

SCHEDULE OF DRAWINGS

DWG No.	DESCRIPTION
29060/717	SITE LAYOUT & LOCALITY PLAN
29060/718	FOOTPATH ALIGNMENT PLAN
29060/719	ALL SERVICES & PAVEMENT LAYOUT PLAN
29060/720	EARTHWORKS, ROADWORKS & STORMWATER PLAN SHEET 1 OF 2
29060/721	EARTHWORKS, ROADWORKS & STORMWATER PLAN SHEET 2 OF 2
29060/722	ROAD LONGITUDINAL SECTIONS
29060/723	ROAD TYPICAL SECTIONS
29060/724	DETAILED ROADWORKS LAYOUT PLAN
29060/725	LANEWAY DETAIL LAYOUT PLAN
29060/726	LANEWAY STRUCTURAL LAYOUT PLAN
29060/727	3% AEP STORMWATER DRAIN LONGITUDINAL SECTIONS
29060/728	CONSTRUCTION DETAILS
29060/729	SEWERAGE RETICULATION PLAN
29060/730	SEWERAGE LONGITUDINAL SECTIONS SHEET 1 OF 2
29060/731	SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 2
29060/732	WATER RETICULATION PLAN
29060/733	LINE MARKING & SIGNAGE LAYOUT PLAN

Stage 11

35 Residential Lot Subdivision

The Village, Oonoonba

ASSOCIATED DRAWINGS

- TOWNSVILLE CITY COUNCIL
STANDARD DRAWINGS**
- STANDARD DRAWING ROADWORKS
 - SD-020 (B) CONCRETE KERBERG
 - SD-025 (C) KERB RAMP
 - SD-030 (I) DRIVEWAY ACCESS URBAN RESIDENTIAL PROPERTIES
 - SD-032 (F) DRIVEWAY CROSSOVERS URBAN RESIDENTIAL PROPERTIES
 - SD-060 (A) TRAFFIC SIGN INSTALLATION
 - SD-065 (A) STREET NAME SIGN RESIDENTIAL PROPERTIES
 - SD-070 (D) CONCRETE PATHWAY REINFORCED CONCRETE (MESH) ALTERNATIVE
 - SD-075 (E) CONCRETE PATHWAY REINFORCED CONCRETE (FIBRE) ALTERNATIVE
 - SD-080 (B) SUBSOIL DRAIN
 - STANDARD DRAWINGS DRAINAGE
 - SD-200 (C) PRECAST GRATED KERB INLET SYSTEM & CAST IN-SITU STORMWATER MANHOLE
 - SD-205 (C) STORMWATER MANHOLE DETAILS
 - SD-210 (A) PRECAST STORMWATER MANHOLE SLAB TOP DETAILS
 - STANDARD DRAWINGS WATER
 - SD-305 (B) STREET POSITIONING OF MAINS, VALVES, HYDRANTS AND DOMESTIC WATER SERVICE CONNECTIONS
 - SD-315 (B) TYPICAL MAINS CONSTRUCTION RETICULATION MAIN ARRANGEMENT
 - SD-320 (B) TYPICAL MAINS CONSTRUCTION CONNECTION TO EXISTING MAINS
 - SD-325 (B) EMBEDMENT & TRENCH FILL TYPICAL ARRANGEMENT
 - SD-330 (B) STANDARD EMBEDMENT ALL PIPE TYPES
 - SD-345 (B) VALVE AND HYDRANT IDENTIFICATION IDENTIFICATION MARKERS & MARKER POSTS
 - SD-350 (B) TYPICAL VALVE AND HYDRANT INSTALLATION VALVE ARRANGEMENT
 - SD-355 (B) TYPICAL VALVE & HYDRANT INSTALLATION HYDRANT AND AIR RELIEF VALVES
 - SD-370 (A) SOIL CLASSIFICATION GUIDELINES AND ALLOWABLE BEARING PRESSURES FOR ANCHORS AND THRUST BLOCKS
 - SD-371 (A) THRUST BLOCK DETAILS - CONCRETE BLOCKS
 - SD-372 (A) THRUST AND ANCHOR BLOCKS - GATE VALVES AND VERTICAL BENDS
 - SD-373 (A) RESTRAINED JOINT SYSTEM DN100 TO DN375 DI MAINS
 - STANDARD DRAWINGS SEWERAGE
 - SD-405 (B) LEGENDS FOR SEWERAGE DRAWINGS
 - SD-411 (A) SEWER MAINTENANCE SHAFT TYPICAL LAYOUT
 - SD-455 (B) PROPERTY CONNECTION DETAILS BURIED INTERFACE METHOD
 - SD-440 (B) EMBEDMENT & TRENCHFILL TYPICAL ARRANGEMENT
 - SD-441 (B) PIPE EMBEDMENT SUPPORT TYPES
 - SD-443 (B) SPECIAL EMBEDMENT PILES, CONCRETE AND STABILISED SUPPORTS
 - SD-470 (B) MAINTENANCE HOLES SEWERS - DN 300 CAST IN-SITU
 - SD-471 (B) MAINTENANCE HOLES SEWERS - DN 300 CHANGES IN LEVEL DETAILS & CHANNEL ARRANGEMENTS
 - SD-473 (B) MAINTENANCE HOLES TYPICAL CHANNEL DETAILS
 - SD-474 (B) MAINTENANCE HOLES ALTERNATIVE DROP CONNECTIONS
 - SD-475 (B) MAINTENANCE HOLES TYPICAL MH COVER ARRANGEMENTS
- QUEENSLAND DEPARTMENT OF MAIN ROADS STANDARD DRAWINGS**
- 1304 (I) WINDWALLS, HEADWALL AND APRON FOR PIPE DIAMETER 750 TO 2400



OVERALL LAYOUT PLAN



LOCALITY PLAN
N.T.S.

AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Derek Robert Conley Saw RPEQ 7363 Date:

Scale 1:2000 @ A1
1 20 40 60 80

No.	Date	Drawn	Checked	Revised
1	29/06/2019	DAVID	DAVID	AS CONSTRUCTED ISSUE

ECONOMIC DEVELOPMENT QUEENSLAND

Level Datum: AHD (GERMEI)
 B.M. Used: 1004 7125
 Coordinate Projection: Coordinate Datum
 Origin of Coordinates: 1984 718.00
 Meridian: Map Reference
 Contour Interval: 1.00
 Job No.: 29060-113-01
 File No.: 29060_717A.dwg
 Drawn: RHM
 Approved:

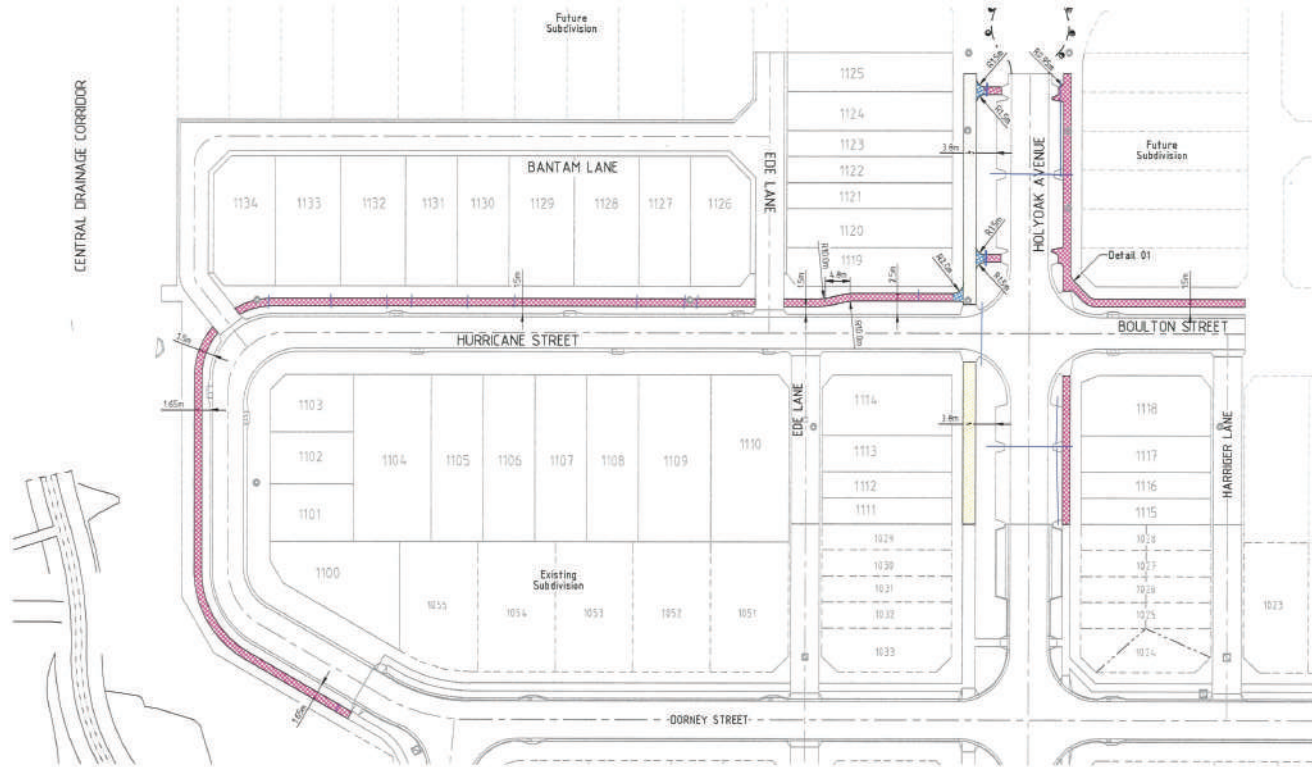
Project: **THE VILLAGE - STAGE 11
HOLYOAK AVENUE - OONOOBMA
SITE LAYOUT & LOCALITY PLAN**

Drawn by: RHM
 Checked by: RHM
 Date: 29/06/2019
 Local Authority: Townsville City Council
 Local Engineer: Local Engineer

ENGINEERING CERTIFICATION
 Signed: **DEREK ROBERT CONLEY SAW - RPEQ No. 7363**

brazier mom

1300 267 878
 29060/717
 1 of 1 Sheets
 Scale: AS 1:2000
 Plan No.: 29060/717
 A



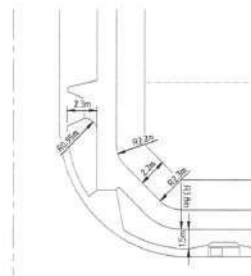
LEGEND

- 1.5m wide footpath.
- 2.5m wide footpath.
- Footpath width transition zone.
- Irrigation Conduits

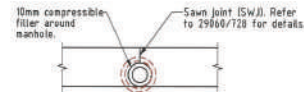
NOTES:

1. Footpaths constructed in accordance with Council's standard drawings SO-070 & SO-075.
2. Kerb ramps constructed in accordance with Council's standard drawing SO-425.
3. Refer to drawing 29060/728 for edge thickening detail for footpath adjacent carpark.
4. Footpath finished flush with top of manholes. (Typical)

LAYOUT PLAN



DETAIL 01



TYPICAL PATH TREATMENT AT MANHOLE

AS CONSTRUCTED

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Derek Robert Corry Szw RPEQ 1381

Date:

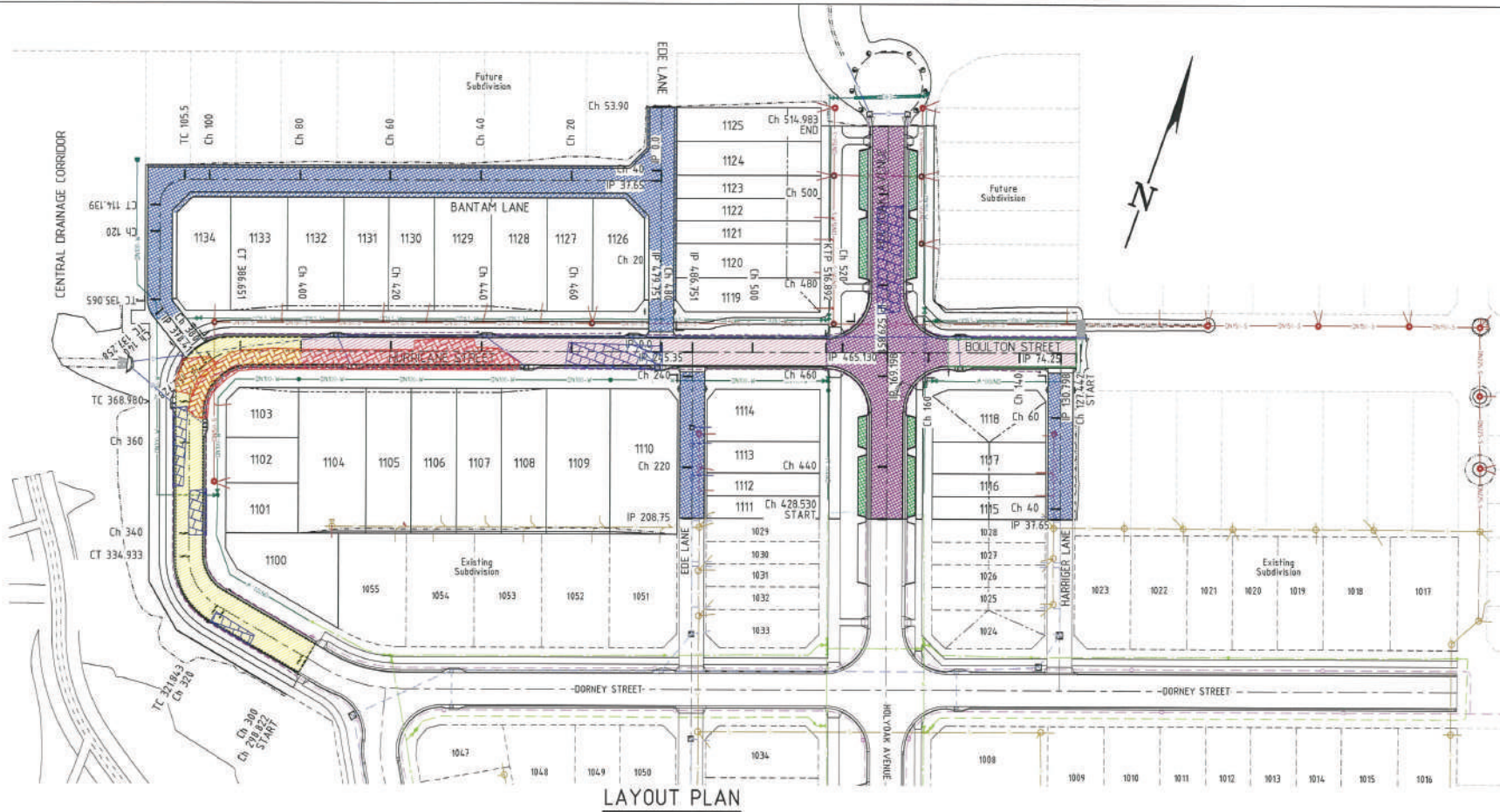


Revisions			
No.	Date	Details	Checked
1	24/06/23	AS-CONSTRUCTED ISSUE	
Level Datum: AHD (GSP/NET)			
S.M. Used: FSN 71238			
Coordinate Projection: Geocentric Datum			
Origin and Coordinates: FSN 71238			
Merkator			
Map Reference: Contour Interval			
Title No: 29060-118-01			
File No: 29060_718A.dwg			
Author/Editor: BH			

CLIENT	
ECONOMIC DEVELOPMENT QUEENSLAND	
Project:	
THE VILLAGE - STAGE 11	
HOLYOAK AVENUE - OONOOBMA	
FOOTPATH ALIGNMENT PLAN	
Parcel of:	County of:
Local Authority: Townsville City Council	Localities: Townsville

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1300 267 878
 24hr fax: 3818
 www.braziermom.com.au
 Townsville | Cairns
 29060/718 A



LAYOUT PLAN

- LEGEND**
- Existing RP boundary.
 - Top of batter.
 - Toe of batter.
 - Change of grade.
 - DN150 uPVC S185 sewer main.
 - DN225 uPVC S185 sewer main.
 - Sewer manhole.
 - DN100 uPVC P116 water main.
 - DN150 uPVC P116 water main.
 - OD63 P116 poly water main.
 - Stormwater drain line.
 - Subsoil drainage.
 - Existing stormwater drain line.
 - Existing subsoil drainage.
 - Existing sewer main.
 - Existing sewer manhole.
 - Existing water main.
 - Existing poly water main.

- PAVEMENT NOTES:**
- Design Assumptions:-**
- The pavement design has been undertaken in accordance with Austroads and TCC CityPlan with the aid of CIRCLY.
 - Traffic multipliers have been applied to the design for asphalt and subgrade of 11 and 1.6 respectively.
 - Project reliability of 95% has been adopted.
- Construction**
- All design spray and spread rates confirmed by third party on day of application.

- PAVEMENT LEGEND**
- Pavement Type A - [Pattern]
 - Pavement Type B - [Pattern]
 - Concrete Laneways - [Pattern]
 - Concrete Carparks - [Pattern]
 - Pavement C - [Pattern]
 - Subgrade Treatment A - [Pattern]
 - Subgrade Treatment B - [Pattern]

PAVEMENT TYPE A
 30mm Wearing Course AC10M (C320) Asphalt
 Tack coat, if required
 7mm C320 seal (spray rate 1.3l/m², spread rate 170m²/m³)
 APMCO Prime
 125mm Base course gravel, D1MR Type 2.1
 125mm Cement modified subbase (CMSB) course gravel, D1MR Type 2.3
 target UCS (28 days) 1.0 MPa
 Subgrade CBR ≥6%

PAVEMENT TYPE C - Hurricane Street Ch.Start-CH.400.000
 30mm Wearing Course AC10M (C320) Asphalt
 Tack coat, if required
 7mm C320 seal (spray rate 1.3l/m², spread rate 170m²/m³)
 APMCO Prime
 125mm Base course gravel, D1MR Type 2.1
 200mm Cement modified subbase (CMSB) course gravel, D1MR Type 2.3
 target UCS (28 days) 1.0 MPa
 Subgrade CBR ≥3%-4%

PAVEMENT TYPE B
 30mm Wearing Course AC10M (C320) Asphalt
 Tack coat, if required
 7mm C320 seal (spray rate 1.3l/m², spread rate 170m²/m³)
 APMCO Prime
 125mm Base course gravel, D1MR Type 2.1
 250mm Cement modified subbase (CMSB) course gravel, D1MR Type 2.3
 target UCS (28 days) 1.0 MPa
 Subgrade CBR ≥6%-8%

Subgrade Treatment A
 200mm 75 minus
 300mm 100mm Nominal Rock

Subgrade Treatment B
 200mm Cement modified subbase (CMSB), D1MR Type 2.3

DESIGN TRAFFIC DETAILS
 Design Life - 20 years
 OESA's - TCC Urban Type B - 1x10⁶ (Table 6.4.4.2.2 of TCC City Plan)
 OESA's - TCC Urban Type C - 1x10⁶ (Table 6.4.4.2.2 of TCC City Plan)
 Hurricane Street & Boulton Street - TCC Urban Type B
 Holyoak Avenue - TCC Urban Type C

DESIGN TRAFFIC DETAILS
 Rigid pavement
 53kN load (SAST) - Laneways
 Light weight vehicles only - Carparks

CONCRETE LANEWAYS
 170mm thick N32 concrete
 S182 mesh with 50 top cover
 125mm sub-base course (D1MR Type 2.3)

CONCRETE CARPARKS
 150mm thick N32 concrete
 S182 mesh with 50 top cover
 125mm sub-base course (D1MR Type 2.3)

AS CONSTRUCTED
 Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

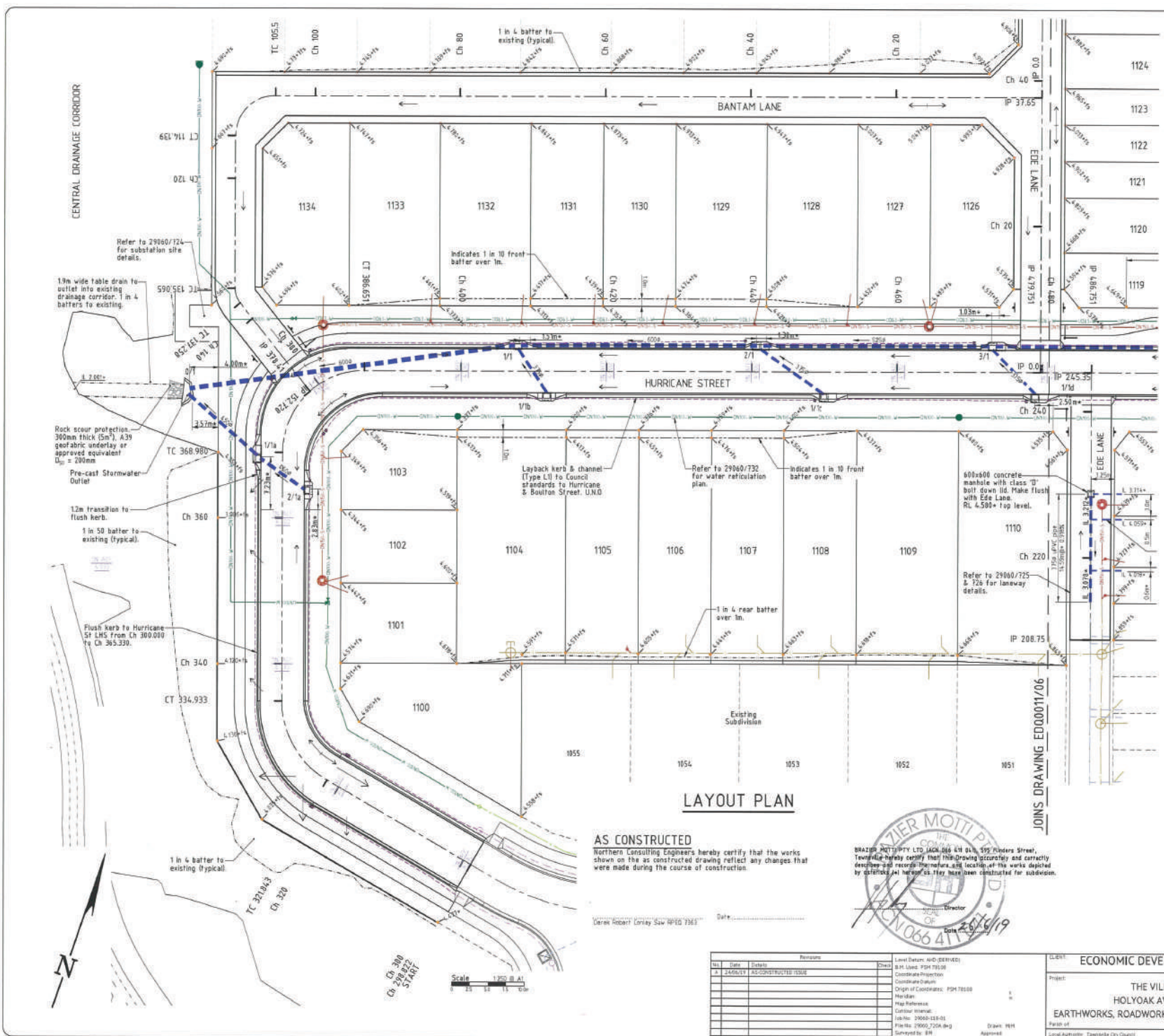
Drawn Robert Conley Saw APED 1983



Revisions		Level Datum: AHD (DAWINDY)		CLIENT	
No.	Date	Details	SW Used: 2021 T1029	ECONOMIC DEVELOPMENT QUEENSLAND	
1	24/06/23	AS-CONSTRUCTED ISSUE	Coordinate Projection	Project	
			Coordinate Datum	THE VILLAGE - STAGE 11	
			Origin of Coordinates: PSN 78000	HOLYOAK AVENUE - DONDOMBRA	
			Meridian	ALL SERVICES & PAVEMENT LAYOUT PLAN	
			Project Name	Parcel ID	
			Contract Number	Level Authority: Tweedshire City Council	
			Job No. 29060-118-01	County of	
			Plan No. 29060_118_01g	Locality: Tweedshire	
			Schneider: BR	Drawn: HPH	
				Approved:	

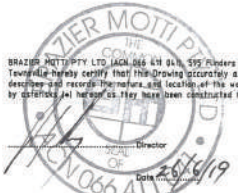
1300 267 878
 1 TORONTOVILLE | AVE
 1 GUYTON | MCKAY

Scale: 1:500
 Sheet: 01 of 1
 Date: 29/06/2023
 Plan No: 29060/719 A



LAYOUT PLAN

AS CONSTRUCTED
 Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.



