

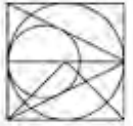
## **DARWIN GREEN ONE**

**South Cambridgeshire District Council**

**Planning Permission Ref S/0001/07/F**

**Condition 12 Submission  
re Levels**

**December 2013**

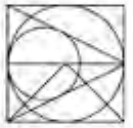


## **CONTENTS**

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- 2.0 EXISTING AND PROPOSED LEVELS
- 3.0 SUMMARY AND CONCLUSIONS

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- APPENDIX 2 - LONGITUDINAL SECTION (WH drg.no.16483/2011C and 2012C)
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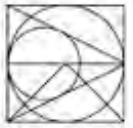
## 1.0 **INTRODUCTION**

- 1.1 This Technical Note has been prepared on behalf of Barratt Eastern Counties and the North West Cambridge Consortium of Landowners in support of the discharge of Condition 12 of Detailed Consent ref S/001/07/F issued by South Cambridgeshire District Council.
- 1.2 The consent is for the formation of a vehicular, pedestrian and cycleway access from the Histon Road to serve the Urban Extension of the City between Huntingdon Road and Histon Road, Cambridge; together with Drainage and Landscaping Works.
- 1.3 Condition 12 states *“No development shall take place until full details of the proposed levels of the road and any associated structures compared to existing levels of the site, have been submitted to and approved in writing by the Local Planning Authority. The approved development shall be constructed in accordance with the approved level details unless otherwise agreed in writing with the Local Planning Authority”*.
- 1.4 This Note demonstrates that the above requirements have been fully met and as such the condition should be formally discharged.



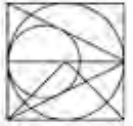
## 2.0 **PROPOSALS**

- 2.1 This consent relates to the short section of road which links the Darwin Green development to the south to Histon Road where a new signalised junction is being formed.
- 2.2 The Darwin Green development to the south is located within Cambridge City Council. The boundary between South Cambridgeshire D.C. and Cambridge City Council is located at the pinch point of the redline given on the General Arrangement (WH drg.no.16483/2004H) given in **Appendix 1**.
- 2.3 The proposed levels for the new on site link road between the City boundary and Histon Road is indicated on the longitudinal sections (WH drg.no.16483/2011C and 2012C) given in **Appendix 2**.
- 2.4 Also indicated dotted on the plan is the existing ground level which is based upon a detailed topographic survey.
- 2.5 The proposed longitudinal and cross sections for the new signalised junction are given on SKM drg.nos.UN/12455/ECC/DG/1100A, 1101A, 1201A and 1202 given in **Appendix 3**
- 2.6 From the on site (WH) longitudinal sections which is drawn at a scale of 1:500H and 1:100V it can be seen that the proposed centreline lies within approximately 1m of the existing ground level along its entire length. It is raised in this area to provide minimal cover to the surface water sewers that cannot be lowered due to the constraints of the existing watercourse outfall which is linked to the A14 culverts.
- 2.7 The proposed alignment rises towards the Histon Road at a gradient of 1:100 which enables the road channels to drain satisfactorily under gravity.
- 2.8 The Histon Road junction follows the existing vertical alignment of the road avoiding unnecessary costs and to assist any temporary traffic management proposals.
- 2.9 It should however be noted that on the eastern side of the proposed junction gabions are proposed along the line of the existing highway ditch which are required to maximise the road and footpath/cycleway width for capacity and safety reasons.



### **3.0 SUMMARY AND CONCLUSIONS**

- 3.1 The vertical alignment for the onsite planning approved road within South Cambridgeshire District Council is approximately 1m above the existing ground profile to provide minimal cover to the surface water sewers.
- 3.2 The vertical alignment for the junction improvements follows the existing alignment but in order to maximise the road section for safety and capacity objectives a gabion retaining structure is required along the eastern edge at the interface with the existing highway ditch.
- 3.3 As the proposals blend in with the existing surroundings this Condition should therefore be formally discharged.



# Appendix 1

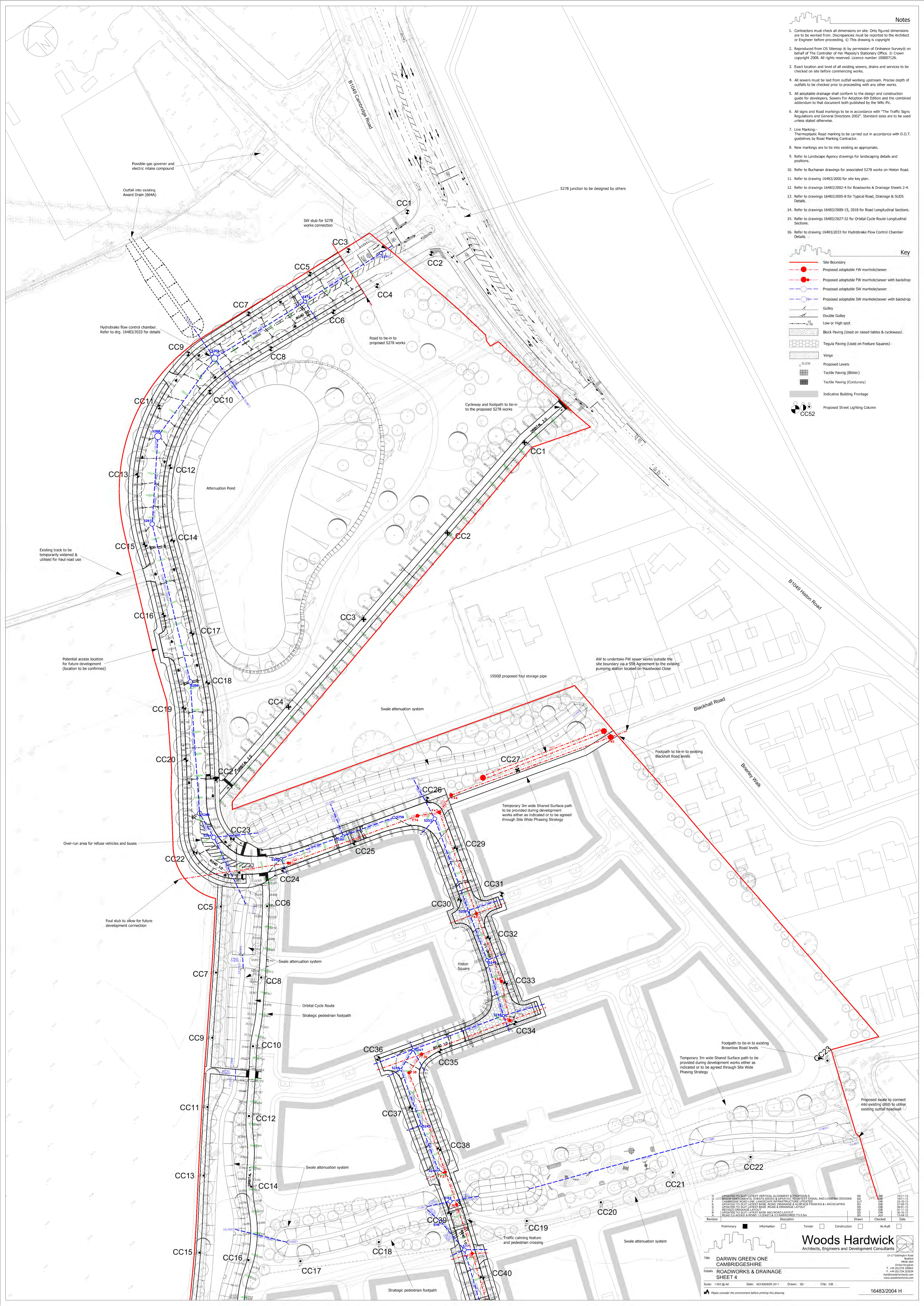
## **General Arrangement (WH drg.no.16483/2004H)**



- Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported to the Architect or Engineer before proceeding. © This drawing is copyright
- Reproduced from OS Stemap @ by permission of Ordnance Survey® on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2008. All rights reserved. Licence number 100007126.
- Exact location and level of all existing sewers, drains and services to be checked on site before commencing works.
- All sewers must be laid from outfall working upstream. Precise depth of outfalls to be checked prior to proceeding with any other works.
- All adoptable drainage shall conform to the design and construction guide for developers, Sewers For Adoption 6th Edition and the combined addendum to that document both published by the WRc Plc.
- All signs and Road markings to be in accordance with "The Traffic Signs Regulations and General Directions 2002". Standard sizes are to be used unless stated otherwise.
- Line Marking:- Thermoplastic Road marking to be carried out in accordance with D.O.T. guidelines by Road Marking Contractor.
- New markings are to be into existing as appropriate.
- Refer to Landscape Agency drawings for landscaping details and positions.
- Refer to Buchanan drawings for associated S278 works on Histon Road.
- Refer to drawing 16483/2000 for site key plan.
- Refer to drawings 16483/2005-8 for Roadworks & Drainage Sheets 2-4.
- Refer to drawings 16483/2009-15, 2018 for Road Longitudinal Sections.
- Refer to drawings 16483/2017-32 for Orbital Cycle Route Longitudinal Sections.
- Refer to drawing 16483/2033 for Hydrobrake Flow Control Chamber Details.

Key

- Site Boundary
- Proposed adoptable FW manhole/sewer
- Proposed adoptable FW manhole/sewer with backdrop
- Proposed adoptable SW manhole/sewer
- Proposed adoptable SW manhole/sewer with backdrop
- Gully
- Double Gully
- Low or High spot
- Block Paving (Used on raised tables & cycleways)
- Tegula Paving (Used on Feature Squares)
- Verge
- Proposed Levels
- Tactile Paving (Blister)
- Tactile Paving (Corduroy)
- Indicative Building Frontage
- Proposed Street Lighting Column



Revision	Description	Drawn	Checked	Date
H	UPDATED TO SLIP LATEST VERTICAL ALIGNMENT & PROPOSALS	SD	SD	18-11-13
G	REVISIONS TO SWALES, GULLIES & IMPROVEMENTS TO LATERAL AND LIGHTING DESIGNS	SD	SD	18-11-13
E	UPDATED TO SLIP LATEST BASE ROAD DRAINAGE & SURFACE FINISHES & LANDSCAPING	SD	SD	27-08-13
C	UPDATED TO SLIP LATEST WASTE ROAD & DRAINAGE LAYOUT	SD	SD	06-05-13
B	REVISED DRAINAGE LAYOUT	SD	SD	01-11-12
A	ROAD S/S ADDED & ROAD L/S (EAST) & S/MARKED TO D.S.M.	SD	SD	30-05-12

Preliminary  Information  Tender  Construction  As Built  Other

**Woods Hardwick**  
 Architects, Engineers and Development Consultants

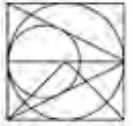
Title: **DARWIN GREEN ONE**  
**CAMBRIDGESHIRE**  
 Details: **ROADWORKS & DRAINAGE**  
**SHEET 4**

