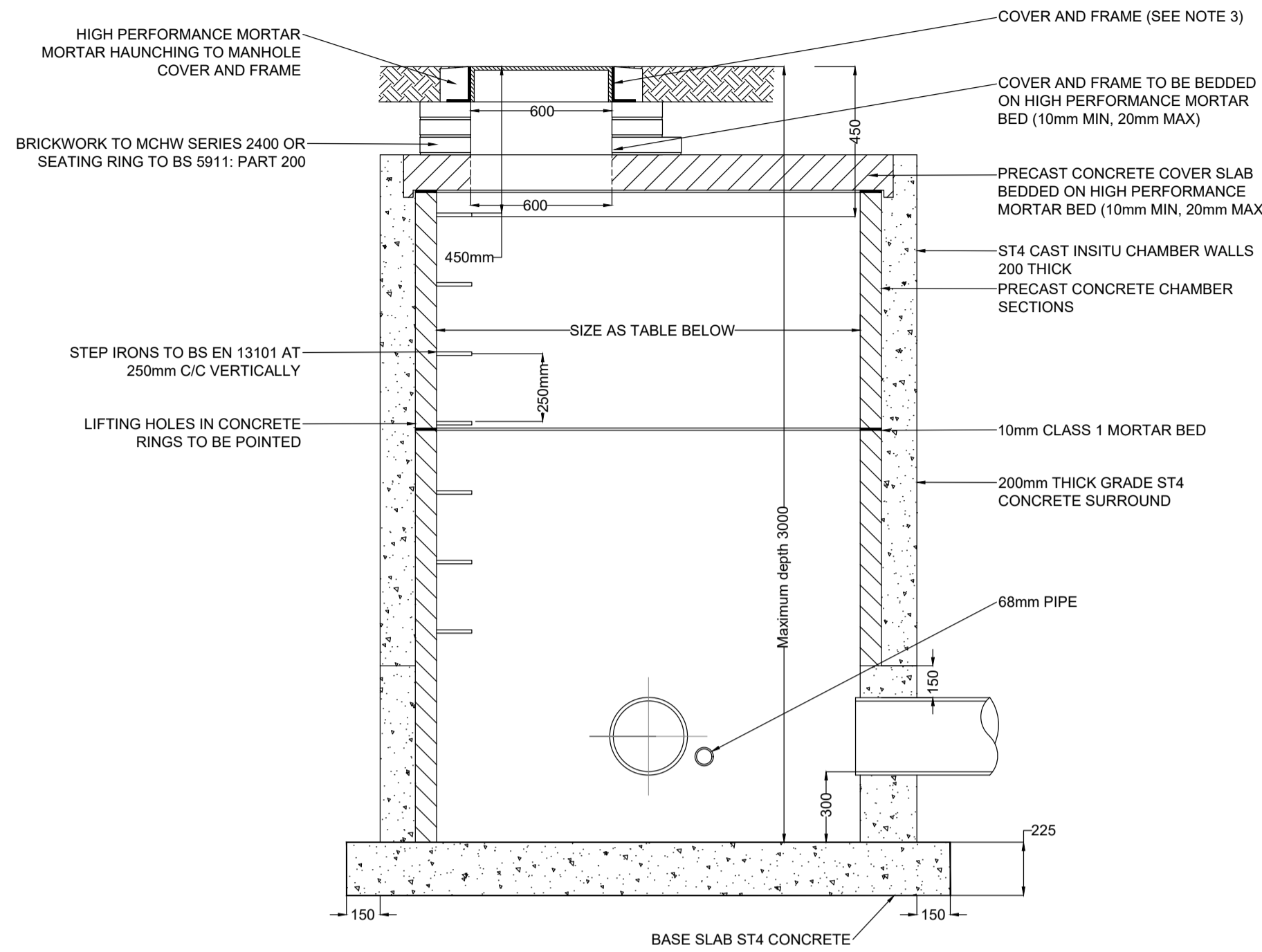


# PRECAST CONCRETE CATCHPIT MANHOLE



### NOTES:

- DO NOT SCALE FROM DRAWING
- ALL DIMENSIONS ARE IN MILLIMETRES
- GULLY COVER AND FRAMES TO BE D400 (DMRB HA 104/09) 150mm MIN HEAVY DUTY AND COMPLY WITH DESIGNERS INFORMATION FOR HYDRAULIC DESIGN
- CHAMBER WALLS AND COVER SLAB TO BE CONSTRUCTED IN PRECAST CONCRETE TO BS EN 1917 AND BS 5911-3
- FOR INVERT DETAILS, NUMBER OF BRANCHES AND TYPE OF COVER AND FRAME, SEE SCHEDULE OF CHAMBERS
- CONCRETE BASE SLAB SHALL BE 300mm GREATER IN DIAMETER THAN OUTER DIAMETER OF CHAMBER WALLS
- SEE MCHW CLAUSE 507 REGARDING BACKFILLING/SURROUND TO CHAMBER
- CAST INSITU CHAMBER WALLS OF ST4 CONCRETE TO 150mm MIN ABOVE HIGHEST PIPE. MINIMUM THICKNESS OF WALL TO BE CHAMBER RING PLUS 200mm AND THE INTERNAL DIAMETER OF THE INSITU CHAMBER SHALL BE EQUAL TO THE INTERNAL DIAMETER OF THE PRECAST RINGS
- FOR PIPES 600mm DIAMETER AND GREATER A SAFETY CHAIN SHALL BE PROVIDED AS DETAILED ON DRAWING NUMBERS F5 AND F10 OF H.C.D
- ALL FITTINGS TO BE FABRICATED FROM STEEL TO BS 970 AND ARE TO BE PROTECTED BY HOT DIP GALVANISING
- 68mm NOMINAL BORE PIPE 600mm LONG TO BS EN 12200-1/2000 TABLE TO BE BUILT INTO CATCHPIT TO DRAIN LOWER PORTION OF TRENCH FOR SURFACE WATER DRAINS TO TABLE 11 OF APPENDIX S1
- WHERE INVERT AND OUTLET PIPES HAVE THE SAME INVERT LEVEL, THE 68mm PIPE SHALL BE SET 50mm ABOVE THE INVERT LEVEL. WHERE THE OUTLET PIPE INVERT IS MORE THAN 50mm LOWER THAN THE LOWEST INVERT PIPE INVERT THE INVERT OF THE 68mm PIPE SHALL HAVE THE SAME INVERT LEVEL AS THE INLET PIPE.
- ALL ST CONCRETE SHALL BE TO MCHW CLAUSE 2602.

### PRODUCT INFORMATION:

- WEIGHT: BOLLARD - 5.5 kg, SOCKET - 1.4 kg, TOTAL - 6.9 kg
- MATERIAL: BOLLARD - IMPACTABLE, SOCKET - DUBARON, FITTINGS - SS304 - STAINLESS STEEL, WASHERS - STAINLESS STEEL, ANCHOR - NYLOD PIPE
- COLOURS: BLACK / WHITE
- DIMENSIONS: ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED.

