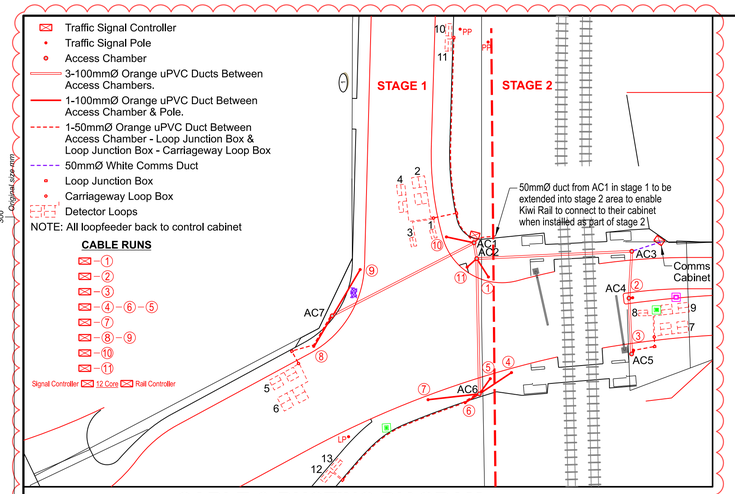
Traffic Signal Controller
Traffic Signal Pole
Access Chamber
3-100mmØ Orange uPVC Ducts Between Access Chambers.
1-100mmØ Orange uPVC Duct Between Access Chamber & Pole.
1-50mmØ Orange uPVC Duct Between Access Chamber - Loop Junction Box & Loop Junction Box - Carriageway Loop Box
50mmØ White Comms Duct
Loop Junction Box
Carriageway Loop Box
Detector Loops

NOTE: All loopfeeder back to control cabinet

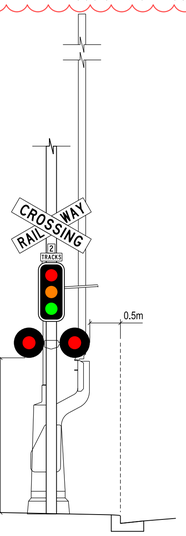
CABLE RUNS

Signal Controller — 12 Core — Rail Controller



CABLE & DUCTING DIAGRAM

1:500 at A1 / 1:1000 at A3

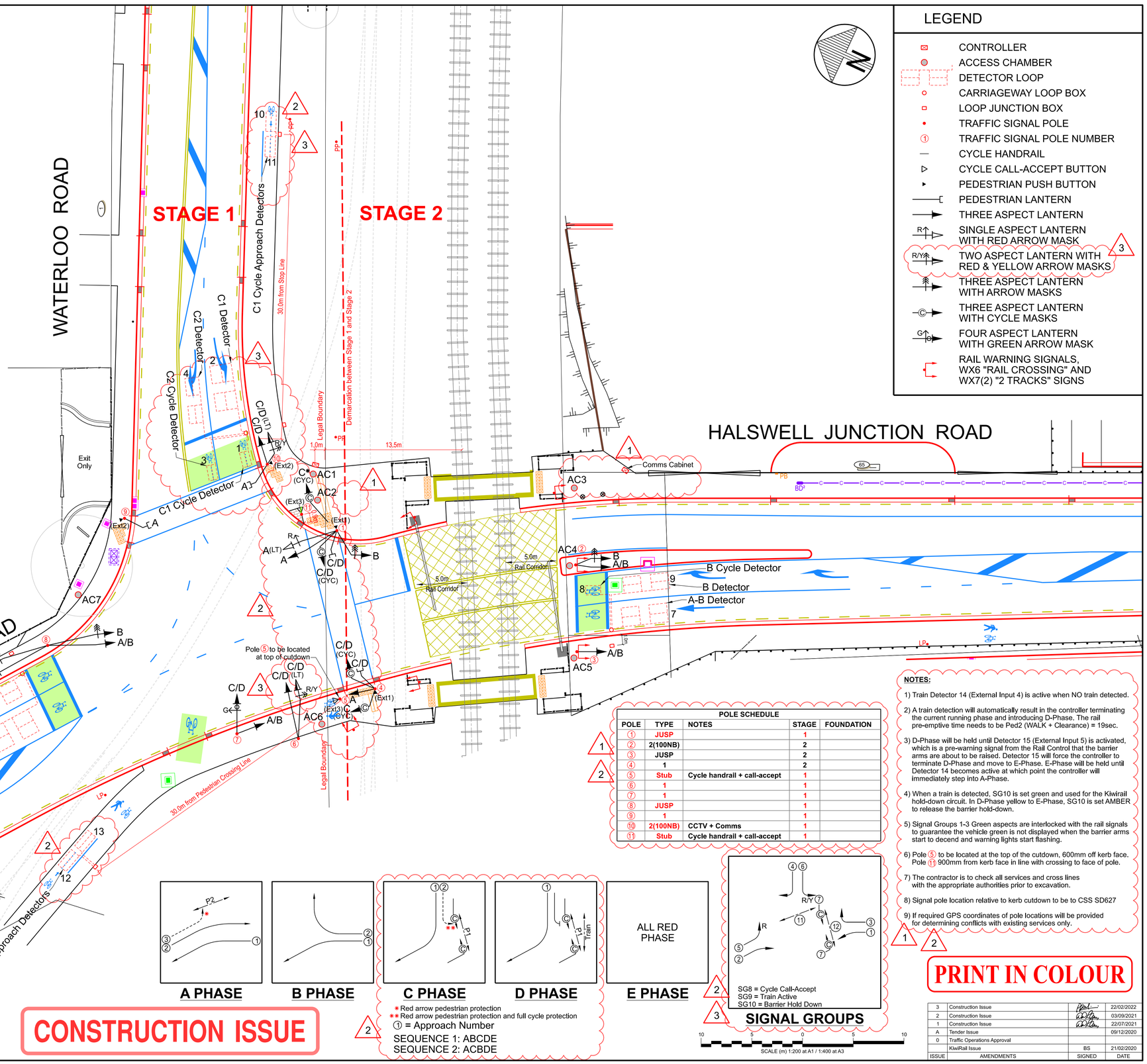


POLE 3

(Pole 2 Similar)

