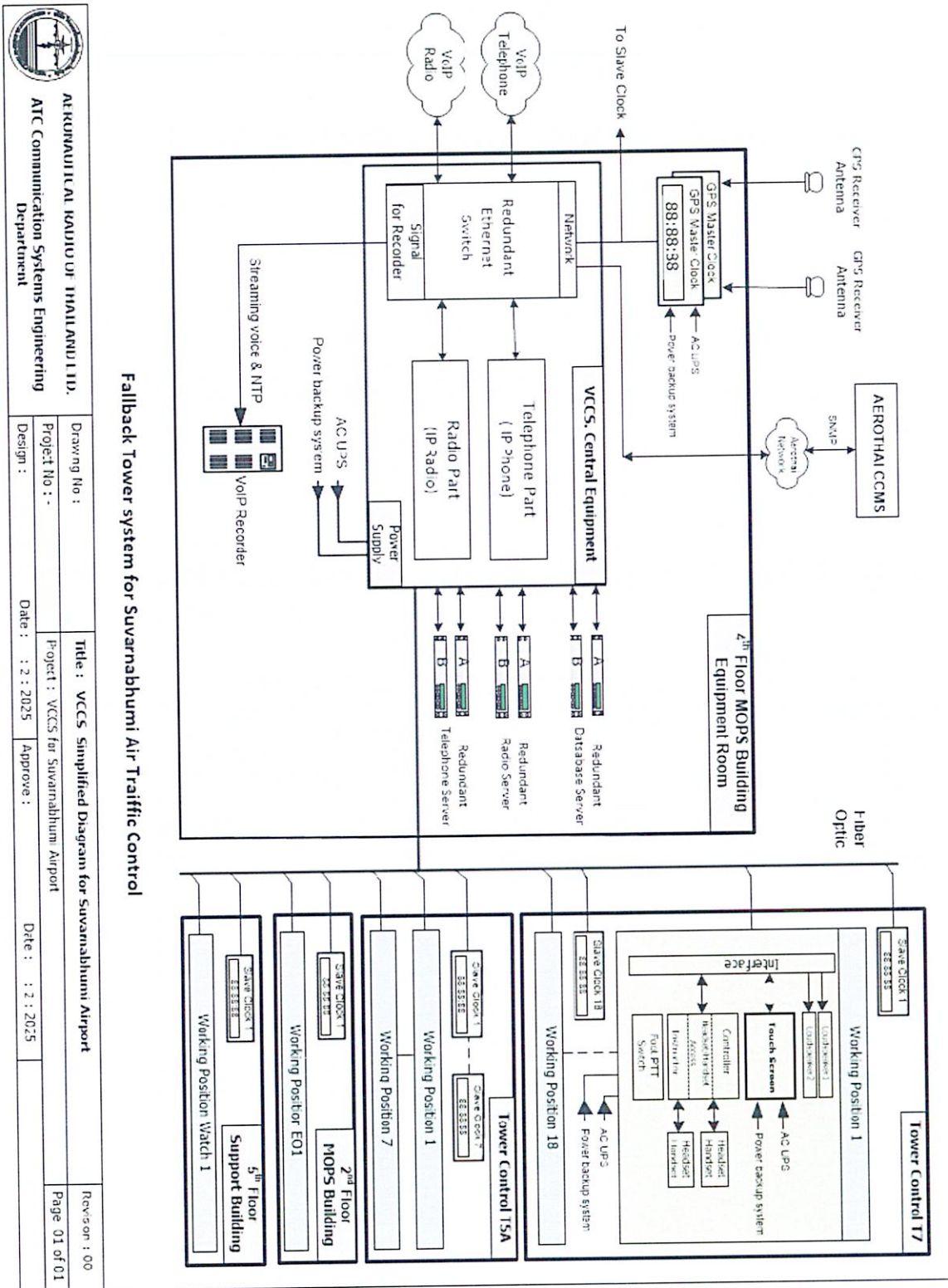


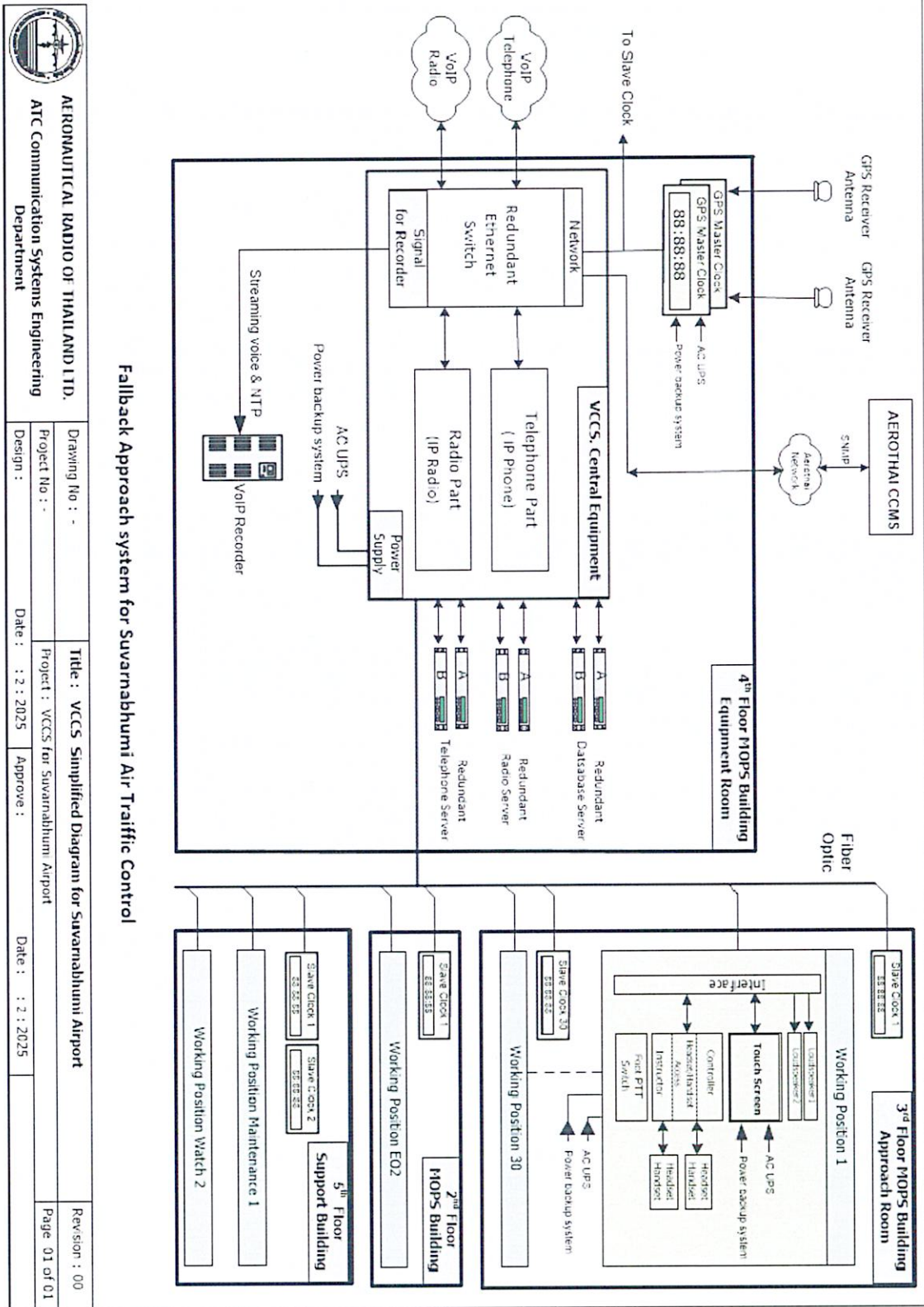
APPENDIX 3: Fallback Tower VCCS Simplify Diagram




|                                                                                            |               |                                                          |               |
|--------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------|---------------|
| <p>ATKUMAVITAI KAUIOU HAWAII LTD.<br/>ATC Communication Systems Engineering Department</p> | Drawing No :  | Title : VCCS Simplified Diagram for Suvarnabhumi Airport | Revision : 00 |
|                                                                                            | Project No :- | Project : VCCS for Suvarnabhumi Airport                  | Page 01 of 01 |
|                                                                                            | Design :      | Date : : 2 : 2025                                        | Approve :     |
|                                                                                            |               | Date : : 2 : 2025                                        |               |

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APPENDIX 4: Fallback Approach VCCS Simplify Diagram

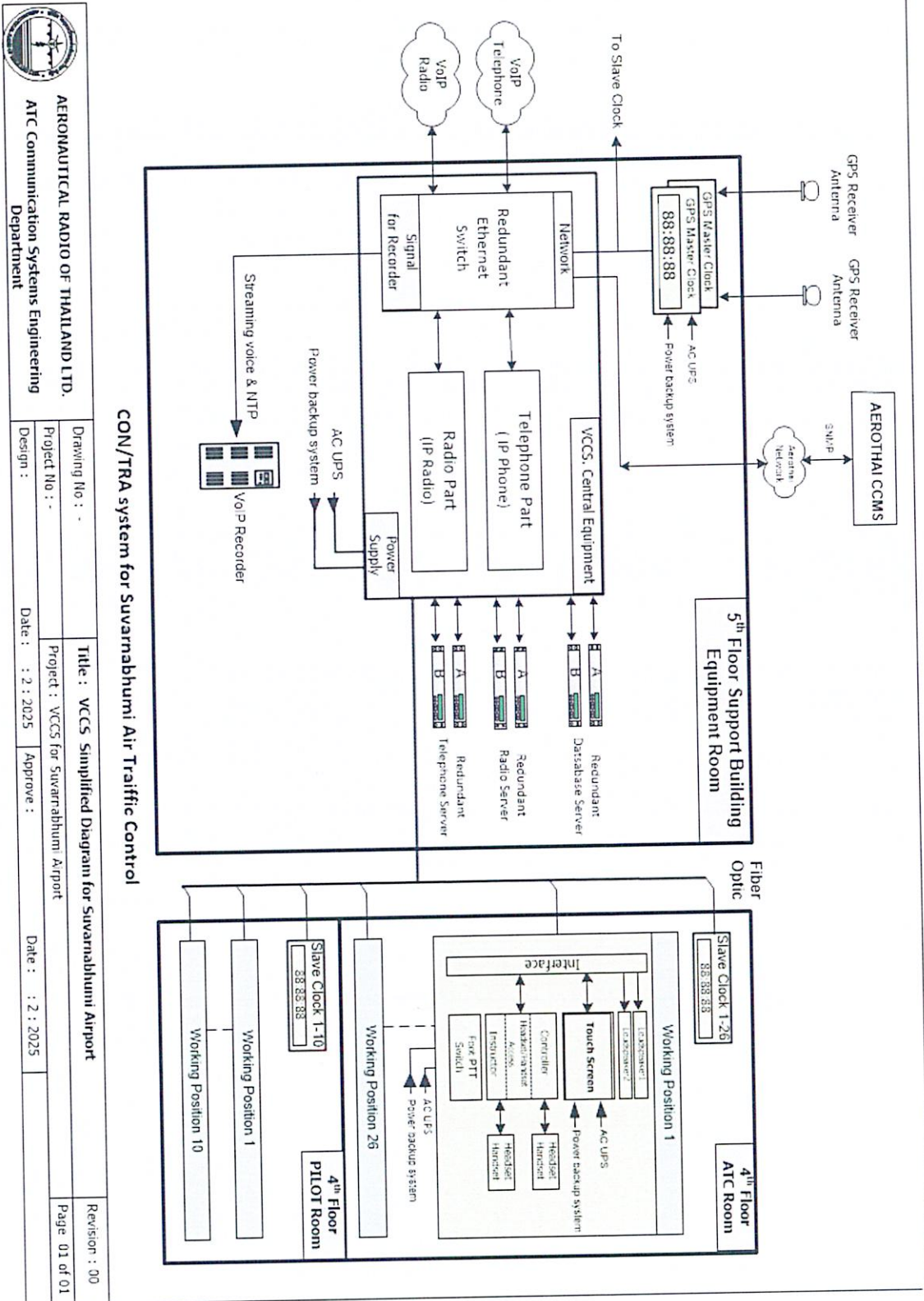


Fallback Approach system for Suvarnabhumi Air Traffic Control

|                                                                                                                                                                                          |                   |                                                                 |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------|---------------|
|  <p><b>AERONAUTICAL RADIO OF THAILAND LTD.</b><br/>ATC Communication Systems Engineering Department</p> | Drawing No : -    | <b>Title :</b> VCCS Simplified Diagram for Suvarnabhumi Airport | Revision : 00 |
|                                                                                                                                                                                          | Project No : -    | Project : VCCS for Suvarnabhumi Airport                         | Page 01 of 01 |
| Design :                                                                                                                                                                                 | Date : : 2 : 2025 | Approve :                                                       |               |

