

Inundation Legend

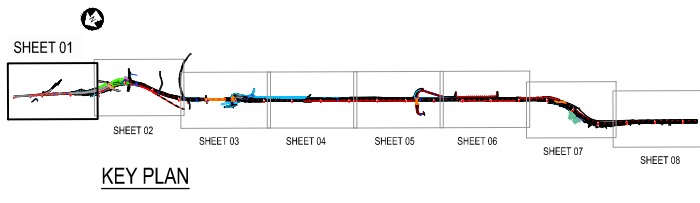
- Existing 100 year flood inundation eliminated by Project.
- 100 year flood inundation unchanged by Project.
- 100 year flood inundation due to Project.

Legend

- Proposed Culvert
- Existing Culvert
- Proposed Swale
- Proposed Attenuation Swale
- Storm water feature
- Designation Boundary
- Proposed Hydraulic Control
- Proposed Scruffy Dome
- Existing Contours (0.5m interval)
- Existing Stream
- Proposed Stream Realignment

For Consent

NOTE:
ESTIMATED EXTENT OF FLOOD
INUNDATION NOT SHOWN



Revision	Amendment	Approved	Revision Date
R1	For Client Review	R.C.	Sept. 2012
R2	Draft for comment	R.C.	18/9/2012
R3	Inundation areas altered, draft for comment	G.W.	7/02/2013
R4	Issued for consent	G.W.	Mar 2013



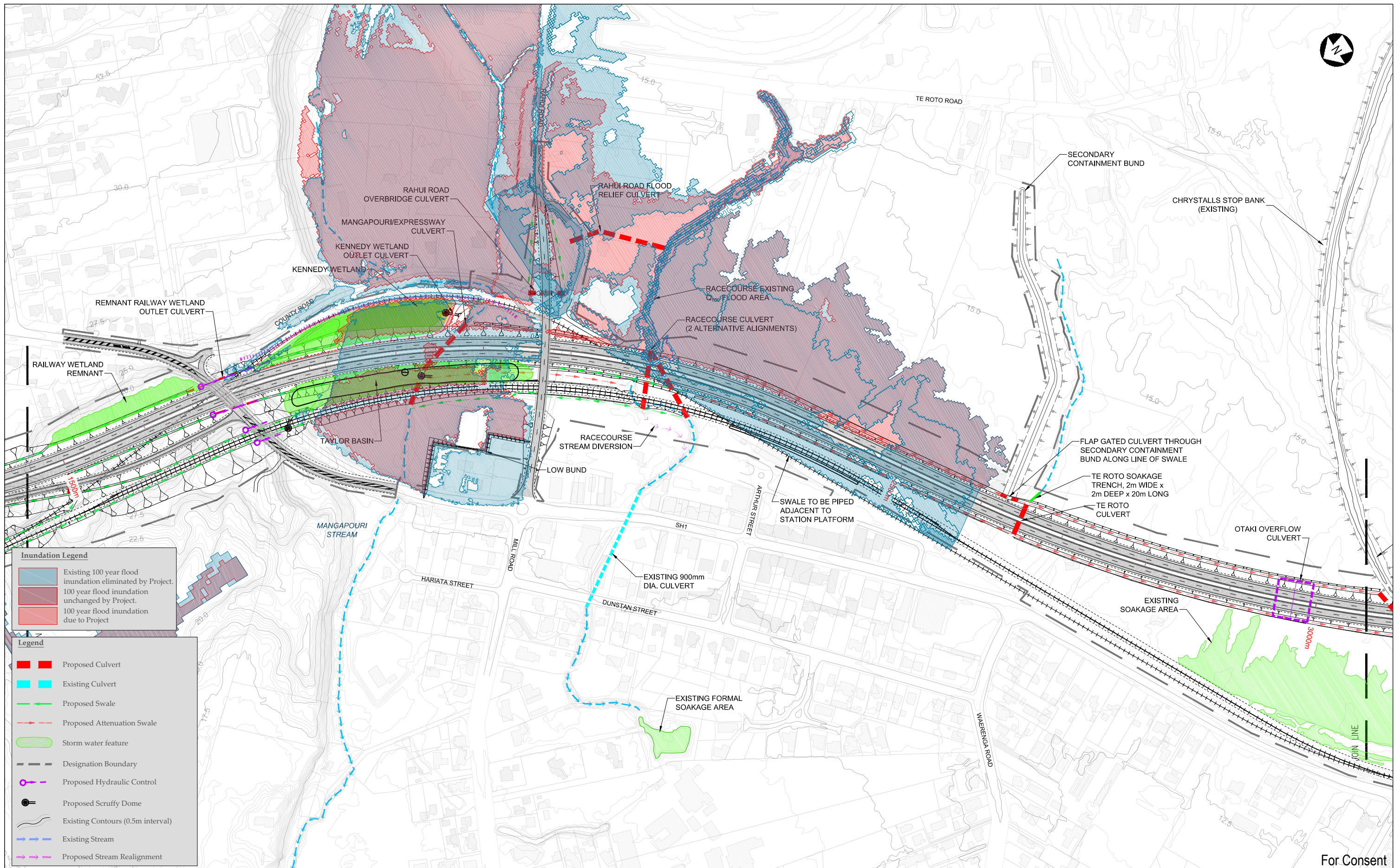
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

