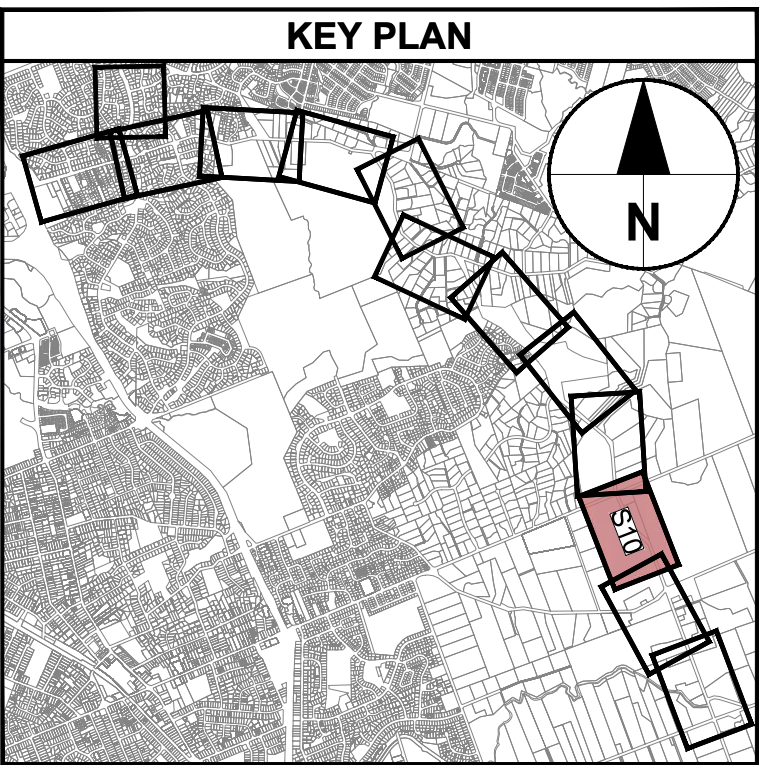
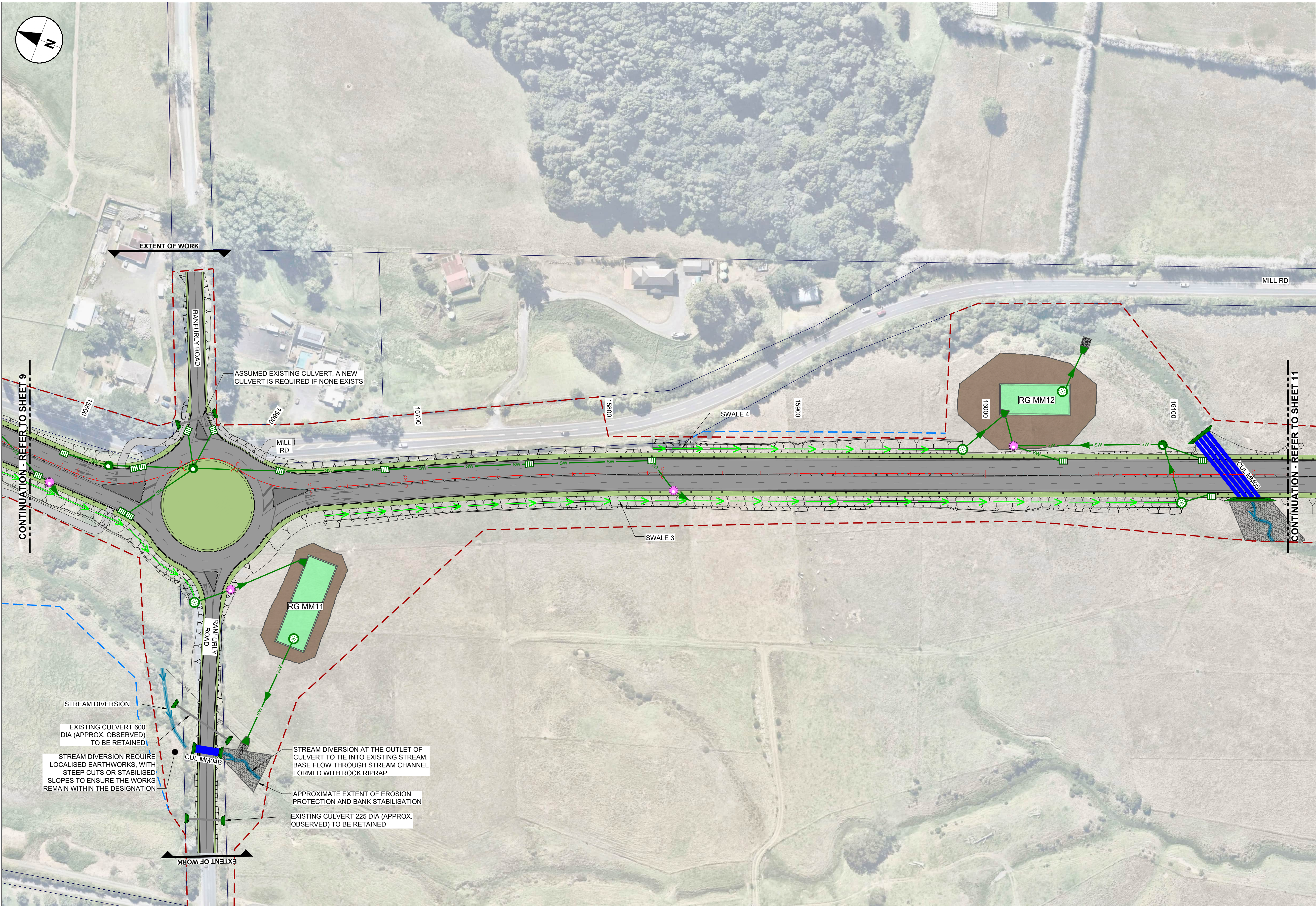




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- LEGEND: Road Plan**
- EXISTING BERM
 - EXISTING FOOTPATH
 - PROPOSED BERM
 - PROPOSED FOOTPATH / SHARED USE PATH
 - PROPOSED CARRIAGEWAY SURFACING
 - PROPOSED BRIDGE STRUCTURE
 - PROPOSED RETAINING WALL
 - PROPOSED GUARDRAIL
 - PROPOSED WIRE-ROPE
 - PROPOSED CIVIL DESIGN
 - EXISTING DESIGNATION BOUNDARY
 - PROPOSED ALTERATION TO DESIGNATION
 - LINZ PROPERTY BOUNDARY
 - PROPOSED NOISE WALL
- LEGEND: Drainage General Arrangement**
- PROPOSED EARTHWORKS
 - PROPOSED RAIN GARDEN
 - PROPOSED WETLAND
 - PROPOSED RIP-RAP
 - PROPOSED STREAM EROSION PROTECTION
 - PROPOSED TANK STORAGE
 - PROPOSED PROPRIETARY FILTRATION DEV.
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 - PROPOSED STORMWATER CP OR CPMH
 - PROPOSED STORMWATER SCRUFFY DOME
 - INDICATIVE STORMWATER FLOW ARROW
 - EXISTING STORMWATER PIPE
 - EXISTING STORMWATER CULVERT
 - PROPOSED STORMWATER PIPE
 - PROPOSED STORMWATER CULVERT
 - PROPOSED STORMWATER SWALE
 - PROPOSED STORMWATER OPEN DRAIN
 - PROPOSED STREAM DIVERSION

DRAINAGE GENERAL ARRANGEMENT

Scale 1:1000m @ A1

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CONSULTANT



CLIENT



PROJECT

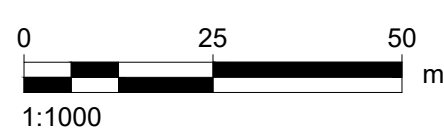
Mill Road – Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

FOR CONSENT

SCALE



PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

1	30.06.26	ISSUED FOR CONSENT
0	05.02.26	ISSUED FOR CONSENT
I/R	DATE	DESCRIPTION

PROJECT NUMBER

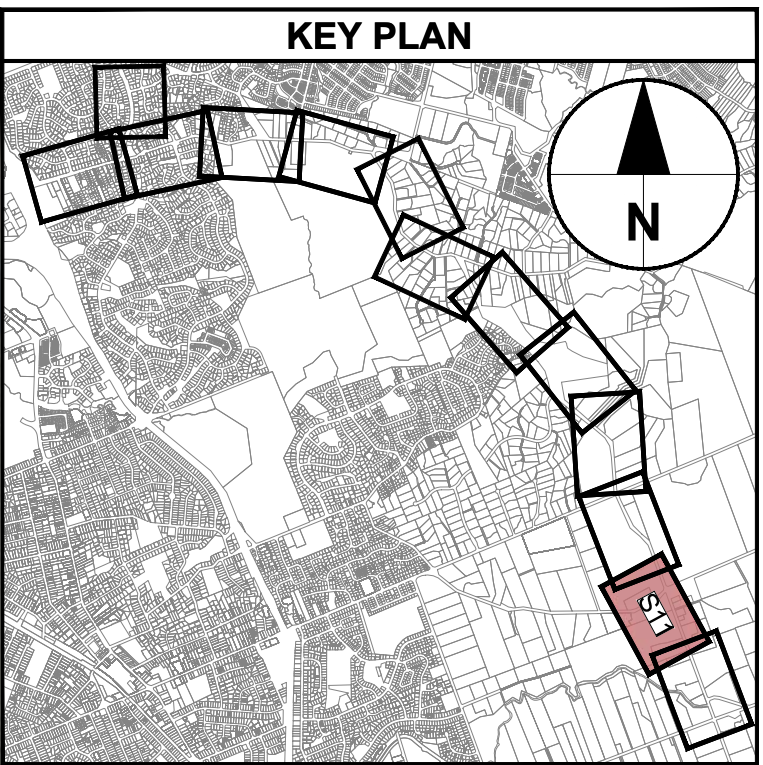
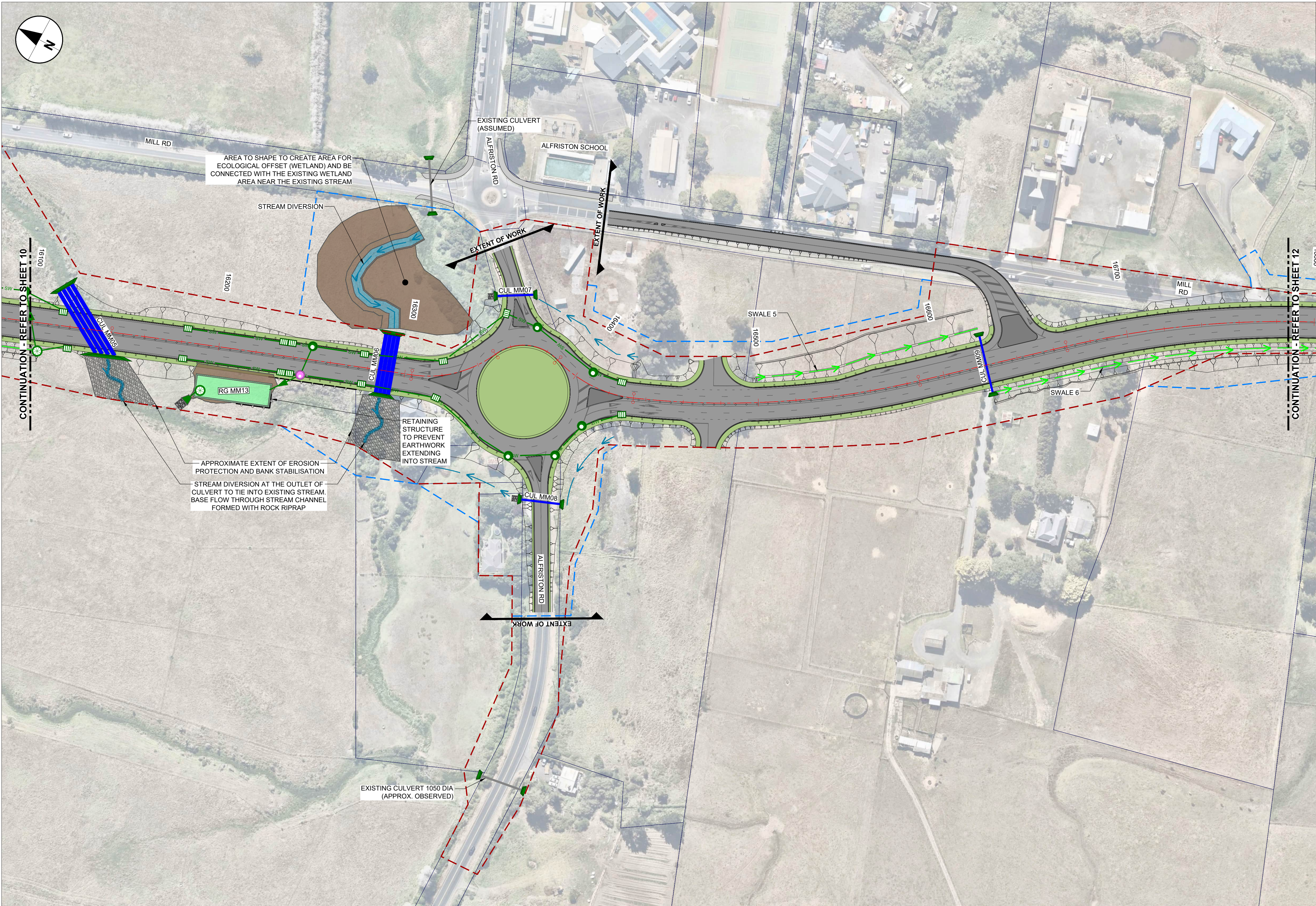
60755376

SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage General Arrangement
Sheet 10

SHEET NUMBER

60755376-SHT-DR-0110



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- LEGEND: Road Plan**
- EXISTING BERM
 - EXISTING FOOTPATH
 - PROPOSED BERM
 - PROPOSED FOOTPATH / SHARED USE PATH
 - PROPOSED CARRIAGEWAY SURFACING
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 - LINZ PROPERTY BOUNDARY
 - PROPOSED NOISE WALL
- LEGEND: Drainage General Arrangement**
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 - PROPOSED RAIN GARDEN
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 - PROPOSED STREAM EROSION PROTECTION
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 - PROPOSED STORMWATER CULVERT
 - PROPOSED STORMWATER SWALE
 - PROPOSED STORMWATER OPEN DRAIN
 - PROPOSED STREAM DIVERSION

DRAINAGE GENERAL ARRANGEMENT

Scale 1:1000m @ A1

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CONSULTANT



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PROJECT

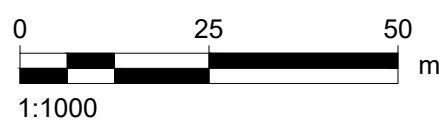
Mill Road – Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

FOR CONSENT

SCALE



PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

I/R	DATE	DESCRIPTION
1	30.06.26	ISSUED FOR CONSENT
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PROJECT NUMBER

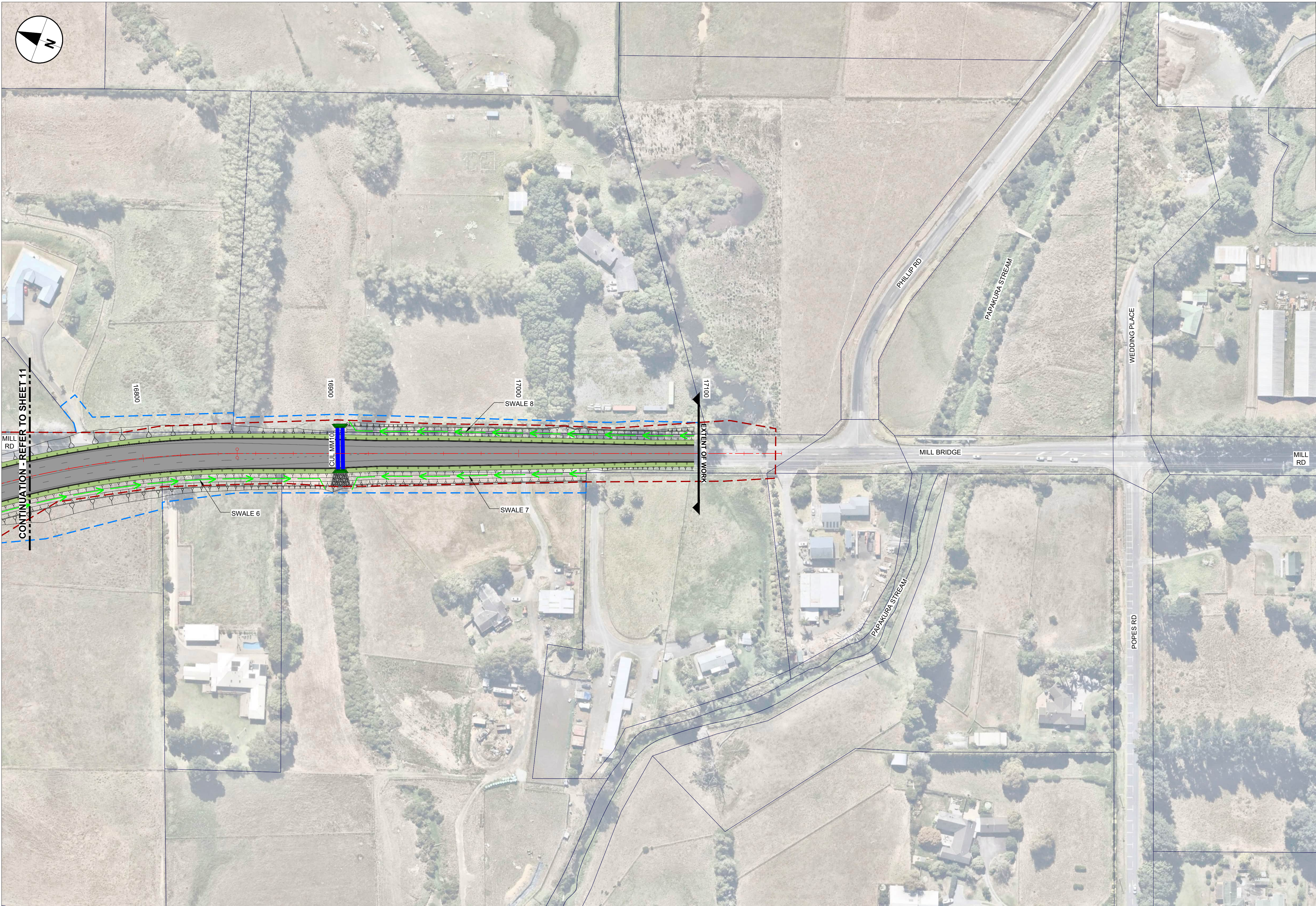
60755376

SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage General Arrangement
Sheet 11

SHEET NUMBER

60755376-SHT-DR-0111



DRAINAGE GENERAL ARRANGEMENT

Scale 1:1000m @ A1

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CONSULTANT



CLIENT



PROJECT

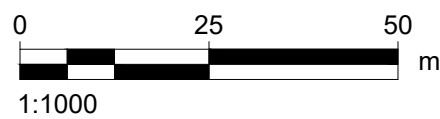
Mill Road - Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

FOR CONSENT

SCALE



PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

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PROJECT NUMBER

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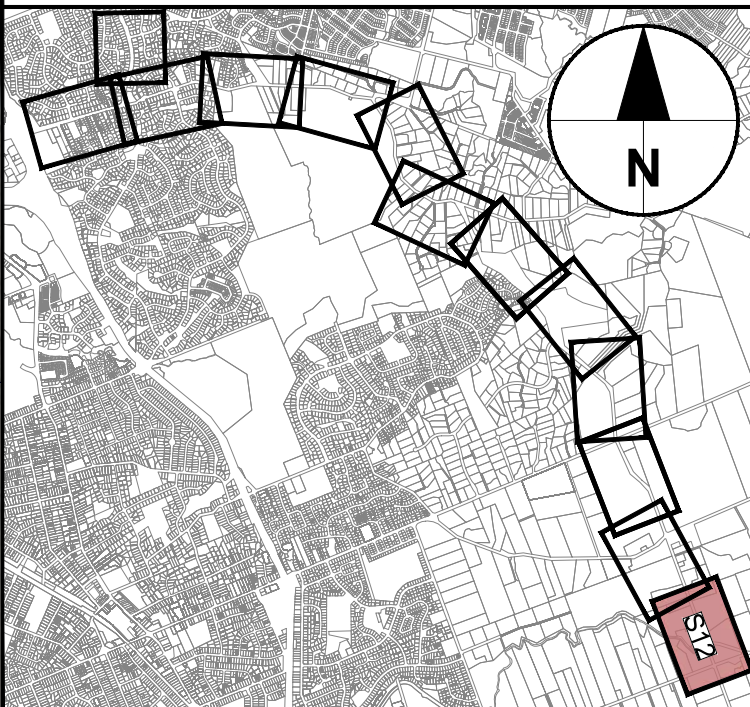
SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage General Arrangement
Sheet 12

SHEET NUMBER

60755376-SHT-DR-0112

KEY PLAN



NOTE:

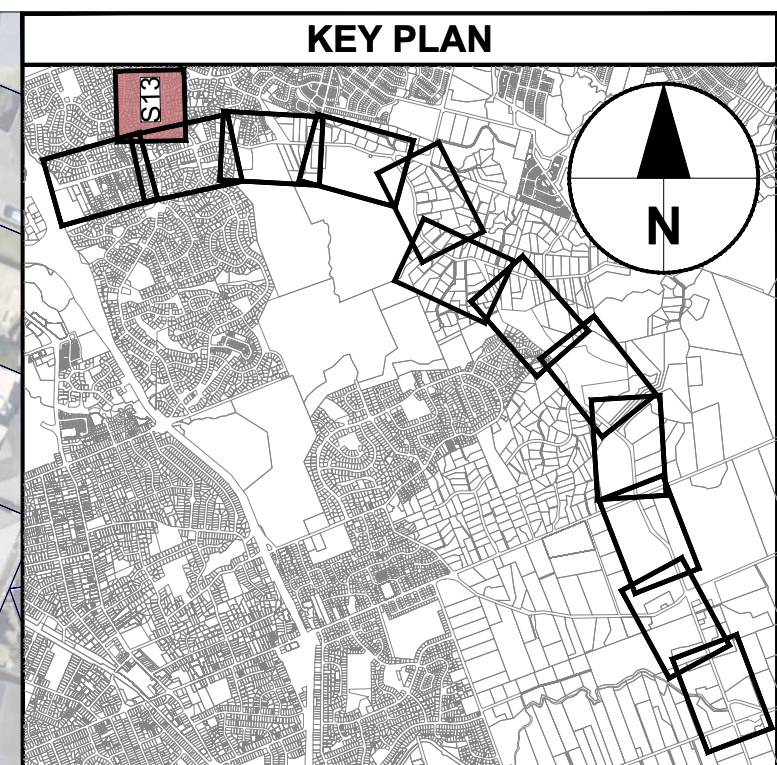
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LEGEND: Road Plan