Scale: 1:600 @ A0 Date: NOVEMBER 2011 Drawn: SD Ck: IDB

Please consider the environment before printing this drawing

16483/2004 H

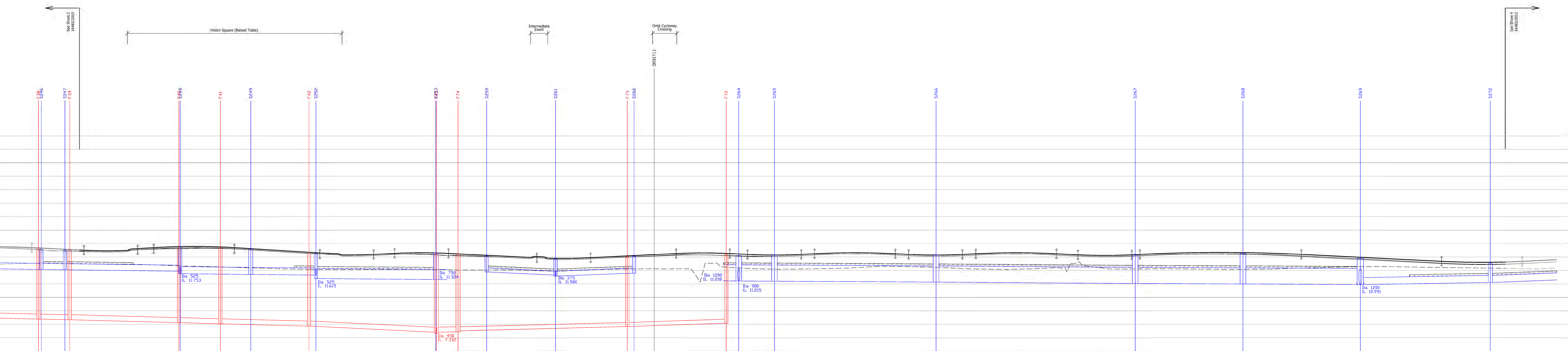




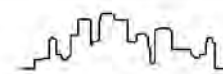
# **Appendix 2**


## **Longitudinal Sections (WH drg.no.16483/ 2011C & 2012C)**



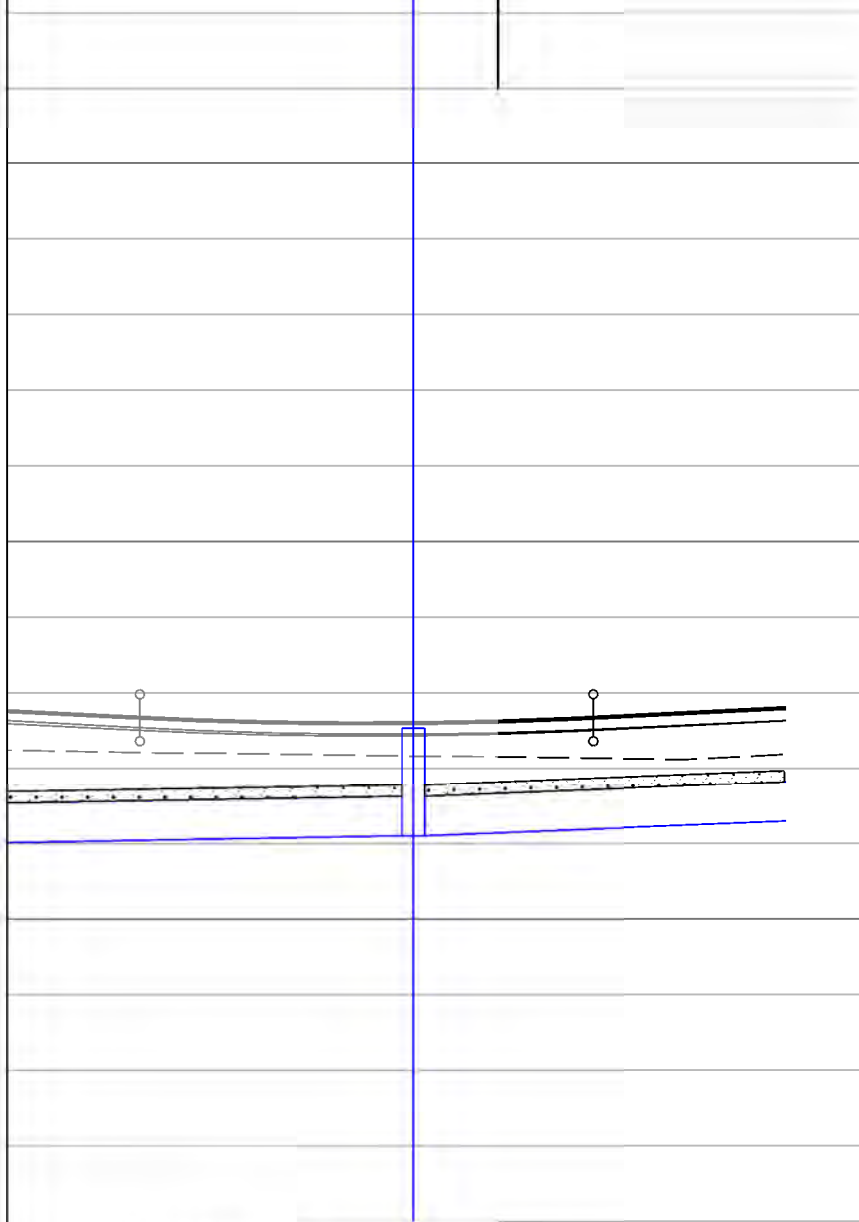






1. All pipes up to and including 300mm diameter to be extra strength vitrified clay to BS.EN295 & BS.65.
2. All pipes greater than 300mm diameter to be Class 120 concrete to BS.5911.
3. All pipes laid with class S bed or class S[S] Concrete Protection.
  -  Class S[S] concrete protection on all pipes with less than 1200mm of cover under highways or 900mm of cover under open space.
4. Precise depth of existing sewers to be confirmed before proceeding with any other works. Drainage MUST be laid from outfall end first.
5. All adoptable drainage shall conform to the Design and Construction Guide for Developers, Sewers for Adoption 6th Edition published by the WRC plc and any Anglian Water Services Additions and Deletions.
6. All existing FW & SW manholes to be raised to new carriageway levels.

S27/2  
See Sheet 3  
16483/2011

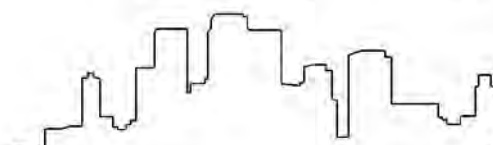


ROAD 1.0

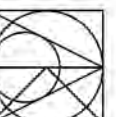
CHAINAGE	1580.000	1581.297	1590.000	1594.112
EXISTING GROUND LEVEL	12.141		12.145	12.188
ALIGNMENT LEVEL	12.659	12.672	12.759	12.800
VERTICAL ALIGNMENT	G = 1.000% 1: 1000			
HORIZONTAL ALIGNMENT				
LEFT HAND CHANNEL	12.493	12.542	12.592	12.633
CENTRE LINE	12.659	12.709	12.759	12.800
RIGHT HAND CHANNEL	12.505	12.551	12.597	12.635
CROSSFALLS				
STORMWATER COVER LEVEL				
STORMWATER INVERT				
STORMWATER DETAILS	Pipe 58.000 Dia 525 Circular CONC 1 in 125			
STORMWATER LENGTHS	41.118			
FOULWATER COVER LEVEL				
FOULWATER INVERT				
FOULWATER DETAILS				
FOULWATER LENGTHS				

C	UPDATED TO SUIT LATEST VERTICAL ALIGNMENT & PROPOSALS	SD	IDB	29/11/13
B	UPDATED TO SUIT LATEST BASE, ROAD & DRAINAGE DESIGN	SD	JF	09/01/13
A	UPDATED TO SUIT LATEST LAYOUT	SD	JF	13/04/12
Revision	Description	Drawn	Checked	Date

Preliminary  Information  Tender  Construction  As Built



**Woods Hardwick**  
Architects, Engineers and Development Consultants



Title **DARWIN GREEN ONE  
CAMBRIDGESHIRE**

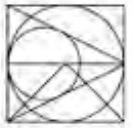
Details **ROAD 1.0 LONG-SECTION  
SHEET 4**

15-17 Goldington Road  
Bedford  
MK40 3NH  
United Kingdom  
T: +44 (0)1234 268862  
F: +44 (0)1234 353034  
mail@woodshardwick.com  
www.woodshardwick.com

Scale: 1:500 H & 1:100 V @ A2 Date: DECEMBER 2011 Drawn: SD Chk: JGF

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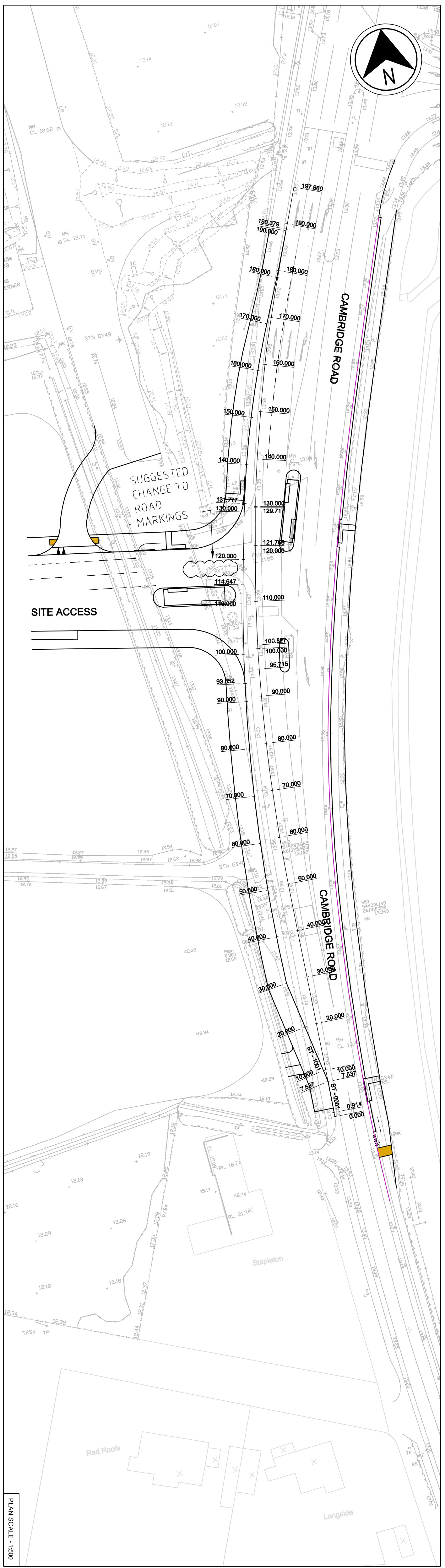
## **Appendix 3**

# **Longitudinal and Cross Sections**

**(SKM**

**drg.nos.UN12455/ECC/DG/1100A,  
1101A, 1201A and 1202)**





15.000

ST-1001  
DATUM 10.000

CHANGING	EXISTING GROUND LEVEL	PROPOSED GROUND LEVEL
7.537	13.554	13.554
10.000	13.584	13.595
20.000	13.604	13.651
22.640	13.615	13.615
28.640	13.627	13.478
29.950	13.626	13.478
30.123	13.626	13.478
38.630	13.593	13.475
40.000	13.584	13.475
46.680	13.540	13.908
53.670	13.509	13.908
60.000	13.497	13.327
70.000	13.477	13.364
73.105	13.471	13.364
80.000	13.452	13.422
83.514	13.439	13.422
90.000	13.412	13.465
94.439	13.394	13.465
100.000	13.375	13.495
110.000	13.355	13.456
114.656	13.389	13.456
114.849	13.363	13.456
117.516	13.355	13.220
120.000	13.355	13.220
128.189	13.376	13.273
130.000	13.376	13.273
133.864	13.389	13.389
136.316	13.397	13.397
139.138	13.401	13.512
140.000	13.401	13.512
141.526	13.398	13.398
143.913	13.385	13.385
145.163	13.396	13.396
150.000	13.402	13.523
152.030	13.405	13.523
158.280	13.409	13.409
158.818	13.408	13.408
159.357	13.408	13.537
160.000	13.408	13.537
166.866	13.414	13.553
170.000	13.419	13.553
173.137	13.430	13.430
177.209	13.431	13.431
179.462	13.431	13.431
180.000	13.431	13.431
180.738	13.431	13.431
181.293	13.431	13.431
185.838	13.435	13.435
190.000	13.443	13.442
190.379	13.443	13.443

15.000

ST-1002

15.000

ST-0001

HISTON ROAD  
PROPOSED LONGITUDINAL SECTION  
ST-1001 - CHANGING 7.537m - 190.379m  
SCALE: 1:500 (VERTICAL)

15.000

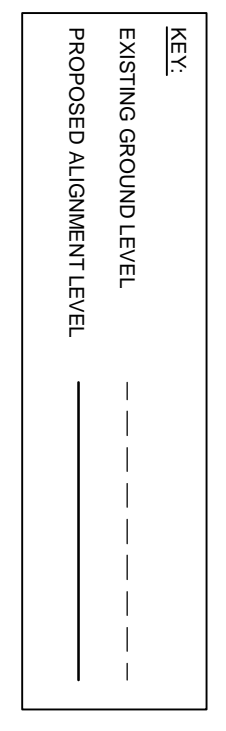
ST-0001  
DATUM 10.000

CHANGING	EXISTING GROUND LEVEL	PROPOSED GROUND LEVEL
0.000	13.559	13.559
10.000	13.553	10.134
10.000	13.553	13.720
20.000	13.539	24.204
24.204	13.539	24.204
25.323	13.511	25.323
30.000	13.511	30.000
37.422	13.466	37.422
37.787	13.466	37.787
40.000	13.466	40.000
48.453	13.406	48.453
50.000	13.406	50.000
60.000	13.376	60.000
60.853	13.376	60.853
63.833	13.376	63.833
63.915	13.376	63.915
70.000	13.370	70.000
73.396	13.350	73.396
77.120	13.350	77.120
80.000	13.350	80.000
87.284	13.308	87.284
90.000	13.308	90.000
90.725	13.308	90.725
98.264	13.278	98.264
100.000	13.278	100.000
101.750	13.278	101.750
109.820	13.292	109.820
110.000	13.292	110.000
114.044	13.264	114.044
114.686	13.264	114.686
120.000	13.264	120.000
123.814	13.314	123.814
130.000	13.314	130.000
131.368	13.343	131.368
136.328	13.343	136.328
140.000	13.343	140.000
140.502	13.359	140.502
141.702	13.359	141.702
150.000	13.377	150.000
151.304	13.377	151.304
153.531	13.377	153.531
162.887	13.405	162.887
163.922	13.405	163.922
167.485	13.405	167.485
170.000	13.428	170.000
172.927	13.428	172.927
175.173	13.428	175.173
175.670	13.428	175.670
180.000	13.446	180.000
182.380	13.446	182.380
184.708	13.446	184.708
185.410	13.446	185.410
190.000	13.467	190.000

15.000

HISTON ROAD  
EXISTING CHANNEL LINE  
ST-0001 - CHANGING 0.000m - 197.860m  
SCALE: 1:500 (HORIZONTAL)  
SCALE: 1:100 (VERTICAL)

- Notes:
- All dimensions are in metres unless otherwise stated.
  - Do not scale from the drawing.



