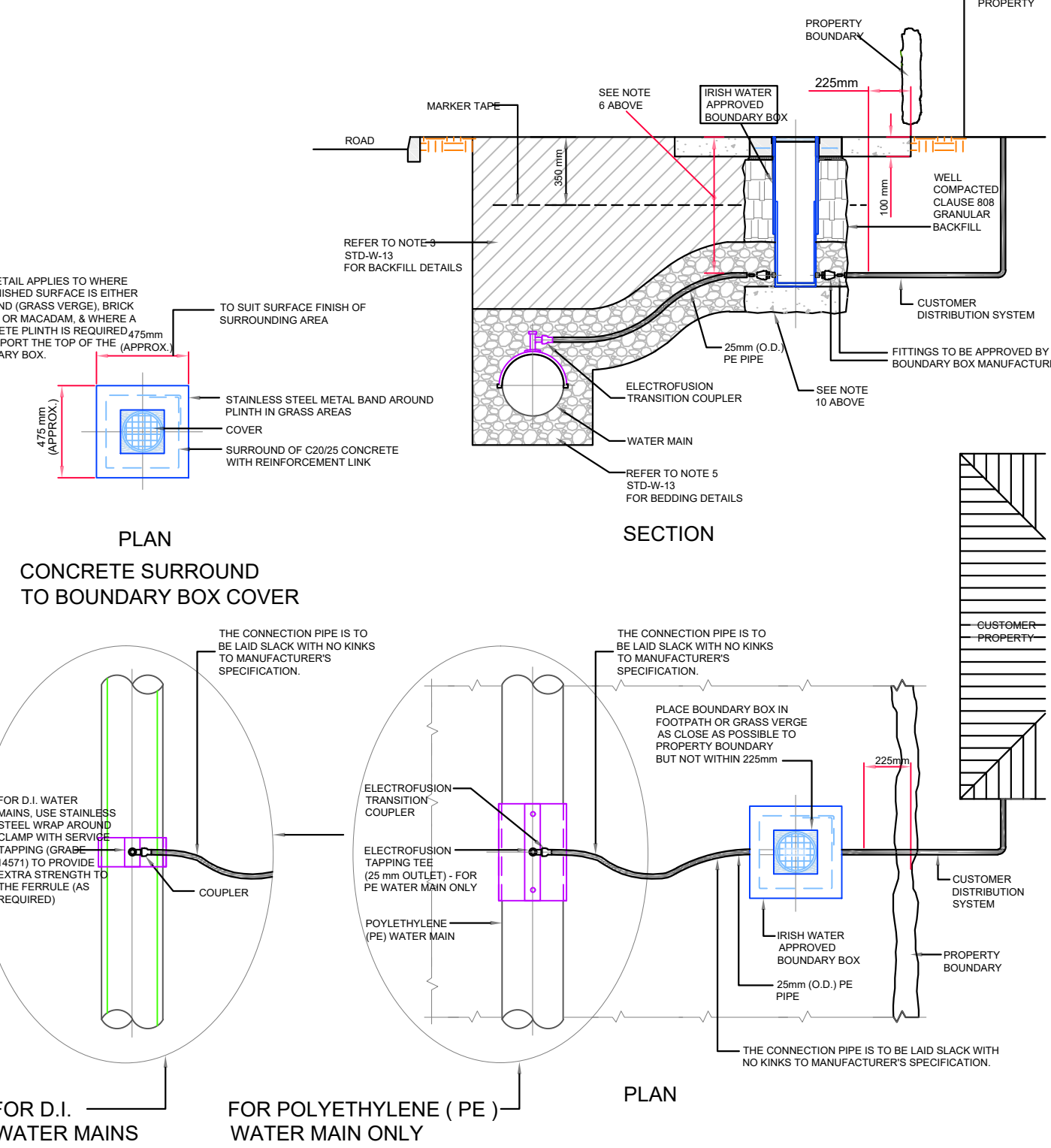
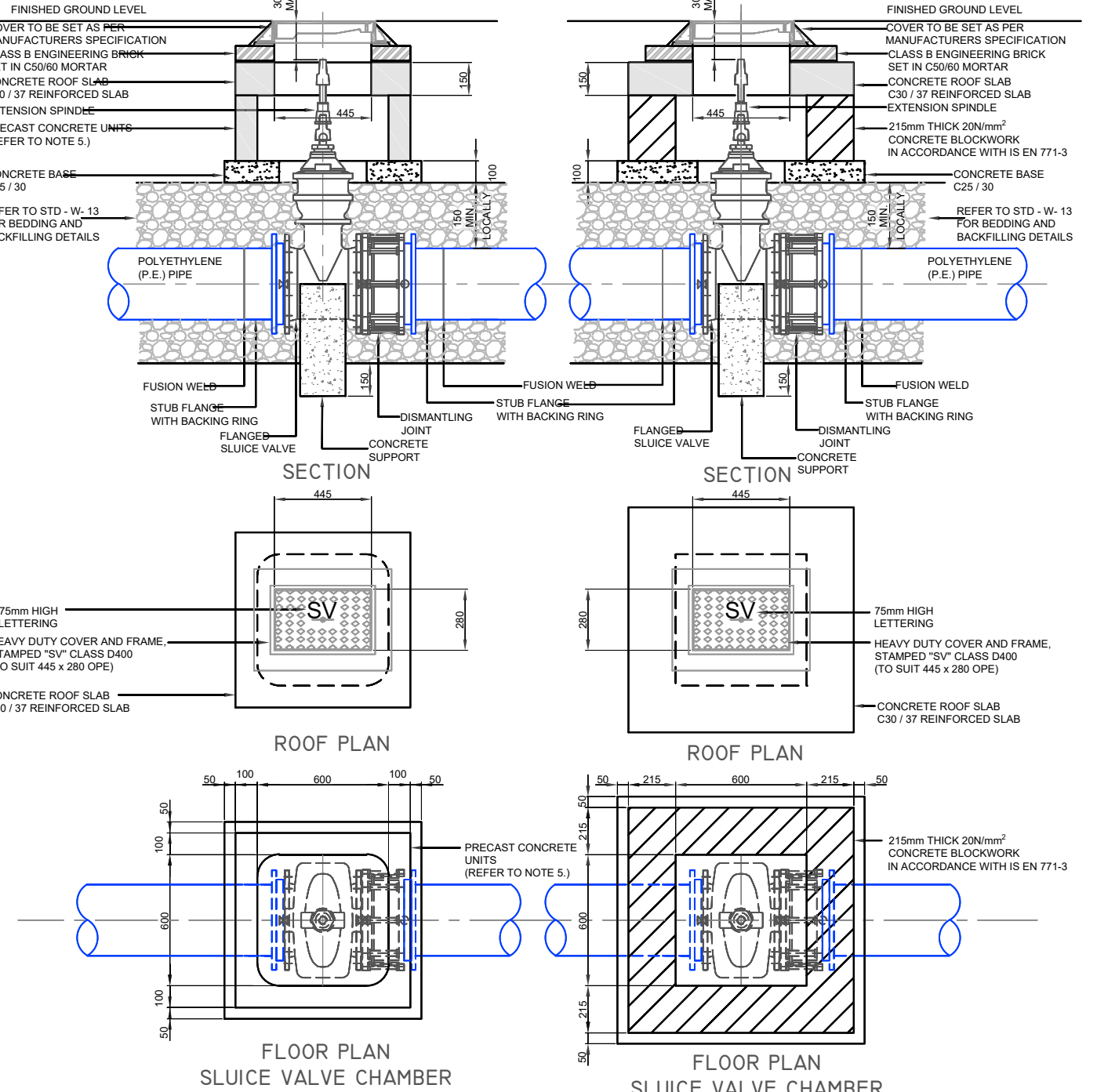


