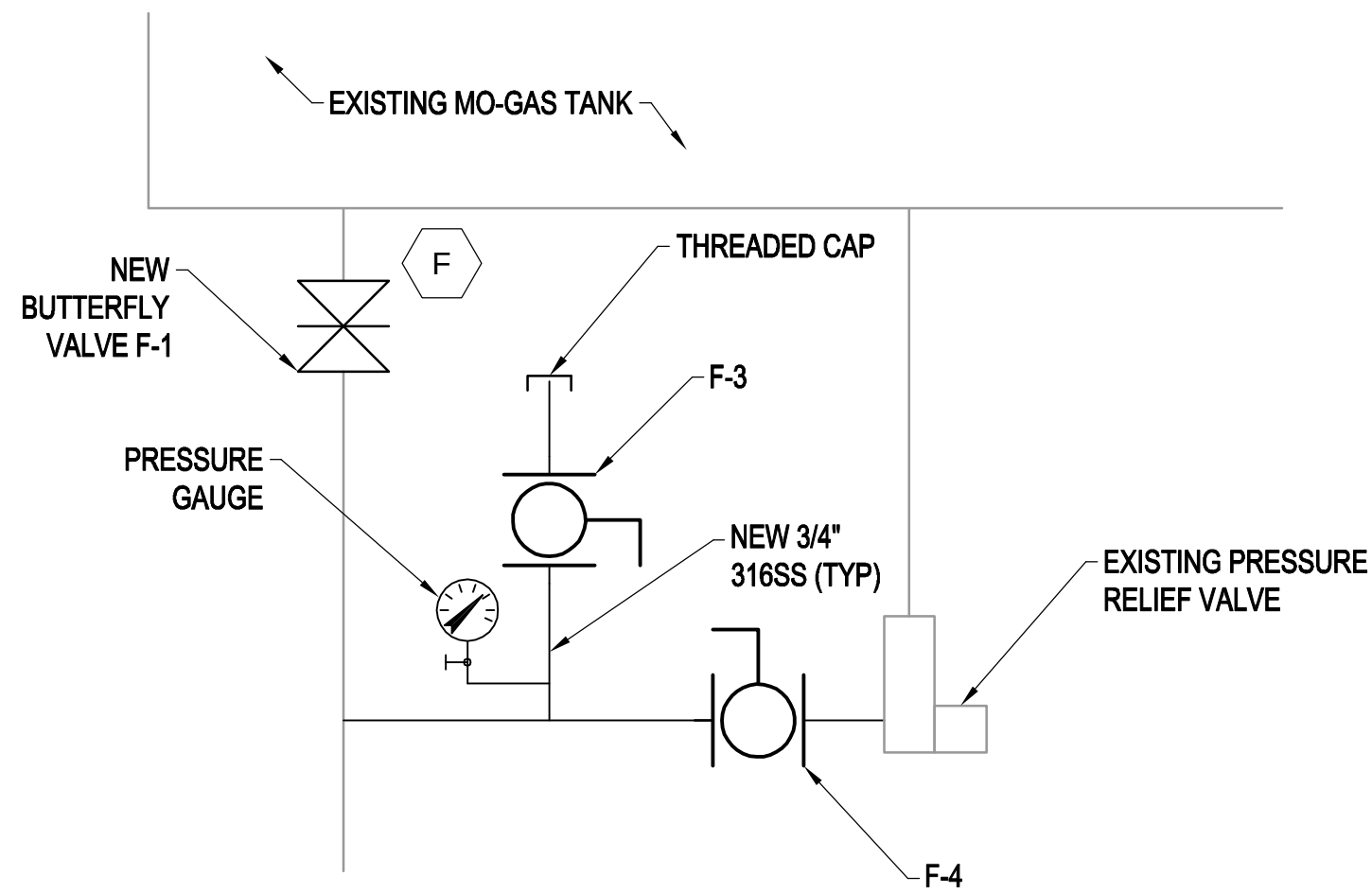
