

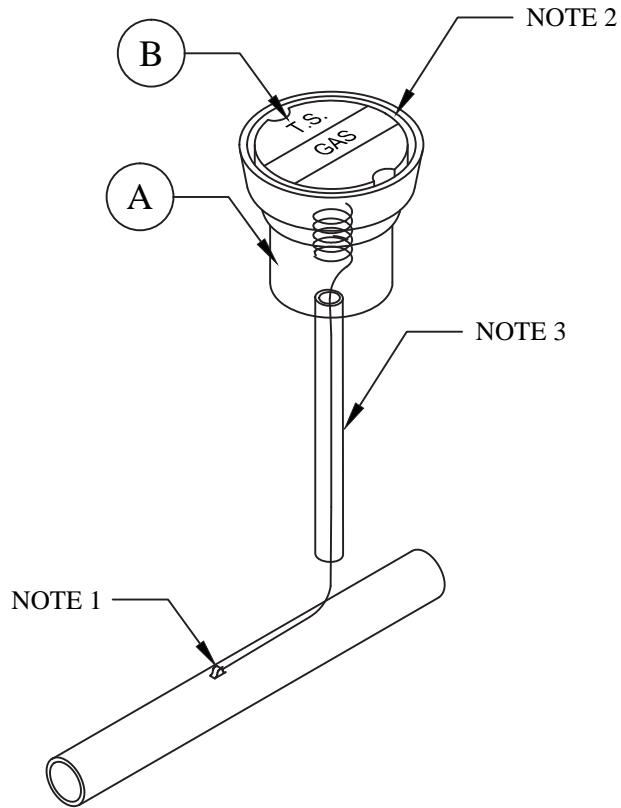
CATHODIC PROTECTION INSTALLATION

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| CM | | | 06/2017 | | | | | | | |

NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) STEEL VALVE BOX LID TO BE MARKED BY WELDING "TS" FOR TEST STATION. TEST LEAD WIRE TO BE LONG ENOUGH TO EXTEND ONE FOOT ABOVE GROUND LEVEL AND SHALL TERMINATE IN VALVE BOX.
- 3) USE 3/4" PVC OR PE AS A LEAD WIRE CONDUCTOR PIPE PLACED APPROXIMATELY 6" ABOVE CARRIER PIPE AND INTO TEST STATION BOX.

