

Control Number: 35077



Item Number: 144

Addendum StartPage: 0



**Project No. 35077**

**INTERCONNECTION AGREEMENT**

**Between**

**Central Texas Electric Cooperative**

**and**

**LCRA Transmission Services Company**

**August 6, 2009**

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**INTERCONNECTION AGREEMENT**  
**BETWEEN**  
**CENTRAL TEXAS ELECTRIC COOPERATIVE**  
**AND**  
**LCRA TRANSMISSION SERVICES CORPORATION**

**DATED: 8-06-09**



**INTERCONNECTION AGREEMENT  
BETWEEN  
CENTRAL TEXAS ELECTRIC COOPERATIVE  
AND  
LCRA TRANSMISSION SERVICES CORPORATION**

This Agreement is made and entered into this 6th day of August, 2009, by and between the Central Texas Electric Cooperative ("CTEC") and LCRA Transmission Services Corporation ("LCRA TSC") each sometimes hereinafter referred to individually as "Party" or both referred to collectively as "Parties".

**WITNESSETH**

WHEREAS, each Party is the owner and operator of transmission and/or distribution facilities and is engaged in the business of transmitting electric energy to the general public within the Electric Reliability Council of Texas; and

WHEREAS, the Parties desire to interconnect their respective transmission and/or distribution systems in the respects, and under the terms and conditions set forth below.

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

**ARTICLE I – EFFECTIVE DATE AND TERM**

1.1 This Agreement and any subsequent addendum to this Agreement shall become effective on the date of execution by both Parties. Unless otherwise mutually agreed, this Agreement shall remain in effect initially for a period of thirty (30) years from the effective date, and shall continue in effect thereafter for periods of five (5) years each unless canceled after such initial period or any subsequent period either by mutual agreement or by either Party upon at least 36 months written notice to the other party.

**ARTICLE II – OBJECTIVE AND SCOPE**

2.1 It is the intent of the Parties, by this Agreement, to state the terms and conditions under which the Parties' transmission and/or distribution systems will be interconnected and to identify the facilities and equipment provided by each Party at the points of interconnection between their systems.

2.2 This Agreement shall apply to the ownership, construction, operation and maintenance of those facilities which are specifically identified and described in the Facility Schedules which are attached hereto and incorporated herein.



2.3 This Agreement, including all attached Facility Schedules, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the facilities of the Parties at the Points of Interconnection expressly provided for in this Agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the subject matter hereof if not set forth or provided for herein. This Agreement replaces all other agreements and undertakings, oral and written, between the Parties with regard to the subject matter hereof. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein; such agreements are unaffected by this Agreement.

2.4 If CTEC also takes Transformation Service from LCRA TSC, CTEC shall execute a separate agreement for Transformation Service, which shall be attached hereto.

### **ARTICLE III – DEFINITIONS**

For purposes of this Agreement, the following definitions shall apply:

3.1 Agreement shall mean this Agreement with all schedules and attachments applying hereto, including any schedules and attachments hereafter made and any amendments hereafter made.

3.2 ERCOT shall mean the Electric Reliability Council of Texas, Inc.

3.3 ERCOT Protocols shall mean the documents adopted by ERCOT, and approved by the PUCT, including any attachments or exhibits referenced in the ERCOT Protocols, as amended from time to time, that contain the scheduling, operating, planning, reliability, and settlement (including customer registration) policies, rules, guidelines, procedures, standards, and criteria of ERCOT.

3.4 ERCOT Transmission Operator shall mean the subset of transmission service providers or transmission and/or distribution service providers (TDSPs) that is charged with continuous communication (7 days per week and 24 hours per day basis) with ERCOT operations and carrying out dispatch instructions directly or on behalf of represented TDSPs and carrying out other functions as described in the ERCOT Protocols.

3.5 Facility Schedule(s) shall mean the addendum(s) to this Agreement that describe the agreement on ownership, control, operation, and maintenance responsibilities of the Parties at the Point(s) of Interconnection.

3.6 Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the



optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region. Good Utility Practice may include, but not be limited to, conformance with the applicable and consistently applied reliability criteria, standards and operating guides of ERCOT and the North American Electric Reliability Council, or successor organization(s).

3.7 Independent System Operator shall mean the ERCOT Independent System Operator as defined in the PUCT Substantive Rules

3.8 NERC shall mean the North American Electric Reliability Corporation or its successor in function.

3.9 NERC Reliability Standards shall mean the mandatory electric reliability standards enforced by NERC.

3.10 Point(s) of Interconnection shall mean the points where the electrical systems of the Parties are or may, by the closure of normally open switches, be connected.

3.11 PUCT shall mean the Public Utility Commission of Texas or its successor in function.

#### **ARTICLE IV – ESTABLISHMENT AND TERMINATION OF POINTS OF INTERCONNECTION**

4.1 The Parties agree to comply with NERC Reliability Standards as they relate to the interconnection of their facilities at the locations identified and described in the Facility Schedules which are attached hereto and incorporated herein.

4.2 The Parties agree to interconnect their facilities at the locations, and in accordance with the terms and conditions, specified in the attached Facility Schedule(s). All Points of Interconnection shall be specified in Exhibit “A” and the Facility Schedule(s) attached hereto and made a part hereof. The Facility Schedule(s) shall specify the responsibilities of the Parties with respect to ownership, control, operation, and maintenance of the interconnection facilities.

4.3 Unless otherwise provided in a Facility Schedule, each Party shall, at each Point of Interconnection, at its own risk and expense, design, install, or cause the design and installation of the transmission or distribution facilities (including all apparatus and necessary protective devices) on its side of the Point of Interconnection, so as to reasonably minimize the likelihood of voltage and frequency abnormalities, originating in the system of one Party, from affecting or impairing the system of the other Party, or other systems to which the system of such Party is interconnected. The Parties agree that all Points of Interconnection will be established in conformance with operating guidelines of ERCOT and the ERCOT Protocols, as the same may be amended hereafter. The Parties agree to cause their systems to be constructed in accordance with specifications at least equal to those provided by the National Electrical Safety Code, approved by the American National Standards Institute, in effect at the time of construction.



Except as otherwise provided in the Facility Schedules, each Party will be responsible for the equipment and facilities it owns on its side of the Point of Interconnection.

4.4 From time to time, a Point of Interconnection may be added, changed, modified, or deleted from this Agreement as mutually agreed by the Parties and/or as ordered by a regulatory authority having jurisdiction thereof. Any such change, addition, or deletion shall be recorded in Exhibit A and a Facility Schedule in such a way that the numbering of the other Facility Schedules is not changed.

4.5 Subject to regulatory approval, if required, unless mutually agreed, neither party shall have the right to disconnect from the other Party at any Point of Interconnection specified on Exhibit A and Facility Schedule, originally attached to this Agreement or added subsequent to the execution of this Agreement, except for reason of a material violation of the terms of this Agreement, for which opportunity to correct such violation was given under Para. 15.1 of this Agreement and such violation was not corrected in accordance with said Para. 15.1.

4.6 For facilities not specified in the Facility Schedules, or if either Party makes equipment changes or additions to the equipment at a Point of Interconnection, which may affect the operation or performance of the other Party's interconnection facilities, the Parties agree to notify the other Party, in writing, of such changes. Such changes shall be made in accordance with Good Utility Practice, ERCOT Requirements, the National Electrical Safety Code, other applicable codes, and standards in effect at the time of construction, and coordinated between the Parties.

4.7 Each party agrees to provide current as-built drawings to the other Party of the facilities owned by that Party at each Point of Interconnection upon request.

4.8 The Parties agree to coordinate and cooperate on assessments of the reliability impacts to the interconnected transmission system for new facilities requesting connection to their distribution or transmission facilities, in accordance with the NERC Reliability Standards.

4.9 CTEC is responsible for reporting annual load data information to ERCOT as required by the ERCOT Protocols and the Parties agree to coordinate and cooperate on submitting this report

#### **ARTICLE V - OTHER SERVICES**

5.1 This Agreement is applicable only to the interconnection of the facilities of the Parties at the Points of Interconnection and does not obligate either Party to provide, or entitle either Party to receive, any service not expressly provided for herein. Each Party is responsible for making the arrangements necessary to receive any other service that either Party may desire from the other Party or any third party.

5.2 All transmission, transformation, distribution, metering, operations, and maintenance, engineering, billing or other miscellaneous services will be provided and charged under agreements separate from this Agreement.



5.3 Each Facility Schedule shall indicate whether transformation and/or metering services apply at each Point of Interconnection. Parties agree that the name and location of the Points of Interconnection in the Exhibit "A" and the Facilities Schedules attached to this Agreement, will be identical to the name used and the location of the corresponding facilities in the Transformation Service Agreement.

## **ARTICLE VI - SYSTEM OPERATION AND MAINTENANCE**

6.1 Unless otherwise provided by the Facility Schedules, each Party shall, at each Point of Interconnection, at its own risk and expense, operate and maintain the facilities (including all apparatus and necessary protective devices) it owns or hereafter may own, so as to reasonably minimize the likelihood of voltage and frequency abnormalities, originating in the system of one Party, from affecting or impairing the system of the other Party, or other systems to which the Party is interconnected. The Parties agree that all Points of Interconnection will be operated and maintained in conformance with operating guidelines of ERCOT and the ERCOT Protocols, as the same may be amended hereafter.

6.2 Operational responsibility for facilities owned by one Party but installed in another Party's substation or transmission line will be identified in the Facility Schedule for that particular Point of Interconnection.

6.3 During the term of this Agreement, the Parties will, consistent with maintaining good operating practices, coordinate their operations to maintain continuity of services to their respective customers to the extent practicable. Planned facility maintenance by either Party that will cause a deviation from the normal power and energy flow at a Point of Interconnection will be scheduled at a mutually agreeable time. No changes will be made in the normal operation of a Point of Interconnection without the mutual agreement of the Parties. The Parties will, to the extent necessary to support continuity of operations, coordinate the operation of protective devices on the facilities they operate in the proximity of the Points of Interconnection which might reasonably be expected to affect the operation of facilities on the other Party's system.

6.4 Each Party will provide the reactive requirements for its own system in accordance with the operating guides as established from time to time by ERCOT or its successor. Each Party will provide the reactive requirements for its own system so as not to impose a burden on the other system.

6.5 CTEC designates LCRA TSC to perform the functions of an "ERCOT Transmission Operator" on CTEC's behalf as described in the ERCOT Protocols. As the ERCOT Transmission Operator acting on behalf of CTEC, LCRA TSC shall have full authority to perform any necessary load shedding, switching, and other transmission activities that are deemed necessary to reliably maintain the electric system.

