FOR APPROVAL
18/03/2020
DATE

cook | costello

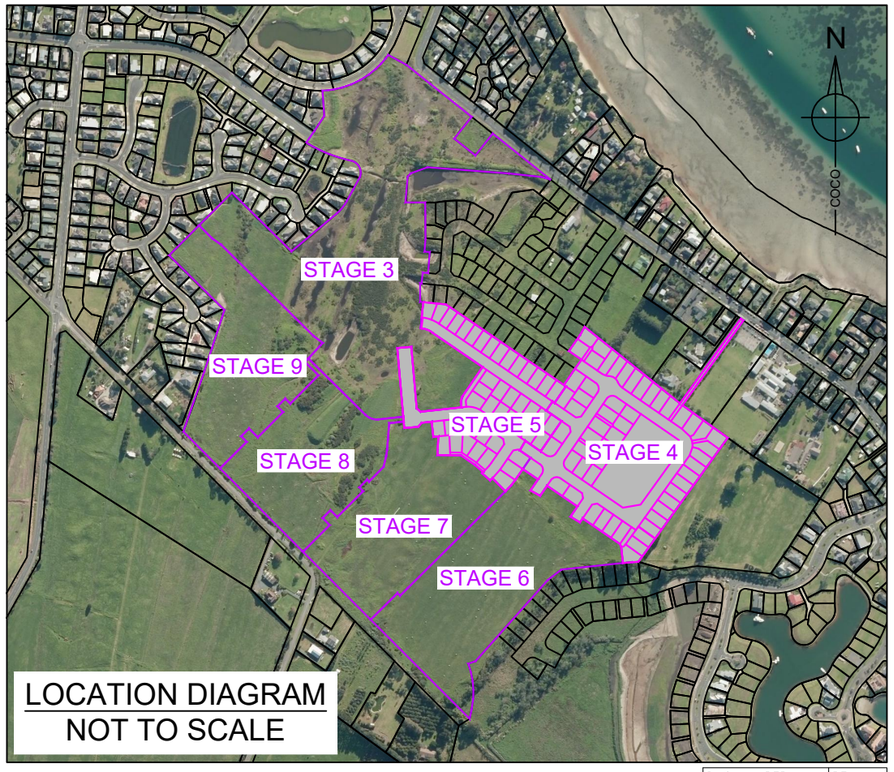
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

PROPOSED CIVIL DETAIL DESIGN PLANS

FOR WFH PROPERTIES LTD, THE LANDING, STAGES 4 & 5, ONE TREE POINT

WDC REF: SD1800110

JOB NO:14333-004
DATE: 18 MARCH 2020



LOCATION DIAGRAM
NOT TO SCALE

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

DWG NUMBER	REV.
DD000	C

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCHEDULE OF DRAWINGS

SHEET #	TITLE	REV
	DD000 - GENERAL	
DD000	COVER SHEET	C
DD001	DRAWING INDEX	C
DD002	CONSTRUCTION NOTES	C
	DD100 - EXISTING SERVICES	
DD100	EXISTING SERVICES OVERVIEW PLAN	B
DD101	EXISTING SERVICES - SHEET 1	B
DD102	EXISTING SERVICES - SHEET 2	B
DD103	EXISTING SERVICES - SHEET 3	B
	DD200 - PROPOSED LAYOUT	
DD200	PROPOSED LAYOUT - OVERVIEW PLAN	C
DD201	PROPOSED LAYOUT - STAGES 4 & 5	C
	EROSION SEDIMENT CONTROL PLAN	
	SEE STAGES 4 & 5 EARTHWORKS PLAN	
	BULK EARTHWORKS	
	SEE STAGES 4 & 5 EARTHWORKS PLAN	
	DD500 - ROADING	
DD500	ROADING LAYOUT OVERVIEW PLAN	C
DD501	ROADING LAYOUT - SHEET 1	C
DD502	ROADING LAYOUT - SHEET 2	C
DD503	ROADING LAYOUT - SHEET 3	C
DD504	ROADING LAYOUT - SHEET 4	C
DD505	ROADING LAYOUT - SHEET 5	C
DD506	ROADING LAYOUT - SHEET 6	C
DD507	ROADING LAYOUT - SHEET 7	C
DD508	ROADING LAYOUT - SHEET 8	C
DD509	ROADING LAYOUT - SHEET 9	C
DD510	ROADING TYPICAL SECTIONS - SHEET 1	C
DD511	ROADING TYPICAL SECTIONS - SHEET 2	C
DD512	COMBINED SERVICE TRENCH DETAILS	B
DD513	TYPICAL ROUNDABOUT & SPEED HUMP DETAILS	B
DD514	TYPICAL PAVEMENT DETAILS	C
DD515	TYPICAL SPEED TABLES	A
DD520	ROAD LONGSECTIONS - SHEET 1	C
DD521	ROAD LONGSECTIONS - SHEET 2	C
DD522	ROAD LONGSECTIONS - SHEET 3	C
DD523	ROAD LONGSECTIONS - SHEET 4	C
DD524	JOAL LONGSECTIONS - SHEET 1	C
DD525	JOAL LONGSECTIONS - SHEET 2	C
DD530	ROAD CROSS SECTIONS - SHEET 1	B
DD531	ROAD CROSS SECTIONS - SHEET 2	B
DD532	ROAD CROSS SECTIONS - SHEET 3	B
DD533	ROAD CROSS SECTIONS - SHEET 4	B
DD534	ROAD CROSS SECTIONS - SHEET 5	B
DD535	ROAD CROSS SECTIONS - SHEET 6	B
DD536	ROAD CROSS SECTIONS - SHEET 7	B
DD537	ROAD CROSS SECTIONS - SHEET 8	B
DD538	ROAD CROSS SECTIONS - SHEET 9	B
DD539	ROAD CROSS SECTIONS - SHEET 10	B
DD550	KERB RETURNS ROUNDABOUT 12 PLAN	C
DD551	KERB RETURNS ROUNDABOUT 12 LONGSECTIONS	B
DD552	KERB RETURNS ROUNDABOUT 12 LONGSECTIONS	B
DD553	KERB RETURNS ROUNDABOUT 13	C
DD554	KERB RETURNS ROUNDABOUT 13 LONGSECTIONS	B
DD555	KERB RETURNS ROUNDABOUT 13 LONGSECTIONS	B
DD556	KERB RETURNS INTERSECTION OF ROADS 5 & 6	C
DD557	KERB RETURNS INTERSECTION OF ROADS 4 & 8	C
DD558	KERB RETURNS INTERSECTION OF ROADS 7 & 19	C
DD559	KERB RETURNS INTERSECTION OF ROADS 10 & 19	C
DD560	LINEMARKING & SIGNPOSTING PLAN - ROUNDABOUT 12	B
DD561	LINEMARKING & SIGNPOSTING PLAN - ROUNDABOUT 13	B
DD562	LINEMARKING & SIGNPOSTING PLAN - INTERSECTION RD'S 4 & 8	B
DD563	LINEMARKING & SIGNPOSTING PLAN - INTERSECTION RD'S 7 & 19	B
DD564	LINEMARKING & SIGNPOSTING PLAN - INTERSECTION RD'S 10&19	B
DD565	LINEMARKING & SIGNPOSTING PLAN - INTERSECTION RD'S 5 & 6	B
DD570	VEHICLE CROSSING - JOAL 713 & 714	C
DD571	VEHICLE CROSSING - JOAL 706 & 709	C
DD572	VEHICLE CROSSING - LOT 253	C
DD573	VEHICLE CROSSING - JOAL 712 & LOTS 397, 398 & 399	C
DD574	VEHICLE CROSSING DETAILS	C
DD580	VEHICLE TRACKING CURVES ROUNDABOUT 12	B
DD581	VEHICLE TURNING CURVES ROUNDABOUT 12	B
DD582	VEHICLE TRACKING CURVES ROUNDABOUT 13	B
DD583	VEHICLE TURNING CURVES ROUNDABOUT 13	B
DD584	VEHICLE TURNING CURVES ROUNDABOUT 13	B
DD590	VEHICLE SIGHTLINES FOR ROUNDABOUT 12	B
DD591	VEHICLE SIGHTLINES FOR ROUNDABOUT 12	B
DD592	VEHICLE SIGHTLINES FOR ROUNDABOUT 13	B
DD593	VEHICLE SIGHTLINES FOR ROUNDABOUT 13	B
DD594	VEHICLE SIGHTLINES FOR ROUNDABOUT 13	B
DD595	VEHICLE SIGHTLINES FOR INTERSECTION ROADS 4 & 8	B
DD596	VEHICLE SIGHTLINES FOR INTERSECTION RD'S 7 &19 AND 5 & 6	C
DD597	VEHICLE SIGHTLINES FOR INTERSECTION ROADS 10 & 19	C
	DD600 - DRAINAGE	
DD600	STORMWATER LAYOUT OVERVIEW PLAN	C
DD601	STORMWATER LAYOUT - SHEET 1	C
DD602	STORMWATER LAYOUT - SHEET 2	C
DD603	STORMWATER LAYOUT - SHEET 3	C
DD604	STORMWATER LAYOUT - SHEET 4	C
DD605	STORMWATER LAYOUT - SHEET 5	C
DD606	STORMWATER LAYOUT - SHEET 6	C
DD607	STORMWATER LAYOUT - SHEET 7	C
DD608	STORMWATER LAYOUT - SHEET 8	C
DD609	STORMWATER LAYOUT - SHEET 9	C
DD610	SANITARY SEWER - OVERVIEW PLAN	C
DD611	SANITARY SEWER - SHEET 1	C
DD612	SANITARY SEWER - SHEET 2	C
DD613	SANITARY SEWER - SHEET 3	C
DD620	STORMWATER CATCHMENT PLAN - OVERVIEW	C
DD621	STORMWATER CATCHMENT PLAN - SHEET 1	C
DD622	STORMWATER CATCHMENT PLAN - SHEET 2	C
DD623	STORMWATER CATCHMENT PLAN - SHEET 3	C
DD625	OVERLAND FLOW PATH - OVERVIEW	C
DD626	OVERLAND FLOW PATH PLAN - SHEET 1	C
DD627	OVERLAND FLOW PATH PLAN - SHEET 2	C
DD630	STORMWATER LONGSECTIONS - SHEET 1	C
DD631	STORMWATER LONGSECTIONS - SHEET 2	C
DD632	STORMWATER LONGSECTIONS - SHEET 3	C
DD633	STORMWATER LONGSECTIONS - SHEET 4	C
DD634	STORMWATER LONGSECTIONS - SHEET 5	C
DD635	STORMWATER LONGSECTIONS - SHEET 6	C
DD636	STORMWATER LONGSECTIONS - SHEET 7	C
DD637	STORMWATER LONGSECTIONS - SHEET 8	C
DD638	STORMWATER LONGSECTIONS - SHEET 9	C
DD639	STORMWATER LONGSECTIONS - SHEET 10	C
DD640	STORMWATER LONGSECTIONS - SHEET 11	C
DD641	STORMWATER LONGSECTIONS - SHEET 12	C
DD642	STORMWATER LONGSECTIONS - SHEET 13	C
DD643	STORMWATER LONGSECTIONS - SHEET 14	C
DD644	STORMWATER LONGSECTIONS - SHEET 15	C
DD645	STORMWATER LONGSECTIONS - SHEET 16	C
DD646	STORMWATER LONGSECTIONS - SHEET 17	C
DD647	STORMWATER LONGSECTIONS - SHEET 18	C
DD648	STORMWATER LONGSECTIONS - SHEET 19	C
DD649	STORMWATER LONGSECTIONS - SHEET 20	C
DD650	STORMWATER LONGSECTIONS - SHEET 21	C
DD651	STORMWATER LONGSECTIONS - SHEET 22	C
DD652	STORMWATER LONGSECTIONS - SHEET 23	C
DD653	STORMWATER LONGSECTIONS - SHEET 24	C
DD660	SEWER LONGSECTIONS - SHEET 1	C
DD661	SEWER LONGSECTIONS - SHEET 2	C
DD662	SEWER LONGSECTIONS - SHEET 3	C
DD663	SEWER LONGSECTIONS - SHEET 4	C
DD664	SEWER LONGSECTIONS - SHEET 5	C
DD665	SEWER LONGSECTIONS - SHEET 6	C
DD666	SEWER LONGSECTIONS - SHEET 7	C
DD670	TYPICAL MANHOLE DETAIL	B
DD671	TYPICAL SUMP DETAIL & SADDLE CONNECTION DETAILS	B
DD672	TYPICAL INLET & OUTLET STRUCTURES	B
DD673	TYPICAL STORMWATER & SEWER CONNECTIONS	B
DD674	TYPICAL PIPE BEDDING DETAILS	B
DD675	BOUNDARY KIT WITH EXTENDED STUBS	B
DD676	FLUSHING POINT DETAIL	B
DD677	2010IP SIMPLEX 800 X 2100IP	B
DD678	TYPICAL BRANCH ARRANGEMENT	B
DD690	POND DETAILS	B
DD691	POND CROSS SECTIONS	B
	DD700 - POTABLE WATER	
DD700	POTABLE WATER OVERVIEW PLAN	C
DD701	POTABLE WATER - SHEET 1	C
DD702	POTABLE WATER - SHEET 2	C
DD703	POTABLE WATER - SHEET 3	C
DD710	POTABLE WATER LONGSECTIONS W1	C
DD711	POTABLE WATER LONGSECTIONS W2	C
DD712	POTABLE WATER LONGSECTIONS W3	C
DD713	POTABLE WATER LONGSECTIONS W4	C
DD714	POTABLE WATER LONGSECTIONS W5	C
DD715	POTABLE WATER LONGSECTIONS W7 & W8	C
DD716	POTABLE WATER LONGSECTIONS W9	C
DD717	POTABLE WATER LONGSECTIONS W10, W11, W12 & W13	C
DD720	POTABLE WATER TYPICAL DETAILS - SHEET 1	B
DD721	POTABLE WATER TYPICAL DETAILS - SHEET 2	C
DD722	POTABLE WATER TYPICAL DETAILS - SHEET 3	B

PHILIP COOK
WDC IQP#014

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	INDEX UPDATED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
DRAWING INDEX

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD001		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:14:37 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD000-Cover.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

GENERAL

G1: THIS SET OF DRAWINGS IS TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATION AND ALL OTHER CONTRACT DRAWINGS.

G2: THE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF THE WORK TO BE CARRIED OUT ONLY AND DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.

G3: ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER FOR DECISIONS BEFORE PROCEEDING WITH THE WORK.

G4: THE CONTRACTOR IS TO CONFIRM THE LOCATION AND LEVEL OF ALL UNDERGROUND SERVICES PRIOR TO UNDERTAKING ANY EARTHWORKS OR FOUNDATION CONSTRUCTION.

G5: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT CODES OF PRACTICE EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION AND/OR DRAWINGS:

- NZS 3101:2017 CONCRETE STRUCTURES STANDARD
- NZS 3109 CONCRETE CONSTRUCTION
- NZS 3121 WATER AND AGGREGATE FOR CONCRETE
- AS/NZS 4671 STEEL REINFORCING MATERIALS

G6: GENERAL ABBREVIATIONS

- NTS - NOT TO SCALE
- UNO - UNLESS NOTED OTHERWISE
- FFL - FINISHED FLOOR LEVEL
- EGL - EXISTING GROUND LEVEL
- FGL - FINISHED GROUND LEVEL

G7: WHERE PROPRIETARY PRODUCTS ARE SPECIFIED IN THE DOCUMENTS THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE PRODUCT FOR APPROVAL AND SUBJECT TO WDC APPROVAL.

G8: ALL WORKS ARE TO COMPLY WITH THE HEALTH & SAFETY AT WORK ACT 2015.

G9: ALL WORKS TO COMPLY WITH THE WHANGAREI DISTRICT COUNCIL (WDC) ENGINEERING STANDARDS 2010, THE WDC QUALITY ASSURANCE / QUALITY CONTROL MANUAL VESTED ASSETS, THE WDC ENGINEERING PLAN APPROVAL LETTER, AND NZS4404:2010.

G10: WDC STANDARD DETAILS HAVE NOT BEEN INDEPENDENTLY VERIFIED BY COOK COSTELLO. WE HAVE ACCEPTED THAT THEY WILL PERFORM FOR THE REQUIRED LIFE EXPECTANCY AS STATED IN THE WDC EES 2010. WE ACCEPT NO LIABILITY IF THE STANDARD DETAILS DO NOT ACHIEVE THIS DESIGN LIFE.

G11: WDC INSPECTIONS REQUIRED IN ACCORDANCE WITH EES, ONLY WDC APPROVED CONTRACTORS TO WORK ON WDC RETICULATION (OR THAT TO VEST), REINSTATEMENT, WRITTEN APPROVAL PRIOR TO UNDERTAKING WORKS WITHIN PRIVATE PROPERTY, WORKS ARE TO COMPLY WITH EES, CONTRACTOR IS RESPONSIBLE FOR LOCATING SERVICES PRIOR TO EXCAVATION, AS-BUILT REQUIREMENTS ETC. WDC TO PROVIDE WRITTEN CERTIFICATION WHERE THEY UNDERTAKE TESTING AND INSPECTION.

G12: THE CONTRACTOR MUST REINSTATE AND/OR REPAIR DAMAGE TO THE KERB & CHANNELING AND FOOTPATH ALONG THE PROPERTY ROADSIDE FRONTAGE. REFER EES 2010 (CLAUSE 1.10.9).

G13: SITE SURVEY, EXISTING SEWER, STORMWATER, AND POTABLE WATER, BASED ON DIGITAL AS-BUILT DATA RECEIVED. COORDINATES ARE IN TERMS OF NZGD 2000 MT EDEN CIRCUIT 2000. VERTICAL DATUM IN TERMS OF ONE TREE POINT 1964. ALL LEVELS AND CONNECTION POINTS TO BE CHECKED AND CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

G14: EROSION CONTROL - ALL SILT CONTROL MEASURES SHALL BE PLACED PRIOR TO COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS AND ALTERATIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR COUNCIL, DURING THE PROGRESSION OF WORKS. IT IS ADVISED TO CONTACT NRC PRIOR TO COMMENCEMENT OF EARTHWORKS, AFTER INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEY HAVE BEEN INSTALLED TO THE SATISFACTION OF NRC.

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

EARTHWORKS

E1: ALL PROJECT PAVEMENT SIZES AND DETAILS INDICATED IN THIS DRAWING SET ARE BASED ON A CBR OF 12%.

E2: ALL SITE EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NZS4431. SOIL BEARING CAPACITY IS TO BE VERIFIED UPON COMPLETION OF SITE EARTHWORKS AND DURING FOUNDATION EXCAVATION TO ENSURE ACTUAL SITE CONDITIONS ARE COMPATIBLE WITH THE INFERRED GEOTECHNICAL MODEL. OVER EXCAVATION AND BACKFILLING WITH ENGINEERED FILL OR SITE CONCRETE MAY BE NECESSARY WHERE SOFT SOIL / FILL IS ENCOUNTERED WITH PRIOR VARIATION APPROVAL.

E3: COMPACTION IN BASE OF PIPE TRENCHES TO ACHIEVE CLEGG 10.

E4: NES VALIDATION TESTING TO BE UNDERTAKEN BY A CONTAMINATED LAND SQEP ON TOPSOIL STOCKPILES PRIOR TO USE OR SPREADING. TESTING SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE GUIDELINES SET OUT WITHIN CONTAMINATED LAND MANAGEMENT GUIDELINE NO 5. SITE VALIDATION REPORT IS TO BE COMPLETED PRIOR TO COMPLETION OF WORKS AND SUBMITTED TO COUNCIL.

CONCRETE

C1: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS3109 AND NZS3101 SUBJECT TO RELEVANT SECTIONS OF THE SPECIFICATION.

C2: NO CONCRETE SHALL BE PLACED UNTIL THE DESIGNER HAS HAD THE OPPORTUNITY TO OBSERVE THAT THE DRAWINGS AND SPECIFICATIONS HAVE BEEN COMPLIED WITH.

C3: ALL CONCRETE SUPPLY AND PRODUCTION SHALL BE IN ACCORDANCE WITH NZS 3104, 3101:2017.

C4: WHERE THE LOCATION OF CONSTRUCTION JOINTS IS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, CONSTRUCTION JOINTS SHALL BE COORDINATED WITH THE ENGINEER AS REQUIRED. THE CONSTRUCTOR SHALL ALLOW FOR ALL SUCH CONSTRUCTION JOINTS.

CONCRETE PAVEMENTS

CP1: UPON EXPOSURE OF SUBGRADE AT PAVEMENT BASE CONTACT ENGINEER FOR INSPECTION AND INSTRUCTION TO REMOVE AND REPLACE ANY SOFT AREAS PRIOR TO COMMENCING CONSTRUCTION OF PAVEMENT LAYERS. EXCAVATED MATERIAL TO BE REMOVED FROM SITE.

CP2: SUPPLY AND COMPACT BASECOURSE LAYER IN ACCORDANCE WITH CROSS SECTIONS SUPPLIED.

CP3: CONCRETE USED SHALL BE SPECIAL GRADE WITH 28 DAY COMPRESSIVE STRENGTH OF 30MPA.

CP4: ALL JOINTS SHALL BE INSTALLED AT THE LOCATIONS INDICATED. SAW CUT JOINTS SHALL BE CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CP5: ALL CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER POURING. CURING METHOD SHALL BE PROPOSED TO ENGINEER FOR APPROVAL. SOME PROPRIETARY SURFACE TREATMENTS MAY NOT BE APPROVED.

CP6: SLAB SURFACE TOLERANCES SHALL NOT EXCEED 5MM DEVIATION IN A 3M STRAIGHT EDGE.

CP7: SLAB THICKNESSES GIVEN ARE MINIMUM THICKNESSES AND EXCLUSIVE OF ANY APPLIED FINISHES.

CP8: SLAB SURFACES SHALL BE NEATLY BROOM FINISHED.

CP9: ALL SLAB JOINTS ARE TO BE SEALED WITH AN APPROVED WATERPROOF FLEXIBLE SEALANT AFTER 28 DAYS AND PRIOR TO PRACTICAL COMPLETION.

INSPECTIONS / SITE VISITS REQUIRED

I1: PRE-CONSTRUCTION SITE MEETING WITH CONTRACTOR, ENGINEER AND WDC PRESENT. NRC TO BE INFORMED OF WORKS ON SITE PRIOR TO COMMENCING WORKS.

I2: STRIPPED GROUND INSPECTIONS OF ROADS, ROW'S, CROSSING AND SITE FILL AREAS.

I3: CONTROLLED FILL TESTING TO BRING FILL UP TO SUBGRADE LEVELS TO BE CONSTRUCTED IN 200mm MAX LIFTS AND TESTED EVERY 600mm.

I4: FINAL INSPECTION WITH, ENGINEER AND CONTRACTOR TO ENSURE ALL WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS FOR FINAL SIGNOFF.

I5: ALL OTHER INSPECTIONS AS REQUIRED IN THE APPROVED INSPECTIONS AND TEST PLAN (ITP). ALL WORKS SHOULD ENSURE THE INSPECTION AND TEST PLAN IS CAREFULLY ACTIONED PRIOR TO PROCEEDING WITH CONSTRUCTION.

ASBUILT CHECKLIST

AB1: PEAT STRIP SURFACE AND UNDERCUT OF UNSUITABLE MATERIAL (IF ANY).

AB2: SUBGRADE BULK EARTHWORKS SAND SURFACE .

AB3: PEAT AND TOPSOIL RESPREAD

ACID SULPHATES

AS1: ALL CONCRETE MANHOLES, CESSPITS, HEADWALLS & PIPES TO BE HYDRUA CONCRETE.

AS2: ALL STORMWATER, GRAVITY SEWER, LOW PRESSURE SEWER AND WATERMAIN PIPES TO HAVE FULL SURROUND PIPE EMBEDMENT IN ACCORDANCE WITH THE BEDDING DETAILS ON SHEET DD674.

AS3: ALL MANHOLE HAUNCHING TO BE 30MPa CONCRETE.

AS4: ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.

AS5: LIME TO BE APPLIED AT A RATE OF 0.5KG/M2 DIRECTLY UNDER ALL CONCRETE KERBS, FOOTPATHS, CROSSINGS AND JOAL'S.

PHILIP COOK
WDC IQP#014

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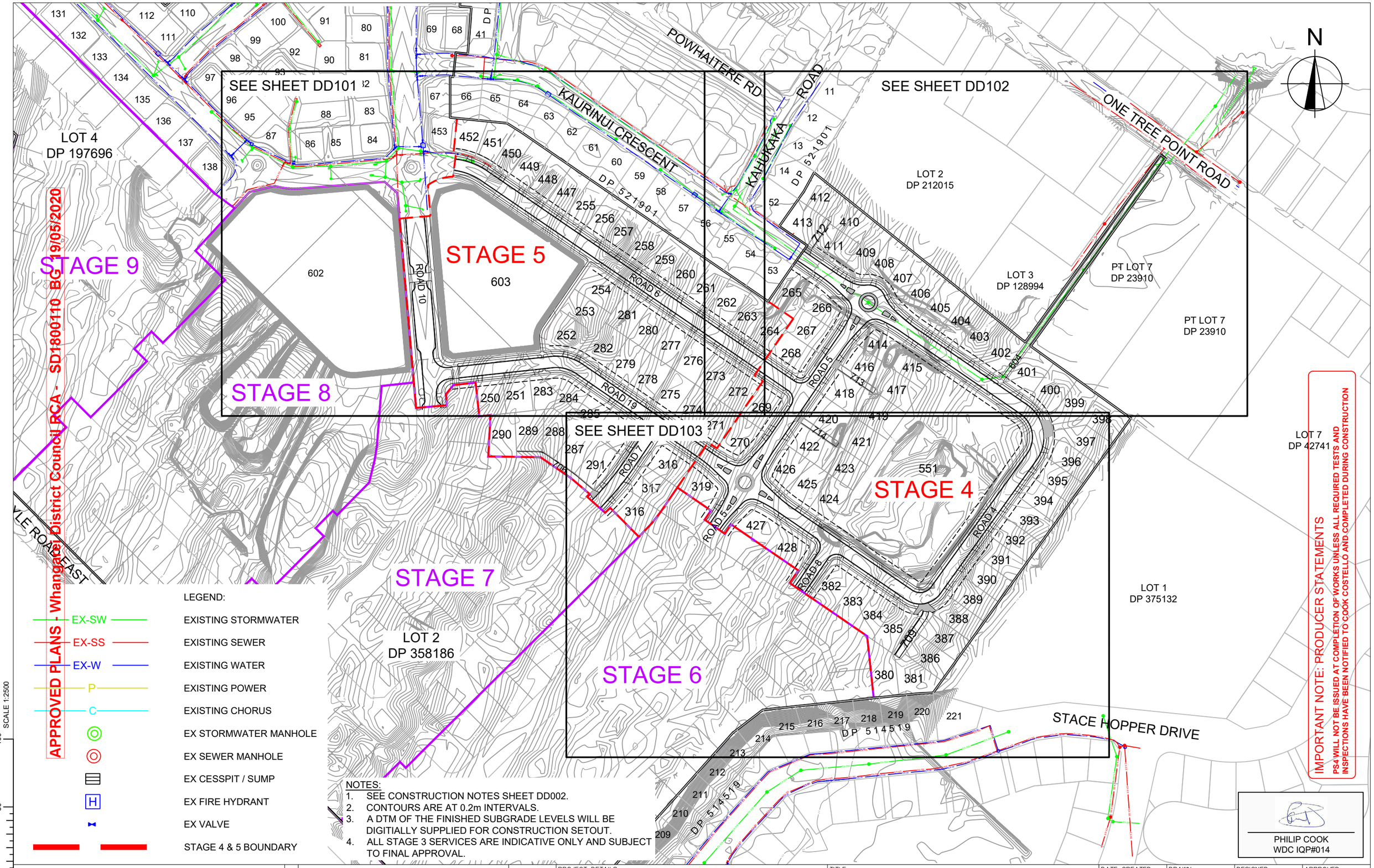

NOTES:
1. SEE CONSTRUCTION NOTES SHEET DD002.
2. CONTOURS ARE AT 0.2m INTERVALS.
3. A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITIALLY SUPPLIED FOR CONSTRUCTION SETOUT.
4. ALL STAGE 3 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.

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B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
EXISTING SERVICES PLAN
OVERVIEW

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD100		REVISION B	

SCALE 1:2500

DATE PLOTTED: Wednesday, 18 March 2020 9:14:42 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD100-Ex Services.dwg

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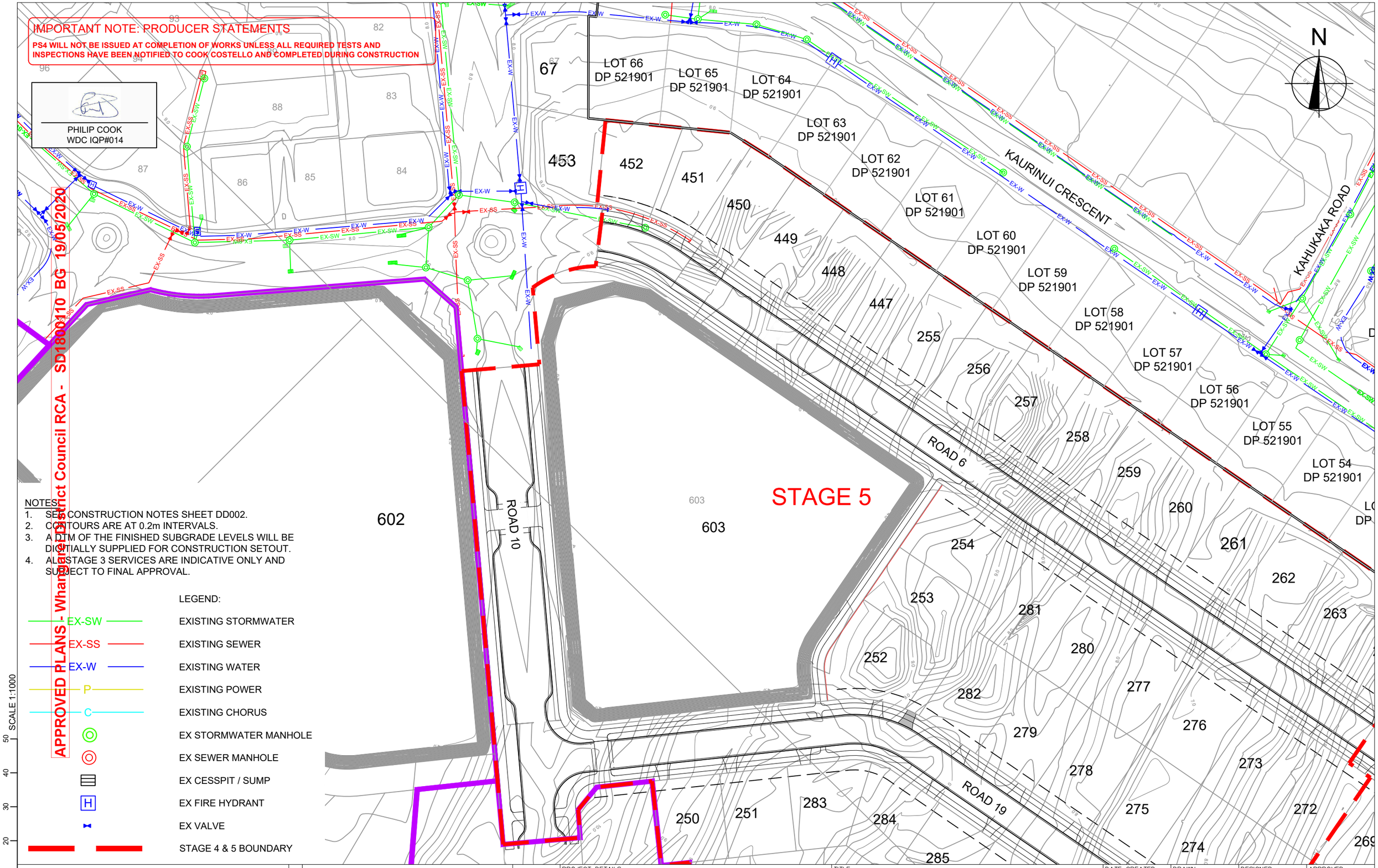
LEGEND:

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EX-W — EXISTING WATER
- P — EXISTING POWER
- C — EXISTING CHORUS
- EX STORMWATER MANHOLE
- EX SEWER MANHOLE
- EX CESSPIT / SUMP
- EX FIRE HYDRANT
- EX VALVE
- STAGE 4 & 5 BOUNDARY



SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
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TITLE
EXISTING SERVICES PLAN
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD101		REVISION B	

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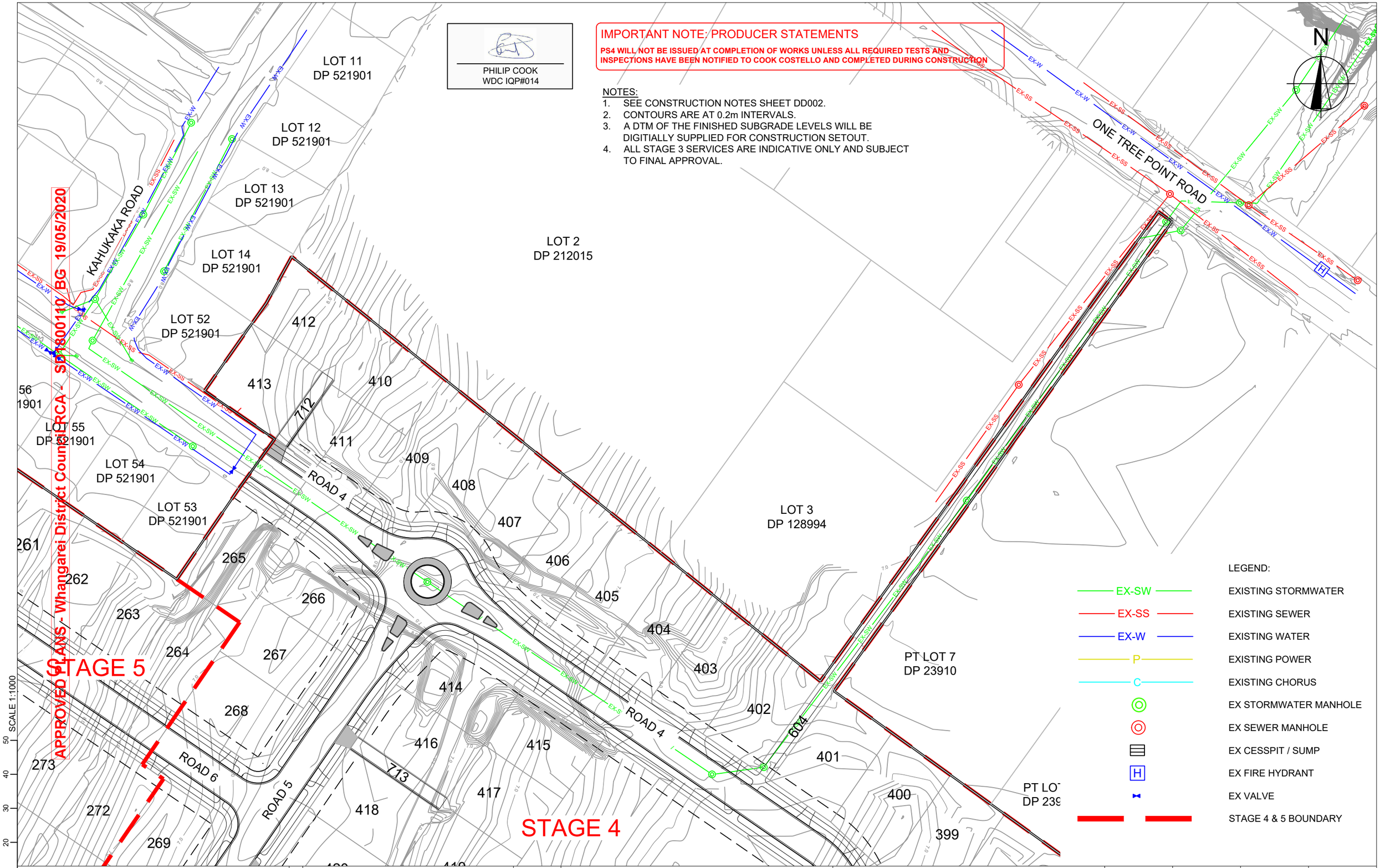
3. A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITIALLY SUPPLIED FOR CONSTRUCTION SETOUT.
4. ALL STAGE 3 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.



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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
EXISTING SERVICES PLAN
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD102		REVISION B	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD100-Ex Services.dwg

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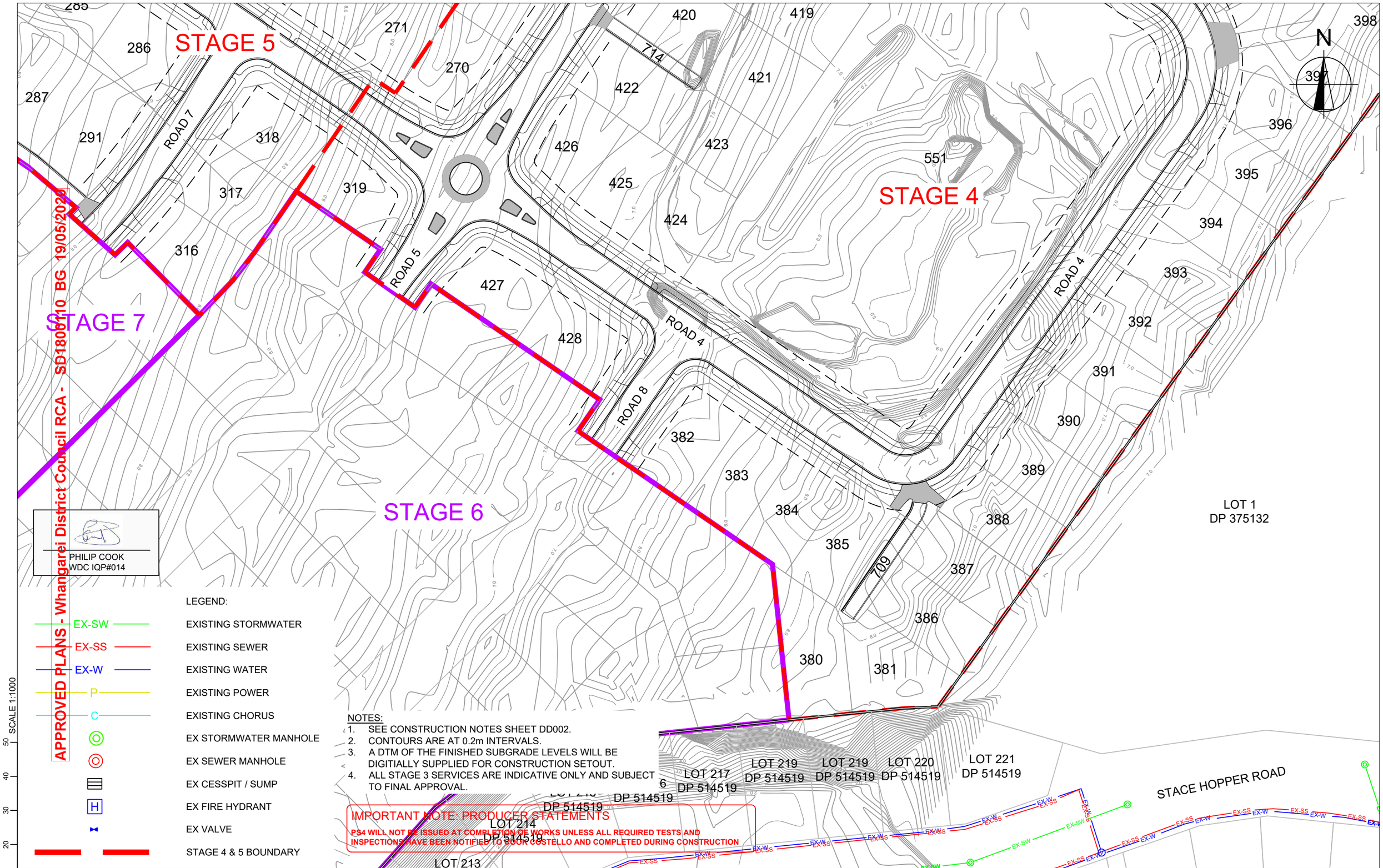

PHILIP COOK
WDC IQP#014

LEGEND:

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
EX-W	EXISTING WATER
P	EXISTING POWER
C	EXISTING CHORUS
	EX STORMWATER MANHOLE
	EX SEWER MANHOLE
	EX CESSPIT / SUMP
H	EX FIRE HYDRANT
	EX VALVE
	STAGE 4 & 5 BOUNDARY

NOTES:
1. SEE CONSTRUCTION NOTES SHEET DD002.
2. CONTOURS ARE AT 0.2m INTERVALS.
3. A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITIALLY SUPPLIED FOR CONSTRUCTION SETOUT.
4. ALL STAGE 3 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
EXISTING SERVICES PLAN
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD103		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:14:43 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD100-Ex Services.dwg

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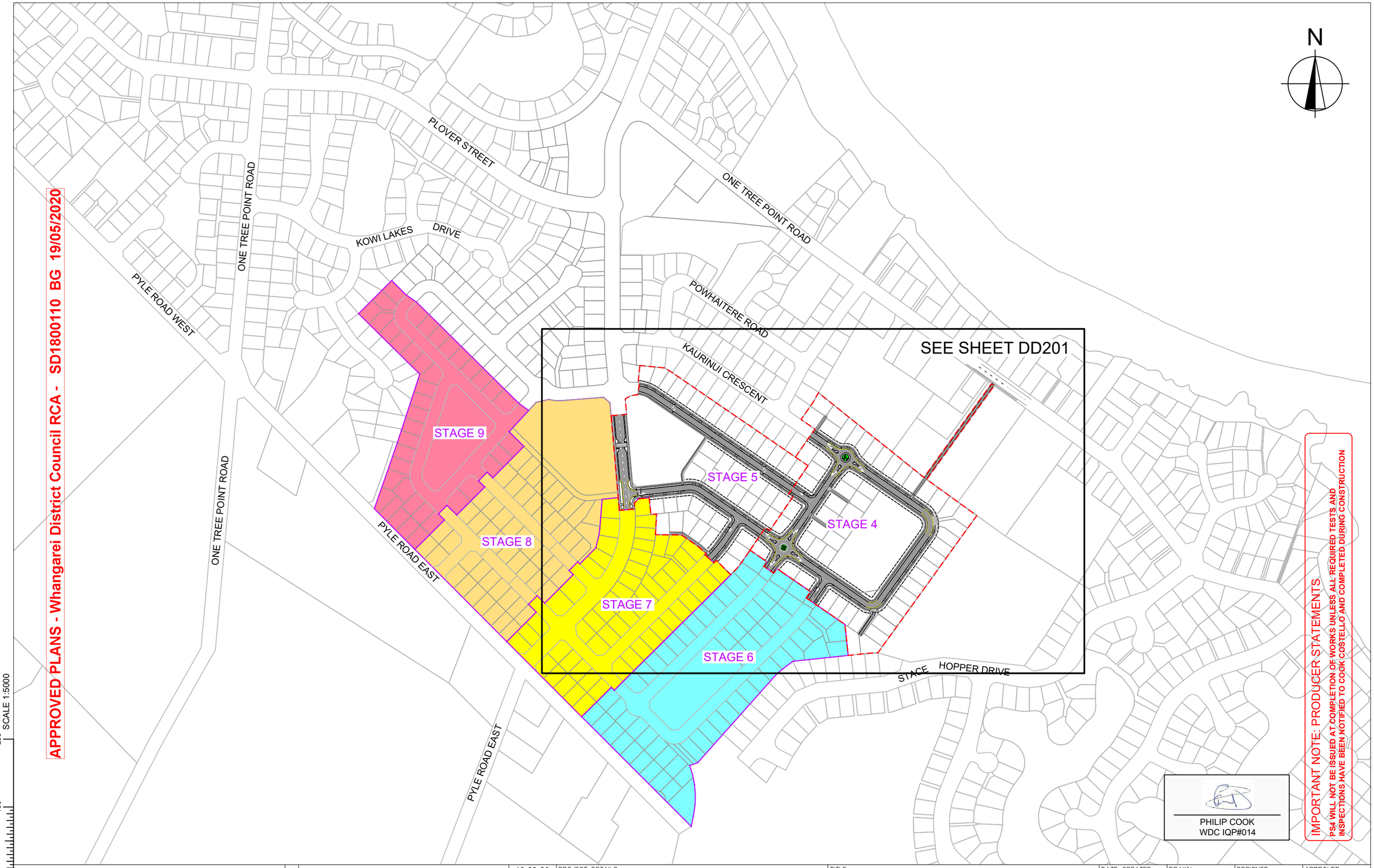

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PSA WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
PROPOSED LAYOUT
OVERVIEW

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:5000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD200			REVISION C

SCALE 1:5000

DATE PLOTTED: Wednesday, 18 March 2020 9:14:45 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD200-Proposed Layout.dwg

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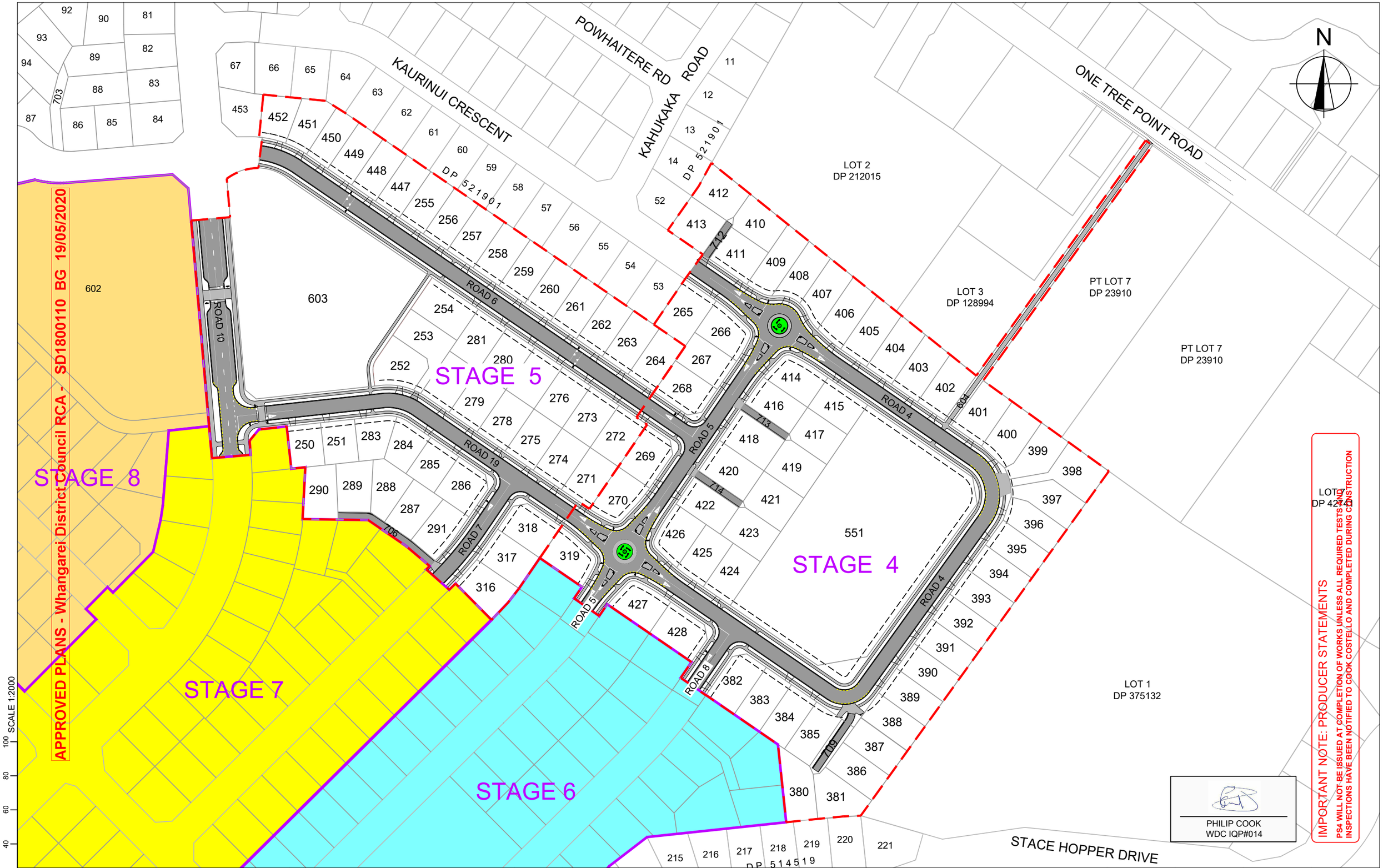

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
PROPOSED LAYOUT
STAGES 4 & 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD201		REVISION C	

SCALE 1:2000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD200-Proposed Layout.dwg

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APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SEE SHEET DD501

SEE SHEET DD502

SEE SHEET DD503

SEE SHEET DD504

SEE SHEET DD505

SEE SHEET DD506

SEE SHEET DD507

SEE SHEET DD508

SEE SHEET DD509

KAURINUI CRESCENT

POWHAITERE RD

KAHUKAKA ROAD

ONE TREE POINT ROAD

STACE HOPPER DRIVE

ROAD 6

ROAD 10

ROAD 19

ROAD 7

ROAD 5

ROAD 4

ROAD 8

JOAL 706

JOAL 707

JOAL 709

JOAL 712

JOAL 713

JOAL 714

FOOTPATH 604

DP 521901

DP 514519

LOT 2
DP 212015

LOT 3
DP 128994

PT LOT 7
DP 23910

LOT 1
DP 375132

NEW FOOTPATH TO MATCH INTO EXISTING FLUSH

PARKS APPROVED SEPARATELY AND EARTHWORKS HAVE BEEN COMPLETED. SEE LANDSCAPE PLANS FOR PARKS LANDSCAPING DETAILS.

KEY

MAJOR CONTOURS

MINOR CONTOURS

8.00 CONTOUR LABEL

STAGE 4 & 5 BOUNDARY

E.O.W EXTENT OF WORKS

(P) POWER POLES

NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:2000

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
OVERVIEW PLAN

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD500			REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:14:52 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

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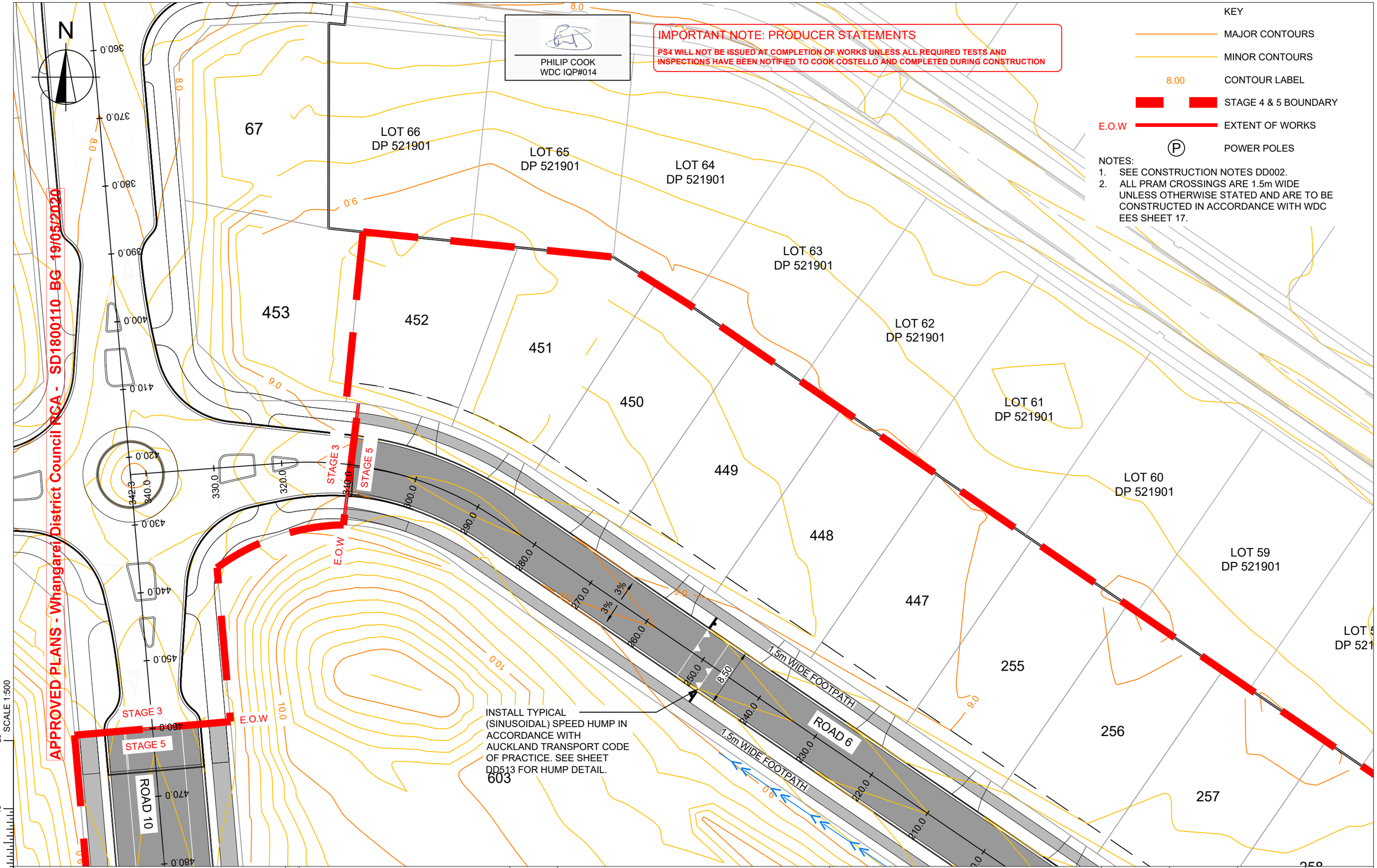

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD501		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:14:52 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

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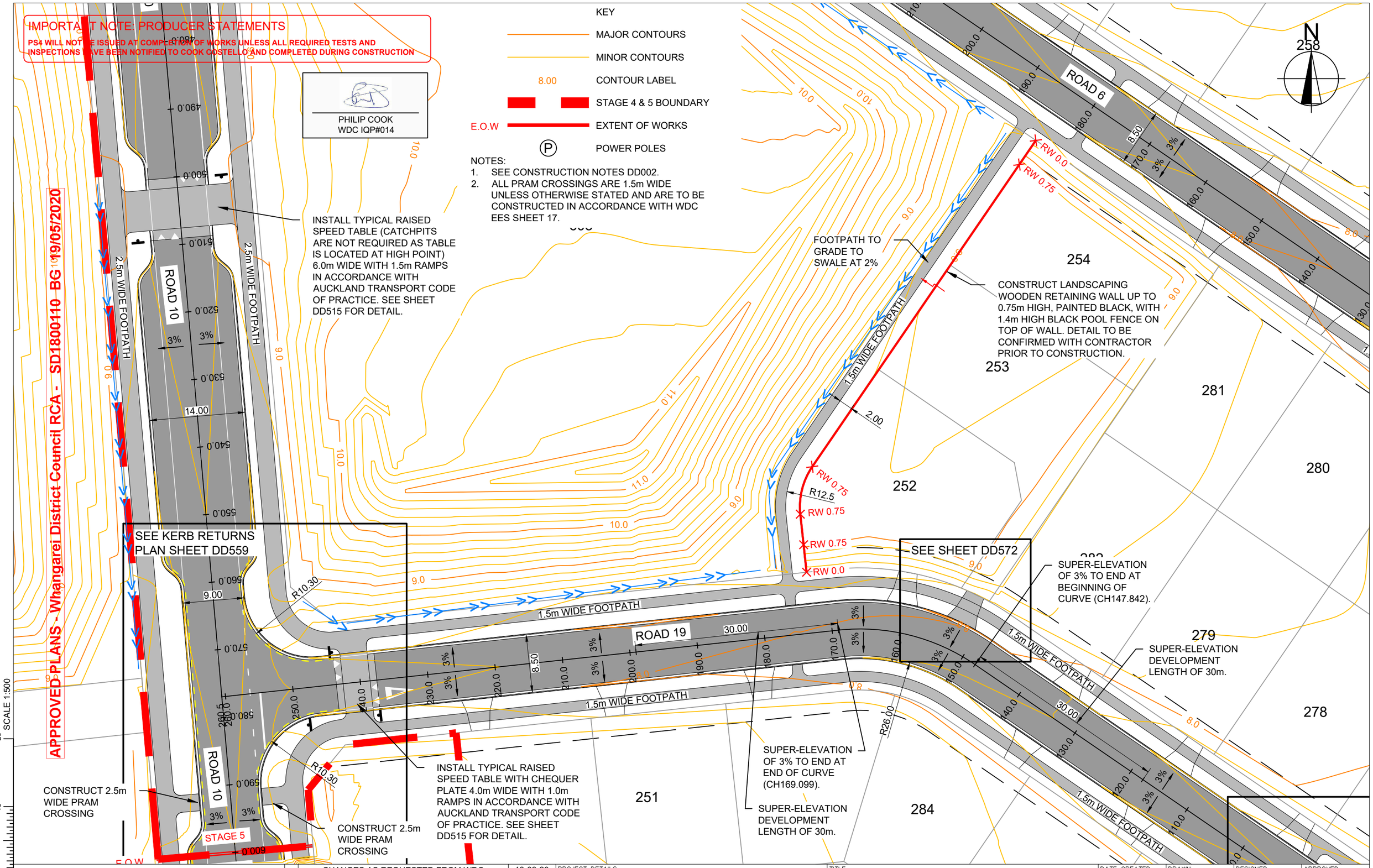

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REV.	REVISION DETAILS	DRAWN	APP.
C	CHANGES AS REQUESTED FROM WDC AND NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO	SCALE	STATUS	
14333-004	1:500 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD502		C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:14:52 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

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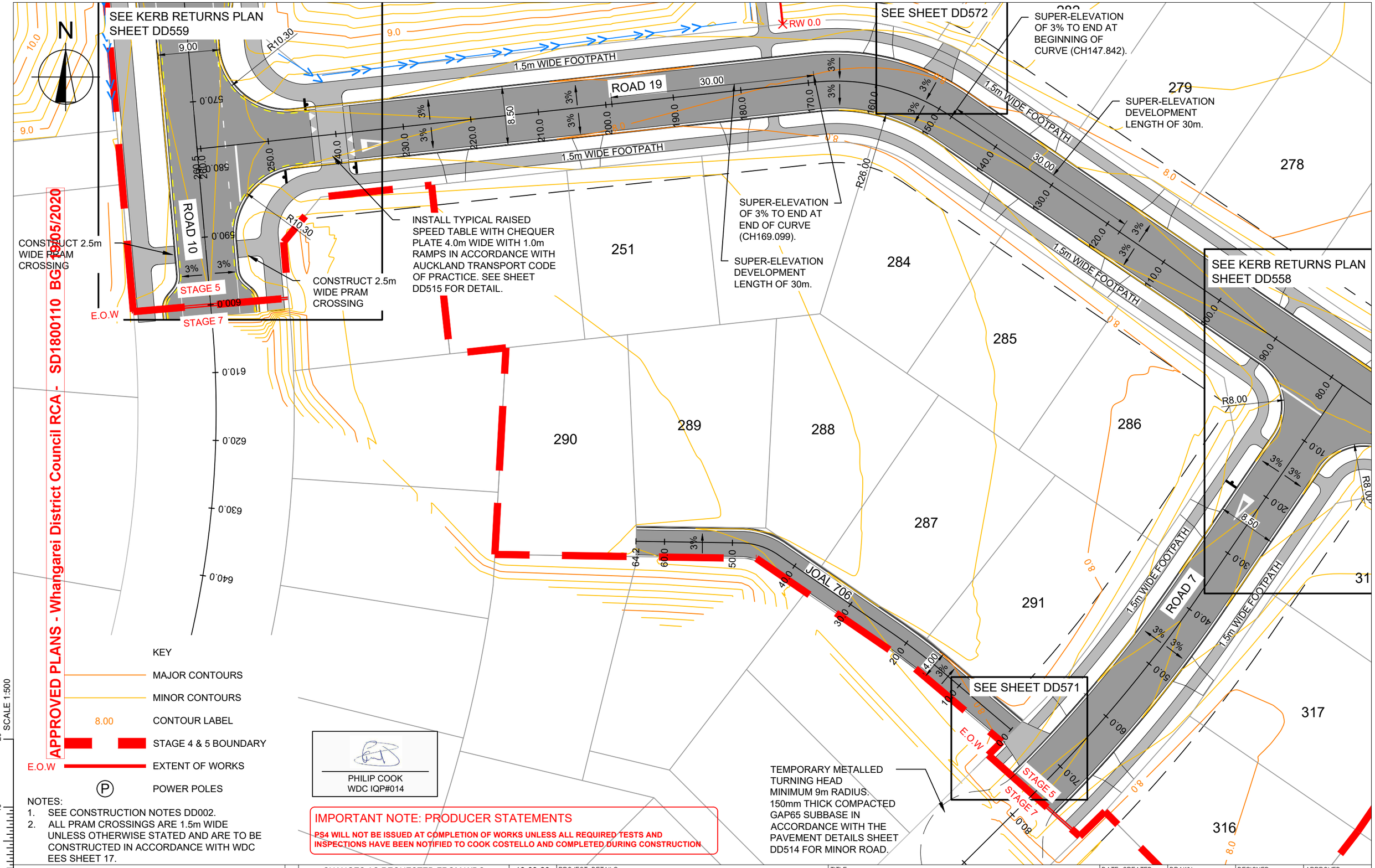

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- STAGE 4 & 5 BOUNDARY
- E.O.W EXTENT OF WORKS
- (P) POWER POLES

NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C	CHANGES AS REQUESTED FROM WDC AND NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD503		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:14:53 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

KEY

MAJOR CONTOURS

MINOR CONTOURS

8.00 CONTOUR LABEL

STAGE 4 & 5 BOUNDARY

E.O.W EXTENT OF WORKS

(P) POWER POLES

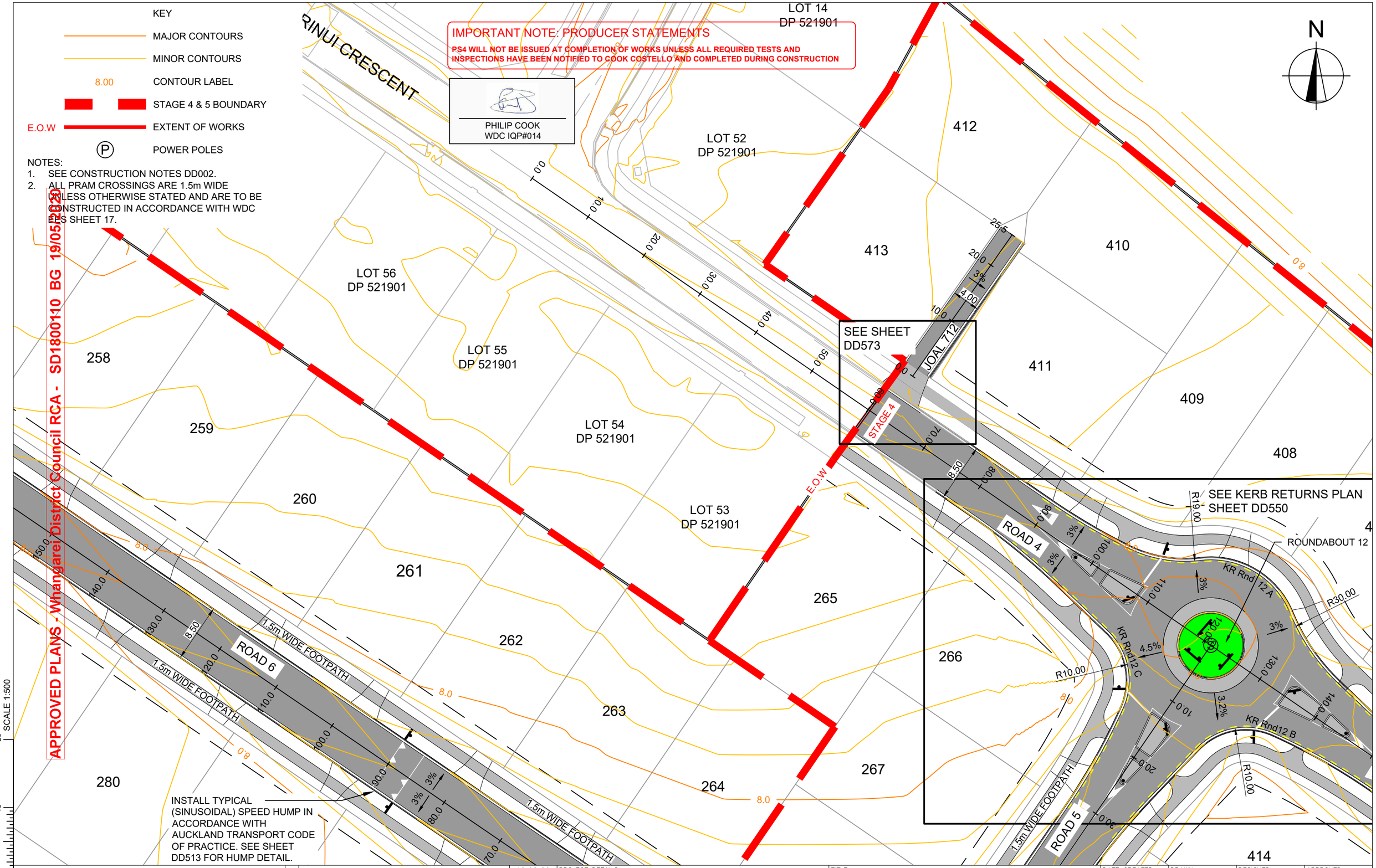
NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC TES SHEET 17.

