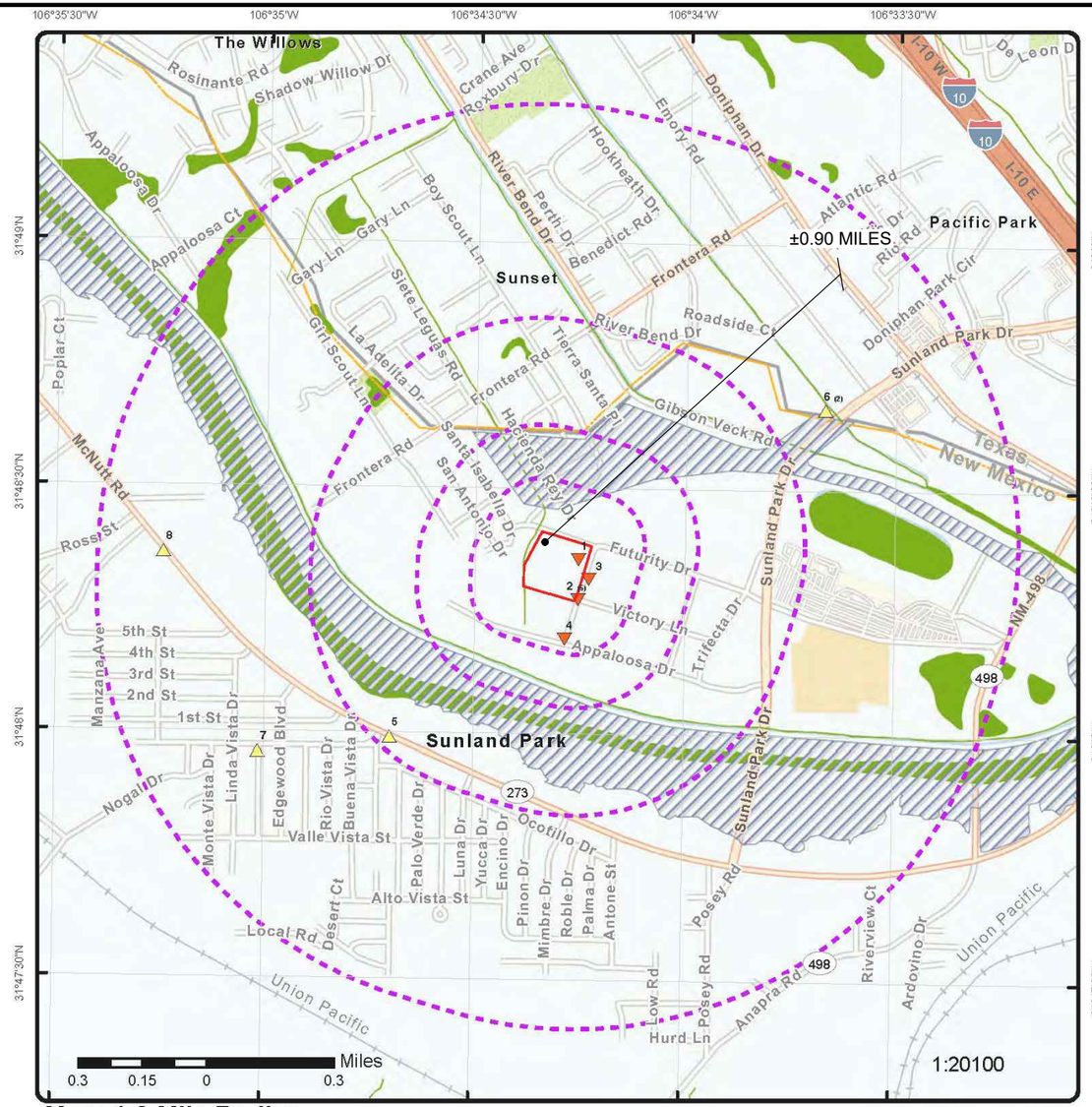
THESE SITE PLANS ARE INCLUDED TO DOCUMENT THE PROXIMIITY OF THE NEAREST RAILROAD TRACKS. THE NEAREST RAILROAD IS APPROXIMATELY 0.90 MILES FROM THE CONSTRUCTION AREA.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
0.5 MILE RAILROAD SEPARATION MAP



Map: 1.0 Mile Radius
Order Number: 23051600203
Address: 295 Quinella Drive, Sunland Park, NM

ERIS

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

THESE SITE PLANS ARE INCLUDED TO DOCUMENT THE PROXIMIITY OF THE NEAREST RAILROAD TRACKS. THE NEAREST RAILROAD IS APPROXIMATELY 0.90 MILES FROM THE CONSTRUCTION AREA.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
1.0 MILE RADIUS RAILROAD SEPARATION MAP

RBM CADD MANAGER (JOSE)
6-Oct-25

Drawing File: H:\2025 PROJECTS\25038\DRAWINGS\03_CAD FILES\SHTS-ELEC\E1004801GN15.DWG
8:47 AM

PROJECT DEVELOPED BY: RBM

ENVIRONMENTAL COMMITMENTS

THE CONTRACTOR SHALL REFER TO SECTION 107 OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION - 2019 EDITION, MAKING SPECIAL NOTE OF **SUB-SECTION 107.14: CONTRACTOR'S RESPONSIBILITY FOR ENVIRONMENTAL AND CULTURAL RESOURCE PROTECTION**.

☐ NO ADDITIONAL PROJECT SPECIFIC ENVIRONMENTAL REQUIREMENTS APPLY.

☒ IN ADDITION TO SECTION 107, THE FOLLOWING PROJECT SPECIFIC ENVIRONMENTAL REQUIREMENTS APPLY:

1. Migratory Bird Treaty Act Compliance: The Contractor shall at all times comply with the Migratory Bird Treaty Act (MBTA), which prohibits the possession, capture, or killing of any migratory bird, egg, chick or occupied nest. If occupied nests (i.e. nests containing eggs or juvenile birds) are present during construction, the parental birds and their nests must be avoided until juvenile birds have fledged and flown away from the nests. MBTA compliance may warrant maintaining nest-free conditions, deployment of netting or other bird exclusion devices, or modifying construction methods and sequencing. Project delays caused by failure to implement MBTA compliance measures are subject to liquidated damages at the discretion of the Project Manager. The Contractor shall be responsible for any penalties levied by the US Fish and Wildlife Service for non-compliance with the MBTA.

DocuSigned by:
Steven Gisler
B73337E3E9C444D...

