

RESOLUTION NO. 2021-105R

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN MARCOS, TEXAS APPROVING A THIRD AMENDMENT TO THE AMENDED AND RESTATED INTERCONNECTION AGREEMENT WITH THE LCRA TRANSMISSION SERVICES CORPORATION (“LCRA TSC”) TO UPDATE THE FACILITY SCHEDULES THAT OUTLINE THE USE AND OWNERSHIP OF, AND RESPONSIBILITIES FOR, VARIOUS APPURTENANCES AND COMPONENTS FOR THE HILLTOP, STRAHAN, RANCH ROAD 12, RATTLER, REDWOOD, AND SAN MARCOS SUBSTATIONS; AUTHORIZING THE CITY MANAGER, OR HIS DESIGNEE, TO EXECUTE SAID AMENDMENT; AND DECLARING AN EFFECTIVE DATE.

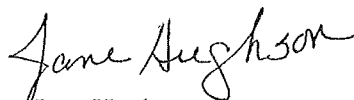
BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SAN MARCOS, TEXAS:

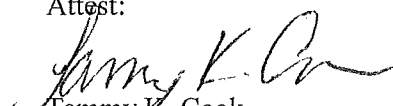
PART 1. The attached Third Amendment to Amended and Restated Interconnection Agreement with the LCRA Transmission Services Corporation is approved.

PART 2. The City Manager, or his designee, is authorized to execute said Second Amendment to Amended and Restated Interconnection Agreement.

PART 3. This resolution shall be in full force and effect immediately from and after its passage.

ADOPTED on June 1, 2021.


Jane Hughson
Mayor

Attest:

Tammy K. Cook
Interim City Clerk

**THIRD AMENDMENT TO THE AMENDED AND RESTATED INTERCONNECTION
AGREEMENT**

This Third Amendment to the Amended and Restated Interconnection Agreement ("Third Amendment") is entered into this 1st day of June, 2021, by and between the City of San Marcos, Texas (San Marcos Electric Utility or "SMEU") and LCRA Transmission Services Corporation ("LCRA TSC"), referred to individually as "Party" and collectively as "Parties".

WHEREAS, LCRA TSC and SMEU entered into that certain Amended and Restated Interconnection Agreement executed January 17, 2017, as amended by that certain First Amendment, executed as of May 13, 2019, as amended by that certain Second Amendment, executed as of February 7, 2020 (collectively, as amended, the "Agreement");

WHEREAS, LCRA TSC and SMEU wish to amend the facility schedule for Rattler Substation;

WHEREAS, LCRA TSC will upgrade the 138-kV bus, replace switches, remove wave traps and coupling capacitors, install a PVT, and install fiber facilities at Hilltop Substation;

WHEREAS, LCRA TSC will upgrade 138-kV switches, remove wave traps, and install fiber facilities at Strahan Substation;

WHEREAS, LCRA TSC will upgrade the LCRA TSC-owned 138-kV Hilltop to Strahan and Hilltop to Ranch Road 12 transmission lines and the Parties will execute a Joint Use Agreement ("JUA") for SMEU's attachments on those transmission lines;

WHEREAS, LCRA TSC will install a ring bus, control enclosure, PVT, CCVTs, and surge arresters at Ranch Road 12 Substation;

WHEREAS, the Parties wish to amend the Redwood and San Marcos Facility Schedules to make miscellaneous updates to the ownership of certain appurtenances owned at each substation.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and conditions herein set forth, the Parties agree to amend the Agreement as follows:

1. Exhibit "A" is deleted in its entirety, and the Exhibit "A" attached to this Third Amendment is added to the Agreement in lieu thereof.
2. Facility Schedule No. 1, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 1 attached to this Third Amendment is added to the Agreement in lieu thereof.
3. Facility Schedule No. 2, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 2 attached to this Third Amendment is added to the Agreement in lieu thereof.

4. Facility Schedule No. 4, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 4 attached to this Third Amendment is added to the Agreement in lieu thereof.

5. Facility Schedule No. 5, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 5 attached to this Third Amendment is added to the Agreement in lieu thereof.

6. Facility Schedule No. 6, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 6 attached to this Third Amendment is added to the Agreement in lieu thereof.

7. Facility Schedule No. 8, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 8 attached to this Third Amendment is added to the Agreement in lieu thereof.

Except as otherwise expressly provided for herein, the Agreement will continue in full force and effect in accordance with its terms.

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IN WITNESS WHEREOF, the Parties have caused this Third Amendment between LCRA Transmission Services Corporation and between the City of San Marcos, Texas to be executed in several counterparts, each of which shall be deemed an original, but all shall constitute one and the same instrument.

CITY OF SAN MARCOS, TEXAS

By:  _____

Name: Bert Lumbreras

Title: City Manager, City of San Marcos,
Texas

Date: 06/03/2021

LCRA TRANSMISSION SERVICES CORPORATION

By: _____



Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission
Design and Protection

Date: _____

FACILITY SCHEDULE NO. 1

1. **Name:** Hilltop
2. **Facility Location:** The Hilltop Substation is located at 321 Lamar Ave, San Marcos, Texas in Hays County. Hilltop Substation is located at the following approximate coordinates: latitude: 29.89900000; longitude: -97.94200000.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Hilltop Substation generally described as:
 - 3.1. where LCRA TSC's jumper from LCRA TSC's 138-kV operating bus connects to SMEU's switch 2554; and
 - 3.2. where LCRA TSC's jumper from LCRA TSC's 138-kV operating bus connects to SMEU's switch 9554.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement.
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** There are two (2) LCRA TSC-owned meter point at Hilltop Substation generally described as:
 - 7.1. One (1) set of 12.5-kV metering accuracy current transformers located in the T1 low-side totalizing bay. One (1) set of 12.5-kV metering accuracy potential transformers located on the 12.5-kV T1 operating bus; and
 - 7.2. One (1) set of metering accuracy current transformers located in the T2 low-side bushings. One (1) set of 12.5-kV metering accuracy potential transformers located on the 12.5-kV T2 operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
 - 9.1. **SMEU owns:**
 - 9.1.1. The Hilltop Substation property, ground grid, grounding wells, gravel, fencing and other appurtenances;
 - 9.1.2. Two (2) power transformers (T1 and T2) with associated surge arresters, and protective relaying;
 - 9.1.3. Two (2) circuit switchers (CS2555 and CS9555) with 138-kV disconnect switch (2554 and 9554);
 - 9.1.4. One (1) circuit switcher bypass switch (9557);
 - 9.1.5. All (five) distribution circuit breakers including protective relaying packages, and

- hook sticks;
- 9.1.6. 12.5-kV steel structures, 12.5-kV operating and transfer buses, switches, insulators, fused cutouts, and distribution class surge arresters;
 - 9.1.7. One (1) 12.5-kV bus tie switch (HI65);
 - 9.1.8. One (1) 12.5-kV potential transformer (PT2) with fuse (F8);
 - 9.1.9. One (1) load management system (LM);
 - 9.1.10. Three (3) Station Service (SS1, SS2 and SS3) with associated fuses; and
 - 9.1.11. One (1) underbuild distribution circuit attached to LCRA TSC's 138-kV Hilltop to Strahan transmission line (structures 4 through 9) of LCRA TSC's;
 - 9.1.12. One (1) 20' x 24' control enclosure with station battery and charger, AC and DC panels, HVAC, control racks, and other appurtenances ("SMEU Control Enclosure").