**FOR APPROVAL**

DRAWING STATUS

REV	DATE	DRAWN	REV'D	APPROV	REVISION
A	13/11/13	JJ	ET	SR	UPDATED TO REFLECT LATEST LAYOUT CHANGES

CLIENT: BARRATT HOMES

PROJECT: HISTON ROAD, CAMBRIDGE  
S278 WORKS

SKM COLIN BUCHANAN  
Senior Knight Merz Colin Buchanan  
20 St Dunstons Street  
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Tel: +44(0)20 7338 6100  
Fax: +44(0)20 7338 6103  
Web: www.skmconsulting.com

DESIGNED	DESIGN CHECK	DESIGN REVIEW	DATE	DATE
SAM	SAM	SR	27.03.13	27.03.13

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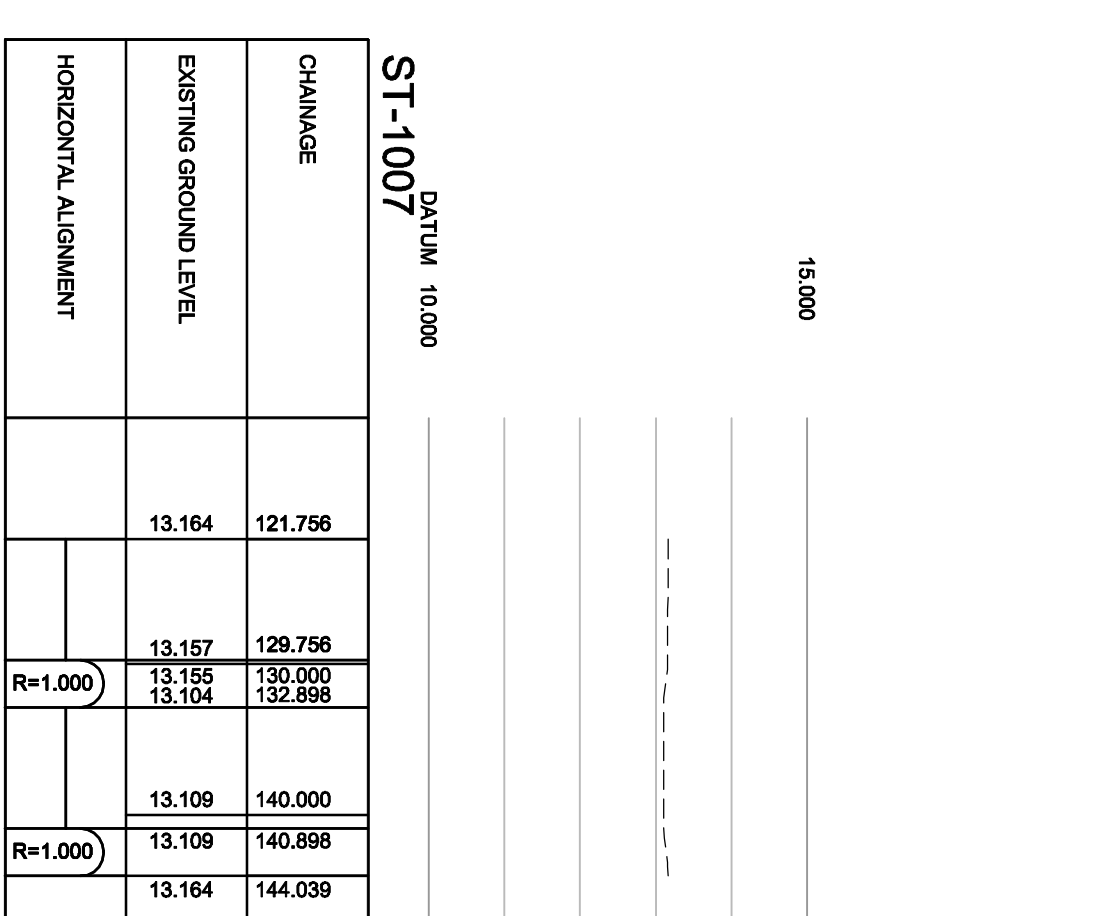
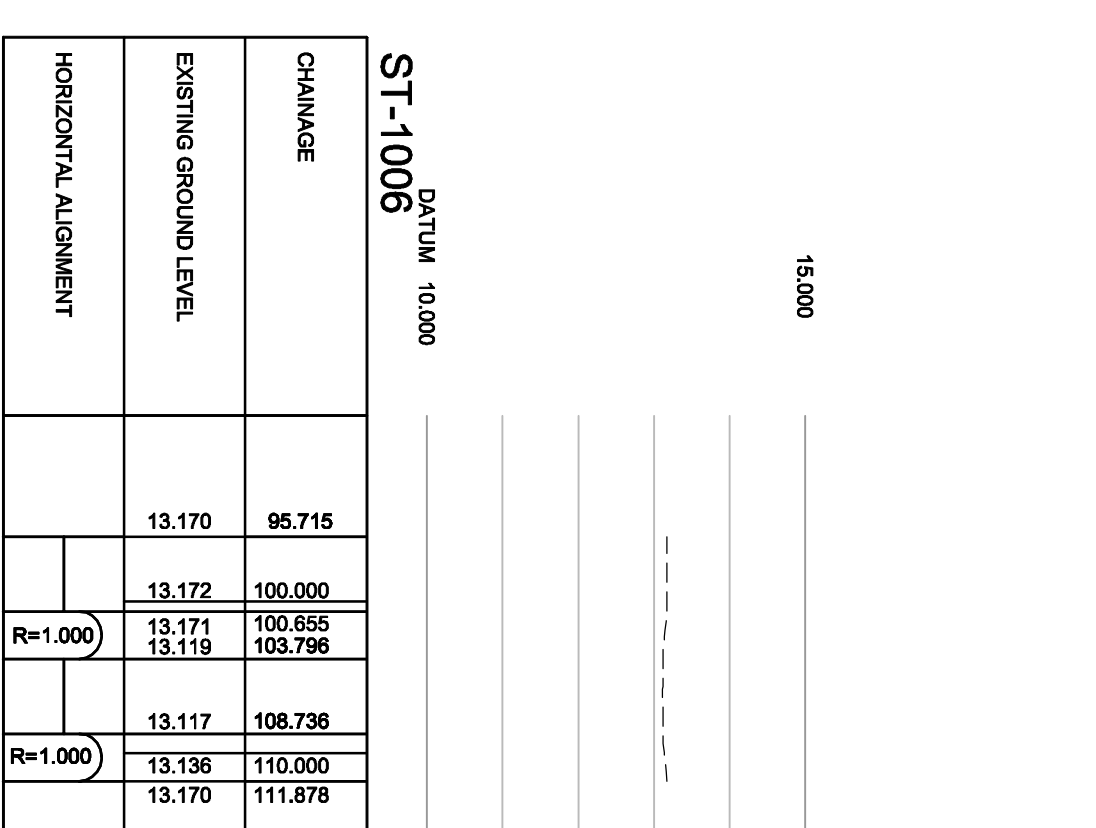
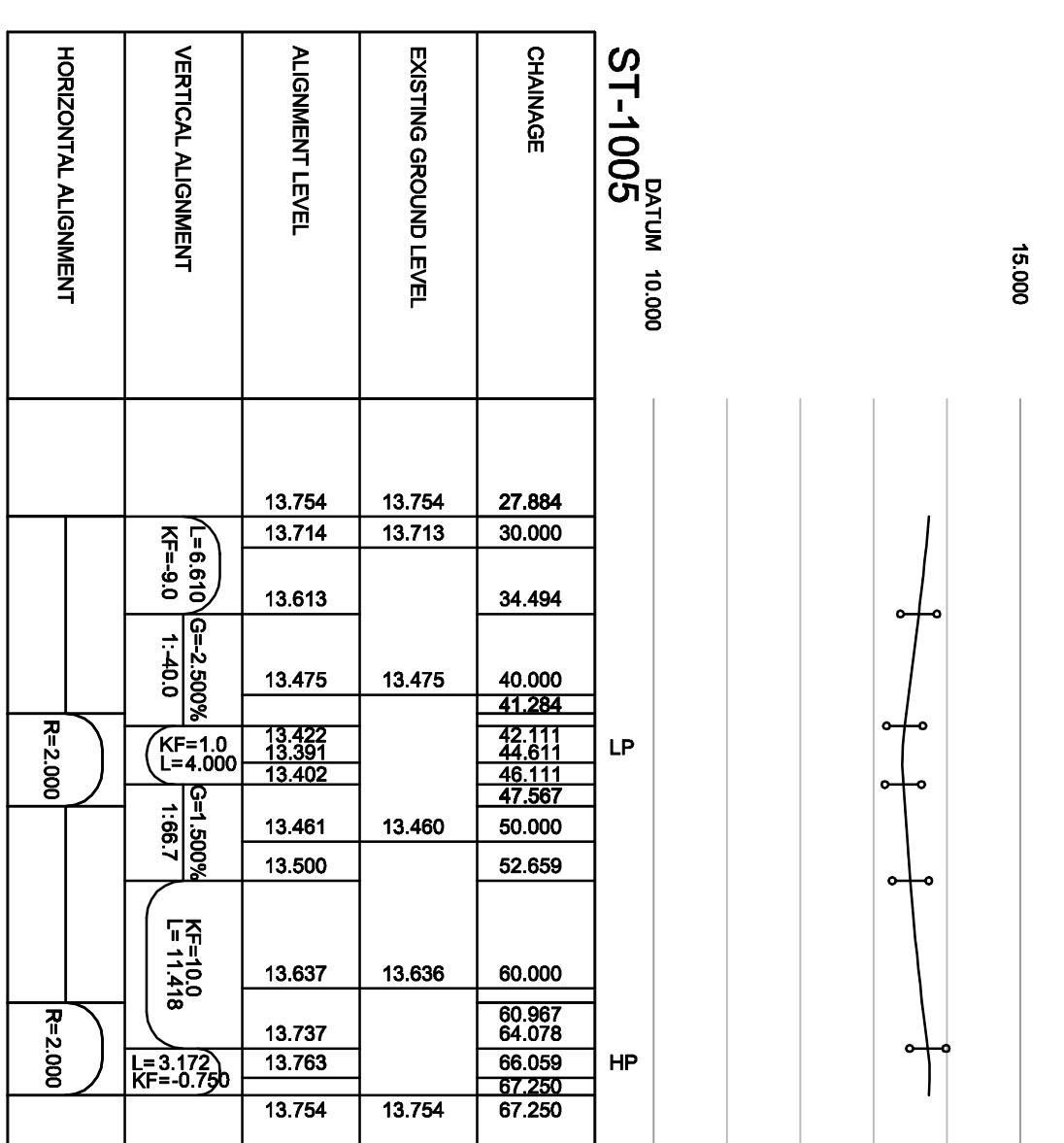
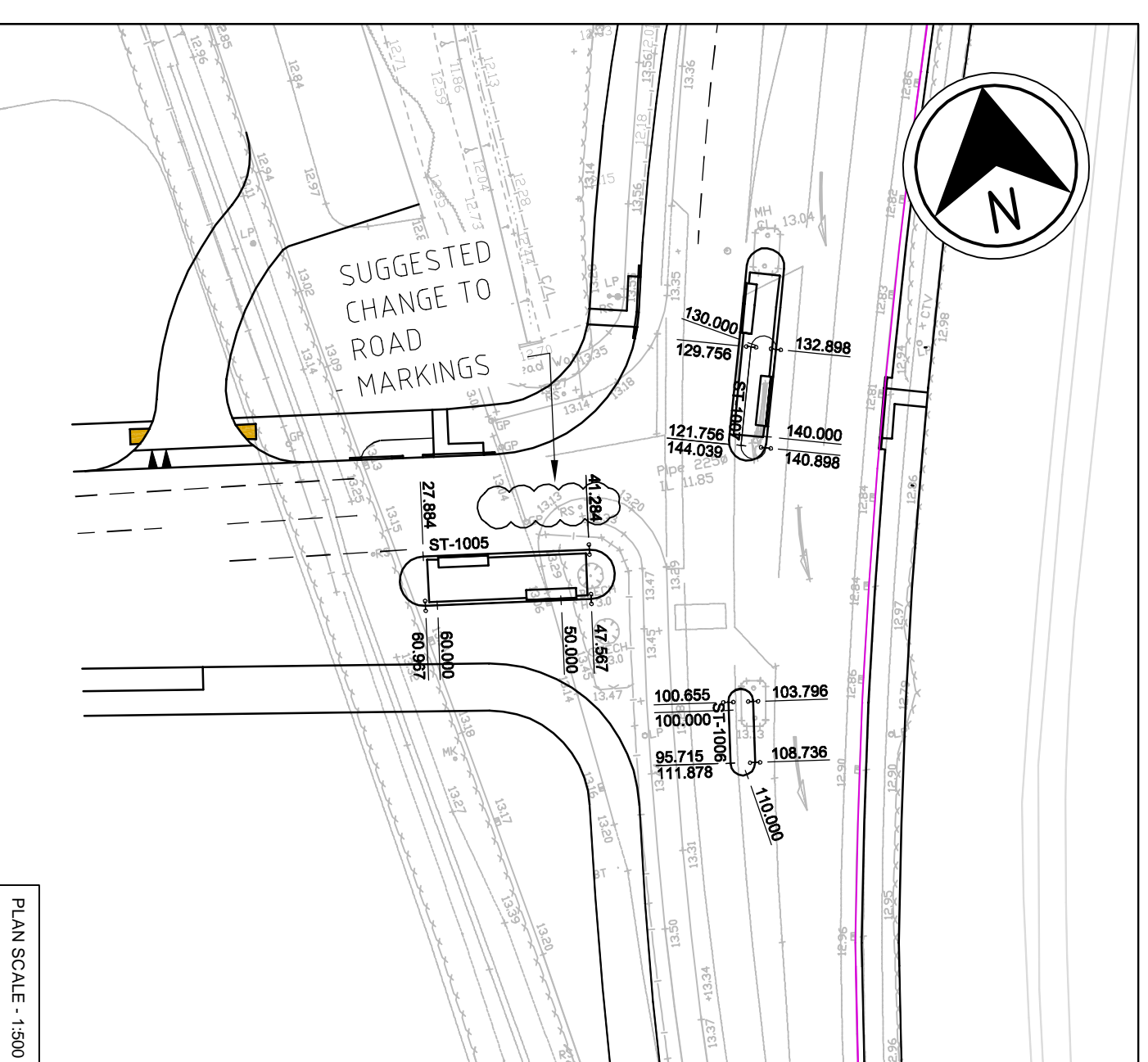
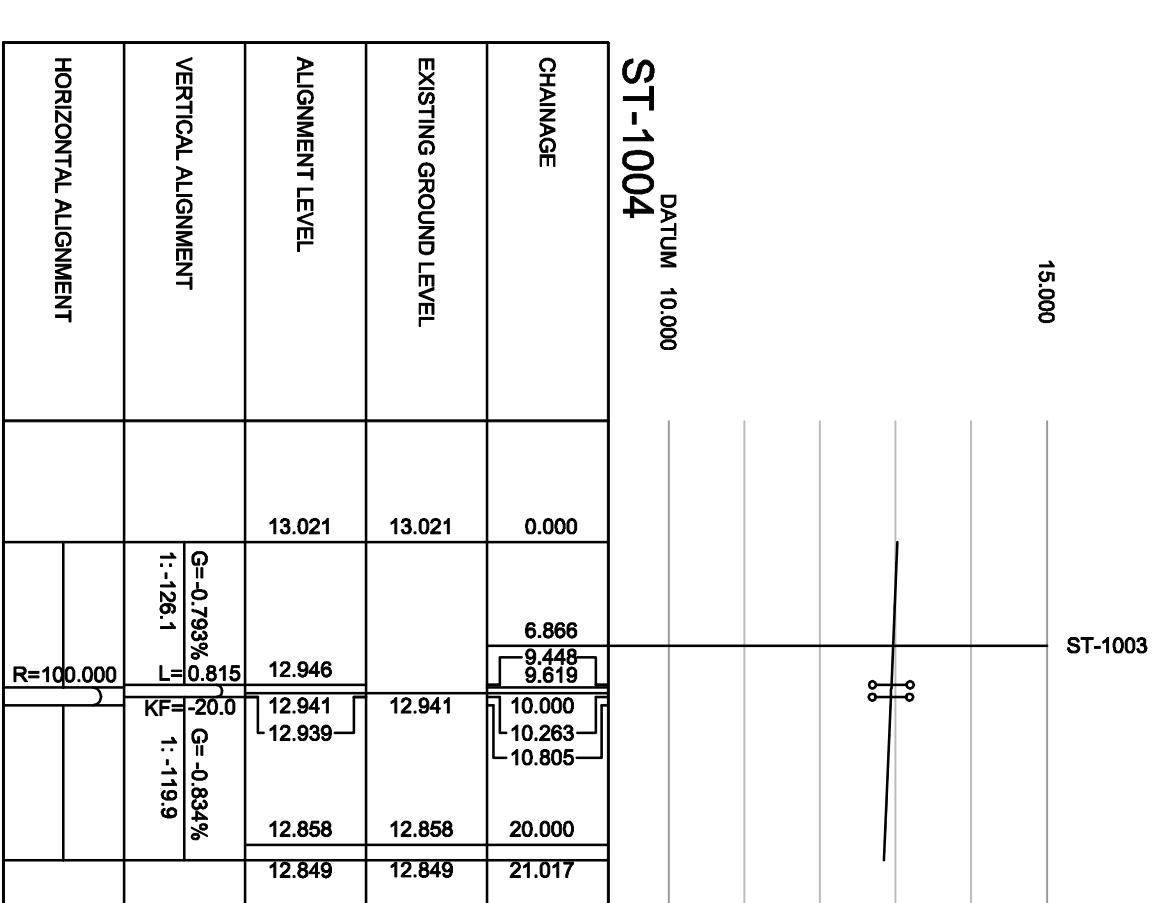
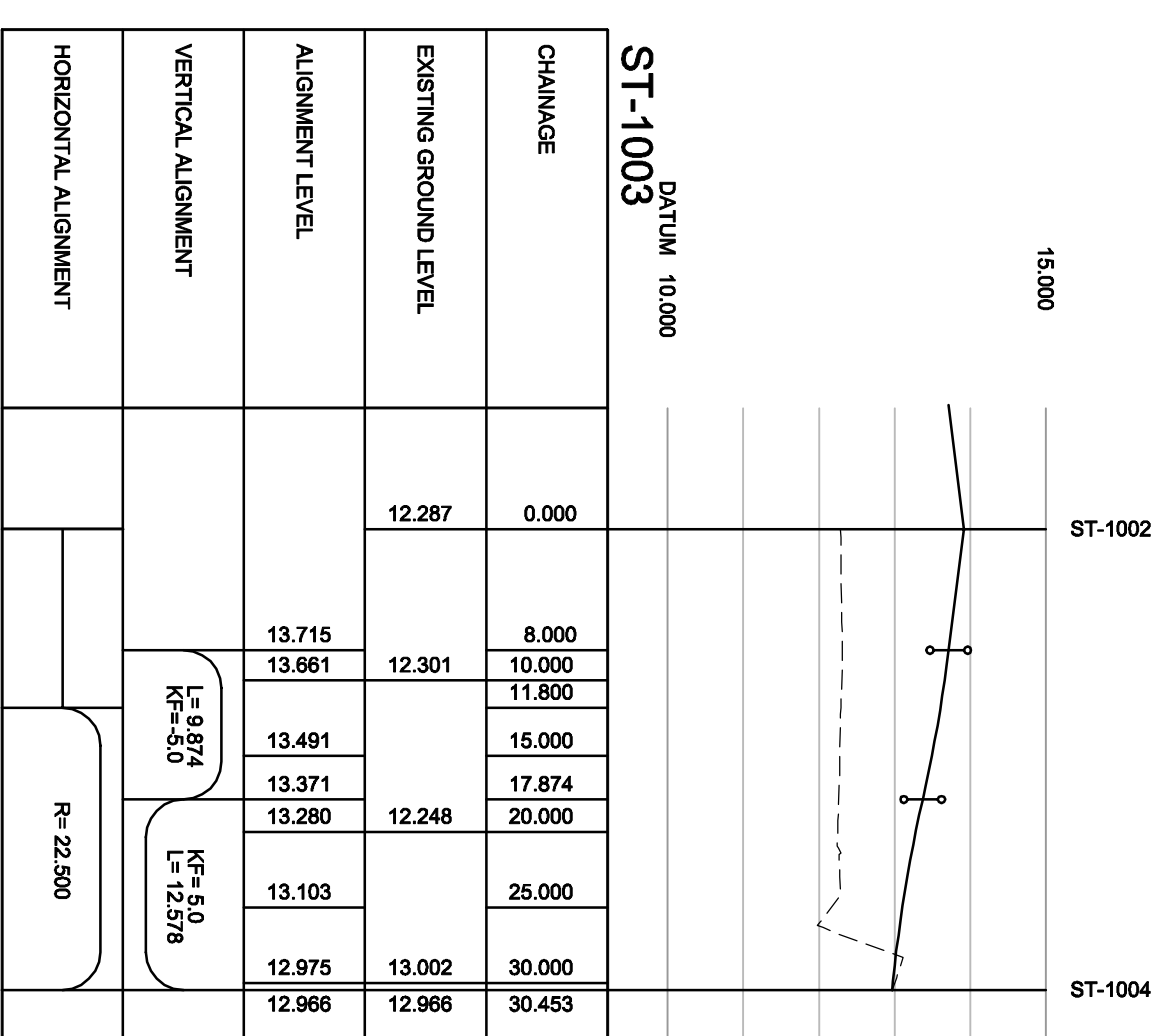
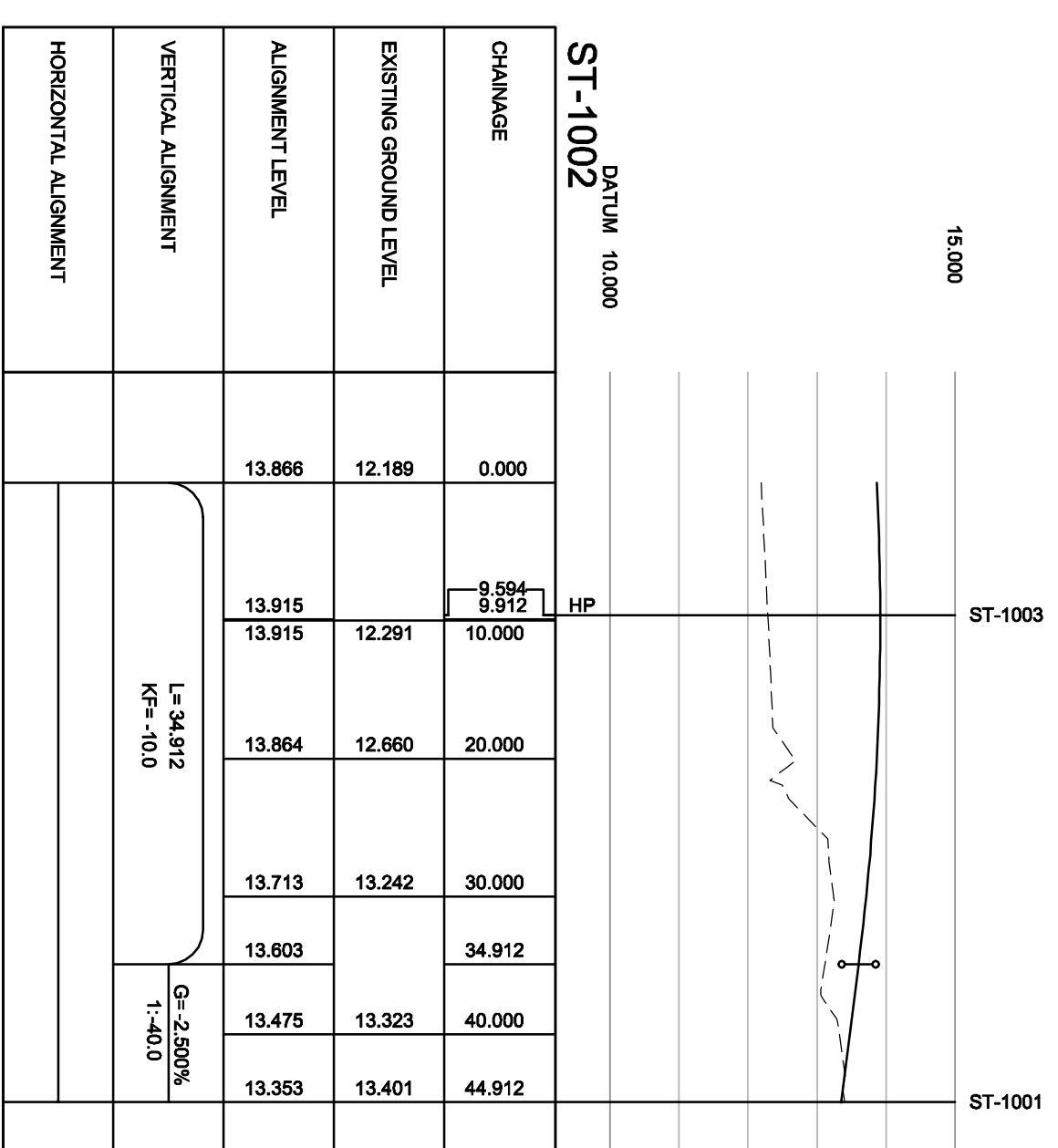
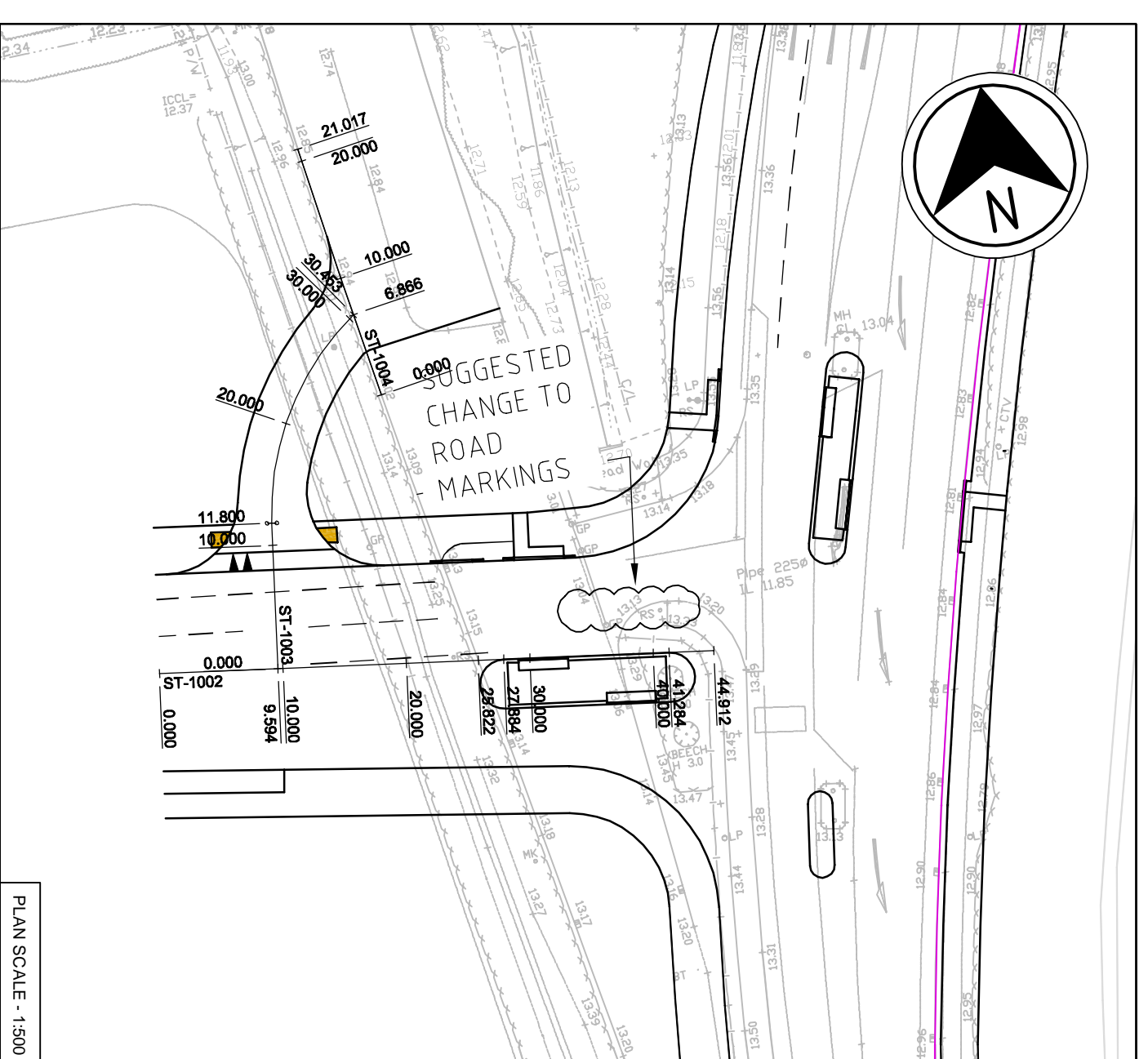
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REV	DATE
A	



