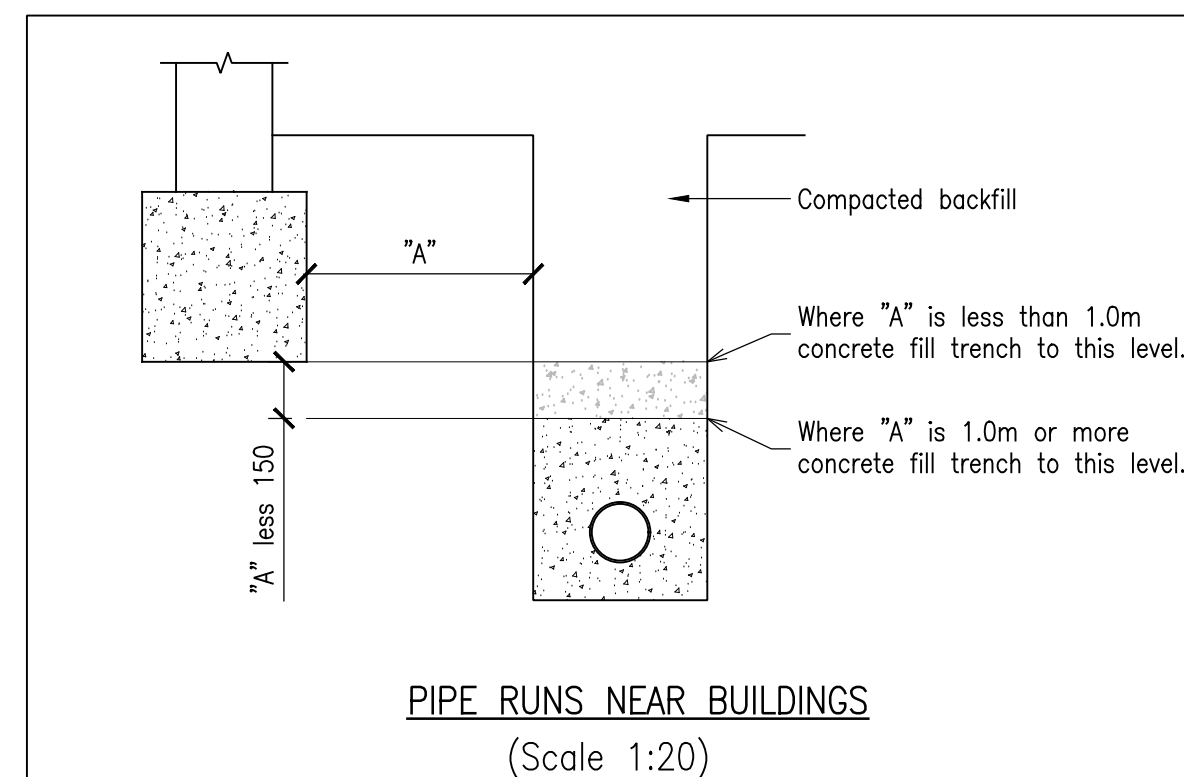
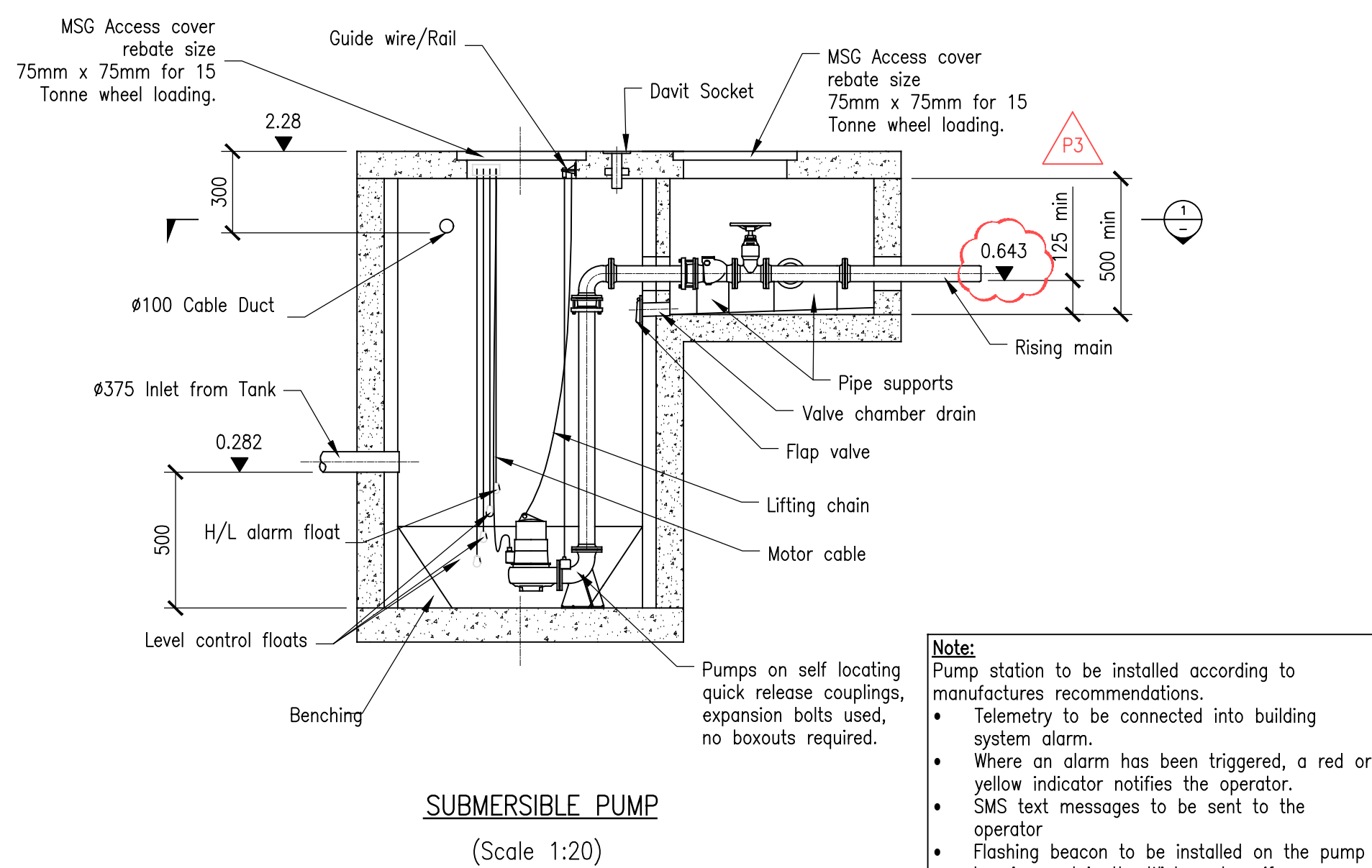