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD504		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:14:53 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

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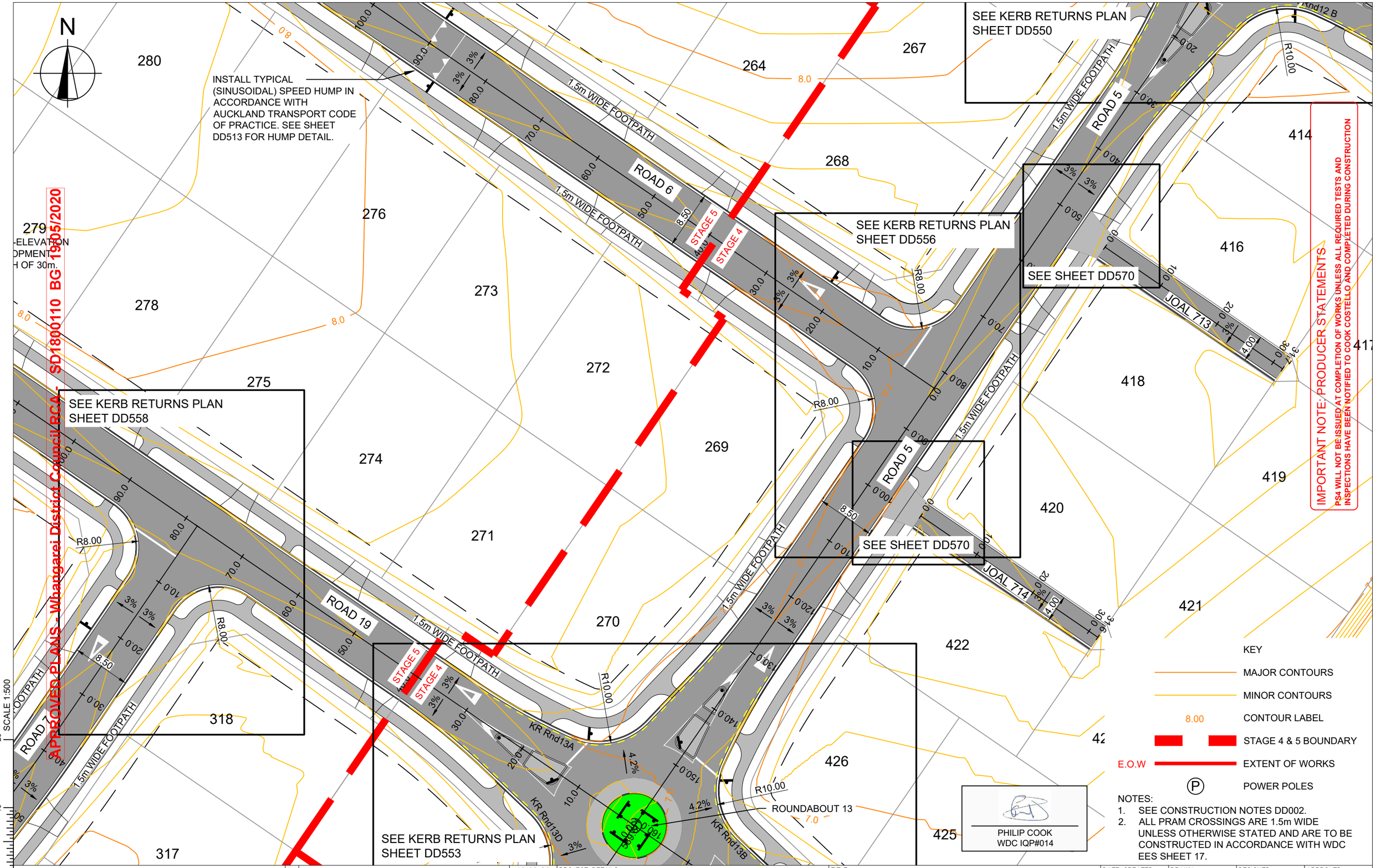

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

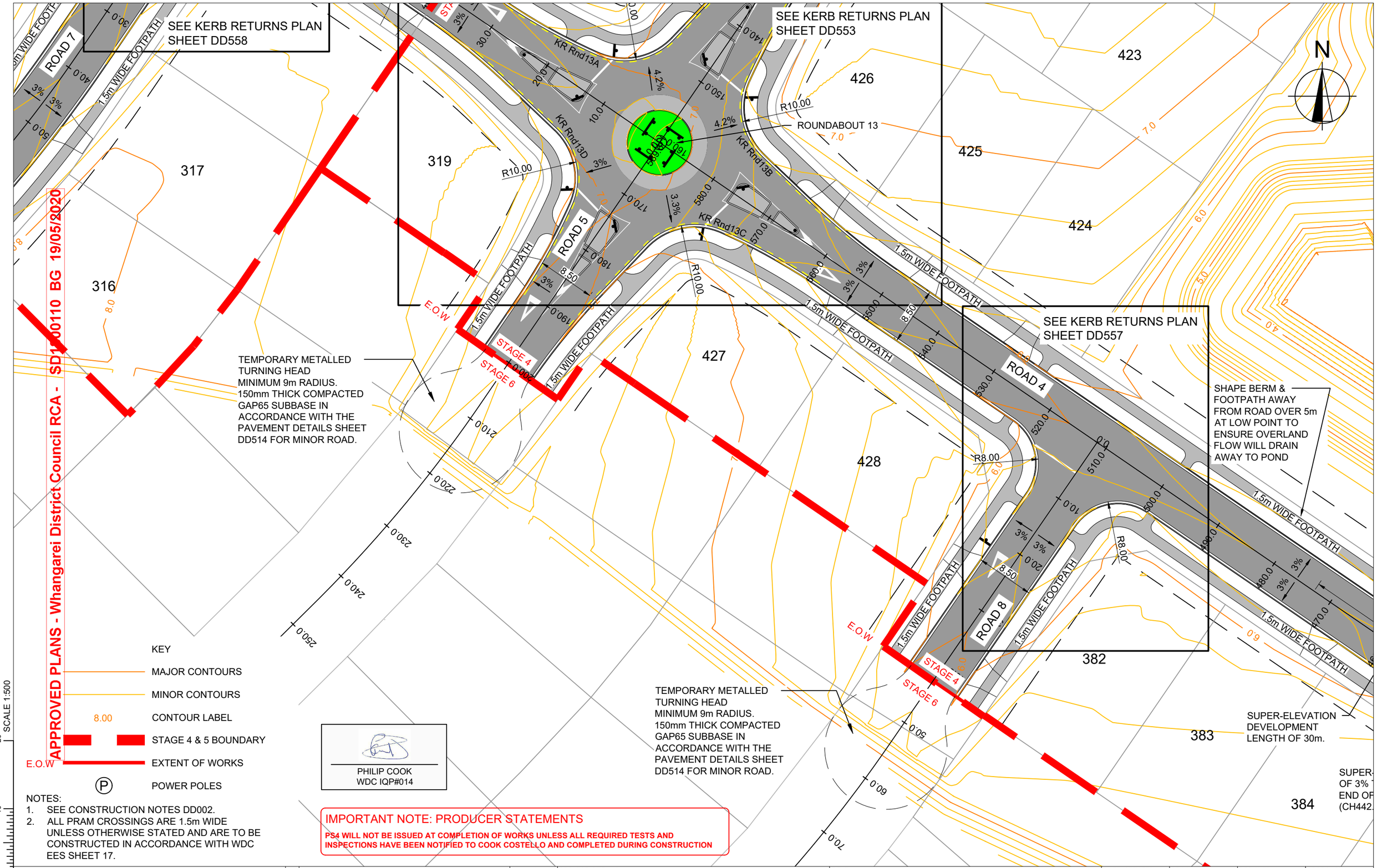
TITLE
ROADING LAYOUT
SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD505		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:14:54 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1[illegible]0110 BG 19/05/2020

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- STAGE 4 & 5 BOUNDARY
- E.O.W EXTENT OF WORKS
- (P) POWER POLES

NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

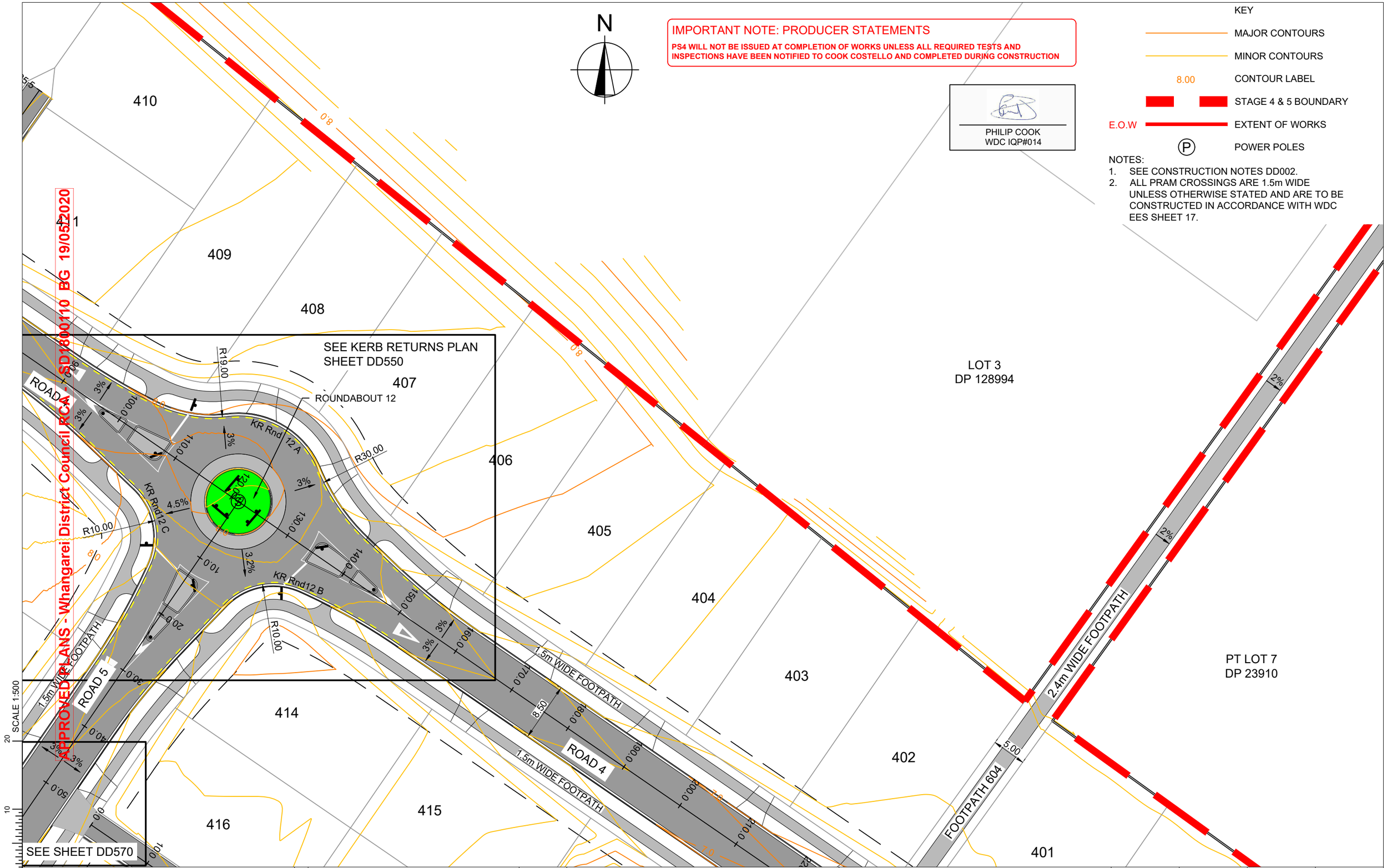
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD506		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:14:54 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- STAGE 4 & 5 BOUNDARY
- E.O.W EXTENT OF WORKS
- (P) POWER POLES

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

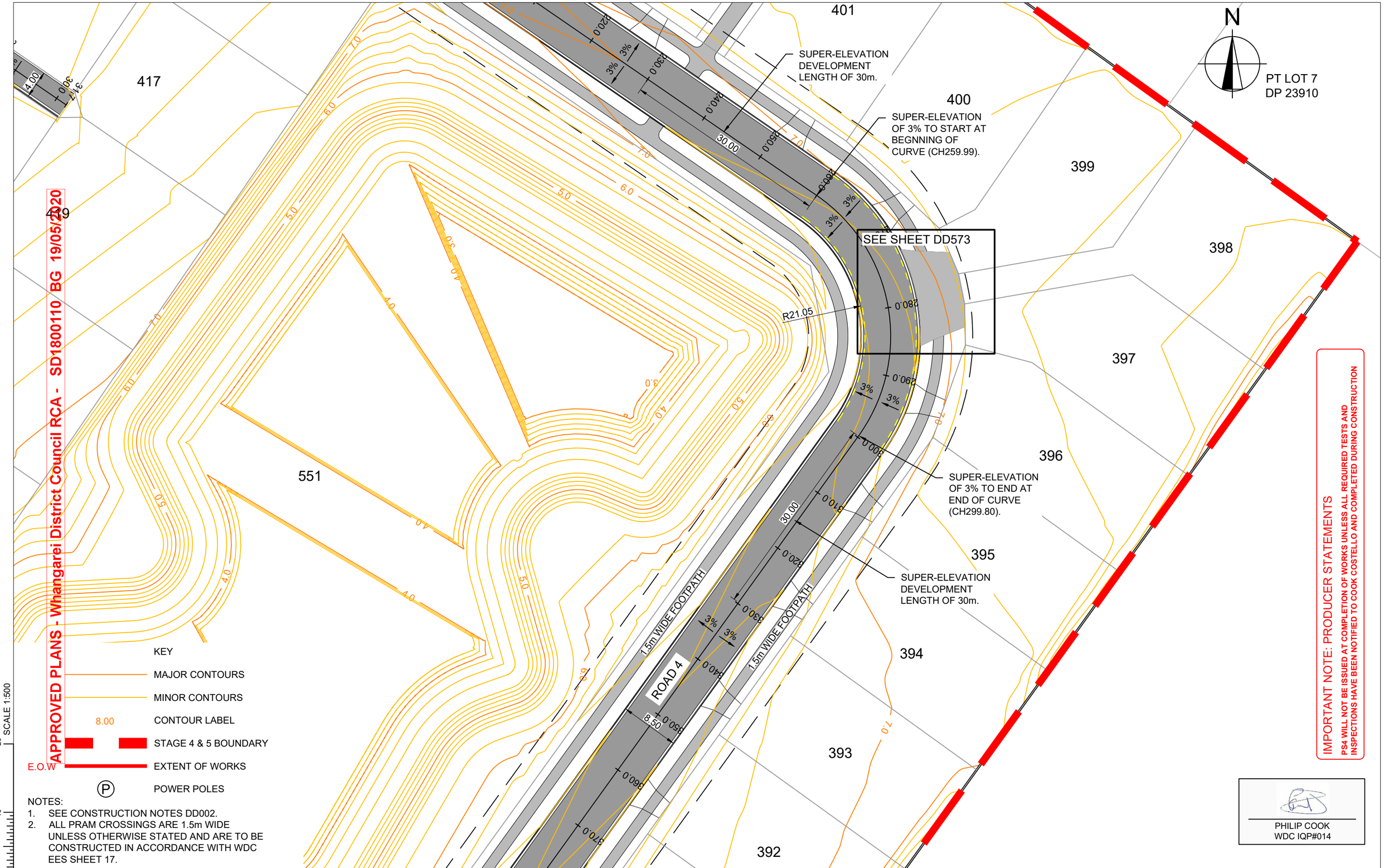
TITLE
ROADING LAYOUT
SHEET 7

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD507		REVISION B	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:14:54 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- STAGE 4 & 5 BOUNDARY
- E.O.W EXTENT OF WORKS
- (P) POWER POLES

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
WDC IQP#014

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	CHANGES AS REQUESTED FROM WDC AND NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

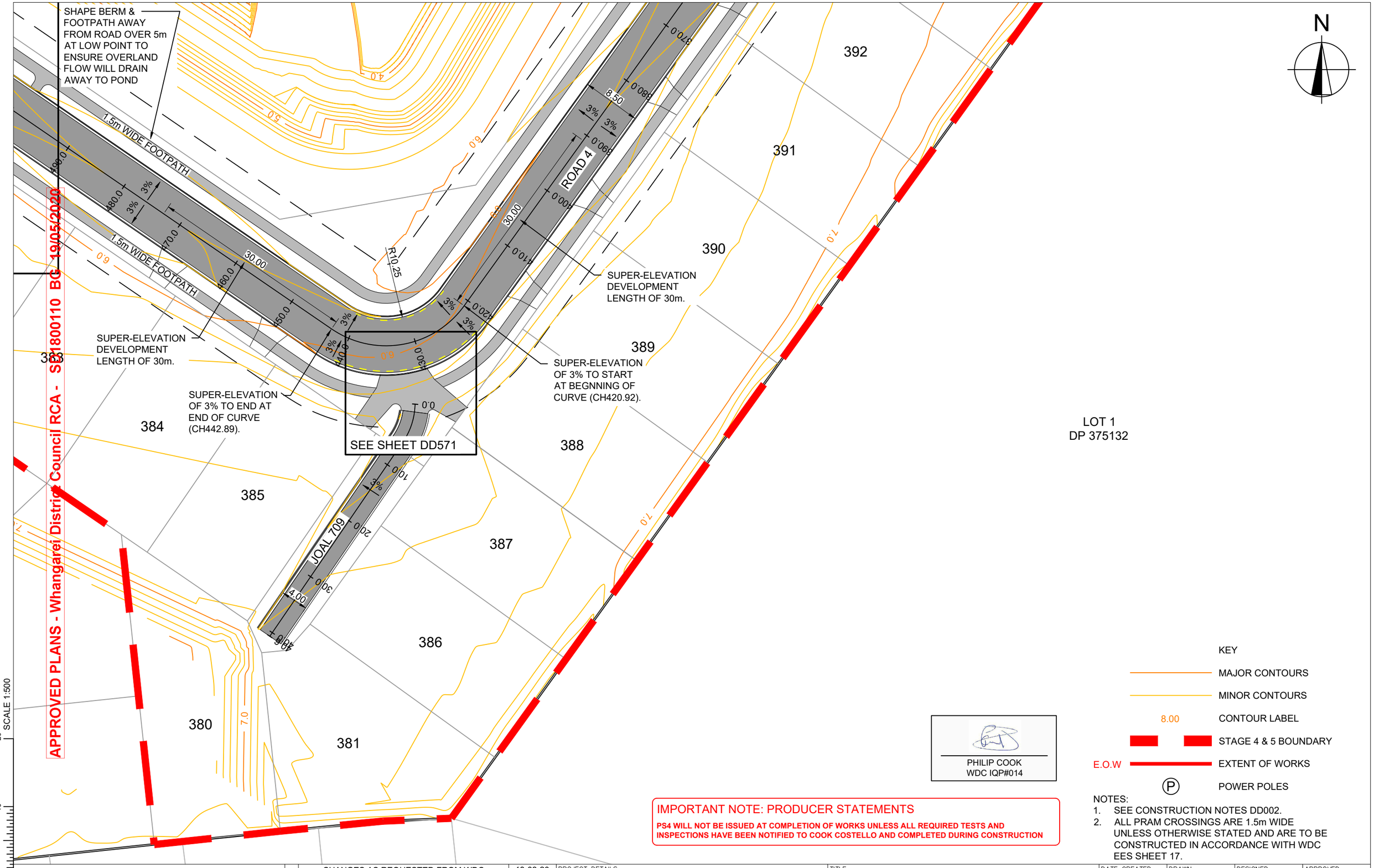
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 8

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD508		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:14:55 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



KEY

	MAJOR CONTOURS
	MINOR CONTOURS
8.00	CONTOUR LABEL
	STAGE 4 & 5 BOUNDARY
E.O.W	EXTENT OF WORKS
(P)	POWER POLES

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	CHANGES AS REQUESTED FROM WDC AND NEW IQP DETAILS	18-03-20	KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED, JOAL 709 CROSSING	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 9

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD509		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD500-Road Plan.dwg

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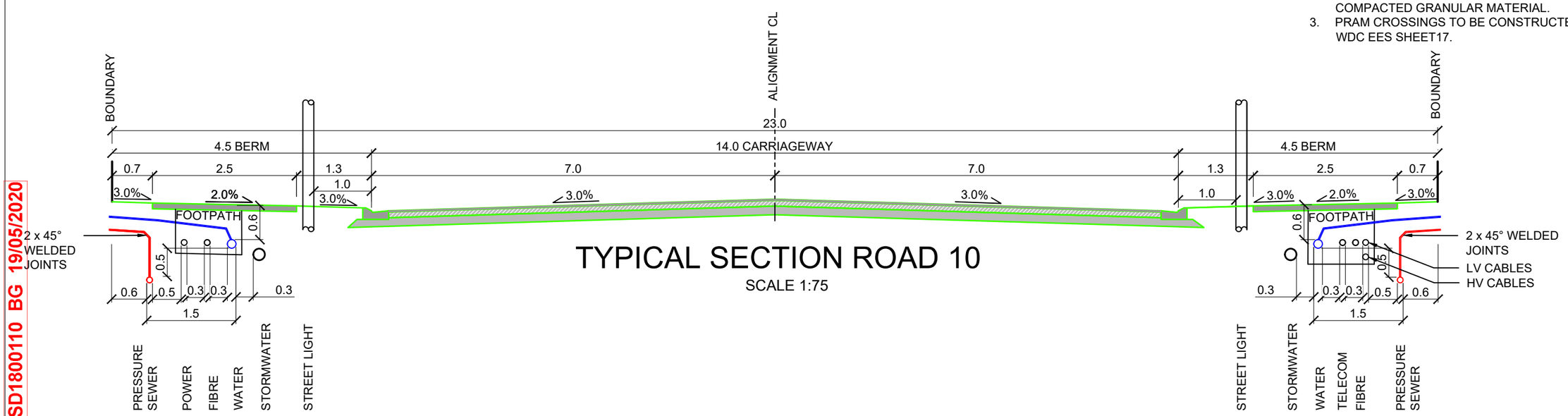
PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

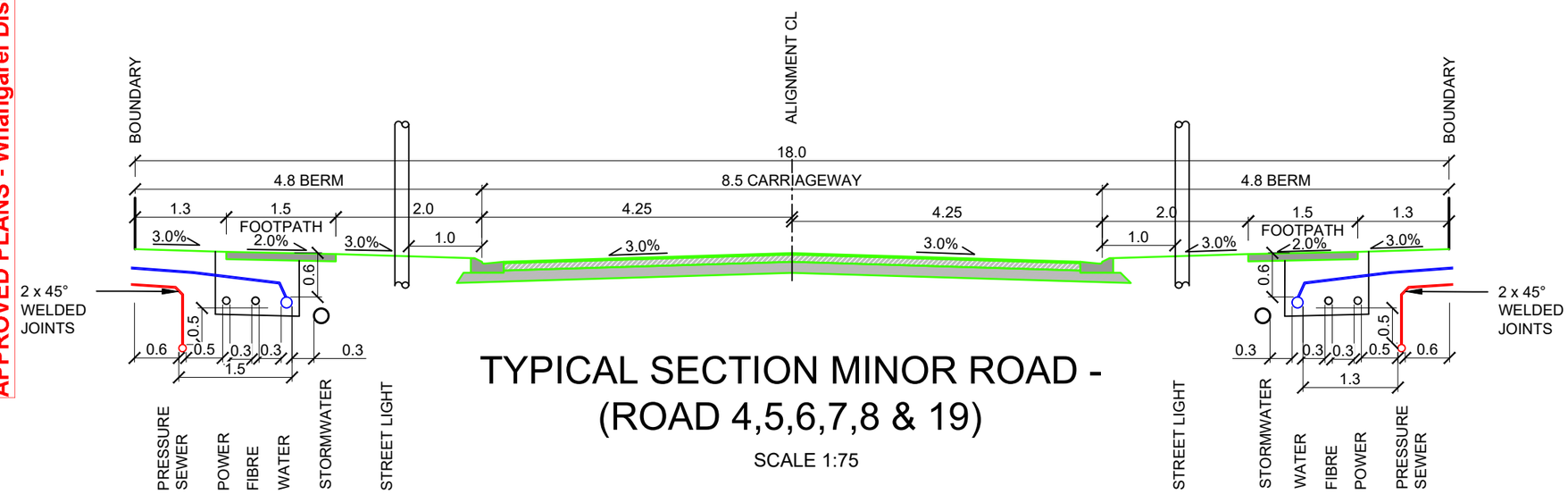
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.
2. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
3. PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.



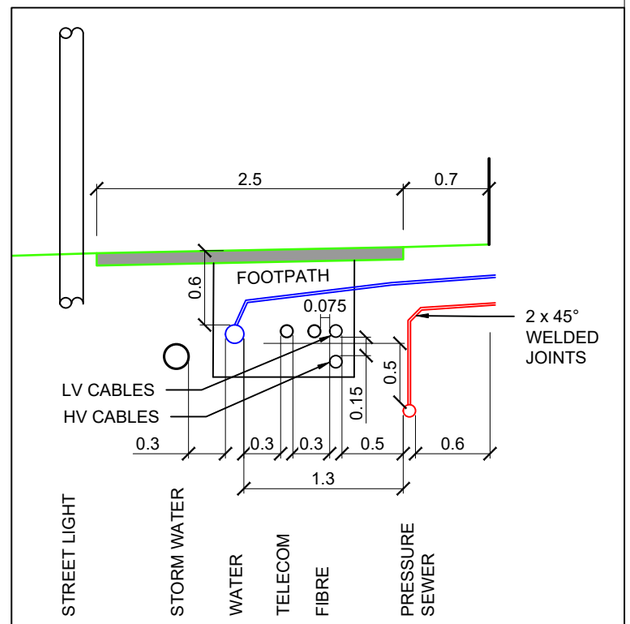
TYPICAL SECTION ROAD 10

SCALE 1:75



TYPICAL SECTION MINOR ROAD - (ROAD 4,5,6,7,8 & 19)

SCALE 1:75



TRENCH DETAIL

SCALE 1:50

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:75

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	PRAM CROSSING CONSTRUCTION NOTE ADDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING TYPICAL SECTIONS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:75 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD510		REVISION C	

SCALE 1:75

DATE PLOTTED: Wednesday, 18 March 2020 9:14:57 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD510-Road Typ Sec.dwg

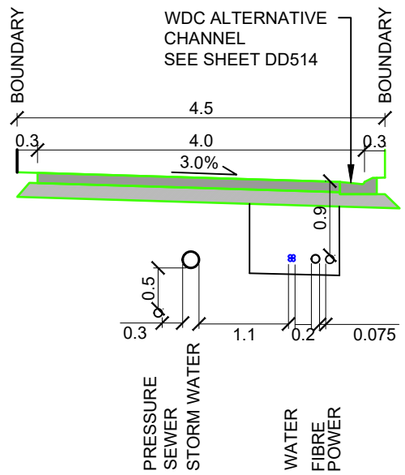
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

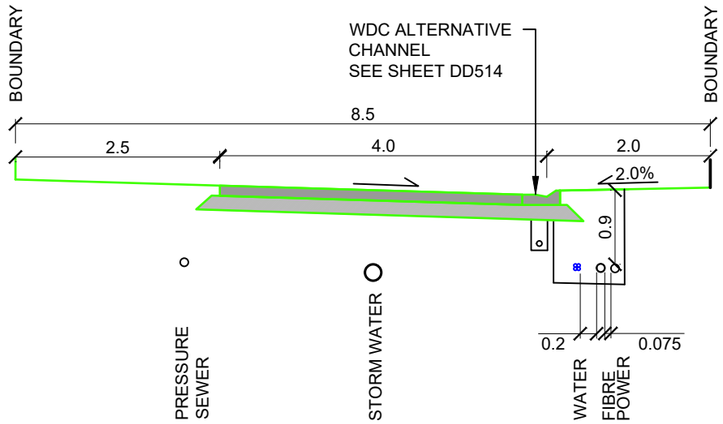
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.
2. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
3. PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.



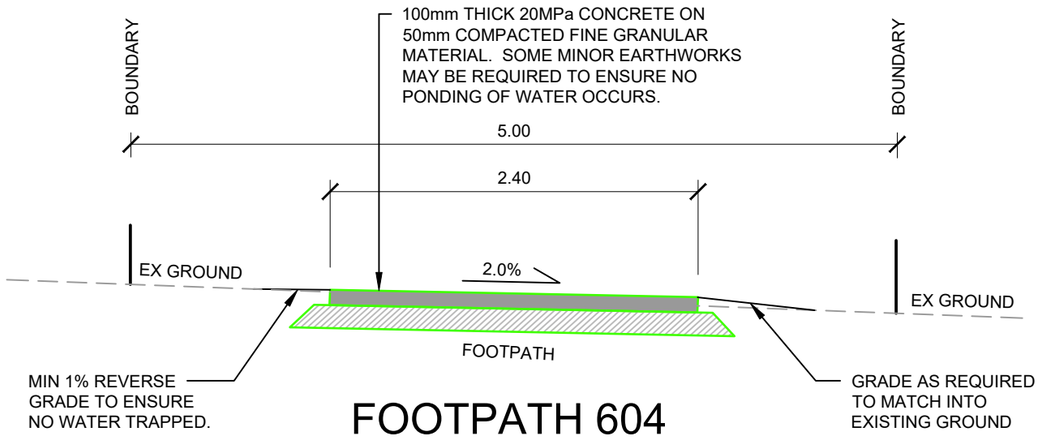
TYPICAL SECTION JOAL 706, 712, 713 & 714

SCALE 1:75



TYPICAL SECTION JOAL 709

SCALE 1:75



FOOTPATH 604

SCALE 1:40

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:75

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	TYPICAL SECTION FOR JOAL 707 REMOVED	28-02-20	KH	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING TYPICAL SECTIONS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:75 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD511		REVISION C	

SCALE 1:75

DATE PLOTTED: Wednesday, 18 March 2020 9:14:57 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD510-Road Typ Sec.dwg

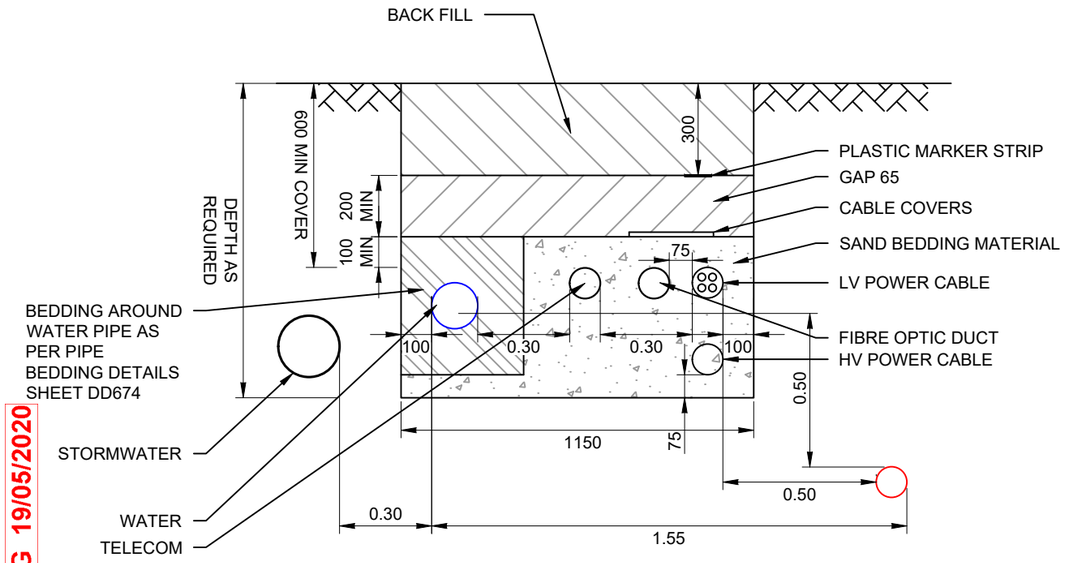
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.



THE MINIMUM CLEAR DISTANCE BETWEEN SERVICES SHALL BE THE GREATER OF THE REQUIRED CLEARANCES BETWEEN THE RELEVANT SERVICES AS FOLLOWS:

STORMWATER:	300 H, 150 V
WASTERWATER:	300 H, 150 V (EXCEPT WATERMAINS AS FOLLOWS) 1000 H, 500 V OR 600 H, 750 V TO WASTEWATERS AS PER TABLE 5.7.
ELECTRICITY:	500 H, 225 V (EXCEPT WATERMAINS > 200mm ID AS FOLLOWS) 1000 H, 225 V TO WATERMAINS > 200mm ID.
TELECOM & GAS:	300 H, 150 V (EXCEPT WATERMAINS > 200mm ID AS FOLLOWS) 600 H, 150 V TO WATERMAINS > 200mm ID.
WATERMAINS:	CLEARANCE TO OTHER SERVICES AS ABOVE. CLEARANCE TO OTHER WATERMAINS AS FOLLOWS: 600 H, 500 V WHERE NEW PIPELINE IS > 375mm ID 300 H, 150 V WHERE NEW PIPELINE IS ≤ 200mm ID AND WHERE EXISTING PIPELINE IS ≤ 375mm ID 600 H, 150 V WHERE NEW PIPELINE IS > 200mm ID AND WHERE EXISTING PIPELINE IS < 375mm ID

NOTES:

1. ALL DISTANCES IN MM.
2. ALL SERVICES SHALL HAVE 600mm MIN. COVER UNDER FOOTPATHS AND BERMS.
3. REFER TO TABLE 5.7 (WASTEWATER) AND 6.4 (WATER) FOR FURTHER NOTES.
4. VERTICAL CLEARANCES APPLY WHERE SERVICES CROSS, EXCEPT THAT WATERMAINS SHALL ALWAYS MAINTAIN A CLEARANCE ABOVE A PARALLEL WASTEWATER PIPELINE.

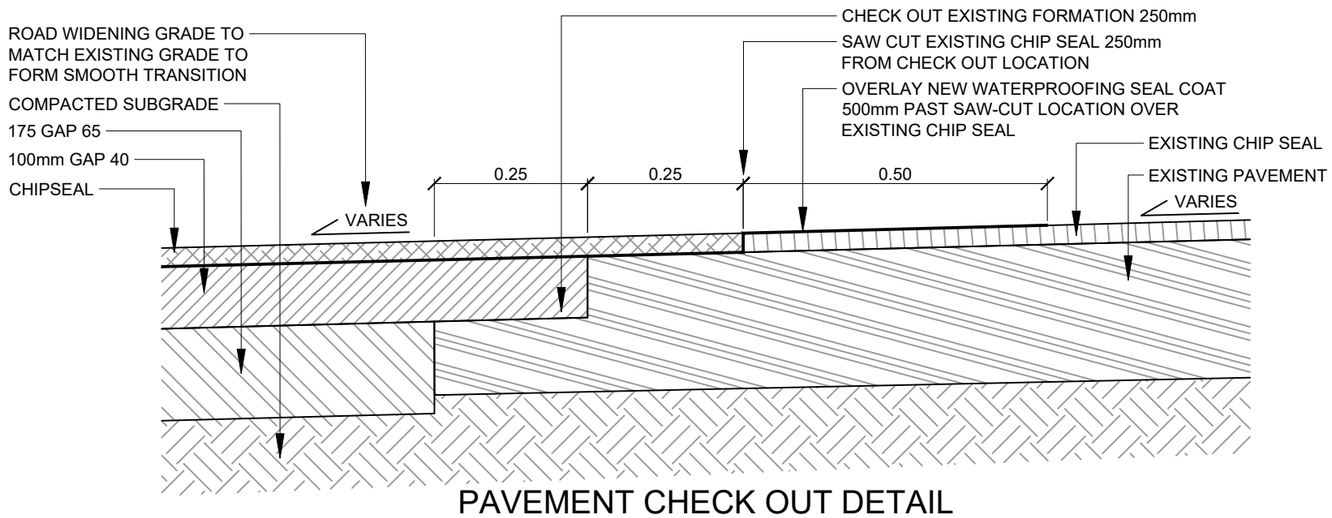
MINIMUM CLEARANCES BETWEEN SERVICES

FOR LIVING 1 AND 2 AND ALL BUSINESS ENVIRONMENTS
WDC EES 2010 SHEET 30

NOTES:
1. BEDDING MATERIAL EITHER SAND OR 'CLEAN' SOIL. THERMAL BACKFILL TO BE USED WHERE SPECIFIED
2. COVERS TO COMPLY WITH AS/NZS 3000:2000 3.11.3.3 AND AS4705-2000 AND SHALL BE LOCATED 75mm ABOVE CABLES AND DUCTS. CABLE COVERS SHALL BE AT LEAST 150mm IN WIDTH AND OVERLAP AT LEAST 40mm EACH SIDE OF THE CABLE.
3. BACKFILL, GENERALLY USE FILL FROM TRENCH BUT ENSURE NO LARGE STONES OR SHARP OBJECTS ARE PLACED BACK IN THE TRENCH.
4. MARKER STRIP TO COMPLY WITH AS/NZS 3000:2000 3.11.3.4 AND BE 100mm WIDE, COLOURED ORANGE, WITH THE WORDS 'ELECTRICAL CABLE BELOW'.
5. WHERE PRACTICAL PROVIDE SOME SEPARATION (75mm OR GREATER) BETWEEN DIRECT LAID LV AND SL CABLE / FIBRE OPTIC DUCT.

DIRECTLY LAID LV CABLES

NORTHPOWER SHEET 2F250s7



PAVEMENT CHECK OUT DETAIL

NOT TO SCALE

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:20

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
COMBINED SERVICE TRENCH AND PAVEMENT CHECK OUT DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:20 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD512		REVISION: B	

SCALE 1:20

DATE PLOTTED: Wednesday, 18 March 2020 9:14:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD510-Road Typ Sec.dwg

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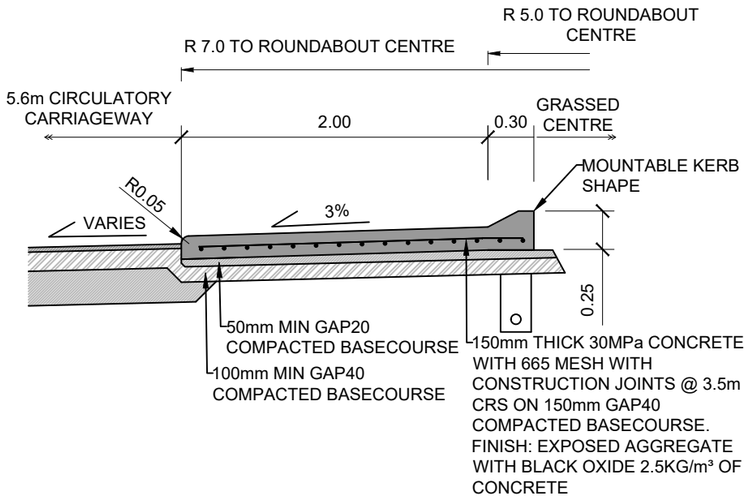
PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

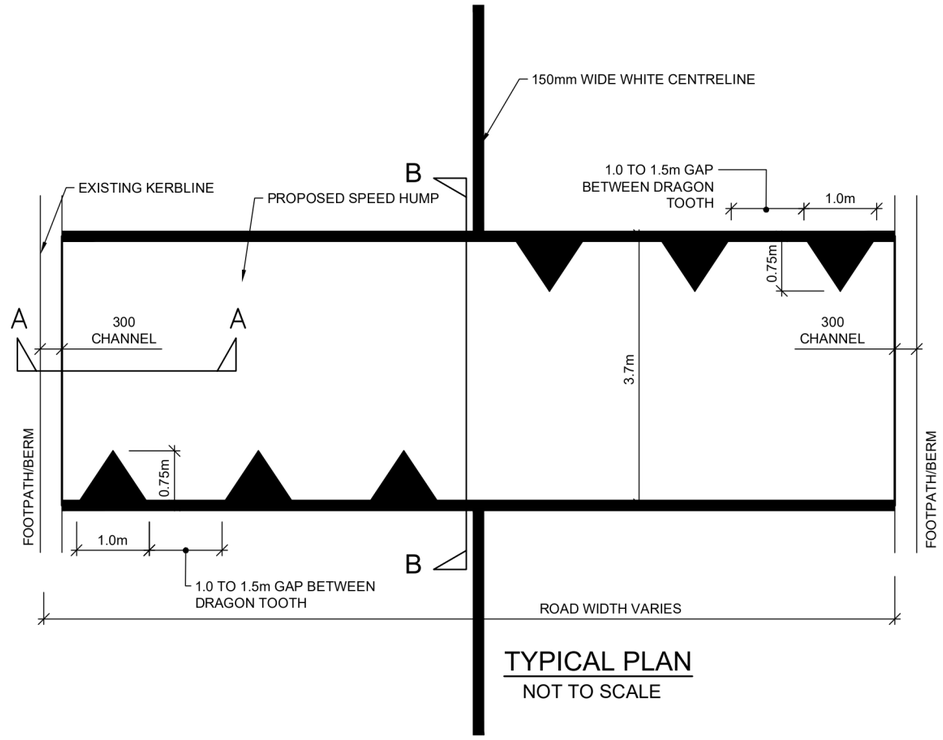
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

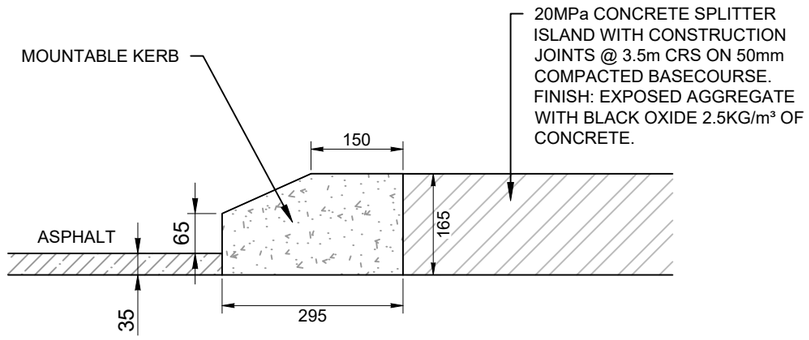
NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.



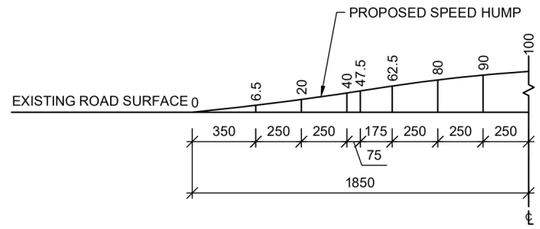
ROUNDABOUT 12 & 13 CENTRE ISLAND
SCALE 1:40

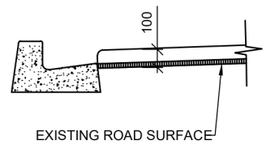


TYPICAL PLAN
NOT TO SCALE

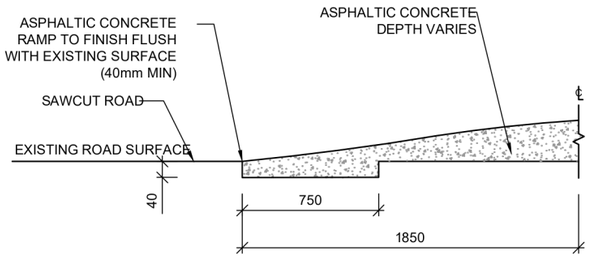


ROUNDABOUT / SPLITTER ISLAND DETAIL
SCALE 1:10





SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

NOTES:
1. All dimensions are in millimeters unless otherwise stated.
2. Do not scale from this drawing.
3. Contractor to liaise with local service authorities for location of all underground services before any excavation.
4. All exposed saw cut edges are to be sprayed with a hot biturmin sealer.
5. All works to have a tolerance of ±5mm

TYPICAL (SINUSOIDAL) SPEED HUMP (AUCKLAND TRANSPORT CODE OF PRACTICE) SHEET TC001

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

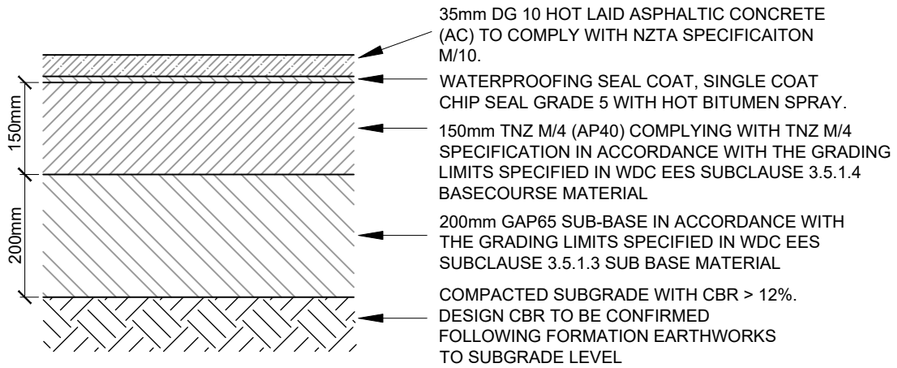
TITLE
ROUNDABOUT & SPEED HUMP DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE AS SHOWN @ A3		STATUS FOR APPROVAL
DWG NUMBER DD513			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:14:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD510-Road Typ Sec.dwg

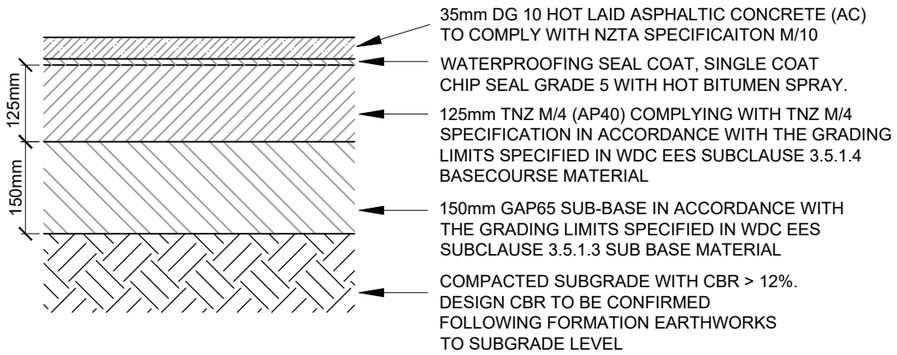
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



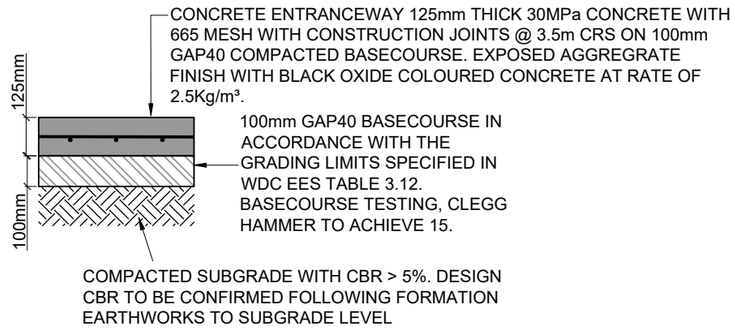
PAVEMENT DETAILS FOR MAJOR ROAD 10

SCALE 1:10



PAVEMENT DETAILS FOR MINOR ROAD 4, 5, 6, 7, 8 & 19

SCALE 1:10



PAVEMENT DETAILS FOR JOAL

SCALE 1:20

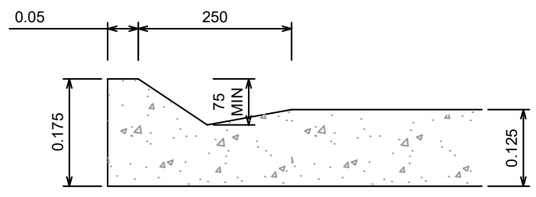
PAVEMENT TESTING REQUIREMENTS

SURFACING TESTING - BENKELMAN BEAM AT 10m CENTRES (STAGGERED) IN THE WHEEL TRACK IN BOTH LANES WITH 95% MAXIMUM ALLOWABLE DEFLECTION OF 1.5mm (MINOR ROADS) AND 1.0mm (MAJOR ROADS) WITH NO VALUE EXCEEDING THE STANDARD BY MORE THAN 25%

BASECOURSE TESTING - NUCLEAR DENSOMETER IN ACCORDANCE WITH NZS4407 TEST 4.2.2 TO ACHIEVE MAXIMUM DRY DENSITY OF ≥95% MINIMUM AND ≥98% MEAN AS PER TNZ B/2.

SUBBASE TESTING - NUCLEAR DENSOMETER IN ACCORDANCE WITH NZS4407 TEST 4.2.2 TO ACHIEVE MAXIMUM DRY DENSITY OF ≥92% MINIMUM AND ≥95% MEAN AS PER TNZ B/2.

SUBGRADE CBR OF 12 (FIRST 600mm DEEP) - TO ACHIEVE 23mm/BLOW WITH SCALA PENETROMETER.



ALTERNATIVE CHANNEL

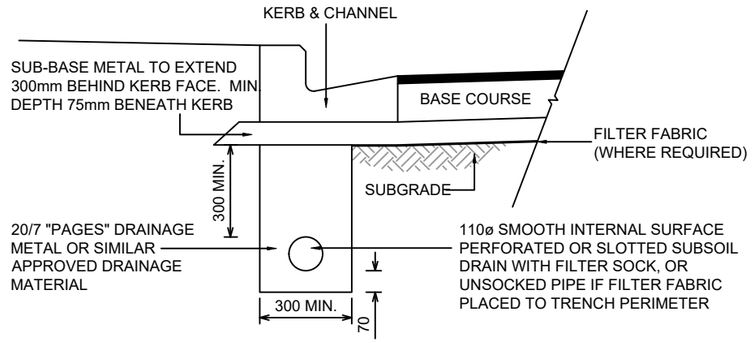
SHEET 7 WDC EES 2010 - NOT TO SCALE

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

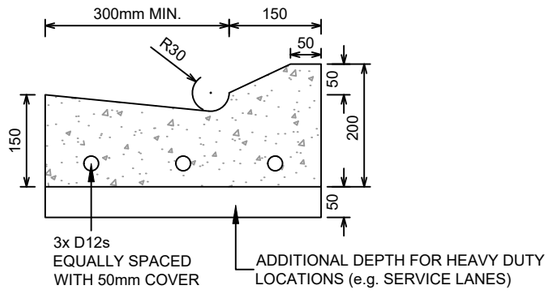
NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.
2. CLEGG >15 REQUIRED UNDER ALL KERBS BY WDC.

PHILIP COOK
WDC IQP#014



UNDER KERB DRAINAGE

NOT TO SCALE



MOUNTABLE KERB & CHANNEL

SHEET 13 WDC EES 2010 - NOT TO SCALE

SCALE 1:10

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	JOAL PAVEMENT AND PAVEMENT TESTING REQUIREMENTS	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS: WFH PROPERTIES LIMITED, THE LANDING - STAGES 4 & 5, ONE TREE POINT, RUAKAKA

TITLE: PAVEMENT DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO	SCALE	STATUS
14333-004	1:10 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD514	C

SCALE 1:10

DATE PLOTTED: Wednesday, 18 March 2020 9:14:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD510-Road Typ Sec.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

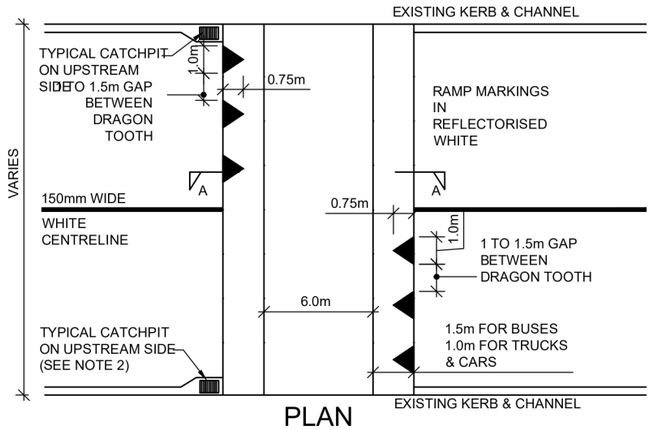
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.

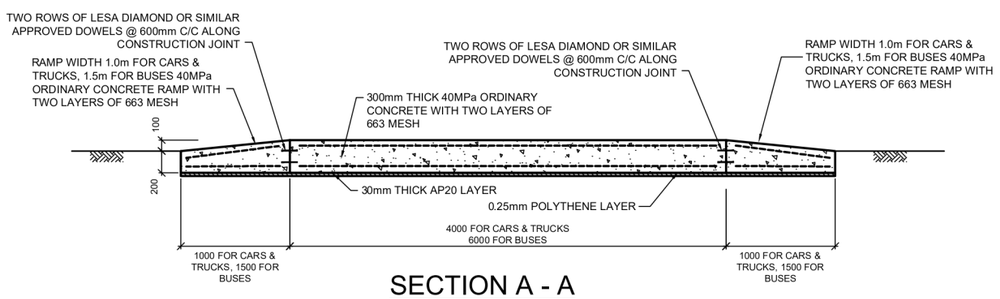
ADVANCE WARNING SIGNS ON APPROACHING SPEED-TABLE OR HUMPS

NOTE

1. PW-39 sign with supplementary as shown to be erected in advance of treatment on both sides of the carriageway facing approaching traffic



PLAN
N.T.S.



SECTION A - A
N.T.S.

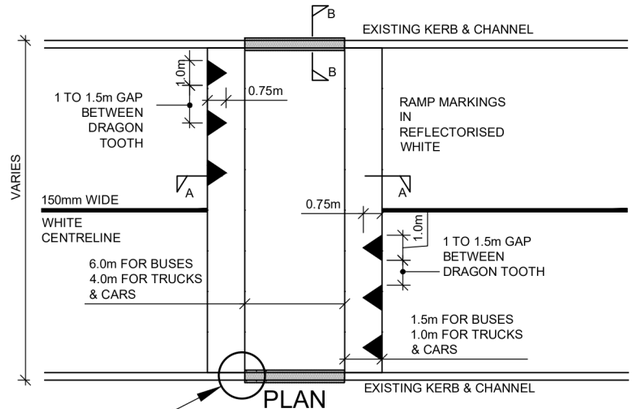
NOTE
1. See drainage chapter for additional catchpit details.
2. All work to have a tolerance of ±5mm.
3. Reinforcing to be placed on spacers.

TYPICAL SPEED TABLE
CATCHPITS NOT REQUIRED AS TABLE IS LOCATED AT HIGH POINT
(AUCKLAND TRANSPORT CODE OF PRACTICE)
SHEET TC003

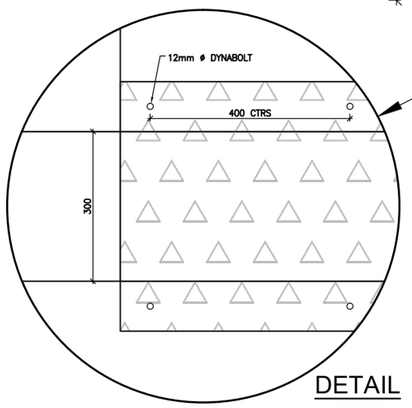
ADVANCE WARNING SIGNS ON APPROACHING SPEED-TABLE OR HUMPS

NOTE

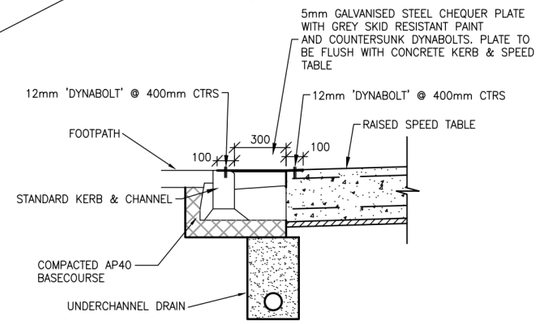
1. PW-39 sign with supplementary as shown to be erected in advance of treatment on both sides of the carriageway facing approaching traffic



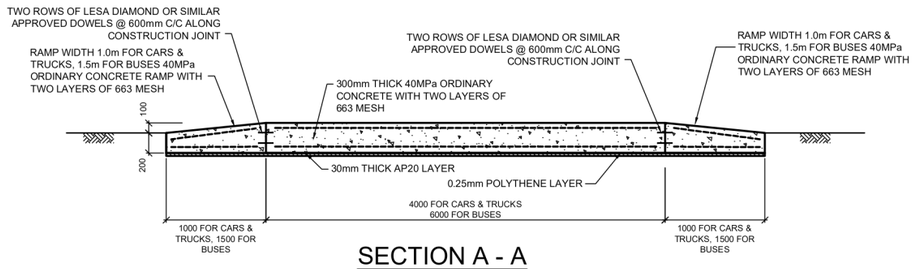
PLAN
N.T.S.



DETAIL
N.T.S.



SECTION B – B
N.T.S.



SECTION A - A
N.T.S.

NOTE:
1. Finished level of raised speed table to be nominally 100mm above existing road level contractor to ensure adequate crossfall to channel drain.
2. Raised speed table to be reinforce with 2 layers 663 mesh.
3. Raised speed table concrete to be wet cured for 7 days prior to traffic loading.
4. Top of galvanised steel plate to be flush with surrounding concrete kerb & speed table.

TYPICAL SPEED TABLE WITH CHEQUER PLATE
(AUCKLAND TRANSPORT CODE OF PRACTICE)
SHEET TC005

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS AND NEW SPEED TABLE DETAILS	18-03-20 KH	PC
A	1ST ISSUE	09-03-20 KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SPEED TABLE DETAILS

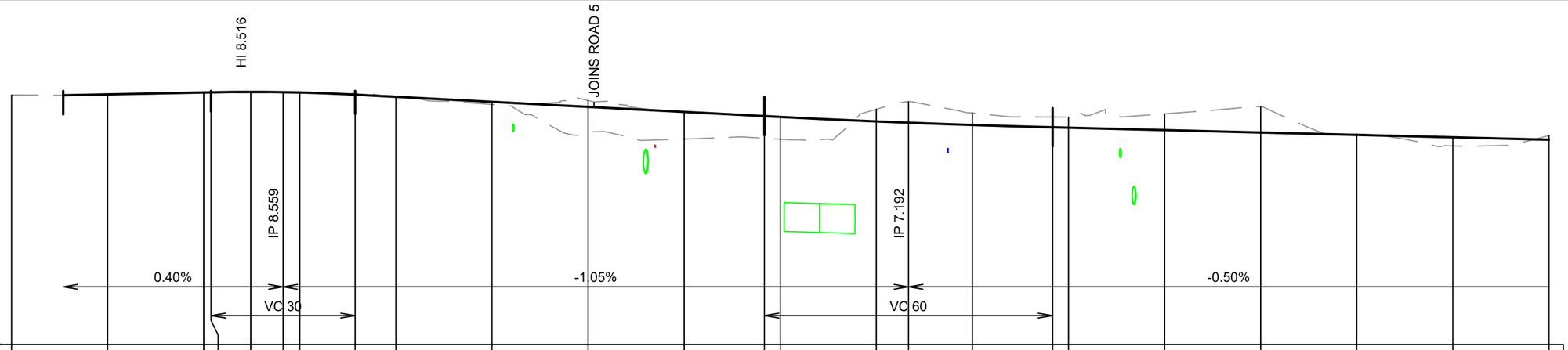
DATE CREATED	DRAWN	DESIGNED	APPROVED
06-03-2020	K HANSARD	A PARKER	P COOK
CCL REF NO 14333-004	SCALE AS SHOWN @ A3		STATUS FOR APPROVAL
DWG NUMBER DD515			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD510-Road Typ Sec.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

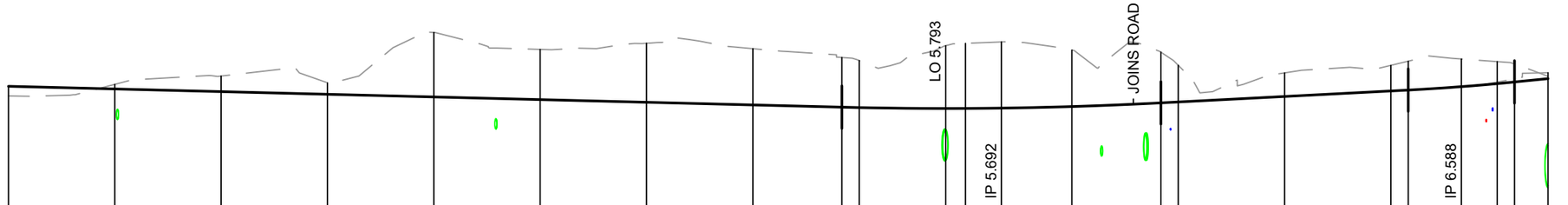
NOTE:
SEE CONSTRUCTION SHEET DD002



RL-2																										
Cut / Fill		0.008	0.015	0.016	0.036	0.027	0.016	-0.034	-0.024	0.110	1.124	1.133	0.921	0.927	-0.506	-0.875	-0.497	-0.428	-0.445	-0.677	-1.076	-0.035	0.363	-0.172		
Design		8.413	8.493	8.499	8.516	8.505	8.49	8.402	8.313	8.102	7.892	7.682	7.507	7.473	7.287	7.233	7.138	7.042	7.026	6.926	6.826	6.726	6.626	6.526		
Natural Surface	8.386	8.405	8.478	8.483	8.480	8.477	8.474	8.436	8.336	7.992	6.768	6.549	6.586	6.546	7.793	8.108	7.636	7.470	7.471	7.603	7.902	6.761	6.262	6.698		
Chainages	0	20	40	41.519	49.794	56.519	60	71.519	80	100	120	140	156.699	160	180	186.699	200	216.699	220	240	260	280	300	320		

HORIZ 1:1000 VERT 1:200

LONGITUDIONAL SECTION - ROAD 4



RL-2																										
Cut / Fill	0.363	-0.172	-0.586	-0.431	-2.422	-1.885	-2.215	-2.112	-1.865	-1.765	-2.357	-2.443	-2.485	-2.122	-1.905	-1.379	-0.885	-0.961	-1.084	-1.037	-0.826	-0.674	-0.086			
Design	6.626	6.526	6.426	6.326	6.226	6.126	6.026	5.926	5.842	5.827	5.793	5.795	5.807	5.865	6.003	6.036	6.243	6.451	6.484	6.612	6.725	6.788	6.914			
Natural Surface	6.262	6.698	7.012	6.757	8.648	8.010	8.241	8.038	7.707	7.592	8.150	8.238	8.292	7.987	7.907	7.415	7.129	7.411	7.568	7.649	7.552	7.462	7.000			
Chainages	300	320	340	360	380	400	420	440	456.744	460	476.28	480	486.744	500	516.744	520	540	560	563.253	573.253	580	583.253	589.556			

HORIZ 1:1000 VERT 1:200

LONGITUDIONAL SECTION - ROAD 4

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SERVICES LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD520		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:14:59 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD520-Road LS.dwg

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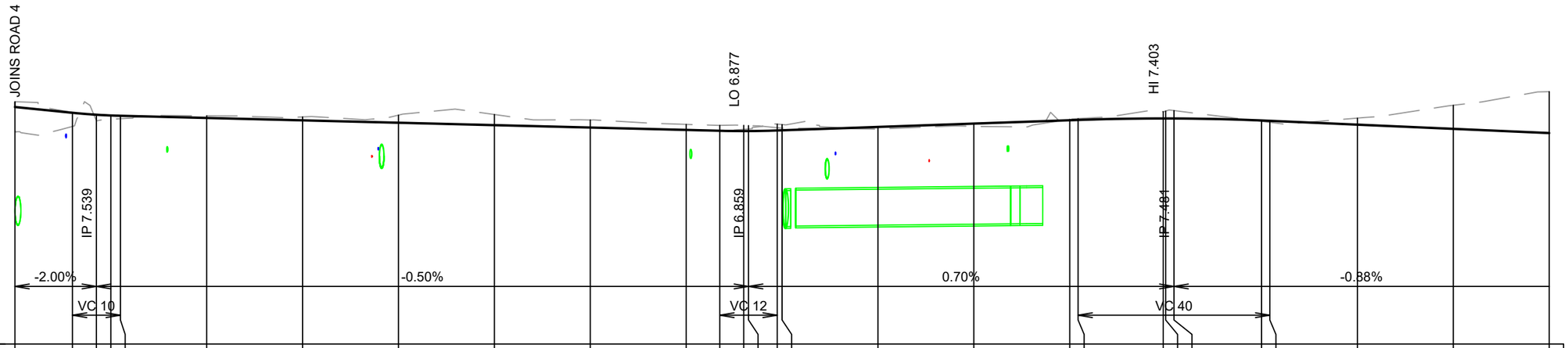
PHILIP COOK
WDC IQP#014

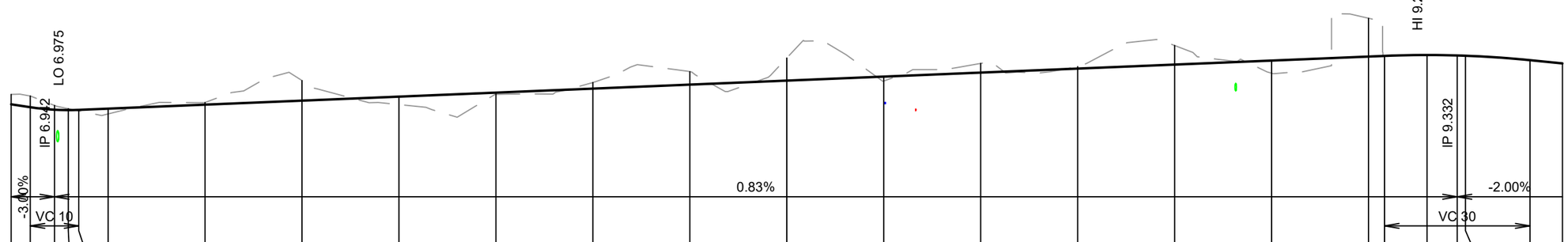
NOTE:
SEE CONSTRUCTION SHEET DD002



RL																										
Cut / Fill	1.026	0.569	0.247	0.162	0.123	-0.089	-0.143	-0.316	-0.443	-0.316	-0.232	-0.225	-0.238	-0.231	-0.114	-0.092	0.086	0.118	-0.040	-0.053	-0.282	-0.307	-0.329	0.037	0.065	-0.272	-0.983	-1.725
Design	7.879	7.639	7.558	7.527	7.514	7.424	7.324	7.224	7.124	7.024	6.924	6.889	6.877	6.877	6.901	6.908	7.048	7.188	7.328	7.341	7.403	7.403	7.402	7.32	7.305	7.145	6.97	6.794
Natural Surface	6.854	7.071	7.311	7.366	7.392	7.513	7.468	7.541	7.568	7.340	7.156	7.114	7.115	7.108	7.016	7.000	6.962	7.070	7.369	7.393	7.685	7.710	7.731	7.283	7.241	7.417	7.953	8.520
Chainages	0	12	17	20	22	40	60	80	100	120	140	147	152	153	159	160	180	200	220	221.732	239.489	240	241.732	260	261.732	280	300	320

HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 5



RL																										
Cut / Fill	-0.408	-0.462	-0.176	-0.058	0.039	0.218	-0.088	-0.830	0.328	0.073	-0.251	-0.534	-0.932	0.181	-0.378	-0.082	-0.786	0.521	-1.579	-0.000	-0.000	0.001	-0.000	0.000	0.000
Design	7.211	7.092	6.99	6.975	6.983	7.033	7.199	7.364	7.529	7.694	7.859	8.025	8.19	8.355	8.52	8.685	8.851	9.016	9.181	9.208	9.245	9.226	9.215	9.032	8.898
Natural Surface	7.619	7.554	7.166	7.032	6.944	6.815	7.286	8.194	7.201	7.621	8.111	8.559	9.122	8.174	8.898	8.767	9.636	8.495	10.760	9.209	9.245	9.225	9.215	9.032	8.898
Chainages	0	3.95	8.95	11.791	13.95	20	40	60	80	100	120	140	160	180	200	220	240	260	280	283.3	292.068	298.3	300	313.3	320

HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 6

APPROVED PLANS - Whangarei District Council RCA: SD1800120 BG: 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SERVICES LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD521		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:14:59 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD520-Road LS.dwg

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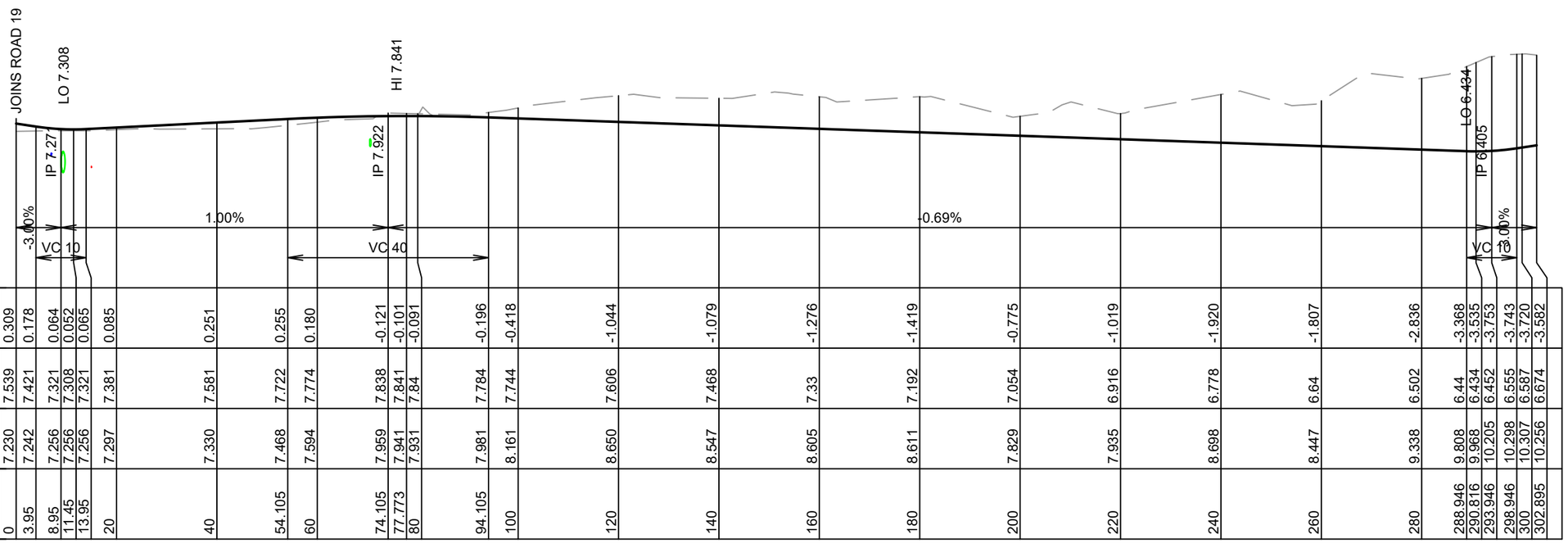
PHILIP COOK
WDC IQP#014

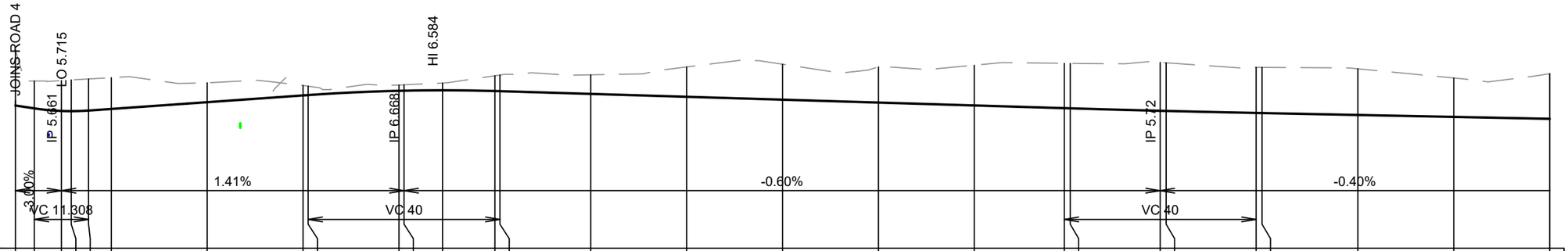
NOTE:
SEE CONSTRUCTION SHEET DD002



RL1																									
Cut / Fill	0.309	0.178	0.064	0.052	0.065	0.085	0.251	0.255	0.180	-0.121	-0.101	-0.091	-0.196	-0.418	-1.044	-1.079	-1.276	-1.419	-0.775	-1.019	-1.920	-1.807	-2.836	-3.368	-3.535	-3.753	-3.743	-3.720	-3.582
Design	7.539	7.421	7.321	7.308	7.321	7.381	7.581	7.722	7.774	7.838	7.841	7.84	7.784	7.744	7.606	7.468	7.33	7.192	7.054	6.916	6.778	6.64	6.502	6.44	6.434	6.452	6.555	6.587	6.674
Natural Surface	7.230	7.242	7.256	7.256	7.256	7.297	7.330	7.468	7.594	7.959	7.941	7.931	7.981	8.161	8.650	8.547	8.605	8.611	7.829	7.935	8.698	8.447	9.338	9.808	9.968	10.205	10.298	10.307	10.256
Chainages	0	3.95	8.95	11.45	13.95	20	40	54.105	60	74.105	77.773	80	94.105	100	120	140	160	180	200	220	240	260	280	288.946	290.816	293.946	298.946	300	302.895

HORIZ 1:1000 VERT 1:200

LONGITUDIONAL SECTION - ROAD 7



RL0																									
Cut / Fill	-2.324	-1.141	-1.268	-1.302	-1.317	-1.303	-0.810	-0.413	-0.371	-0.241	-0.245	-0.303	-0.636	-0.673	-0.796	-1.244	-1.477	-1.487	-1.678	-1.868	-1.873	-2.017	-2.007	-1.901	-1.904	-1.925	-1.623	-1.881
Design	5.949	5.83	5.723	5.715	5.741	5.807	6.089	6.371	6.386	6.563	6.568	6.584	6.554	6.548	6.434	6.314	6.194	6.073	5.953	5.84	5.833	5.73	5.724	5.64	5.635	5.555	5.475	5.395
Natural Surface	8.273	6.972	6.991	7.017	7.058	7.111	6.900	6.785	6.758	6.804	6.813	6.887	7.190	7.221	7.230	7.558	7.671	7.560	7.631	7.708	7.706	7.747	7.730	7.541	7.539	7.480	7.098	7.276
Chainages	0	3.95	9.604	11.643	15.258	20	40	60	61.056	80	81.056	89.096	100	101.056	120	140	160	180	200	218.769	220	238.769	240	258.769	260	280	300	320

HORIZ 1:1000 VERT 1:200

LONGITUDIONAL SECTION - ROAD 8

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SERVICES LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
SHEET 3

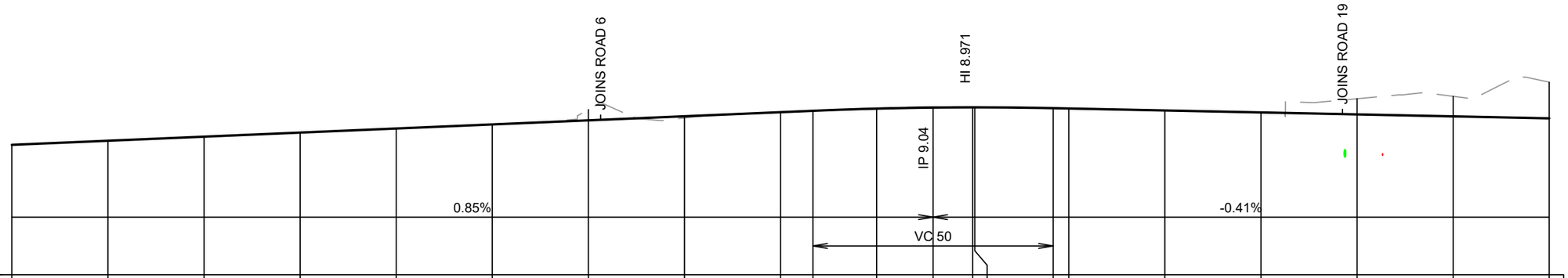
DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO: 14333-004
SCALE: 1:1000H @ A3, 1:200V @ A3
STATUS: FOR APPROVAL
DWG NUMBER: DD522
REVISION: C

DATE PLOTTED: Wednesday, 18 March 2020 9:15:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD520-Road LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