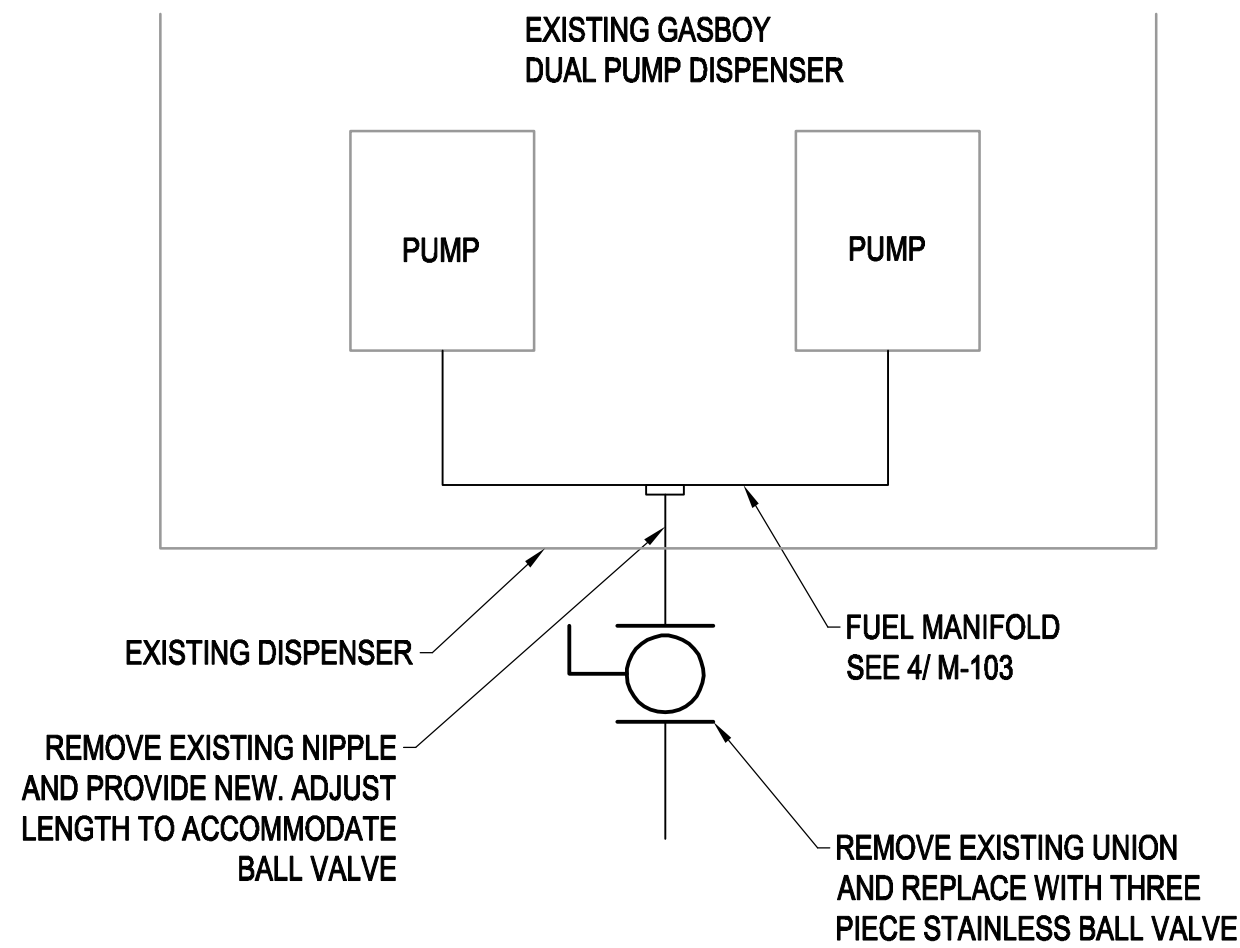