6.6 CTEC shall ensure that its operators designated to carry out dispatch instructions from LCRA TSC are properly authorized and trained to comply with all reliability directives issued by LCRA TSC, including shedding firm load, unless such actions would violate safety,



equipment, regulatory or statutory requirements. Under these circumstances, CTEC's operators shall immediately inform LCRA TSC of the inability to perform the directive so that LCRA TSC can implement alternate remedial actions.

6.7 During periods of emergency conditions declared by the ERCOT Independent System Operator, or its successor, or as necessary to restore customer service, either Party may operate equipment that is normally operated by the other Party, provided that authorization to do so must first be received from the Party that normally operates the equipment, such authorization not to be unreasonably withheld or delayed. It shall be considered reasonable for the Party that normally operates such equipment to deny such a request by the other Party if the withholding Party will provide such operation within the time frame called for in the circumstances. Such operations by the other Party will be at no cost to the owner or normal operator of the equipment.

6.8 Each Party will determine the operating limits of the facilities that it owns and make such limits known to the Party operating those facilities. The operating Party of those facilities will not exceed those limits without prior approval of the Party owning the facilities.

6.9 CTEC's requirement for under-frequency relaying, as described in the ERCOT Protocols, is accomplished through its participation within the LCRA TSC under-frequency load shed (UFLS) program, however, each Party that owns UFLS equipment must individually comply with ERCOT requirements and NERC Reliability Standards pertaining to UFLS equipment ownership, including but not limited to relay testing and maintenance documentation.

## **ARTICLE VII - RIGHTS OF ACCESS, EQUIPMENT INSTALLATION, AND REMOVAL**

7.1 Each Party shall permit duly authorized representatives and employees of the other Party to enter upon its premises for the purpose of inspecting, testing, repairing, renewing or exchanging any or all of the equipment owned by such other Party that is located on such premises or for the purpose of performing any work necessary in the performance of this Agreement.

7.2 Each Party grants to the other permission to install, maintain, and/or operate, or cause to be installed, maintained, and/or operated, on its premises, the necessary equipment, apparatus and devices required for the performance of this Agreement. Any such installation, maintenance, and operation to be performed, except in the case of emergencies, shall be performed only after a schedule of such activity has been submitted and agreed upon by the Parties.

7.3 Any and all equipment, apparatus, and devices placed or installed, or caused to be placed or installed by one Party on, or in, the premises of the other Party, shall be and remain the property of the Party owning and installing such equipment, apparatus, devices, or facilities, regardless of the mode and manner of annexation or attachment to real property. Upon the termination of any Point of Interconnection under this Agreement, the Party owning and installing such equipment, apparatus, devices or facilities on the property of the other Party, shall



1) have the right to sell such equipment, apparatus, devices or facilities to the other Party if the other Party wishes to purchase such equipment, apparatus, devices, or facilities or 2) to enter the premises of the other Party and, within a reasonable time, remove such equipment, apparatus, devices, or facilities, at no cost to the owner of the premises. If, upon the termination of any Point of Interconnection under this Agreement, equipment of a Party that is installed on the premises of the other Party is either not sold to the other Party or removed by the owning Party within a reasonable time, it shall be considered abandoned by the owning Party and may be disposed of by the other Party in the manner it shall determine appropriate; provided, however, that any net cost incurred by the disposing Party shall be reimbursed by the abandoning party.

7.4 Each Party shall clearly mark their respective equipment, apparatus, devices or facilities with appropriate ownership identification.

7.5 Either Party may request the other Party to upgrade or modify its terminal facilities at a Point of Interconnection in accordance with the Other Party's standard design of equipment. Such request shall not be unreasonably denied.

#### **ARTICLE VIII – METERING AND RECORDS**

8.1 All metering equipment required herein shall be selected, installed, tested, operated, and maintained by the Party owning such metering equipment in accordance with Good Utility Practice, applicable ERCOT operating and metering guidelines, and the ERCOT Protocols.

8.2 The Party that does not own the metering equipment shall be permitted to witness any testing, inspection, maintenance, or alteration of such metering equipment owned by the other Party. The owner of such equipment shall give reasonable advance notice of all tests and inspections so that representatives of the other Party may be present. After proper notification to the other Party, the owner may proceed with the scheduled tests or inspections regardless of whether a witness is present.

8.3 If any test or inspection of metering equipment shows that it does not meet the accuracy requirements established by ERCOT operating or metering guidelines, whichever is applicable, the meter or other equipment found to be inaccurate or defective shall be promptly repaired, adjusted, or replaced by the owner. Should metering equipment fail to register, the power and energy delivered and received shall be determined in accordance with ERCOT operating or metering guidelines, and ERCOT Protocols.

#### **ARTICLE IX – COMMUNICATION AND TELEMETERING FACILITIES**

9.1 Each Party shall provide, at its own expense, the necessary communication and telemetering facilities needed for the control and operation of its transmission and/or distribution system.

9.2 All communication and telemetering facilities required herein shall be selected, installed, tested, operated, and maintained by the Party owning such equipment in accordance



with Good Utility Practice, applicable ERCOT operating and metering guidelines, and the ERCOT Protocols.

9.3 CTEC's requirement (if any) to supply real-time telemetry data to ERCOT, as described in the ERCOT Protocols and referred to in the NERC Reliability Standards, is accomplished through the LCRA TSC as it performs the functions of CTEC's ERCOT Transmission Operator.

## **ARTICLE X - INDEMNIFICATION**

10.1 EACH PARTY SHALL INDEMNIFY, DEFEND, AND SAVE HARMLESS THE OTHER PARTY, ITS DIRECTORS, OFFICERS, AND AGENTS (INCLUDING, BUT NOT LIMITED TO, DIRECTORS, OFFICERS, AND EMPLOYEES OF ITS AFFILIATES AND CONTRACTORS) FROM ANY AND ALL DAMAGES, LOSSES, CLAIMS, INCLUDING CLAIMS AND ACTIONS RELATING TO INJURY TO OR DEATH OF ANY PERSON OR DAMAGE TO PROPERTY, DEMANDS, SUITS, RECOVERIES, COSTS AND EXPENSES, COURT COSTS, ATTORNEY FEES, AND ALL OTHER OBLIGATIONS BY OR TO THIRD PARTIES, ARISING OUT OF OR RESULTING FROM GROSS NEGLIGENCE OR OTHER FAULT IN THE DESIGN, CONSTRUCTION, OR OPERATION OF THEIR RESPECTIVE FACILITIES DURING THE PERFORMANCE OF THIS AGREEMENT AND TO THE EXTENT PERMITTED BY LAW, EXCEPT IN CASES OF GROSS NEGLIGENCE OR INTENTIONAL WRONGDOING BY THE OTHER PARTY.

## **ARTICLE XI -NOTICES**

11.1 Notices of an administrative nature, including but not limited to a notice of termination, a request for amendment, a change to a Point of Interconnection, or a request for a new Point of Interconnection, shall be forwarded to the designees listed below for each Party and shall be deemed properly given if delivered in writing to the following:

- (a) CENTRAL TEXAS ELECTRIC COOPERATIVE  
P.O. Box 553  
386 Friendship Lane  
Fredericksburg, TX 78624-0553
- (b) LCRA TRANSMISSION SERVICES CORPORATION  
Manager, Transmission Engineering  
LCRA  
P.O. Box 220  
Austin, TX 78767-0220

11.2 The above listed names, titles, and addresses of either Party may be changed upon written notification to the other Party.

## **ARTICLE XII - SUCCESSORS AND ASSIGNS**



12.1 Subject to the provisions of Section 12.2 below, this Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns of the respective Parties.

12.2 Neither Party shall assign its interest in this Agreement in whole or in part without the prior written consent of the other Party. Such consent shall not be unreasonably withheld, provided that neither Party will be required to consent to any assignment which would, in its sole judgment and among other reasons, subject it to additional federal or state regulation, result in the imposition of additional costs of administration which the Party requesting assignments does not agree to reimburse, or in any way diminish the reliability of its system, enlarge its obligations or otherwise create or maintain an unacceptable condition. The respective obligations of the Parties under this Agreement may not be changed, modified, amended, or enlarged, in whole or in part, by reason of the sale, merger, or other business combination of either Party with any other person or entity. Notwithstanding the foregoing, a Party may assign, without the consent of the other Party, its interest in this Agreement, in whole or in part (1) to a successor that has an interest in all or a substantial portion of the Party's transmission and distribution business; or (2) in connection with any financing or financial arrangements.

12.3 The several provisions of this Agreement are not intended to and shall not create rights of any character whatsoever in favor of any persons, corporations, or associations other than the Parties to this Agreement, and the obligations herein assumed are solely for the use and benefit of the Parties to this Agreement.

### **ARTICLE XIII – GOVERNING LAW AND REGULATION**

13.1 This Agreement was executed in the State of Texas and must in all respects be governed by, interpreted, construed, and enforced in accordance with the laws thereof except as to matters exclusively controlled by the Constitution and statutes of the United States of America. This Agreement is subject to all valid applicable federal, state, and local laws, ordinances, rules and regulations of duly constituted regulatory authorities having jurisdiction.

13.2 This Agreement and all obligations hereunder, are expressly conditioned upon obtaining approval or authorization or acceptance for filing by any regulatory body, whose approval, authorization or acceptance for filing is required by law. Both Parties hereby agree to support the approval of this Agreement before such regulatory authority and to provide such documents, information, and opinions as may be reasonably required or requested by either Party in the course of approval proceedings.

13.3 In the event that a regulatory authority having jurisdiction over the Parties orders a change in the terms of this Agreement, the Parties agree to negotiate in good faith a replacement term that will most nearly accomplish the purpose and intent of the original term consistent with the regulatory order. If the Parties cannot reach an agreement over the new term and if the old term is an essential provision of this Agreement, either Party may elect to terminate this Agreement, by providing notice of such election to the other upon sixty (60) days prior written notice to the other Party. An election to terminate under this provision shall not affect either Party's duty to perform prior to the effective date of termination.



13.4 In the event any part of this Agreement is declared invalid by a court of competent jurisdiction, the remainder of said Agreement shall remain in full force and effect and shall constitute a binding agreement between the Parties provided, however, that if either Party determines, in its sole discretion, that there is a material change in this Agreement by reason of any provision or application being finally determined to be invalid, illegal, or unenforceable, that Party may terminate this Agreement upon sixty (60) days prior written notice to the other Party. An election to terminate under this provision shall not affect either Party's duty to perform prior to the effective date of termination.

#### **ARTICLE XIV – DEFAULT AND FORCE MAJEURE**

14.1 Neither Party shall be considered in default with respect to any obligation hereunder, other than the payment of money, if prevented from fulfilling such obligations by reason of any cause beyond its reasonable control, including, but not limited to, outages or interruptions due to weather, accidents, equipment failures or threat of failure, strikes, civil unrest, injunctions or order of governmental authority having jurisdiction. If performance by either Party has been prevented by such event, the affected Party shall promptly and diligently attempt to remove the cause of its failure to perform, except that neither Party shall be obligated to agree to any quick settlement of any strike or labor disturbance, which, in the affected Party's opinion, may be inadvisable or detrimental, or to appeal from any administrative or judicial ruling.