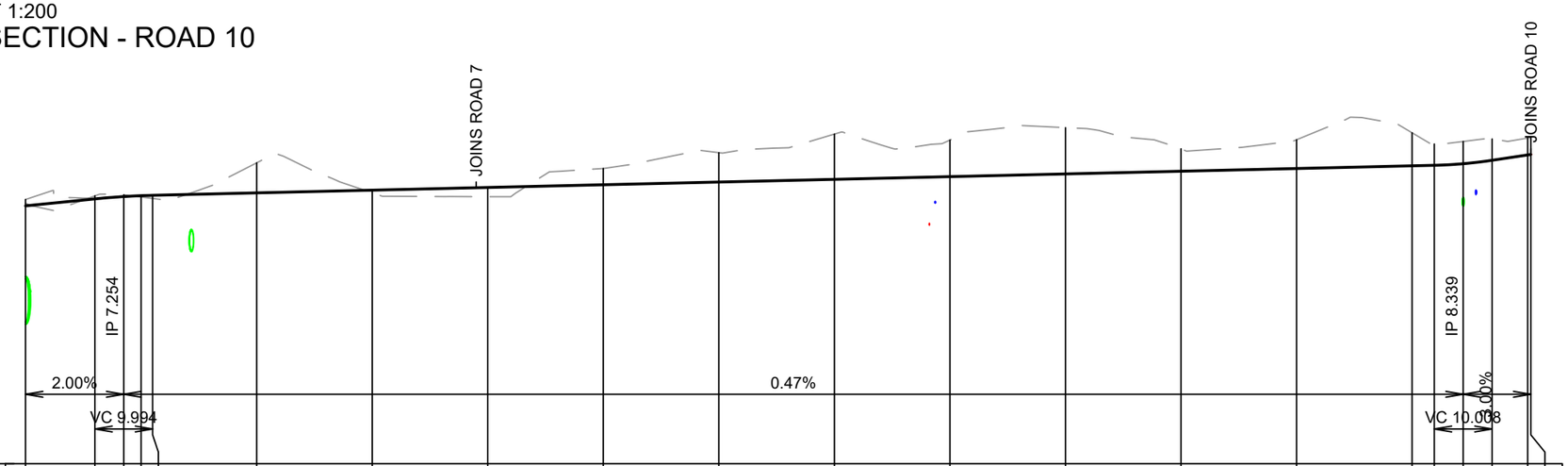
NOTE:
SEE CONSTRUCTION SHEET DD002



RL2																					
Cut / Fill	0.000	0.000	0.000	0.000	0.000	0.000	-0.449	0.072	0.000	0.000	-0.020	-0.030	-0.026	-0.025	0.000	0.000	0.000	0.000	-0.653	-0.836	-1.504
Design	7.411	7.581	7.751	7.921	8.091	8.261	8.431	8.601	8.771	8.828	8.918	8.962	8.971	8.971	8.938	8.924	8.842	8.76	8.677	8.595	8.513
Natural Surface	7.411	7.581	7.751	7.921	8.091	8.261	8.880	8.529	8.771	8.828	8.938	8.992	8.997	8.996	8.938	8.924	8.842	8.760	9.330	9.431	10.017
Chainages	300	320	340	360	380	400	420	440	460	466.744	480	491.744	500	500.44	516.744	520	540	560	580	600	620

HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 10



RL-2																					
Cut / Fill	-0.085	-0.104	-0.060	0.046	0.109	-1.038	0.092	0.319	-0.564	-1.016	-1.565	-1.264	-1.601	-0.776	-0.995	-1.141	-0.735	-0.769	-0.736	-0.584	-0.585
Design	6.914	7.154	7.235	7.265	7.277	7.362	7.455	7.549	7.642	7.736	7.829	7.923	8.017	8.11	8.204	8.297	8.315	8.37	8.489	8.673	8.69
Natural Surface	6.999	7.258	7.295	7.219	7.168	8.400	7.363	7.229	8.206	8.751	9.395	9.187	9.618	8.887	9.199	9.438	9.051	9.139	9.225	9.257	9.275
Chainages	0	12	16.997	20	21.994	40	60	80	100	120	140	160	180	200	220	240	243.84	248.844	253.848	260	260.548

HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 19

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:200 (0, 2, 4, 6, 8, 10)

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS AND ROADS 10 & 19 LONGSECTIONS UPDATED	18-03-20 KH	PC
B	SERVICES LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
SHEET 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO 14333-004
SCALE 1:1000H @ A3, 1:200V @ A3
STATUS FOR APPROVAL
DWG NUMBER DD523
REVISION C

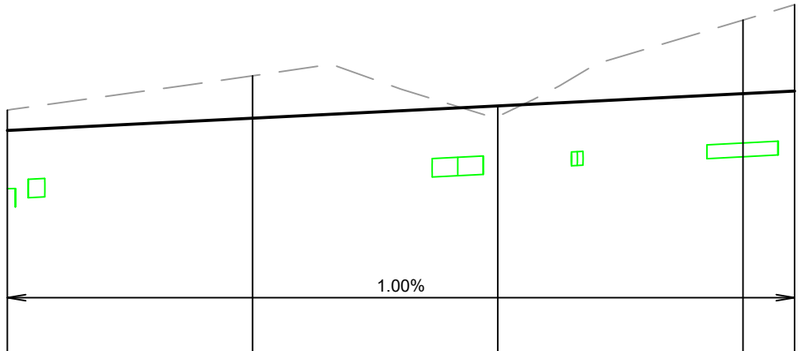
SCALE 1:1000 (0, 10, 20, 30, 40, 50)

DATE PLOTTED: Wednesday, 18 March 2020 9:15:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD520-Road LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL4						
Cut / Fill	-0.330	-0.691	0.173	-1.200	-1.409	
Design	7.926	8.126	8.326	8.526	8.568	
Natural Surface	8.257	8.817	8.153	9.726	9.977	
Chainages	0	20	40	60	64.207	

HORIZ 1:500 VERT 1:100

LONGITUDIONAL SECTION - JOAL 706

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SERVICES LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
JOAL LONGSECTIONS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD524		REVISION C	

SCALE 1:500

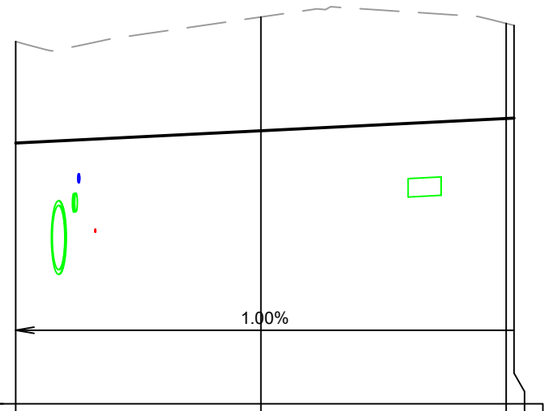
DATE PLOTTED: Wednesday, 18 March 2020 9:15:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD520-Road LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

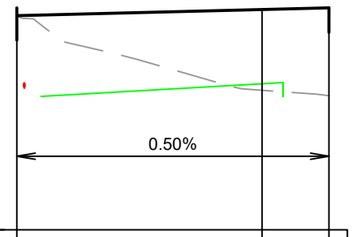
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL2

Cut / Fill	-1.655	-1.854	-1.550	-1.511
Design	6.252	6.452	6.652	6.659
Natural Surface	7.907	8.306	8.202	8.170
Chainages	0	20	40	40.643

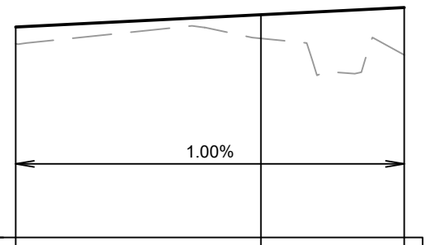
HORIZ 1:500 VERT 1:100
LONGITUDIONAL SECTION - JOAL 709



RL5

Cut / Fill	0.000	1.317	1.432
Design	8.492	8.592	8.619
Natural Surface	8.492	7.275	7.187
Chainages	0	20	25.455

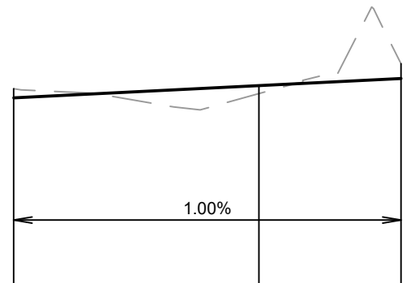
HORIZ 1:500 VERT 1:100
LONGITUDIONAL SECTION - JOAL 712



RL4

Cut / Fill	0.274	0.387	0.773
Design	7.432	7.632	7.749
Natural Surface	7.158	7.245	6.976
Chainages	0	20	31.69

HORIZ 1:500 VERT 1:100
LONGITUDIONAL SECTION - JOAL 713



RL4

Cut / Fill	-0.149	0.131	-0.241
Design	7.192	7.392	7.508
Natural Surface	7.341	7.261	7.749
Chainages	0	20	31.59

HORIZ 1:500 VERT 1:100
LONGITUDIONAL SECTION - JOAL 714

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SERVICES LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
JOAL LONGSECTIONS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO 14333-004
SCALE 1:500H @ A3 1:100V @ A3
STATUS FOR APPROVAL
DWG NUMBER DD525
REVISION C

SCALE 1:500

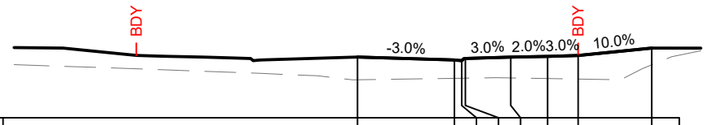
DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD520-Road LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Datum 5.00

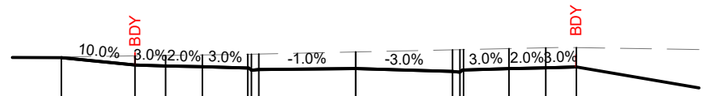
DESIGN HEIGHT	7.47	7.35	7.32	7.41	7.47	7.50	7.54	7.84								
EXISTING SURFACE	6.55	6.61	6.61	6.61	6.62	6.60	6.58	7.16								
DESIGN OFFSET	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00								

CH. 160.00

Datum 6.00

DESIGN HEIGHT	8.68	8.38	8.34	8.31	8.25	8.16	8.19	8.31	8.31	8.19	8.16	8.25	8.31	8.34	8.38	8.68		
EXISTING SURFACE	7.97	8.22	8.24	8.29	8.30	8.30	8.30	8.34	8.34	8.31	8.30	8.30	8.30	8.28	8.26	8.26		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00		

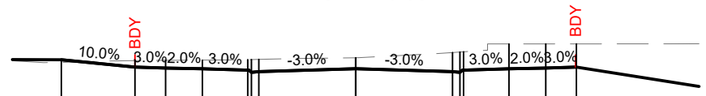
CH. 80.00



Datum 5.00

DESIGN HEIGHT	7.37	7.07	7.03	7.00	6.95	6.86	6.89	6.93	6.93	6.81	6.78	6.87	6.92	6.95	6.99	
EXISTING SURFACE	7.40	7.44	7.46	7.48	7.51	7.51	7.52	7.60	7.60	7.69	7.70	7.70	7.74	7.77	7.78	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

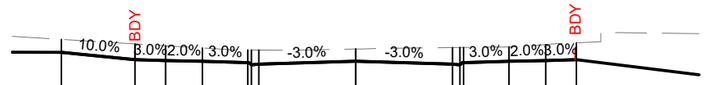
CH. 240.00



Datum 5.00

DESIGN HEIGHT	7.39	7.09	7.05	7.02	6.97	6.88	6.91	7.03	7.03	6.91	6.88	6.97	7.02	7.05	7.09	
EXISTING SURFACE	7.29	7.36	7.37	7.38	7.40	7.40	7.41	7.47	7.47	7.68	7.70	7.71	8.04	8.04	8.04	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 220.00



Datum 5.00

DESIGN HEIGHT	7.50	7.20	7.17	7.14	7.08	6.99	7.02	7.14	7.14	7.02	6.99	7.08	7.14	7.17	7.20	
EXISTING SURFACE	8.03	7.85	7.77	7.68	7.60	7.60	7.59	7.64	7.64	7.70	7.70	7.70	7.72	7.82	7.89	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 200.00

Datum 5.00

DESIGN HEIGHT	7.65	7.35	7.31	7.28	7.23	7.14	7.17	7.29	7.29	7.17	7.14	7.23	7.28	7.31	7.35	7.65		
EXISTING SURFACE	7.84	7.85	7.84	7.84	7.82	7.82	7.82	7.79	7.79	7.89	7.88	7.85	7.01	6.65	6.68	7.91		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00		

CH. 180.00

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

CROSS SECTION - ROAD 4 (1)

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD530		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

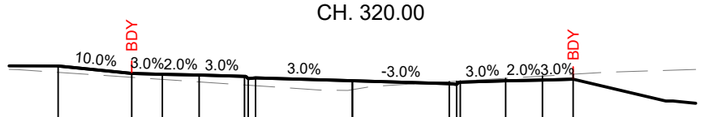
PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

Datum 4.00

DESIGN HEIGHT	6.97	6.67	6.63	6.60	6.54	6.45	6.48	6.53	6.53	6.41	6.38	6.47	6.52	6.55	6.59		
EXISTING SURFACE	6.83	6.80	6.79	6.77	6.75	6.75	6.74	6.70	6.70	6.97	7.02	7.04	7.32	7.53	7.67		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

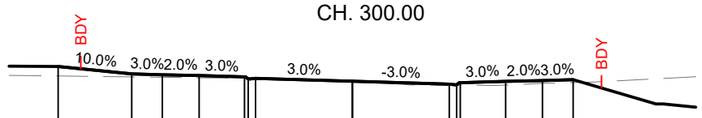
CH. 320.00



Datum 4.00

DESIGN HEIGHT	7.23	6.93	6.89	6.86	6.80	6.71	6.74	6.63	6.63	6.51	6.48	6.57	6.62	6.65	6.69		
EXISTING SURFACE	6.97	6.76	6.68	6.58	6.45	6.44	6.42	6.26	6.26	6.59	6.60	6.61	6.73	6.82	6.89		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

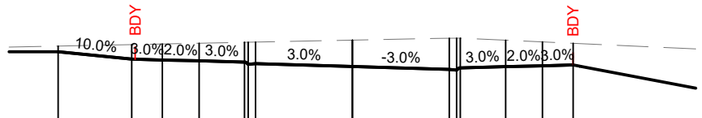
CH. 300.00



Datum 4.00

DESIGN HEIGHT	7.33	7.03	6.99	6.96	6.90	6.81	6.84	6.73	6.73	6.61	6.58	6.67	6.72	6.75	6.79		
EXISTING SURFACE	6.94	6.90	6.89	6.87	6.85	6.84	6.84	6.76	6.76	6.57	6.56	6.56	6.57	6.64	6.67		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

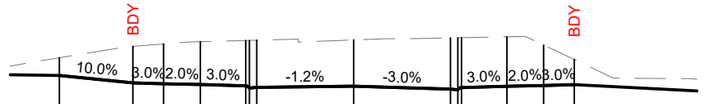
CH. 280.00



Datum 4.00

DESIGN HEIGHT	7.43	7.13	7.09	7.06	7.00	6.91	6.94	6.83	6.83	6.71	6.68	6.77	6.82	6.85	6.89		
EXISTING SURFACE	7.66	7.72	7.74	7.77	7.81	7.82	7.82	7.90	7.90	7.98	7.98	7.98	7.90	7.83	7.77		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

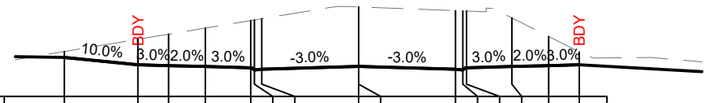
CH. 260.00



Datum 4.00

DESIGN HEIGHT	6.56	6.26	6.22	6.19	6.14	6.05	6.08	6.13	6.13	6.01	5.98	6.07	6.12	6.15	6.19		
EXISTING SURFACE	7.29	7.75	7.85	7.94	7.99	7.99	8.00	8.01	8.01	8.09	8.10	8.10	8.14	7.80	7.22		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

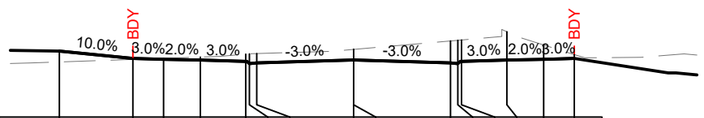
CH. 400.00



Datum 5.00

DESIGN HEIGHT	6.59	6.29	6.25	6.22	6.17	6.08	6.11	6.23	6.23	6.11	6.08	6.17	6.22	6.25	6.29		
EXISTING SURFACE	6.83	7.33	7.54	7.79	8.09	8.12	8.17	8.65	8.65	8.50	8.49	8.48	8.20	7.45	6.82		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

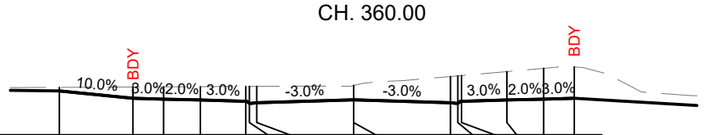
CH. 380.00



Datum 4.00

DESIGN HEIGHT	6.69	6.39	6.35	6.32	6.27	6.18	6.21	6.33	6.33	6.21	6.18	6.27	6.32	6.35	6.39		
EXISTING SURFACE	6.25	6.35	6.39	6.45	6.56	6.58	6.59	6.76	6.76	7.10	7.13	7.14	7.48	6.94	6.55		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

CH. 360.00



Datum 5.00

DESIGN HEIGHT	6.79	6.49	6.45	6.42	6.37	6.28	6.31	6.43	6.43	6.31	6.28	6.37	6.42	6.45	6.49		
EXISTING SURFACE	6.93	6.95	6.96	6.96	6.97	6.97	6.98	7.01	7.01	7.38	7.40	7.42	7.58	7.71	7.77		
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00		

CH. 340.00

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:250

CROSS SECTION - ROAD 4 (2)

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD531		REVISION B	

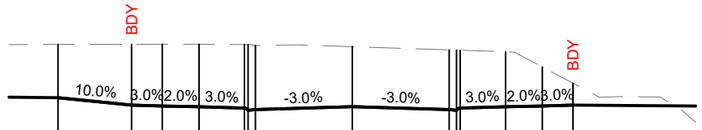
SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002



Datum 4.00

DESIGN HEIGHT	6.16	5.86	5.82	5.79	5.74	5.65	5.68	5.79	5.79	5.68	5.65	5.74	5.79	5.82	5.86	
EXISTING SURFACE	8.33	8.34	8.34	8.34	8.33	8.33	8.29	8.24	8.24	8.11	8.10	8.10	8.03	7.41	6.75	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 480.00

Datum 4.00

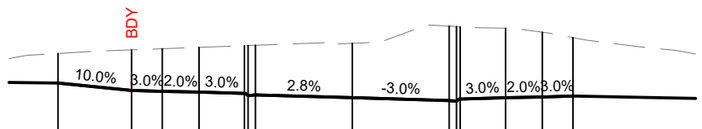
DESIGN HEIGHT	6.29	5.99	5.96	5.93	5.87	5.78	5.81	5.83	5.83	5.71	5.68	5.77	5.82	5.85	5.89	
EXISTING SURFACE	7.61	7.63	7.64	7.66	7.68	7.68	7.69	7.59	7.59	7.47	7.46	7.46	7.19	6.88	6.63	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 460.00

Datum 4.00

DESIGN HEIGHT	6.53	6.23	6.19	6.16	6.10	6.01	6.04	5.93	5.93	5.81	5.78	5.87	5.92	5.95	5.99	
EXISTING SURFACE	7.68	7.78	7.83	7.88	7.95	7.95	7.96	8.04	8.04	8.07	8.07	8.07	8.02	7.98	8.20	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

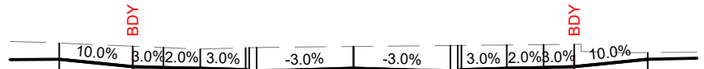
CH. 440.00



Datum 4.00

DESIGN HEIGHT	6.62	6.32	6.28	6.25	6.20	6.11	6.14	6.03	6.03	5.91	5.88	5.97	6.02	6.05	6.09	
EXISTING SURFACE	7.83	7.97	8.02	8.07	8.14	8.15	8.16	8.24	8.24	8.94	8.92	8.92	8.85	8.69	8.47	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

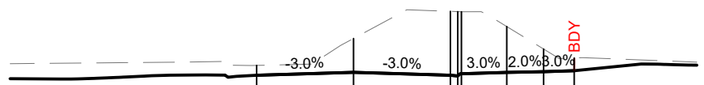
CH. 420.00



Datum 5.00

DESIGN HEIGHT	6.61	6.31	6.27	6.24	6.18	6.09	6.12	6.24	6.24	6.12	6.09	6.18	6.24	6.27	6.31	6.61	
EXISTING SURFACE	7.27	7.14	7.09	7.02	7.07	7.08	7.08	7.13	7.13	7.17	7.17	7.17	7.19	7.20	7.22	6.88	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

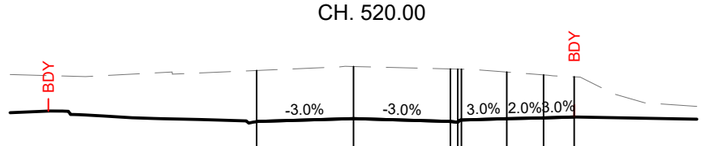
CH. 540.00



Datum 4.00

DESIGN HEIGHT	5.92	6.04	5.92	5.89	5.98	6.03	6.06	6.10	
EXISTING SURFACE	6.32	7.42	8.52	8.51	8.51	7.90	6.99	6.62	
DESIGN OFFSET	-3.95	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 520.00



Datum 4.00

DESIGN HEIGHT	5.75	5.87	5.75	5.72	5.81	5.86	5.89	5.93	
EXISTING SURFACE	7.82	7.99	7.89	7.88	7.88	7.76	7.65	7.57	
DESIGN OFFSET	-3.95	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 500.00

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:250

CROSS SECTION - ROAD 4 (3)

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO	SCALE	STATUS
14333-004	1:250 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD532	B

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

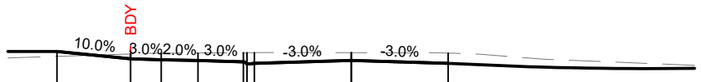
PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Datum 5.00

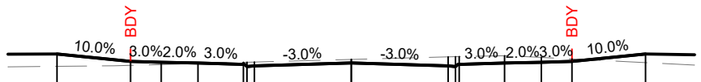
DESIGN HEIGHT	7.59	7.29	7.25	7.22	7.17	7.08	7.11	7.22	7.22	7.11	
EXISTING SURFACE	7.39	7.49	7.52	7.53	7.54	7.54	7.54	7.54	7.54	7.52	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	

CH. 80.00

Datum 6.00

DESIGN HEIGHT	7.19	7.07	7.04	7.13	7.19	7.22	7.25	7.55	
EXISTING SURFACE	7.07	7.20	7.21	7.22	7.31	7.38	7.44	7.49	
DESIGN OFFSET	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

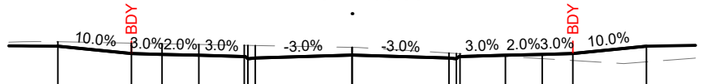
CH. 200.00



Datum 6.00

DESIGN HEIGHT	7.69	7.39	7.35	7.32	7.27	7.18	7.21	7.32	7.32	7.21	7.18	7.27	7.32	7.35	7.39	7.69	
EXISTING SURFACE	7.19	7.23	7.26	7.30	7.35	7.35	7.36	7.47	7.47	7.57	7.58	7.59	7.62	7.55	7.49	7.34	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

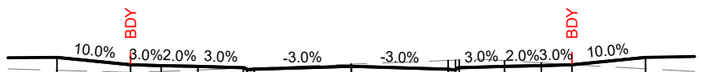
CH. 60.00



Datum 5.00

DESIGN HEIGHT	7.39	7.09	7.05	7.02	6.97	6.88	6.91	7.02	7.02	6.91	6.88	6.97	7.02	7.05	7.09	7.39	
EXISTING SURFACE	7.57	7.51	7.49	7.46	7.42	7.42	7.42	7.34	7.34	7.11	7.09	7.08	6.97	6.88	6.80	6.75	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

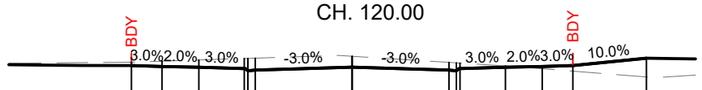
CH. 120.00



Datum 6.00

DESIGN HEIGHT	7.79	7.49	7.45	7.42	7.37	7.28	7.31	7.42	7.42	7.31	7.28	7.37	7.42	7.45	7.49	7.79	
EXISTING SURFACE	7.26	7.18	7.22	7.27	7.34	7.35	7.36	7.51	7.51	7.67	7.68	7.68	7.66	7.57	7.49	7.32	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 40.00



Datum 5.00

DESIGN HEIGHT	7.19	7.15	7.12	7.07	6.98	7.01	7.12	7.12	7.01	6.98	7.07	7.12	7.15	7.19	7.49		
EXISTING SURFACE	7.33	7.37	7.42	7.48	7.48	7.49	7.57	7.57	7.32	7.30	7.29	7.17	7.06	6.96	6.72		
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00		

CH. 100.00

CROSS SECTION - ROAD 5

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD533		REVISION B	

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

Datum 6.00

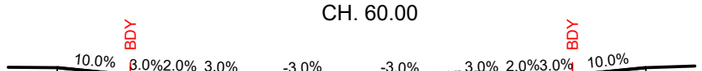
DESIGN HEIGHT	7.89	7.59	7.56	7.53	7.47	7.38	7.41	7.53	7.53	7.41	7.38	7.47	7.53	7.56	7.59	7.89	
EXISTING SURFACE	7.16	7.18	7.20	7.22	7.25	7.25	7.26	7.20	7.20	7.18	7.19	7.19	7.21	7.23	7.25	7.30	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 80.00

Datum 6.00

DESIGN HEIGHT	7.73	7.43	7.39	7.36	7.31	7.22	7.25	7.36	7.36	7.25	7.22	7.31	7.36	7.39	7.43	7.73	
EXISTING SURFACE	7.99	8.04	8.06	8.09	8.12	8.12	8.13	8.19	8.19	8.38	8.39	8.40	8.49	8.57	8.63	8.70	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

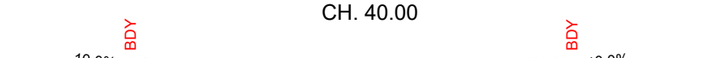
CH. 60.00



Datum 6.00

DESIGN HEIGHT	7.56	7.26	7.23	7.20	7.14	7.05	7.08	7.20	7.20	7.08	7.05	7.14	7.20	7.23	7.26	7.56	
EXISTING SURFACE	7.29	7.24	7.21	7.21	7.27	7.27	7.27	7.29	7.29	7.40	7.41	7.41	7.39	7.35	7.32	7.22	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 40.00



Datum 5.00

DESIGN HEIGHT	7.40	7.10	7.06	7.03	6.97	6.88	6.91	7.03	7.03	6.91	6.88	6.97	7.03	7.06	7.10	7.40	
EXISTING SURFACE	7.12	7.08	7.06	7.04	6.97	6.97	6.96	6.82	6.82	6.81	6.82	6.83	6.87	6.89	6.90	6.91	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 20.00

Datum 7.00

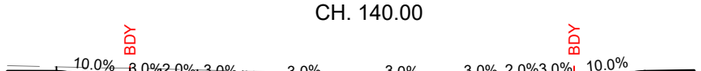
DESIGN HEIGHT	8.55	8.25	8.22	8.19	8.13	8.04	8.07	8.19	8.19	8.07	8.04	8.13	8.19	8.22	8.25	8.55	
EXISTING SURFACE	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.12	9.12	9.29	9.31	9.31	9.39	9.46	9.51	9.64	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 160.00

Datum 6.00

DESIGN HEIGHT	8.39	8.09	8.05	8.02	7.97	7.88	7.91	8.02	8.02	7.91	7.88	7.97	8.02	8.05	8.09	8.39	
EXISTING SURFACE	8.51	8.52	8.52	8.51	8.50	8.49	8.49	8.56	8.56	8.68	8.68	8.69	8.72	8.75	8.77	8.83	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

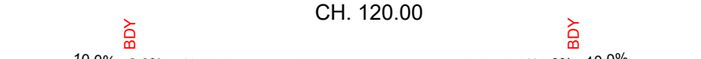
CH. 140.00



Datum 6.00

DESIGN HEIGHT	8.22	7.92	7.89	7.86	7.80	7.71	7.74	7.86	7.86	7.74	7.71	7.80	7.86	7.89	7.92	8.22	
EXISTING SURFACE	8.41	8.36	8.33	8.28	8.23	8.23	8.22	8.11	8.11	8.00	7.99	7.99	7.98	7.97	7.96	7.94	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 120.00



Datum 6.00

DESIGN HEIGHT	8.06	7.76	7.72	7.69	7.64	7.55	7.58	7.69	7.69	7.58	7.55	7.64	7.69	7.72	7.76	8.06	
EXISTING SURFACE	7.58	7.62	7.65	7.67	7.67	7.66	7.66	7.62	7.62	7.46	7.45	7.45	7.42	7.41	7.41	7.39	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 100.00

CROSS SECTION - ROAD 6(1)

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD534		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

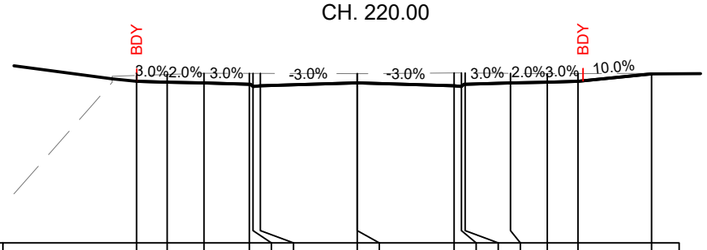
NOTE:
SEE CONSTRUCTION SHEET DD002

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

Datum 3.00

DESIGN HEIGHT	8.75	8.71	8.68	8.63	8.54	8.57	8.69	8.69	8.57	8.54	8.63	8.68	8.71	8.75	9.05
EXISTING SURFACE	9.03	8.98	8.91	8.84	8.83	8.82	8.77	8.77	8.75	8.75	8.75	8.75	8.74	8.73	8.67
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

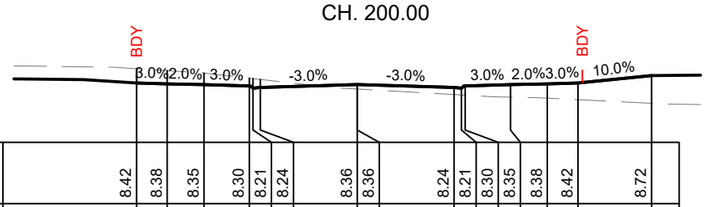
CH. 220.00



Datum 2.00

DESIGN HEIGHT	8.58	8.55	8.52	8.46	8.37	8.40	8.52	8.52	8.40	8.37	8.46	8.52	8.55	8.58	8.88
EXISTING SURFACE	8.82	8.86	8.91	8.91	8.91	8.91	8.90	8.90	8.93	8.93	8.92	8.91	8.90	8.90	8.91
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

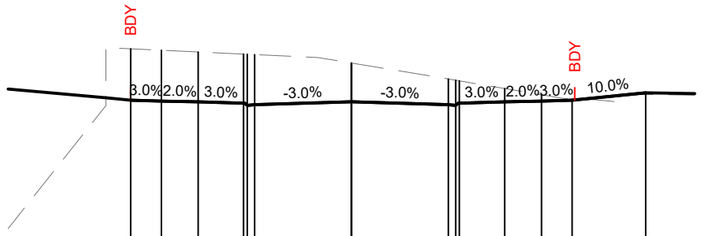
CH. 200.00



Datum 6.00

DESIGN HEIGHT	8.42	8.38	8.35	8.30	8.21	8.24	8.36	8.36	8.24	8.21	8.30	8.35	8.38	8.42	8.72
EXISTING SURFACE	9.00	8.92	8.82	8.61	8.60	8.56	8.17	8.17	7.95	7.93	7.92	7.84	7.80	7.74	7.59
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

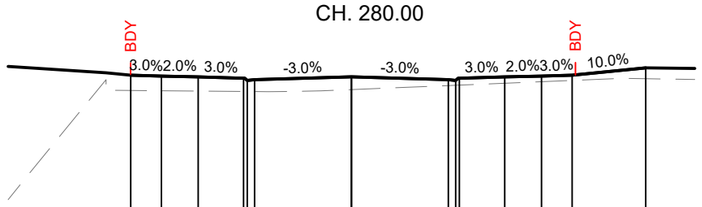
CH. 180.00



Datum 3.00

DESIGN HEIGHT	9.25	9.21	9.18	9.12	9.03	9.06	9.18	9.18	9.06	9.03	9.12	9.18	9.21	9.25	9.55
EXISTING SURFACE	11.34	11.28	11.21	11.12	11.12	11.10	10.76	10.76	10.11	10.06	10.03	9.72	9.47	9.30	9.48
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

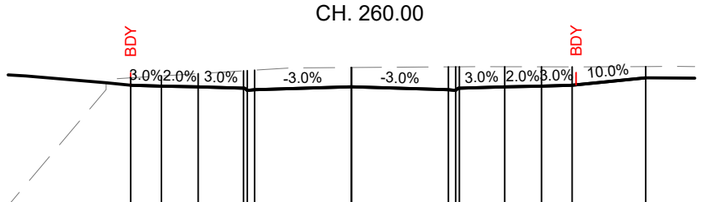
CH. 280.00



Datum 3.00

DESIGN HEIGHT	9.08	9.04	9.01	8.96	8.87	8.90	9.02	9.02	8.90	8.87	8.96	9.01	9.04	9.08	9.38
EXISTING SURFACE	8.46	8.45	8.43	8.42	8.42	8.41	8.49	8.49	8.66	8.67	8.68	8.75	8.82	8.87	8.94
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 260.00



Datum 3.00

DESIGN HEIGHT	8.92	8.88	8.85	8.79	8.70	8.73	8.85	8.85	8.73	8.70	8.79	8.85	8.88	8.92	9.22
EXISTING SURFACE	9.22	9.29	9.39	9.50	9.51	9.53	9.64	9.64	9.66	9.67	9.67	9.67	9.67	9.66	9.67
DESIGN OFFSET	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 240.00

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

CROSS SECTION - ROAD 6(2)

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD535		REVISION B	

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

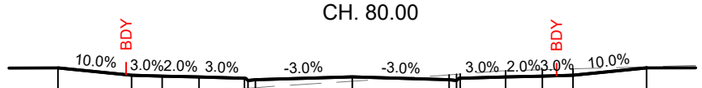
PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

Datum 6.00

DESIGN HEIGHT	8.20	7.90	7.87	7.84	7.78	7.69	7.72	7.84	7.84	7.72	7.69	7.78	7.84	7.87	7.90	8.20	
EXISTING SURFACE	7.18	7.19	7.25	7.32	7.47	7.49	7.52	7.93	7.93	8.29	8.30	8.30	8.35	8.38	8.41	8.38	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

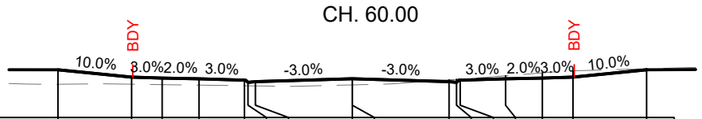
CH. 80.00



Datum 6.00

DESIGN HEIGHT	8.14	7.84	7.80	7.77	7.72	7.63	7.66	7.77	7.77	7.66	7.63	7.72	7.77	7.80	7.84	8.14	
EXISTING SURFACE	7.13	7.07	7.05	7.14	7.29	7.30	7.33	7.59	7.59	7.85	7.88	7.89	8.02	8.06	8.10	8.18	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

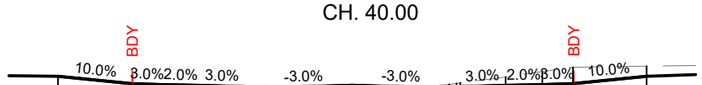
CH. 60.00



Datum 6.00

DESIGN HEIGHT	7.95	7.65	7.61	7.58	7.52	7.43	7.46	7.58	7.58	7.46	7.43	7.52	7.58	7.61	7.65	7.95	
EXISTING SURFACE	7.36	7.36	7.34	7.32	7.30	7.29	7.29	7.33	7.33	7.54	7.56	7.57	7.70	7.82	7.90	7.99	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 40.00

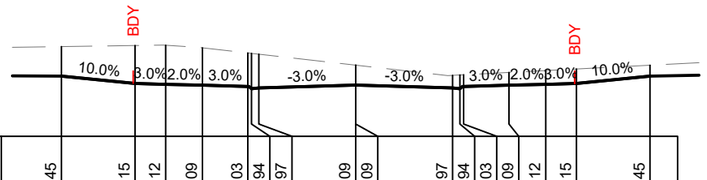


Datum 6.00

DESIGN HEIGHT	7.75	7.45	7.41	7.38	7.32	7.23	7.26	7.38	7.38	7.26	7.23	7.32	7.38	7.41	7.45	7.75	
EXISTING SURFACE	7.24	7.20	7.20	7.23	7.27	7.27	7.27	7.30	7.30	7.42	7.46	7.48	7.72	7.94	8.11	8.16	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 20.00

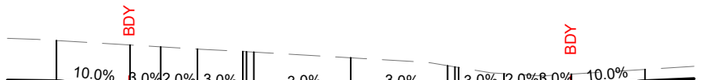
CROSS SECTION - ROAD 7



Datum 4.00

DESIGN HEIGHT	6.45	6.15	6.12	6.09	6.03	5.94	5.97	6.09	6.09	5.97	5.94	6.03	6.09	6.12	6.15	6.45	
EXISTING SURFACE	7.66	7.70	7.71	7.61	7.40	7.38	7.35	6.90	6.90	6.48	6.50	6.51	6.60	6.68	6.74	6.90	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 40.00



Datum 4.00

DESIGN HEIGHT	6.17	5.87	5.83	5.80	5.75	5.66	5.69	5.81	5.81	5.69	5.66	5.75	5.80	5.83	5.87	6.17	
EXISTING SURFACE	7.82	7.63	7.56	7.47	7.37	7.36	7.34	7.11	7.11	6.79	6.74	6.72	6.47	6.38	6.45	6.64	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00	

CH. 20.00

CROSS SECTION - ROAD 8

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 7

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD536		REVISION B	

SCALE 1:250

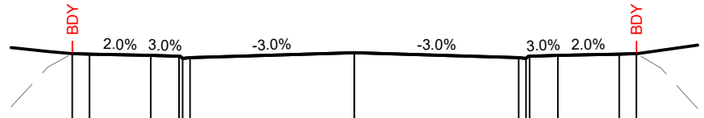
DATE PLOTTED: Wednesday, 18 March 2020 9:15:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

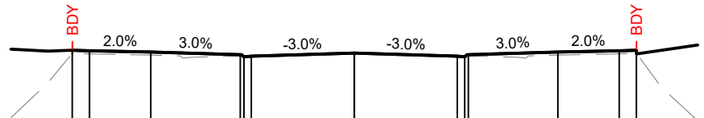
NOTE:
SEE CONSTRUCTION SHEET DD002



Datum 5.00

DESIGN HEIGHT	8.89	8.87	8.82	8.78	8.69	8.72	8.92	8.92	8.72	8.69	8.78	8.82	8.87	8.89
EXISTING SURFACE	8.89	8.87	8.82	8.78	8.69	8.72	8.92	8.92	8.72	8.69	8.78	8.82	8.87	8.89
DESIGN OFFSET	-11.50	-10.80	-8.30	-7.15	-7.00	-6.70	0.00	0.00	6.70	7.00	7.15	8.30	10.80	11.50

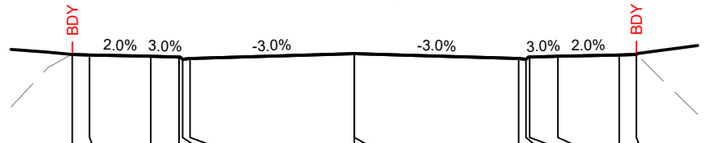
CH. 520.00



Datum 5.00

DESIGN HEIGHT	9.09	9.06	9.01	8.91	8.82	8.85	8.97	8.97	8.85	8.82	8.91	9.01	9.06	9.09
EXISTING SURFACE	8.96	8.94	8.89	8.86	8.86	8.87	9.00	9.00	8.87	8.86	8.86	8.89	8.94	8.96
DESIGN OFFSET	-11.50	-10.80	-8.30	-4.65	-4.50	-4.20	0.00	0.00	4.20	4.50	4.65	8.30	10.80	11.50

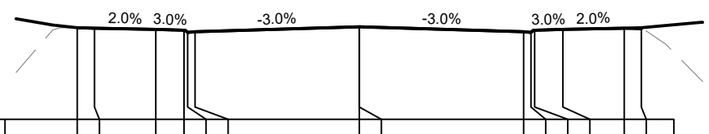
CH. 500.00



Datum 5.00

DESIGN HEIGHT	8.88	8.86	8.81	8.78	8.69	8.72	8.92	8.92	8.72	8.69	8.78	8.81	8.86	8.88
EXISTING SURFACE	8.90	8.88	8.83	8.80	8.71	8.74	8.94	8.94	8.74	8.71	8.80	8.83	8.88	8.90
DESIGN OFFSET	-11.50	-10.80	-8.30	-7.15	-7.00	-6.70	0.00	0.00	6.70	7.00	7.15	8.30	10.80	11.50

CH. 480.00



Datum 5.00

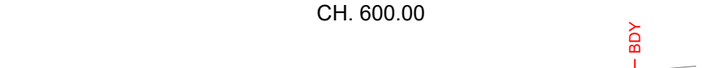
DESIGN HEIGHT	8.74	8.71	8.66	8.63	8.54	8.57	8.77	8.77	8.57	8.54	8.63	8.66	8.71	8.74
EXISTING SURFACE	8.74	8.71	8.66	8.63	8.54	8.57	8.77	8.77	8.57	8.54	8.63	8.66	8.71	8.74
DESIGN OFFSET	-11.50	-10.80	-8.30	-7.15	-7.00	-6.70	0.00	0.00	6.70	7.00	7.15	8.30	10.80	11.50

CH. 460.00

Datum 7.00

DESIGN HEIGHT	8.56	8.54	8.49	8.45	8.36	8.39	8.60	8.60	8.39	8.36	8.45	8.49	8.54	8.56
EXISTING SURFACE	9.78	9.70	9.41	9.29	9.28	9.25	9.43	9.43	9.55	9.54	9.53	9.49	9.41	9.40
DESIGN OFFSET	-11.50	-10.80	-8.30	-7.15	-7.00	-6.70	0.00	0.00	6.70	7.00	7.15	8.30	10.80	11.50

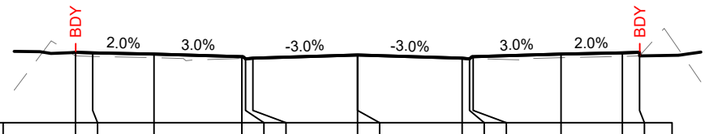
CH. 600.00



Datum 7.00

DESIGN HEIGHT	8.55	8.68	8.55	8.52	8.61	8.72	8.77	8.79
EXISTING SURFACE	9.19	9.33	9.47	9.48	9.48	9.48	9.47	9.51
DESIGN OFFSET	-4.20	0.00	4.20	4.50	4.65	8.30	10.80	11.50

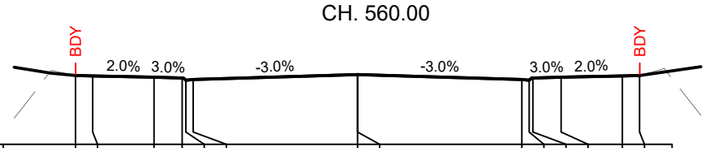
CH. 580.00



Datum 6.00

DESIGN HEIGHT	8.87	8.85	8.80	8.69	8.60	8.63	8.76	8.76	8.63	8.60	8.69	8.80	8.85	8.87
EXISTING SURFACE	8.72	8.70	8.65	8.62	8.62	8.63	8.76	8.76	8.63	8.62	8.62	8.65	8.70	8.72
DESIGN OFFSET	-11.50	-10.80	-8.30	-4.72	-4.57	-4.27	0.00	0.00	4.27	4.57	4.72	8.30	10.80	11.50

CH. 560.00



Datum 6.00

DESIGN HEIGHT	8.81	8.79	8.74	8.70	8.61	8.64	8.84	8.84	8.64	8.61	8.70	8.74	8.79	8.81
EXISTING SURFACE	8.81	8.79	8.74	8.70	8.61	8.64	8.84	8.84	8.64	8.61	8.70	8.74	8.79	8.81
DESIGN OFFSET	-11.50	-10.80	-8.30	-7.15	-7.00	-6.70	0.00	0.00	6.70	7.00	7.15	8.30	10.80	11.50

CH. 540.00

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250

CROSS SECTION - ROAD 10

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS AND NEW ROAD 10 X-SECTIONS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 8

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD537		REVISION B	

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

Datum 6.00

DESIGN HEIGHT	7.43	7.55	7.43	7.40	7.49	7.55	7.58	7.61	7.91
EXISTING SURFACE	7.24	7.23	7.21	7.21	7.20	7.19	7.17	7.16	7.14
DESIGN OFFSET	-3.95	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 80.00

Datum 6.00

DESIGN HEIGHT	7.82	7.52	7.48	7.45	7.40	7.31	7.34	7.46	7.46	7.34	7.31	7.40	7.45	7.48	7.52	7.82
EXISTING SURFACE	7.32	7.31	7.30	7.29	7.29	7.29	7.30	7.36	7.36	7.41	7.41	7.41	7.44	7.46	7.48	7.53
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 60.00

Datum 6.00

DESIGN HEIGHT	7.73	7.43	7.39	7.36	7.30	7.21	7.24	7.36	7.36	7.24	7.21	7.30	7.36	7.39	7.43	7.73
EXISTING SURFACE	8.46	8.45	8.44	8.43	8.42	8.42	8.42	8.40	8.40	8.35	8.34	8.34	8.28	8.24	8.21	8.13
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 40.00

Datum 6.00

DESIGN HEIGHT	8.29	7.99	7.95	7.92	7.86	7.77	7.80	7.92	7.92	8.04	8.01	8.10	8.16	8.19	8.22	8.52
EXISTING SURFACE	9.89	9.79	9.70	9.58	9.43	9.42	9.39	9.19	9.19	9.06	9.05	9.04	9.08	9.15	9.20	8.74
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 160.00

Datum 6.00

DESIGN HEIGHT	8.19	7.89	7.86	7.83	7.77	7.68	7.71	7.83	7.83	7.89	7.86	7.95	8.00	8.03	8.07	8.37
EXISTING SURFACE	9.25	9.29	9.31	9.33	9.36	9.36	9.36	9.39	9.39	9.22	9.20	9.20	9.09	9.00	8.92	8.73
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 140.00

Datum 6.00

DESIGN HEIGHT	8.10	7.80	7.76	7.73	7.68	7.59	7.62	7.74	7.74	7.63	7.60	7.69	7.75	7.78	7.82	8.12
EXISTING SURFACE	8.84	8.90	8.93	8.94	8.88	8.88	8.87	8.75	8.75	8.64	8.63	8.62	8.57	8.52	8.52	8.52
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 120.00

Datum 6.00

DESIGN HEIGHT	8.01	7.71	7.67	7.64	7.58	7.49	7.52	7.64	7.64	7.52	7.49	7.58	7.64	7.67	7.71	8.01
EXISTING SURFACE	8.26	8.24	8.23	8.23	8.22	8.22	8.22	8.21	8.21	8.21	8.21	8.21	8.18	8.14	8.09	7.98
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	0.00	3.95	4.25	4.40	6.25	7.75	9.00	12.00

CH. 100.00

CROSS SECTION - ROAD 19(1)

SCALE 1:250

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C				
B	NEW IQP DETAILS AND NEW ROAD 19 X-SECTIONS	18-03-20	KH	PC
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 9

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO	SCALE	STATUS
14333-004	1:250 @ A3	FOR APPROVAL

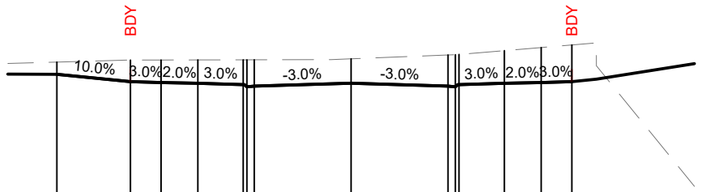
DWG NUMBER	REVISION
DD538	B

DATE PLOTTED: Wednesday, 18 March 2020 9:15:03 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

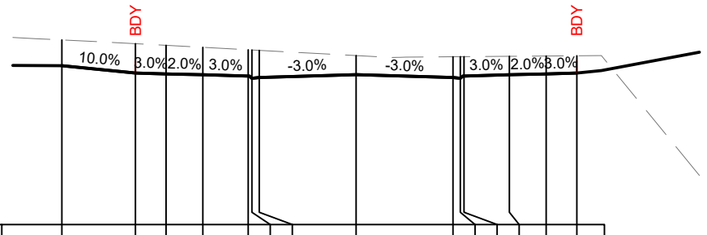
NOTE:
SEE CONSTRUCTION SHEET DD002



Datum 2.00

DESIGN HEIGHT	8.57	8.27	8.23	8.20	8.15	8.06	8.09	8.20	8.09	8.06	8.15	8.20	8.23	8.27	
EXISTING SURFACE	9.06	9.15	9.15	9.15	9.16	9.16	9.16	9.20	9.35	9.37	9.38	9.53	9.66	9.76	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 220.00



Datum 2.00

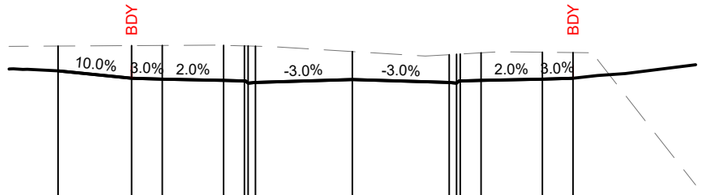
DESIGN HEIGHT	8.47	8.17	8.14	8.11	8.05	7.96	7.99	8.11	7.99	7.96	8.05	8.11	8.14	8.17	
EXISTING SURFACE	9.53	9.37	9.30	9.22	9.12	9.12	9.10	8.89	8.84	8.84	8.84	8.86	8.87	8.88	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 200.00

Datum 3.00

DESIGN HEIGHT	8.38	8.08	8.04	8.01	7.96	7.87	7.90	8.02	8.05	8.02	8.11	8.16	8.19	8.23	
EXISTING SURFACE	9.90	9.91	9.86	9.80	9.73	9.72	9.71	9.62	9.75	9.76	9.76	9.79	9.69	9.61	
DESIGN OFFSET	-12.00	-9.00	-7.75	-6.25	-4.40	-4.25	-3.95	0.00	3.95	4.25	4.40	6.25	7.75	9.00	

CH. 180.00



Datum 2.00

DESIGN HEIGHT	8.65	8.35	8.31	8.26	8.24	8.15	8.18	8.30	8.18	8.15	8.24	8.26	8.31	8.35	
EXISTING SURFACE	9.66	9.68	9.69	9.69	9.67	9.67	9.66	9.44	9.31	9.33	9.34	9.39	9.41	9.40	
DESIGN OFFSET	-12.00	-9.00	-7.75	-5.25	-4.40	-4.25	-3.95	0.00	3.95	4.25	4.40	5.25	7.75	9.00	

CH. 240.00

CROSS SECTION - ROAD 19(2)

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250 (0 5 10)

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS AND NEW ROAD 19 X-SECTIONS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

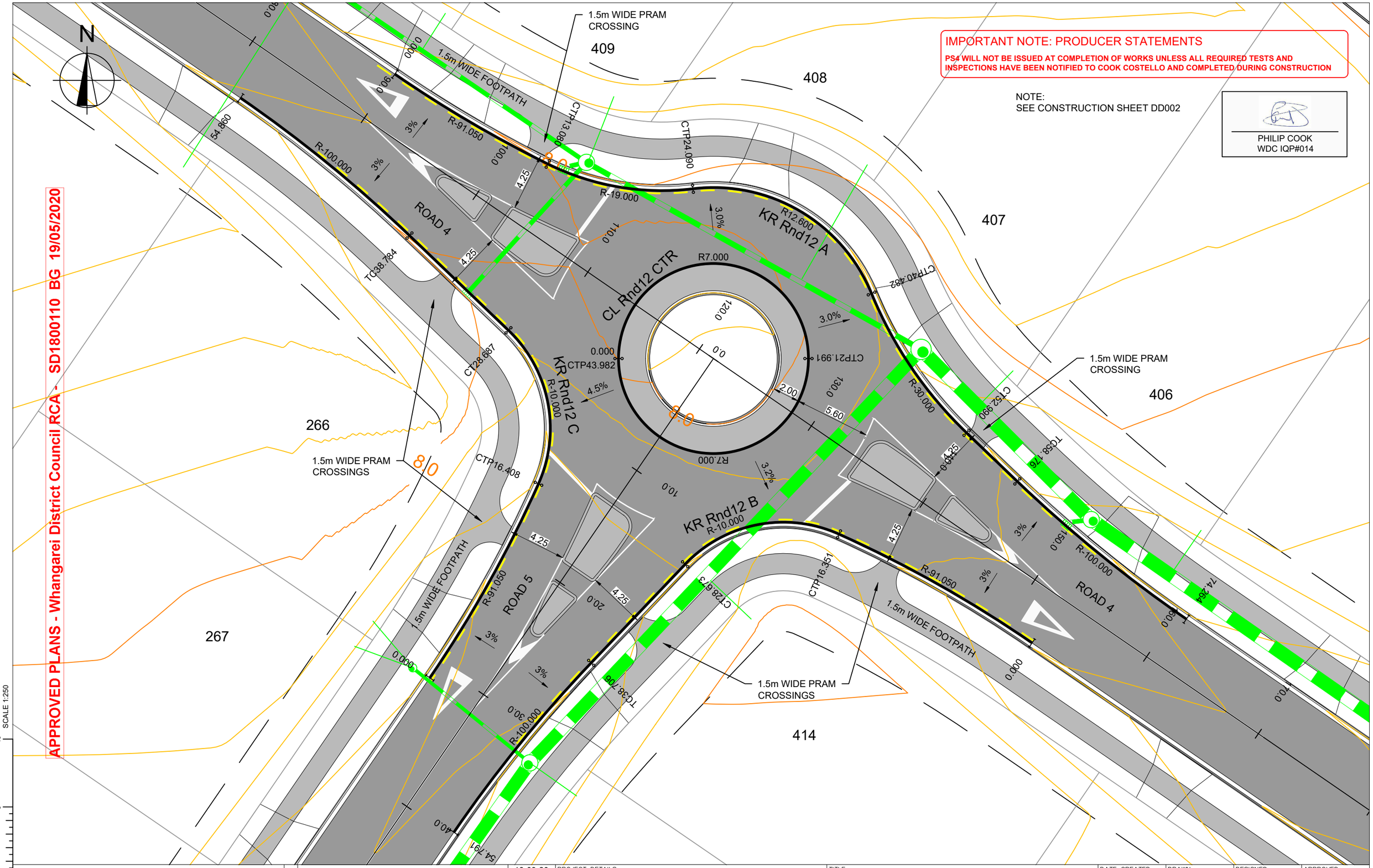
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
SHEET 10

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD539			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD530-Road X-Secs.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SW LOCATIONS	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
ROUNDABOUT 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:250 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD550		REVISION: C	

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:09 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

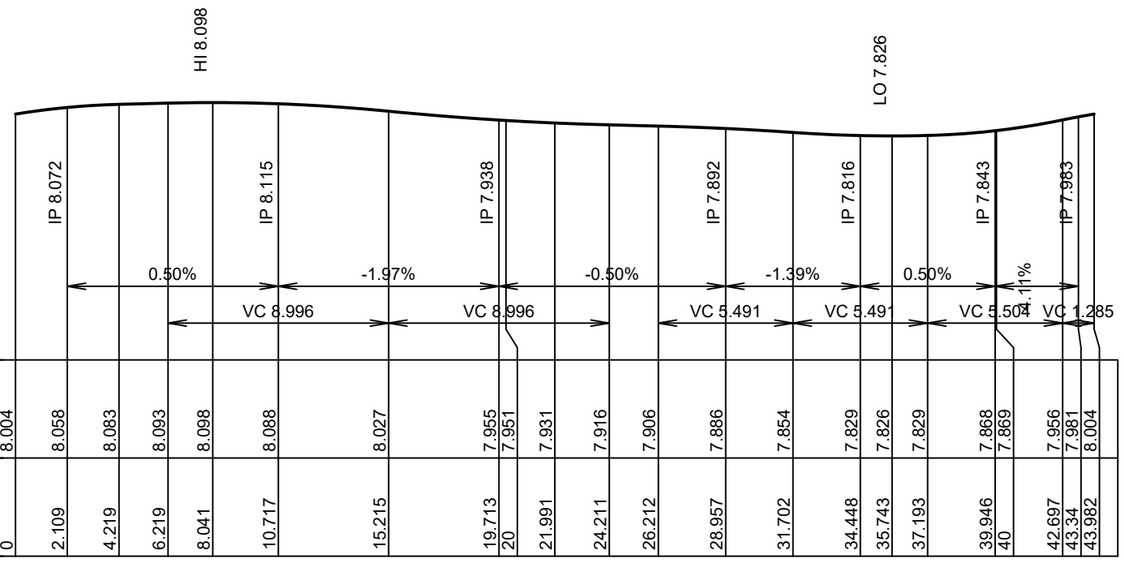
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

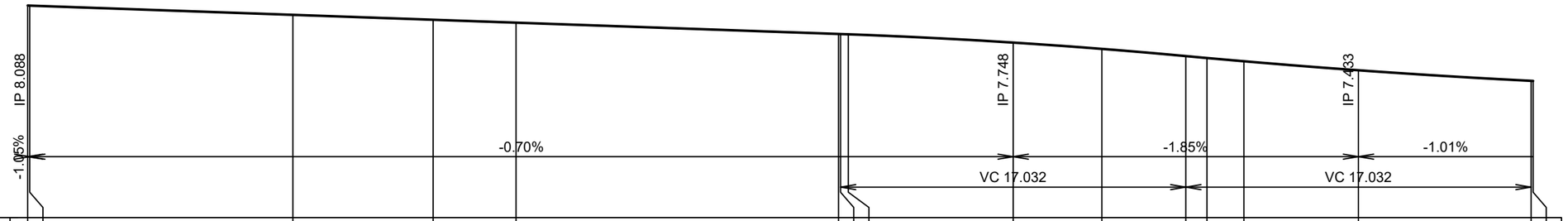


RL6

Design	8.004	8.058	8.083	8.093	8.098	8.088	8.027	7.955	7.951	7.931	7.916	7.906	7.886	7.854	7.829	7.826	7.829	7.868	7.869	7.956	7.981	8.004
Chainages	0	2.109	4.219	6.219	8.041	10.717	15.215	19.713	20	21.991	24.211	26.212	28.957	31.702	34.448	35.743	37.193	39.946	40	42.697	43.34	43.982

Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONCL Rnd12 CTR



RL6

Design	8.089	8.088	7.997	7.948	7.92	7.808	7.808	7.805	7.724	7.661	7.591	7.572	7.54	7.451	7.347	7.346
Chainages	0	0.1	13.08	20	24.09	40	40.1	40.482	48.616	52.99	57.132	58.176	60	65.648	74.164	74.264

Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd12 A

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:50

0 1 2

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
ROUNDABOUT 12 LONGSECTIONS 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD551		REVISION B	

SCALE 1:250 0 5 10

DATE PLOTTED: Wednesday, 18 March 2020 9:15:09 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

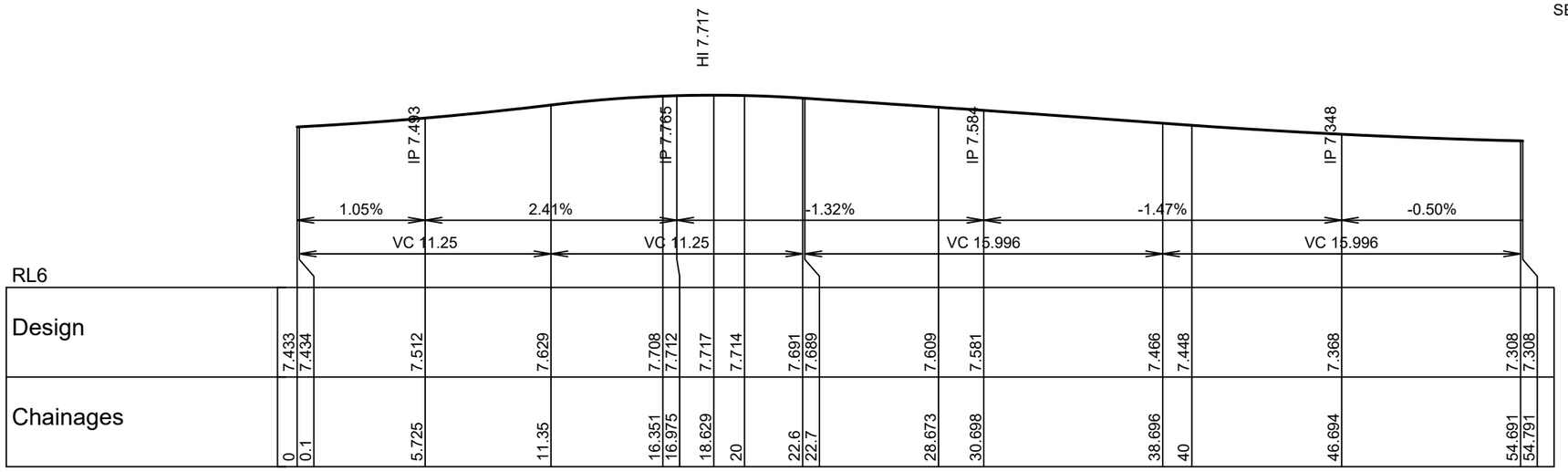
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

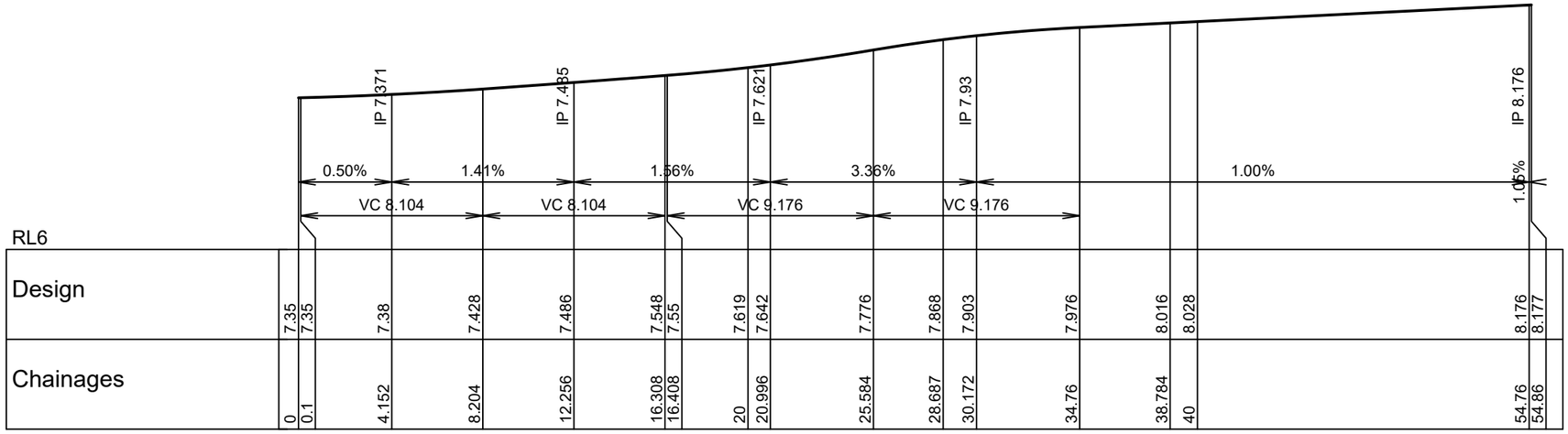
NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014



Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd12 B



Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd12 C

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:50

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
ROUNDABOUT 12 LONGSECTIONS 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD552		REVISION B	

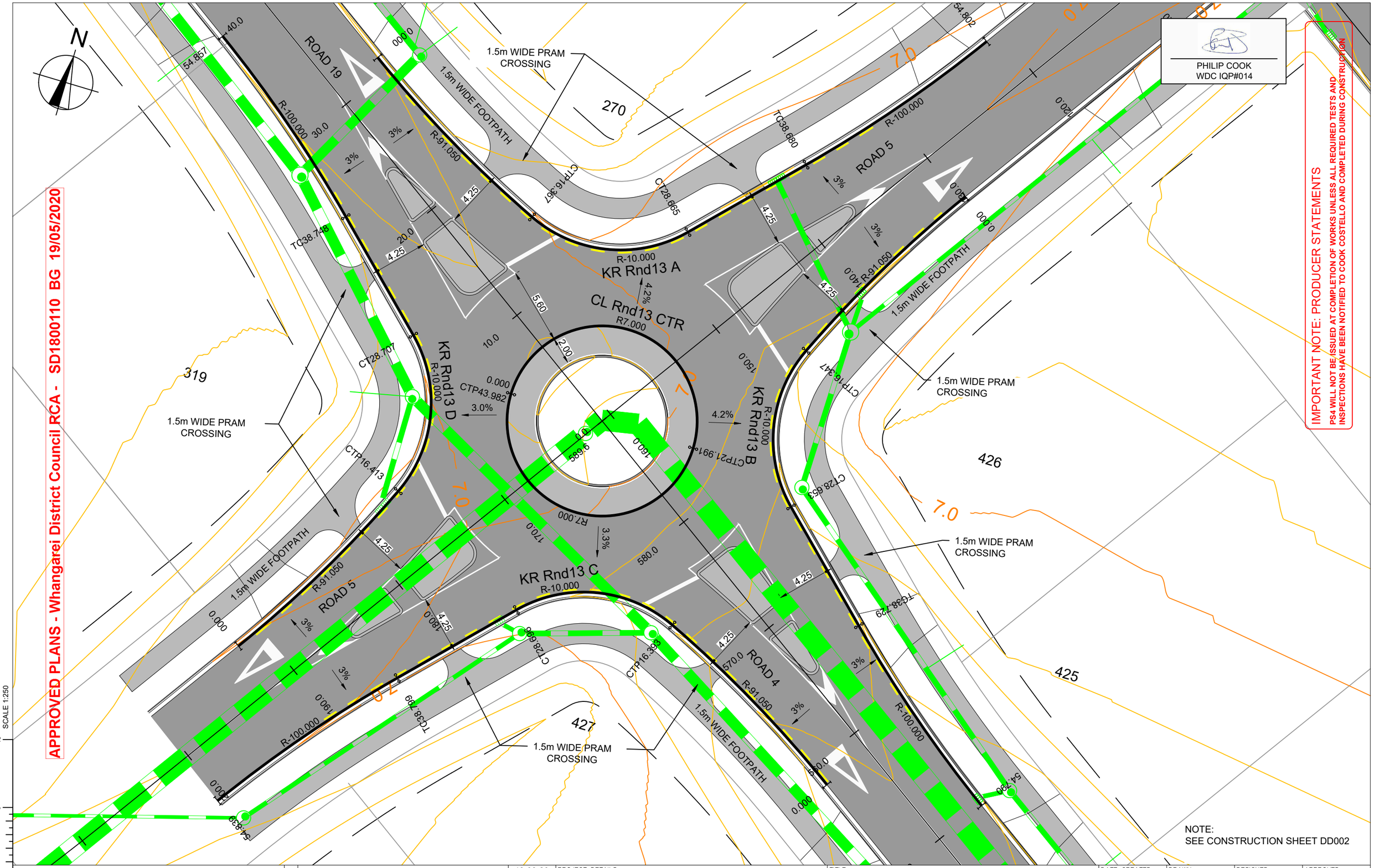
DATE PLOTTED: Wednesday, 18 March 2020 9:15:09 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

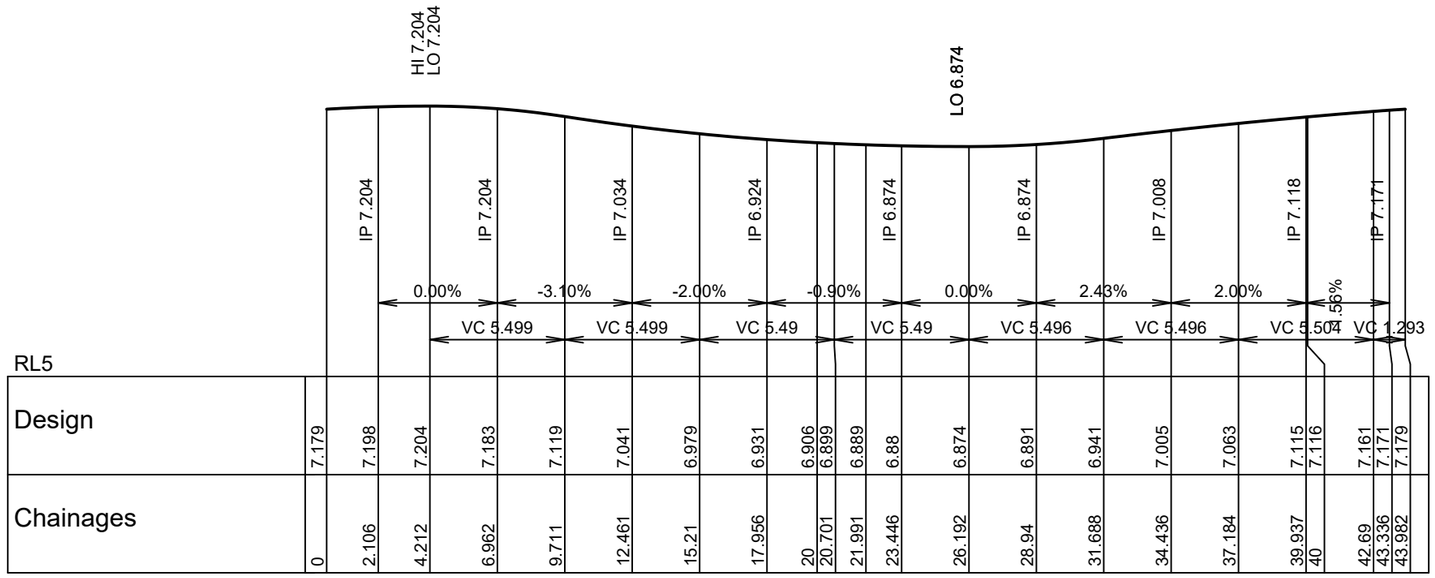

N
ROAD 19
ROAD 5
ROAD 4
KR Rnd13 A
KR Rnd13 B
KR Rnd13 C
KR Rnd13 D
CL Rnd13 CTR
R7.000
R-10.000
R-100.000
R-91.050
1.5m WIDE FOOTPATH
1.5m WIDE PRAM CROSSING
270
319
425
426
427
7.0
3%
3.3%
4.2%
3.0%
4.25
5.60
2.00
20.0
30.0
40.0
10.0
150.0
160.0
170.0
180.0
190.0
570.0
580.0
589.6
CTP43.982
CTP21.991
CTP16.413
CTP16.347
CTP16.393
CTP16.367
CTP16.347
CTP16.393
CTP16.367
CTP16.347
CTP16.413
CTP16.393
CTP16.347
CTP16.367
CTP16.347
CTP16.393
CTP16.413

