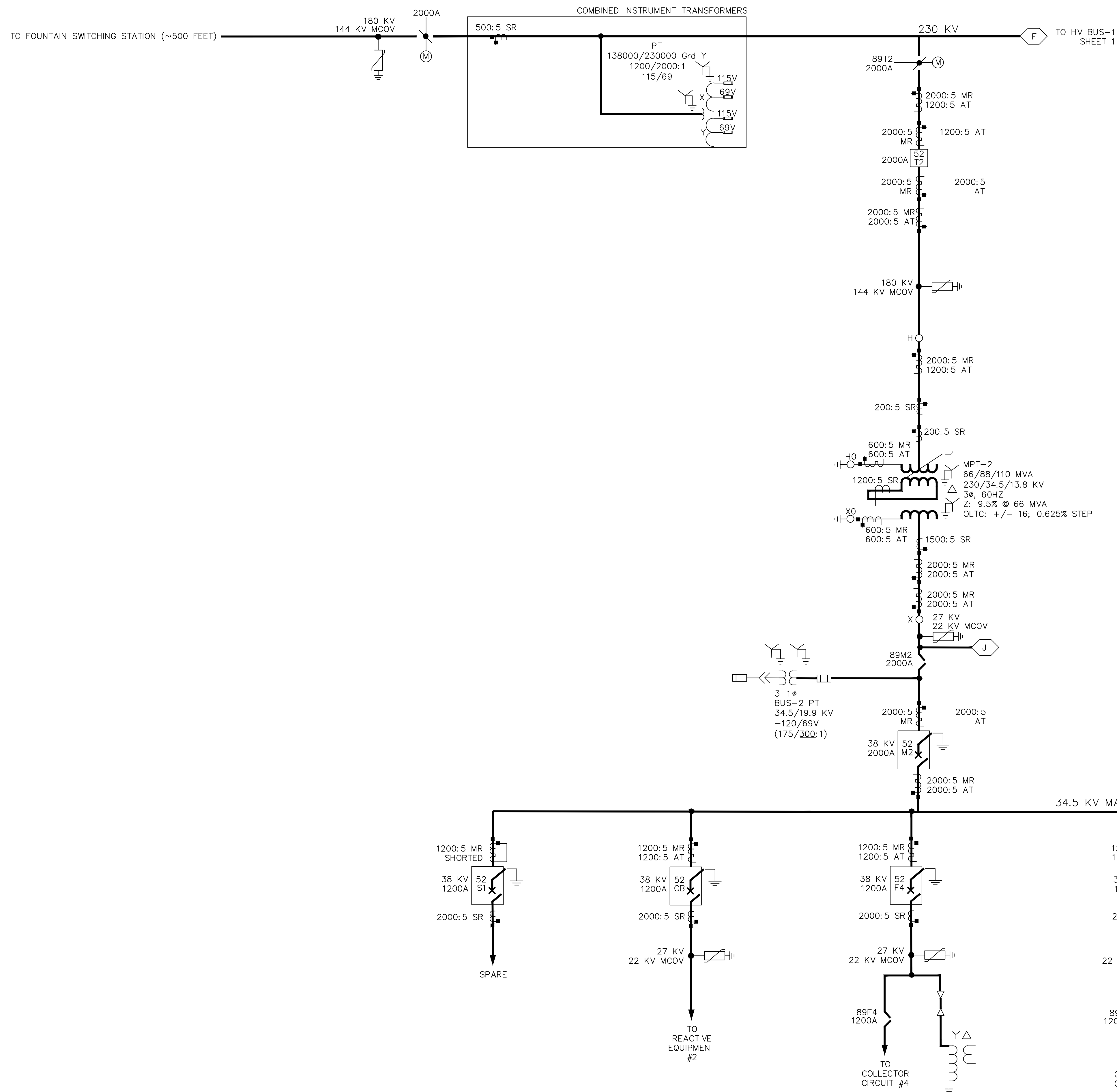
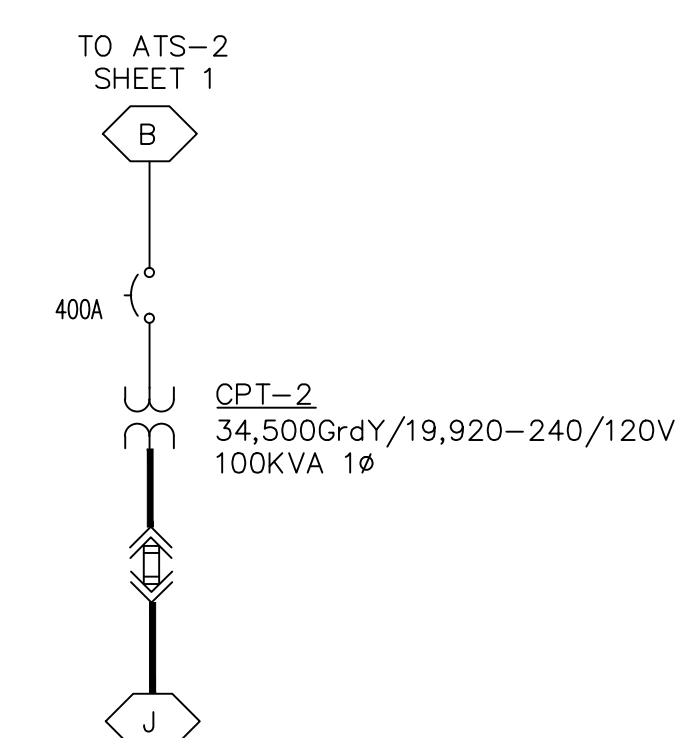