- Notes:
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  2. Do not scale from the drawing.



DRAWING STATUS

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REV	DATE	DRAWN	REV'D	APPRO	REVISION
A	13/11/13	JJ	ET	SR	UPDATED TO REFLECT LATEST LAYOUT CHANGES

CLIENT: BARRATT HOMES

PROJECT: HISTON ROAD CAMBRIDGE

DESIGNER: S278 WORKS

SKM COLIN BUCHANAN

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JOB	DESIGNED	DESIGNED CHECK	DATE	SR	DATE	SR
SAM	SR	SR	27.03.13	SR	27.03.13	SR

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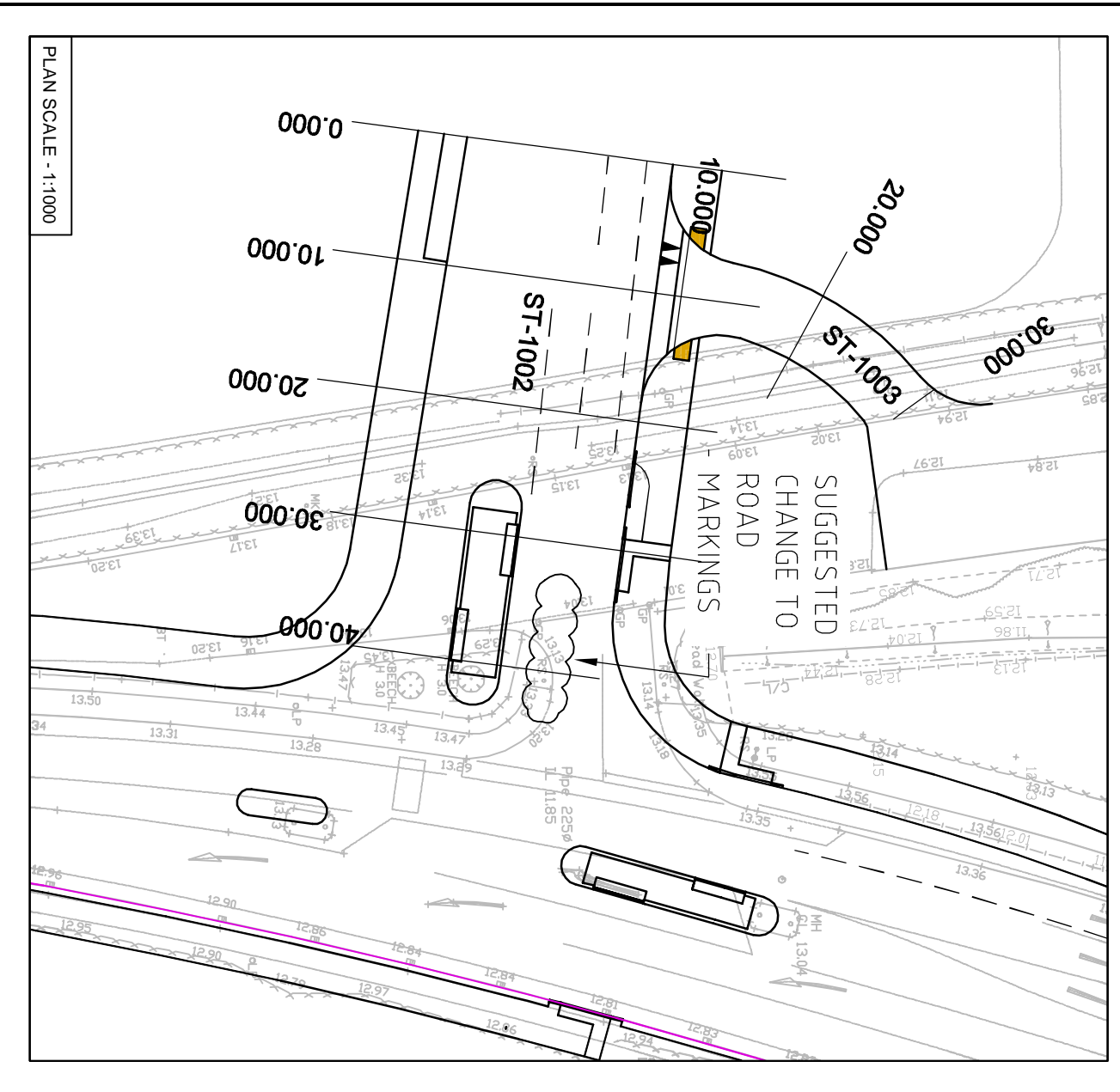
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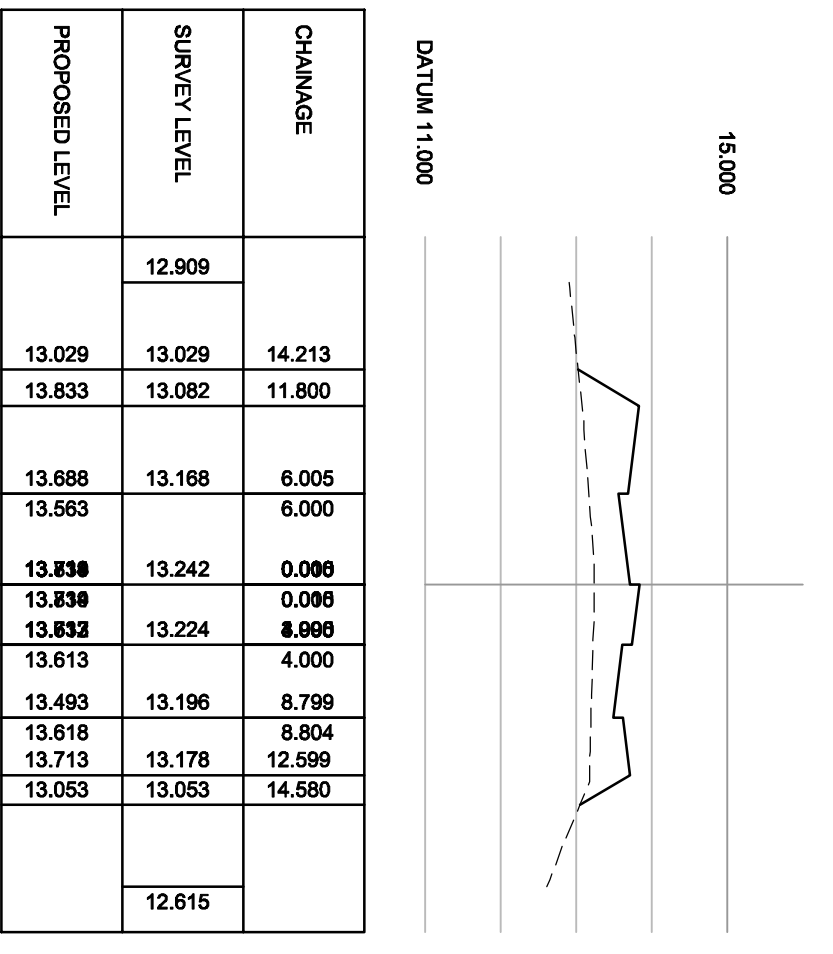
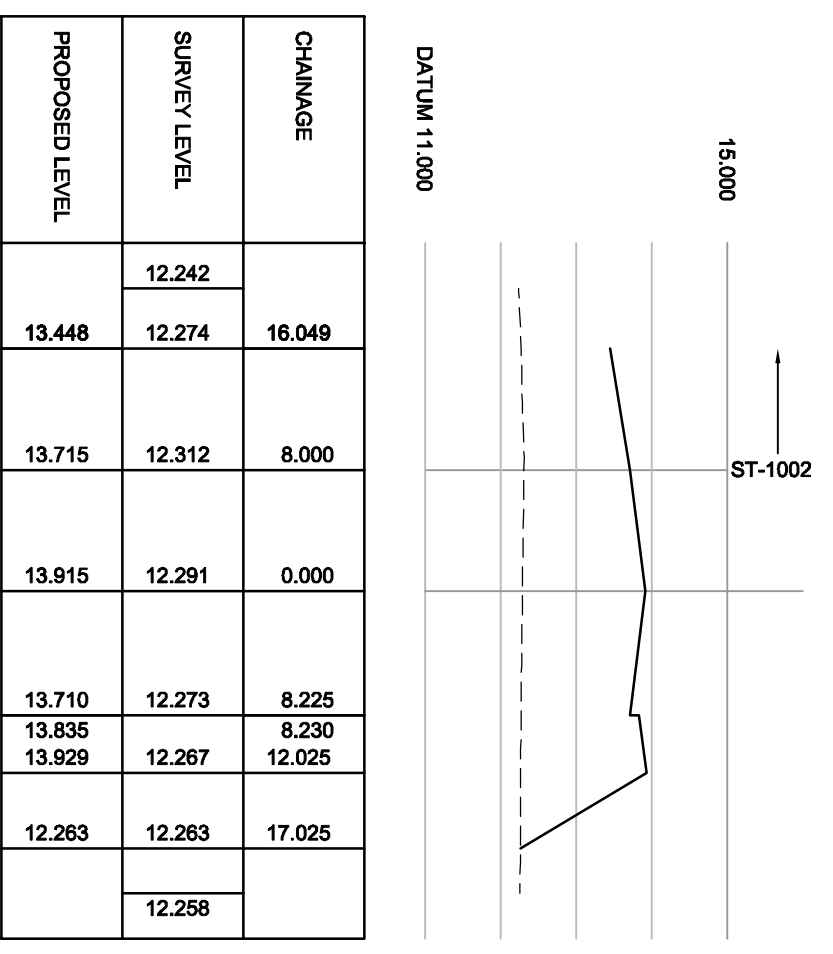