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- EXISTING FOOTPATH
- PROPOSED BERM
- PROPOSED FOOTPATH / SHARED USE PATH
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- PROPOSED WIRE-ROPE
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- PROPOSED ALTERATION TO DESIGNATION
- LINZ PROPERTY BOUNDARY
- PROPOSED NOISE WALL

LEGEND: Drainage General Arrangement

- PROPOSED EARTHWORKS
- PROPOSED RAIN GARDEN
- PROPOSED WETLAND
- PROPOSED RIP-RAP
- PROPOSED STREAM EROSION PROTECTION
- PROPOSED TANK STORAGE
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LEGEND: Drainage General Arrangement

-
- | | |
|--|--------------------------------------|
| | PROPOSED EARTHWORKS |
| | PROPOSED RAIN GARDEN |
| | PROPOSED WETLAND |
| | PROPOSED RIP-RAP |
| | PROPOSED STREAM EROSION PROTECTION |
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DRAINAGE GENERAL ARRANGEMENT

Scale 1:1000m @ A1

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CONSULTANT



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NZ.B.N 9429032091335
www.aecom.com

CLIENT



PROJECT

Mill Road – Stage 1

Roads of National Significance

REGISTRATION

FOR CONSENT

PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

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PROJECT NUMBER

60755376

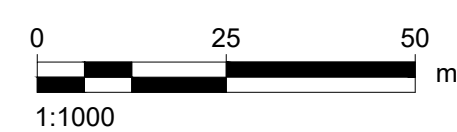
SHEET TITLE

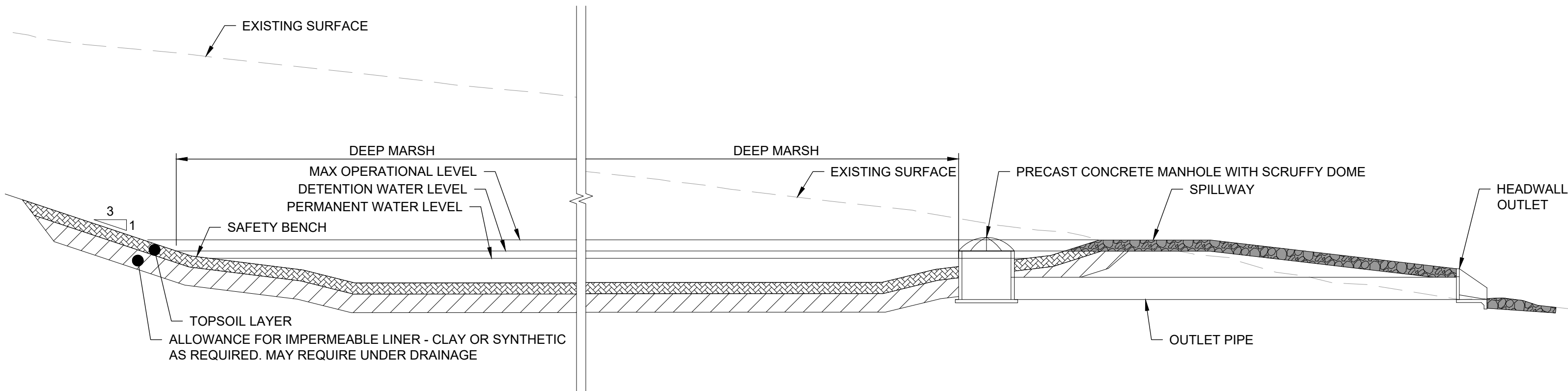
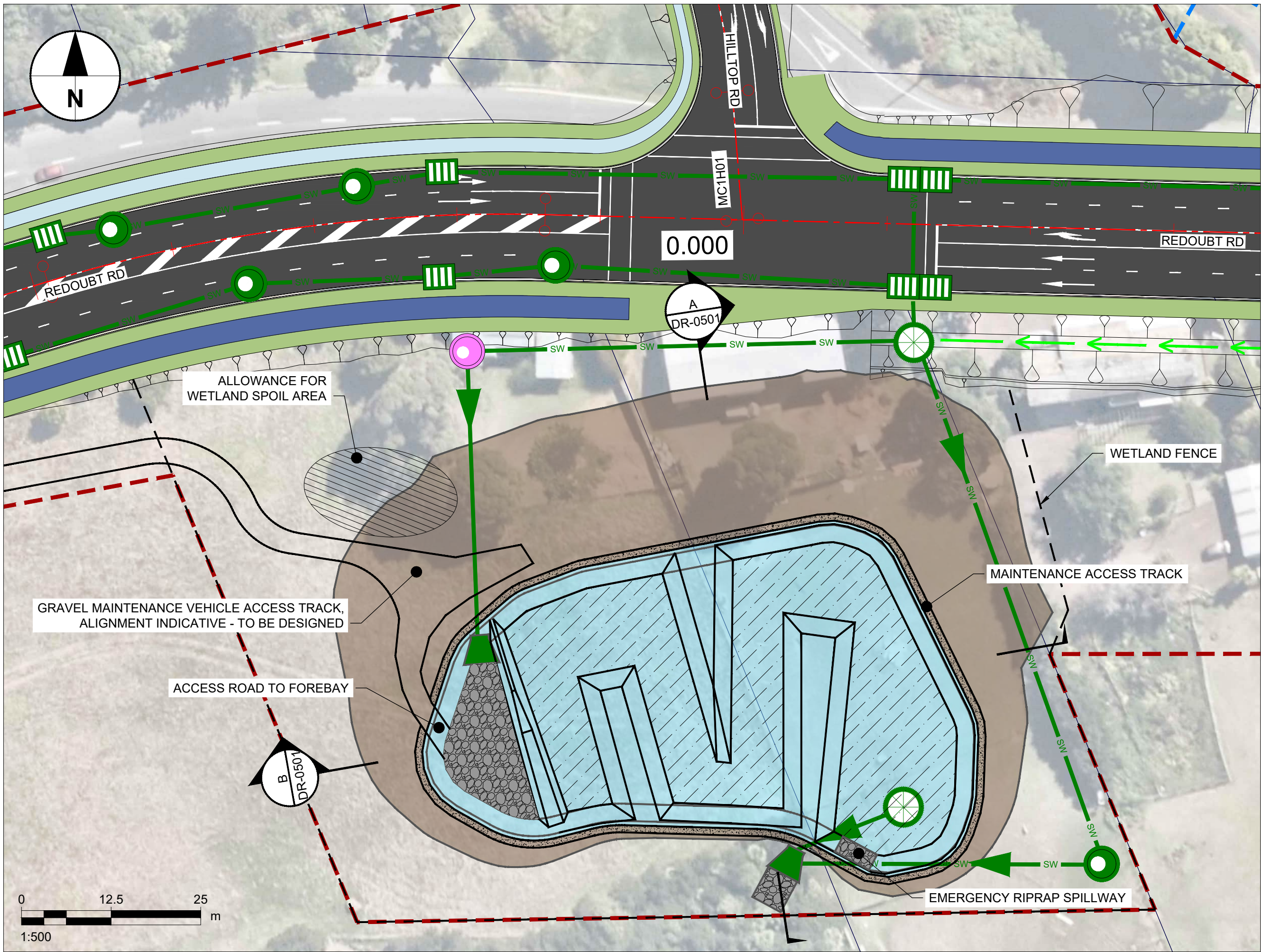
Mill Road RoNS Stage 1 FTA
Drainage General Arrangement
Sheet 13

SHEET NUMBER

60755376-SHT-DR-0113

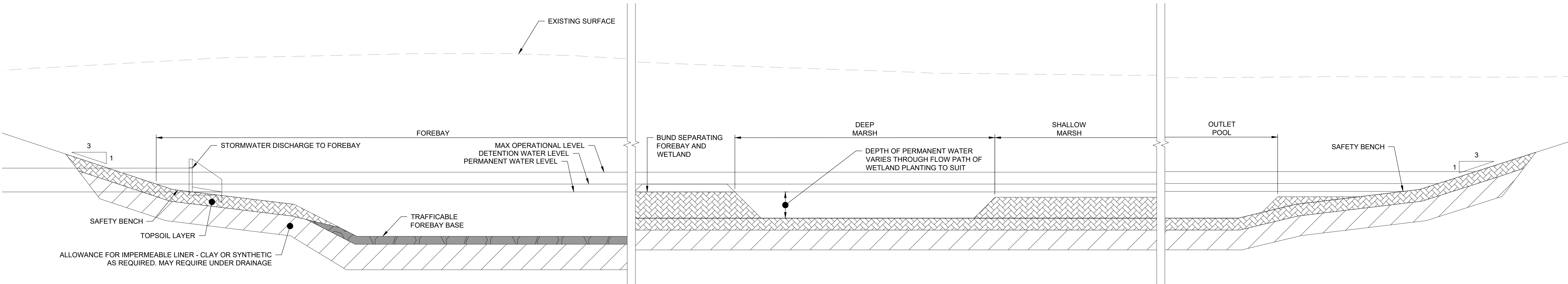
SCALE





A | TYPICAL CROSS SECTION

Scale 1:100m



B | TYPICAL LONG SECTION

Scale 1:50m

CONSULTANT

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CLIENT

NZ TRANSPORT AGENCY
WAKA KOTAHĪ

PROJECT

Mill Road - Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

FOR CONSENT

PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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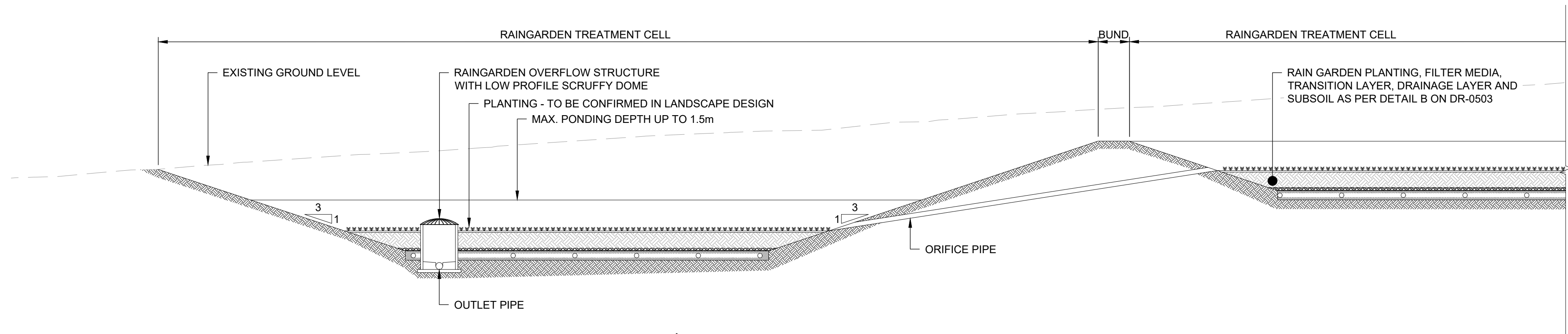
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Mill Road RoNS Stage 1 FTA
Drainage Details
Wetland 1 - Plan and Sections