9.2. LCRA TSC owns:

- 9.2.1. The following transmission lines comprised of structures, foundations, conductors, insulators, OPGW, splice cans, and connecting hardware:
 - 9.2.1.1. 138-kV Hilltop to Ranch Road 12 transmission line;
 - 9.2.1.2. 138-kV Hilltop to Strahan transmission line;
- 9.2.2. Two (2) 138-kV circuit breakers (9540 and 9550) with foundations and protective relaying;
- 9.2.3. Two (2) coupling capacitor voltage transformers CCVT1 and CCVT2;
- 9.2.4. Six (6) 138-kV switches (9539, 9541, 9543, 9549, 9551, and 9553);
- 9.2.5. Two (2) 138-kV dead-end towers with associated bus, insulators, and surge arresters (SA6, SA7);
- 9.2.6. One (1) 138-kV Operating Bus with associated steel supporting structures and insulators;
- 9.2.7. Jumpers from LCRA TSC's 138-kV operating bus to the Points of Interconnection at SMEU's disconnect switches (2554 and 9554);
- 9.2.8. Underfrequency relay panel;
- 9.2.9. One (1) 12.5-kV metering potential transformer (PT1) with fuse (F2);
- 9.2.10. One (1) 138-kV bus potential transformer (PT5);
- 9.2.11. Two (2) 138-kV surge arresters (SA5 and SA8);
- 9.2.12. One (1) 138-kV motor operated switch (9538);
- 9.2.13. One (1) 138-kV power voltage transformer (PVT1);
- 9.2.14. Two (2) 12.5-kV metering current transformers (CT1 and CT3);
- 9.2.15. One (1) 138-kV relaying current transformer (CT4);
- 9.2.16. One (1) 138-kV bus, bus differential and breaker failure relaying package; and
- 9.2.17. One (1) 24' x 32' control enclosure with station battery and charger, AC and DC panels, HVAC, and appurtenances ("LCRA TSC Control Enclosure").

- 10. Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the equipment it owns.

11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.

12. **Other Terms and Conditions:**

12.1. Access and Physical Security

12.1.1. SMEU and LCRA TSC are to share access to the substation by LCRA TSC hardened locks in the gate and in the control enclosure doors.

12.2. Relay and Control

12.2.1. LCRA TSC will provide SMEU access to 125 VDC and 120/240 VAC power.

Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either LCRA TSC (if space is available) or SMEU.

12.2.2. LCRA TSC will provide SMEU with floor space (as available and as necessary) in its control enclosures for the installation of SMEU required relay panel boards and equipment.

12.2.3. LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138-kV differential & breaker failure relaying panel to SMEU's circuit switcher CS2555 relaying panel.

12.2.4. LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138-kV bus differential & breaker failure relaying panel to SMEU's circuit switcher CS9555 relaying panel.

12.2.5. SMEU will provide breaker failure initiate contacts from SMEU's 138-kV circuit switcher CS2555 relaying panel to LCRA TSC's 138-kV-bus differential & breaker failure relaying panel.

12.2.6. SMEU will provide breaker failure initiate contacts from SMEU's 138-kV circuit switcher CS9555 relaying panel to LCRA TSC's 138-kV bus differential & breaker failure relaying panel.

12.2.7. SMEU will supply and provide relaying current transformers from SMEU's Transformer T2 for use by LCRA TSC in LCRA TSC's 138-kV bus differential relaying scheme.

12.2.8. LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

12.3. Metering

12.3.1. SMEU shall supply and provide metering current transformers from power transformer T2 for LCRA TSC metering.

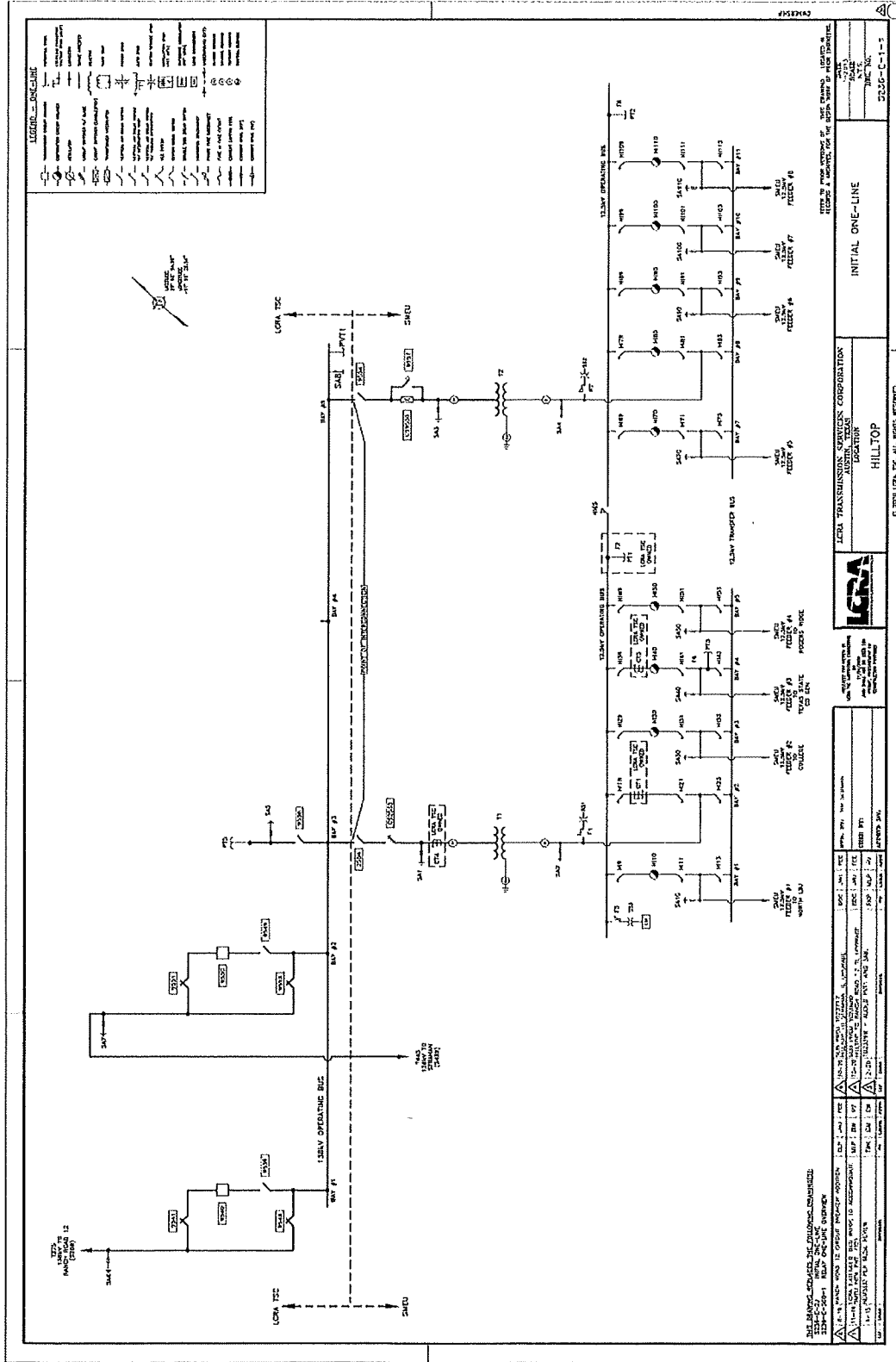
12.3.2. SMEU shall supply and provide 12.5-kV bus potential transformer PT2 for LCRA TSC metering.