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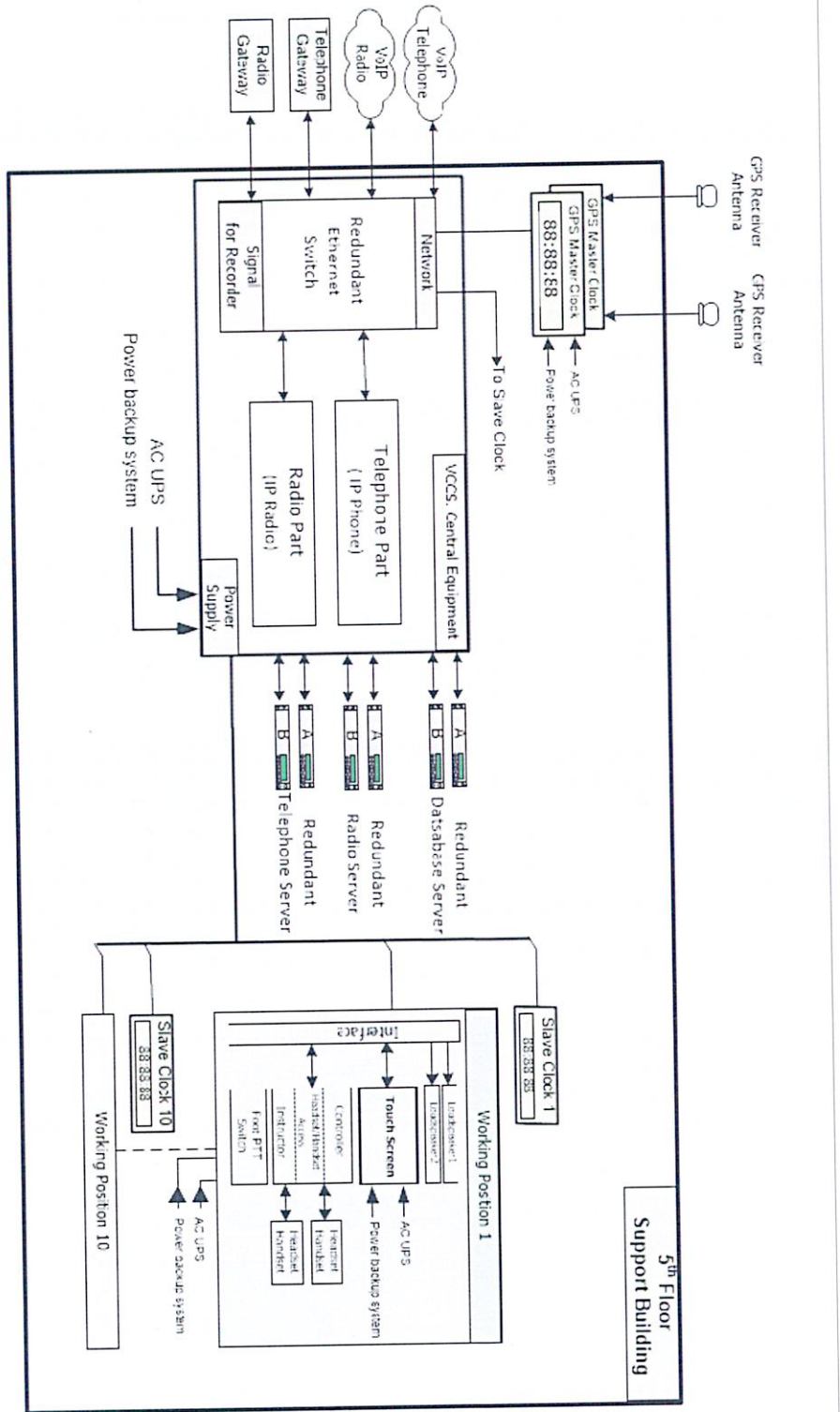
APPENDIX 5: CON/TRA VCCS Simplify Diagram




|                                                                                                 |  |                                                         |  |                                                                                                             |  |                                        |  |
|-------------------------------------------------------------------------------------------------|--|---------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------|--|----------------------------------------|--|
| <p>AERONAUTICAL RADIO OF THAILAND LTD.<br/>ATC Communication Systems Engineering Department</p> |  | <p>Drawing No : -<br/>Project No : -<br/>Design : -</p> |  | <p>Title : VCCS Simplified Diagram for Suvarnabhumi Airport<br/>Project : VCCS for Suvarnabhumi Airport</p> |  | <p>Revision : 00<br/>Page 01 of 01</p> |  |
| <p>Date : : 2 : 2025</p>                                                                        |  | <p>Date : : 2 : 2025</p>                                |  | <p>Approve : _____</p>                                                                                      |  | <p>Date : : 2 : 2025</p>               |  |

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APPENDIX 6: Spare VCCS Simplify Diagram

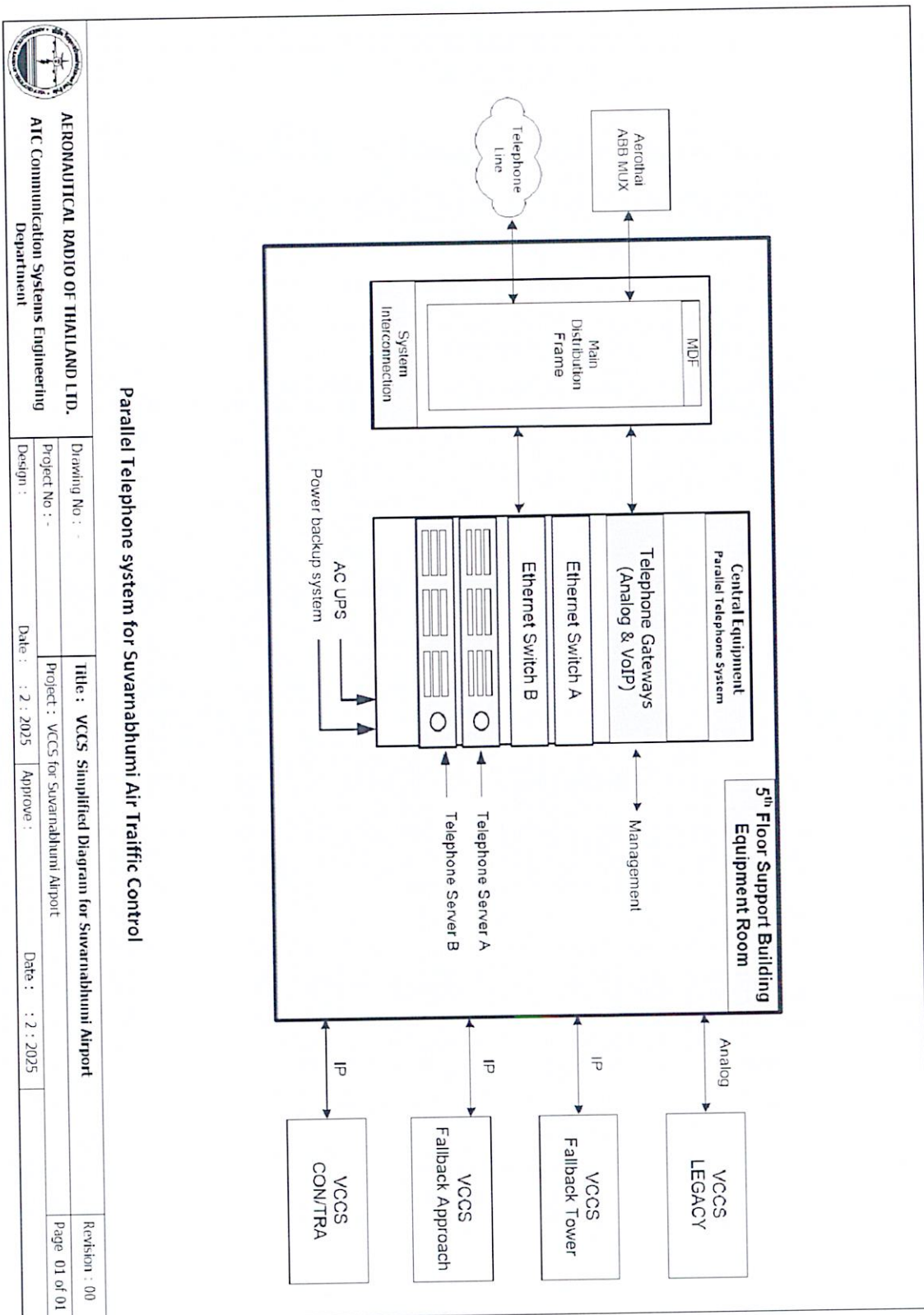


Spare system for Suvarnabhumi Air Traffic Control

|                                                                                                                                                                                   |                |  |                                                          |           |                   |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--|----------------------------------------------------------|-----------|-------------------|--|
|  <p>AERONAUTICAL RADIO OF THAILAND LTD.<br/>ATC Communication Systems Engineering Department</p> | Drawing No : - |  | Title : VCCS Simplified Diagram for Suvarnabhumi Airport |           | Revision : 00     |  |
|                                                                                                                                                                                   | Project No : - |  | Project : VCCS for Suvarnabhumi Airport                  |           | Page 01 of 01     |  |
|                                                                                                                                                                                   | Design :       |  | Date : : 2 : 2025                                        | Approve : | Date : : 2 : 2025 |  |
|                                                                                                                                                                                   |                |  |                                                          |           |                   |  |

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APPENDIX 7: Parallel Telephone System Simplify Diagram



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ATC Communication Systems Engineering Department

