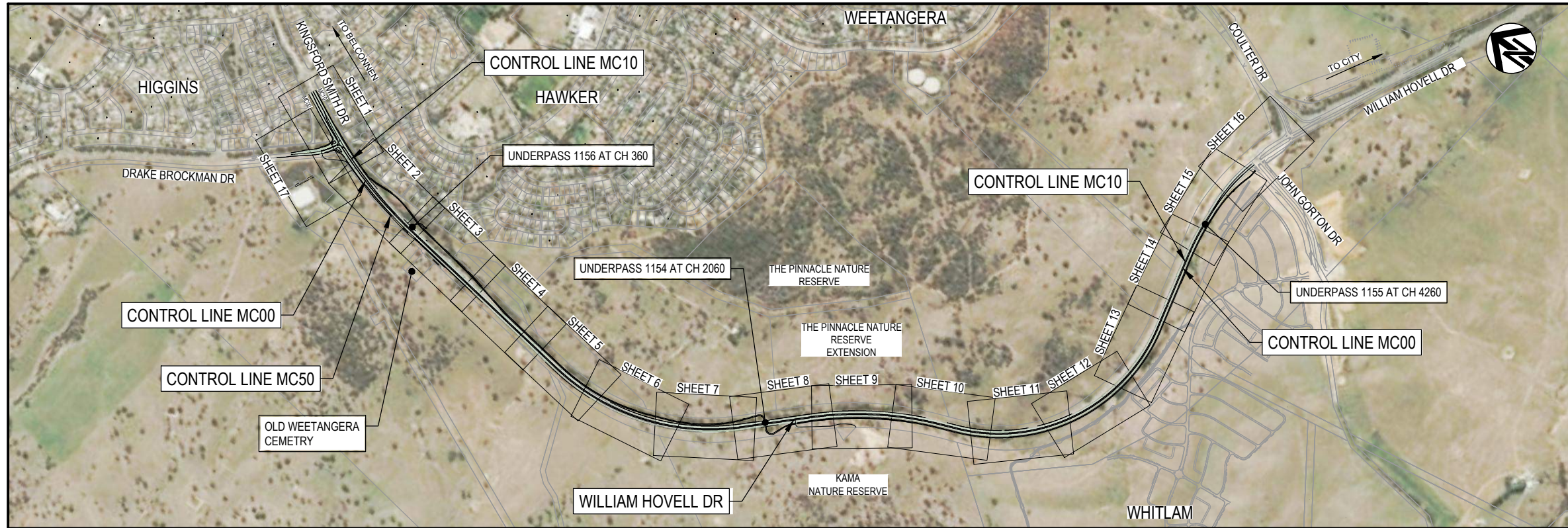
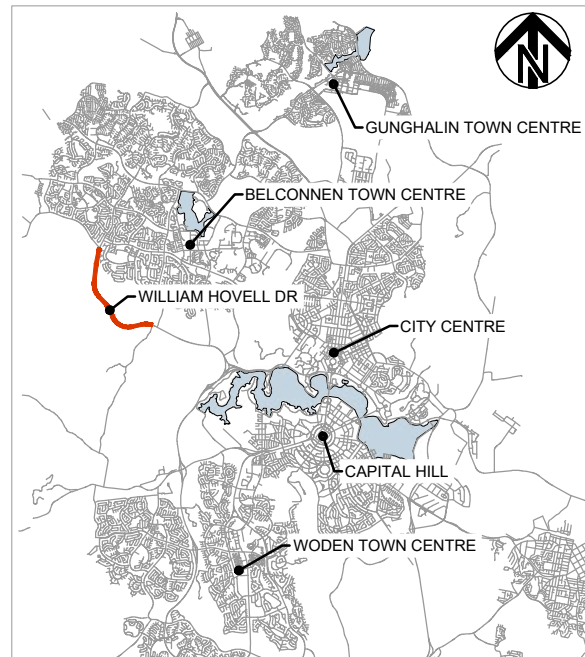


WILLIAM HOVELL DRIVE DUPLICATION PACKAGE 07 DRAINAGE



LOCALITY PLAN
SCALE 1:10000

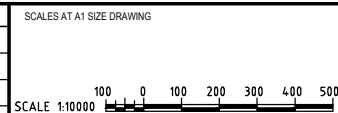


PACKAGE REFERENCES

PACKAGE	DESCRIPTION	DISCIPLINE
PACKAGE 01	INDEX LOCALITY PLAN, GENERAL NOTES, TYPICAL DETAILS AND TYPICAL SECTIONS	GE
PACKAGE 03	GENERAL ARRANGEMENT PLAN	RD
PACKAGE 04	ROAD ALIGNMENT PLANS	RD
PACKAGE 05	LONGITUDINAL SECTIONS	LS
PACKAGE 06	CROSS SECTIONS	XS
PACKAGE 07	DRAINAGE	DD
PACKAGE 08	WATER AND SEWER	WS
PACKAGE 09	UTILITIES - TELECOMMUNICATIONS, ITS, ELECTRICAL	UT
PACKAGE 10	PAVEMENT PLAN, PAVEMENT DETAILS AND SUBSOIL DRAINAGE	PV
PACKAGE 15	LINES AND SIGNS, TCCS TRAFFIC SIGNALS	TC
PACKAGE 17	STRUCTURES	ST
PACKAGE 22	CONSTRUCTION STAGING	CS

PRELIMINARY

DRAWING FILE LOCATION / NAME V:_Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1400.dwg		PLOT DATE 13 Nov 2020		TIME 08:47:01	
REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	TITLE
A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK	DRAFTER <i>R. GOOSEN</i>
B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK	DRAFTING CHECK <i>K. CURLEY</i>
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK	DESIGNER <i>M. HARTY</i>
					DESIGN CHECK <i>T. NIELSEN</i>
					PROJECT MANAGER <i>S. RAVEN</i>
					PROJECT DIRECTOR <i>D. KEEP</i>



DESIGNER

SMC
Member of the Surbana Jurong Group
SMC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMC PROJECT No 3002750

CLIENT

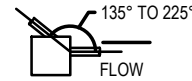
ACT
Government
Transport Canberra & City Services

PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		REVISION C	
DRAINAGE COVER SHEET			
SCALE AS SHOWN	PHASE PSP	PROJECT / DRAWING No. 3002750-DD-1400	

150 mm ON ORIGINAL
A1

GENERAL

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ASSOCIATED DESIGN PACKAGE DRAWINGS.
2. THE DOCUMENTED DRAINAGE SYSTEM IS DETAILED ONLY FOR THE PERMANENT ROAD CONFIGURATION UNLESS NOTED OTHERWISE. CONSTRUCTION REQUIREMENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
3. PIPES THROUGH PITS ARE TO BE ALIGNED WITH UPSTREAM PIPE CENTRELINE TO OUTLET PIPE CENTRELINE AT DOWNSTREAM PIT FACE AS SHOWN.



LONGITUDINAL PAVEMENT AND TRANSVERSE DRAINAGE

1. ALL PIPES ARE TO BE STEEL REINFORCED CONCRETE UNLESS NOTED OTHERWISE. ALL CONCRETE PIPES SHALL HAVE HS3 TYPES INSTALLATION AS PER TCCS SPECIFICATION MITS 03A AND AS/NZS 3725:2007.
2. CONCRETE PIPE CLASS IS TO BE A MINIMUM OF CLASS 4. TYPE HS3 SUPPORT AND TRENCH CONDITION INSTALLATION TO AS3725 AND SPECIFICATION UNLESS OTHERWISE NOTED. CONCRETE PIPES ARE TO BE RUBBER RING JOINT SPIGOT AND SOCKET TYPE UNLESS NOTED OTHERWISE. THERMAL ENVIRONMENT CONDITION OF TABLE 3.1 OF AS/NZS 4058:2007 APPLIES.
3. CONNECTIONS BETWEEN PIPES AND STRUCTURES TO BE UNDERTAKEN IN ACCORDANCE WITH TCCS SPECIFICATION MITS 03A AND 03B AND 03C.

SERVICES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL EXISTING UTILITIES ARE ACCURATELY LOCATED, IDENTIFIED, CHECKED AGAINST ALL DESIGN DRAWINGS AND PROTECTED OR RELOCATED AS REQUIRED PRIOR TO CONSTRUCTION WORKS.
2. REQUIRED CONDITIONS TO BE OBTAINED FROM RELEVANT AUTHORITIES WHILE WORKING IN THE VICINITY OF UTILITIES PRIOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN SUCH CONDITIONS.

CHANNELS

1. CHANNEL LININGS ARE TO BE IN ACCORDANCE WITH THE LP LANDSCAPING DRAWING PACKAGE AND THE DD DRAINAGE DRAWING PACKAGE.
2. DRAINAGE OPEN CHANNEL LOCATIONS ARE SHOWN ON THE PLAN DRAWINGS.
3. FOR CONCRETE CHANNELS WITH A SIDE SLOPE STEEPER THAN 1 IN 2 AND CHANNELS DEPTH EXCEEDS .9m STEP IRONS TO BE SPACED AT 0.3m VERTICAL INTERVALS . THE MAXIMUM LONGITUDINAL SPACING BETWEEN STEP IRONS SHOULD NOT EXCEED 60m

SCOUR PROTECTION

1. RIP RAP STONE SHALL BE REASONABLY WELL GRADED IN ACCORDANCE WITH THE FOLLOWING TABLE:

ROCK SIZE	% PASSING (BY WEIGHT)
2 x D50	100%
D50	40-60%
0.3 x D50	10-20%

2. THE ROCK SHALL BE WELL GRADED THROUGHOUT THE RIP RAP LAYER. STONE SIZES SHALL BE DEPENDENT ON THE D50 VALUE SPECIFIED ON THE DRAWINGS. D10 SHALL BE 0.5 x D50 AND D90 SHALL BE 1.35 x D50. STONES SMALLER THAN THE SPECIFIED D10 ARE NOT TO EXCEED 20% BY WEIGHT OF EACH LOAD.
3. ROCK IS TO BE HARD, DENSE, DURABLE, RESISTANT TO WEATHERING AND ANGULAR IN SHAPE. IT SHALL BE FREE FROM OVERBURDEN, SPOIL, SHALE AND ORGANIC MATTER. ROCK THAT IS LAMINATED, FRACTURED, POROUS OR OTHERWISE PHYSICALLY WEAK WILL BE UNACCEPTABLE.
4. ROCK SOURCING AND SUITABILITY TO BE APPROVED BY THE PRINCIPAL.
5. GEOTEXTILES FOR THE PROJECT ARE TO BE IN ACCORDANCE WITH TCCS SPECIFICATION MITS 03I AND TYPE SHOWN ON THE DRAWINGS.

EXISTING STORMWATER PITS & PIPES

1. EXISTING STORMWATER DRAINAGE PIPE AND PIT LAYOUTS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. ALL LOCATIONS, ORIENTATION AND LEVELS OF EXISTING SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE COMMENCING ANY WORK.
2. LAYOUTS OF EXISTING STORMWATER DRAINAGE HAVE BEEN PREPARED BASED ON A COMBINATION OF SURVEY DATA & AVAILABLE TCCS GIS DATA.
3. EXISTING STORMWATER DRAINAGE PIPES AND MANHOLES WITHIN THE LIMITS OF WORK SHALL BE DECOMMISSIONED OR RETAINED WHERE SPECIFIED WITHIN THE DESIGN PACKAGES.
4. EXISTING STORMWATER DRAINAGE PIPES AND CULVERTS THAT ARE IDENTIFIED TO BE DECOMMISSIONED OR ABANDONED SHALL BE IN ACCORDANCE WITH TCCS SPECIFICATION MITS 03A AND CCTV FOR ASSESSMENT OF THE APPROPRIATE TREATMENT IN REFERENCE TO DURABILITY REQUIREMENTS. TREATMENTS INCLUDE:
 - REMOVE AND BACKFILL - EXISTING PIPES / PITS TO BE REMOVED WITH TRENCH BACKFILLED AND COMPACTED IN ACCORDANCE WITH TCCS STANDARD SPECIFICATIONS.
 - SEAL AND GROUT - PIPE ENDS TO BE CAPPED AND PIPES TO BE INFILLED WITH GROUT, 'TEREFIL MAINMARK' OR APPROVED EQUIVALENT.

DRAINAGE STRUCTURES

1. DRAINAGE STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND PROVISION OF ANY TEMPORARY BRACING, PROPPING, ETC. REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH TCCS 03 UNDERGROUND SERVICES SPECIFICATIONS STRUCTURES SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED .
2. EQUIVALENT PRECAST HEADWALLS / PITS MAY BE USED THAT SATISFY TCCS 03 UNDERGROUND SERVICES SPECIFICATIONS, SUBJECT TO THE PRINCIPAL'S APPROVAL.
3. INADEQUATE FOUNDATION MATERIAL FOR PIPES AND STRUCTURES SHALL BE REMOVED OR IMPROVED IN ACCORDANCE WITH MITS 03A TRENCHING FOR UNDERGROUND SERVICES.
4. SUITABILITY OF THE FOUNDING MATERIAL SHALL BE ASSESSED AND CONFIRMED ON SITE BY THE CONTRACTORS GEOTECHNICAL ENGINEER
5. TCCS STANDARD DETAILS TO BE ADOPTED ONLY WHERE REFERENCED / APPROVED. WHERE USED THEY MUST BE IN CONJUNCTION WITH DRAINAGE STRUCTURES DURABILITY REQUIREMENTS.
6. STEEL GRATES AND FRAMES ARE TO BE FABRICATED FROM MILD STEEL AND HOT DIP GALVANISED. ALL GRATES ARE TO BE CLASS D U.N.O. GRATES AND FRAMES WITHIN THE PAVEMENT SURFACE (INCLUDES ADJOINING SO GUTTER) ARE TO BE BICYCLE SAFE IN ACCORDANCE WITH AS 3996.
7. ALL WELDS TO COMPLY WITH AUSTRALIAN STANDARD AS 1554. FILLET WELDS TO BE NOT LESS THAN 6mm .
8. ALL REINFORCEMENT SHALL COMPLY WITH AS/NZS 4671 GRADE D500L (FITMENTS) AND D500N (TYPICAL).
9. ALL GALVANISING TO BE IN ACCORDANCE WITH AS/NZS 2312 AND AS/NZS 4680. GALVANISING TO THREADED FASTENERS TO BE IN ACCORDANCE WITH AS 1214. MINIMUM GALVANISING 600g/sqm OTHER THAN FASTENERS.
10. ALL DRAINAGE PIT GRATES TO BE BOLTED (HEX BOLT) TO THE FRAME.
11. PITS GREATER THAN 900mm TO BE FITTED WITH STEP IRONS TO TCCS STANDARD DRAWING ACTSD-0830. STEP IRONS TO BE INSTALLED IN ACCORDANCE WITH UNDERGROUND SERVICES SPECIFICATIONS DRAINAGE STRUCTURES 03D.