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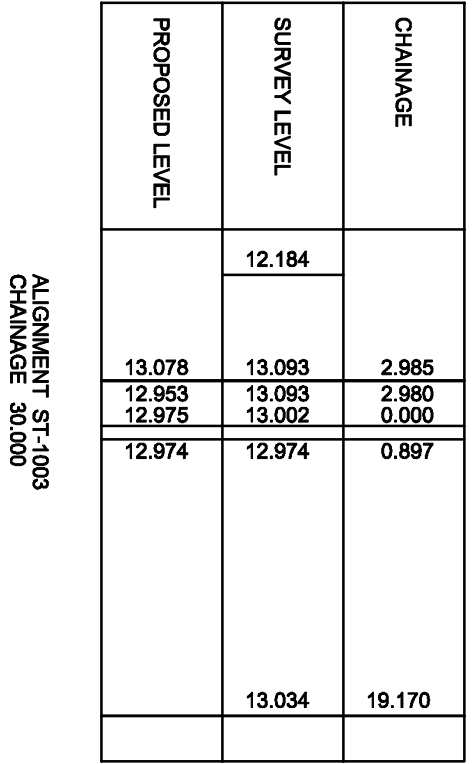
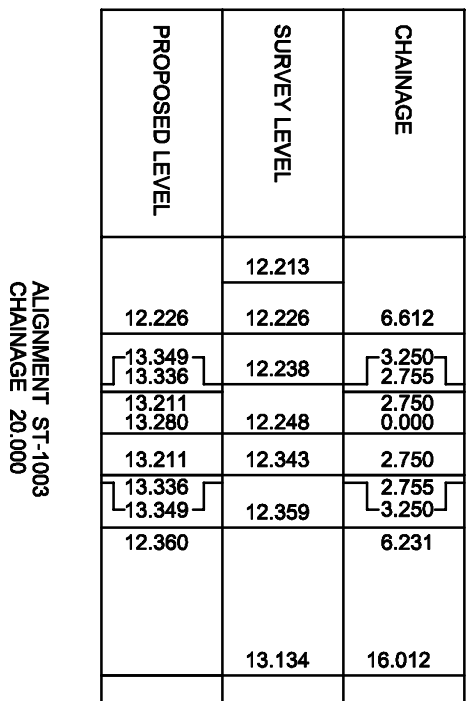
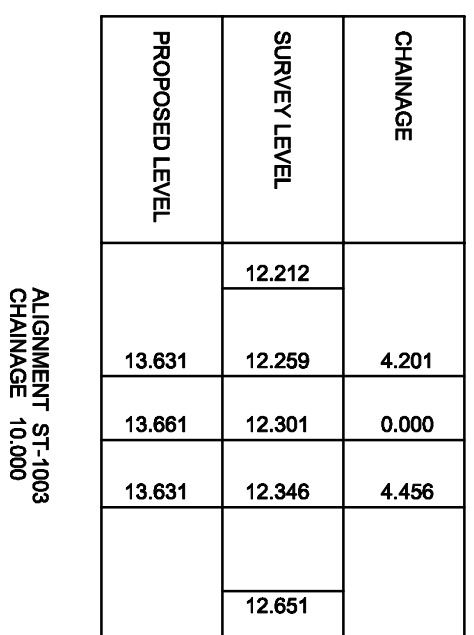
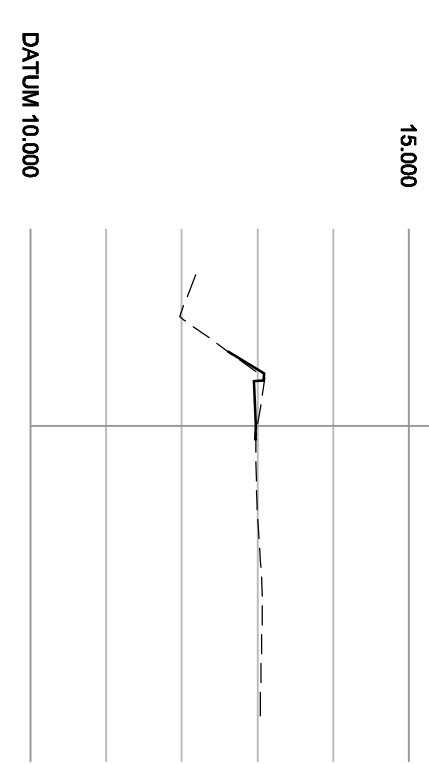
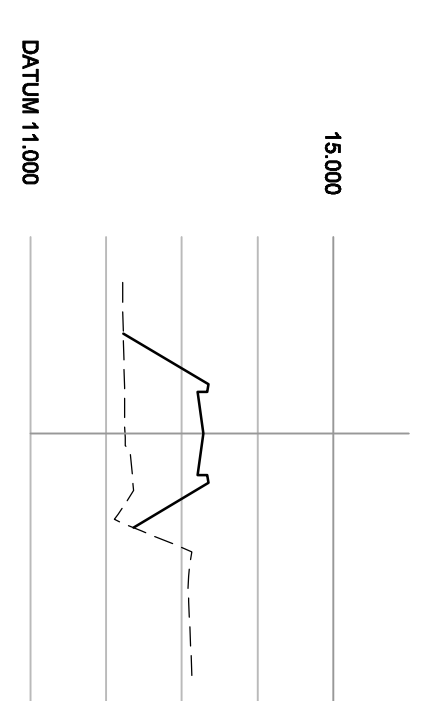
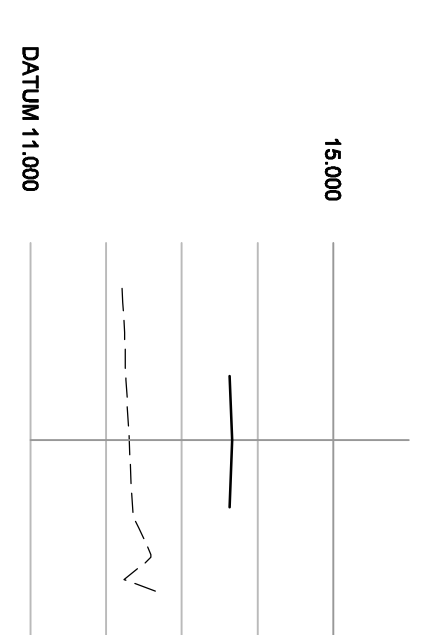
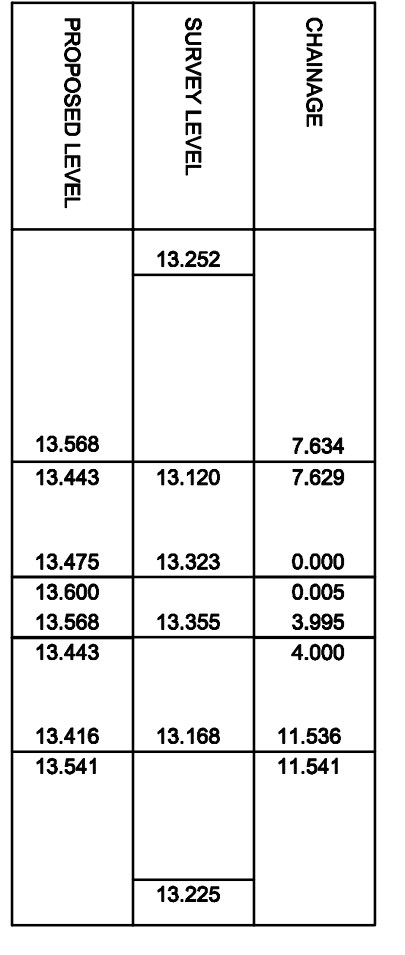
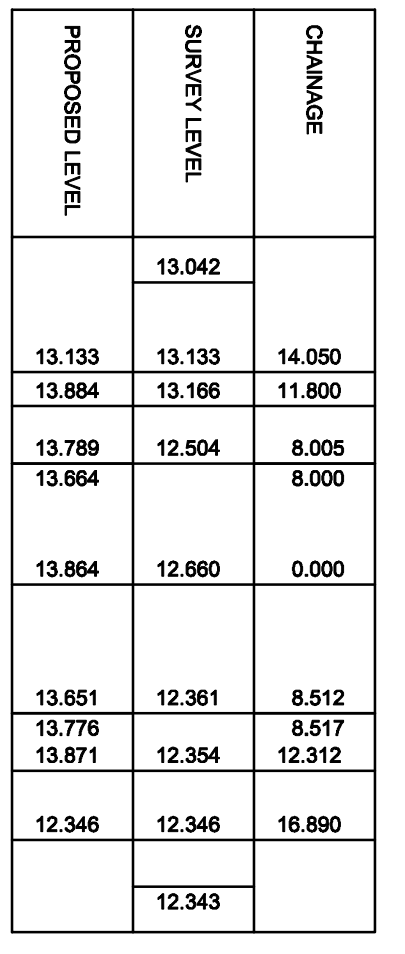
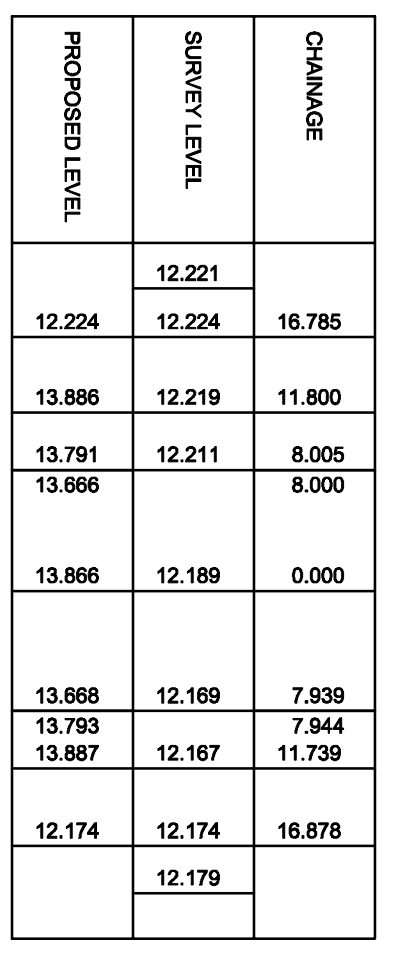
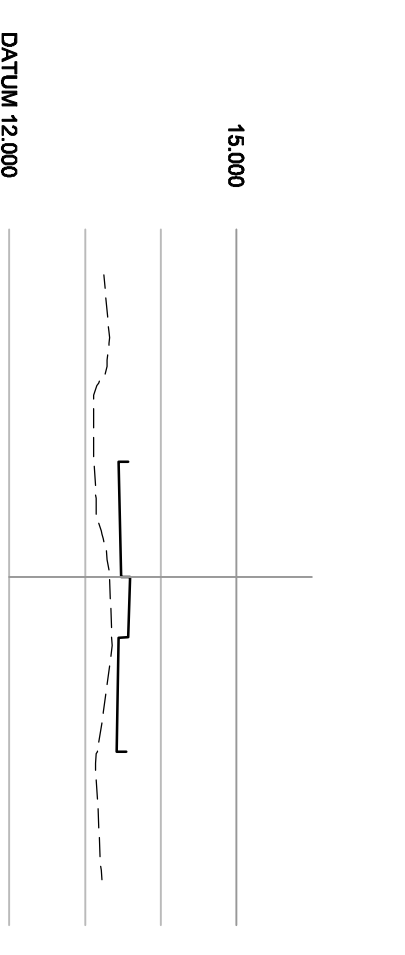
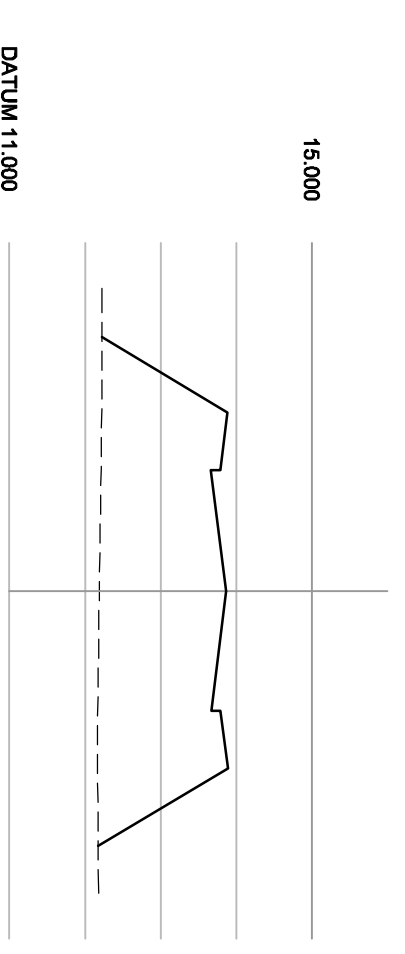




ACCESS & LINK ROAD  
 PROPOSED CROSS SECTIONS  
 SCALE: 1:500 (HORIZONTAL)  
 SCALE: 1:100 (VERTICAL)



KEY:  
 EXISTING SURVEY LEVEL  
 PROPOSED ALIGNMENT LEVEL



- Notes:
1. All dimensions are in metres unless otherwise stated.
  2. Do not scale from the drawing.