1:50

NOTE:
Rail warning signals, WX6 "RAIL CROSSING" sign and WX7(2) "2 TRACKS" sign to be mounted on pole 2 and 3. Pole 3 is located back from the face of kerb to achieve a minimum 0.5m offset from the right hand edge of the rail warning lights to the face of kerb.



LEGEND

- CONTROLLER
- ACCESS CHAMBER
- DETECTOR LOOP
- CARRIAGEWAY LOOP BOX
- LOOP JUNCTION BOX
- TRAFFIC SIGNAL POLE
- TRAFFIC SIGNAL POLE NUMBER
- CYCLE HANDRAIL
- CYCLE CALL-ACCEPT BUTTON
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN LANTERN
- THREE ASPECT LANTERN
- SINGLE ASPECT LANTERN WITH RED ARROW MASK
- TWO ASPECT LANTERN WITH RED & YELLOW ARROW MASKS
- THREE ASPECT LANTERN WITH ARROW MASKS
- THREE ASPECT LANTERN WITH CYCLE MASKS
- FOUR ASPECT LANTERN WITH GREEN ARROW MASK
- RAIL WARNING SIGNALS, WX6 "RAIL CROSSING" AND WX7(2) "2 TRACKS" SIGNS

POLE SCHEDULE

POLE	TYPE	NOTES	STAGE	FOUNDATION
1	JUSP		1	
2	2(100NB)		2	
3	JUSP		2	
4	1		2	
5	Stub	Cycle handrail + call-accept	1	
6	1		1	
7	1		1	
8	JUSP		1	
9	1		1	
10	2(100NB)	CCTV + Comms	1	
11	Stub	Cycle handrail + call-accept	1	

NOTES:

1) Train Detector 14 (External Input 4) is active when NO train detected.
2) A train detection will automatically result in the controller terminating the current running phase and introducing D-Phase. The rail pre-emptive time needs to be Ped2 (WALK + Clearance) = 19sec.
3) D-Phase will be held until Detector 15 (External Input 5) is activated, which is a pre-warning signal from the Rail Control that the barrier arms are about to be raised. Detector 15 will force the controller to terminate D-Phase and move to E-Phase. E-Phase will be held until Detector 14 becomes active at which point the controller will immediately step into A-Phase.
4) When a train is detected, SG10 is set green and used for the Kiwirail hold-down circuit. In D-Phase yellow to E-Phase, SG10 is set AMBER to release the barrier hold-down.
5) Signal Groups 1-3 Green aspects are interlocked with the rail signals to guarantee the vehicle green is not displayed when the barrier arms start to decend and warning lights start flashing.
6) Pole (5) to be located at the top of the cutdown, 600mm off kerb face. Pole (11) 900mm from kerb face in line with crossing to face of pole.
7) The contractor is to check all services and cross lines with the appropriate authorities prior to excavation.
8) Signal pole location relative to kerb cutdown to be to CSS SD627
9) If required GPS coordinates of pole locations will be provided for determining conflicts with existing services only.

* Red arrow pedestrian protection
** Red arrow pedestrian protection and full cycle protection
(1) = Approach Number
SEQUENCE 1: ABCDE
SEQUENCE 2: ACBDE

SIGNAL GROUPS

SCALE (m) 1:200 at A1 / 1:400 at A3

CONSTRUCTION ISSUE

PRINT IN COLOUR

ISSUE	AMENDMENTS	SIGNED	DATE
3	Construction Issue		22/02/2022
2	Construction Issue		03/09/2021
1	Construction Issue		22/07/2021
A	Tender Issue		09/12/2020
0	Traffic Operations Approval		
	KiwiRail Issue	BS	21/02/2020

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Christchurch City Council
TECHNICAL SERVICES & DESIGN

			NAME	SIGNED	DATE
DATUM	C.D.D.				
BENCH MK.		DESIGNED	B. Sissons	BS	12/2020
RL		DES. REVIEW			
SURVEY		DRAWN	S.J. Pratt	SP	12/2020
SURVEY LB		DRW. CHECK			
		FILE LOCATION			
DRAIN. REF.		S:\Data\Dgn\V8\Traffic\ts11100\ts117801.dgn			
SAP WBS		PRINTED ON 22/02/2022 BY pratts			

APPROVED

FOR TENDER	
DATE	SIGNED
09/12/2020	
FOR CONSTRUCTION	
DATE	SIGNED
22/07/2021	

CONSULTANT
CONSULTANT PROJECT REF.
CONSULTANT FILE REF.

PROJECT TITLE
HALSWELL JUNCTION ROAD / WATERLOO ROAD INTERSECTION

DRAWING TITLE
TRAFFIC SIGNALS AND PAVEMENT MARKINGS

DOCUMENT NUMBER	ORIGINAL SHEET SIZE	SCALES
CAD DRAWING FILE REF. TS117801.dgn	A1	1:200 @ A1 1:400 @ A3
TSD PROJECT FILE NUMBER CP502128		INTERSECTION NUMBER 518