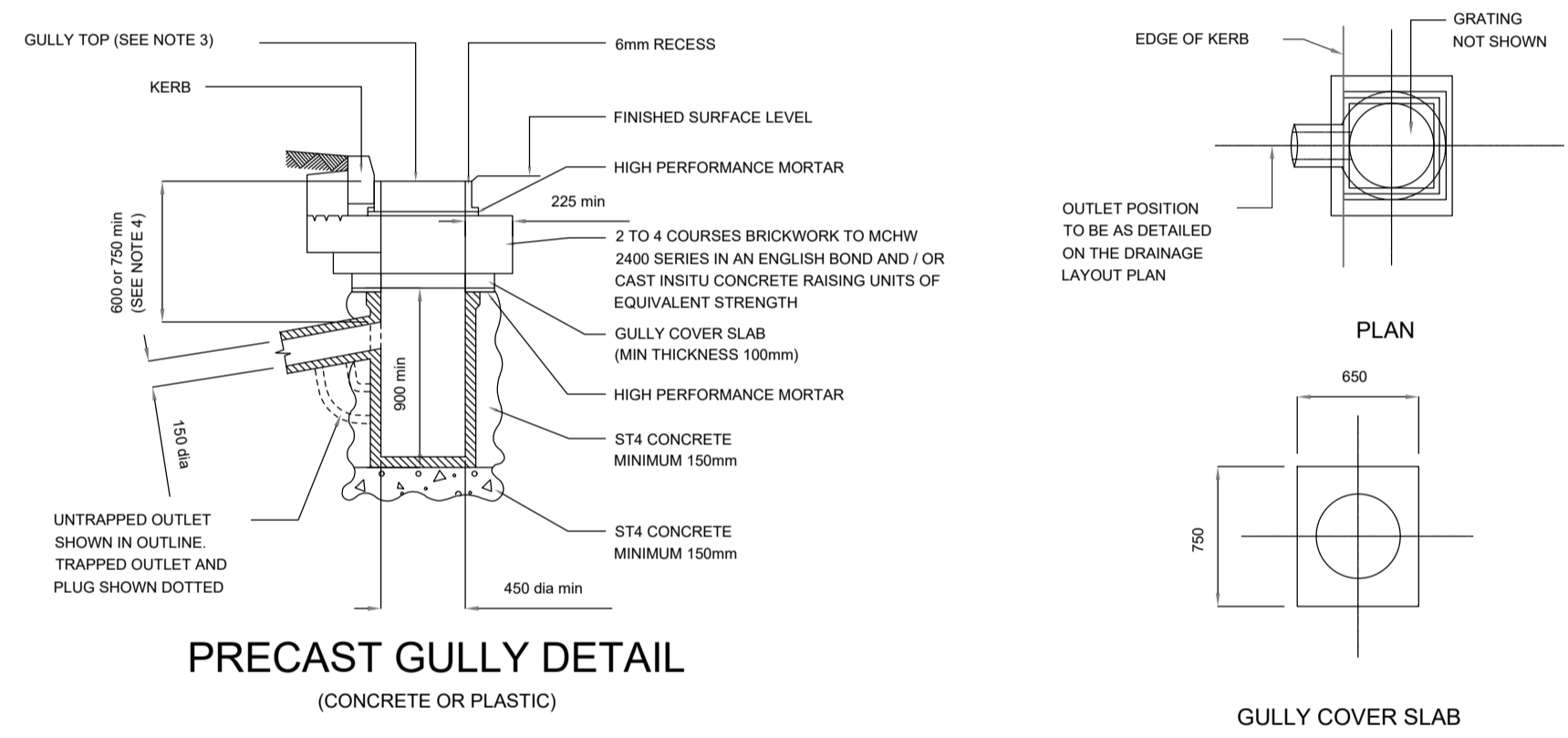
### INSTALLATION GUIDE:

- ITEM 1 - REMOVABLE BOLLARD
- ITEM 2 - CONCRETE IN SOCKET
- ITEM 3 - CONCRETE TO REDUCE LINE ON SITE (BE COMING USING QUICK SETTING CONCRETE (i.e. GRADE 90/10))
- ITEM 4 - GRAVEL
- ENSURE THAT ANY SURFACE FACES FORMING ONCHANGING TRAFFIC
- RECOMMENDED HOLE SIZE 425 X 425 X 350MM DEEP
- WE RECOMMEND THE SOCKET IS BEDDED ON GRAVEL FOR DRAINAGE
- COVER SOCKET TO AVOID BUILD UP OF CONCRETE/GRAVEL FALLING IN WHICH WILL PREVENT BOLLARD SEATING AND LOCKING
- EXACT INSTALLATION REQUIREMENTS SHOULD BE ASSESSED FROM A SITE SURVEY
- WELD CONTACT WITH HOT TAP ANCHOR AS THIS WILL SERIOUSLY IMPAIR THE PERFORMANCE OF THE BOLLARD AND SOCKET