NMDOT Environmental Bureau Chief

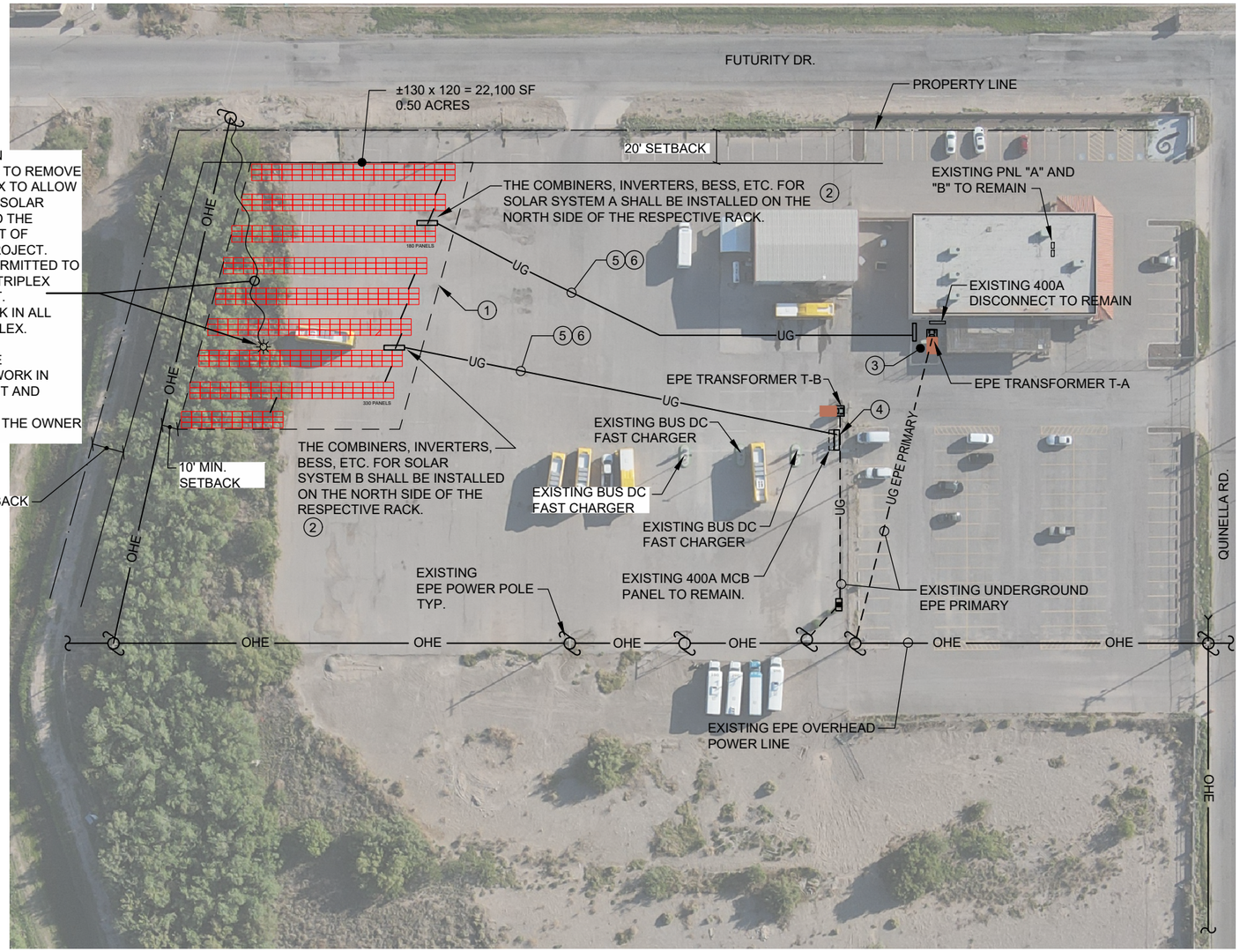
RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
ENVIRONMENTAL COMMITMENTS

EL PASO ELECTRIC HAS BEEN AUTHORIZED BY THE OWNER TO REMOVE THE LIGHT POLE AND TRIPLEX TO ALLOW THE CONSTRUCTION OF THE SOLAR ARRAY. EPE HAS SCHEDULED THE REMOVAL BEFORE THE START OF CONSTRUCTION FOR THIS PROJECT.
THE CONTRACTOR IS NOT PERMITTED TO BUILD UNDER THE EXISTING TRIPLEX THAT FEEDS THE AREA LIGHT.
THE CONTRACTOR MAY WORK IN ALL AREAS NOT UNDER THE TRIPLEX.

14 DAYS PRIOR TO WHEN THE CONTRACTOR IS READY TO WORK IN THIS AREA, IF THE AREA LIGHT AND TRIPLEX ARE IN PLACE THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITTING.



1
11 - 1 **ELECTRICAL SITE PLAN**

SCALE: 1" = 1000'

GENERAL NOTES

A. PROVIDE GROUND MOUNT SOLAR ARRAY.

B. THERE ARE (2) ARRAY SYSTEMS: SYSTEM A AND SYSTEM B.

C. SEE GROUND MOUNT ARRAY DETAILS ON SHEETS E.2-E2.4.

D. THE SOLAR ARRAY SHALL BE IN THE NW CORNER OF THE SITE AS SHOWN. THE SOLAR ARRAY MAY NOT BE INSTALLED IN THE SETBACK AREA AS INDICATED.

E. THE VEGITATION WILL BE REMOVED BY THE OWNER PRIOR TO THE SOLAR ARRAY INSTALLATION.

KEYED NOTES

(1) PROPOSED LOCATION OF THE NEW GROUND MOUNTED SOLAR ARRAY.

(2) LOCATION OF THE NEW SOLAR EQUIPMENT TO BE MOUNTED ON THE GROUND MOUNT RACKS. THE EQUIPMENT INCLUDED THE DC COMBINER, BATTERY, INVERTERS, MOCROGRIDE CONTROLLER, ETC. SEE THE RISER DIAGRAM ON E1.4 FOR MORE INFORMATION.

(3) SEE THE RISER DIAGRAM FOR THE REVISED WORK AT THE EXISTING BUILDING ELECTRICAL SERVICE.

(4) SEE THE RISER DIAGRAM FOR THE REVISED WORK AT THE EXISTING BUS CHARGER ELECTRICAL SERVICE.

(5) (3) 2" NEW UNDERGROUND CONDUITS. SEE THE RISER DIAGRAM.

(6) THE CONTRACTOR MAY BORE THE PARKING LOT FOR THE INSTALLATION OF THE NEW CONDUITS. OTHERWISE PATCH AND REPAIR THE ASPHALT. THE CONTRACTOR SHALL SAW CUT THE ASPHALT. THE TRENCH BACKFILL SHALL BE COMPACTED TO 95%, WITH 4" OF BASE COURSE AND 4" OF ASPHALT. THE TRENCH REPAIR SHALL BE SUITABLE FOR THE SLOW SPEED BUS TRAFFIC.

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
ELECTRICAL SITE PLAN

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

GENERAL NOTES

A. THE RISER DIAGRAM IS DIAGRAMATIC.

B. THE SYSTEM DESING IS PERFORMANCE BASED.

C. THERE ARE (2) EPE TRANSFORMER ON PROPERTY, THEREFORE THERE ARE (2) SOLAR SYSTEMS. THE VOLTAGES ARE DIFFERENT AS NOTED.