Drawing No : -  
Project No : -  
Design : -

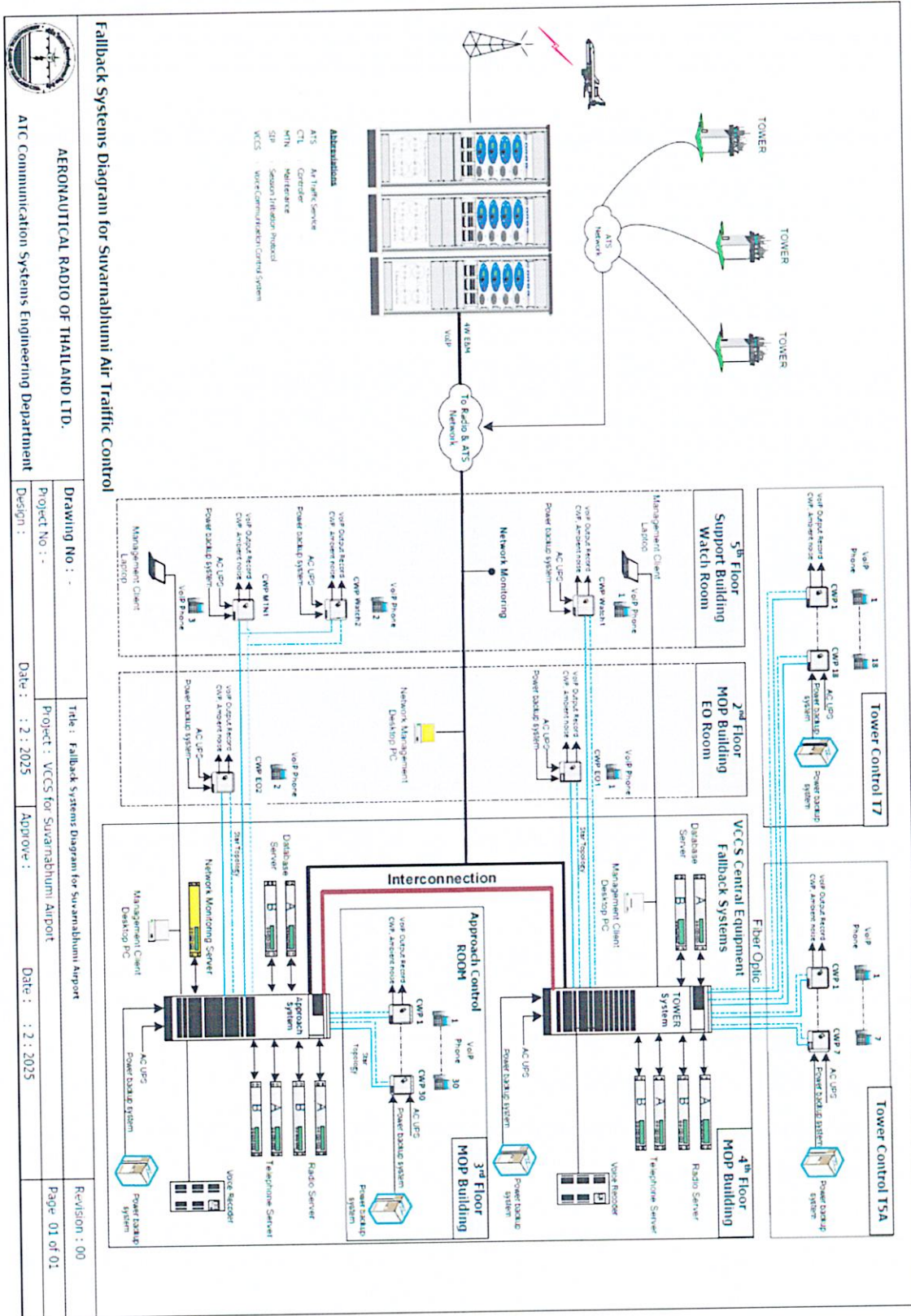
**title : VCCS Simplified Diagram for Suvarnabhumi Airport**  
Project : VCCS for Suvarnabhumi Airport  
Date : : 2 : 2025  
Approve : -

Date : : 2 : 2025

Revision : 00  
Page 01 of 01

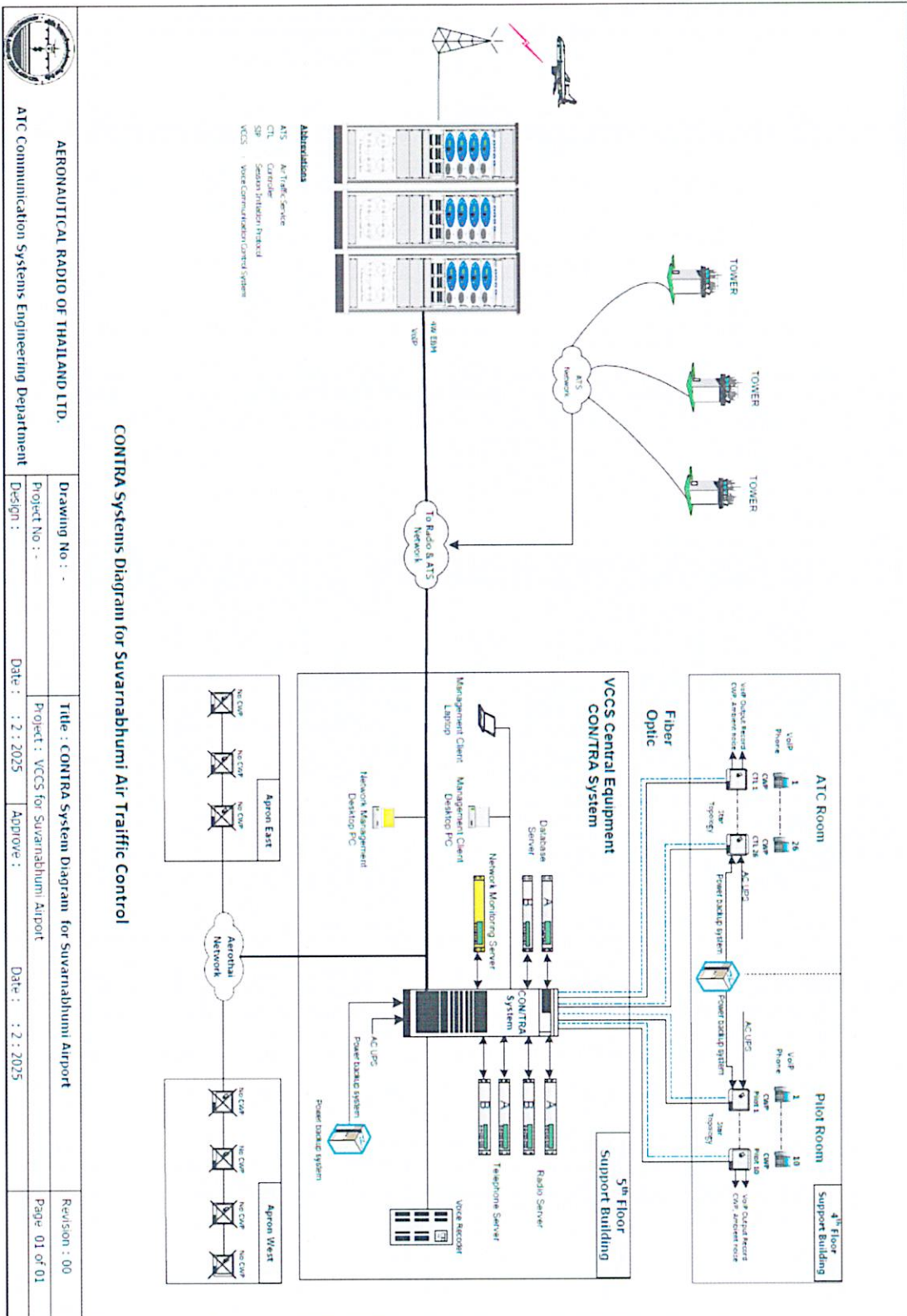
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# APPENDIX 8: Fallback System Diagram



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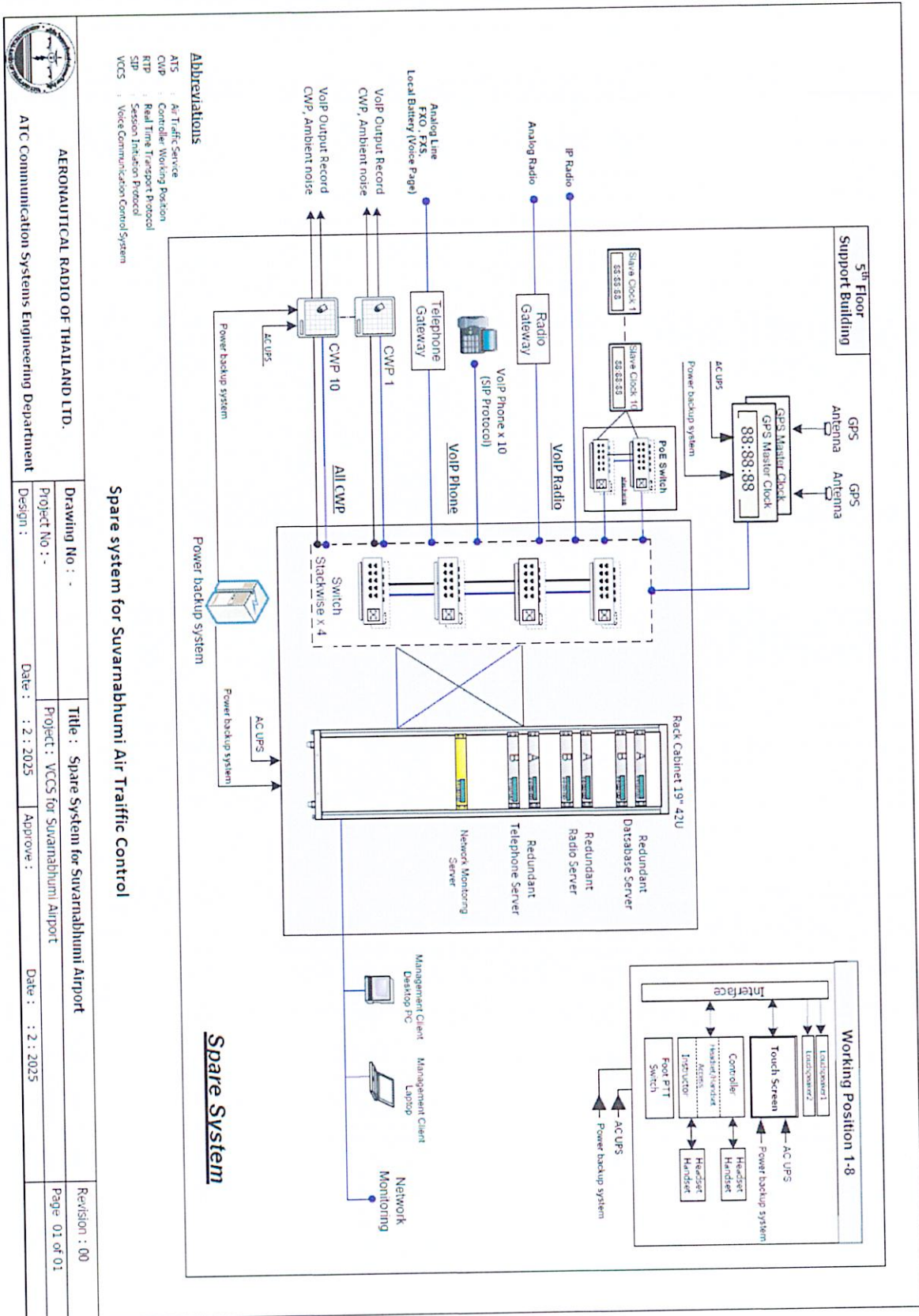
APPENDIX 9: CONTRA System Diagram



|                                                                                                                                                                                   |                   |             |                                                        |  |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|--------------------------------------------------------|--|---------------|
|  <p>AERONAUTICAL RADIO OF THAILAND LTD.<br/>ATC Communication Systems Engineering Department</p> | Drawing No. : -   |             | Title : CONTRA System Diagram for Suvarnabhumi Airport |  | Revision : 00 |
|                                                                                                                                                                                   | Project No. : -   |             | Project : VCCS for Suvarnabhumi Airport                |  | Page 01 of 01 |
| Design : -                                                                                                                                                                        | Date : : 2 : 2025 | Approve : - | Date : : 2 : 2025                                      |  |               |