### OPTIONS AVAILABLE FOR THE PRODUCT:

- BODY C/W FRONT, SIDE & REAR COMPLEXY PANELS
- BODY C/W FRONT, SIDE & REAR COMPLEXY PANELS
- BODY C/W FRONT, REAR, SIDE & REAR COMPLEXY PANELS
- A RANGE OF RETROREFLECTIVE SIGNAGES NOW WHITE SIGN
- INSTALLATION PLATE
- SPACES ARE AVAILABLE, WHICH INCLUDE:
  - BOLLARD C/W RETROREFLECTIVE PATCHES
  - RANGE OF SIGNAGES
  - KEY
- SURFACE AREA OF COMPLEXY PANELS:
  - FRONT - 131,470mm<sup>2</sup> (PROJECTED)
  - SIDE REAR - 37,710mm<sup>2</sup>
  - OPTIONAL DOUBLE SIDE - 41,560mm<sup>2</sup>
- SURFACE AREA OF SIGNAGE - 71,310mm<sup>2</sup>
- ALL RETROREFLECTIVE MATERIALS SUPPLIED BY GLASDON OR AS RECOMMENDED IN TABLE 11 OF THE NATIONAL SPECIFICATION FOR ROAD WORKS SHALL COMPLY WITH THE REQUIREMENTS OF BS EN 12899-1/2007 FIXED VERTICAL ROAD SIGNS
- NON-COMPLIANT RETROREFLECTIVE MATERIALS USED ON OUR PRODUCTS MEET THE REQUIREMENTS OF BS EN 12899-1/2007 ROAD SIGNS. TESTING AND PERFORMANCE OF MICROPRISMATIC RETROREFLECTIVE MATERIALS WILL BE GIVEN NORMALLY AND SEE FOR THEIR NORMAL APPLICATION

