

NOTE:
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RESIDENTIAL SUBDIVISION STAGE F4 - LUCAS ESTATE ROAD & DRAINAGE WORKS

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STANDARD DETAILS TABLE

DESCRIPTION	AUTHORITY	STANDARD DETAIL REFERENCE	DESCRIPTION	AUTHORITY	STANDARD DETAIL REFERENCE
BCC2 BARRIER KERB & CHANNEL	CITY OF BALLARAT	SD-K1	HAUNCHED PITS	I.D.M.	SD 410
TRENCH DETAILS FOR R.C.P	CITY OF BALLARAT	SD-D8-1(A)	JUNCTION PITS	I.D.M.	SD 420 / SD 425
KERB BEDDING	I.D.M.	SD 110	SIDE ENTRY PITS	I.D.M.	SD 430 - SD 450
SUBSOIL DRAINAGE	I.D.M.	SD 145	HOUSE DRAIN CONNECTION - KERB	I.D.M.	SD 505
KERB RAMPS	I.D.M.	SD 200	HOUSE DRAIN CONNECTION - PIPE	I.D.M.	SD 515
CONCRETE FOOTPATHS	I.D.M.	SD 205	TACTILE INDICATORS (TGSI's)	AUSTRALIAN STANDARD	AS1428.4

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE	JUNE 2019
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	AS CONSTRUCTED	13/05/20	J.H.		DRAWN	J. HADFIELD	SCALE:	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SURVEY:	TGM GROUP	SHEET SIZE:	A1
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							CHECKED:	M. ANTON	APPROVED:	R. DUNN
04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE:	10/07/19
05	CONSTRUCTION	10/07/19	J.H.										
06	ROAD NAME UPDATED	16/08/19	J.H.										
07	DRAINAGE REFERENCE UPDATED	27/08/19	S.L.										

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PROJECT:
**LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)**

CIVIL DRAWING

DRAWING TITLE:
**GENERAL NOTES, DRAWING INDEX,
STANDARD DETAILS TABLE & LOCALITY PLAN**

TGM REF. No.: **18775-204** SHEET **C01** OF **21** REV. **08**



AS CONSTRUCTED

GENERAL NOTES
THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ALL OTHER RELEVANT CONSULTANTS DRAWINGS, SPECIFICATIONS, CLIENT INSTRUCTIONS, AND ANY WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER FOR DISCUSSION BEFORE PROCEEDING WITH WORK.

DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS. SUBSTITUTES WILL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

DURING CONSTRUCTION THE SITE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART OF THE SITE SHALL BE UNSAFE AS A RESULT OF THE CONSTRUCTION PROCEDURE.

MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND CITY OF BALLARAT STANDARDS, THE CURRENT REVISION OF ALL RELEVANT SAA CODES, THE REQUIREMENTS OF THE VICTORIA BUILDING REGULATIONS, THE BUILDING CODE OF AUSTRALIA AND THE RELEVANT AUTHORITIES.

UNLESS NOTED OTHERWISE ON A PARTICULAR DRAWING THESE NOTES SHALL APPLY.

THE TERM "ENGINEER" SHALL MEAN A REPRESENTATIVE APPOINTED BY THE CITY OF BALLARAT.

CONSTRUCTION HOLD POINTS
THE CONTRACTOR IS TO BE AWARE OF THE CITY OF BALLARAT CONSTRUCTION REQUIREMENTS AND CONTACT THE CITY OF BALLARAT AT EACH OF THEIR REQUIRED HOLD POINTS TO ARRANGE APPROPRIATE TESTING AND INSPECTIONS.

SUB-GRADE INSPECTION - NO CRUSHED ROCK OR OTHER PAVEMENT MATERIAL IS TO BE PLACED UNTIL THE SUBGRADE HAS BEEN INSPECTED AND APPROVED BY THE COUNCIL OFFICER/ENGINEER.

TEST ROLLING - SHALL BE CARRIED OUT IN THE PROCESS OF AND TO THE SATISFACTION OF THE COUNCIL OFFICER/ENGINEER.

PRIMER COAT - THE COUNCIL OFFICER/ENGINEER IS TO GIVE APPROVAL PRIOR TO THE PLACEMENT OF THE PRIMER COAT.

BITUMINOUS CONCRETE WEARING COURSE - (PLACING AND COMPACTION). NO LAYER SHALL BE SPREAD UNTIL THE COUNCIL OFFICER/ENGINEER GIVES CONSENT TO PROCEED.

PLACING - CONCRETE SHALL NOT BE PLACED UNTIL THE COUNCIL OFFICER/ENGINEER HAS EXAMINED FORMWORK AND REINFORCEMENT IN PLACE AND GIVEN HIS CONSENT TO PROCEED.

FORMS - THE FORMS SHALL BE INSPECTED BY THE COUNCIL OFFICER/ENGINEER IMMEDIATELY BEFORE CONCRETE IS PLACED.

PREPARATION BEFORE PLACING FRESH CONCRETE - THE SURFACE PREPARATIONS WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE COUNCIL OFFICER/ENGINEER BEFORE CONCRETING PROCEEDS.

BACKFILLING - NO JOINTS ARE TO BE COVERED OR TRENCHES BACKFILLED UNTIL PIPE LAYING HAS BEEN APPROVED BY THE COUNCIL OFFICER/ENGINEER.

DRAINAGE PITS - COVERS SHALL NOT BE PLACED UNTIL THE PITS HAVE BEEN INSPECTED AND APPROVED BY THE COUNCIL OFFICER/ENGINEER.

CONCRETE NOTES
REFER VARIOUS SPECIFICATION STANDARD SECTION 703 "CAST IN PLACE CONCRETE EDGINGS, PATHS AND OTHER SURFACINGS" FOR CONSTRUCTION DETAILS AND ASSOCIATED REFERENCES.

ALL CONCRETE AND CONCRETE PRACTICE SHALL BE GENERALLY IN ACCORDANCE WITH AS 3600 CONCRETE STRUCTURES CODE.

ALL IN-SITU CONCRETE SHALL HAVE A CHARACTERISTIC STRENGTH AT 28 DAYS (F'c) OF 25 MPa UNLESS NOTED OTHERWISE.

CONCRETE ELEMENTS SHOWN ON THESE DRAWINGS MUST NOT BE REDUCED IN ANY WAY WITHOUT THE ENGINEER'S APPROVAL. NO HOLES, CHASES, OR EMBEDMENTS, OTHER THAN THOSE SHOWN WILL BE PERMITTED IN ANY CONCRETE ELEMENTS WITHOUT THE ENGINEER'S APPROVAL.

REINFORCEMENT NOTATION
R - DENOTES STRUCTURAL GRADE PLAIN ROUND BARS TO AS 1302
N - DENOTES FLAT ROLLED DEFORMED BARS TO AS 1302 (4.10Y)
SL12 - DENOTES REINFORCEMENT FABRIC TO AS 1304 (72 DENOTES SIZE OF FABRIC)

LAPPING REINFORCEMENT
MESH 50mm FULL WIDTH AT INTERSECTION
TRENCH MESH 500mm TOP BARS (300mm OR MORE CONCRETE BELOW) OTHER BARS

N12	300
N16	400
N20	600

CLEAR COVER TO REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS.

CONCRETE COVER SHALL BE MAINTAINED BY THE USE OF APPROVED CHAIRS AND/OR CONCRETE BLOCKS. CONDUITS, PIPES ETC. ARE NOT TO BE PLACED IN CONCRETE COVER.

THE SLUMP OF ALL CONCRETE AT THE TIME OF PLACING AT THE JOB SHALL BE 75mm +/- 15mm TOLERANCE U.N.O.

ALL CONCRETE PLACED IN POSITION SHALL BE ADEQUATELY VIBRATED.

ALL CONCRETE SHALL BE CURED TO THE APPROVAL OF THE ENGINEER.

ALL PIPEWORK CAST INTO CONCRETE IS TO BE SLEEVED OR LAGGED WITH APPROPRIATE COMPRESSIBLE MATERIAL FOR THE FULL LENGTH OF EMBEDMENT.

ASPHALT NOTES
REFER VARIOUS SPECIFICATION STANDARD SECTION 407 "HOT MIX ASPHALT" FOR CONSTRUCTION DETAILS AND ASSOCIATED REFERENCES.

CIVIL NOTES
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
ALL LEVELS SHOWN ARE TO AUSTRALIAN HEIGHT DATUM (TBM) AS NOTED ON THE PLANS.
ALL SET-OUT CO-ORDINATES ARE IN METRES TO THE MAP GRID OF AUSTRALIA (MGA 54-94).

UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE ENGINEER, LAYING OF ALL PIPES OR CULVERTS SHALL COMMENCE AT THE DOWNSTREAM END.

PRIOR TO ANY WORKS COMMENCING THE CONTRACTOR SHALL COMPLETE A CHECK OF ANY EXISTING CONNECTING STORMWATER DETAILS, INCLUDING INVERTS, DIAMETERS, DEPTHS, MATERIAL ETC. TO CONFIRM ANY EXISTING DETAILS SHOWN ON THE DRAWINGS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.

STORMWATER DRAINS ARE TO BE PVC SEWER QUALITY PIPES OR REINFORCED CONCRETE AS NOTED.

RC PIPES ARE TO BE RUBBER RING JOINTED CLASS 3 UNDER VEHICLE PAVEMENTS. ALL RC PIPES ELSEWHERE ARE TO BE CLASS 2 WITHOUT RUBBER RING JOINTS.

DRAINAGE PIPES MUST BE BEDDED IN ACCORDANCE WITH THESE DRAWINGS.

DRAINAGE, SERVICES AND CONDUIT TRENCHES UNDER PAVEMENTS, FOOTPATHS AND PAVING ARE TO BE BACKFILLED TO THE UNDERSIDE OF THE PAVEMENT WITH AN APPROVED CONSOLIDATED MATERIAL IN ACCORDANCE WITH THE RELEVANT MUNICIPALITIES CONDITIONS.

ANY CLASH OF THE WORKS WITH A SERVICE IS TO BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL ENSURE THAT SERVICES ARE FULLY PROTECTED DURING CONSTRUCTION. ANY SERVICES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

SERVICES OTHER THAN THOSE SHOWN ON THE DRAWINGS MAY EXIST. THE CONTRACTOR IS TO ALLOW FOR THE ALTERATION TO SERVICES WITHIN THE SITE, INCLUDING THE ADJUSTMENT OF PIT COVER LEVELS AND THE REMOVAL AND SEALING OF UNWANTED SERVICES & ASSOCIATED PITS & FITTINGS.

EXPOSED SUBGRADE AREAS SHALL BE PROOF ROLLED UNDER THE SUPERVISION OF THE ENGINEER USING A 10 TONNE AXLE LOAD. SOFT AREAS DETECTED SHALL BE EXCAVATED AND BACKFILLED AS DIRECTED BY THE ENGINEER.

THE PAVEMENT SUB-BASE COURSE IS TO BE COMPACTED TO 97% MODIFIED MAXIMUM DRY DENSITY COMPACTION. THE PAVEMENT BASE COURSE TO 98% MODIFIED MAXIMUM DRY DENSITY. TESTING LOCATIONS IN ACCORDANCE WITH VARIOUS SPECIFICATIONS RC316-10. ALL PAVEMENT TESTING TO NATA STANDARDS.

ALL WORKS ADJACENT TO THE SITE ARE TO BE APPROVED INSPECTED BY CITY OF BALLARAT.

THE LOCATION OF UNDERGROUND SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL AUTHORITIES TO DETERMINE THE LOCATION OF UNDERGROUND SERVICES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORK. ANY CLASH OF WORKS WITH A SERVICE IS TO BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL ENSURE THAT ALL SERVICES ARE FULLY PROTECTED DURING CONSTRUCTION. ANY SERVICES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

THE ORIENTATION OF ALL STORMWATER DRAINAGE ACCESS COVERS & GRATES ARE SHOWN INDICATIVELY AND ARE TO BE MANUFACTURED & INSTALLED IN ACCORDANCE WITH AS3996-2006.

ALL DISTURBED SURFACES, FENCING & OTHER ITEMS TO BE RE-INSTATED TO ORIGINAL CONDITION.

PROVIDE 0.3m RADIUS TO KERBS AT INTERNAL CORNERS UNLESS NOTED OTHERWISE.

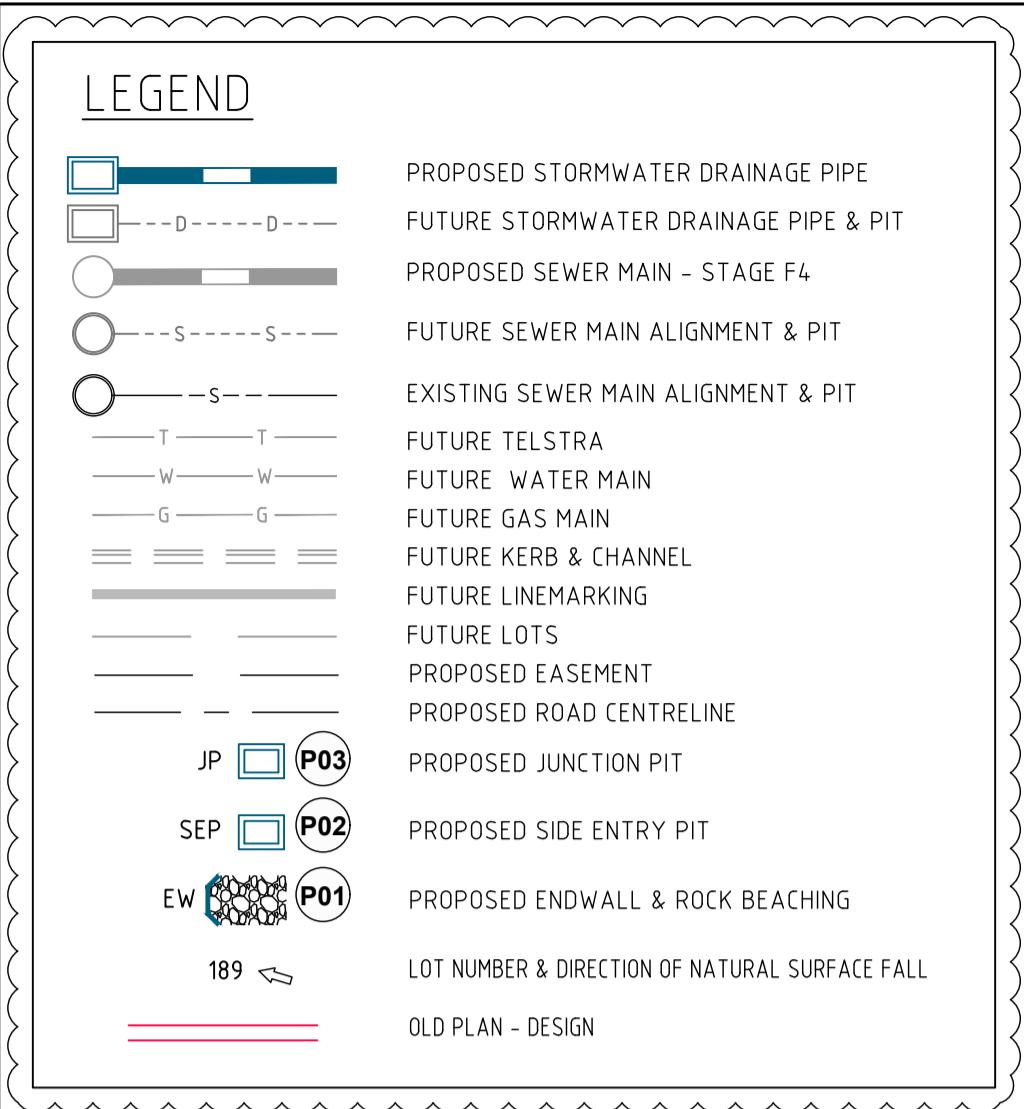
SACUT EXISTING KERBS & PAVEMENTS WHERE REQUIRED FOR INSTALLATION OF NEW KERBS AND WHERE NEW WORK IS TO MATCH EXISTING.

THE CONTRACTOR SHALL AT ALL TIMES DURING THE CURRENCY OF THE WORKS PROTECT THE PUBLIC FROM THE WORKS, PLANT, TRENCHES ETC. OCCASIONED BY THE WORKS BY THE USE OF APPROVED BARRICADES AND BARRIERS. SUCH PROTECTIVE MEASURES WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND A REPRESENTATIVE FROM CITY OF BALLARAT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY ARISING FROM THE NEGLECT OR INSUFFICIENCY OF SUCH PRECAUTIONS.

THE CONTRACTOR IS ADVISED THAT THE MINES (TRENCHES) REGULATIONS 1982 WILL APPLY TO THIS PROJECT. THE CONTRACTOR IS REQUIRED TO SATISFY AND/OR PUT INTO EFFECT ALL REQUIREMENTS OF THOSE REGULATIONS AND THOSE OF THE OFFICE OF MINERALS AND ENERGY.

THE WORKS SHOWN HEREIN ARE SUBJECT TO THE SUPERVISION OF THE PRINCIPAL'S APPOINTED SUPERINTENDENT.

CARE IS TO BE TAKEN TO PROTECT EXISTING FENCES, BUILDINGS, FITTINGS, SERVICES, FURNITURE, SIGNAGE, TREES AND OTHER ITEMS TO BE RETAINED FROM ANY DAMAGE.



6

NOTE:
ALTERNATIVE PIPE MATERIAL CAN BE UTILISED PROVIDING THEY MEET THE REQUIRED LOAD, SPECIFICATIONS & AUTHORITY REQUIREMENTS.

NOTE:
THE ORIENTATION OF ALL STORMWATER DRAINAGE ACCESS COVERS & GRATES ARE SHOWN INDICATIVELY AND ARE TO BE MANUFACTURED & INSTALLED IN ACCORDANCE WITH AS3996-2006.

NOTE:
THE CONTRACTOR IS TO CONFIRM INVERT LEVELS OF ALL EXISTING PITS PRIOR TO ANY DRAINAGE WORKS COMMENCING.

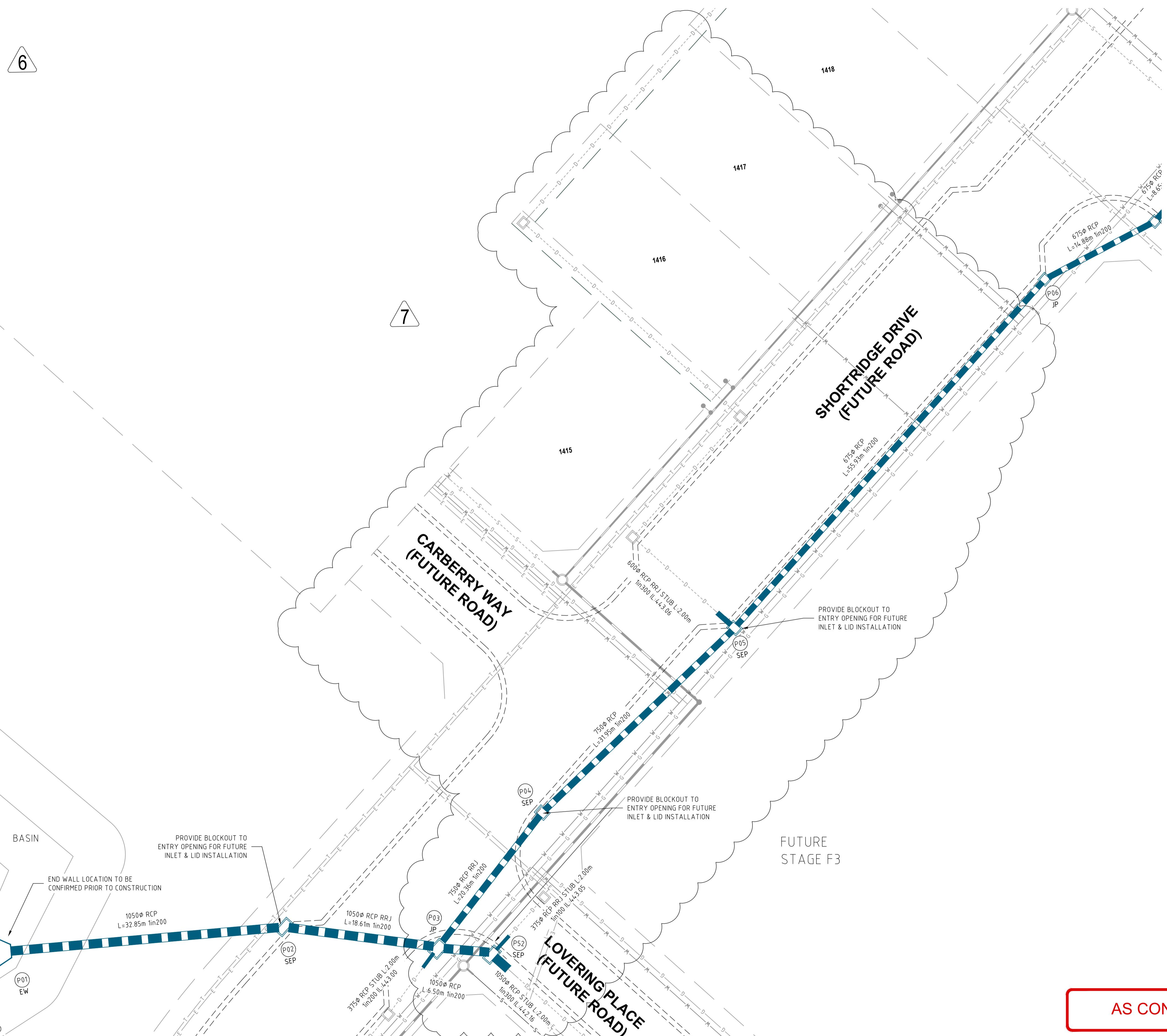
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NOTE:
HOUSE DRAINS TO BE CONNECTED TO KERB IN ACCORDANCE WITH I.D.M. SD 505 OR CONNECTED TO PIPE IN ACCORDANCE WITH I.D.M. SD 515.

PLAN

SCALE 1:250



ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	AS CONSTRUCTED	13/05/20	J.H.		DRAWN	J. HADFIELD	JUNE 2019
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03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							CHECKED: M. ANTON	SCALE: A1	
04	APPROVAL	05/07/19	J.H.							APPROVED: R. DUNN		
05	CONSTRUCTION	10/07/19	J.H.							DATE: 05/07/19		
06	AMENDMENTS - UPDATED PLANS	30/07/19	S.L.							DATE: 10/07/19		
07	OLD CARBERRY WAY LAYOUT REMOVED	21/08/19	J.H.									