#### **ARTICLE XV - TERMINATION ON DEFAULT**

15.1 Should either of the Parties hereto violate any material provisions of this Agreement, the other Party shall give written notice to the violating Party specifying the violation. Upon actual receipt of such notice, the Party shall have one hundred eighty (180) days to correct such violation. In the event such violation of this Agreement is not corrected by the expiration of said one hundred eighty (180) days, this Agreement, subject to the applicable regulations of any jurisdictional regulatory authority, may be terminated by giving no less than sixty (60) days written notice, but no other remedy or remedies, available under the law, for such violation shall be limited in any way because of this provision or the exercise of the right conferred hereunder.

15.2 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties by this Agreement.

#### **ARTICLE XVI- MISCELLANEOUS PROVISIONS**

16.1 Any undertaking by a Party to the other Party under this Agreement shall not constitute the dedication of the electrical system or any portion thereof of that Party to the public or to the other Party, and it is understood and agreed that any such undertaking shall cease upon the termination of this Agreement.



16.2 The several provisions of this Agreement are not intended to and shall not create rights of any character in, nor be enforceable by, parties other than the signatories to this Agreement and their assigns.

16.3 Neither Party shall be liable to the other for any indirect, consequential, incidental, punitive, or exemplary damages.

16.4 This Agreement shall not affect the obligations or rights of either Party with respect to other agreements. Both Parties to this Agreement represent that there is no agreement or other obligation binding upon it, which, as such Party is presently aware, would limit the effectiveness or frustrate the purpose of this Agreement.

16.5 This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced in writing and executed by the Parties.

16.6 The descriptive headings of the various sections of this Agreement have been inserted for convenience of reference only and are to be afforded no significance in the interpretation or construction of this Agreement.

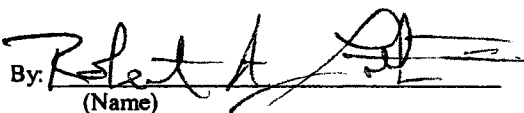
16.7 The invalidity of one or more phrases, sentences, clauses, Sections or Articles contained in this Agreement shall not affect the validity of the remaining portions of this Agreement so long as the material purposes of this Agreement can be determined and carried out.

16.8 This Agreement will be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.



IN WITNESS WHEREOF, the Parties have caused this Interconnection Agreement between LCRA Transmission Services Corporation and Central Texas Electric Cooperative to be executed in two (2) counterparts, each of which shall constitute an original, on the day and year first written above.

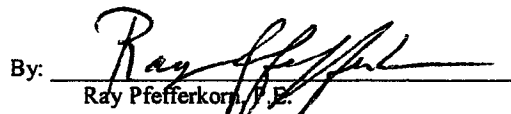
**CENTRAL TEXAS ELECTRIC COOPERATIVE**

By:   
(Name)

Title: \_\_\_\_\_

Date: 8/6/09

**LCRA TRANSMISSION SERVICES CORPORATION**

By:   
Ray Pfefferkorn, P.E.

Title: LCRA Transmission Engineering Manager

Date: 8/13/09





## EXHIBIT A

<b>FACILITY SCHEDULE NO.</b>	<b>LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)</b>	<b>INTERCONNECTION VOLTAGE (KV)</b>	<b>EFFECTIVE DATE OF INTERCONNECTION</b>
1	Buchanan CTEC (6)	69 kV	
2	Castell (1)	69 kV	
3	Eckert (2)	4.16 kV	
4	Fredericksburg (1)	69 kV	
5	Kendall CTEC (1)	138 kV	
6	Live Oak CTEC (1)	69 kV	
7	Nimitz (9)	12.5 kV	
8	Pittsburg (1)	138 kV	
9	Rim Rock (6)	12.5 kV	
10	Wolf Creek (1)	138 kV	
11	Jack Furman (1)	138 kV	
12	Sunrise Beach (1)	69 kV	
13	CTEC Mason (2)	69 kV	
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## FACILITY SCHEDULE NO. 1

1. **Name:** Buchanan CTEC Substation
2. **Facility Location:** The Buchanan CTEC Substation is located at 16340 E. State Hwy. 29, Buchanan Dam, Llano County, Texas 78609.
3. **Points of Interconnection:** There are six (6) Points of Interconnection in the Buchanan CTEC Substation generally described as:
  - where the bus extension from switch 8253 connects to the a-tap of the 69 kV transfer bus.
  - where the bus extension from switch 8283 connects to the a-tap of the 69 kV transfer bus
  - where the bus extension from switch 8249 connects to the a-tap of the 69 kV operating bus
  - where the bus extension from switch 8279 connects to the a-tap of the 69 kV operating bus
  - where the jumper from switch 8257 attaches to the 69 kV transfer bus.
  - where the jumper from switch 8264 attaches to the 69 kV operating bus.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 69 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located in the 12.5 kV PWT-1, T-1 transformer bus and the 12.5 kV PWT-2, T-2 transformer bus. The bus potential transformers are located on both 12.5 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

The Buchanan Substation including, but not limited to, the following items:

  - Two (2) 69 kV circuit breakers 8250 and 8280 including jumpers and protective relay packages
  - Bus extensions and bus extension insulators in bays 2 and 5
  - Eleven (11) 69 kV switches 8249, 8251, 8253, 8254, 8257, 8264, 8274, 8279, 8281, 8283, and 8284
  - Two (2) fuses F-1 and F-2
  - Two (2) power transformers PWT-1, T-1 and PWT-2, T-2 and associated surge



arresters

- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformers and associated cabling
- Six (6) single phase regulators REG-1 and REG-2 and associated cutoff and bypass switches.
- Two (2) station service SS-1 and SS-2

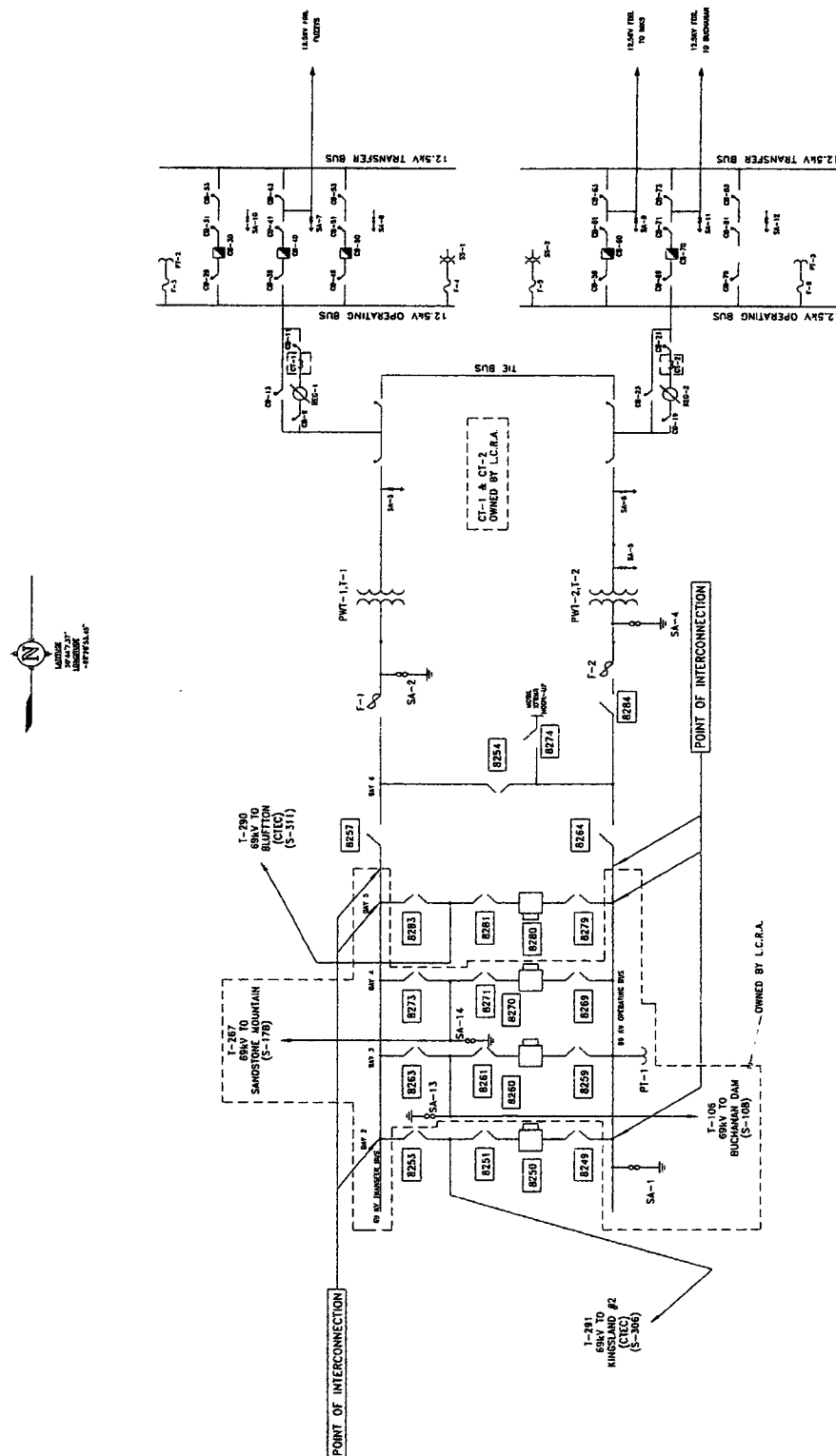
LCRA TSC owns:

- 69 kV dead-end structures, foundations, insulators and jumpers
- Two (2) 69 kV circuit breakers 8260 and 8270 including jumpers and protective relay packages
- Six (6) 69 kV switches 8259, 8261, 8263, 8269, 8271 and 8273
- Three (3) 69 kV surge arresters SA-1, SA-13 and SA-14
- 69 kV operating and transfer bus including structures, insulators, foundations and jumpers
- One (1) bus potential transformer PT-1
- Two (2) metering current transformer CT-1 and CT-2
- Control house and battery bank
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# BUCHANAN CTEC ONE-LINE DIAGRAM



BUCHANAN CTEC SUBSTATION



## FACILITY SCHEDULE NO. 2

1. **Name:** Castell Substation
2. **Facility Location:** The Castell Substation is located at 18411 W. State Hwy. 29, Castell, Llano County, Texas 78631.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Castell Substation generally described as:
  - where the jumper from the 69 kV bus insulator bolts to the four hole pad on switch 536.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 69 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformer is located in the 12.5 kV PWT-1, T-1 transformer bus. The bus potential transformer is located on the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