Drawn	Designed	Approved	Revision Date
R.QUINEY	R.COLES	T.COULMAN	09/2011

DRAINAGE PLAN
SHEET 1 OF 8

Project No.	Scale	Drawing No.
5C1814.00	1:2000(A1), 1:4000(A3)	5/2664/1/6504

Sheet No.	Revision
DR01	R4



Inundation Legend

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Legend

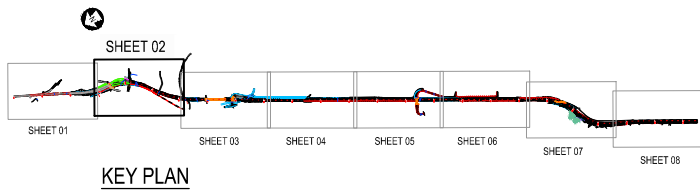
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300 mm
200
100
50
0
10 mm

For Consent

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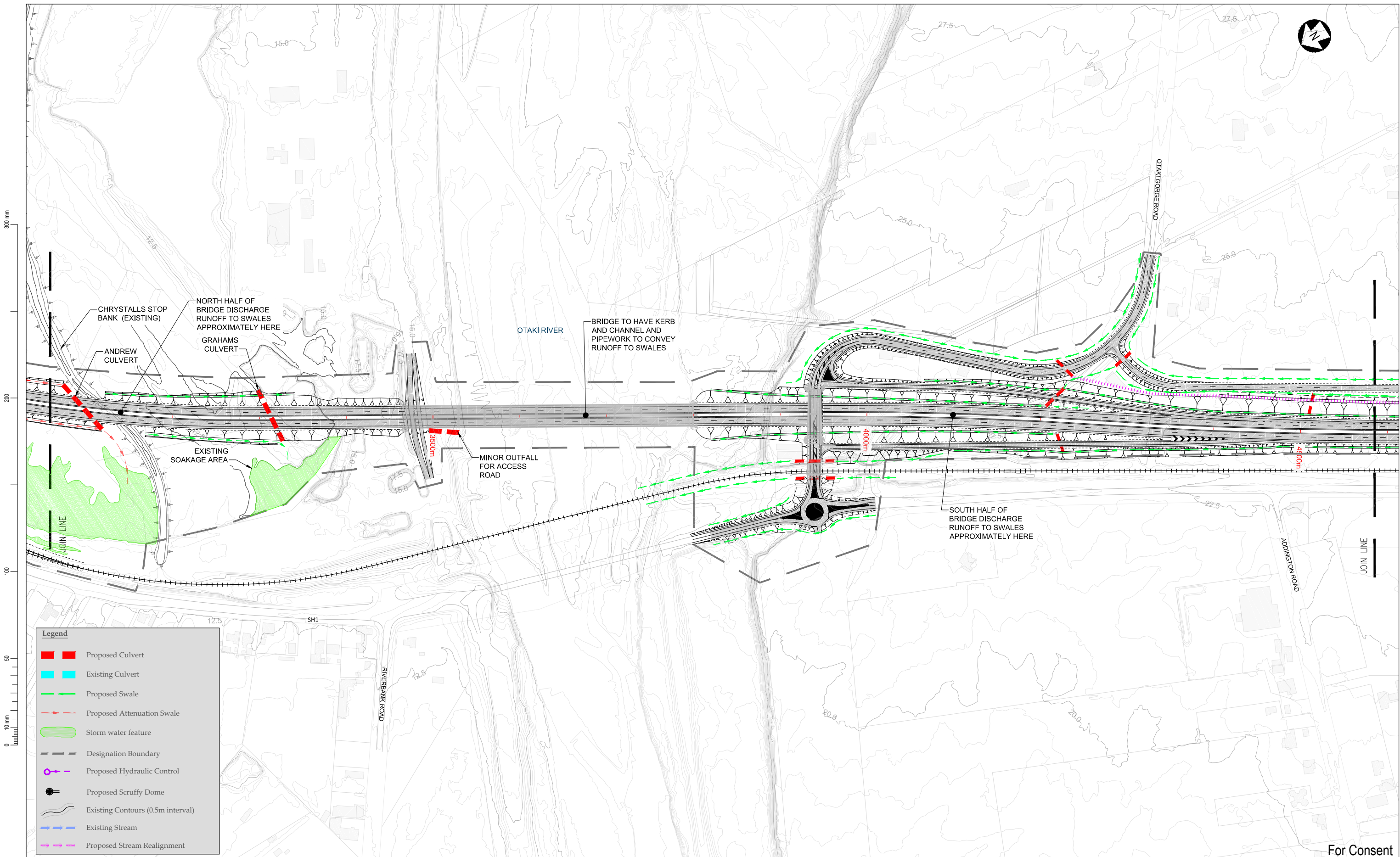
Project
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