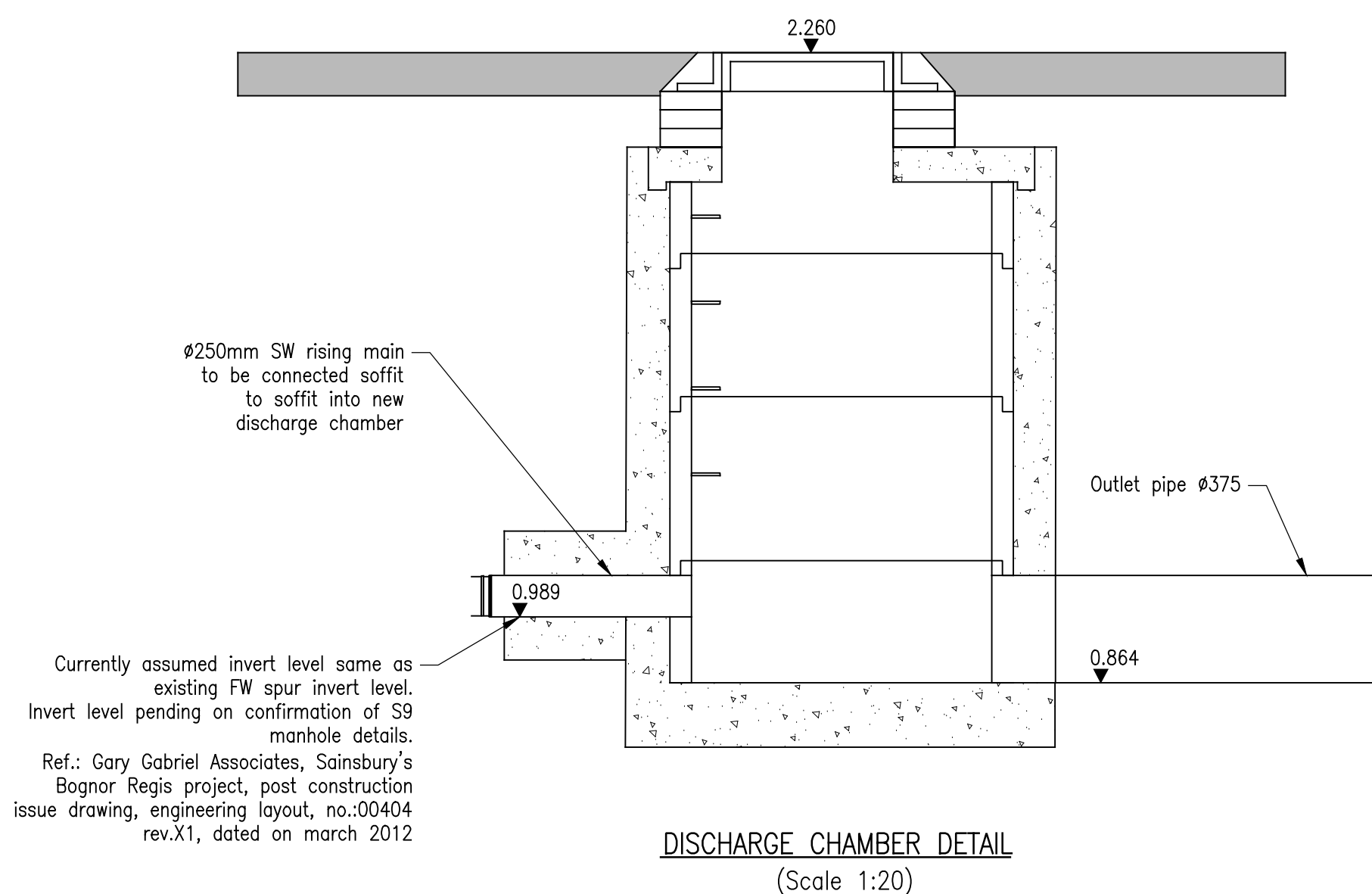


1. CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
2. DIVIDE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.
3. AREAS TO BE ADJUSTED FOR OTHER PRESSURE CONDITIONS.
4. PROVIDE TWO 1" MINIMUM DIAMETER RODS ON VALVES UP THROUGH 10" DIAMETER. VALVES LARGER THAN 10" REQUIRE SPECIAL TIE ROD DESIGN.

| Thrust at Fittings in Pounds |                   |                   |          |          |            |             |
|------------------------------|-------------------|-------------------|----------|----------|------------|-------------|
|                              |                   | A                 | B        | C        | D          | E           |
| Size                         | Test Pressure PSI | Tee and Dead Ends | 90° Bend | 45° Bend | 22.5° Bend | 11.25° Bend |
| 4"                           | 250               | 3,140             | 4,440    | 2,405    | 1,225      | 615         |
| 6"                           | 250               | 7,070             | 9,995    | 5,410    | 2,760      | 1,385       |
| 8"                           | 250               | 12,565            | 17,770   | 9,620    | 4,905      | 2,465       |
| 10"                          | 250               | 19,635            | 27,770   | 15,030   | 7,660      | 3,850       |
| 12"                          | 250               | 28,275            | 39,985   | 21,640   | 11,030     | 5,545       |
| 14"                          | 250               | 38,485            | 54,425   | 29,455   | 15,015     | 7,545       |
| 16"                          | 250               | 50,265            | 71,085   | 38,470   | 19,615     | 9,855       |

| Soil Type                          | Safe Bearing Load PSI |
|------------------------------------|-----------------------|
| Muck, peat, etc.                   | 0                     |
| Soft clay                          | 1,000                 |
| Sand                               | 2,000                 |
| Sand and gravel                    | 3,000                 |
| Sand and gravel cemented with clay | 4,000                 |
| Hard shale                         | 10,000                |



|    |    |          |                                                          |
|----|----|----------|----------------------------------------------------------|
| P3 | DF | 06.10.17 | UPDATED TO WEST SUSSEX COUNTY COUNCIL ENGINEERS COMMENTS |
| P2 | FC | 10.08.17 | PUMP STATION NOTES ADDED                                 |
| P1 | DF | 25.07.17 | FOR INFORMATION ISSUE                                    |

| Rev | Tech | Date | Description |
|-----|------|------|-------------|
|-----|------|------|-------------|

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Kingston, London, Dubai, Qatar

**Bradbrook**

|        |  |
|--------|--|
| Client |  |
|--------|--|

Job title  
WICKES - SHRIPNEY ROAD  
BOGNOR REGIS. PO22 9NG

Drawing title  
PUMP STATION DETAILS

Purpose of issue

Information ☐ Preliminary ☒ Approval ☐ Tender ☐ Construction ☐ Record Copy ☐

|        |       |              |         |
|--------|-------|--------------|---------|
| Date   | Drawn | Scale        | Checked |
| JUL'17 | DF    | VARIOUS @ A1 |         |

|                     |           |
|---------------------|-----------|
| Drawing no.         | Rev       |
| <b>15-112 / 500</b> | <b>P3</b> |