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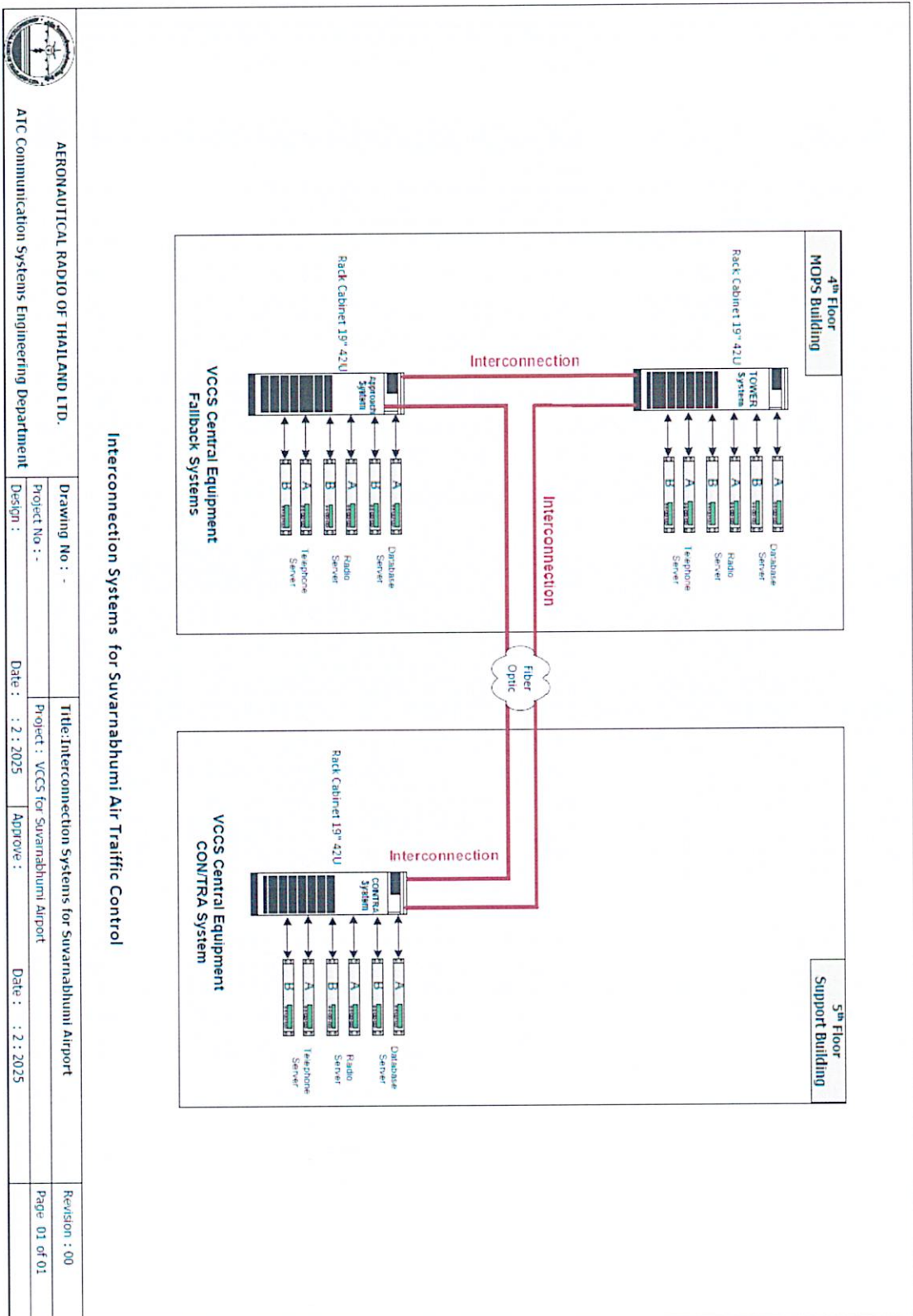
# APPENDIX 10: Spare System Diagram




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APPENDIX 12: Interconnection System

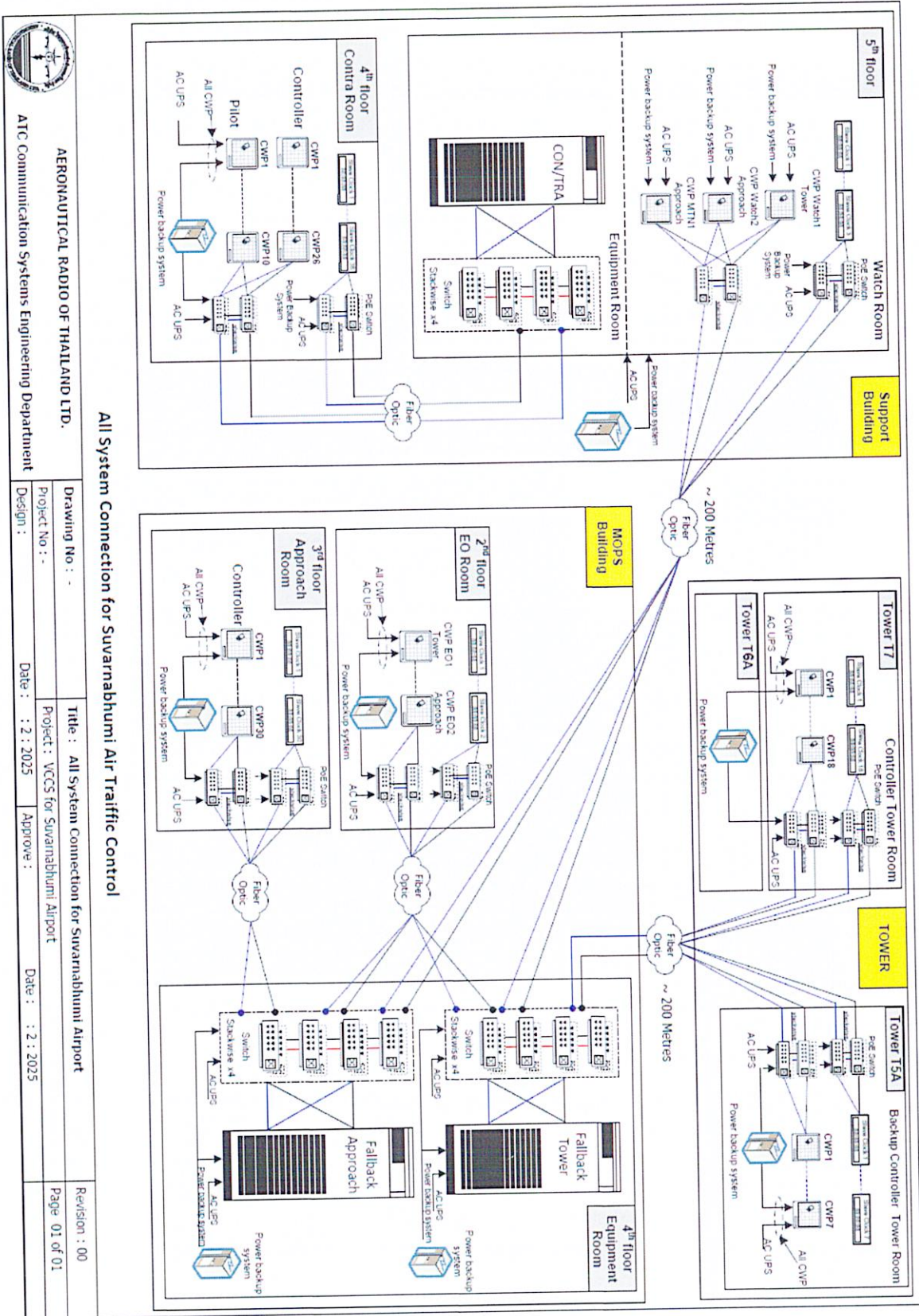


Interconnection Systems for Suvarnabhumi Air Traffic Control

|                                                                                                                                                                                   |                                    |  |                                                                           |  |                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--|---------------------------------------------------------------------------|--|--------------------------------|
|  <p>AERONAUTICAL RADIO OF THAILAND LTD.<br/>ATC Communication Systems Engineering Department</p> | Drawing No. : -<br>Project No. : - |  | Title: Interconnection Systems for Suvarnabhumi Airport                   |  | Revision : 00<br>Page 01 of 01 |
|                                                                                                                                                                                   | Design :<br>Date : : 2 : 2025      |  | Project : VCCS for Suvarnabhumi Airport<br>Approve :<br>Date : : 2 : 2025 |  |                                |

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APPENDIX 13: All System Connection



|                       |                                                         |                          |                                                               |                    |                      |                          |  |
|-----------------------|---------------------------------------------------------|--------------------------|---------------------------------------------------------------|--------------------|----------------------|--------------------------|--|
|                       | <b>AERONAUTICAL RADIO OF THAILAND LTD.</b>              |                          | <b>Title : All System Connection for Suvarnabhumi Airport</b> |                    | <b>Revision : 00</b> |                          |  |
|                       | <b>ATC Communication Systems Engineering Department</b> |                          | <b>Project : WCCS for Suvarnabhumi Airport</b>                |                    | <b>Page 01 of 01</b> |                          |  |
| <b>Drawing No : -</b> |                                                         | <b>Date : : 2 : 2025</b> |                                                               | <b>Approve : -</b> |                      | <b>Date : : 2 : 2025</b> |  |
| <b>Project No : -</b> |                                                         | <b>Date : : 2 : 2025</b> |                                                               | <b>Approve : -</b> |                      | <b>Date : : 2 : 2025</b> |  |

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APPENDIX 14: Fiber Optic Connection

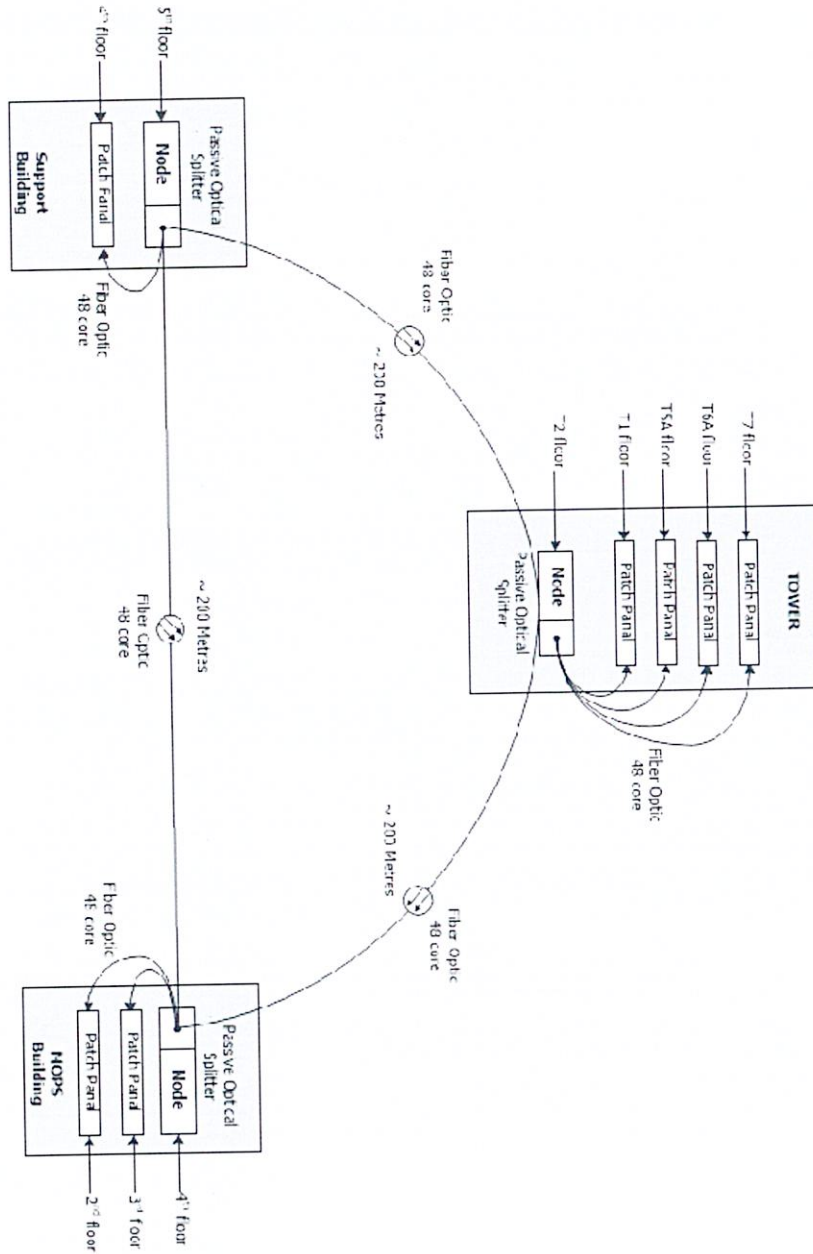


AERONAUTICAL RADIO OF THAILAND LTD.  
 AIC Communication Systems Engineering Department