Drawn	Designed	Approved	Revision Date
R.QUINEY	R.COLES	T.COULMAN	09/2011

Sheet
DRAINAGE PLAN
SHEET 2 OF 8

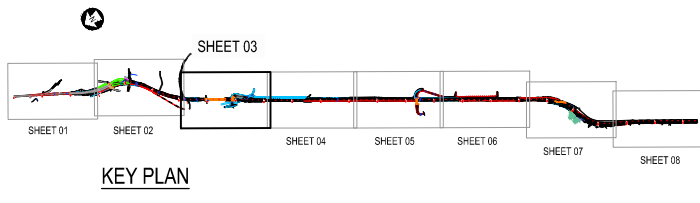
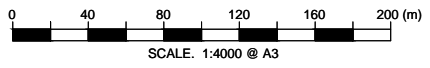
Project No.	Scale	Drawing No.
5C1814.00	1:2000(A1), 1:4000(A3)	5/2664/1/6504

Sheet No.	Revision
DR02	R4



For Consent

NOTE:
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INUNDATION NOT SHOWN



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R4	Issued for consent	G.W.	Mar 2013



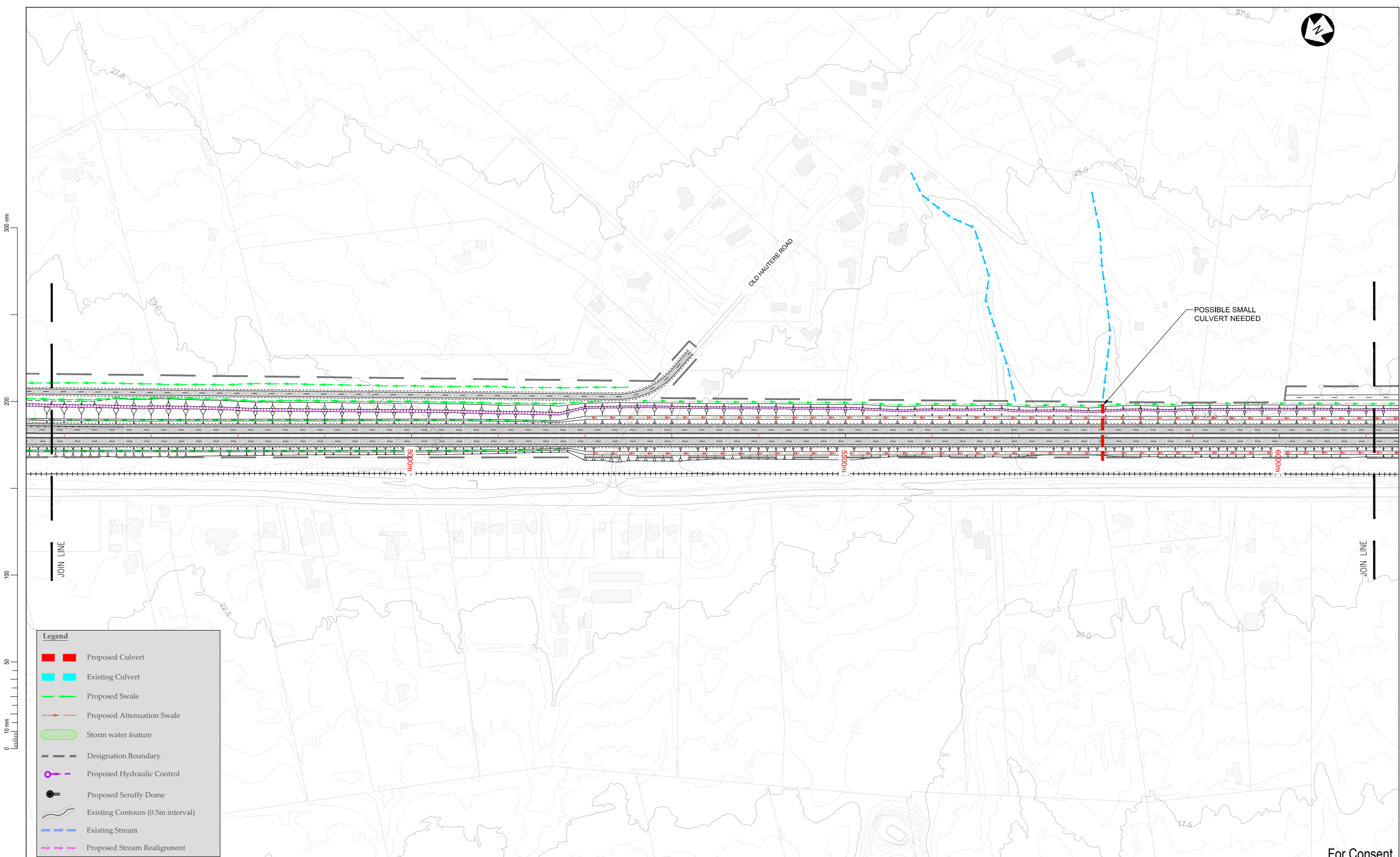
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