D. THE SOLAR ARRAY SHALL BE GROUND MOUNT, AND TAKE UP THE LEAST AREA AS PRACTICLE.

E. IT IS PREFERRED THAT THE MODULES BE ARRANGED 3 HIGH.

F. IT IS PREFERRED THAT THE GROUND MOUNT FRAMES BE ANCHORED WITH HELIX ANCHOR POSTS AS SHOWN ON THE RACK DETAILS.

G. COORDINATE ALL POWER OUTAGES WITH THE OWNER.

KEYED NOTES

1. REMOVE THE EXISTING UNDERGROUND 400A CONDUCTORS. REMOVE ALL ABOVE GROUND CONDUITS, FILL THE CONDUIT WITH 2 SACK. ABANDON THE UNDERGROUND CONDUIT.
2. REMOVE THE METER CAN AND ALL ABOVE GROUND CONDUITS.
3. EL PASO ELECTRIC TO REMOVE THE CTS IN THE TRANSFORMER.
4. MAINTAIN THE EXISTING 400A FUSE DISCONNECT.
5. MAINTAIN THE EXISTING 400A MCB PANEL.
6. EXISTING ELECTRICAL GEAR TO REMAIN.
7. NEW 600A LATERAL. PARALLEL (2) 3" C. EA. W/ 4-350 KCMIL CU.
8. NEW N3R CT ENCLOSURE, AMPERAGE AND VOLTAGE AS NOTED.
9. PARALLEL (2) 3"C. EA. W/ 4-350 KCMIL, 1- 2/0 CU G
10. NR3 RT GUTTER 12"X12"XLENGTH REQUIRED.
11. MODIFIED UFER PER NMAC. 2O LF OF BARE 2/0 CU BURIED 30' BELOW GRADE WITH (2) 5/8" X 10 FEET COPPER GROUND RODS 20 FEET APART.
12. N3R 480V, 400A 3P+SN DISCONNECT WITH 3-400A FUSES.
13. N3R 480V, 200A 3P+SN DISCONNECT WITH 3-125A FUSES.
14. N3R 250V, 400A 3P+SN DISCONNECT WITH 3-400A FUSES.
15. N3R 250V, 200A 3P+SN DISCONNECT WITH 3-175A FUSES.
16. N3R 200A 3 PHASE INLINE METER PER UTILITY REQUIREMENTS. 480V OR 250V TO MATCH TRANSFOMER VOLTAGE.
17. N3R METER CAN FOR CT'S EPE TO INSTALL A BI-DIRECTIONAL METER. STENCIL ADDRESS ON THE METER PER EPE REQUIREMENTS.
18. 3"C 4-500 KCMIL, 1- 1/0 CU G.
19. 2"C 4-3/0 CU, 1- #4 CU G.
20. 2"C FOR INTERCONNECT CABLES.
21. PROVIDE A SOLAR TRANSFER SWITCH, BATTERY BACK-UP AUTOMATIC TRANSFER SWITCH, N3R. PROGRAM AS REQUIRED.
22. PROVIDE A SUITABLE CONCRETE PAD FOR THE BATTERY. THE CONCRETE PAD SHALL EXTEND AT LEAST 48" IN FRONT OF THE BATTERY AND EXTEND 4" BEYOND THE BATTERY CABINET ON THE 3 OTHER SIDES.

GENERAL NOTES AND KEYED NOTES APPLY TO SHEETS 11-3, 11-4

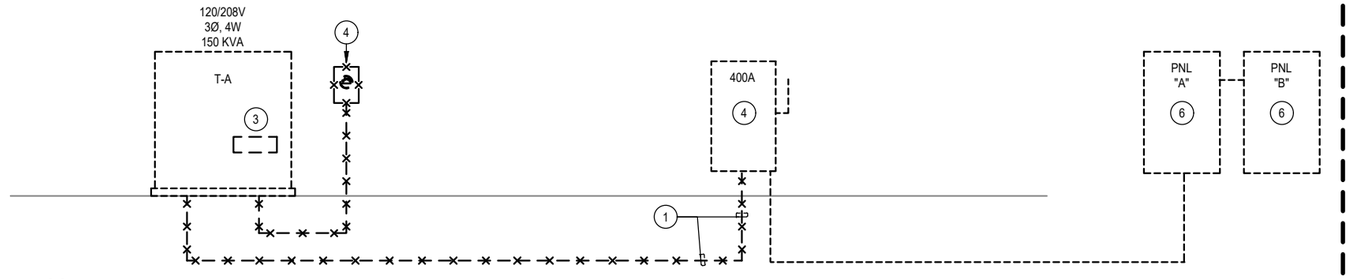
BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
ELECTRICAL RISER DIAGRAMS KEY NOTES

BID ITEM C 663213



SOLAR SYSTEM A

COMMERCIAL INVERTER 120/208V 3Ø, 4W
50KW AC/ 87.5KW DC DC/AC RATION 1.4
180 PANELS BASED ON 410W MODULES
73.8KW DC
MAX OUTPUT CURRENT (AC) 139.5A @ 125% = 174.5

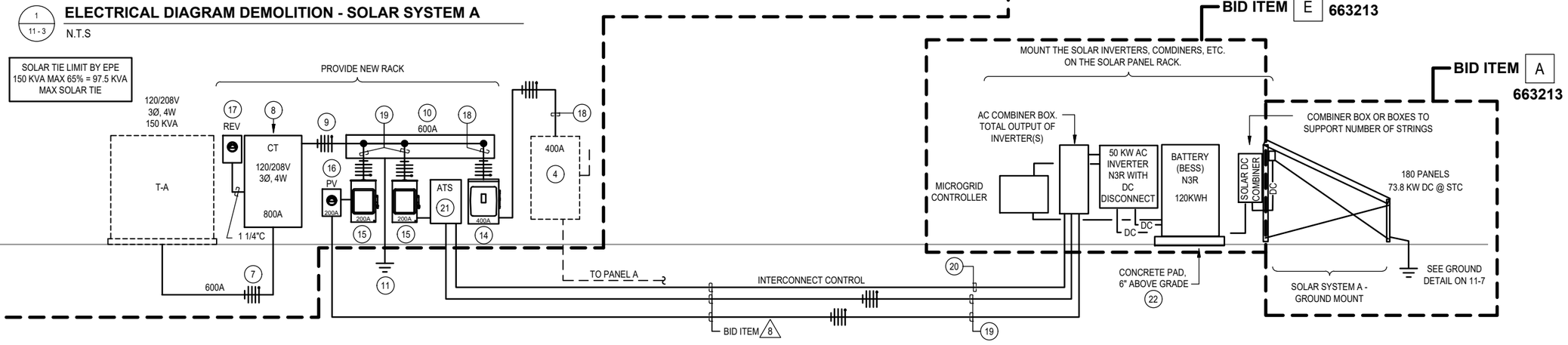
ELECTRICAL DIAGRAM DEMOLITION - SOLAR SYSTEM A

1 / 11 - 3

N.T.S

BID ITEM E 663213

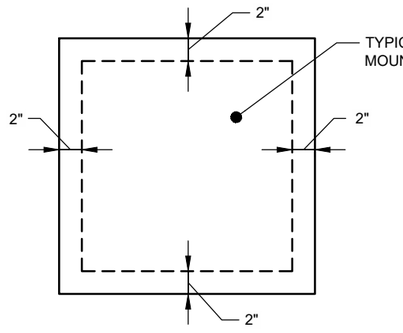
BID ITEM A 663213



ELECTRICAL DIAGRAM REVISED - SOLAR SYSTEM A

2 / 11 - 3

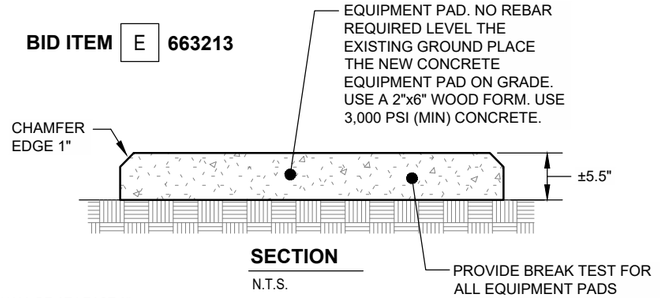
N.T.S.



PLAN VIEW

N.T.S.

BID ITEM E 663213



SECTION

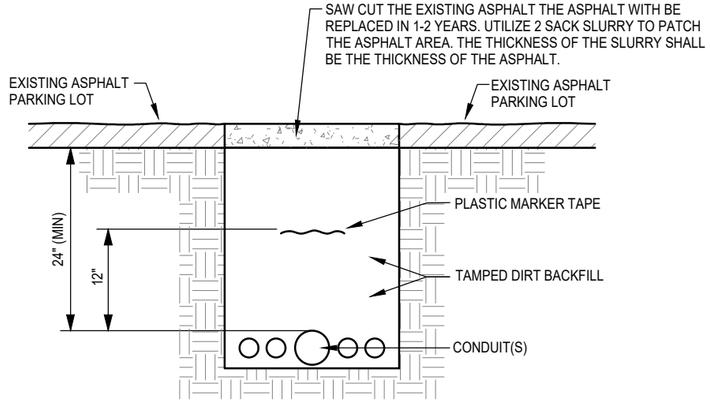
N.T.S.

THE EQUIPMENT PAD SHALL BE AT LEAST 2"
LARGER THAN THE EQUIPMENT ON ALL SIDES

CONCRETE EQUIPMENT SLAB DETAIL

3 / 11 - 3

N.T.S.