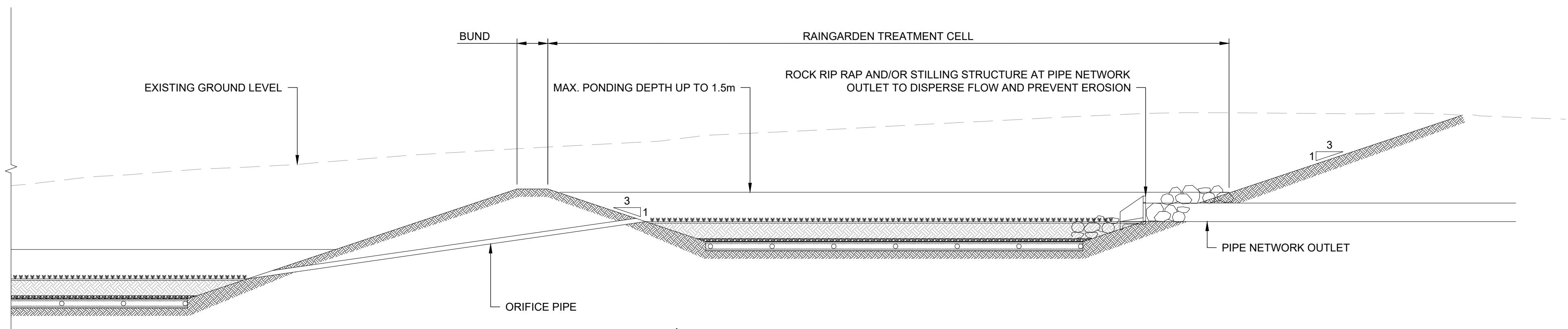
SHEET NUMBER

60755376-SHT-DR-0501

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A | TYPICAL LONG SECTION
Scale 1:100m



A | TYPICAL LONG SECTION
Scale 1:100m

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NZ TRANSPORT AGENCY
WAKA KOTAHĪ

PROJECT

Mill Road - Stage 1
Consenting Design
Roads of National Significance

REGISTRATION

FOR CONSENT

PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

1	30.06.26	ISSUED FOR CONSENT
0	05.02.26	ISSUED FOR CONSENT
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PROJECT NUMBER

60755376

SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage Details
Rain Garden 1 - Plan and Sections

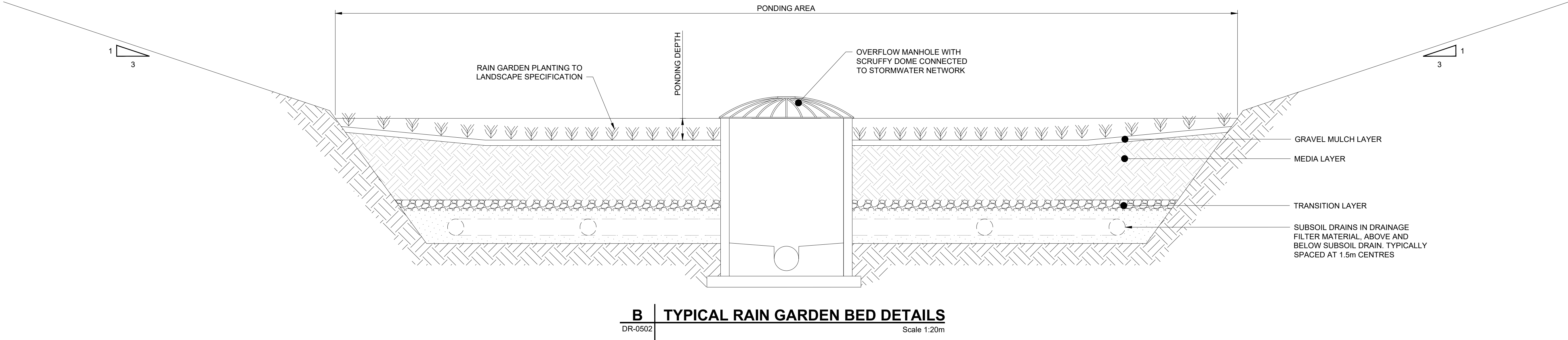
SHEET NUMBER

60755376-SHT-DR-0502

NOTES:

1. CATCHMENT ONLY INCLUDES ROAD CATCHMENT DISCHARGING TO EACH DEVICE. IT DOES NOT ACCOUNT FOR THE LOCAL CATCHMENT OVER FOOTPRINT OF THE DEVICE.

DEVICE ID	DEVICE TYPE	CATCHMENT AREA (m2) (NOTE 1)	WATER QUALITY TREATMENT	95th PERCENTILE HYDROLOGY MITIGATION	10% AEP ATTENUATION	PONDING AREA (m2)	RAINGARDEN PONDING DEPTH (m)	% OF CATCHMENT AREA	"OUTLET EROSION PROTECTION MEASURES (WHERE APPLICABLE)"	"OUTLET EROSION PROTECTION SIZE AND FOOTPRINT D50 (mm), LENGTH X DEPTH X WIDTH (m)"
RG MM01	RAINGARDEN	24,000	Y	Y	Y	2100	1.5	8.8%	N/A	N/A
RG MM02	RAINGARDEN	5,500	Y	Y	Y	830	0.4	15.1%	N/A	N/A
RG MM03	RAINGARDEN	3,500	Y	N	N	170	0.2	4.9%	Riprap Apron	300, 1.8 x 0.7 x 2.1
RG MM04	RAINGARDEN	6,300	Y	Y	N	430	0.2	6.8%	Riprap Apron	300, 2.7 x 0.7 x 3.2
RG MM05	RAINGARDEN	8,200	Y	Y	N	710	0.3	8.7%	Riprap Apron	300, 2.7 x 0.7 x 3.2
RG MM06	RAINGARDEN	10,300	Y	Y	N	520	0.2	5.0%	Riprap Apron	350, 2.6 x 0.8 x 2.9
RG MM07	RAINGARDEN	17,200	Y	Y	N	860	0.2	5.0%	Riprap Apron	300, 2.3 x 0.7 x 2.6
RG MM08	RAINGARDEN	8,600	Y	Y	N	440	0.2	5.1%	Riprap Apron	250, 1.5 x 0.6 x 1.9
RG MM09	RAINGARDEN	14,500	Y	Y	N	725	0.2	5.0%	Riprap Apron	500, 2.1 x 1 x 2.3
RG MM10	RAINGARDEN	7,000	Y	Y	N	350	0.2	5.0%	Riprap Apron	350, 1.5 x 0.5 x 1.9
RG MM11	RAINGARDEN	14,000	Y	Y	N	640	0.2	5.0%	Riprap Apron	350, 2.3 x 0.8 x 2.6
RG MM12	RAINGARDEN	19,200	Y	Y	N	960	0.2	5.0%	Riprap Apron	250, 1.9 x 0.6 x 2.4
RG MM13	RAINGARDEN	10,300	Y	Y	N	520	0.2	5.0%	Riprap Apron	300, 1.8 x 0.8 x 2.1
WETLAND 1	WETLAND	47,600	Y	Y	N	2680	N/A	5.6%	Riprap Apron	500, 3.7 x 1 x 4
TD MM01	UNDERGROUND TANK SYSTEM, PROPRIETARY FILTRATION DEVICE	6,000	Y	Y	N	N/A	N/A		N/A	N/A
TD MM02	UNDERGROUND TANK SYSTEM	3,500	N	Y	N	N/A	N/A		N/A	N/A
TD MM03	UNDERGROUND TANK SYSTEM, PROPRIETARY FILTRATION DEVICE	1,600	Y	Y	N	N/A	N/A		Riprap Apron	150, 1.2 x 0.5 x 1.7
TD MM04	UNDERGROUND TANK SYSTEM, PROPRIETARY FILTRATION DEVICE	8,900	Y	Y	N	N/A	N/A		Riprap Apron	150, 1.2 x 0.5 x 1.7
TD MM05	PROPRIETARY FILTRATION DEVICE	2,720	Y	N	N	N/A	N/A		Riprap Apron	150, 1.2 x 0.5 x 1.7



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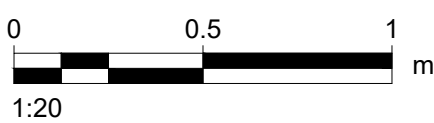
PROJECT



REGISTRATION



SCALE



PROJECT MANAGEMENT INITIALS

JL	DSP	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

1	30.06.26	ISSUED FOR CONSENT
0	05.02.26	ISSUED FOR CONSENT
I/R	DATE	DESCRIPTION

PROJECT NUMBER

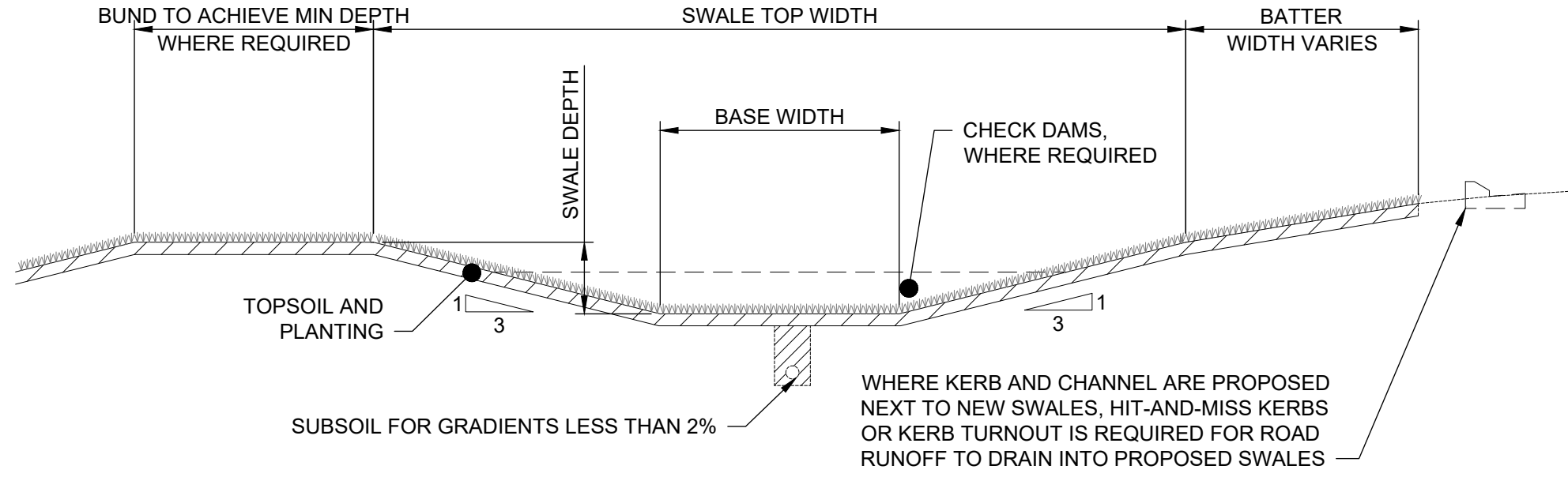
60755376

SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage Details
Rain Garden Detail and Schedule