# GLASDON SOCKETED BOLLARD DETAIL

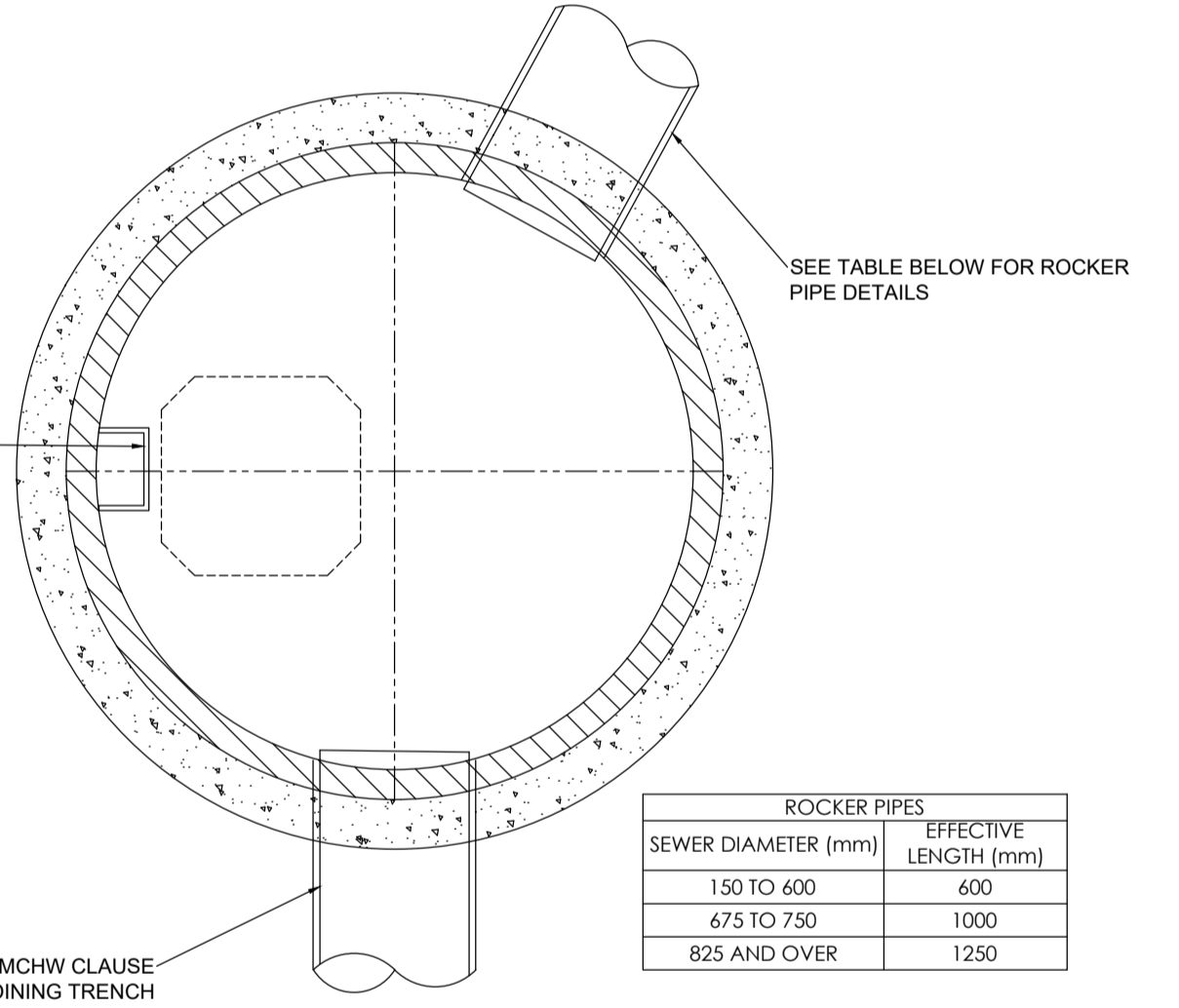


### NOTES:

- DO NOT SCALE FROM DRAWING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS AND DRAWINGS.
- GULLY GRATINGS AND FRAMES SHALL BE BS EN 124 CLASS D400 AND CONFORM TO THE REQUIREMENTS OF BS 7903:1997. GULLY GRATINGS AND FRAMES SHALL MEET THE REQUIREMENTS OF CD534. A DATASHEET (OR SIMILAR) TO CONFIRM THAT THE GULLY GRATING AND FRAME IS CD534 COMPLIANT WILL BE REQUIRED. THE FRAME SHOULD BE AT LEAST 150MM DEEP.
- THE MINIMUM DEPTH FROM THE TOP OF THE GRATING TO THE TOP OF THE GULLY OUTLET IS TO BE 750mm WHEN THE CONNECTING PIPE IS UNDER A CARRIAGEWAY OR A HARD SHOULDER AND 600mm ELSEWHERE.