NOTE:
THIS DRAWING TO BE READ IN CONJUNCTION WITH IRISH WATER INFRASTRUCTURE STANDARD DETAILS, DOCUMENT NUMBER: IW-CDS-5020-01, AUGUST 2016. THIS INCLUDES FOR ALL RELEVANT NOTES PERTAINING TO EACH OF THE DETAILS AS INCLUDED. THIS DRAWING ALSO TO BE READ IN CONJUNCTION WITH DWG. NO. 201101-0201 Rev. D

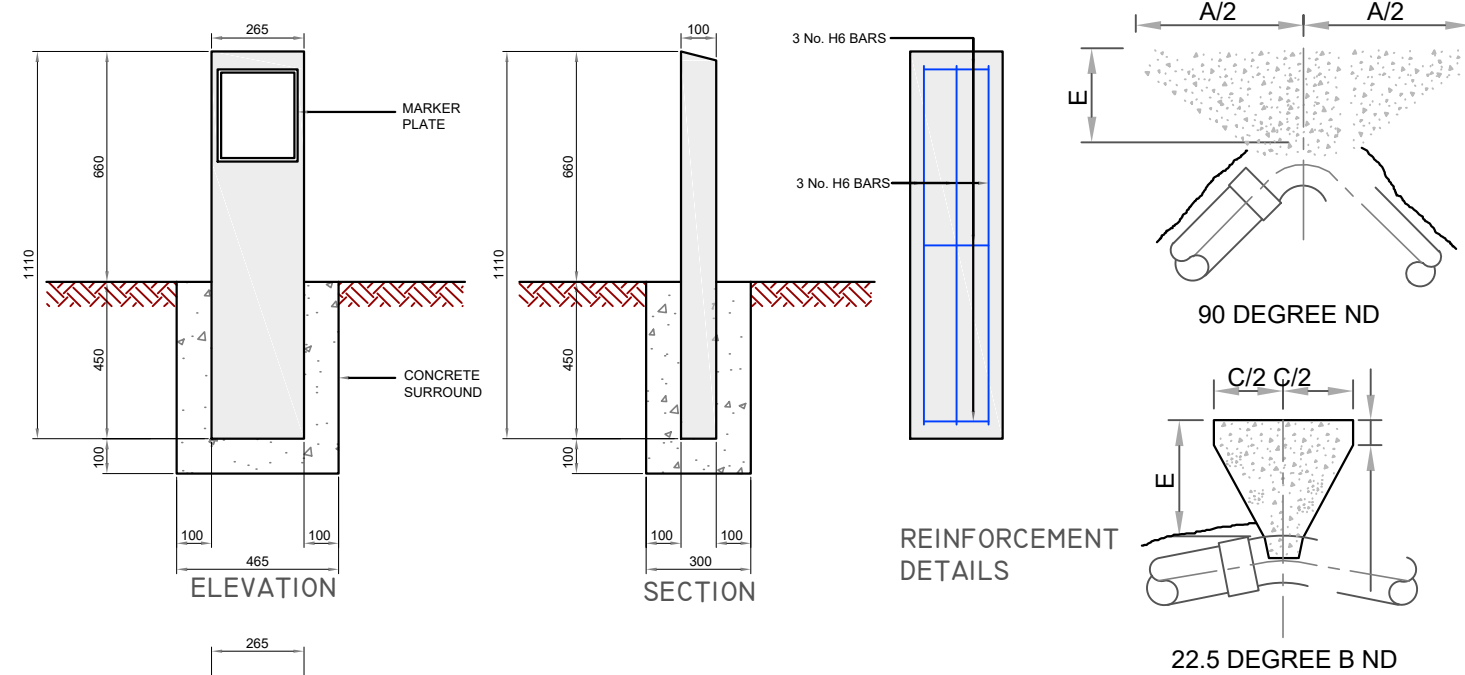


CUSTOMER CONNECTION AND BOUNDARY BOX (25mm OD PIPE)
DRAWING No. **STD-W-03**

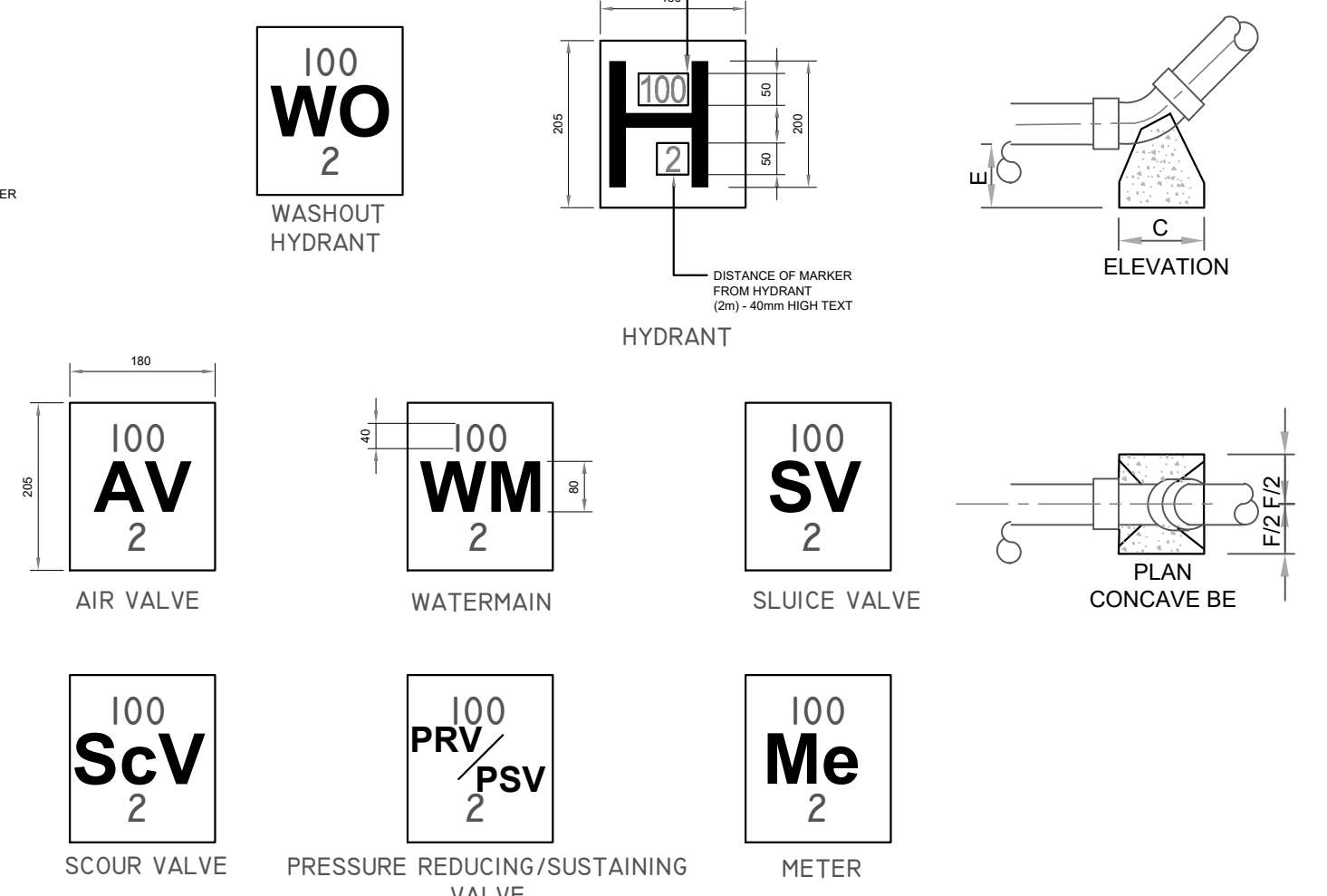


SLUICE VALVE FOR POLYETHYLENE (P.E.) PIPE (< 350mm DIA.)
DRAWING No. **STD-W-15**

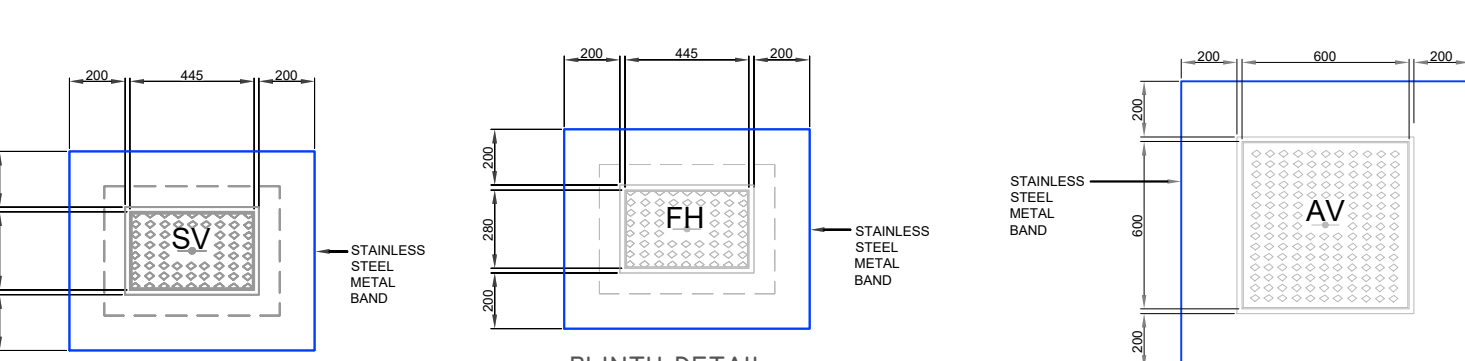
- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- SLUICE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 8834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- SLUICE VALVES SHALL BE RESILIENT GATED AND SHALL COMPLY WITH BS 5163-1, BS 5163-2, IS EN 1074-1, IS EN 1074-2, OR EQUIVALENT E.U. SPECIFICATIONS.
- SLUICE VALVES SHALL BE ANTI-CLOCKWISE CLOSING.
- VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLASS B08 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201-2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVER IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.