Drawn	Designed	Approved	Revision Date
R.QUINEY	R.COLES	T.COULMAN	09/2011

DRAINAGE PLAN
SHEET 3 OF 8

Project No.	Scale	Drawing No.
5C1814.00	1:2000(A1), 1:4000(A3)	5/2664/1/6504

Sheet No.	Revision
DR03	R4



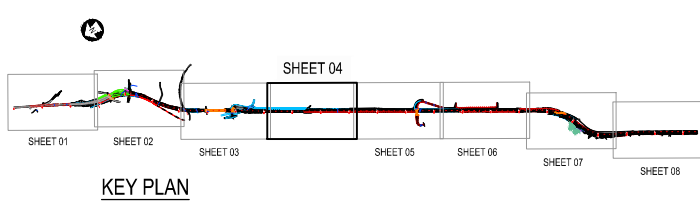
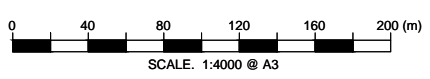
Legend

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For Consent

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Project
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

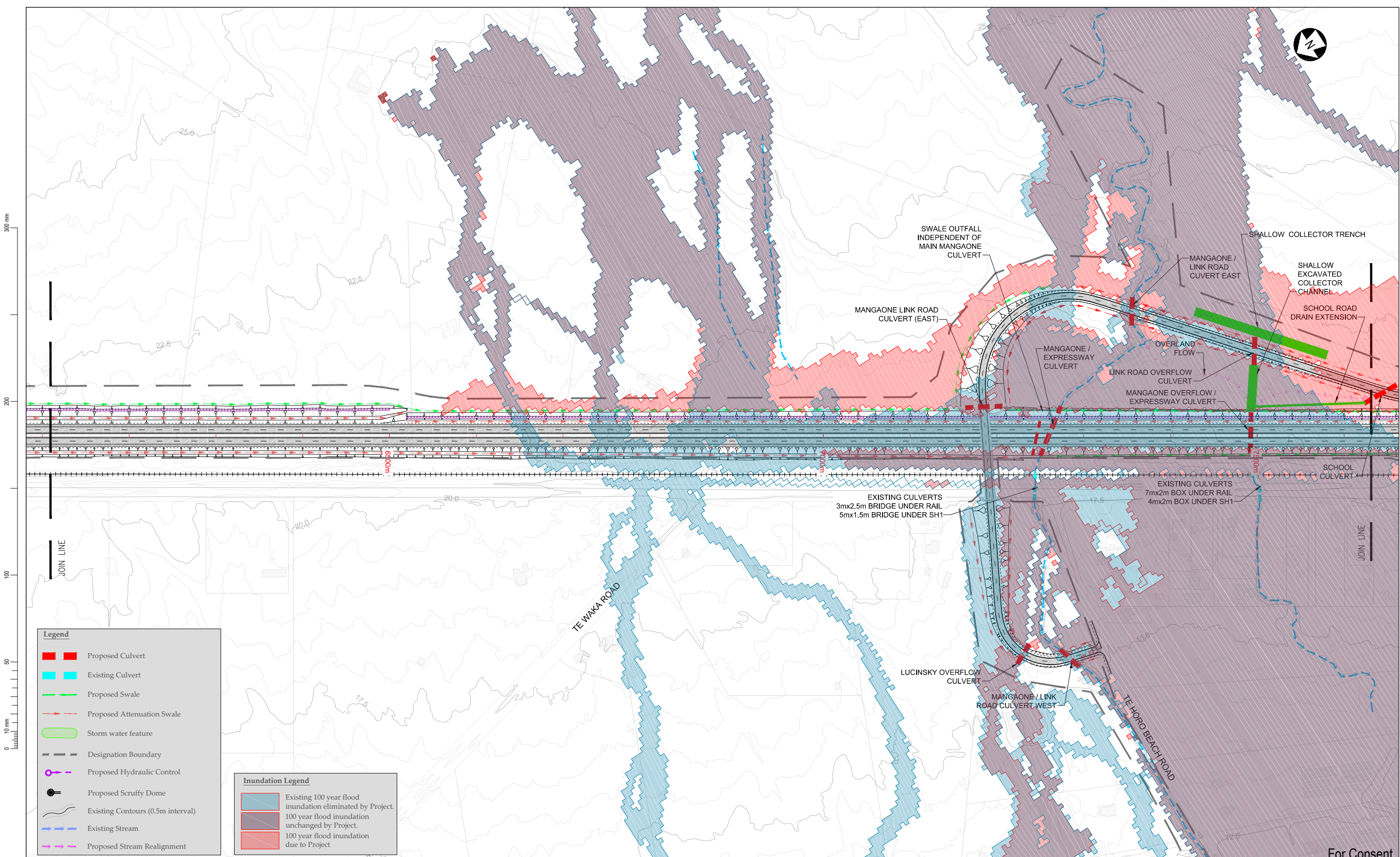
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R.QUINEY	R.COLES	T.COULMAN	09/2011

Sheet
DRAINAGE PLAN
SHEET 4 OF 8

Project No. 5C1814.00 Scale 1:2000(A1), 1:4000(A3)