THE CONTRACTOR SHALL PROVIDE DENSITY TESTING, OF THE BACK FILL. BACK FILL TO 95% COMPACTION. PROVIDE AT LEAST 1 DENSITY TEST PER TRENCH. FOR TRENCHES LONGER THAN 100 FEET PROVIDE AT LEAST 3 DENSITY TESTS.

TRENCH DETAIL

4 / 11 - 3

N.T.S.

UTILIZE A SINGLE TRENCH FOR MULTIPLE CONDUITS IN CLOSE PROXIMITY.

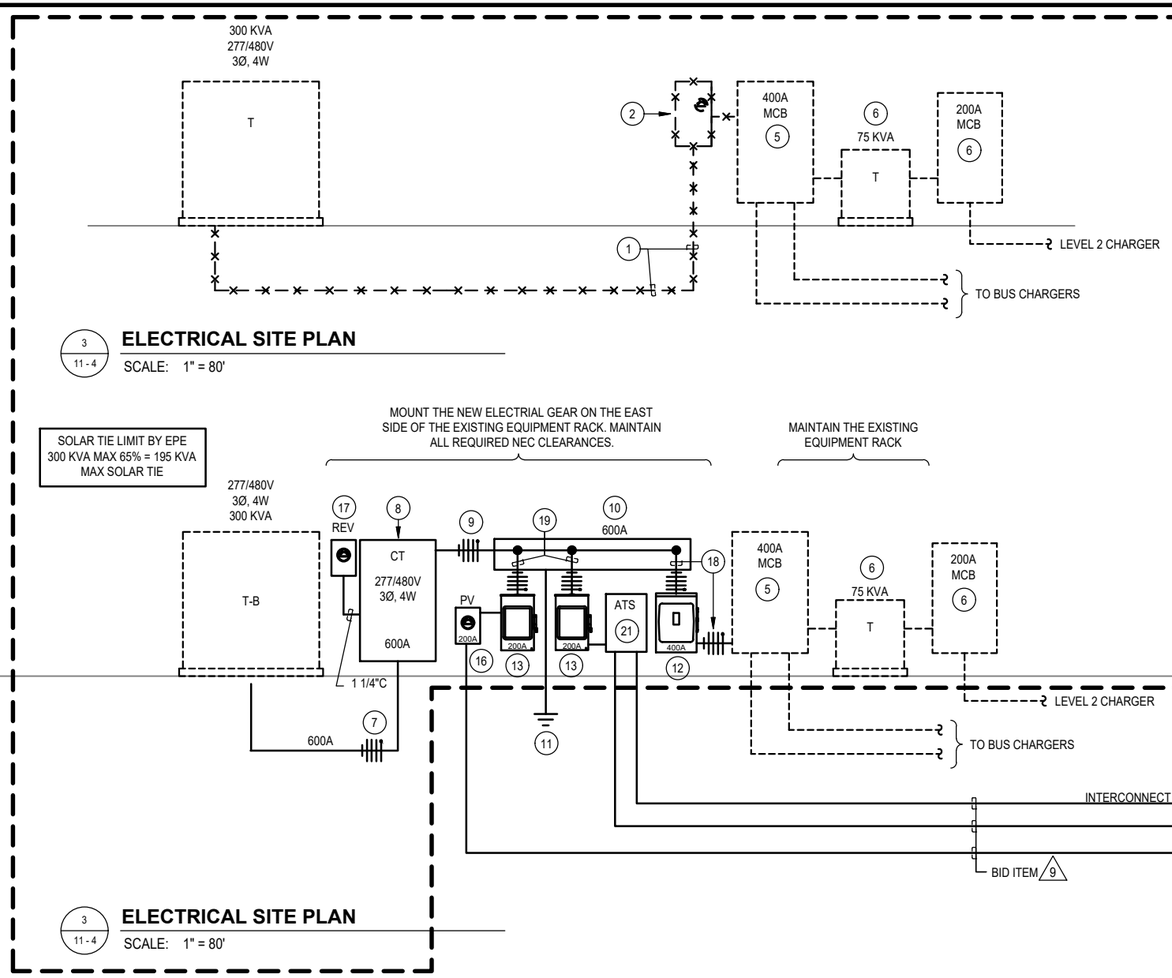
RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

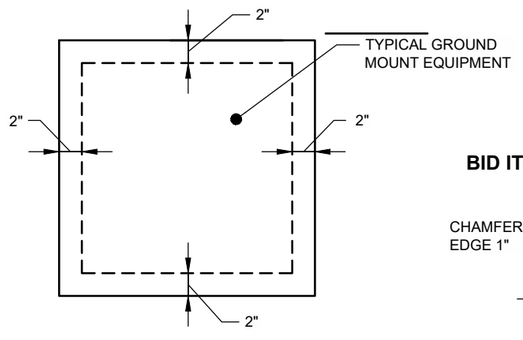
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
ELECTRICAL RISER DIAGRAMS - SOLAR SYSTEM A

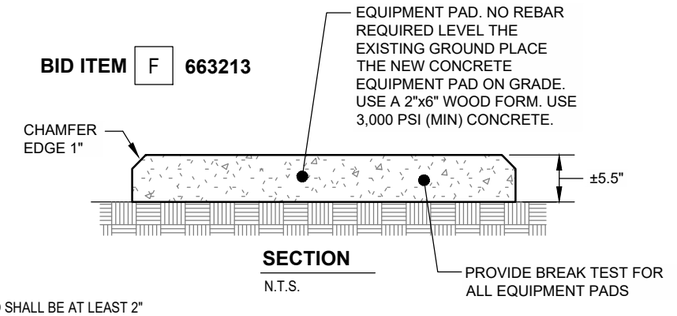
SOLAR SYSTEM B

COMMERCIAL INVERTER 277/480V 3Ø, 4W
80KW AC/ 140KW DC DC/AC RATION 1.7
330 PANELS BASED ON 410W MODULES
135.3 KW DC
MAX OUTPUT CURRENT (AC) 96.5A @ 125% = 120.6





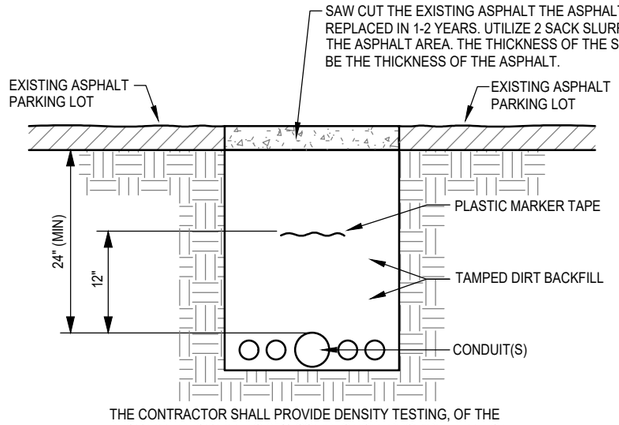
PLAN VIEW
N.T.S.



SECTION
N.T.S.

THE EQUIPMENT PAD SHALL BE AT LEAST 2"
LARGER THAN THE EQUIPMENT ON ALL SIDES

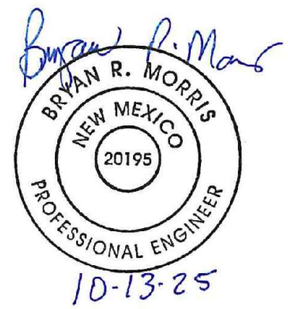
3
11 - 4
CONCRETE EQUIPMENT SLAB DETAIL
N.T.S.



THE CONTRACTOR SHALL PROVIDE DENSITY TESTING, OF THE BACK FILL. BACK FILL TO 95% COMPACTION. PROVIDE AT LEAST 1 DENSITY TEST PER TRENCH. FOR TRENCHES LONGER THAN 100 FEET PROVIDE AT LEAST 3 DENSITY TESTS.