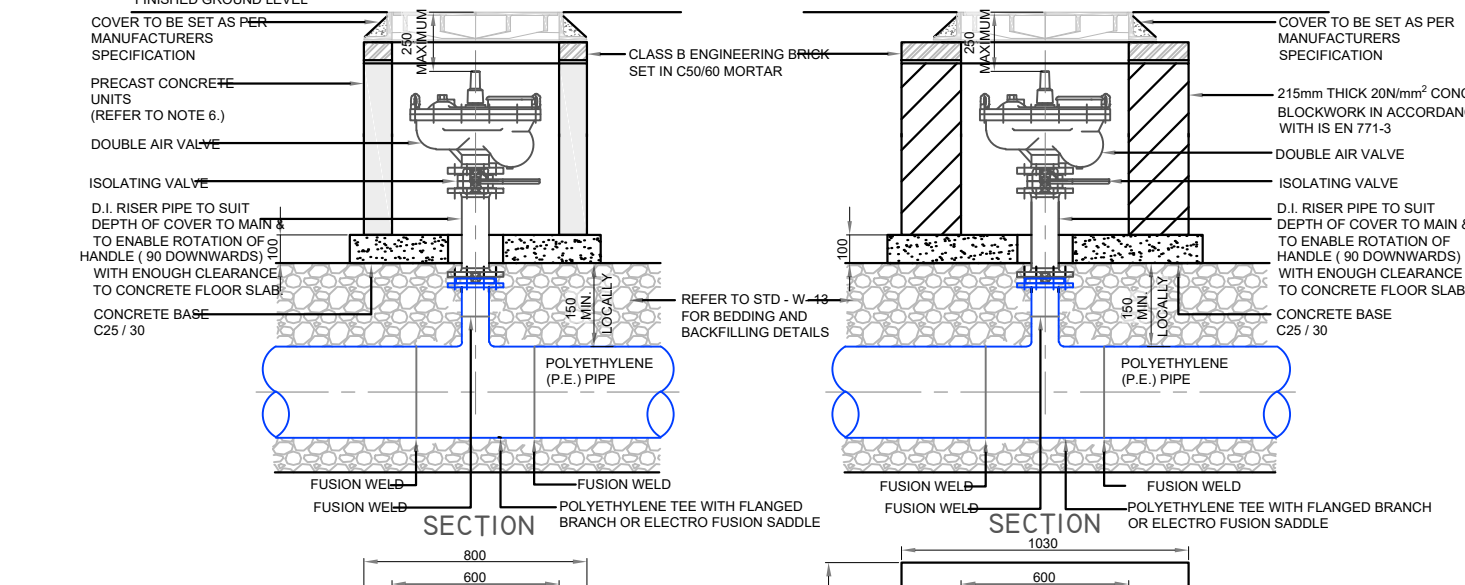
REINFORCEMENT DETAILS



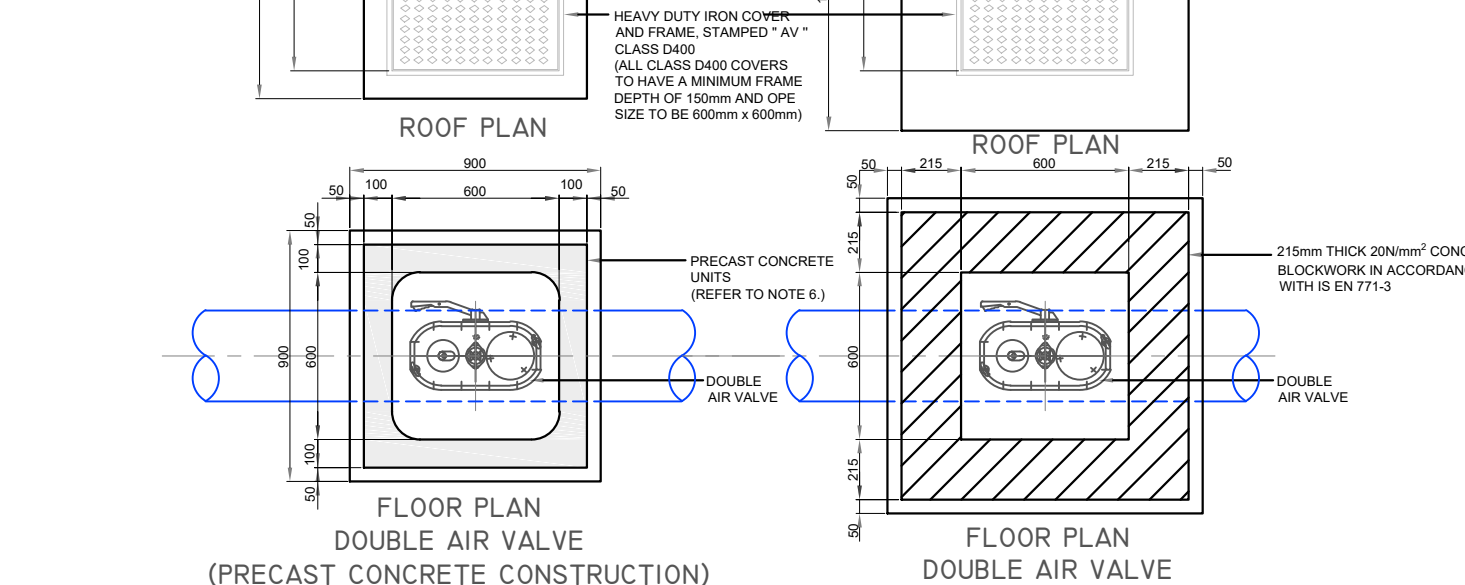
MARKER POSTS / PLATES
DRAWING No. **STD-W-27**