The Castell Substation including, but not limited to, the following items:

  - One (1) 69 kV switch 536
  - One (1) fuse F-1
  - One (1) power transformer PWT-1, T-1 with associated surge arresters
  - All distribution circuit breakers including jumpers and protective relay packages
  - All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
  - All distribution and total bays including foundations, structures, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, and associated cabling
  - Three (3) single phase voltage regulators REG-1 with associated bypass and disconnect switches
  - Station Service



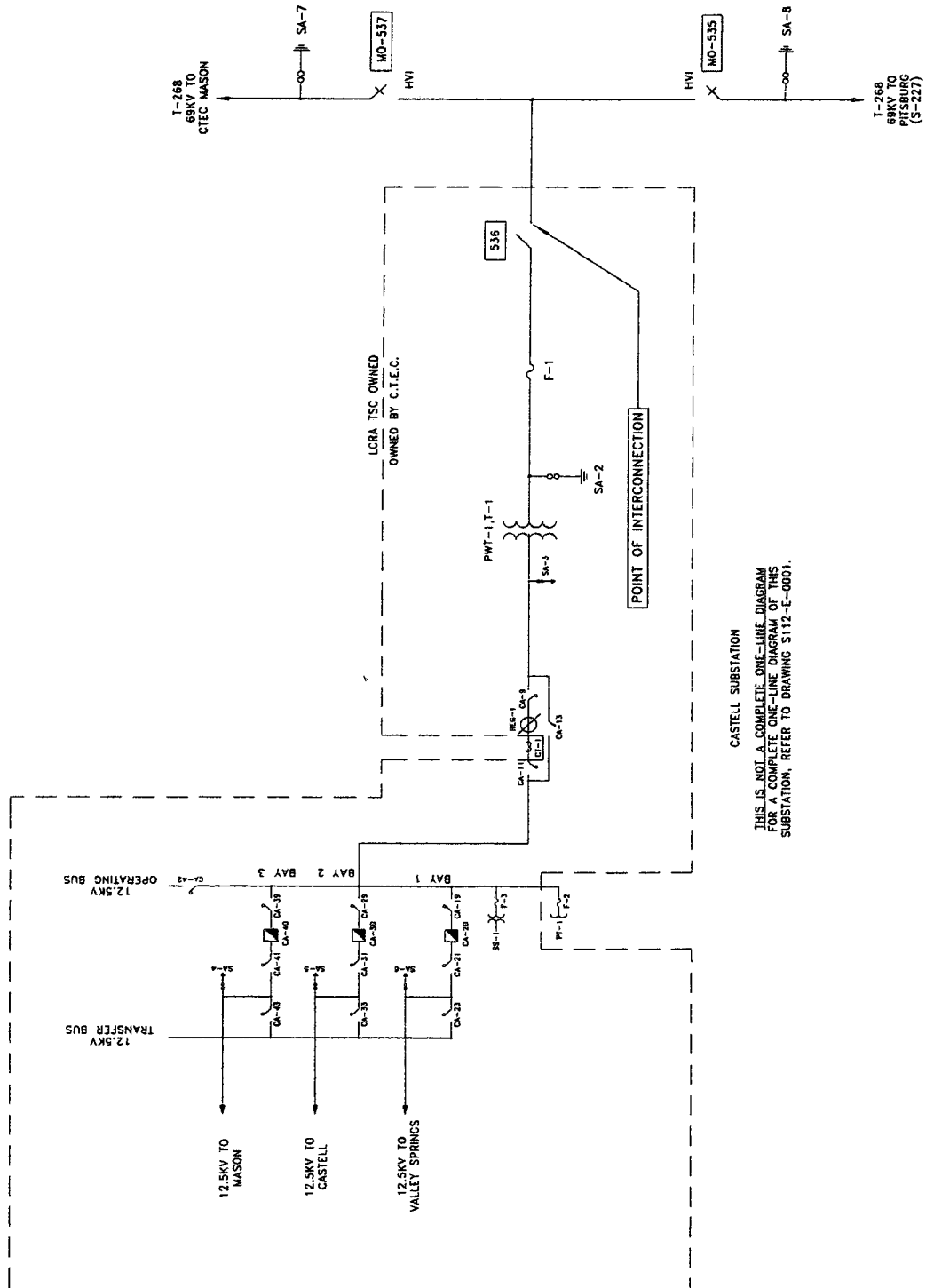
LCRA TSC owns:

- The following transmission lines comprised of conductors, insulators, and connecting hardware:
  - Castell to Pittsburg 69 kV transmission line
  - Castell to CTEC Mason / Fort Mason 69 kV transmission line
- 69 kV dead-end box structure, foundations, insulators and jumpers
- 69 kV operating bus including insulators and jumpers
- Two (2) 69 kV motor operated switches with interrupters MO-535 and MO-537
- Two (2) 69 kV surge arresters SA-7 and SA-8
- One (1) bus potential transformer PT-1 and F-2
- One (2) metering current transformer CT-1
- Portable meter house
- Control house

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# CASTELL ONE-LINE DIAGRAM





### FACILITY SCHEDULE NO. 3

1. **Name:** Eckert Substation
2. **Facility Location:** The Eckert Substation is located at 662 Exxon Rd., Eckert, Gillespie County, Texas 78624.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Eckert Substation generally described as:
  - where the jumper from switch EK-9, passing through CT-1, bolts to breaker EK-10
  - where the jumper conductor connector from switch EK-12 connects to the 4.16 kV transformer bus at the A-frame dead end structure.
4. **Transformation Services Provided by LCRA TSC:** Yes
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 4.16 kV
7. **Metered Voltage and Location:** The metering voltage is 4.16 kV. The metering current transformer is located in the 4.16 kV transformer bus. The bus potential transformer is located on the 4.16 kV transformer bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

- Two (2) low voltage switches EK-11 and EK-12
- One (1) distribution circuit breaker EK-10 with protective relaying
- Jumper from breaker EK-10 to switch EK-11
- Jumper and connector from EK-12 to 4.16 kV transformer bus
- Tubular bus from switch EK-11 to surge arrester SA-4
- One (1) surge arrester SA-4

LCRA TSC owns:

The Eckert Substation is leased from Exxon Oil Company

- 69 kV dead-end box structure, foundations, insulators and jumpers
- Four (4) 69 kV switches 572, 576, 577 and 599
- One (1) fuse F-1
- One (1) power transformer PWT-1, T-1 with associated surge arresters
- One (1) 69 kV surge arresters SA-1
- One (1) low voltage bus potential transformer PT-1

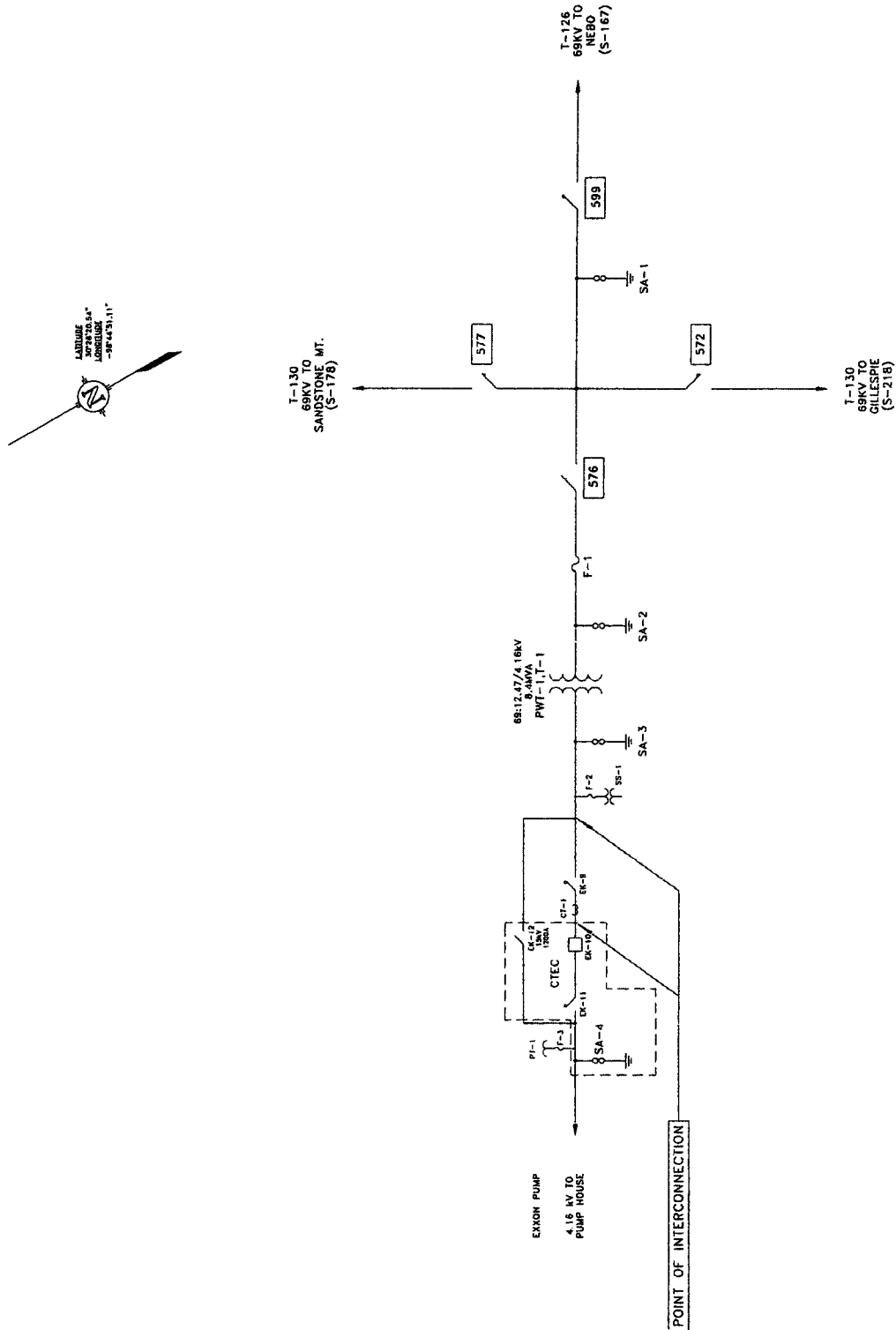


- One (1) distribution bay including A-frames, trusses, insulators, disconnect switch (EK-9), bus, metering current transformer (CT-1) and associated cabling
- Jumper from PWT-1, T-1 bus dead end insulator to switch EK-9
- Jumper from switch EK-9, passing through CT-1 to breaker EK-10
- Station service
- Control house and battery

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# ECKERT ONE-LINE DIAGRAM



ECKERT SUBSTATION  
THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S121-E-0001.