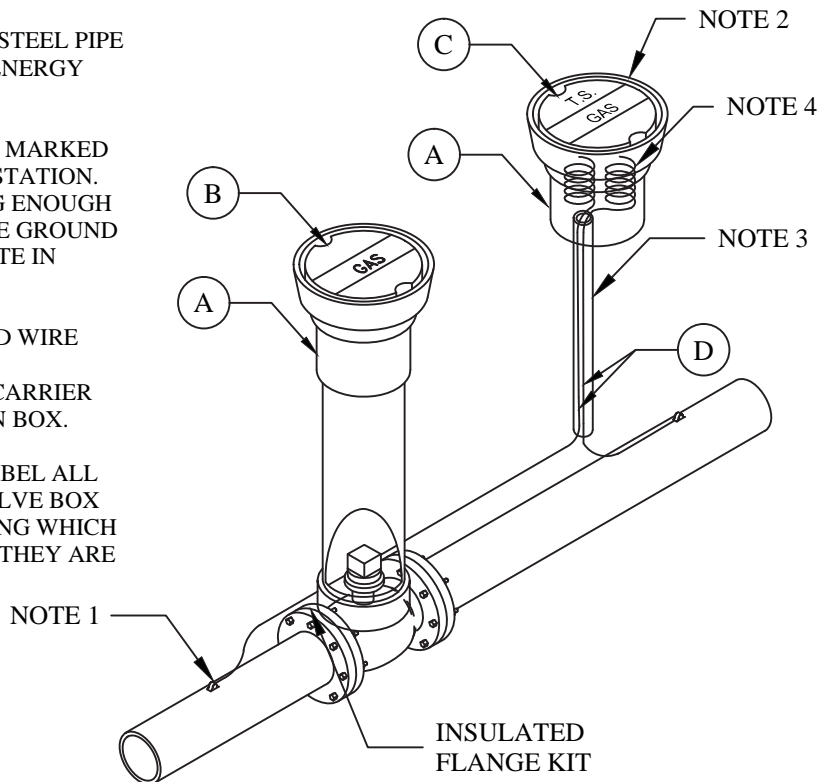


| MATERIALS LIST - CPI02G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 430010 | 1.0 | 6" VALVE BOX |
| B | 430095 | 1.0 | TS BOX COVER |
| C | 470037 | 1.0 | CADWELD SLEEVE |
| D | 470038 | 1.0 | WELD CHARGE |
| E | 457600 | 5.0 | TRACER WIRE |
| F | 470180 | 1.0 | PRIMER |
| G | 470290 | 0.2 | BLACK TAPE |
| H | 470260 | 0.2 | PROTECTIVE TAPE |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------|------------------------------------------|-------|----|----|----|--------|--|--|--|
|  | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | GCPI-AB | | | | | | | | | |
| | CATHODIC PROTECTION INSTALLATIONS TEST STATION-PIPE | | Revision: X Page X of X | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Drawn:</td> <td style="width: 25%;">Eng:</td> <td style="width: 25%;">Appr:</td> <td style="width: 25%;">Date:</td> </tr> <tr> <td>CM</td> <td>XX</td> <td>XX</td> <td>5/2017</td> </tr> </table> | Drawn: | Eng: | Appr: | Date: | CM | XX | XX | 5/2017 | | | |
| Drawn: | Eng: | Appr: | Date: | | | | | | | | |
| CM | XX | XX | 5/2017 | | | | | | | | |

NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) STEEL VALVE BOX LID TO BE MARKED BY WELDING "TS" FOR TEST STATION. TEST LEAD WIRE TO BE LONG ENOUGH TO EXTEND ONE FOOT ABOVE GROUND LEVEL AND SHALL TERMINATE IN VALVE BOX.
- 3) USE 3/4" PVC OR PE AS A LEAD WIRE CONDUCTOR PIPE PLACED APPROXIMATELY 6" ABOVE CARRIER PIPE AND INTO TEST STATION BOX.
- 4) DO NOT CONNECT LEADS. LABEL ALL TEST LEAD WIRES INSIDE VALVE BOX WITH BRASS TAGS, INDICATING WHICH SIDE OF INSULATED FITTING THEY ARE CONNECTED TO.