PLINTH DETAIL IN GRASS AREA

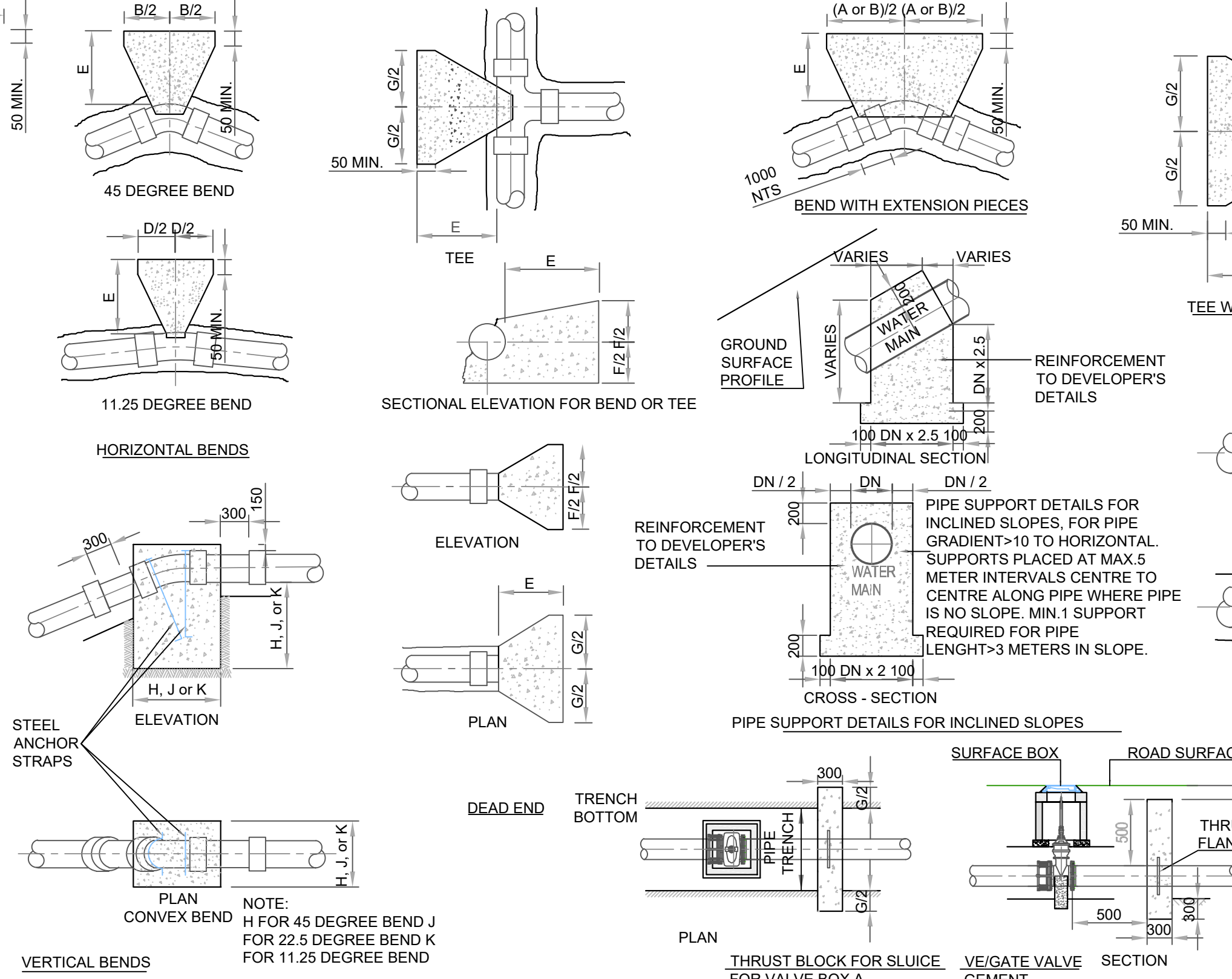


TRENCH BACKFILL AND BEDDING
DRAWING No. **STD-W-13**

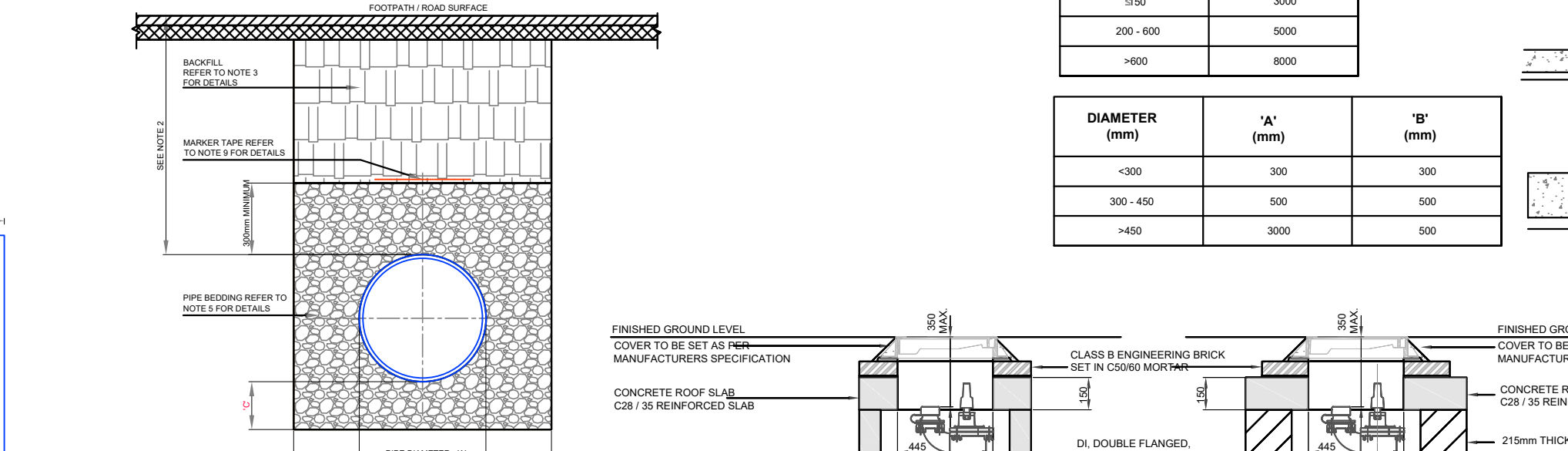


ON - LINE AIR VALVE FOR POLYETHYLENE (P.E.) PIPE
DRAWING No. **STD-W-22**

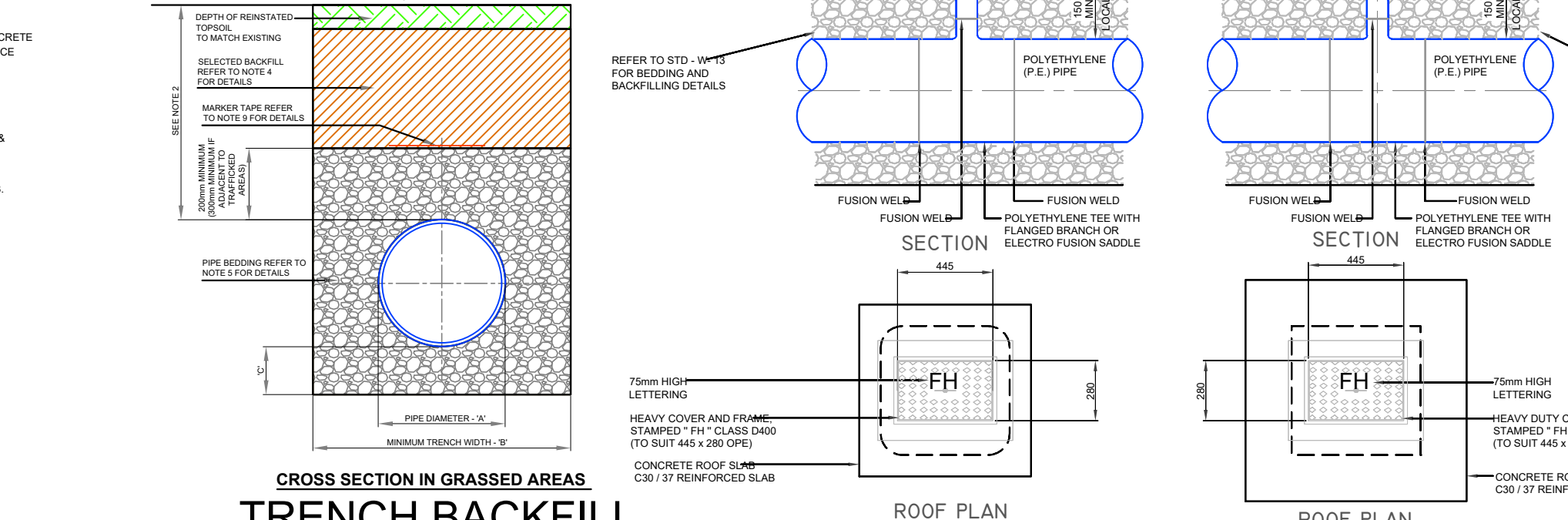
- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- AIR VALVES SHALL COMPLY WITH THE REQUIREMENTS OF IS EN 1074-4. AIR VALVES SHALL BE DOUBLE ORIFICE TYPE AND SHALL INCLUDE AN ISOLATING VALVE. THE ISOLATING VALVE SHALL BE A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTED BONNET DESIGN.
- THE AIR VALVES SHALL HAVE BODIES AND COVERS OF CAST IRON TO BS EN 1563 WITH FLANGES DRILLED TO PN 16 IN ACCORDANCE WITH BS EN 1092. EACH VALVE SHALL HAVE A LARGE AND A SMALL AIR ESCAPE ORIFICE WITH AN ISOLATING VALVE.
- SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
- AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.
- PRECAST CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLASS B08 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.



WATER MAIN THRUST AND SUPPORT BLOCKS
DRAWING No. **STD-W-28**



TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES
DRAWING No. **STD-W-11**



ON - LINE HYDRANT FOR POLYETHYLENE (P.E.) PIPE
DRAWING No. **STD-W-18**

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
≤80	SEE NOTE 10
100	500
150	600
200	600
250	750
300	750
350	750
400	900
450	900

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 8834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- ALL HYDRANTS, SURFACE BOX FRAMES & COVERS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF IS EN 14339, IS EN 1074-6 & BS 750. FIRE HYDRANTS SHALL BE TYPE 2. THE HYDRANT INLET SHALL BE 80mm DIAMETER WITH PN16.
- ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
- HYDRANT CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLASS B08 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201-2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