CONCRETE

1. CONCRETE GRADE, EXPOSURE CLASSIFICATION AND MIN COVER AS SHOWN:

CONCRETE	ELEMENT	CONCRETE (GRADE MPa)	EXPOSURE CLASSIFICATION	CHARACTERISTIC COMPRESSIVE STRENGTH AT 28 DAYS (MPa)	MINIMUM COVER (mm) EXPOSURE CLASSIFICATION		
					CAST AGAINST FOTCCS	CAST AGAINST BLINDINGS	CAST AGAINST GROUND
CAST INSITU CONCRETE	ROUND BOTTOM CHANNEL	20	B1	20	N/A	N/A	N/A
	BOX CULVERT BASE SLAB	32	B1	32	45	N/A	N/A
	RECTANGULAR AND TRAPEZOIDAL CHANNEL	32	B1	32	45	N/A	N/A
	GRADED DRAIN CONCRETE ENCASMENT	40	B1	40	45	45	45
BLINDING CONCRETE	-	20	-	20	N/A	N/A	N/A
PRECAST	OTHER	40	B1	40	45	N/A	N/A

2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH TCCS 03 UNDERGROUND SERVICES SPECIFICATIONS INCLUDING AMENDMENTS, EXCEPT WHERE VARIED BY PROJECT SPECIFICATIONS.
3. CONCRETE SHALL BE FROM AN APPROVED SOURCE AND SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS VARIED BY THE PROJECT SPECIFICATION
4. UNLESS VARIED BY THE PROJECT SPECIFICATION ALL CEMENT SHALL BE "GP" GENERAL PURPOSE OR "GB" GENERAL PURPOSE BLENDED CEMENT OR "SR" SULPHATE RESISTANT CEMENT, AS REQUIRED AND SMALL COMPLY WITH AS 3972.
5. NO PENETRATIONS, RECESSES OR CHASES OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE IN THE CONCRETE MEMBERS WITHOUT APPROVAL OF THE PRINCIPAL.
6. ALL CONCRETE SURFACE FINISHES ARE TO BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

FORMWORK

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, PRECAST, CAST INSITU, PROOF ENGINEERING, CERTIFICATION , CONSTRUCTION, INSPECTION AND PERFORMANCE OF THE FORMWORK AND FALSEWORK.
2. DURING CONSTRUCTION, SUPPORT PROPPING IS REQUIRED WHERE LOADS FROM STACKED MATERIALS, FORMWORK AND OTHER SUPPORTED SLABS INDUCE LOADS IN A SLAB OR BEAM WHICH EXCEED THE DESIGN LOAD FOR STRENGTH AND SERVICEABILITY AT THAT AGE OR WHERE THE STRUCTURE IS INCOMPLETE ONCE THE NOMINATED 28 DAY STRENGTH HAS BEEN ATTAINED.
3. THE FORMWORK SHALL NOT BE DESIGNED TO RELY ON RESTRAINT OR SUPPORT FROM THE PERMANENT STRUCTURE WITHOUT PRIOR APPROVAL FROM THE PRINCIPAL.
4. ALL FORMED EXPOSED EDGES AND RE-ENTRANT CORNERS SHALL BE CHAMFERED OR FILLETED 20 x 20 mm, UNLESS NOTED OTHERWISE.

REINFORCEMENT

1. ALL REINFORCEMENT SHALL COMPLY WITH AS/NZS 4671 GRADE D500N (BARS).
2. REINFORCEMENT SHOWN ON THE DRAWINGS IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION. FOR CLARITY, BAR LOCATIONS MAY BE EXAGGERATED.
3. UNLESS OTHERWISE SPECIFIED, THE MINIMUM DEVELOPED LENGTHS AND LENGTHS OF LAPS SHALL BE AS FOLLOWS:

MINIMUM DEVELOPMENT & LAP LENGTHS

BAR SIZE	CONCRETE GRADE (40 MPa)						
	N12	N16	N20	N24	N28	N32	N36
a) HORIZONTAL BARS WITH >300mm OF CONCRETE CAST BELOW THE BAR	450	620	800	1100	1410	1650	1950
b) OTHER BARS	350	500	650	850	1090	1250	1500

4. WELDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE PRINCIPAL.
5. ALL REINFORCEMENT SHALL BE SECURELY TIED WITH WIRE TIES AND ALL TIE ENDS SHALL BE TURNED INTO THE MEMBER CLEAR OF THE COVER ZONE.
6. REINFORCEMENT SHALL NOT BE CUT OR BENT ON SITE UNLESS APPROVED BY THE PRINCIPAL.
7. THE TOLERANCE ON THE NOMINAL COVERS FOR FIXING THE REINFORCEMENT SHALL BE AS NOTED IN THE PROJECT SPECIFICATION.
8. SPACING OF REINFORCEMENT SHALL BE TAKEN AS EQUAL UNLESS NOTED OTHERWISE ON THE DRAWINGS OR VARIED BY THE PROJECT SPECIFICATION.

SUBSURFACE DRAINAGE

1. FOR SUBSURFACE DRAINAGE DETAILS REFER TO PACKAGE 10 PAVEMENTS DRAWING SET.

DURABILITY

1. PITS:
 - 1.1. EXPOSURE CLASSIFICATION SHALL BE B1.
 - 1.2. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 50 MPa, WITH A NOMINAL COVER OF 35mm OR MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 40 MPa WITH A NOMINAL COVER OF 45mm.
2. PIPES:
 - 2.1. CONCRETE GRADE AND COVER SHALL BE IN ACCORDANCE WITH THE PROVISIONS IN AS 4058 FOR "NORMAL" EXPOSURE ENVIRONMENT.

150 mm ON ORIGINAL
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1401.dwg				PLOT DATE 13 Nov 2020		TIME 08:47:34	
EXTERNAL REFERENCE FILES				REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.
				A	19.06.2020	PRELIMINARY SKETCH PLAN	0007
				B	08.10.2020	PRELIMINARY SKETCH PLAN	0014
				C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015
				APPROVAL	TITLE	NAME	
				DK	DRAFTER	R. GOOSEN	
				DK	DRAFTING CHECK	K. CURLEY	
				DK	DESIGNER	M. HARTY	
					DESIGN CHECK	T. NIELSEN	
					PROJECT MANAGER	S. RAVEN	
					PROJECT DIRECTOR	D. KEEP	
				SCALES AT A1 SIZE DRAWING			
				DESIGNER SMEC Member of the Surlana Jurong Group SMEC AUSTRALIA PTY LTD © ABN 47 065 475 149 SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE LYNEHAM ACT 2602 AUSTRALIA SMEC PROJECT No 3002750			
				CLIENT ACT Government Transport Canberra & City Services			
				PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION			
				DRAINAGE NOTES			
SCALE AS SHOWN		PHASE PSP		PROJECT / DRAWING No. 3002750-DD-1401		REVISION C	

PRELIMINARY

LEGEND

EXISTING

	CADASTRAL BOUNDARY
	STORMWATER PIPE
	STORMWATER HEADWALL MANHOLE & PLANTATION SUMP
	OVERHEAD POWER LINE
	UNDERGROUND POWER LINE
	UNDERGROUND LOW VOLTAGE POWER LINE
	TELECOMMUNICATIONS ICON
	TELECOMMUNICATIONS NBN
	TELECOMMUNICATIONS NEXTGEN
	TELECOMMUNICATIONS OPTUS
	SHARED SERVICES TRENCH
	TELECOMMUNICATIONS TACT
	TELECOMMUNICATIONS TELSTRA
	HIGH PRESSURE GAS
	LOW PRESSURE GAS
	SEWER
	WATER
	UTILITY SERVICE PITS & STREETLIGHT
	TREE
	MAJOR CONTOUR AND LABEL
	MINOR CONTOUR
	ACCESS ROAD BY OTHERS
	UTILITIES EASEMENT
	DEEP CREEK ALIGNMENT
	BICENTENNIAL NATIONAL TRAIL
	UTILITIES LOCATION TO BE CONFIRMED
	132kV PROPOSED UTILITY BY OTHERS

PROPOSED WORKS

	MAJOR CONTOUR AND LABEL
	MINOR CONTOUR
	CONSTRUCTION BOUNDARY
	RETAINING WALL
NOTE: REFER PACKAGE 08 FOR WATER AND SEWER REFER PACKAGE 09 FOR TELECOMMUNICATIONS, ITS & ELECTRICAL	
	Ø100 WATERMAIN
	Ø150 WATERMAIN
	Ø600 WATERMAIN
	Ø675 WATERMAIN
	Ø900 WATERMAIN
	ITS CONDUIT
	TELECOMMUNICATIONS
	TELECOMMUNICATIONS NBN
	TELECOMMUNICATIONS TELSTRA
	TELECOMMUNICATIONS TPG
	ELECTRICITY LOW VOLTAGE UNDERGROUND
NOTE: REFER PACKAGE 15 FOR TCD & TCCS	
	PEDESTAL
	COMBINED USE
	MAST ARM
	CONDUIT
	STREETLIGHT TO BE REMOVED
	TELECOMMUNICATIONS OPTUS TO BE REMOVED
	TELECOMMUNICATIONS TELSTRA TO BE REMOVED
	WATERMAIN Ø900 TO BE DECOMMISSIONED
	WATERMAIN Ø600 TO BE DECOMMISSIONED
	WATERMAIN Ø675 TO BE DECOMMISSIONED
	WATERMAIN Ø150 TO BE DECOMMISSIONED
	WATERMAIN Ø100 TO BE DECOMMISSIONED

PROPOSED DRAINAGE

	PIPE DIAMETER, PIPE AND FLOW DIRECTION
	ACT TYPE R SUMP (SINGLE / DOUBLE) ACT PLANTATION SUMP (SINGLE / DOUBLE)
	ACT 1050ND MANHOLE
	CONCRETE CHANNEL
	VEGETATED CATCH DRAIN
	CONCRETE V DRAIN
	STORMWATER PIPES/PITS TO BE REMOVED
	CULVERT HEADWALL, HEADWALL WITH ROCK MATTRESS, HEADWALL WITH CONCRETE APRON

150 mm ON ORIGINAL
A1

150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1402.dwg		PLOT DATE 13 Nov 2020		TIME 08:47:59	
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK
	B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK
	C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK

TITLE	NAME
DRAFTER	R. GOOSEN
DRAFTING CHECK	K. CURLEY
DESIGNER	M. HARTY
DESIGN CHECK	T. NIELSEN
PROJECT MANAGER	S. RAVEN
PROJECT DIRECTOR	D. KEEP

DESIGNER

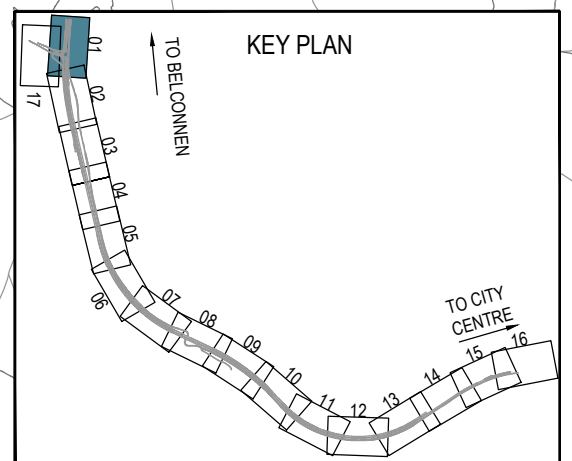
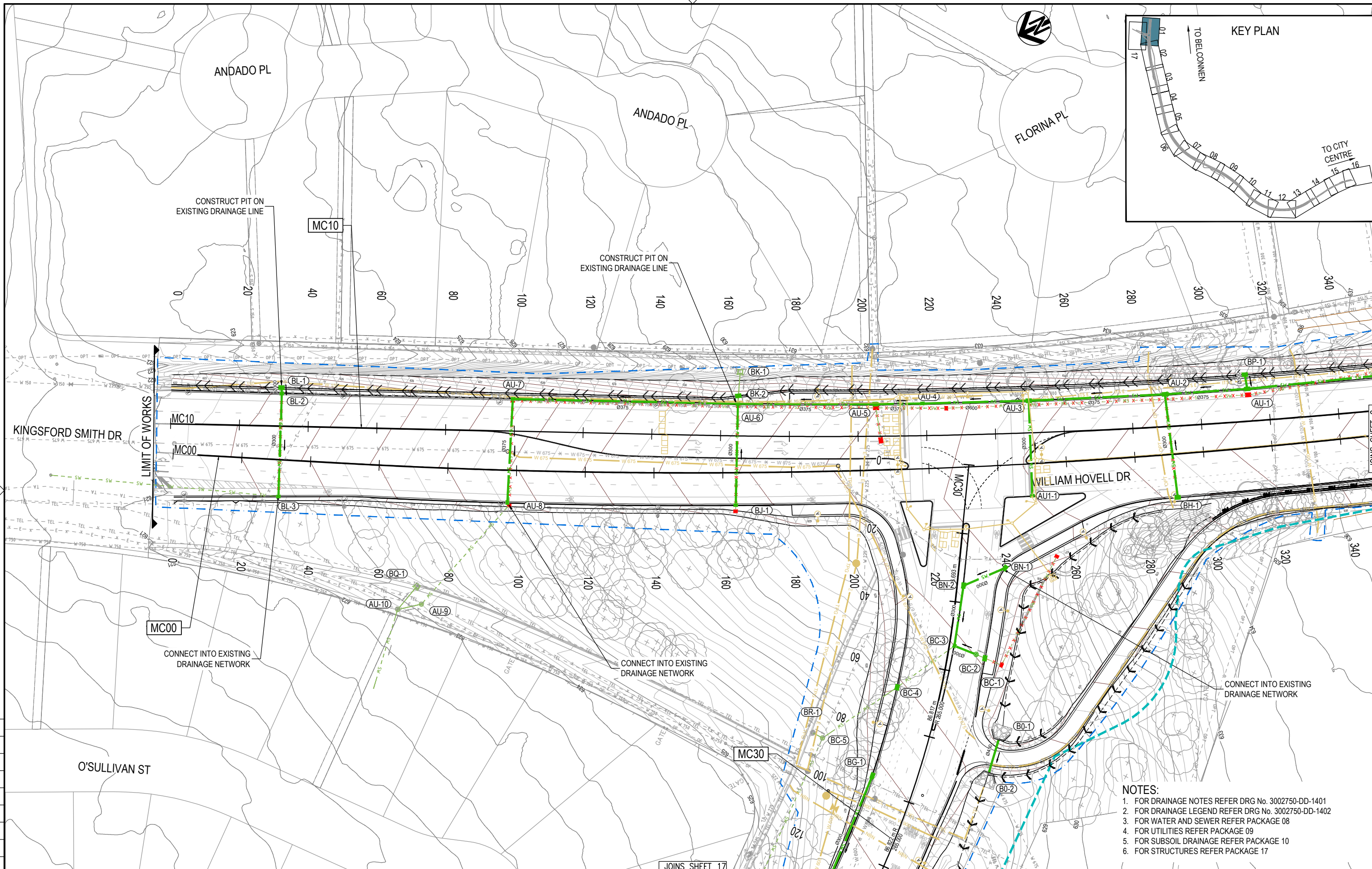
SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