- PRECAST CONCRETE GULLIES AND COVER SLABS SHALL BE TO B.S. 5911-4:2010.
- WHEN AN INSITU CAST GULLY HAS A TRAP, THE STOPPERS SHALL COMPLY WITH THE REQUIREMENTS OF B.S. 5911-4 AND BS EN 1917.
- ALL ST CONCRETE SHALL BE TO MCHW CLAUSE 2602.

CHAMBER SUB TYPE	CHAMBER RING DIA	MAX PIPE DIA
20	1050	300
20a	1200	450
20b	1350	600
20c	1500	675
20d	1800	900
20e	2100	1200

NOTE: CHAMBER WITH OUTGOING PIPES 600mm OR GREATER DIAMETER SHALL BE FITTED WITH REMOVABLE SAFETY CHAINS OR POLYPROPYLENE ROPE.

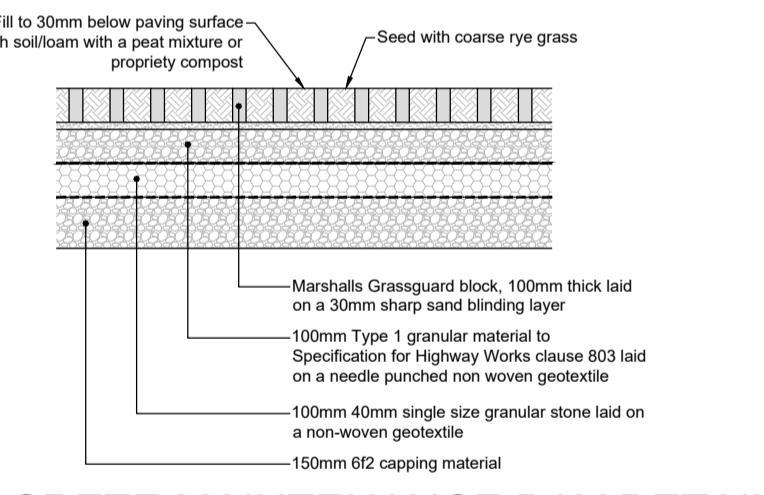


SEWER DIAMETER (mm)	EFFECTIVE LENGTH (mm)
150 TO 600	600
675 TO 750	1000
825 AND OVER	1250

# PRECAST GULLY DETAIL

(CONCRETE OR PLASTIC)