No.	Date	Details	Revisions
A	25/06/19	AS-CONSTRUCTED ISSUE	

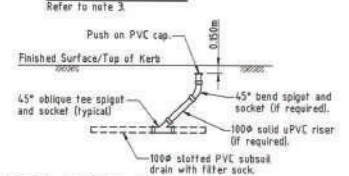
LEGEND

- Z/1
- 2000+rs
- 1% AEP 8.00
- 1 in 4 batter to existing (typical)
- Top of batter
- Toe of batter
- Change of grade
- Stormwater drain line
- Subsoil drainage
- DN150 uPVC S/N8 sewer main
- Sewer manhole
- DN100 uPVC P/N6 water main
- OD43 PH10 poly water main
- Existing water main
- Existing sewer main

NOTES:

- EARTHWORKS NOTES:**
- All 1% AEP flows remain outside the building envelopes.
 - All approved fill material placed, compacted & tested in accordance with AS3798 'Guidelines on Earthworks for Commercial and Residential Developments'. Level 1 inspection, testing & certification is required for all fill exceeding 300mm in depth.
 - Batters extend 500mm clear of property boundaries prior to battering to existing surface.
- STORMWATER NOTES:**
- All trenches under road pavement backfilled with crusher dust to subgrade level.
 - Trafficable bolt down lids installed to all manholes/inlet pits located in trafficable areas, finish flush and match final grade/profile.
 - Flood levels in the Central Drainage Corridor have been obtained from 'The Village' Donsonba, Townsville, Consolidated Flood Report prepared by DIT WDM.

BATTER DIAGRAM



TYPICAL SUBSOIL DRAIN CLEANOUT POINT DETAIL
 Note: Provide '50' brass kerb marker to indicate location of cleanout point N.T.S.

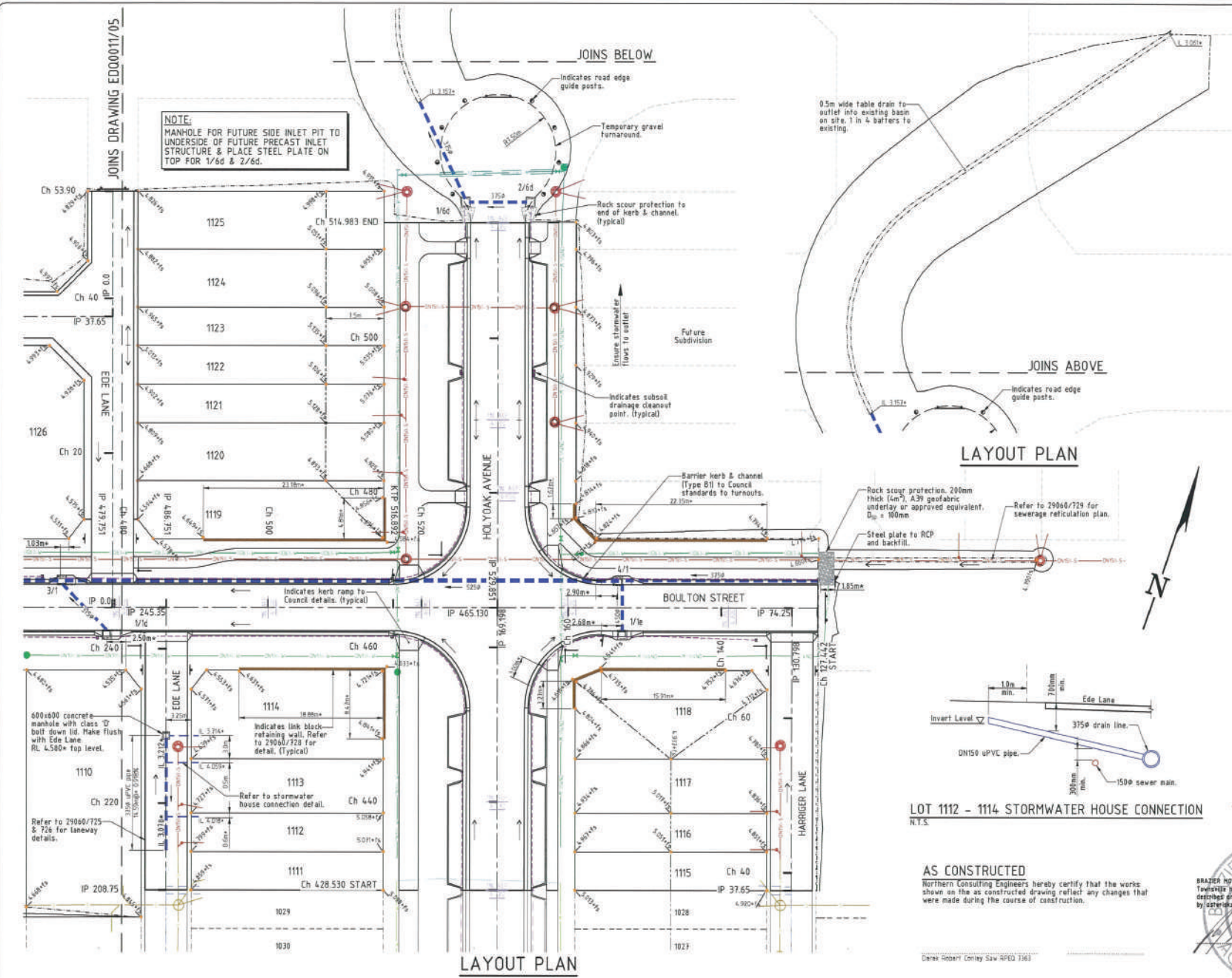


Scale 1:250 @ A1

ECONOMIC DEVELOPMENT QUEENSLAND

Project: THE VILLAGE - STAGE 11
 HOLYOAK AVENUE - OONCOMBA
 EARTHWORKS, ROADWORKS & STORMWATER - SHEET 1 OF 2

Client: ECONOMIC DEVELOPMENT QUEENSLAND
 Date: 29/06/2018
 Sheet: 3 of 11
 Scale: A3 (SHEET)
 Plan No: 29060/720 A



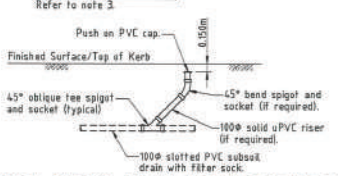
NOTE:
MANHOLE FOR FUTURE SIDE INLET PIT TO UNDERSIDE OF FUTURE PRECAST INLET STRUCTURE & PLACE STEEL PLATE ON TOP FOR 1/6d & 2/6d.

- LEGEND**
- 2/1 12000+16 1% AEP 3.00
 - Pit No. 2/Drainline No. 1
 - Certified finished surface levels.
 - 0100 water surface levels.
 - Stormwater flow arrow.
 - Existing RP boundary
 - Top of batter.
 - Toe of batter.
 - Change of grade.
 - Stormwater drain line.
 - Subsoil drainage.
 - DN150 uPVC S8B sewer main.
 - Sewer manhole.
 - DN100 uPVC P116 water main.
 - OD43 P116 poly water main.
 - Existing water main.
 - Existing sewer main.

- NOTES:**
- EARTHWORKS NOTES:**
- All 1% AEP flows remain outside the building envelopes.
 - All approved fill material placed, compacted & tested in accordance with AS3798 Guidelines on Earthworks for Commercial and Residential Developments. Level 1 Inspection, testing & certification is required for all fill exceeding 300mm in depth.
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- All franchises under road pavement backfilled with crusher dust to subgrade level.
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LAYOUT PLAN

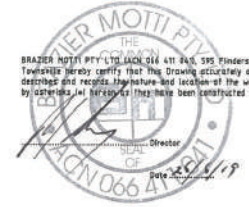
BATTER DIAGRAM



TYPICAL SUBSOIL DRAIN CLEANOUT POINT DETAIL

Note: Provide '50' brass kerb marker to indicate location of cleanout point N.T.S.

AS CONSTRUCTED
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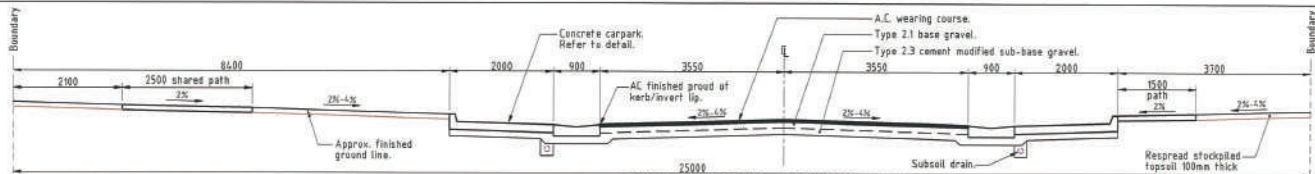
Revisions		Level/Drawn: AND (20/04/21)	CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND
1	20/04/21	AS-CONSTRUCTED SH&E	PROJECT: THE VILLAGE - STAGE 11 HOLYOAK AVENUE - OONOOMBA EARTHWORKS, ROADWORKS & STORMWATER - SHEET 2 OF 2
2	20/04/21	AS-CONSTRUCTED SH&E	
Level/Drawn: AND (20/04/21) S.M. Used: PDM 7500 Coordinate Projection: GDA2011 Origin of Coordinates: PDM 7500 Map Datum: GDA2011 Map Reference: Coordinate System: Job No: 29060-118-01 Frame: 29060-721A-06g Submitted By: BR		Drawn: NEM Approved:	Date: 22/04/21 Scale: AS SHOWN Plan No: 29060/721 A



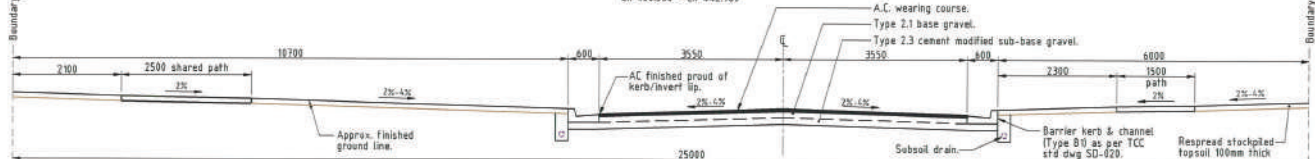
TYPICAL SERVICES SECTION - VERGE FOR ROAD RESERVE <20m



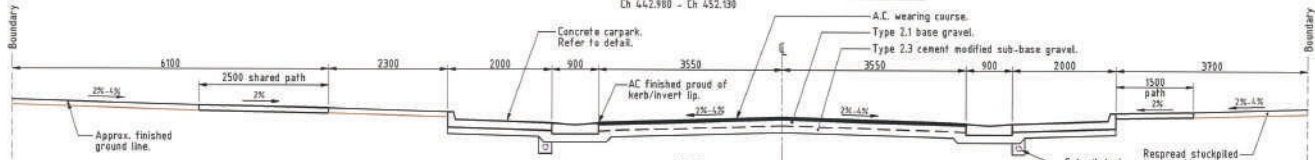
TYPICAL SERVICES SECTION - VERGE FOR ROAD RESERVE >20m



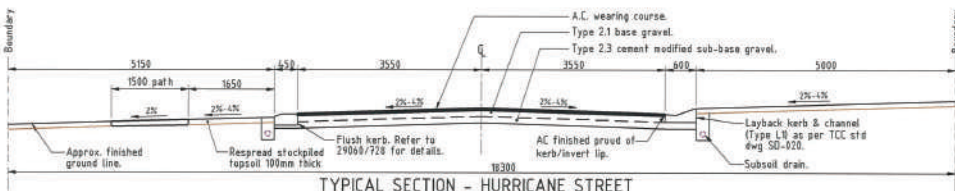
TYPICAL SECTION - HOLYOAK AVENUE
Ch 428.530 - Ch 442.980



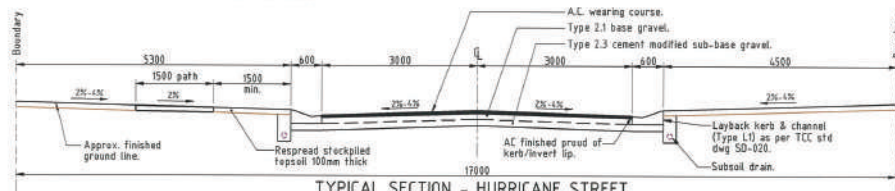
TYPICAL SECTION - HOLYOAK AVENUE
Ch 442.980 - Ch 452.130