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

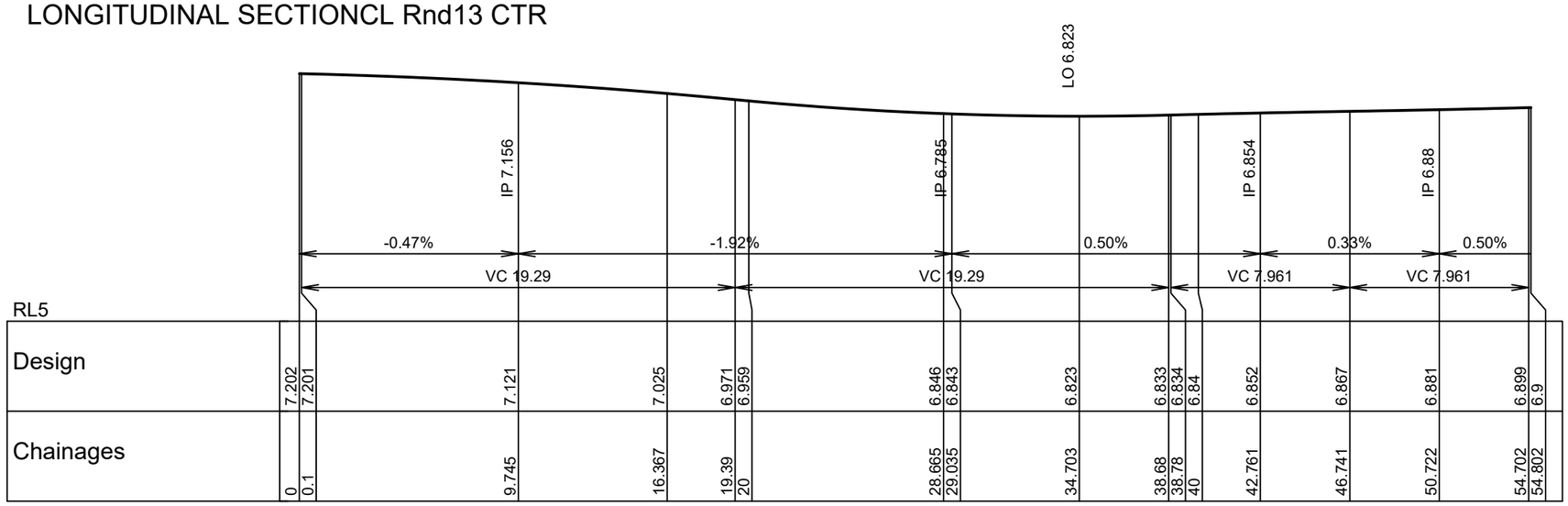
NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014



Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONCL Rnd13 CTR



Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd13 A

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:50

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
ROUNDABOUT 13 LONGSECTIONS 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD554		REVISION B	

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:10 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

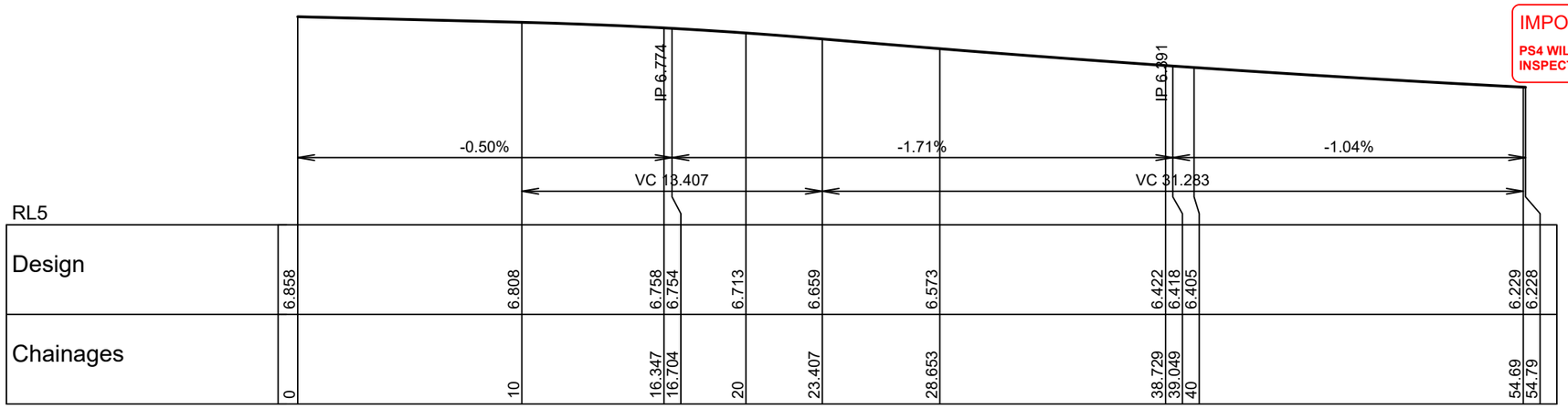
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

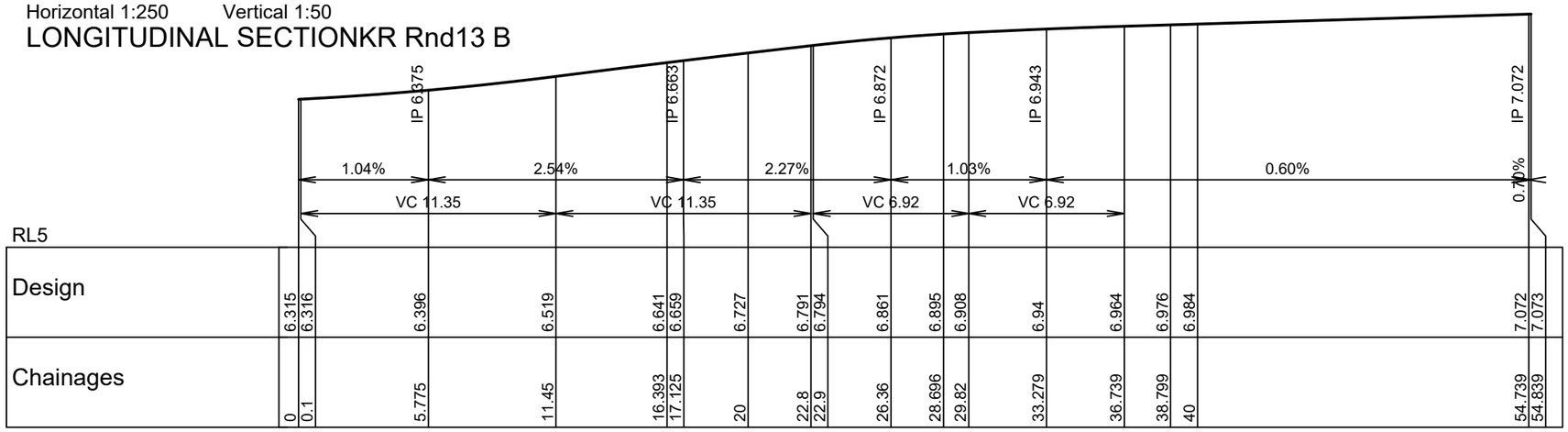
NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014



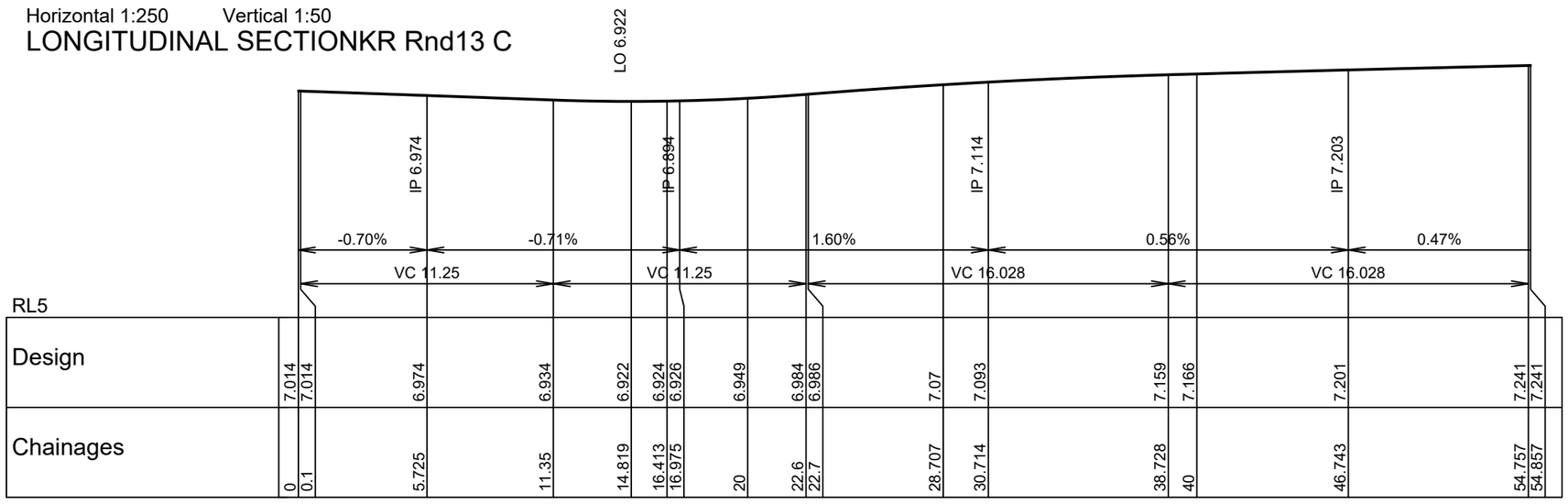
Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd13 B



Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd13 C



Horizontal 1:250 Vertical 1:50

LONGITUDINAL SECTIONKR Rnd13 D

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:50

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

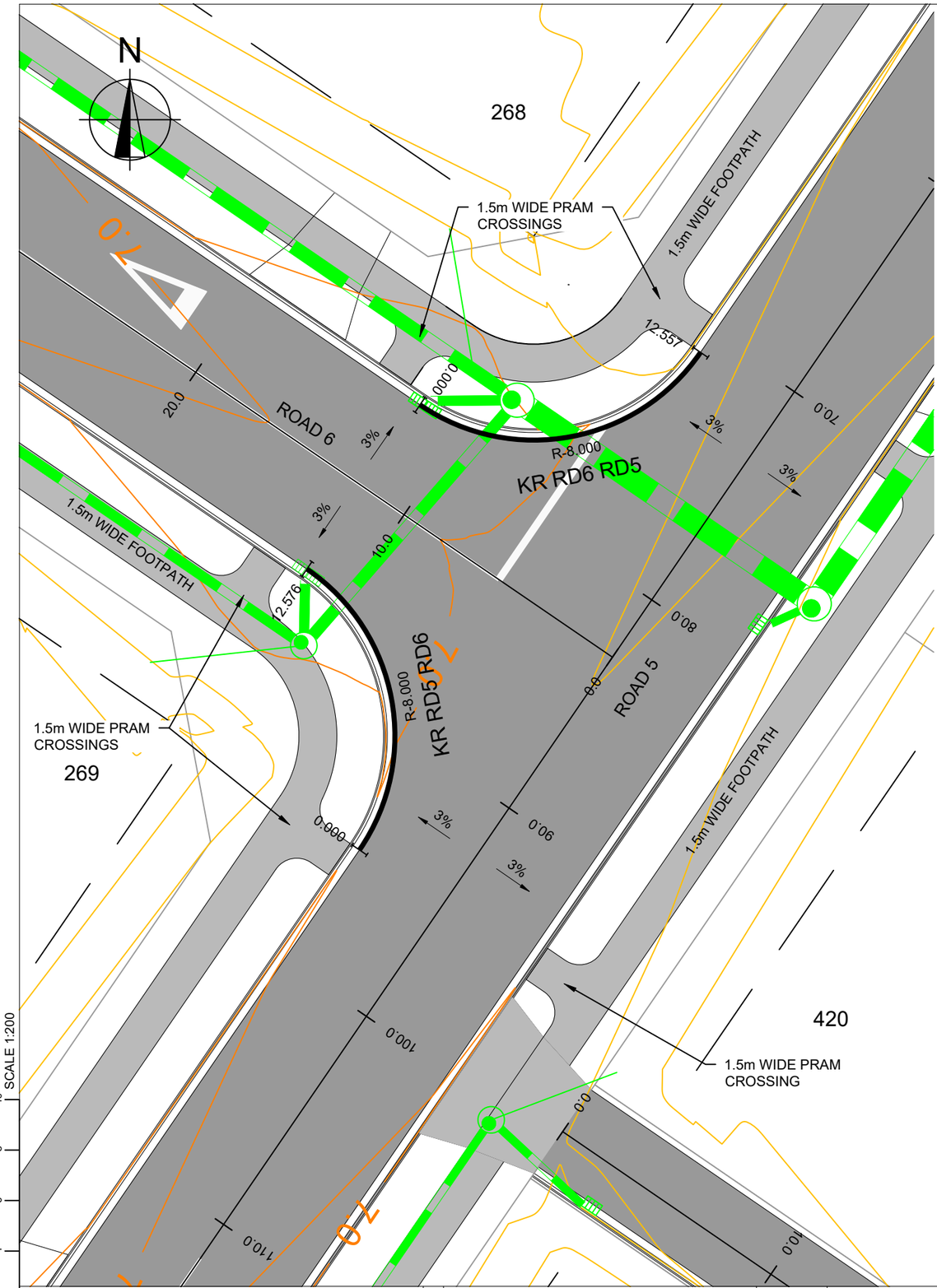
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
ROUNDABOUT 13 LONGSECTIONS 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD555		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:10 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



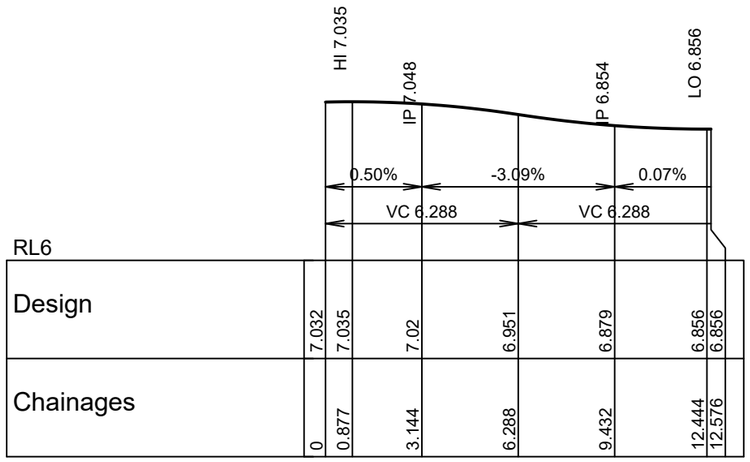
NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

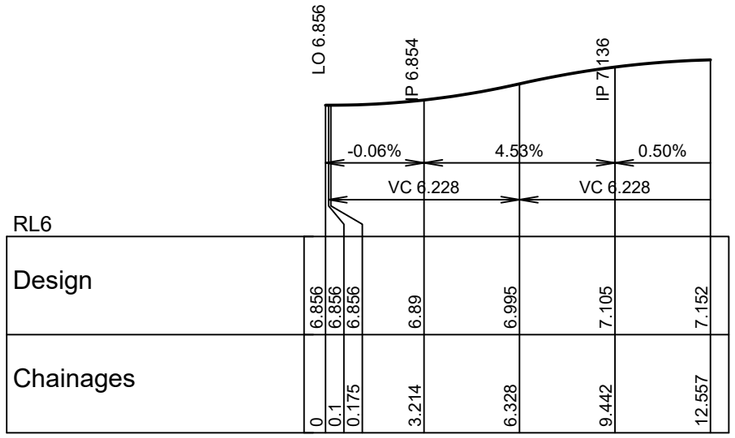
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL6							
Design	7.032	7.035	7.02	6.951	6.879	6.856	6.856
Chainages	0	0.877	3.144	6.288	9.432	12.444	12.576

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD5 RD6



RL6							
Design	6.856	6.856	6.856	6.89	6.995	7.105	7.152
Chainages	0	0.1	0.175	3.214	6.328	9.442	12.557

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD6 RD5

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SW LOCATIONS	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 5 AND 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:200 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD556		REVISION C	

SCALE 1:200

DATE PLOTTED: Wednesday, 18 March 2020 9:15:11 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

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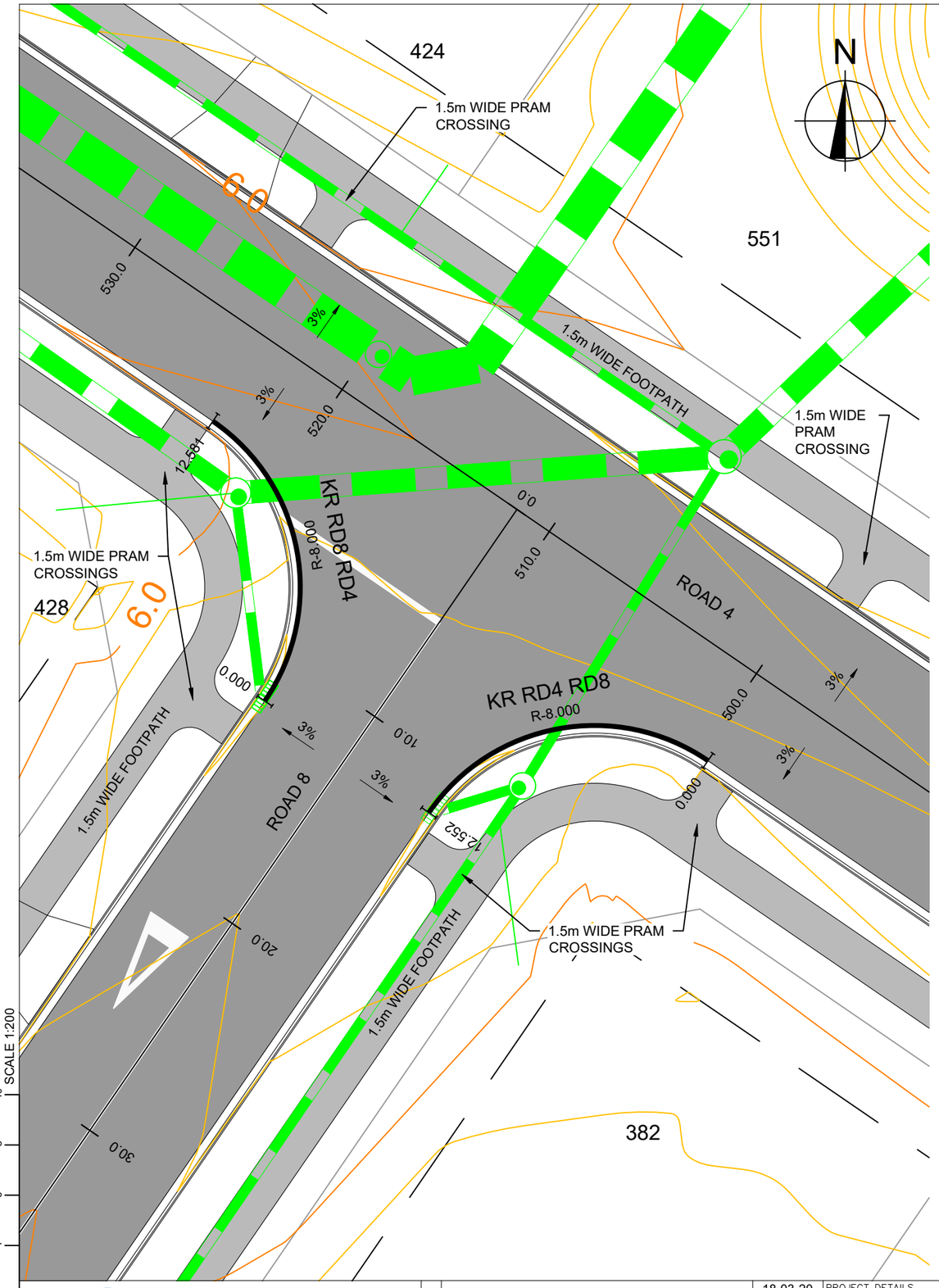


NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

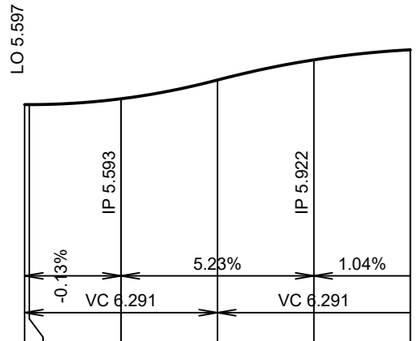
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

RL4							
Design	5.708	5.716	5.712	5.665	5.612	5.597	5.597
Chainages	0	1.774	3.138	6.276	9.414	12.26	12.552

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD4 RD8



RL4						
Design	5.597	5.597	5.635	5.757	5.889	5.954
Chainages	0	0.151	3.145	6.291	9.436	12.581

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD8 RD4

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:200

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	KH	PC
B	SW LOCATIONS	AP	GM
A	1ST ISSUE	KH	GM

PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 4 & 5 ONE TREE POINT RUAKAKA
TITLE	KERB RETURNS INTERSECTION OF ROADS 4 AND 8
DATE CREATED	29-11-2019
DRAWN	K HANSARD
DESIGNED	A PARKER
APPROVED	G McGREGOR
CCL REF NO	14333-004
SCALE	1:200 @ A3
STATUS	FOR APPROVAL
DWG NUMBER	DD557
REVISION	C

SCALE 1:200

DATE PLOTTED: Wednesday, 18 March 2020 9:15:11 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

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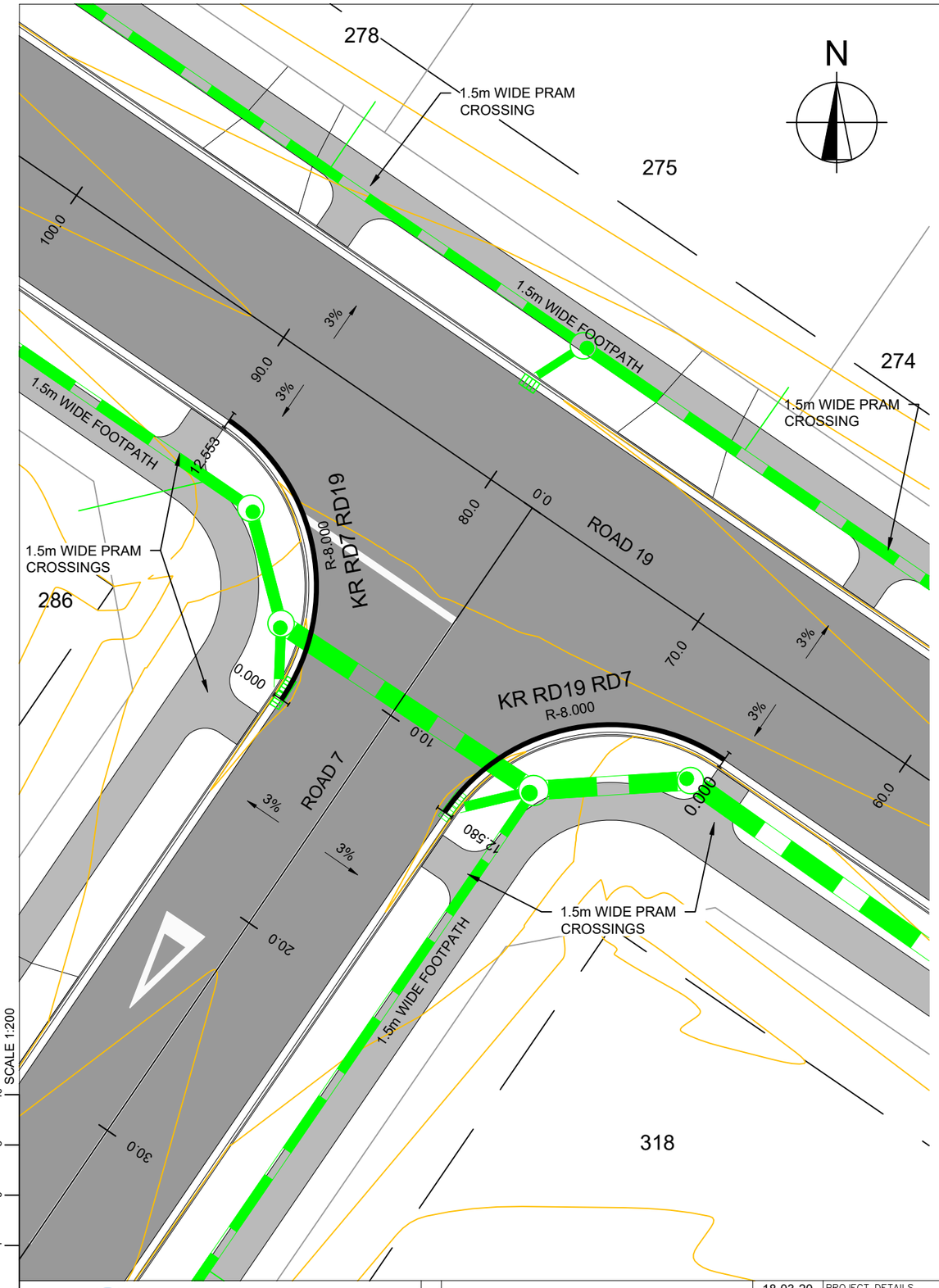


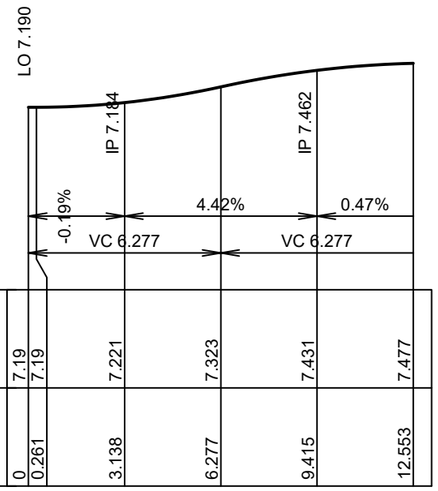
NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

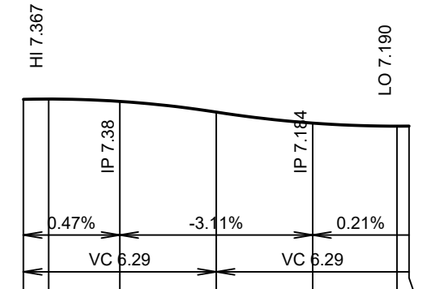
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL6						
Design	7.19	7.19	7.221	7.323	7.431	7.477
Chainages	0	0.261	3.138	6.277	9.415	12.553

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD7 RD19



RL6							
Design	7.365	7.367	7.351	7.282	7.21	7.19	7.19
Chainages	0	0.822	3.145	6.29	9.435	12.186	12.58

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD19 RD7

SCALE 1:200

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SW LOCATIONS	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 7 AND 19

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:200 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD558		REVISION: C	

SCALE 1:200

DATE PLOTTED: Wednesday, 18 March 2020 9:15:11 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

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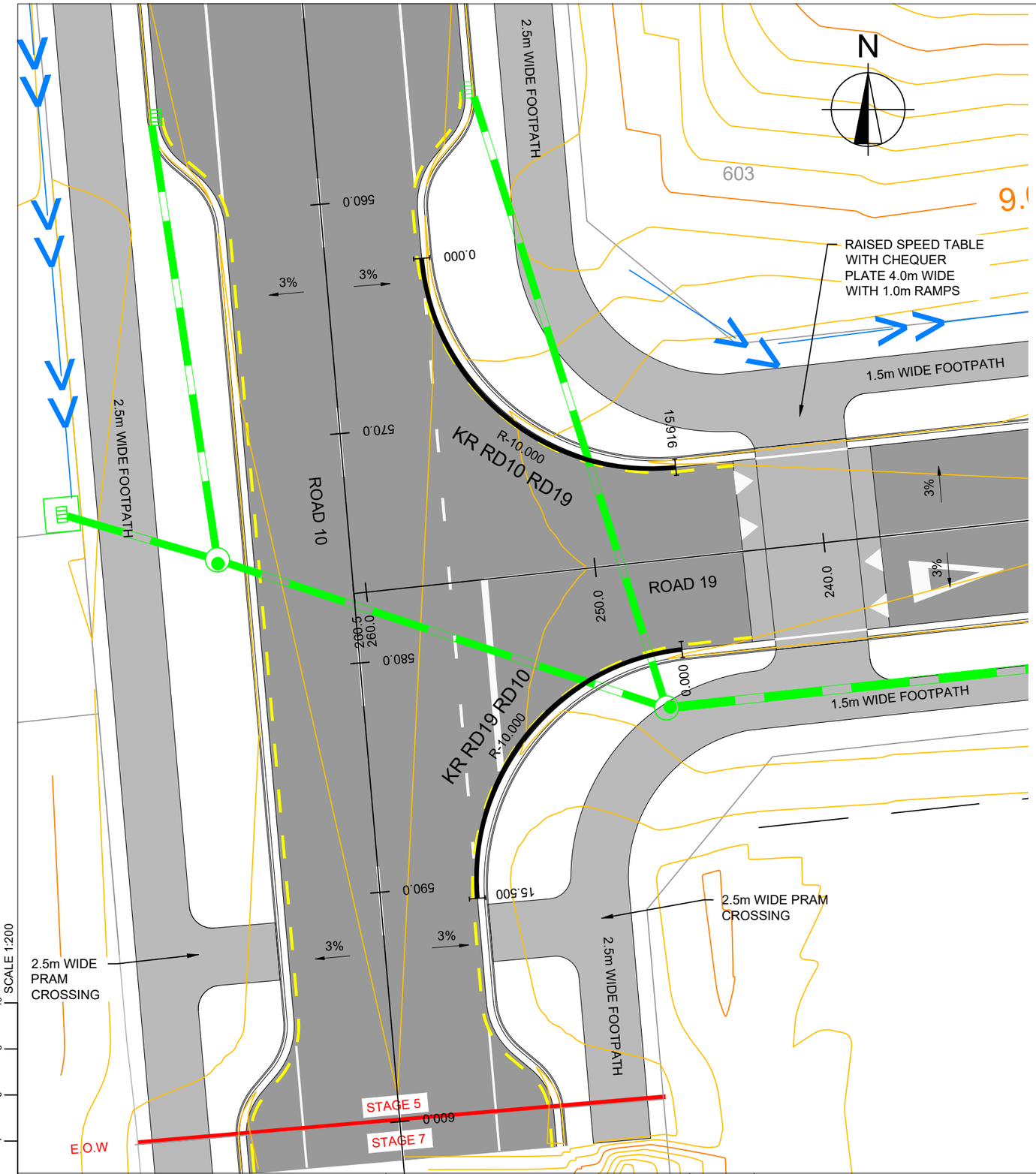


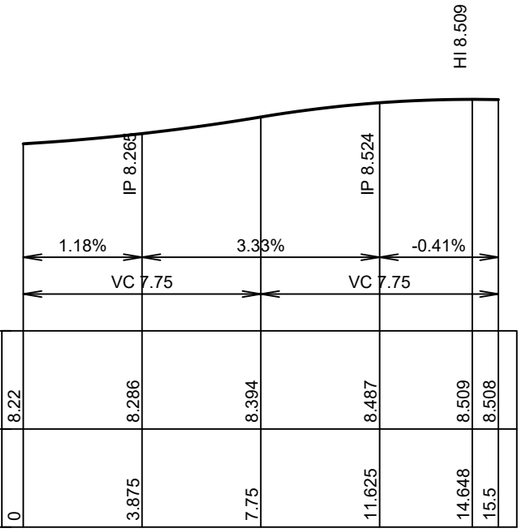
NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

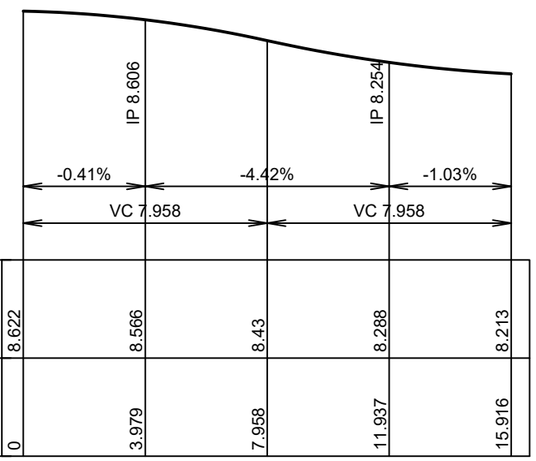
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL7						
Design	8.22	8.286	8.394	8.487	8.509	8.508
Chainages	0	3.875	7.75	11.625	14.648	15.5

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD19 RD10



RL7					
Design	8.622	8.566	8.43	8.288	8.213
Chainages	0	3.979	7.958	11.937	15.916

Horizontal 1:200 Vertical 1:40

LONGITUDINAL SECTIONKR RD10 RD19

SCALE 1:200

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS AND NEW KERB RETURN DETAILS	18-03-20 KH	PC
B	SW LOCATIONS	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 10 AND 19

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:200 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD559		REVISION C	

SCALE 1:200

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD550-Road KR.dwg

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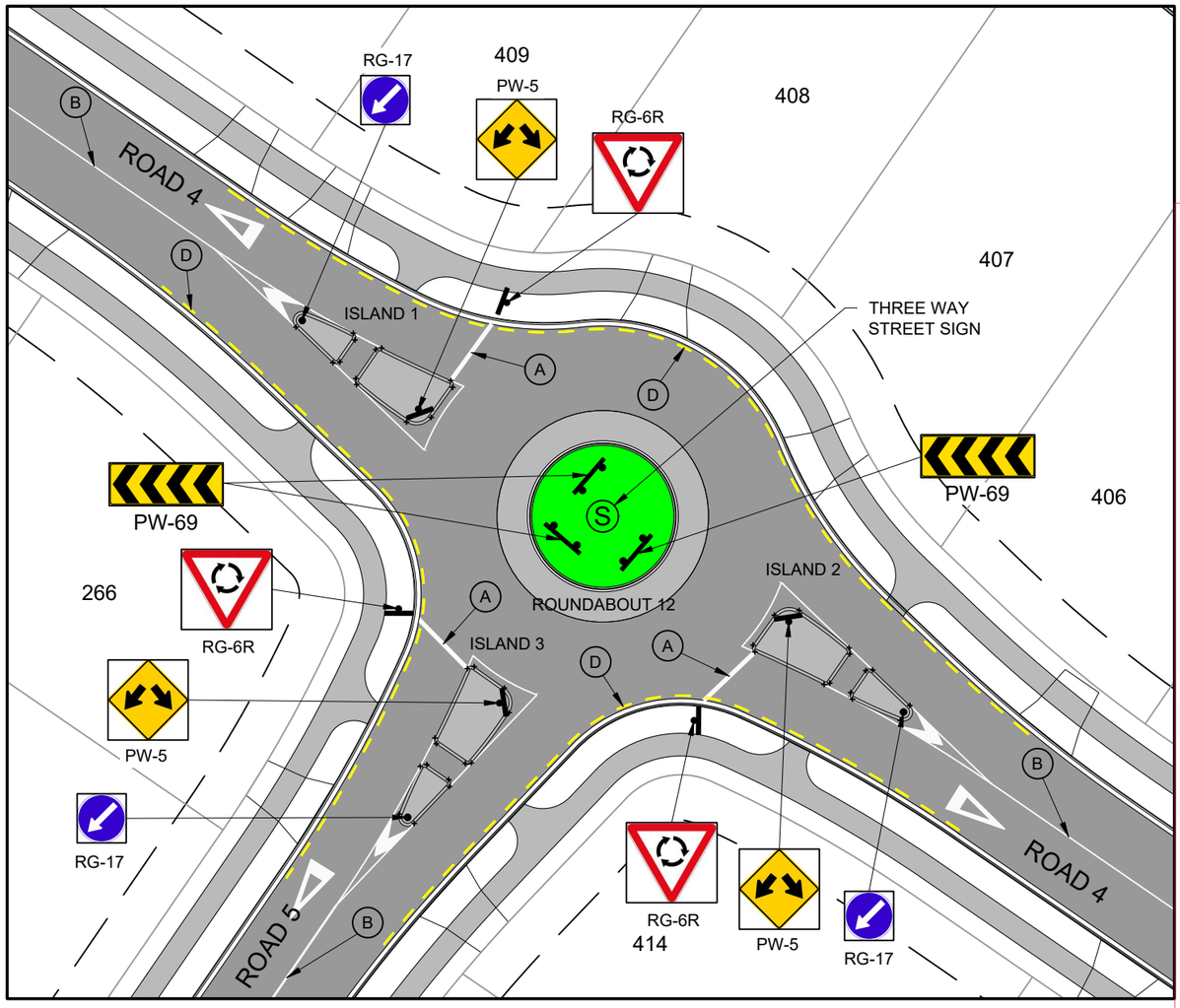
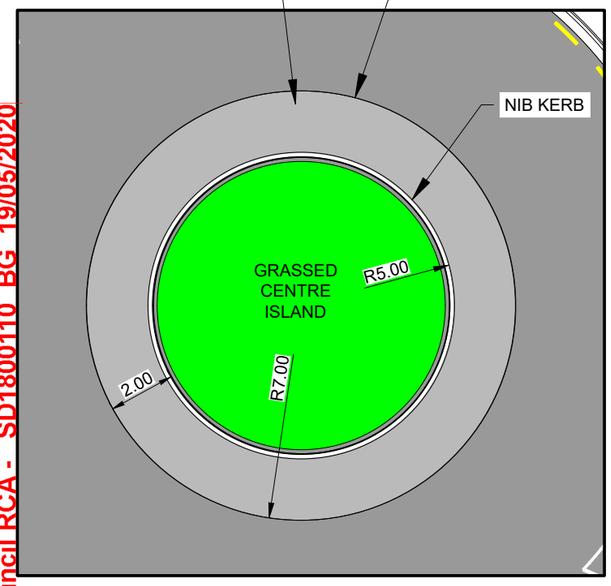
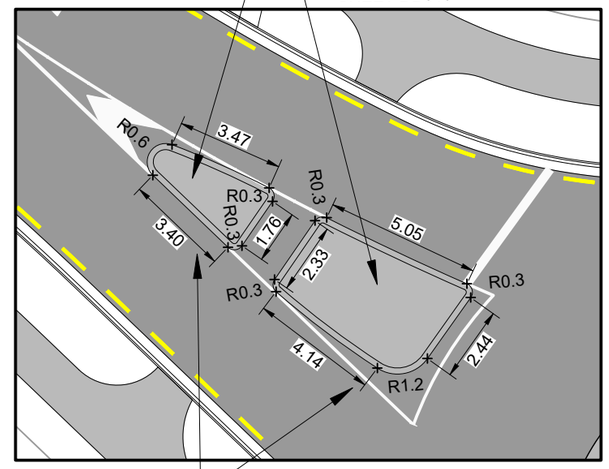
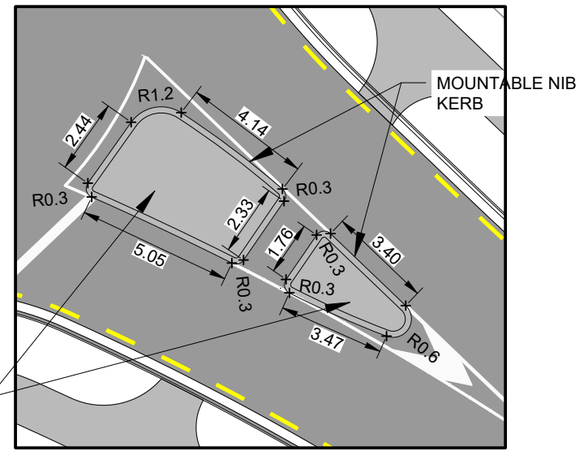




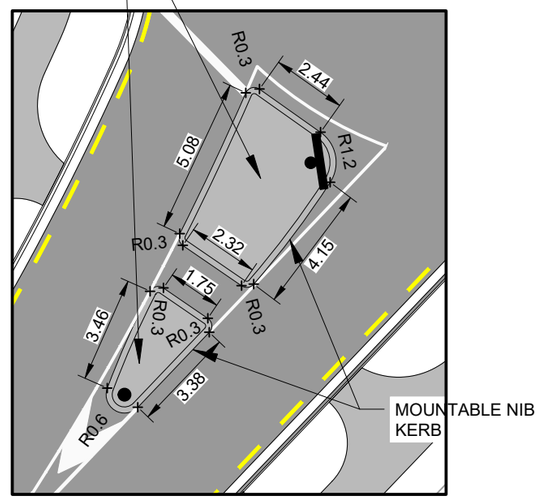
ROUNDABOUT 12
SCALE 1:200



ISLAND 1
SCALE 1:200



ISLAND 2
SCALE 1:200



ISLAND 3
SCALE 1:200

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

KEY:

A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND RELEVANT SPECIFICATIONS.

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

SCALE 1:400

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
ROUNDABOUT 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:400 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD560			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:15:13 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD560-Road Markings.dwg

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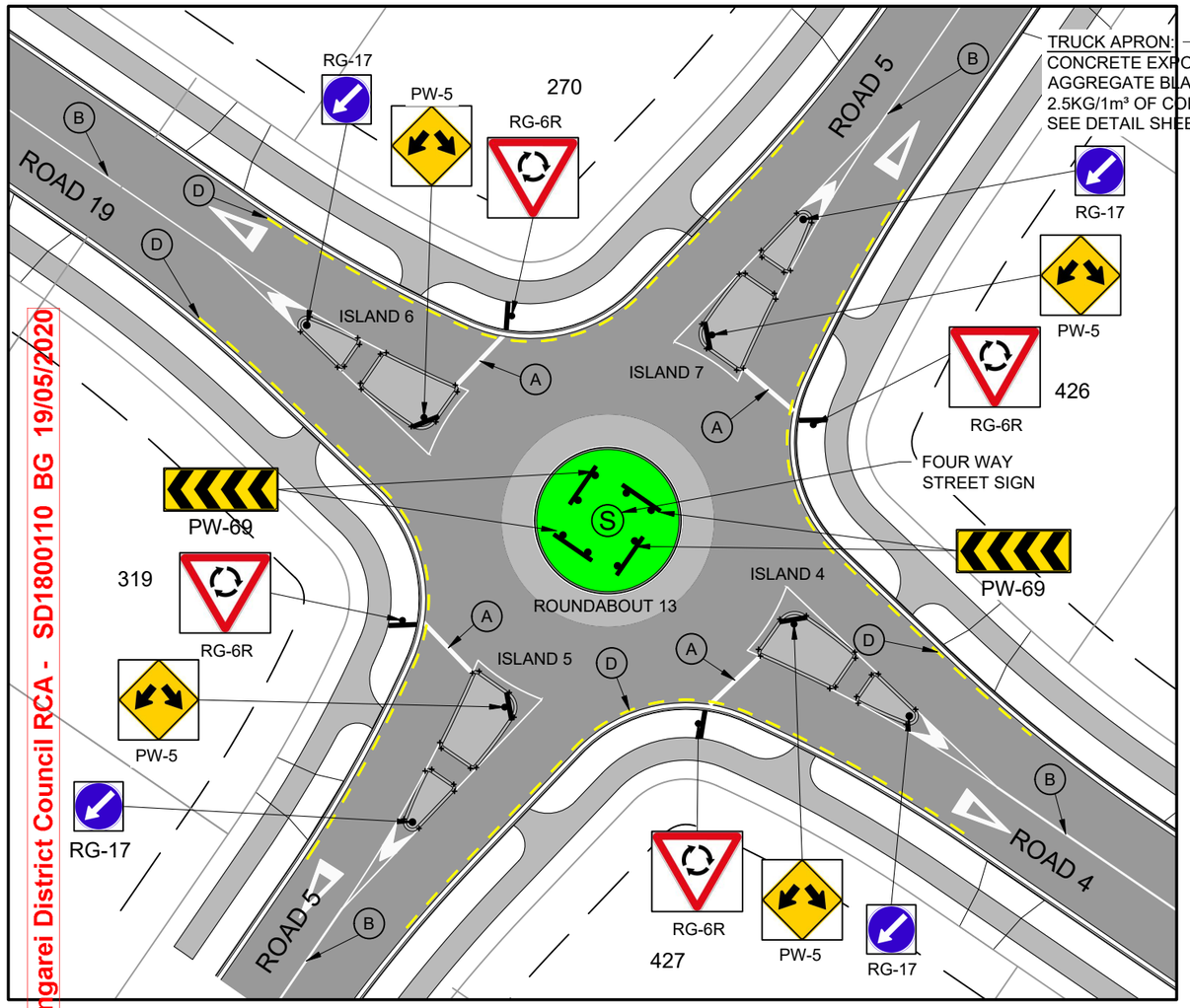
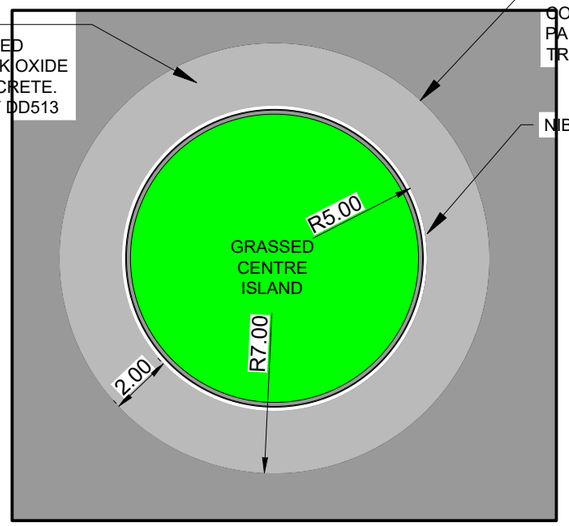
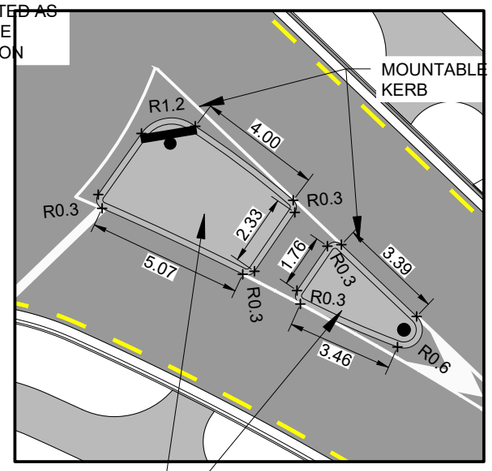


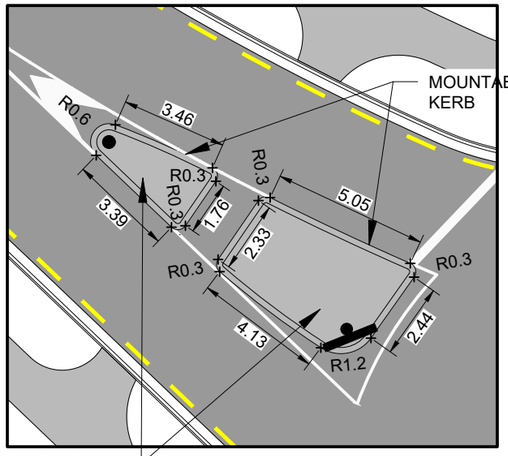


ROUNDABOUT 13
SCALE 1:200



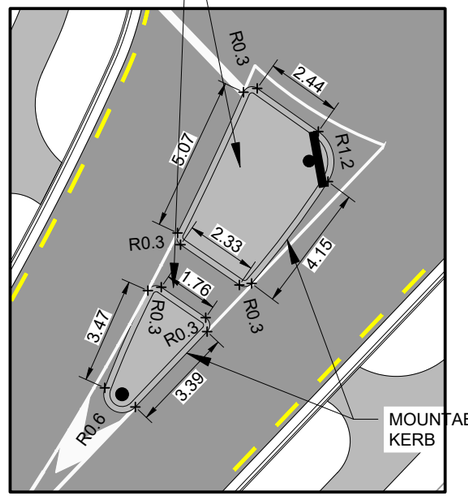
ISLAND 4
SCALE 1:200

150mm THICK 20MPa CONCRETE SPLITTER ISLANDS WITH CONSTRUCTION JOINTS @ 3.5m CRS ON 50m COMPACTED BASECOURSE. SEE DETAIL SHEET DD513



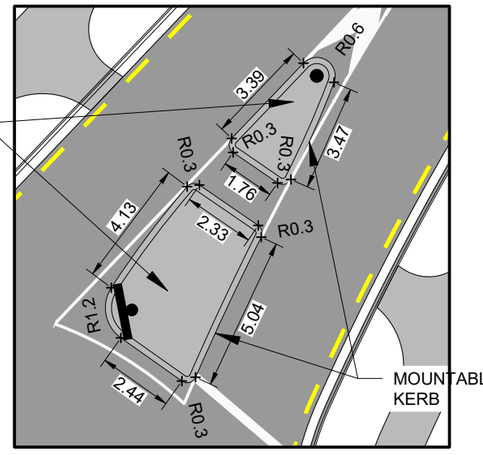
ISLAND 6
SCALE 1:200

150mm THICK 20MPa CONCRETE SPLITTER ISLANDS WITH CONSTRUCTION JOINTS @ 3.5m CRS ON 50m COMPACTED BASECOURSE. SEE DETAIL SHEET DD513



ISLAND 5
SCALE 1:200

150mm THICK 20MPa CONCRETE SPLITTER ISLANDS WITH CONSTRUCTION JOINTS @ 3.5m CRS ON 50m COMPACTED BASECOURSE. SEE DETAIL SHEET DD513



ISLAND 7
SCALE 1:200

KEY:

A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND RELEVANT SPECIFICATIONS.

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

PHILIP COOK
WDC IQP#014

SCALE 1:400

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
ROUNDABOUT 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:400 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD561		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:13 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD560-Road Markings.dwg

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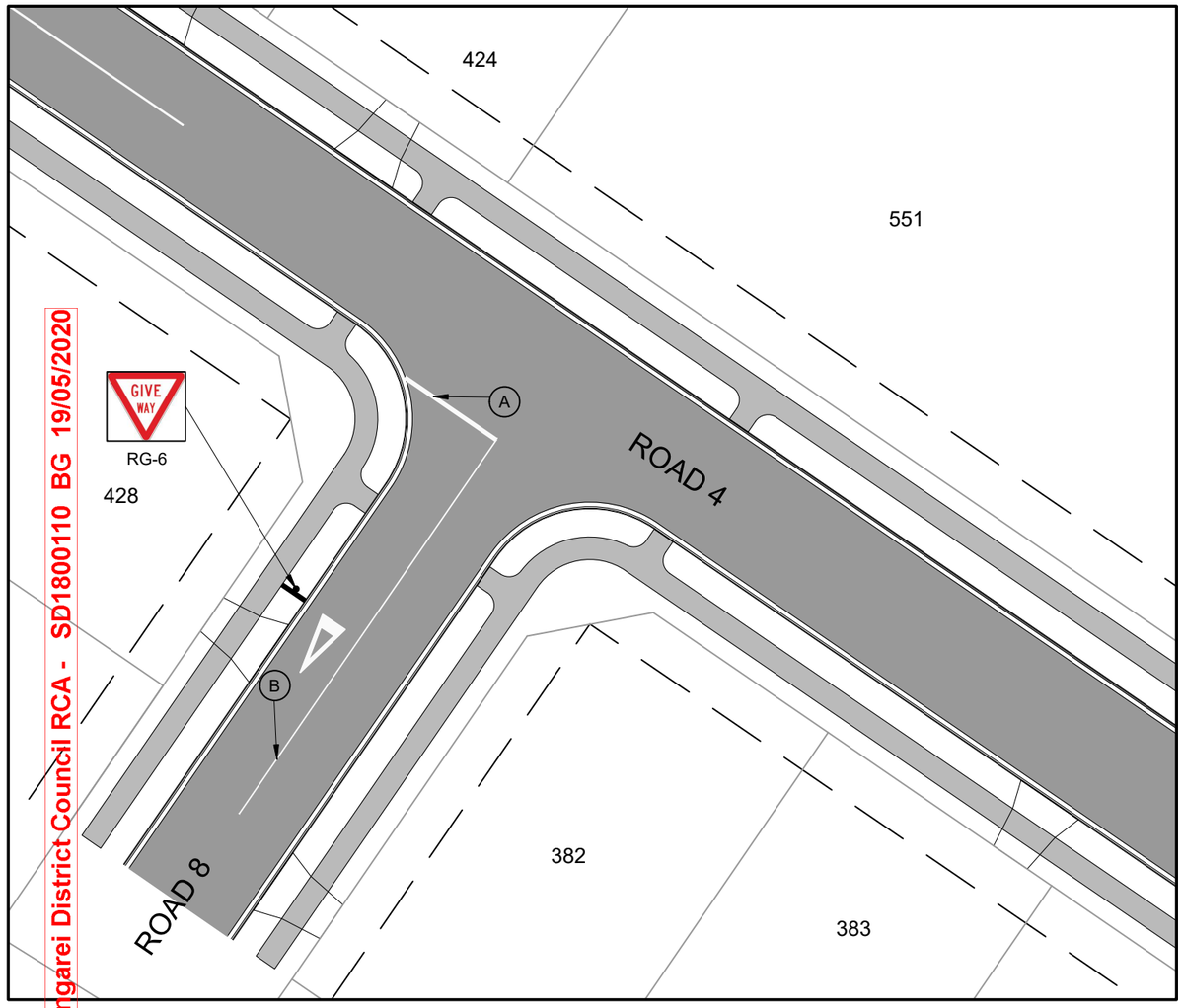
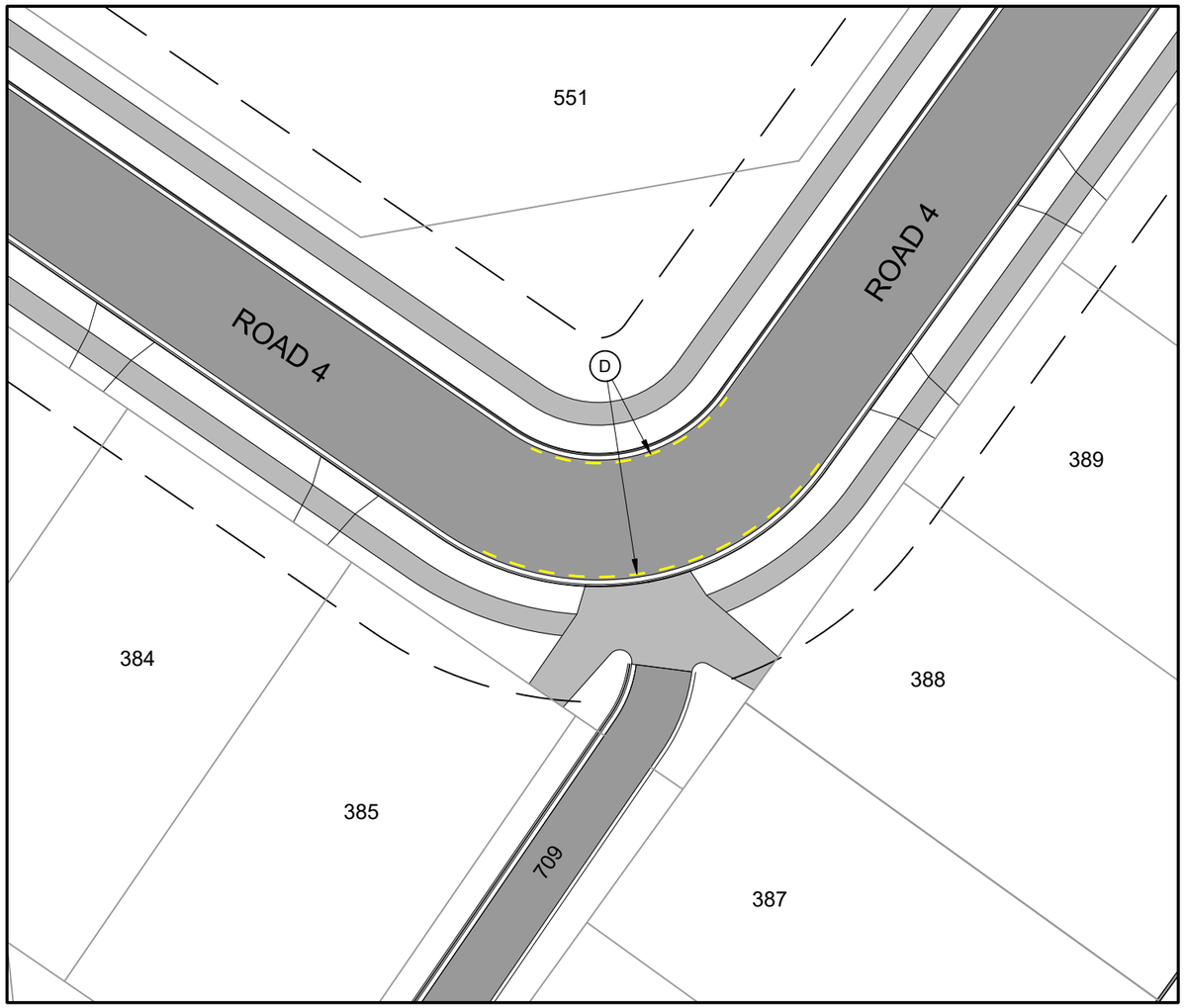


INTERSECTION ROADS 4 AND 8



NSAAT MARKINGS ON ROAD 4

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

KEY:

A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND RELEVANT SPECIFICATIONS.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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SCALE 1:400

REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NSAAT MARKINGS ADDED ON ROAD 4 AND NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
INTERSECTION ROADS 4 AND 8
& NSAAT MARKINGS ON ROAD 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:400 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD562		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:14 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD560-Road Markings.dwg

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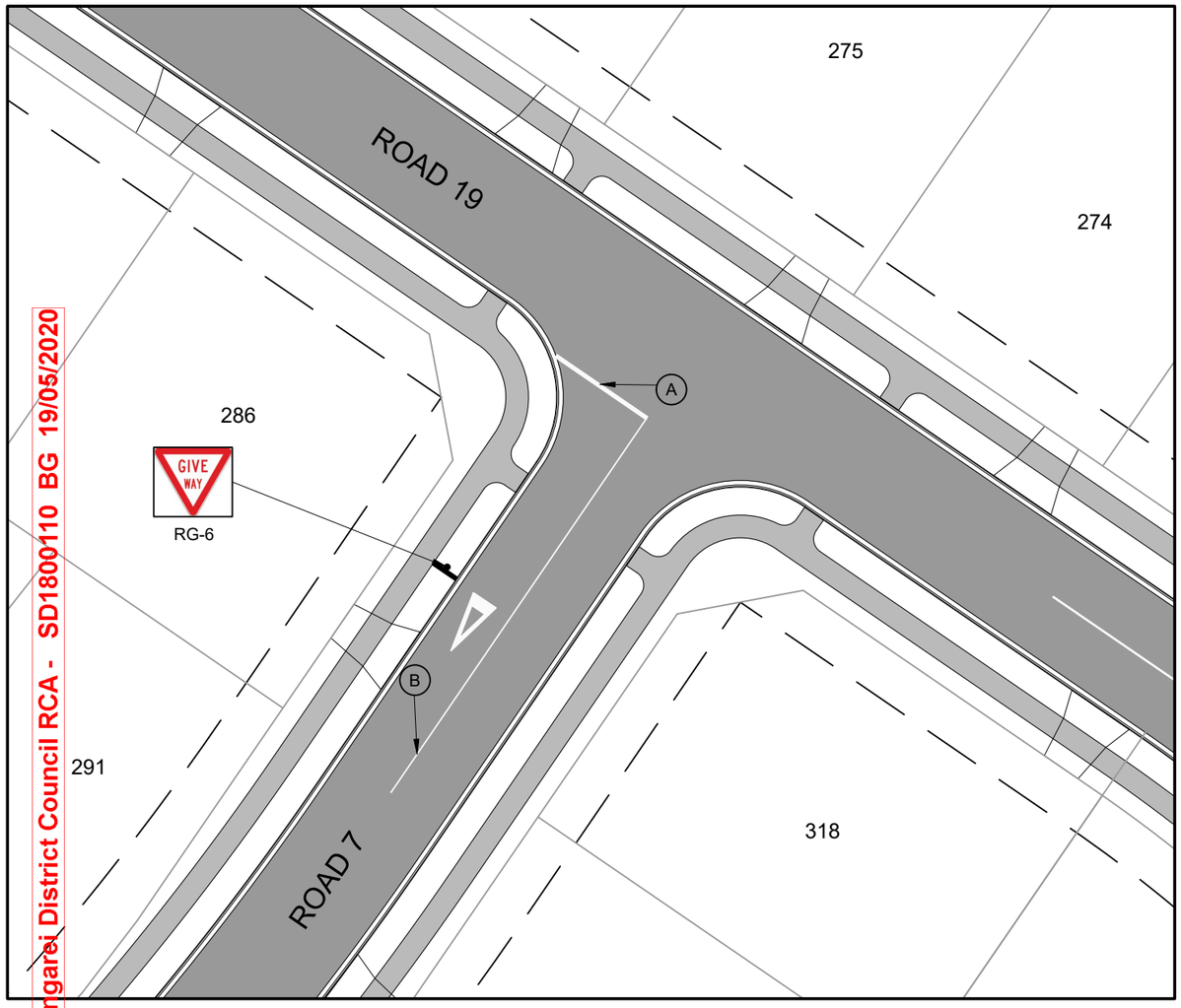
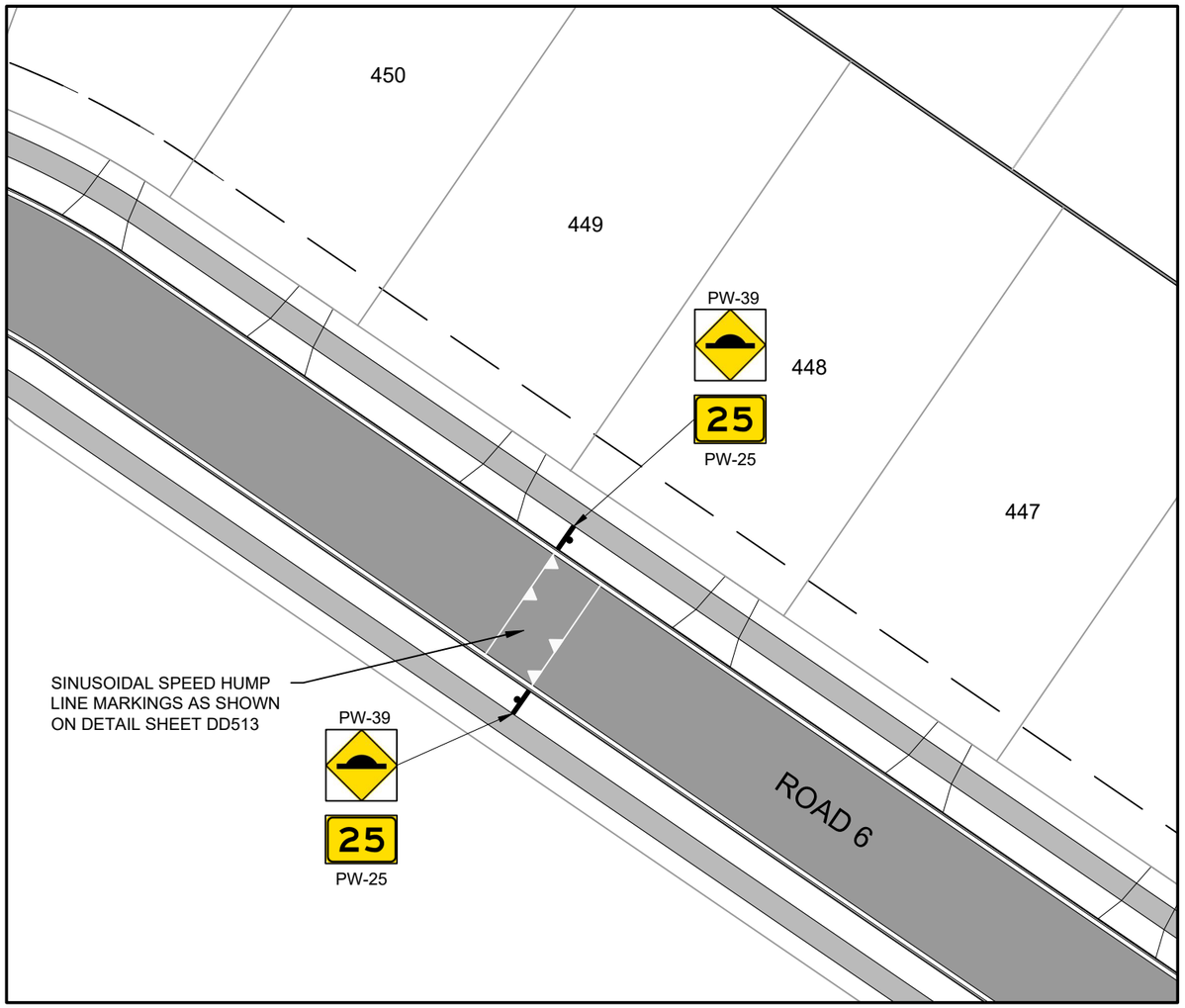


INTERSECTION ROADS 7 AND 19



SINUSOIDAL SPEED HUMPS ON ROAD 6

KEY:

A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND RELEVANT SPECIFICATIONS.