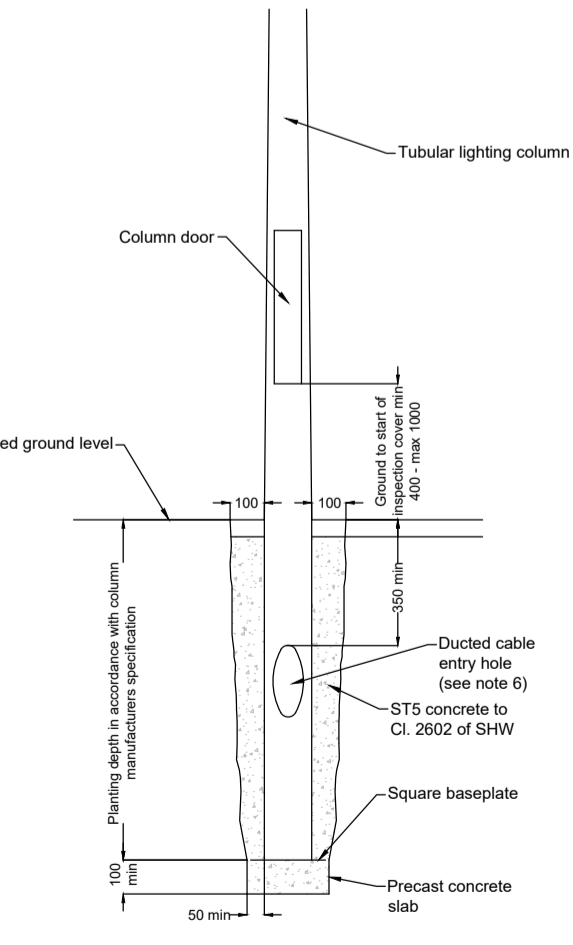
# GULLY DETAIL



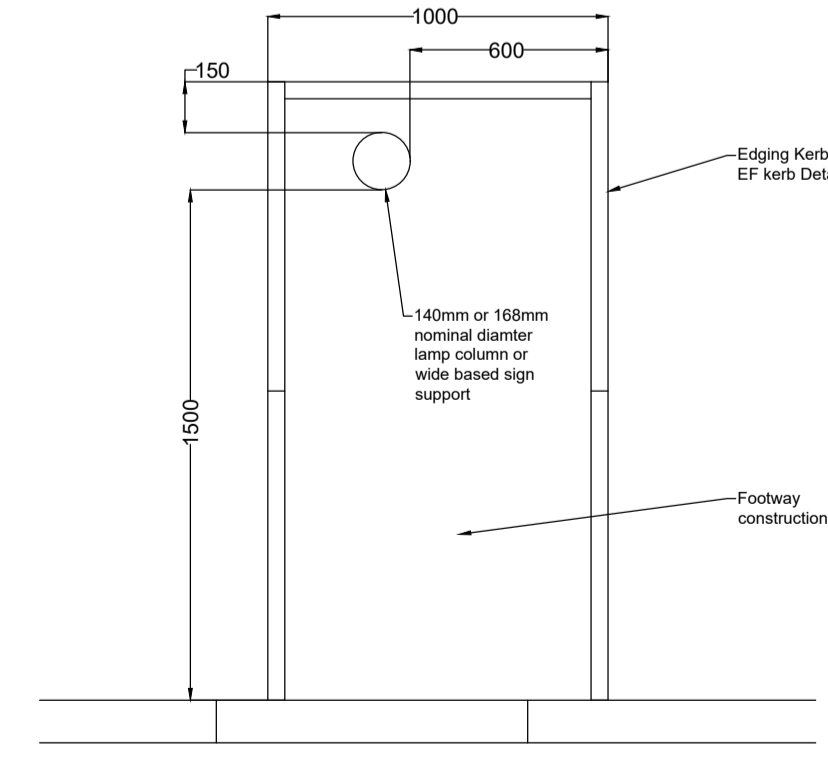
# GRASSCRETE MAINTENANCE BAY DETAIL

### NOTES:

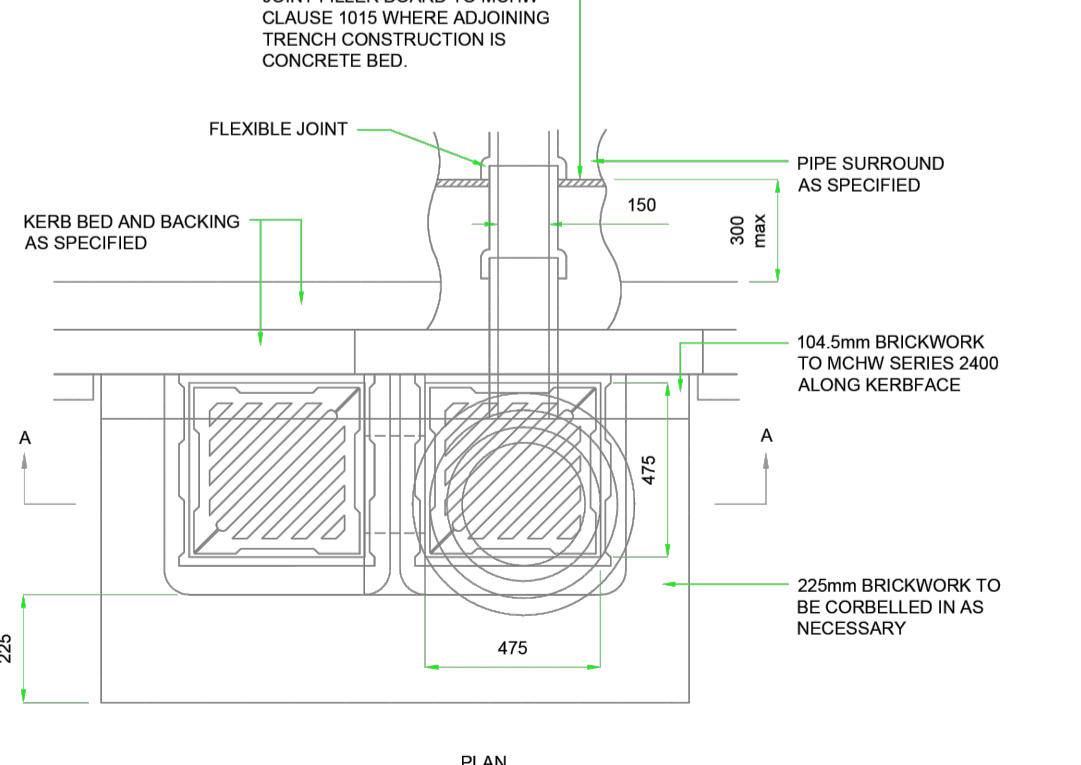
- All dimensions are in millimetres
- Lighting columns and brackets shall comply with SHW Cl. 1302
- Lighting columns and brackets shall be protected against corrosion to the requirements of SHW Cl. 1609 for galvanneal columns and/or Cl 1921 for painted columns
- Backfilling foundations shall comply with SHW Cl. 1305
- Cable entry hole shall be smooth and have a minimum width of 50mm
- A duct equal in size to the width of the cable entry hole shall be made through the concrete filling to SHW Cl. 1305.4
- For details of schematic wiring diagram and typical base layouts refer to Essex County Council's Folio Drawing Nos. ECC-SO-1400-011 - 011
- Precast concrete base slabs to have minimum dimensions of shaft width plus 100mm
- Planting depth and distance to bottom of column door from finished ground level to be to column manufacturers recommendations
- Minimum clearance to column to be 1m from the channel of any carriageway
- Columns shall be galvanneal steel with two pack glass flake epoxy to the external and internal root to 250mm above ground level, minimum dry film thickness 200 COLOURUM Black (shop applied)
- All columns being supplied must meet the coastal grade specification regardless of their location in Essex (so inland areas still require coastal columns)