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Ballarat Melbourne Geelong



PROJECT:
**LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)**

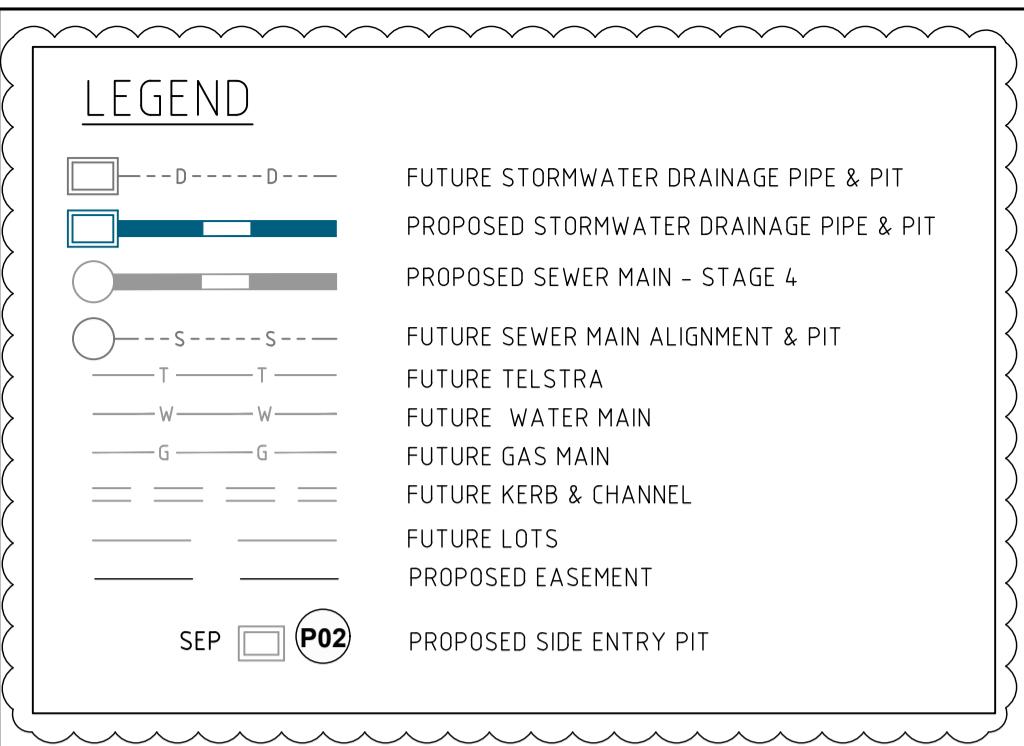
CIVIL DRAWING



DRAWING TITLE:
**ROAD & DRAINAGE LAYOUT PLAN
SHEET 1 OF 5**

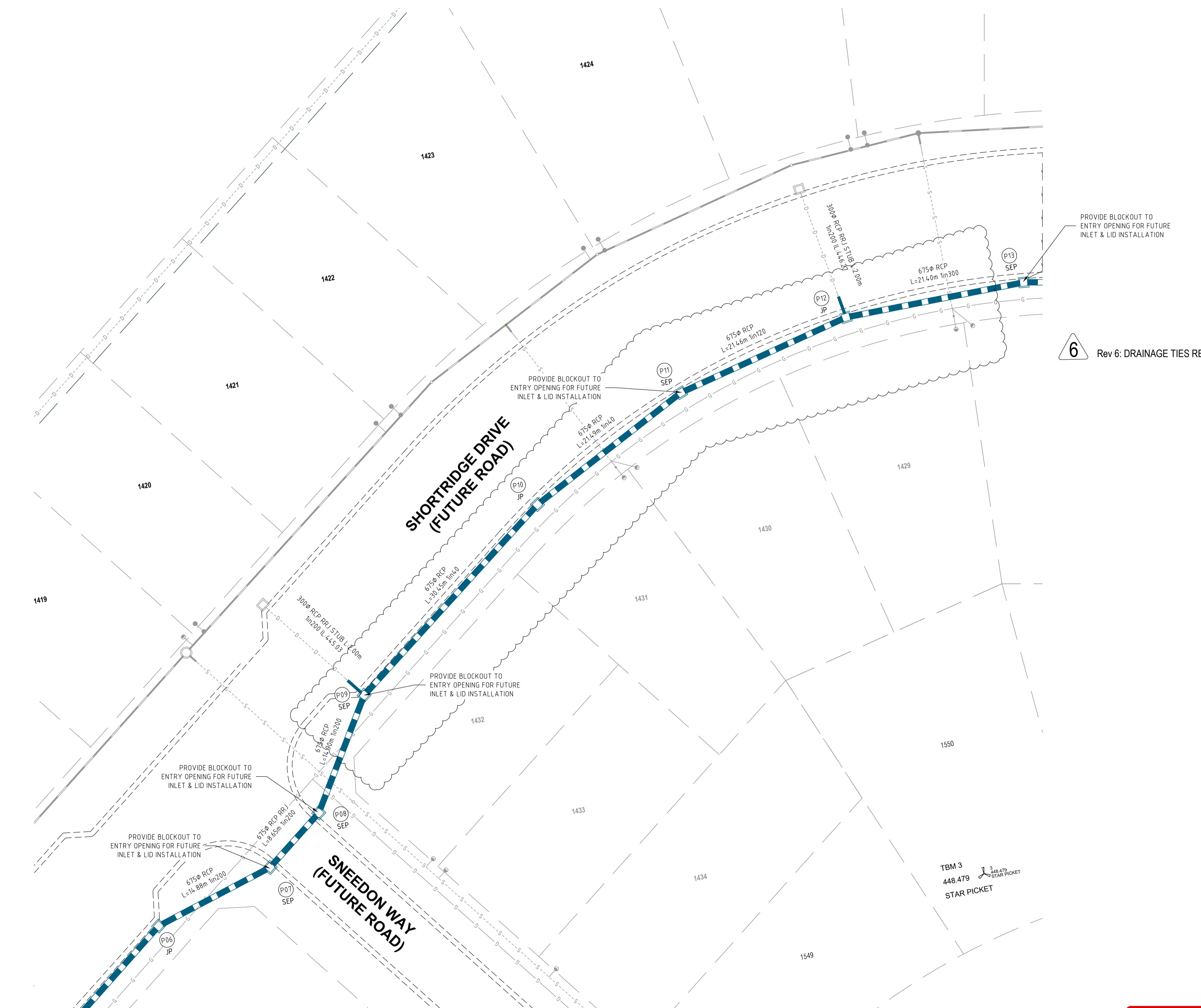
TGM REF. No.: 18775-204

SHEET C02 OF 21 REV. 08



NOTE: ALTERNATIVE PIPE MATERIAL CAN BE UTILISED PROVIDING THEY MEET THE REQUIRED LOAD, SPECIFICATIONS & AUTHORITY REQUIREMENTS.
NOTE: THE ORIENTATION OF ALL STORMWATER DRAINAGE ACCESS COVERS & GRATES ARE SHOWN INDICATIVELY AND ARE TO BE MANUFACTURED & INSTALLED IN ACCORDANCE WITH AS3996-2006.
NOTE: THE CONTRACTOR IS TO CONFIRM INVERT LEVELS OF ALL EXISTING PITS PRIOR TO ANY DRAINAGE WORKS COMMENCING.
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NOTE: HOUSE DRAINS TO BE CONNECTED TO KERB IN ACCORDANCE WITH I.D.M. SD 505 OR CONNECTED TO PIPE IN ACCORDANCE WITH I.D.M. SD 515.

PLAN
SCALE 1:250



6 Rev 6: DRAINAGE TIES REMOVED FOR LOTS 1429 -1432.

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE	JUNE 2019
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	SCALE:	AS SHOWN
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04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE:	10/07/19
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07	AS CONSTRUCTED	13/05/20	J.H.										

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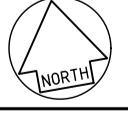
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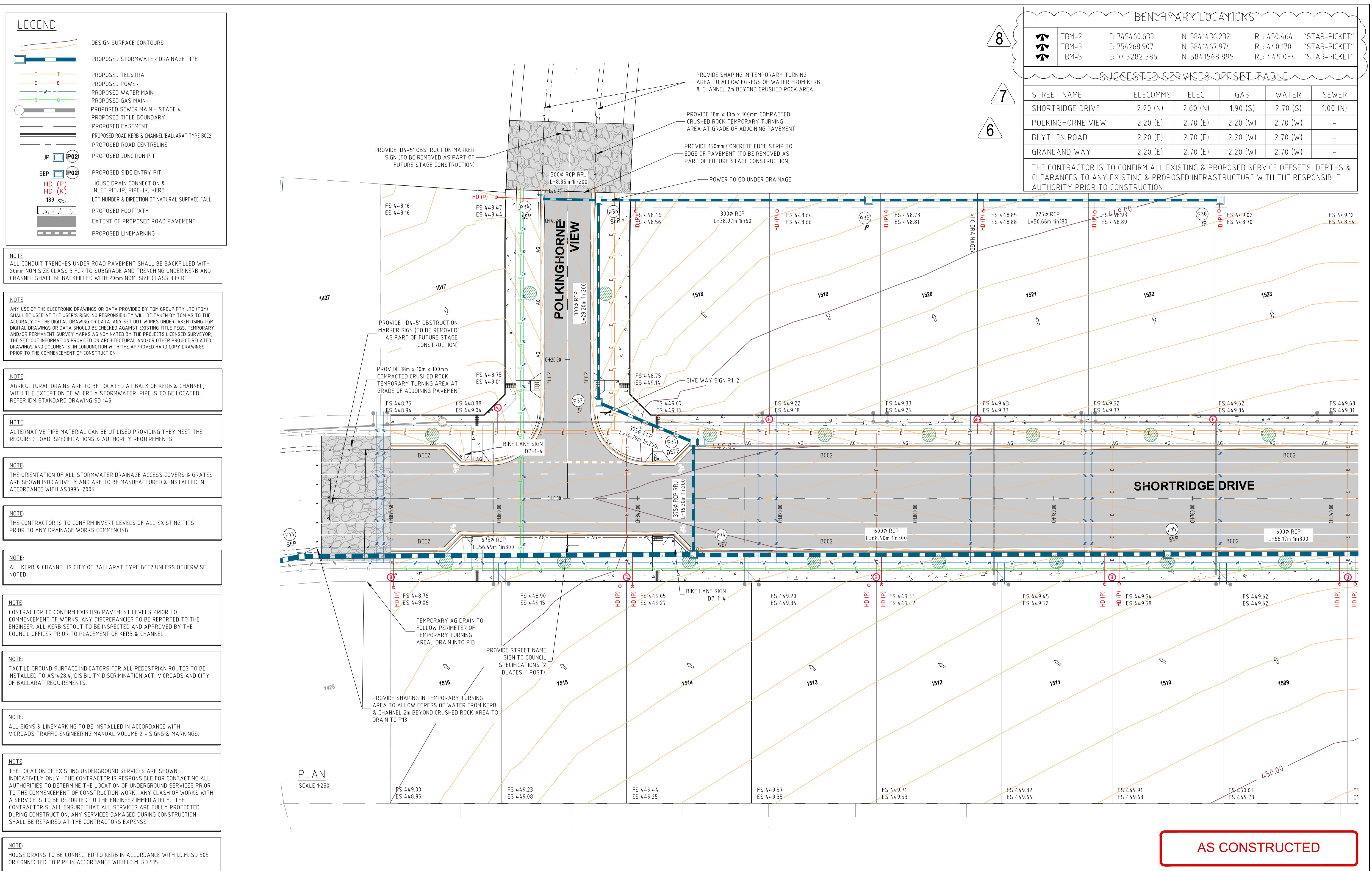
LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

CIVIL DRAWING

DRAWING TITLE:
**ROAD & DRAINAGE LAYOUT PLAN
SHEET 2 OF 5**



TGM REF. No.: **18775-204** SHEET **C03** OF **21** REV: **07**



ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	TBM'S UPDATED	23/09/19	J.H.	
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.		09	AS CONSTRUCTED	13/05/20	J.H.	
03	PRELIMINARY - FOR COMMENTS - COUNCIL	20/06/19	J.H.						
04	APPROVAL	05/07/19	J.H.						
05	CONSTRUCTION	10/07/19	J.H.						
06	ROAD NAME UPDATED	16/08/19	J.H.						
07	SHORTRIDGE DRIVE POWER & GAS OFFSET UPDATED	22/08/19	J.H.						

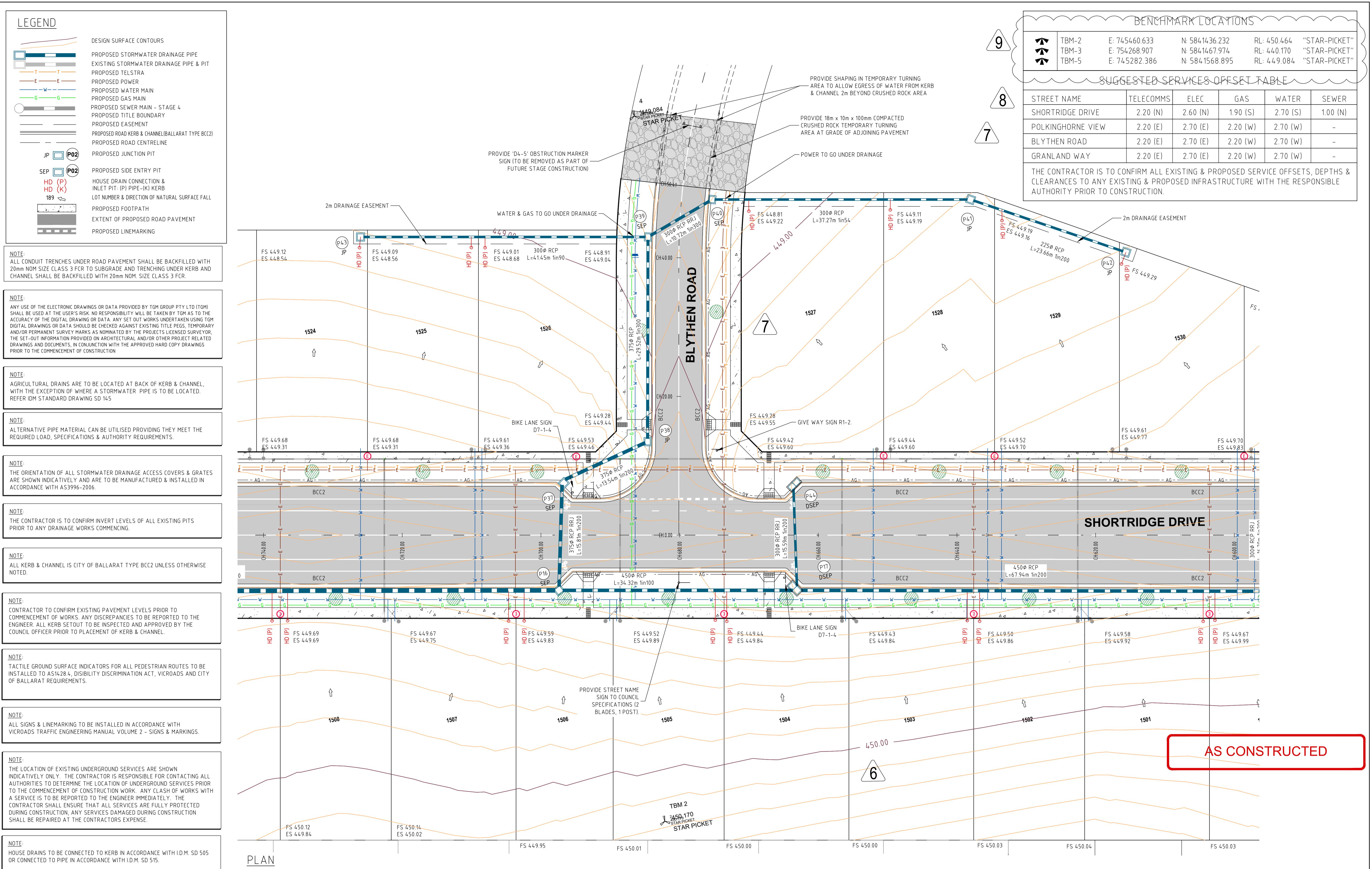


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LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

CIVIL DRAWING
DRAWING TITLE:
**ROAD & DRAINAGE LAYOUT PLAN
SHEET 3 OF 5**
TGM REF. No.: 18775-204
SHEET C04 OF 21 REV. 09

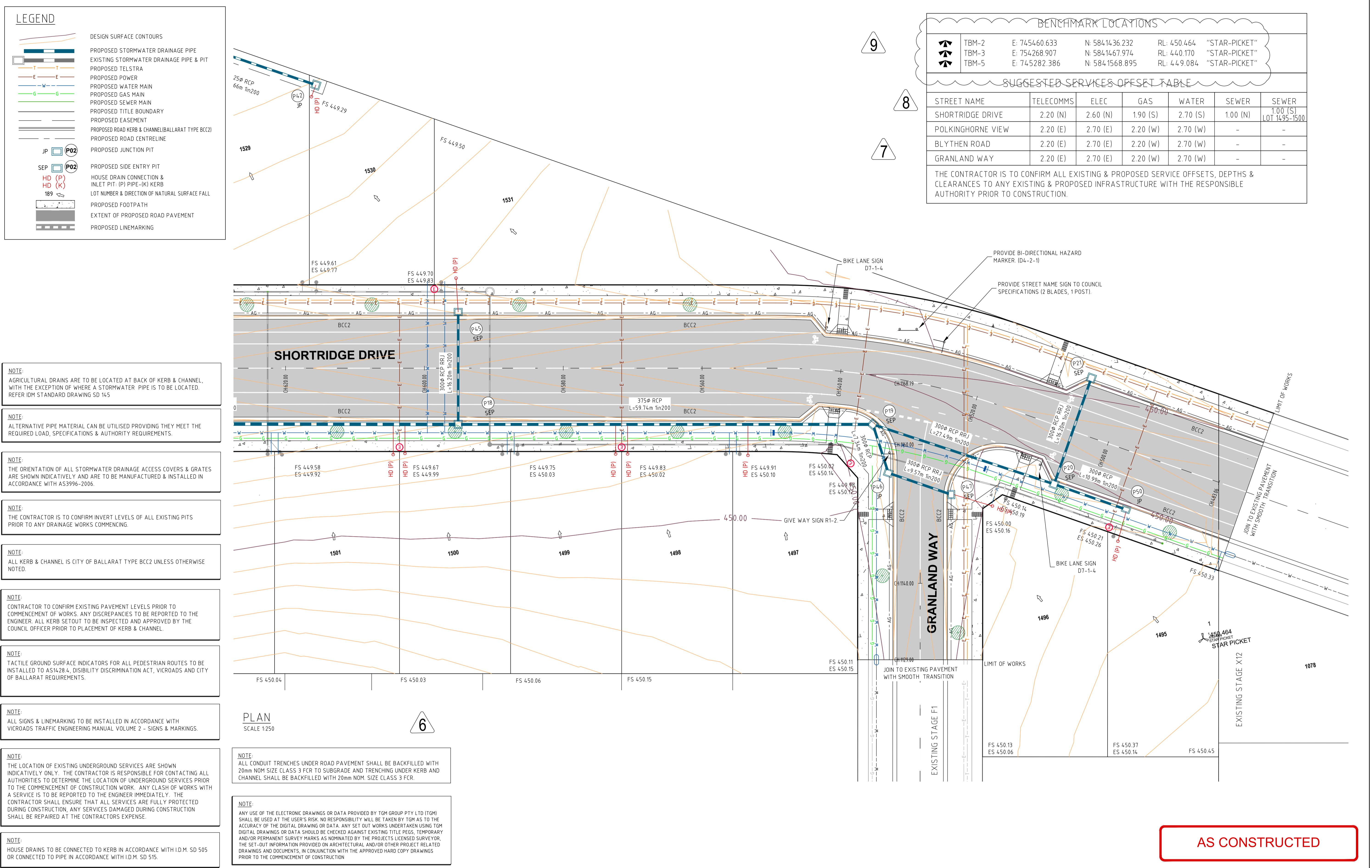


ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE	JUNE 2019	CLIENT	PROJECT	CIVIL DRAWING
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	SHORTRIDGE DRIVE POWER & GAS OFFSET UPDATED	22/08/19	J.H.		DRAWN	J. HADFIELD	SCALE:	AS SHOWN	TGM Group	LUCAS ESTATE RESIDENTIAL SUBDIVISION STAGE F4 (37 LOTS)	ROAD & DRAINAGE LAYOUT PLAN SHEET 4 OF 5
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.		09	TBM'S UPDATED	23/09/19	J.H.		SURVEY:	TGM GROUP	SHEET SIZE:	A1	T 1315 Sturt Street Ballarat VIC 3350 T 03 5330 8888 F 03 5333 3815 PO Box 1000 Ballarat West Vic 3350 ABN 11 125 568 461 www.tgmgroup.com		
03	PRELIMINARY - FOR COMMENTS - COUNCIL	21/06/19	J.H.		10	AS CONSTRUCTED	13/05/20	J.H.		CHECKED:	M. ANTON	APPROVED:	R. DUNN			
04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE:	10/07/19			
05	CONSTRUCTION	10/07/19	J.H.													
06	AMENDMENTS - UPDATED PLANS	30/07/19	S.L.													
07	ROAD NAME UPDATED	16/08/19	J.H.													

ISSUE: 18775-204 | SHEET: C05 OF 21 | REV: 10

TGM Integra

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ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOT/AY	DATE	JUNE 2019
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	SHORTRIDGE DRIVE POWER & GAS OFFSET UPDATED	22/08/19	J.H.		DRAWN	J. HADFIELD	SCALE:	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.		09	TBM'S UPDATED	23/09/19	J.H.		SURVEY:	TGM GROUP	SHEET SIZE:	A1
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.		10	AS CONSTRUCTED	13/05/20	J.H.		CHECKED:	M. ANTON	APPROVED:	R. DUNN
04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE:	10/07/19
05	CONSTRUCTION	10/07/19	J.H.										
06	AMENDMENTS - UPDATED PLANS	30/07/19	S.L.										
07	ROAD NAME UPDATED	16/08/19	J.H.										

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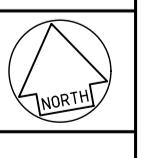
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ABN 11 125 568 461
www.tgmgroup.com
JAS-ANZ Accredited: Quality ISO 9001 - OH&S AS/NZS 4801 - Environment ISO 14001

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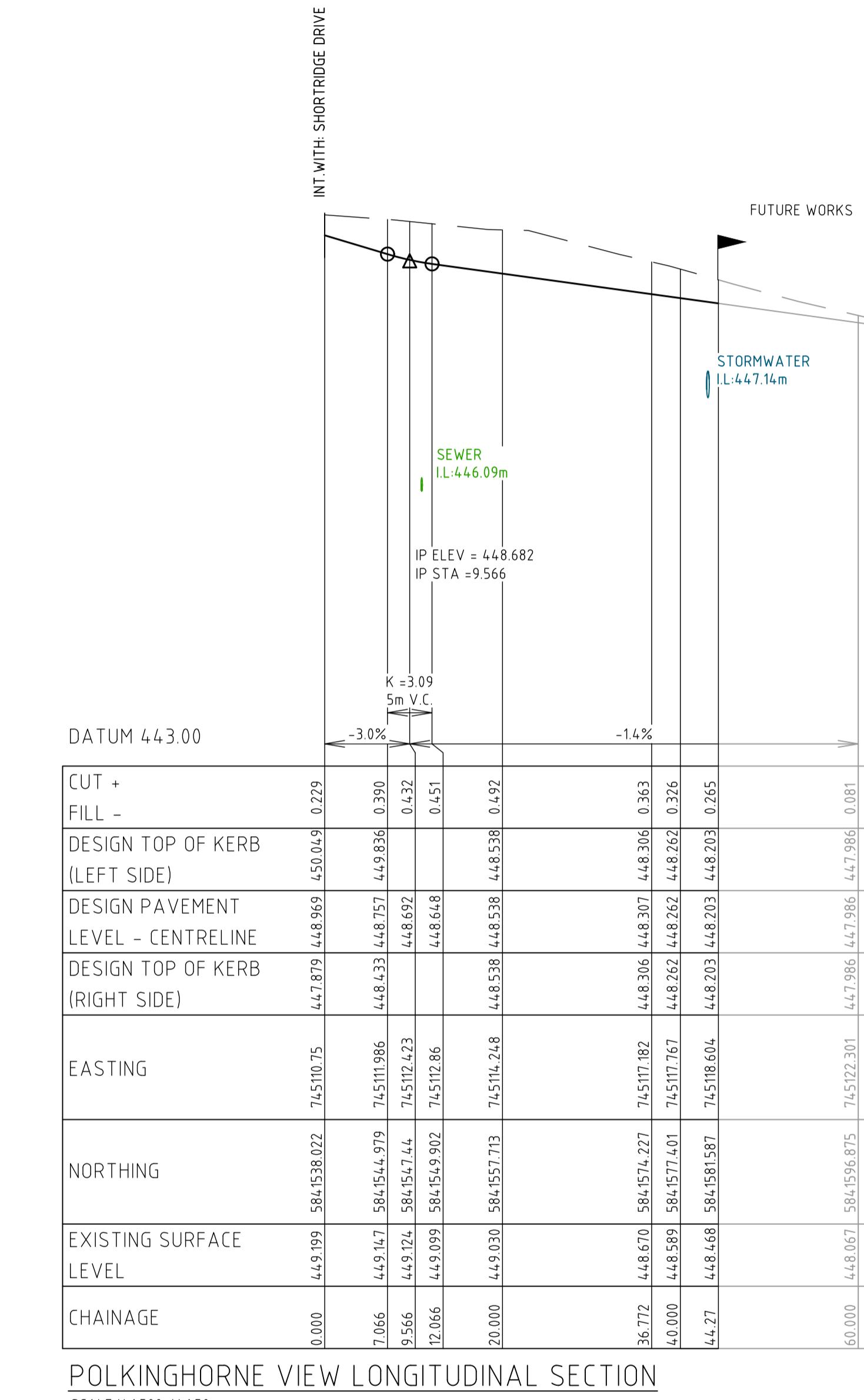
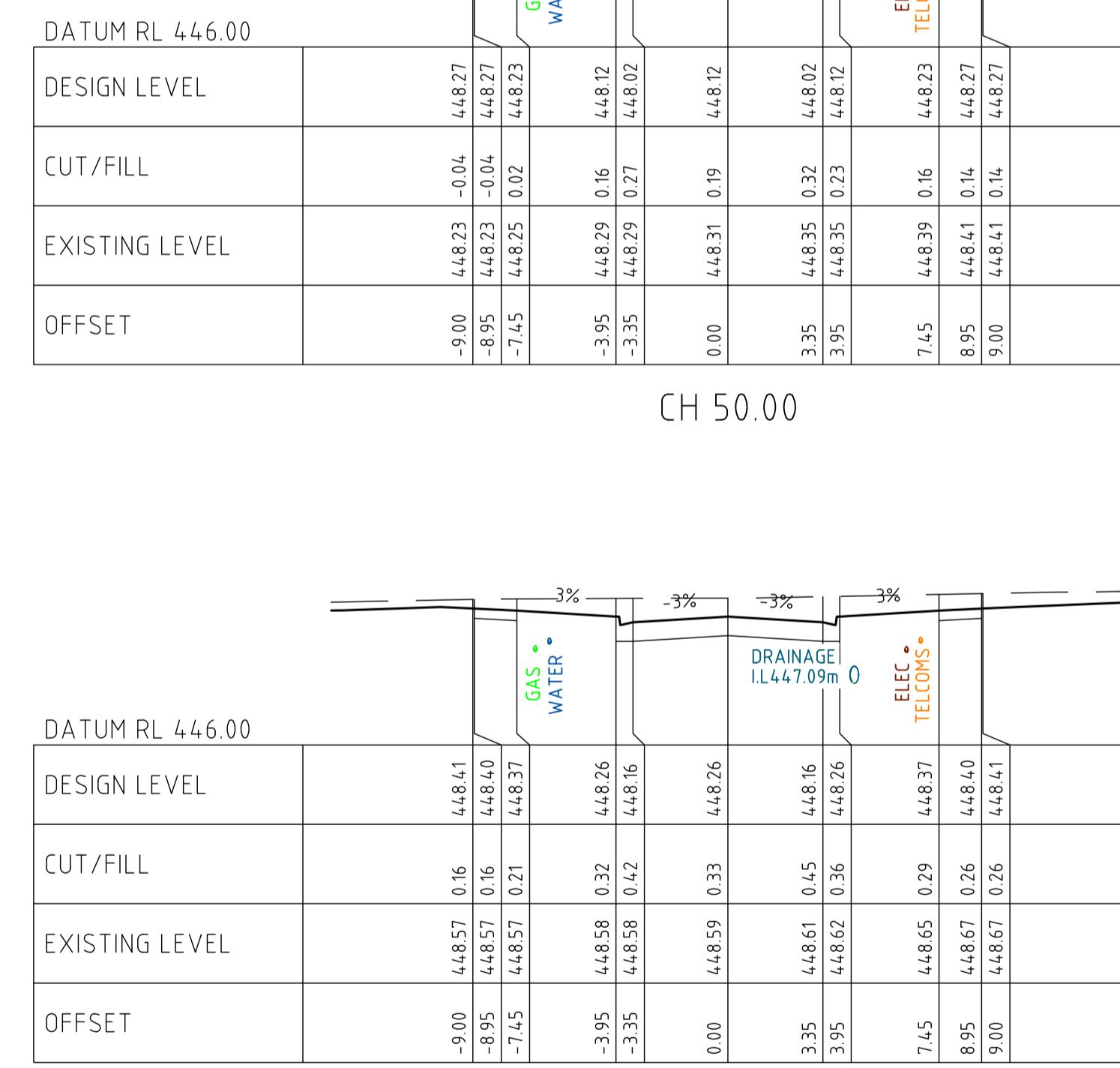
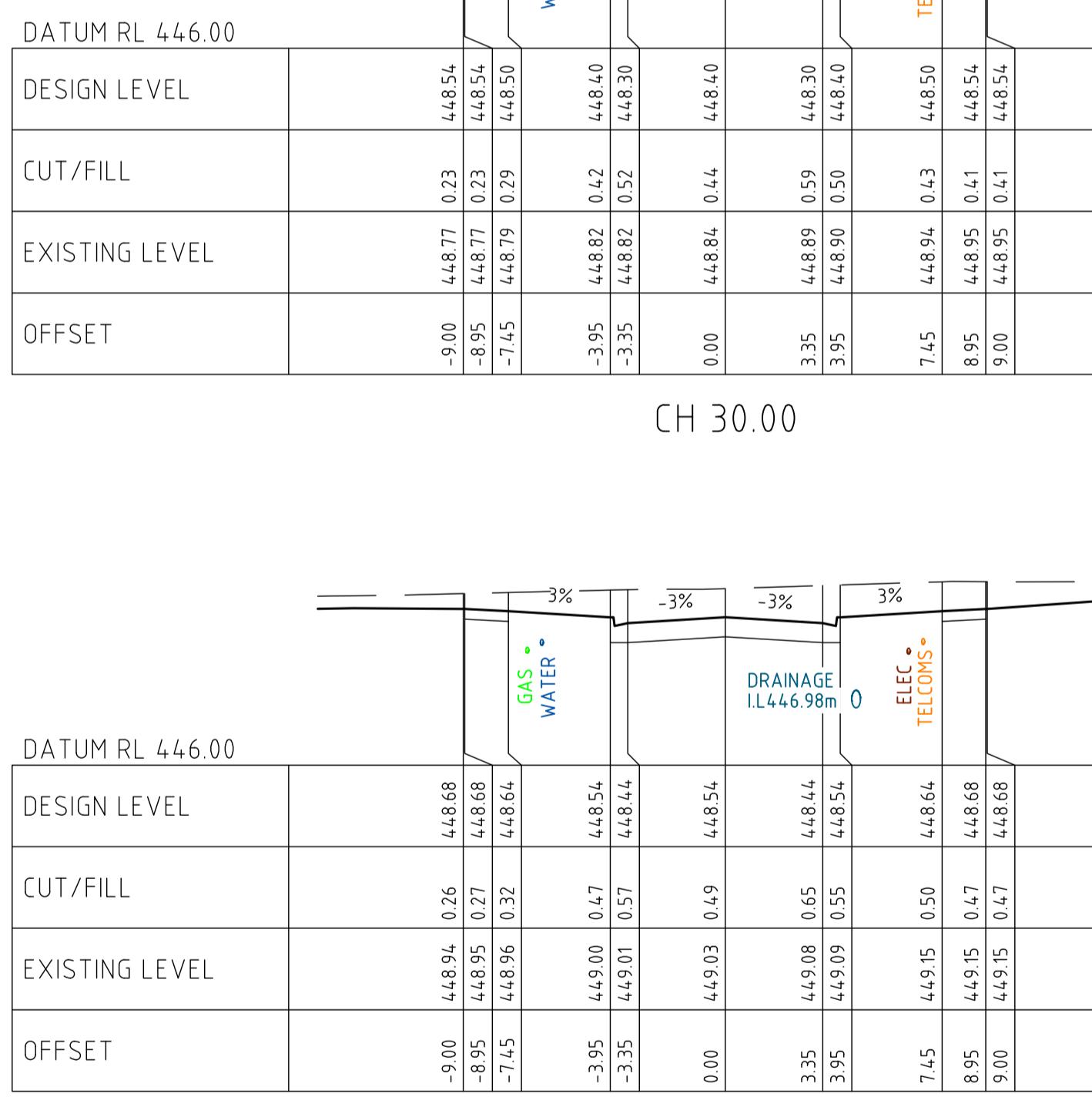
CLIENT:

