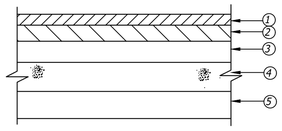
## BITUMINOUS CARRIAGEWAY CONSTRUCTION

(Refer to WSCC standard detail number S278/38/21F)



1. 30mm thick Close graded asphalt concrete surface course, 10mm aggregate, 100/150 to Clause 912. Refer to WSCC standard drawing number S278/38/21revF. PSV value 55+ to Table 3.1a od IAN 156/12 to WSCC standard detail requirements.
2. 60mm thick Binder course, Dense Asphalt Concrete, AC20 dense bin 40/60 to Clause 906
3. 125mm thick Base, Dense Asphalt Concrete, AC32 Dense Base 40/60 to Clause 906.
4. 150mm thick Type 1 (Clause 803)
5. 600mm thick CBR 2% 6F1/6F2 (site won) or 6F4/6F5 (imported material). Anticipated CBR value of 2% subject to in-situ testing to *WSCC requirements. Requirements in order for that figure (2%) to be achievable:
   - Removing any soft spots
   - Do not working in wet or poorly drained conditions
   - Protect the subgrade with placement of sub-base in a timely manner.

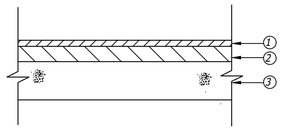
NOTE:
CBR tests* to be taken on site. Formation to be inspected by highway engineer. Any soft spots to be excavated and replaced with 6F2 crushed concrete capping, as per table below.

| Subgrade CBR | Capping layer thickness |
|---|---|
| Greater than 5% | 100mm Type 1 |
| 2.5% - 5% | 350mm Type 6F1/6F2 |
| 2% - 2.5% | 600mm Type 6F1/6F2 |
| Less than 2% | Refer to IAN 73/06 |

*NOTES ON CBR TESTING FOR WSCC HIGHWAYS SCHEMES:
Laboratory CBR testing in accordance with BS1377: Part 4: 1990. In line with Interim Advice Note 73/06 (Design Manual for Roads and Bridges, Volume 7, Section 2), the tests should be carried out over a range of conditions to reproduce, as far as possible, the conditions of moisture content and density which are likely to be experienced during construction and in the completed pavement. If applicable, soaked CBR tests may need to be undertaken.

## VEHICULAR CROSSOVER

(Refer to WSCC standard detail number S278/38/07 C)

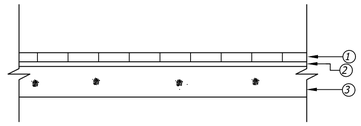


1. 20mm thick 6mm dense graded asphalt concrete surface course 100/150 to Clause 912.
2. 50mm thick 20mm dense asphalt concrete binder 40/60 PEN to Clause 906
3. 200mm thick Type 1 (Clause 803)

## CHARCOAL COLOUR / OCHRE COLOUR

## BLOCKPAVED VEHICULAR CROSSOVER
Colour to Architect's specification

(Refer to WSCC standard detail number S278/38/04 B)



1. 60mm thick 200mm x 100mm rectangular blocks
2. 30mm thick compacted sand
3. 200mm thick Type 1 (Clause 803)

GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.

2. Tender or billing drawings shall not be used for construction or the ordering of materials.

3. Do not scale. All dimensions and levels to be site confirmed.

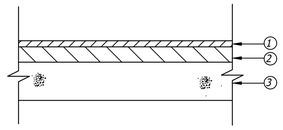
4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

5. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

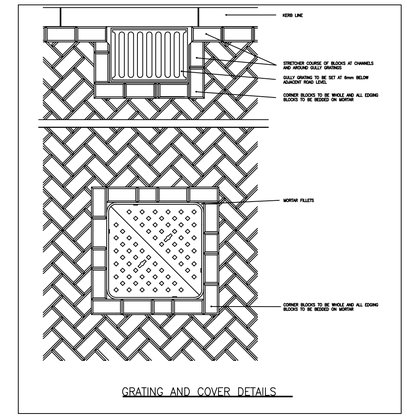
6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