SHEET NUMBER

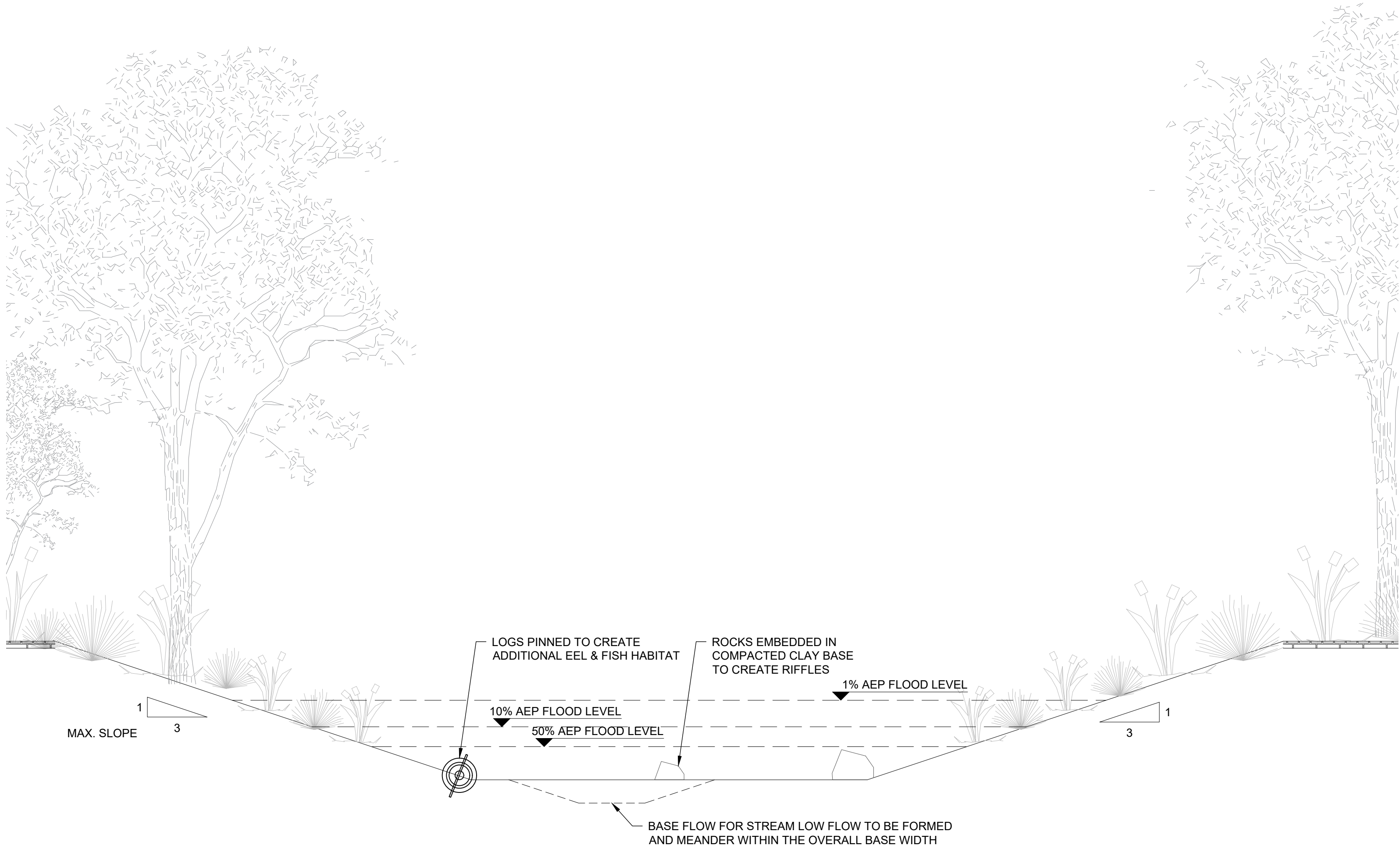
60755376-SHT-DR-0503



TYPICAL TREATMENT SWALE (TYPE T1)

N.T.S.

DEVICE ID	TYPE	CATCHMENT AREA	10% AEP CONVEYANCE	WATER QUALITY TREATMENT	95th PERCENTILE HYDROLOGY MITIGATION	SWALE BASE WIDTH (m)	SWALE TOP WIDTH (m)	SWALE TOTAL DEPTH (m)	SWALE CHECK DAMS
SWALE 1	PLANTED SWALE	17,800	Y	Y	N	2.0	8.0	1.0	N
SWALE 2	PLANTED SWALE	12,800	Y	Y	N	1.0	5.5	0.8	Y
SWALE 3	PLANTED SWALE	16,000	Y	Y	N	1.0	5.5	0.8	N
SWALE 4	PLANTED SWALE	3,200	Y	Y	N	1.0	4.6	0.6	N
SWALE 5	PLANTED SWALE	6,500	Y	Y	Y	1.0	5.5	0.8	Y
SWALE 6	PLANTED SWALE	11,200	Y	Y	Y	2.0	6.5	0.8	Y
SWALE 7	PLANTED SWALE	2,800	Y	Y	Y	2.0	6.5	0.8	Y
SWALE 8	PLANTED SWALE	2,800	Y	Y	Y	1.0	4.6	0.6	Y



TYPICAL STREAM CHANNEL DETAIL

Scale 1:25m

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PROJECT

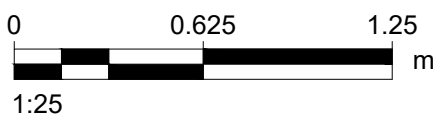
Mill Road - Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

FOR CONSENT

SCALE



PROJECT MANAGEMENT INITIALS

JL DESIGNER	DSP CHECKED	DM APPROVED
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PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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PROJECT NUMBER

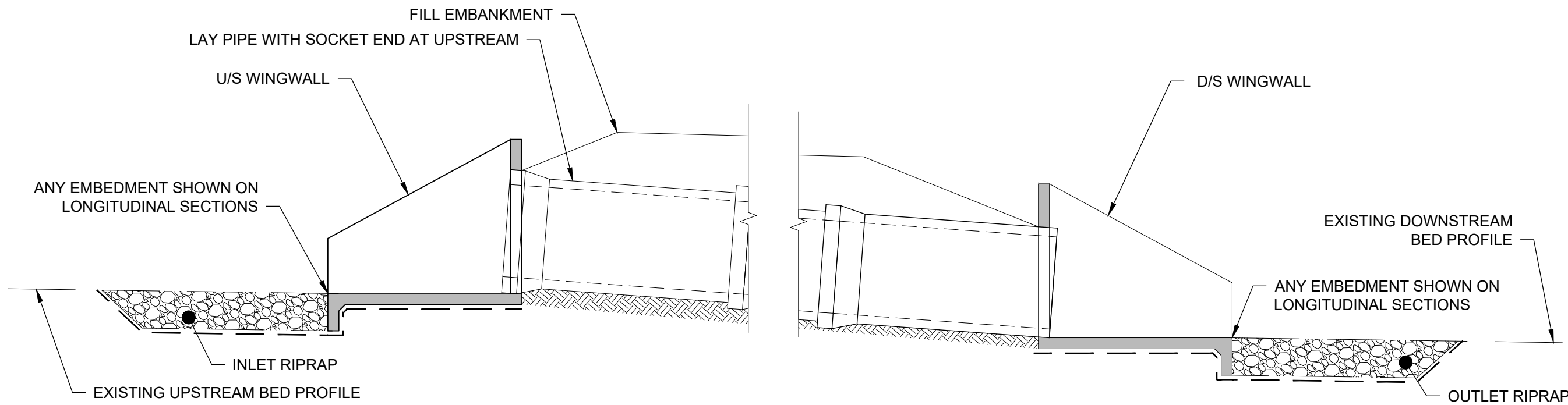
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SHEET TITLE

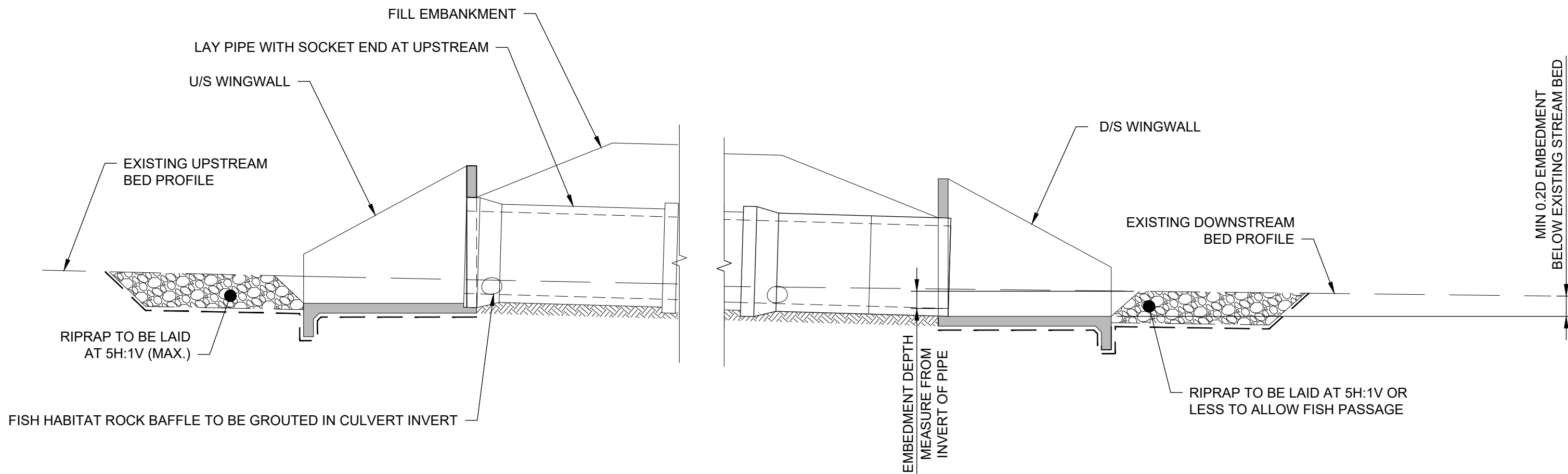
Mill Road RoNS Stage 1 FTA
Drainage Details
Swales and Stream Channel