ACT
Government
Transport Canberra & City Services

PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		REVISION C	
DRAINAGE LEGEND		PROJECT / DRAWING No. 3002750-DD-1402	
SCALE AS SHOWN	PHASE PSP	REVISION	

PRELIMINARY



150 mm ON ORIGINAL

- NOTES:**
1. FOR DRAINAGE NOTES REFER DRG No. 3002750-DD-1401
 2. FOR DRAINAGE LEGEND REFER DRG No. 3002750-DD-1402
 3. FOR WATER AND SEWER REFER PACKAGE 08
 4. FOR UTILITIES REFER PACKAGE 09
 5. FOR SUBSOIL DRAINAGE REFER PACKAGE 10
 6. FOR STRUCTURES REFER PACKAGE 17

PRELIMINARY

DRAWING FILE LOCATION / NAME V:_Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1410.dwg		PLOT DATE 13 Nov 2020	TIME 08:48:46
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION
	A	19.06.2020	PRELIMINARY SKETCH PLAN
	B	08.10.2020	PRELIMINARY SKETCH PLAN
	C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION

WVR No.	APPROVAL	TITLE	NAME
0007	DK	DRAFTER	R. GOOSEN
0014	DK	DRAFTING CHECK	K. CURLEY
0015	DK	DESIGNER	M. HARTY
		DESIGN CHECK	T. NIELSEN
		PROJECT MANAGER	S. RAVEN
		PROJECT DIRECTOR	D. KEEP

SCALES AT A1 SIZE DRAWING

SCALE 1:500

DESIGNER

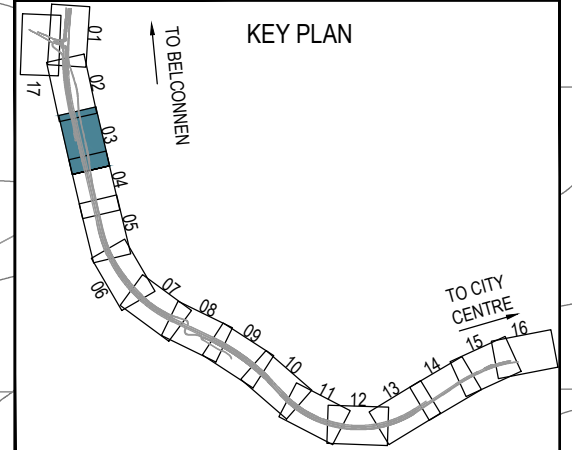
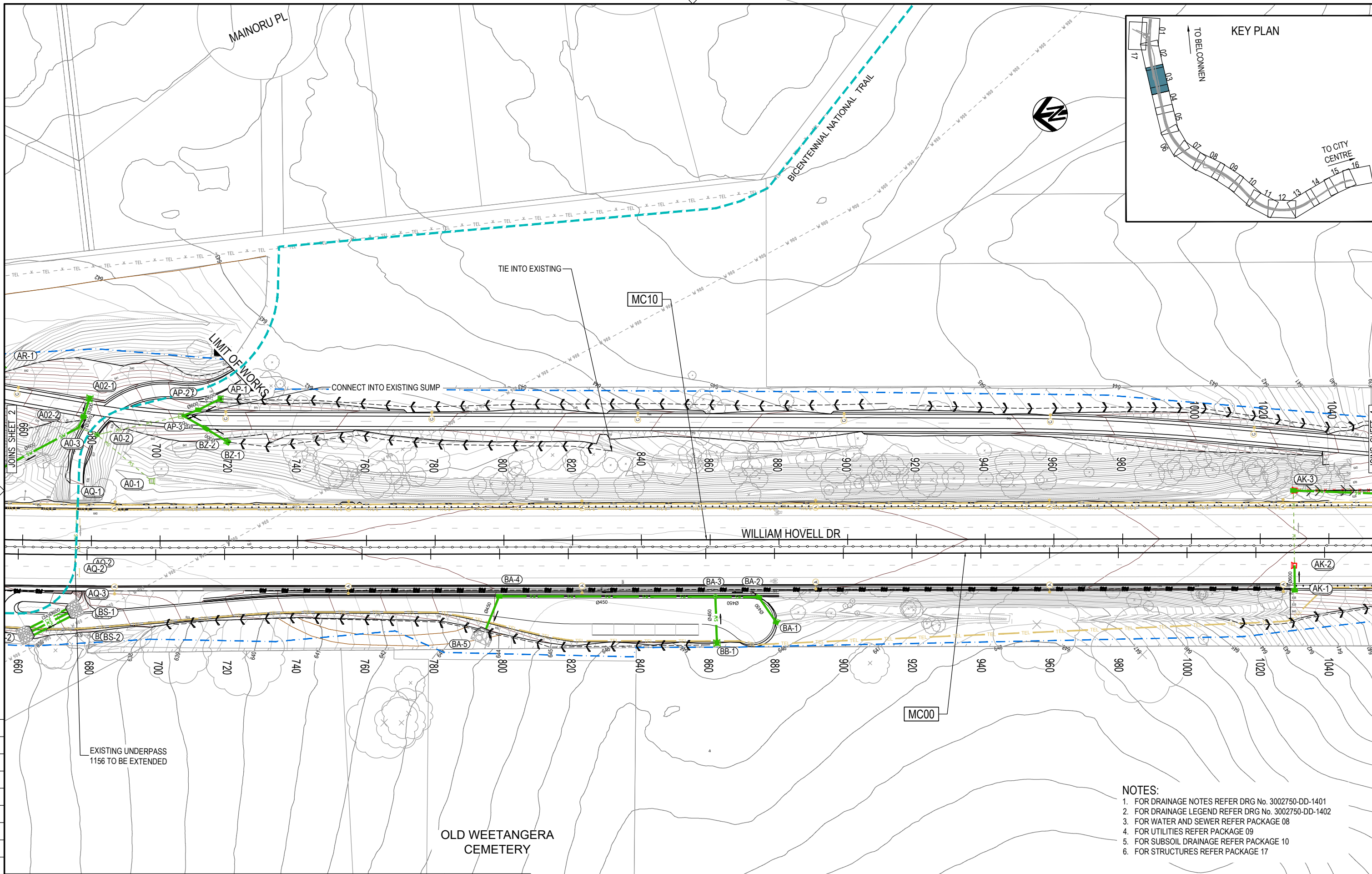
SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

ACT
Government
Transport Canberra & City Services

PROJECT TITLE	WILLIAM HOVELL DRIVE DUPLICATION		
	DRAINAGE SHEET 1		
SCALE	PHASE	PROJECT / DRAWING No.	REVISION
AS SHOWN	PSP	3002750-DD-1410	C

150 mm ON ORIGINAL

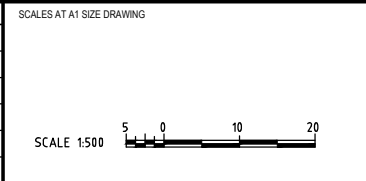


- NOTES:
1. FOR DRAINAGE NOTES REFER DRG No. 3002750-DD-1401
 2. FOR DRAINAGE LEGEND REFER DRG No. 3002750-DD-1402
 3. FOR WATER AND SEWER REFER PACKAGE 08
 4. FOR UTILITIES REFER PACKAGE 09
 5. FOR SUBSOIL DRAINAGE REFER PACKAGE 10
 6. FOR STRUCTURES REFER PACKAGE 17

PRELIMINARY

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1412.dwg		<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>AMENDMENT / REVISION DESCRIPTION</th> </tr> <tr> <td>A</td> <td>19.06.2020</td> <td>PRELIMINARY SKETCH PLAN</td> </tr> <tr> <td>B</td> <td>08.10.2020</td> <td>PRELIMINARY SKETCH PLAN</td> </tr> <tr> <td>C</td> <td>13.11.2020</td> <td>PRELIMINARY SKETCH PLAN SUBMISSION</td> </tr> </table>	REV	DATE	AMENDMENT / REVISION DESCRIPTION	A	19.06.2020	PRELIMINARY SKETCH PLAN	B	08.10.2020	PRELIMINARY SKETCH PLAN	C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION																								
REV	DATE	AMENDMENT / REVISION DESCRIPTION																																				
A	19.06.2020	PRELIMINARY SKETCH PLAN																																				
B	08.10.2020	PRELIMINARY SKETCH PLAN																																				
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION																																				
<table border="1"> <tr> <th>WVR No.</th> <th>APPROVAL</th> <th>TITLE</th> <th>NAME</th> </tr> <tr> <td>0007</td> <td>DK</td> <td>DRAFTER</td> <td>R. GOOSEN</td> </tr> <tr> <td>0014</td> <td>DK</td> <td>DRAFTING CHECK</td> <td>K. CURLEY</td> </tr> <tr> <td>0015</td> <td>DK</td> <td>DESIGNER</td> <td>M. HARTY</td> </tr> <tr> <td></td> <td></td> <td>DESIGN CHECK</td> <td>T. NIELSEN</td> </tr> <tr> <td></td> <td></td> <td>PROJECT MANAGER</td> <td>S. RAVEN</td> </tr> <tr> <td></td> <td></td> <td>PROJECT DIRECTOR</td> <td>D. KEEP</td> </tr> </table>		WVR No.	APPROVAL	TITLE	NAME	0007	DK	DRAFTER	R. GOOSEN	0014	DK	DRAFTING CHECK	K. CURLEY	0015	DK	DESIGNER	M. HARTY			DESIGN CHECK	T. NIELSEN			PROJECT MANAGER	S. RAVEN			PROJECT DIRECTOR	D. KEEP	<table border="1"> <tr> <th>SCALE</th> <th>PHASE</th> <th>PROJECT / DRAWING No.</th> <th>REVISION</th> </tr> <tr> <td>AS SHOWN</td> <td>PSP</td> <td>3002750-DD-1412</td> <td>C</td> </tr> </table>	SCALE	PHASE	PROJECT / DRAWING No.	REVISION	AS SHOWN	PSP	3002750-DD-1412	C
WVR No.	APPROVAL	TITLE	NAME																																			
0007	DK	DRAFTER	R. GOOSEN																																			
0014	DK	DRAFTING CHECK	K. CURLEY																																			
0015	DK	DESIGNER	M. HARTY																																			
		DESIGN CHECK	T. NIELSEN																																			
		PROJECT MANAGER	S. RAVEN																																			
		PROJECT DIRECTOR	D. KEEP																																			
SCALE	PHASE	PROJECT / DRAWING No.	REVISION																																			
AS SHOWN	PSP	3002750-DD-1412	C																																			

<table border="1"> <tr> <th>SCALE</th> <th>PHASE</th> <th>PROJECT / DRAWING No.</th> <th>REVISION</th> </tr> <tr> <td>AS SHOWN</td> <td>PSP</td> <td>3002750-DD-1412</td> <td>C</td> </tr> </table>	SCALE	PHASE	PROJECT / DRAWING No.	REVISION	AS SHOWN	PSP	3002750-DD-1412	C	<table border="1"> <tr> <th>PLLOT DATE</th> <th>TIME</th> </tr> <tr> <td>13 Nov 2020</td> <td>08:50:45</td> </tr> </table>	PLLOT DATE	TIME	13 Nov 2020	08:50:45
SCALE	PHASE	PROJECT / DRAWING No.	REVISION										
AS SHOWN	PSP	3002750-DD-1412	C										
PLLOT DATE	TIME												
13 Nov 2020	08:50:45												



DESIGNER

SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

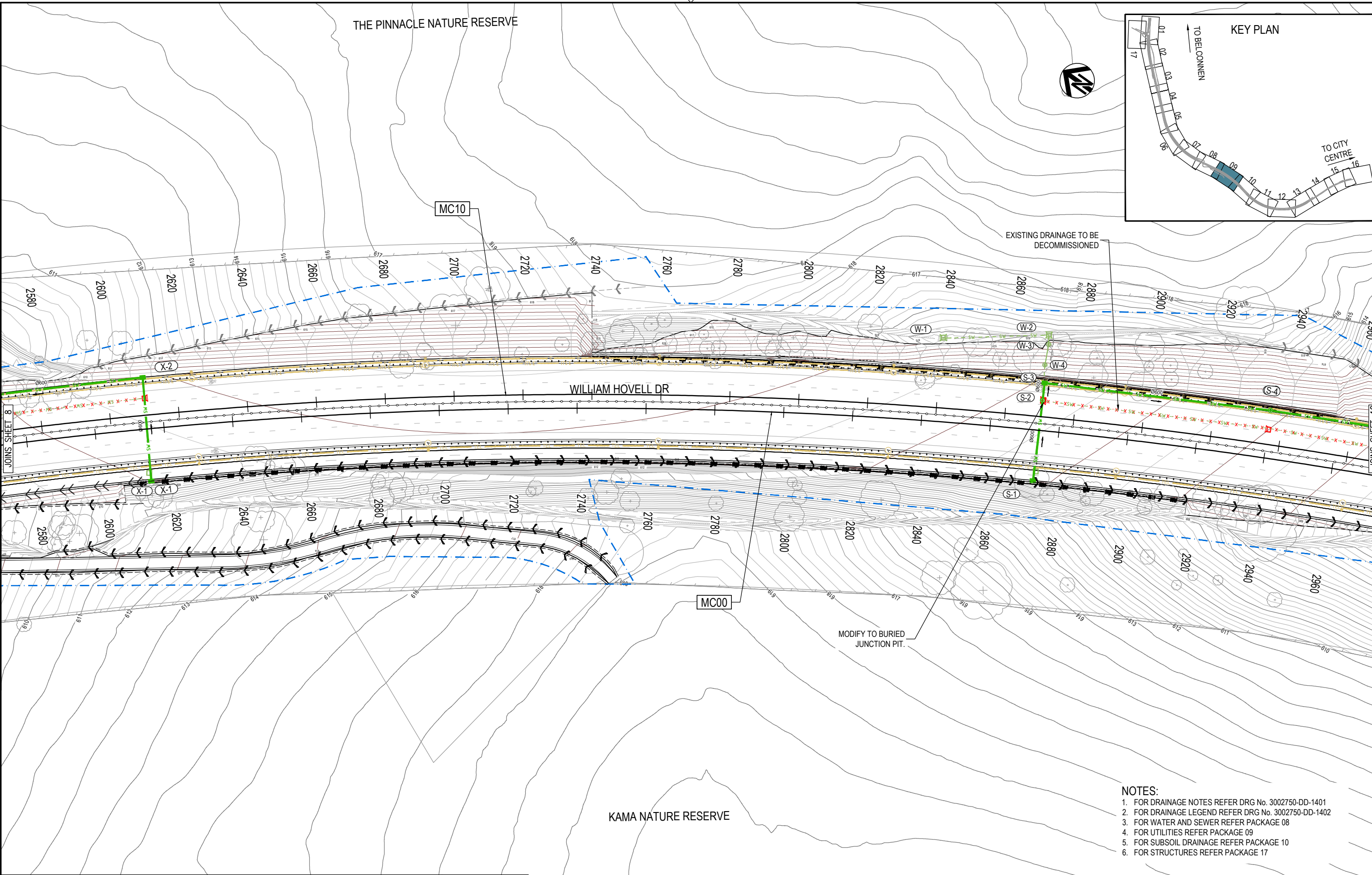
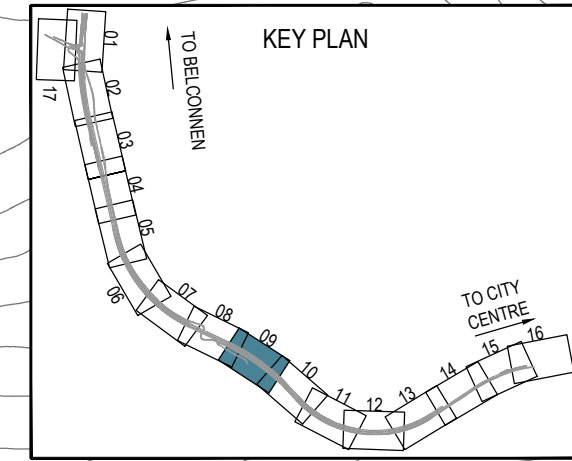
ACT
Government
Transport Canberra & City Services