## FACILITY SCHEDULE NO. 4

1. **Name:** Fredericksburg Substation
2. **Facility Location:** The Fredericksburg Substation is located at 1116S. State Hwy. 16, Fredericksburg, Gillespie County, Texas 78624.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Fredericksburg Substation generally described as:
  - where the incoming 69 kV CTEC transmission line from Goehmann Lane Substation terminates at the dead end structure in the substation.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** No
6. **Delivery Voltage:** 69 kV
7. **Metered Voltage and Location:** N/A
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

- The following transmission lines comprised of conductors, insulators, and connecting hardware:
  - Fredericksburg to Goehmann Lane transmission line

LCRA TSC owns:

The Fredericksburg Substation including, but not limited to, the following items:

- Line protection equipment for the CTEC owned Fredericksburg to Goehmann Lane transmission line
- 69 kV dead-end structures, foundations, insulators and jumpers
- One (1) 69 kV surge arrester SA-15
- One (1) 69 kV bus potential transformer PT-3
- One (1) 69 kV switch 2411
- One (1) 69 kV circuit breaker 2410 including jumpers and protective relay package
- One (1) auto transformer AUT-1, T-2 with associated surge arresters
- One (1) 138 kV circuit breaker 9810 including jumpers and protective relay package
- One (1) 138 kV switch 9809
- 138 kV bus including structures, insulators, foundations and jumpers

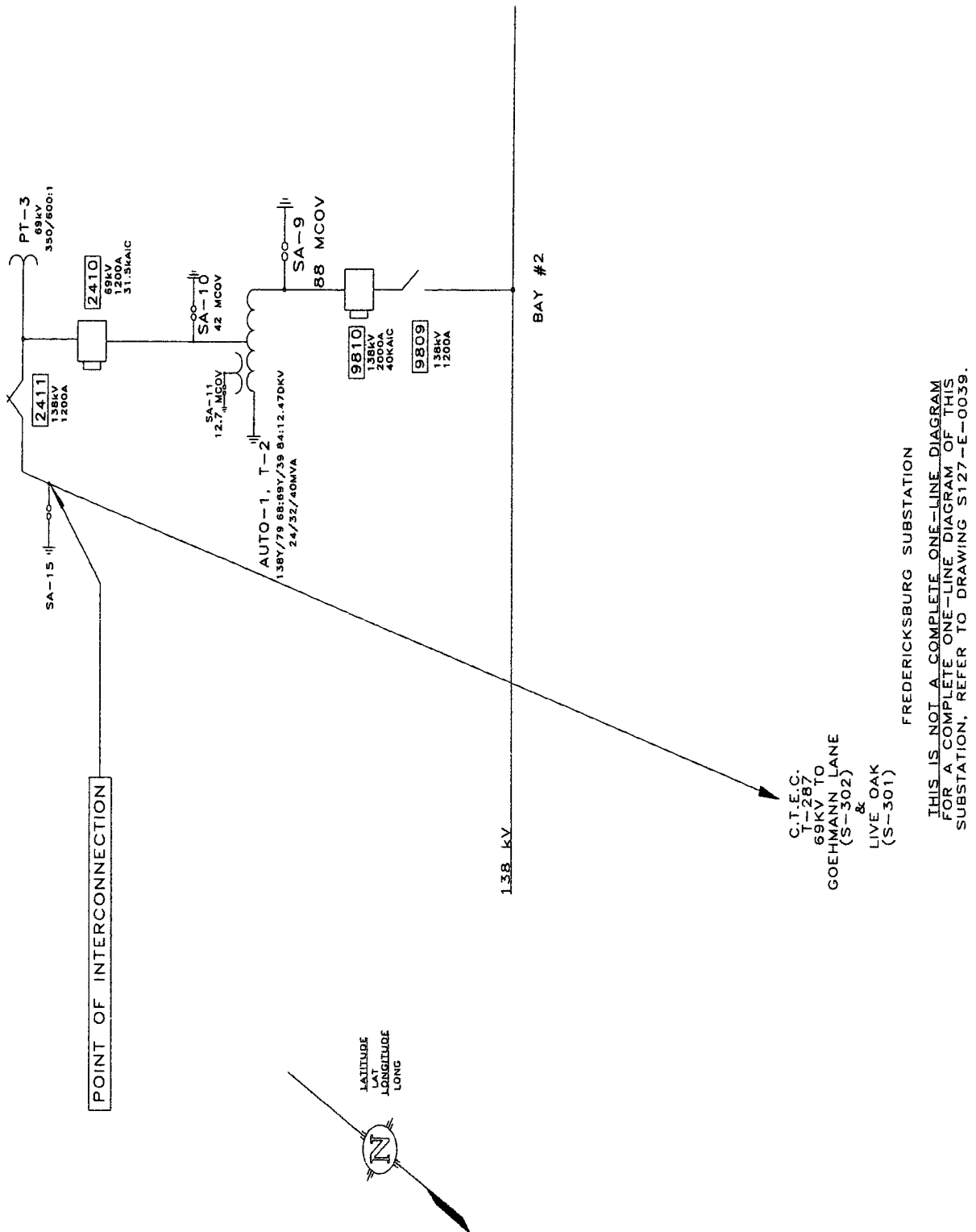


- Control house and battery
- Two (2) station service SS-1 and SS-2 (not shown on one-line drawing)

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# FREDERICKSBURG ONE-LINE DIAGRAM





## FACILITY SCHEDULE NO. 5

1. **Name:** Kendall CTEC Substation
2. **Facility Location:** The Kendall CTEC Substation is located at 50 Flat Rock Creek, Comfort, Kendall County, Texas 78013.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Kendall CTEC Substation generally described as:
  - where the tee connector attaches the jumper from circuit switcher CS-3175 to the tubular jumper running between switches 3176 and 3178.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located in the PWT-1, T-1; 12.5 kV transformer bus. The bus potential transformer is on the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

  - 138 kV bus including structures, insulators, foundations and jumpers
  - One (1) circuit switcher CS-3175 and associated bypass switch 3187
  - One (1) power transformer PWT-1, T-1 with associated surge arresters
  - All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
  - All distribution circuit breakers including jumpers, protective relay packages and foundations
  - All distribution and total bays including structure, insulators, disconnect switches, surge arresters and 12.5 kV operating and transfer bus
  - One (1) low voltage transformer bus disconnect switch KL-5
  - Three (3) single phase regulators REG-1 with associated bypass and disconnect switches
  - Station Service
  - Control house and battery



LCRA TSC owns:

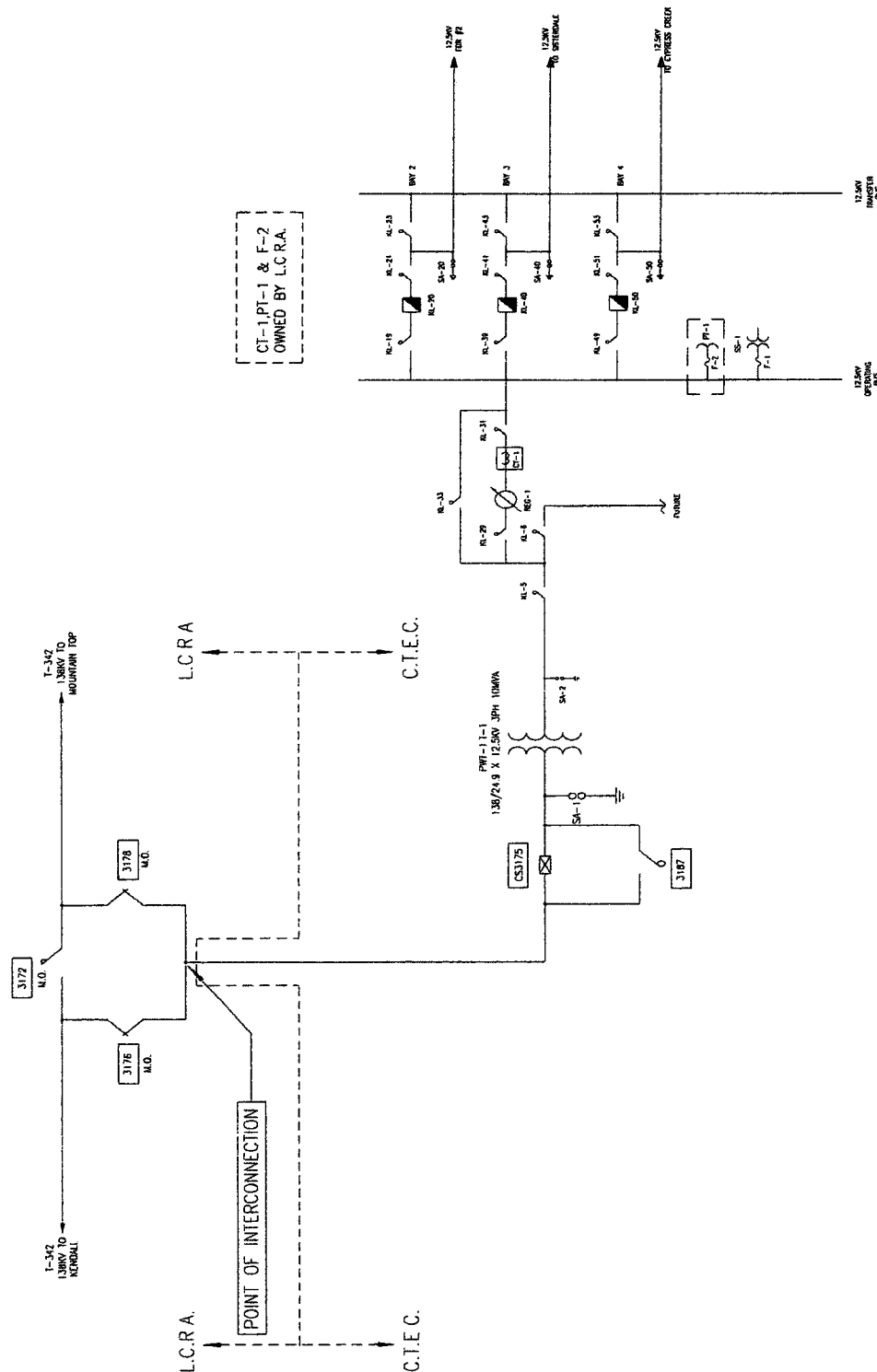
The Kendall CTEC substation including but not limited to, the following items:

- 138 kV dead-end structures, foundations, insulators and jumpers
- Three (3) 138 kV motor operated switches 3172 (with interrupter) , 3176 and 3178
- One (1) metering current transformer CT-1
- One (1) 12.5 kV bus potential transformer PT-1
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



## KENDALL CTEC ONE-LINE DIAGRAM



KENDALL CTEC SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S343-E-0002.