SHEET NUMBER

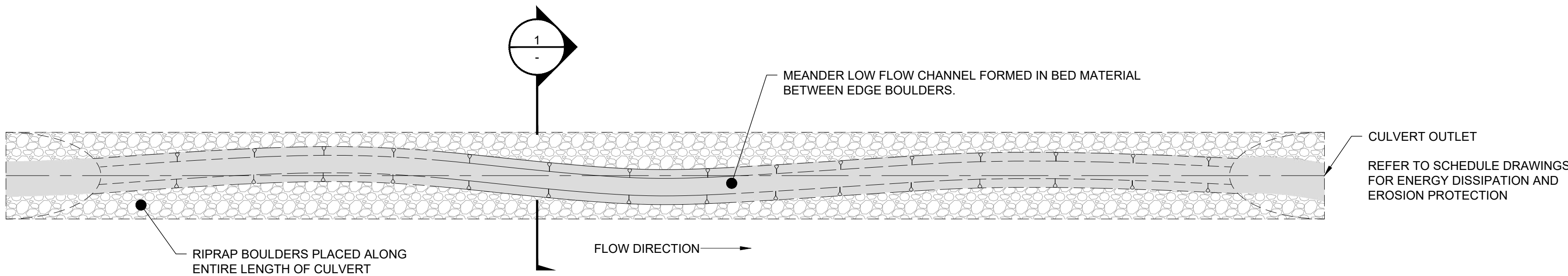
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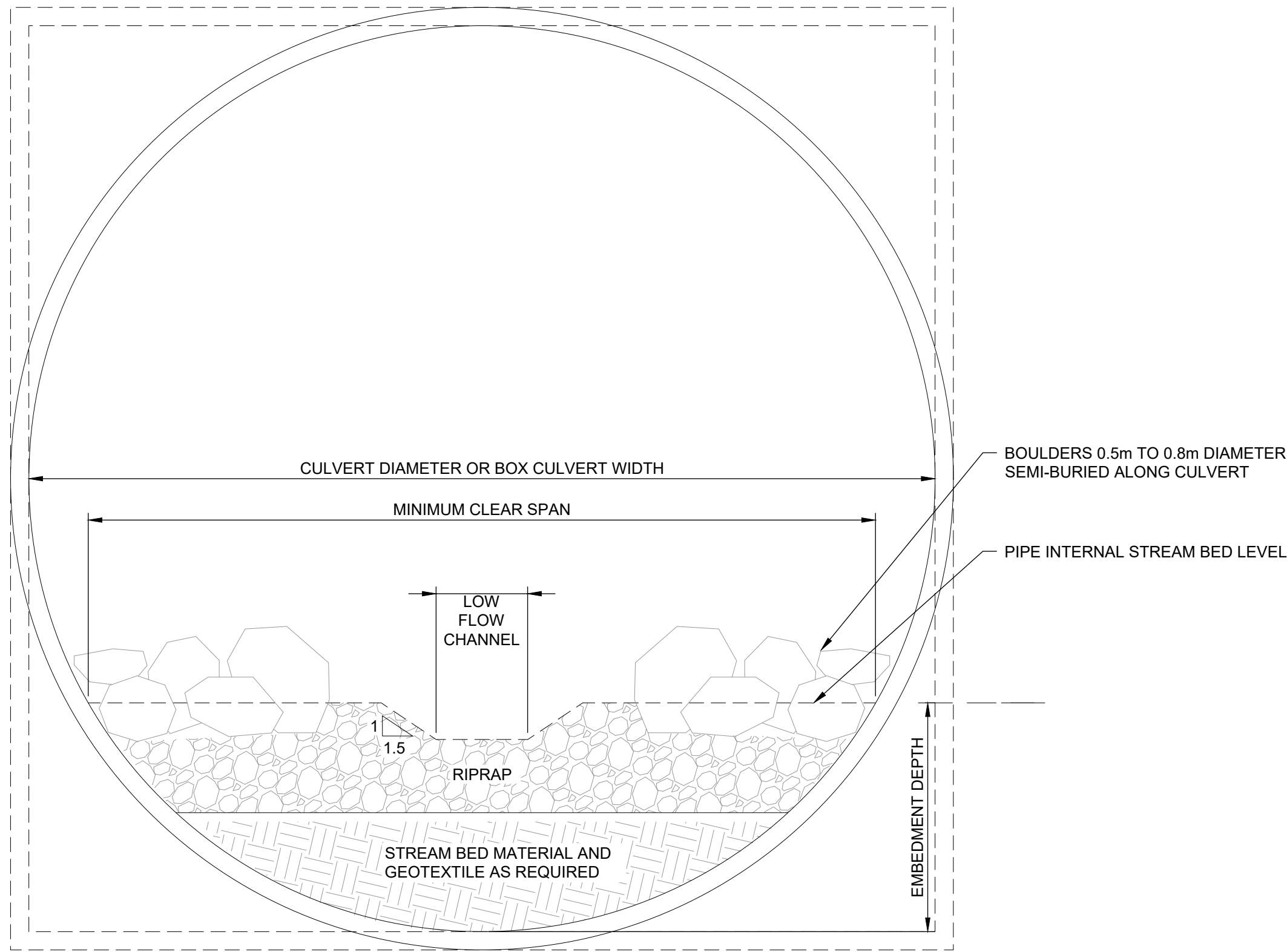
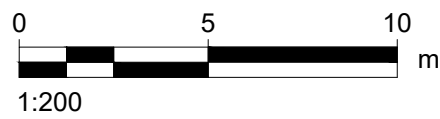
CULVERT PIPE - TYPICAL DETAIL
N.T.S.



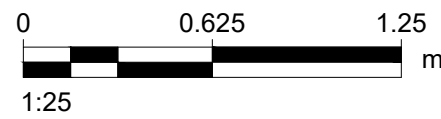
EMBEDDED FISH PASSAGE CULVERT PIPE - TYPICAL DETAIL
N.T.S.



FISH PASSAGE CULVERT - TYPICAL INTERNAL BED PLAN
Scale 1:200m



1 CULVERT WITH FISH PASSAGE - INTERNAL SECTION
Scale 1:25m



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Mill Road - Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

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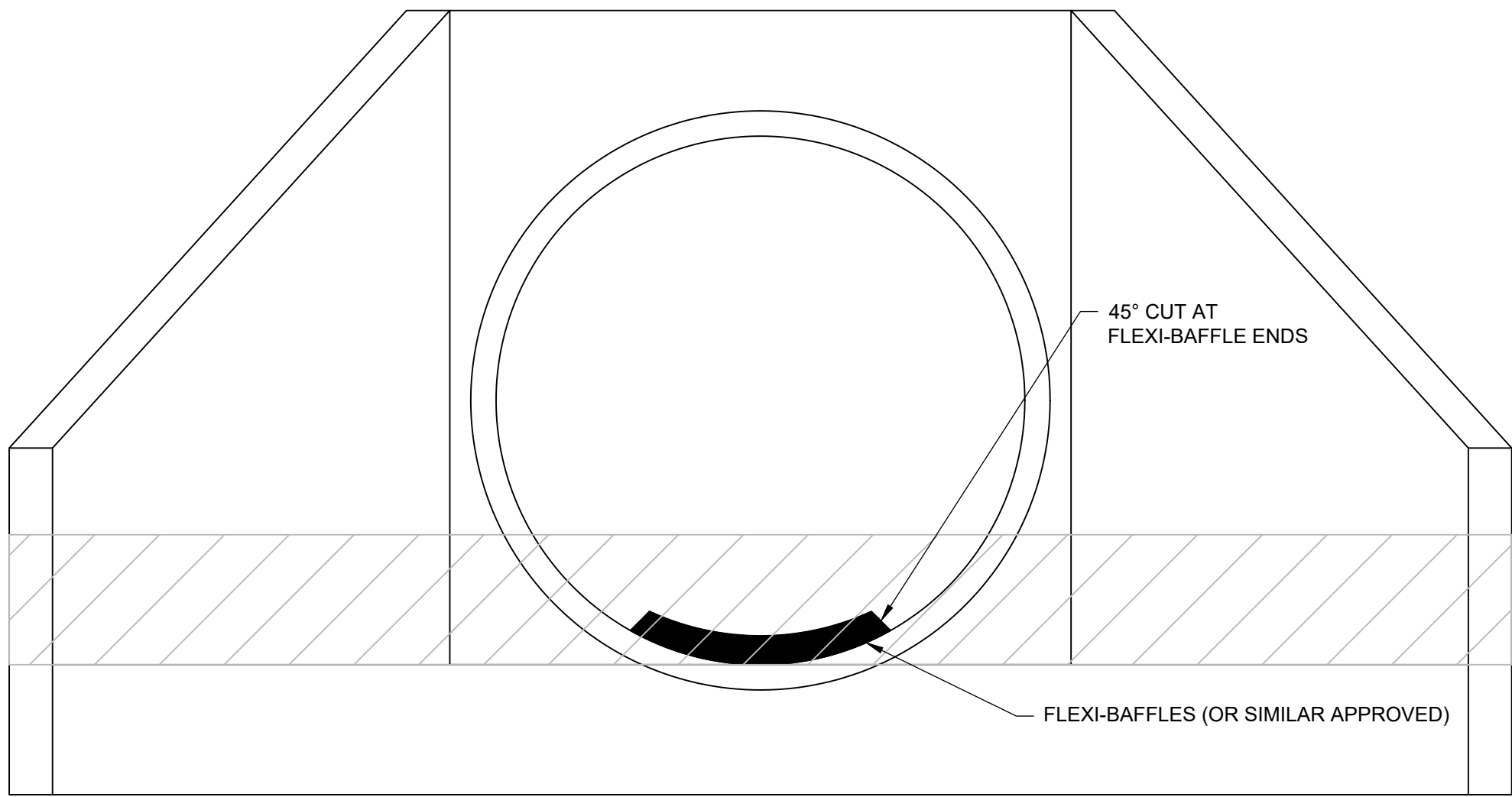
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SHEET TITLE

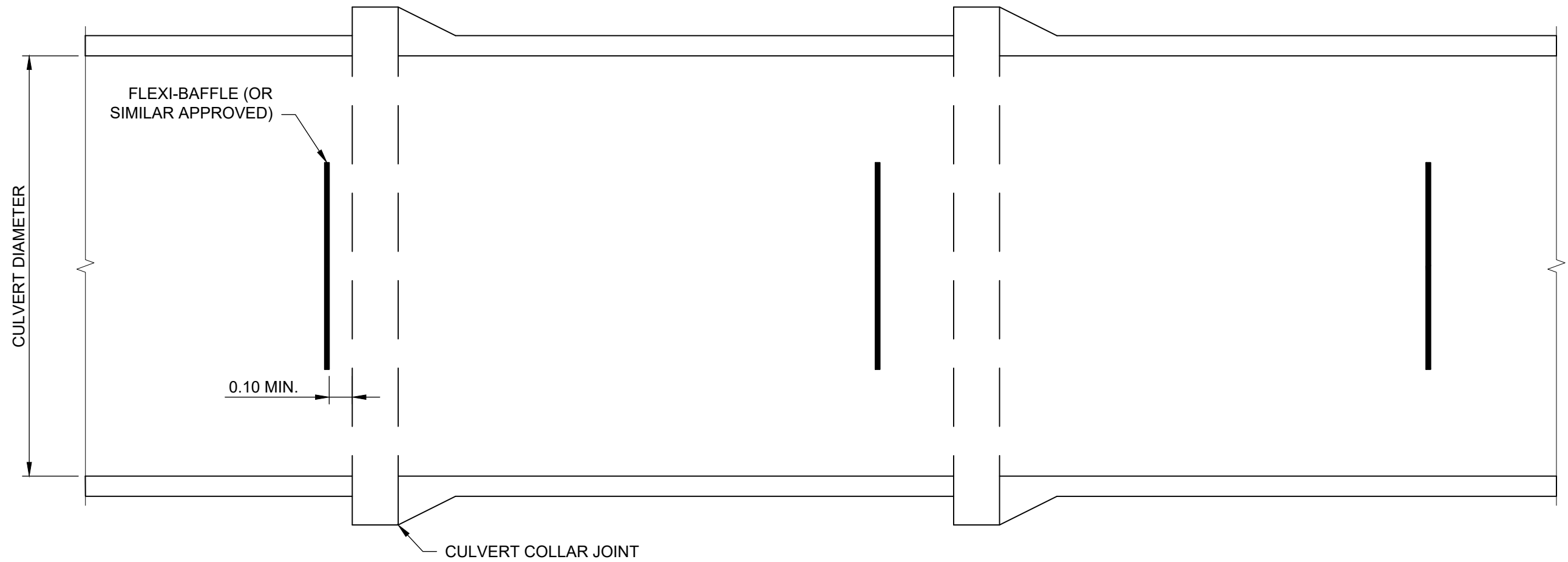
Mill Road RoNS Stage 1 FTA
Drainage Details
Culvert With Embedded Fish Passage

SHEET NUMBER

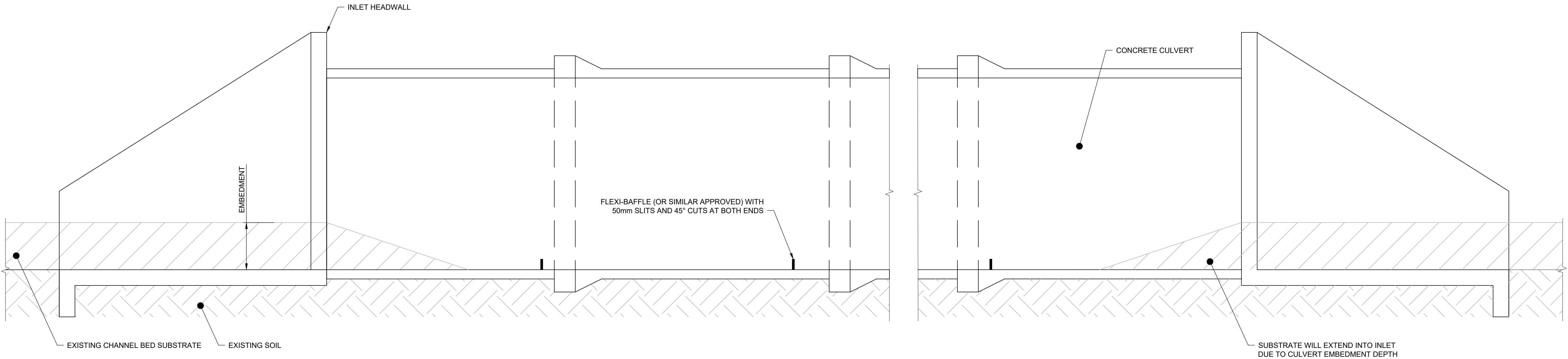
60755376-SHT-DR-0505



TYPICAL BAFFLE LAYOUT - FRONT VIEW
Scale 1:20m



TYPICAL BAFFLE LAYOUT - PLAN VIEW
Scale 1:20m



TYPICAL BAFFLE LAYOUT - ELEVATION VIEW
Scale 1:20m

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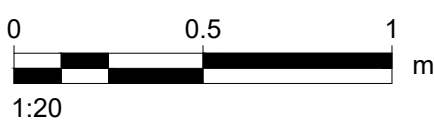
PROJECT