**Title :** Fiber Optic for Suvarnabhumi Airport  
**Project :** VCCS for Suvarnabhumi Airport  
**Date :** 2 : 2015  
**Design :**  
**Approve :**  
**Date :** 2 : 2015

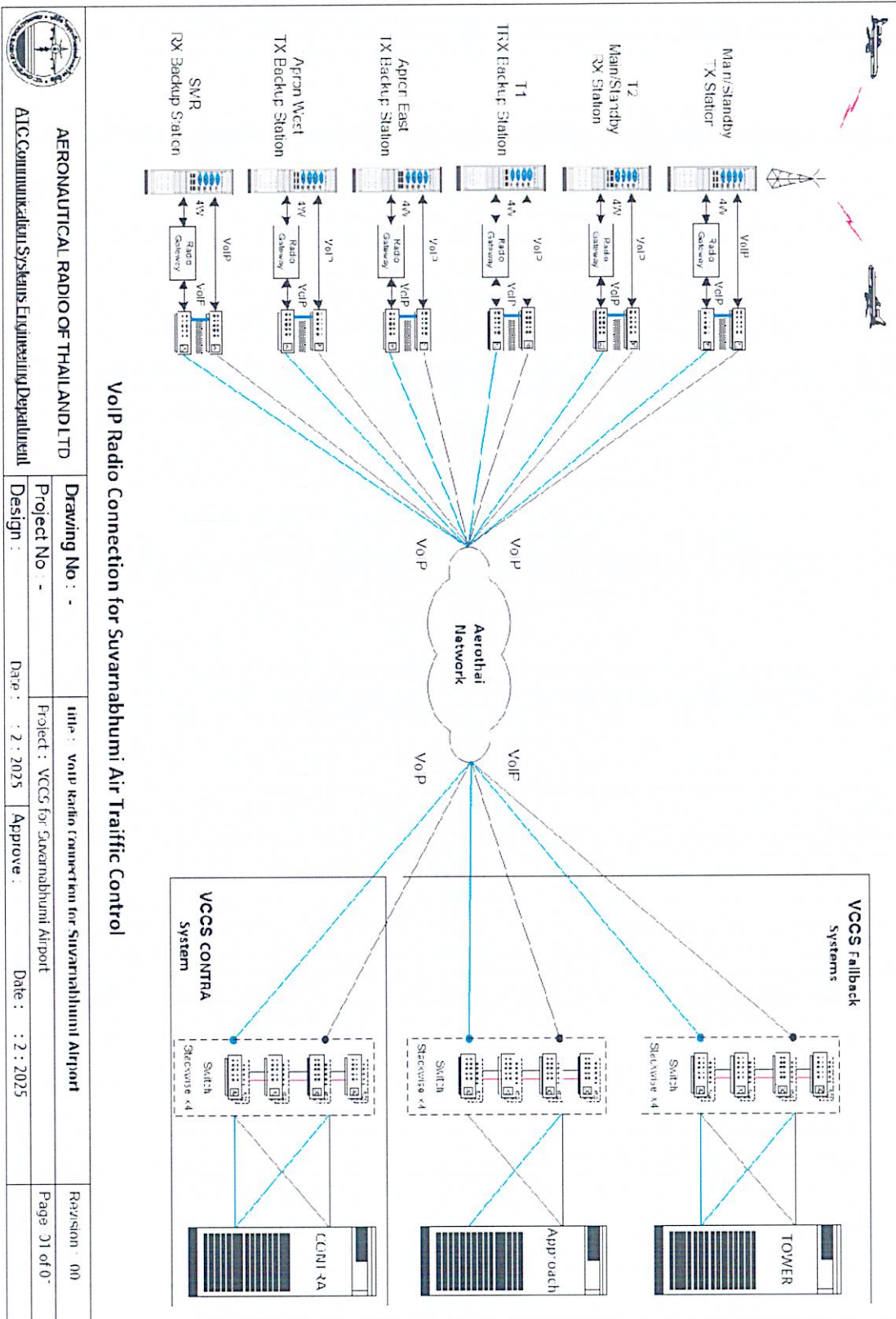
Revision : 01  
 Page 01 of 01

Fiber Optic for Suvarnabhumi Air Traffic Control




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APPENDIX 15: VoIP Radio Connection

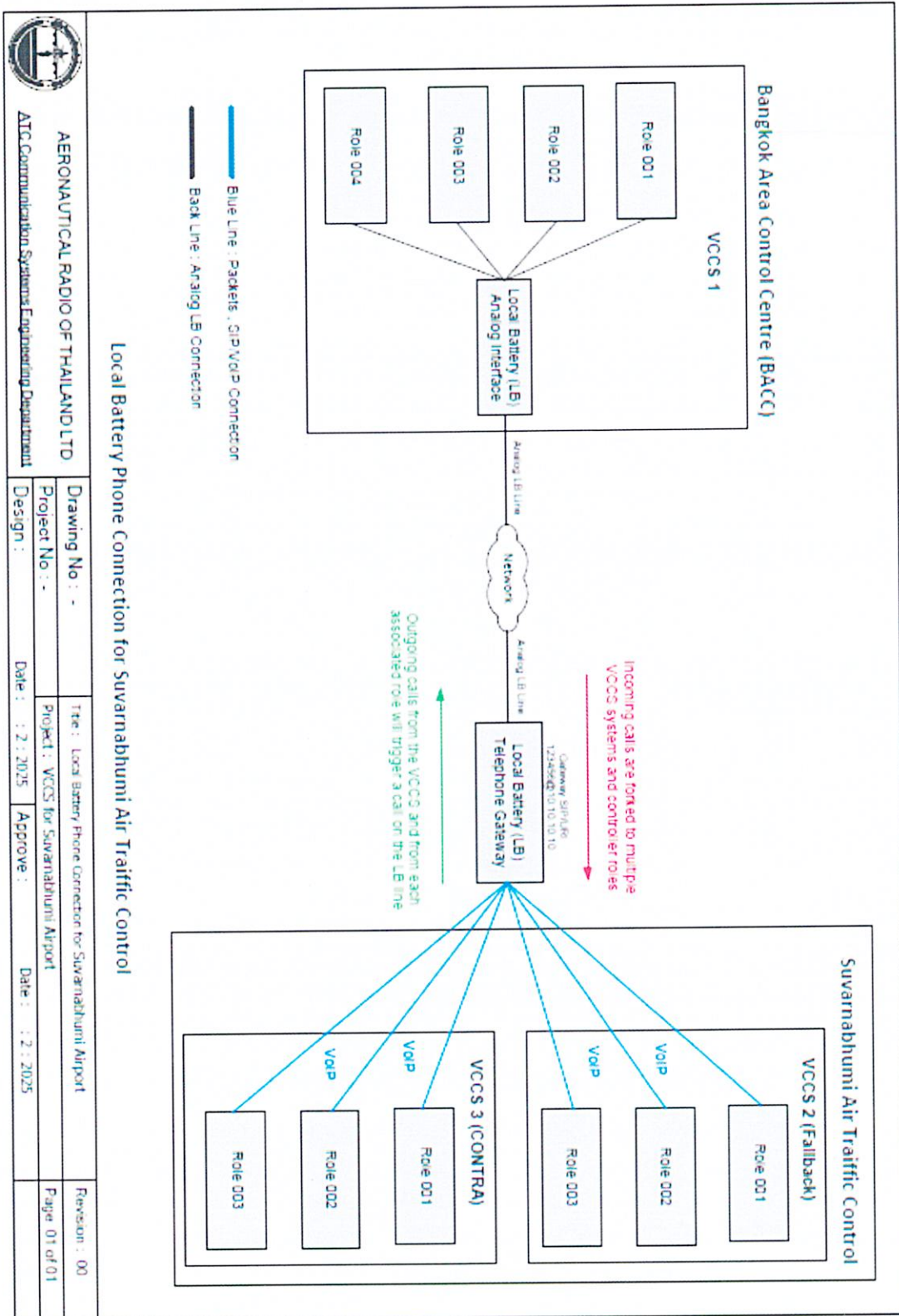


VoIP Radio Connection for Suvarnabhumi Air Traffic Control

|                                                                                                                                                                                   |                        |                                                               |                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------|------------------------|
|  <p>AERONAUTICAL RADIO OF THAILAND LTD<br/>ATC Communications Systems Engineering Department</p> | <p>Drawing No : -</p>  | <p>title : voip Radio Connection for Suvarnabhumi Airport</p> | <p>Revision : 00</p>   |
|                                                                                                                                                                                   | <p>Project No : -</p>  | <p>Project : VCCS for Suvarnabhumi Airport</p>                | <p>Pages : 31 of 0</p> |
| <p>Design : -</p>                                                                                                                                                                 | <p>Date : 2 : 2025</p> | <p>Approve : -</p>                                            | <p>Date : 2 : 2025</p> |

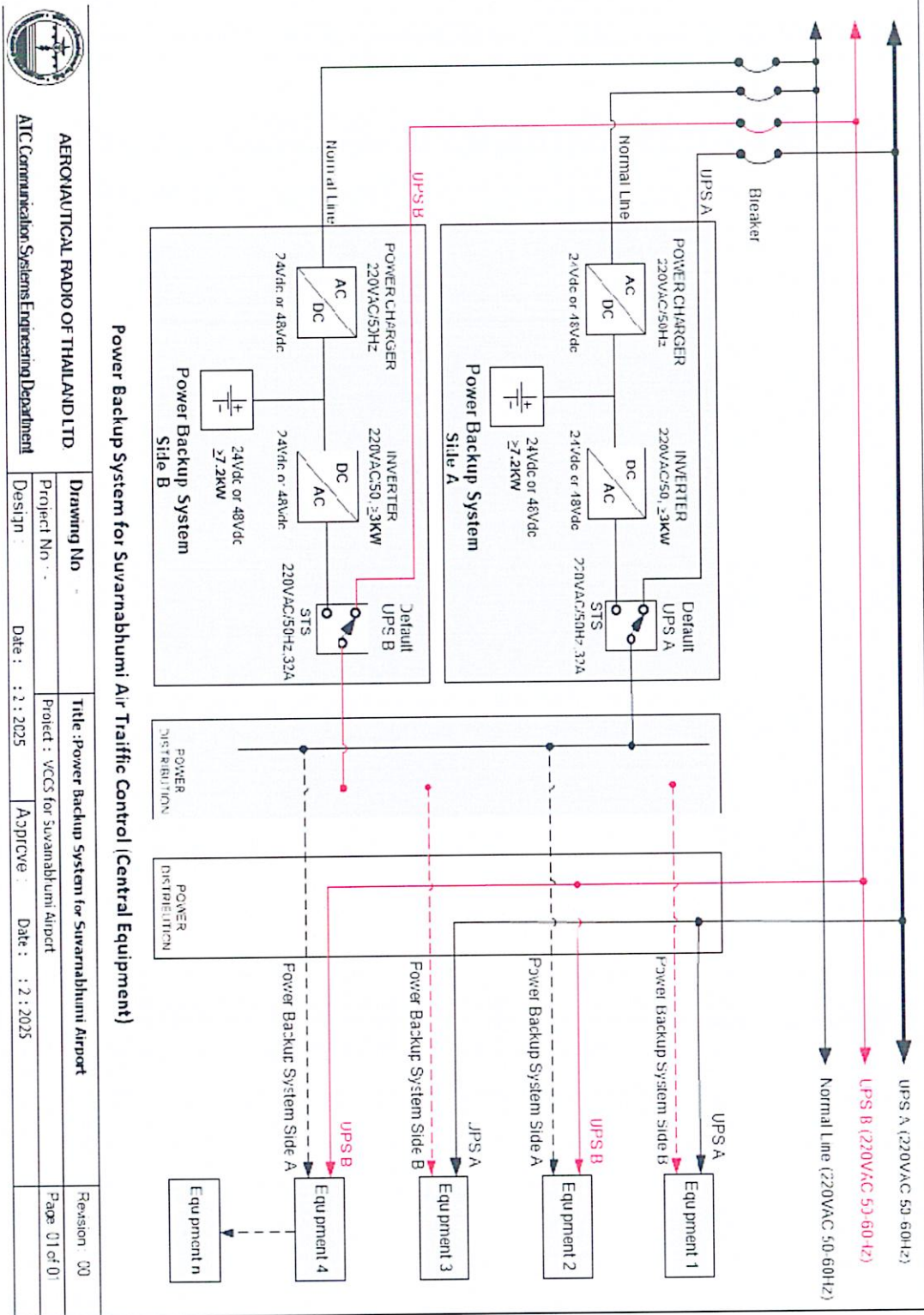
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APPENDIX 16: Local Battery Phone Connection