REV	DATE	DRAWN	REVO	APPR	REVISION
A	13/11/12	JJ	ET	SR	UPDATED TO REFLECT LATEST LAYOUT CHANGES

DRAWING STATUS  
**FOR APPROVAL**

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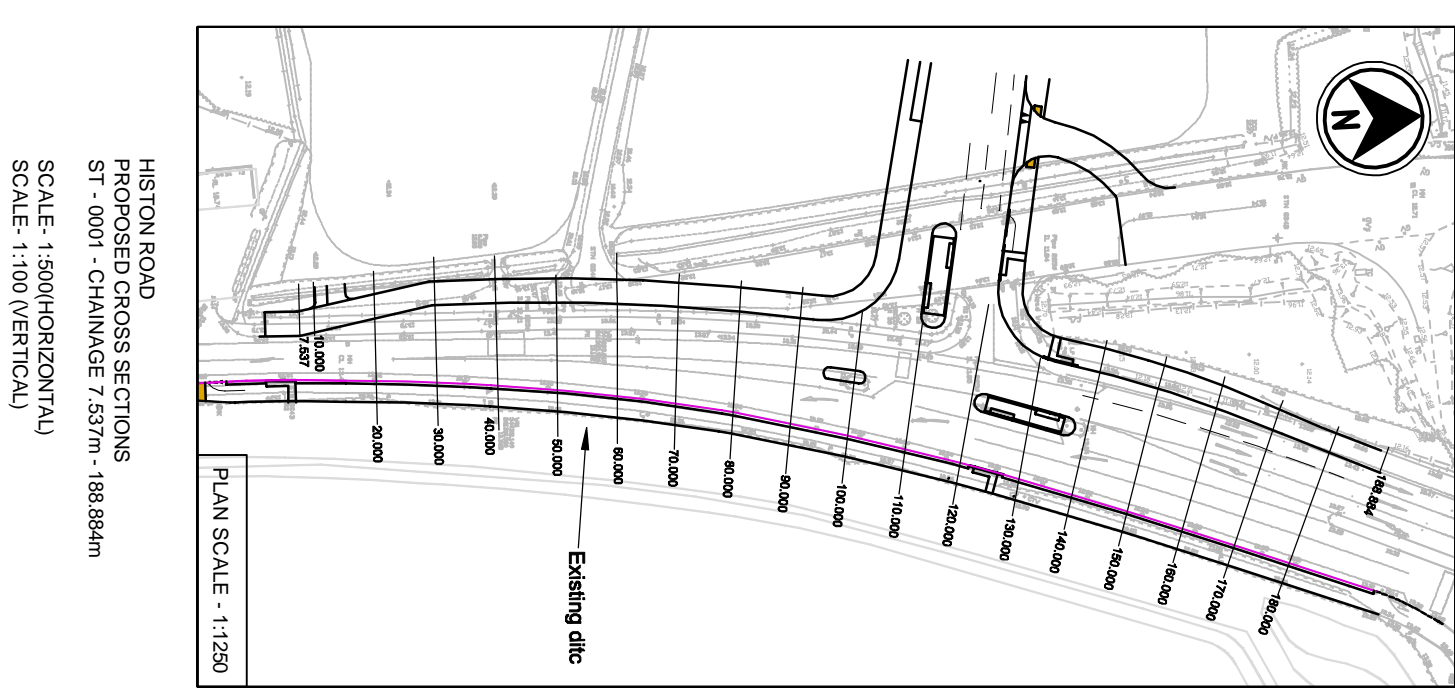
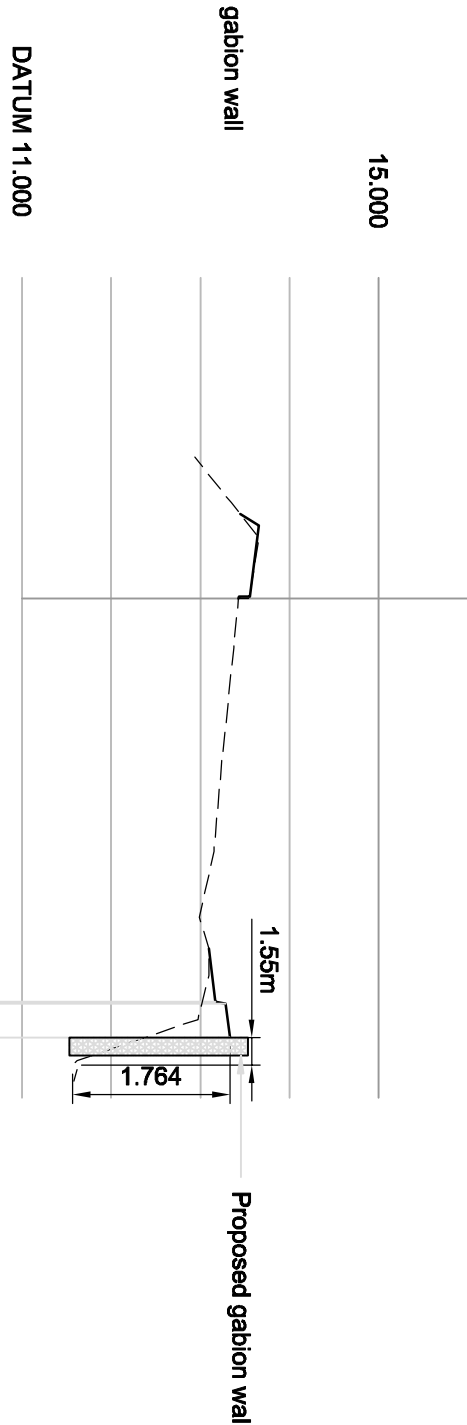
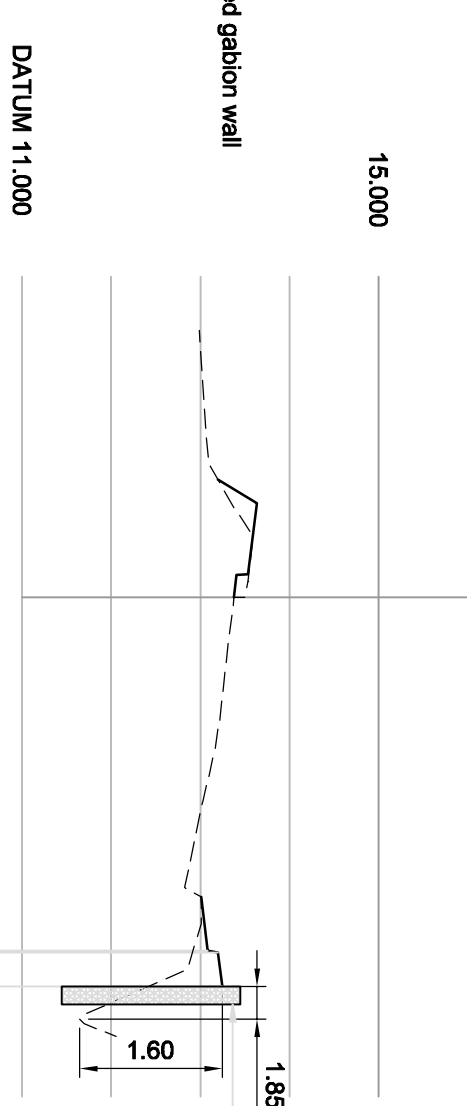
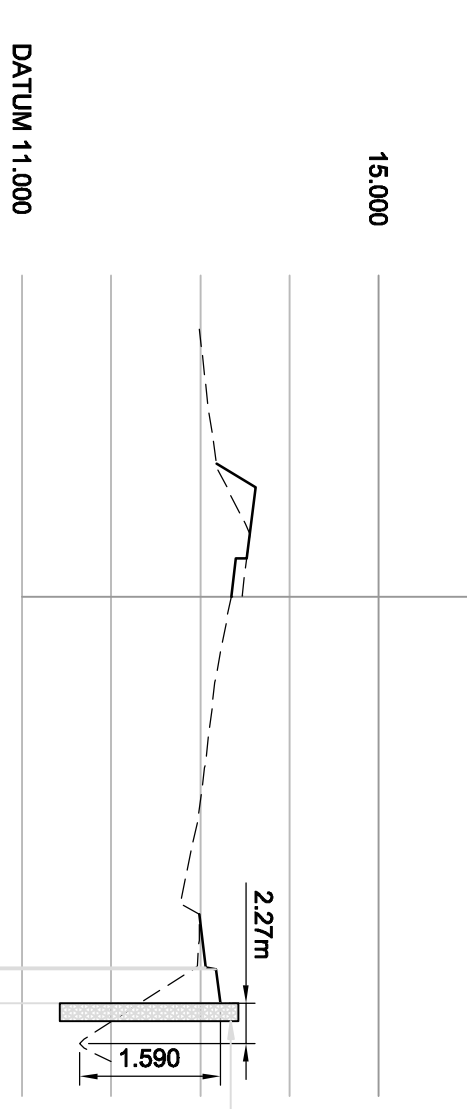
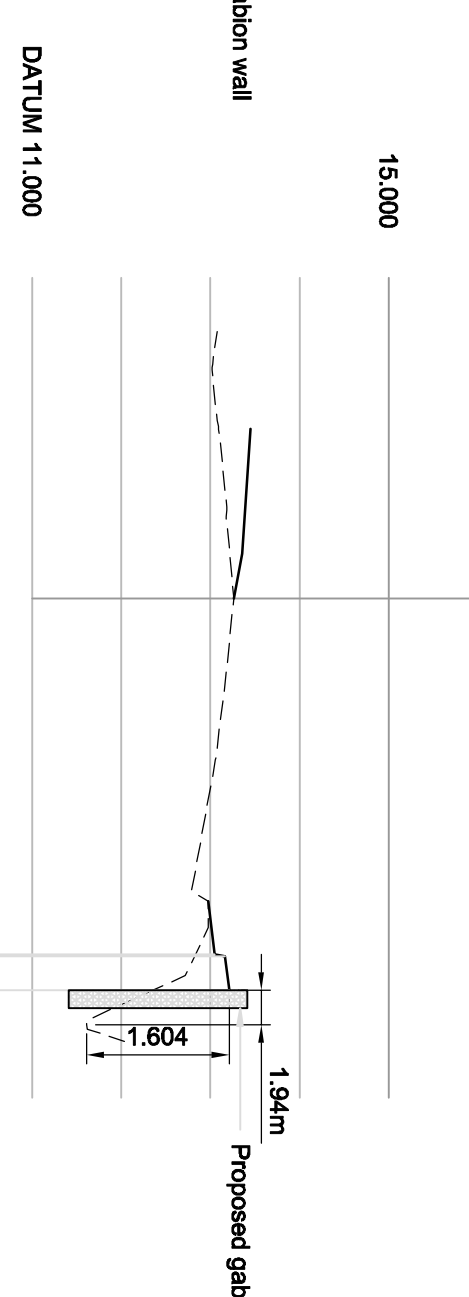
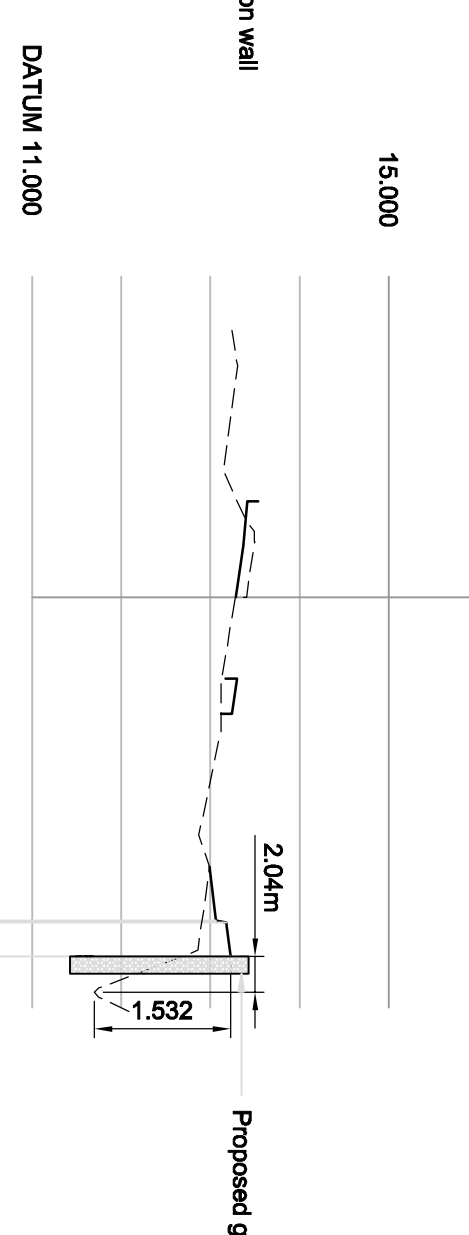
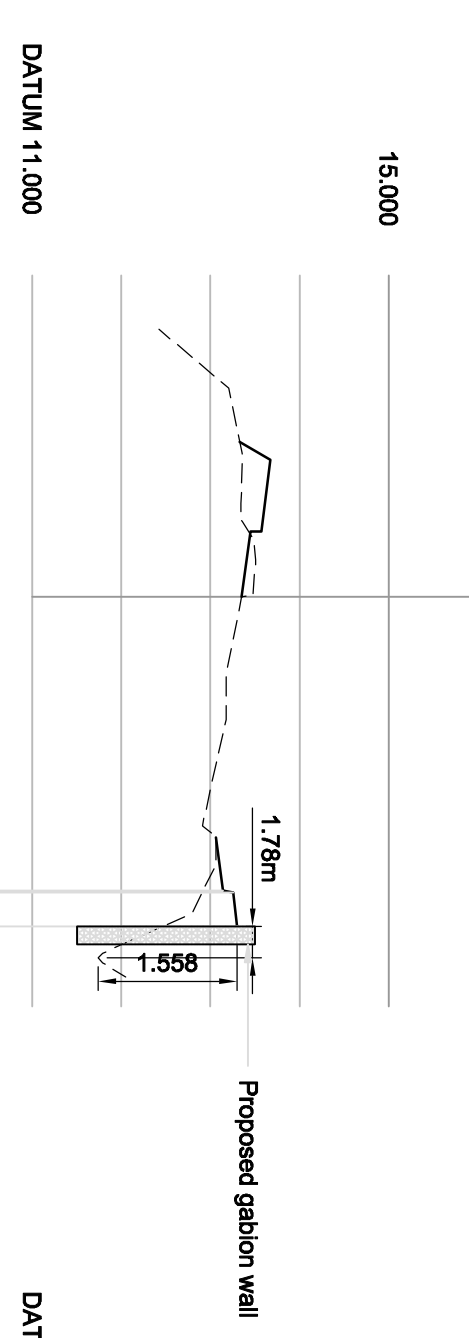
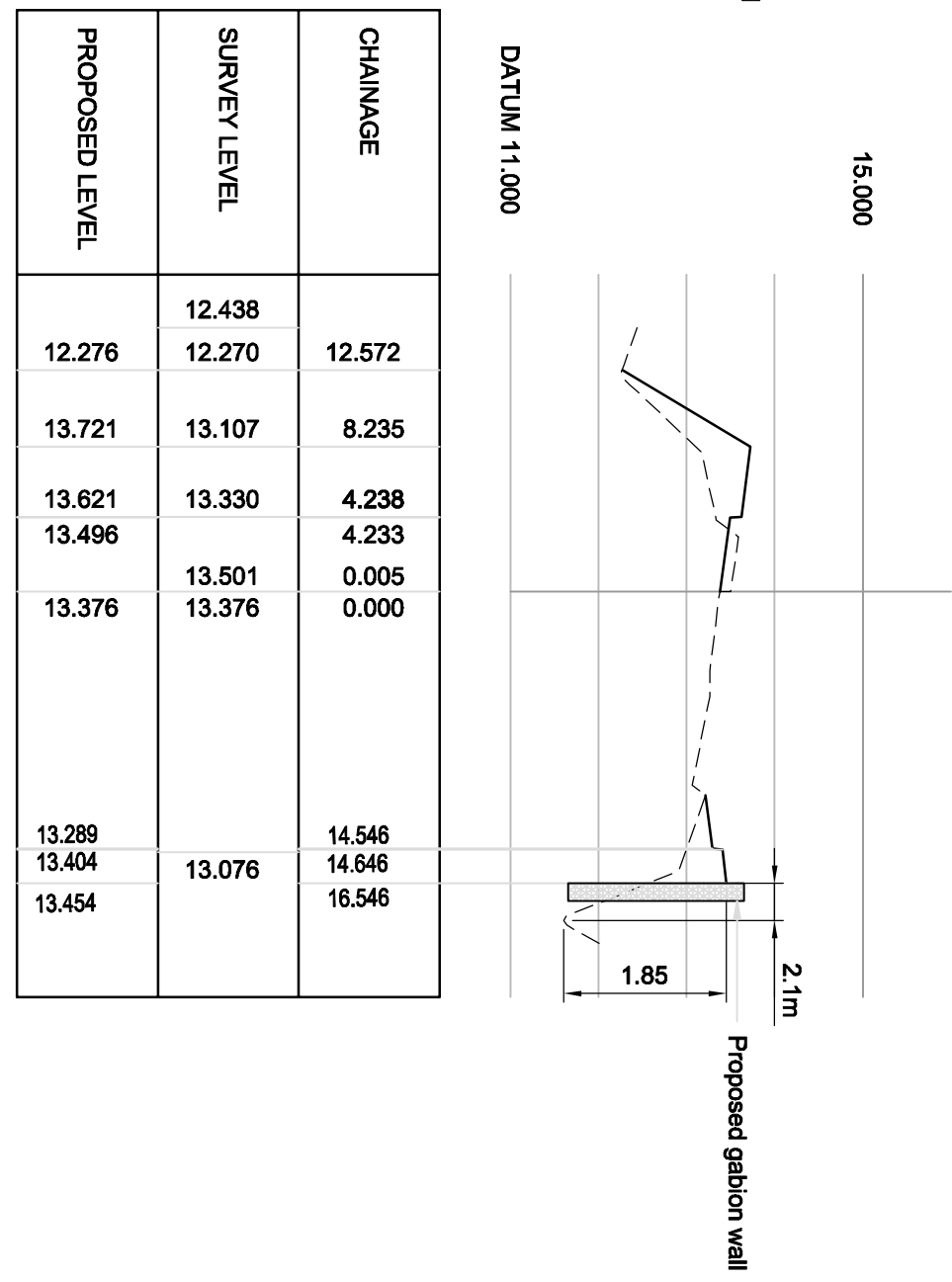
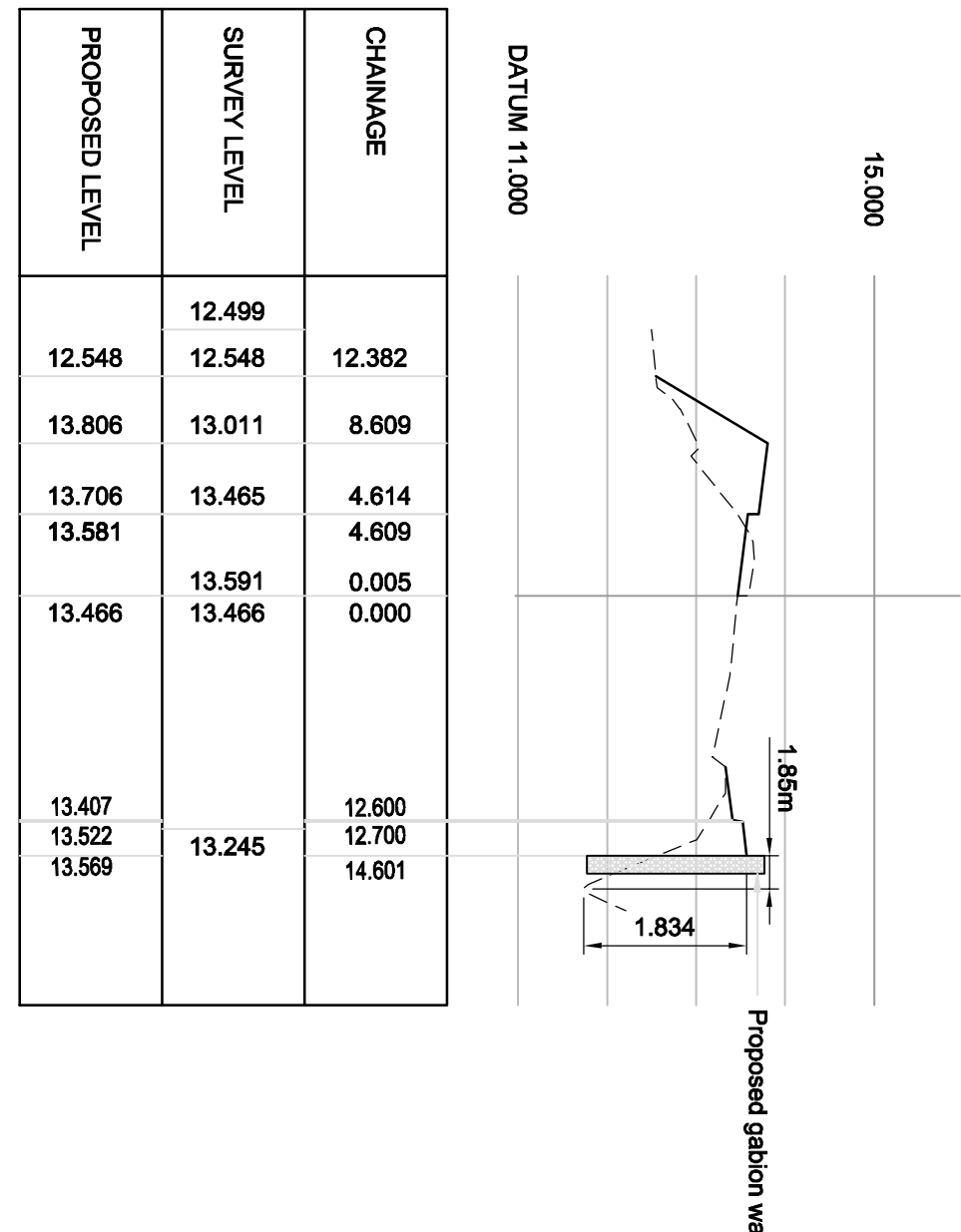
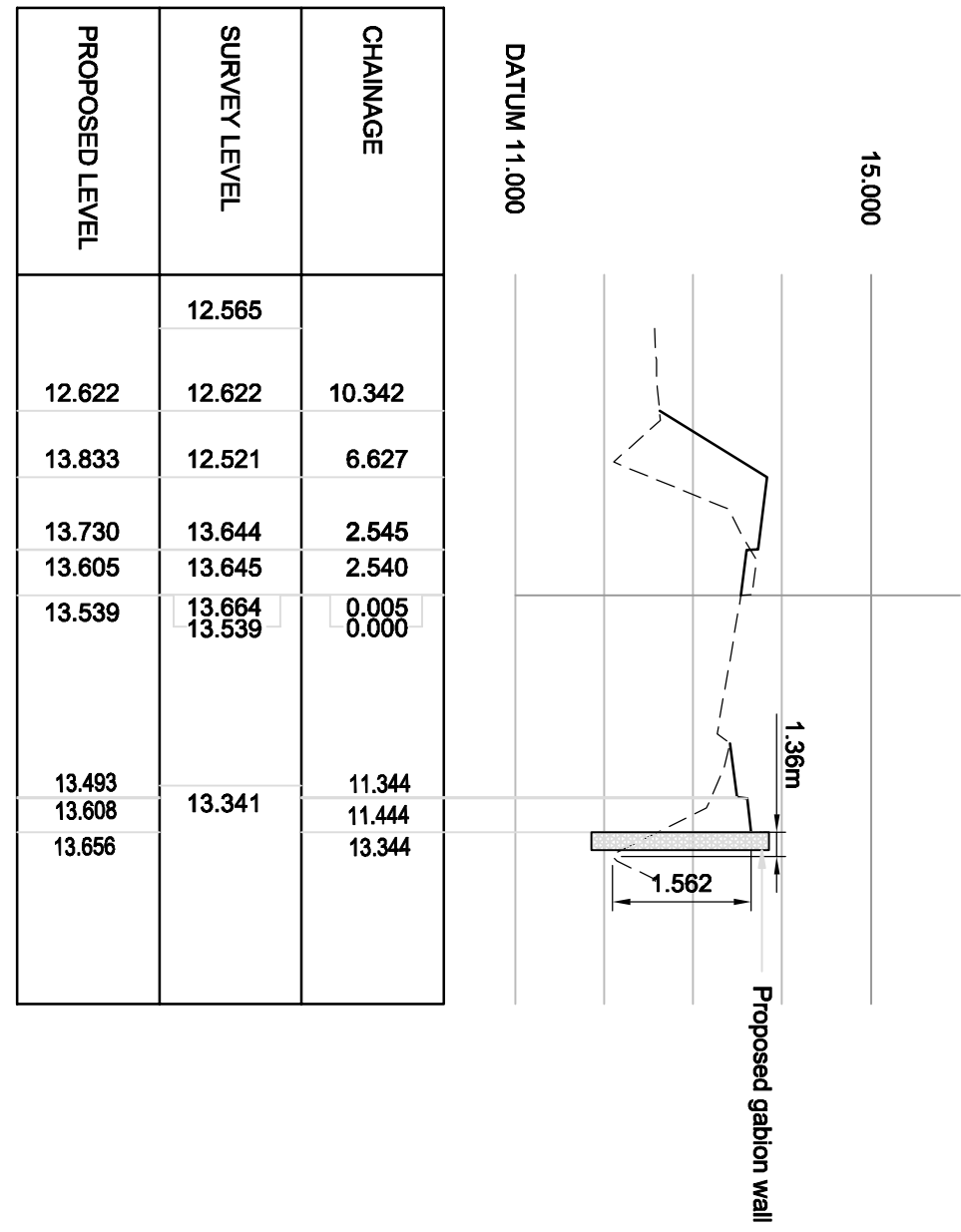
CLIENT	PROJECT	DRAWN	DRAWING CHECK	DESIGNED	DESIGN REVIEW	DATE	DATE
BARRATT HOMES	HISTON ROAD CAMBRIDGE	SR	SR	SR	SR	27.03.13	27.03.13

SCALE	DRAWING No.	REV
AS SHOWN	UN12455-ECC-DG-1201	A

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- Notes:
- All dimensions are in metres unless otherwise stated.
  - Do not scale from the drawing.

KEY:  
 EXISTING SURVEY LEVEL  
 PROPOSED ALIGNMENT LEVEL

REV	DATE	DRAWN	REV/D	APP'D	REVISION

DRAWING STATUS  
**FOR APPROVAL**

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CLIENT	PROJECT	DRAWING CHECK	DESIGNED	LA
BARRETT HOMES	HISTON ROAD CAMBRIDGE	SR	SR	SR

TITLE  
**CROSS SECTIONS  
 PROPOSED GABION WALL**

SCALE: DRAWING NO: AS SHOWN UN12455-ECC-DG-1202