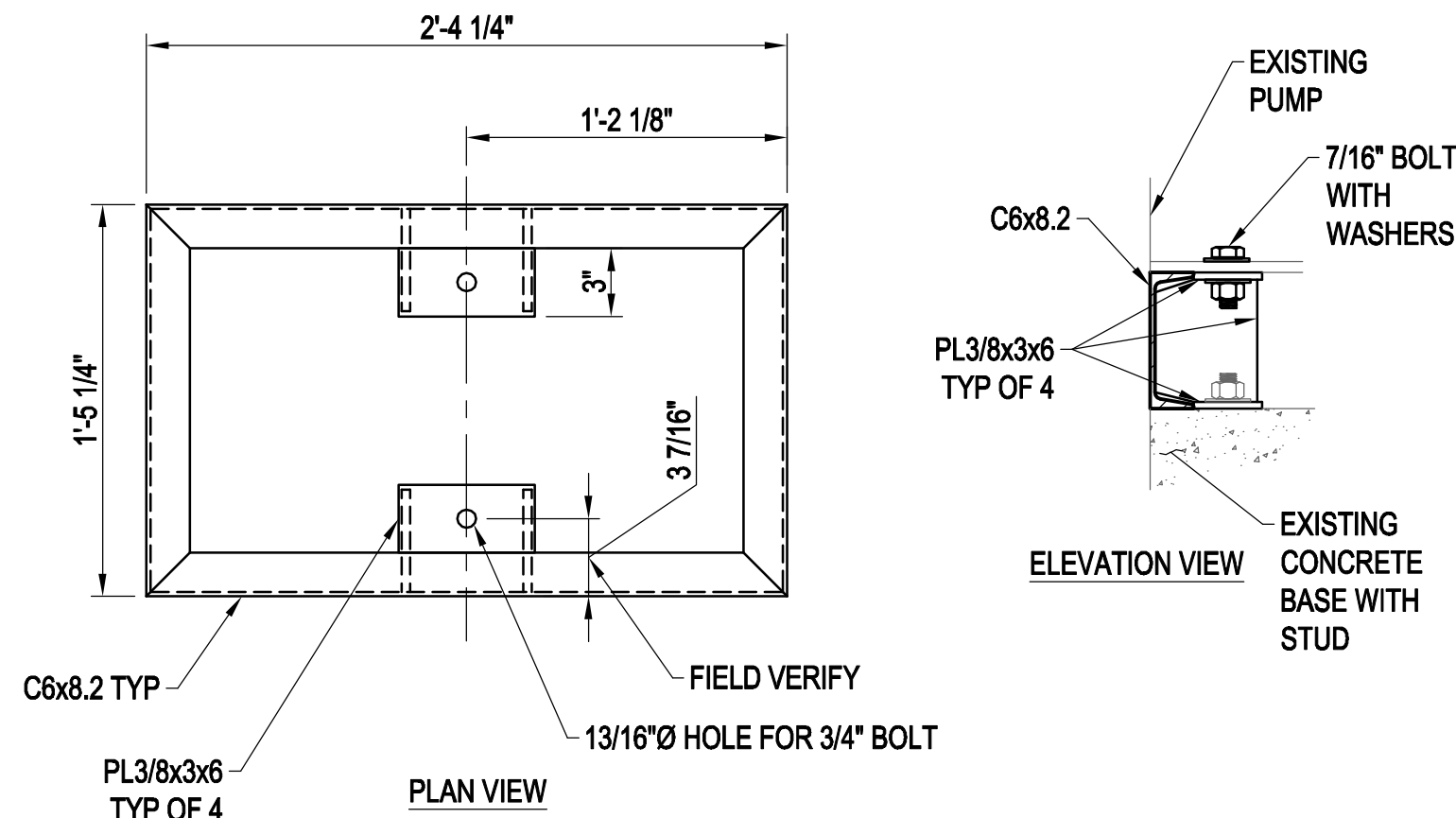