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:400

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	SINUSOIDAL SPEED HUMPS ADDED & NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

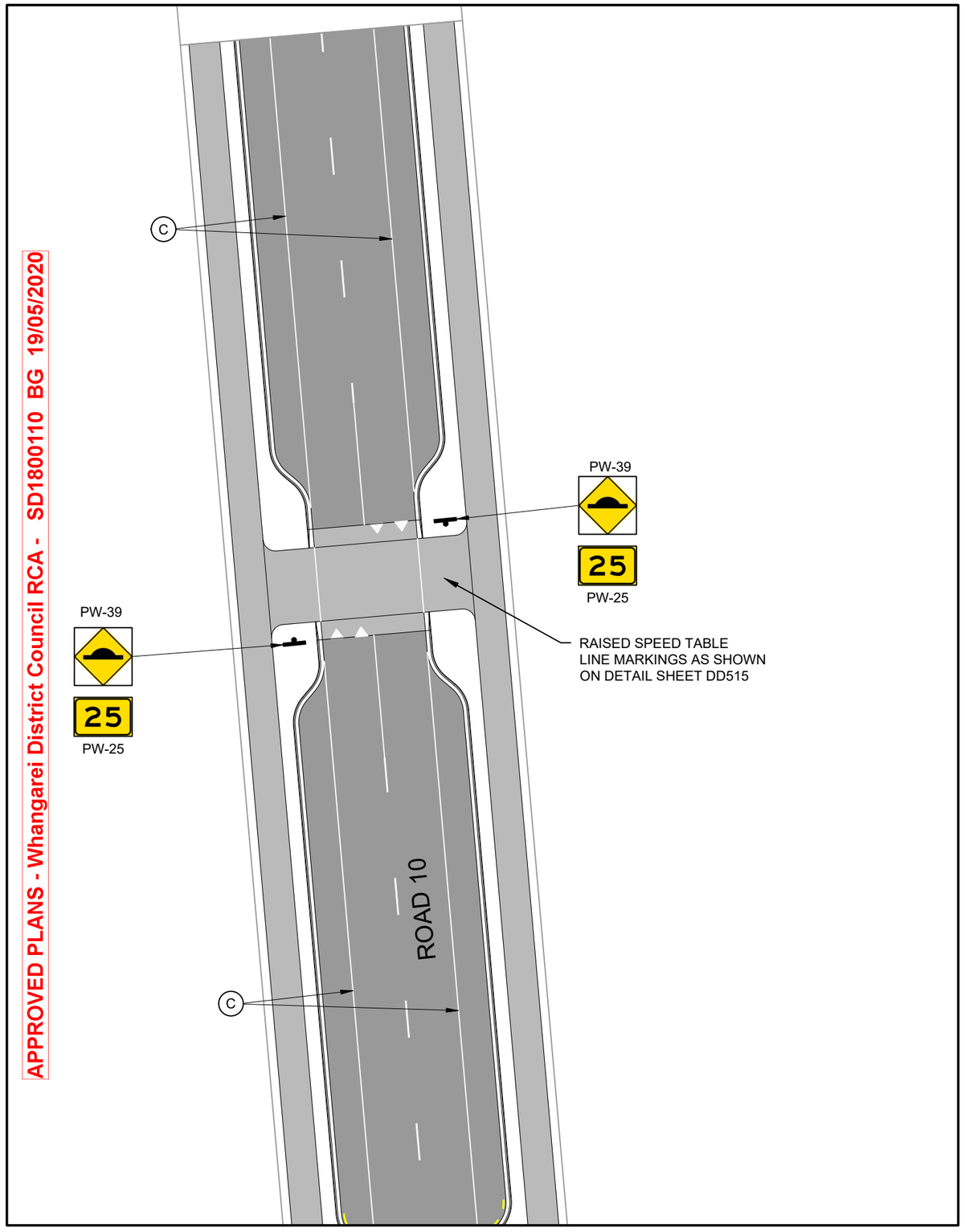
TITLE
LINEMARKING & SIGNPOSTING PLAN
INTERSECTION ROADS 7 AND 19
& SINUSOIDAL SPEED HUMPS

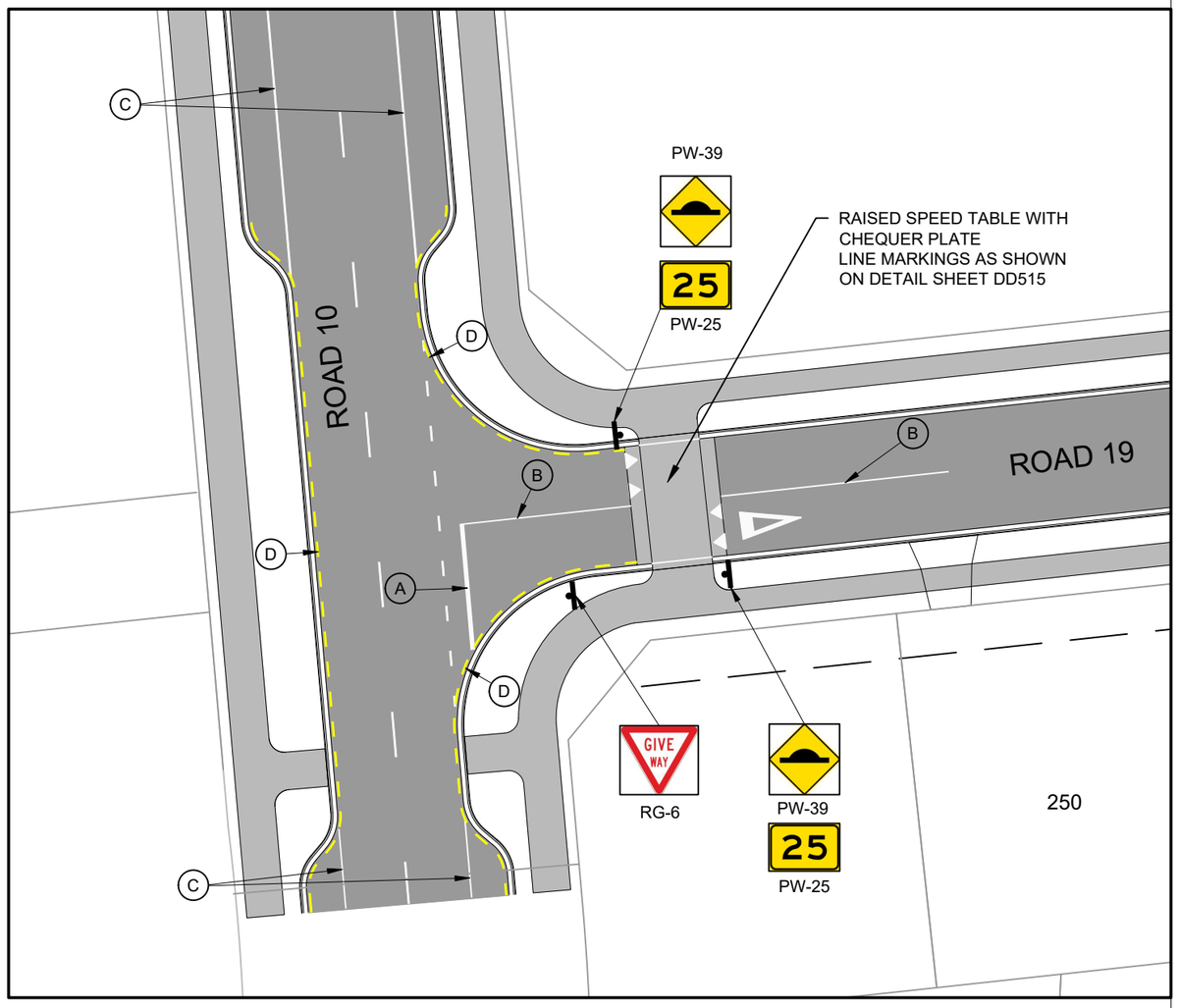
DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:400 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD563			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:15:14 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD560-Road Markings.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020





KEY:

A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND RELEVANT SPECIFICATIONS.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:400

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	ROADING NARROWING ADDED TO ROAD 10 AND NEW IQP DETAILS	18-03-20 KH	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
INTERSECTION ROADS 10 AND 19
& ROAD NARROWING ON ROAD 10

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:400 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD564		REVISION B	

SCALE 1:400

DATE PLOTTED: Wednesday, 18 March 2020 9:15:14 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD560-Road Markings.dwg

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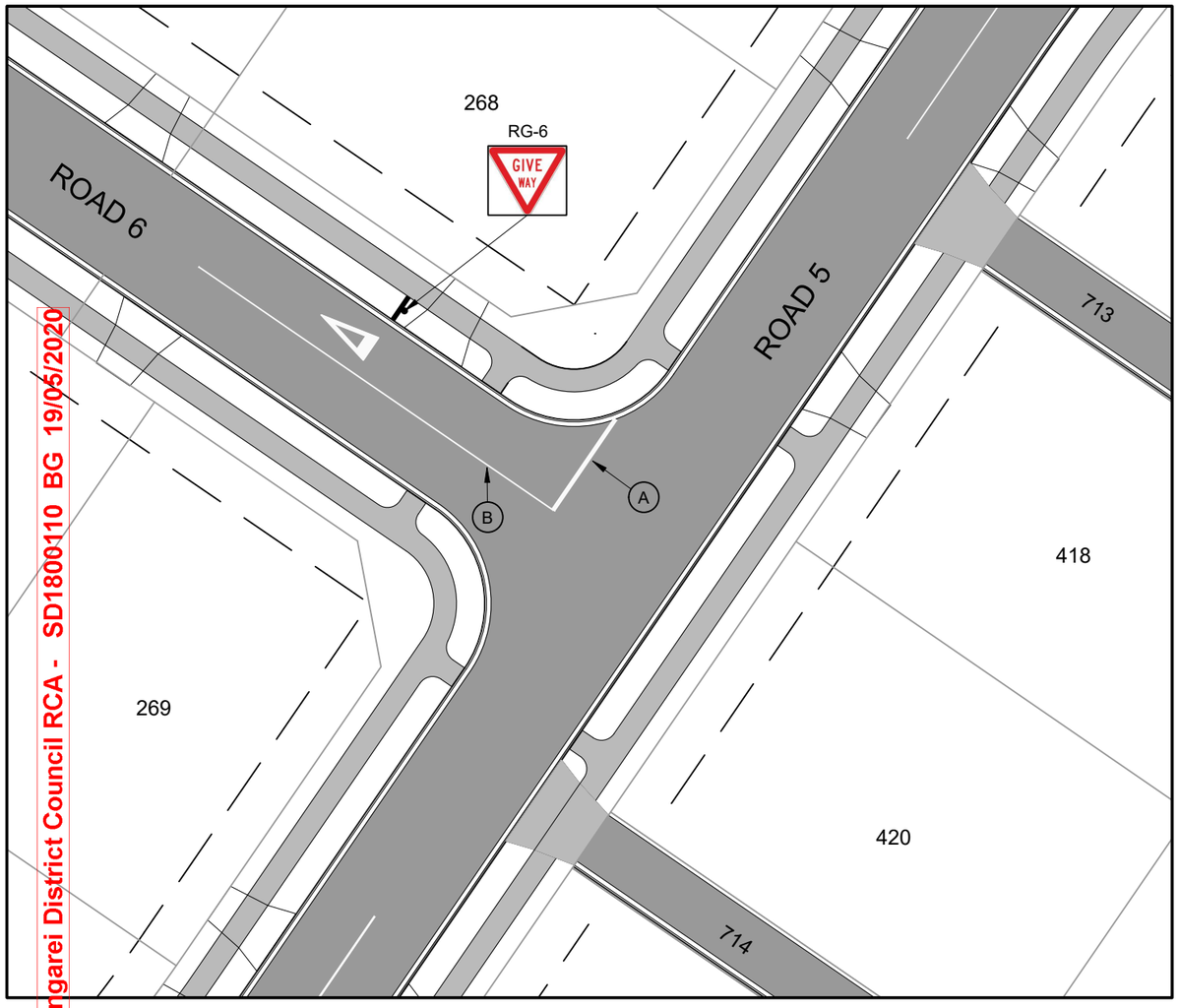
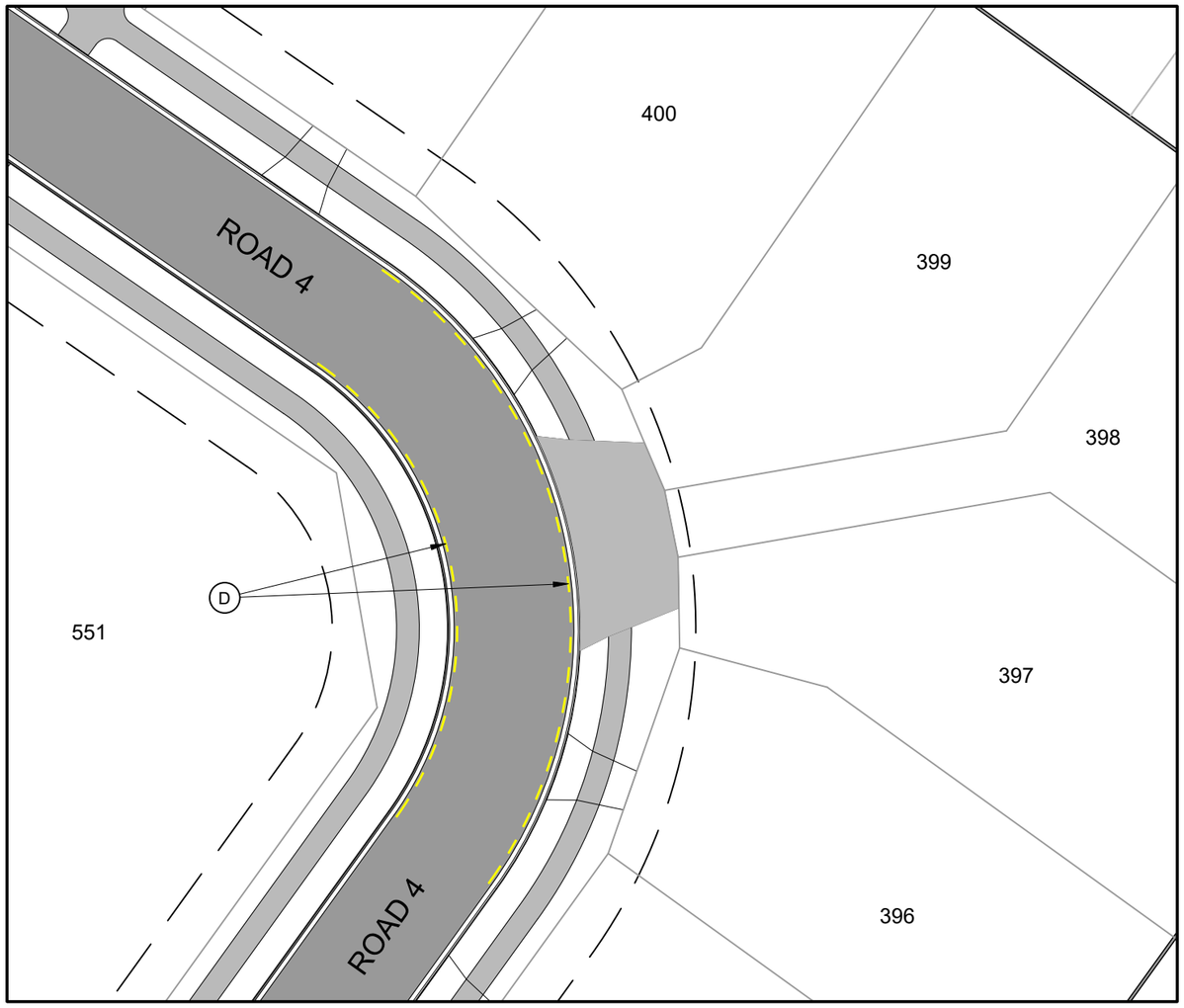


INTERSECTION ROADS 5 AND 6



NSAAT MARKINGS ON ROAD 4

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

KEY:

A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND RELEVANT SPECIFICATIONS.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:400

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NSAAT MARKINGS ADDED ON ROAD 4 AND NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
INTERSECTION ROADS 5 AND 6
& NSAAT MARKINGS ON ROAD 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:400 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD565			REVISION B

SCALE 1:400

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD560-Road Markings.dwg

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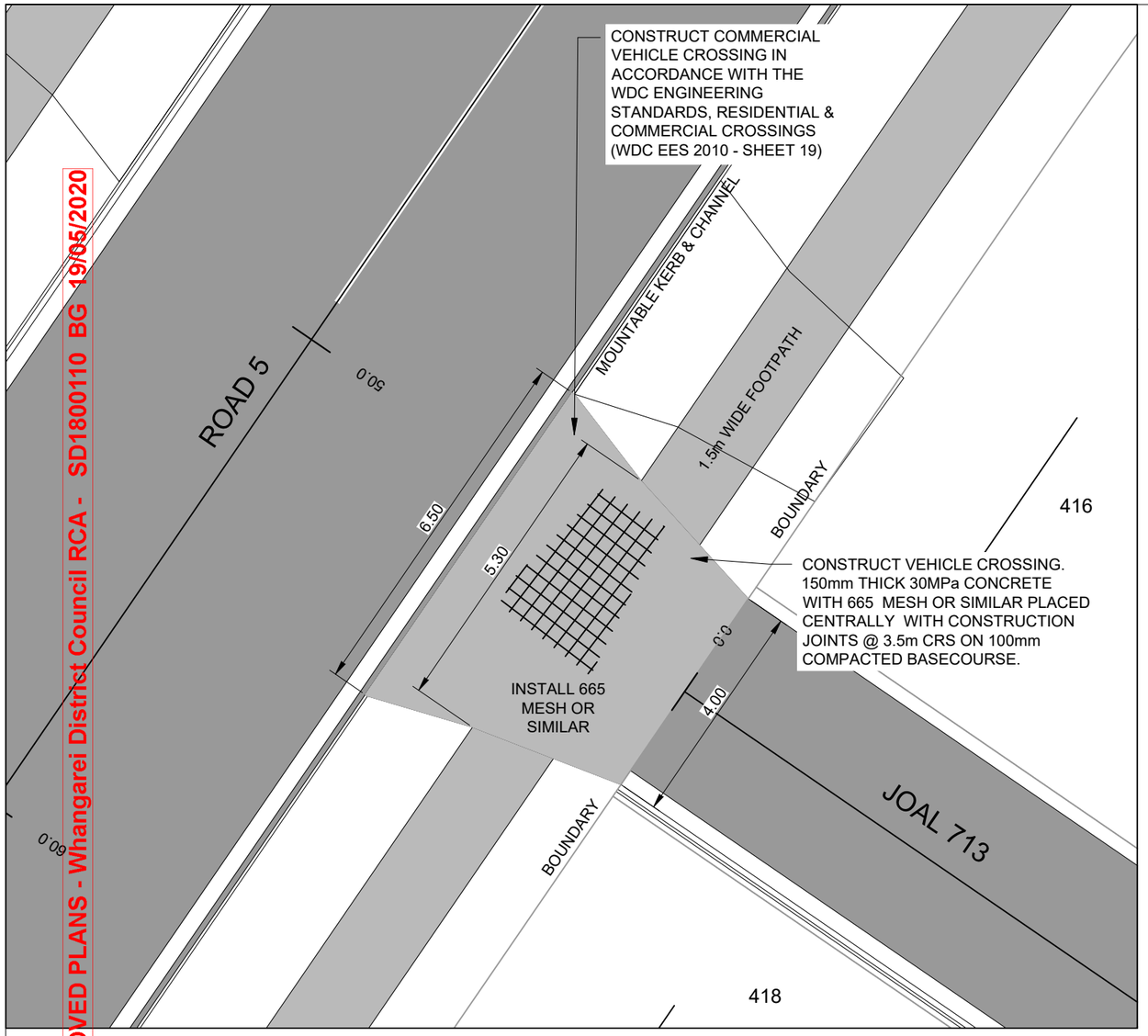
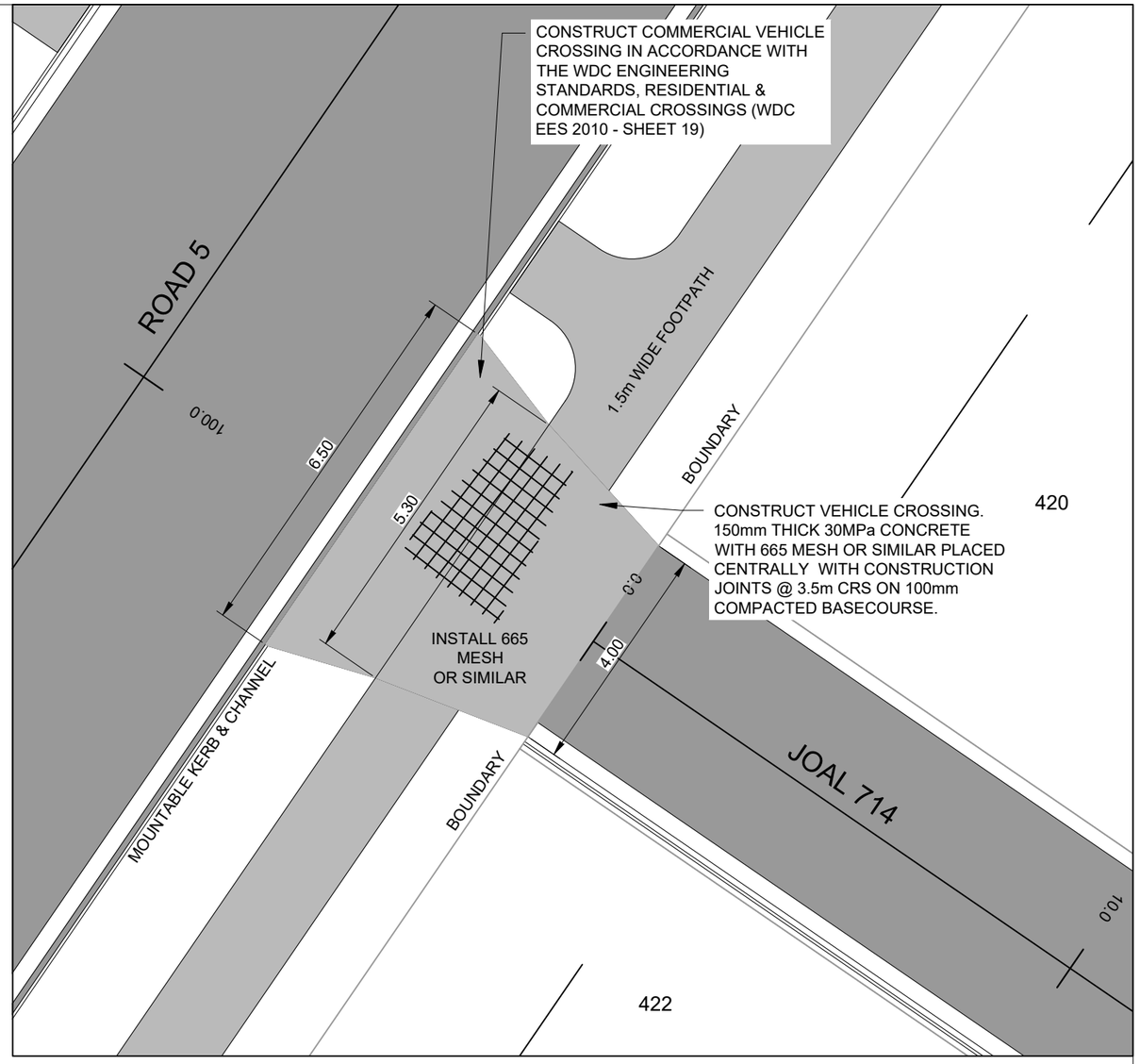
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



JOAL 713 - VEHICLE CROSSING

SCALE 1:100



JOAL 714 - VEHICLE CROSSING

SCALE 1:100

SCALE 1:100

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	MESH AMENDED TO 665	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE CROSSINGS
JOAL 713 & 714

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

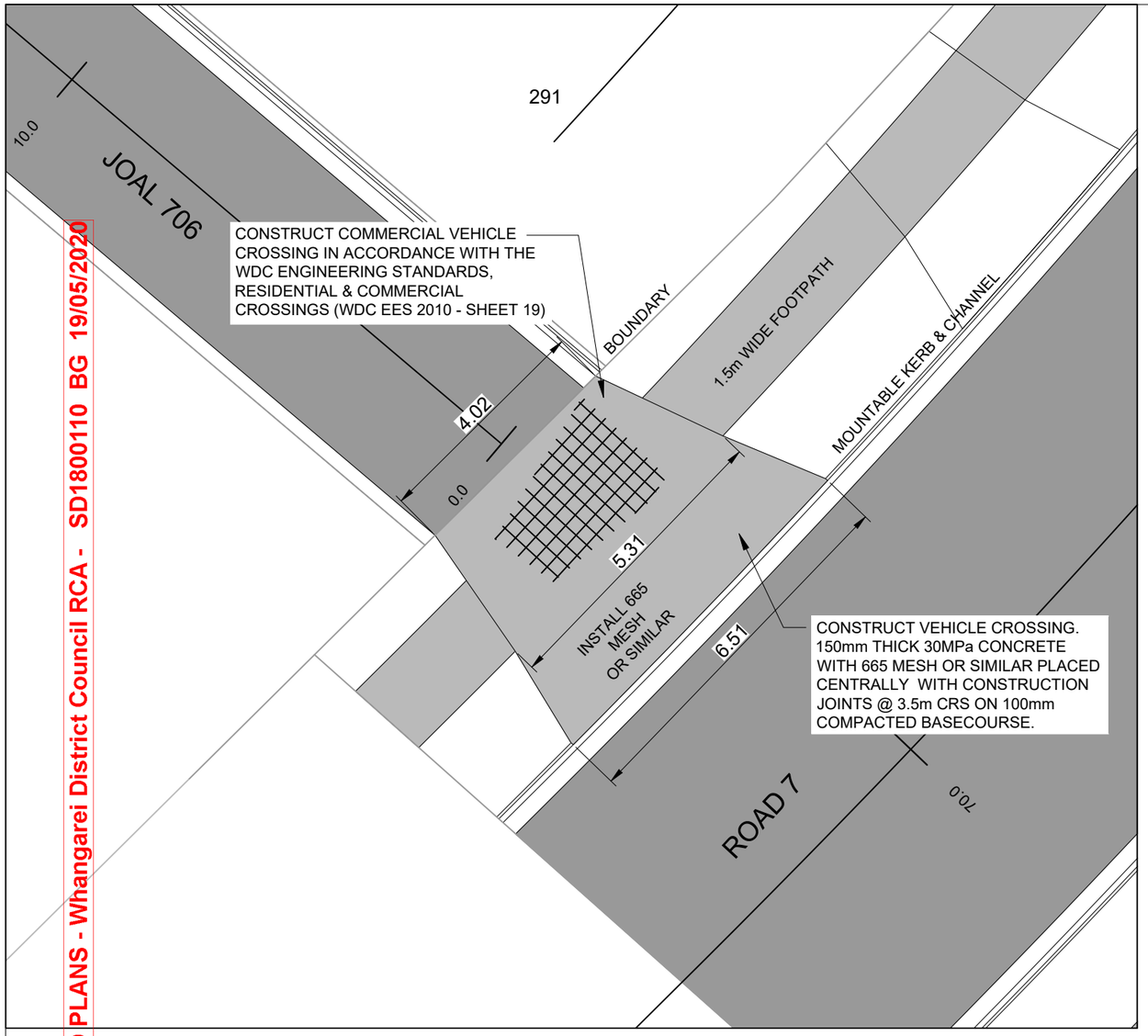
CCL REF NO	SCALE	STATUS
14333-004	1:100 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD570	C

SCALE 1:100

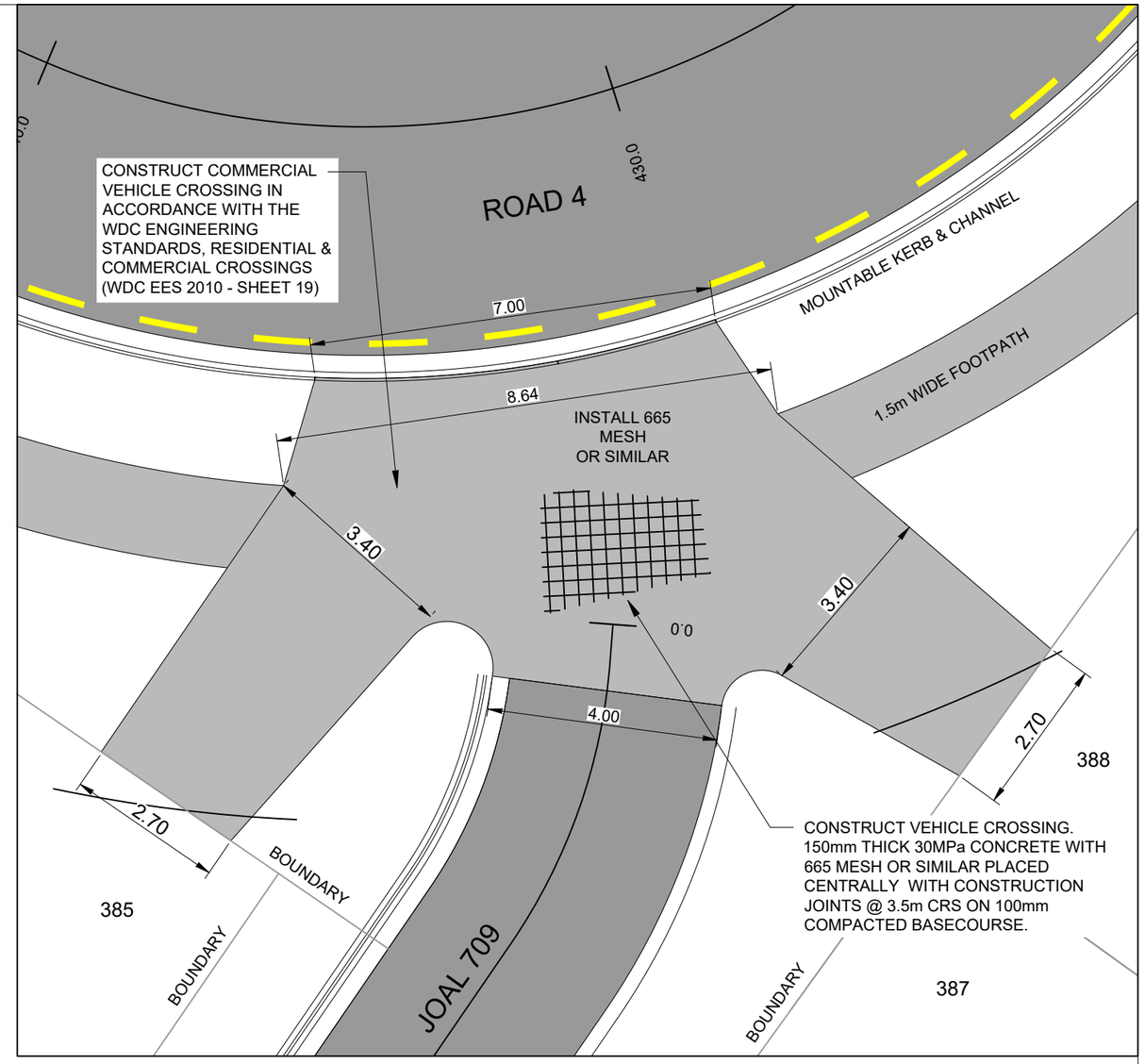
DATE PLOTTED: Wednesday, 18 March 2020 9:15:16 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD570-Vehicle Crossing.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



JOAL 706 - VEHICLE CROSSING

SCALE 1:100



JOAL 709 - VEHICLE CROSSING

SCALE 1:100

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	MESH AMENDED TO 665, JOAL 709 CROSSING CONFIGURATION AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE CROSSINGS
JOALS 706 & 709

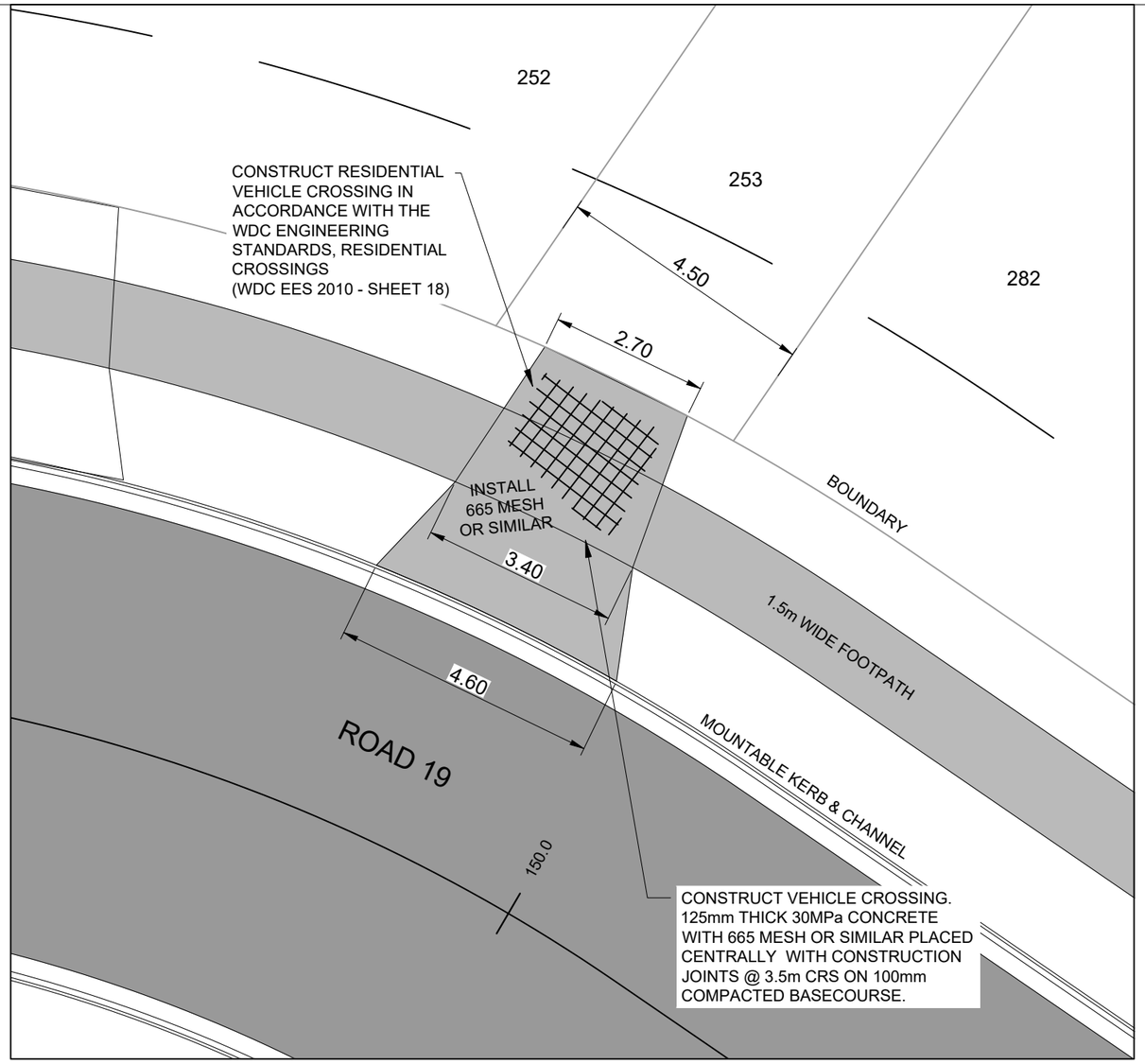
DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:100 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD571		REVISION C	

SCALE 1:100

DATE PLOTTED: Wednesday, 18 March 2020 9:15:16 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD570-Vehicle Crossing.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



VEHICLE CROSSING - LOT 253

SCALE 1:100

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

SCALE 1:100

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND NEW VEHICLE CROSSING FOR LOT 253	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE CROSSING
LOT 253

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:100 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD572		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:16 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD570-Vehicle Crossing.dwg

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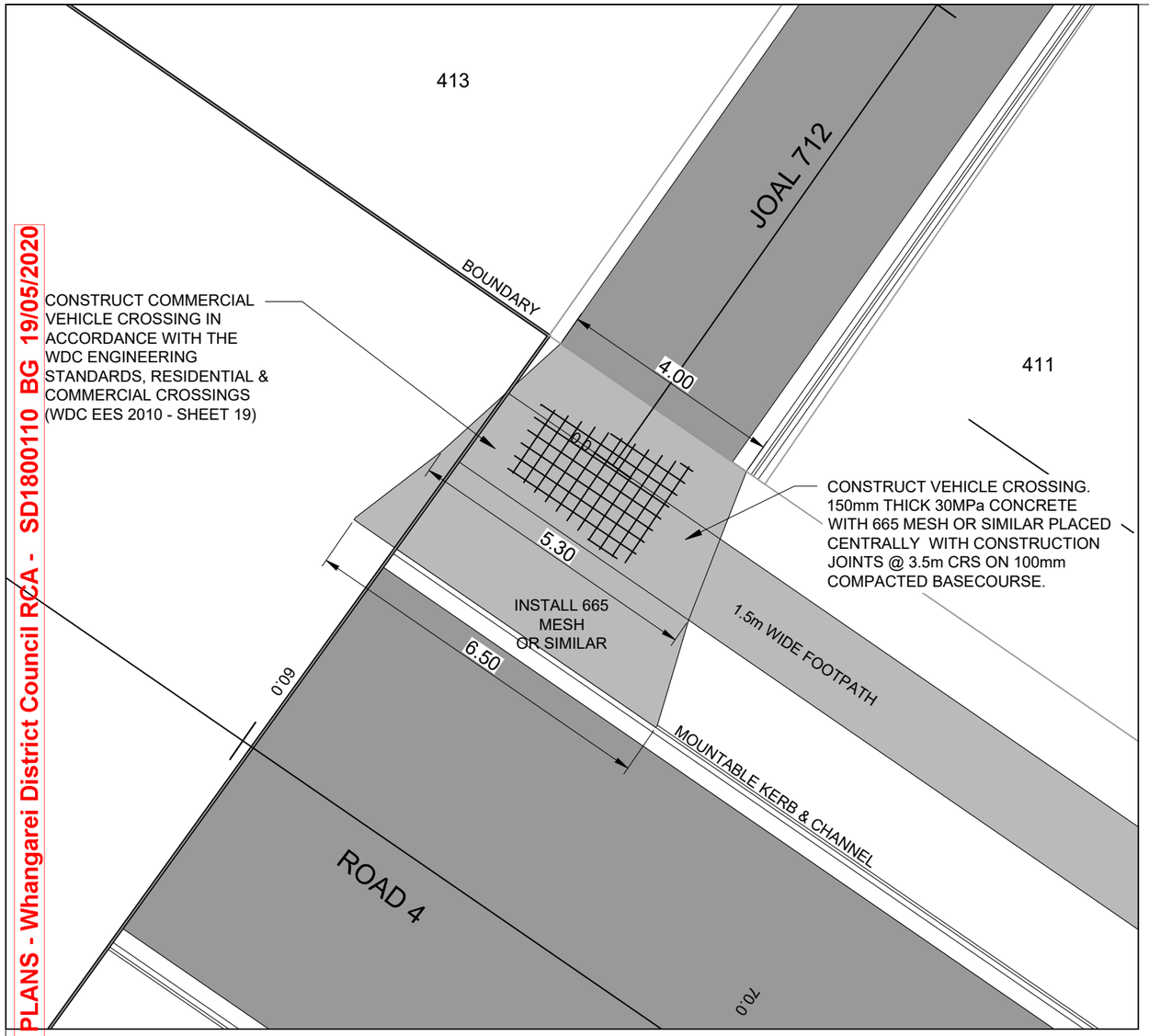
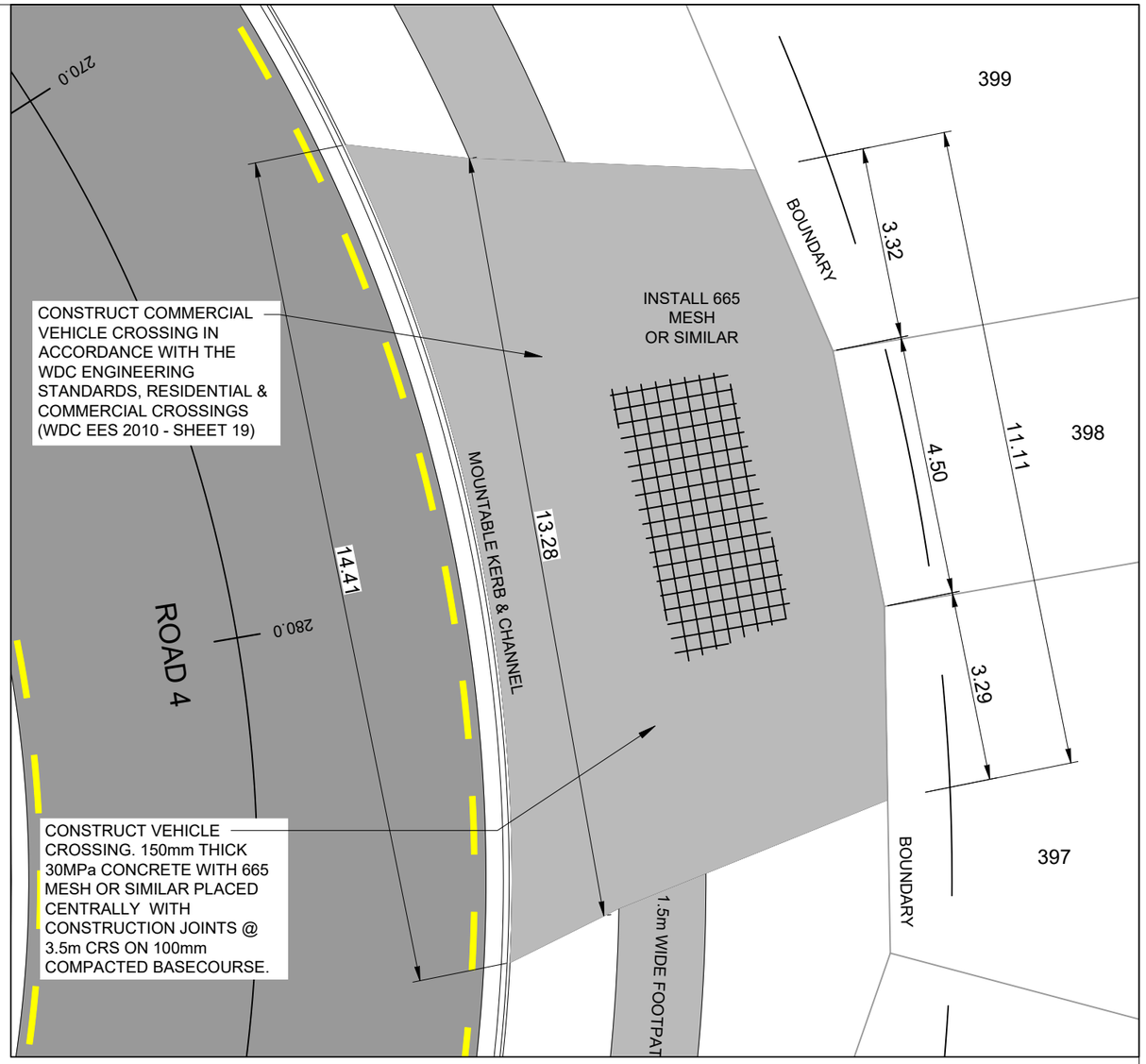
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



JOAL 712 - VEHICLE CROSSING

SCALE 1:100



VEHICLE CROSSING - LOTS 397, 398 & 399

SCALE 1:100

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	MESH AMENDED TO 665	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE CROSSING
JOAL 712 & LOTS 397, 398 & 399

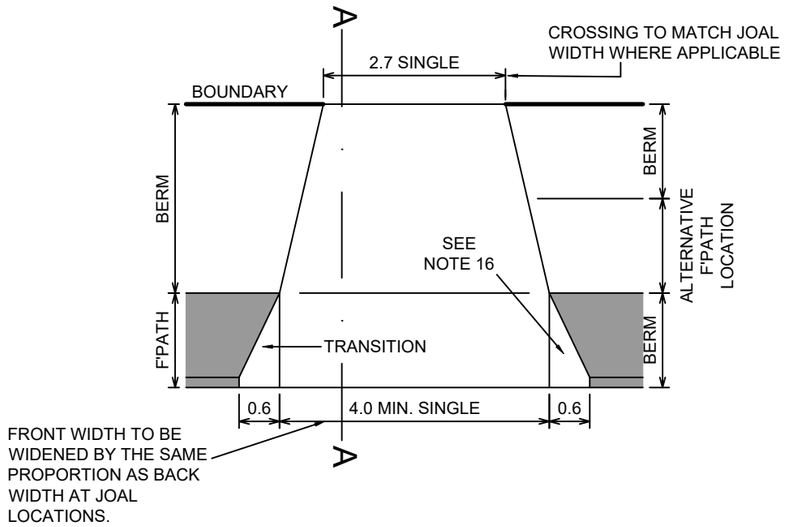
DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:100 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD573		REVISION C	

SCALE 1:100

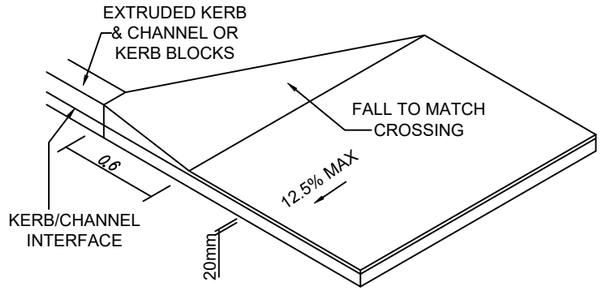
DATE PLOTTED: Wednesday, 18 March 2020 9:15:17 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD570-Vehicle Crossing.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

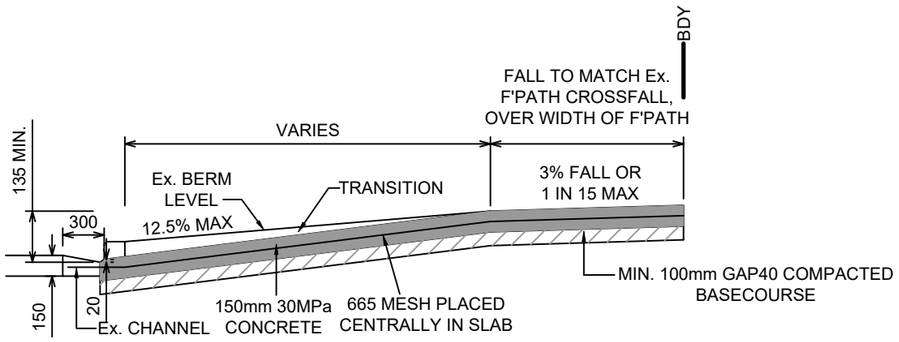


COMMERCIAL/INDUSTRIAL CROSSINGS - SHEET 19 WDC EES 2010 - NOT TO SCALE



KERB TRANSITION DETAIL

COMMERCIAL/INDUSTRIAL CROSSINGS - SHEET 19 WDC EES 2010 - NOT TO SCALE



CROSSING SECTION A-A

COMMERCIAL/INDUSTRIAL CROSSINGS - SHEET 19 WDC EES 2010 - NOT TO SCALE

1. ALL CONCRETE TO BE 30MPa STRENGTH AT 28 DAYS.
2. CROSSINGS TO BE CONSTRUCTED TO MATCH EXISTING FOOTPATH AND CHANNEL LEVELS AND BE GRADED TO GIVE SUFFICIENT CLEARANCE TO THE UNDERSIDE OF ALL VEHICLES.
3. THE ALTERNATIVE CHANNEL CROSSING DETAILED ON SHEET 20 MAY ONLY BE USED WITH SPECIFIC APPROVAL. IT IS FOR USE ONLY WHERE THICK OVERLAY OF THE EXISTING SEAL PRECLUDES THE STANDARD OPTION.
4. IF NO FOOTPATH, ALLOWANCE SHALL BE MADE FOR SUCH WITH A 3% CROSSFALL TO THE KERB.
5. KERB TRANSITIONS TO BE CONSTRUCTED OF SIMILAR MATERIALS TO THE ADJACENT KERB OR CAST INSITU CONCRETE. SEE SHEET 12 FOR DETAILS.
6. WHERE THE FOOTPATH OR ADJACENT PROPERTY LEVEL IS BELOW THE CHANNEL LEVEL, RAMP THE CROSSING UP FROM THE CHANNEL TO CONTROL SURFACE WATER WHILE MAINTAINING VEHICLE CLEARANCE. A FREE BOARD OF 200mm ABOVE THE CHANNEL IS REQUIRED TO CONTAIN STORMWATER WITHIN THE ROAD.
7. GRADIENT OF CROSSING NOT TO EXCEED 12.5% (1 IN 8)
8. CROSSINGS FOR ALL PRIVATEWAYS SHALL BE COMMERCIAL GRADE (PER SHEET 19)
9. EDGES OF FOOTPATH AND BACK OF CHANNEL TO BE SAWCUT.
10. ALL CROSSINGS REQUIRE COUNCIL INSPECTION PRIOR TO POURING CONCRETE.
11. IF THE EDGE OF THE CROSSING IS WITHIN 1m OF A CRACK OR JOINT IN AN EXISTING FOOTPATH THEN THAT SECTION OF FOOTPATH IS TO BE REPLACED.
12. COMMERCIAL AND INDUSTRIAL CHANNELS TO BE REINFORCED WITH AN EXTENSION OF THE 665 MESH.
13. WHERE A STREET SUMP IS LOCATED WITHIN THE PROPOSED CROSSING, THE SUMP SHALL BE RELOCATED TO THE SIDE OF THE CROSSING AND BE RECONNECTED TO THE COUNCIL STORMWATER SYSTEM.
14. REFER TO SHEET 16 FOR VEHICLE CROSSINGS OVER A DRAINAGE SWALE.
15. STORMWATER KERB CONNECTIONS ARE GENERALLY NOT PERMITTED (SEE SECTION 4.8.1.5).
16. SPLAY WIDTH MAY NEED TO BE INCREASED IN SOME CIRCUMSTANCES TO ACCOMMODATE AN 11.5m RIGID TRUCK.
17. FOR COMMERCIAL CROSSINGS, PROVIDE A 2m STRIP OF HOT LAID ASPHALTIC CONCRETE OVER FULL WIDTH INCLUDING SPLAYS.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	MESH AMENDED TO 665	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE CROSSING DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO	SCALE	STATUS
14333-004	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD574	C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD570-Vehicle Crossing.dwg

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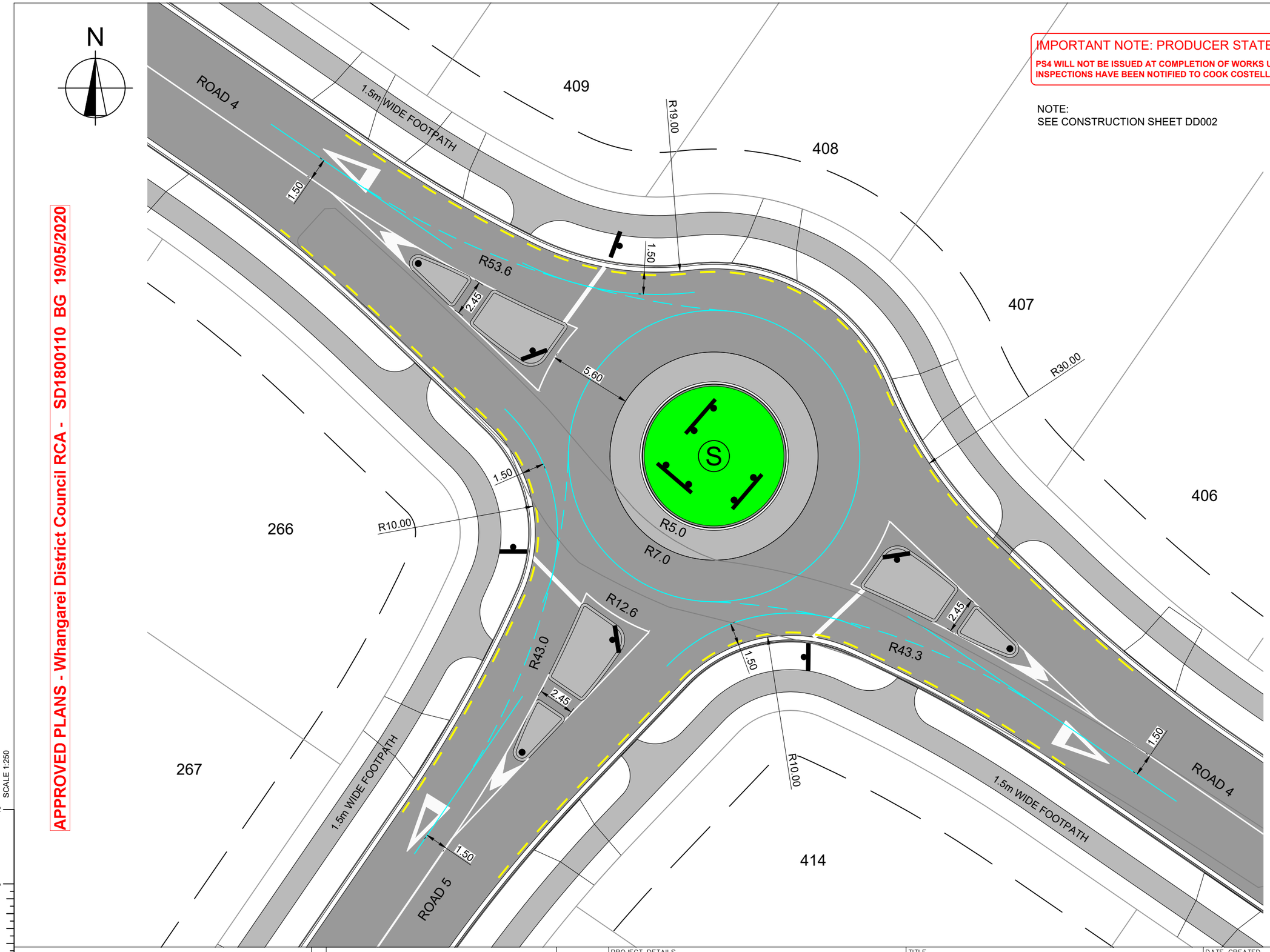

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE TRACKING CURVES
ROUNDABOUT 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO	SCALE	STATUS	
14333-004	1:250 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD580		B	

SCALE 1:250

DATE PLOTTED: Wednesday, 18 March 2020 9:15:18 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD580-Road Design.dwg

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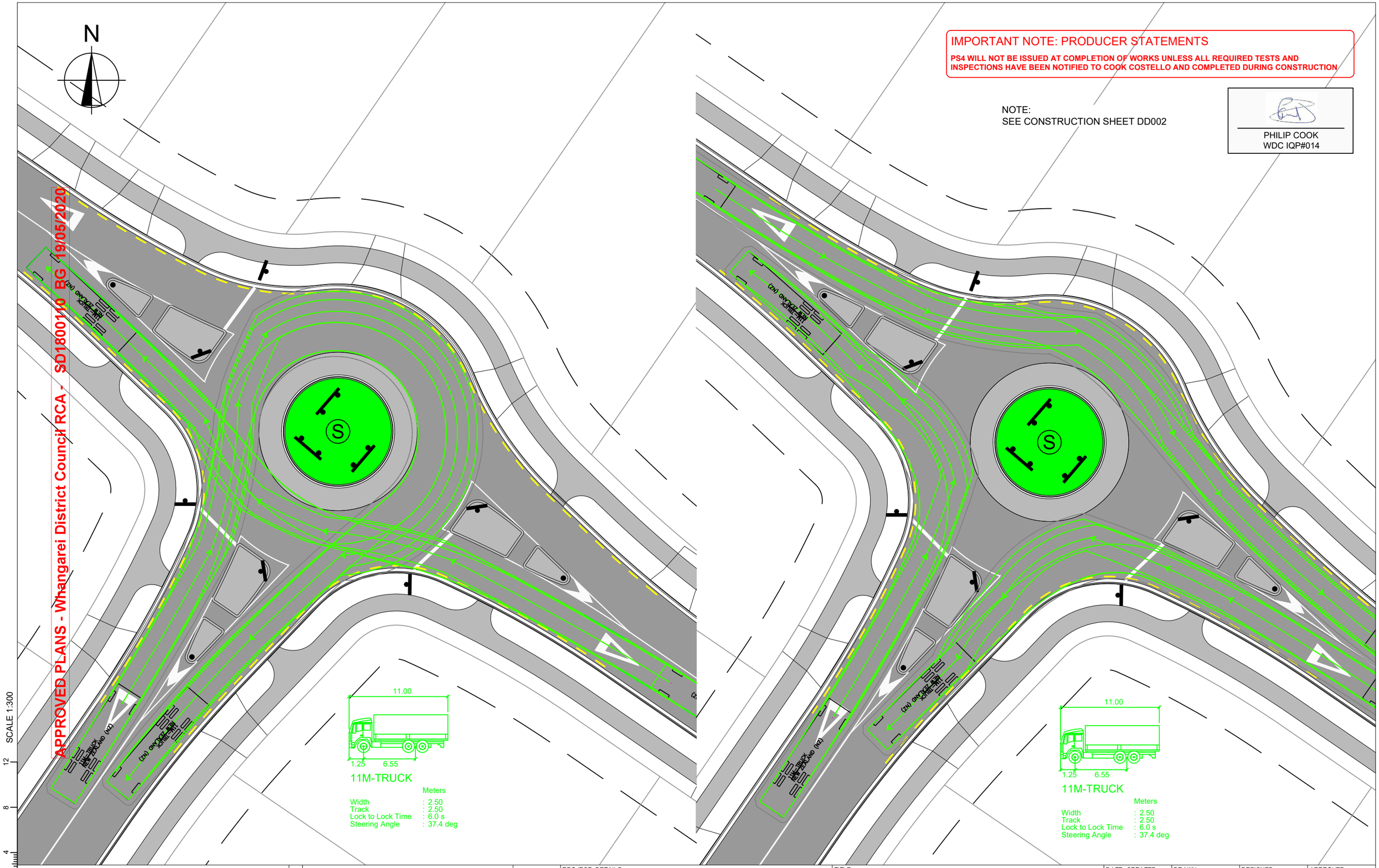

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

SCALE 1:300

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

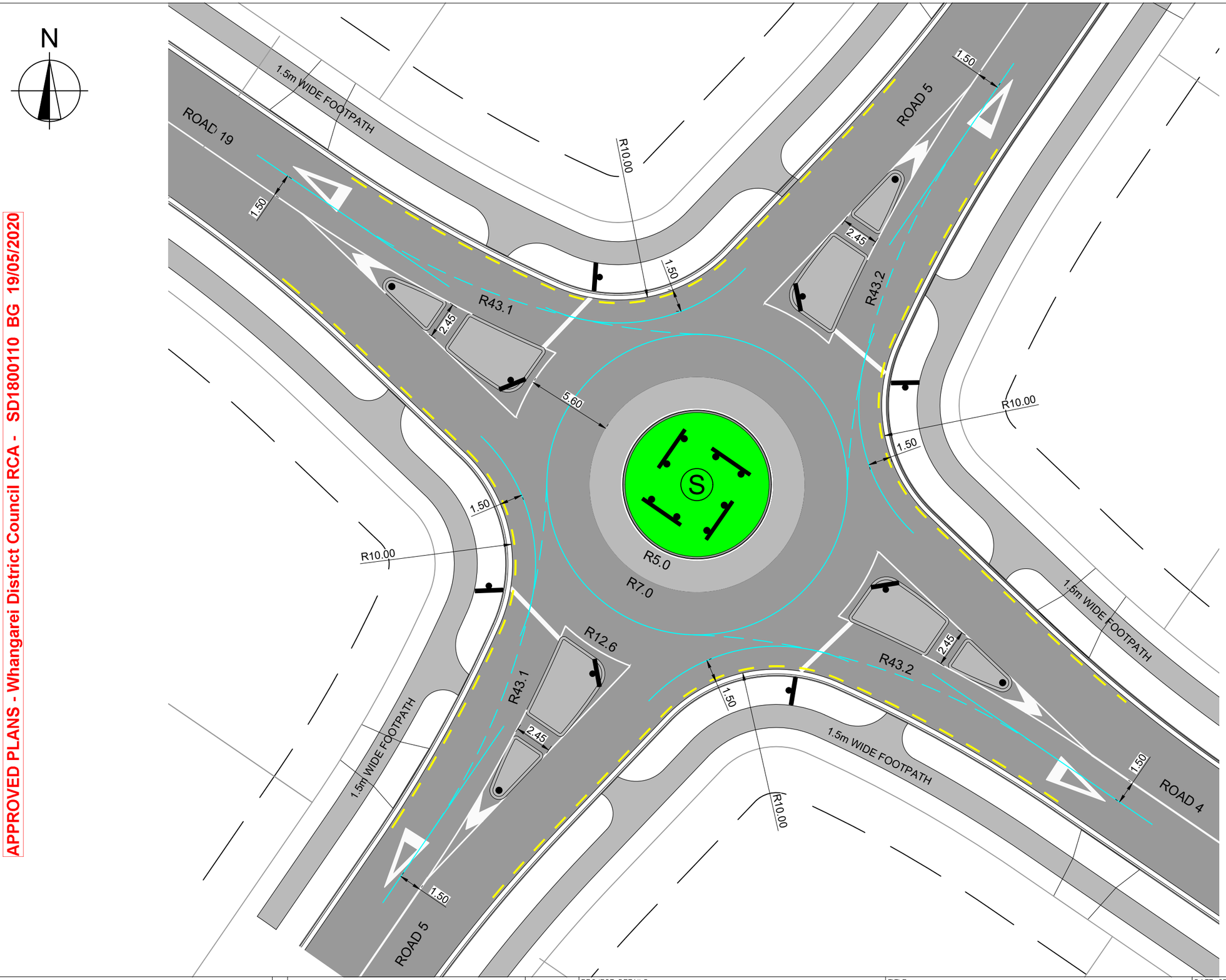
TITLE
VEHICLE TURNING CURVES
ROUNDABOUT 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO	SCALE	STATUS	
14333-004	1:300 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD581		B	

SCALE 1:300

DATE PLOTTED: Wednesday, 18 March 2020 9:15:19 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD580-Road Design.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

NOTE:
SEE CONSTRUCTION SHEET DD002

SCALE 1:250

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

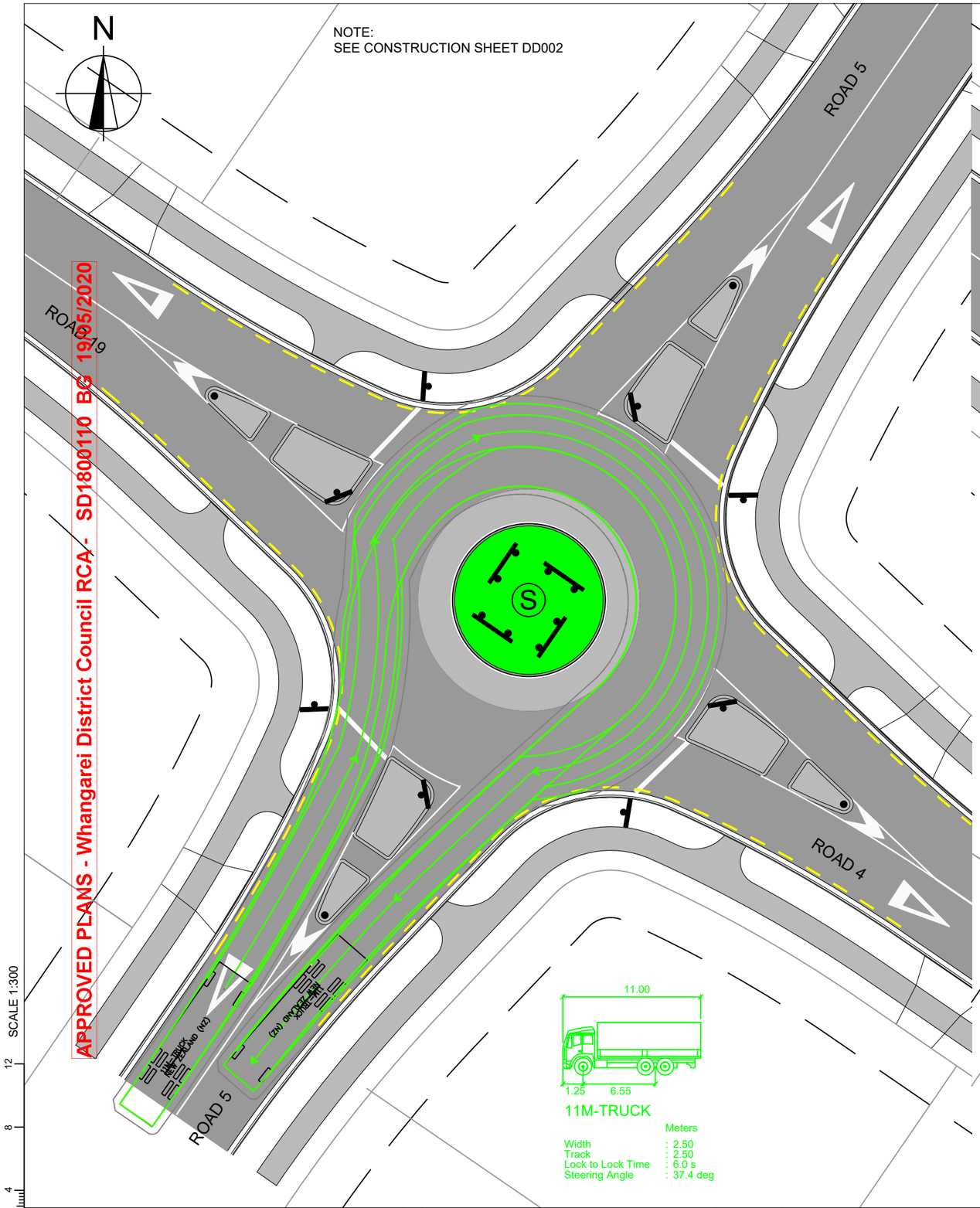
TITLE
VEHICLE TRACKING CURVES
ROUNDABOUT 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD582			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:15:19 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD580-Road Design.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

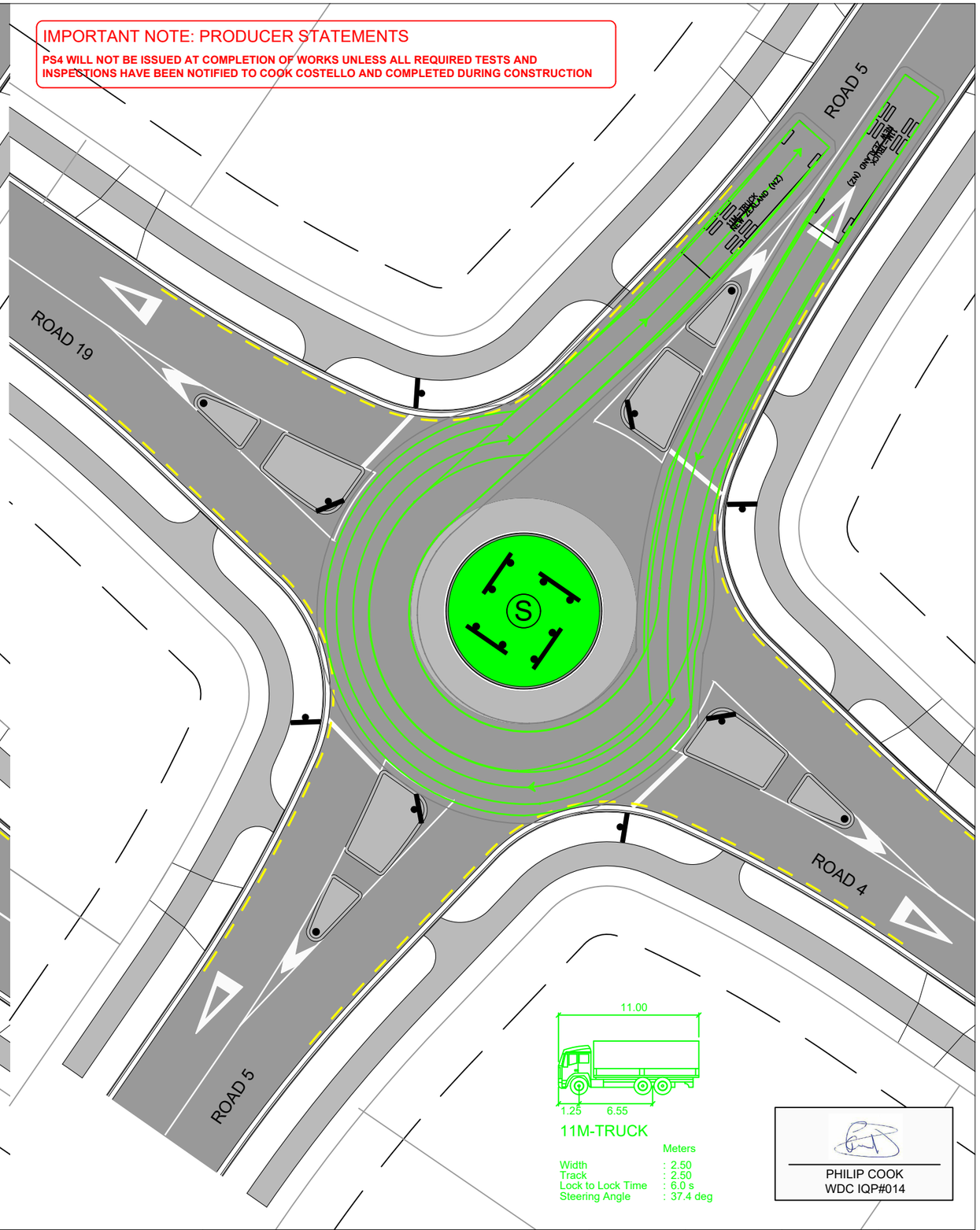
NOTE:
SEE CONSTRUCTION SHEET DD002



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BC 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



PHILIP COOK
WDC IQP#014

SCALE 1:300

cook | costello
www.coco.co.nz
Whangarei | Auckland | Wellington | Christchurch

C			
B	NEW IQP DETAILS	18-03-20	KH / PC
A	1ST ISSUE	29-11-19	KH / GM
	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

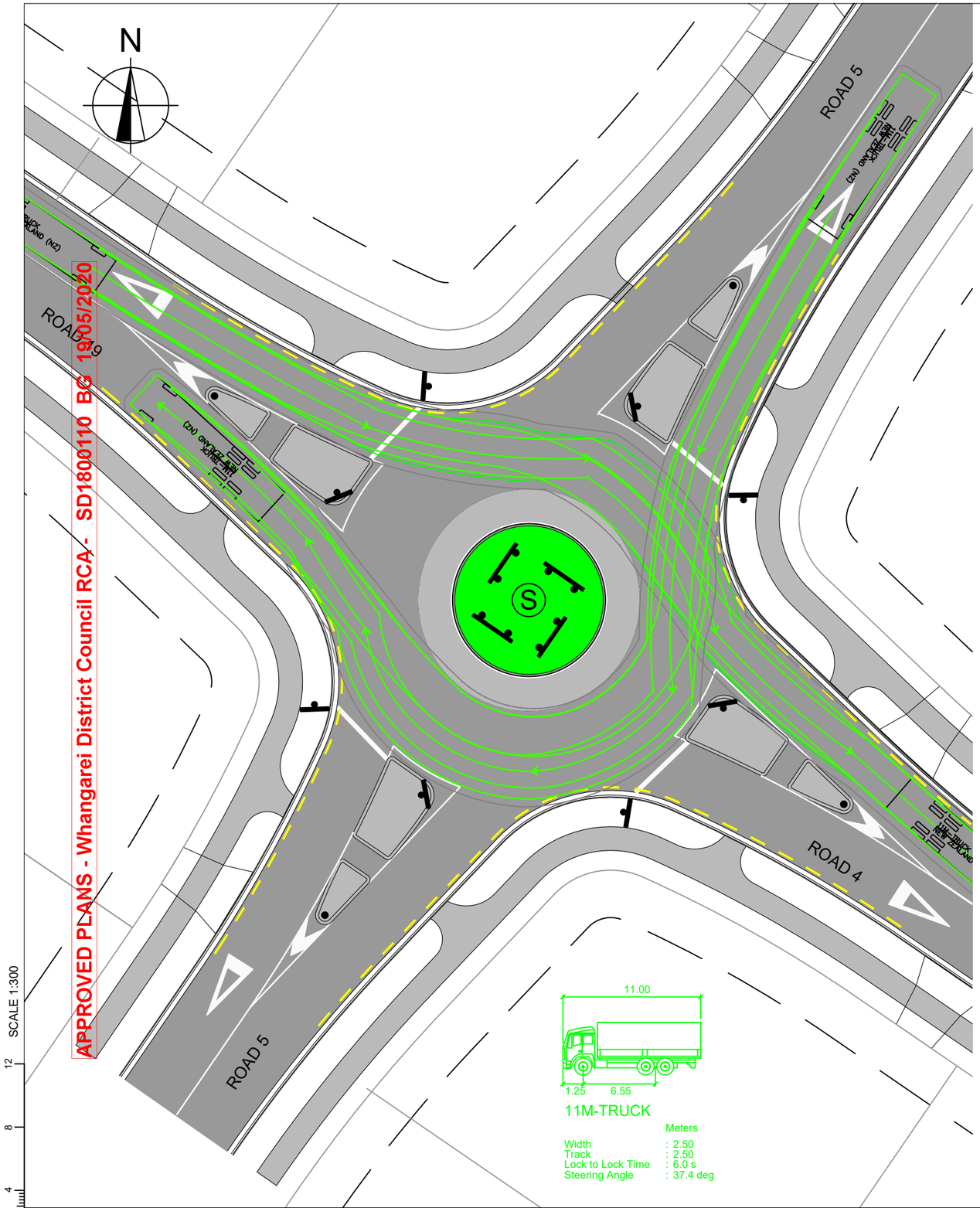
TITLE
VEHICLE TURNING CURVES
ROUNDABOUT 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:300 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD583		REVISION: B	

SCALE 1:300

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD580-Road Design.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BC 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

SCALE 1:300

0 4 8 12

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C			
B	NEW IQP DETAILS	18-03-20	KH PC
A	1ST ISSUE	29-11-19	KH GM
	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE TURNING CURVES
ROUNDABOUT 13

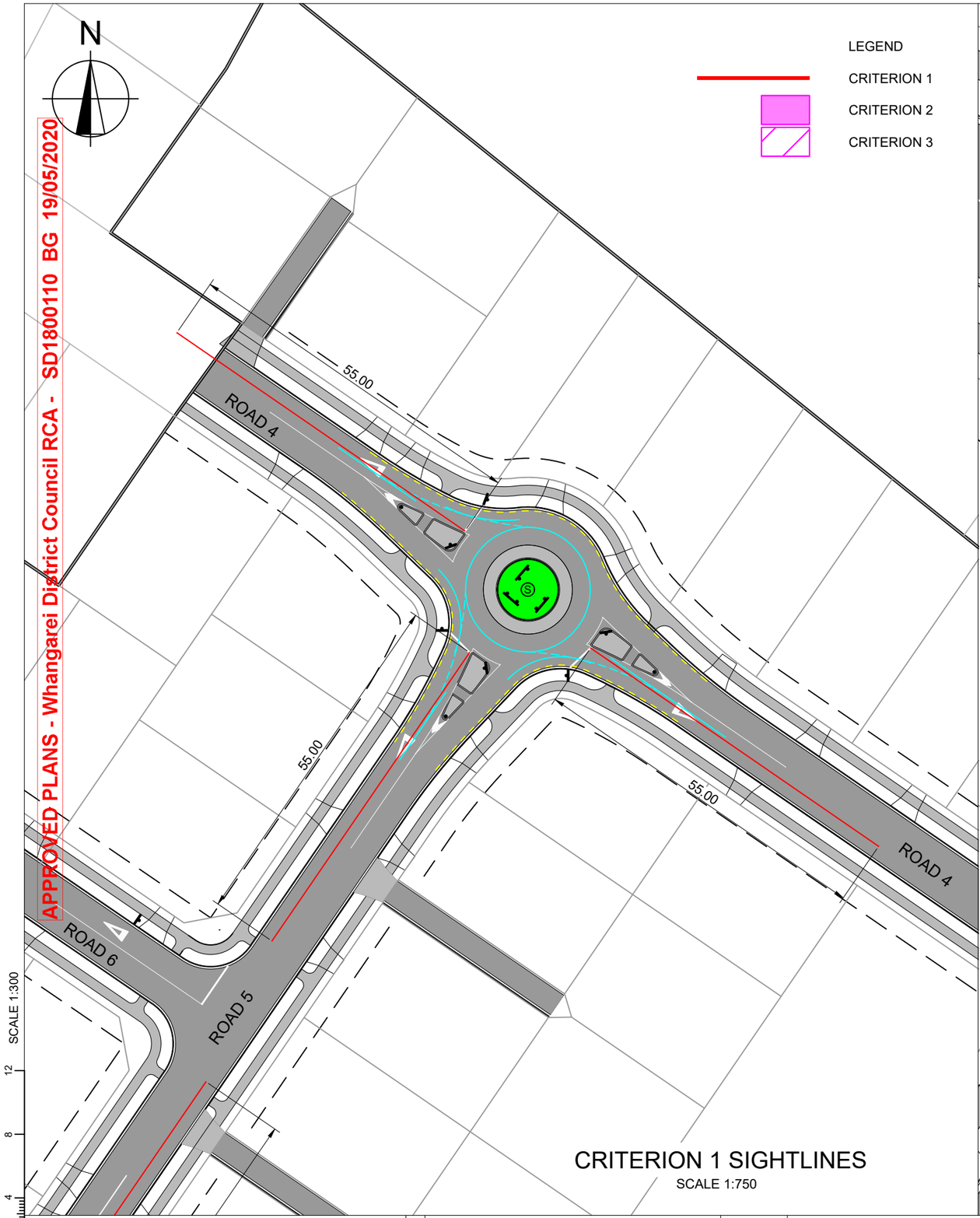
DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:300 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD584		REVISION: B	

SCALE 1:300

DATE PLOTTED: Wednesday, 18 March 2020 9:15:19 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD580-Road Design.dwg