PROJECT TITLE

WILLIAM HOVELL DRIVE DUPLICATION

DRAINAGE SHEET 3

THE PINNACLE NATURE RESERVE



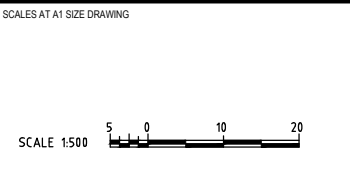
KAMA NATURE RESERVE

- NOTES:**
1. FOR DRAINAGE NOTES REFER DRG No. 3002750-DD-1401
 2. FOR DRAINAGE LEGEND REFER DRG No. 3002750-DD-1402
 3. FOR WATER AND SEWER REFER PACKAGE 08
 4. FOR UTILITIES REFER PACKAGE 09
 5. FOR SUBSOIL DRAINAGE REFER PACKAGE 10
 6. FOR STRUCTURES REFER PACKAGE 17

PRELIMINARY

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1418.dwg		PLOT DATE 13 Nov 2020		TIME 08:56:05		
EXTERNAL REFERENCE FILES		REV	DATE	AMENDMENT / REVISION DESCRIPTION		
3002750-SMECT-#1 3002750-REV-500 3002750-REV-501 3002750-REV-502 3002750-REV-503 3002750-REV-504 3002750-REV-505 3002750-REV-506 3002750-REV-507 3002750-REV-508 3002750-REV-509 3002750-REV-510 3002750-REV-511 3002750-REV-512 3002750-REV-513 3002750-REV-514 3002750-REV-515 3002750-REV-516 3002750-REV-517 3002750-REV-518 3002750-REV-519 3002750-REV-520 3002750-REV-521 3002750-REV-522 3002750-REV-523 3002750-REV-524 3002750-REV-525 3002750-REV-526 3002750-REV-527 3002750-REV-528 3002750-REV-529 3002750-REV-530 3002750-REV-531 3002750-REV-532 3002750-REV-533 3002750-REV-534 3002750-REV-535 3002750-REV-536 3002750-REV-537 3002750-REV-538 3002750-REV-539 3002750-REV-540 3002750-REV-541 3002750-REV-542 3002750-REV-543 3002750-REV-544 3002750-REV-545 3002750-REV-546 3002750-REV-547 3002750-REV-548 3002750-REV-549 3002750-REV-550 3002750-REV-551 3002750-REV-552 3002750-REV-553 3002750-REV-554 3002750-REV-555 3002750-REV-556 3002750-REV-557 3002750-REV-558 3002750-REV-559 3002750-REV-560 3002750-REV-561 3002750-REV-562 3002750-REV-563 3002750-REV-564 3002750-REV-565 3002750-REV-566 3002750-REV-567 3002750-REV-568 3002750-REV-569 3002750-REV-570 3002750-REV-571 3002750-REV-572 3002750-REV-573 3002750-REV-574 3002750-REV-575 3002750-REV-576 3002750-REV-577 3002750-REV-578 3002750-REV-579 3002750-REV-580 3002750-REV-581 3002750-REV-582 3002750-REV-583 3002750-REV-584 3002750-REV-585 3002750-REV-586 3002750-REV-587 3002750-REV-588 3002750-REV-589 3002750-REV-590 3002750-REV-591 3002750-REV-592 3002750-REV-593 3002750-REV-594 3002750-REV-595 3002750-REV-596 3002750-REV-597 3002750-REV-598 3002750-REV-599 3002750-REV-600 3002750-REV-601 3002750-REV-602 3002750-REV-603 3002750-REV-604 3002750-REV-605 3002750-REV-606 3002750-REV-607 3002750-REV-608 3002750-REV-609 3002750-REV-610 3002750-REV-611 3002750-REV-612 3002750-REV-613 3002750-REV-614 3002750-REV-615 3002750-REV-616 3002750-REV-617 3002750-REV-618 3002750-REV-619 3002750-REV-620 3002750-REV-621 3002750-REV-622 3002750-REV-623 3002750-REV-624 3002750-REV-625 3002750-REV-626 3002750-REV-627 3002750-REV-628 3002750-REV-629 3002750-REV-630 3002750-REV-631 3002750-REV-632 3002750-REV-633 3002750-REV-634 3002750-REV-635 3002750-REV-636 3002750-REV-637 3002750-REV-638 3002750-REV-639 3002750-REV-640 3002750-REV-641 3002750-REV-642 3002750-REV-643 3002750-REV-644 3002750-REV-645 3002750-REV-646 3002750-REV-647 3002750-REV-648 3002750-REV-649 3002750-REV-650 3002750-REV-651 3002750-REV-652 3002750-REV-653 3002750-REV-654 3002750-REV-655 3002750-REV-656 3002750-REV-657 3002750-REV-658 3002750-REV-659 3002750-REV-660 3002750-REV-661 3002750-REV-662 3002750-REV-663 3002750-REV-664 3002750-REV-665 3002750-REV-666 3002750-REV-667 3002750-REV-668 3002750-REV-669 3002750-REV-670 3002750-REV-671 3002750-REV-672 3002750-REV-673 3002750-REV-674 3002750-REV-675 3002750-REV-676 3002750-REV-677 3002750-REV-678 3002750-REV-679 3002750-REV-680 3002750-REV-681 3002750-REV-682 3002750-REV-683 3002750-REV-684 3002750-REV-685 3002750-REV-686 3002750-REV-687 3002750-REV-688 3002750-REV-689 3002750-REV-690 3002750-REV-691 3002750-REV-692 3002750-REV-693 3002750-REV-694 3002750-REV-695 3002750-REV-696 3002750-REV-697 3002750-REV-698 3002750-REV-699 3002750-REV-700 3002750-REV-701 3002750-REV-702 3002750-REV-703 3002750-REV-704 3002750-REV-705 3002750-REV-706 3002750-REV-707 3002750-REV-708 3002750-REV-709 3002750-REV-710 3002750-REV-711 3002750-REV-712 3002750-REV-713 3002750-REV-714 3002750-REV-715 3002750-REV-716 3002750-REV-717 3002750-REV-718 3002750-REV-719 3002750-REV-720 3002750-REV-721 3002750-REV-722 3002750-REV-723 3002750-REV-724 3002750-REV-725 3002750-REV-726 3002750-REV-727 3002750-REV-728 3002750-REV-729 3002750-REV-730 3002750-REV-731 3002750-REV-732 3002750-REV-733 3002750-REV-734 3002750-REV-735 3002750-REV-736 3002750-REV-737 3002750-REV-738 3002750-REV-739 3002750-REV-740 3002750-REV-741 3002750-REV-742 3002750-REV-743 3002750-REV-744 3002750-REV-745 3002750-REV-746 3002750-REV-747 3002750-REV-748 3002750-REV-749 3002750-REV-750 3002750-REV-751 3002750-REV-752 3002750-REV-753 3002750-REV-754 3002750-REV-755 3002750-REV-756 3002750-REV-757 3002750-REV-758 3002750-REV-759 3002750-REV-760 3002750-REV-761 3002750-REV-762 3002750-REV-763 3002750-REV-764 3002750-REV-765 3002750-REV-766 3002750-REV-767 3002750-REV-768 3002750-REV-769 3002750-REV-770 3002750-REV-771 3002750-REV-772 3002750-REV-773 3002750-REV-774 3002750-REV-775 3002750-REV-776 3002750-REV-777 3002750-REV-778 3002750-REV-779 3002750-REV-780 3002750-REV-781 3002750-REV-782 3002750-REV-783 3002750-REV-784 3002750-REV-785 3002750-REV-786 3002750-REV-787 3002750-REV-788 3002750-REV-789 3002750-REV-790 3002750-REV-791 3002750-REV-792 3002750-REV-793 3002750-REV-794 3002750-REV-795 3002750-REV-796 3002750-REV-797 3002750-REV-798 3002750-REV-799 3002750-REV-800 3002750-REV-801 3002750-REV-802 3002750-REV-803 3002750-REV-804 3002750-REV-805 3002750-REV-806 3002750-REV-807 3002750-REV-808 3002750-REV-809 3002750-REV-810 3002750-REV-811 3002750-REV-812 3002750-REV-813 3002750-REV-814 3002750-REV-815 3002750-REV-816 3002750-REV-817 3002750-REV-818 3002750-REV-819 3002750-REV-820 3002750-REV-821 3002750-REV-822 3002750-REV-823 3002750-REV-824 3002750-REV-825 3002750-REV-826 3002750-REV-827 3002750-REV-828 3002750-REV-829 3002750-REV-830 3002750-REV-831 3002750-REV-832 3002750-REV-833 3002750-REV-834 3002750-REV-835 3002750-REV-836 3002750-REV-837 3002750-REV-838 3002750-REV-839 3002750-REV-840 3002750-REV-841 3002750-REV-842 3002750-REV-843 3002750-REV-844 3002750-REV-845 3002750-REV-846 3002750-REV-847 3002750-REV-848 3002750-REV-849 3002750-REV-850 3002750-REV-851 3002750-REV-852 3002750-REV-853 3002750-REV-854 3002750-REV-855 3002750-REV-856 3002750-REV-857 3002750-REV-858 3002750-REV-859 3002750-REV-860 3002750-REV-861 3002750-REV-862 3002750-REV-863 3002750-REV-864 3002750-REV-865 3002750-REV-866 3002750-REV-867 3002750-REV-868 3002750-REV-869 3002750-REV-870 3002750-REV-871 3002750-REV-872 3002750-REV-873 3002750-REV-874 3002750-REV-875 3002750-REV-876 3002750-REV-877 3002750-REV-878 3002750-REV-879 3002750-REV-880 3002750-REV-881 3002750-REV-882 3002750-REV-883 3002750-REV-884 3002750-REV-885 3002750-REV-886 3002750-REV-887 3002750-REV-888 3002750-REV-889 3002750-REV-890 3002750-REV-891 3002750-REV-892 3002750-REV-893 3002750-REV-894 3002750-REV-895 3002750-REV-896 3002750-REV-897 3002750-REV-898 3002750-REV-899 3002750-REV-900 3002750-REV-901 3002750-REV-902 3002750-REV-903 3002750-REV-904 3002750-REV-905 3002750-REV-906 3002750-REV-907 3002750-REV-908 3002750-REV-909 3002750-REV-910 3002750-REV-911 3002750-REV-912 3002750-REV-913 3002750-REV-914 3002750-REV-915 3002750-REV-916 3002750-REV-917 3002750-REV-918 3002750-REV-919 3002750-REV-920 3002750-REV-921 3002750-REV-922 3002750-REV-923 3002750-REV-924 3002750-REV-925 3002750-REV-926 3002750-REV-927 3002750-REV-928 3002750-REV-929 3002750-REV-930 3002750-REV-931 3002750-REV-932 3002750-REV-933 3002750-REV-934 3002750-REV-935 3002750-REV-936 3002750-REV-937 3002750-REV-938 3002750-REV-939 3002750-REV-940 3002750-REV-941 3002750-REV-942 3002750-REV-943 3002750-REV-944 3002750-REV-945 3002750-REV-946 3002750-REV-947 3002750-REV-948 3002750-REV-949 3002750-REV-950 3002750-REV-951 3002750-REV-952 3002750-REV-953 3002750-REV-954 3002750-REV-955 3002750-REV-956 3002750-REV-957 3002750-REV-958 3002750-REV-959 3002750-REV-960 3002750-REV-961 3002750-REV-962 3002750-REV-963 3002750-REV-964 3002750-REV-965 3002750-REV-966 3002750-REV-967 3002750-REV-968 3002750-REV-969 3002750-REV-970 3002750-REV-971 3002750-REV-972 3002750-REV-973 3002750-REV-974 3002750-REV-975 3002750-REV-976 3002750-REV-977 3002750-REV-978 3002750-REV-979 3002750-REV-980 3002750-REV-981 3002750-REV-982 3002750-REV-983 3002750-REV-984 3002750-REV-985 3002750-REV-986 3002750-REV-987 3002750-REV-988 3002750-REV-989 3002750-REV-990 3002750-REV-991 3002750-REV-992 3002750-REV-993 3002750-REV-994 3002750-REV-995 3002750-REV-996 3002750-REV-997 3002750-REV-998 3002750-REV-999 3002750-REV-1000						

WVR No.	APPROVAL	TITLE	NAME
0007	DK	DRAFTER	R. GOOSEN
0014	DK	DRAFTING CHECK	K. CURLEY
0015	DK	DESIGNER	M. HARTY
		DESIGN CHECK	T. NIELSEN
		PROJECT MANAGER	S. RAVEN
		PROJECT DIRECTOR	D. KEEP