## BITUMINOUS FOOTWAY

(Refer to WSCC standard detail number S278/38/04 B)



1. 20mm thick 6mm dense graded asphalt concrete surface course 100/150 to Clause 912.
2. 50mm thick 20mm dense asphalt concrete binder 40/60 PEN to Clause 906
3. 200mm thick Type 1 (Clause 803)




GRATING AND COVER DETAILS

NOTES:

- ALL HIGHWAY WORKS ARE SUBJECT TO S38 APPROVAL BY WEST SUSSEX COUNTY COUNCIL
- ALSO REFER TO WEST SUSSEX COUNTY COUNCIL STANDARD DETAILS VIA WEB LINK:

https://www.westsussex.gov.uk/media/10709/standard_construction_details.pdf

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE EXTERNAL WORKS LAYOUTS (10768/1801-1805).
- WHERE THE SITE REQUIRES FILLING IN EXCESS OF 500mm, MATERIAL TO BE CLASS 2C UNDER 600mm 6F1 CAPPING BENEATH ANY ADOPTABLE ROADS, CAREFULLY COMPACTED IN 250mm LAYERS.

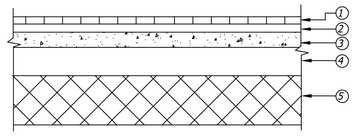
THIS DRAWING IS SUBJECT TO CHANGE FOLLOWING 'TECHNICAL APPROVAL' PROCESS WITH WEST SUSSEX COUNTY COUNCIL
NO WORKS CAN COMMENCE ON THE PUBLIC HIGHWAY PRIOR TO A (SECTION 38) AGREEMENT BEING SIGNED BY WSCC

NOTE:
All construction details in accordance with West Sussex County Council's standard construction details

## CHARCOAL COLOUR / OCHRE COLOUR

## BLOCK CARRIAGEWAY CONSTRUCTION
Colour to Architect's specification

(Refer to WSCC standard detail number S278/38/21F)

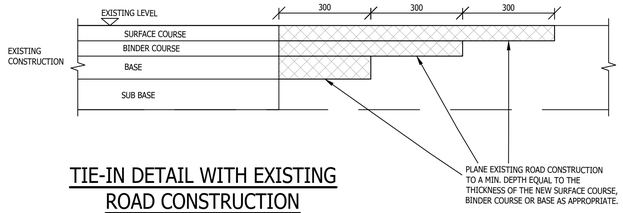


1. 80mm thick 200mm x 100mm rectangular blocks with 2 - 5mm sand filled joints to BS7533-3:2001 + A1:2009. Laid to herringbone pattern, with double string course at channel.
2. 30mm thick compacted Category B1 sand to BS7533-3:2003 + A1:2009.
3. 125mm thick Base, Dense Asphalt Concrete, AC32 Dense Base 40/60 to Clause 906.
4. 150mm thick Sub-base Type 1 material to clause 803
5. 600mm thick CBR 2% 6F1/6F2 (site won) or 6F4/6F5 (imported material). Anticipated CBR value of 2% subject to in-situ testing to *WSCC requirements. Requirements in order for that figure (2%) to be achievable:
   - Removing any soft spots
   - Do not working in wet or poorly drained conditions
   - Protect the subgrade with placement of sub-base in a timely manner.