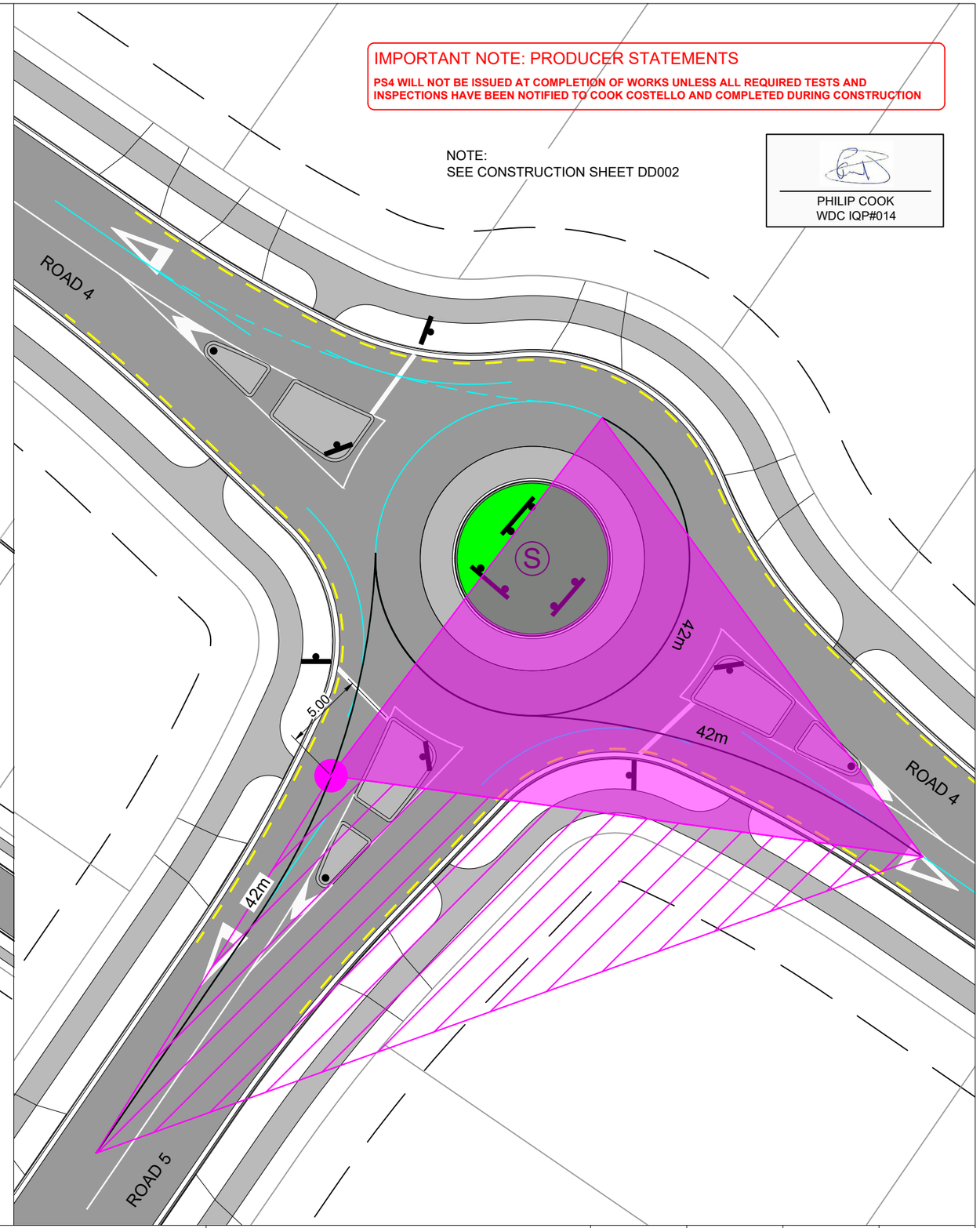
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



CRITERION 1 SIGHTLINES

SCALE 1:750



SCALE 1:300

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Whangarei | Auckland | Wellington | Christchurch

REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHTLINES FOR ROUNDABOUT 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:300 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD590		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:20 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

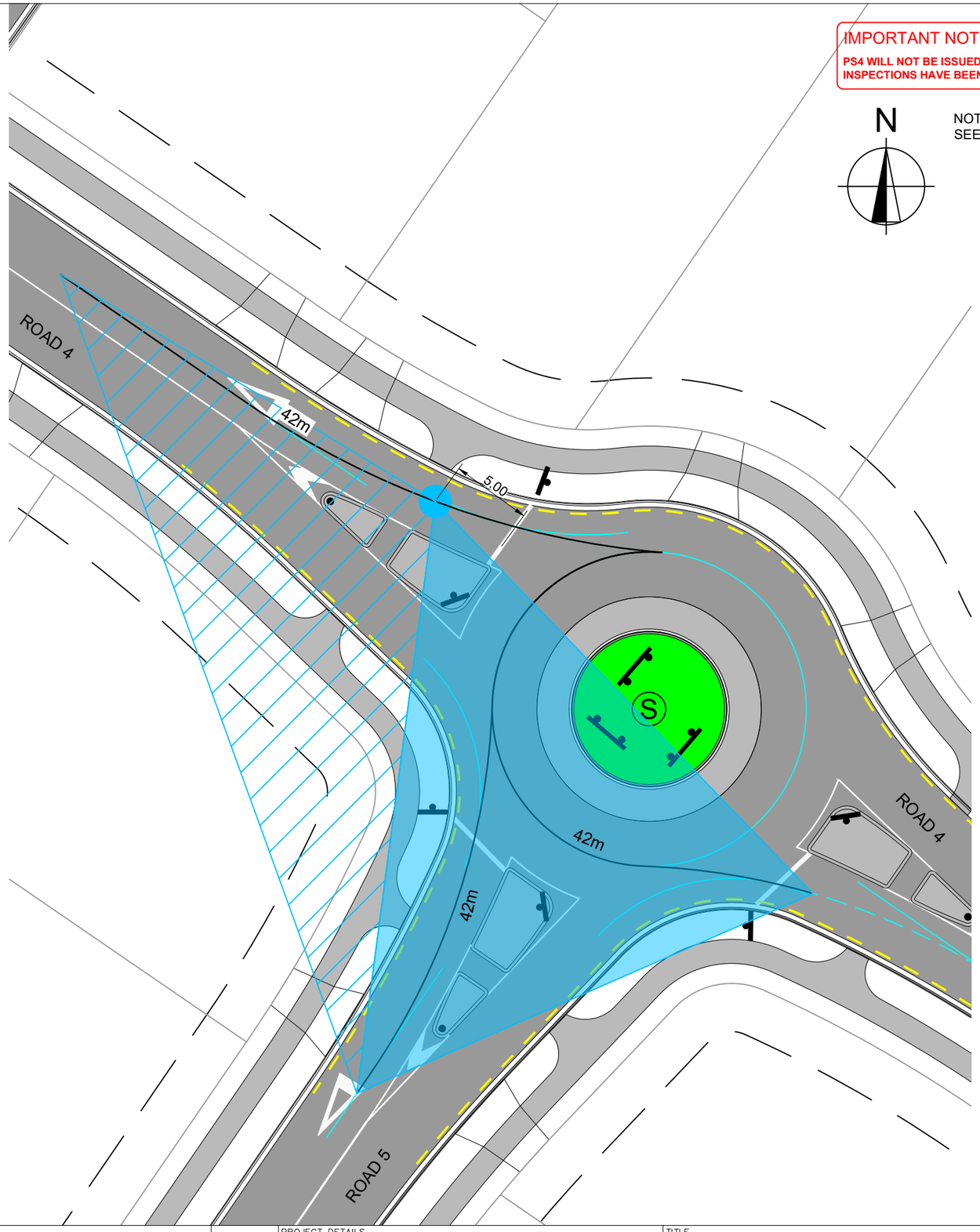
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

LEGEND

CRITERION 1

CRITERION 2

CRITERION 3



IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

N

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:300

0 4 8 12

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

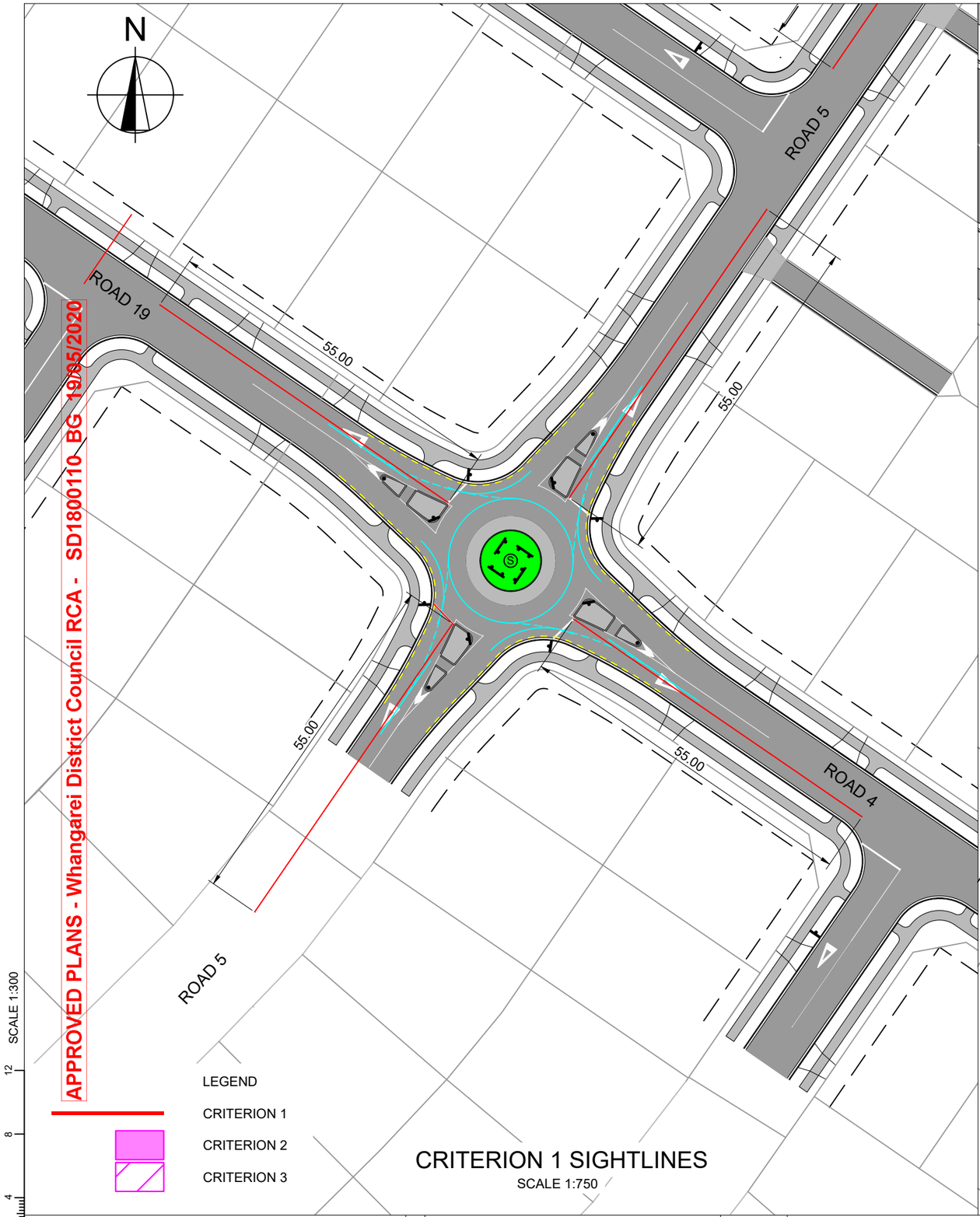
TITLE
VEHICLE SIGHTLINES FOR
ROUNDABOUT 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:300 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD591		REVISION B	

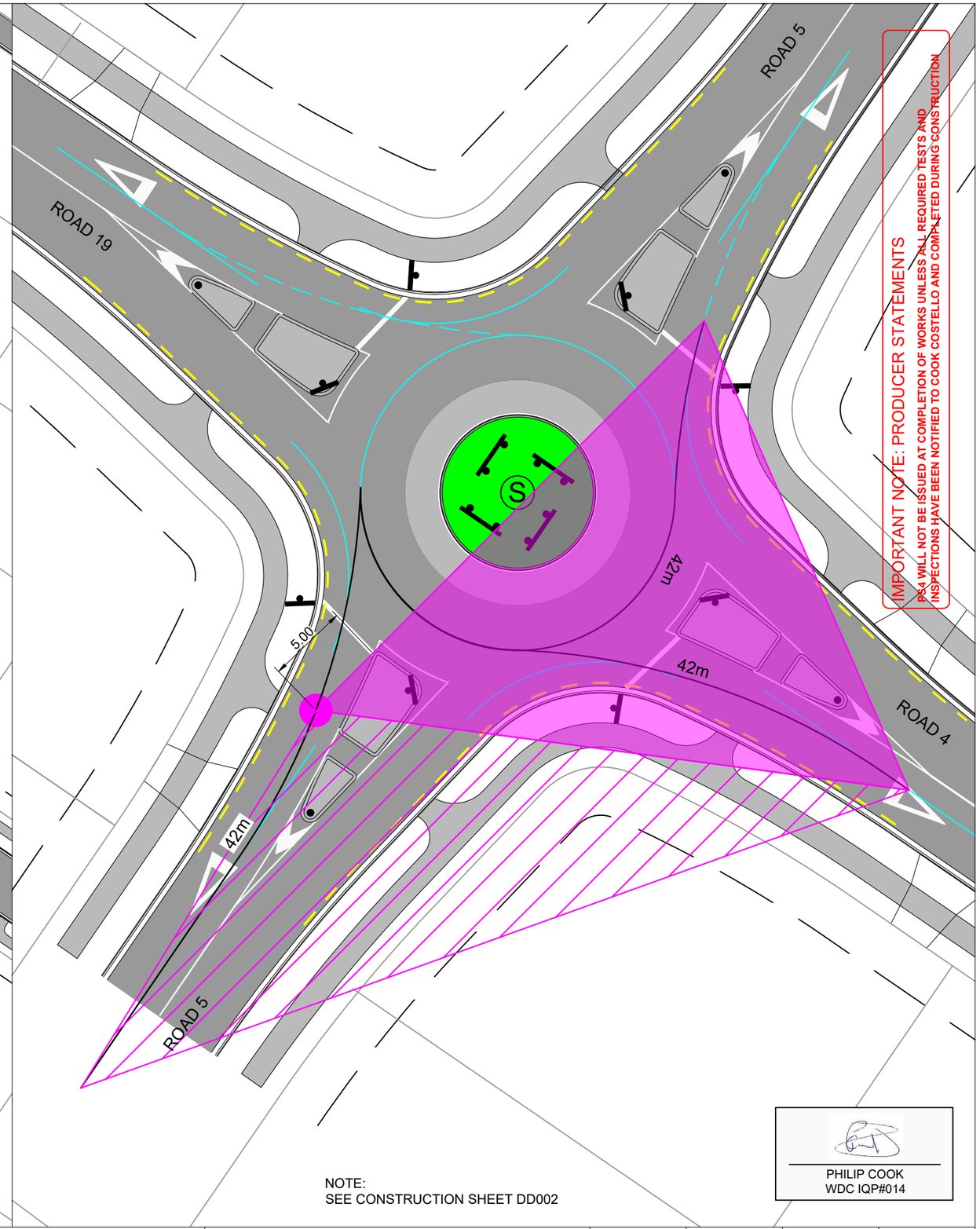
SCALE 1:300

DATE PLOTTED: Wednesday, 18 March 2020 9:15:21 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



CRITERION 1 SIGHTLINES
SCALE 1:750



NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

SCALE 1:300

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHTLINES FOR ROUNDABOUT 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO	SCALE	STATUS	
14333-004	1:300 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD592		B	

SCALE 1:300

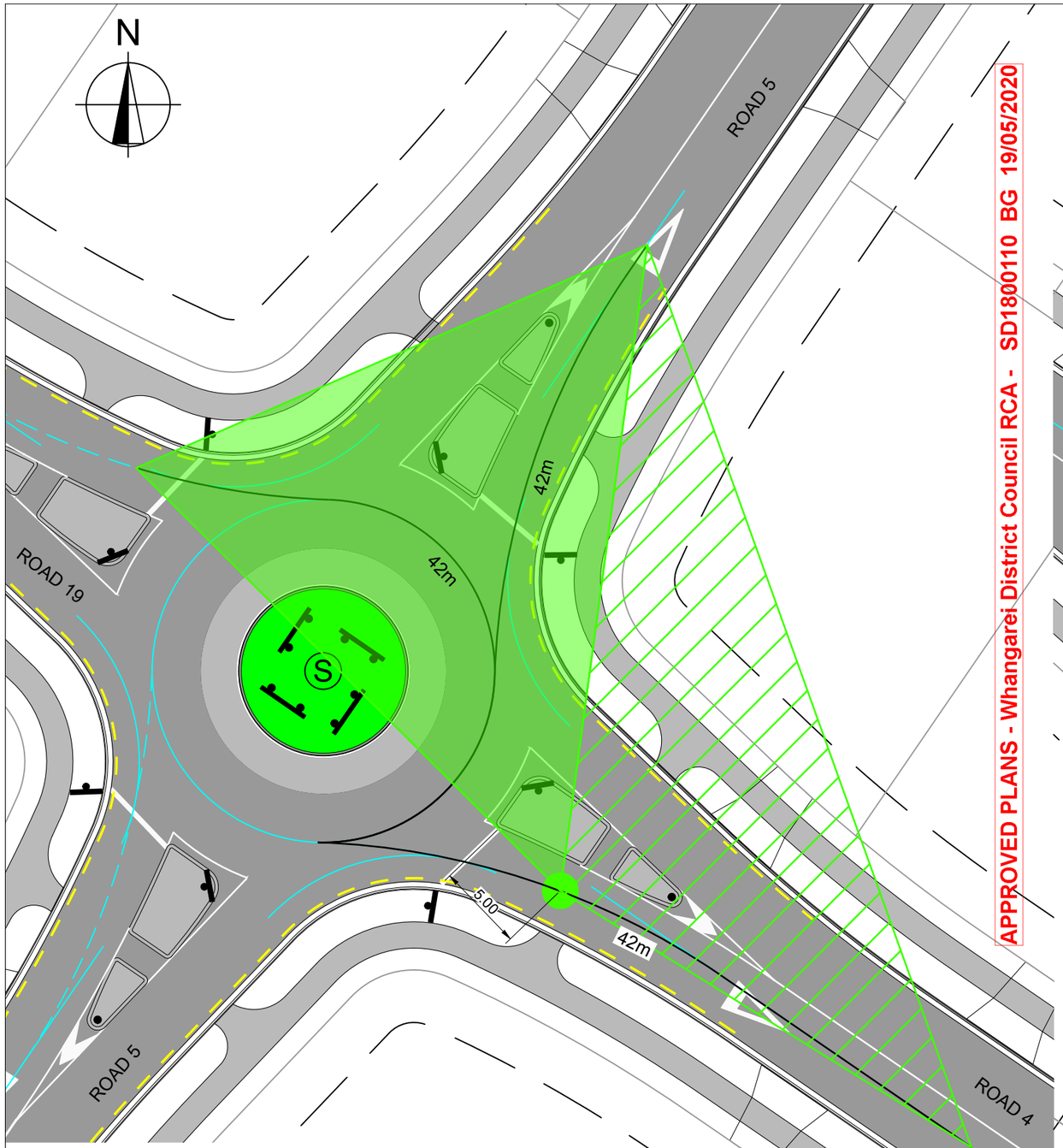
DATE PLOTTED: Wednesday, 18 March 2020 9:15:21 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

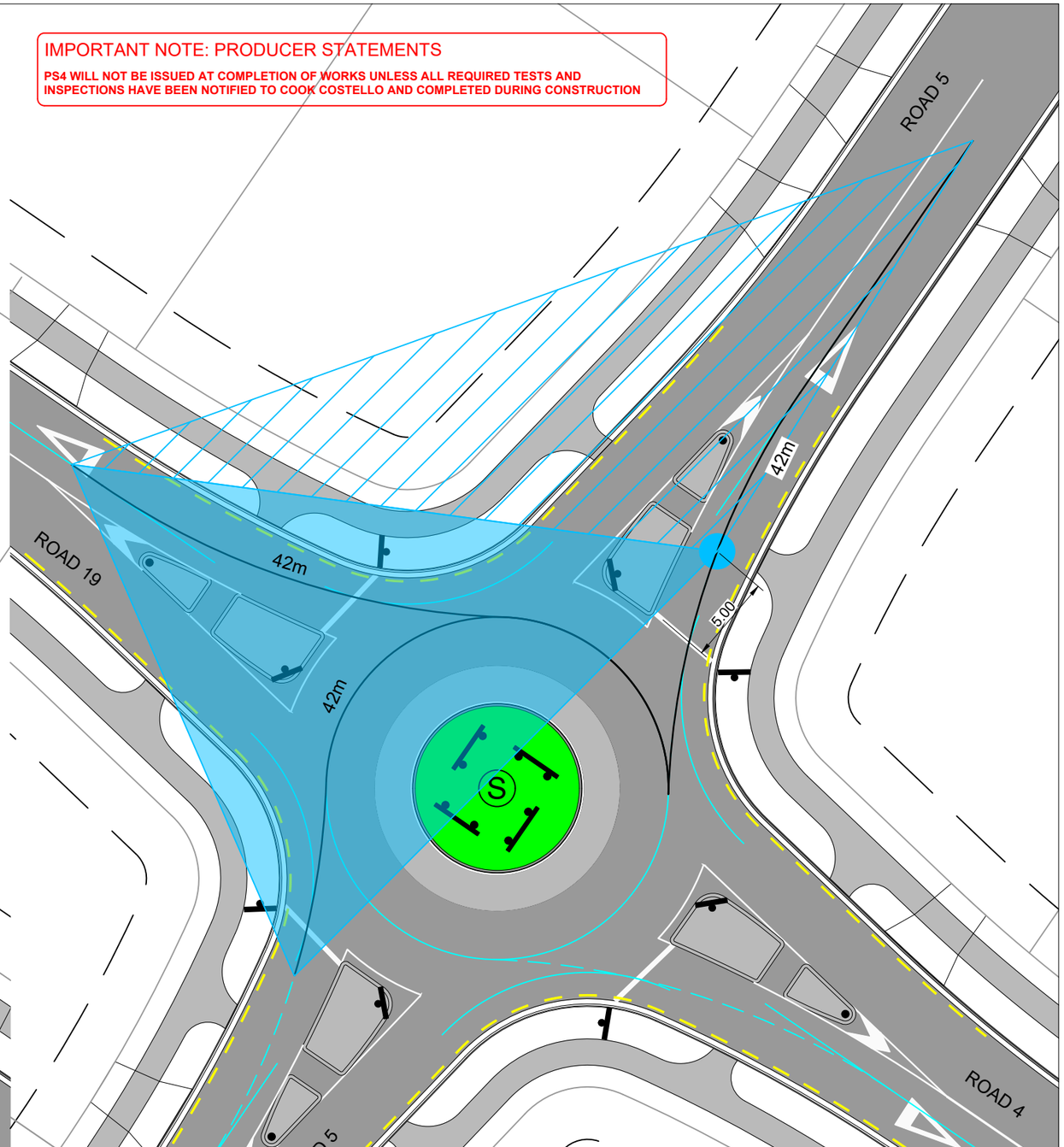
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020





LEGEND

CRITERION 1

CRITERION 2

CRITERION 3

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

SCALE 1:300

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C			
B	NEW IQP DETAILS	18-03-20	KH / PC
A	1ST ISSUE	29-11-19	KH / GM
	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

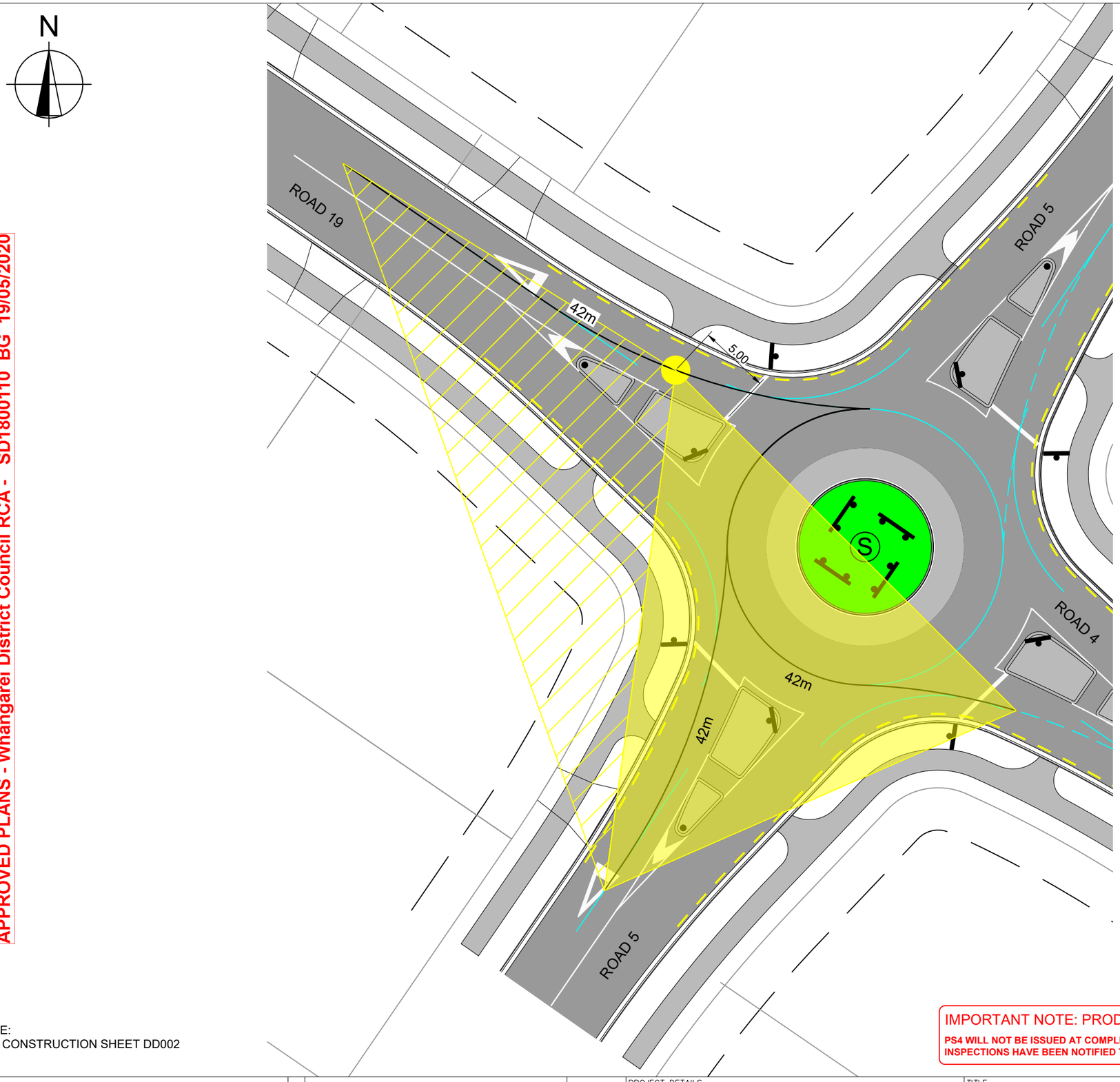
TITLE
VEHICLE SIGHTLINES FOR
ROUNDABOUT 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:300 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD593			REVISION B

SCALE 1:300

DATE PLOTTED: Wednesday, 18 March 2020 9:15:21 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



LEGEND

CRITERION 1

CRITERION 2

CRITERION 3

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:300

NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

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C			
B	NEW IQP DETAILS	18-03-20	KH PC
A	1ST ISSUE	29-11-19	KH GM
	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

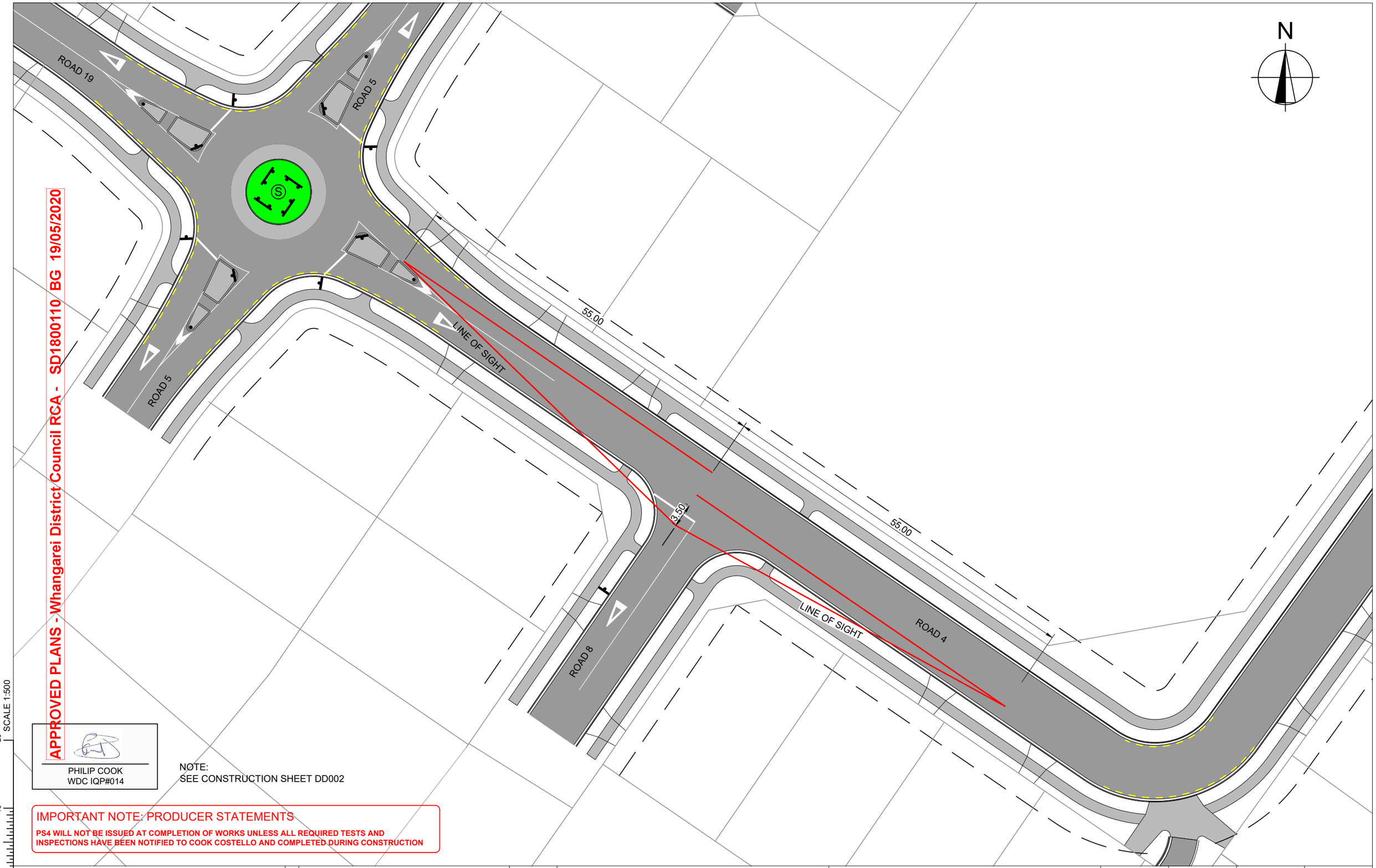
TITLE
VEHICLE SIGHTLINES FOR
ROUNDABOUT 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:300 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD594		REVISION B	

SCALE 1:300

DATE PLOTTED: Wednesday, 18 March 2020 9:15:21 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

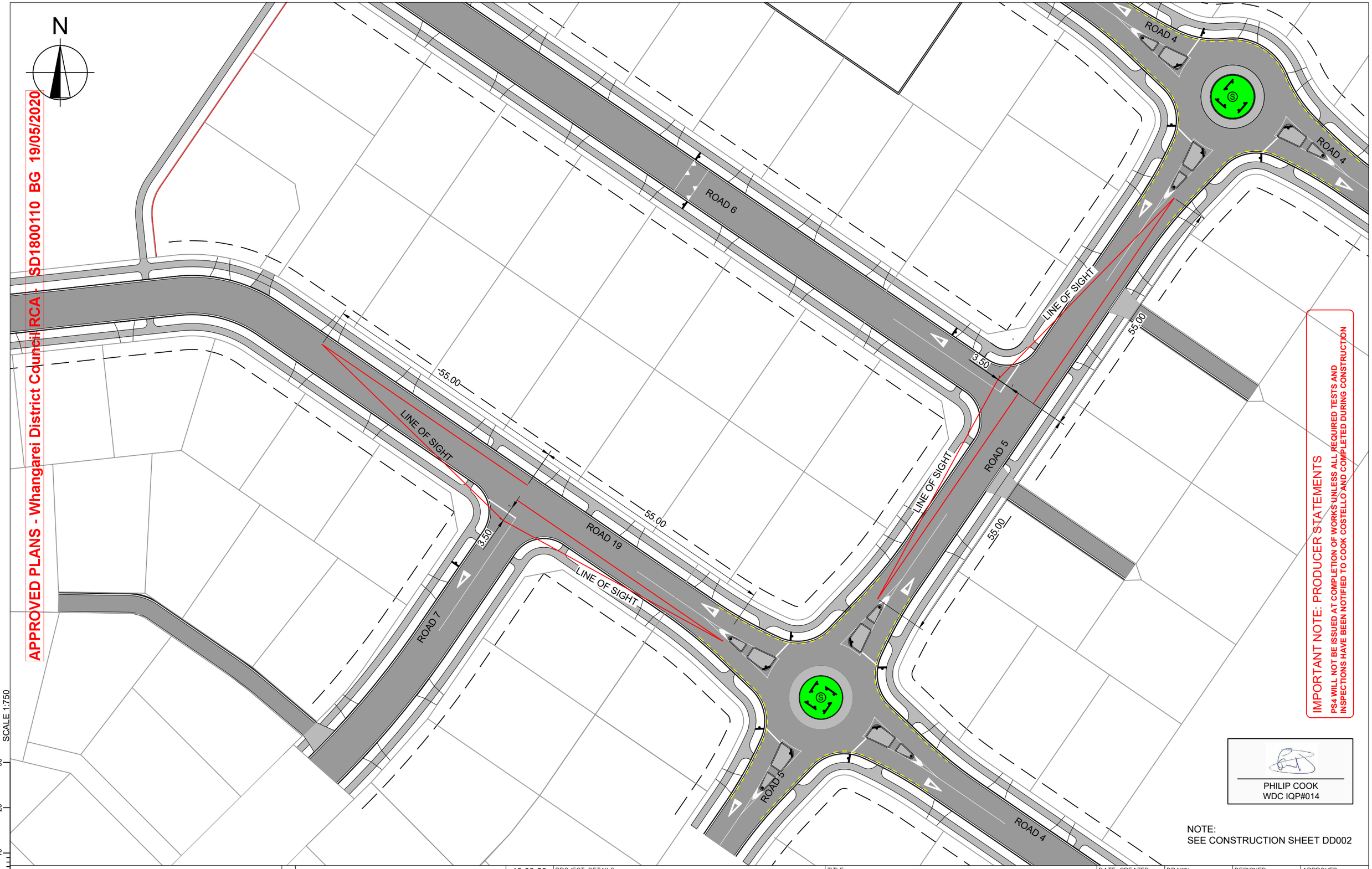
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHTLINES FOR
INTERSECTION OF ROADS 4 AND 8

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD595		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:22 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

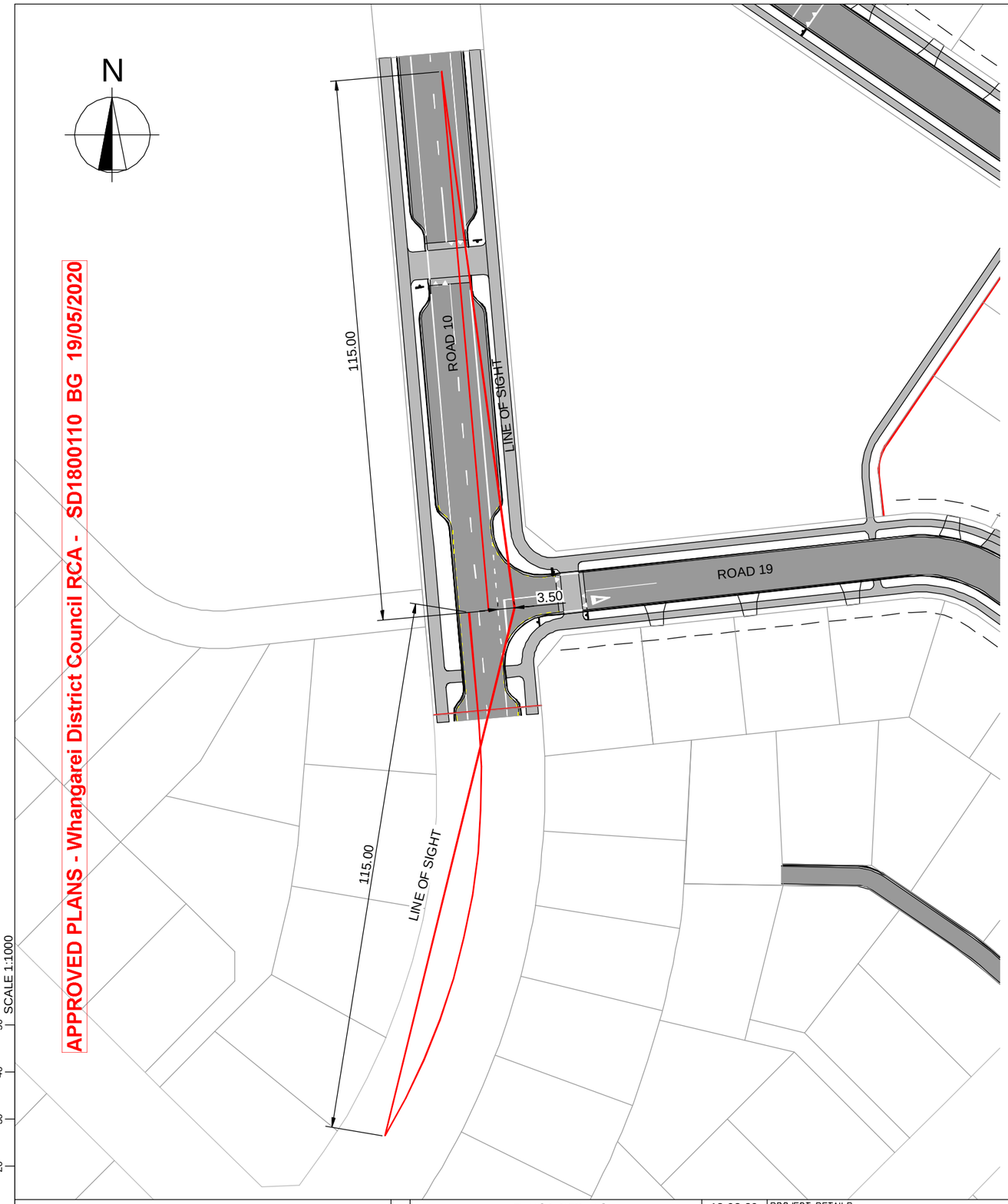
TITLE
VEHICLE SIGHTLINES FOR INTERSECTION OF ROADS 7 AND 19 & INTERSECTION OF ROADS 5 AND 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO	SCALE	STATUS	
14333-004	1:750 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD596		C	

SCALE 1:750

DATE PLOTTED: Wednesday, 18 March 2020 9:15:22 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD590-Road Sightlines.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS AND SIGHTLINES AT REVISED INTERSECTION	18-03-20	KH	PC
B	JOAL 707 REMOVED AND LOTS 252-254 BOUNDARIES CHANGED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHTLINES FOR
INTERSECTION OF ROADS 10 AND 19

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:1000 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD597		REVISION: C	

SCALE 1:1000

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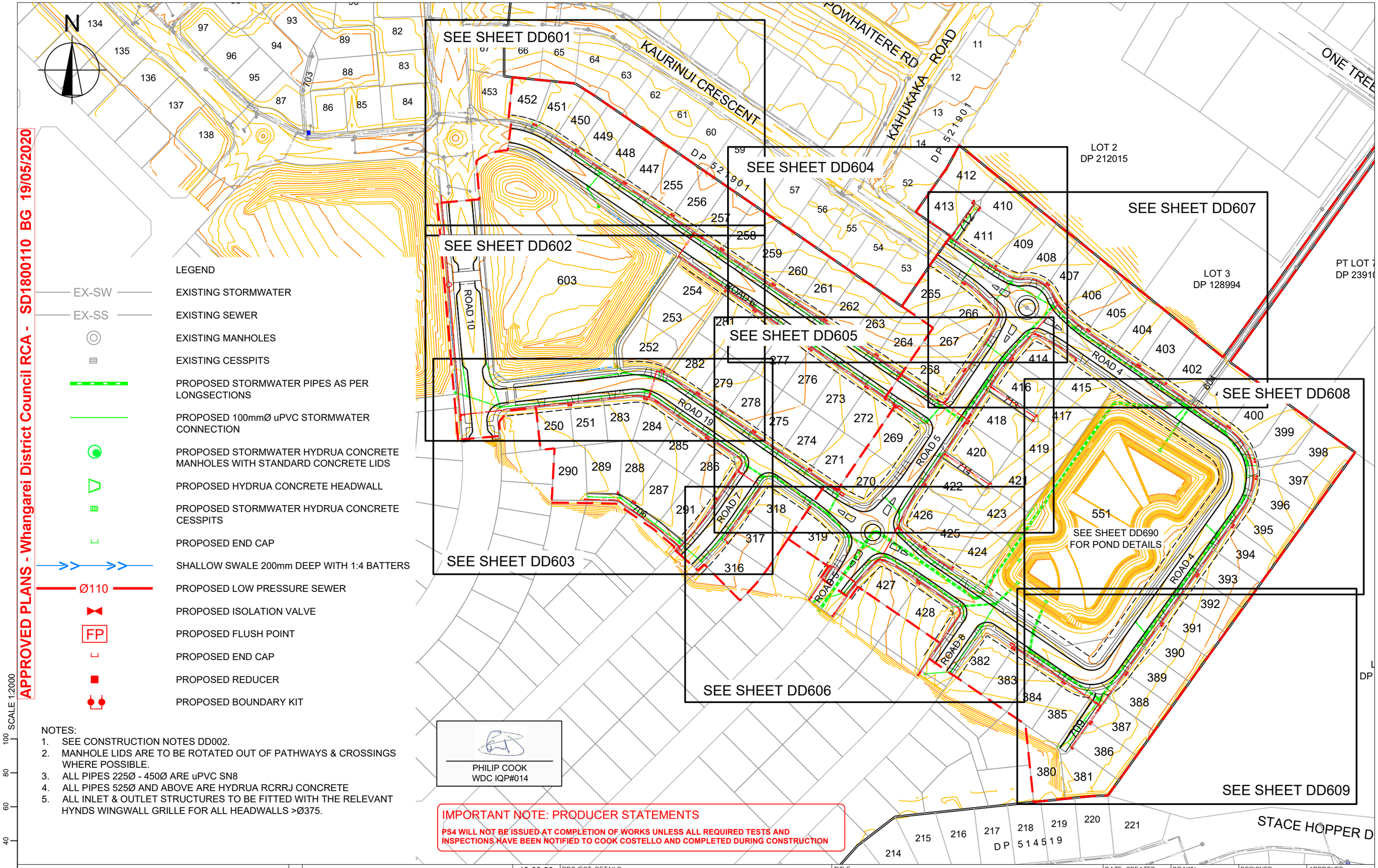
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:2000

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

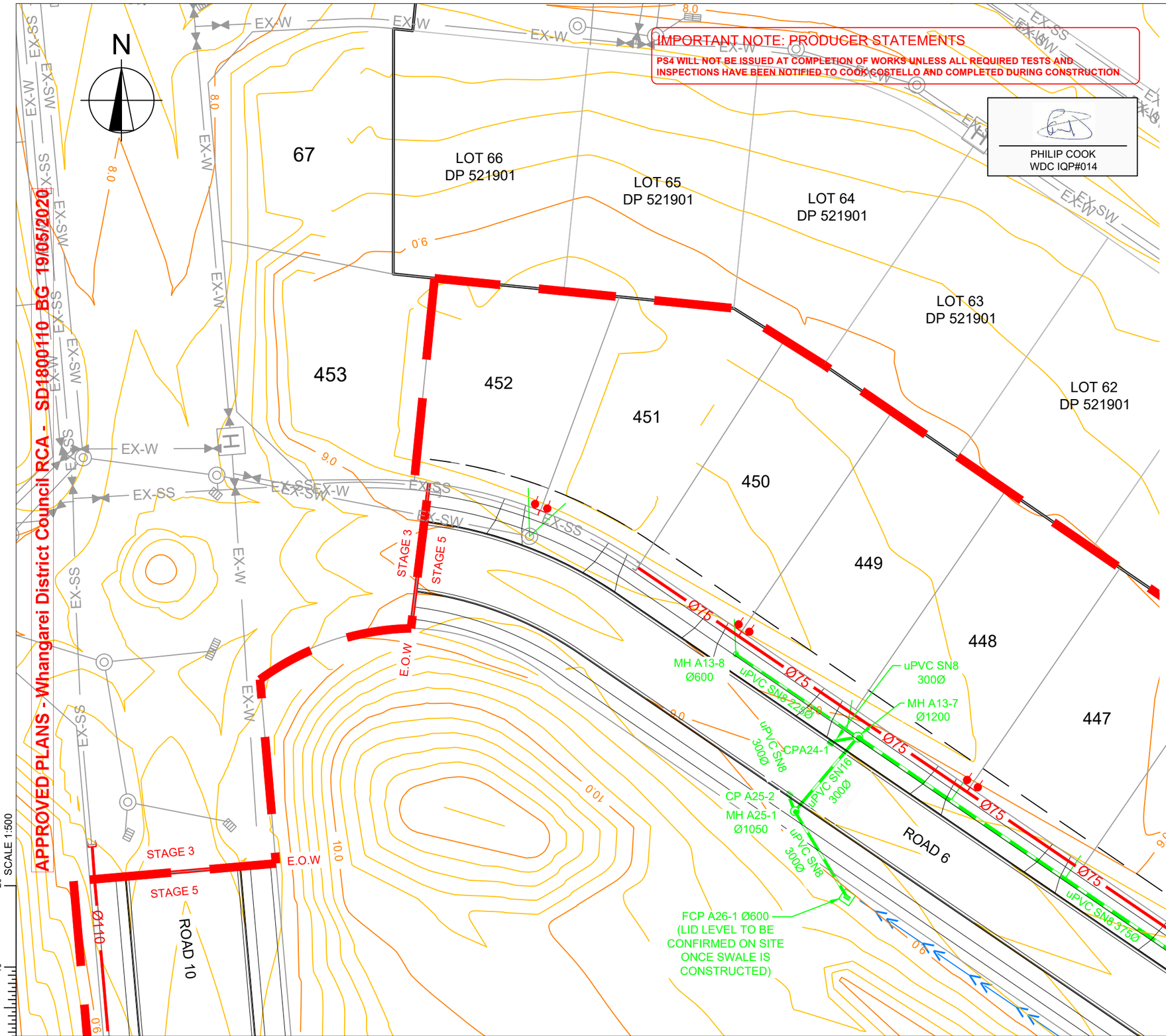
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
OVERVIEW

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:2000 @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD600		REVISION: C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:29 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD601		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:15:30 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

LEGEND

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EXISTING MANHOLES
- EXISTING CESSPITS
- PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
- PROPOSED 100mmØ uPVC STORMWATER CONNECTION
- PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
- PROPOSED HYDRUA CONCRETE HEADWALL
- PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
- PROPOSED END CAP
- SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
- Ø110 — PROPOSED LOW PRESSURE SEWER
- PROPOSED ISOLATION VALVE
- FP — PROPOSED FLUSH POINT
- PROPOSED END CAP
- PROPOSED REDUCER
- PROPOSED BOUNDARY KIT

N

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 - BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

ROAD 10
ROAD 19
ROAD 6

CP B12-9
CP B18-1
FCP B22-1 Ø600 (LID LEVEL TO BE CONFIRMED ON SITE ONCE SWALE IS CONSTRUCTED)
FCP B19-1 Ø600
DCP B23-1
DCP B17-1
MH B12-8 Ø1050
MH B12-7 Ø1050
MH B12-6 Ø1050
MH B01-11 Ø1200
MH B01-10 Ø1050
MH A13-6 Ø1050
MH A18-3 Ø1050
CP A23-1
CP A21-1
uPVC SN8 300Ø
uPVC SN8 375Ø
uPVC SN8 450Ø
uPVC SN16 300Ø
Ø110
Ø63
Ø50
Ø75
STAGE 5
STAGE 7
E.O.W

250 251 252 253 254 258 279 280 281 282 283 284 278

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

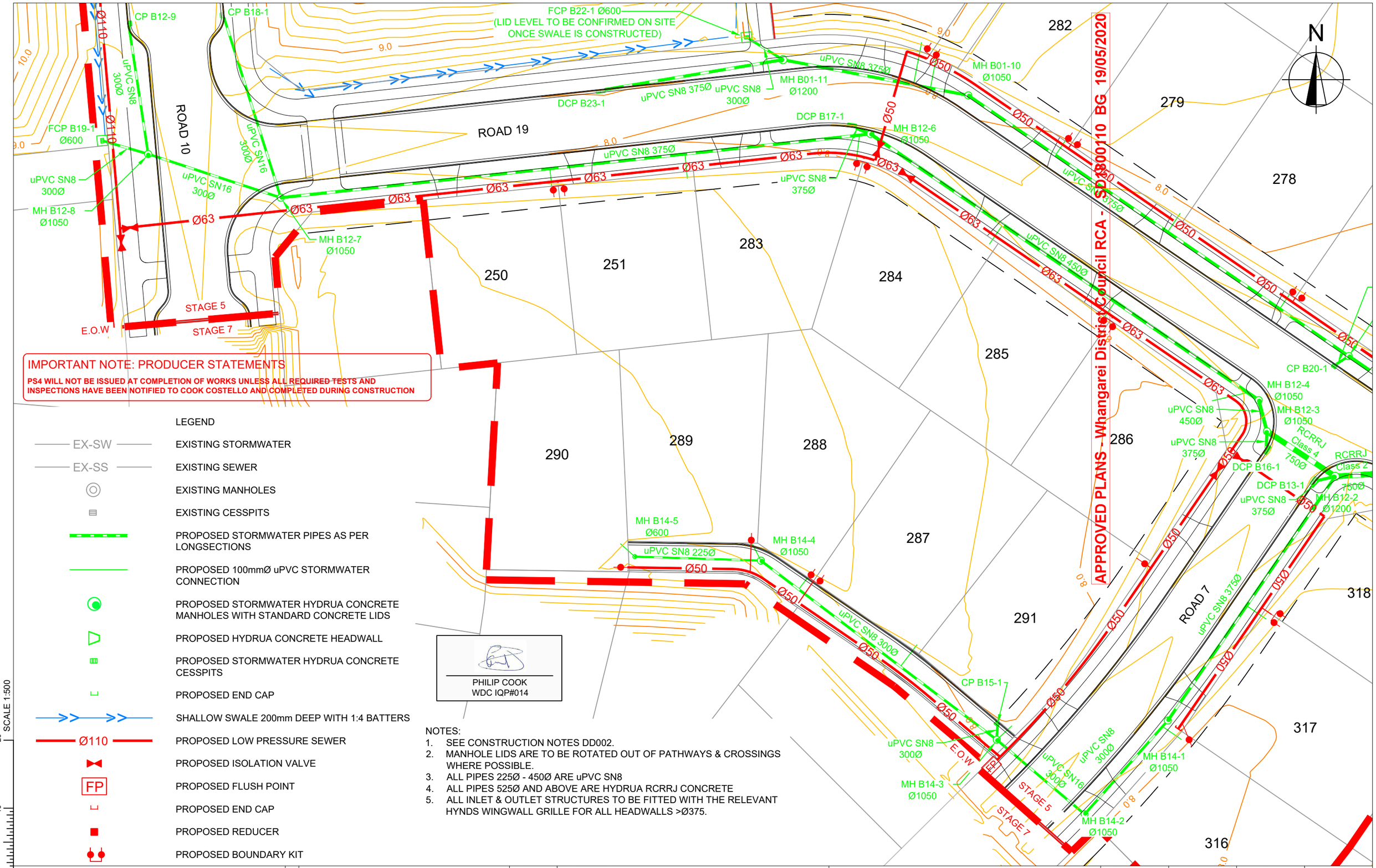
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD602		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:31 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
E	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
E	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT

PHILIP COOK
WDC IQP#014

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

SCALE 1:500 (0 10 20)

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD603		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:32 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

LEGEND

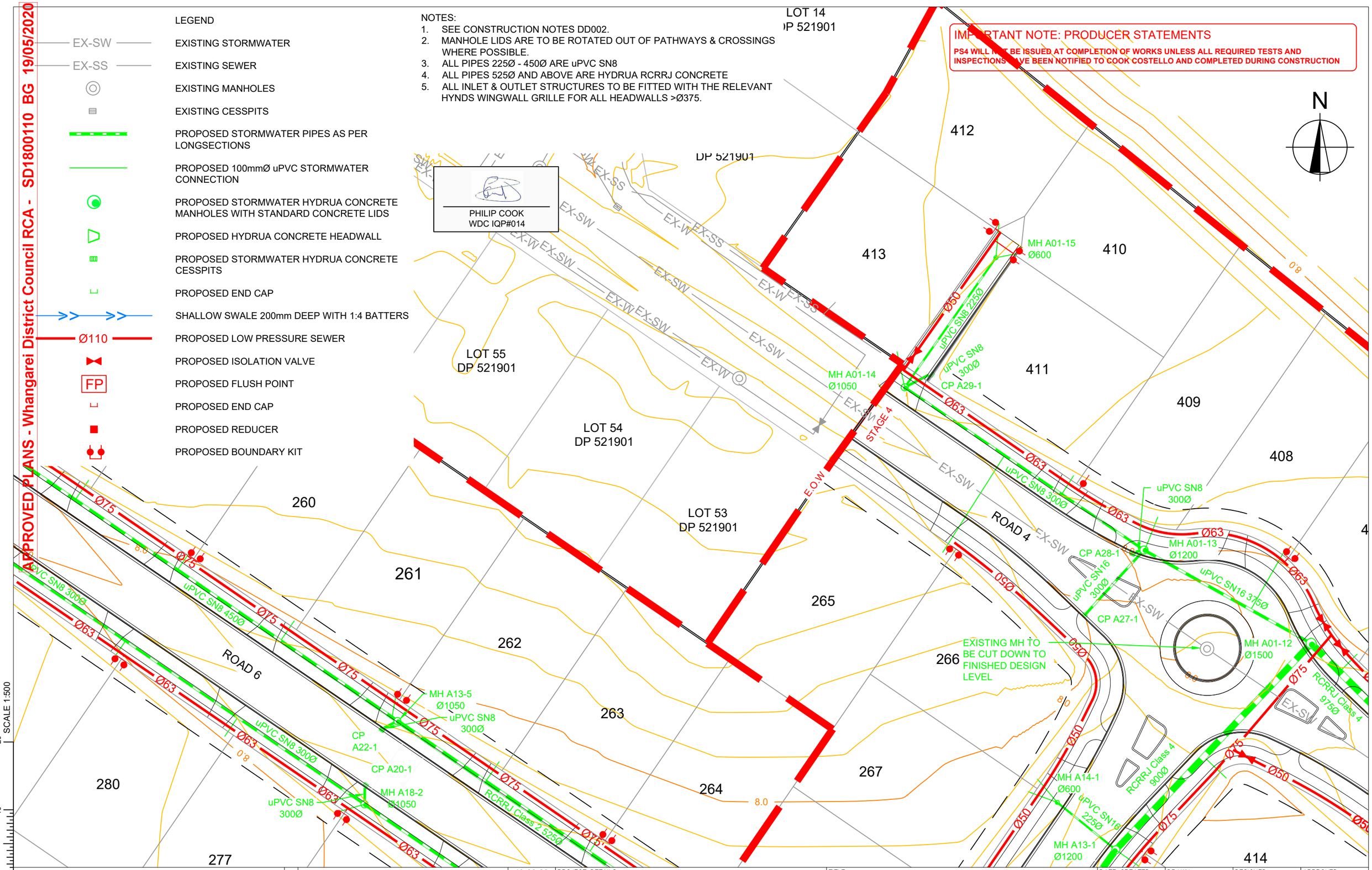
- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EXISTING MANHOLES
- EXISTING CESSPITS
- PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
- PROPOSED 100mmØ uPVC STORMWATER CONNECTION
- PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
- PROPOSED HYDRUA CONCRETE HEADWALL
- PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
- PROPOSED END CAP
- SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
- Ø110 — PROPOSED LOW PRESSURE SEWER
- PROPOSED ISOLATION VALVE
- FP — PROPOSED FLUSH POINT
- PROPOSED END CAP
- PROPOSED REDUCER
- PROPOSED BOUNDARY KIT

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



SCALE 1:500

REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

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PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

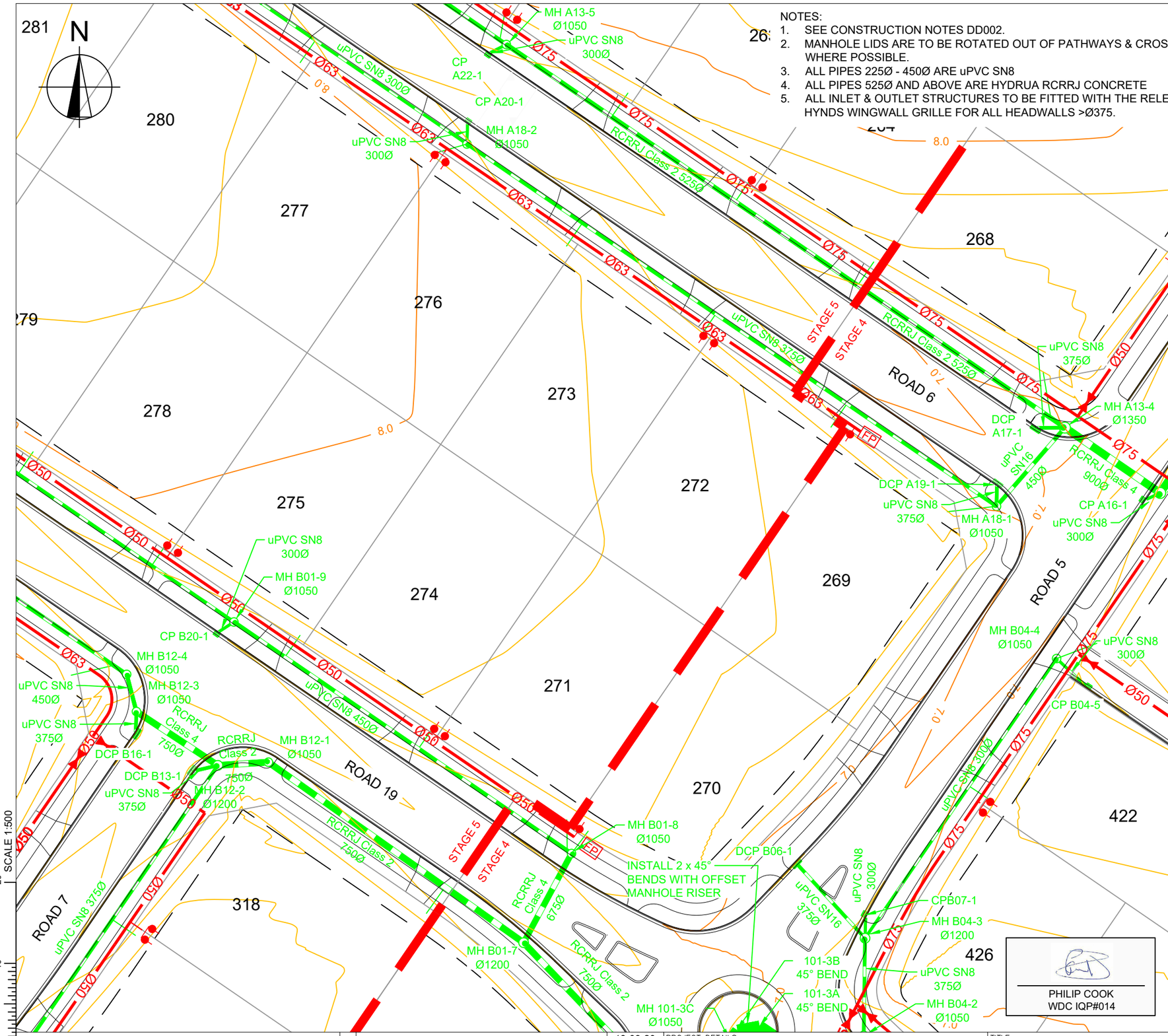
TITLE
STORMWATER PLAN
SHEET 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD604		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:33 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

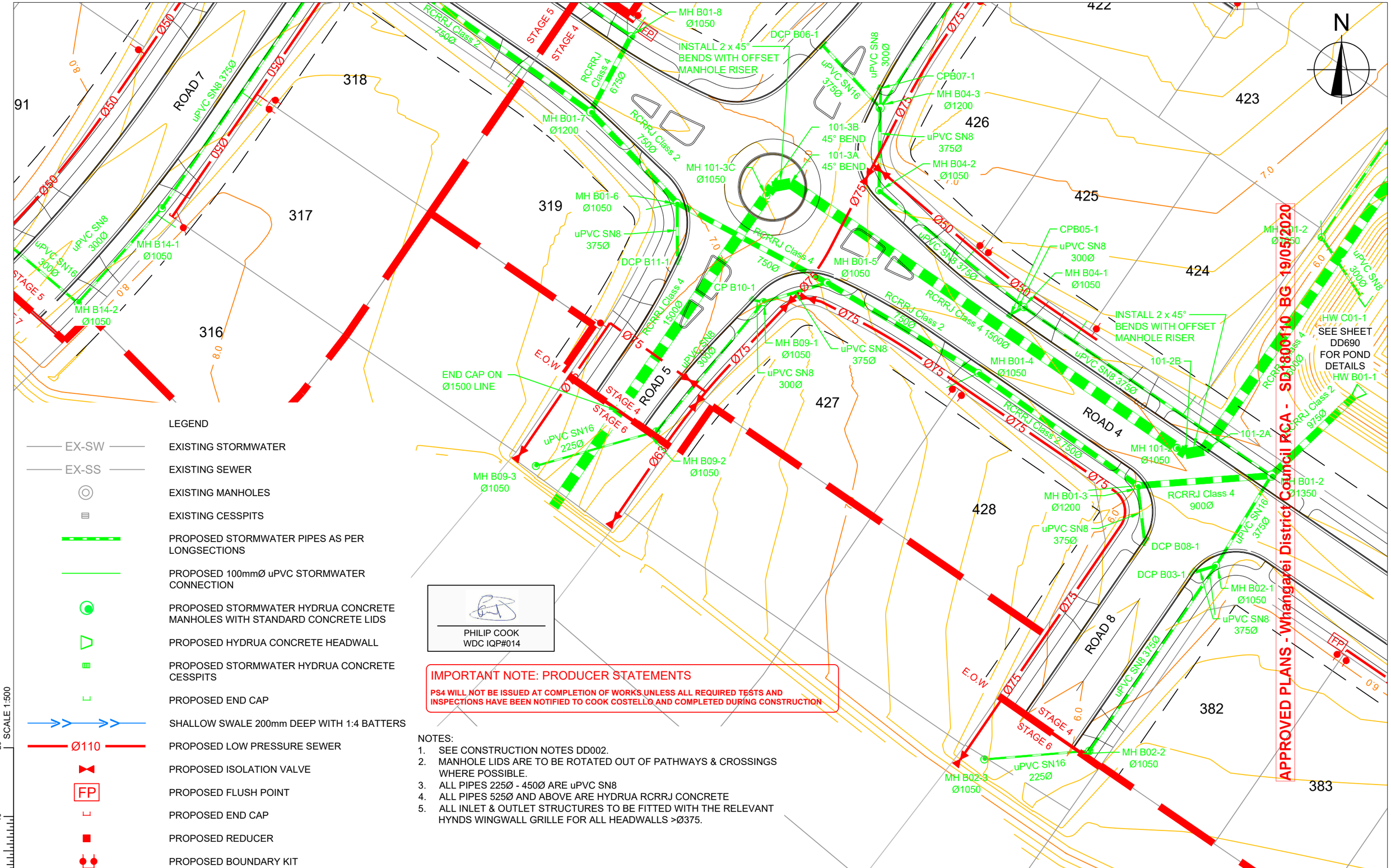
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD605		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:34 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD606		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:35 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

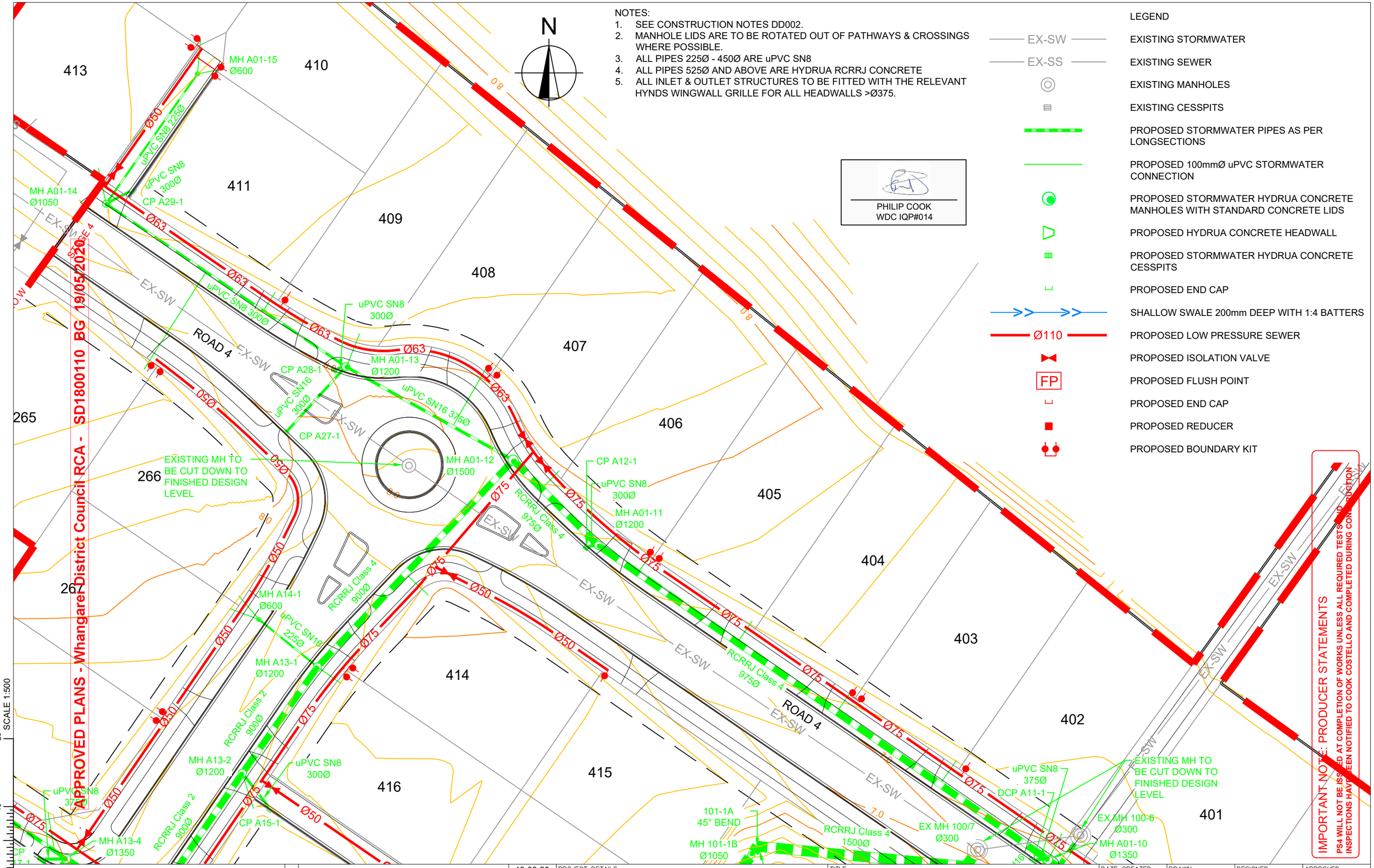
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

PHILIP COOK
WDC IQP#014

LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT



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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	AP	GM
A	1ST ISSUE	KH	GM

18-03-20	
28-02-20	
29-11-19	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

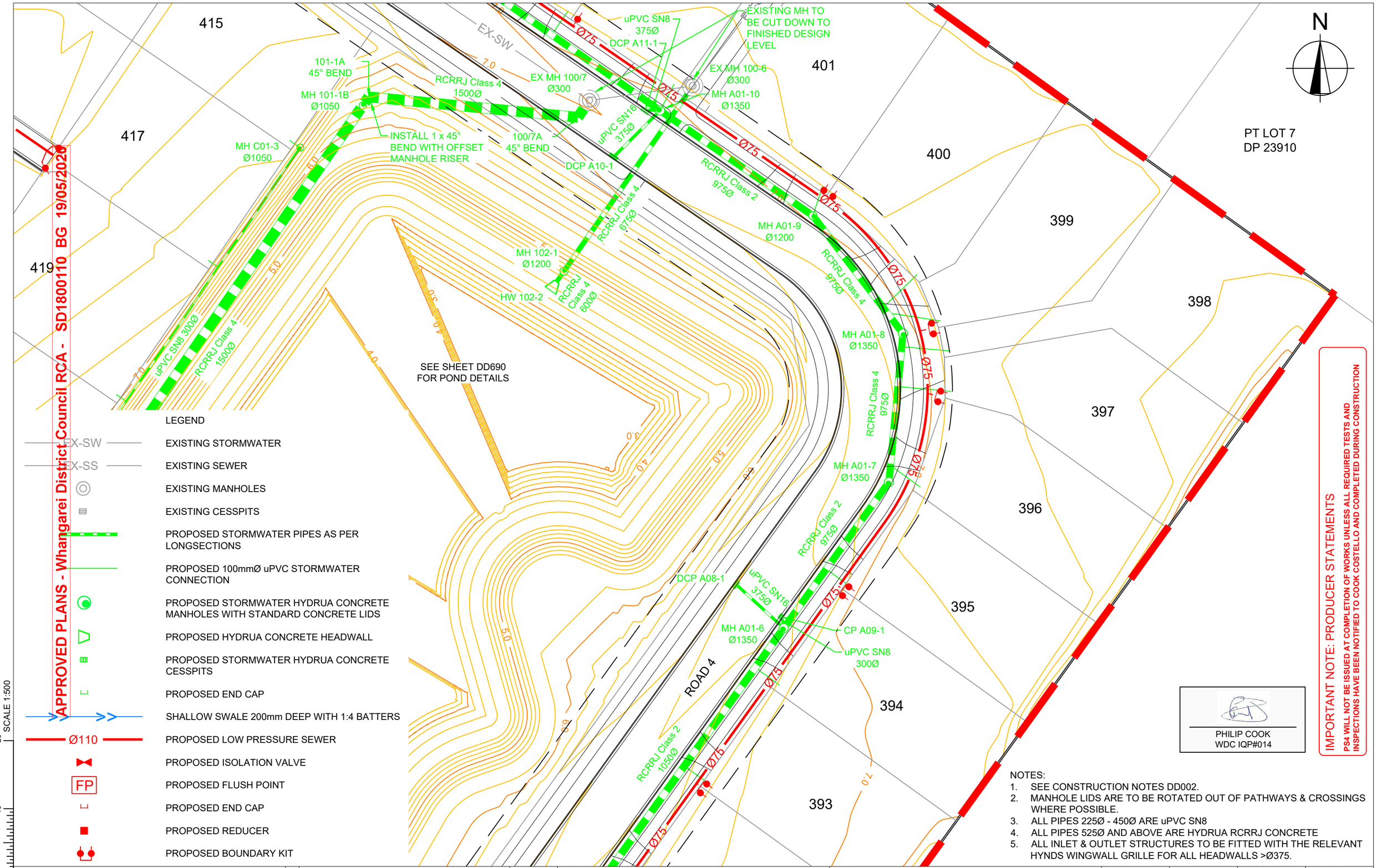
TITLE
STORMWATER PLAN
SHEET 7

DATE CREATED 29-11-2019	DRAWN K HANSARD	DESIGNED A PARKER	APPROVED G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD607		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:15:36 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

LEGEND

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EXISTING MANHOLES
- EXISTING CESSPITS
- PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
- PROPOSED 100mmØ uPVC STORMWATER CONNECTION
- PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
- PROPOSED HYDRUA CONCRETE HEADWALL
- PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
- PROPOSED END CAP
- SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
- Ø110 — PROPOSED LOW PRESSURE SEWER
- PROPOSED ISOLATION VALVE
- FP — PROPOSED FLUSH POINT
- PROPOSED END CAP
- PROPOSED REDUCER
- PROPOSED BOUNDARY KIT

SCALE 1:500 (0, 10, 20)

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

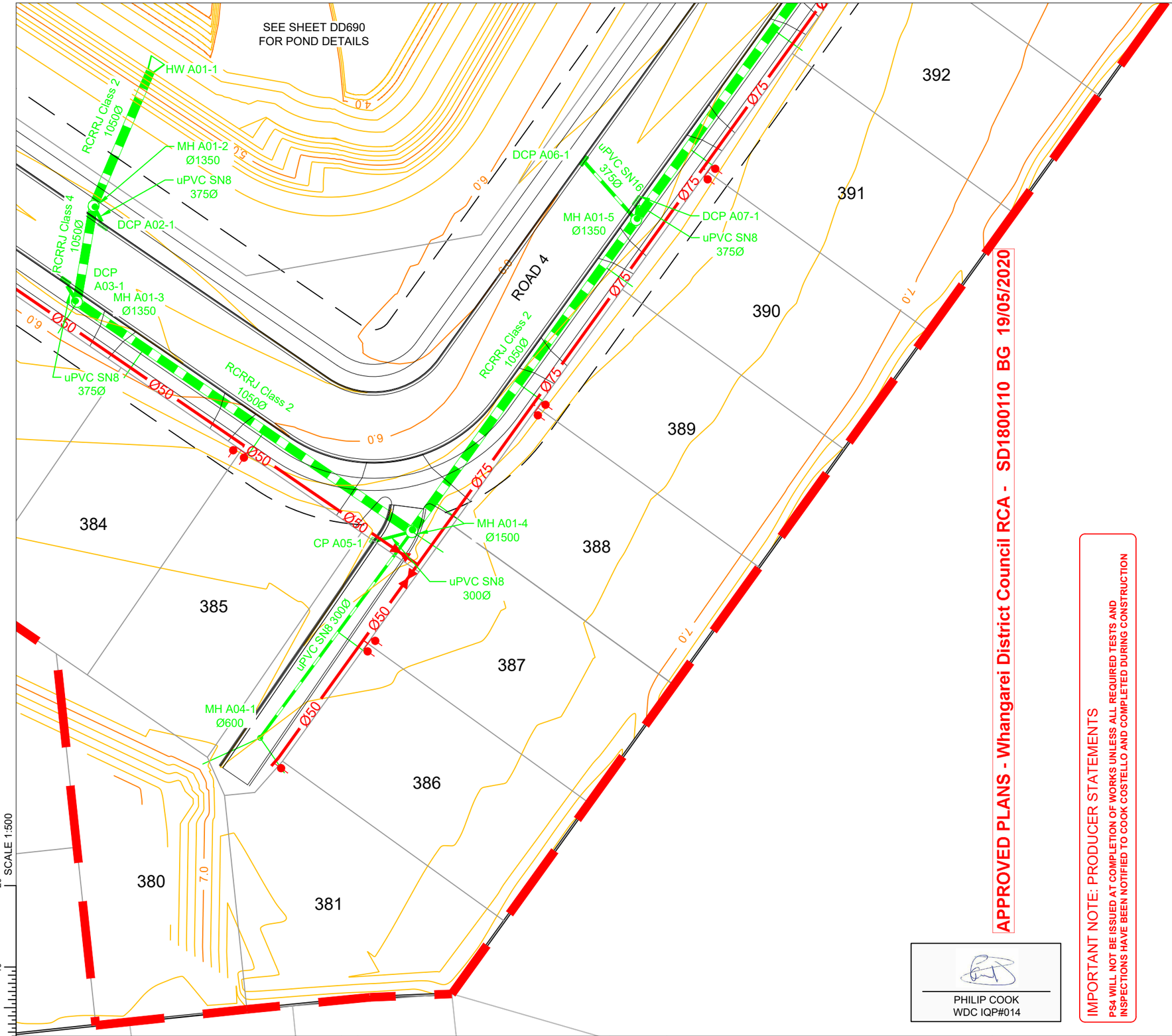
TITLE
STORMWATER PLAN
SHEET 8

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD608			REVISION C

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



N

APPROVED PLANS - Whangarei District Council RCA - SD180110 BG 19/05/2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LEGEND

EX-SW	EXISTING STORMWATER
EX-SS	EXISTING SEWER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDRUA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	PROPOSED END CAP
	SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
Ø110	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
FP	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
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5. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SW AMENDED TO ALLOW FOR EXTRA TREE PLANTING BEHIND KERBS, JOAL 707 REMOVED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

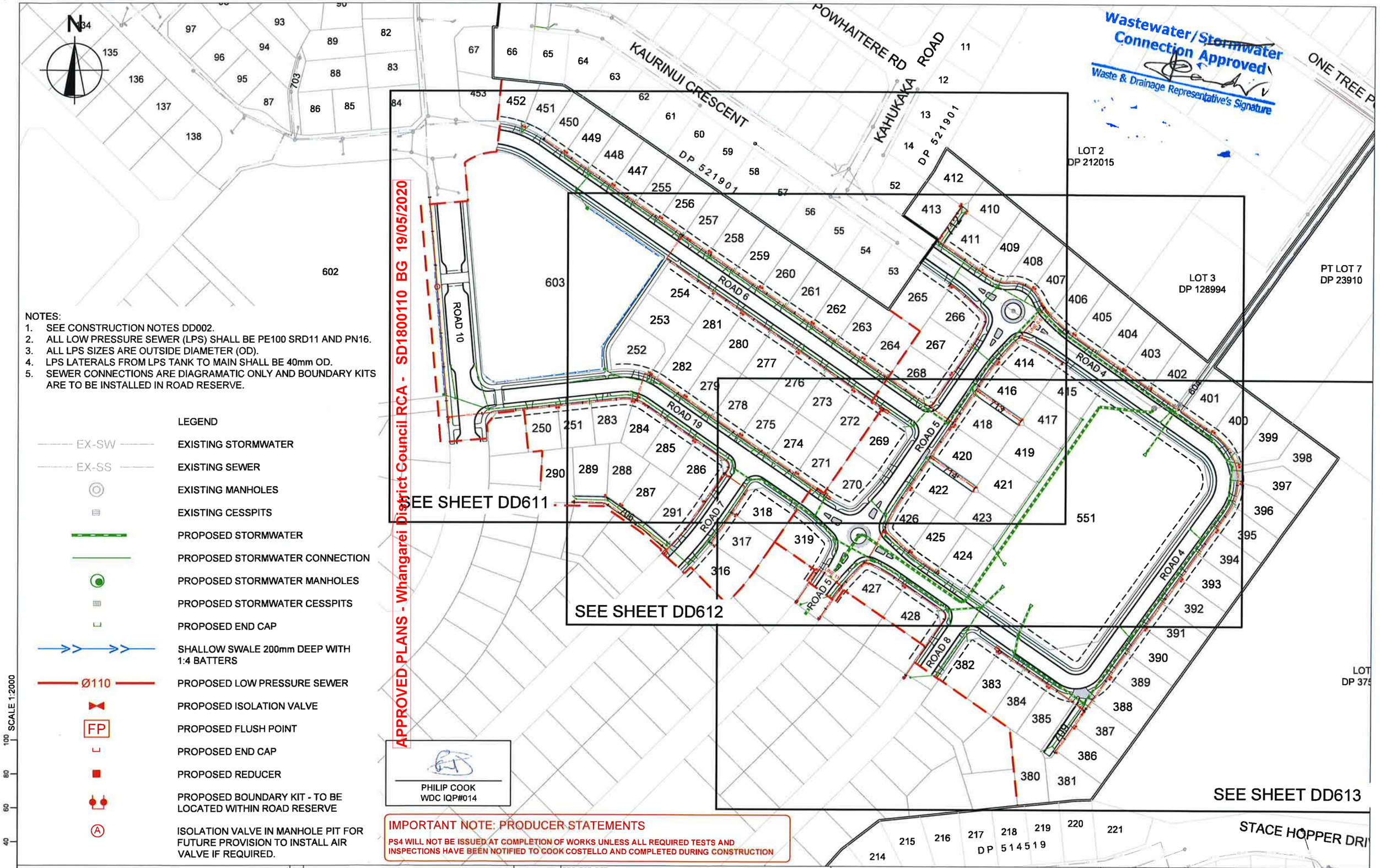
TITLE
STORMWATER PLAN
SHEET 9

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD609		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:15:37 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD600-SW Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
3. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
4. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
5. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.