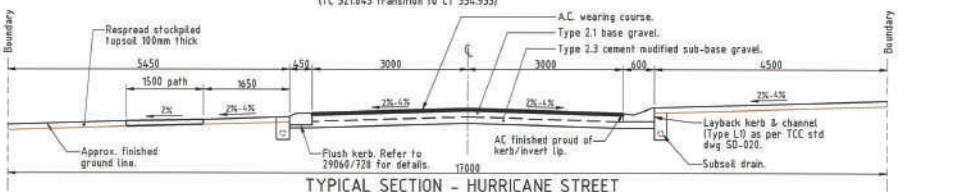
TYPICAL SECTION - HOLYOAK AVENUE
Ch 478.130 - Ch 514.983



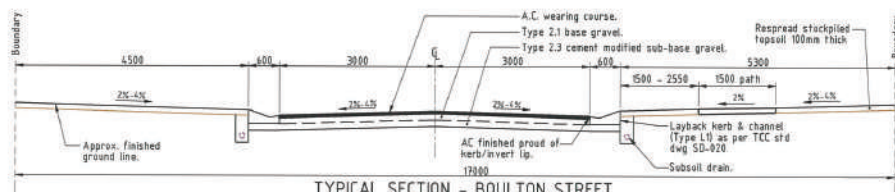
TYPICAL SECTION - HURRICANE STREET
Ch 308.000 - TC 321.843
(TC 321.843 transition to LT 334.933)



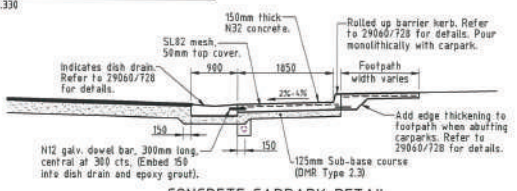
TYPICAL SECTION - HURRICANE STREET
Ch 366.530 - Ch 529.851



TYPICAL SECTION - HURRICANE STREET
LT 334.933 - Ch 365.330



TYPICAL SECTION - BOULTON STREET



CONCRETE CARPARK DETAIL

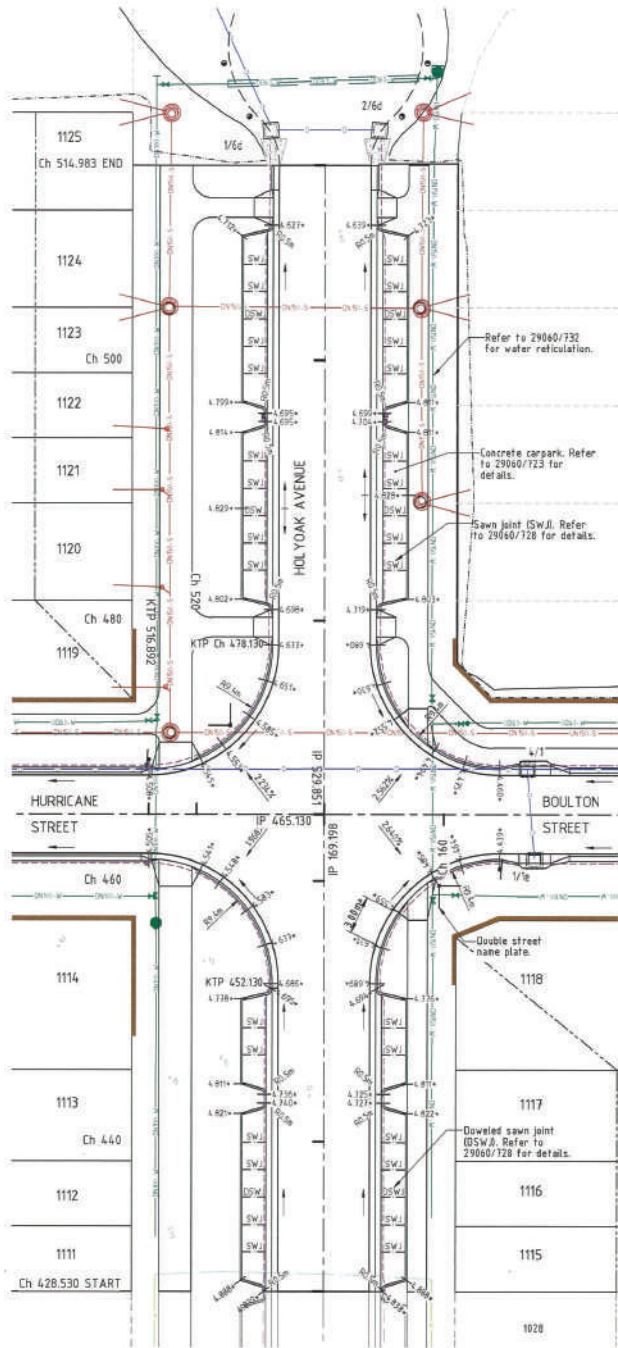
AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Date: _____
Derek Robert Conlay SRW RP02 1361

NOTE:
1. Refer to 29060/720 for kerb & channel setout location details.
2. Refer to 29060/719 for pavement details.

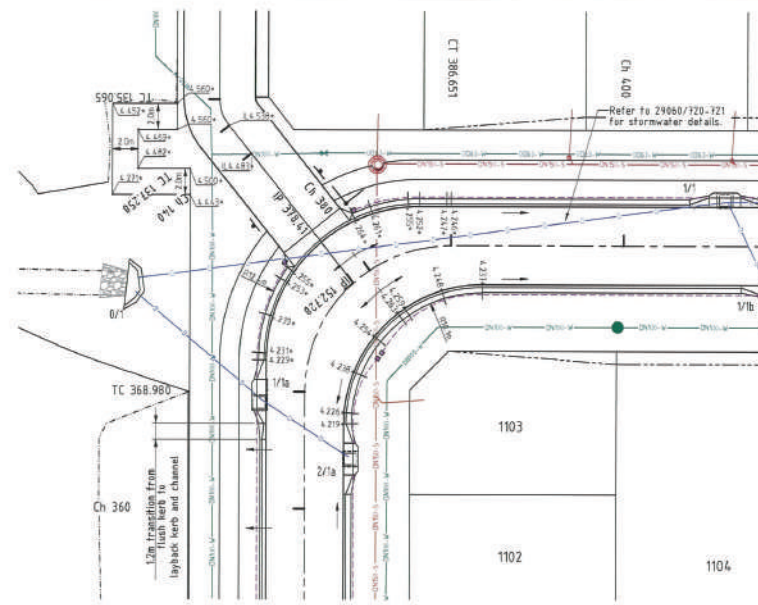


Revisions		Level Datum: AHD (2016/01) 8.1M, Local: PD4 710.00		CLIENT	
No.	Date	Details	Coordinate Projection	ECONOMIC DEVELOPMENT QUEENSLAND	
1	24/06/19	AS-CONSTRUCTED ISSUE	Coordinate Datum	Project	
			Origin of Coordinates	THE VILLAGE - STAGE 11	
			Meridian	HOLYOAK AVENUE - OODNOOMBA	
			North Reference	ROAD TYPICAL SECTIONS	
			Contour Interval	Drawn by: MH	
			Grid No. 29060-110-01	Checked by: MH	
			Plan No. 29060-717A.dwg	Date: 24th June 2019	
			Survised by: BH	Sheet 1 of 1 Sheets	
				Scale: AS SHEETS	
				Author: I TOMICIC A WIT	
				Checker: AS SHEETS	
				Plan No: 29060/723 A	
				Client: brazer mcm	
				Local Authority: Townsville City Council	
				Locality: Townsville	



INTERSECTION LAYOUT PLAN

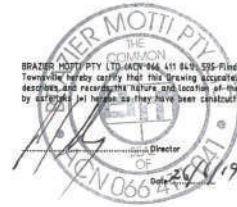
Scale 1:200 @ A1



WIDENING LAYOUT PLAN

LEGEND

- Certified Finished invert level.
- Certified Finished surface level.
- Certified Finished back of kerb level.
- Stormwater flow arrow.
- Existing RP boundary.
- Top of batter.
- Top of batter.
- Change of grade.
- Stormwater drain line.
- Subsoil drainage.
- DN150 uPVC SBR sewer main.
- Sewer manhole
- DN100 uPVC PNH water main.
- DN150 uPVC PNH water main.
- OD63 PNH poly water main.
- Existing water main.



BRAZER MOTTI PTY LTD ACN 944 411 849, 555 Flinders Street, Townsville hereby certify that this drawing accurately and correctly describes and recognizes the work and location of the works depicted by this drawing as they have been constructed for subdivision.

AS CONSTRUCTED

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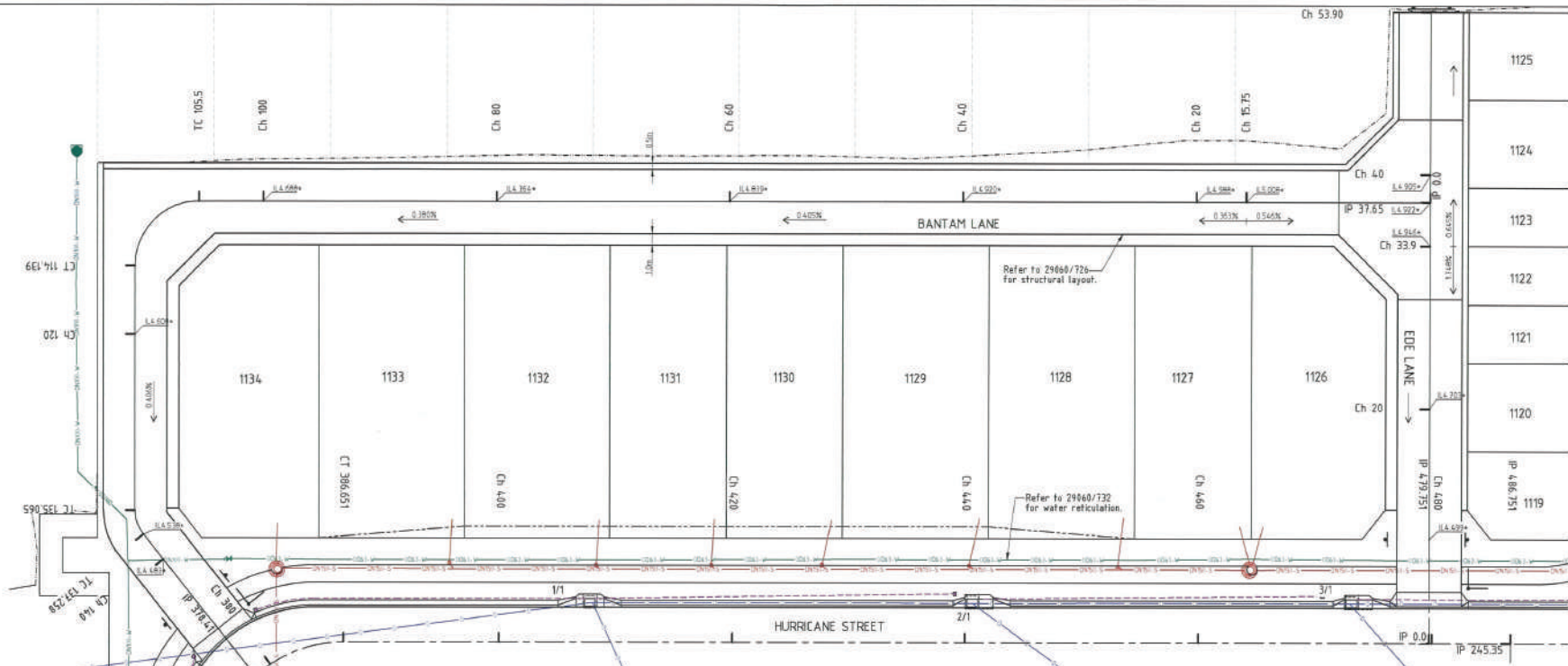
Derek Robert Chiley S.W. RP60 1963 Date: 26/11/19



Revisions		Level Datum: AHD (BENBEE)		CLIENT	
No.	Date	Details	Sheet	Level Datum: AHD (BENBEE)	ECONOMIC DEVELOPMENT QUEENSLAND
1	24/06/19	AS-CONSTRUCTED ISSUE	1 of 1	Coordinate Projection	
				Coordinate Datum	
				Origin of Coordinates	PSN 78100
				Hardian	
				Map Reference	
				Contour Interval	
				Lot No.	29060-119-01
				Project No.	29060/724-01
				Drawn by	NRK
				Approved	

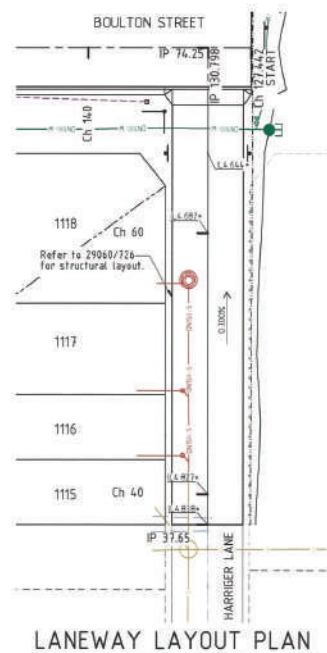
PROJECT		DATE	
THE VILLAGE - STAGE 11 HOLYOAK AVENUE - DONDOOMBA DETAILED ROADWORKS LAYOUT PLAN		26/11/19	
Parish of		County of	
Local Authority: Townsville City Council		Locality: Townsville	

		Date: 26/11/2019 Sheet: 5 of 5 Sheets Scale: AS 1:200 Plan No: 29060/724 A	
--	--	---	--



- LEGEND**
- Certified surface levels
 - Certified invert levels
 - Top of batter.
 - Toe of batter.
 - Change of grade.
 - Stormwater drain line.
 - Subsoil drainage.
 - DN150 uPVC S185 sewer main.
 - Sewer manhole.
 - DN150 uPVC PN16 water main.
 - OD63 PN16 poly water main.
 - Existing sewer main.