## FACILITY SCHEDULE NO. 6

1. **Name:** Live Oak Substation
2. **Facility Location:** The Live Oak Substation is located at 724 Post Oak Rd., Fredericksburg, Gillespie County, Texas 78624.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Live Oak Substation generally described as:
  - where the incoming 69 kV LCRA TSC transmission line from Gillespie Substation terminates at the CTEC Live Oak Substation box structure. CTEC owns the jumpers from the Live Oak Substation equipment to this line at this Point of Interconnection.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 69 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformer is located in the PWT-1, T-1; 12.5 kV transformer bus. The bus potential transformer is on the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

The Live Oak Substation and all equipment except for those items listed under LCRA TSC ownership.

LCRA TSC owns:

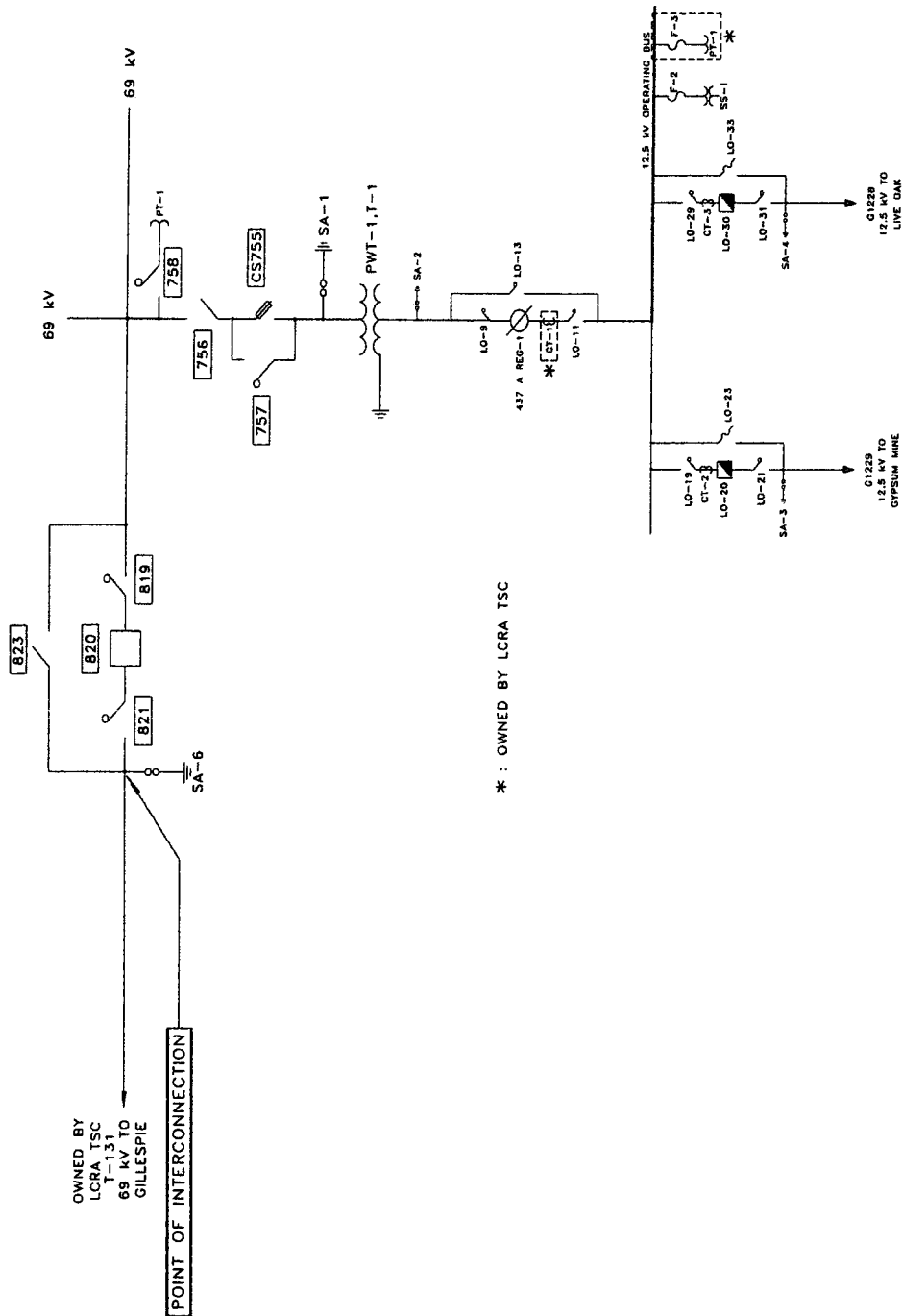
- The following transmission lines comprised of conductors, insulators, and connecting hardware:
  - Live Oak to Gillespie transmission line, including the wood H-frame dead-end structure within Live Oak Substation and the final span into Live Oak Substation up to the CTEC box structure.
- Supervisory Interface Panel 11
- RTU Panel 12 and associated cabling
- Metering Panel 13 and associated cabling
- One (1) bus potential transformer PT-1 and associated fuse F-3
- One (1) metering current transformer CT-1



10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# LIVE OAK ONE-LINE DIAGRAM



LIVE OAK SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S301-E-0001



## **FACILITY SCHEDULE NO. 7**

1. **Name:** Nimitz Substation
2. **Facility Location:** The Nimitz Substation is located at 2167 RR 965, Fredericksburg, Gillespie County, Texas 78624.
3. **Points of Interconnection:** There are nine (9) Points of Interconnection in the Nimitz Substation generally described as:
  - where the incoming distribution line connects to the tubular bus between switches NI-131 and NI-133 at breaker NI-130.
  - where the jumper from breaker NI-130 connects to the 4 hole pad on switch NI-131.
  - where the jumper from breaker NI-130 connects to the 4 hole pad on switch NI-129.
  - where the incoming distribution line connects to the tubular bus between switches NI-141 and NI-143 at breaker NI-140.
  - where the jumper from breaker NI-140 connects to the 4 hole pad on switch NI-141.
  - where the jumper from breaker NI-140 connects to the 4 hole pad on switch NI-139.
  - where the incoming distribution line connects to the tubular bus between switches NI-151 and NI-153 at breaker NI-150.
  - where the jumper from breaker NI-150 connects to the 4 hole pad on switch NI-151.
  - where the jumper from breaker NI-150 connects to the 4 hole pad on switch NI-149.
4. **Transformation Services Provided by LCRA TSC:** Yes
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 12.5 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformer is located in 12.5 kV bay #12. The bus potential transformer is on the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes



**9. Description of Facilities Owned by Each Party:**

CTEC owns:

- Three (3) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- Three (3) distribution circuit breakers NI-130, NI-140 and NI-150 including foundations, jumpers and protective relay packages

LCRA TSC owns:

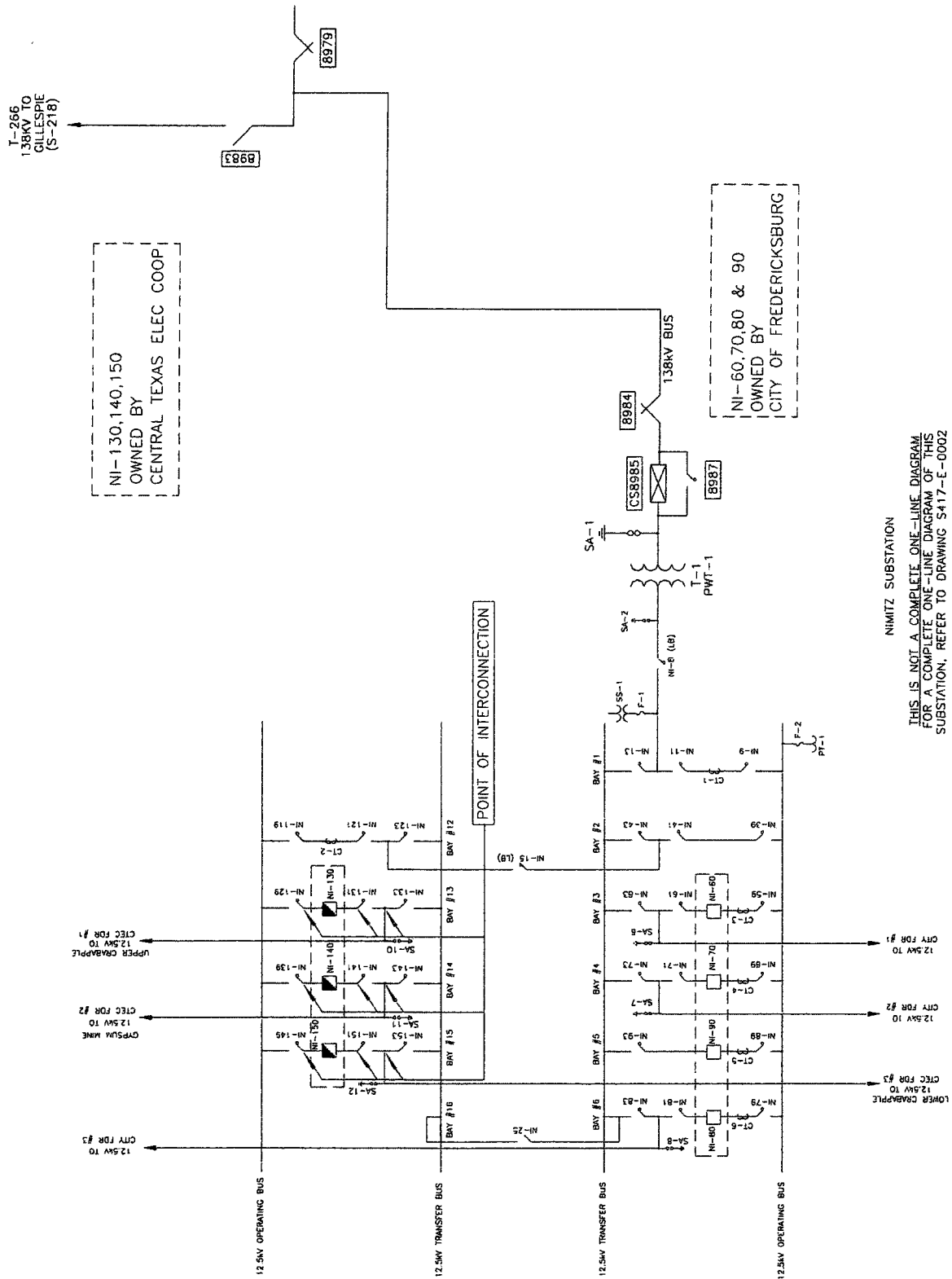
The Nimitz Substation including, but not limited to, the following items:

- 138 kV dead-end structures, foundations, insulators and jumpers
- 138 kV operating bus including structures, insulators, foundations and jumpers
- Two (2) 138 kV switches 8983 and 8979
- One (1) circuit switcher CS-8985 and associated disconnect switch 8984 and bypass switch 8987
- One (1) power transformer PWT-1, T-1 with associated surge arresters
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, metering current transformer (CT-2), bus potential transformer (PT-1) and associated cabling
- Control house and battery bank
- Station Service
- Underfrequency relay panel

- 10. Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# NIMITZ ONE-LINE DIAGRAM



NIMITZ SUBSTATION



## FACILITY SCHEDULE NO. 8

1. **Name:** Pittsburg Substation
2. **Facility Location:** The Pittsburg Substation is located at 1504 Birmingham Ave., Llano, Llano County, Texas 78643.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Pittsburg Substation generally described as:
  - where the pipe from switch 11834 attaches to the 138 kV operating bus #1.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located in bus tie bay #1-3 and bus tie bay #2-8, along with metering CT-21 inside the CTEC PWT-3, T-4. The bus potential transformers are located on both 12.5 kV operating bus #1 and 12.5 kV operating bus #2.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

  - 138 kV bay 1 dead end structure, foundations, insulators and jumpers
  - Transformer PWT-3, T-4 bus support structure, foundations, insulators and jumpers
  - One (1) circuit switcher CS-11835 and associated disconnect switch 11834 and bypass switch 11837
  - One (1) power transformer PWT-3, T-4 with internal metering CT-21 and with associated surge arresters
  - One (1) power transformer PWT-2, T-3 and associated surge arresters, disconnect switches and bypass switch
  - Four (4) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
  - Five (5) distribution and total circuit breakers PG-10, PG-20, PG-40, PG-50 and PG-130 including jumpers and protective relay packages
  - Six (6) distribution and total bays (bays 1-1 thru 1-5 and 1-13) including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformer (PT-6) and associated cabling



LCRA TSC owns:

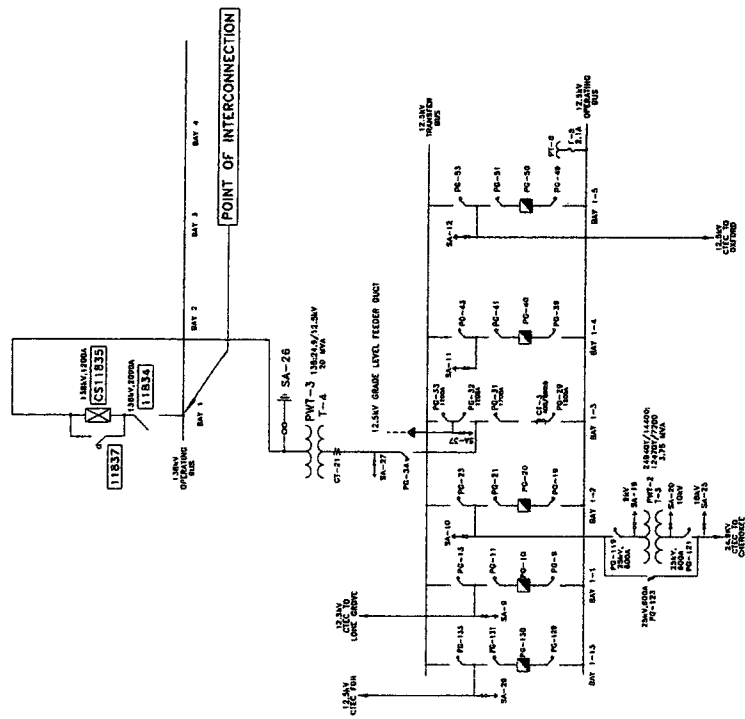
The Pittsburg Substation including, but not limited to, the following items:

- 138 kV dead-end structures, foundations, insulators and jumpers (except bay 1)
- 138 kV operating bus including structures, insulators, foundations and jumpers
- 12.5 kV grade level bus tie / mobile hookup cables and pad mounted transfer switch
- Two (2) metering current transformers CT-3 and CT-8
- Two (2) control houses
- Two (2) station service
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



LATITUDE  
 30° 43' 32.81"  
 LONGITUDE  
 -89° 40' 30.35"



PITTSBURG SUBSTATION



## FACILITY SCHEDULE NO. 9

1. **Name:** Rim Rock Substation
2. **Facility Location:** The Rim Rock Substation is located at 190 Cataline Ct. South, Kerrville, Kerr County, Texas 78028.
3. **Points of Interconnection:** There are six (6) Points of Interconnection in the Rim Rock Substation generally described as:
  - where the incoming distribution line connects to the tubular bus between switches RR-21 and RR-23 at breaker RR-20.
  - where the jumper from breaker RR-20 connects to the 4 hole pad on switch RR-21.
  - where the jumper from breaker RR-20, passing through CT-3, connects to the 4 hole pad on switch RR-19.
  - where the incoming distribution line connects to the tubular bus between switches RR-121 and RR-123 at breaker RR-120.
  - where the jumper from breaker RR-120 connects to the 4 hole pad on switch RR-121.
  - where the jumper from breaker RR-120, passing through CT-10, connects to the 4 hole pad on switch RR-119.
4. **Transformation Services Provided by LCRA TSC:** Yes
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 12.5 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located in the PWT-1, T-1 total bay; inside transformer T-2 and in each distribution bay. The bus potential transformers are located on both 12.5 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

  - Two (2) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
  - Two (2) distribution circuit breakers RR-20 and RR-120 including jumpers and protective relay packages



LCRA TSC owns:

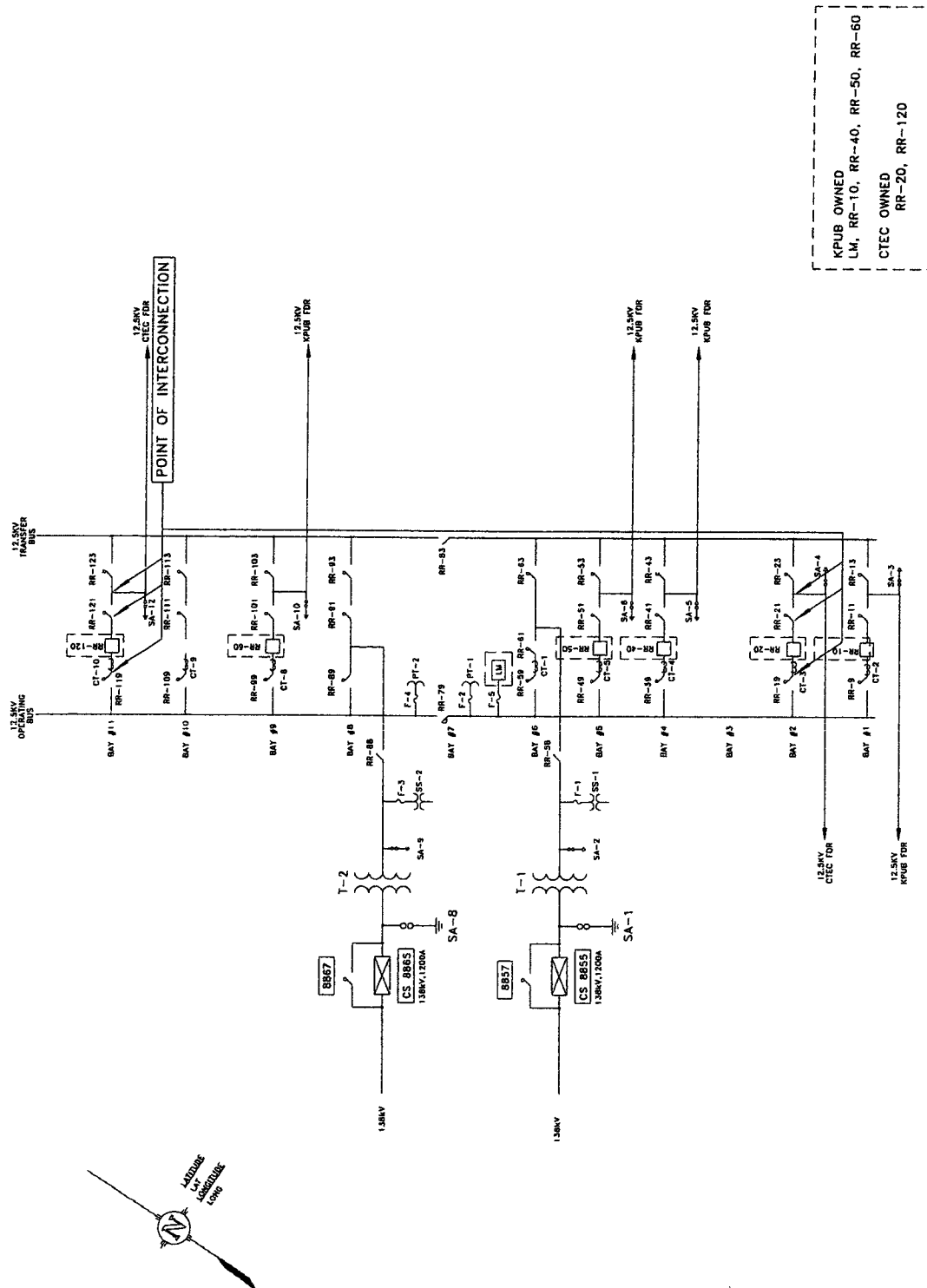
The Rim Rock Substation is leased from the University of Texas.