PROJECT:
**LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)**

CIVIL DRAWING
DRAWING TITLE:
**ROAD & DRAINAGE LAYOUT PLAN
SHEET 5 OF 5**
TGM REF. No.: **18775-204** SHEET **C06** OF **21** REV: **10**



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NOTE:
LEFT & RIGHT BOUNDARIES ARE TRUE WHEN VIEWED IN DIRECTION OF INCREASING CHAINAGE

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SURVEY: TGM GROUP		SHEET SIZE: A1
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							CHECKED: M. ANTON	APPROVED: R. DUNN	
04	APPROVAL	05/07/19	J.H.							DATE: 05/07/19	DATE: 10/07/19	
05	CONSTRUCTION	10/07/19	J.H.									
06	AS CONSTRUCTED	13/05/20	J.H.									

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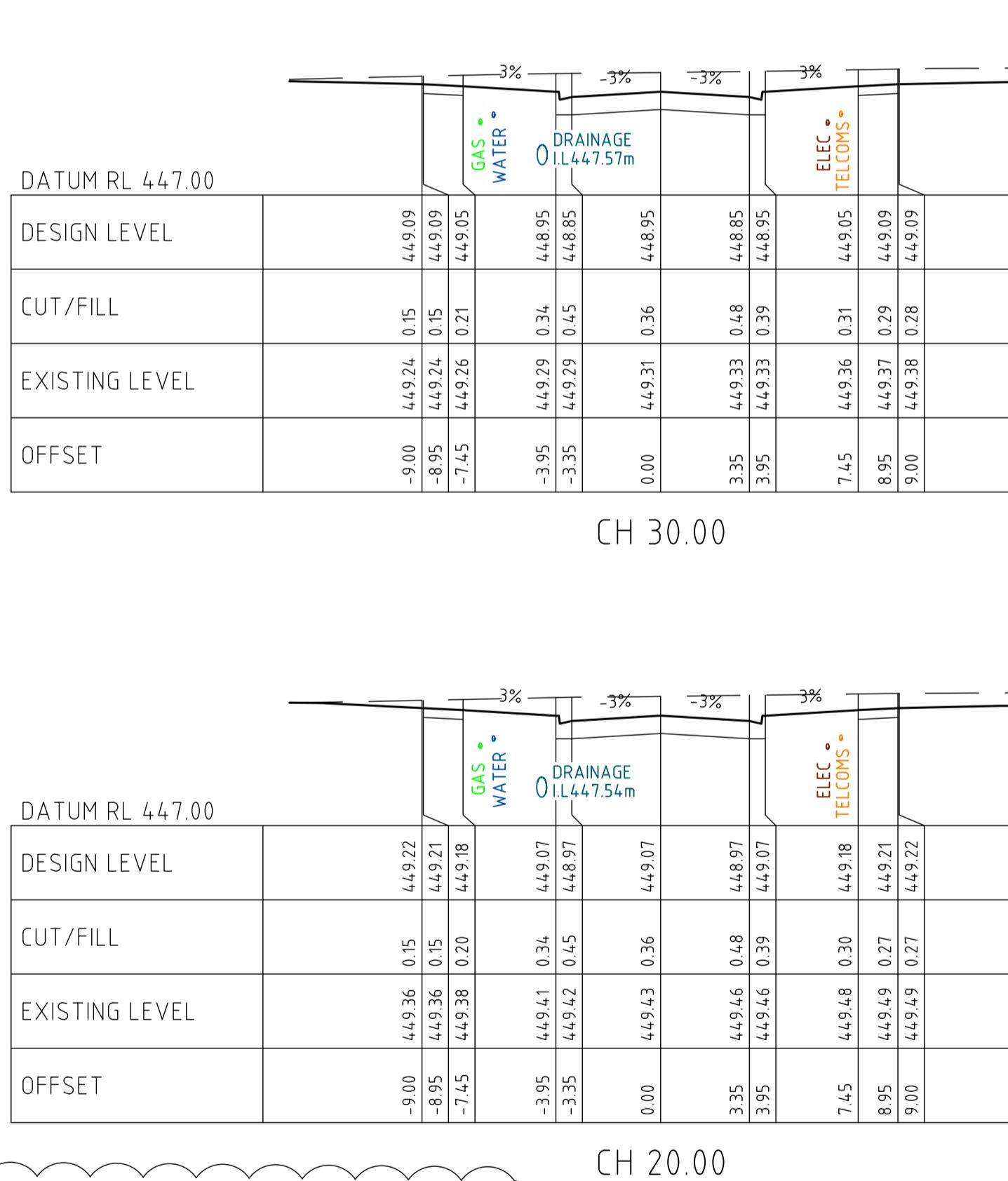
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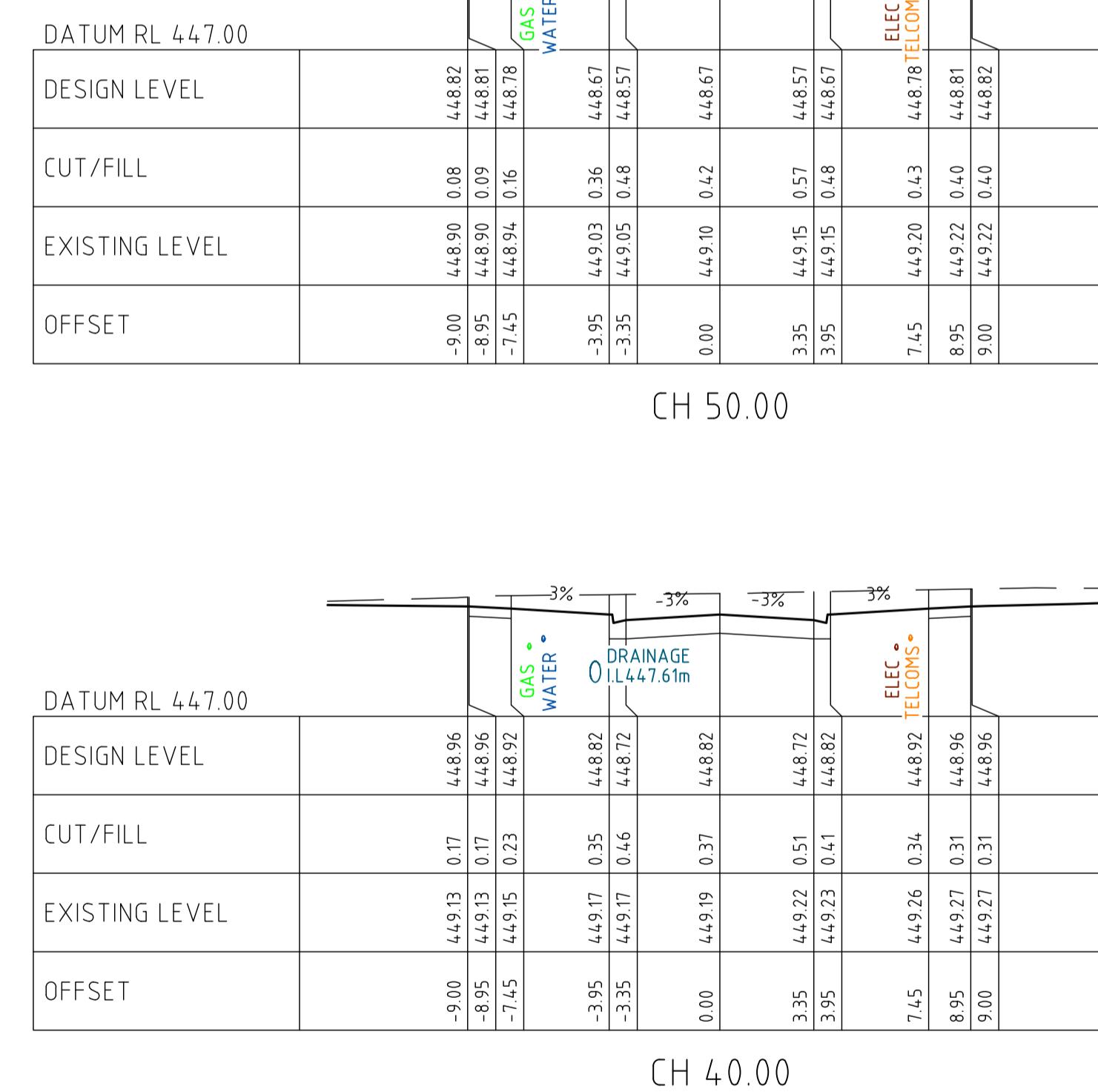
CLIENT:
**LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)**

CIVIL DRAWING
DRAWING TITLE:
POLKINGHORNE VIEW LONGITUDINAL & CROSS SECTIONS
TGM REF. No.: **18775-204** SHEET **C07** OF **21** REV. **06**

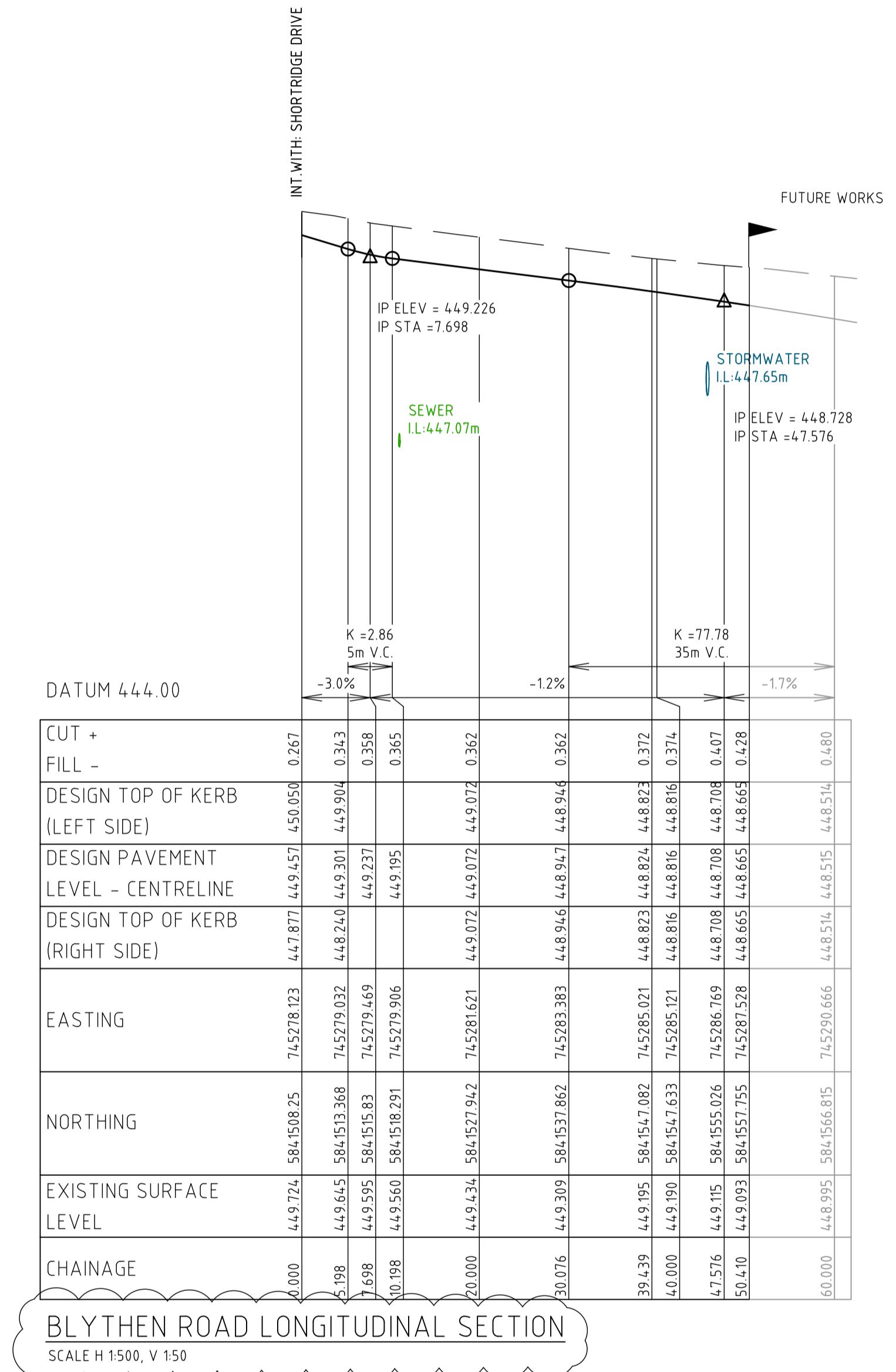
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6



CH 0.00



6

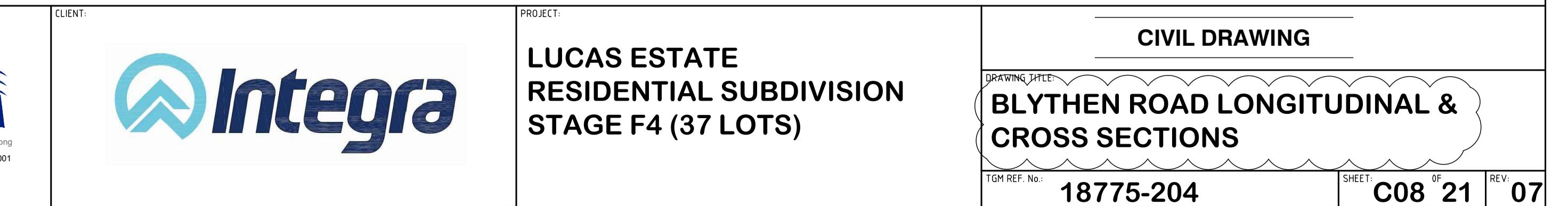
NOTE:
LEFT & RIGHT BOUNDARIES ARE
TRUE WHEN VIEWED IN DIRECTION
OF INCREASING CHAINAGE

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	JUNE 2019
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SCALE: AS SHOWN		
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							SHEET SIZE: A1		
04	APPROVAL	05/07/19	J.H.							SURVEY: TGM GROUP		
05	CONSTRUCTION	10/07/19	J.H.							CHECKED: M. ANTON		
06	ROAD NAME UPDATED	16/08/19	J.H.							APPROVED: R. DUNN		
07	AS CONSTRUCTED	19/05/20	J.H.							DATE: 05/07/19		
										DATE: 10/07/19		