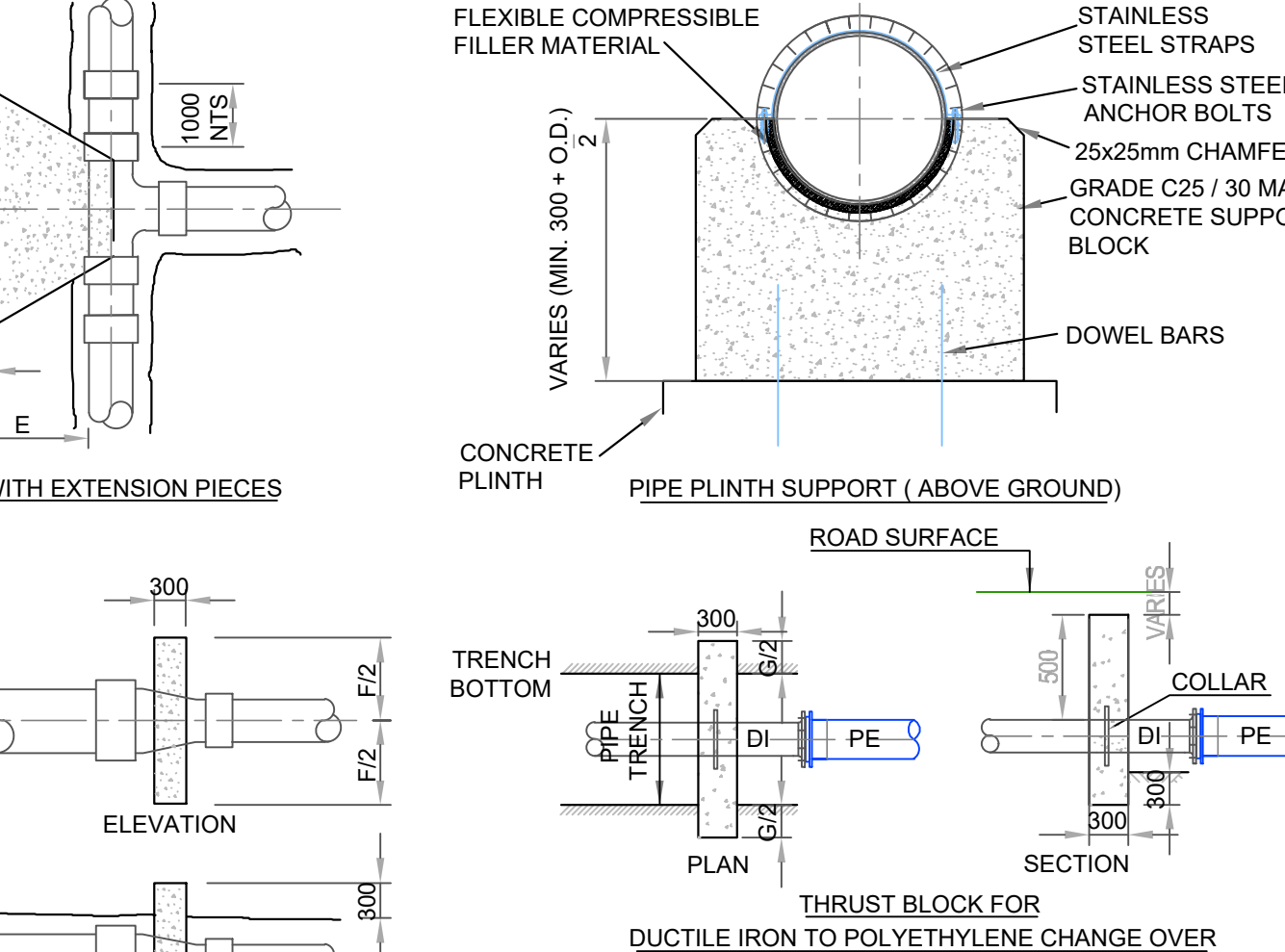
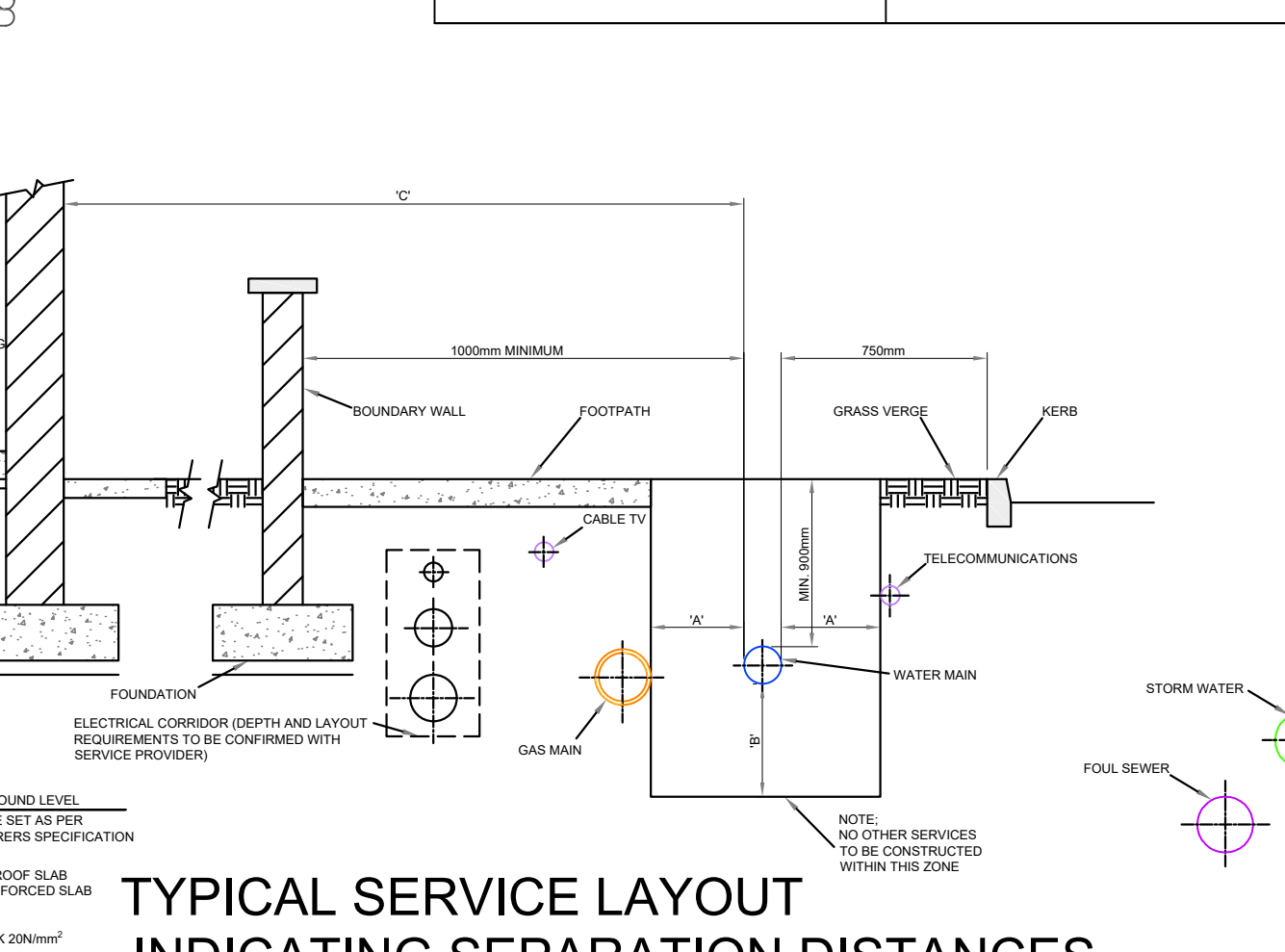