LANEWAY LAYOUT PLAN
Refer to ED0001/08 for lane concrete slab details.



LANEWAY LAYOUT PLAN



AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Derek Robert Conley Saw APED 1361 DATE: 20/11/19

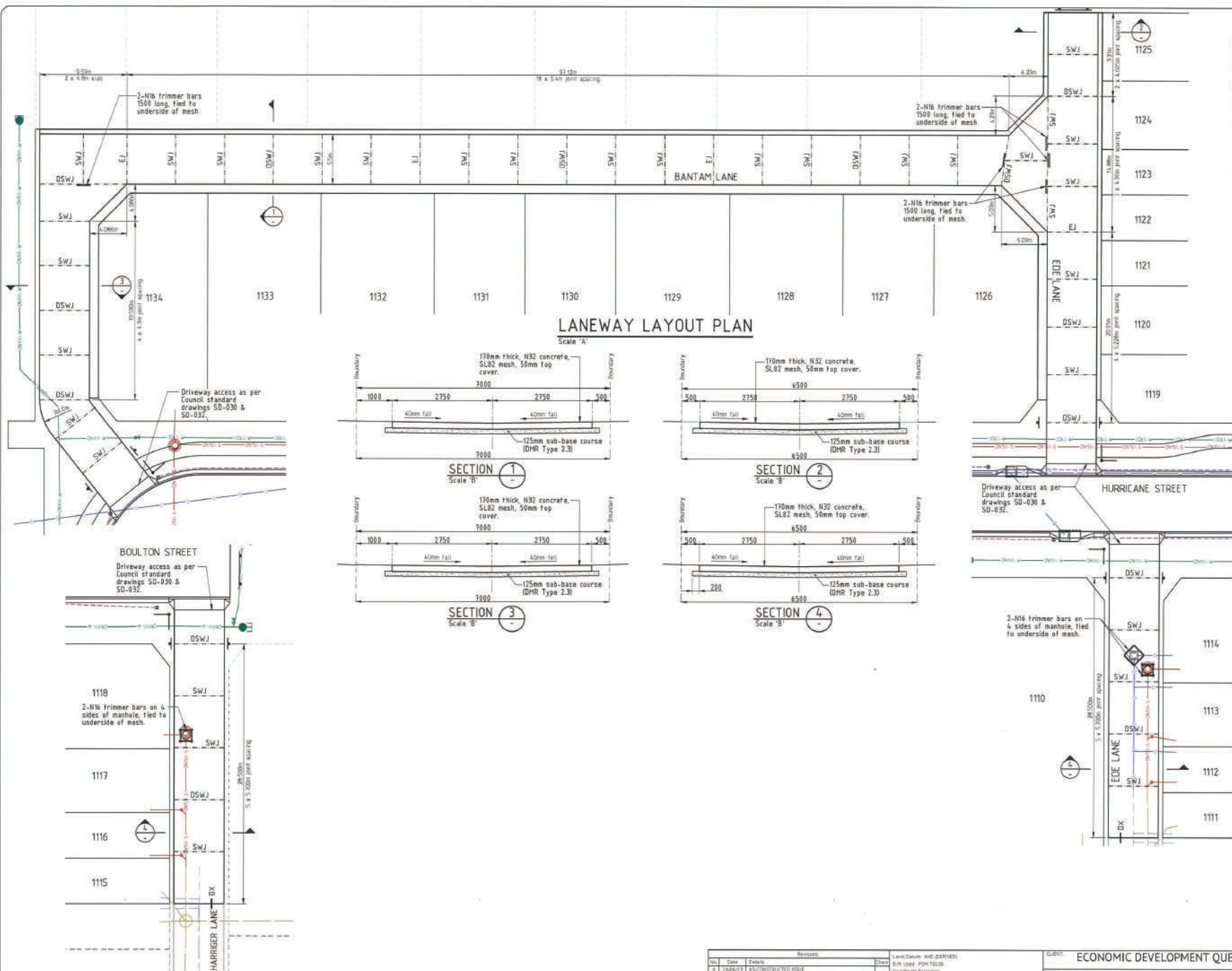
No.	Date	Details	By	Level (Datum: AHD (GEMMED))
1	24/04/17	AS-CONSTRUCTED ISSUE	DR	See Used pipe table
				Coordinate Projection
				Coordinate Datum
				Origin of Coordinates: PG94781.00
				Meridian
				Map Reference
				Colour Interval
				Job No: 29060-133-01
				File No: 29060_725A.dwg
				Drawn: NCM
				Approved:

ECONOMIC DEVELOPMENT QUEENSLAND

Project: **THE VILLAGE - STAGE 11**
HOLYOAK AVENUE - OONDOOMBA
LANEWAY DETAIL LAYOUT PLAN

Client: **brozier mom**
1300 267 878
1 Towardville | 4th Floor
1 Cashmere | Mackay
29060/725 A

Scale: 1:200 (A1)
Date: 20/11/19
Sheet: 1 of 1
Scale: AS SHOWN



- LEGEND**
- Stormwater drain line.
 - Subsoil drainage.
 - DN150 uPVC SN8 sewer main.
 - Sewer manhole.
 - DN100 uPVC PN16 water main.
 - OD63 PN16 poly water main.
 - Existing sewer main.
 - Existing stormwater drain.

- NOTE:**
1. For all joint details, refer to 29060/728.
 2. For Lane concrete slab details refer to 29060/723.

Note:
Concrete laneway's and/or exposed aggregate alternative slabs not constructed until all services, i.e. electrical/BNB/etc. have been installed.

AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Date:
Date: Robert Conroy Saw RPEQ 7363



LANEWAY LAYOUT PLAN

Revisions		Level Status: A/C: DERIVED		CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND	
No.	Date	Details	Drawn	Level Status: A/C: DERIVED	Project
1	2/8/2018	AS-CONSTRUCTED ISSUE	PHM	Level Used: PSM 70200	THE VILLAGE - STAGE 11
				Coordinate Projection	HOLYOAK AVENUE - OONDOOMBA
				Origin of Coordinates: PSM 70200	LANEWAY STRUCTURAL LAYOUT PLAN
				Meridian	
				Map Reference	
				Contour Interval	
				Site No: 29060-118-01	
				File No: 29060_720A (R)	
				Surveyed By: BR	
				Drawn: PHM	
				Approved:	
				Client:	
				Project:	
				Part of:	
				Level Authority: Tweedvale City Council	
				Locality: Tweedvale	

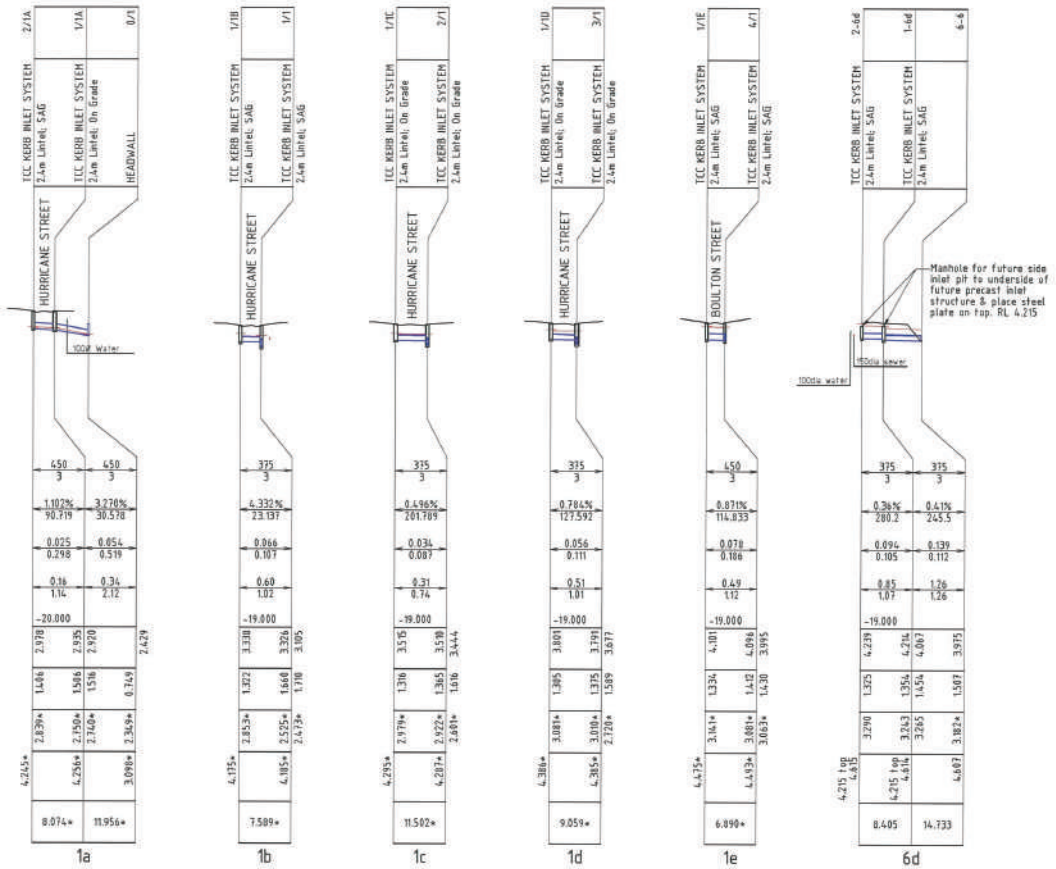
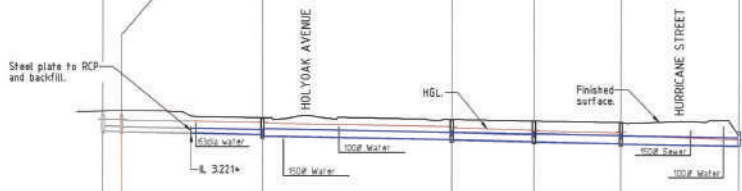
brozer mom

1300 267 878
 1 TOMMYVILLE | A11
 1 CATHIE | HICKS

29060/726 A

Issue: 2/8/2018
 Sheet: 1 of 1 Sheets
 Stage: AS CONSTRUCTED
 Plan No: 29060/726 A

STRUCTURE NAME	4/1	5/1	4/1	3/1	2/1	1/1	0/1
STRUCTURE DESCRIPTION	TTC KERB INLET SYSTEM 2.4m Linel, On Grade	TTC KERB INLET SYSTEM 2.4m Linel, On Grade	TTC KERB INLET SYSTEM 2.4m Linel, SAG	TTC KERB INLET SYSTEM 2.4m Linel, On Grade	TTC KERB INLET SYSTEM 2.4m Linel, On Grade	TTC KERB INLET SYSTEM 2.4m Linel, SAG	HEADWALL
PIPE SIZE (mm)	375	375	525	525	600	600	
PIPE CLASS	3	3	3	3	3	3	
PIPE GRADE (%)	0.42%	0.37%	0.446%	0.284%	0.359%	0.375%	
PIPE SLOPE (1 in X)	235.3	213.0	223.991	351.636	278.836	266.721	
PIPE FLOW (cumecs)	0.650	0.692	0.223	0.223	0.385	0.571	
CAPACITY FLOW (cumecs)	0.314	0.104	0.257	0.252	0.383	0.363	
FULL PIPE VELOCITY (m/s)	0.44	0.83	1.05	1.44	1.29	1.69	
NORMAL DEPTH VELOCITY (m/s)	1.00	1.08	1.34	1.44	1.54	1.69	
DATUM RL	-19.000						
HGL ELEVATION	4.301	4.306	4.096	3.191	3.026	3.026	2.773
DEPTH TO INVERT	1.251	1.201	1.301	1.688	1.688	1.688	0.797
INVERT LEVEL OF DRAIN	3.440	3.360	3.114	2.719	2.607	2.607	2.279
FINISHED SURFACE LEVEL	4.461	4.461	4.653	4.385	4.201	4.185	3.898
CHAINAGE	7.060	54.608	72.570*	32.350*	32.624*	45.876*	



LONGITUDINAL SECTION

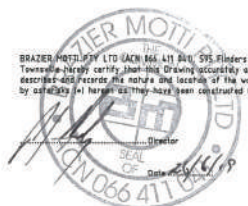
Scale 'A' - Horizontal
Scale 'B' - Vertical

NOTES:

- All Kerb Inlet Grates are Class 'U' and 'Bicycle Safe' to AS 3996 U.K.O.