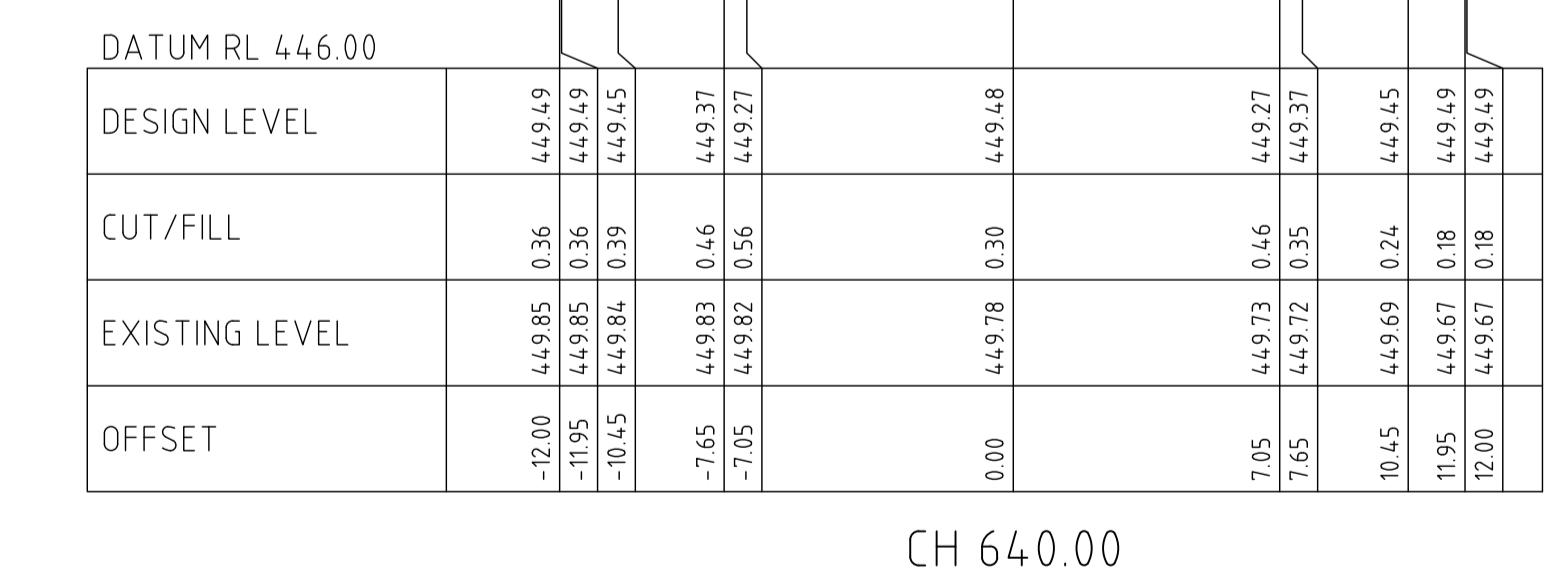
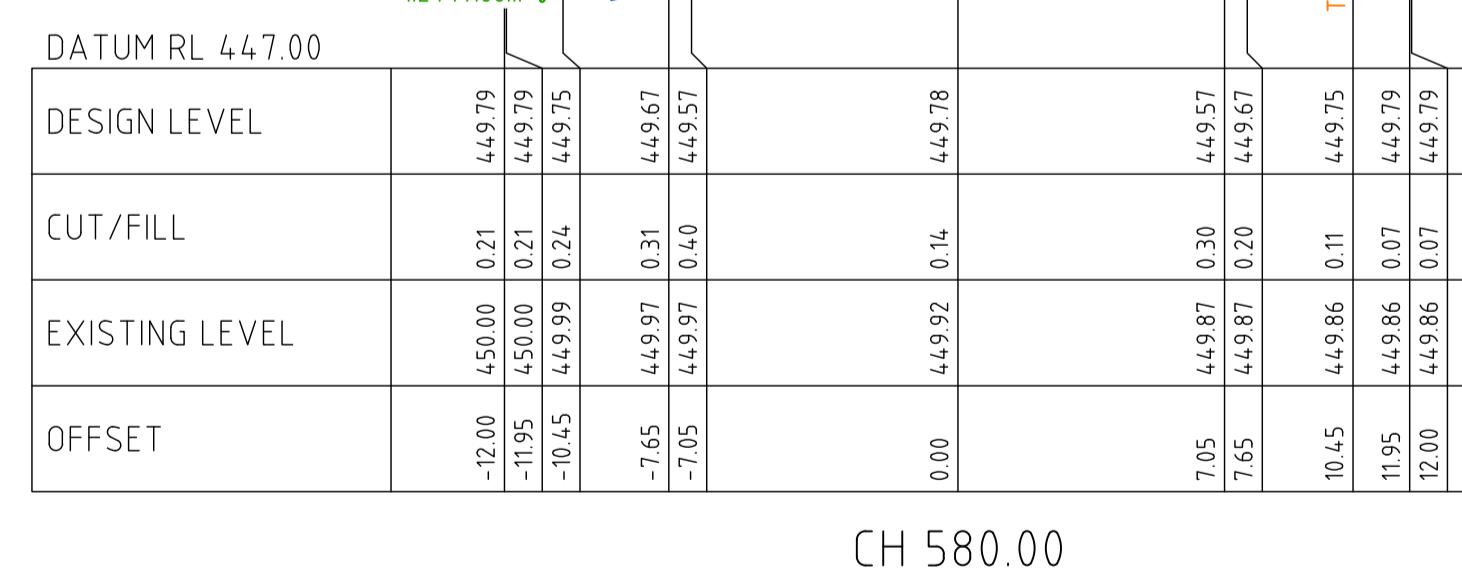
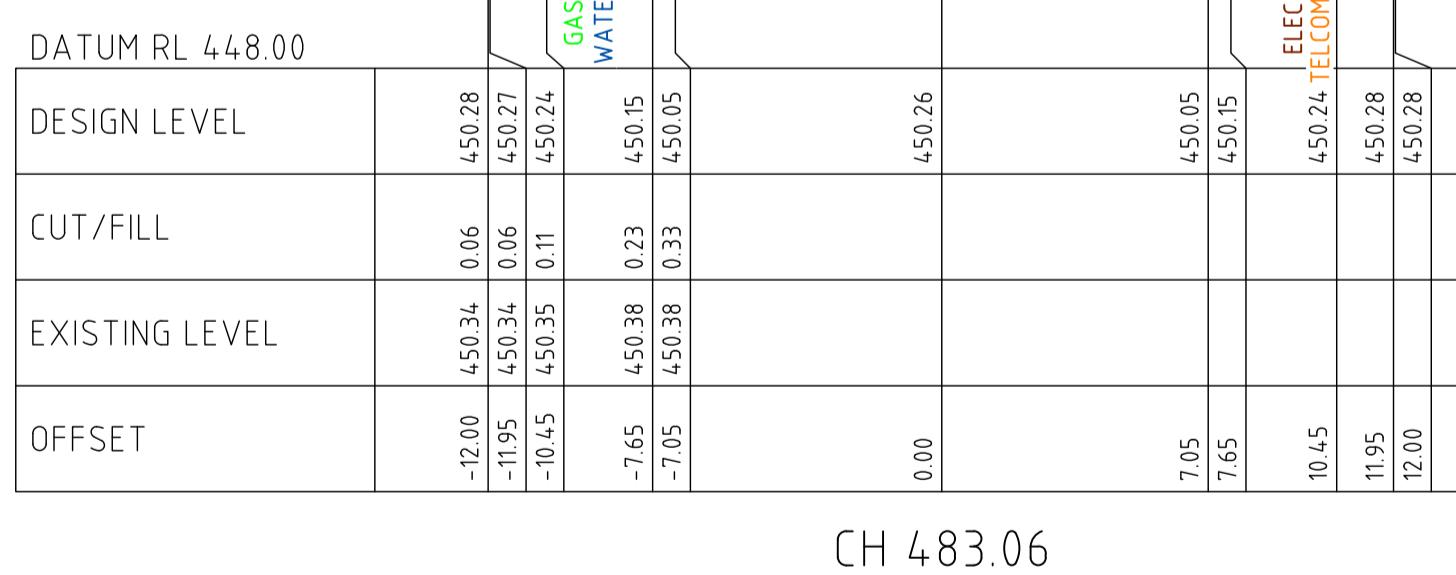
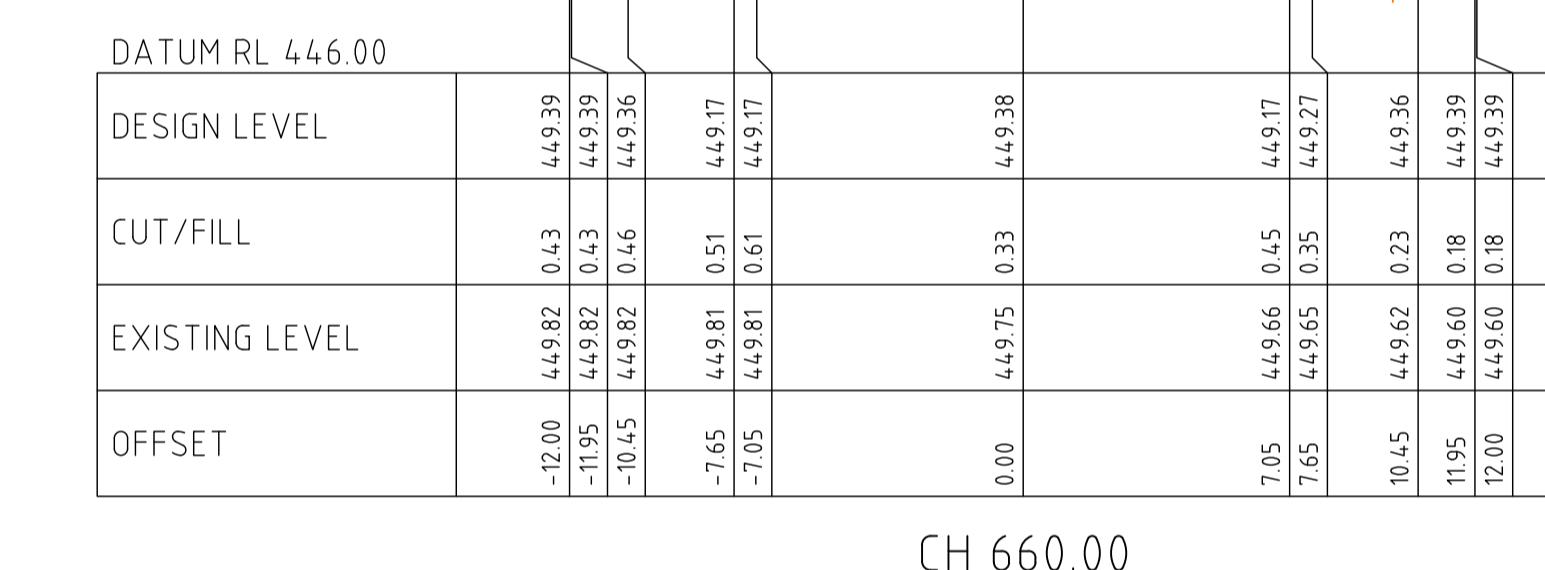
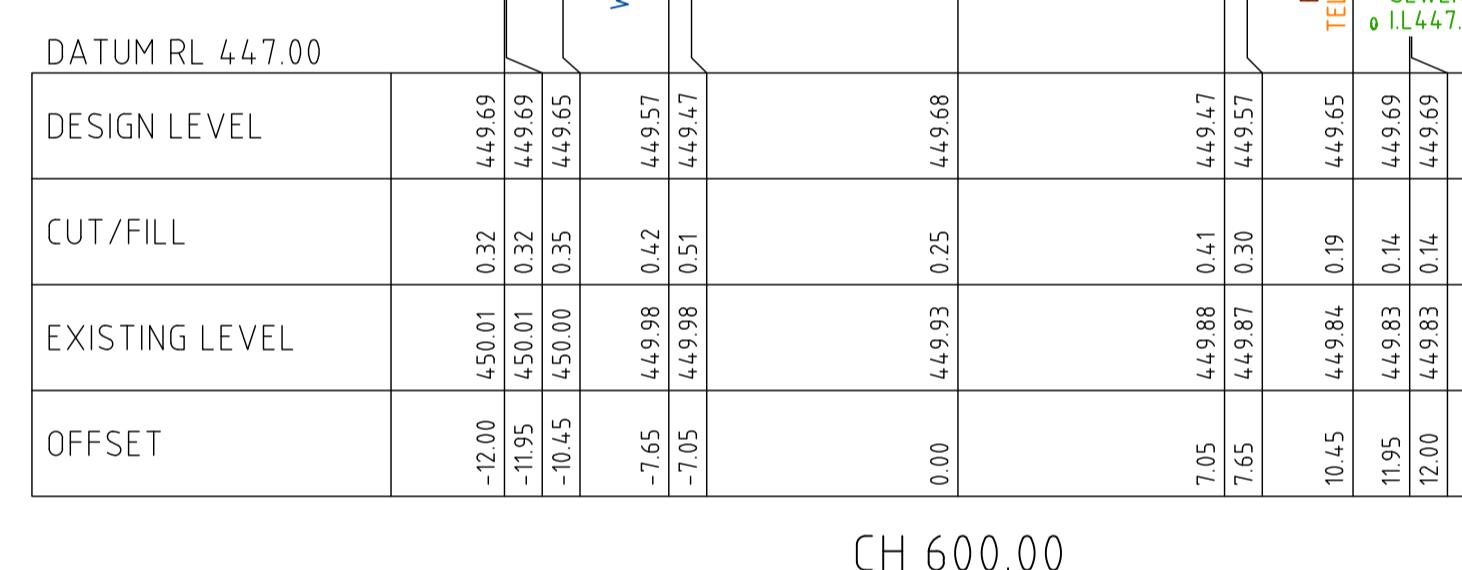
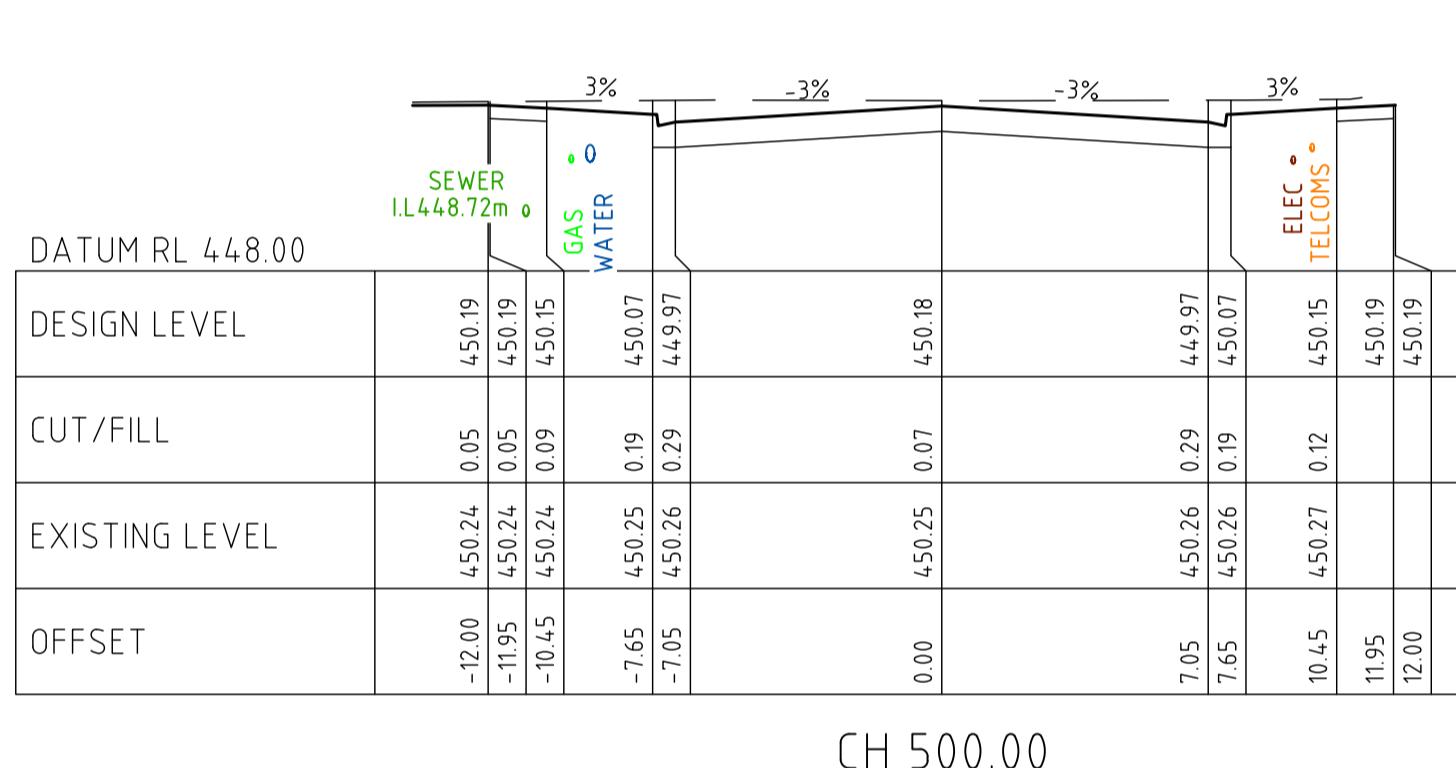
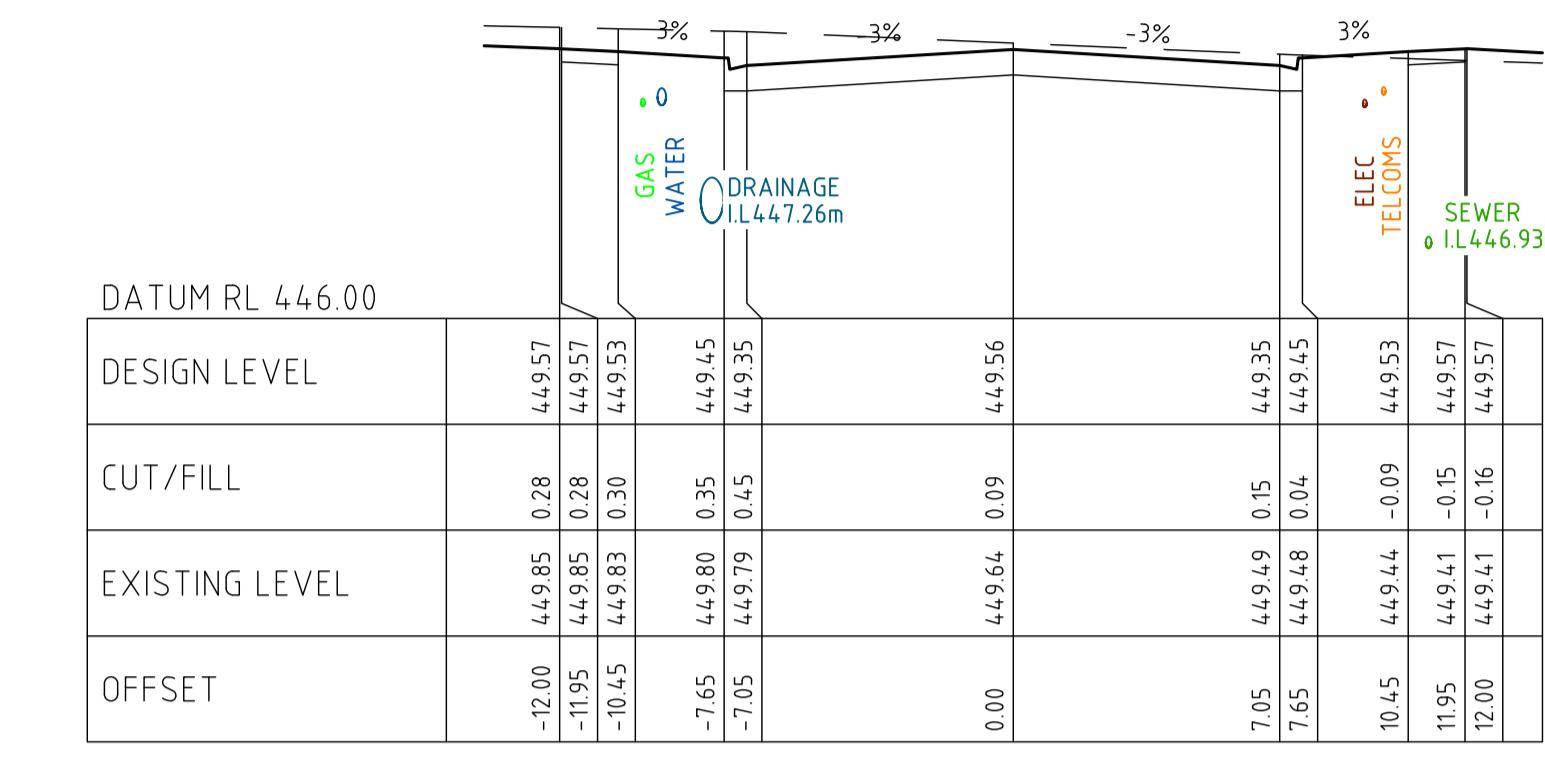
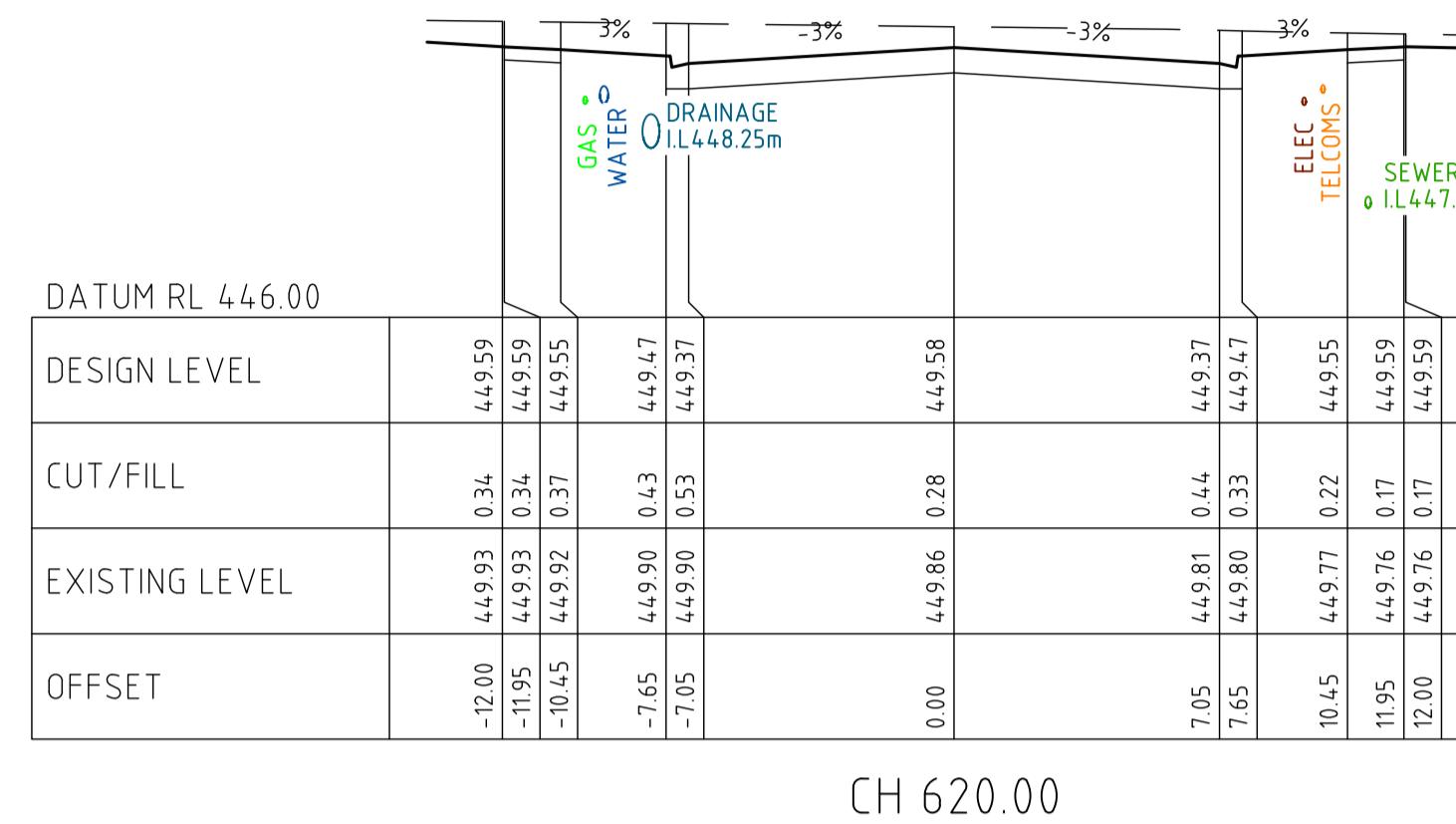
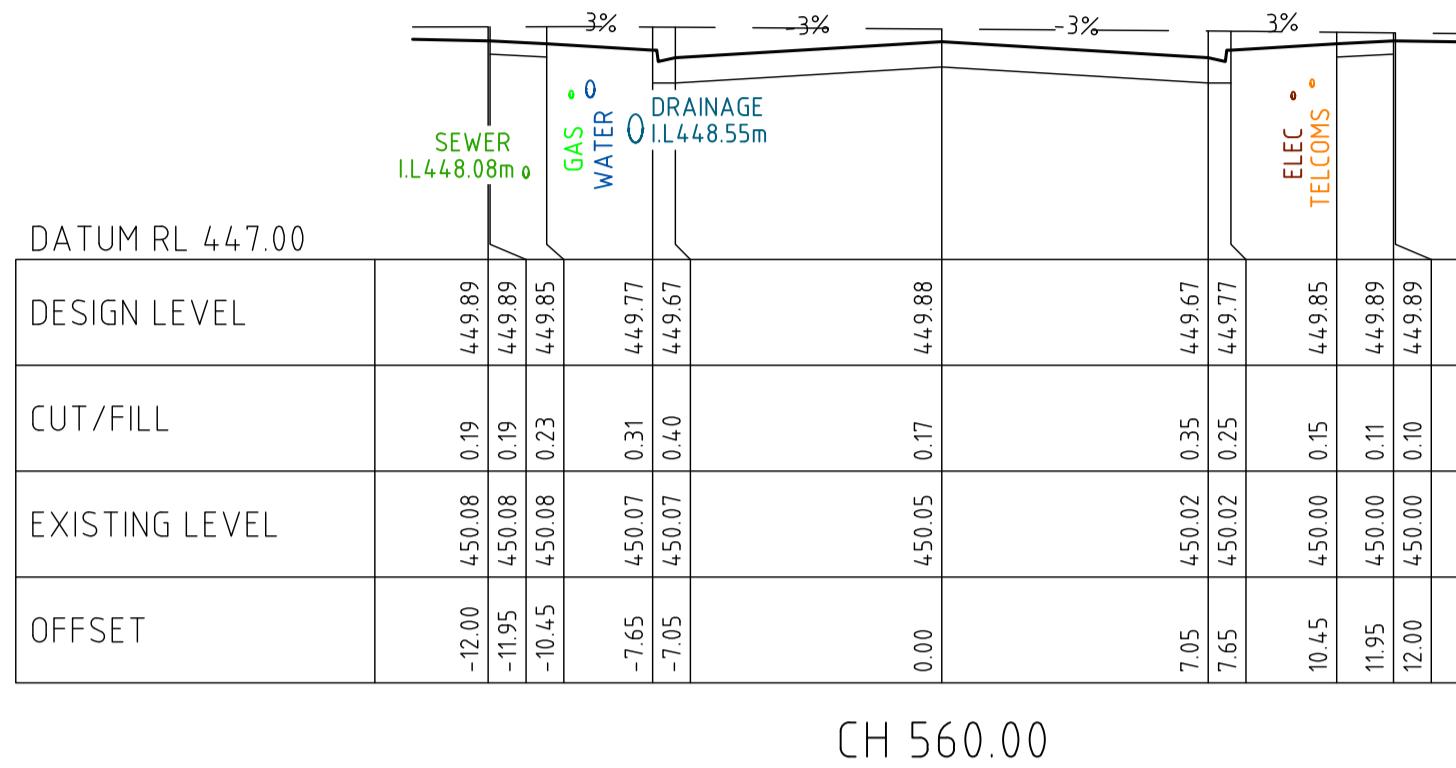
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AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	JUNE 2019
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SCALE:	AS SHOWN	
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							SHEET SIZE:	A1	
04	APPROVAL	05/07/19	J.H.							SURVEY:	TGM GROUP	
05	CONSTRUCTION	10/07/19	J.H.							CHECKED:	M. ANTON	
06	AS CONSTRUCTED	13/05/20	J.H.							APPROVED:	R. DUNN	
										DATE:	05/07/19	
										DATE:	10/07/19	