REGISTRATION



SCALE



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PROJECT DATA

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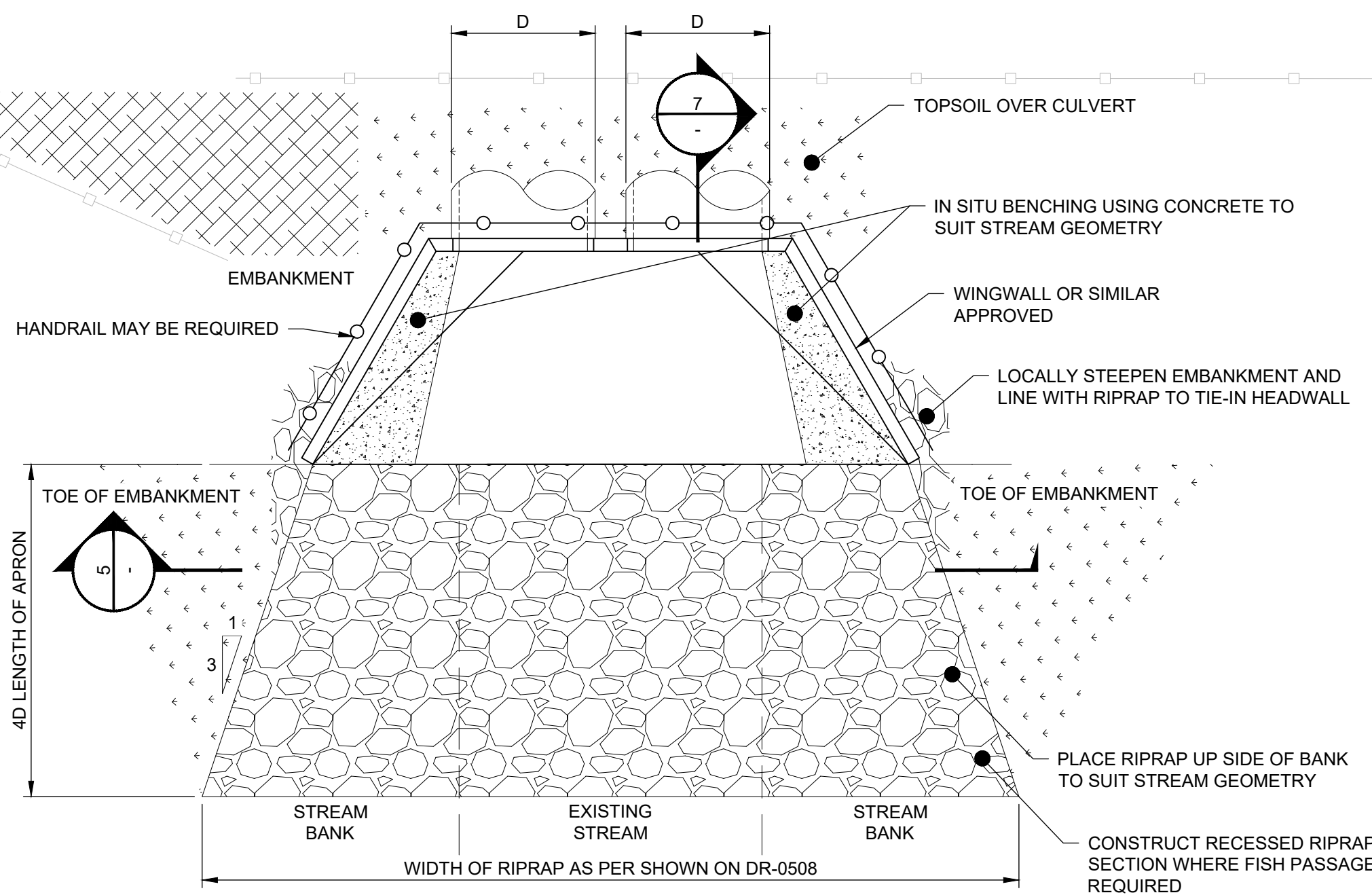
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SHEET TITLE

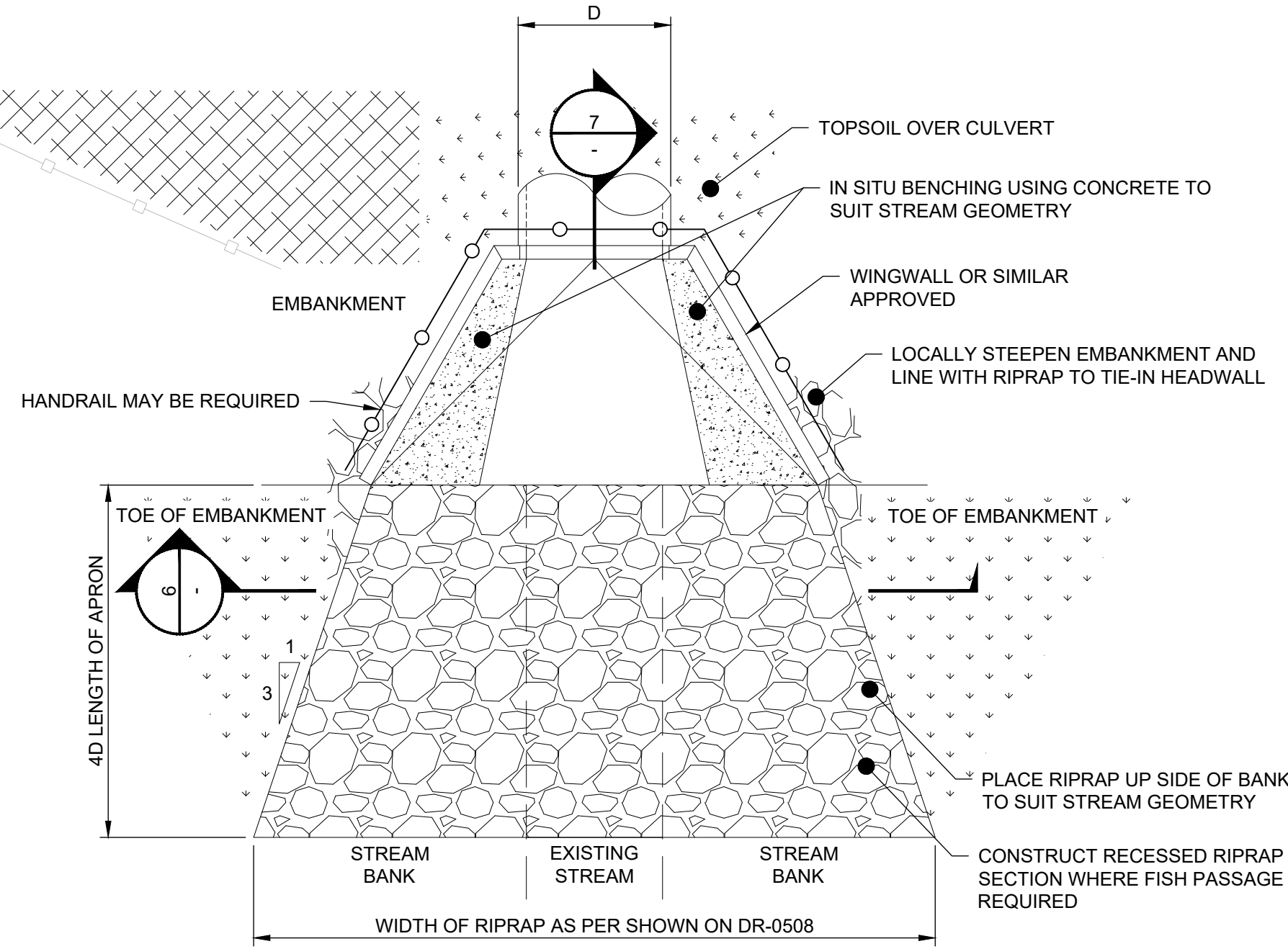
Mill Road RoNS Stage 1 FTA
Drainage Details
Culvert With Baffles

SHEET NUMBER

60755376-SHT-DR-0506

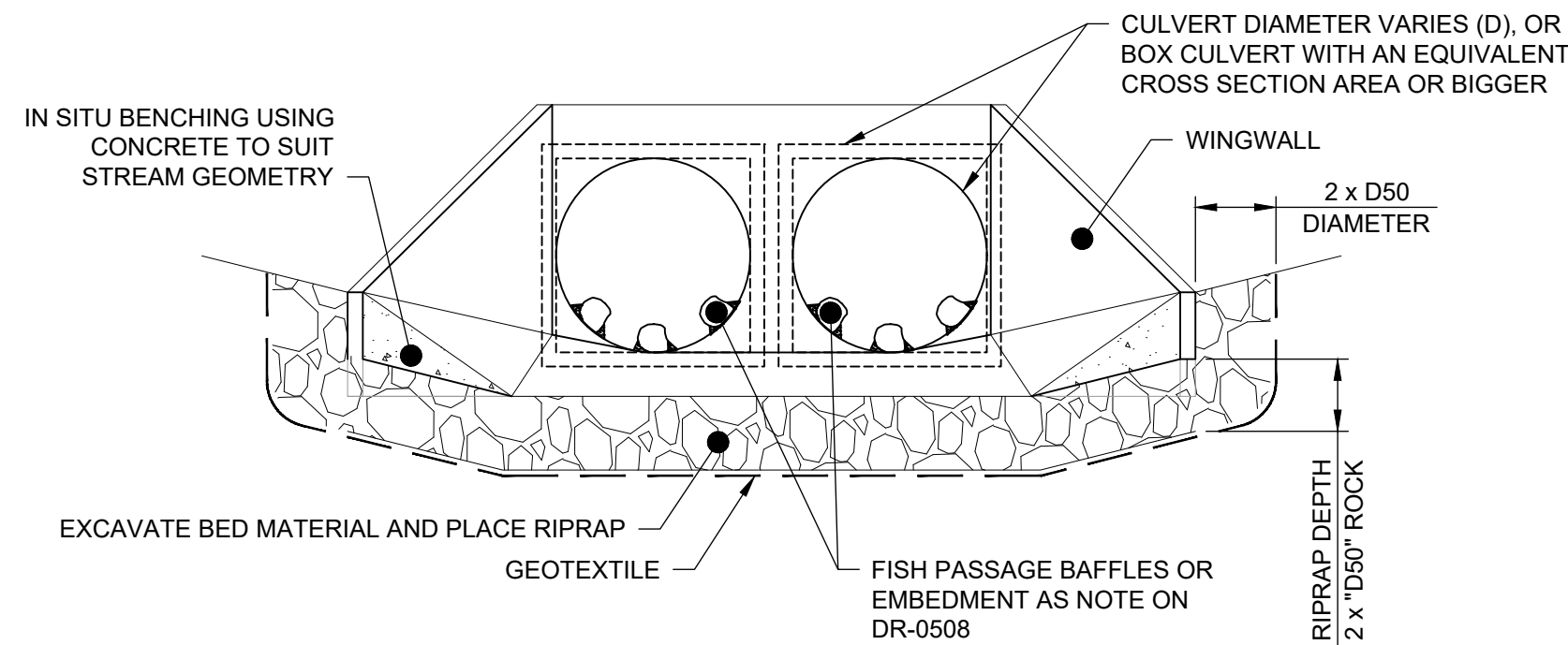


A | MULTIPLE BARREL PIPE - TYPICAL RIPRAP APRON
N.T.S.