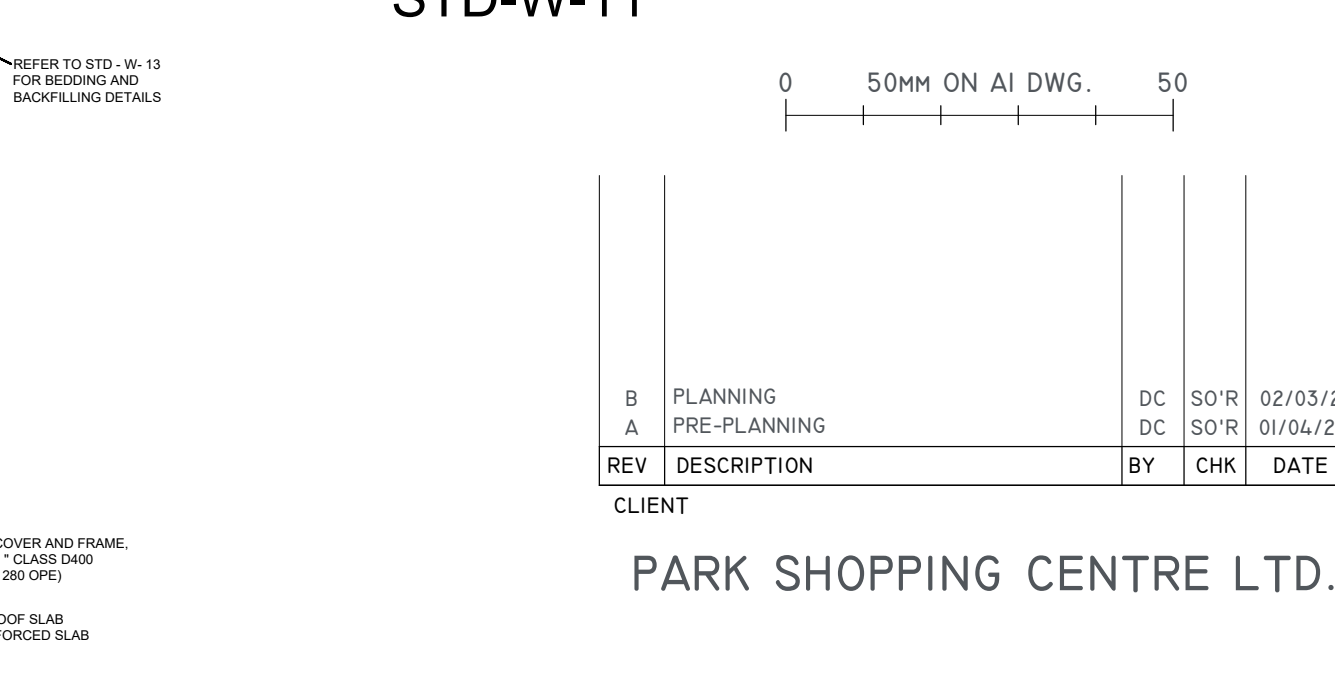