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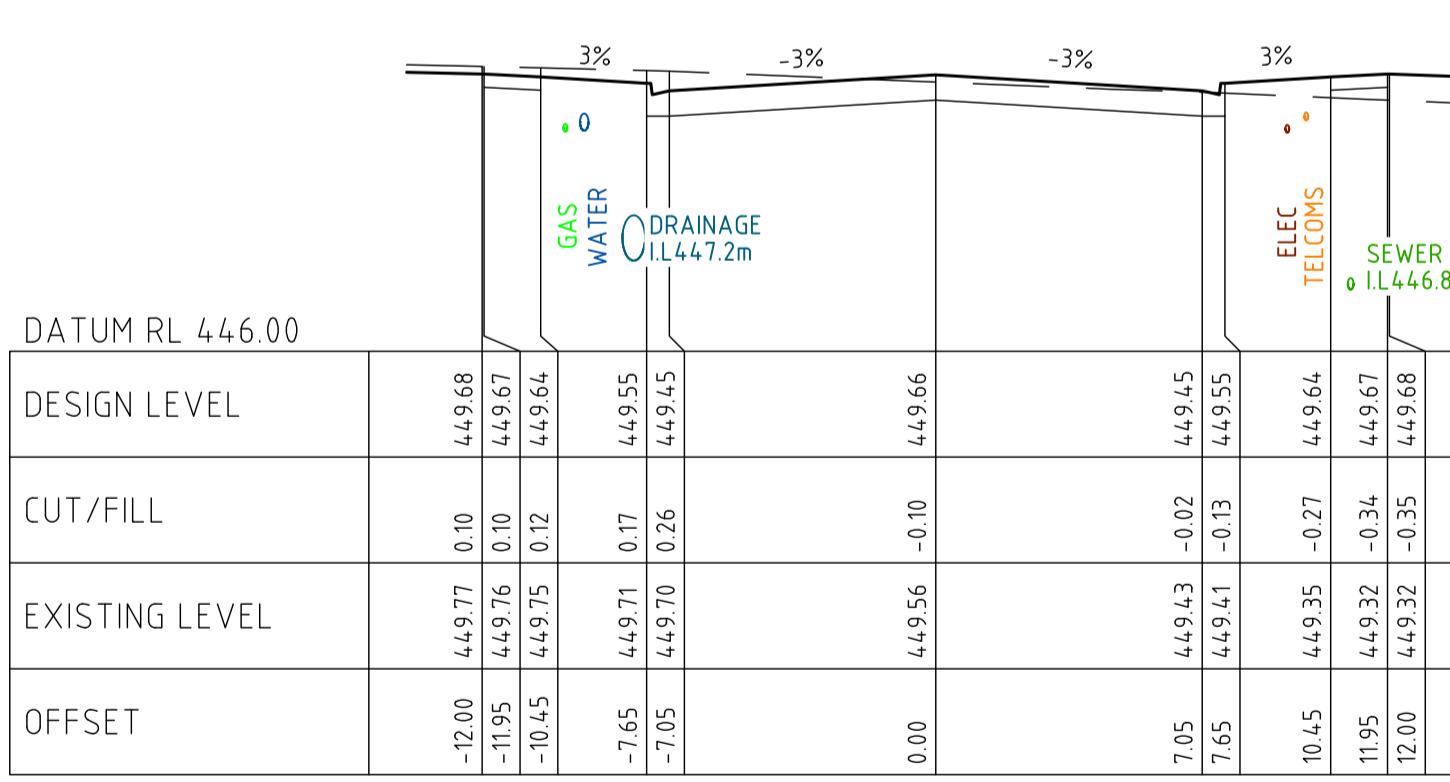
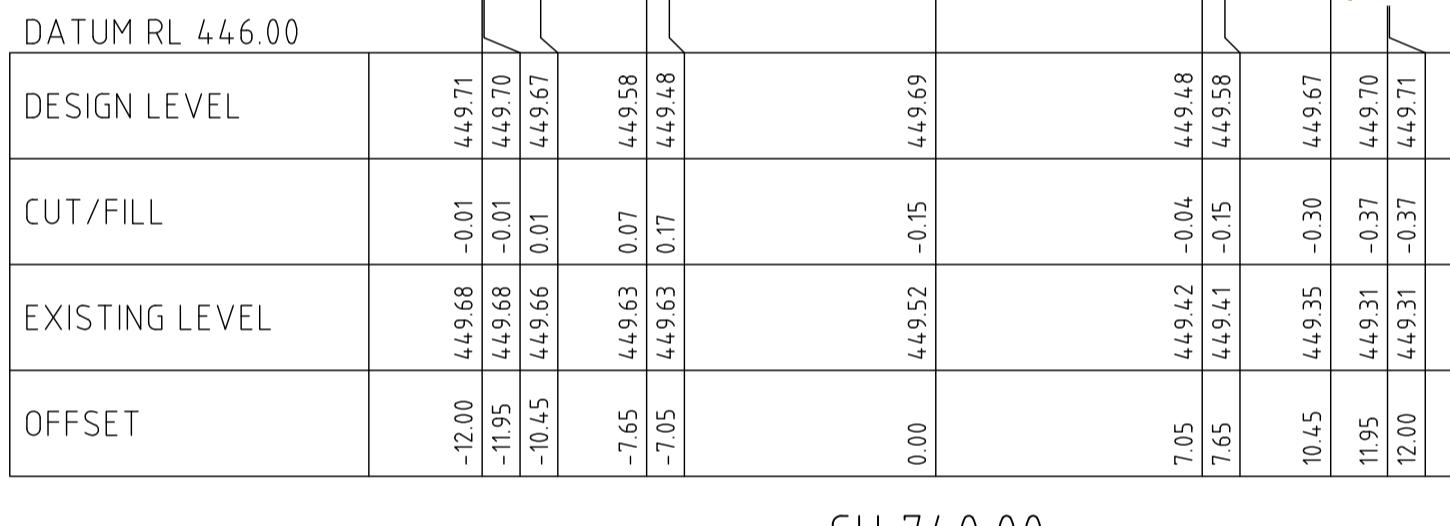
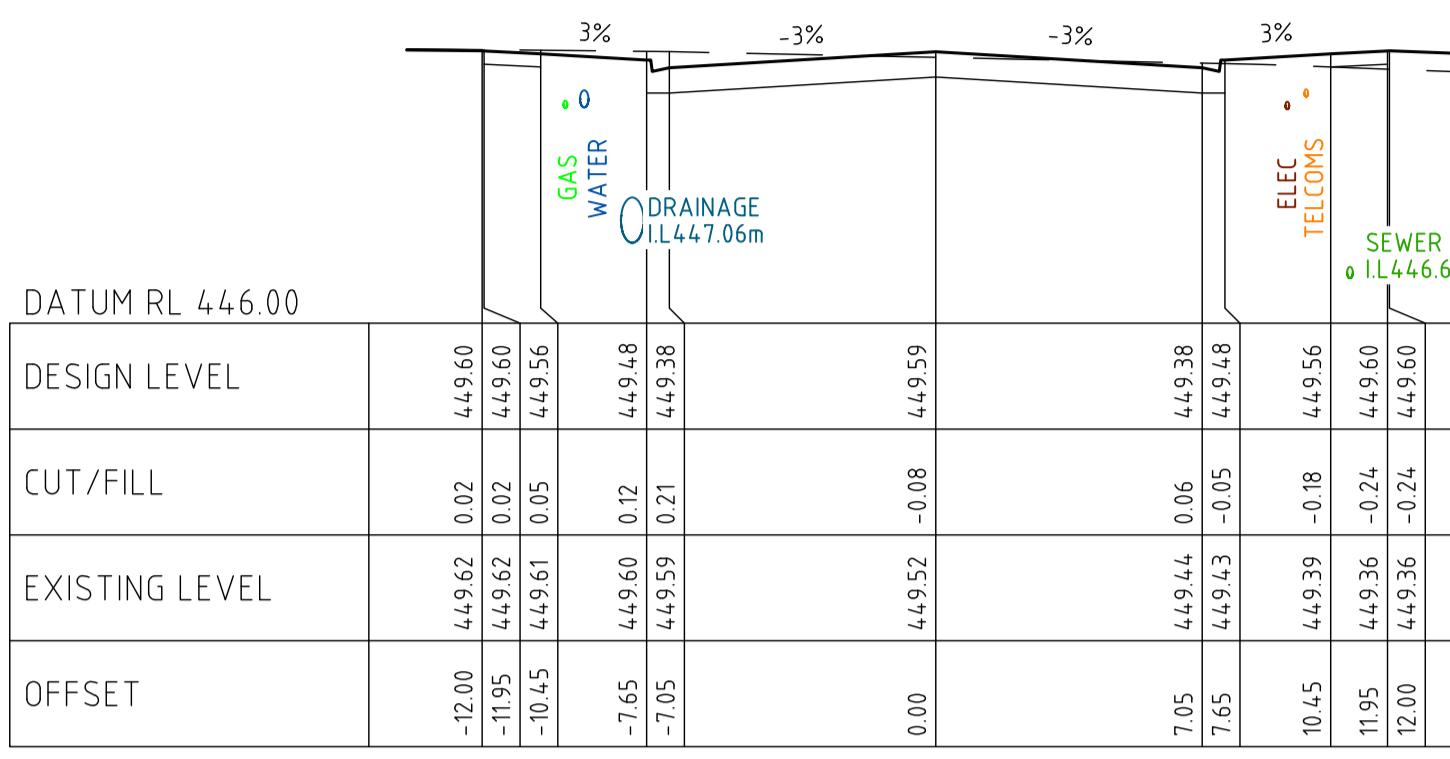
CLIENT:
Integra

PROJECT:
**LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)**

CIVIL DRAWING
DRAWING TITLE:
**SHORTRIDGE DRIVE CROSS SECTIONS
SHEET 1 OF 2**
TGM REF. No.: **18775-204** SHEET **C09** OF **21** REV. **06**

NOTE:
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SHORTRIDGE DRIVE CROSS SECTION
SCALE H 1:200, V 1:100

DATUM RL 445.00

	DESIGN LEVEL	CUT/FILL	EXISTING LEVEL	OFFSET
-12.00	4.4962 0.02	4.4960	-12.00	4.4962 0.02
-11.95	4.4961 0.05	4.4956	-11.95	4.4961 0.05
-10.45	4.4951 0.33	4.4871	-10.45	4.4951 0.33
-7.65	4.4946 0.49	4.4859	-7.65	4.4946 0.49
-7.05	4.4946 0.55	4.4859	-7.05	4.4946 0.55
0.00	4.4952 -0.08	4.4959	0.00	4.4952 -0.08
7.05	4.4944 0.06	4.4938	7.05	4.4944 0.06
7.65	4.4943 0.05	4.4938	7.65	4.4943 0.05
10.45	4.4939 -0.18	4.4956	10.45	4.4939 -0.18
11.95	4.4936 -0.24	4.4940	11.95	4.4936 -0.24
12.00	4.4936 -0.24	4.4940	12.00	4.4936 -0.24

CH 820.00

DATUM RL 445.00

	DESIGN LEVEL	CUT/FILL	EXISTING LEVEL	OFFSET
-12.00	4.4962 0.02	4.4960	-12.00	4.4962 0.02
-11.95	4.4961 0.05	4.4956	-11.95	4.4961 0.05
-10.45	4.4951 0.33	4.4871	-10.45	4.4951 0.33
-7.65	4.4946 0.49	4.4859	-7.65	4.4946 0.49
-7.05	4.4946 0.55	4.4859	-7.05	4.4946 0.55
0.00	4.4952 -0.08	4.4959	0.00	4.4952 -0.08
7.05	4.4944 0.06	4.4938	7.05	4.4944 0.06
7.65	4.4943 0.05	4.4938	7.65	4.4943 0.05
10.45	4.4939 -0.18	4.4956	10.45	4.4939 -0.18
11.95	4.4936 -0.24	4.4940	11.95	4.4936 -0.24
12.00	4.4936 -0.24	4.4940	12.00	4.4936 -0.24

CH 800.00

DATUM RL 445.00

	DESIGN LEVEL	CUT/FILL	EXISTING LEVEL	OFFSET
-12.00	4.4962 0.02	4.4960	-12.00	4.4962 0.02
-11.95	4.4961 0.05	4.4956	-11.95	4.4961 0.05
-10.45	4.4951 0.33	4.4871	-10.45	4.4951 0.33
-7.65	4.4946 0.49	4.4859	-7.65	4.4946 0.49
-7.05	4.4946 0.55	4.4859	-7.05	4.4946 0.55
0.00	4.4952 -0.08	4.4959	0.00	4.4952 -0.08
7.05	4.4944 0.06	4.4938	7.05	4.4944 0.06
7.65	4.4943 0.05	4.4938	7.65	4.4943 0.05
10.45	4.4939 -0.18	4.4956	10.45	4.4939 -0.18
11.95	4.4936 -0.24	4.4940	11.95	4.4936 -0.24
12.00	4.4936 -0.24	4.4940	12.00	4.4936 -0.24

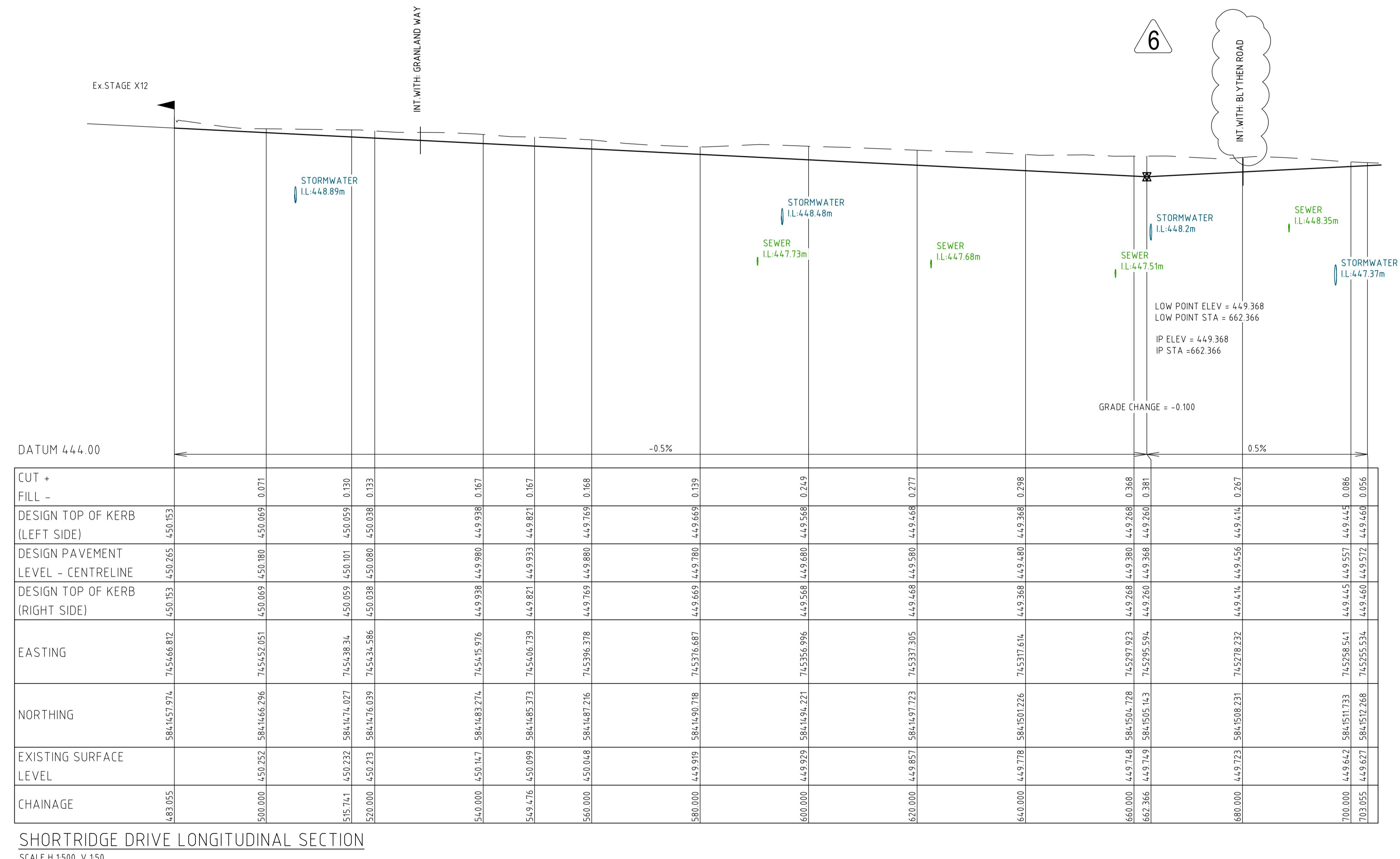
CH 780.00

	DESIGN LEVEL	CUT/FILL	EXISTING LEVEL	OFFSET
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-11.95	4.4961 0.05	4.4956	-11.95	4.4961 0.05
-10.45	4.4951 0.33	4.4871	-10.45	4.4951 0.33
-7.65	4.4946 0.49	4.4859	-7.65	4.4946 0.49
-7.05	4.4946 0.55	4.4859	-7.05	4.4946 0.55
0.00	4.4952 -0.08	4.4959	0.00	4.4952 -0.08
7.05	4.4944 0.06	4.4938	7.05	4.4944 0.06
7.65	4.4943 0.05	4.4938	7.65	4.4943 0.05
10.45	4.4939 -0.18	4.4956	10.45	4.4939 -0.18
11.95	4.4936 -0.24	4.4940	11.95	4.4936 -0.24
12.00	4.4936 -0.24	4.4940	12.00	4.4936 -0.24

CH 880.00

	DESIGN LEVEL	CUT/FILL	EXISTING LEVEL	OFFSET
-12.00	4.4962 0.02	4.4960	-12.00	4.4962 0.02
-11.95	4.4961 0.05	4.4956	-11.95	4.4961 0.05
-10.45	4.4951 0.33	4.4871	-10.45	4.4951 0.33
-7.65	4.4946 0.49	4.4859	-7.65	4.4946 0.49
-7.05	4.4946 0.55	4.4859	-7.05</	

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AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.			
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.			
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.			
04	APPROVAL	05/07/19	J.H.			
05	CONSTRUCTION	10/07/19	J.H.			
06	ROAD NAME UPDATED	16/08/19	J.H.			
07	AS CONSTRUCTED	13/05/20	J.H.			



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CLIENT:

PROJECT:

LUCAS ESTATE RESIDENTIAL SUBDIVISION STAGE F4 (37 LOTS)

CIVIL DRAWING

AWING TITLE:

SHORTRIDGE DRIVE LONGITUDINAL SECTIONS

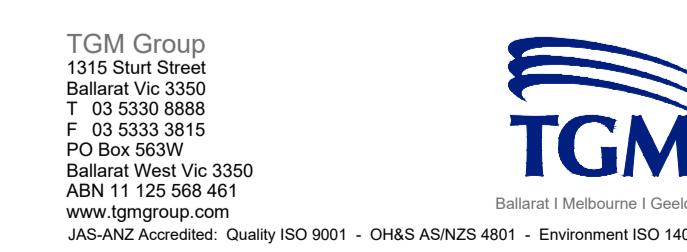
SHEET 1 OF 2

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AND/OR PERMANENT SURVEY MARKS AS NOMINATED BY THE PROJECT'S LICENSED SURVEYOR.
THE SET-OUT INFORMATION PROVIDED ON ARCHITECTURAL AND/OR OTHER PROJECT RELATED
DRAWINGS AND DOCUMENTS, IN CONJUNCTION WITH THE APPROVED HARD COPY DRAWINGS
PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.



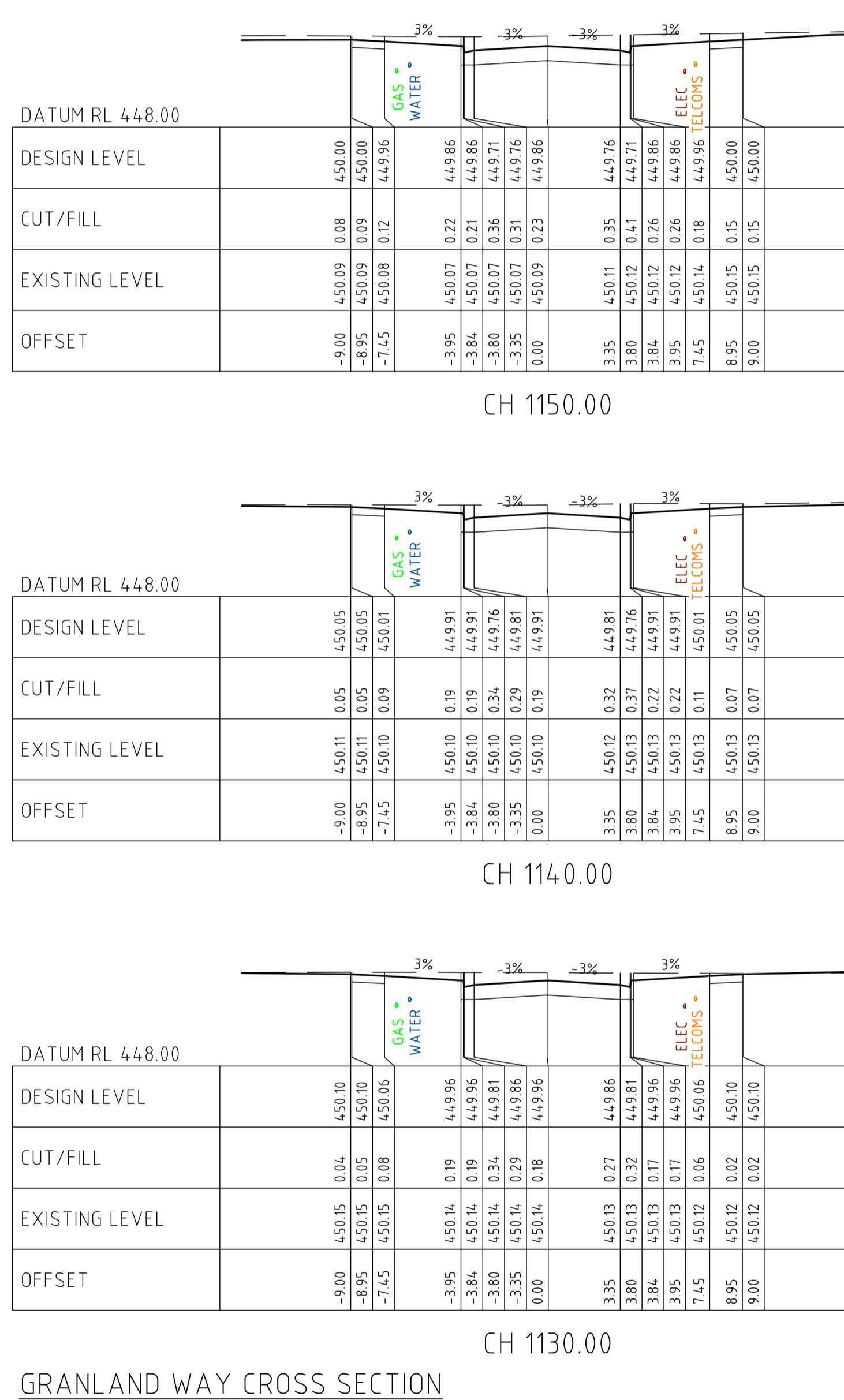
AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE	JUNE 2019
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	SCALE:	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SURVEY:	TGM GROUP	SHEET SIZE:	A1
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							CHECKED:	M. ANTON	APPROVED:	R. DUNN
04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE:	10/07/19
05	CONSTRUCTION	10/07/19	J.H.										
06	AS CONSTRUCTED	13/05/20	J.H.							(C) COPYRIGHT T.G.M GROUP PTY. LTD.			



PROJECT:		CIVIL DRAWING	
DRAWING TITLE:		C12 21	
LUCAS ESTATE RESIDENTIAL SUBDIVISION STAGE F4 (37 LOTS)		SHORTRIDGE DRIVE LONGITUDINAL SECTIONS SHEET 2 OF 2	
TGM REF. No.: 18775-204		SHEET C12 21 REV. 06	

NOTE:
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GRANLAND WAY CROSS SECTION
SCALE H 1:200, V 1:100

SLOTAY JUNE 2019
J. HADFIELD AS SHOWN
TGM GROUP A1
M. ANTON R. DUNN

05/07/19 10/07/19

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	DATE
									DRAWN	SCALE:
									SURVEY:	SHEET SIZE:
									CHECKED:	APPROVED:
									DATE:	DATE:

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JAS-ANZ Accredited: Quality ISO 9001 - OH&S AS/NZS 4801 - Environment ISO 14001

CLIENT:

Integra

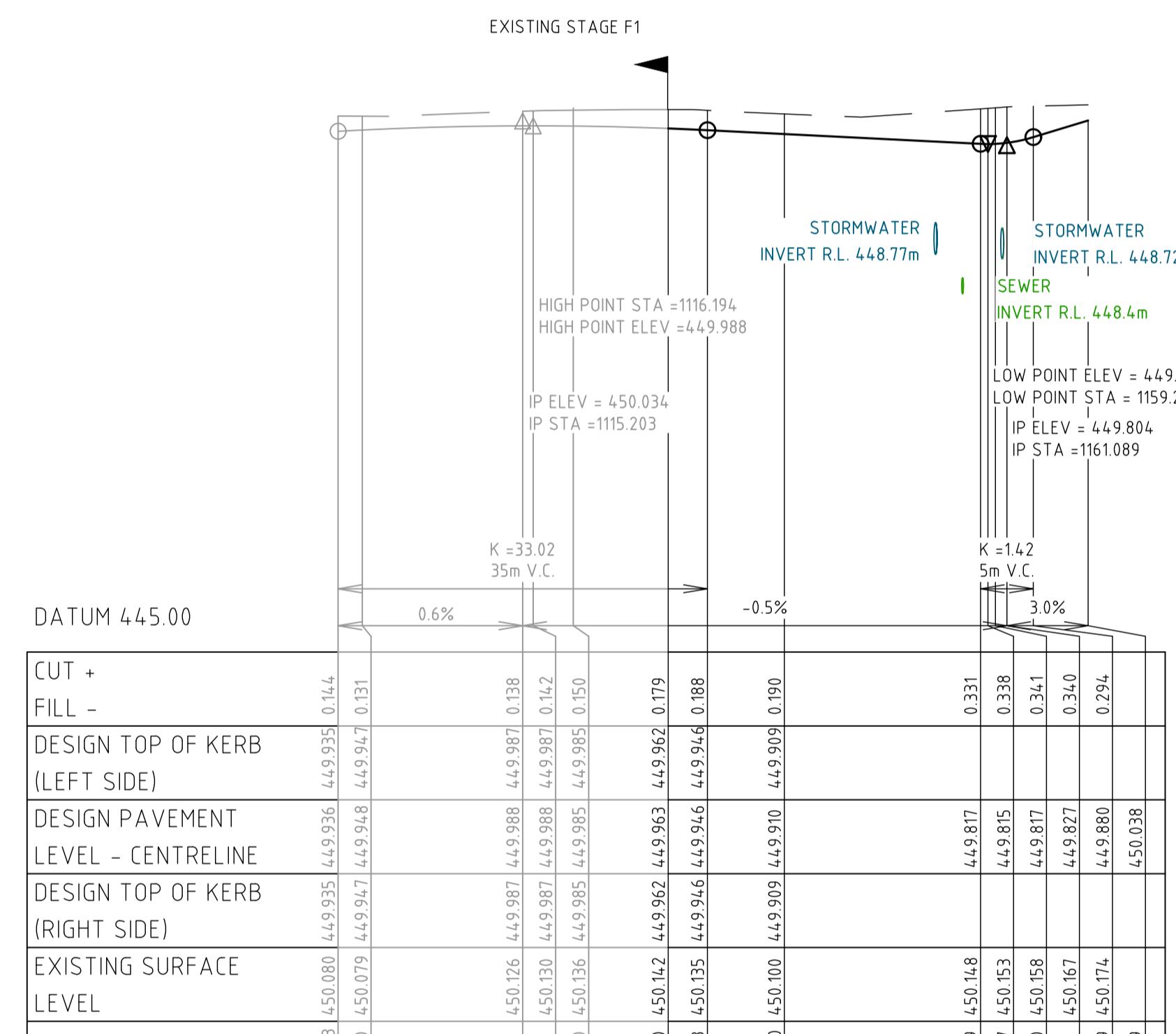
LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

C13 21
06
DRAWING TITLE:

NOTE:
LEFT & RIGHT BOUNDARIES ARE
TRUE WHEN VIEWED IN DIRECTION
OF INCREASING CHAINAGE

CIVIL DRAWING

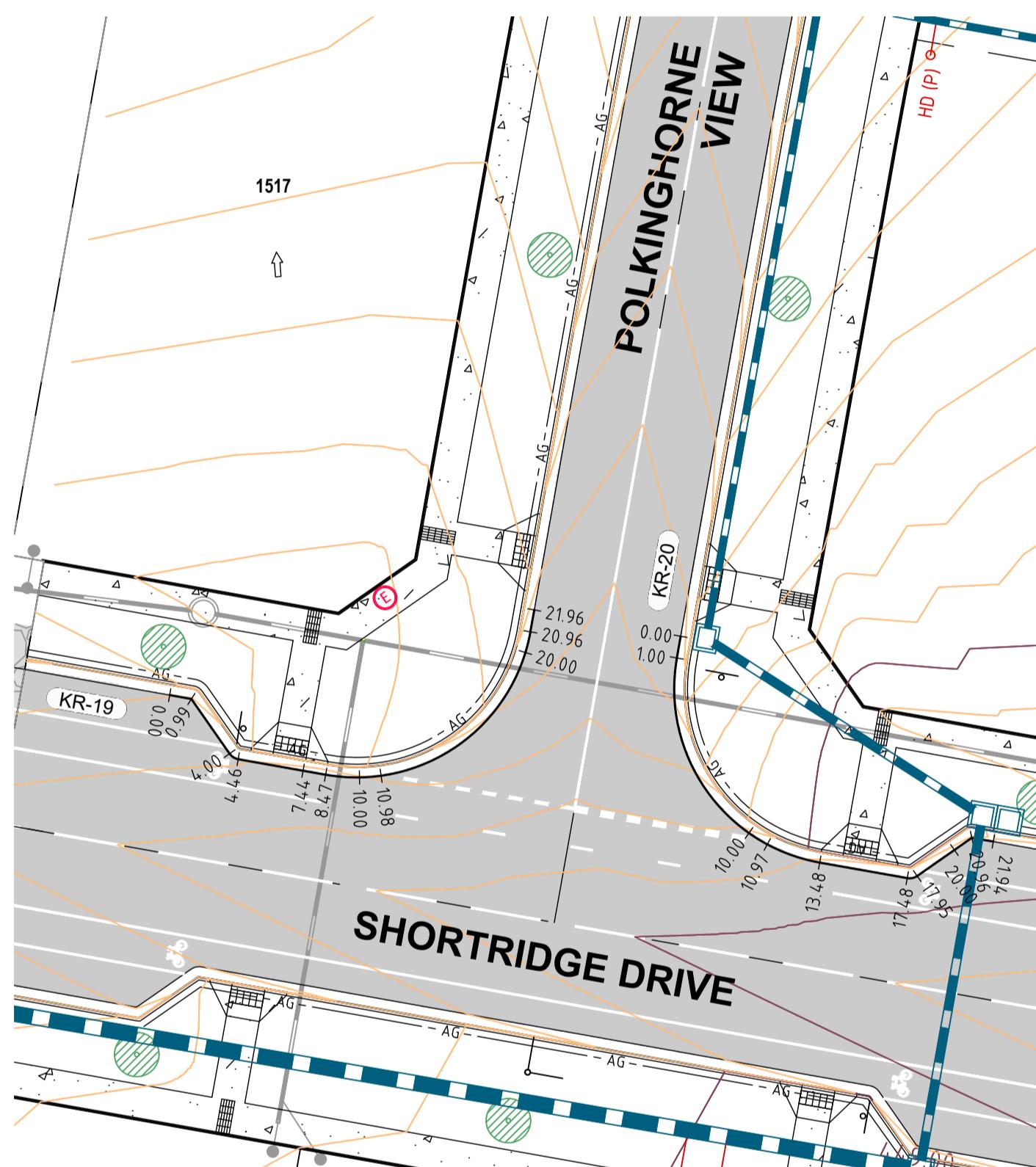
AS CONSTRUCTED



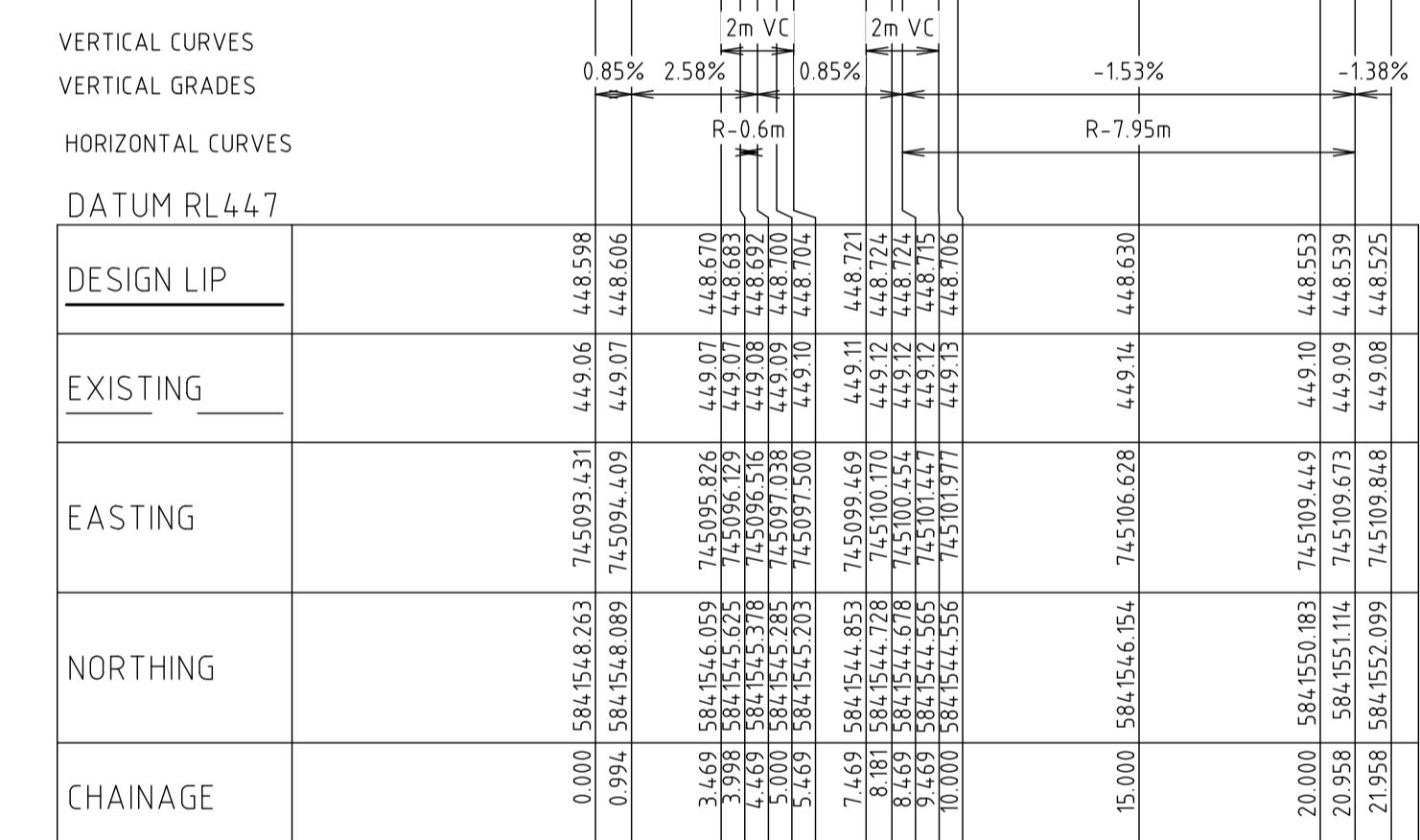
GRANLAND WAY LONGITUDINAL SECTION
SCALE H 1:500, V 1:50

TGM REF. NO.: SHEET: OF REV:

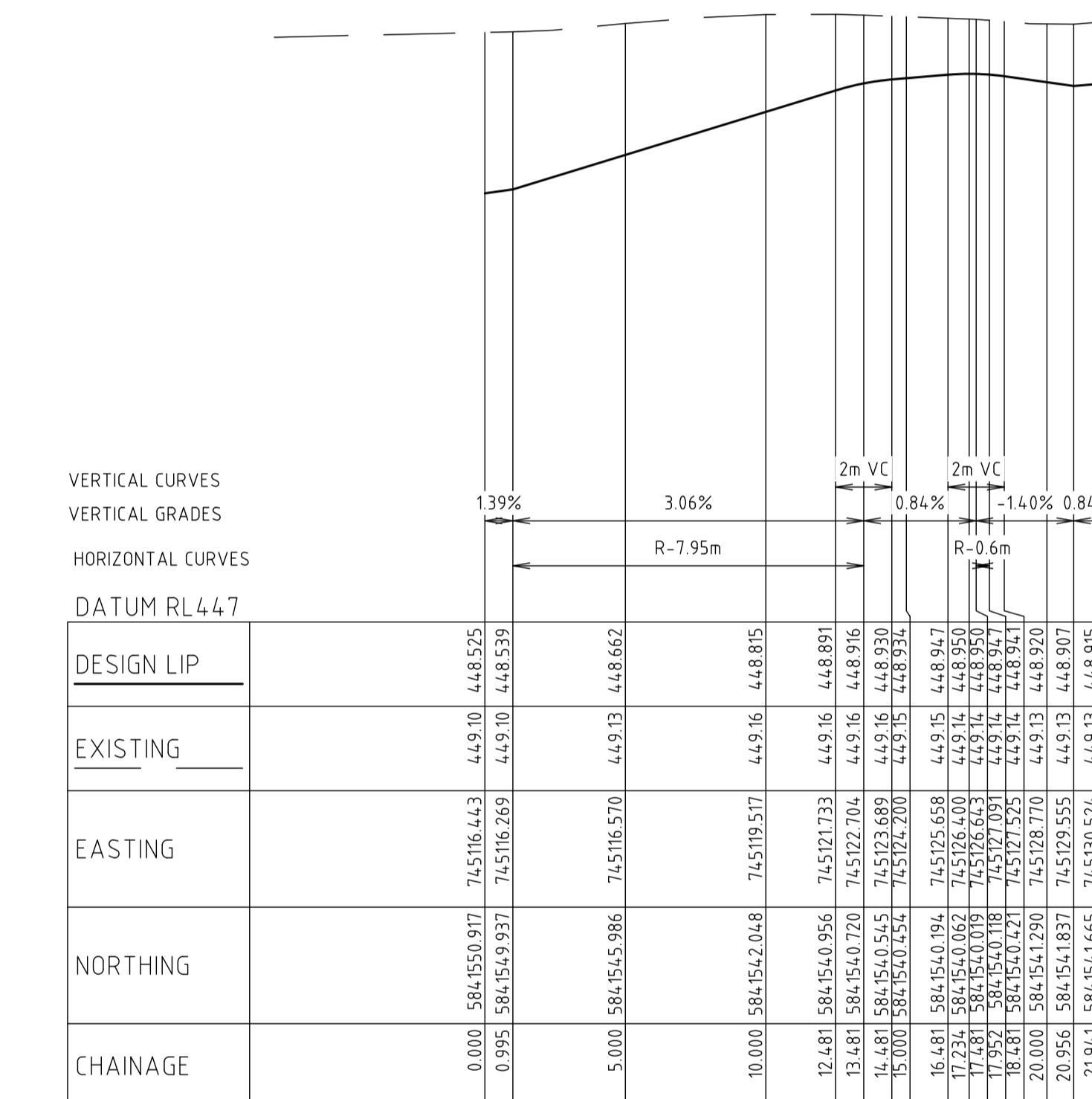
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DRAWINGS AND DOCUMENTS, IN CONJUNCTION WITH THE APPROVED HARD COPY DRAWINGS
PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.



SHORTRIDGE DRIVE - POLKINGHORNE VIEW
CRESCENT KERB RETURN CHAINAGE MAP
SCALE 1:250



SHORTRIDGE DRIVE - POLKINGHORNE VIEW - KR-19
LONG SECTION - LIP OF KERB
SCALE H 1:200, V 1:20



SHORTRIDGE DRIVE - KR-20
LONG SECTION - LIP OF KERB
SCALE H 1:200, V 1:20

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	JUNE 2019
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SCALE:	AS SHOWN	
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							SURVEY:	TGM GROUP	SHEET SIZE: A1
04	APPROVAL	05/07/19	J.H.							CHECKED:	M. ANTON	APPROVED:
05	CONSTRUCTION	10/07/19	J.H.							DATE:	05/07/19	DATE: 10/07/19
06	AS CONSTRUCTED	13/05/20	J.H.									

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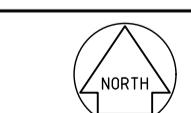


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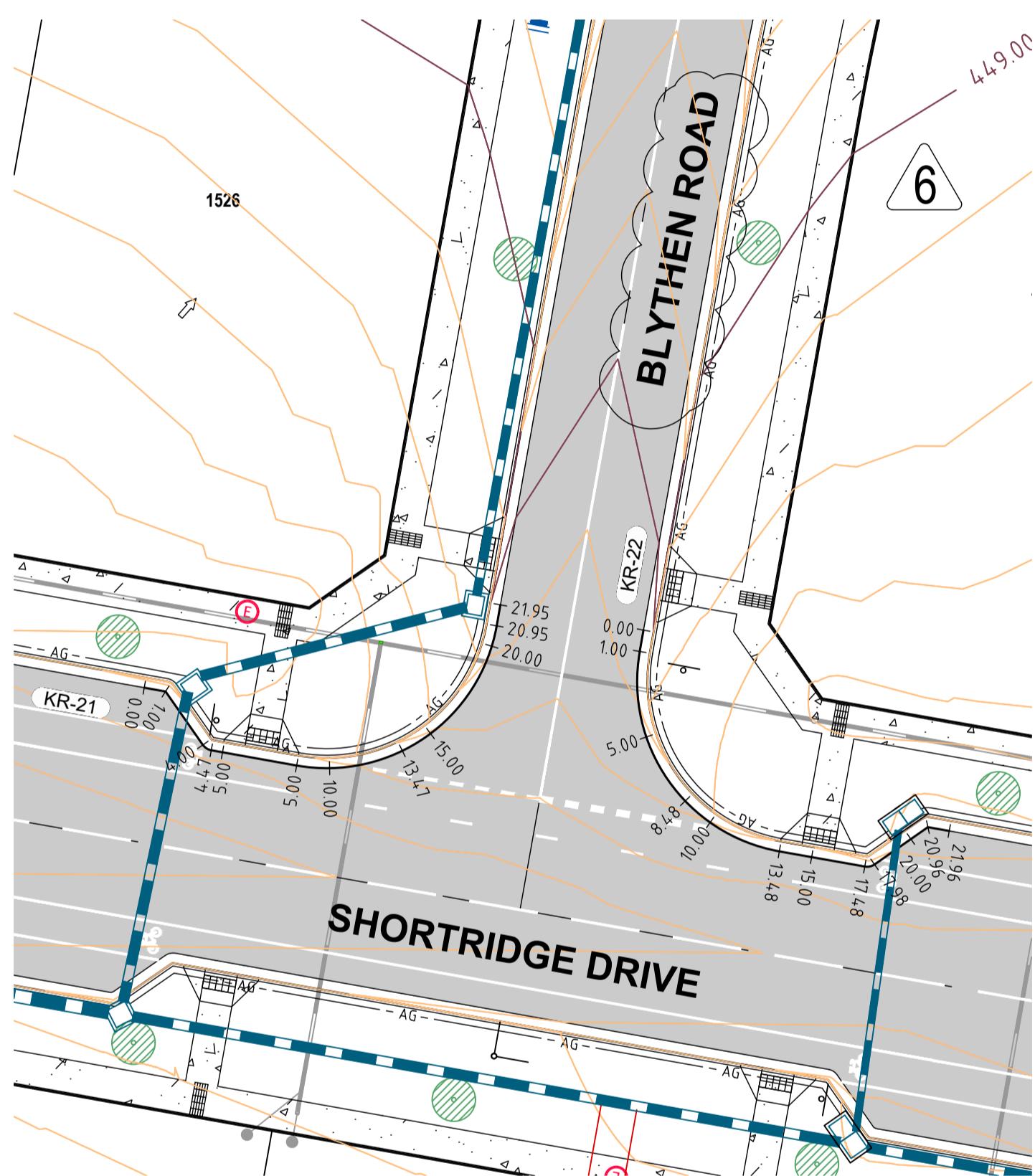
LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

PROJECT:

CIVIL DRAWING
DRAWING TITLE:
KERB RETURN LONGITUDINAL SECTIONS & CHAINAGE MAP - SHEET 1 OF 3
TGM REF. No.: 18775-204 SHEET C14 OF 21 REV. 06

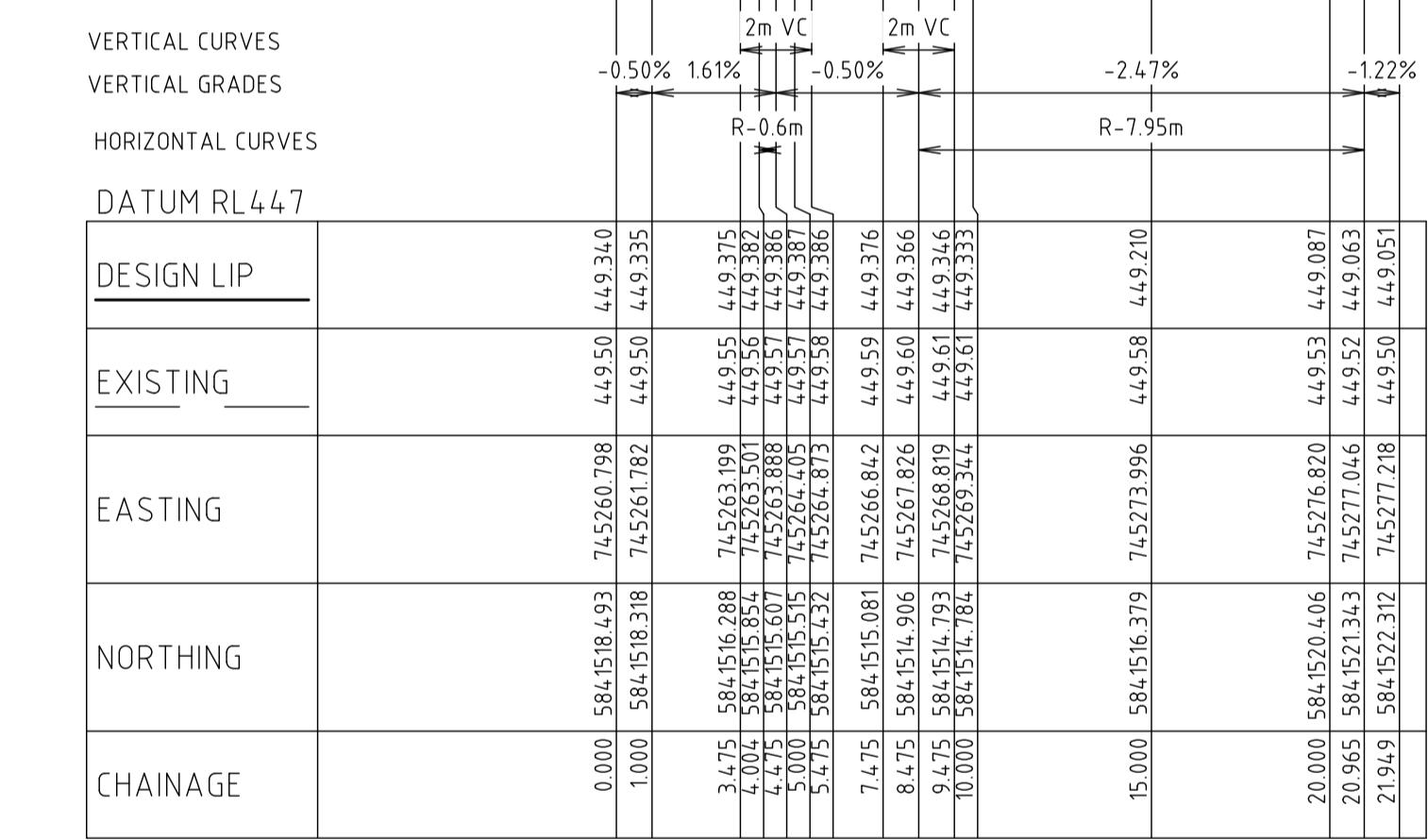


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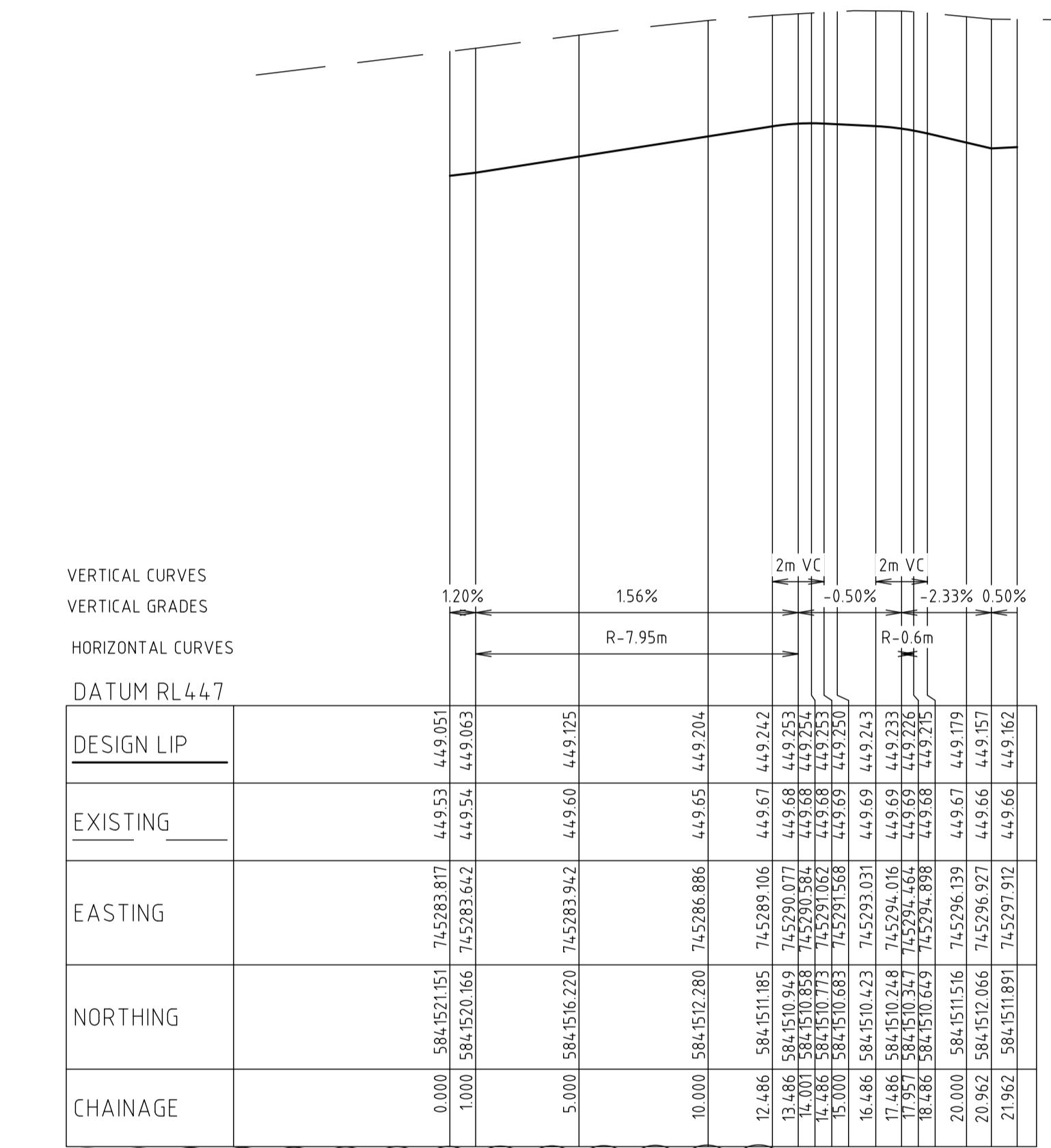


SHORTRIDGE DRIVE - ROAD KERB RETURN

CHAINAGE MAP



SHORTRIDGE DRIVE - BLYTHEN ROAD - KR-21
LONG SECTION - LIP OF KERB



SHORTRIDGE DRIVE - BLYTHEN ROAD - KR-22
LONG SECTION - LIP OF KERB

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.			
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.			
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.			
04	APPROVAL	05/07/19	J.H.			
05	CONSTRUCTION	10/07/19	J.H.			
06	ROAD NAME UPDATED	16/08/19	J.H.			
07	AS CONSTRUCTED	13/05/20	J.H.			