4
11 - 4
TRENCH DETAIL
N.T.S.

UTILIZE A SINGLE TRENCH FOR MULTIPLE CONDUITS IN CLOSE PROXIMITY.



RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
ELECTRICAL RISER DIAGRAMS - SOLAR SYSTEM B

OVERALL SYSTEM SIZE FOR THE GROUND MOUNT PV ARRAY IS:
130 KW OF AC CAPABILITY - 209.1 KW OF DC OUTPUT THE
SYSTEM HAS 420 KWH OF BATTERY STORAGE

GENERAL NOTES FOR NM PERMITTING:

A. CONTRACTOR SHALL COMPLY WITH THE CURRENT NMAC ELECTRICAL CODE WHICH IS BASED ON THE 2021 NEC AND APPLICABLE MODIFICATIONS.

B. UPON AWARD OF THE CONTRACT THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY TO DETERMINE THE PRIMARY VOLTAGE OF THEIR SYSTEM AT THE PROPOSED SITE, AND COORDINATE ALL REQUIREMENTS FOR METERING AND PROTECTION REQUIREMENTS.

C. THE CONTRACTOR PERFORMING ALL WORK ON THE PROJECT 5000V NOMINAL OR LESS SHALL HAVE A NEW MEXICO EE-98 LICENSE.

BASIS OF DESIGN

NON TRACKER SYSTEM

THE GROUND MOUNTED PV MODULES ARE FIXED MOUNTED.

PANELS WILL TILT APPROXIMATELY 25 DEGREES.

SYSTEM DC VOLTAGE

PV MODULES – SHALL BE SERIES CONNECTED DC CIRCUITS TO YIELD 1,000 VDC MAX CIRCUITS

STRING DC CALCULATIONS

XXX V > NUMBER OF PANELS * Voc OF SELECTED PANEL * TEMP ADJ.
XXX V > X. * X V * 1.09
XXX V > XXXV

STRING LENGTH = 27 PV MODULES

PV MODULE WATTAGE = 410W EACH STRING 15 * 410 W = 6,150 W

INVERTER CALCULATION – 208V SOLAR SYSTEM A

WE HAVE SELECTED AN INVERTER RATED 50 KW (87.5 KW DC/208 VAC)
INVERTER SPECS ARE AS FOLLOWS:

87.5 KW MAX PV POWER 139.5 A MAX OUTPUT CURRENT

12 STRINGS PER INVERTER * 6.150 KW/STRING = 74 KW PV POWER

THE 87.5 KW DC INVERTER IS SUITABLE FOR 12 STRINGS

INVERTER CALCULATION – 480V

WE HAVE SELECTED AN INVERTER RATED 80 KW (140 KW DC/480 VAC)
INVERTER SPECS ARE AS FOLLOWS:

140 KW MAX PV POWER 98.5 A MAX OUTPUT CURRENT

12 STRINGS PER INVERTER * 6.150 KW/STRING = 74 KW PV POWER

THE 140 KW DC INVERTER IS SUITABLE FOR 12 STRINGS

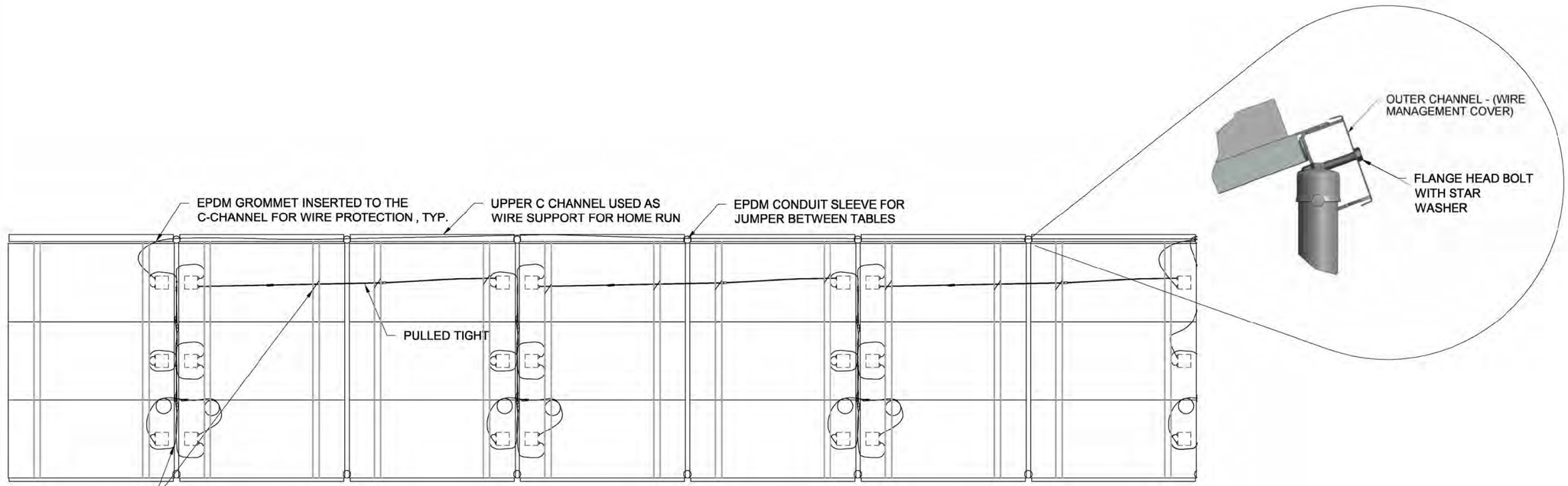
THE PROJECT SHALL ABIDE BY
BUY AMERICA, BUILD AMERICA.
SEE THE PROJECT SPECIFICATIONS.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
SOLAR ARRAY BASID OF DESIGN



1 MODULE WIRING DETAILS
NTS

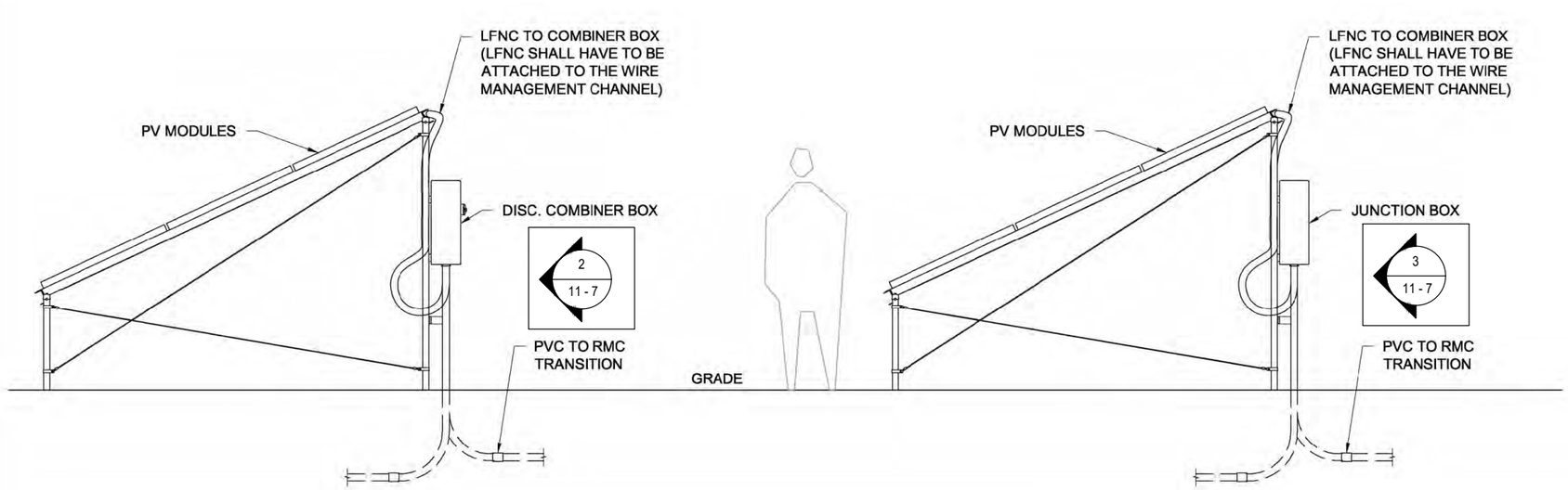
THE PV ARRAY RACK DETAILS SHOWN ARE A GENERAL ILLUSTRATION OF THE EXPECTED STYLE. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS AFTER BID AWARD.