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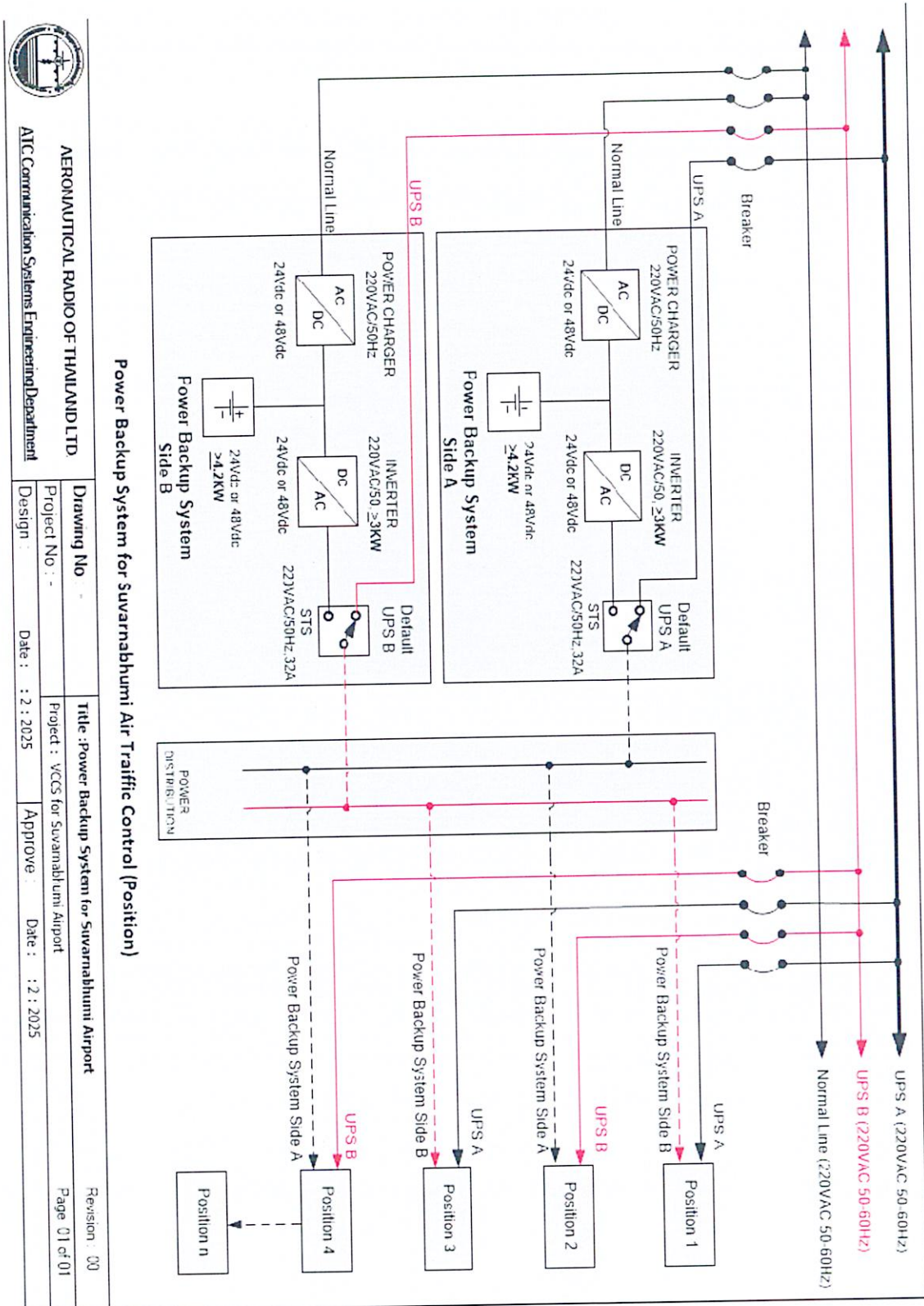
APPENDIX 17: Power Backup System (Central Equipment)



|                                                                                   |  |                                                                                                |  |
|-----------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------|--|
|  |  | <b>AERONAUTICAL RADIO OF THAILAND LTD.</b><br>AIC Communication Systems Engineering Department |  |
| Drawing No. : _____                                                               |  | Title : Power Backup System for Suvarnabhumi Airport                                           |  |
| Project No. : _____                                                               |  | Project : VCCS for Suvarnabhumi Airport                                                        |  |
| Design : _____                                                                    |  | Date : : 2 : 2025                                                                              |  |
| Date : : 2 : 2025                                                                 |  | Approve : _____                                                                                |  |
| Date : : 2 : 2025                                                                 |  | Date : : 2 : 2025                                                                              |  |
| Revision : 00                                                                     |  | Page 01 of 01                                                                                  |  |

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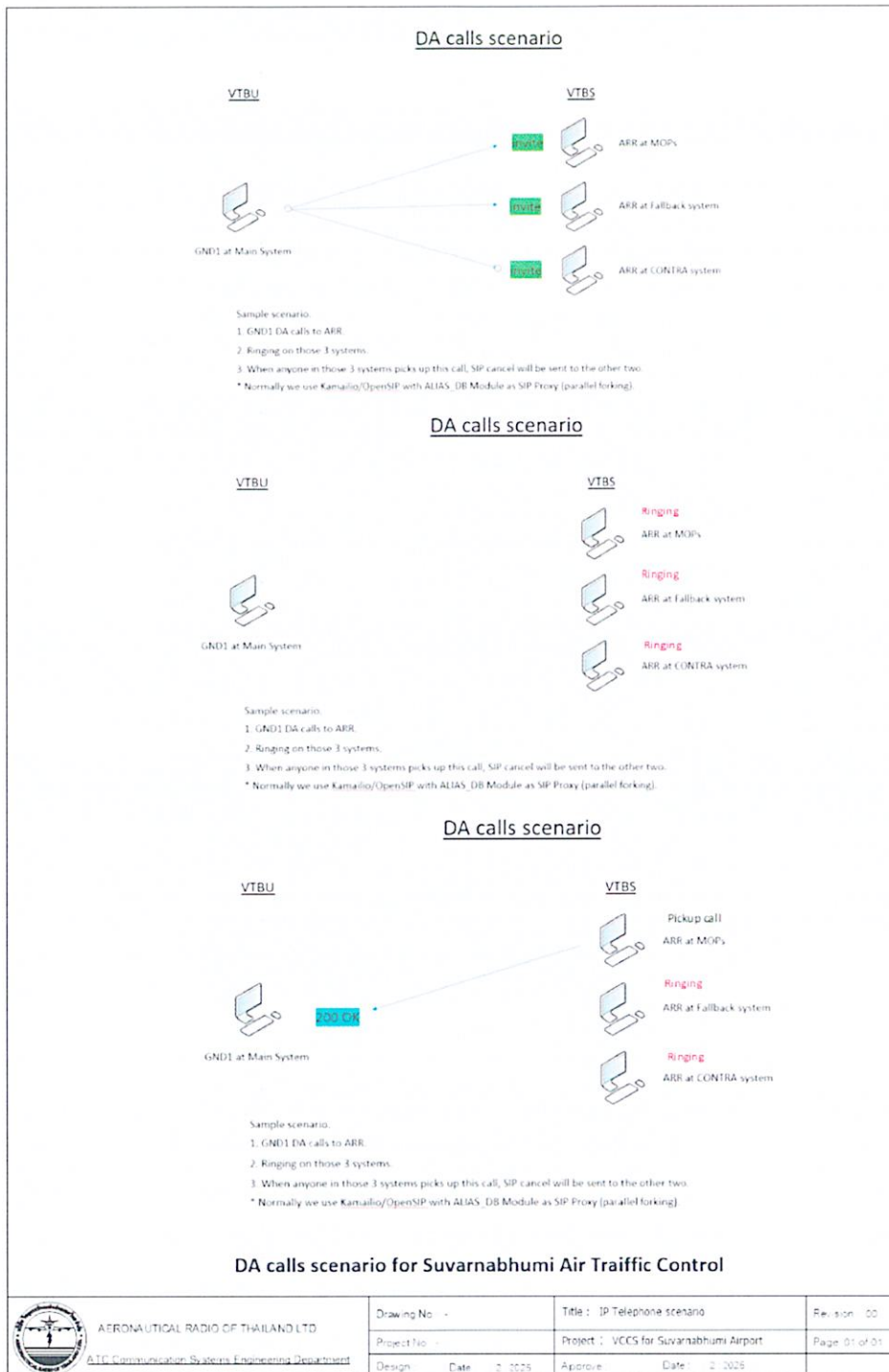
APPENDIX 18: Power Backup System (Position)



|                                                  |  |                                                      |  |                   |  |
|--------------------------------------------------|--|------------------------------------------------------|--|-------------------|--|
| AERONAUTICAL RADIO OF THAILAND LTD.              |  | Title : Power Backup System for Suvarnabhumi Airport |  | Revision : 00     |  |
| ATC Communication Systems Engineering Department |  | Project : VCS for Suvarnabhumi Airport               |  | Page 01 of 01     |  |
| Drawing No : -                                   |  | Design : -                                           |  | Date : : 2 : 2025 |  |
| Date : : 2 : 2025                                |  | Approve : -                                          |  | Date : : 2 : 2025 |  |

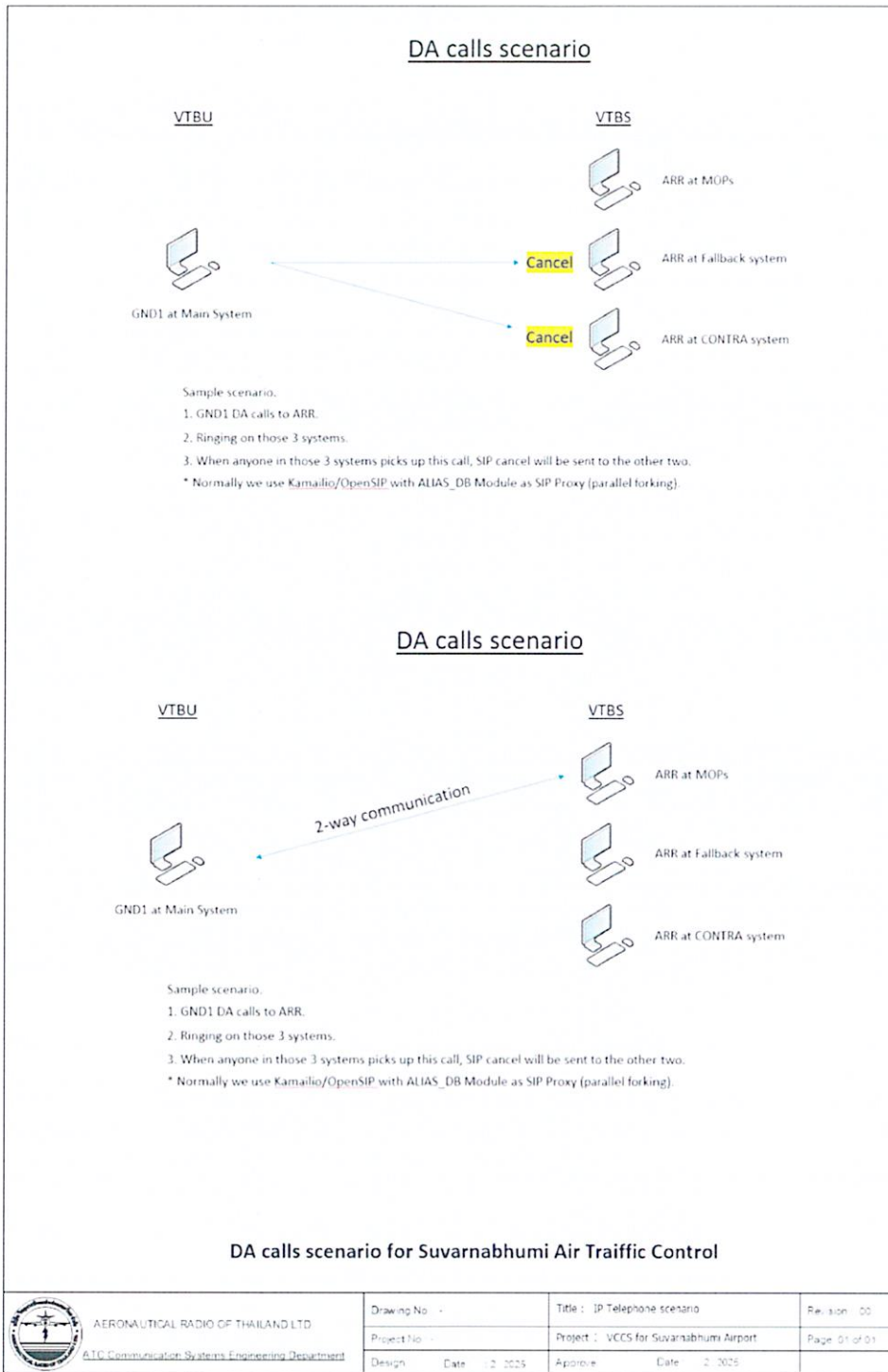
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## APPENDIX 19: Direct Access calls scenario 1