| DOCKETED | |
|-------------------------|--------------------------------------|
| Docket Number: | 23-OPT-01 |
| Project Title: | Fountain Wind Project |
| TN #: | 250504 |
| Document Title: | TSD-03_fwp_Substation Design Details |
| Description: | N/A |
| Filer: | Caitlin Barns |
| Organization: | Stantec Consulting Services, Inc. |
| Submitter Role: | Applicant Consultant |
| Submission Date: | 6/2/2023 3:02:23 PM |
| Docketed Date: | 6/2/2023 |



LEGEND:
SEE SHEET 1



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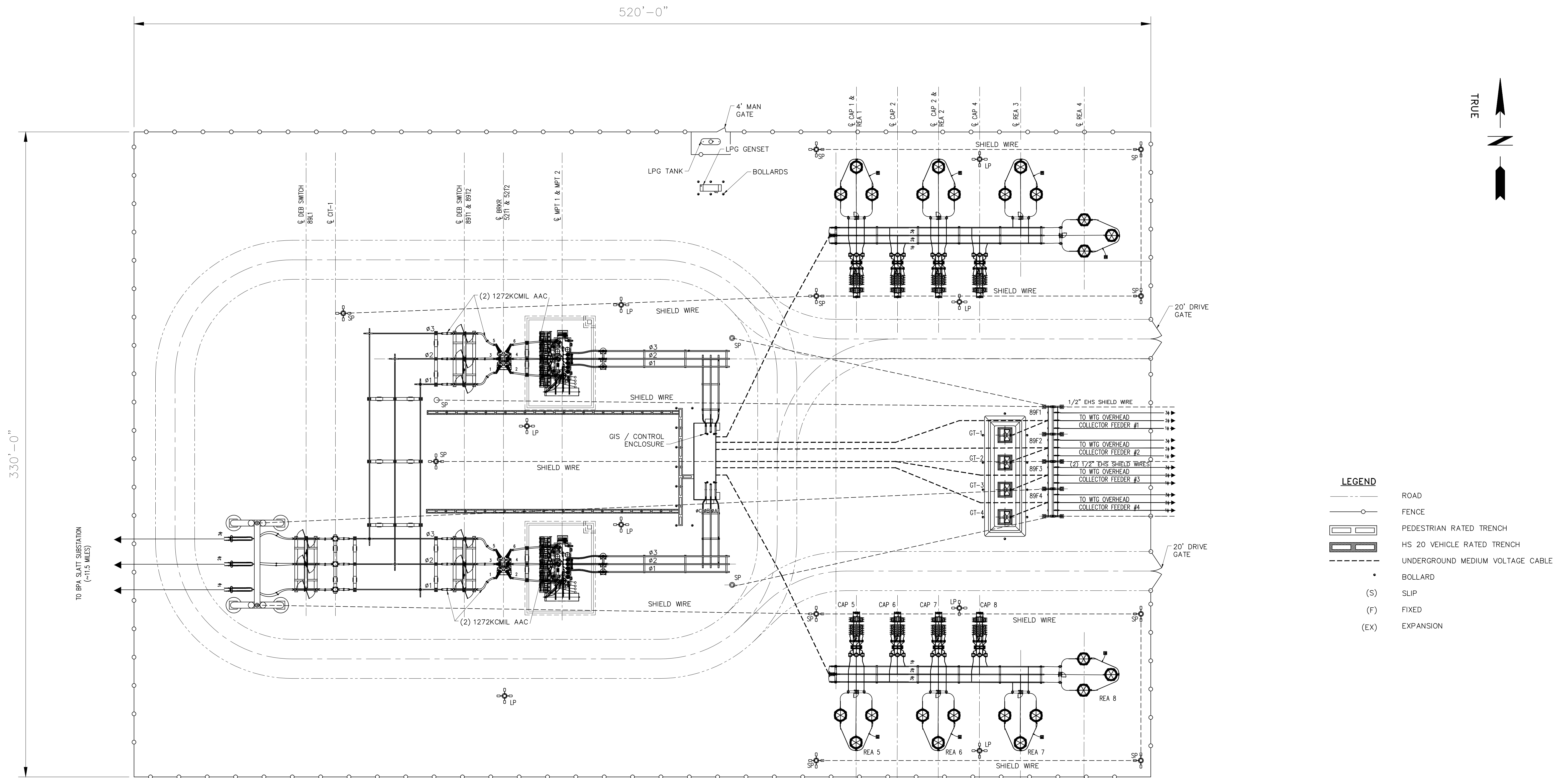
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| FOUNTAIN WIND PROJECT | |
| 230-34.5KV COLLECTOR SUBSTATION | |
| GENERAL ARRANGEMENT | |
| SCALE: 1"=25'-0" | DWG.NO. |
| SHEET 2 OF 2 | REV |