Drawing No. 5/2664/1/6504

Sheet No.	Revision
DR04	R4

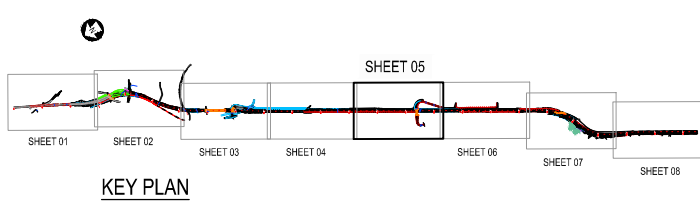


- Legend**
- █ Proposed Culvert
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- Inundation Legend**
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NOTE:
ESTIMATED EXTENT OF FLOOD
INUNDATION NOT SHOWN

SCALE: 1:4000 @ A3

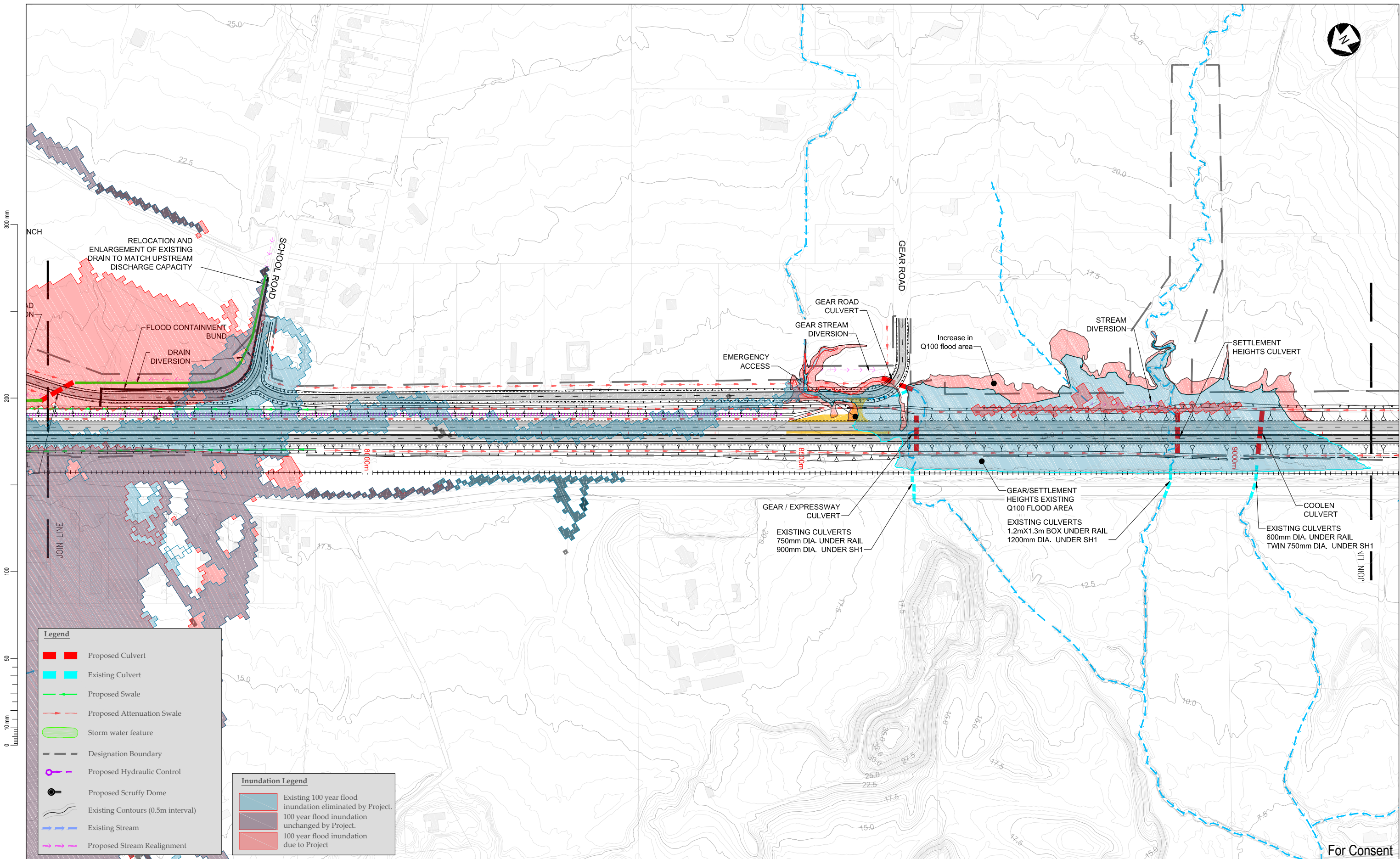


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Drawn	Designed	Approved	Revision Date
R.QUINEY	R.COLES	T.COULMAN	09/2011