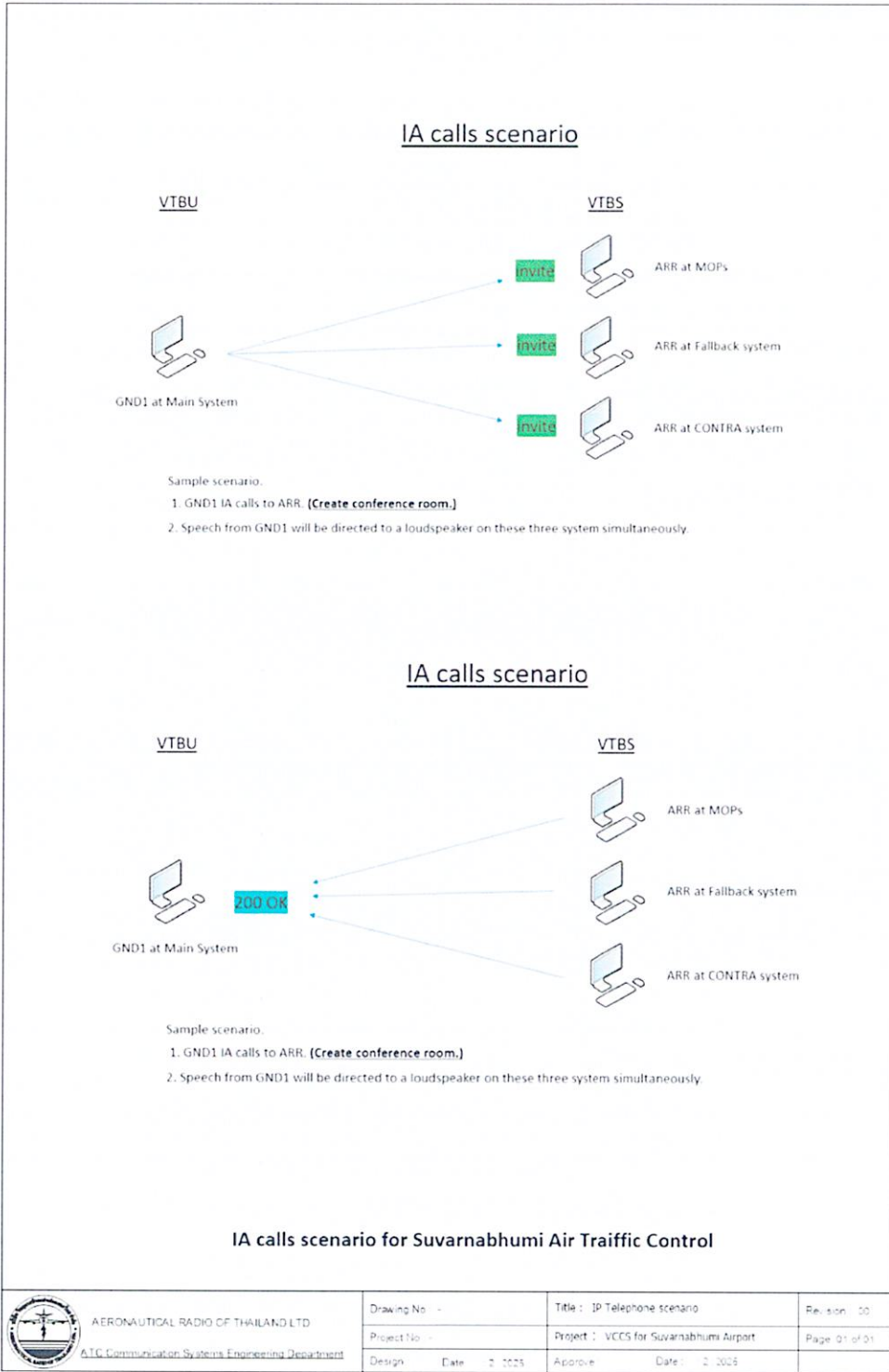
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APPENDIX 20: Direct Access calls scenario 2



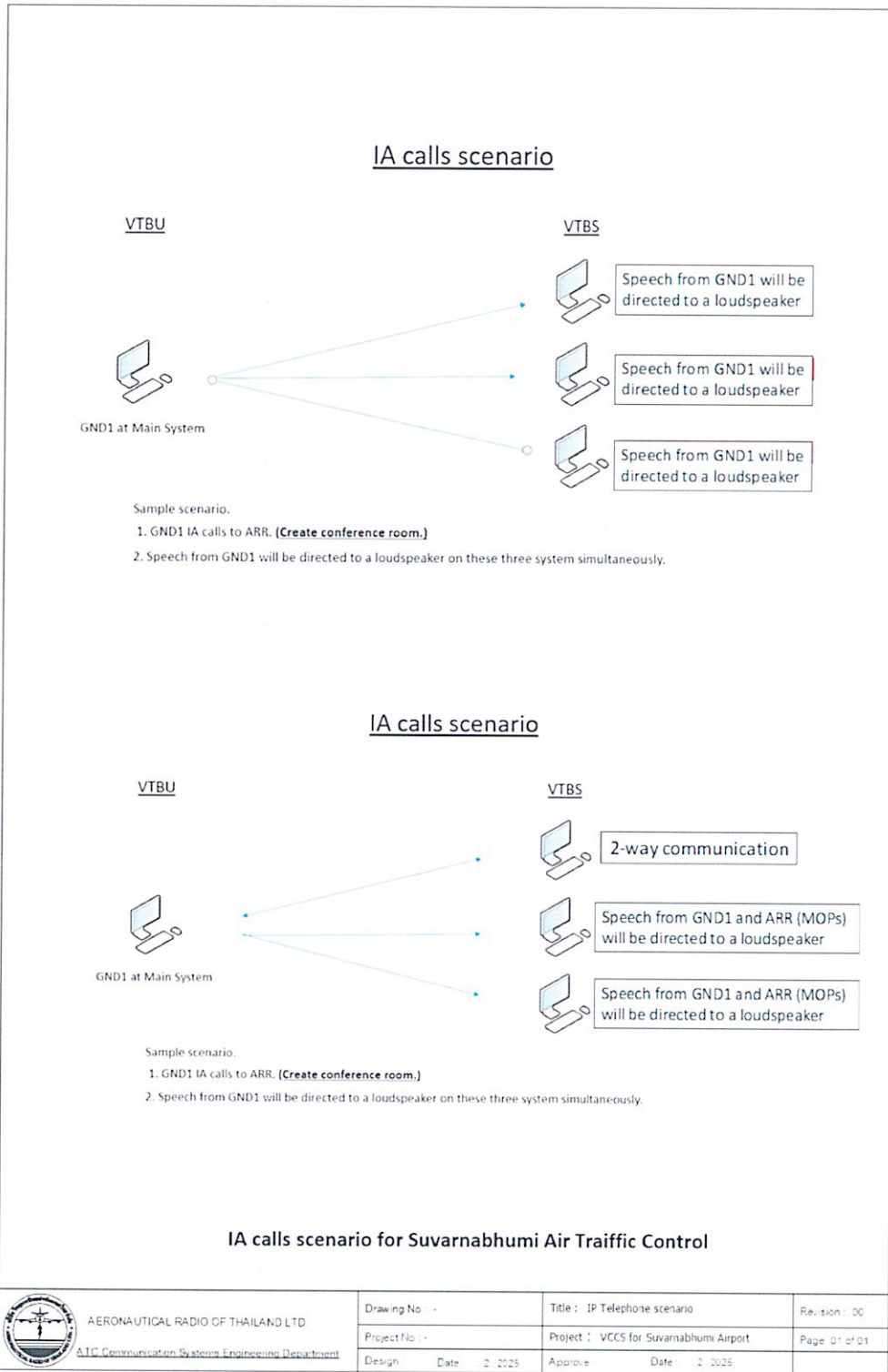
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APPENDIX 21: Instantaneous Access calls scenario 1



ATC  
 asomc  
 [Signature]  
 [Signature]  
 [Signature]

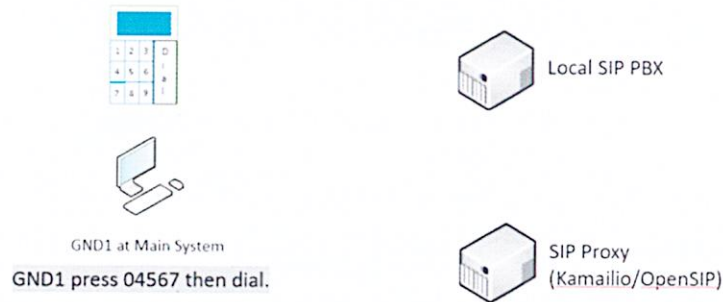
APPENDIX 22: Instantaneous Access calls scenario 2



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APPENDIX 23: Indirect Access calls scenario 1

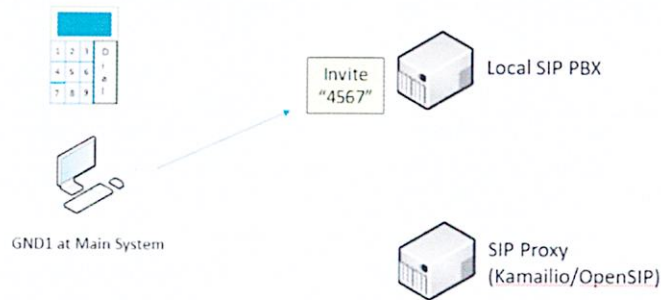
IDA calls scenario



Sample scenario.

1. GND1 press 04567 then dial.
  2. 4567@localsippbx's invite packet will be sent to local sip pbx
  3. Other number that not initial with "0" will be sent to SIP proxy.
- \* May be you can use SIP proxy to do all these processes.


IDA calls scenario



Sample scenario.