NOTE:
CBR tests* to be taken on site. Formation to be inspected by highway engineer. Any soft spots to be excavated and replaced with 6F2 crushed concrete capping, as per table below.

| Subgrade CBR | Capping layer thickness |
|---|---|
| Greater than 5% | 100mm Type 1 |
| 2.5% - 5% | 350mm Type 6F1/6F2 |
| 2% - 2.5% | 600mm Type 6F1/6F2 |
| Less than 2% | Refer to IAN 73/06 |

*NOTES ON CBR TESTING FOR WSCC HIGHWAYS SCHEMES:
Laboratory CBR testing in accordance with BS1377: Part 4: 1990. In line with Interim Advice Note 73/06 (Design Manual for Roads and Bridges, Volume 7, Section 2), the tests should be carried out over a range of conditions to reproduce, as far as possible, the conditions of moisture content and density which are likely to be experienced during construction and in the completed pavement. If applicable, soaked CBR tests may need to be undertaken.




## TIE-IN DETAIL WITH EXISTING ROAD CONSTRUCTION

ROAD SUB-GRADE NOTE

ROAD CONSTRUCTION (DESIGN STAGE) IS BASED ON ESTIMATED 2% CBR VALUE FROM THE SITE ASSESSMENT (SEFTER ROAD, BOGNOR REGIS SUPPLEMENTARY GEOTECHNICAL SITE ASSESSMENT – CBR FOR ROAD PAVEMENT DESIGN - REF 305035 L02 BY RSK DATED 12/08/22).
A geotechnical investigation must be undertaken along the line of the proposed roads in order to establish the design California Bearing Ratio (CBR) and frost susceptibility of each subgrade type present along the road corridor. The sampling / testing should be undertaken at frequencies to suit the anticipated ground and site conditions but the spacing should not be greater than 30m, staggered across the width of the highway corridor. On small sites, a minimum of three samples / tests is required.
The ground investigation report, including exploratory hole logs, in-situ & laboratory test results together with the interpretation of the data used to establish the Design CBR value, must be submitted to West Sussex County Council for review and approval. FINAL SUB-BASE/CAPPING LAYER TO BE BASED ON EQUILIBRIUM TESTS PRIOR TO CONSTRUCTION.

ANY SOFT SPOTS IN FORMATION TO BE EXCAVATED AND BACKFILLED WITH 6F2 MATERIAL WELL CONSOLIDATED IN LAYERS.

WHERE THE PROPOSED FORMATION LEVEL IS ABOVE EXISTING GROUND LEVEL, ADDITIONAL GRANULAR MATERIAL TO BE IMPORTED AND COMPACTED IN LAYERS NOT EXCEEDING 225MM FOLLOWING INITIAL SITE PREPARATION.

ALL FORMATIONS TO BE PROOF ROLLED TO AFFORD THE SUBGRADE SOME COMPACTION AND TO HELP IDENTIFY ANY VERY LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIAL THAT SHOULD BE REMOVED AND REPLACED AS NOTED ABOVE.

DURING CONSTRUCTION THE DEVELOPER MUST DEMONSTRATE THAT THE CBR VALUE OF THE SUBGRADE IS EQUAL TO OR GREATER THAN THE DESIGN CBR VALUE. IT SHOULD BE NOTED THAT THE CONSTRUCTION THICKNESS MAY NEED TO BE INCREASED IF IN-SITU CBR VALUES AT THE TIME OF CONSTRUCTION ARE LESS THAN THE DESIGN CBR VALUE.
HOWEVER, A REDUCTION IN THE CONSTRUCTION THICKNESS WILL NOT BE CONSIDERED IF THE IN-SITU CBR VALUES AT THE TIME OF CONSTRUCTION ARE GREATER THAN THE DESIGN CBR VALUE.
IN-SITU CBR TESTING SHALL BE CARRIED OUT AT NOT GREATER THAN 30M CENTRES, STAGGERED ACROSS THE WIDTH OF THE ROAD CORRIDOR. ACCEPTABLE IN-SITU CBR TEST METHODS INCLUDE: TRL DYNAMIC CONE PENETROMETER TESTING, CALIFORNIA BEARING RATIO (BS1377, PART 9), OR ALTERNATIVELY THE CBR VALUE MAY BE DERIVED FROM PLATE BEARING TEST DATA.