12.4. Joint Use of Structures and Easements

The Parties will execute a separate Joint Use Agreement ("JUA") defining the terms and conditions for SMEU's joint use and attachment to LCRA TSC's Strahan to Hilltop 138-kV transmission line and LCRA TSC's 138-kV Hilltop to Ranch Road 12 transmission line.

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HILLTOP ONE-LINE DIAGRAM



FACILITY SCHEDULE NO. 2

1. **Name:** Strahan
2. **Facility Location:** The Strahan Substation is located at 709 Aquarena Springs Dr. (Loop 82), San Marcos, Texas in Hays County. Strahan is located at the following approximate coordinates: latitude: 29.89000000; longitude: -97.93200000.
3. **Point of Interconnection:** There are three (3) Points of Interconnection in the Strahan Substation generally described as:
 - 3.1. where the SMEU-owned 12.5-kV bus terminates at the LCRA TSC-owned power transformer (T1) low-voltage bushings;
 - 3.2. where the four-hole pad from the LCRA TSC-owned jumper from 12.5-kV mobile switch ST582 contacts the SMEU-owned 12.5-kV operating bus terminal pad; and
 - 3.3. where the four-hole pad from the LCRA TSC-owned jumper from 12.5-kV mobile switch ST585 contacts the SMEU-owned 12.5-kV transfer bus terminal pad.
4. **Transformation Services Provided by LCRA TSC:** Yes, per separate Transformation Service Agreement.
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement.
6. **Delivery Voltage:** 12.5-kV
7. **Metered Voltage and Location:** There is one (1) LCRA TSC-owned meter point at Strahan Substation generally described as:
 - 7.1 One (1) set of 12.5-kV metering accuracy current transformers located in the T1 low-side bushings. One (1) set of 12.5-kV metering accuracy potential transformers located on the 12.5-kV T1 operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
 - 9.2. **SMEU owns:**
 - 9.2.1. The Strahan Substation property, ground grid, gravel, fencing and other appurtenances;
 - 9.2.2. Five (5) distribution circuit breakers (ST510, ST520, ST530, ST550, and ST560);
 - 9.2.3. 15-kV bus potential transformers;
 - 9.2.4. Six (6) distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer bus, bus potential transformers, and metering current transformers; and

9.2.5. One (1) underbuild distribution circuit, including cross-arms and appurtenances, attached to LCRA TSC's 138-kV Hilltop to Strahan transmission line structures (no. 4 through 9) of LCRA TSC's.

9.2.6. One (1) 120/240 AC Panel

9.2.7. One (1) 125 VDC Panel

9.3. LCRA TSC owns:

9.2.1. The following transmission lines comprised of structures, conductors, insulators, OPGW, splice cans, and connecting hardware:

9.2.1.1. 138-kV Hilltop to Strahan transmission line;

9.2.1.2. 138-kV San Marcos to Strahan transmission line;

9.2.2. 138-kV ring bus including structures, bus supports, insulators, hardware, foundations, and jumpers;

9.2.3. One (1) power transformer T1 with associated surge arresters;

9.2.4. One (1) 138-kV circuit switcher (CS9515) with bypass switch (9517) and disconnect switch (9512);

9.2.5. Two (2) mobile transformer disconnect switches (ST582 and ST585) on the ends of the 12.5-kV operating and transfer buses;

9.2.6. Station Service equipment; and

9.2.7. One (1) control enclosure with battery bank, charger, HVAC, and other appurtenances.

10. Operational Responsibilities of Each Party: Each Party will be responsible for the operation of the equipment it owns.

11. Maintenance Responsibilities of Each Party: Each Party will be fully responsible for the maintenance of the equipment it owns.

12. Other Terms and Conditions:

12.1. Access and Physical Security

12.1.1. SMEU and LCRA TSC are to share access to the substation by LCRA TSC hardened locks in the gate and in the control enclosure doors.

12.2. Relay and Control

12.2.1. LCRA TSC will provide SMEU access to 125 VDC. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.

12.2.2. LCRA TSC will provide SMEU access to 120/240 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.

12.2.3. LCRA TSC will provide SMEU with floor space (as available and as necessary) in its control enclosures for the installation of LCRA TSC required relay panel boards and equipment.