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PROJECT:

LUCAS ESTATE RESIDENTIAL SUBDIVISION STAGE F4 (37 LOTS)

CIVIL DRAWING

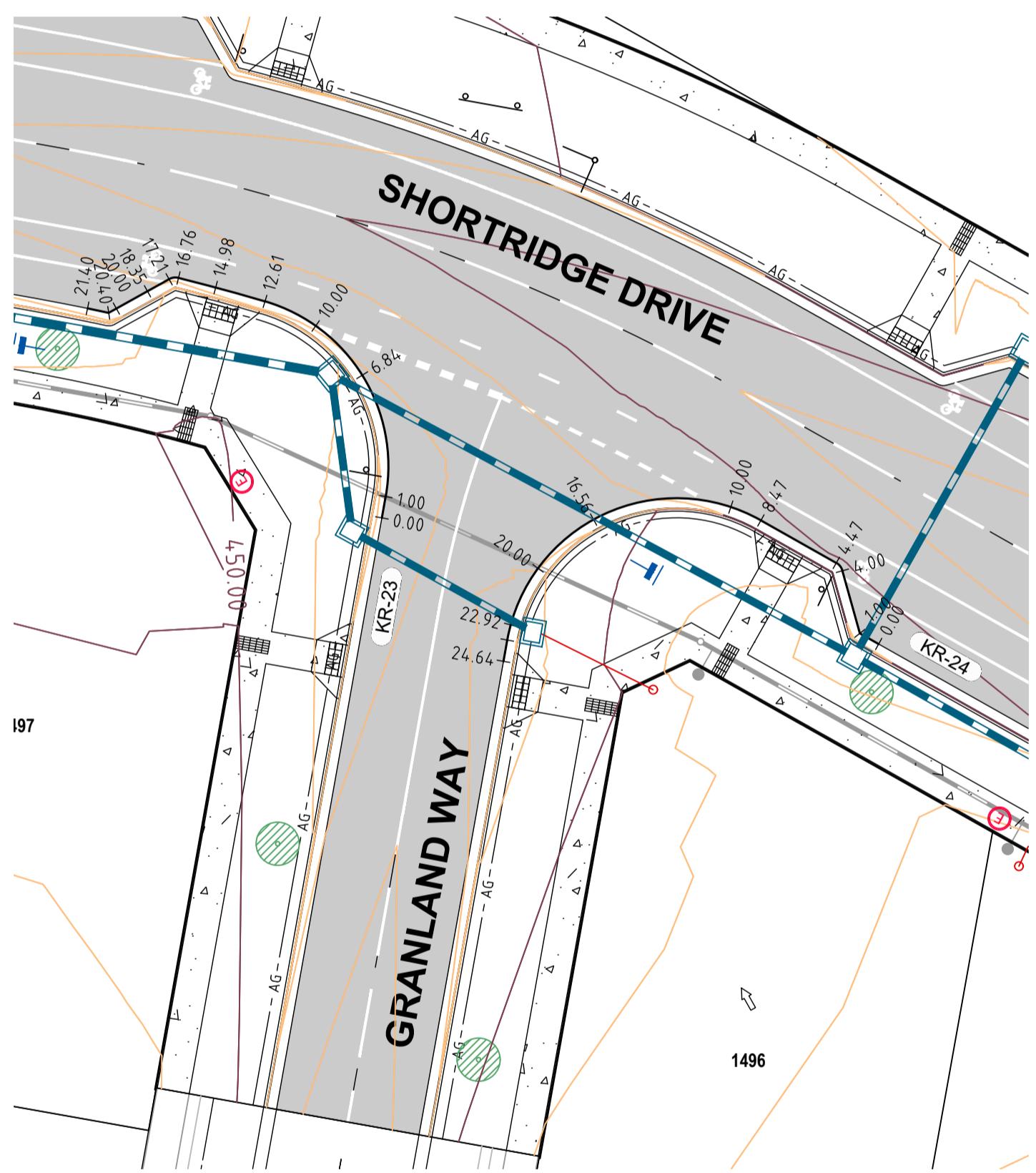
DRAWING TITLE:

**KERB RETURN LONGITUDINAL SECTIONS
& CHAINAGE MAP - SHEET 2 OF 3**

TGM REF. No.: **18775-204**

SHEET: C15	OF 21	REV: 07
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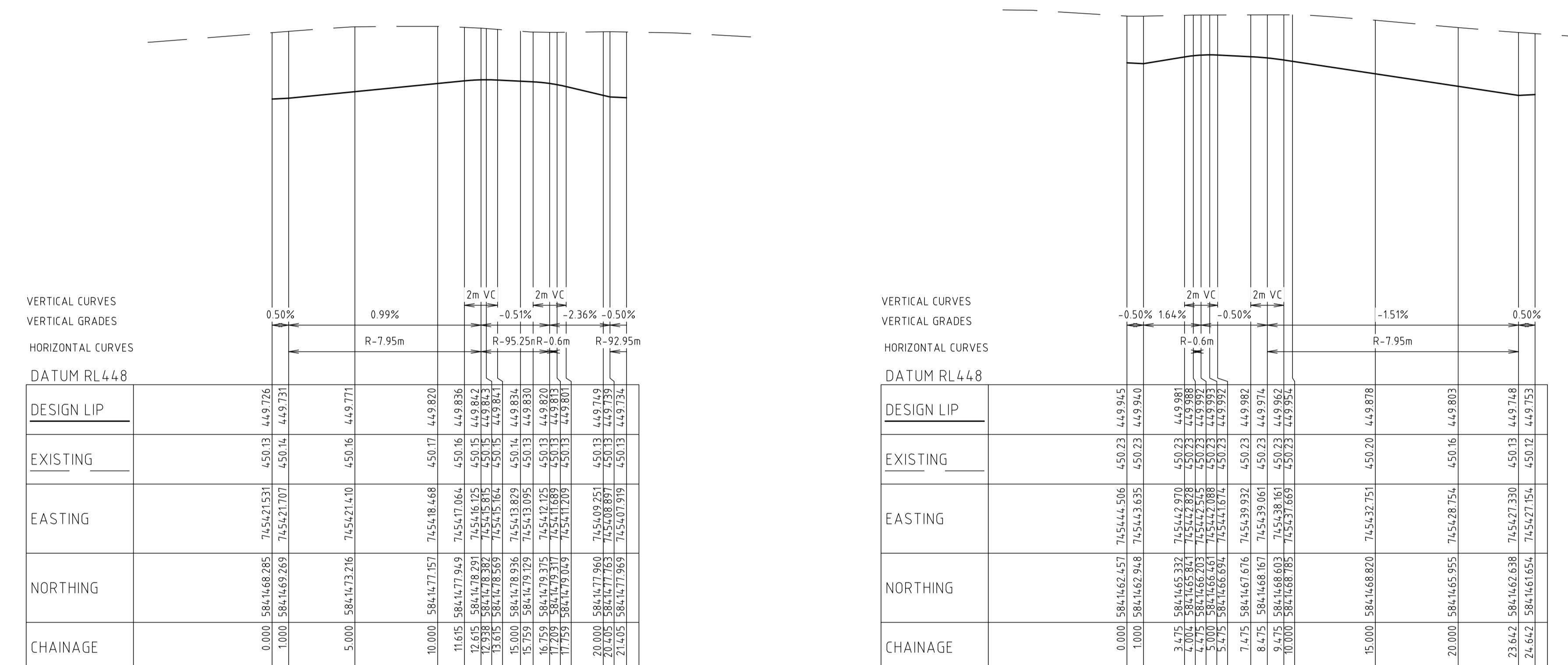


SHORTRIDGE DRIVE - GRANLAND WAY
KERB RETURN CHAINAGE MAP

SCALE 1:250

VERTICAL CURVES		VERTICAL GRADES		HORIZONTAL CURVES					
DATUM RL 448									
DESIGN LIP									
EXISTING									
EASTING									
NORTHING									
CHAINAGE									
0.000	5841468285	745421531	450.13	44.9726	11.615	5841467794.9	745417064	450.16	44.9336
1.000	5841469269	745421707	450.14	44.9731	12.615	5841468291	745416125	450.15	44.9342
5.000	5841473216	745421410	450.16	44.9771	12.918	5841478382	74541581	450.15	44.9342
10.000	5841477157	745418468	450.17	44.9820	13.615	5841478359	745415764	450.15	44.9342
15.000	584147836	745413829	450.16	44.9334	15.759	5841469129	745413398	450.13	44.9330
16.750	5841469175	745412725	450.13	44.9320	17.759	5841479169	745411209	450.13	44.9317
17.759	5841479169	745411209	450.13	44.9317	17.913	5841479169	745411209	450.13	44.9317
20.000	5841477660	745409751	450.13	44.9749	21.415	5841471653	745408875	450.13	44.9732
21.415	5841477269	7454071919	450.13	44.9734	21.415	5841477269	7454071919	450.13	44.9734

SHORTRIDGE DRIVE - GRANLAND WAY - KR-23
LONG SECTION - LIP OF KERB
SCALE H 1:200, V 1:20



SHORTRIDGE DRIVE - GRANLAND WAY - KR-24
LONG SECTION - LIP OF KERB
SCALE H 1:200, V 1:20

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE
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02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SCALE:	AS SHOWN	
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							SURVEY:	TGM GROUP	SHEET SIZE: A1
04	APPROVAL	05/07/19	J.H.							CHECKED:	M. ANTON	APPROVED: R. DUNN
05	CONSTRUCTION	10/07/19	J.H.							DATE:	05/07/19	DATE: 10/07/19
06	AS CONSTRUCTED	13/05/20	J.H.							(C)	COPYRIGHT T.G.M GROUP PTY. LTD.	

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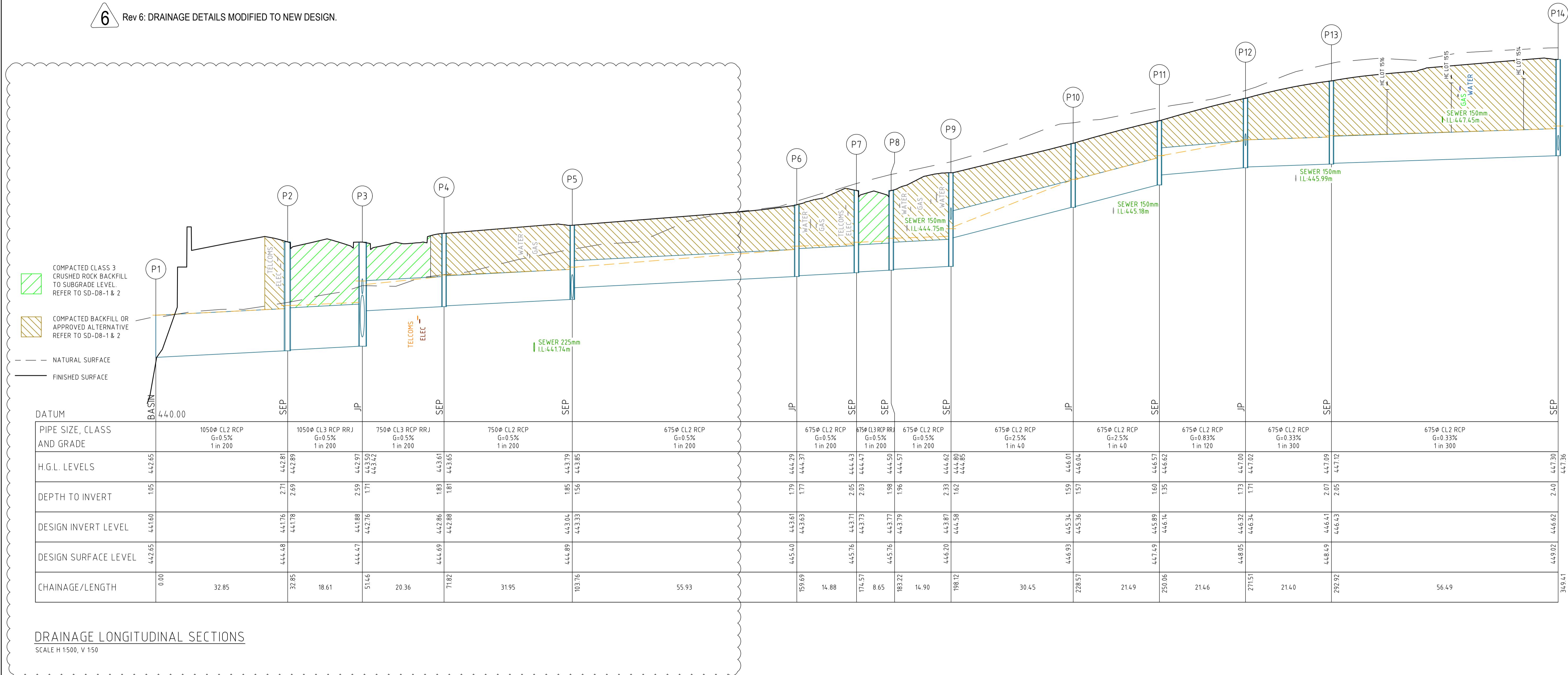
CLIENT:

LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

CIVIL DRAWING
DRAWING TITLE:
KERB RETURN LONGITUDINAL SECTIONS & CHAINAGE MAP - SHEET 3 OF 3
TGM REF. No.: **18775-204** SHEET **C16** OF **21** REV. **06**

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6 Rev 6: DRAINAGE DETAILS MODIFIED TO NEW DESIGN.



DRAINAGE | LONGITUDINAL SECTIONS

SCALE H 1:500 V 1:50

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.						
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.						
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.						
04	APPROVAL	05/07/19	J.H.						
05	CONSTRUCTION	10/07/19	J.H.						
06	AMENDMENTS - UPDATED PLANS	30/07/19	S.L.						
07	AS CONSTRUCTED	13/05/20	J.H.						



The logo for Integra, featuring a blue circular icon with a stylized upward-pointing arrow on the left, and the word "Integra" in a large, bold, blue sans-serif font to the right.

PROJECT:

LUCAS ESTATE RESIDENTIAL SUBDIVISION STAGE F4 (37 LOTS)

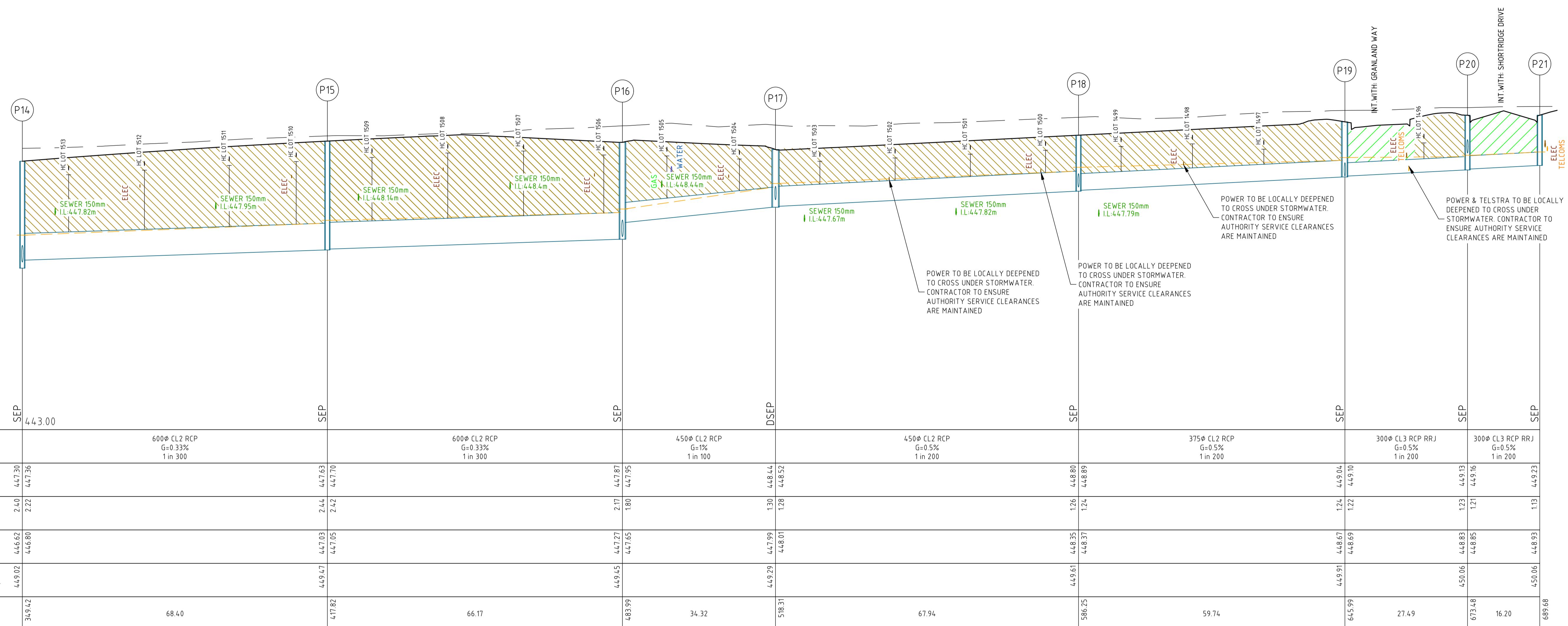
CIVIL DRAWING

DRAWING TITLE:

DRAINAGE LONGITUDINAL SECTION

SHEET 1 OF 4

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DRAINAGE LONGITUDINAL SECTIONS

SCALE H 1500, V 150

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOT#AY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.							DRAWN	J. HADFIELD	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SURVEY:	TGM GROUP	SCALE: A1
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							CHECKED:	M. ANTON	APPROVED: R. DUNN
04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE: 10/07/19
05	CONSTRUCTION	10/07/19	J.H.									
06	AMENDMENTS - UPDATED PLANS	30/07/19	S.L.									
07	AS CONSTRUCTED	13/05/20	J.H.									

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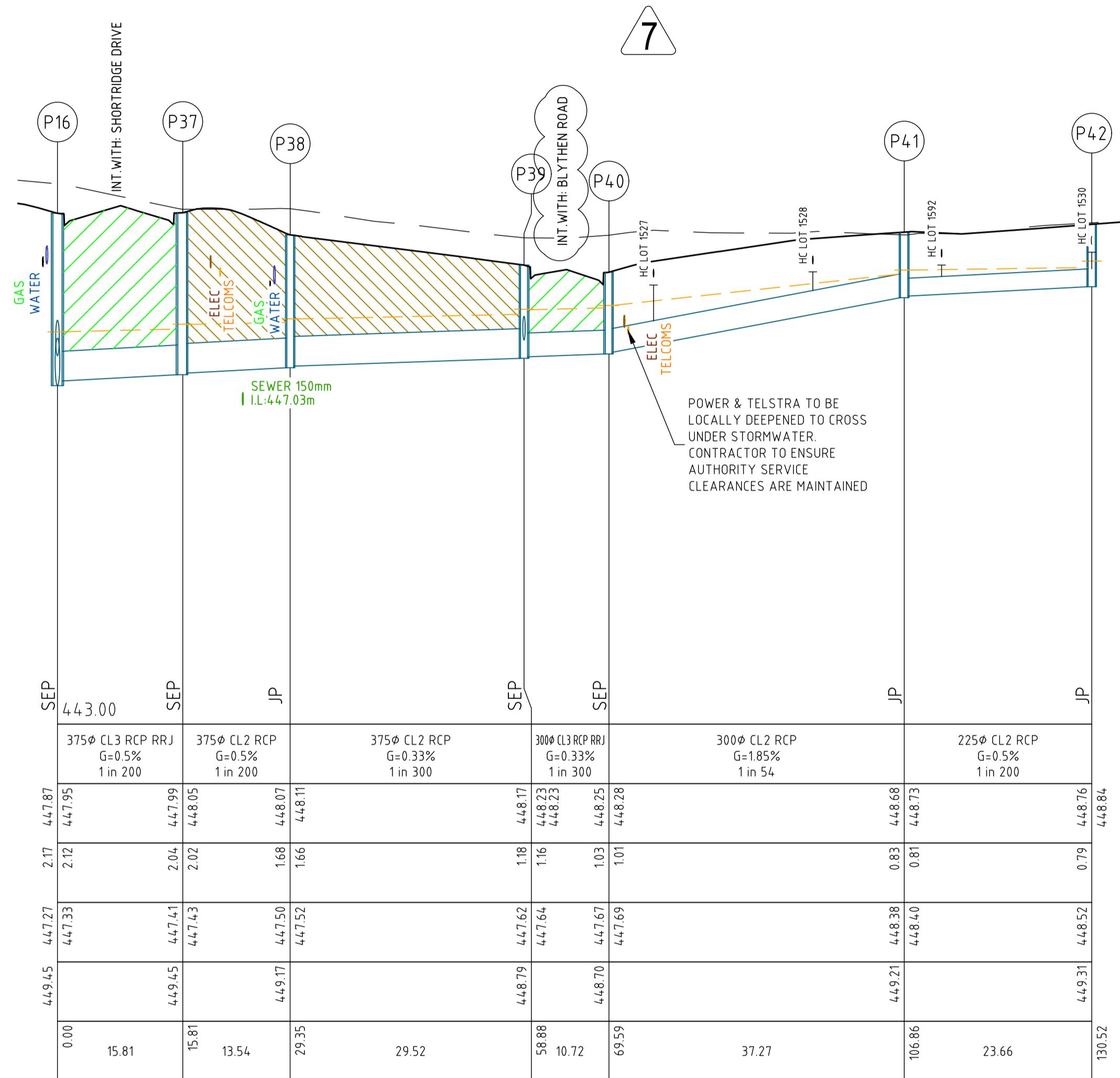
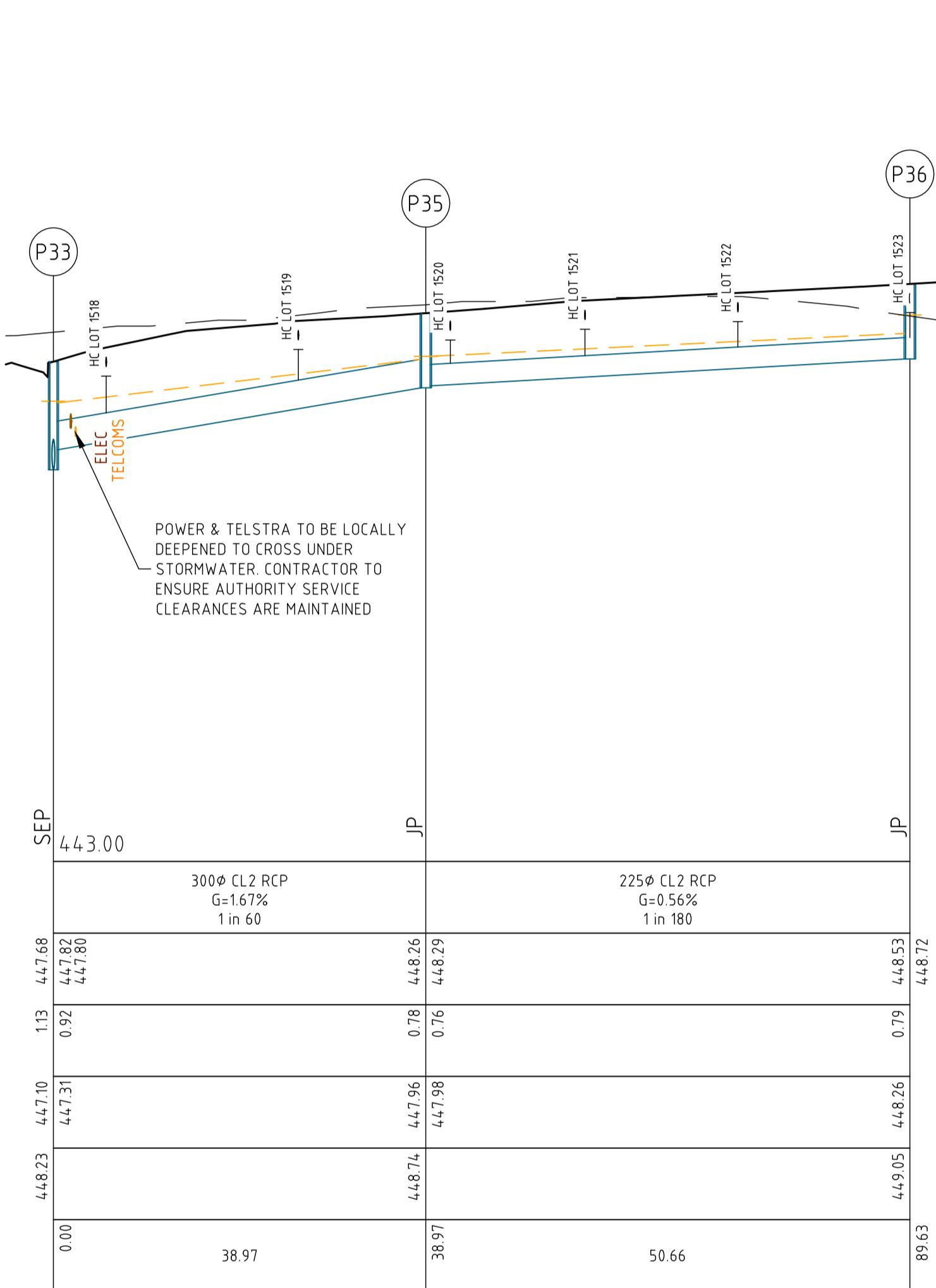
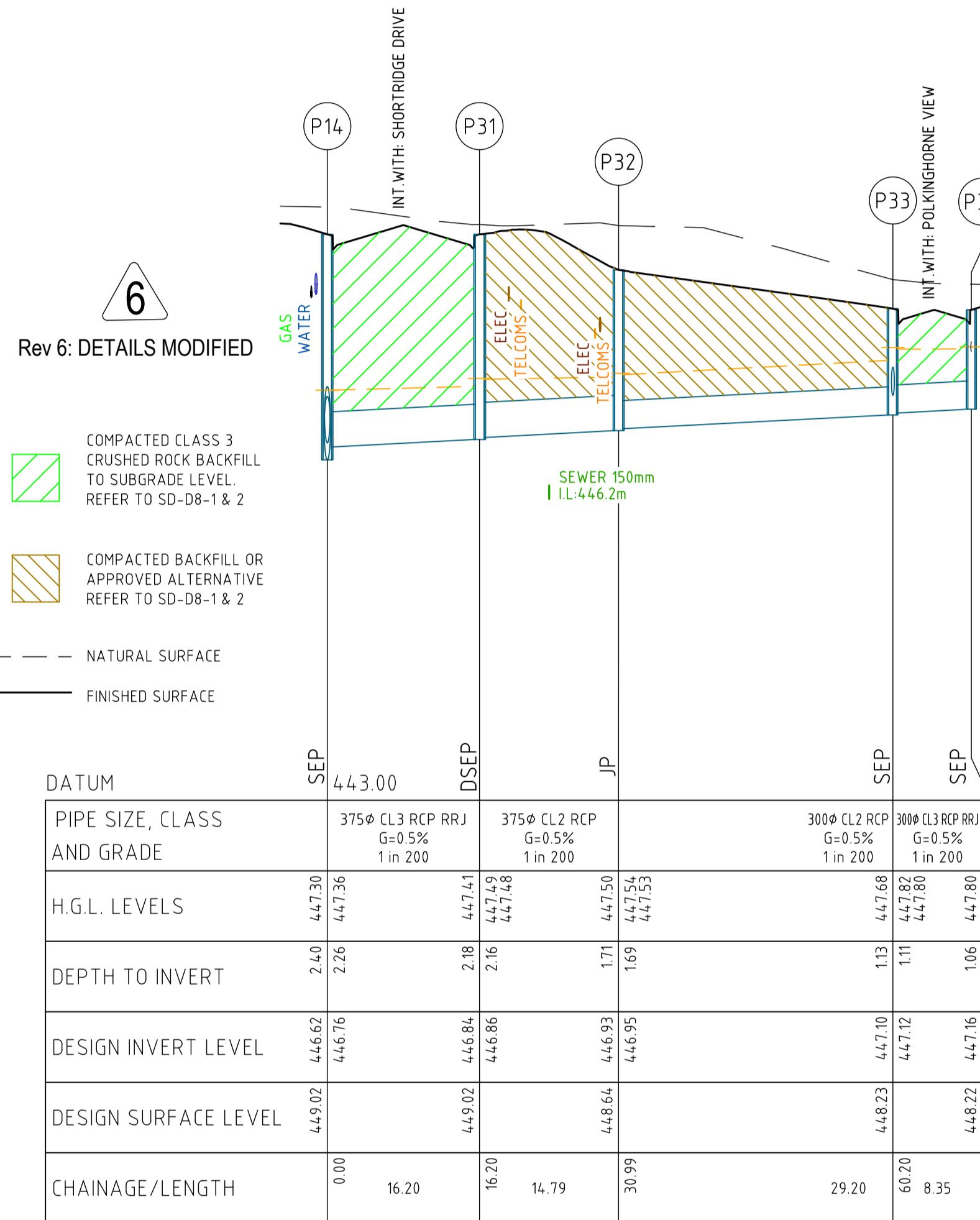
LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

CIVIL DRAWING

DRAWING TITLE:
**DRAINAGE LONGITUDINAL SECTION
SHEET 2 OF 4**

TGM REF. No.: **18775-204** SHEET **C18** OF **21** REV. **07**

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DRAINAGE LONGITUDINAL SECTIONS

SCALE H 1:500, V 1:50

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROV
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	AS CONSTRUCTED	13/05/20	J.H.	
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.						
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.						
04	APPROVAL	05/07/19	J.H.						
05	CONSTRUCTION	10/07/19	J.H.						
06	AMENDMENTS - UPDATED PLANS	30/07/19	S.L						
07	ROAD NAME UPDATED	16/08/19	J.H.						