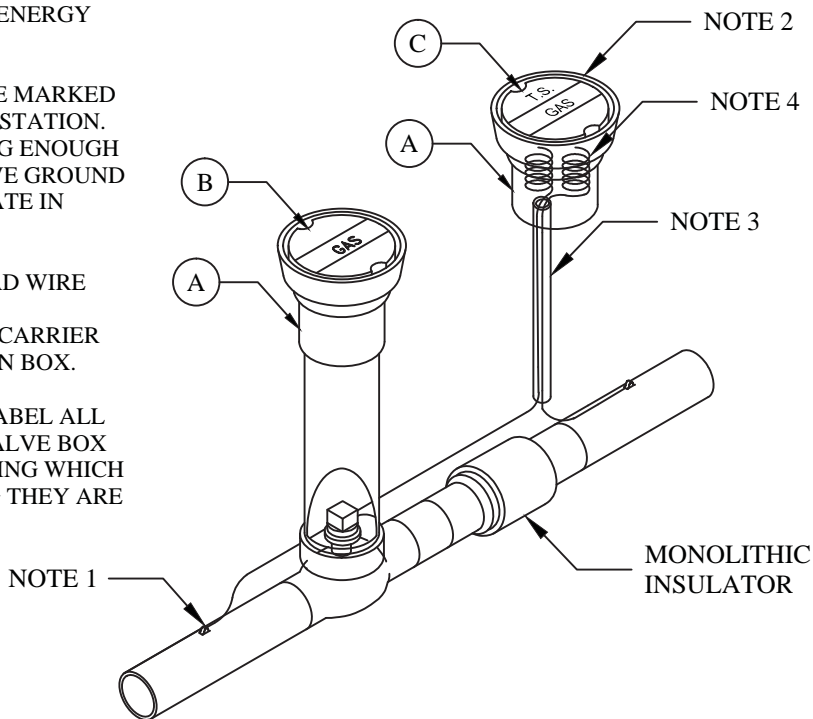


| MATERIALS LIST - CPI04G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 430010 | 2.0 | 6" VALVE BOX |
| B | 430090 | 1.0 | VALVE BOX COVER |
| C | 430095 | 1.0 | TS BOX COVER |
| D | 470035 | 2.0 | 32# ANODE |
| E | 470037 | 2.0 | CADWELD SLEEVE |
| F | 470038 | 2.0 | WELD CHARGE |
| G | 457600 | 5.0 | TRACER WIRE |
| H | 470180 | 1.0 | PRIMER |
| I | 470290 | 0.2 | BLACK TAPE |
| J | 470260 | 0.2 | PROTECTIVE TAPE |

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|--------|--------------------------------------------------------------------|-------|--------|-------------|
| | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | | | GCPI-AC |
| | CATHODIC PROTECTION INSTALLATIONS UNDERGROUND INSULATED FITTING | | | |
| Drawn: | Eng: | Appr: | Date: | Revision: X |
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NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) STEEL VALVE BOX LID TO BE MARKED BY WELDING "TS" FOR TEST STATION. TEST LEAD WIRE TO BE LONG ENOUGH TO EXTEND ONE FOOT ABOVE GROUND LEVEL AND SHALL TERMINATE IN VALVE BOX.
- 3) USE 3/4" PVC OR PE AS A LEAD WIRE CONDUCTOR PIPE PLACED APPROXIMATELY 6" ABOVE CARRIER PIPE AND INTO TEST STATION BOX.
- 4) DO NOT CONNECT LEADS. LABEL ALL TEST LEAD WIRES INSIDE VALVE BOX WITH BRASS TAGS, INDICATING WHICH SIDE OF INSULATED FITTING THEY ARE CONNECTED TO.

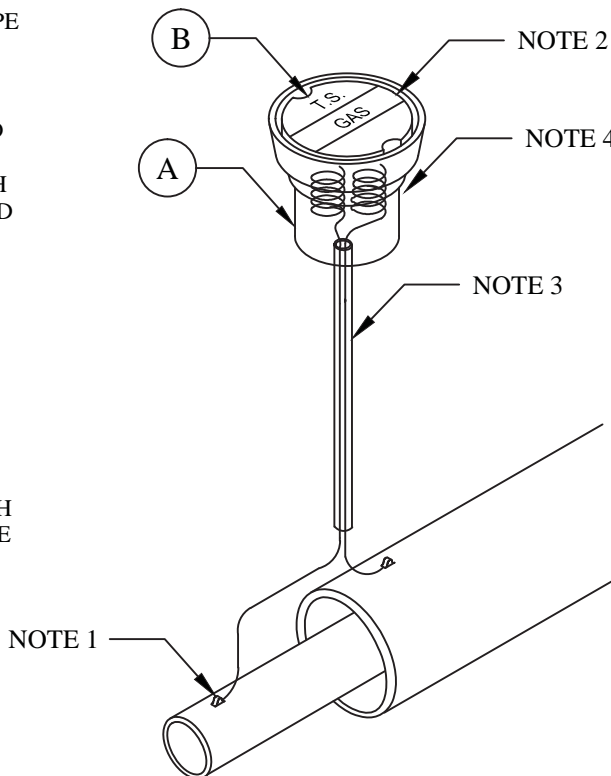


| MATERIALS LIST - CPI04G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 430010 | 2.0 | 6" VALVE BOX |
| B | 430090 | 1.0 | VALVE BOX COVER |
| C | 430095 | 1.0 | TS BOX COVER |
| D | 470037 | 2.0 | CADWELD SLEEVE |
| E | 470038 | 2.0 | WELD CHARGE |
| F | 457600 | 5.0 | TRACER WIRE |
| G | 470180 | 1.0 | PRIMER |
| H | 470290 | 0.2 | BLACK TAPE |
| I | 470260 | 0.2 | PROTECTIVE TAPE |