12.2.4. LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in

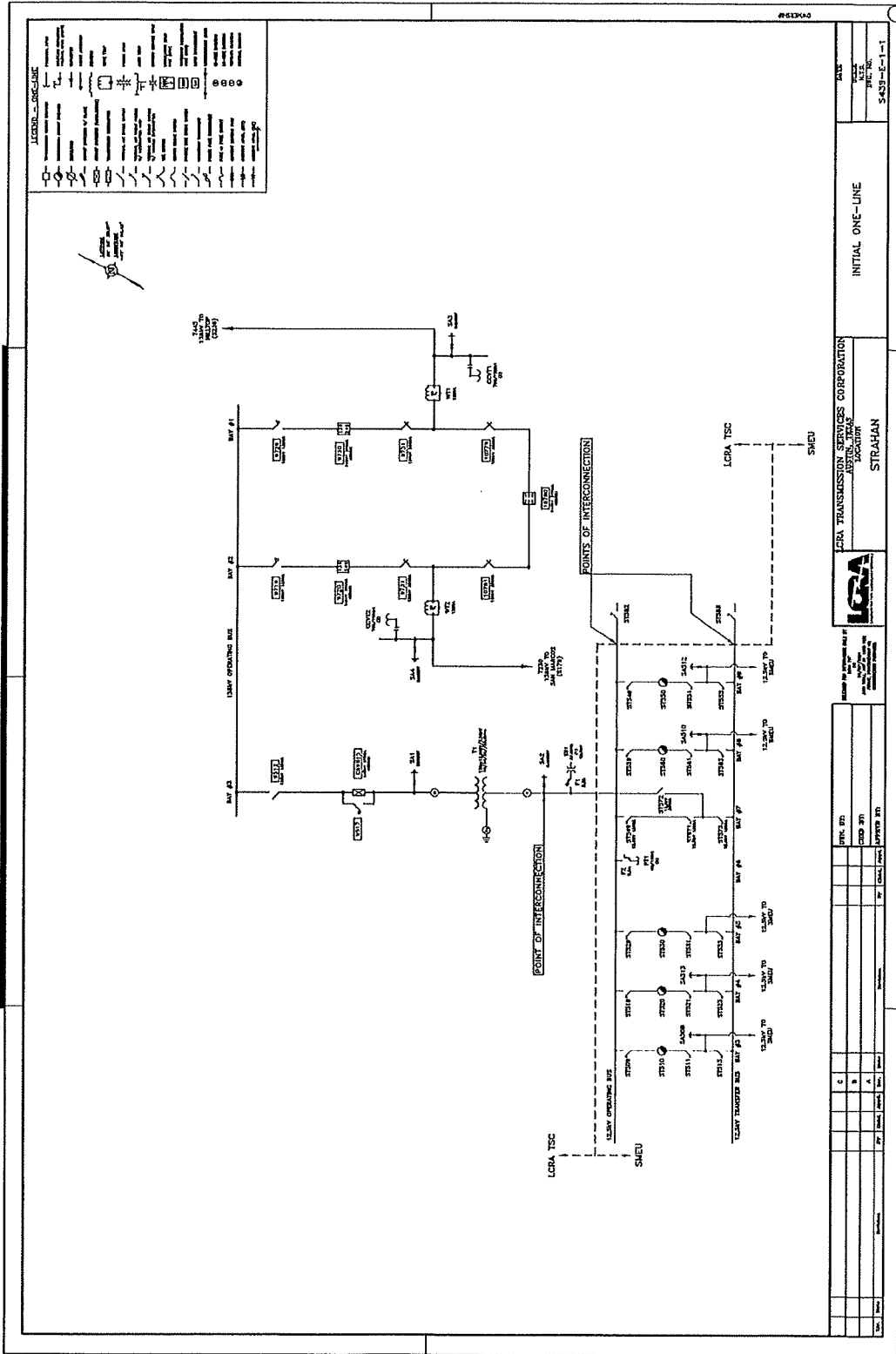
accordance with ERCOT Nodal Operating Guides.

12.3. Joint Use of Structures and Easements

The Parties will execute a separate Joint Use Agreement (“JUA”) defining the terms and conditions for SMEU’s joint use and attachment to LCRA TSC’s Strahan to Hilltop 138-kV transmission line.

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STRAHAN ONE-LINE DIAGRAM



FACILITY SCHEDULE NO. 4

1. **Name:** Ranch Road 12
2. **Facility Location:** The Ranch Road 12 Substation is located at 2701 Ranch Road 12, San Marcos, Texas in Hays County. Ranch Road Substation is located at the following approximate coordinates: latitude: 29.90100000; longitude: -97.99200000.
3. **Point of Interconnection:** There is one (1) Point of Interconnection at Ranch Road 12 Substation:
 - 3.1. where LCRA TSC's jumpers from the LCRA TSC-owned 138-kV ring bus connect to the four-hole pad on the SMEU-owned disconnect switch 30154. The Point of Interconnection (POI) serves the SMEU-owned power transformer (T2).
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement.
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** There is one (1) LCRA TSC-owned meter point at Ranch Road 12 Substation generally described as:
 - 7.1. One (1) set of 12.5-kV metering accuracy current transformers located in the T2 low-side bushings. One (1) set of 12.5-kV metering accuracy potential transformers located on the 12.5-kV T2 operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
 - 9.1. **SMEU owns:**
 - 9.1.1. The Ranch Road 12 Substation property, ground grid, grounding wells, gravel, fencing, and other appurtenances;
 - 9.1.2. One (1) disconnect switch (30154);
 - 9.1.3. One (1) power transformer T2 with associated surge arresters and protective relaying;
 - 9.1.4. One (1) circuit switcher (CS30155) with associated bypass switch (30157);
 - 9.1.5. Four (4) distribution bays including A-frames, trusses, insulators, disconnect switches, surge arresters, bus potential transformers and 12.5-kV operating and transfer bus;
 - 9.1.6. Three (3) distribution circuit breakers (RR80, RR90, and RR100) and hooksticks;
 - 9.1.7. Station Service equipment;
 - 9.1.8. Control Enclosure with station battery and control panels; and

9.1.9. One (1) underbuild distribution circuit attached to LCRA TSC's 138-kV Hilltop to Ranch Road 12 transmission line (structures 1 and 2) of LCRA TSC's.

9.2. LCRA TSC owns:

9.2.1. The following transmission lines comprised of structures, conductors, insulators, OPGW, splice cans, and connecting hardware:

9.2.1.1 138-kV Hilltop to Ranch Road 12 transmission line;

9.2.1.2 138-kV Ranch Road 12 to McCarty Lane East transmission line;

9.2.2. One (1) 138-kV ring bus including structures, insulators, hardware, foundations, and jumpers;

9.2.3. Three 138-kV circuit breakers (30150, 30160, and 30170) with foundations, jumpers, and protective relaying;

9.2.4. Two (2) 138-kV dead-end towers with associated foundations, insulators, and jumpers;

9.2.5. Two (2) A-Frame structures including hardware and foundations;

9.2.6. Six (6) 138-kV disconnect switches (30149, 30151, 30159, 30161, 30169, and 30171);

9.2.7. Two (2) 138-kV surge arresters (SA4 and SA5);

9.2.8. Two (2) 138-kV coupling capacitor voltage transformers (CCVT1 and CCVT2);

9.2.9. One (1) control enclosure (21' x 27') with battery bank, battery charger, and appurtenances;

9.2.10. One (1) 138-kV power voltage transformer (PVT1); and

9.2.11. Underfrequency relay panel.

10. Operational Responsibilities of Each Party: Each Party will be responsible for the operation of the equipment it owns.