LEGEND

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EXISTING MANHOLES
- EXISTING CESSPITS
- PROPOSED STORMWATER
- PROPOSED STORMWATER CONNECTION
- PROPOSED STORMWATER MANHOLES
- PROPOSED STORMWATER CESSPITS
- PROPOSED END CAP
- SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
- Ø110 — PROPOSED LOW PRESSURE SEWER
- PROPOSED ISOLATION VALVE
- FP — PROPOSED FLUSH POINT
- PROPOSED END CAP
- PROPOSED REDUCER
- PROPOSED BOUNDARY KIT - TO BE LOCATED WITHIN ROAD RESERVE
- A — ISOLATION VALVE IN MANHOLE PIT FOR FUTURE PROVISION TO INSTALL AIR VALVE IF REQUIRED.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:2000

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	LOTS 252-254 CHANGED, LINE 36.1 AMENDED, VALVE LOCATIONS AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER PLAN
OVERVIEW

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD610		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:41 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD610-SS Plan.dwg

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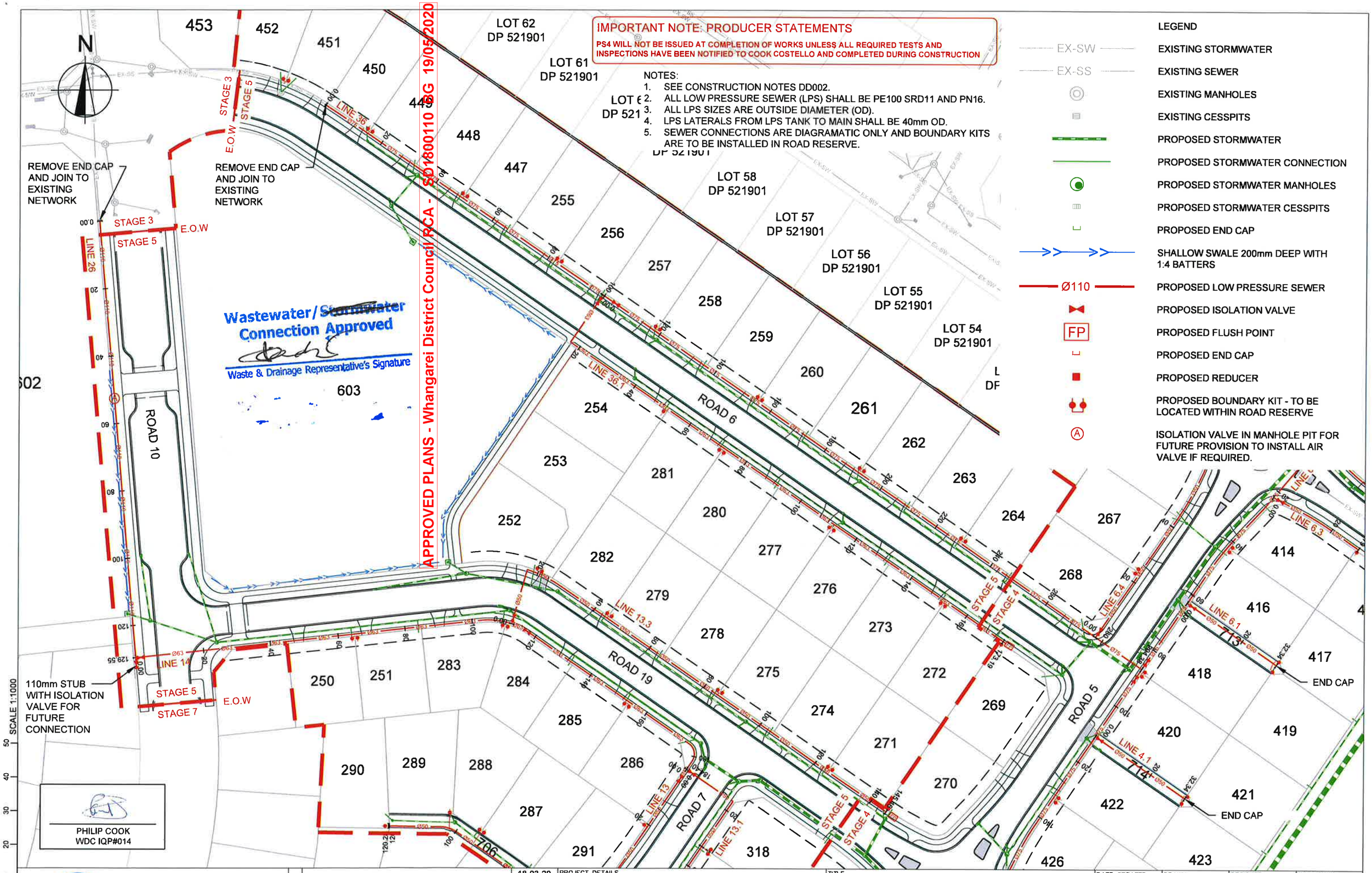

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
3. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
4. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
5. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.

LEGEND

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EXISTING MANHOLES
- EXISTING CESSPITS
- PROPOSED STORMWATER
- PROPOSED STORMWATER CONNECTION
- PROPOSED STORMWATER MANHOLES
- PROPOSED STORMWATER CESSPITS
- PROPOSED END CAP
- SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
- Ø110 — PROPOSED LOW PRESSURE SEWER
- PROPOSED ISOLATION VALVE
- FP — PROPOSED FLUSH POINT
- PROPOSED END CAP
- PROPOSED REDUCER
- PROPOSED BOUNDARY KIT - TO BE LOCATED WITHIN ROAD RESERVE
- Ⓐ — ISOLATION VALVE IN MANHOLE PIT FOR FUTURE PROVISION TO INSTALL AIR VALVE IF REQUIRED.

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	LOTS 252-254 CHANGED, LINE 36.1 AMENDED, VALVE LOCATIONS AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER PLAN
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD611		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:41 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD610-SS Plan.dwg

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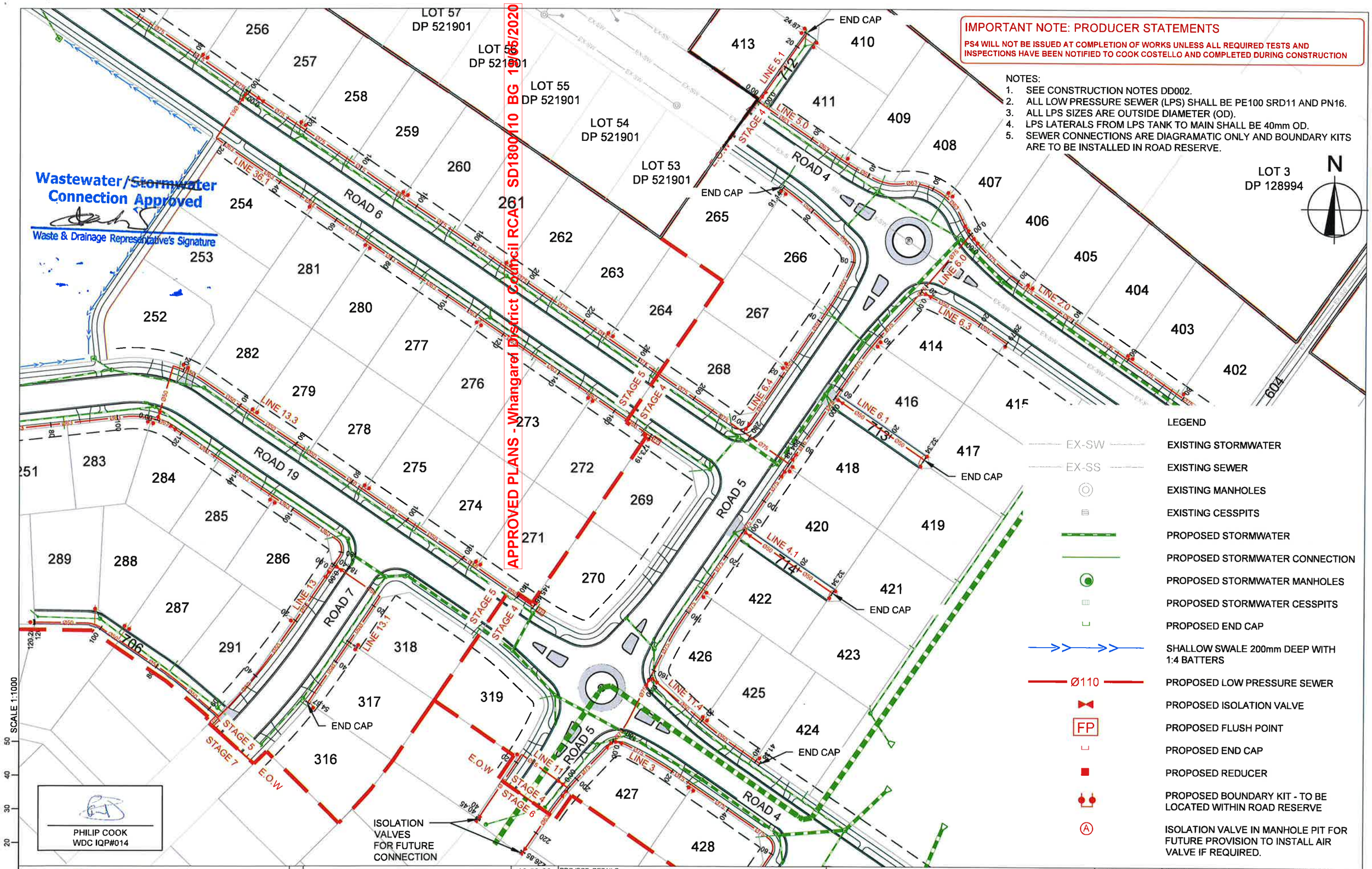

Wastewater/Stormwater Connection Approved

Waste & Drainage Representative's Signature

APPROVED PLANS - Whangarei District Council RCA SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
3. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
4. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
5. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.

LEGEND

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EXISTING MANHOLES
- EXISTING CESSPITS
- PROPOSED STORMWATER
- PROPOSED STORMWATER CONNECTION
- PROPOSED STORMWATER MANHOLES
- PROPOSED STORMWATER CESSPITS
- PROPOSED END CAP
- SHALLOW SWALE 200mm DEEP WITH 1:4 BATTERS
- Ø110 — PROPOSED LOW PRESSURE SEWER
- PROPOSED ISOLATION VALVE
- FP — PROPOSED FLUSH POINT
- PROPOSED END CAP
- PROPOSED REDUCER
- PROPOSED BOUNDARY KIT - TO BE LOCATED WITHIN ROAD RESERVE
- Ⓐ — ISOLATION VALVE IN MANHOLE PIT FOR FUTURE PROVISION TO INSTALL AIR VALVE IF REQUIRED.

PHILIP COOK
WDC IQP#014

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	LOTS 252-254 CHANGED, LINE 36.1 AMENDED, VALVE LOCATIONS AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER PLAN
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD612		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:42 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD610-SS Plan.dwg

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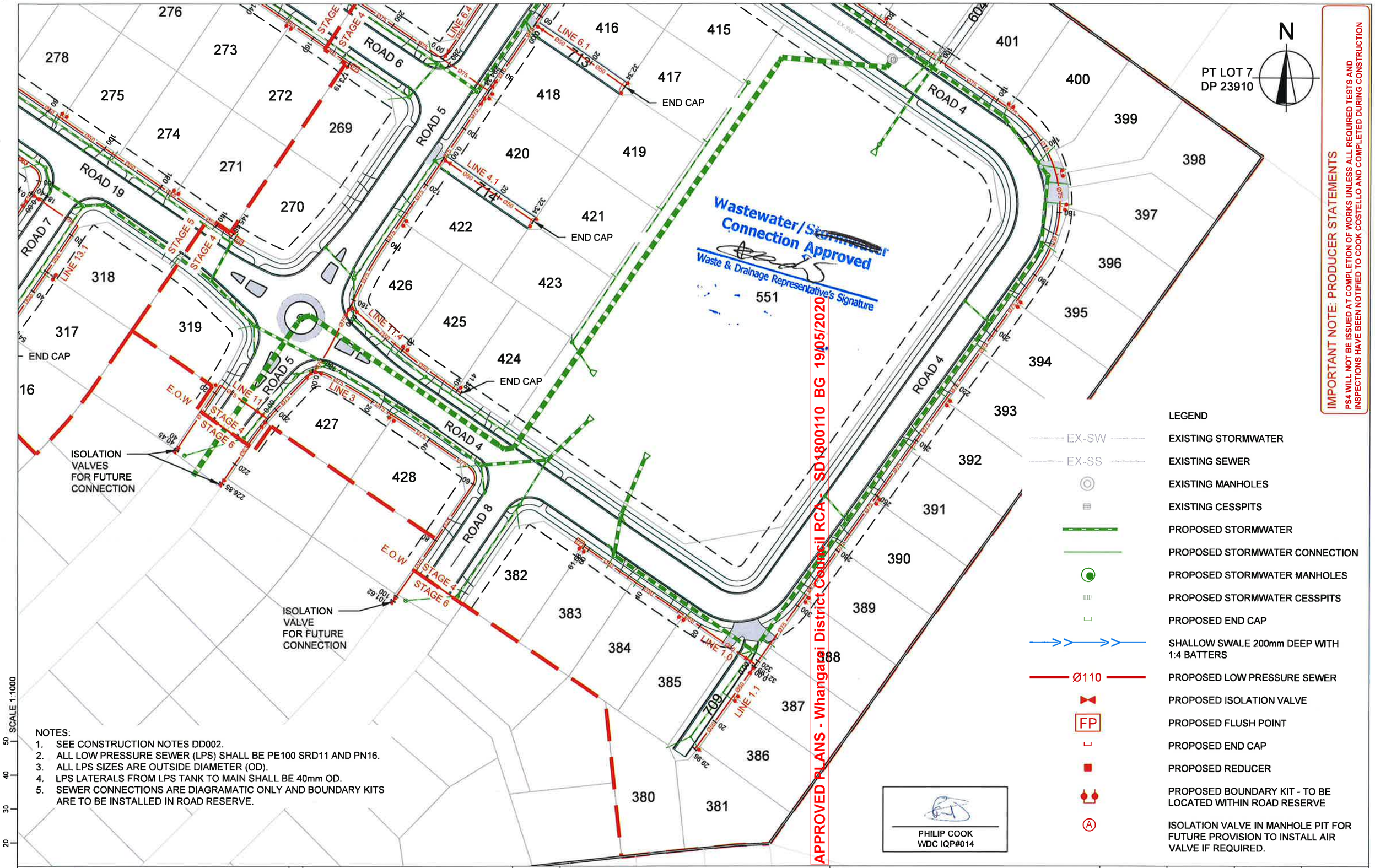

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
3. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
4. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
5. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	LOTS 252-254 CHANGED, LINE 36.1 AMENDED, VALVE LOCATIONS AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER PLAN
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD613		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD610-SS Plan.dwg

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NOTE:
SEE CONSTRUCTION SHEET DD002

N

SEE SHEET DD622

SEE SHEET DD621

SEE SHEET DD623

KAURINUI CRESCENT

FOOTPATH 604

ROAD 4

ROAD 5

ROAD 6

ROAD 7

ROAD 8

ROAD 19

JOAL 706

JOAL 709

JOAL 712

JOAL 713

JOAL 714

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

SCALE 1:2000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	CATCHMENT BDYS CHANGED DUE TO NEW STORMWATER LAYOUT	28-02-20 KH	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
OVERVIEW PLAN

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD620			REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:15:48 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD620-SW Catch.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

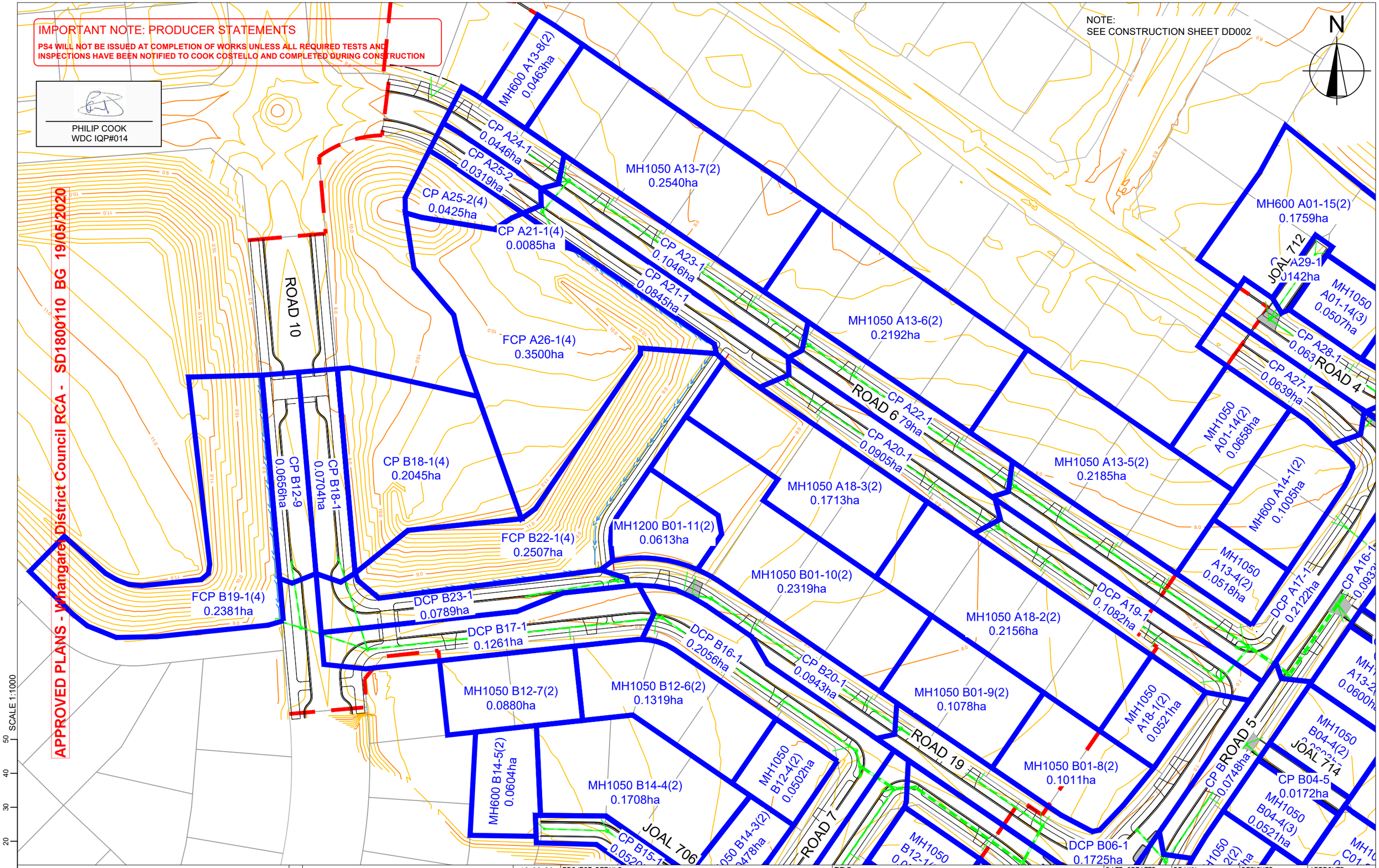
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

NOTE:
SEE CONSTRUCTION SHEET DD002

N



C	NEW IQP DETAILS	18-03-20	KH / PC
B	CATCHMENT BDYS CHANGED DUE TO NEW STORMWATER LAYOUT	28-02-20	KH / GM
A	1ST ISSUE	29-11-19	KH / GM
REV.	REVISION DETAILS	DRAWN	APP.

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PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

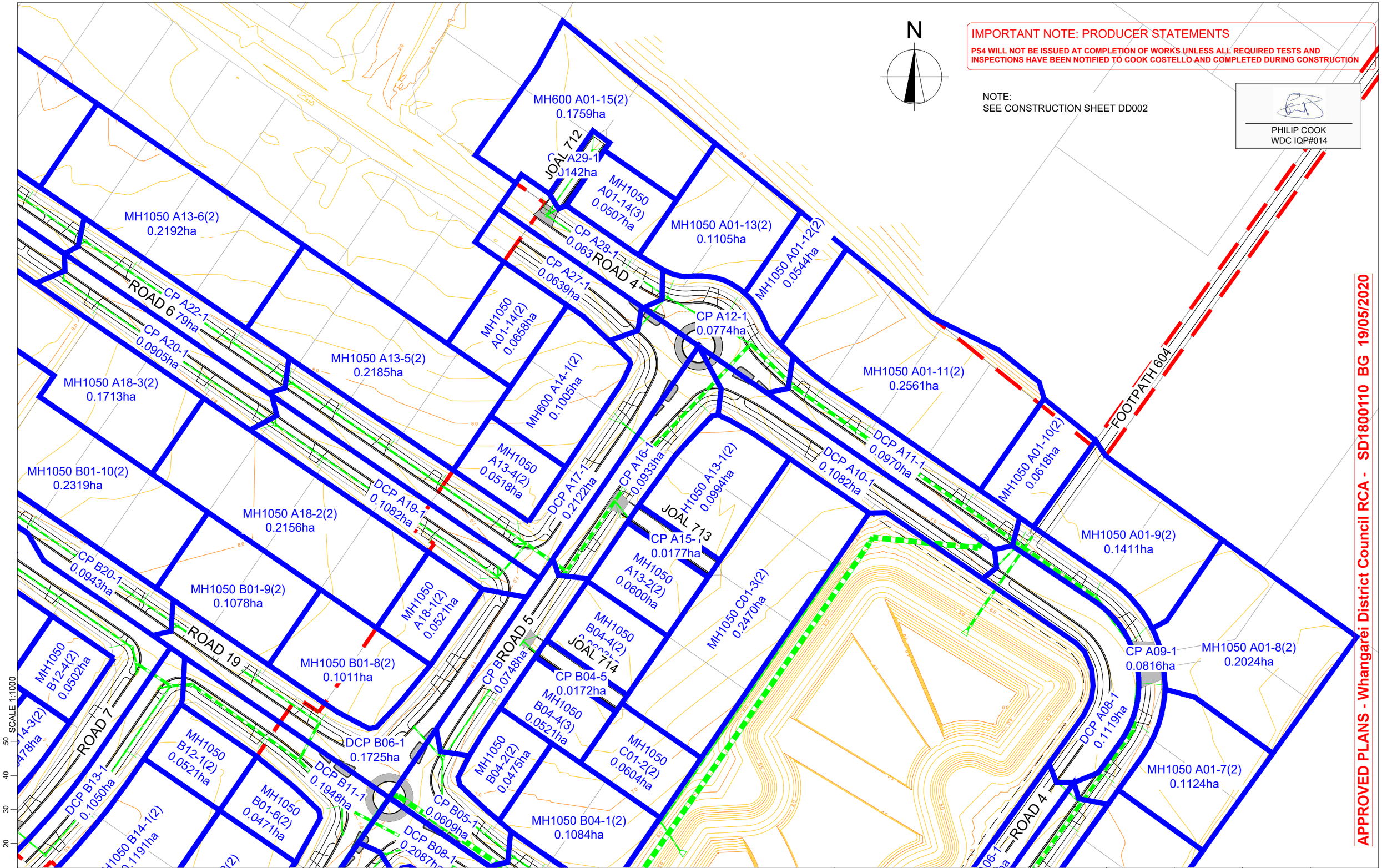
TITLE
STORMWATER CATCHMENT PLAN
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD621			REVISION C

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD620-SW Catch.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	CATCHMENT BDYS CHANGED DUE TO NEW STORMWATER LAYOUT	28-02-20 KH	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD622		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:15:48 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD620-SW Catch.dwg

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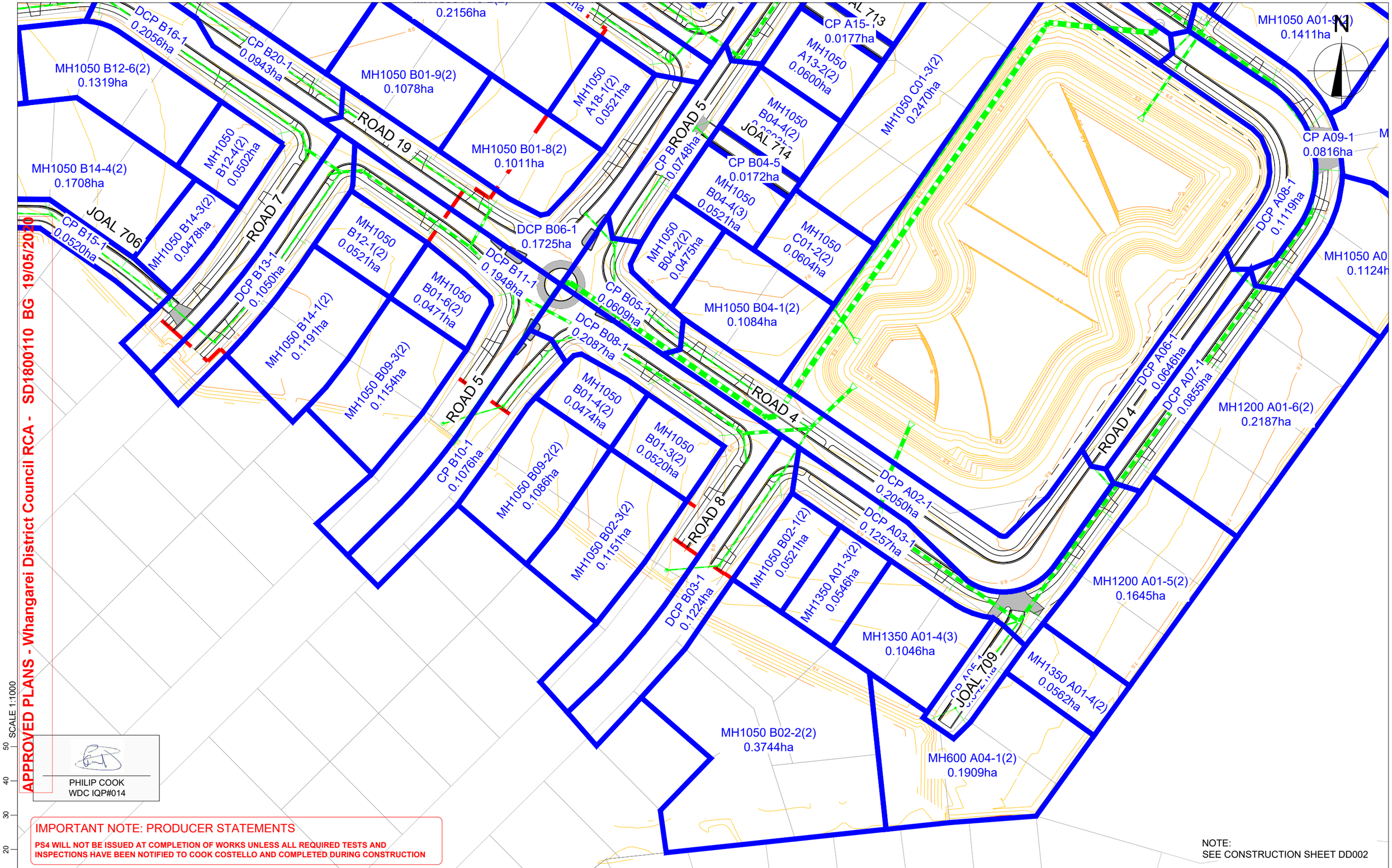

APPROVED PLANS - Whangarei District Council RCA - SD180110 BG 19/05/2020

SCALE 1:1000

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	CATCHMENT BDYS CHANGED DUE TO NEW STORMWATER LAYOUT	28-02-20 KH	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD623		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:15:49 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD620-SW Catch.dwg

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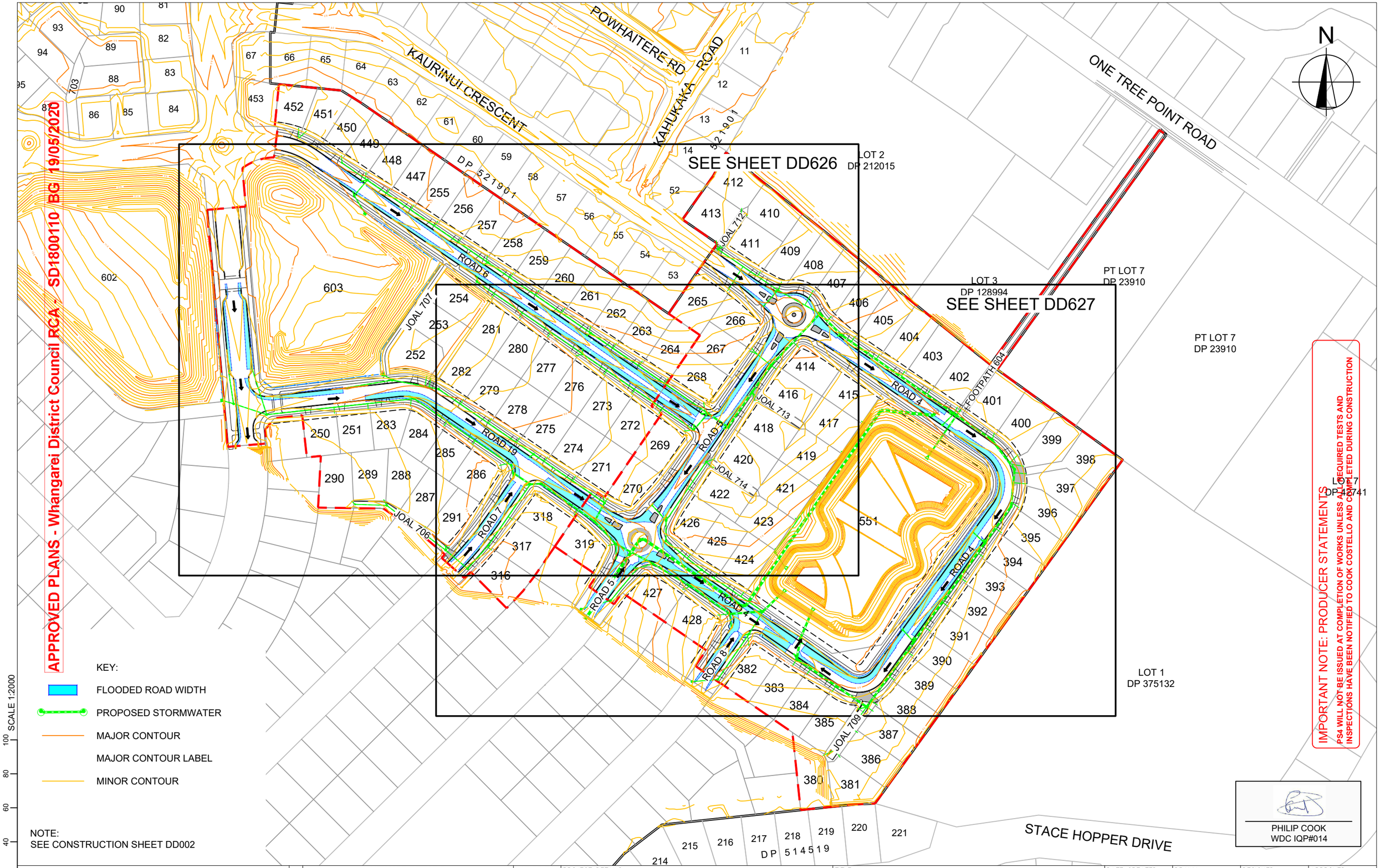
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



KEY:

- FLOODED ROAD WIDTH
- PROPOSED STORMWATER
- MAJOR CONTOUR
- MAJOR CONTOUR LABEL
- MINOR CONTOUR

NOTE:
SEE CONSTRUCTION SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS
PSA WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

SCALE 1:2000

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS AND NEW SW FLOOD WIDTHS	18-03-20	KH	PC
B	SW AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

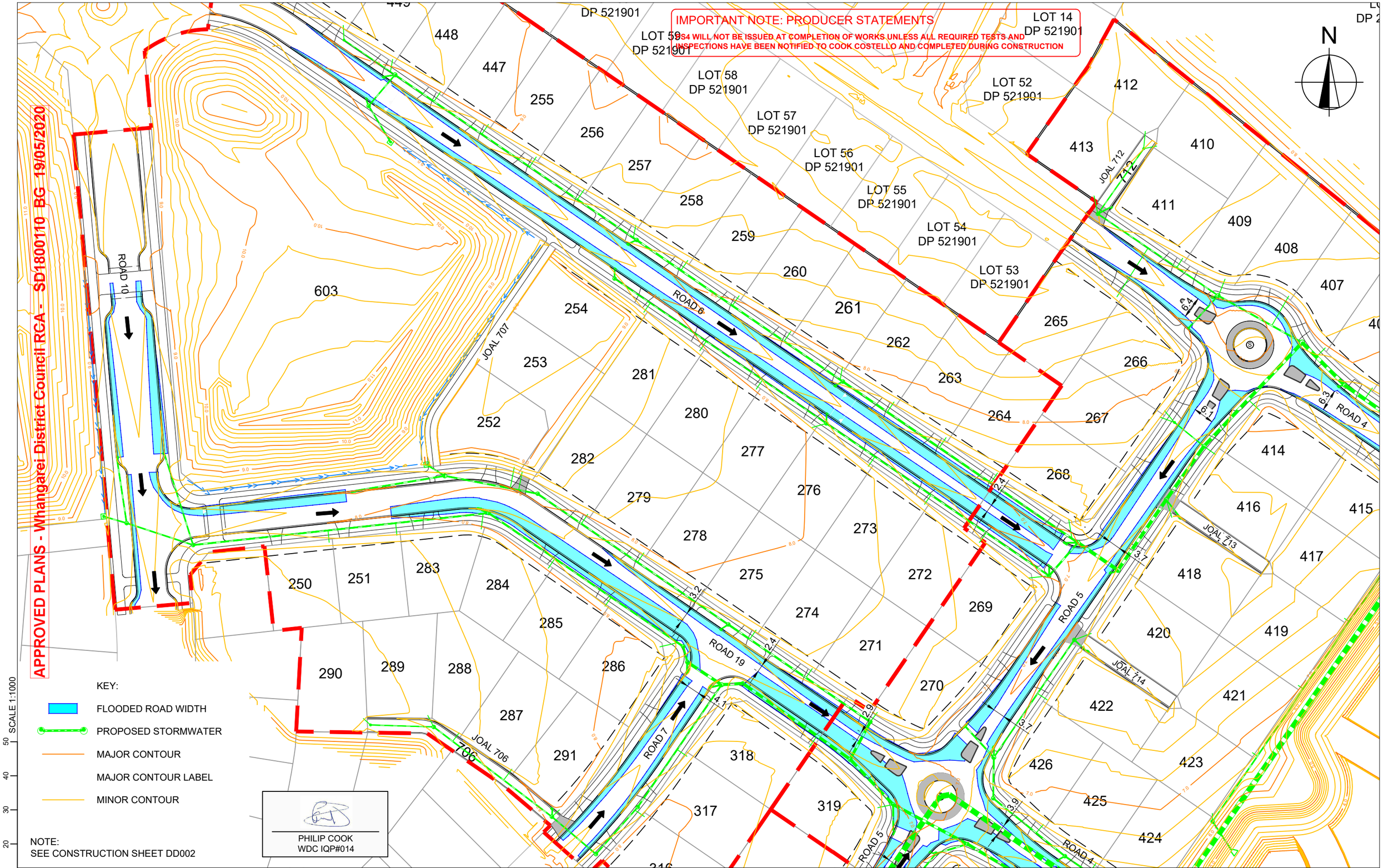
TITLE
OVERLAND FLOW PATH PLAN
OVERVIEW PLAN
FLOODED ROAD WIDTHS
FOR 1% AEP (+20%) STORM

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD625			REVISION C

SCALE 1:2000

DATE PLOTTED: Wednesday, 18 March 2020 9:15:55 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD625-SW OLFP.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS AND NEW SW FLOOD WIDTHS	18-03-20	KH	PC
B	SW AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-2019	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
OVERLAND FLOW PATH PLAN
SHEET 1
FLOODED ROAD WIDTHS
FOR 1% AEP (+20%) STORM

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD626		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:56 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD625-SW OLFP.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

KEY:

- FLOODED ROAD WIDTH
- PROPOSED STORMWATER
- MAJOR CONTOUR
- MAJOR CONTOUR LABEL
- MINOR CONTOUR

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RGA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS AND NEW SW FLOOD WIDTHS	18-03-20	KH	PC
B	SW AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
OVERLAND FLOW PATH PLAN
SHEET 2
FLOODED ROAD WIDTHS
FOR 1% AEP (+20%) STORM

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD627			REVISION C

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD625-SW OLFP.dwg

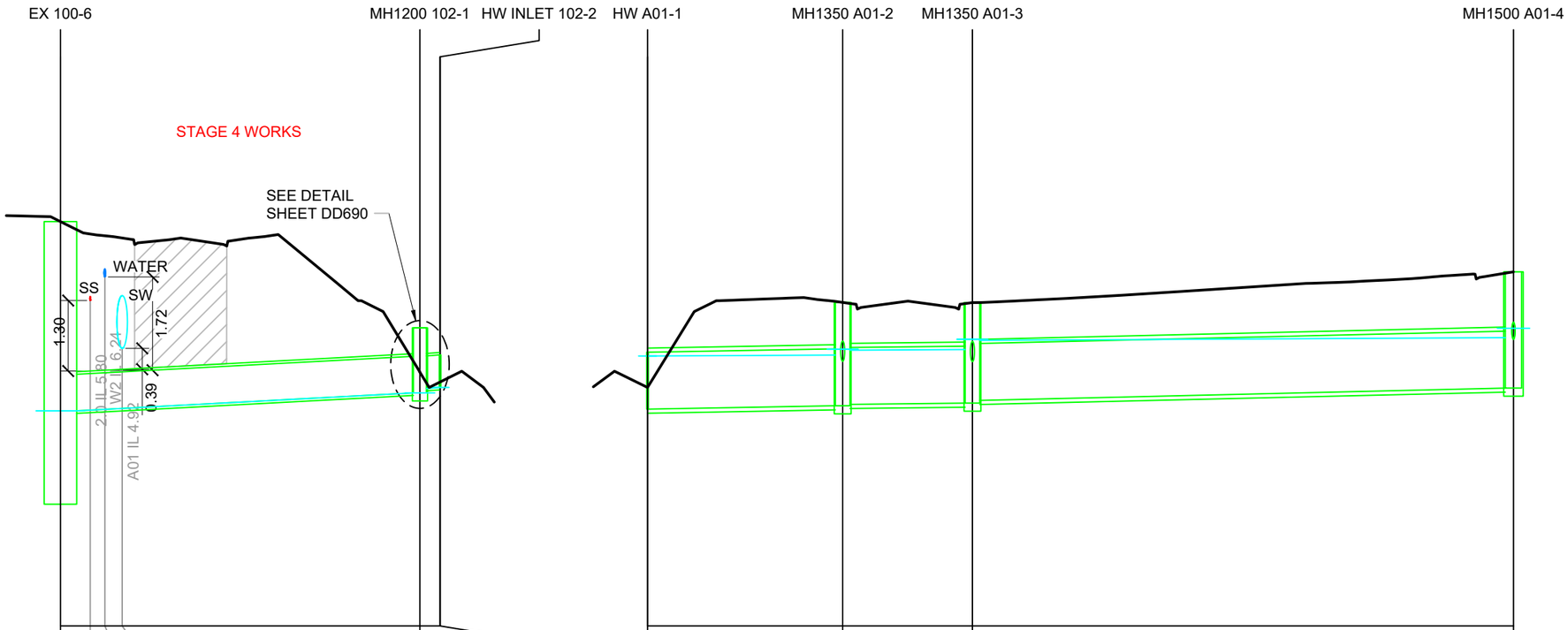
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
SW = PROPOSED STORMWATER
WATER = POTABLE WATER

BACKFILL



Flow (L/s)		0								0								1038				1001.8				979.4			
Vn - Velocity (m/s)		0.00								0.00								1.97				1.57				2.16			
Pipe Size/Type		Ø675 RCRRJ Class 4								Ø600 RCRRJ Class 4								Ø1050 RCRRJ Class 2				Ø1050 RCRRJ Class 4				Ø1050 RCRRJ Class 2			
Grade (%)		1%								1%								0.35%				0.2%				0.46%			
Datum		-4.000																-4.000											
Depth To Invert	5.216	3.492							1.200	1.119						0.600		1.050			1.906	1.881			1.854	1.804			2.144
HGL Levels	3.768								4.100	4.181						4.200					4.798	4.905 4.887			4.900	5.088 5.069			5.118
Invert Levels	2.045	3.768	3.78	3.8	3.81				4.100	4.181						4.200		3.800			3.863	3.888			3.911	3.961			4.189
Finished Surface		7.261								5.300							4.800	4.850				5.768				5.766			6.332
Chainage	0.000	2.75	5.7							33.168							35.027	0.000				18.007				29.979			79.900

LINE 102

LINE A01

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100 (0, 2, 4)

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD630		REVISION C	

SCALE 1:500 (0, 10, 20)

DATE PLOTTED: Wednesday, 18 March 2020 9:15:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

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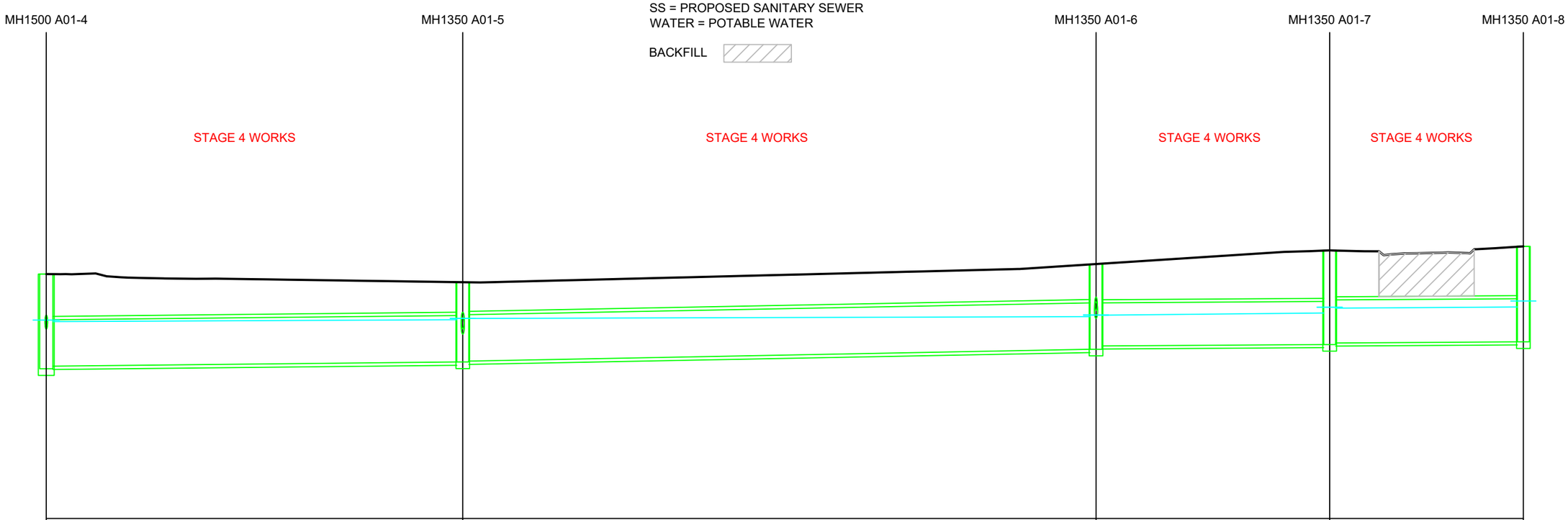
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		918.3					872.3					800.2			783.3			
Vn - Velocity (m/s)		1.55					1.95					1.18			1.18			
Pipe Size/Type		Ø1050 RCRRJ Class 2					Ø1050 RCRRJ Class 2					Ø975 RCRRJ Class 2			Ø975 RCRRJ Class 4			
Grade (%)		0.2%					0.37%					0.12%			0.12%			
Datum		-3.000																
Depth To Invert	2.144	2.084				1.805	1.785				1.929	1.854			2.132	2.097		2.161
HGL Levels	5.118	5.292 5.257				5.300	5.330 5.328				5.370	5.406 5.403			5.452	5.583 5.561		5.589 5.723
Invert Levels	4.189	4.249				4.343	4.363				4.631	4.706			4.738	4.773		4.799
Finished Surface		6.332					6.148					6.560			6.870			6.960
Chainage		79.900					127.081					198.819			225.286			247.226

LINE A01

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO: 14333-004	SCALE: 1:500H @ A3, 1:100V @ A3	STATUS: FOR APPROVAL	
DWG NUMBER: DD631		REVISION: C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
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SW = PROPOSED STORMWATER
WATER = POTABLE WATER

BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

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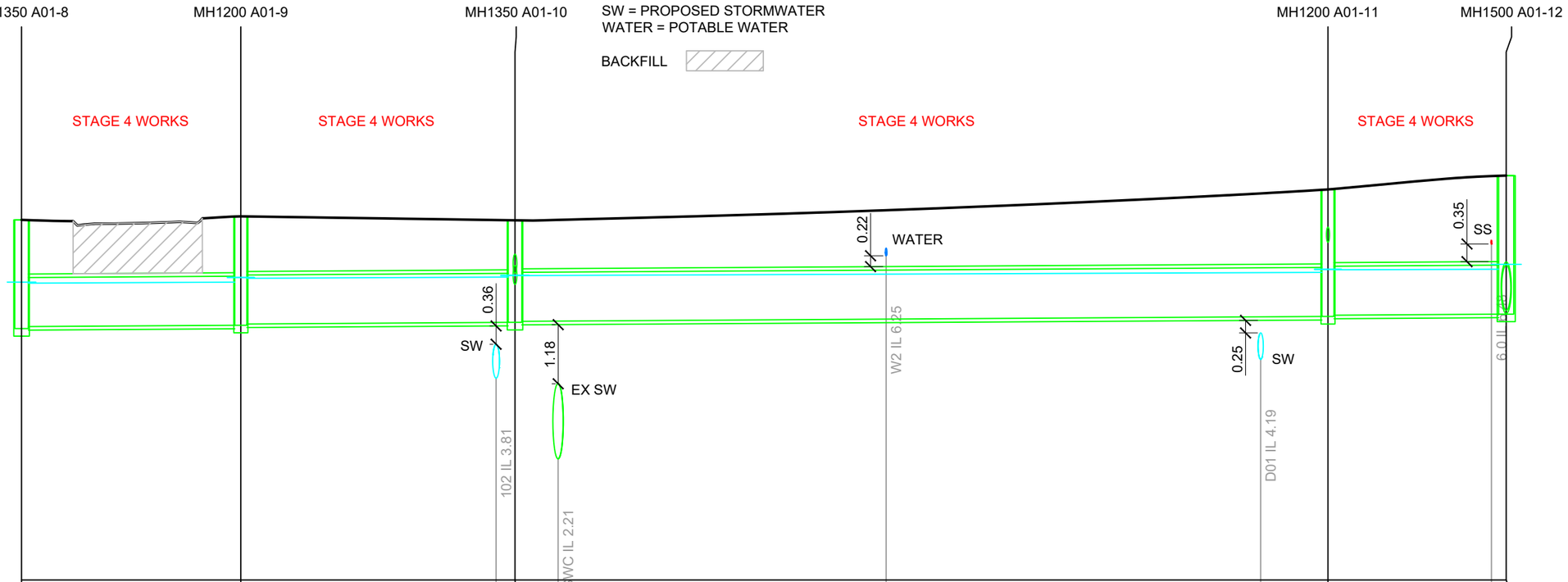
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		749.4						727.4										685.2					624.6				
Vn - Velocity (m/s)		1.18						1.18										1.17					1.16				
Pipe Size/Type		Ø975 RCRRJ Class 4						Ø975 RCRRJ Class 2										Ø975 RCRRJ Class 4					Ø975 RCRRJ Class 4				
Grade (%)		0.12%						0.12%										0.12%					0.12%				
Datum	-4.000																										
Depth To Invert	2.161	2.121			2.166			2.141				2.030	2.010								2.526	2.501			2.755		
HGL Levels	5.589	5.723 5.702			5.724			5.816 5.800				5.824	5.857 5.853								5.917	5.978 5.968			5.980	6.077	
Invert Levels	4.799	4.839			4.865			4.890				4.923	4.943	4.95				4.99			5.03 5.040	5.065			5.086		
Finished Surface	6.960							7.032					6.952									7.566				7.842	
Chainage	247.226							269.044			25.4	294.44	296.322	4.29	300.61		36.93	333.25		74.19	370.52	377.211		16.27	393.48	394.947	

LINE A01

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD632		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

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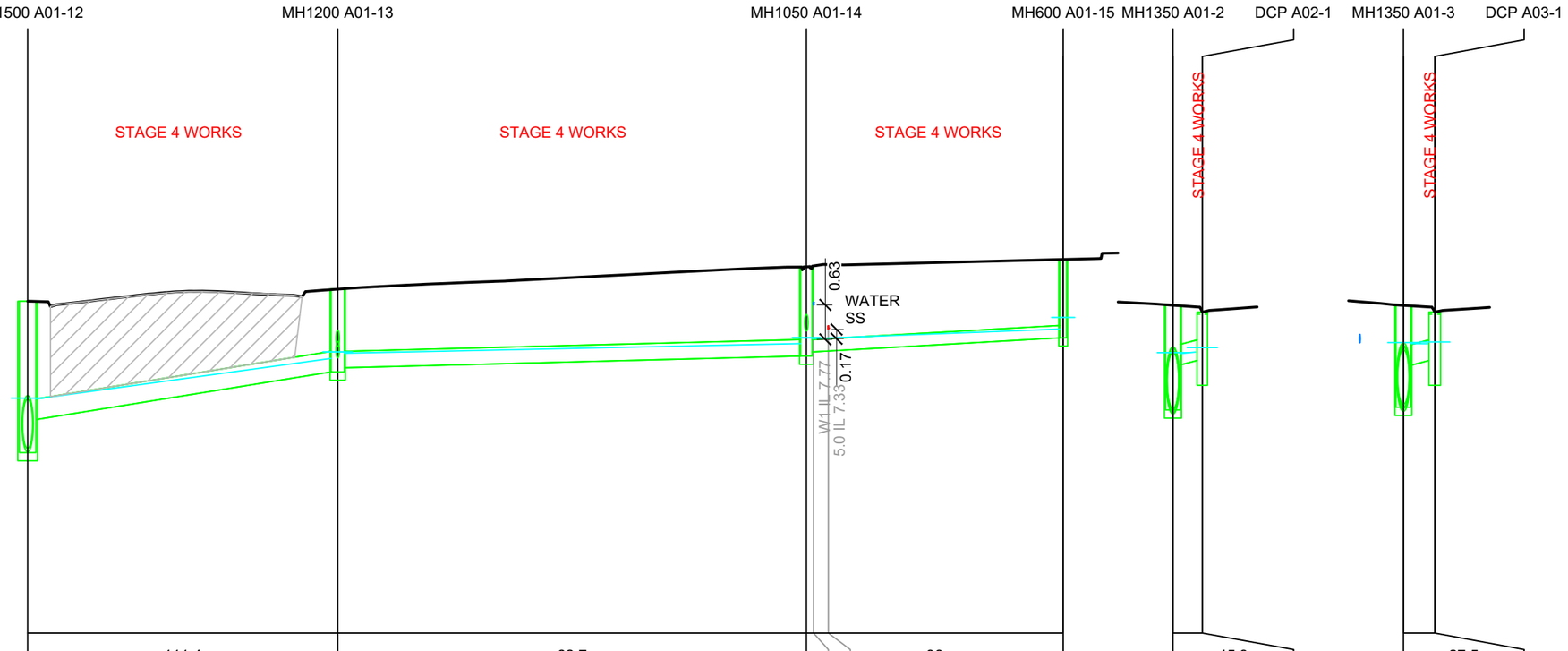
BACKFILL

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		111.4				62.7				36						45.3				27.5			
Vn - Velocity (m/s)		2.56				1.10				1.30						1.97				1.71			
Pipe Size/Type		Ø375 uPVC SN16				Ø300 uPVC SN8				Ø225 uPVC SN8						Ø375 uPVC SN8				Ø375 uPVC SN8			
Grade (%)		3.07%				0.5%				1.1%						3%				3%			
Datum		-2.000														-4.000				-4.000			
Depth To Invert	2.755	2.155			1.506	1.431			1.624	1.549			1.426			1.087		0.883	1.333	1.090		0.883	1.333
HGL Levels	5.980	6.077 6.063			6.800	6.920 6.895			7.070	7.177 7.161			7.335	7.546		4.905 4.887	4.798	4.915	4.999	5.088 5.069	4.900	5.069	5.099
Invert Levels	5.086	5.686			6.555	6.630			6.843	6.918	6.92	6.93	7.176			4.681	3.863	4.762	4.312	4.676	3.911	4.762	4.312
Finished Surface		7.842				8.060				8.467				8.602		5.768			5.645	5.766			5.645
Chainage		394.947				423.202				465.910	466.56	467.91		489.310		-2.678			0.000	-2.857			0.000

LINE A01 LINE A02 LINE A03

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SCALE 1:100

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD633		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:15:58 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

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NOTE:
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BACKFILL

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
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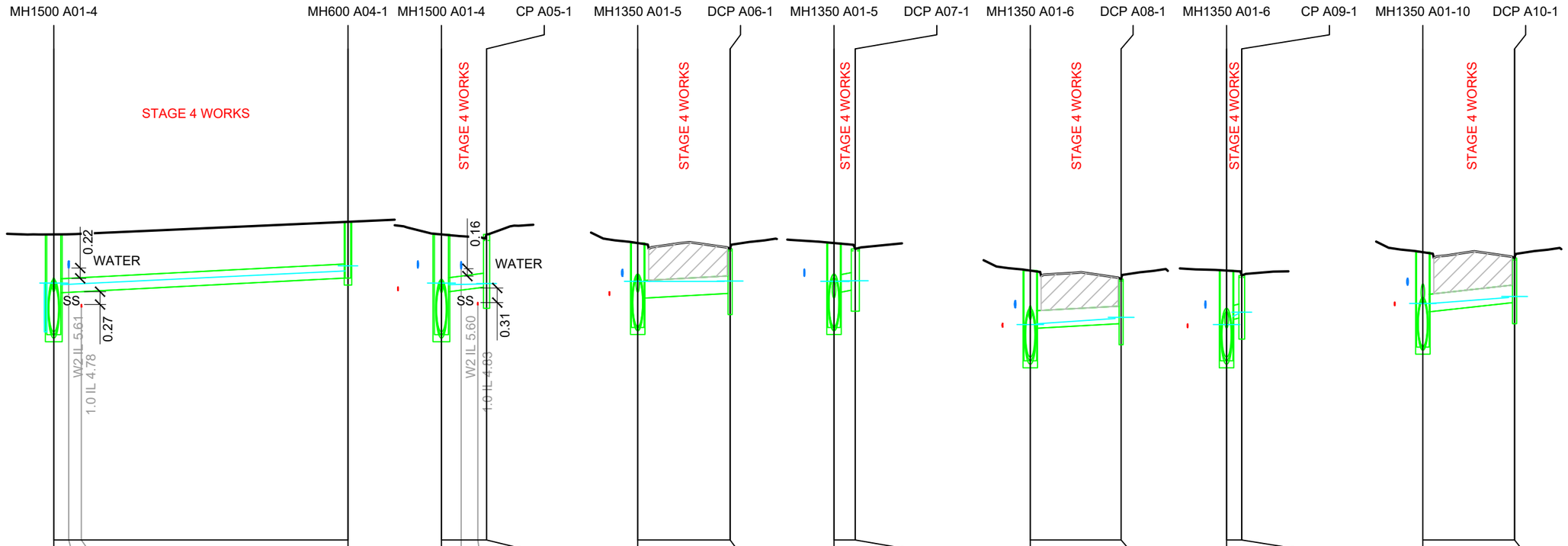

	LINE A04						LINE A05						LINE A06						LINE A07						LINE A08						LINE A09						LINE A10					
Flow (L/s)	39.1						9.2						14.1						19.7						24.4						16.8						23.6					
Vn - Velocity (m/s)	1.30						1.10						0.95						1.34						1.12						1.31						1.42					
Pipe Size/Type	Ø300 uPVC SN8						Ø300 uPVC SN8						Ø375 uPVC SN16						Ø375 uPVC SN8						Ø375 uPVC SN16						Ø300 uPVC SN8						Ø375 uPVC SN16					
Grade (%)	1%						2%						1%						2%						1%						2%						2%					
Datum	-4.000						-4.000						-4.000						-4.000						-3.000						-3.000						-3.000					
Depth To Invert	2.144	1.248				1.203	2.144	1.227				1.131	1.805	1.177				0.953	1.805	1.053				0.882	1.929	1.233				0.953	1.929	1.048				0.911	2.030	1.275				0.953
HGL Levels	5.118	5.292 5.257				5.552	5.118	5.292 5.257				5.274	5.300	5.330 5.328				5.328	5.300	5.330 5.328				5.326	5.370	5.406 5.421				5.535	5.370	5.406 5.582				5.642	5.824	5.857 5.853				5.983
Invert Levels	4.189	5.085	5.09	5.11		5.400	4.189	5.106	5.14	5.19		5.203	4.343	4.971				5.070	4.343	5.095				5.141	4.631	5.327				5.424	4.631	5.511				5.544	4.923	5.677				5.874
Finished Surface	6.332					6.602	6.332					6.333	6.148					6.023	6.148					6.023	6.560					6.377	6.560					6.455	6.952					6.827
Chainage	-12.751	2.951	5	-9.8		18.723	0.000	2.89		3.89		4.829	0.000					9.886	0.000					2.277	0.000					9.718	0.000					1.623	0.000					9.815

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD634		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:59 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

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PHILIP COOK
WDC IQP#014

NOTE:
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BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

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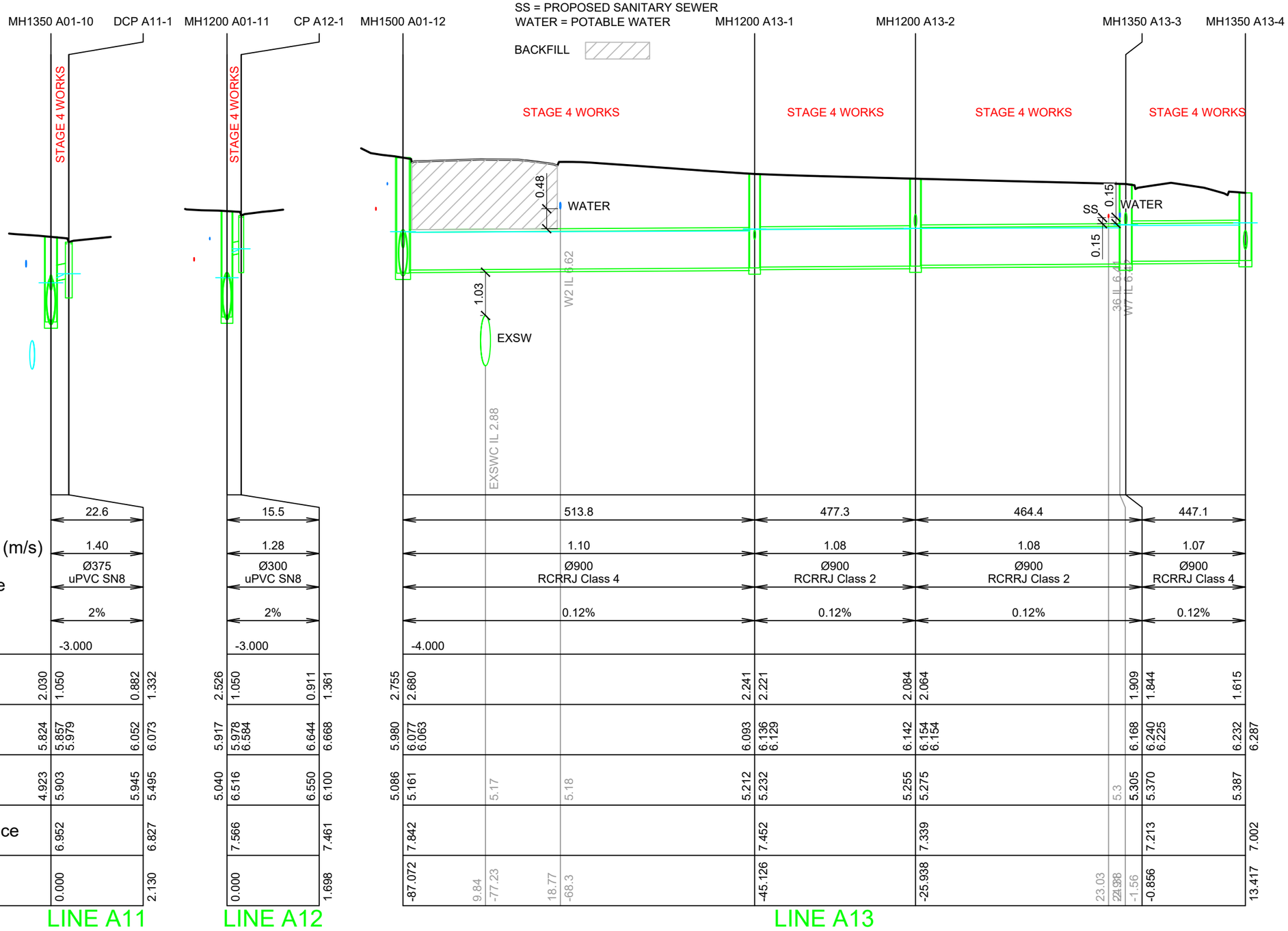
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD635		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:15:59 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

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PHILIP COOK
WDC IQP#014

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BACKFILL

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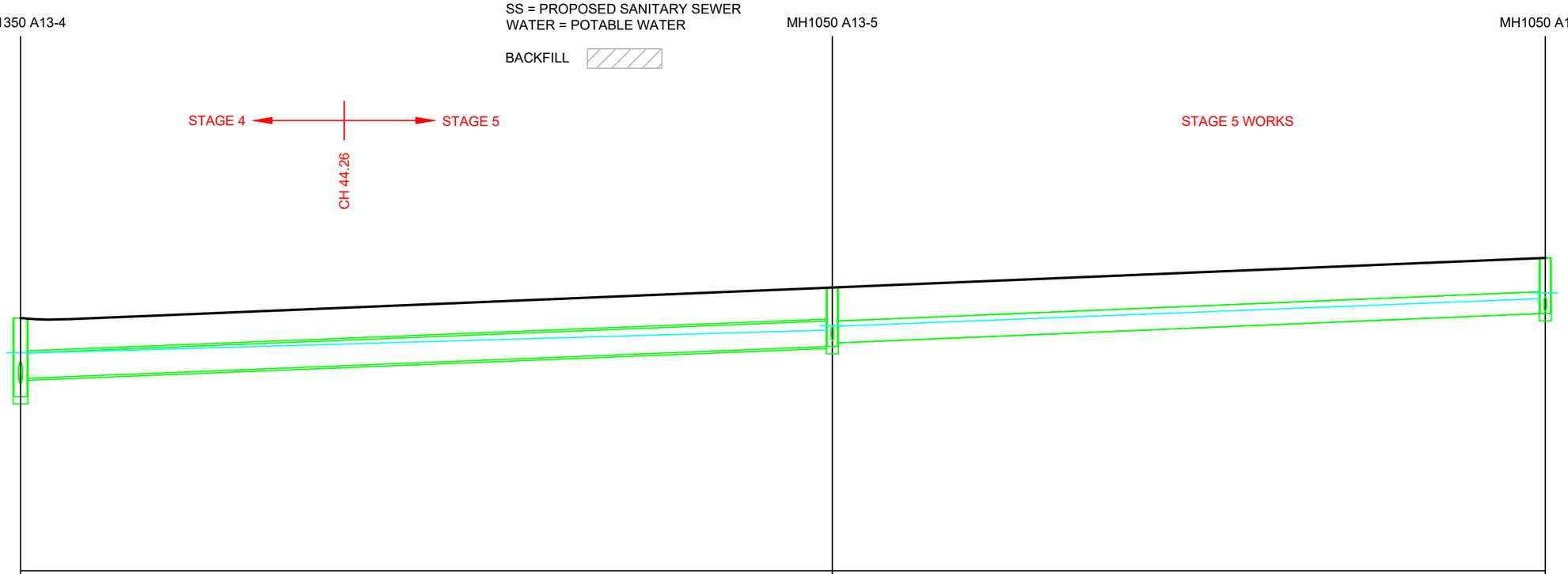