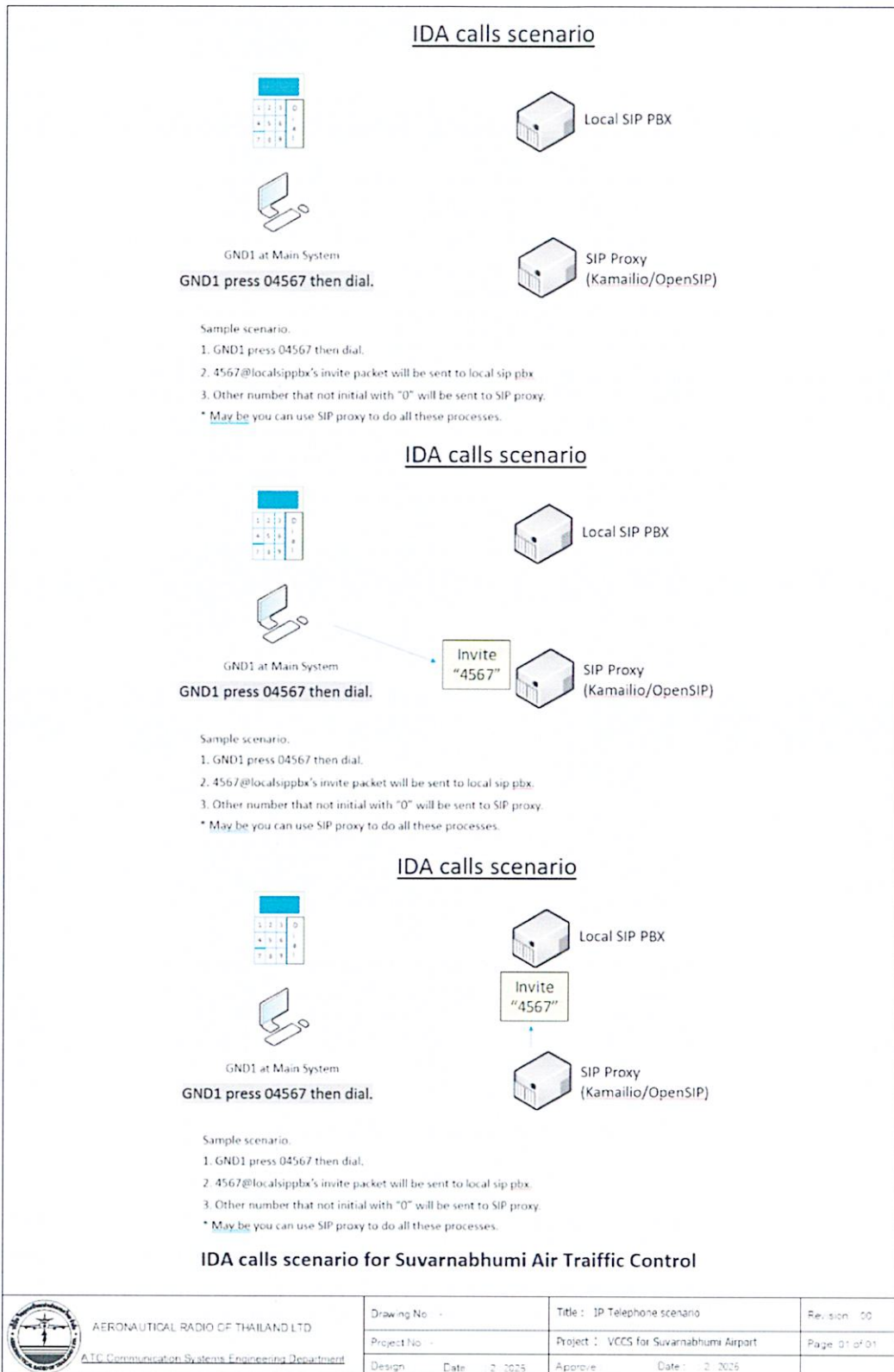
1. GND1 press 04567 then dial.
  2. 4567@localsippbx's invite packet will be sent to local sip pbx.
  3. Other number that not initial with "0" will be sent to SIP proxy.
- \* May be you can use SIP proxy to do all these processes.

IDA calls scenario for Suvarnabhumi Air Traffic Control

|                                                                                                                                                                                     |                      |                                         |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------|-----------------|
|  <p>AERONAUTICAL RADIO OF THAILAND LTD.<br/>ATC Communication Systems Engineering Department</p> | Drawing No. -        | Title : IP Telephone scenario           | Revision : 00   |
|                                                                                                                                                                                     | Project No. -        | Project : VCCS for Suvarnabhumi Airport | Page : 01 of 01 |
|                                                                                                                                                                                     | Design Date : 2 2025 | Approve Date : 2 2025                   |                 |

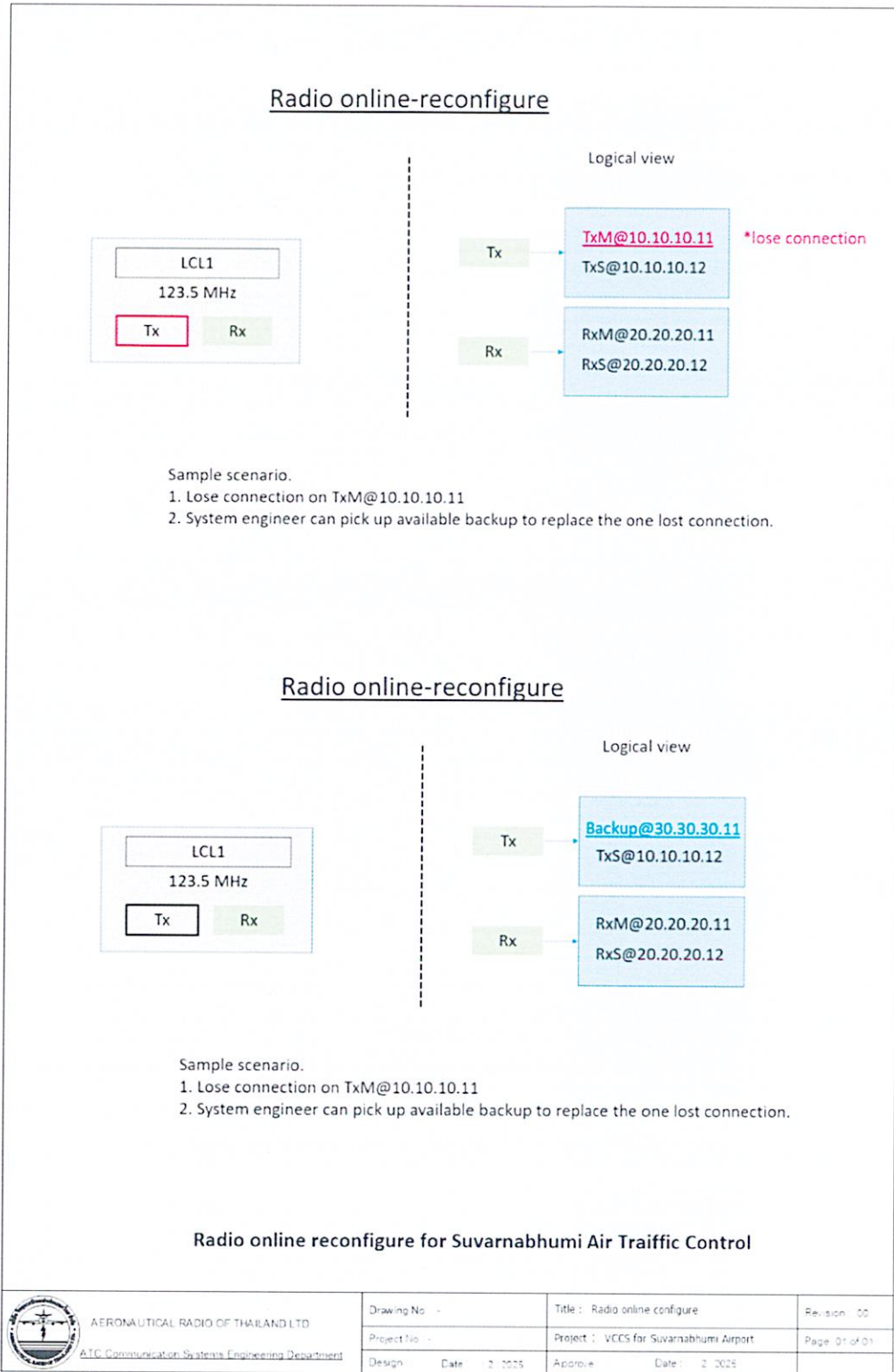
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APPENDIX 24: Indirect Access calls scenario 2



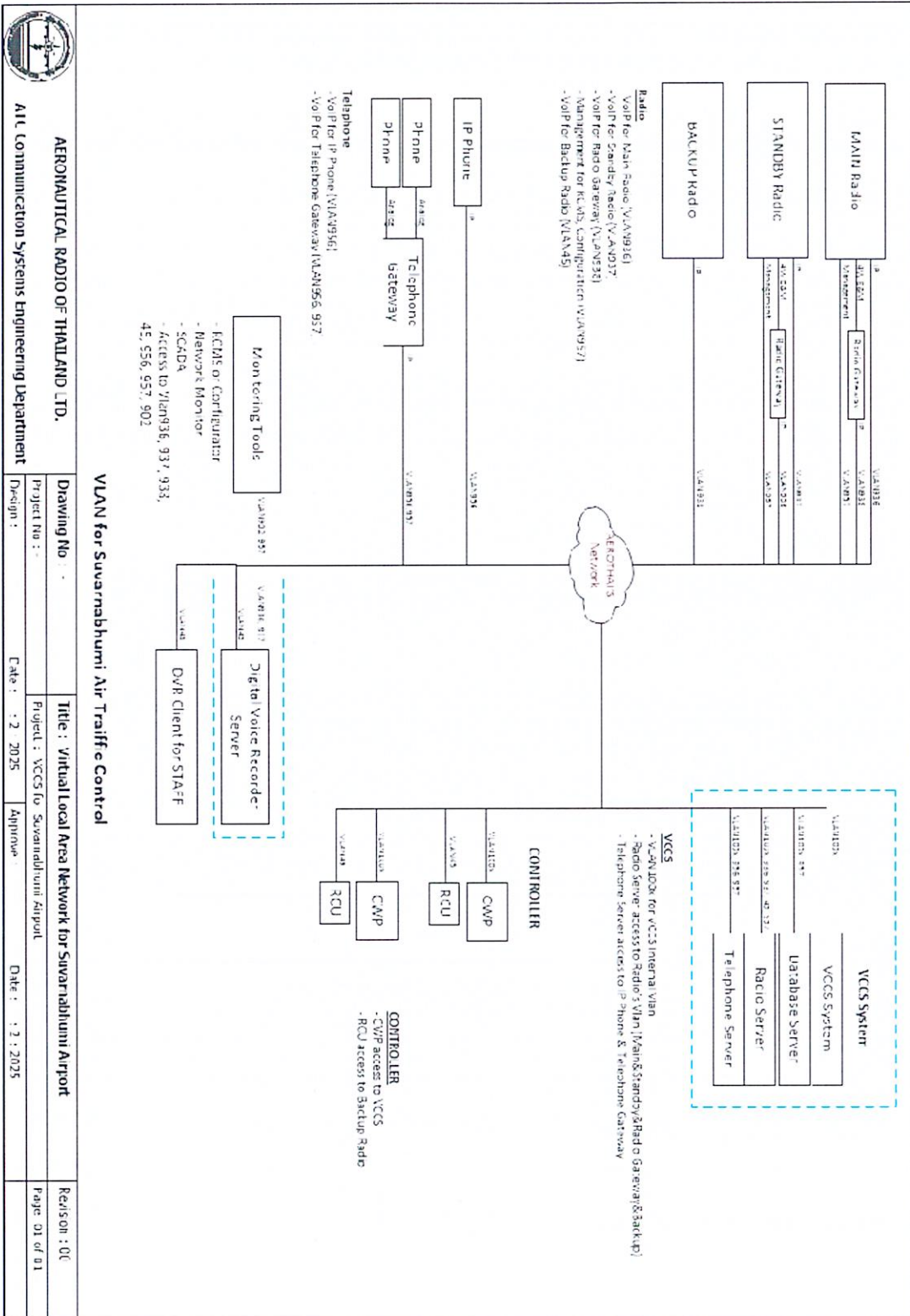


APPENDIX 25: Radio online reconfigures





APPENDIX 26: VLAN Network Diagram



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