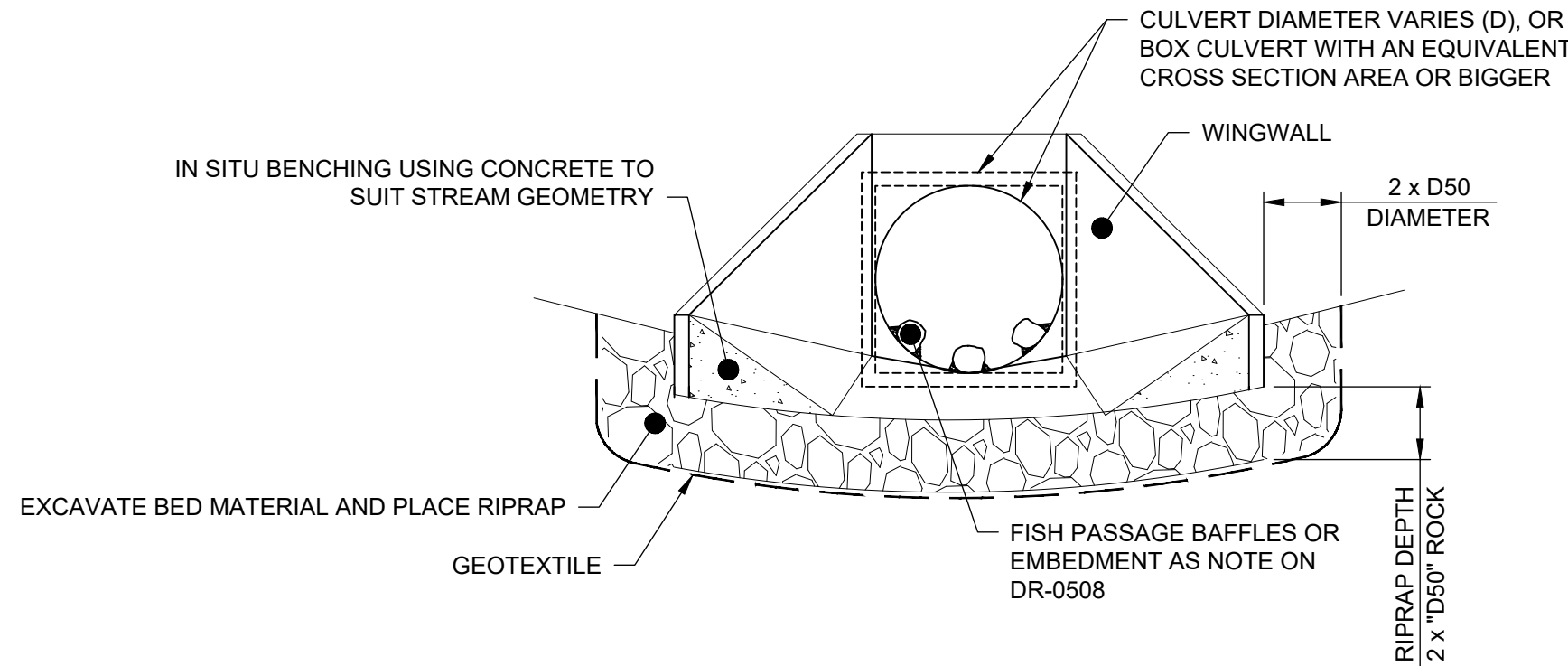


B | SINGLE BARREL PIPE - TYPICAL RIPRAP APRON
N.T.S.

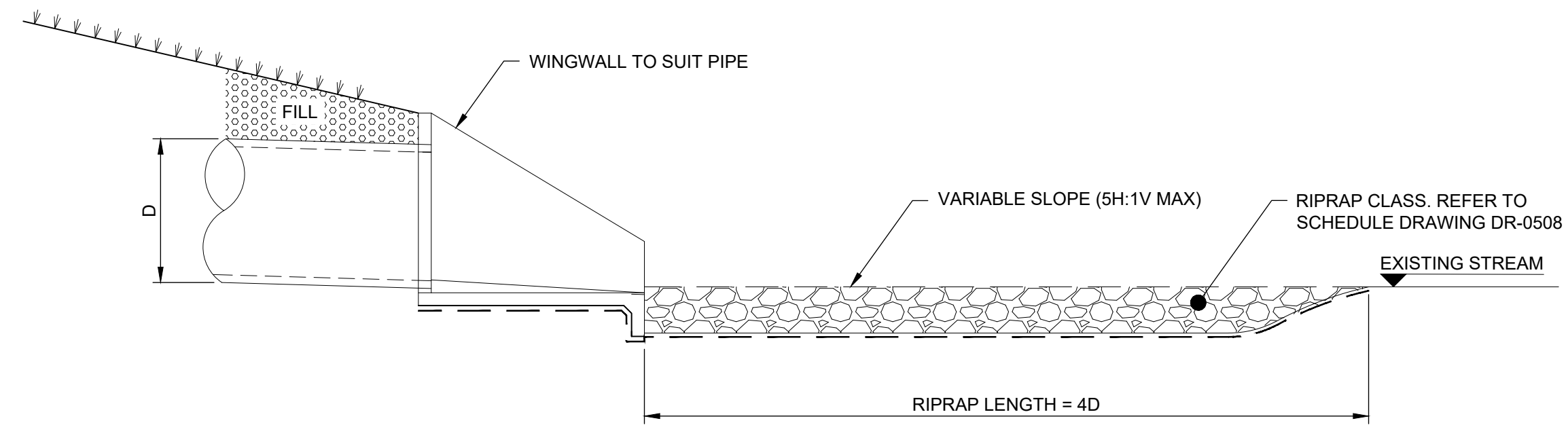
- APRON NOTES:
1. RIPRAP APRON IS TO BE PLACED FLAT. WHERE THIS CANNOT BE ACHIEVED, THE APRON SHALL NOT BE STEEPER THAN 10H:1V.
 2. GEOTEXTILE MATERIAL TO OVERLAP BY 300mm AND EXTEND 300mm BEYOND ROCK. SECURE THE FILTER CLOTH AT THE EDGES VIA SECURE PINS.



5 | MULTIPLE BARREL PIPE - TYPICAL RIPRAP APRON
N.T.S.



6 | SINGLE BARREL PIPE - TYPICAL RIPRAP APRON
N.T.S.



7 | TYPICAL RIPRAP SCOUR PROTECTION
N.T.S.

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PROJECT

Mill Road - Stage 1
Consenting Design
Roads of National Significance

REGISTRATION

FOR CONSENT

PROJECT MANAGEMENT INITIALS

JL DESIGNER	DSP CHECKED	DM APPROVED
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PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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ISSUE/REVISION

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PROJECT NUMBER

60755376

SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage Details
Culvert Outfalls

SHEET NUMBER

60755376-SHT-DR-0507

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Mill Road - Stage 1

Consenting Design

Roads of National Significance

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PROJECT MANAGEMENT INITIALS

JL DESIGNER	DSP CHECKED	DM APPROVED
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DATUM	AUK46	SURVEY	NZTM
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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60755376

SHEET TITLE

Mill Road RoNS Stage 1 FTA
Drainage Details
Culvert and Schedules

SHEET NUMBER

60755376-SHT-DR-0508



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Mill Road - Stage 1
Consenting Design

Roads of National Significance

REGISTRATION

FOR CONSENT

SCALE

N.T.S.

PROJECT MANAGEMENT INITIALS

SS	DG	DM
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	AUK46	SURVEY	NZTM
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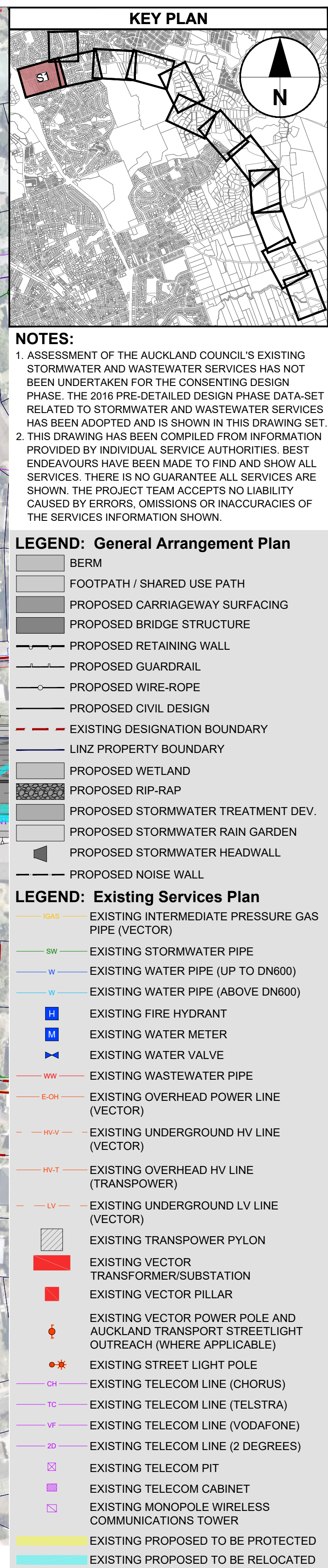
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SHEET TITLE

Mill Road RoNS Stage 1 FTA
Existing Services Plan
Sheet Layout Plan

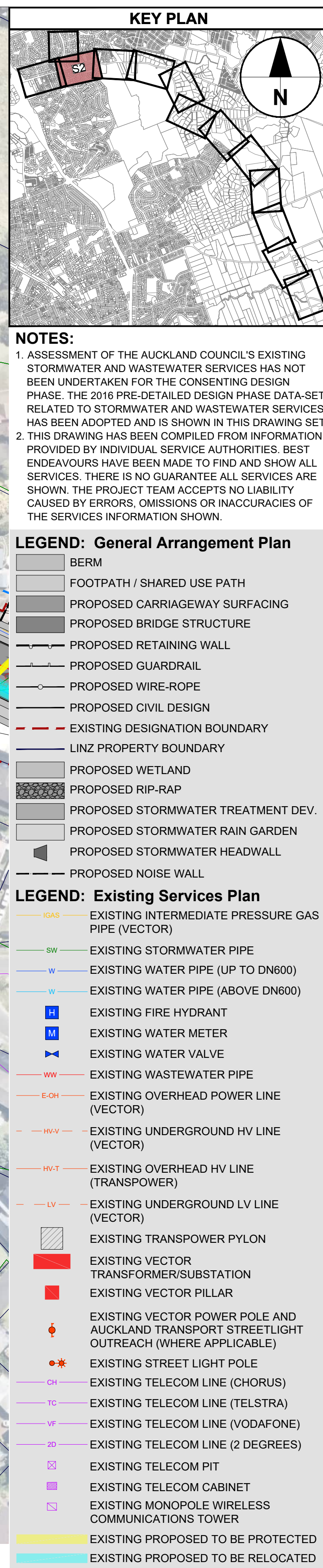
SHEET NUMBER

60755376-SHT-UT-0100



Scale 1:1000m @ A1

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Scale 1:1000m @ A1

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60755376-SHT-UT-0102

SCALE