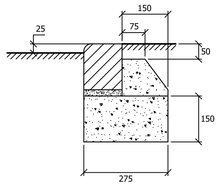
1. All works on adoptable highway to be carried out in accordance with the DIT Specification for Highway Works or as amended by the West Sussex County Council Standard Details (2012)" - both available on the Internet."

2. All works to be in accordance with the current Department of Transport "Specification for Highway Works"

3. Bituminous materials to comply with relevant Clause No. in BSEN 13108:2006

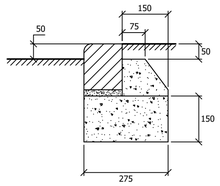
4. Grading of granular sub-base material to comply with Clause 803 of DMRB, tested in accordance with BS1377 - 1990.

150mm x 125mm BULLNOSED PRECAST CONCRETE KERB (TYPE BN TO BS 7263:Pt.1) KERB TO BE BEDDED IN 20mm 1:3 CEMENT/ SAND MORTAR. CONCRETE BED AND HAUNCH GRADE GEN 0 (ST.1).



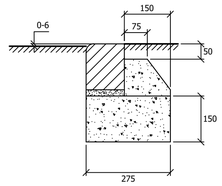

25mm BN KERB DETAIL TO SHARED SURFACES

150mm x 125mm BULLNOSED PRECAST CONCRETE KERB (TYPE BN TO BS 7263:Pt.1) KERB TO BE BEDDED IN 20mm 1:3 CEMENT/ SAND MORTAR. CONCRETE BED AND HAUNCH GRADE GEN 0 (ST.1).

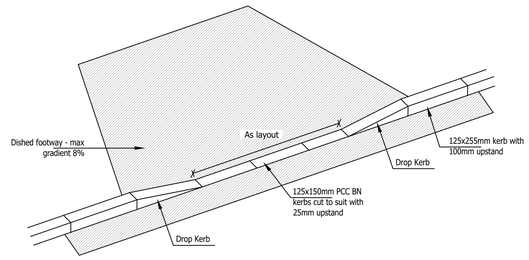



50mm BN KERB DETAIL TO SHARED SURFACES

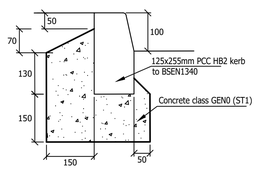
150mm x 125mm BULLNOSED PRECAST CONCRETE KERB (TYPE BN TO BS 7263:Pt.1) KERB TO BE BEDDED IN 20mm 1:3 CEMENT/ SAND MORTAR. CONCRETE BED AND HAUNCH GRADE GEN 0 (ST.1).



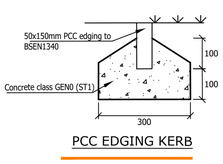

FLUSH BN KERB AT CROSSINGS



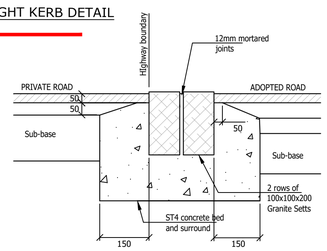

VEHICLE CROSSOVER (NTS)




FULL HEIGHT KERB DETAIL

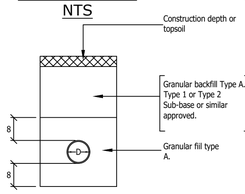



PCC EDGING KERB

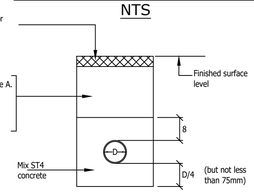



BOUNDARY DEMARCATION DOUBLE ROW GRANITE SETT DETAIL

## BACKFILLING TO FLEXIBLE PIPES
NTS

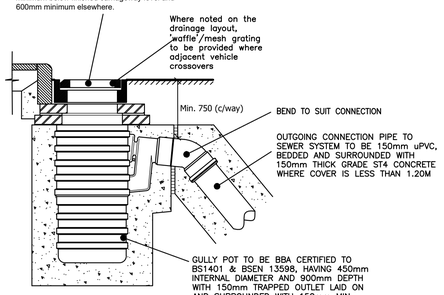



## CONCRETE PROTECTION OF PIPELINES AND SERVICE DUCTS
NTS




(Refer to Specification Clauses S4.2.6 or S4.2.10) appropriate where depth below finished surface level is under carriageway <1200 or >4500, Elsewhere <900 or >4500