11. Maintenance Responsibilities of Each Party: Each Party will be fully responsible for the maintenance of the equipment it owns.

12. Other Terms and Conditions

12.1. Access and Physical Security

12.1.1. SMEU and LCRA TSC are to share access to the substation by LCRA TSC hardened locks in the gate.

12.1.2. LCRA TSC will share access to its control house at Ranch Road 12 Substation. Access is obtained by calling LCRA TSC's System Operations Control Center using the intercom at the door of the control house.

12.2. Relay and Control

12.2.1. LCRA TSC will provide tripping and close inhibit contacts from its 138-kV bus differential & breaker failure relaying panel to SMEU's circuit switcher CS30155 relaying panel.

12.2.2. SMEU will provide breaker failure initiate contacts from SMEU's 138-kV circuit switcher CS30155 relaying panel to LCRA TSC's 138-kV-bus differential & breaker failure relaying panel.

- 12.2.3. SMEU will supply and provide relaying current transformers from SMEU's Transformer T2 for use by LCRA TSC in LCRA TSC's 138-kV bus differential relaying scheme.
- 12.2.4. LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

12.3. Metering

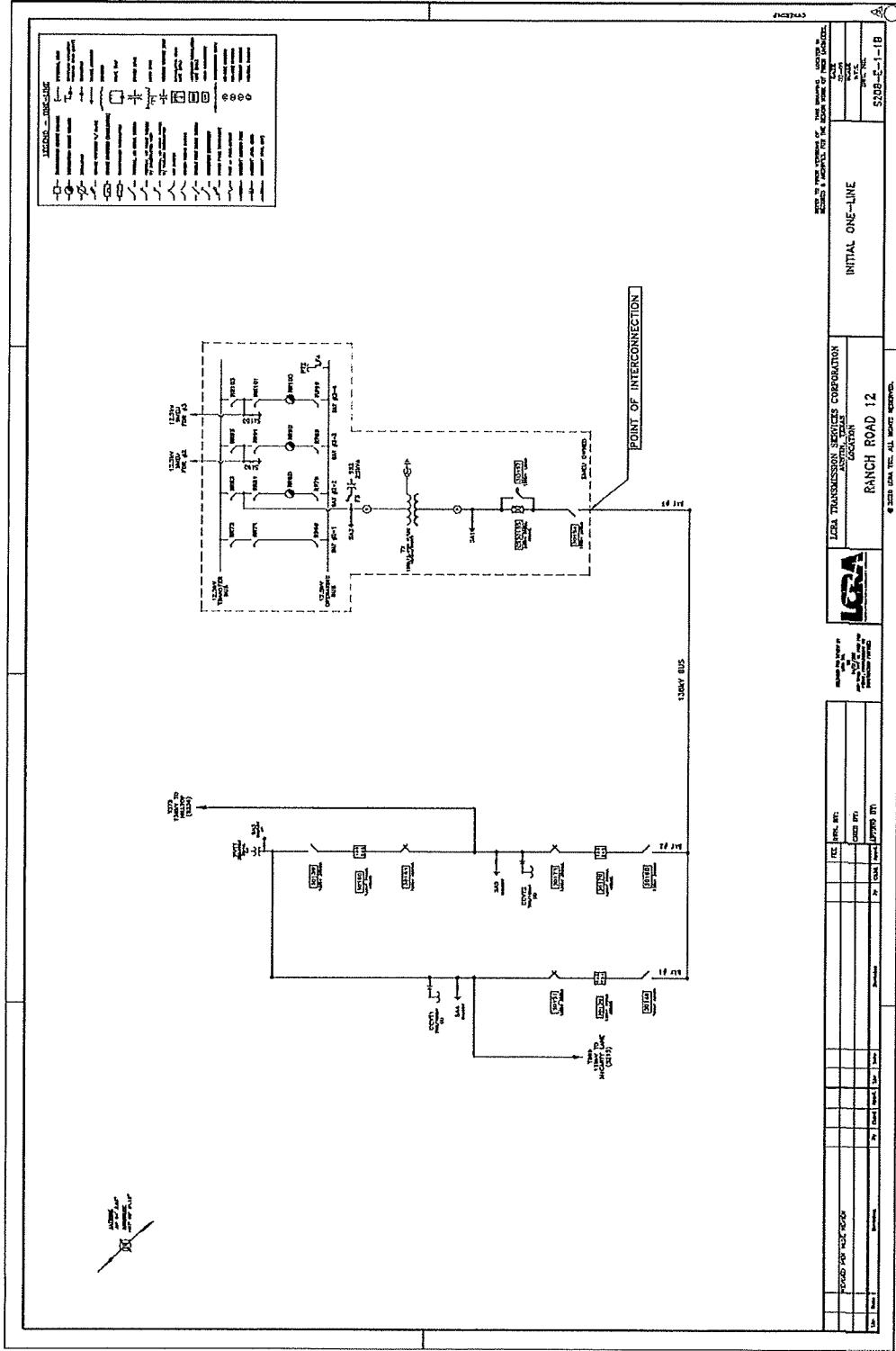
- 12.3.1. SMEU shall supply and provide metering current transformers from power transformer T2 for LCRA TSC metering.
- 12.3.2. SMEU shall supply and provide 12.5-kV bus potential transformer PT2 for LCRA TSC metering.

12.4. Joint Use of Structures and Easements

The Parties will execute a separate Joint Use Agreement ("JUA") defining the terms and conditions for SMEU's joint use and attachment to LCRA TSC's 138-kV Hilltop to Ranch Road 12 transmission line.