DESIGNER

SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

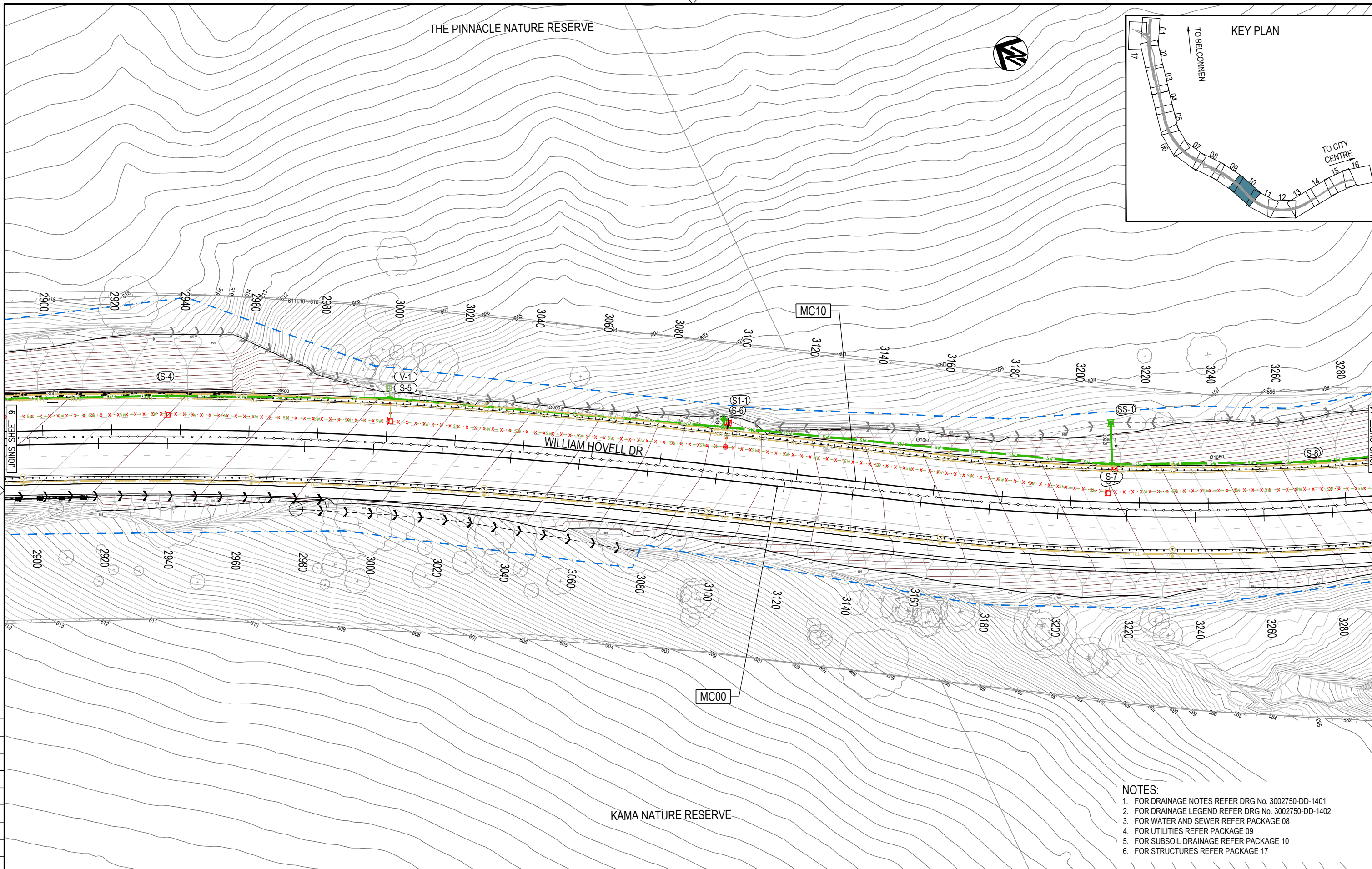
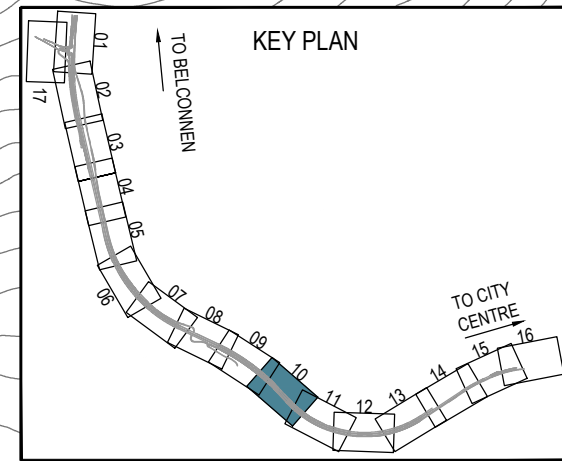
CLIENT

ACT
Government
Transport Canberra & City Services

PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		PROJECT / DRAWING No. 3002750-DD-1418	
DRAINAGE SHEET 9		REVISION C	
SCALE AS SHOWN	PHASE PSP		

150 mm ON ORIGINAL
A1

THE PINNACLE NATURE RESERVE



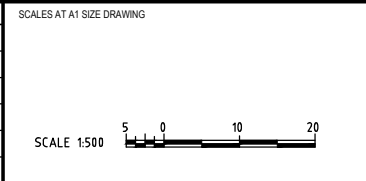
- NOTES:**
1. FOR DRAINAGE NOTES REFER DRG No. 3002750-DD-1401
 2. FOR DRAINAGE LEGEND REFER DRG No. 3002750-DD-1402
 3. FOR WATER AND SEWER REFER PACKAGE 08
 4. FOR UTILITIES REFER PACKAGE 09
 5. FOR SUBSOIL DRAINAGE REFER PACKAGE 10
 6. FOR STRUCTURES REFER PACKAGE 17

PRELIMINARY

150 mm ON ORIGINAL

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1419.dwg		<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>AMENDMENT / REVISION DESCRIPTION</th> </tr> <tr> <td>A</td> <td>19.06.2020</td> <td>PRELIMINARY SKETCH PLAN</td> </tr> <tr> <td>B</td> <td>08.10.2020</td> <td>PRELIMINARY SKETCH PLAN</td> </tr> <tr> <td>C</td> <td>13.11.2020</td> <td>PRELIMINARY SKETCH PLAN SUBMISSION</td> </tr> </table>	REV	DATE	AMENDMENT / REVISION DESCRIPTION	A	19.06.2020	PRELIMINARY SKETCH PLAN	B	08.10.2020	PRELIMINARY SKETCH PLAN	C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	<table border="1"> <tr> <th>WVR No.</th> <th>APPROVAL</th> <th>TITLE</th> <th>NAME</th> </tr> <tr> <td>0007</td> <td>DK</td> <td>DRAFTER</td> <td>R. GOOSEN</td> </tr> <tr> <td>0014</td> <td>DK</td> <td>DRAFTING CHECK</td> <td>K. CURLEY</td> </tr> <tr> <td>0015</td> <td>DK</td> <td>DESIGNER</td> <td>M. HARTY</td> </tr> <tr> <td></td> <td></td> <td>DESIGN CHECK</td> <td>T. NIELSEN</td> </tr> <tr> <td></td> <td></td> <td>PROJECT MANAGER</td> <td>S. RAVEN</td> </tr> <tr> <td></td> <td></td> <td>PROJECT DIRECTOR</td> <td>D. KEEP</td> </tr> </table>	WVR No.	APPROVAL	TITLE	NAME	0007	DK	DRAFTER	R. GOOSEN	0014	DK	DRAFTING CHECK	K. CURLEY	0015	DK	DESIGNER	M. HARTY			DESIGN CHECK	T. NIELSEN			PROJECT MANAGER	S. RAVEN			PROJECT DIRECTOR	D. KEEP
REV	DATE	AMENDMENT / REVISION DESCRIPTION																																									
A	19.06.2020	PRELIMINARY SKETCH PLAN																																									
B	08.10.2020	PRELIMINARY SKETCH PLAN																																									
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION																																									
WVR No.	APPROVAL	TITLE	NAME																																								
0007	DK	DRAFTER	R. GOOSEN																																								
0014	DK	DRAFTING CHECK	K. CURLEY																																								
0015	DK	DESIGNER	M. HARTY																																								
		DESIGN CHECK	T. NIELSEN																																								
		PROJECT MANAGER	S. RAVEN																																								
		PROJECT DIRECTOR	D. KEEP																																								

<table border="1"> <tr> <th>SCALE</th> <th>PHASE</th> <th>PROJECT / DRAWING No.</th> <th>REVISION</th> </tr> <tr> <td>AS SHOWN</td> <td>PSP</td> <td>3002750-DD-1419</td> <td>C</td> </tr> </table>	SCALE	PHASE	PROJECT / DRAWING No.	REVISION	AS SHOWN	PSP	3002750-DD-1419	C
SCALE	PHASE	PROJECT / DRAWING No.	REVISION					
AS SHOWN	PSP	3002750-DD-1419	C					



DESIGNER

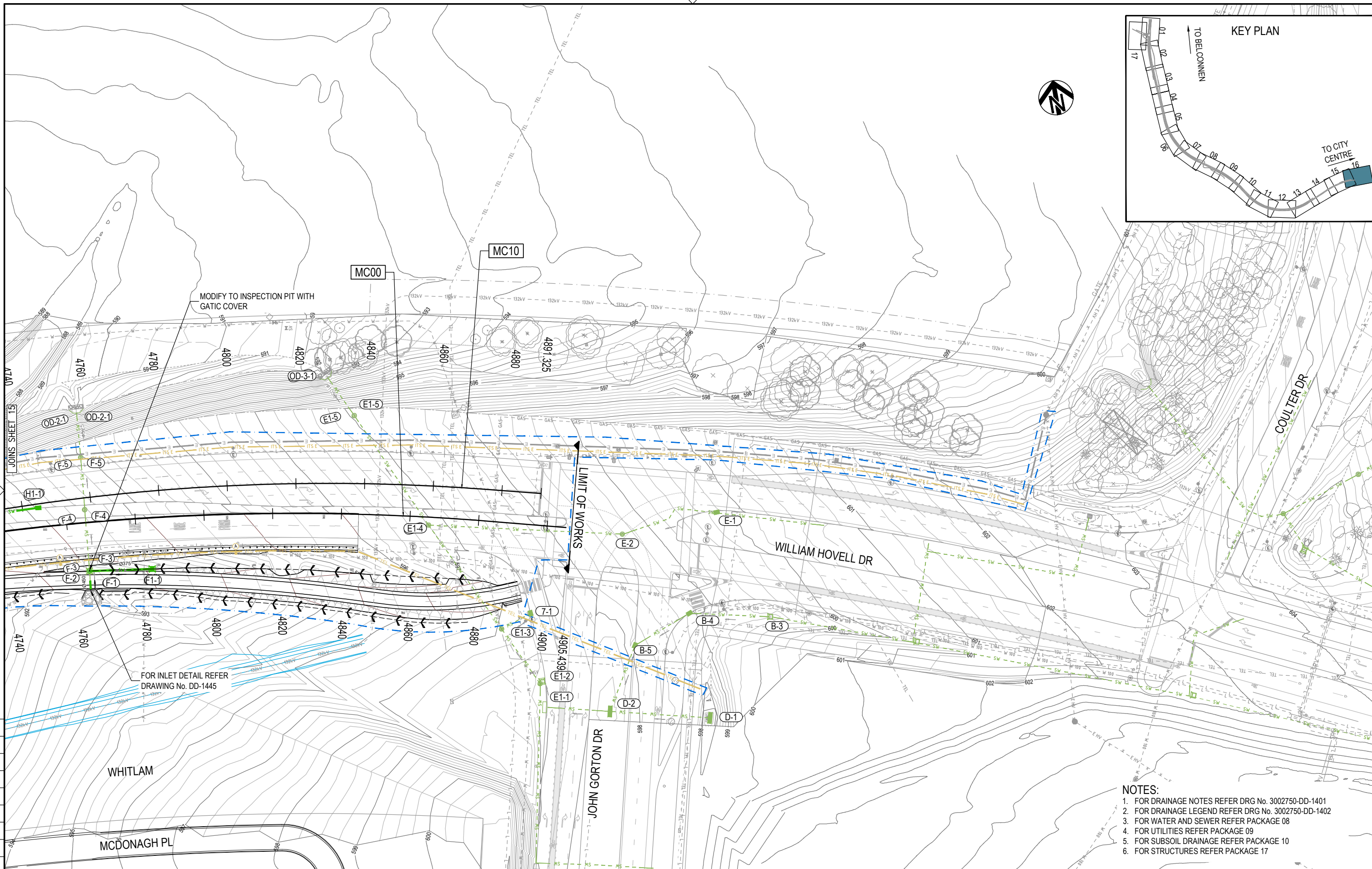
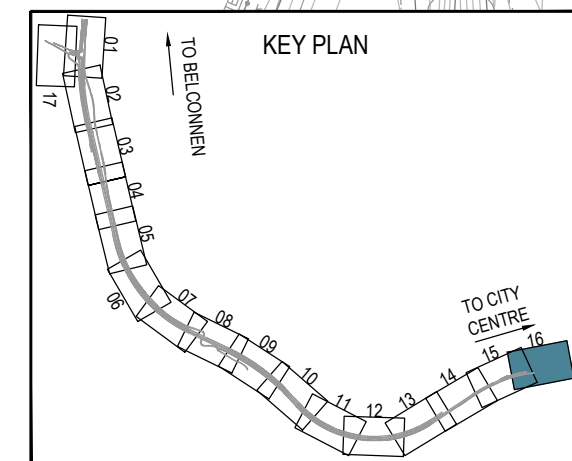
SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

ACT
Government
Transport Canberra & City Services

PROJECT TITLE
WILLIAM HOVELL DRIVE DUPLICATION

DRAINAGE SHEET 10



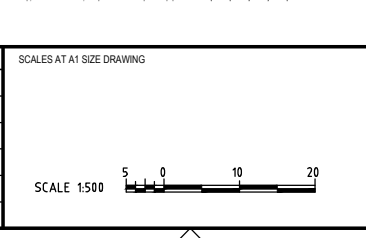
- NOTES:**
1. FOR DRAINAGE NOTES REFER DRG No. 3002750-DD-1401
 2. FOR DRAINAGE LEGEND REFER DRG No. 3002750-DD-1402
 3. FOR WATER AND SEWER REFER PACKAGE 08
 4. FOR UTILITIES REFER PACKAGE 09
 5. FOR SUBSOIL DRAINAGE REFER PACKAGE 10
 6. FOR STRUCTURES REFER PACKAGE 17