Grating to be a hinged D400 conforming to BS 7903:1997 and be set 6mm below the plane of the finished surfacing following exactly both the longitudinal gradient and crossfall.
The frame shall be set in cement mortar on 225mm engineering brickwork (min 2 courses, max 4) built on a cover slab (varying thickness but min 100mm) such that the soffit of the gully outlet pipe is 750mm minimum below finished carriageway level and 600mm minimum elsewhere.




ROAD GULLY DETAIL

WSCC Highway
Section 38 Agreement Standard Details

| Drawing Number | Drawing Title | Detail/Spec | Approval Date |
|---|---|---|---|
| S278/38/02 Rev B | Approved Kerb Type Selection Sheet 1 | • Edging Type EF Flat Top<br>• Full Height Kerb Type HB2<br>• Drop Kerb Type BN | 25.04.17 |
| S278/38/03 Rev A | Approved Kerb Type Selection Sheet 2 | • Boundary Demarcation Double Row of Granite Sett Section (0-6mm upstand) | 28.02.13 |
| S278/38/04 Rev B | Footway/Cycleway Type 1 & 2 | • Type 1 Flexible Footway construction /<br>• Block Paving footway/ cross-over | 09.09.13 |
| S278/38/07 Rev C | Footway Crossover Type 1 - Residential | • Type 1- Residential crossover | 13.05.14 |
| S278/38/09 Rev B | Service Margin | • Detail to suit service strip width and construction type | 09.09.13 |
| S278/38/10 Rev A | Preferred arranagement of services within public highway | • Detail to suit service strip width | 28.02.13 |
| S278/38/11 Rev A | Gully A- pre-cast concrete | • All adopted road gullies | 28.02.13 |
| S278/38/13 Rev C | Drainage Type B Catchpit | • All adopted highway catchpits | 25.04.17 |
| S278/38/16 Rev D | Street Furniture Ramp feature | • Ramps up to shared surfaces as detail (5) - AC road to block paved surface | 14.12.15 |
| S278/38/18 Rev A | Street Furniture Tactile Crossings | • Crossing Plan Detail Footway-Footway<br>• Section A-A Detail<br>• Laying Method Option 1 | 28.02.13 |
| S278/38/21 Rev F | Carriageway Flexible Specification | • Type 1 Flexible Construction<br>• Thickness of capping layer subject to the ground investigation report and amended only at the discretion of the appropriate West Sussex County Council engineer | 16.11.17 |

| Rev | Amendments | Date | Dsn | Chk |
|---|---|---|---|---|
| P4 | Capping thickness increased to 600mm based on 2% CBR value. | 03.11.22 | DT | MR |
| P3 | CBR value updated in line with latest lab testing | 24/08/22 | DT | MR |
| P2 | Granite Sett Detail Added | 28/07/22 | DT | MR |
| P1 | Initial Issue | 14/02/22 | DT | MR |

Status
PRELIMINARY

Client
Taylor Wimpey

Project
SEFTER ROAD
BOGNOR REGIS

Title
EXTERNAL WORKS
ADOPTABLE DETAILS

| Date | Scale @ A1 |
|---|---|
| FEBRUARY 2022 | NTS |
| Base Layout Ref. | CAD File ref. |
| Clients Ref. | Project Ref. 10768 |

gtaCivils Consulting Engineers
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Burgess Hill, West Sussex, RH15 9AS
Tel.01444 871444 Web: www.gtacivils.co.uk

| Drawing Number | Rev. |
|---|---|
| 10768/1401 | P4 |