STORMWATER NOTES:

- All works constructed in accordance with relevant latest issue Council standard drawings.
- For stormwater alignment, refer to stormwater layout drawings 29064/729 & 721
- All drainage pipes are FRC flush jointed rubber ring, unless notes otherwise.
- All uPVC drainage pipes rubber ring jointed conforming to AS1254.
- All polypropylene drainage pipes in accordance with AS5065.
- Pipe Class (2) - FRC class 2
(3) - FRC class 3

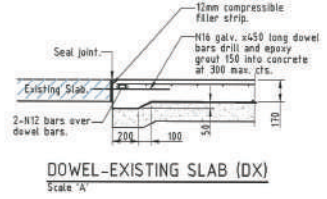
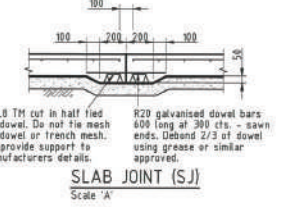
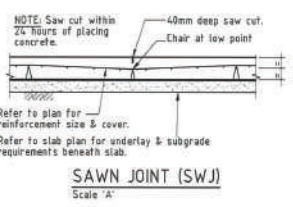
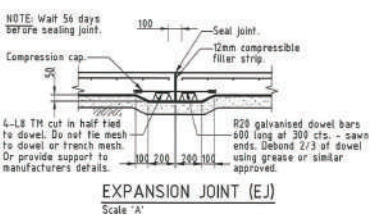
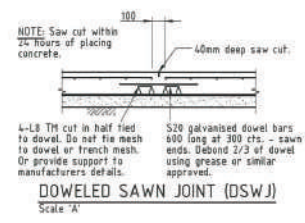
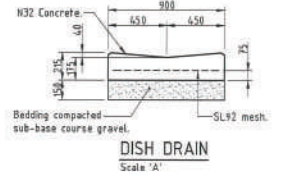
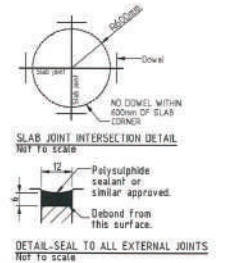
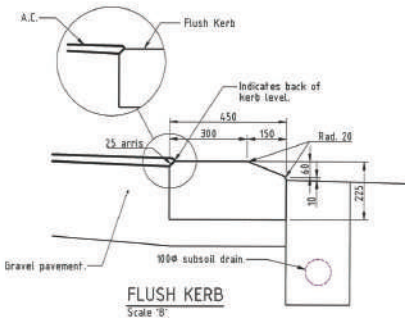
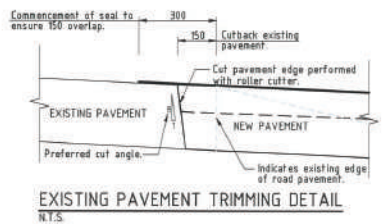
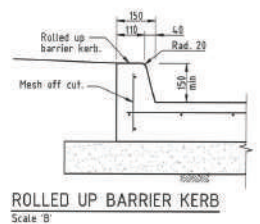
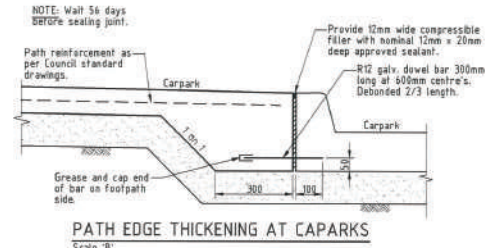
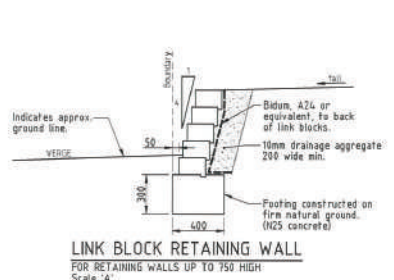
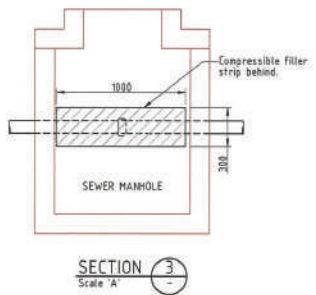
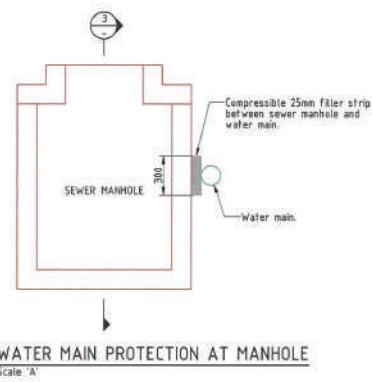
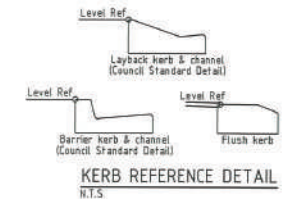


AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Derek Robert Conway SA 1962 1363 DATE

Revisions		Client	
No.	Date	Description	Project
1	24/06/23	AS-CONSTRUCTED ISSUE	ECONOMIC DEVELOPMENT QUEENSLAND
			THE VILLAGE - STAGE 11
			HOLYOAK AVENUE - OONOOBMA
			39% AEP STORMWATER DRAIN LONGITUDINAL SECTIONS
			Drawn: PPH
			Approved:
			Local Authority: Townsville City Council
			Location: Townsville



AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.



Revisions				Level Datum: AHD (DPRN2)		CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND	
No.	Date	Describe	Drawn	By	Level	Project	THE VILLAGE - STAGE 11 HOLYOAK AVENUE - OONOOMBA CONSTRUCTION DETAILS
1	24/04/21	AS CONSTRUCTED ISSUE				1300 267 878 11 FORDVILLE AFR 1 GARDNER MACKAY	
				2-DIMENSIONAL Coordinate Projection Origin of Coordinates: PSN 70100 Meridian Map Reference Contour Interval Job No: 20060-03-01 Project: 29060_723A-06g Supervisor: BR		Sheet 1 of 1 sheets Scale: AS SHOWN Plan No: 29060/728 A	

Drawn: Robert Derry Saw RP102 7362 Date:

brozier mcm
 1300 267 878
 11 FORDVILLE | AFR
 1 GARDNER | MACKAY
 29060/728 A

NOTES:

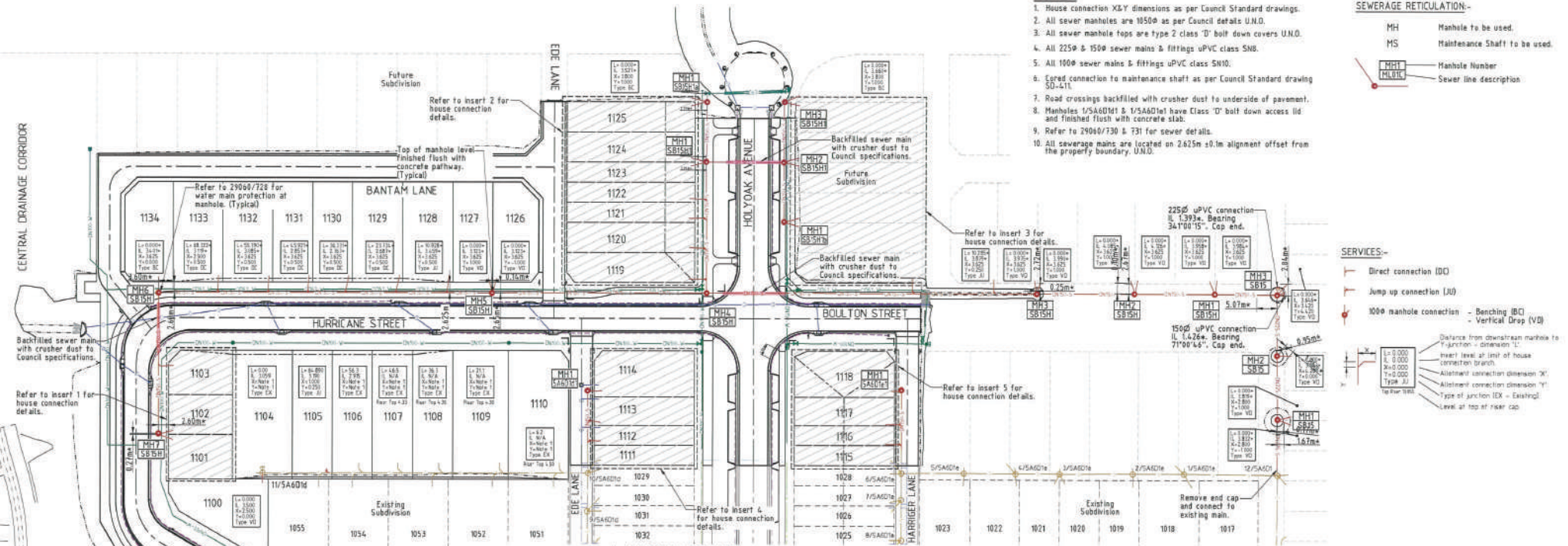
1. House connection X&Y dimensions as per Council Standard drawings.
2. All sewer manholes are 1050Ø as per Council details U.N.D.
3. All sewer manhole taps are type 2 class 'D' bolt down covers U.N.D.
4. All 225Ø & 150Ø sewer mains & fittings uPVC class SN10.
5. All 100Ø sewer mains & fittings uPVC class SN10.
6. Eased connection to maintenance shaft as per Council Standard drawing SD-411.
7. Road crossings backfilled with crusher dust to underside of pavement.
8. Manholes 1/5A60Ø1 & 1/5A60Ø1 have Class 'D' bolt down access lid and finished flush with concrete slab.
9. Refer to 2906/730 & 731 for sewer details.
10. All sewerage mains are located on 262.5m ±0.0m alignment offset from the property boundary, U.N.D.