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

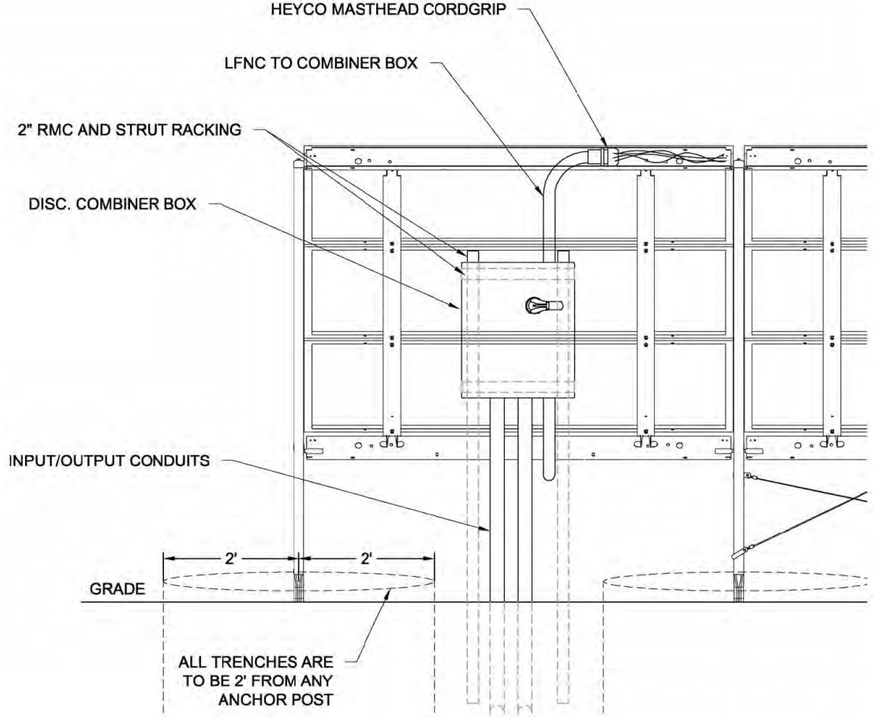
E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
PV MODULE DC CABLE DETAILS

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

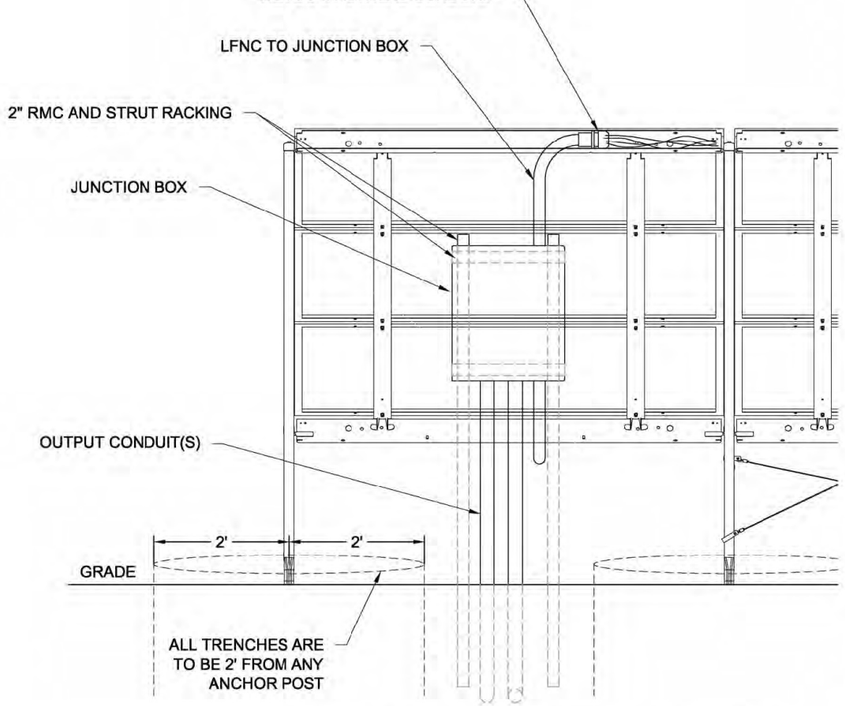


1 COMBINER & JUNCTION BOX MOUNTING DETAILS
NTS

THE PV ARRAY RACK DETAILS SHOWN ARE A GENERAL ILLUSTRATION OF THE EXPECTED STYLE. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS AFTER BID AWARD.



2 COMBINER BOX MOUNTING DETAILS
NTS

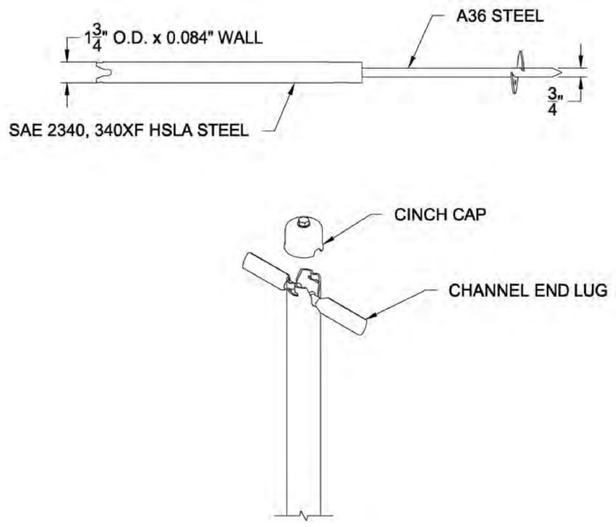


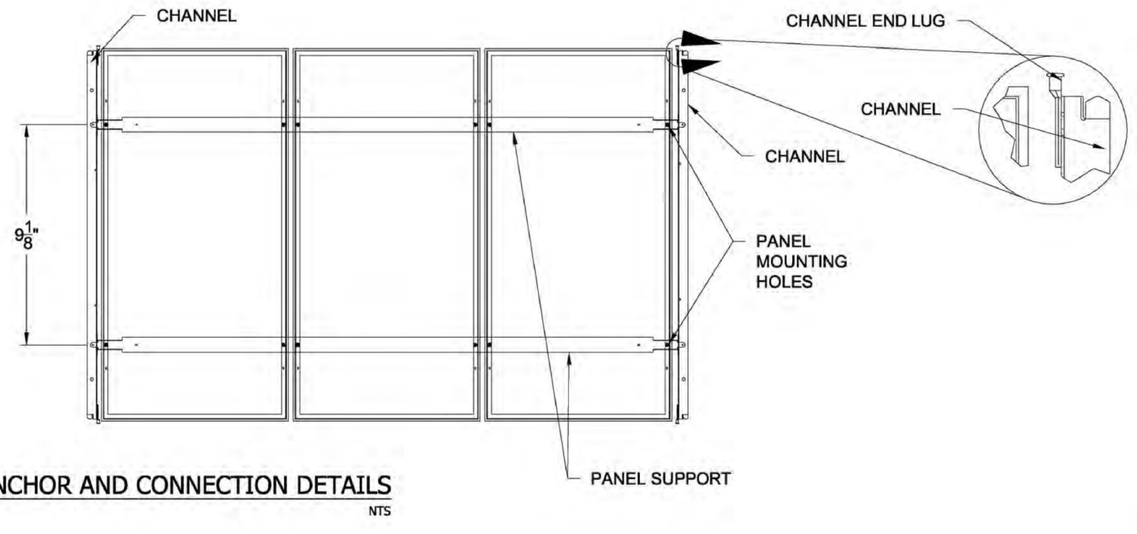
3 JUNCTION BOX MOUNTING DETAILS
NTS

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
WIRING AND COMBINER DETAILS