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RANCH ROAD 12 ONE-LINE DIAGRAM



		LRA TRANSMISSION SERVICES CORPORATION LOCATION RANCH ROAD 12	INITIAL ONE-LINE
PROJECT NO: 12-0000		SHEET NO: 1-18	
DATE: 12/15/00		DRAWN BY:	
CHECKED BY:		APPROVED BY:	

FACILITY SCHEDULE NO. 8

1. **Name:** Rattler
2. **Facility Location:** The Rattler Substation is located at 1550 Clovis R Barker Rd., Texas in Hays County. Rattler Substation is located at the following approximate coordinates: latitude: 29.83954869; longitude: -97.95725775.
3. **Point of Interconnection:** There is one (1) Point of Interconnection at Rattler Substation generally described as:
 - 3.1. where the LCRA TSC jumper connects the LCRA TSC 138-kV ring bus to the four-hole pad on the SMEU 138-kV motor operated disconnect switch 35804. The Point of Interconnection (POI) is located on the LCRA TSC-owned 138-kV box structure and serves the SMEU-owned power transformer (T1).
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement between the parties.
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** There is one (1) LCRA TSC-owned meter point at Rattler Substation generally described as:
 - 7.1. One (1) set of 12.5-kV metering accuracy current transformers located in the T1 low-side bushings. One (1) set of 12.5-kV metering accuracy potential transformers located on the 12.5-kV T1 operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
 - 9.1. **SMEU owns:**
 - 9.1.1. The Rattler Substation property, ground grid, gravel, fencing, and other appurtenances;
 - 9.1.2. One (1) 138-kV circuit breaker (35800) with associated foundation and protective relaying;
 - 9.1.3. One (1) 138-kV motor operated disconnect switch (35804);
 - 9.1.4. One (1) power transformer (T1) with associated surge arresters, foundation, jumpers, and protective relaying;
 - 9.1.5. One Distribution Building with 15KV switchgear (with 4 – 1200Amp breakers), with station battery and charger, AC and DC panels, HVAC, and other appurtenances (the old existing enclosure);
 - 9.1.6. One 480V – 208Y/120V, 200 KW Generator with a 372-gal subtank, automatic

- transfer switch and other appurtenances;
- 9.1.7. All underground distribution circuits including pad mounted gear, conductors, and hardware;
- 9.1.8. All distribution circuit breakers including protective relay packages;
- 9.1.9. All distribution and total bays including switchgear building, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer buses, bus potential transformer and associated cabling; and
- 9.1.10. One (1) station service (SS1).
- 9.2 LCRA TSC owns:**
- 9.2.1 The following transmission lines comprised of structures, conductors, insulators, OPGW, splice cans, and connecting hardware ("LCRA TSC Transmission Lines"):
 - 9.2.1.1 138-kV Redwood to Rattler transmission line;
 - 9.2.1.2 138-kV Rattler to McCarty Lane East transmission line;
- 9.2.2 138-kV ring bus including structures, bus supports, insulators, hardware, foundations, and jumpers;
- 9.2.3 Six (6) 138-kV switches (35809, 35811, 35819, 35821, 35829, and 35831);
- 9.2.4 Three (3) 138-kV circuit breakers (35810, 35820, and 35830) including jumpers, foundations, and protective relay packages;
- 9.2.5 Two (2) 138-kV coupling capacitor voltage transformers (CCVT1 and CCVT2);
- 9.2.6 Two (2) power voltage transformer (PVT1 and PVT2);
- 9.2.7 Two (2) 138-kV surge arresters (SA1 and SA2);
- 9.2.8 138-kV bus differential & breaker failure relaying schemes;
- 9.2.9 One (1) control enclosure (21' X 27') with battery bank, battery charger, and appurtenances; and
- 9.2.10 One (1) interconnect junction box.

10. Operational Responsibilities of Each Party: Each Party will be responsible for the operation of the equipment it owns.

11. Maintenance Responsibilities of Each Party: Each Party will be fully responsible for the maintenance of the equipment it owns.

12. Other Terms and Conditions:

12.1. Metering

- 12.1.1. SMEU shall supply and provide metering current transformers from power transformer T1 for LCRA TSC metering.
- 12.1.2. SMEU shall supply and provide 12.5-kV bus potential transformer PT1 for LCRA TSC metering.

12.2. Relay and Control

- 12.2.1. LCRA TSC will supply and install the interface junction box and will provide trenching, cable, and conduits from its facilities to the interface junction box for wiring needed to interface the two systems. LCRA TSC will make wiring connections.
- 12.2.2. SMEU will provide trenching, cable, and conduits from its facilities to the interface junction box for wiring needed to interface the two systems. LCRA TSC will make wiring connections.
- 12.2.3. LCRA TSC will provide tripping and close inhibit contacts from its 138-kV bus

differential & breaker failure relaying panel to SMEU's circuit breaker 35800 relaying panel.

- 12.2.4. SMEU will provide breaker failure initiate contacts from its circuit breaker 35800 relaying panel to LCRA TSC's 138-kV bus differential & breaker failure relaying panel.
- 12.2.5. SMEU will supply and allow LCRA TSC use of circuit breaker 35800 relaying bushing current transformer for its 138-kV bus differential relaying scheme.
- 12.2.6. LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

12.3. Access and Physical Security

- 12.3.1. SMEU and LCRA TSC are to share access to the substation by LCRA TSC hardened locks in the gate.