Project		NEW ZEALAND TRANSPORT AGENCY PEKA PEKA TO NORTH OTAKI EXPRESSWAY FOR CONSENTING
Sheet		DRAINAGE PLAN SHEET 5 OF 8
Project No.	Scale	Drawing No.
5C1814.00	1:2000(A1), 1:4000(A3)	5/2664/1/6504
Sheet No.	Revision	
DR05	R4	



Legend

- █ Proposed Culvert
- █ Existing Culvert
- Proposed Swale
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- Designation Boundary
- ⊕ Proposed Hydraulic Control
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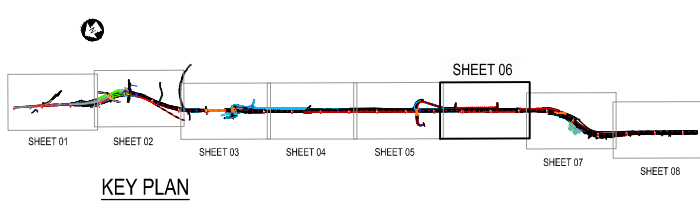
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NOTE:
ESTIMATED EXTENT OF FLOOD
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0 40 80 120 160 200 (m)

SCALE: 1:4000 @ A3



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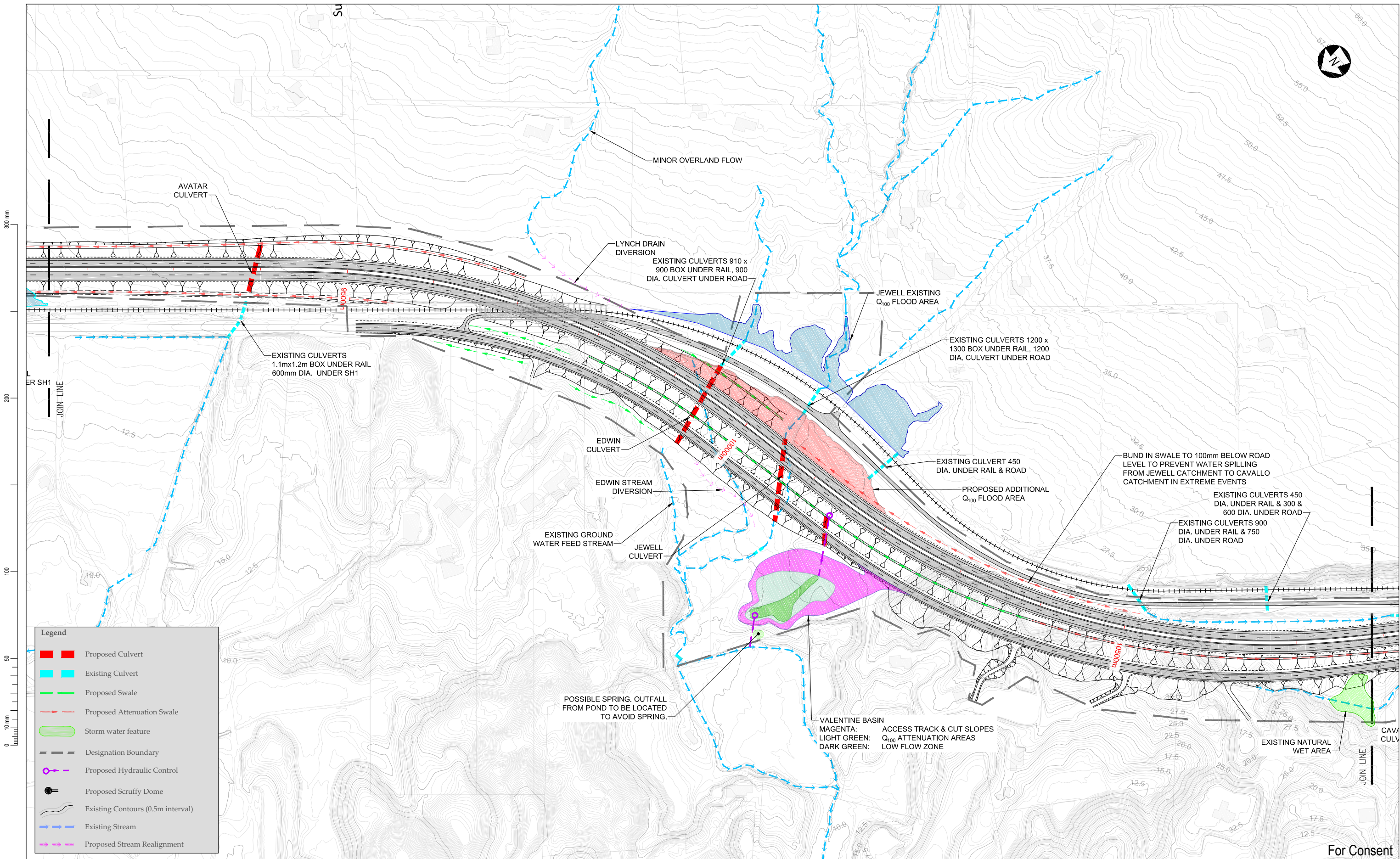
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