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|------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------|--------|-------------|
|  | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | | | GCPI-AD |
| | CATHODIC PROTECTION INSTALLATIONS MONOLITHIC INSULATED JOINT | | | |
| Drawn: | Eng: | Appr: | Date: | Revision: X |
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NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) STEEL VALVE BOX LID TO BE MARKED BY WELDING "TS" FOR TEST STATION. TEST LEAD WIRE TO BE LONG ENOUGH TO EXTEND ONE FOOT ABOVE GROUND LEVEL AND SHALL TERMINATE IN VALVE BOX.
- 3) USE 3/4" PVC OR PE AS A LEAD WIRE CONDUCTOR PIPE PLACED APPROXIMATELY 6" ABOVE CARRIER PIPE AND INTO TEST STATION BOX.
- 4) DO NOT CONNECT LEADS. LABEL ALL TEST LEAD WIRES INSIDE VALVE BOX WITH BRASS TAGS, INDICATING WHICH SIDE OF INSULATED FITTING THEY ARE CONNECTED TO.

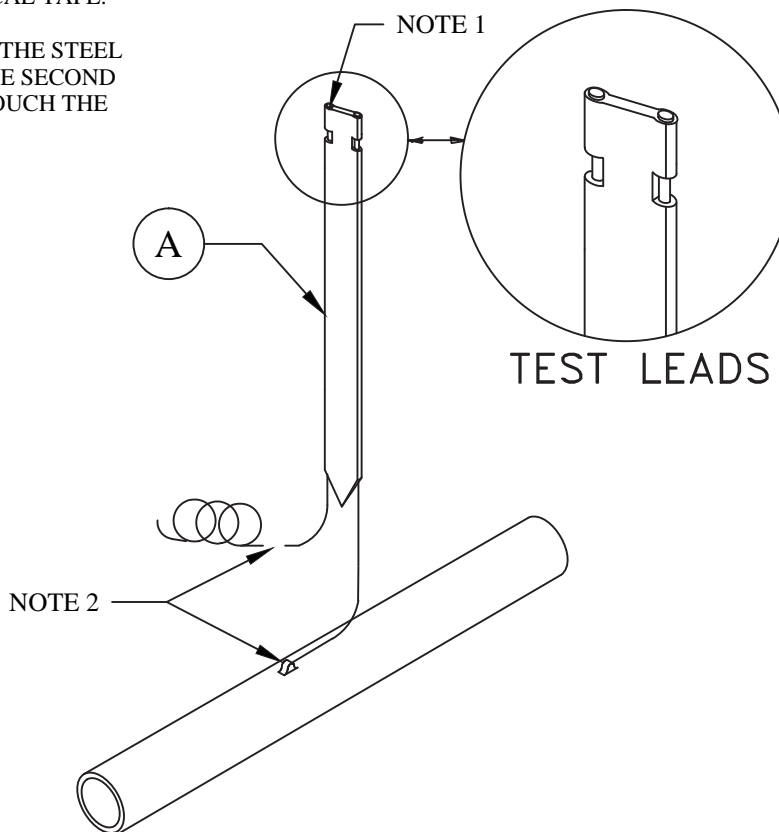


| MATERIALS LIST - CPI05G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 430010 | 1.0 | 6" VALVE BOX |
| B | 430095 | 1.0 | TS BOX COVER |
| C | 470037 | 2.0 | CADWELD SLEEVE |
| D | 470038 | 2.0 | WELD CHARGE |
| E | 457600 | 5.0 | TRACER WIRE |
| F | 470180 | 1.0 | PRIMER |
| G | 470290 | 0.2 | BLACK TAPE |
| H | 470260 | 0.2 | PROTECTIVE TAPE |

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|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------|--------|-------------|---------|
|  | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | | | | GCPI-AE |
| | CATHODIC PROTECTION INSTALLATIONS CASING WITH STEEL CARRIER PIPE | | | | |
| Drawn: | Eng: | Appr: | Date: | Revision: X | |
| CM | XX | XX | 5/2017 | Page X of X | |

NOTES:

- 1) ALL WIRE SPLICES TO BE MADE USING A SPLIT BOLT CONNECTOR WRAPPED WITH AQUA-SEAL AND ELECTRICAL TAPE.
- 2) CONNECT ONE PIGTAIL TO THE STEEL PIPE. CUT AND REMOVE THE SECOND PIGTAIL SO IT WILL NOT TOUCH THE STEEL PIPE.

