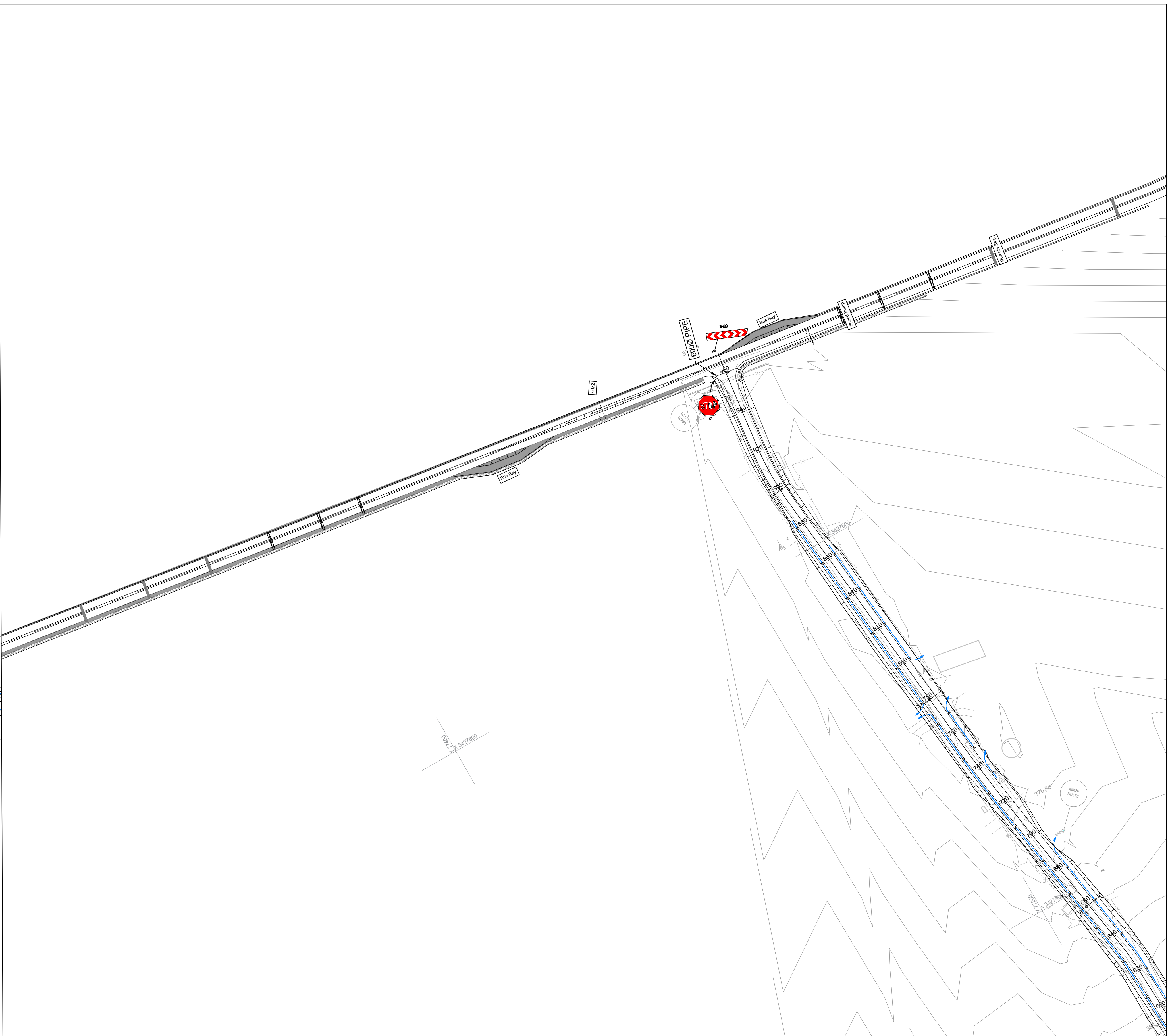




LEGEND	
SYMBOL	DESCRIPTION
	PIPE CULVERT AND HEADWALLS
	PIPE CULVERT, HEADWALL AND DROP INLET
	ROAD CENTRE LINE
	2400 GRASSY LINER V DRAIN (SD 060/13)
	CONCRETE V DRAIN (SD 060/1C)
	1000 CONCRETE LINER V DRAIN (SD 060/12)
	CHUTE (SD 060/5A)
	LIMIT OF CONSTRUCTION
	NEW ROAD RESERVE
	EXISTING ROAD RESERVE
	EXISTING FENCE LINE
	GUARDRAIL
	CHANGE OF SPEED LIMIT