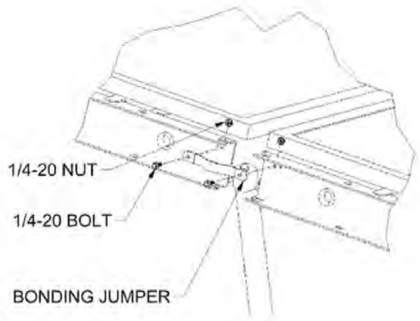
3 ANCHOR AND CONNECTION DETAILS
NTS

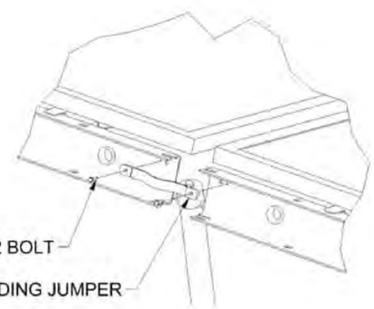
THE PV ARRAY RACK DETAILS SHOWN ARE A GENERAL ILLUSTRATION OF THE EXPECTED STYLE. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS AFTER BID AWARD.

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

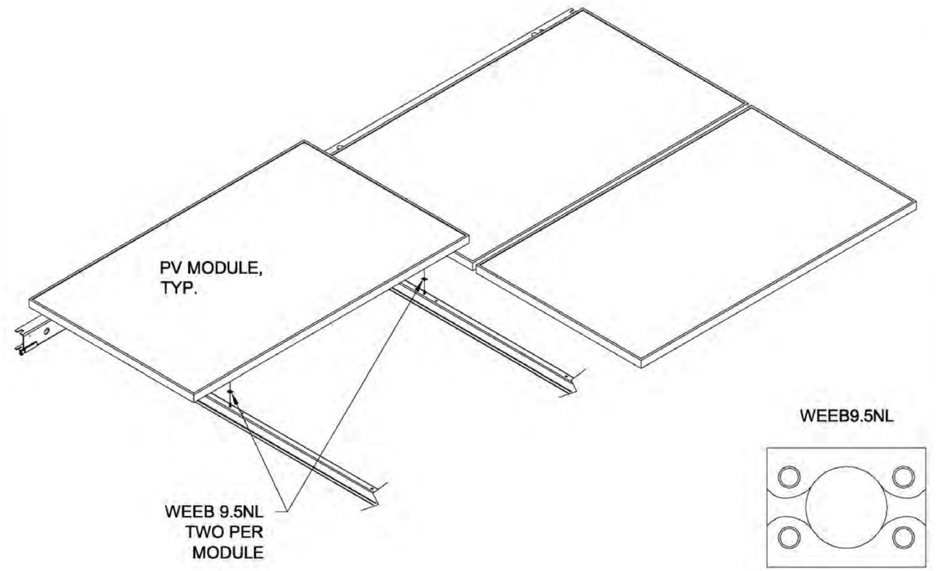
E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
PV RACK DETAILS



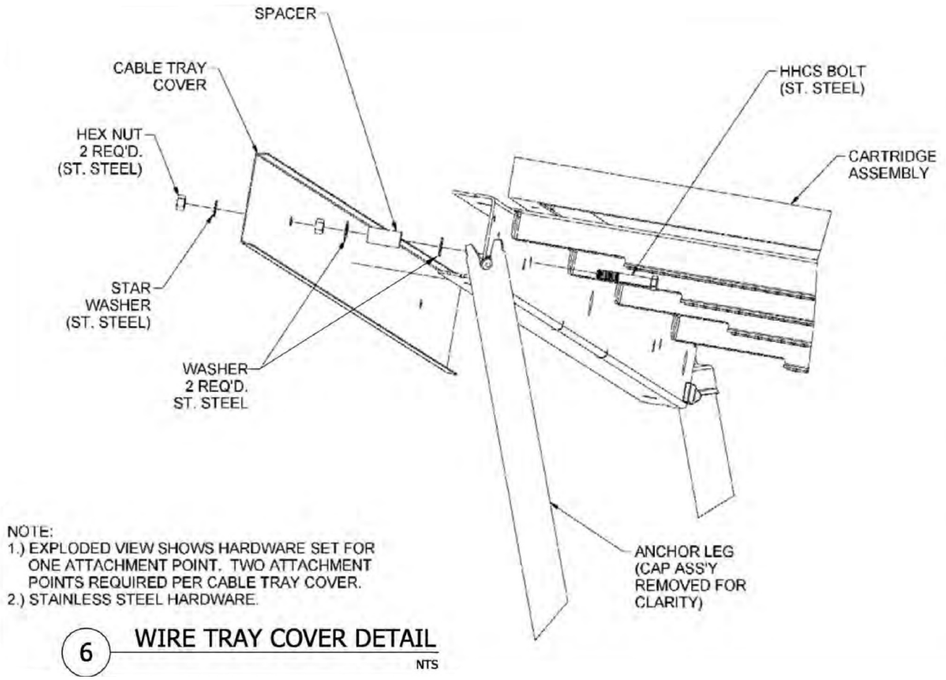


NOTES:
AMERICAN GROUNDING SYSTEMS: EITHER 1/4-20 BOLT THROUGH OR 10-32 SELF ROLLING THREAD OR (TAP THE HOLE FIRST AND THEN USE A 10-32 BOLT). SPECS ARE 6" BOLT HOLE TO BOLT HOLE, #6 AWG, TINNED COPPER STYLE BRAID, 7/8" WIDE, .050" THICK, 105 AMPS RATED.
AK STAMPING: 1/4-20 BOLT THROUGH, UL 467 LISTED ALREADY FOR BONDING ALL ON ITS OWN, SPECS ARE 6" BOLT HOLE TO BOLT HOLE, #6 AWG, 19 STRAND ROUND TINNED COPPER.
OR EQUAL.

4 RACK GROUNDING JUMPER DETAIL
NTS



5 MODULE GROUNDING DETAIL
NTS



NOTE:
1.) EXPLODED VIEW SHOWS HARDWARE SET FOR ONE ATTACHMENT POINT. TWO ATTACHMENT POINTS REQUIRED PER CABLE TRAY COVER.
2.) STAINLESS STEEL HARDWARE.