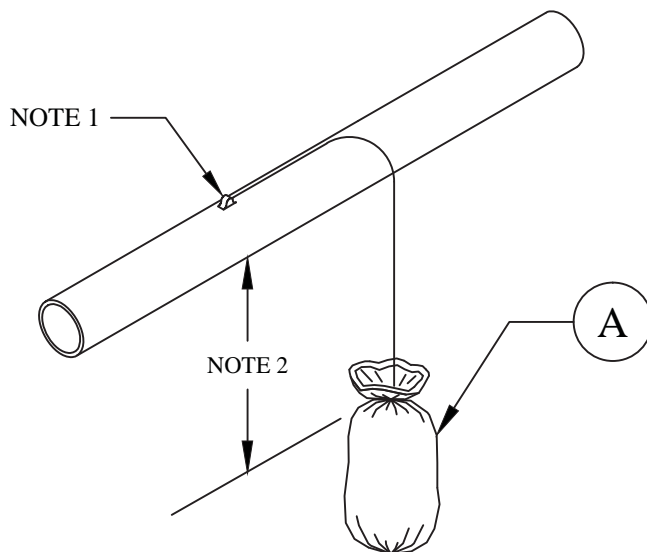


| MATERIALS LIST - CPI06G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 470035 | 1.0 | MARKER POST |
| B | 470037 | 1.0 | CADWELD SLEEVE |
| C | 470038 | 1.0 | WELD CHARGE |
| D | 470180 | 1.0 | PRIMER |
| E | 470290 | 0.2 | BLACK TAPE |
| F | 470260 | 0.2 | PROTECTIVE TAPE |


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|------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------|--------|-------------|
|  | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | | | GCPI-AF |
| | CATHODIC PROTECTION INSTALLATIONS TEST STATION - LINE MARKER | | | |
| Drawn: | Eng: | Appr: | Date: | Revision: X |
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NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) ANODE CAN BE INSTALLED VERTICALLY OR HORIZONTALLY BUT MUST HAVE A MINIMAL RADIAL CLEARANCE OF TWO FEET FROM THE STEEL PIPE AND BE POSITIONED AT AN ELEVATION NO HIGHER THAN THE STEEL PIPE

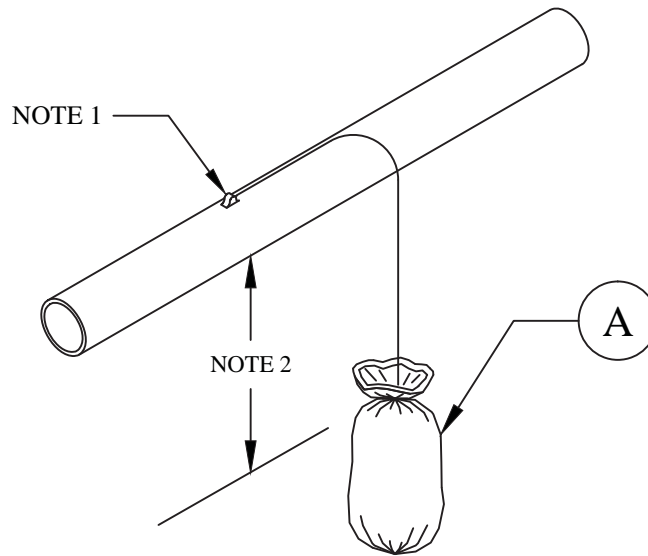


| MATERIALS LIST - CPI01G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 470030 | 1.0 | 17# ANODE |
| B | 470037 | 1.0 | CADWELD SLEEVE |
| C | 470038 | 1.0 | WELD CHARGE |
| D | 470180 | 1.0 | PRIMER |
| E | 470290 | 0.2 | BLACK TAPE |
| F | 470260 | 0.2 | PROTECTIVE TAPE |