| KV | BIL | MINIMUM METAL-TO-METAL DISTANCE FOR RIGID BUS PHASE-TO-PHASE | MINIMUM CENTERLINE TO PHASE SPACING FOR RIGID BUS | MINIMUM CREEPAGE DISTANCE | MINIMUM PHASE TO GROUND SPACING | MINIMUM CLEARANCE BETWEEN LIVE PARTS TO FENCE | MINIMUM CLEARANCE PHASE TO SUBSTATION GRADE | MINIMUM CLEARANCE PHASE TO SUBSTATION ROADWAY |
|------|------|--|---|---------------------------|---------------------------------|---|---|---|
| | | | | | | | | |
| 230 | 1050 | 7'-2" | 13'-0" | 195" | 6'-7" | 16'-5" | 16'-0" | 28'-0" |
| 34.5 | 250 | 1'-9" | 4'-0" | 37" | 1'-7" | 10'-11" | 10'-0" | 22'-0" |

NOTE:
 1050KV BIL COMES FROM REQUIRED 900KV BIL X ALTITUDE FACTOR
 250KV BIL COMES FROM REQUIRED 200KV BIL X ALTITUDE FACTOR



CONCEPTUAL- NOT FOR CONSTRUCTION

| NO. | REVISIONS | DATE | BY | CHK | APR | NO. | REVISIONS | DATE | BY | CHK | APR |
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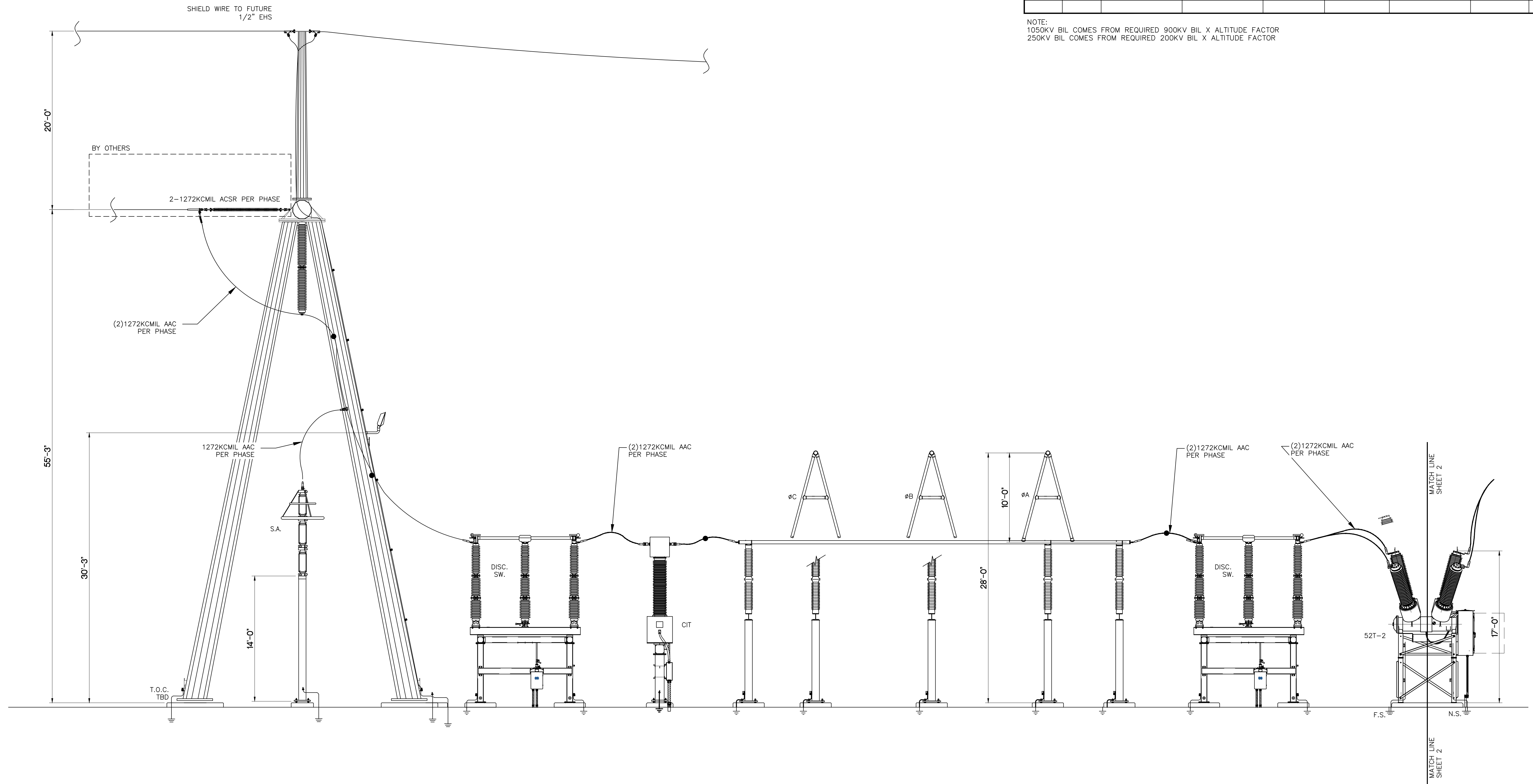