TABLE OF DIMENSIONS FOR STEEPLY INCLINED PIPELINES

GRADIENT	SPACING
1 IN 2 & STEEPER	5.5m
BELOW 1 IN 2 TO 1 IN 4	11.0m
1 IN 4 TO 1 IN 5	16.6m
1 IN 5 TO 1 IN 6	22.0m



CUSTOMER CONNECTION AND BOUNDARY BOX (25mm OD PIPE)
DRAWING No. **STD-W-03**



SLUICE VALVE FOR POLYETHYLENE (P.E.) PIPE (< 350mm DIA.)
DRAWING No. **STD-W-15**

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- SLUICE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 8834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- SLUICE VALVES SHALL BE RESILIENT GATED AND SHALL COMPLY WITH BS 5163-1, BS 5163-2, IS EN 1074-1, IS EN 1074-2, OR EQUIVALENT E.U. SPECIFICATIONS.
- SLUICE VALVES SHALL BE ANTI-CLOCKWISE CLOSING.
- VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLASS B08 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201-2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

PINNACLE CONSULTING ENGINEERS

GROSVENOR COURT,
67A PATRICK STREET,
DUN LAOGHAIRE,
COUNTY DUBLIN
IRELAND. TELEPHONE: +353 1231 1041
WELWYN GARDEN CITY | NORWICH | LONDON | THE HAGUE

DRAWING STATUS: **PRE-PLANNING**

SCALE: 1:100 DATE: 01/04/20 DRAWN BY: DC CHECKED: SOR

DRG NO: 201101-PIN-XX-XX-DR-C-0205-S2 REVISION: B

COPYRIGHT PINNACLE