1 CONNECTION DETAIL  
SCALE: NOT TO SCALE

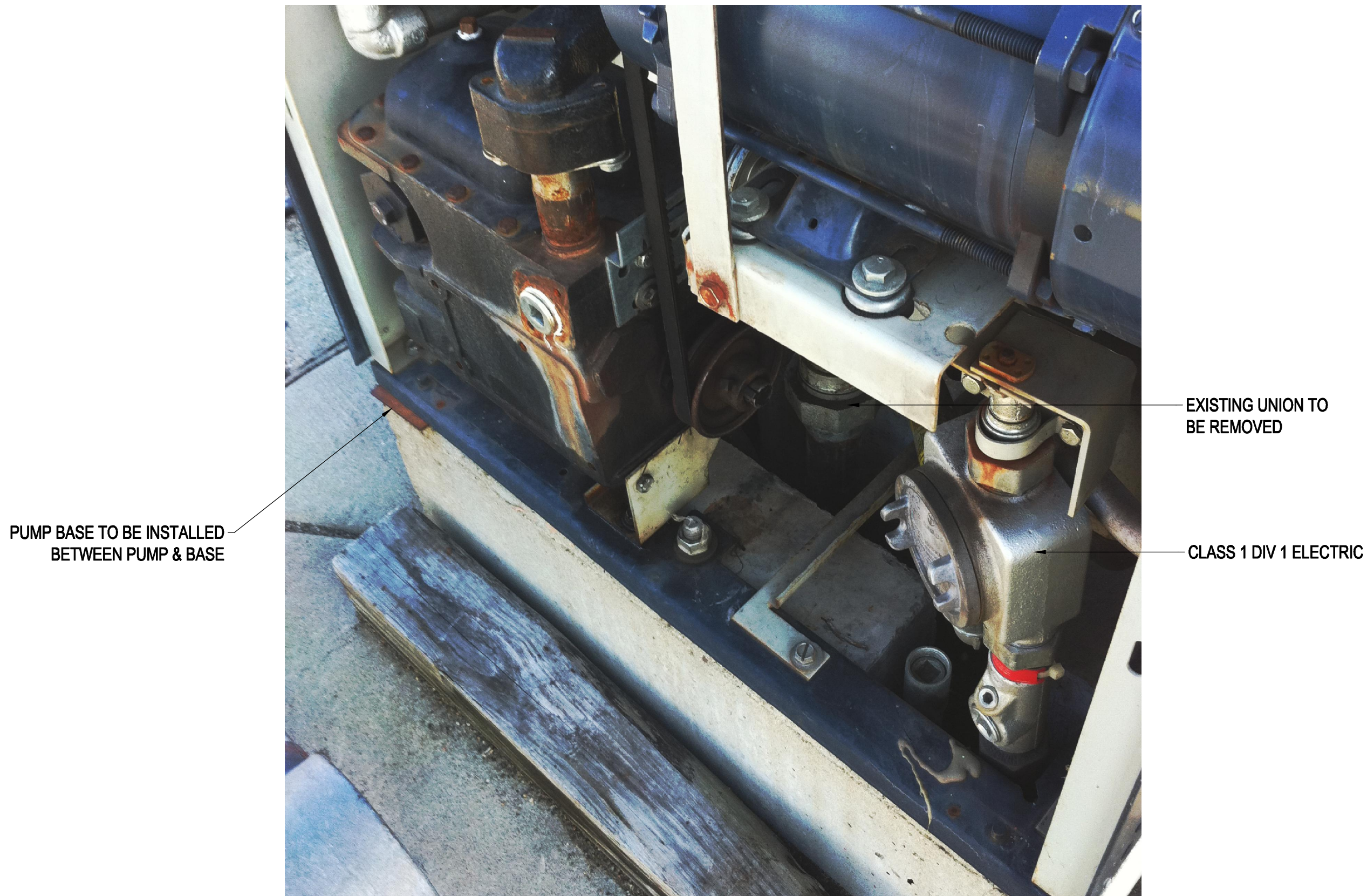


2 PUMP DETAIL  
SCALE: NOT TO SCALE



NOTE:  
HOT DIP GALVANIZE BASE  
AFTER FABRICATION.