SEWERAGE RETICULATION-

- MH Manhole to be used.
- MS Maintenance Shaft to be used.
- MH1 Manhole Number
- M1001 Sewer line description

SERVICES-

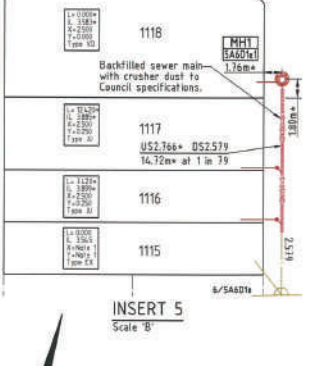
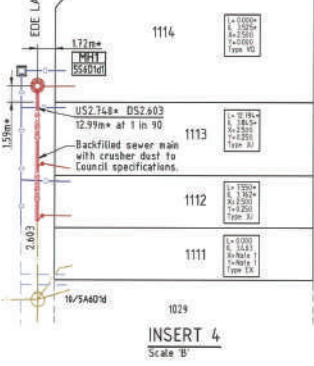
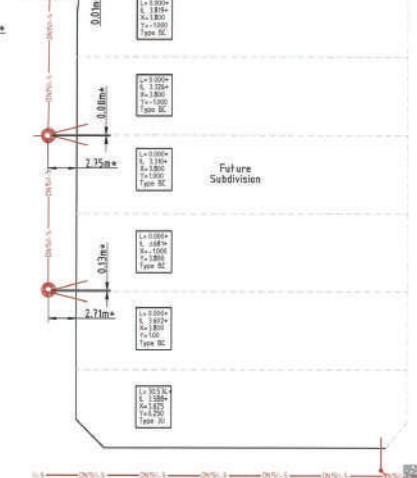
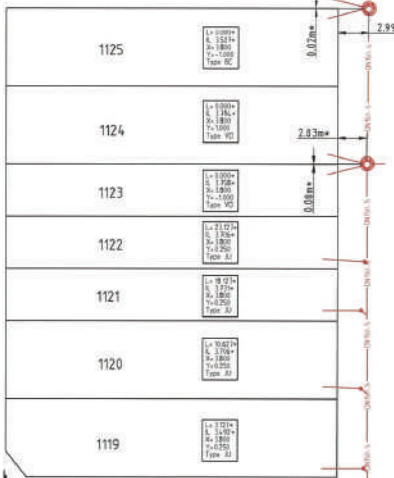
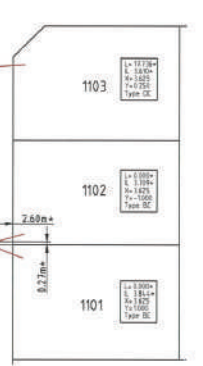
- Direct connection (DD)
- Jump up connection (JU)
- 100Ø manhole connection - Benching (BC) - Vertical Drop (VD)
- Distance from downstream manhole to Y-junction - dimension 'L'
- Invert level at limit of house connection branch
- Alignment connection dimension 'X'
- Alignment connection dimension 'Y'
- Type of junction (EX - Existing)
- Level at top of riser cap



LAYOUT PLAN
Scale 'A'

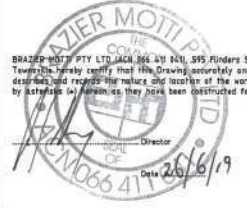
LEGEND

- Existing RP boundary.
- Top of batter.
- Toe of batter.
- Change of grade.
- DN150 uPVC SN10 sewer main.
- DN125 uPVC SN8 sewer main.
- Sewer manhole.
- DN100 uPVC PN16 water main.
- DN150 uPVC PN16 water main.
- OD63 PN16 poly water main.
- Stormwater drain line.
- Subsoil drainage.
- Existing stormwater drain line.
- Existing subsoil drainage.
- Existing sewer main.
- Existing sewer manhole.
- Existing water main.
- Existing poly water main.



AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.



No.	Date	Details	Checked	Level/Date: AND (DENNY)
1	24/06/19	AS CONSTRUCTED ISSUE		S.M. Level: P2H 71016

ECONOMIC DEVELOPMENT QUEENSLAND

Project: THE VILLAGE - STAGE 11
HOLYOAK AVENUE - OONDOOMBA
SEWERAGE RETICULATION PLAN

Client: ECONOMIC DEVELOPMENT QUEENSLAND

Project No: 2906/729 A

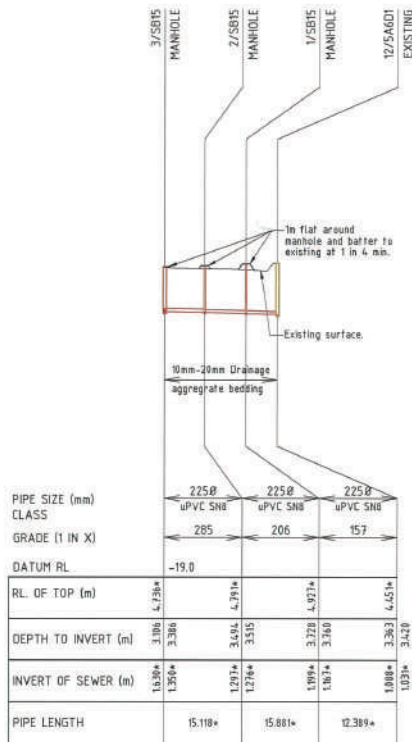
Scale: AS SHOWN

Sheet: 1 of 1 sheets

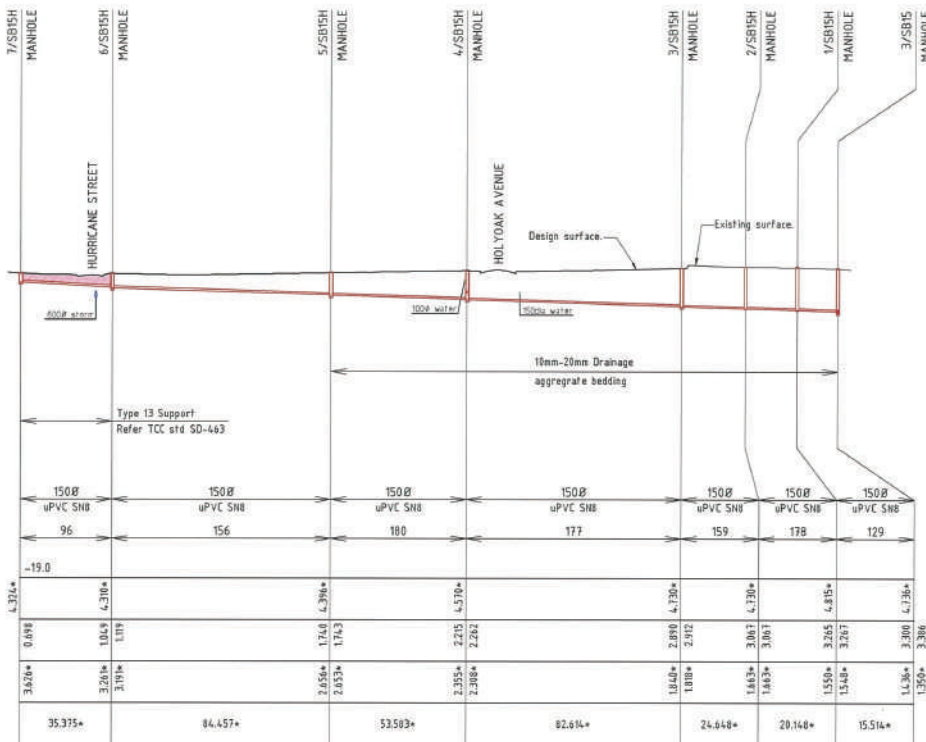
Date: 28/06/2019

Drawn: MH

Approved:



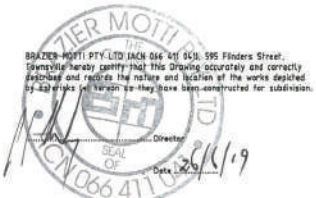
SB15



SB15H

LONGITUDINAL SECTION

Scale 'A' - Horizontal
Scale 'B' - Vertical



AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Date: 20/11/19
Drawn: Robert Conroy
Checked: Steve Ridd
Date: 20/11/19

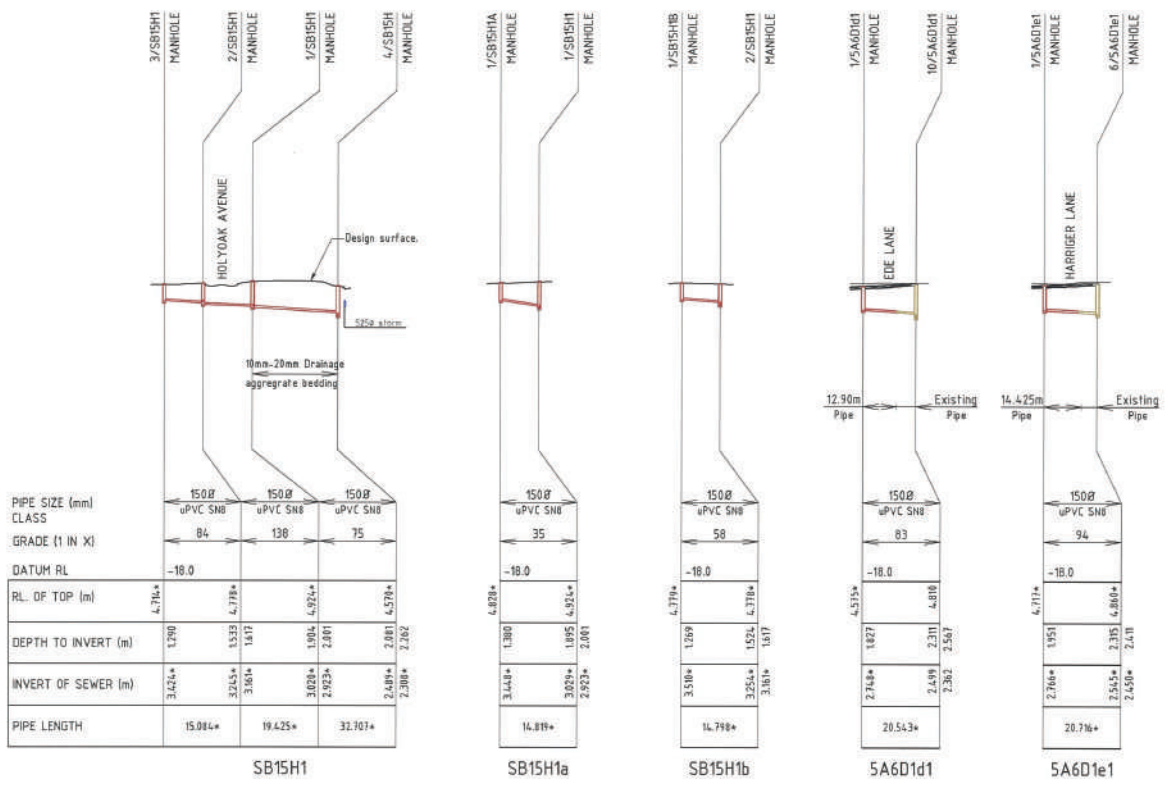
No.	Date	Details	Drawn	Checked
1	24/06/19	AS CONSTRUCTED ISSUE		

ECONOMIC DEVELOPMENT QUEENSLAND Project: THE VILLAGE - STAGE 11 HOLYOAK AVENUE - OONOOOMA SEWERAGE LONGITUDINAL SECTIONS SHEET 1 OF 2	
Parish of: Local Authority: Toowoomba City Council	County of: Local Government:

brozier mott macdonald

1500 267 874

Date: 20th Nov 2019
Sheet: 1 of 1
Scale: AS SHOWN
Project No: 29060/730
A



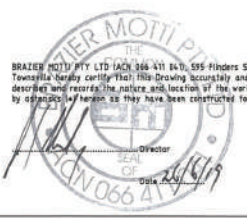
PIPE SIZE (mm)	150Ø	150Ø	150Ø
CLASS	uPVC S80	uPVC S85	uPVC S90
GRADE (1 IN X)	B4	130	75
DATUM RL	-18.0		
RL OF TOP (m)	4.71*		
DEPTH TO INVERT (m)	1.790		
INVERT OF SEWER (m)	3.424*		
PIPE LENGTH	15.084*	19.425*	32.707*

LONGITUDINAL SECTION

Scale 'A' - Horizontal
Scale 'B' - Vertical

AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Derek Robert Conley Sww RP10 7367 Date: _____