12.4. Electrical

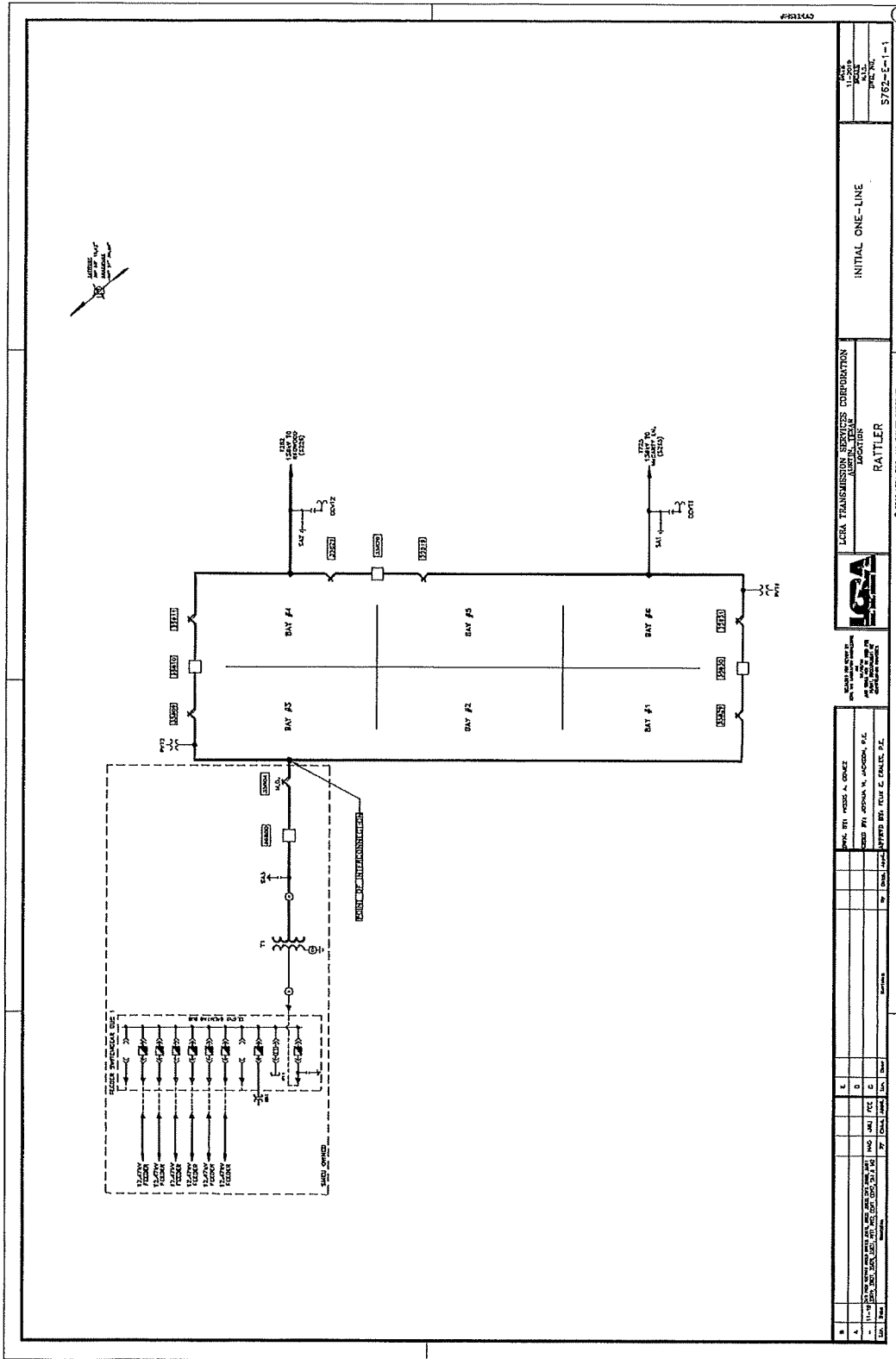
- 12.4.1. SMEU and LCRA TSC shield wire systems will be installed by each Party and will be connected.
- 12.4.2. SMEU and LCRA TSC ground grids will be installed by each Party but will be connected by LCRA TSC.

12.5. Site Development

- 12.5.1. SMEU will acquire the Rattler Substation site and perform or cause to be performed the site grading for the substation yard.
- 12.5.2. SMEU shall design, construct, and maintain any required detention pond(s).
- 12.5.3. SMEU will acquire any necessary permits required for development of the Substation Site.
- 12.5.4. LCRA TSC will construct the ground grid and install gravel underlying its portion of the Substation Site and SMEU will reimburse LCRA TSC for such costs.

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RATTLER ONE-LINE DIAGRAM



FACILITY SCHEDULE NO. 5

1. **Name:** Redwood
2. **Facility Location:** The Redwood Substation is located at 1375 Wonder World Drive, San Marcos, Hays County, Texas. Redwood is located at the following approximate coordinates: latitude: 29.8506734; longitude: -97.9448147.
3. **Points of Interconnection:** There are twelve (12) Points of Interconnection at Redwood Substation generally described as:
 - 3.1. where the SMEU's 138-kV bus from switch 8238 connects to LCRA TSC's 138-kV operating bus #1 for T2;
 - 3.2. where the SMEU's 138-kV bus from switch 8237 connects to LCRA TSC's 138-kV operating bus #2 for T2;
 - 3.3. where SMEU's incoming distribution line connects to the tubular bus between switches RW321 and RW323 at breaker RW320;
 - 3.4. where the jumper from breaker RW320, passing through CT15, connects to the four-hole pad on switch RW319;
 - 3.5. where the jumper from breaker RW320 connects to the four-hole pad on switch RW321;
 - 3.6. where SMEU's incoming distribution line connects to the tubular bus between switches RW341 and RW343 at breaker RW340;
 - 3.7. where the jumper from breaker RW340, passing through CT11, connects to the four-hole pad on switch RW339;
 - 3.8. where the jumper from breaker RW340 connects to the four-hole pad on switch RW341;
 - 3.9. where the jumper from switch RW202 connects to the 12.5-kV operating bus for T2;
 - 3.10. where the jumper from switch RW205 connects to the 12.5-kV transfer bus for T2;
 - 3.11. where the jumper from switch RW102 connects to the 12.5-kV operating bus for T2; and
 - 3.12. where the jumper from switch RW105 connects to the 12.5-kV transfer bus for T2.
4. **Transformation Services Provided by LCRA TSC:** Yes, for T3 only, per separate Transformation Service Agreement.
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement.
6. **Delivery Voltage:** 138-kV for T2; 12.5-kV for T3
7. **Metered Voltage and Location:** For T2, the metering current transformers located in the T2 low-side bushings. For T3, the metered voltage is 12.5 kV. The metering current transformers are located in each individual bay. The metering potential transformers are located on their respective 12.5 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

9.1. SMEU owns:

- 9.1.1 One (1) power transformer (T2) with associated foundation, surge arresters, and protective relaying;
- 9.1.2 One (1) circuit switcher (CS8235) with bypass switch (8236);
- 9.1.3 138-kV transformer bus with associated steel structures for T2, 138-kV operating bus disconnect switches (8237 and 8238), and insulators;
- 9.1.4 Three (3) distribution bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer bus, and metering current transformers for T2;
- 9.1.5 Six (6) distribution circuit breakers (RW210, RW220, RW230, RW240, RW320, RW340);
- 9.1.6 Disconnect switches in distribution bays 1-0 and 1-4;
- 9.1.7 120/240 AC panel (AC Panel #1), 28 Ckt in Control Enclosure #1; and
- 9.1.8 125 VDC panel (DC Panel #1), 20 Ckt in Control Enclosure #1.

9.2. LCRA TSC owns:

- 9.2.1. The Redwood Substation property, perimeter fence, gravel, ground grid and other appurtenances;
- 9.2.2. All 138-kV transmission facilities and associated protective relaying packages except those owned by SMEU defined in Section 9.1;
- 9.2.3. One (1) 138-kV circuit switcher (CS19235) with bypass switch (19232) and disconnect switches (19237 and 19238);
- 9.2.4. One (1) power transformer (T3) with associated surge arresters;
- 9.2.5. Three (3) distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer bus, bus potential transformers and metering current transformers for T3;
- 9.2.6. One (1) total circuit breaker RW330;
- 9.2.7. One (1) station service transformer (SS5) associated with T3;
- 9.2.8. 12.5-kV bus potential transformers (PT3 and PT4) with fuses (F4 and F8) associated with T2 and T3;
- 9.2.9. 12.5-kV metering current transformers (CT11, CT15, and CT22); and
- 9.2.10. 24' x 51' control enclosure with battery bank, battery charger, AC and DC panels, HVAC, and appurtenances ("Control Enclosure #2");
- 9.2.11. 20' x 39' control enclosure with battery bank, battery charger, AC and DC panels, HVAC, and appurtenances ("Control Enclosure #1").