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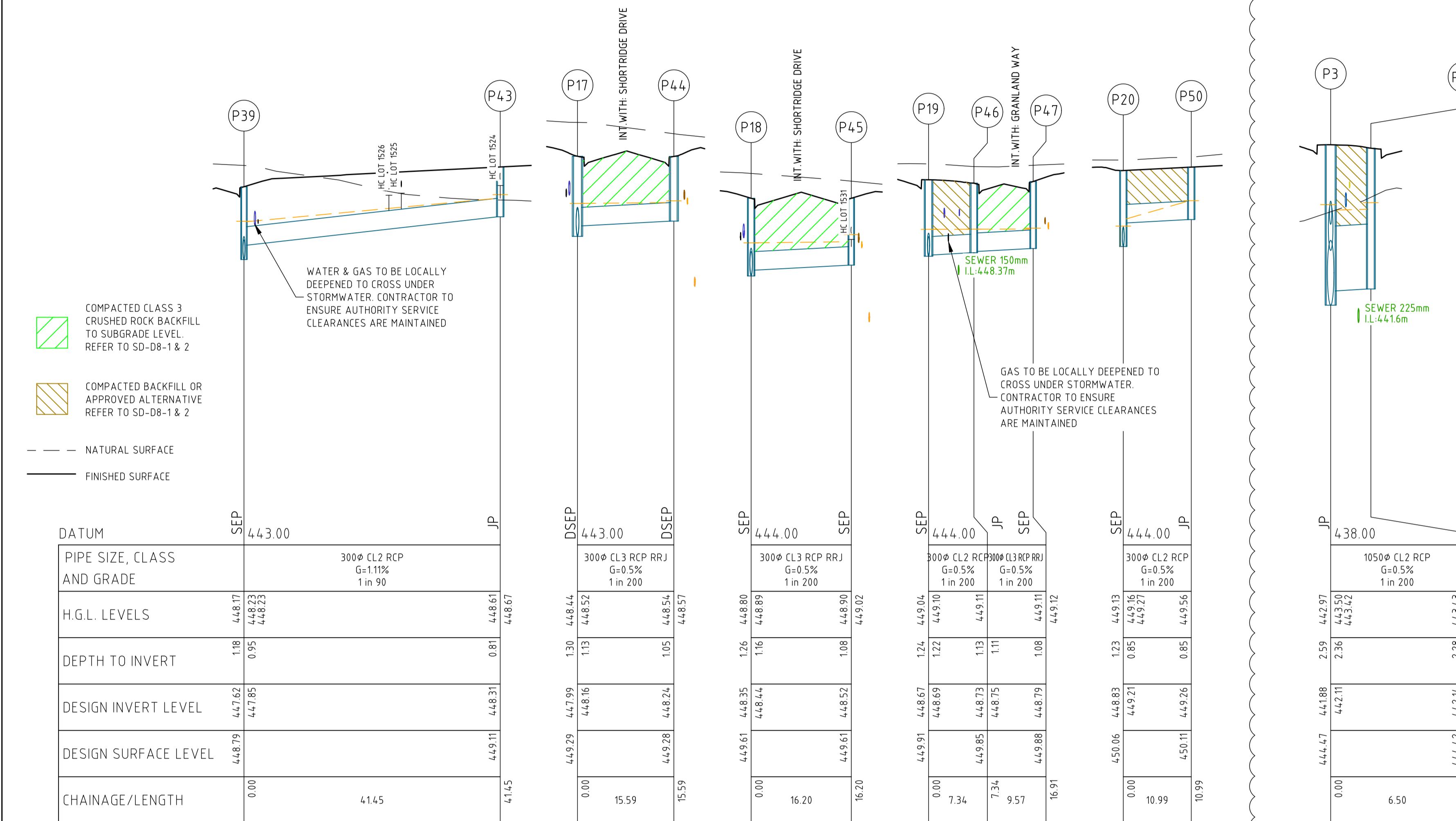
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PROJECT:

LUCAS ESTATE RESIDENTIAL SUBDIVISION STAGE F4 (37 LOTS)

CIVIL DRAWING

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DRAINAGE LONGITUDINAL SECTIONS

SCALE H 1500, V 150

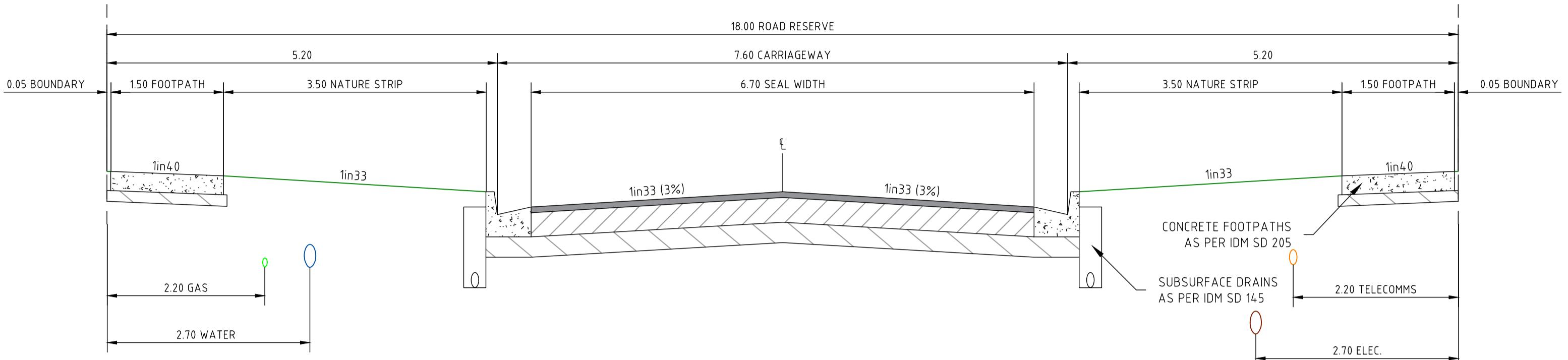
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PIT NAME	PIT TYPE	INTERNAL DIMENSIONS		INLET		OUTLET		FSL	DEPTH	REMARKS	
		LENGTH	WIDTH	FROM PIT	INLET DIA	INVERT RL	OUTLET DIA				
P1	EW	0	0	P2	1050	441.60		442.65	1.05	Refer IDM SD 465	
P2	SEP	1800	900	P3	1050	441.78	1050	444.48	2.71	CLASS B LID - Refer IDM SD 430/435	
P3	JP	1800	1200	P4	750	442.76	1050	441.88	2.59	CLASS B LID - Refer IDM SD 425	
				P52	1050	442.11					
				P61	375	443.19					
P4	SEP	900	1200	P5	750	442.88	750	442.86	1.83	CLASS B LID - Refer IDM SD 430/435	
P5	SEP	900	1200	P6	675	443.34	750	443.04	1.85	CLASS B LID - Refer IDM SD 430/435	
P6	JP	900	900	P7	675	443.63	675	443.61	1.79	CLASS B LID - Refer IDM SD 425	
P7	SEP	900	900	P8	675	443.73	675	443.71	2.05	CLASS B LID - Refer IDM SD 430/435	
P8	SEP	900	900	P9	675	443.79	675	443.77	1.98	CLASS B LID - Refer IDM SD 430/435	
P9	SEP	900	900	P10	675	444.58	675	443.87	2.33	CLASS B LID - Refer IDM SD 430/435	
P10	JP	900	900	P11	675	445.36	675	445.34	1.59	CLASS B LID - Refer IDM SD 420	
P11	SEP	900	900	P12	675	446.15	675	445.90	1.60	CLASS B LID - Refer IDM SD 430/435	
P12	JP	900	900	P13	675	446.34	675	446.32	1.73	CLASS B LID - Refer IDM SD 425	
P13	SEP	900	900	P14	675	446.44	675	446.42	2.07	CLASS B LID - Refer IDM SD 430/435	
P14	SEP	900	900	P15	600	446.80	675	446.62	2.40	CLASS B LID - Refer IDM SD 430/435	
P15	SEP	900	900	P16	600	447.05	600	447.03	2.44	CLASS B LID - Refer IDM SD 425	
P16	SEP	900	900	P17	450	447.65	600	447.27	2.17	CLASS B LID - Refer IDM SD 430/435	
P17	DSEP	1900	900	P18	450	448.01	450	447.99	1.30	CLASS B LID - Refer IDM SD 445/450	
P18	SEP	900	900	P19	300	448.16					
P19	SEP	900	900	P20	300	448.69	375	448.67	1.24	CLASS B LID - Refer IDM SD 430/435	
P20	SEP	900	900	P21	300	448.85	300	448.83	1.23	CLASS B LID - Refer IDM SD 430/435	
P21	SEP	900	750				300	448.93	450.06	1.13	CLASS B LID - Refer IDM SD 430/435
P31	DSEP	1900	900	P32	375	446.86	375	446.84	449.02	2.18	CLASS B LID - Refer IDM SD 445/450
P32	JP	900	900	P33	300	446.95	375	446.93	448.64	1.71	CLASS B LID - Refer IDM SD 425
P33	SEP	900	750	P34	300	447.12	300	447.10	448.23	1.13	CLASS B LID - Refer IDM SD 430/435
P34	SEP	900	750	P35	300	447.31					
P35	JP	900	600	P36	225	447.98	300	447.96	448.74	0.78	CLASS B LID - Refer IDM SD 425
P36	JP	900	600				225	448.26	449.05	0.79	CLASS B LID - Refer IDM SD 425
P37	SEP	900	900	P38	375	447.43	375	447.41	449.45	2.04	CLASS B LID - Refer IDM SD 430/435
P38	JP	900	900	P39	375	447.52	375	447.50	449.17	1.68	CLASS B LID - Refer IDM SD 425
P39	SEP	900	750	P40	300	447.64	375	447.62	448.79	1.18	CLASS B LID - Refer IDM SD 430/435
P40	SEP	900	750	P41	300	447.69	300	447.67	448.70	1.03	CLASS B LID - Refer IDM SD 430/435
P41	JP	900	600	P42	225	448.40	300	448.38	449.21	0.83	CLASS B LID - Refer IDM SD 425
P42	JP	900	600				225	448.52	449.31	0.79	CLASS B LID - Refer IDM SD 425
P43	JP	900	600				300	448.31	449.11	0.81	CLASS B LID - Refer IDM SD 425
P44	DSEP	1900	750				300	448.24	449.28	1.05	CLASS B LID - Refer IDM SD 445/450
P45	SEP	900	750				300	448.53	449.61	1.08	CLASS B LID - Refer IDM SD 430/435
P46	JP	900	600	P47	300	448.75	300	448.73	449.85	1.13	CLASS B LID - Refer IDM SD 425
P47	SEP	900	750				300	448.79	449.88	1.08	CLASS B LID - Refer IDM SD 430/435
P48	JP	900	600				300	449.26	450.11	0.85	CLASS B LID - Refer IDM SD 425
P49	SEP	900	1800				1050	442.14	444.42	2.28	CLASS B LID - Refer IDM SD 425

7 Rev 7: PIT DETAILS UPDATED

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOT/AY	DATE
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	AS CONSTRUCTED	13/05/20	J.H.		DRAWN	J. HADFIELD	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							S		

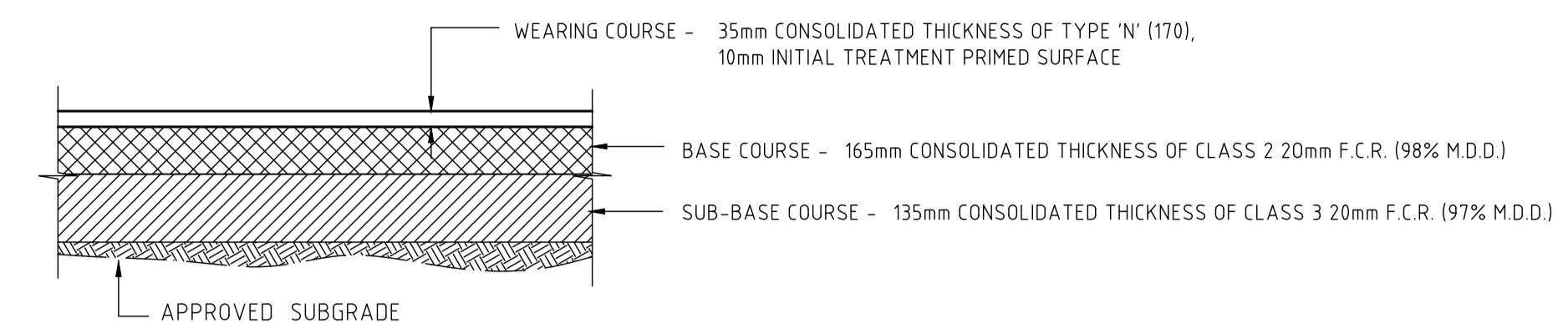
NOTE:
ANY USE OF THE ELECTRONIC DRAWINGS OR DATA PROVIDED BY TGM GROUP PTY LTD (TGM) SHALL BE USED AT THE USER'S RISK. NO RESPONSIBILITY WILL BE TAKEN BY TGM AS TO THE ACCURACY OF THE DIGITAL DRAWING OR DATA. ANY SET OUT WORKS UNDERTAKEN USING TGM DRAWINGS SHALL BE CONDUCTED IN ACCORDANCE AGAINST EXISTING SURVEY PEGS, TEMPORARY AND/OR PERMANENT SURVEY MARKS AS NOMINATED BY THE PROJECT'S LICENSED SURVEYOR, THE SET-OUT INFORMATION PROVIDED ON ARCHITECTURAL AND/OR OTHER PROJECT RELATED DRAWINGS AND DOCUMENTS, IN CONJUNCTION WITH THE APPROVED HARD COPY DRAWINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.



TYPICAL CROSS SECTION

SCALE N.T.S.
POLKINGHORNE VIEW
BLYTHEN ROAD
GRANLAND WAY

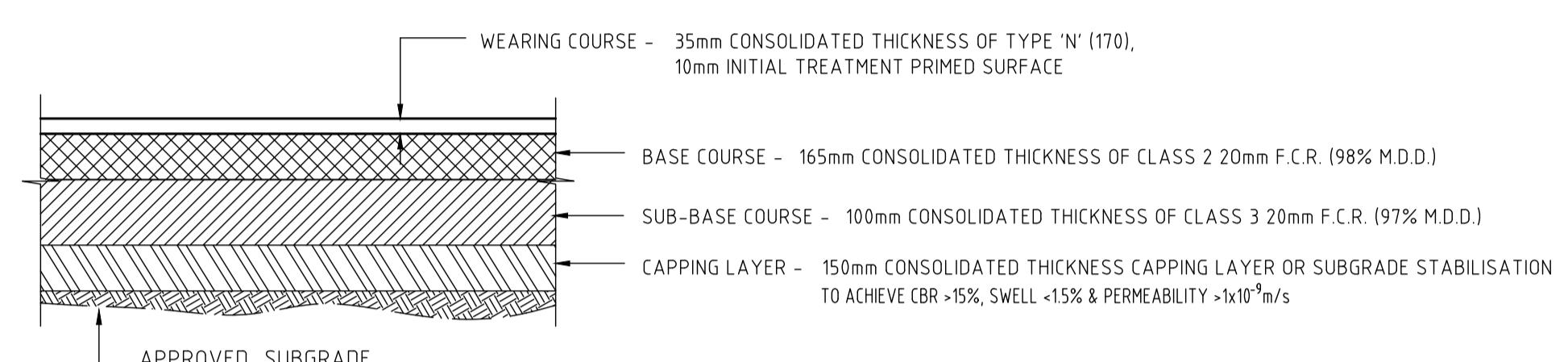
6



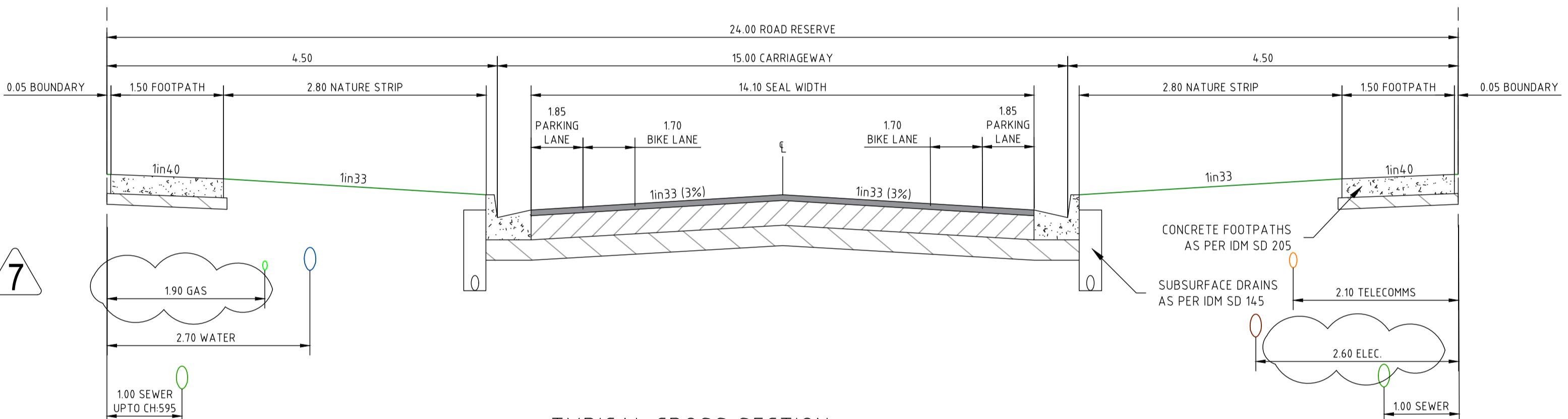
ASPHALT PAVEMENT PROFILE - OPTION 1

POLKINGHORNE VIEW
BLYTHEN ROAD
GRANLAND WAY

6

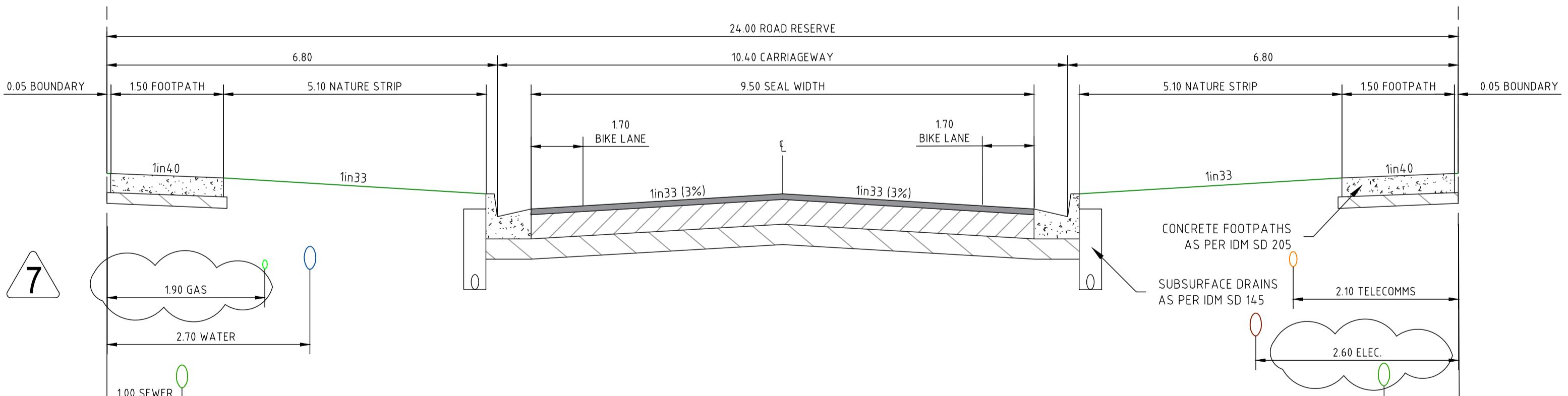


ASPHALT PAVEMENT PROFILE - OPTION 2



TYPICAL CROSS SECTION

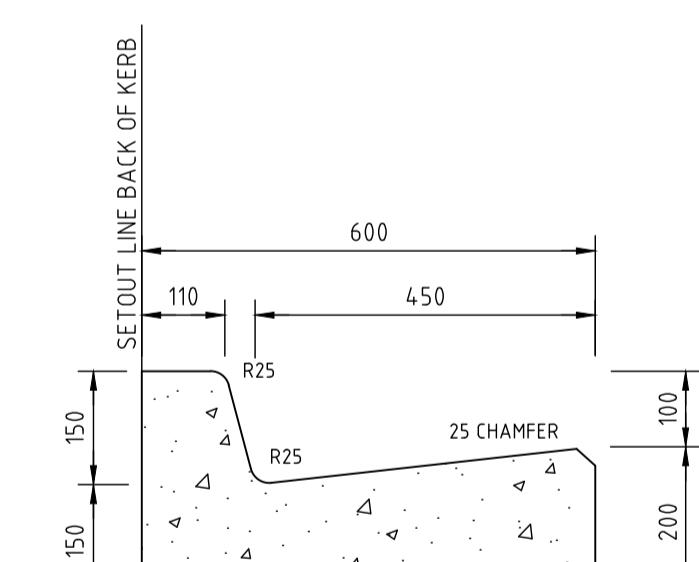
SCALE N.T.S.
SHORTRIDGE DRIVE WITH PARKING AND BIKE LANE



TYPICAL CROSS SECTION

SCALE N.T.S.
SHORT RIDGE DRIVE - WITHOUT PARKING LANE

7



BCC2 KERB DETAIL
REFER TO CITY OF BALLARAT SD-K1

AS CONSTRUCTED

ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	ISSUE	ISSUED FOR	DATE	DRAWN	APPROVED	DESIGNED	S.LOTAY	DATE	JUNE 2019
01	PRELIMINARY - FOR COMMENTS	17/06/19	J.H.		08	AS CONSTRUCTED	13/05/20	J.H.		DRAWN	J. HADFIELD	SCALE:	AS SHOWN
02	PRELIMINARY - FOR COMMENTS	21/06/19	J.H.							SURVEY:	TGM GROUP	SHEET SIZE:	A1
03	PRELIMINARY - FOR COMMENTS - COUNCIL	28/06/19	J.H.							CHECKED:	M. ANTON	APPROVED:	R. DUNN
04	APPROVAL	05/07/19	J.H.							DATE:	05/07/19	DATE:	10/07/19
05	CONSTRUCTION	10/07/19	J.H.										
06	ROAD NAME UPDATED	16/08/19	J.H.										
07	SHORTRIDGE DRIVE POWER & GAS OFFSET UPDATED	22/08/19	J.H.										



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JAS-ANZ Accredited: Quality ISO 9001 - OH&S AS/NZS 4801 - Environment ISO 14001



CLIENT:

LUCAS ESTATE
RESIDENTIAL SUBDIVISION
STAGE F4 (37 LOTS)

CIVIL DRAWING

DRAWING TITLE:
TYPICAL CROSS SECTIONS & PAVEMENT PROFILES

TGM REF. No.: 18775-204 SHEET C21 OF 21 REV. 08