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| FOUNTAIN WIND PROJECT | |
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| 230-34.5KV COLLECTOR SUBSTATION | |
| GENERAL ARRANGEMENT | |
| SCALE: 1"=25'-0" | DWG.NO. |
| SHEET OF | REV |

| VOLTAGE | | MINIMUM METAL-TO-METAL DISTANCE FOR RIGID BUS PHASE-TO-PHASE | MINIMUM CENTERLINE TO CENTERLINE PHASE SPACING FOR RIGID BUS | MINIMUM CREEPAGE DISTANCE | MINIMUM PHASE TO GROUND SPACING | MINIMUM CLEARANCE BETWEEN LIVE PARTS TO FENCE | MINIMUM CLEARANCE PHASE TO SUBSTATION GRADE | MINIMUM CLEARANCE PHASE TO SUBSTATION ROADWAY |
|---------|------|--|--|---------------------------|---------------------------------|---|---|---|
| KV | BIL | | | | | | | |
| 230 | 1050 | 7'-2" | 13'-0" | 195" | 6'-7" | 16'-5" | 16'-0" | 28'-0" |
| 34.5 | 250 | 1'-9" | 4'-0" | 37" | 1'-7" | 10'-11" | 10'-0" | 22'-0" |
| | | | | | | | | |

NOTE:
 1050KV BIL COMES FROM REQUIRED 900KV BIL X ALTITUDE FACTOR
 250KV BIL COMES FROM REQUIRED 200KV BIL X ALTITUDE FACTOR