10. Operational Responsibilities of Each Party: Each Party will be responsible for the operation of the equipment it owns. LCRA TSC shall operate the SMEU 138-kV equipment, including monitoring the SMEU power transformer alarms.

11. Maintenance Responsibilities of Each Party: Each Party will be fully responsible for the maintenance of the equipment it owns.

12. Other Terms and Conditions:

12.1. Access and Physical Security

The SMEU and LCRA TSC are to share access to the substation by LCRA TSC hardened locks in the gate and in the control house doors.

12.2. Relay and Control

- 12.2.1 LCRA TSC will provide SMEU access to 125 VDC and 120/240 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.
- 12.2.2 LCRA TSC will provide SMEU with floor space (as available and as necessary) in its control houses for the installation of SMEU required relay panel boards and equipment.
- 12.2.3 LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138-kV differential and breaker failure relaying panel to SMEU's circuit switcher CS8235 relaying panel.
- 12.2.4 SMEU will provide breaker failure initiate contacts from SMEU's 138-kV circuit switcher CS8235 relaying panel to LCRA TSC's 138-kV bus differential and breaker failure relaying panel.
- 12.2.5 SMEU will supply and provide relaying current transformers from SMEU's T2 for use by LCRA TSC in LCRA TSC's 138-kV bus differential relaying scheme.
- 12.2.6 LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

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FACILITY SCHEDULE NO. 6

1. **Name:** San Marcos
2. **Facility Location:** The San Marcos Substation is located at 1301 River Road, San Marcos, Hays County, Texas.
3. **Points of Interconnection:** There are four (4) Points of Interconnection at San Marcos Substation generally described as:
 - 3.1. where SMEU's jumper from switch 3942 on the transformer bus for power transformer T1 connects to LCRA TSC's 138-kV operating bus;
 - 3.2. where SMEU's jumper from switch 3944 on the transformer bus for power transformer T1 connects to LCRA TSC's 138-kV transfer bus;
 - 3.3. where SMEU's jumper from switch 4986 on the transformer bus for power transformer T2 connects to LCRA TSC's 138-kV operating bus; and
 - 3.4. where SMEU's jumper from switch 4987 on the transformer bus for power transformer T2 connects to LCRA TSC's 138-kV transfer bus.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** The metered voltage is 12.5-kV. The metering current transformers are located in the two power transformers (T1 and T2). The two metering potential transformers are located on the two 12.5-kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
 - 9.1. **SMEU owns:**
 - 9.1.1. Two (2) transformers (T1 and T2) with associated surge arresters;
 - 9.1.2. Two (2) 138-kV circuit switchers (CS4975 and CS4985) and associated protective relaying packages;
 - 9.1.3. Six (6) 138-kV disconnect switches (4974, 3942, 3944, 4984, 4986 and 4987);
 - 9.1.4. Jumpers from the disconnect switches (3942, 3944, 4986 and 4987) to the Points of Interconnection at the 138-kV operating and transfer buses;
 - 9.1.5. 138-kV transformer bus with associated steel structures and insulators;
 - 9.1.6. Two (2) 138 kV surge arresters (SA7 and SA9);
 - 9.1.7. All distribution and total circuit breakers including jumpers, protective relay packages and foundations;
 - 9.1.8. All distribution and total bays including A-frames, trusses, foundations, insulators,

disconnect switches, surge arresters, 12.5-kV operating and transfer bus, and bus potential transformers; and

9.1.9. Two (2) station service transformers (SS1 and SS2).

9.2. LCRA TSC owns:

9.2.1. The San Marcos Substation property, perimeter fence, gravel, ground grid, and other appurtenances;

9.2.2. All 138-kV transmission facilities and associated protective relaying packages except those owned by SMEU defined in Section 9.1;

9.2.3. 138-kV operating and transfer bus;

9.2.4. One (1) 138-kV bus potential transformer (PT1);

9.2.5. One (1) 138-kV bus differential and breaker failure relaying scheme;

9.2.6. Two (2) metering packages;

9.2.7. One (1) 138-kV surge arrester (SA6);

9.2.8. Underfrequency relay panel; and

9.2.9. Two (2) control enclosures with battery banks, battery chargers, AC and DC panels, HVAC, and appurtenances;

9.2.10. One (1) microwave tower; and

9.2.11. One (1) battery enclosure.

10. Operational Responsibilities of Each Party: Each Party will be responsible for the operation of the equipment it owns. LCRA TSC shall operate the SMEU 138-kV equipment, including monitoring the SMEU power transformer alarms.

11. Maintenance Responsibilities of Each Party: Each Party will be fully responsible for the maintenance of the equipment it owns.

12. Other Terms and Conditions:

12.1. Access and Physical Security

SMEU and LCRA TSC are to share access to the substation by LCRA TSC hardened locks in the gate and in the control house doors.

12.2. Metering

12.2.1. SMEU will supply and allow LCRA TSC use of its 12.5-kV bus potential transformers PT3 and PT4 for metering.

12.2.2. SMEU will supply and allow LCRA TSC use of transformer T1 and T2 metering current transformers for its metering.

12.3. Relay and Control

12.3.1. SMEU will supply and allow LCRA TSC use of transformer T1 and T2 relaying current transformers for LCRA TSC's bus differential and breaker failure relaying scheme.

12.3.2. SMEU will provide breaker failure initiate contacts from its circuit switchers CS4975 and CS4985 relaying panel to LCRA TSC's bus differential and breaker failure relaying panel.

12.3.3. LCRA TSC will provide tripping and close inhibit contacts from its bus differential and breaker failure relaying panel to SMEU's circuit switchers CS4975 and CS4985 relaying panels.

12.3.4. LCRA TSC will provide SMEU access to 125 VDC and 120/240 VAC power. Circuits

must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either LCRA TSC (if space is available) or SMEU.

- 12.3.5. SMEU will supply and allow LCRA TSC use of SS1 and SS2 for primary and backup station power.
- 12.3.6. LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.
- 12.3.7. LCRA TSC will provide SMEU with floor space (as available and as necessary) in its control house for the installation of SMEU required panels and equipment.

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