PRELIMINARY

150 mm ON ORIGINAL

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1425.dwg		PLOT DATE 13 Nov 2020		TIME 18:02:11	
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK
	B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK
	C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK

TITLE	NAME
DRAFTER	R. GOOSEN
DRAFTING CHECK	K. CURLEY
DESIGNER	M. HARTY
DESIGN CHECK	T. NIELSEN
PROJECT MANAGER	S. RAVEN
PROJECT DIRECTOR	D. KEEP



DESIGNER

SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

ACT
Government
Transport Canberra & City Services

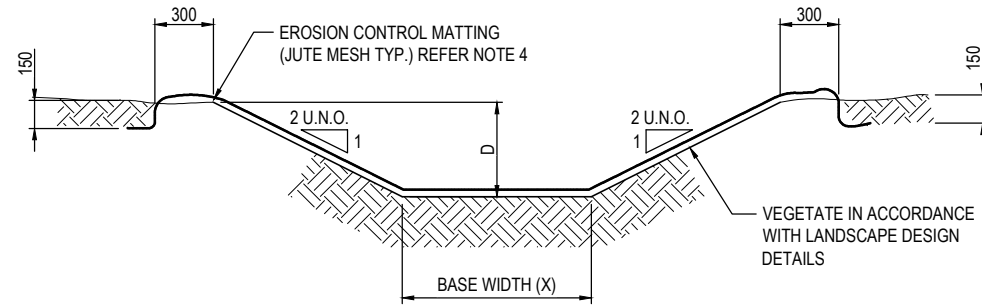
PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		PROJECT / DRAWING No. 3002750-DD-1425		REVISION C	
SCALE AS SHOWN	PHASE PSP				

NOTES

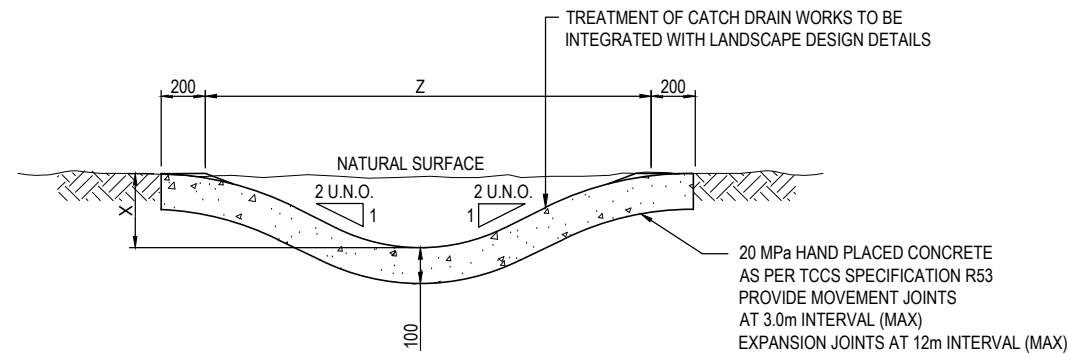
1. FOR DRAINAGE NOTES REFER DRG No. DD-1401.
2. FOR LOCATION OF CHANNELS AND CATCH DRAINS REFER DRAINAGE PLANS.
3. EROSION CONTROL MATTING (ECM) SHALL BE LAID AND PINNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND SATISFY THE REQUIREMENTS OF SPECIFICATION MITS 00C CONTROL OF EROSION AND SEDIMENTATION.
4. FOR TYPE AND GRADE MATTING REFER TO VEGETATION AND LANDSCAPE PLANTING SPECIFICATIONS AND DETAILS.
5. GEOTEXTILE UNDER RIP-RAP SHALL BE IN ACCORDANCE WITH SPECIFICATIONS MITS 03I SUBSURFACE DRAINAGE.

CONCRETE CATCH DRAIN DIMENSIONS

TYPE	X (mm)	Z (mm)
A	300	
B	500	2000
C	700	2800



VEGETATED CHANNEL
 BASE WIDTH (X) SHALL BE 1000mm UNLESS SPECIFIED OTHERWISE ON DRAINAGE PLAN
 N.T.S.



LINED CATCH DRAINS
 ALL CATCH DRAINS SHALL BE TYPE A UNLESS SPECIFIED OTHERWISE ON DRAINAGE PLANS
 N.T.S.

150 mm ON ORIGINAL
 150
 140
 130
 120
 110
 100
 90
 80
 70
 60
 50
 40
 30
 20
 10
 0

DRAWING FILE LOCATION / NAME V:_Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1441.dwg		PLOT DATE 13 Nov 2020		TIME 09:05:05	
REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	TITLE
A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK	DRAFTER <i>R. GOOSEN</i>
B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK	DRAFTING CHECK <i>K. CURLEY</i>
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK	DESIGNER <i>M. HARTY</i>
					DESIGN CHECK <i>T. NIELSEN</i>
					PROJECT MANAGER <i>S. RAVEN</i>
					PROJECT DIRECTOR <i>D. KEEP</i>

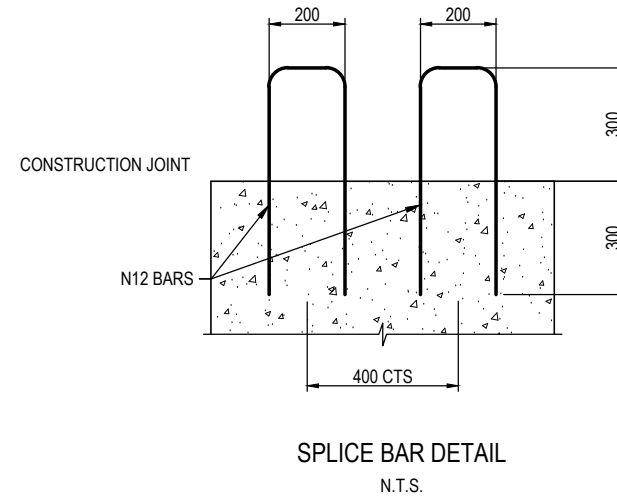
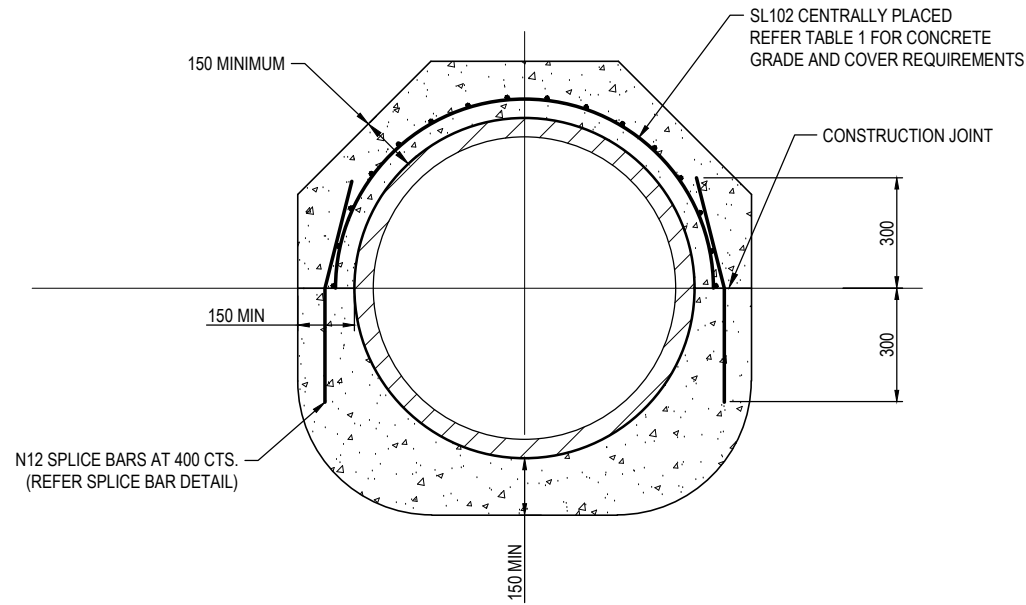
EXTERNAL REFERENCE FILES		SCALES AT A1 SIZE DRAWING	
		SCALE 1:10	

DESIGNER **SMEC**
 Member of the **Surbana Jurong Group**
 SMEC AUSTRALIA PTY LTD
 © ABN 47 065 475 149
 SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
 LYNEHAM ACT 2602 AUSTRALIA
 SMEC PROJECT No 3002750

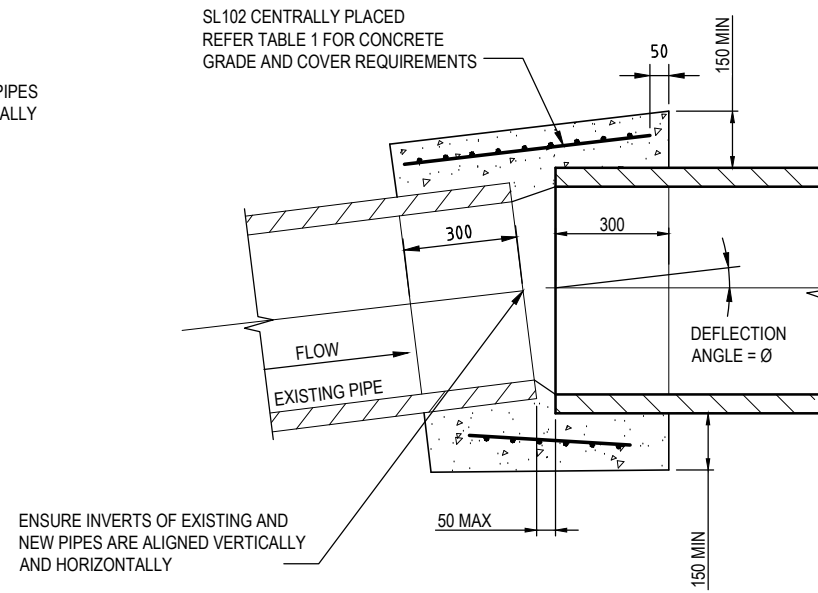
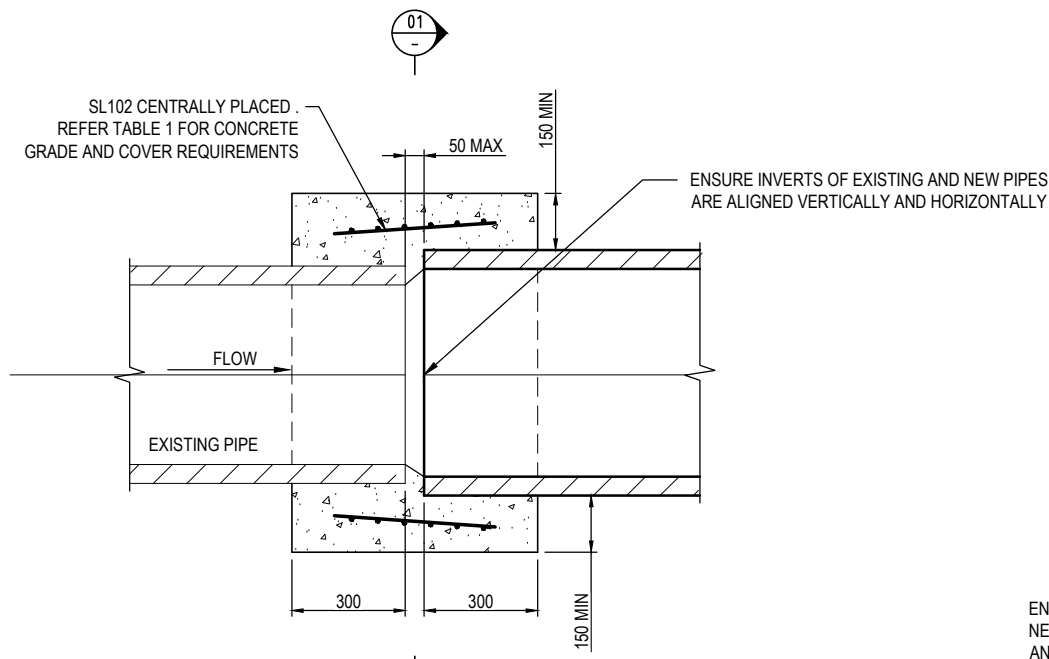
CLIENT **ACT**
 Government
 Transport Canberra & City Services

PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		PROJECT / DRAWING No. 3002750-DD-1441	
DRAINAGE DETAILS SHEET 1		SCALE AS SHOWN	REVISION C

PRELIMINARY



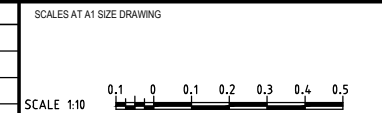
EXPOSURE CLASSIFICATION	CONCRETE GRADE (MPa)	COVER TO REINFORCEMENT
B1	32	45
B2	40	55



- NOTES
1. MAXIMUM DEFLECTION ANGLE $\theta = 18^\circ$ -D4150
 2. FOR DRAINAGE NOTES REFER DRG NO. DD-1401

150 mm ON ORIGINAL

DRAWING FILE LOCATION / NAME V:_Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1442.dwg		PLOT DATE 13 Nov 2020		TIME 09:05:32	
REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	TITLE
A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK	DRAFTER <i>R. GOOSEN</i>
B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK	DRAFTING CHECK <i>K. CURLEY</i>
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK	DESIGNER <i>M. HARTY</i>
					DESIGN CHECK <i>T. NIELSEN</i>
					PROJECT MANAGER <i>S. RAVEN</i>
					PROJECT DIRECTOR <i>D. KEEP</i>