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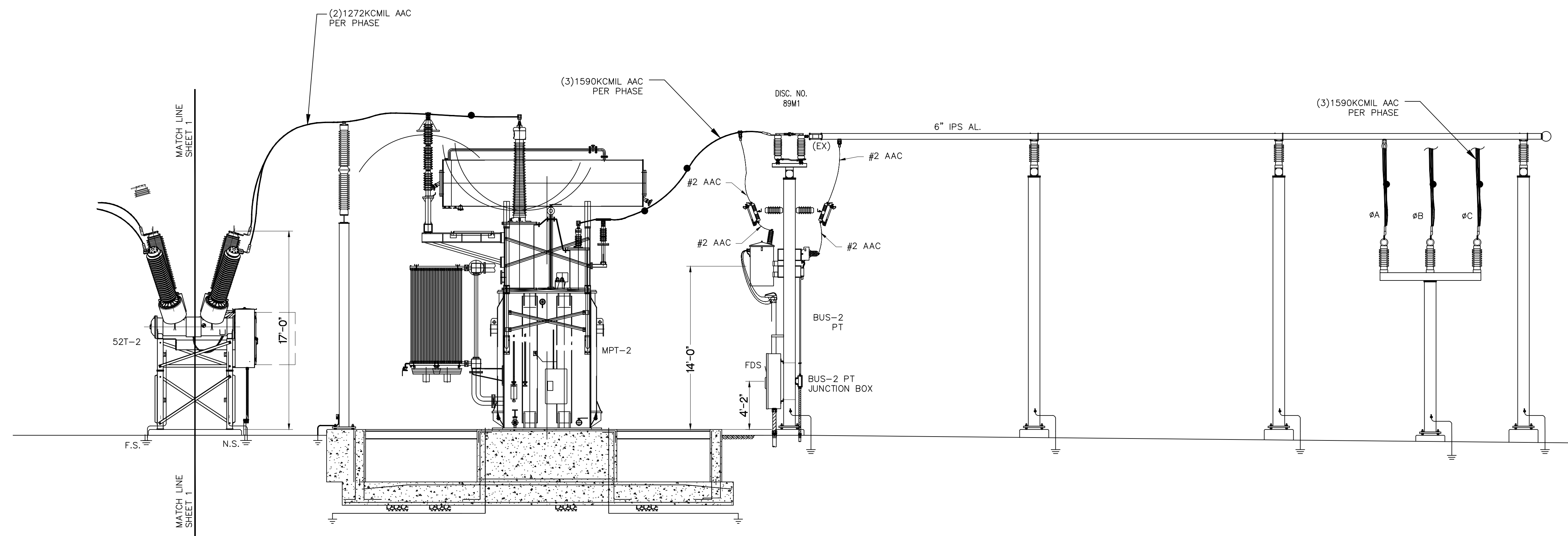
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| FOUNTAIN WIND PROJECT | |
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| 230-34.5KV COLLECTOR SUBSTATION ELEVATIONS | |
| SCALE: 1"=25'-0" | DWG. NO. |
| SHEET 1 OF 2 | REV. |

| VOLTAGE | | MINIMUM METAL-TO-METAL DISTANCE FOR RIGID BUS PHASE-TO-PHASE | MINIMUM CENTERLINE TO CENTERLINE PHASE SPACING FOR RIGID BUS | MINIMUM CREEPAGE DISTANCE | MINIMUM PHASE TO GROUND SPACING | MINIMUM CLEARANCE BETWEEN LIVE PARTS TO FENCE | MINIMUM CLEARANCE PHASE TO SUBSTATION GRADE | MINIMUM CLEARANCE PHASE TO SUBSTATION ROADWAY |
|---------|------|--|--|---------------------------|---------------------------------|---|---|---|
| KV | BIL | | | | | | | |
| 230 | 1050 | 7'-2" | 13'-0" | 195" | 6'-7" | 16'-5" | 16'-0" | 28'-0" |
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| | | | | | | | | |

NOTE:
 1050KV BIL COMES FROM REQUIRED 900KV BIL X ALTITUDE FACTOR
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| FOUNTAIN WIND PROJECT | |
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| 230-34.5KV COLLECTOR SUBSTATION ELEVATIONS | |
| SCALE: 1"=25'-0" | DWG. NO. |
| SHEET 2 OF 2 | REV. |