6 WIRE TRAY COVER DETAIL
NTS

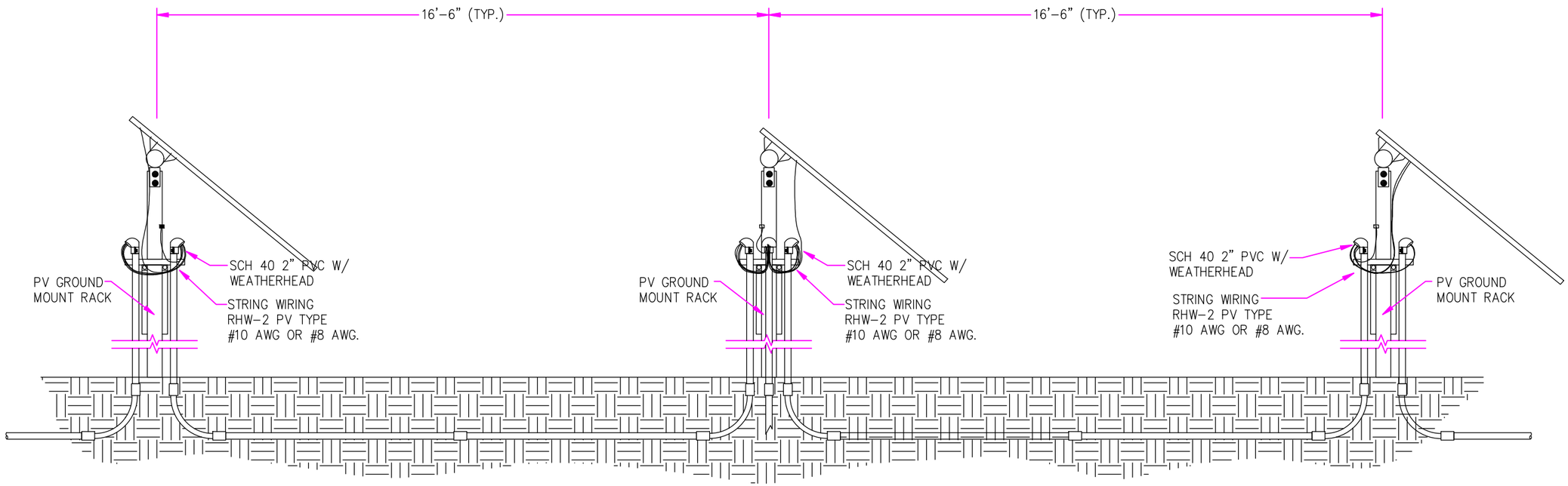
THE PV ARRAY RACK DETAILS SHOWN ARE A GENERAL ILLUSTRATION OF THE EXPECTED STYLE. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS AFTER BID AWARD.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
PV RACK DETAILS



1
11 – 10 **UNDERGROUND DC CABLE INTERCONNECT - TYP**

SCALE: N.T.S.

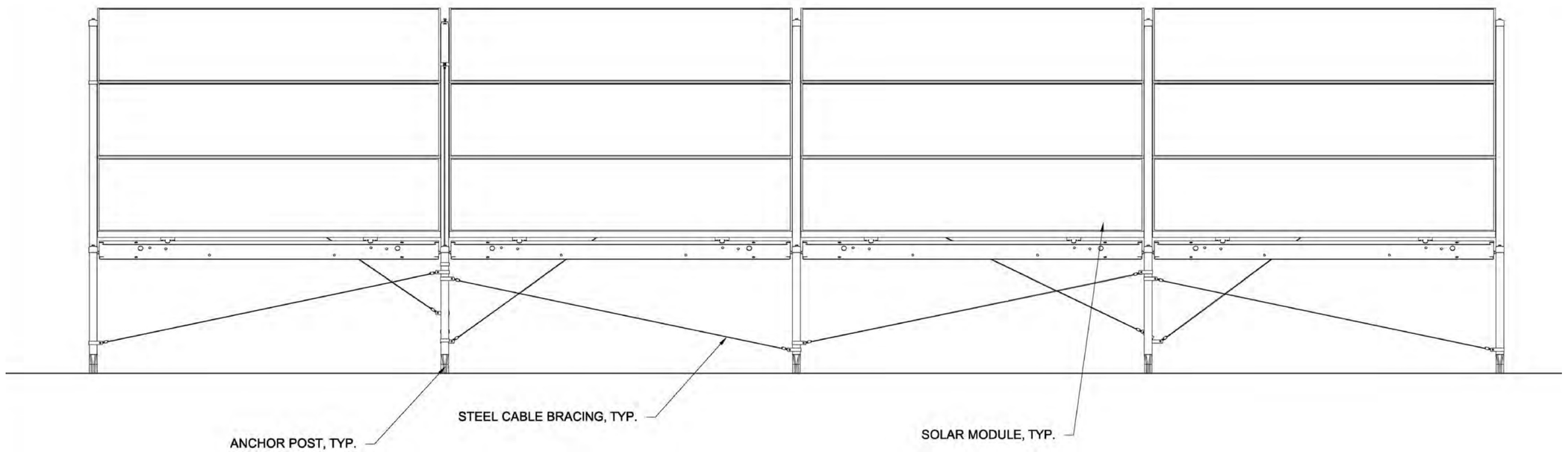
THE PV ARRAY RACK DETAILS SHOWN ARE A GENERAL ILLUSTRATION OF THE EXPECTED STYLE. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS AFTER BID AWARD.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

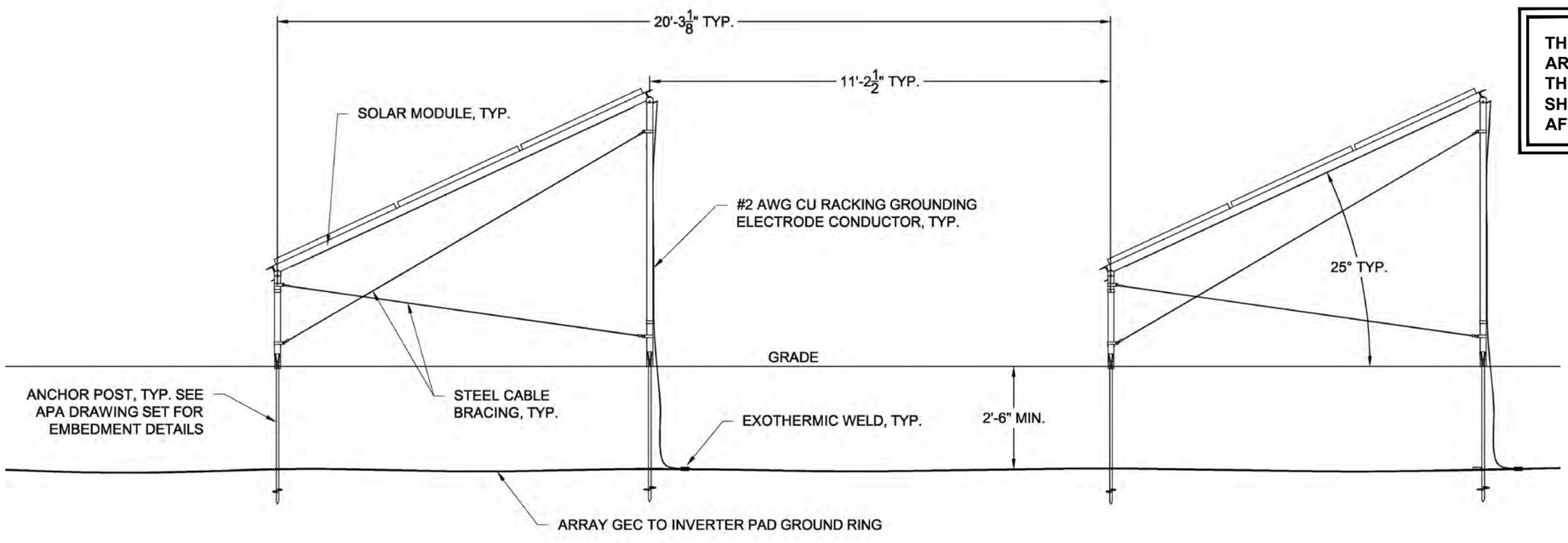
RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR ARRAY AND MICROGRID
UNDERGROUND DC CABLE INTERCONNECT



2 RACK FRONT ELEVATION
NTS



1 RACK SIDE ELEVATION
NTS

THE PV ARRAY RACK DETAILS SHOWN ARE A GENERAL ILLUSTRATION OF THE EXPECTED STYLE. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS AFTER BID AWARD.

BRYAN R. MORRIS
NEW MEXICO
20195
PROFESSIONAL ENGINEER
10-13-25

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

E100480
SOUTH CENTRAL REGIONAL TRANSIT - SOLAR
ARRAY AND MICROGRID
RACK GROUNDING DETAILS