DESIGNER

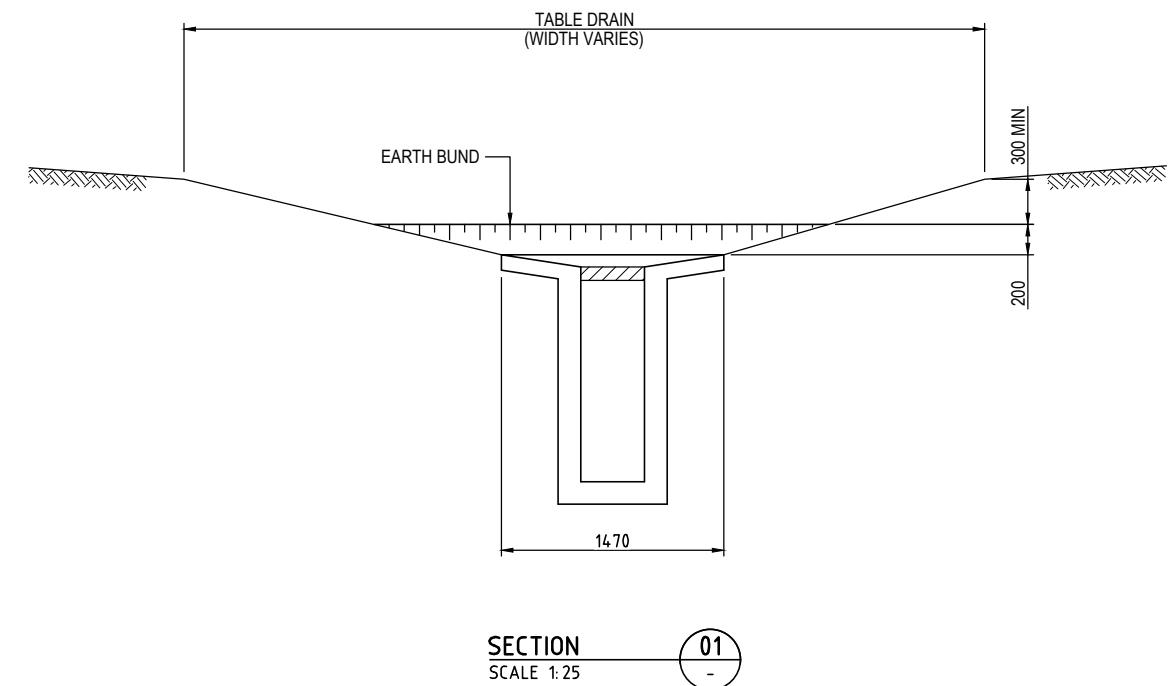
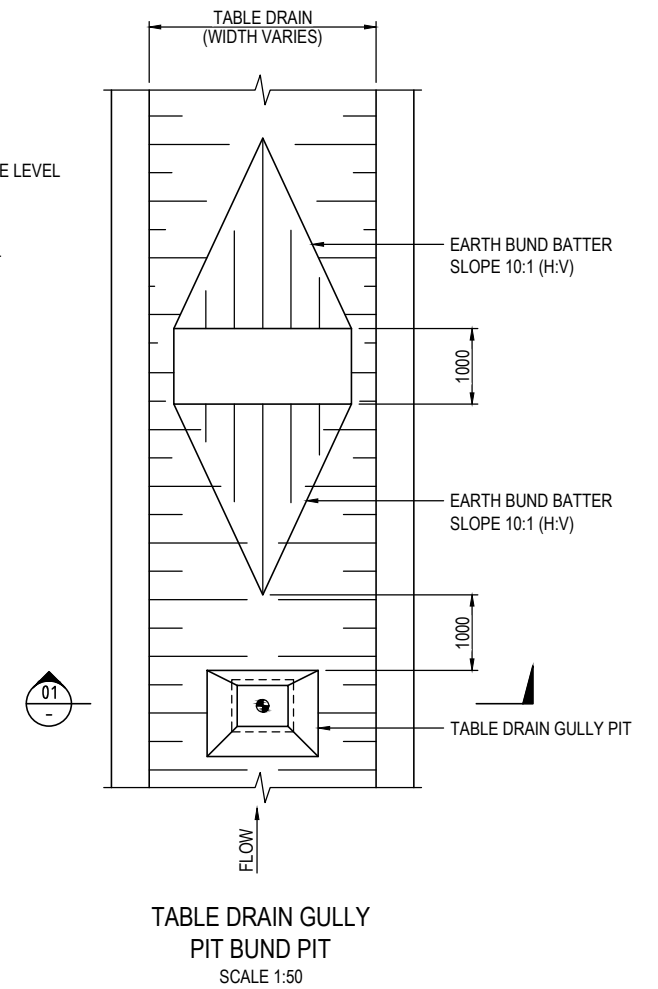
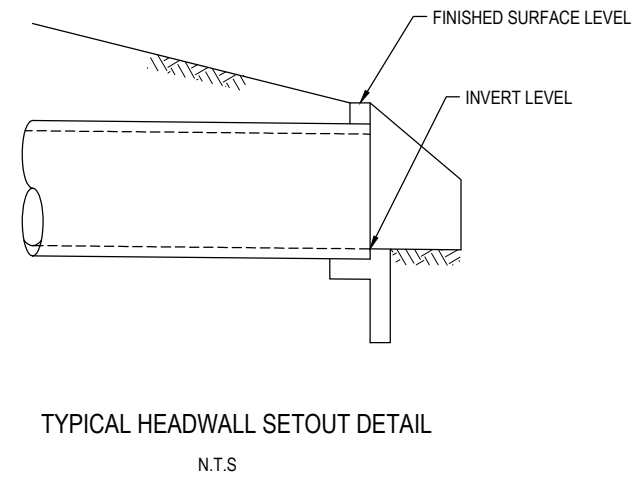
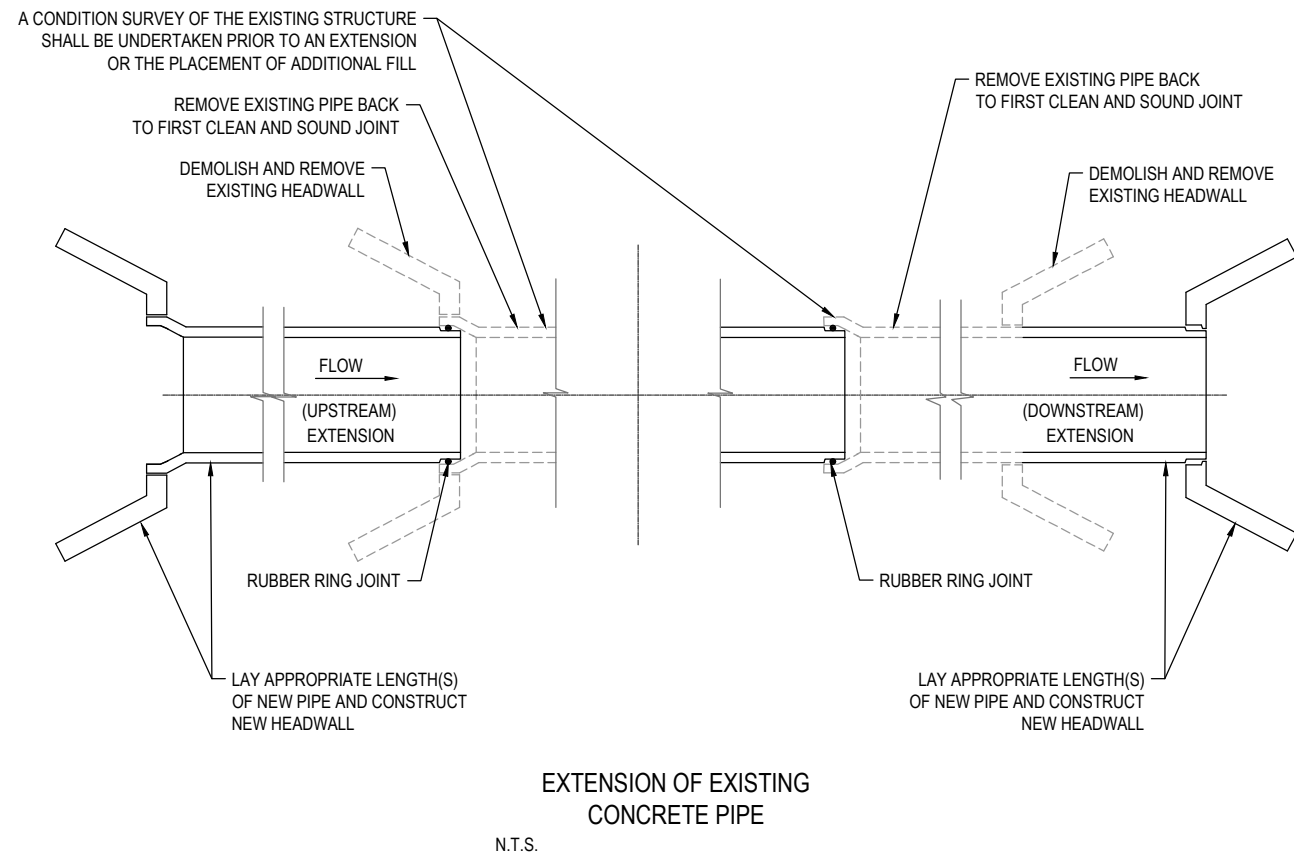
SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

ACT
Government
Transport Canberra & City Services

PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		REVISION C	
DRAINAGE DETAILS SHEET 2		PROJECT / DRAWING No. 3002750-DD-1442	
SCALE AS SHOWN	PHASE PSP	PROJECT / DRAWING No. 3002750-DD-1442	REVISION C

PRELIMINARY



150 mm ON ORIGINAL

A1

DRAWING FILE LOCATION / NAME V:_Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1443.dwg		PLOT DATE 13 Nov 2020		TIME 09:05:59	
REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	TITLE
A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK	DRAFTER <i>R. GOOSEN</i>
B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK	DRAFTING CHECK <i>K. CURLEY</i>
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK	DESIGNER <i>M. HARTY</i>
					DESIGN CHECK <i>T. NIELSEN</i>
					PROJECT MANAGER <i>S. RAVEN</i>
					PROJECT DIRECTOR <i>D. KEEP</i>

SCALES AT A1 SIZE DRAWING

SCALE 1:25

SCALE 1:50

DESIGNER

SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

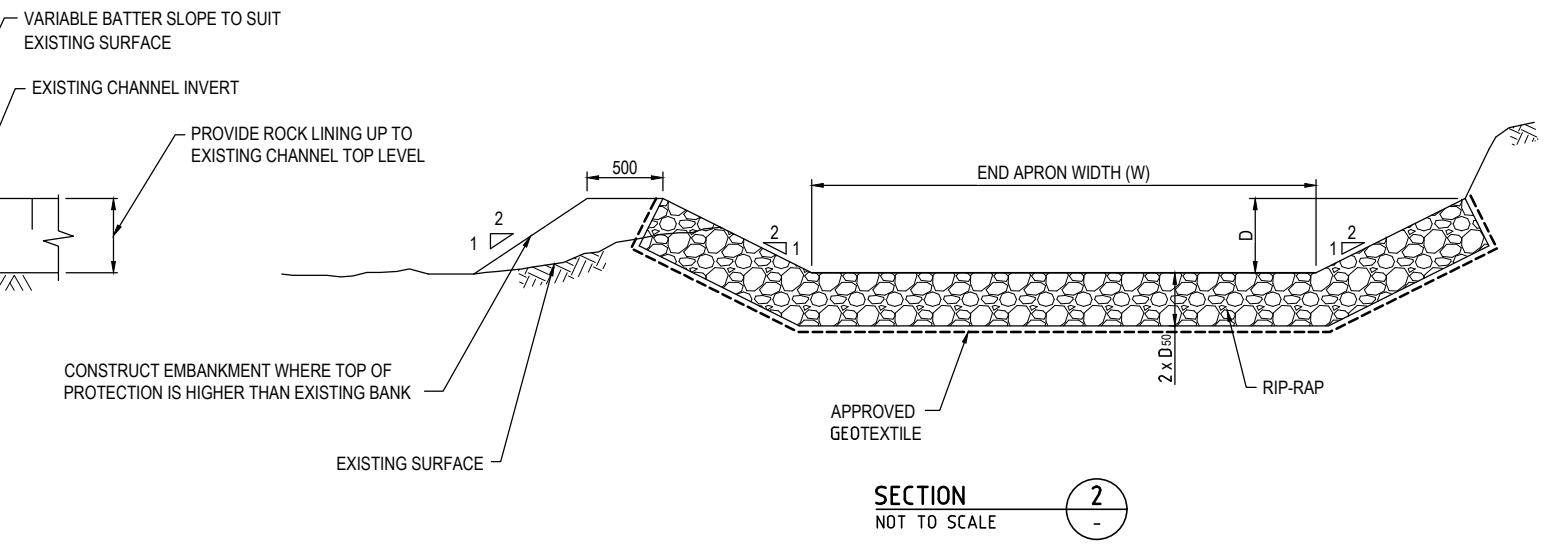
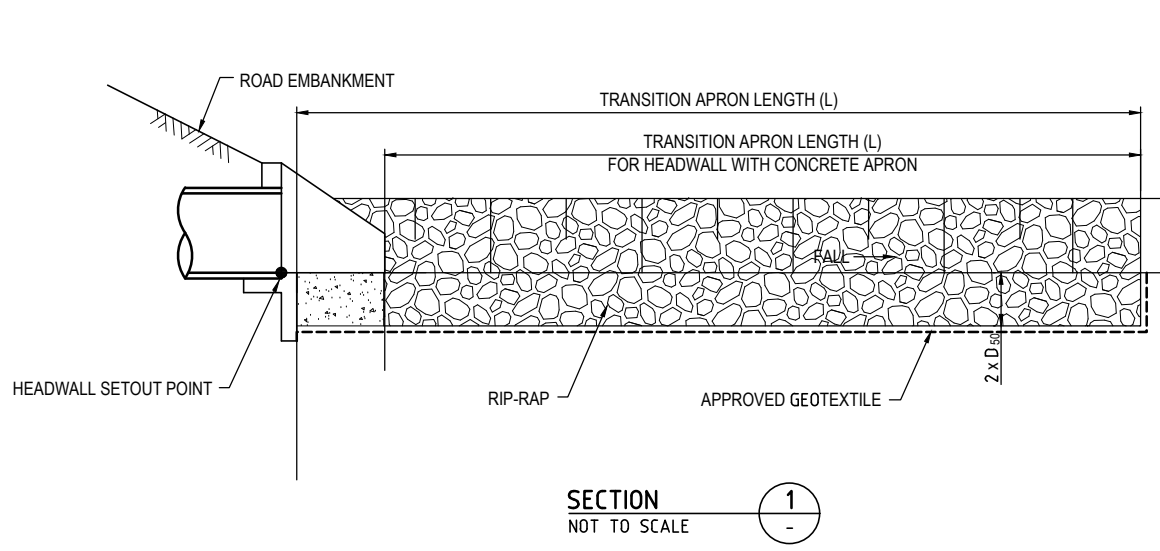
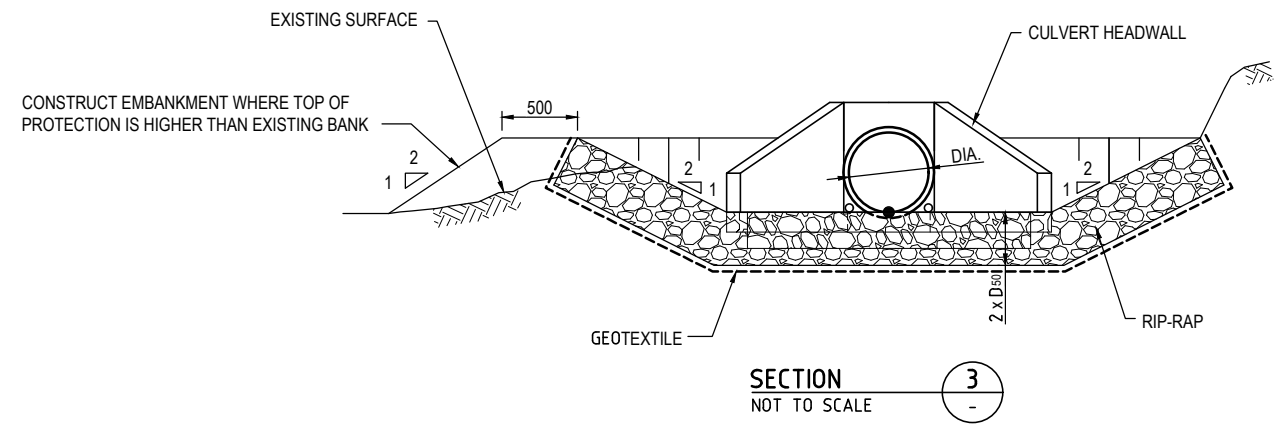
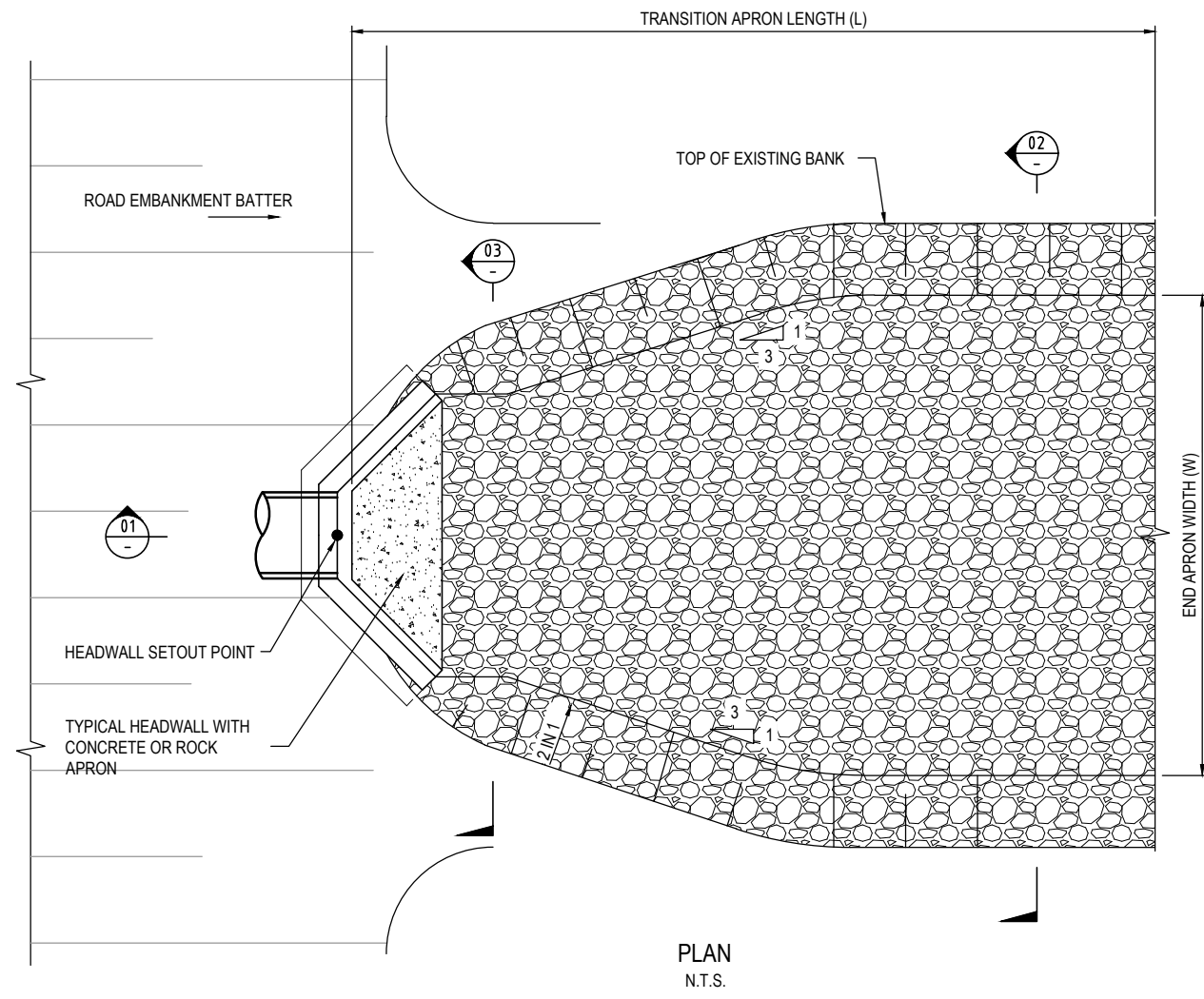
ACT
Government
Transport Canberra & City Services