3 PUMP BASE DETAIL  
SCALE: NOT TO SCALE



4 PUMP PHOTO (SEE 2/ M-103)  
SCALE: NOT TO SCALE

- = GAUGE
- = REDUCER
- = CHECK VALVE
- = BUTTERFLY VALVE
- = BALL VALVE
- = NITROGEN CHARGING POINT

5 LEGEND  
SCALE: NOT TO SCALE

| VALVE LIST |           |               |         |             |            |                |
|------------|-----------|---------------|---------|-------------|------------|----------------|
| TIE POINT  | VALVE TAG | SIZE/TYPE     | SERVICE | LOCATION    | CONNECTION | MAKE/ MODEL    |
| 1          | A-1       | 10" BUTTERFLY | JET A   | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 2          | A-2       | 4" BUTTERFLY  | JET A   | TANK FILL   | LUG        | VELAN TORQSEAL |
| 3          | A-3       | 4" BUTTERFLY  | JET A   | TANK FILL   | LUG        | VELAN TORQSEAL |
| 4          | A-4       | 4" BUTTERFLY  | JET A   | TANK FILL   | LUG        | VELAN TORQSEAL |
| 5          | A-5       | 4" BUTTERFLY  | JET A   | TANK FILL   | LUG        | VELAN TORQSEAL |
| 6          | A-6       | 3/4" BALL     | JET A   | TANK FILL   | THREADED   | APOLLO 86A-100 |
| 7          | A-7       | 3/4" BALL     | JET A   | TANK FILL   | THREADED   | APOLLO 86A-100 |
| 8          | B-1       | 4" BUTTERFLY  | AV-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 9          | B-2       | 4" BUTTERFLY  | AV-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 10         | B-3       | 4" BUTTERFLY  | AV-GAS  | TANK FILL   | LUG        | VELAN TORQSEAL |
| 11         | B-4       | 3/4" BALL     | AV-GAS  | PUMP SLAB   | THREADED   | APOLLO 86A-100 |
| 12         | C-1       | 3" BUTTERFLY  | MO-GAS  | TANK FILL   | LUG        | VELAN TORQSEAL |
| 13         | C-2       | 3" BUTTERFLY  | MO-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 14         | C-3       | 3" BUTTERFLY  | MO-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 15         | C-4       | 3/4" BALL     | MO-GAS  | PUMP SLAB   | THREADED   | APOLLO 86A-100 |
| 16         | D-1       | 6" BUTTERFLY  | JET A   | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 17         | D-2       | 6" BUTTERFLY  | JET A   | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 18         | D-3       | 4" BUTTERFLY  | JET A   | TRUCK FILL  | LUG        | VELAN TORQSEAL |
| 19         | D-4       | 4" BUTTERFLY  | JET A   | TRUCK FILL  | LUG        | VELAN TORQSEAL |
| 20         | D-5       | 3/4" BALL     | JET A   | PUMP SLAB   | THREADED   | APOLLO 86A-100 |
| 21         | E-1       | 3" BUTTERFLY  | AV-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 22         | E-2       | 3" BUTTERFLY  | AV-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 23         | E-3       | 4" BUTTERFLY  | AV-GAS  | TRUCK FILL  | LUG        | VELAN TORQSEAL |
| 24         | E-4       | 3/4" BALL     | AV-GAS  | PUMP SLAB   | THREADED   | APOLLO 86A-100 |
| 25         | E-5       | 3/4" BALL     | AV-GAS  | PUMP SLAB   | THREADED   | APOLLO 86A-100 |
| 26         | F-1       | 3" BUTTERFLY  | MO-GAS  | MO-GAS TANK | LUG        | VELAN TORQSEAL |
| 27         | F-2       | 2" BALL VALVE | MO-GAS  | TRUCK FILL  | THREADED   | APOLLO 86A-100 |
| 28         | F-3       | 3/4" BALL     | MO-GAS  | MO-GAS TANK | THREADED   | APOLLO 86A-100 |
| 29         | F-4       | 3/4" BALL     | MO-GAS  | MO-GAS TANK | THREADED   | APOLLO 86A-100 |
| 30         | G-1       | 3" BUTTERFLY  | MO-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 31         | G-2       | 3" BUTTERFLY  | MO-GAS  | PUMP SLAB   | LUG        | VELAN TORQSEAL |
| 32         | G-3       | 3" BUTTERFLY  | MO-GAS  | MO-GAS TANK | LUG        | VELAN TORQSEAL |
| 33         | G-4       | 3/4" BALL     | MO-GAS  | PUMP SLAB   | THREADED   | APOLLO 86A-100 |

NOTE: BUTTERFLY VALVES SHALL MEET THE REQUIREMENTS OF API 609.



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**NFTA** Niagara Frontier Transportation Authority  
Serving the Niagara Region

|     |              |    |         |
|-----|--------------|----|---------|
| NO. | REVISIONS    | BY | DATE    |
| △   | ORIGINAL BID |    | 6/25/10 |
| △   | RE BID       |    | 6/25/10 |
|     |              |    |         |
|     |              |    |         |
|     |              |    |         |
|     |              |    |         |

CONSTRUCTION PROJECT NUMBER -- 15BF0711

BNIA -- UPGRADE  
CATHODIC PROTECTION  
FUEL FARM  
DETAILS

|                   |                 |
|-------------------|-----------------|
| SCALE -- AS SHOWN | DATE            |
| DRAWN BY          | PLD             |
| CHECKED BY        | ETC             |
| FILE NAME:        | GP-101.DWG      |
| DRAWING #         | SHEET #10 OF 10 |

**M-103**