Drawn	Designed	Approved	Revision Date
R. QUINEY	R. COLES	T. COULMAN	09/2011

Sheet
DRAINAGE PLAN
SHEET 6 OF 8

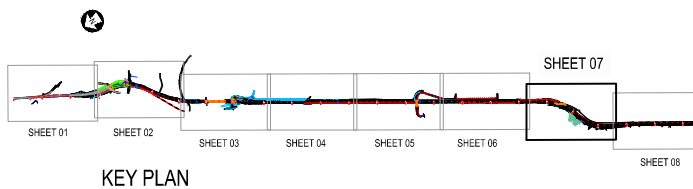
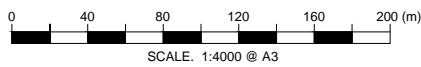
Project No. 5C1814.00 Scale: 1:2000(A1), 1:4000(A3) Drawing No. 5/2664/1/6504

Sheet No. DR06 Revision R4



For Consent

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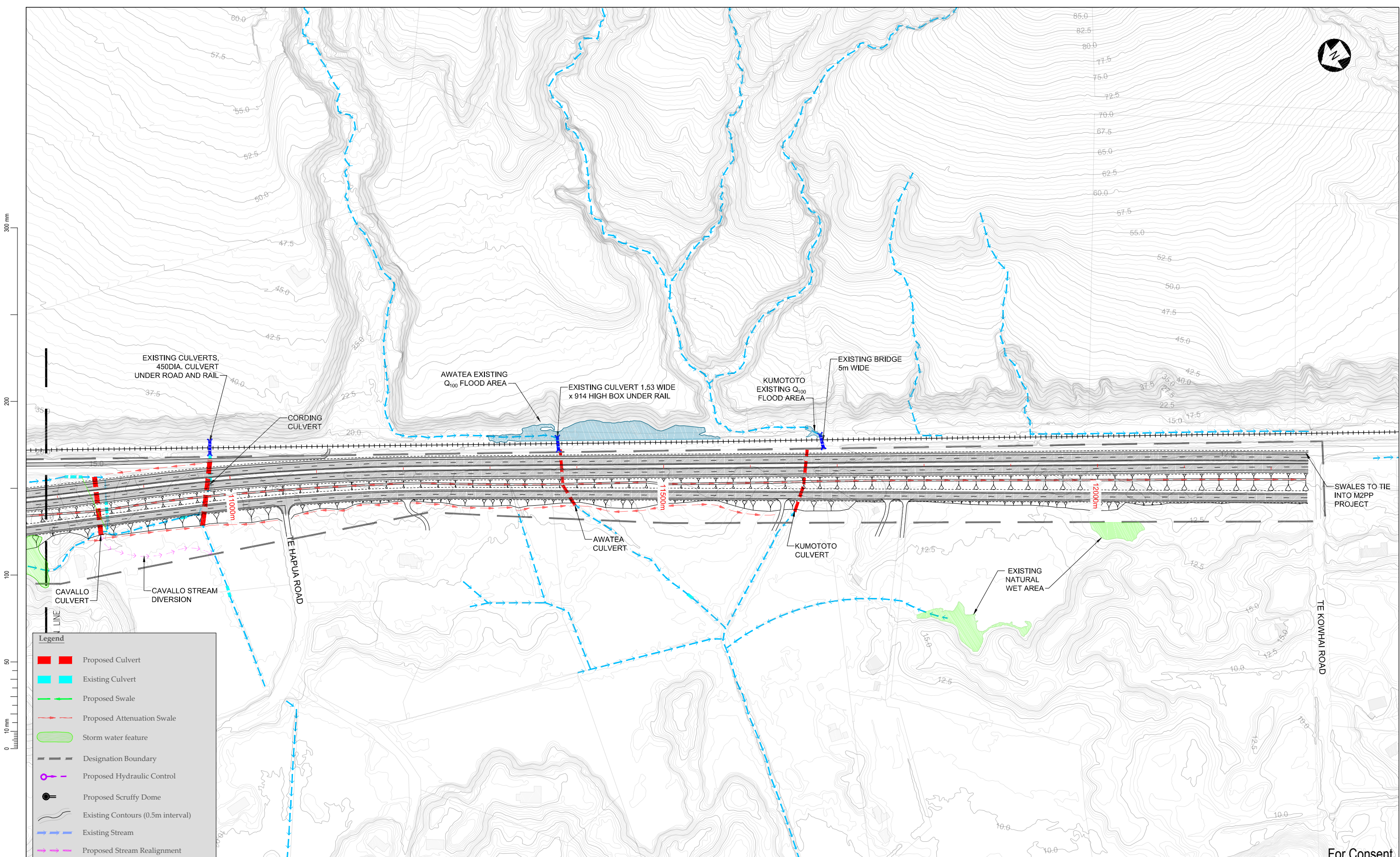


Drawn	Designed	Approved	Revision Date
R.QUINEY	R.COLES	T.COULMAN	09/2011
Project No. 5C1814.00		Scale 1:2000(A1), 1:4000(A3)	Drawing No. 5/2664/1/6504