Scale 'A' 1:1000 @ A1
Scale 'B' 1:200 @ A1

No	Date	Details	Check
1	24/06/19	AS-CONSTRUCTED ISSUE	

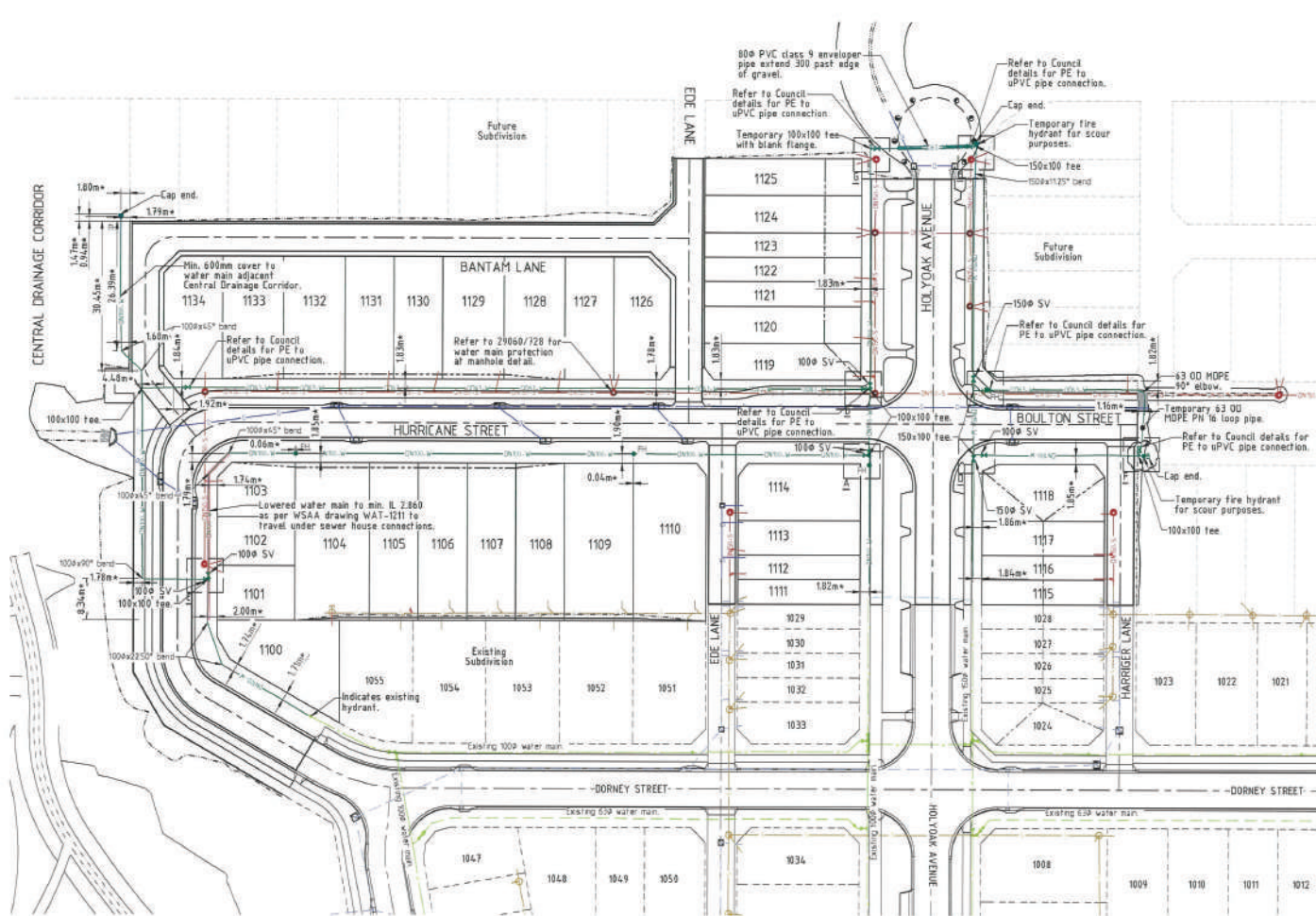
Level Datum AND (SERIES)	BM Load PSM 76350
Coordinate Projection	
Coordinate Datum	
Origin of Coordinates	PSM 76350
Meridian	
Map Reference	
Contract Internal	
Job No	29060-139-03
File No	29060-731A-08g
Screened by	BN

Client	ECONOMIC DEVELOPMENT QUEENSLAND
Project	THE VILLAGE - STAGE 11 HOLYOAK AVENUE - OONOOOMBA SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 2
Drawn	MM
Approved	
Local Authority	Tweed Shire Council
Locality	Tweedville

1000 267 878
www.brazeur.com.au

1 DONDOLLE | AIR
1 CARNE | HOCKEY

Date: 24th June 2019
Sheet: 1 of 1 Sheets
Scale: AS 3909
Plan No: 29060/731 A



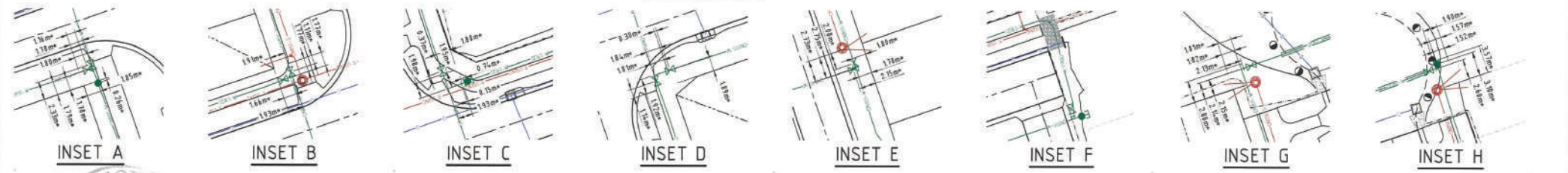
- ### LEGEND
- - - Existing RP boundary.
 - - - Top of batter.
 - - - Toe of batter.
 - - - Change of grade.
 - DN150 uPVC SHS sewer main.
 - DN225 uPVC SHS sewer main.
 - Sewer manhole.
 - DN100 uPVC PH10 water main.
 - DN150 uPVC PH10 water main.
 - DD63 PH10 poly water main.
 - Stormwater drain line.
 - Existing stormwater drain line.
 - Existing sewer main.
 - Existing sewer manhole.
 - Existing water main.
 - Existing poly water main.

- ### NOTES:
1. Water mains are constructed on a 1.8m ±100mm alignment from property boundaries unless shown otherwise.
 2. All uPVC & PE water mains & fittings are Class 16 cast iron outside diameter compatible unless shown otherwise.
 3. Cover to water mains are as follows:
 - 450mm min. general
 - 600mm min. under roads & open drains.
 - At valve locations the water main lowered to obtain required cover to valve.
 4. Road crossings backfilled with crusher dust to underside of pavement.
 5. All fittings socket end unless shown otherwise.
 6. Valves & hydrants located directly opposite property boundary pegs unless shown otherwise.
 7. uPVC pipe may be deflected to achieve minor alignment changes in property boundaries. For maximum deflections refer to manufacturer's specification.
 8. Refer to W.S.A.A. standard drawings WAT-1205 & 1207 for sizes & requirements for all thrust blocks.
 9. Refer to 29060/728 for water main protection at manhole detail at sewer manholes.

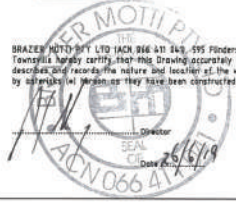
- ### WATER RETICULATION -
- PH Fire Hydrant.
 - SV Stop Valve.



LAYOUT PLAN



BRAZER PHOTO BY LTD (ACN 066 411 840) 595 Flinders Street, Townsville hereby certify that this drawing accurately and correctly describes the location, nature and location of the works depicted by symbols (if any) as they have been constructed for subdivision.



AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Drawn Robert Conley (Lic No 1311) Date: _____

No.	Date	Details	Drawn	Checked
1	24/06/2019	AS-CONSTRUCTED ISSUE	Robert Conley	Robert Conley

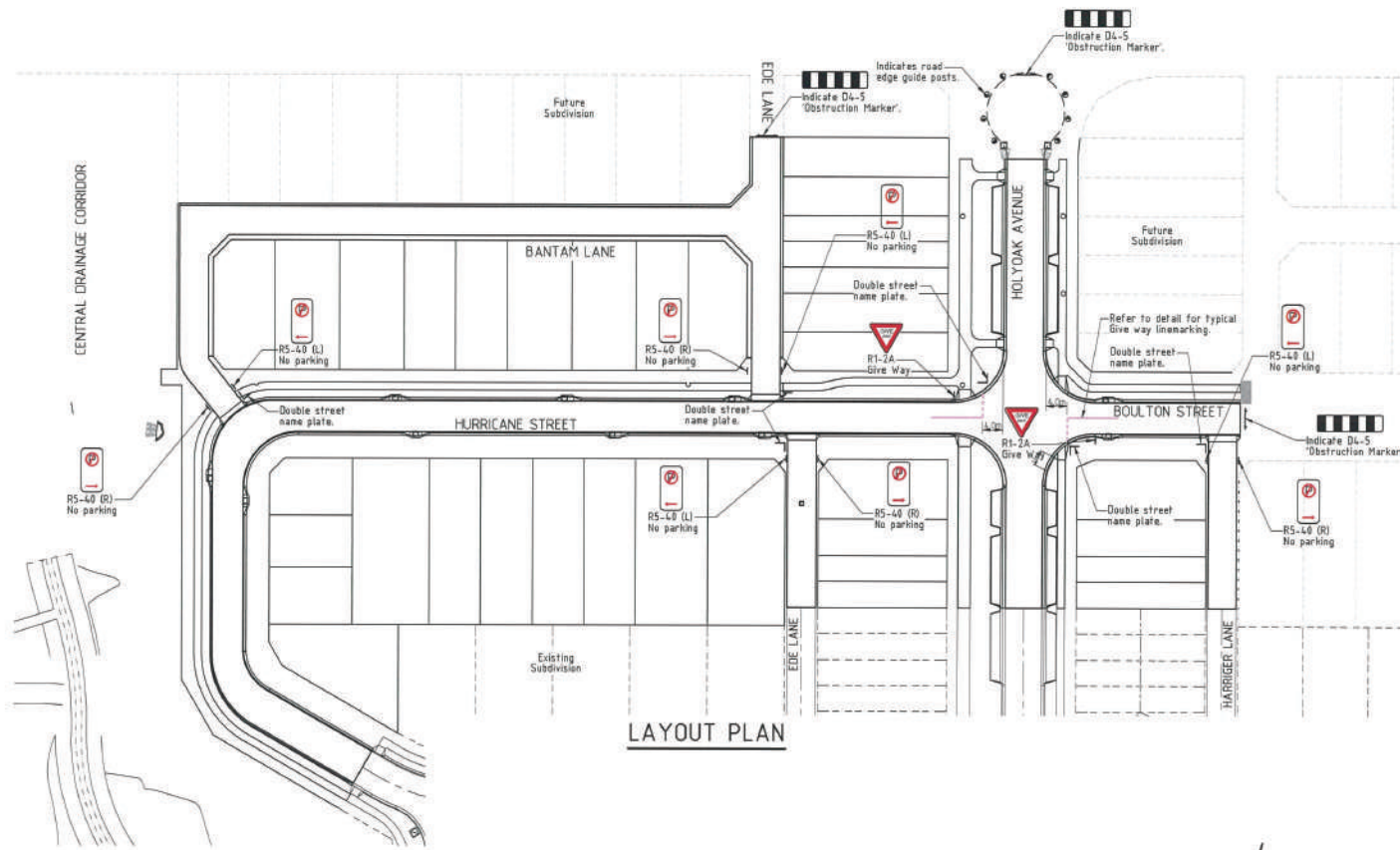
CLIENT ECONOMIC DEVELOPMENT QUEENSLAND	
Project THE VILLAGE - STAGE 11 HOLYOAK AVENUE - OONOOMBA WATER RETICULATION PLAN	
Parish of Local Authority: Townsville City Council	County of Local Government: Townsville

Scale 1:500 @ A1

brozer mom

1100 267 878
 1000 267 878
 1000 267 878

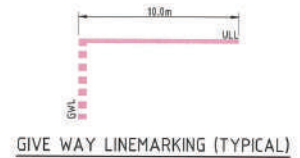
Date: 24th June 2019
 Sheet: 1 of 5 Sheets
 Project: AS-CONSTRUCTED
 File No: 29060/723 A



LAYOUT PLAN

LEGEND

- EWL 400mm-600mm Strip & Cap 100 Give way line.
- ULL 100 Unbroken Lane Line.



NOTES:

1. All road signage, linemarking and R.R.P.M. to comply with the manual of uniform traffic control devices (M.U.T.C.D.).
2. All linemarking is reflectorized white.
3. Guide posts installed in accordance with D.T.M.R. specification and the M.U.T.C.D.
4. For sign post details, refer to the Townsville City Council standard drawings SD-060 & SD-065.



AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works shown on the as constructed drawing reflect any changes that were made during the course of construction.

Drawn: Robert Conley Saw: RPS02 1361 Date: _____

Revisions		Drawn	Checked
No.	Date	Details	
1	24/04/19	AS CONSTRUCTED ISSUE	

Level Datum: AHD (PERVED)	Drawn: RCH
BM Used: PSM 79328	Approved:
Coordinate Projection:	
Coordinate Datum:	
Origin of Coordinates: PSM 79328	
Meridian:	
Map Reference:	
Contour Interval:	
Job No: 23060-113-01	
File No: 23060_733A.dwg	
Surveyed by: BM	

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND
Project: THE VILLAGE - STAGE 11 HOLYOAK AVENUE - OONOOMBA LINEMARKING & SIGNAGE LAYOUT PLAN
Drawn: RCH Approved:
Local Authority: Townsville City Council

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Date: 28/04/2019
Drawn: RCH
Scale: AS SHOWN
Plan No: 23060/733 A