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|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------|--------|-------------|
|  | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | | | GCPI-BA |
| | CATHODIC PROTECTION INSTALLATIONS 17# ANODE - NO TEST STATION | | | |
| Drawn: | Eng: | Appr: | Date: | Revision: X |
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NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) ANODE CAN BE INSTALLED VERTICALLY OR HORIZONTALLY BUT MUST HAVE A MINIMAL RADIAL CLEARANCE OF TWO FEET FROM THE STEEL PIPE AND BE POSITIONED AT AN ELEVATION NO HIGHER THAN THE STEEL PIPE

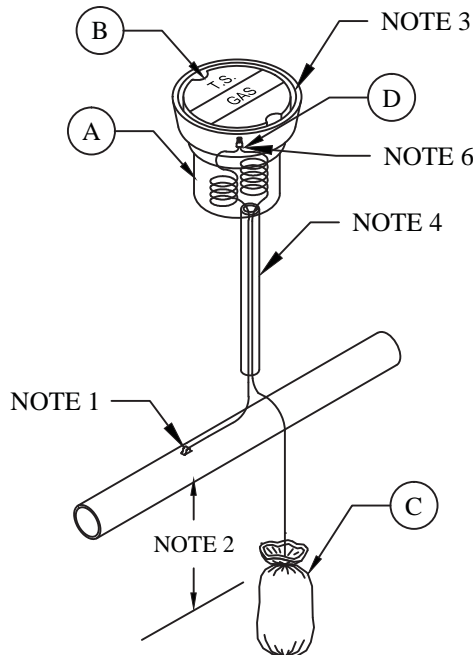


| MATERIALS LIST - CPI01G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 470035 | 1.0 | 32# ANODE |
| B | 470037 | 1.0 | CADWELD SLEEVE |
| C | 470038 | 1.0 | WELD CHARGE |
| D | 470180 | 1.0 | PRIMER |
| E | 470290 | 0.2 | BLACK TAPE |
| F | 470260 | 0.2 | PROTECTIVE TAPE |

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|------------------------------------------------------------------------------------|------------------------------------------------------------------|-------|--------|-------------|
|  | VOLUME 15 - ENGINEERING & CONSTRUCTION STANDARD | | | GCPI-CA |
| | CATHODIC PROTECTION INSTALLATIONS 32# ANODE - NO TEST STATION | | | |
| Drawn: | Eng: | Appr: | Date: | Revision: X |
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NOTES:

- 1) ALL WIRE CONNECTIONS TO STEEL PIPE TO BE CADWELDED PER NV ENERGY SPECIFICATIONS.
- 2) ANODE CAN BE INSTALLED VERTICALLY OR HORIZONTALLY BUT MUST HAVE A MINIMAL RADIAL CLEARANCE OF TWO FEET FROM THE STEEL PIPE AND BE POSITIONED AT AN ELEVATION NO HIGHER THAN THE STEEL PIPE
- 3) STEEL VALVE BOX LID TO BE MARKED BY WELDING "TS" FOR TEST STATION. TEST LEAD WIRE TO BE LONG ENOUGH TO EXTEND ONE FOOT ABOVE GROUND LEVEL AND SHALL TERMINATE IN VALVE BOX.
- 4) USE 3/4" PVC OR PE AS A LEAD WIRE CONDUCTOR PIPE PLACED APPROXIMATELY 6" ABOVE CARRIER PIPE AND INTO TEST STATION BOX.
- 5) CONNECT LEADS.



| MATERIALS LIST - CPI03G | | | |
|-------------------------|---------|-----|-----------------|
| ITEM | STOCK # | QTY | DESCRIPTION |
| A | 430010 | 1.0 | 6" VALVE BOX |
| B | 430095 | 1.0 | TS BOX COVER |
| C | 470035 | 1.0 | 32# ANODE |
| D | 571138 | 1.0 | WIRE CONNECTOR |
| E | 470037 | 1.0 | CADWELD SLEEVE |
| F | 470038 | 1.0 | WELD CHARGE |
| G | 457600 | 5.0 | TRACER WIRE |
| H | 470180 | 1.0 | PRIMER |
| I | 470290 | 0.2 | BLACK TAPE |
| J | 470260 | 0.2 | PROTECTIVE TAPE |