Name	Round 2 Horizontal Data		Y-Coord	X-Coord
	Chains	Radius		
BC1	43.05	1	77527 013	K23035 136
BC2	52.85	1	77504 386	K23815 106
BC3	51.01	1	77502 802	K23830 106
BC4	50.05	1	77498 299	K23037 508
BC5	50.05	1	77498 299	K23037 508
BC6	50.05	1	77498 299	K23037 508
BC7	50.05	1	77498 299	K23037 508
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BC217	50.05	1	77498 299	K23037 508
BC218	50.05	1	77498 299	K23037 508

GENERAL NOTES

- All levels, dimensions and setting out details to be verified by Consultant and Contractors on site prior to construction
- All existing drainage culverts are to be inspected, and any found in unserviceable condition are to be replaced unless shown otherwise.
- Culvert inlets are to be decided by Engineer on site unless shown otherwise. Min. cover = 600mm, min. slope = 2%.
- Pipe culverts are to be laid in accordance with SDD401 with headwalls as per SD 0402, SD 0403 or SD 0406. Min dia = 450mm for minor access broadband access bell-mouths, and min dia = 600mm for major road cross drainage.
- Box culverts 3m high are to be constructed in accordance with SD 0404 or SD 0407. Box culverts >1.8m high are to be appropriately designed by a Structural Engineer in Accordance with KZN DOT Standards.
- For erosion control reno mattresses are recommended at culvert inlets and outlets.
- Earth berms are to be constructed at culvert inlets to direct stormwater into culverts were necessary.
- Rock bolsters are to be placed across the invert of drains susceptible to erosion for every 2m vertical drop.
- Grassed/Concrete lined V-drains as per SD 0601/3, 4 are recommended for shallow culverts of depth less than 50mm measured at a point 6m from edge of carriageway. Concrete lined 1000 V-drains as per SD 0601/2 are recommended for deep cuttings of depth greater than 5m measured at a point 6m from edge of carriageway.
- Subsoil drains as per SD 0501 are to be are to be installed with 1000 V-drains or where high water tables are encountered.
- Kerb and Channel drains as per SD 0701 are to be provided where fill embankments exceed 3m in height, also used in cuts here.
- Where surface runoff is toward the road, catch - water banks are to be provided to divert stormwater to major cross drainage structures.
- The road surface accesses are to be determined in consultation with the local community. Daylighting requirements are to be decided by the Engineer on site. Concrete Wedges as per SD 0303 may be used in place of surface bell-mouths for accesses serving single residential properties.
- Guardrails are to be installed in accordance with SD 1101 and SD 1102 where fill embankments exceed 3m height or where hazardous obstructions cannot be removed.
- Road signs, traffic service and fencing affected by construction are to be removed /relocated where necessary.
- Underground service crossings and markers are to be in accordance with SD 1001-3.
- All new road signs and road marking requirements are to conform to the Southern African Road Development Community Road Traffic Signs Manual (SADC - RTSM)
- All work is to be carried out in accordance with COLTO Specifications for Road and Bridge Works for State Road Authorities.
- All survey and setting out data provided is based on (WGS 84)
- New fill and exposed cuttings are to be top-soiled and vegetated immediately after Construction to prevent erosion.

PIPE CROSSING ESTIMATED - ROAD 2												
No.	CH Position	Size (mm)	Pipe Class	Type	Bedding Class	Estimated Length (m)	Skew	Headwall	Drop Inlet	Flow (m ³ /s)	Velocity (m/s)	Catchment Area (km ²)
01	120	900	1000	GI	C	17.70	0	2	0	0.180	1.7	0.026
02	220	900	1000	GI	C	12.50	0	2	2	0.21	1.5	0.015
03	320	600	1000	GI	C	11.20	0	2	0	0.358	1.5	0.051
04	420	600	1000	GI	C	16.40	0	2	0	0.134	1.7	0.019
05	520	600	1000	GI	C	17.70	0	2	0	0.176	1.5	0.025
06	620	600	1000	GI	C	17.70	0	2	2	0.12	1.5	0.018
07	720	600	1000	GI	C	28.00	0	2	0	5.838	1.7	0.840
08	780	900	1000	GI	C	17.70	0	2	0	0.289	1.5	0.042
09	880	900	1000	GI	C	17.70	0	2	0	0.143	1.5	0.020
10	980	600	1000	GI	C	28.00	0	2	0	8.838	1.7	0.840

[illegible]