PROJECT TITLE WILLIAM HOVELL DRIVE DUPLICATION		PROJECT / DRAWING No. 3002750-DD-1443	
SCALE AS SHOWN		REVISION C	

PRELIMINARY

**DRAINAGE
DETAILS
SHEET 3**

- NOTES**
- FOR DRAINAGE NOTES REFER DRG No. DD-1401
 - REFER TO DRAINAGE DESIGN PLANS FOR TRANSITION APRON DIMENSIONS
 - GEOTEXTILE UNDER RIP-RAP SHALL BE IN ACCORDANCE WITH SPECIFICATION MITS 031 SUBSURFACE DRAINAGE.



150 mm ON ORIGINAL

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1444.dwg		PLOT DATE 13 Nov 2020		TIME 09:06:27	
REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	TITLE
A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK	DRAFTER <i>R. GOOSEN</i>
B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK	DRAFTING CHECK <i>K. CURLEY</i>
C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK	DESIGNER <i>M. HARTY</i>
					DESIGN CHECK <i>T. NIELSEN</i>
					PROJECT MANAGER <i>S. RAVEN</i>
					PROJECT DIRECTOR <i>D. KEEP</i>

SCALES AT A1 SIZE DRAWING

SCALE 1:25

DESIGNER

SMEC
Member of the Surlana Jurong Group
SMEC AUSTRALIA PTY LTD
© ABN 47 065 475 149
SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE
LYNEHAM ACT 2602 AUSTRALIA
SMEC PROJECT No 3002750

CLIENT

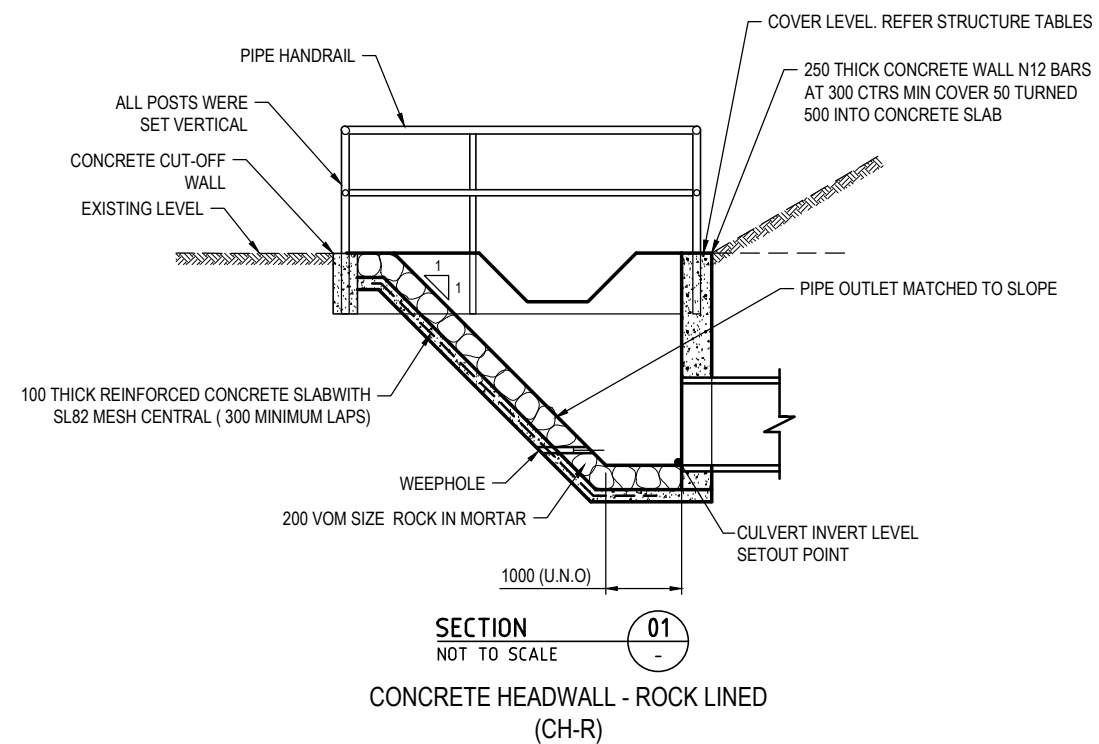
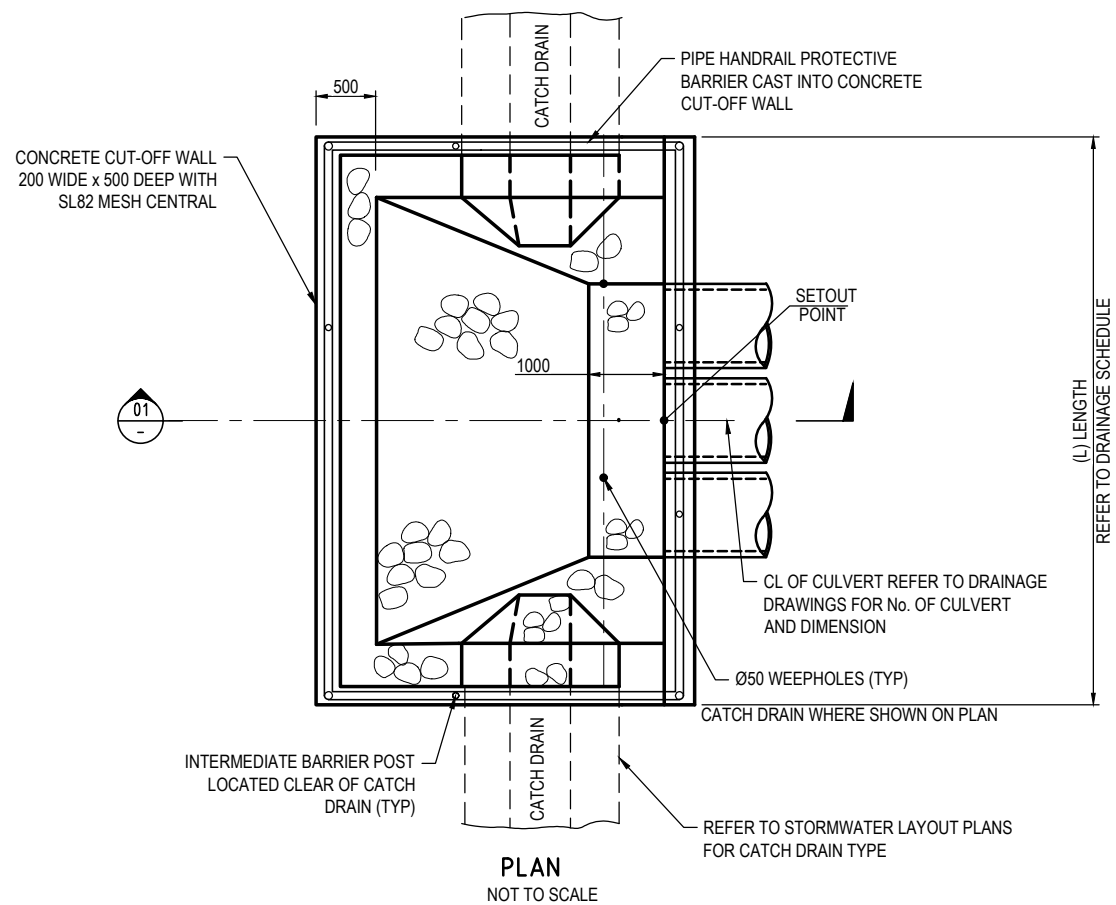
ACT
Government
Transport Canberra & City Services

PROJECT TITLE
WILLIAM HOVELL DRIVE DUPLICATION

DRAINAGE DETAILS SHEET 4

SCALE AS SHOWN	PHASE PSP	PROJECT / DRAWING No. 3002750-DD-1444	REVISION C
-------------------	--------------	--	---------------

PRELIMINARY



NOTES

1. FOR DRAINAGE NOTES REFER DRG No. DD-1401
2. REFER TO DRAINAGE DESIGN PLANS FOR LOCATION OF BATTER DRAINS AND SO TRANSITIONS.
3. GEOTEXTILE UNDER RIP-RAP SHALL BE IN ACCORDANCE WITH SPECIFICATION MITS 031 SUBSURFACE DRAINAGE.

PRELIMINARY

150 mm ON ORIGINAL
A1

DRAWING FILE LOCATION / NAME V:\Vault\Projects\3002750\CAD\DWG\07_DD_Drainage\3002750-DD-1445.dwg		PLOT DATE 13 Nov 2020		TIME 09:06:54												
EXTERNAL REFERENCE FILES		REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	TITLE	NAME	SCALES AT A1 SIZE DRAWING	DESIGNER	CLIENT	PROJECT TITLE	SCALE	PHASE	PROJECT / DRAWING No.	REVISION
		A	19.06.2020	PRELIMINARY SKETCH PLAN	0007	DK	DRAFTER	R. GOOSEN	SCALE 1:25 0.25 0 0.50 1.00	<p>SMEC Member of the Surbana Jurong Group SMEC AUSTRALIA PTY LTD © ABN 47 065 475 149 SUITE 2, LEVEL 1, 243 NORTHBOURNE AVENUE LYNEHAM ACT 2602 AUSTRALIA SMEC PROJECT No 3002750</p>	<p>ACT Government Transport Canberra & City Services</p>	WILLIAM HOVELL DRIVE DUPLICATION	AS SHOWN	PSP	3002750-DD-1445	C
		B	08.10.2020	PRELIMINARY SKETCH PLAN	0014	DK	DRAFTING CHECK	K. CURLEY								
		C	13.11.2020	PRELIMINARY SKETCH PLAN SUBMISSION	0015	DK	DESIGNER	M. HARTY								
							DESIGN CHECK	T. NIELSEN								
							PROJECT MANAGER	S. RAVEN								
							PROJECT DIRECTOR	D. KEEP								