# TYPICAL LIGHTING COLUMN BEDDING DETAIL



# LIGHTING COLUMN HARD STANDING



# DOUBLE GULLY DETAIL

### Notes

- It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the 1974 Health and Safety at Work Act and the 2015 CDM regulations. The Contractor shall be deemed to have allowed for full compliance with the same within their price.
- The Contractor is responsible for checking all tie-in work with existing for line and level before commencing work. Any discrepancies or errors found shall be reported to the Engineer in writing immediately.
- All accommodation works necessary to establish a satisfactory link between existing and new work will have been allowed for in the Contractors price.
- All materials for use in the contract are to be BSI kitemarked.
- All concrete and mortar that is to be buried shall be sulphate resisting unless soil and groundwater tests prove that no sulphates are present.
- The Contractor is responsible for arranging a meeting with drainage and Highway Authority Clerk of Works to ascertain any variations that are relevant to this development prior to work commencing.
- The Contractor is responsible for ensuring that all works are to the satisfaction of the Highway Authority and LLFA Engineers.
- The Contractor is to liaise with the Highway Authority Engineer, affording them reasonable notice to inspect the works during construction.
- The Contractor is to ensure that any traffic management required to undertake the works is approved by the Highway Authority prior to these works commencing.
- The Contractor is to comply with the New Roads and Streetworks Act 1991 for all works in the public highway.
- All adoptable highway work shall be constructed in accordance with the Essex County Council Development Construction Manual dated August 2025 and the Specification for Highway Works. This drawing is intended for guidance only and must be read in conjunction with the above document which will supersede this drawing in the event of a conflict.
- This drawing is to be read in conjunction with all other relevant Engineers, Architects and any other specialist design drawings and details. Any discrepancies or errors found shall be reported to the Engineer in writing immediately.
- All dimensions shown are in millimetres unless noted otherwise, and all levels and coordinates relate to topographical survey information.
- Do not scale from this drawing. If in doubt, ask.
- The site is to be cleared of all rubbish, undergrowth and unwanted matter. Vegetable matter shall be stripped and any roots grubbed up. All material to be disposed to a tip provided by the Contractor unless otherwise agreed in the Specification/Contract.
- Remove all soft spots and backfill with granular material of Type 1 sub-base to Clause 803 of the Specification for Highway Works. Fill material to be compacted in layers not exceeding 150mm thick.
- The Contractor will be responsible for all necessary dewatering and trench support to execute the work in a satisfactory manner and will be deemed to have included for the same within their price.
- For drainage construction details see the specific drainage drawings.
- Existing drainage to be surveyed, inspected, jetted, and repaired where necessary.
- During construction, if bituminous layers are trafficked or become contaminated prior to the next layer being laid, a bond coat must be applied. A bond coat shall be applied prior to the laying of a new asphalt layer on any bound substrate.
- Bitumen emulsion bond coats to conform to BS EN 13108 with minimum cohesion in accordance with BS EN 13808:2013, Table 4, Class 4. The bond coat shall have BSA/HAPAS accreditations and comply with BS 5948B:2015 and A1:2017.
- The depiction of any service apparatus on this or any other drawing has been obtained from third party sources and is not necessarily accurate or complete. At no time does the inferred position on the drawing absolve the Contractor from taking all necessary steps to locate service apparatus in accordance with the methods suggested by the Highway Authority. The Developer and Engineer will accept no claims whatsoever in respect of any losses or damage caused in respect of such apparatus, however caused.
- The Contractor shall be deemed to have allowed for locating of service apparatus by hand digging in their price.
- All signing for road markings works shall be in accordance with TSRGD 2016, the relevant Traffic Signs Manual chapters, and Safety at Streetworks and Roadworks Code of Practice.
- The Contractor shall be deemed to have included for any necessary testing, trial hoing and liaison with the Highway and LLFA Authorities within their price.
- No overhead projections, gas meter boxes etc to be sited over adoptable areas or in adjacent areas open to the public.

Rev	Description	Date	Drawn	Checked	Appr'd
E	Notes and double gully detail added	23.04.26	JG	TJW	TJW
D	Grasscrete maintenance bay detail added	31.04.26	JG	TJW	TJW
C	Street lighting detail added	30.03.26	JG	TJW	TJW
B	Gully detail added from sheet 1 and maximum casting depth added	24.10.25	JG	TJW	TJW
A	CD534 manhole detail update to match the current ECC file drawing.	21.09.25	JG	TJW	TJW

## Proposed development to South of Stortford Road, Great Dunmow, Essex.

Section 278 Works Construction Details - Sheet 2 of 2	
Project Number	Drawing Number
ST-3760	731-E
Scale	Date
1:250@A1	20.06.25
Client	Architect
	TJW LGH AK

Do not scale off the drawing. Only written dimensions should be taken. Any discrepancies or errors should be brought to the attention of the engineer immediately. This document is copyright and may not be reproduced without permission of the owner.

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