Project
NEW ZEALAND TRANSPORT AGENCY
PEKA PEKA TO NORTH OTAKI EXPRESSWAY
FOR CONSENTING

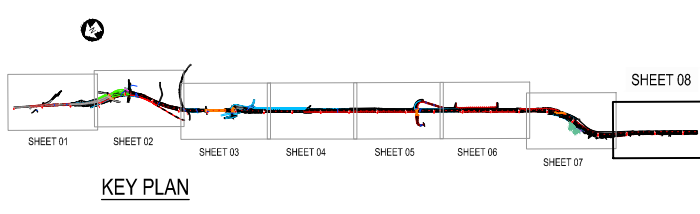
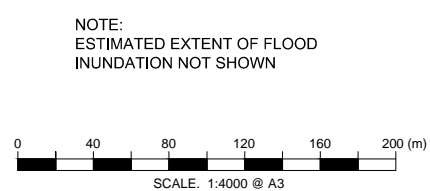
Sheet
DRAINAGE PLAN
SHEET 7 OF 8

Sheet No. DR07
Revision R4



Legend

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- █ Existing Culvert
- Proposed Swale
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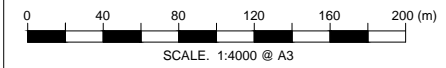
Drawn	Designed	Approved	Revision Date
R.QUINEY	R.COLES	T.COULMAN	09/2011
Project No. 5C1814.00		Scale 1:2000(A1), 1:4000(A3)	Sheet No. 5/2664/1/6504

Project	
NEW ZEALAND TRANSPORT AGENCY PEKA PEKA TO NORTH OTAKI EXPRESSWAY FOR CONSENTING	
Sheet	
DRAINAGE PLAN SHEET 8 OF 8	
Sheet No.	Revision
DR08	R4

For Consent

Waterway Crossing	Fish passage allowance	Culvert cross-section (m)	Culvert length (m)	Disturbed waterway length (m)
Greenwood Culvert	Yes	4 x 2 (est.)	25.000	55.000
Coopers Culvert	No	3 x 0.450 dia.	40.000	-
Waitohu Bridge	Yes	~ 75m span	-	-
Waitohu Tributary Culvert	Yes	5 x 1 (est.)	40.000	60.000
Remnant Railway Wetland Outlet Culvert	Yes	1.0 dia.	75.000	95.000
Kennedy Wetland Outlet Culvert	Yes	1.0 dia.	15.000	20.000
Mangapouri Culvert (Expressway)	Yes	3 x 3	60.000	100.000
Mangapouri Culvert (relocated NIMT railway)	Yes	3 x 3	20.000	60.000
Rahui Road Overbridge Culvert	No	10 x 2	~ 20	-
Rahui Road flood relief Culvert	No	1.5 x 0.5	115.000	-
Racecourse Culvert	No	1.5 dia. or 1.35 dia	100.000	210.000
Te Roto Culvert	No	0.525 dia.	40.000	65.000
Andrews Culvert/Otaki Overflow Culvert	No	40 x 1.5	40.000	-
Grahams Culvert	No	0.525 dia.	52.000	56.000
Otaki Bridge	Yes	~ 320m span	-	-
Mangaone link road (east) Culvert	Yes	10 x 2 (est.)	16.000	35.000
Mangaone Culvert -Expressway	Yes	5 x 2 (est.)	50.000	80.000
Mangaone link road (west) bridge/culvert	Yes	Single span bridge	-	-
Lucinsky overflow culvert – link road (west)	No	10 x 1 (est.)	16.000	-
Mangaone link road (east) bridge/culvert	Yes	Single span bridge	-	-
Mangaone link road (east) Overflow culvert	No	Not known	16.000	-
Mangaone Overflow Culvert – Expressway	No	8 x 1.5 (est.)	50.000	-
School Rd Culvert – link road (east)	No	Not known	16.000	520.000
Gear Road Culvert	Yes	3.5 x 2	20.000	150.000
Gear Expressway Culvert	Yes	5 x 2	40.000	90.000
Settlement Heights Culvert	Yes	10 x 2	40.000	170.000
Coolen Culvert	Yes	0.6 dia.	40.000	44.000
Avatar Culvert	No	1.2 dia.	60.000	64.000
Edwin Culvert	Yes	1.2 dia.	100.000	200.000
Jewell Culvert	Yes	Twin 3.5 x2.5	120.000	140.000
Cavallo Culvert	Yes	1.5 dia.	80.000	320.000
Cording Culvert	No	0.450 dia.	70.000	75.000
Awatea Culvert	Yes	Twin 1.8 dia.	68.000	90.000
Kumototo Culvert	Yes	Twin 1.5 dia.	88.000	115.000

300 mm
200
100
50
0 10 mm



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Project No. 5C1814.00		Scale 1:2000(A1), 1:4000(A3)	

Project NEW ZEALAND TRANSPORT AGENCY PEKA PEKA TO NORTH OTAKI EXPRESSWAY FOR CONSENTING	
Sheet DRAINAGE PLAN CULVERT DETAILS	
Drawing No. 5/2664/1/6504	Sheet No. / Revision DR09 / R0