- Two (2) circuit switchers CS-8855 and CS-8865 with associated bypass switches 8857 and 8867
- Two (2) power transformers T-1 and T-2 and associated surge arresters
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, metering current transformers, bus potential transformers and associated cabling
- Two (2) station service SS-1 and SS-2
- Control house and battery
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# RIM ROCK ONE-LINE DIAGRAM





## FACILITY SCHEDULE NO. 10

1. **Name:** Wolf Creek Substation
2. **Facility Location:** The Wolf Creek Substation is located at 3900 Sidney Baker Hwy., Kerrville, Kerr County, Texas 78028.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Wolf Creek Substation generally described as:
  - where the tee connector attaches the jumper from circuit switcher CS-3295 to the tubular jumper running between switches 3294 and 3297.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformer is located in the PWT-1, T-1 transformer bus. The bus potential transformer is located on the 24.9 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:

The Wolf Creek Substation including, but not limited to, the following items:

  - 138 kV bus including structures, insulators, foundations and jumpers
  - One (1) 138 kV switch 3292
  - One (1) circuit switcher CS-3295
  - One (1) power transformer PWT-1, T-1 with associated surge arresters
  - Three (3) single phase regulators REG-1 and associated bypass and disconnect switches
  - One (1) current transformer CT-2
  - All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
  - All distribution circuit breakers including jumpers, protective relay packages and foundations
  - All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 24.9 kV operating and transfer bus, bus potential transformers (PT-1) and associated cabling
  - Control house and battery
  - Station Service



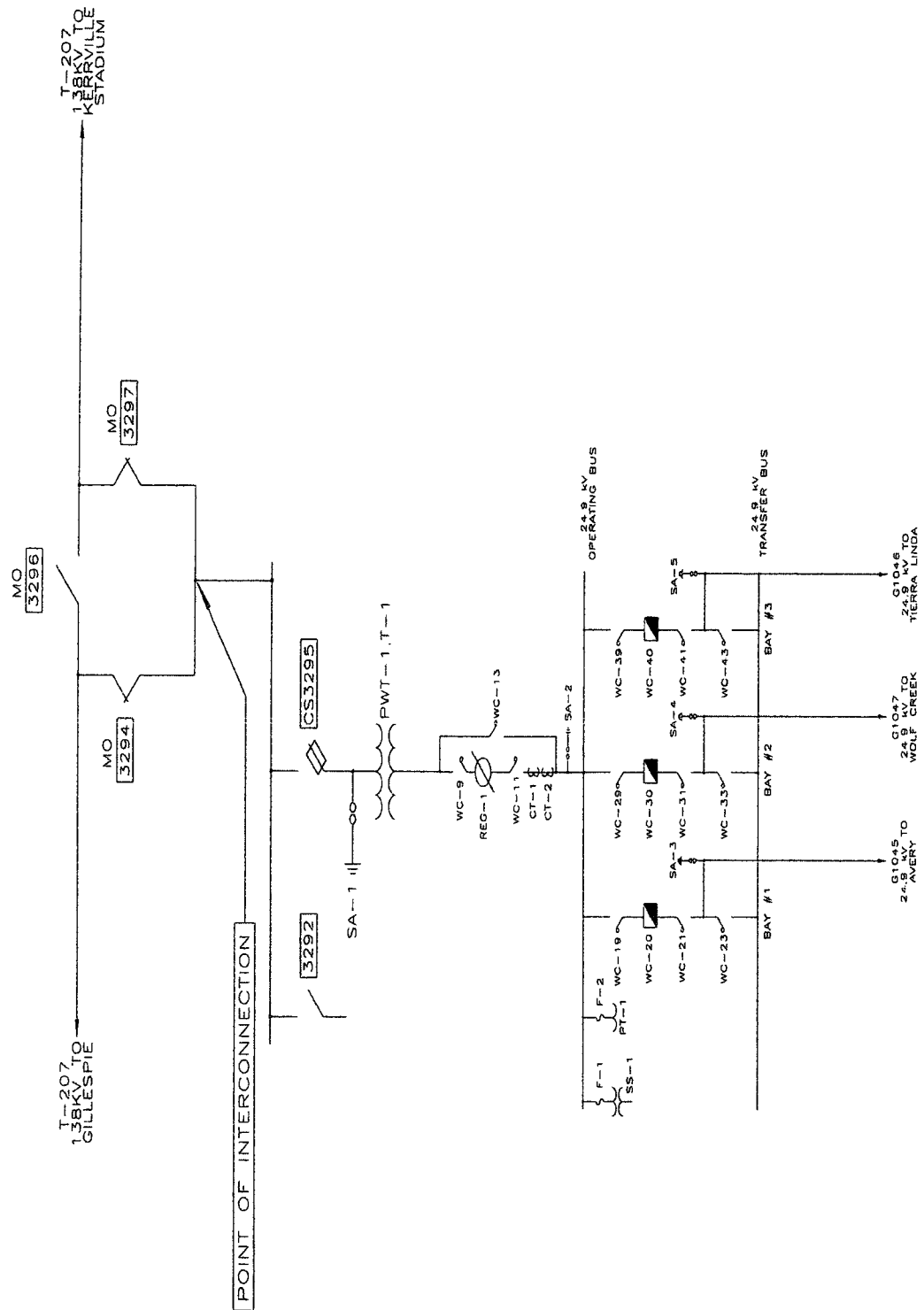
LCRA TSC owns:

- 138 kV dead-end structures, foundations, insulators and jumpers
- Three (3) 138 kV motor operated switches 3294, 3296 and 3297
- One (1) metering current transformer CT-1
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# WOLF CREEK ONE-LINE DIAGRAM



THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S240-E-0002



## FACILITY SCHEDULE NO. 11

1. **Name:** Jack Furman Substation
2. **Facility Location:** The Jack Furman Substation is located at 267 Goat Creek Cutoff Road, Kerrville, Kerr County, TX 78028
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Jack Furman Substation generally described as:
  - where the 138 kV Operating Bus expansion terminal bolts to the four hole pad of switch 21874.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformer is located in the total bay. The bus potential transformer is located on the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**  
LCRA TSC owns:
  - The Jack Furman Substation including, but not limited to, the following items:
    - 138 kV dead-end structures, foundations, insulators and jumpers
    - 138 kV bus including structures, insulators, foundations and jumpers
    - Four (4) 138 kV switches 21889, 21891, 21899 and 21901
    - Two (2) 138 kV circuit breakers 21890 and 21900 including jumpers and protective relay packages
    - One (1) 12.5 kV bus potential transformer PT-4
    - One (1) metering current transformer CT-4
    - Control house and battery
    - Station Service, SS-1 with fuse F-1



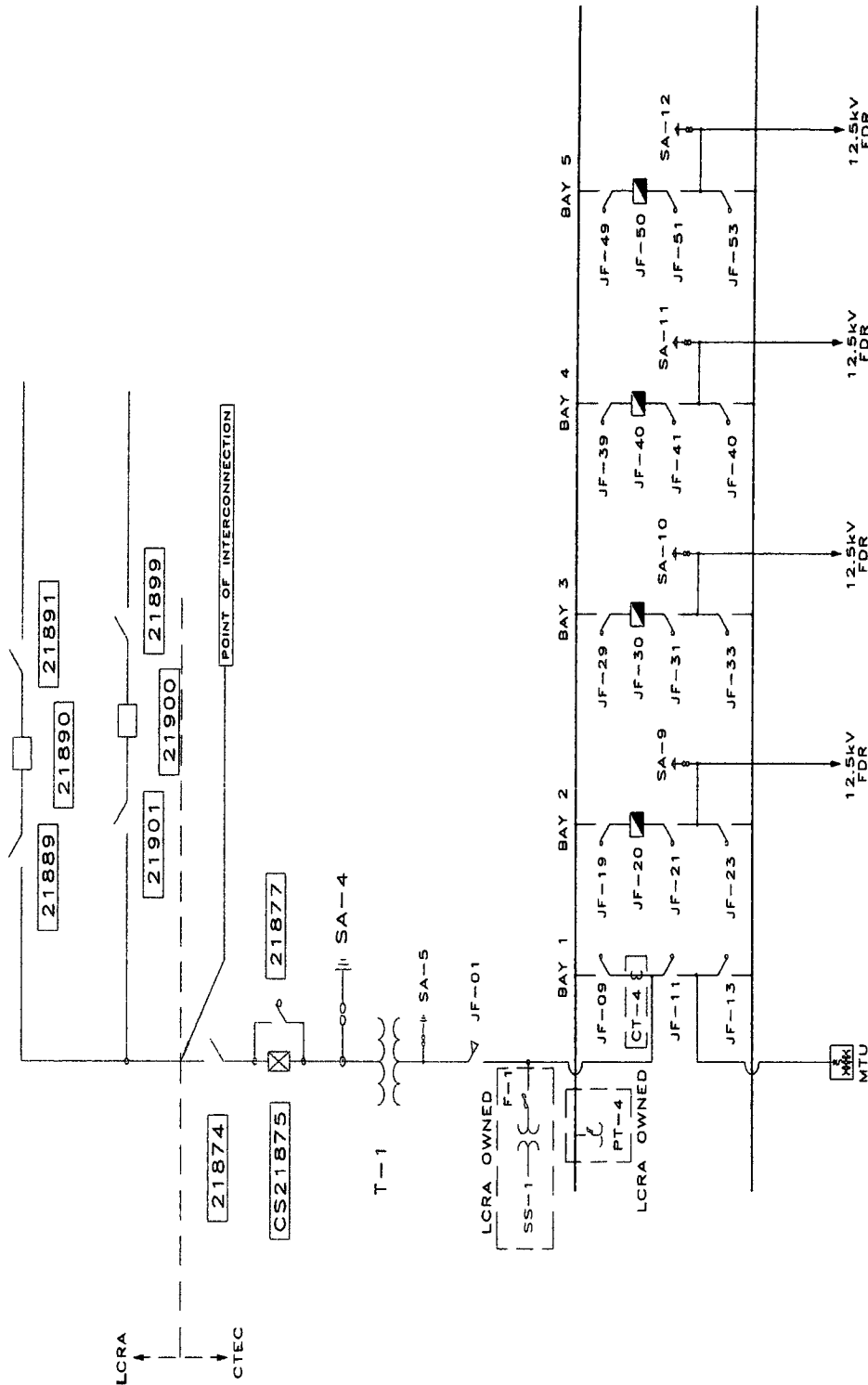
CTEC owns:

- One (1) circuit switcher CS-21875 with associated disconnect and bypass switches 21874 and 21877
- One (1) power transformer T-1 with associated surge arresters
- One (1) transformer bus disconnect switch JF-01
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, MTU, and associated cabling

10. **Operational Responsibilities of Each Party:** Each Party is 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:** CTEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.



# JACK FURMAN ONE-LINE DIAGRAM





## FACILITY SCHEDULE NO. 12

1. **Name:** Sunrise Beach Substation
2. **Facility Location:** The Sunrise Beach Substation is located at 3105 Ranch RD 2233 Llano, Llano County, Texas 78643.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Sunrise Beach Substation generally described as:
  - where the incoming 69 kV LCRA TSC transmission line from Sandy Creek Substation terminates at the CTEC Sunrise Beach Substation dead-end. CTEC owns the jumper from the Sunrise Beach Substation equipment to this line at this Point of Interconnection
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 69 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformer and the potential transformer are located between the station voltage regulators and the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

CTEC owns:  
The Sunrise Beach Substation and all equipment except for those items listed under LCRA TSC ownership.

LCRA TSC owns:

  - The following transmission lines comprised of conductors, insulators, and connecting hardware:
    - Sunrise Beach to Sandy Creek 69 kV transmission line
  - Supervisory Interface Panel / RTU Panel 22 and associated cabling
  - Telecom Panel 20 and associated cabling
  - Metering Panel 21 and associated cabling
  - One (1) bus potential transformer PT-1 and associated fuse F-3
  - One (1) metering current transformer CT-1
10. **Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.