Flow (L/s)		249.8		190.6		
Vn - Velocity (m/s)		1.88		1.78		
Pipe Size/Type		Ø525 RCRRJ Class 2		Ø450 uPVC SN8		
Grade (%)		0.78%		0.82%		
Datum		-2.000				
Depth To Invert	1.615	1.240	1.215	1.140	1.146	
HGL Levels	6.232	6.287 6.282	6.755	6.843 6.835	7.403	7.520
Invert Levels	5.387	5.762	6.417	6.492	7.095	
Finished Surface		7.002		7.632		8.241
Chainage		13.417		97.067		170.524

LINE A13

SCALE 1:100

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 7

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD636		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:15:59 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

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PHILIP COOK
WDC IQP#014

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BACKFILL

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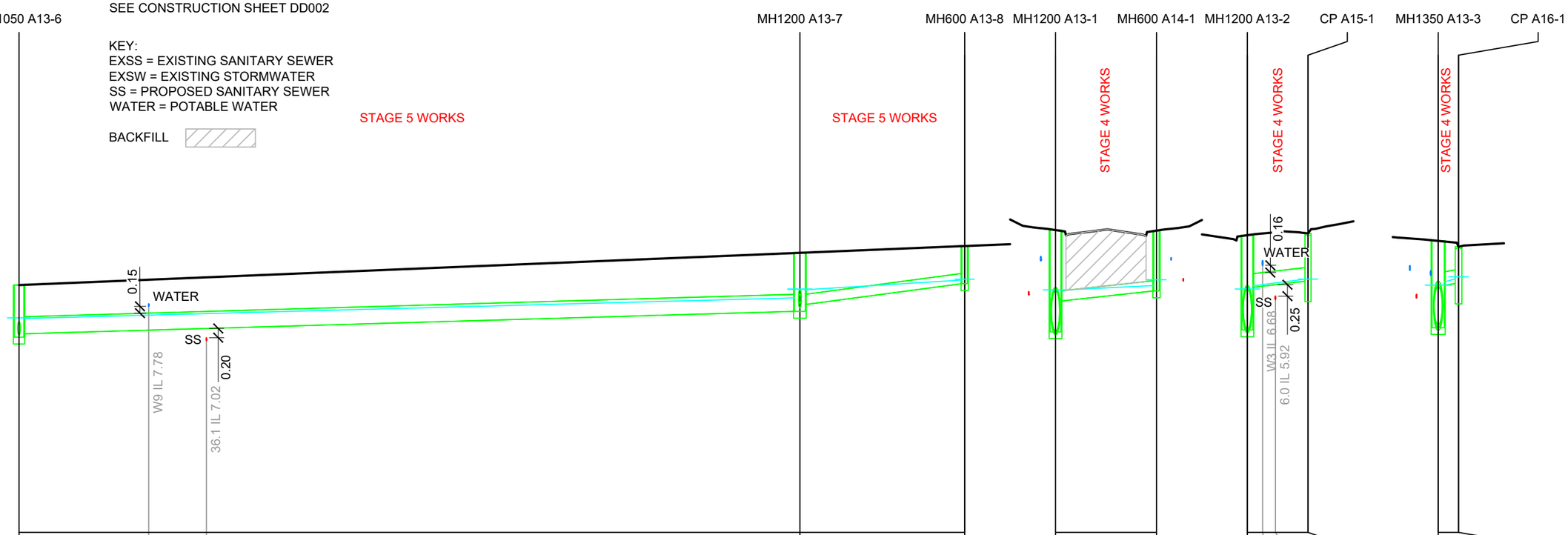

| | | |

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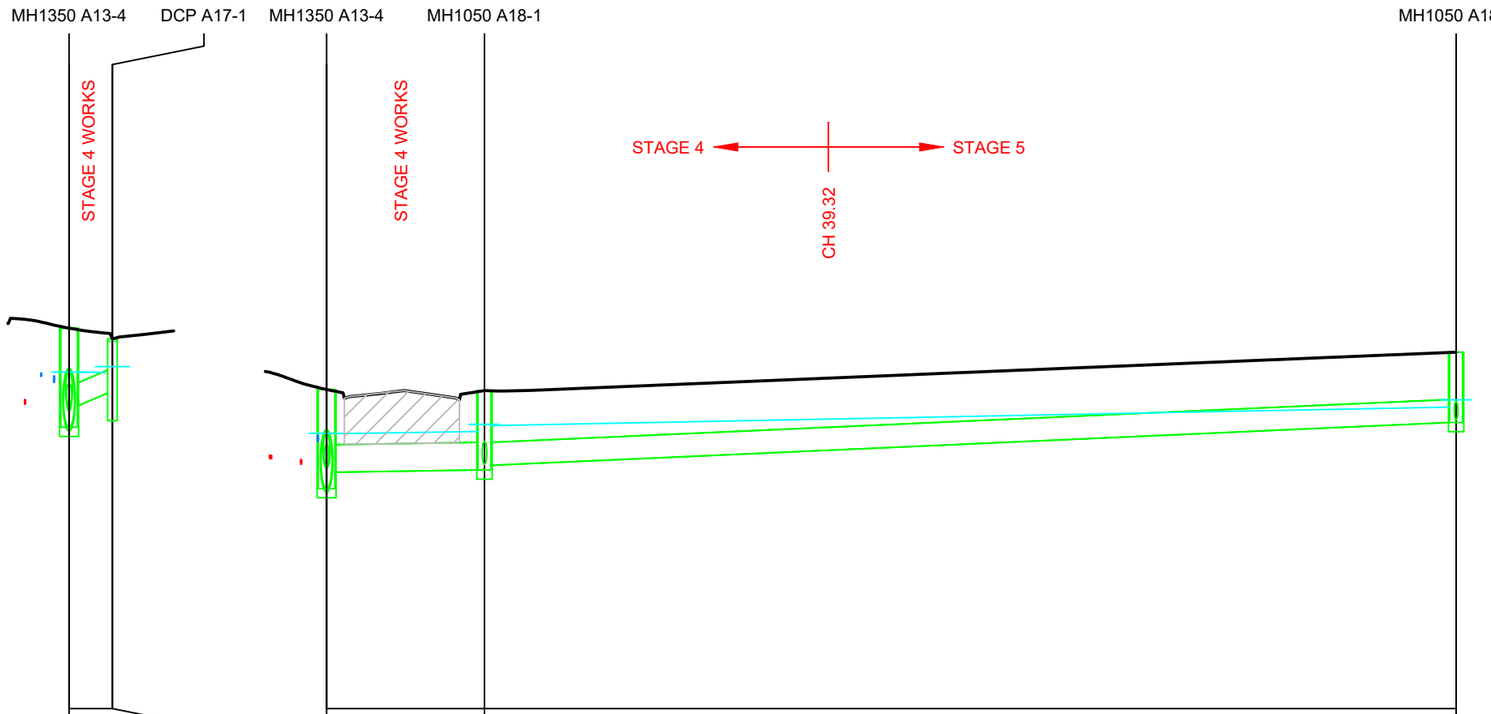

	LINE A17				LINE A18					
Flow (L/s)	47.8				148.7	115.7				
Vn - Velocity (m/s)	2.57				1.12	1.61				
Pipe Size/Type	Ø375 uPVC SN8				Ø450 uPVC SN16	Ø375 uPVC SN8				
Grade (%)	6%				0.3%	0.88%				
Datum	-3.000				-2.000					
Depth To Invert	1.615	1.271	0.882	1.332	1.615	1.350	1.294	1.219	1.146	
HGL Levels	6.232	6.287 6.282	6.283	6.376	6.232	6.287 6.282	6.317	6.434 6.413	6.715	6.834
Invert Levels	5.387	5.731	5.944	5.494	5.387	5.652	5.691	5.766	6.464	
Finished Surface		7.002		6.826		7.002		6.984		7.610
Chainage		0.000		3.536		0.000		12.880		92.119

SCALE 1:100

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 9

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD638		REVISION C	

SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:16:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

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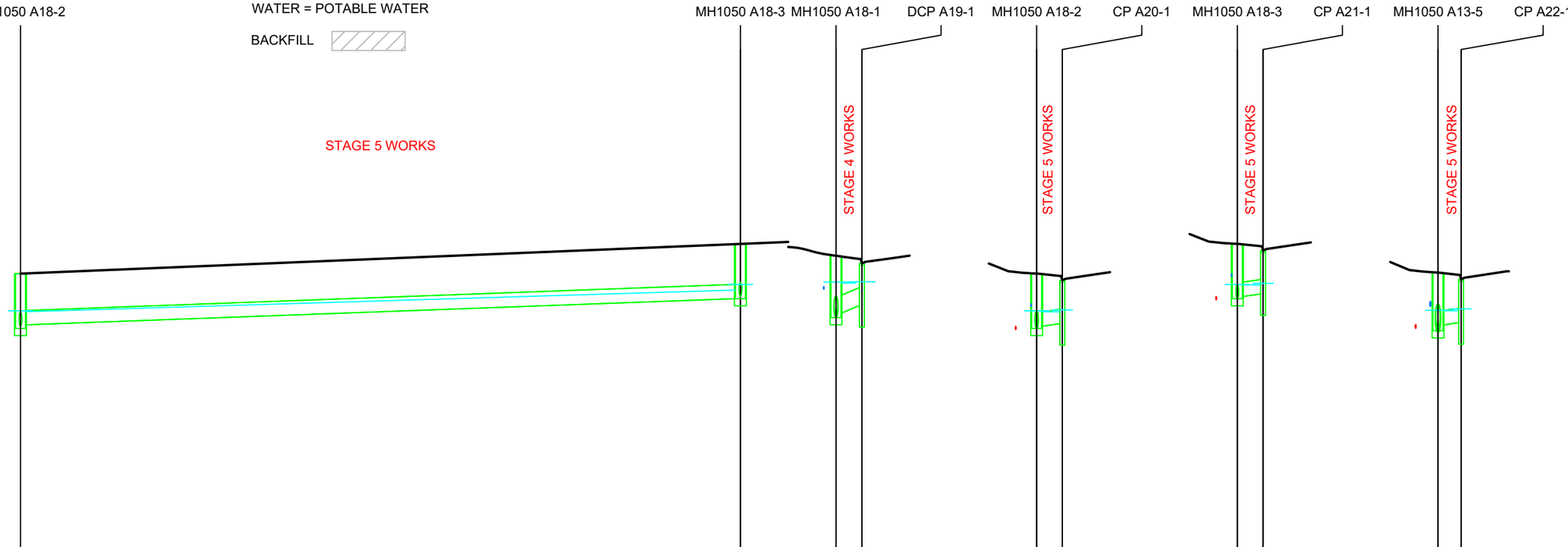
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



	LINE A18	LINE A19	LINE A20	LINE A21	LINE A22
Flow (L/s)	53.6	25.1	19.6	18.6	19.5
Vn - Velocity (m/s)	1.24	2.12	1.37	1.35	1.37
Pipe Size/Type	Ø300 uPVC SN8	Ø375 uPVC SN8	Ø300 uPVC SN8	Ø300 uPVC SN8	Ø300 uPVC SN8
Grade (%)	0.73%	6%	2%	2%	2%
Datum	-2.000	-3.000	-2.000	-2.000	-2.000
Depth To Invert	1.146, 1.071, 1.146	1.294, 1.204, 0.883, 1.333	1.146, 1.101, 0.909, 1.359	1.146, 1.101, 0.909, 1.359	1.215, 1.096, 0.909, 1.359
HGL Levels	6.715, 6.834, 6.813, 7.266, 7.384	6.317, 6.434, 6.413, 6.414, 6.439	6.715, 6.834, 6.813, 6.813, 6.851	7.266, 7.384, 7.375, 7.373, 7.408	6.755, 6.843, 6.835, 6.835, 6.873
Invert Levels	6.464, 6.539, 7.086	5.691, 5.781, 5.943, 5.493	6.464, 6.509, 6.563, 6.113	7.086, 7.131, 7.185, 6.735	6.417, 6.536, 6.585, 6.135
Finished Surface	7.610, 8.233	6.984, 6.826	7.610, 7.472	8.233, 8.094	7.632, 7.493
Chainage	92.119, 167.459	0.000, 2.710	0.000, 2.684	0.000, 2.692	0.000, 2.419

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	STORMWATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 10

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO: 14333-004
SCALE: 1:500H @ A3, 1:100V @ A3
STATUS: FOR APPROVAL
DWG NUMBER: DD639
REVISION: C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

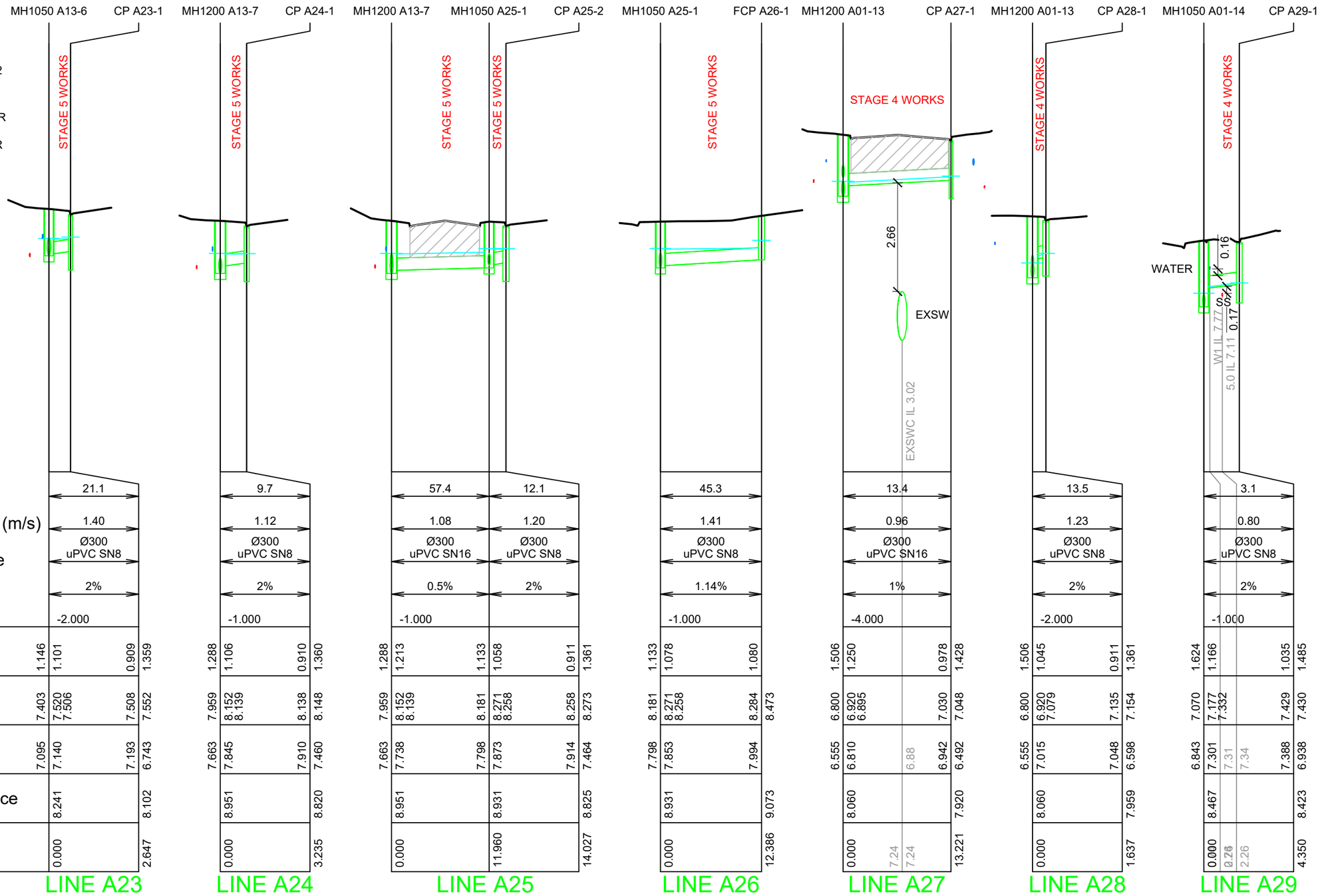
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

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PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 11

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD640		REVISION C	

SCALE 1:100 (0, 2, 4)
SCALE 1:500 (0, 10, 20)

DATE PLOTTED: Wednesday, 18 March 2020 9:16:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

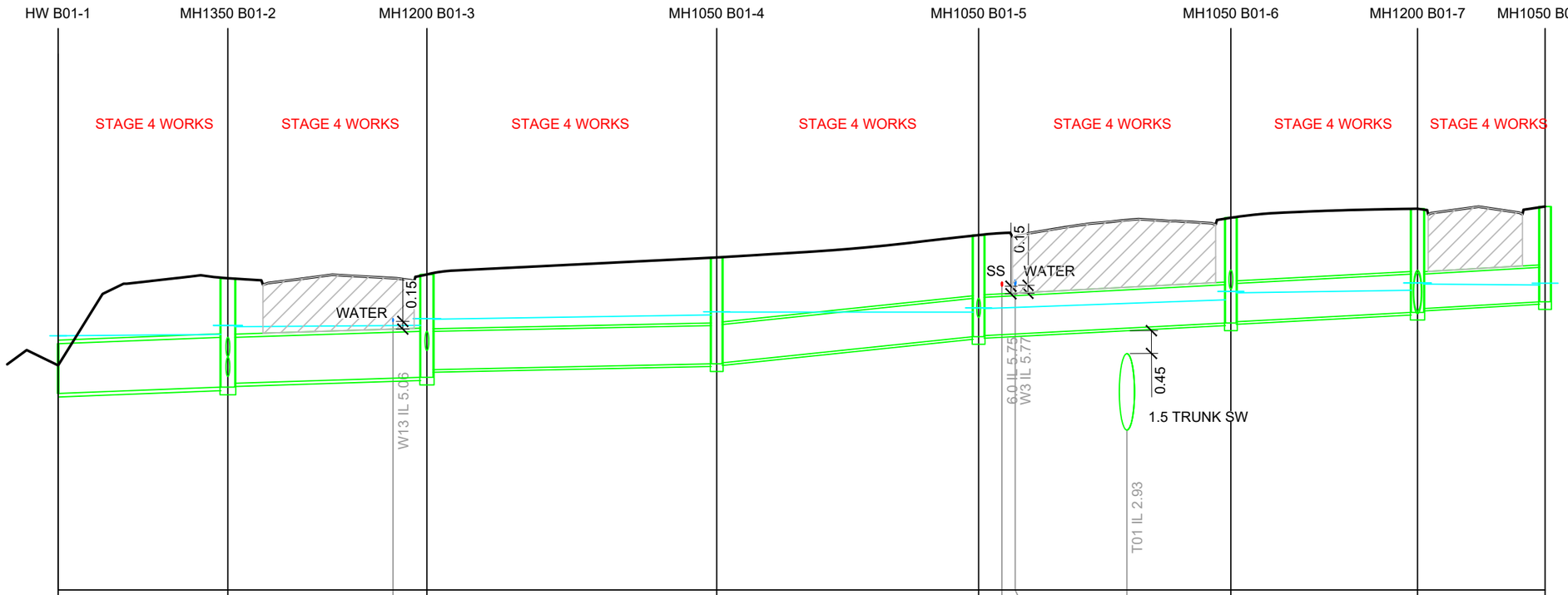
BACKFILL

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)	902.6	659.8	609	603.1	542.1	494.4	172.5	
Vn - Velocity (m/s)	2.55	2.17	1.79	3.33	2.50	2.45	1.89	
Pipe Size/Type	Ø975 RCRRJ Class 2	Ø900 RCRRJ Class 4	Ø750 RCRRJ Class 2	Ø750 RCRRJ Class 2	Ø750 RCRRJ Class 4	Ø750 RCRRJ Class 2	Ø675 RCRRJ Class 4	
Grade (%)	0.75%	0.6%	0.4%	2%	1%	1%	1.06%	
Datum	-4.000							
Depth To Invert	0.975 / 0.975	2.132 / 2.057	2.015 / 1.865	2.084 / 2.064	1.989 / 1.969	2.063 / 2.038	2.031 / 1.956	1.866
HGL Levels	4.780	4.807 / 4.982 4.958	4.984 / 5.115 5.104	5.189 / 5.251 5.244	5.244 / 5.326 5.314	5.485 / 5.650 5.621	5.671 / 5.815 5.792	5.775 / 5.810
Invert Levels	3.650 / 3.650	3.774 / 3.849	3.95 / 3.966 / 4.116	4.230 / 4.250	4.763 / 4.783 4.8 4.82 4.93	5.030 / 5.055	5.238 / 5.313	5.446
Finished Surface	4.625	5.906	5.981	6.314	6.752	7.094	7.269	7.312
Chainage	0.000	16.630 16.18 32.81	36.134	64.532	90.198 92.88 93.78 14.53 104.73	114.914	133.205	145.702

LINE B01

SCALE 1:100

0 2 4

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 12

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD641		REVISION C	

0 10 20 SCALE 1:500

DATE PLOTTED: Wednesday, 18 March 2020 9:16:00 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
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WATER = POTABLE WATER

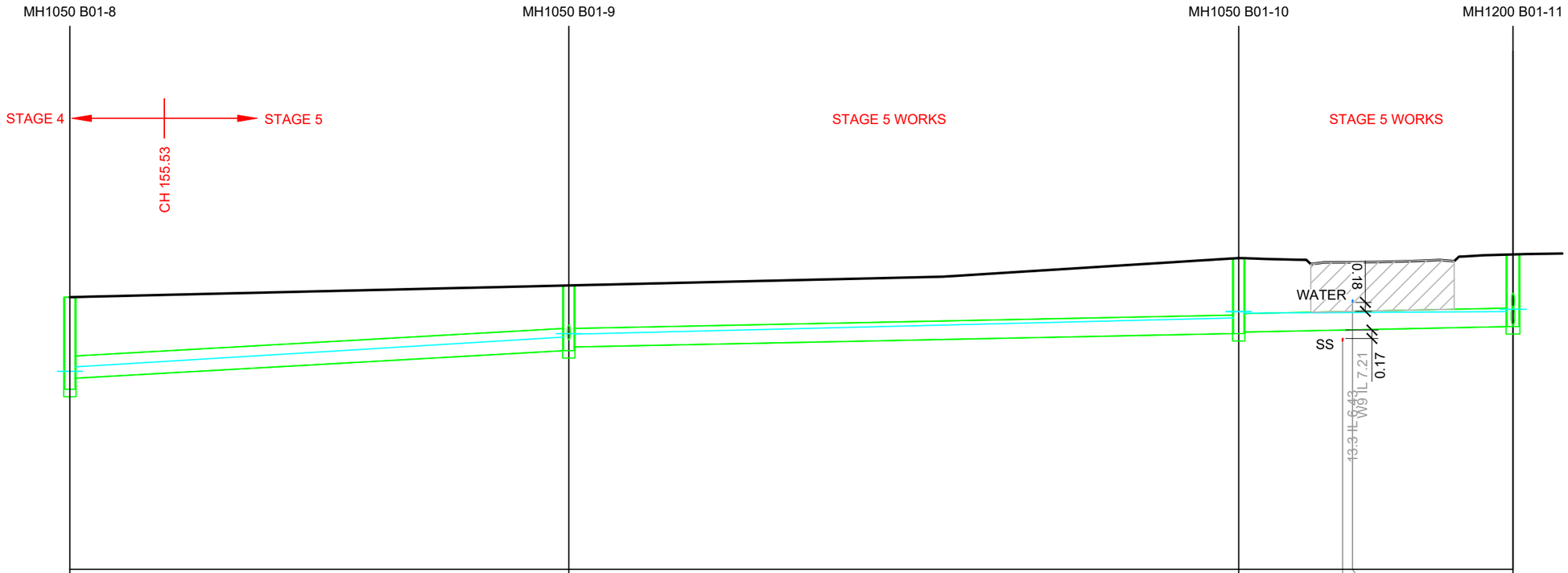
BACKFILL

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



	MH1050 B01-8		MH1050 B01-9		MH1050 B01-10			MH1200 B01-11	
Flow (L/s)		154		114.4			67.7		
Vn - Velocity (m/s)		1.90		1.14			1.05		
Pipe Size/Type		Ø450 uPVC SN8		Ø375 uPVC SN8			Ø375 uPVC SN8		
Grade (%)		1.1%		0.4%			0.4%		
Datum		-2.000							
Depth To Invert	1.866	1.641	1.322	1.247	1.530	1.500		1.463	
HGL Levels	5.775	5.810 5.899	6.504	6.573 6.564	6.891	7.020 6.989		7.021	7.067
Invert Levels	5.446	5.671	6.228	6.303	6.575	6.605	6.65	6.65	6.716	
Finished Surface		7.312		7.550		8.105			8.179
Chainage		145.702		196.257		264.130	10.52 ~~27.565~~	275.66	291.916

LINE B01

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	STORMWATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO: 14333-004
SCALE: 1:500H @ A3, 1:100V @ A3
STATUS: FOR APPROVAL
DWG NUMBER: DD642
REVISION: C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
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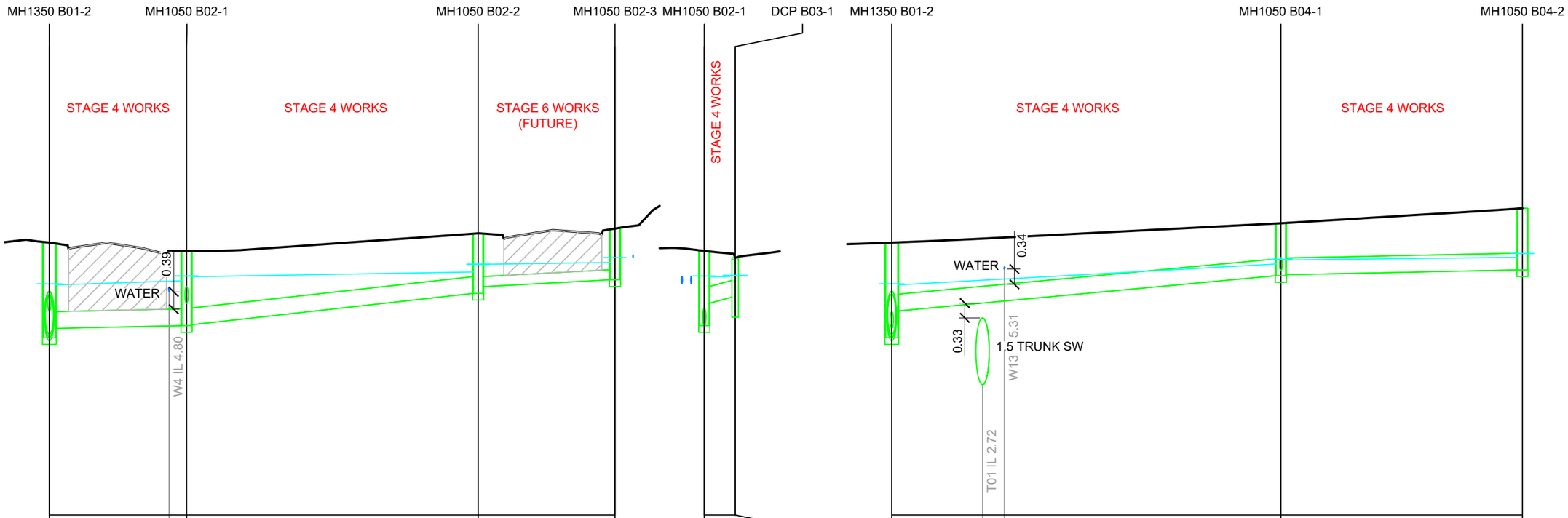
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		136.5				100				23.6				26.8				124.2				89.8		
Vn - Velocity (m/s)		1.24				2.18				1.14				1.88				2.17				1.12		
Pipe Size/Type		Ø375 uPVC SN16				Ø375 uPVC SN8				Ø225 uPVC SN8				Ø375 uPVC SN8				Ø375 uPVC SN8				Ø375 uPVC SN8		
Grade (%)		0.4%				2.15%				1%				4%				1.82%				0.4%		
Datum		-4.000												-4.000				-4.000						
Depth To Invert	2.132	1.922		1.676		1.656			1.345	1.195		1.148	1.676	1.176		0.883	1.333	2.132	1.532			1.174	1.154		1.382
HGL Levels	4.807	4.982 4.958		5.051		5.158 5.141			5.248	5.421 5.418		5.461	5.570	5.051	5.158 5.141		5.142	5.171	4.807	4.982 4.958		5.426	5.533 5.517		5.576	5.662
Invert Levels	3.774	3.984		4.045		4.065			4.769	4.919		5.072		4.045	4.545		4.684	4.234	3.774	4.374		5.166	5.186		5.294	
Finished Surface		5.906				5.721				6.114			6.220		5.721			5.567		5.906			6.339			6.676
Chainage		0.000	13.42	13.42		15.374				48.042			63.377		0.000			3.462		-113.381	10.18	1.062	-100.76			-42.724

LINE B02 LINE B03 LINE B04

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	STORMWATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 14

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD643		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

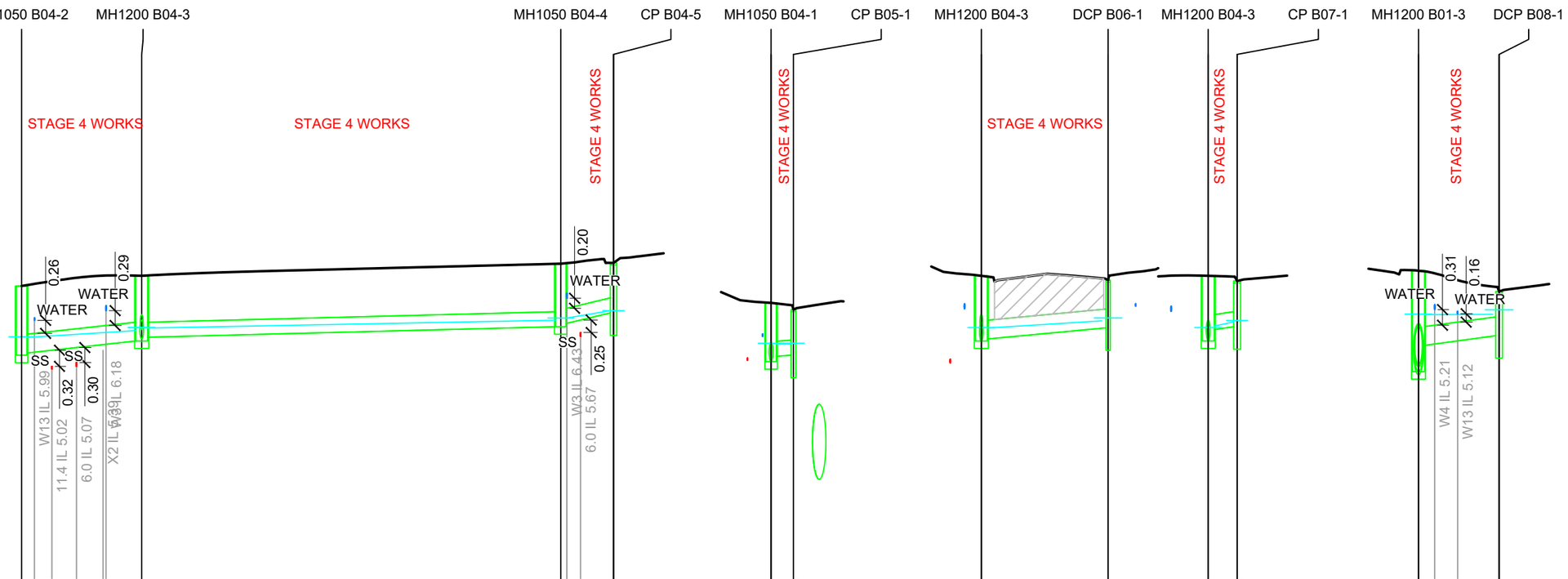
KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



| | | |

PHILIP COOK
WDC IQP#014

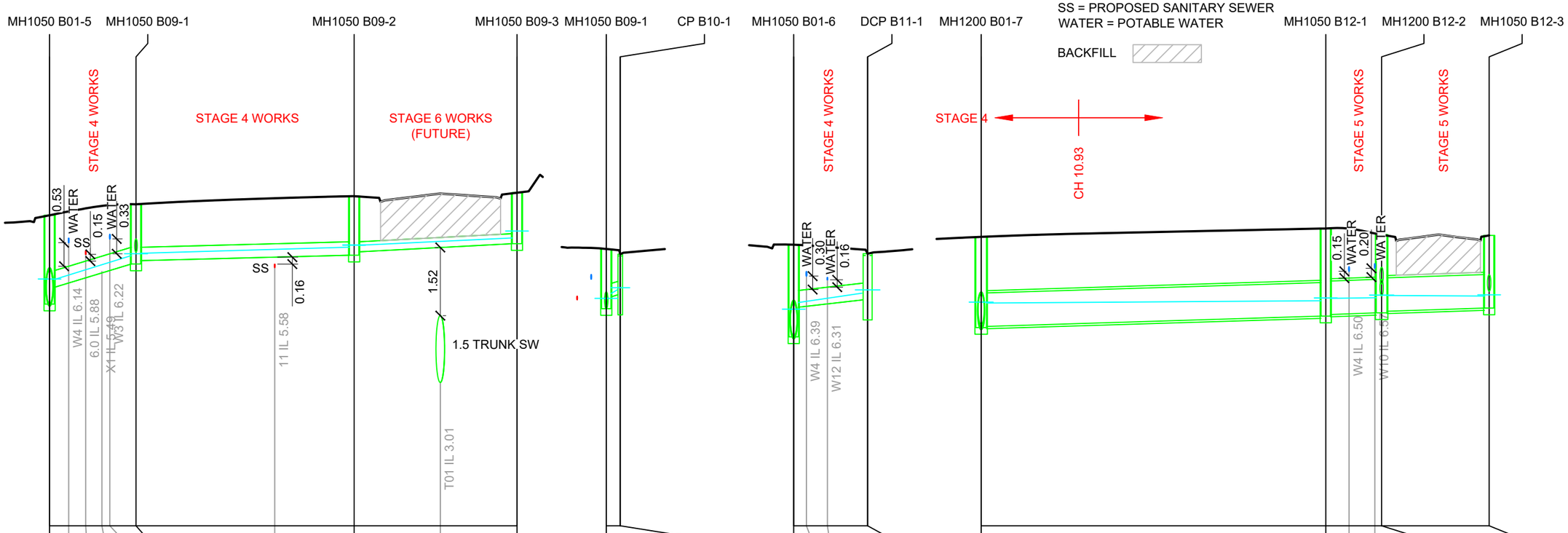
IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER
BACKFILL

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



	MH1050 B01-5	MH1050 B09-1	MH1050 B09-2	MH1050 B09-3	MH1050 B09-1	CP B10-1	MH1050 B01-6	DCP B11-1	MH1200 B01-7	MH1050 B12-1	MH1200 B12-2	MH1050 B12-3
Flow (L/s)	67	45.7	23.6		21.7		42.6		318.7	308.8	198.2	
Vn - Velocity (m/s)	2.73	1.04	1.14		1.63		1.68		1.81	1.79	1.58	
Pipe Size/Type	Ø375 uPVC SN8	Ø300 uPVC SN8	Ø225 uPVC SN16		Ø300 uPVC SN8		Ø375 uPVC SN8		Ø750 RCRRJ Class 2	Ø750 RCRRJ Class 2	Ø750 RCRRJ Class 4	
Grade (%)	5.41%	0.5%	1%		3%		2%		0.6%	0.6%	0.6%	
Datum	-4.000				-3.000		-3.000		-3.000			
Depth To Invert	1.989 1.614 1.336	1.261 1.322	1.247 1.141		1.336 1.073 0.909 1.359		2.063 1.400 1.033 1.483		2.031 2.006 1.961	1.926 1.751	1.716 1.627	
HGL Levels	5.244 5.326 5.314 5.850	5.892 5.902 6.038	6.085 6.080 6.244	6.400	5.850 5.892 5.998 6.084 6.131		5.485 5.650 5.798 6.008 6.081		5.668 5.808 5.787 5.839	5.901 5.892 5.906	5.964 5.956 5.944	5.972
Invert Levels	4.763 5.138 5.24 5.35 5.46 5.52 5.661	5.736 5.81 5.859	5.934 6.03 6.116		5.661 5.925 5.972 5.522		5.030 5.693 5.71 5.77 5.859 5.409		5.238 5.263 5.495	5.530 5.55 5.57 5.567	5.602 5.675	
Finished Surface	6.752	6.998	7.180 7.257		6.998 6.881		7.094 6.892		7.269	7.455	7.318 7.302	
Chainage	0.000 2.04 4.06 5.86 6.75	9.679 15.54 25.22	34.121 9.65 43.78 52.367		0.000 1.562		0.000 3.77 8.281		0.000	38.607 41.22 44.1	44.865 56.915	

LINE B09 LINE B10 LINE B11 LINE B12

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
D	NEW IQP DETAILS	18-03-20	KH	PC
C	ALL LONGSECTIONS UPDATED	14-02-20	KH	GM
B	PIPE TYPES	??-??-??	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 16

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD645		REVISION D	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

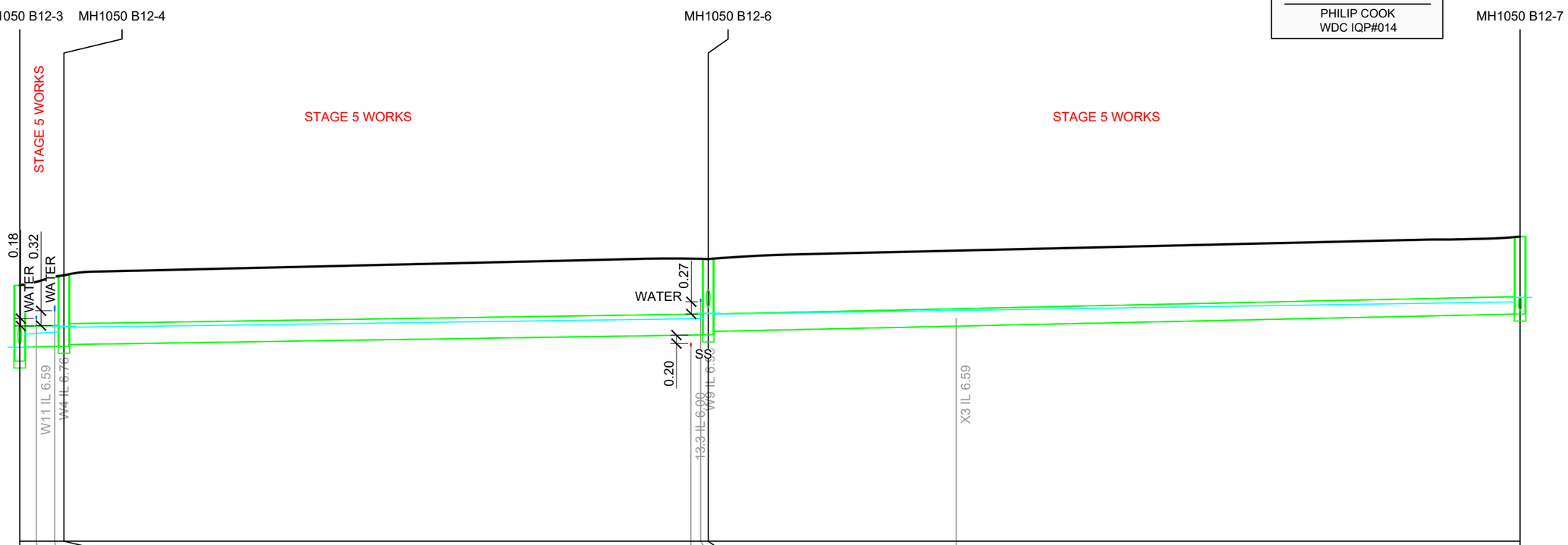
BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		155.1				147.4														95.9			
Vn - Velocity (m/s)		1.12				1.12														1.16			
Pipe Size/Type		Ø450 uPVC SN8				Ø450 uPVC SN8														Ø375 uPVC SN8			
Grade (%)		0.3%				0.3%														0.43%			
Datum		-2.000																					
Depth To Invert	1.627	1.327			1.530	1.490											1.632	1.557					1.668
HGL Levels	5.944	5.972 6.251			6.304	6.419 6.400											6.589	6.700 6.683					6.947 7.043
Invert Levels	5.675	5.975	5.98	5.99	5.989	6.029										6.23	6.237	6.312			6.42		6.685
Finished Surface		7.302				7.519												7.869					8.353
Chainage	56.915	57.5	59.75	60.67		61.662									67.4	69.66	130.12	130.933			26.65	157.59	218.213

LINE B12

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
D	NEW IQP DETAILS	KH	PC
C	ALL LONGSECTIONS UPDATED	KH	GM
B	PIPE TYPES	KH	GM

18-03-20
14-02-20
??-??-??

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 17

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO: 14333-004
SCALE: 1:500H @ A3, 1:100V @ A3
STATUS: FOR APPROVAL
DWG NUMBER: DD646
REVISION: D

DATE PLOTTED: Wednesday, 18 March 2020 9:16:01 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

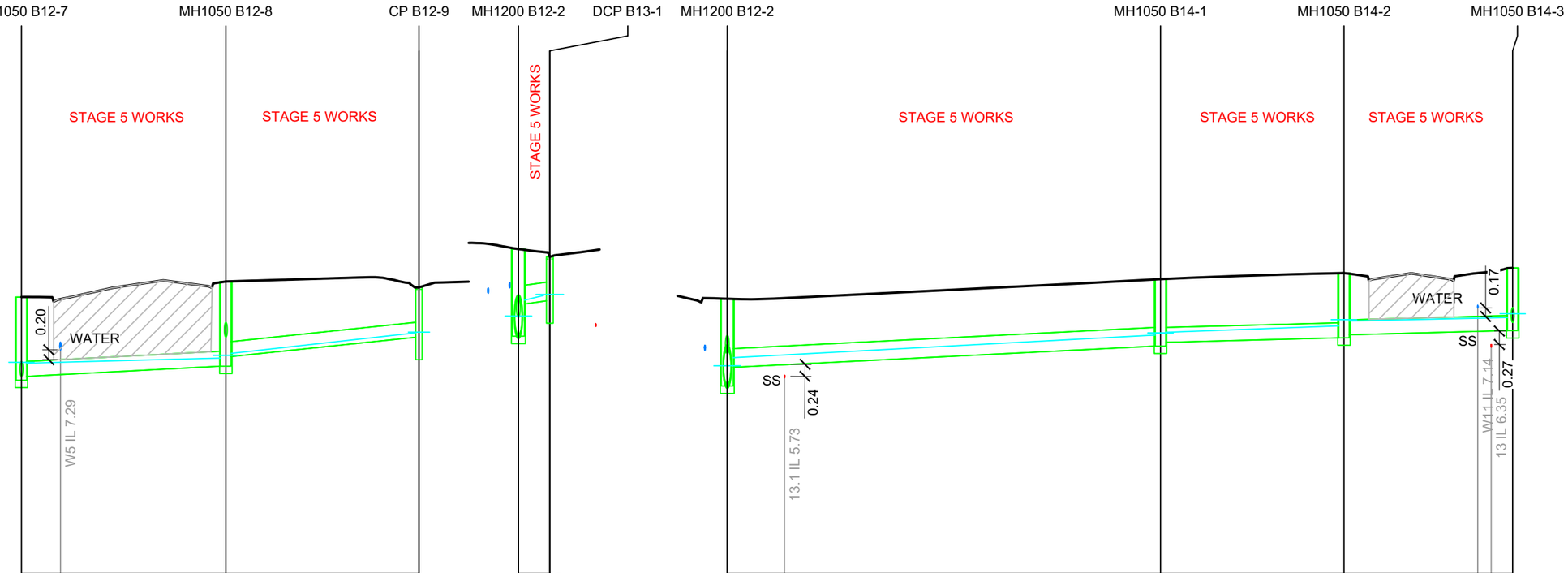
BACKFILL

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



	MH1050 B12-7		MH1050 B12-8	CP B12-9	MH1200 B12-2	DCP B13-1	MH1200 B12-2	MH1050 B14-1	MH1050 B14-2	MH1050 B14-3
Flow (L/s)		44.4	13.8		23		91.2	67.5	67.7	
Vn - Velocity (m/s)		1.34	1.24		1.40		1.59	1.10	1.10	
Pipe Size/Type		Ø300 uPVC SN16	Ø300 uPVC SN8		Ø375 uPVC SN8		Ø375 uPVC SN8	Ø300 uPVC SN8	Ø300 uPVC SN16	
Grade (%)		1%	2%		2%		0.98%	0.5%	0.5%	
Datum		-1.000			-3.000		-2.000			
Depth To Invert	1.668	1.593	1.701	1.000	1.450	1.751	1.104	0.883	1.333	1.751	1.376	1.346	1.271	1.300	1.240	1.258
HGL Levels	6.947	7.043 7.026	7.128	7.635	7.648	5.911	5.972 6.291	6.385	6.407	5.911	5.972 6.136	6.590	6.632 6.646	6.775	6.899 6.873	6.942	7.018
Invert Levels	6.685	6.760	6.965	7.546	7.096	5.567	6.214	6.277	5.827	5.567	5.942	6.368	6.443	6.536	6.596	6.680
Finished Surface	8.353		8.666	8.547			7.318		7.160		7.318	7.714		7.835		7.938
Chainage	218.213	3.92 222.14	238.763	258.176			0.000		3.156		0.000 5.75 5.75	43.557		62.003	13.44 76.85 76.81	78.962

LINE B12 LINE B13 LINE B14

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
D	NEW IQP DETAILS AND LINE B12 UPDATED	18-03-20 KH	PC
C	ALL LONGSECTIONS UPDATED	14-02-20 KH	GM
B	PIPE TYPES	??-??-?? KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 18

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD647		REVISION D	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

NOTE:
SEE CONSTRUCTION SHEET DD002

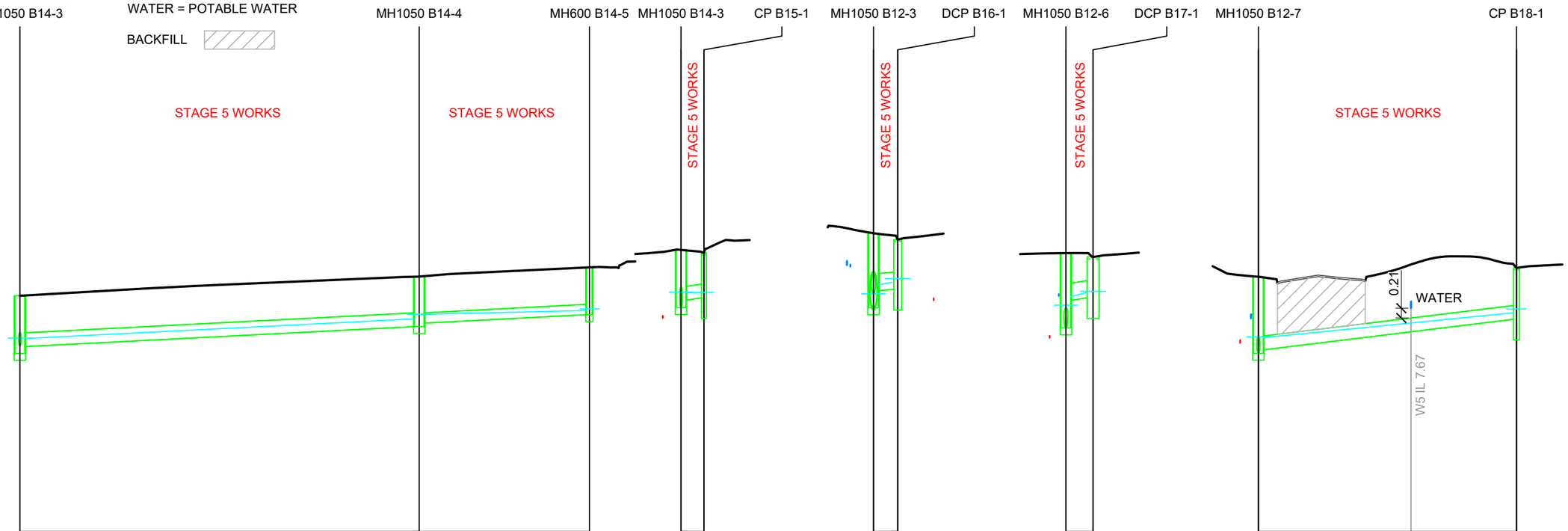
KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



	LINE B14																													
Flow (L/s)		47.2								12.4																				
Vn - Velocity (m/s)		1.36								0.96																				
Pipe Size/Type		Ø300 uPVC SN8								Ø225 uPVC SN8																				
Grade (%)		1%								1%																				
Datum		-1.000																												
Depth To Invert	1.258	1.108							1.090	1.015							1.031													
HGL Levels	6.942	7.018 7.006							7.434	7.536 7.534							7.618												7.653	
Invert Levels	6.680	6.830							7.266	7.341							7.527													
Finished Surface		7.938								8.356																			8.558	
Chainage		78.962								122.538																			141.108	

	LINE B15																													
Flow (L/s)		11.4								44.9												27.6								
Vn - Velocity (m/s)		1.17								1.36												1.48								
Pipe Size/Type		Ø300 uPVC SN8								Ø375 uPVC SN8												Ø375 uPVC SN8								
Grade (%)		2%								1.06%												2%								
Datum		-2.000								-3.000												-2.000								
Depth To Invert	1.258	1.096						0.980	1.430	1.627	1.252						1.082	1.532	1.632	1.033						0.890	1.340			
HGL Levels	6.942	7.018 7.006						7.000	7.013	5.949	5.980 6.177						6.231	6.313	6.611	6.735 6.920						7.013	7.035			
Invert Levels	6.680	6.842						6.892	6.442	5.675	6.050						6.078	5.628	6.237	6.835						6.894	6.444			
Finished Surface		7.938							7.872		7.302							7.160		7.869							7.785			
Chainage		0.000							2.493		0.000							2.643		0.000							2.953			

	LINE B18																													
Flow (L/s)		34																												
Vn - Velocity (m/s)		1.71																												
Pipe Size/Type		Ø300 uPVC SN16																												
Grade (%)		2.37%																												
Datum		-1.000																												
Depth To Invert	1.668	1.593															1.120	1.570												
HGL Levels	6.947	7.043 7.026															7.568	7.651												
Invert Levels	6.685	6.760											7.15				7.427	6.977												
Finished Surface		8.353																8.547												
Chainage		0.000											16.65	16.65				28.163												

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
D	NEW IQP DETAILS AND LINE B18 UPDATED	18-03-20 KH	PC
C	ALL LONGSECTIONS UPDATED	14-02-20 KH	GM
B	PIPE TYPES	??-??-?? KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 19

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO: 14333-004
SCALE: 1:500H @ A3, 1:100V @ A3
STATUS: FOR APPROVAL
DWG NUMBER: DD648
REVISION: D

DATE PLOTTED: Wednesday, 18 March 2020 9:16:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

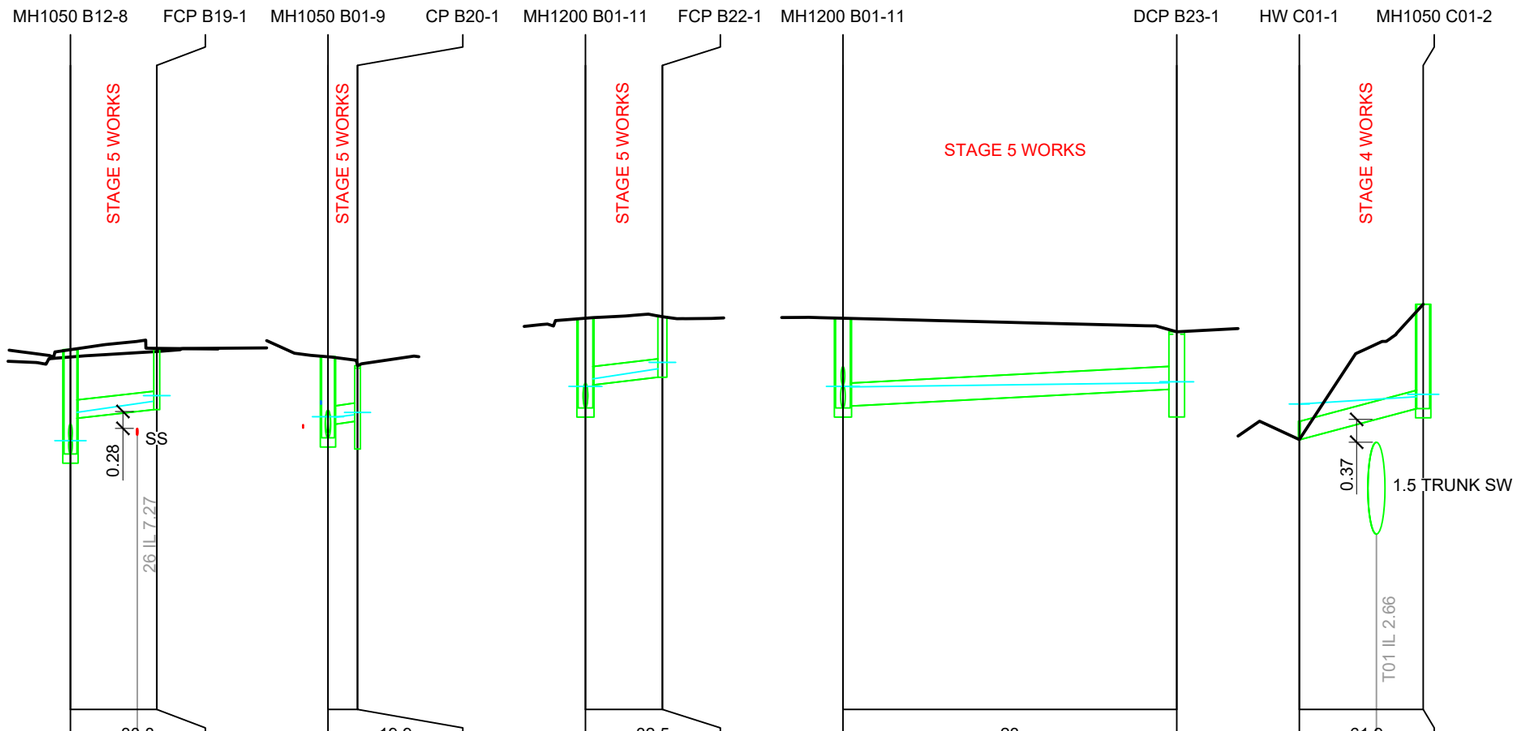
NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



	LINE B19					LINE B20					LINE B22					LINE B23					LINE C01				
Flow (L/s)		30.8					19.9					32.5					23					61.9				
Vn - Velocity (m/s)		1.56					1.38					1.59					1.10					2.64				
Pipe Size/Type		Ø300 uPVC SN8					Ø300 uPVC SN8					Ø300 uPVC SN8					Ø375 uPVC SN8					Ø300 uPVC SN8				
Grade (%)		2%					2%					2%					1%					5%				
Datum		-1.000					-2.000					-2.000					-2.000					-4.000				
Depth To Invert	1.701	1.119			0.999	1.322	1.102			0.908	1.358	1.463	1.088			0.988	1.463	1.433			0.939	1.389	0.300	0.300			1.700
HGL Levels	7.128	7.183 7.644			7.822	7.917	6.504	6.573 6.564			6.603	6.642	7.021	7.067 7.190			7.354	7.459	7.021	7.067 7.058			7.126	7.142	4.780			4.898	4.938
Invert Levels	6.965	7.547		7.66	7.688		6.228	6.448			6.496	6.046	6.716	7.091			7.216		6.716	6.746			7.018	6.568	4.200	4.200		4.53	4.705	
Finished Surface		8.666				8.687		7.550				7.404		8.179				8.204		8.179				7.957		4.500				6.405
Chainage	0.000		5.45	5.45		7.037	0.000					2.412	0.000					6.274	0.000					27.221	0.000		6.28	6.28		10.099

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
D	NEW IQP DETAILS AND LINE B19 UPDATED	18-03-20 KH	PC
C	ALL LONGSECTIONS UPDATED	14-02-20 KH	GM
B	PIPE TYPES	??-??-?? KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 20

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD649		REVISION D	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

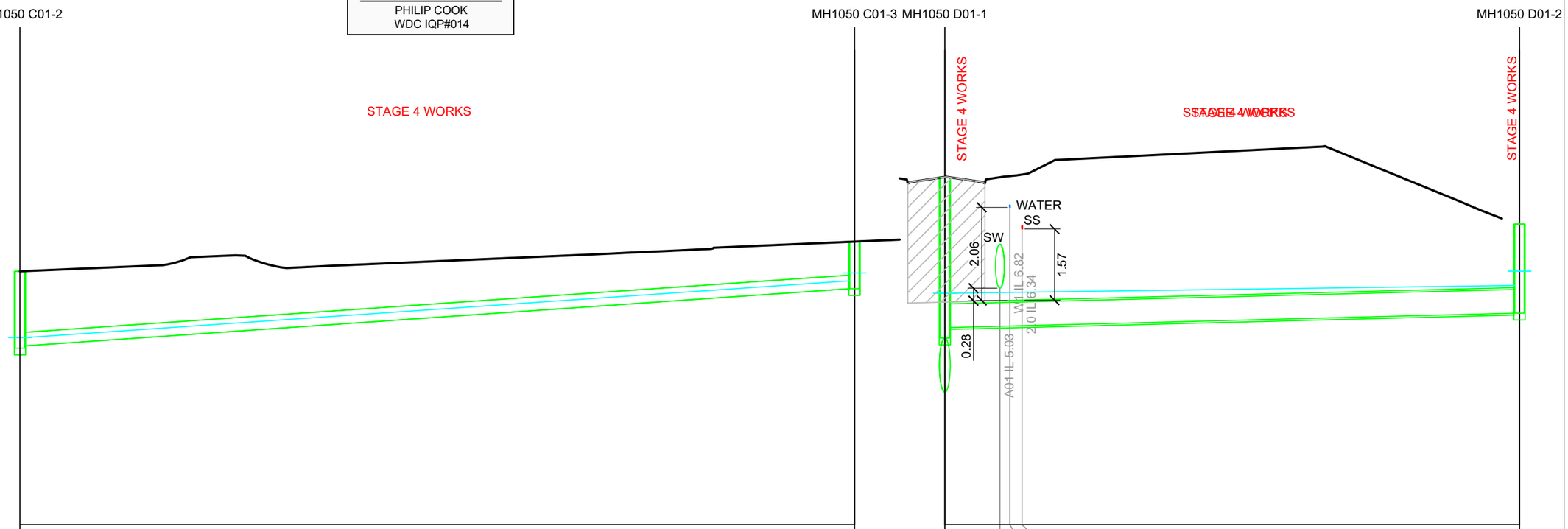
BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



| | | |

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
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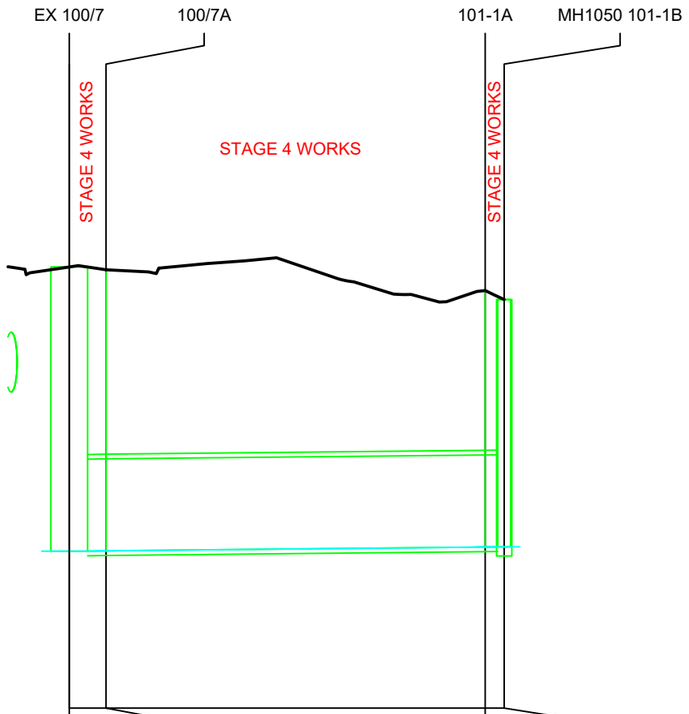
BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		0		0		0		
Vn - Velocity (m/s)		0.00		0.00		0.00		
Pipe Size/Type		Ø1500 RCRRJ Class 4		Ø1500 RCRRJ Class 4		Ø1500 RCRRJ Class 4		
Grade (%)		0.2%		0.2%		0.2%		
Datum		-4.000						
Depth To Invert	4.634	4.634	4.582	4.582	4.182	4.182	4.032	
HGL Levels	2.358		2.364		2.426		2.429	
Invert Levels	2.358	2.358	2.364	2.364	2.426	2.426	2.429	
Finished Surface		6.992		6.946		6.608		6.461
Chainage		0.000		3.000		33.921		35.471

LINE T01

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	LONGSECTION LINE D01 ADDED	14-02-20 KH	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 22

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD651		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:02 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
SW = PROPOSED STORMWATER
WATER = POTABLE WATER

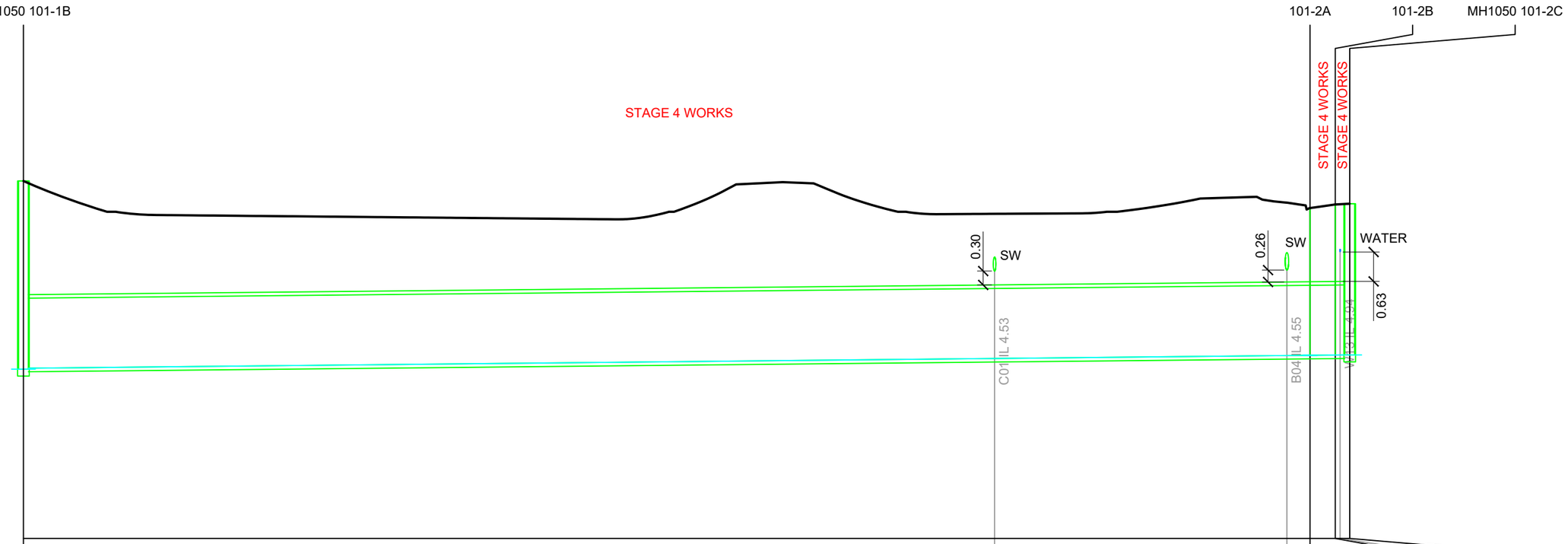
BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		0							0		0			
Vn - Velocity (m/s)		0.00							0.00		0.00			
Pipe Size/Type		Ø1500 RCRRJ Class 4							Ø1500 RCRRJ Class 4		Ø1500 RCRRJ Class 4			
Grade (%)		0.2%							0.2%		0.2%			
Datum		-5.000												
Depth To Invert	4.032	4.012						3.155	3.155	3.227	3.227	3.240		
HGL Levels	2.429	2.449						2.725		2.730		2.733		
Invert Levels	2.429	2.449			2.66		2.72	2.725	2.725	2.730	2.730	2.73	2.733	
Finished Surface		6.461							5.880		5.957			5.973
Chainage		35.471		104.15	139.62	135.5	170.97		173.455		176.163	176.68		177.713

LINE T01

SCALE 1:100

0 2 4

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	ALL LONGSECTIONS UPDATED	14-02-20 KH	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 23

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:500H @ A3 1:100V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD652		REVISION C	

SCALE 1:500

0 10 20

DATE PLOTTED: Wednesday, 18 March 2020 9:16:03 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION SHEET DD002

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
SW = PROPOSED STORMWATER
WATER = POTABLE WATER

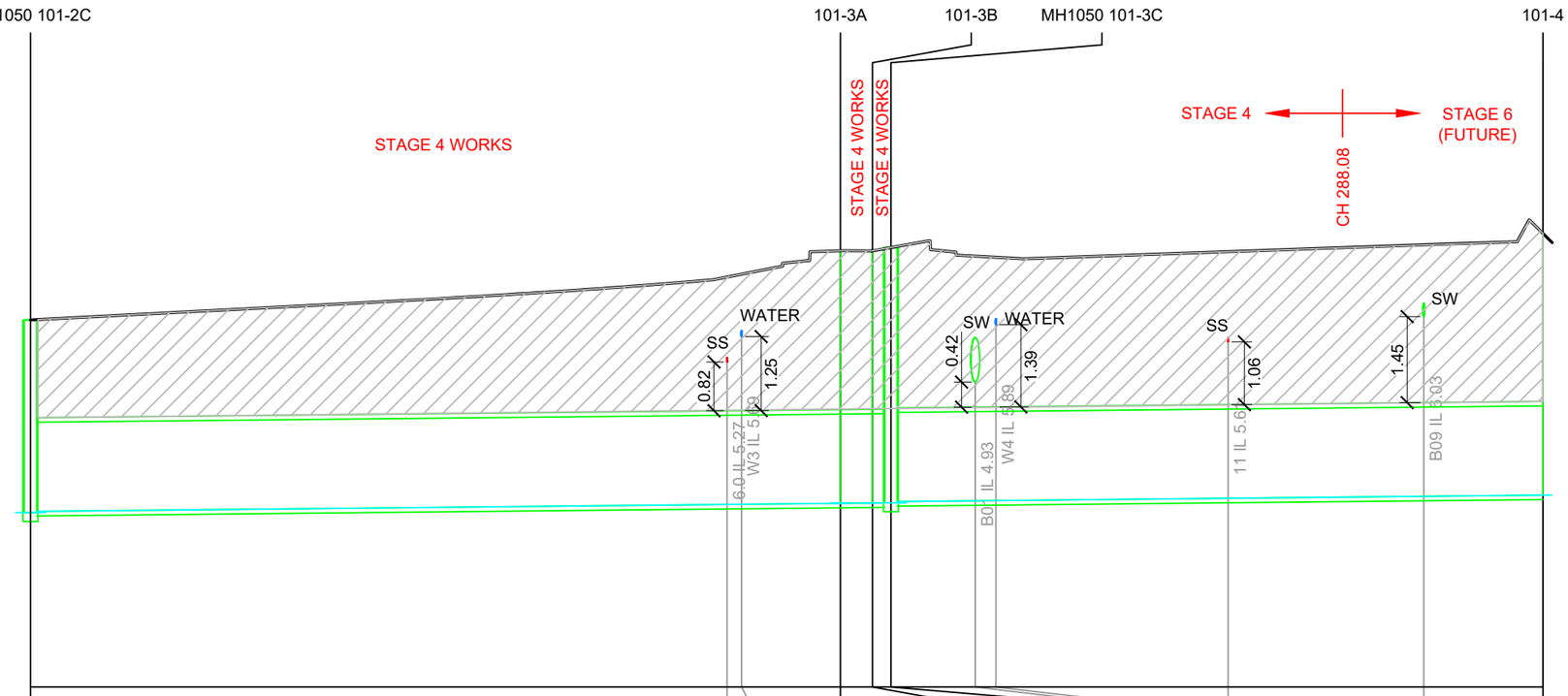
BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



Flow (L/s)		0					0	0			0			
Vn - Velocity (m/s)		0.00					0.00	0.00			0.00			
Pipe Size/Type		Ø1500 RCRRJ Class 4					Ø1500 RCRRJ Class 4	Ø1500 RCRRJ Class 4			Ø1500 RCRRJ Class 4			
Grade (%)		0.2%					0.2%	0.2%			0.2%			
Datum		-4.000												
Depth To Invert	3.240	3.220				4.248	4.248	4.243	4.243	4.293	4.273			4.401	
HGL Levels	2.733	2.753				2.890		2.895		2.898	2.918			3.028	
Invert Levels	2.733	2.753		2.87	2.87	2.890	2.890	2.895	2.895	2.898	2.918	2.93	2.93	2.97	3.01	3.028	
Finished Surface	5.973						7.138		7.138		7.191						7.428
Chainage	177.713		58.59	237.52			245.831		248.531		250.081	258.91	28.36	278.44	44.82	294.9	304.921

LINE T01

SCALE 1:100

SCALE 1:500

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	KH	PC
B	ALL LONGSECTIONS UPDATED	KH	GM
A	1ST ISSUE	KH	GM

PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 4 & 5 ONE TREE POINT RUAKAKA
TITLE	STORMWATER LONGSECTIONS SHEET 24
DATE CREATED	29-11-2019
DRAWN	K HANSARD
DESIGNED	A PARKER
APPROVED	G McGREGOR
CCL REF NO	14333-004
SCALE	1:500H @ A3 1:100V @ A3
STATUS	FOR APPROVAL
DWG NUMBER	DD653
REVISION	C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:03 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD630-SW LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

Wastewater/~~Stormwater~~ Connection Approved
Waste & Drainage Representative's Signature

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

STAGE 4 WORKS

RL0											
Invert Depth	1.265	1.564	1.578	1.200	1.209	1.200	1.178	1.177	1.265	1.285	
Sewer Invert	5.148	4.782	4.908	5.029	4.995	4.891	4.786	4.681	4.577	4.559	
Design Surface	6.413	6.346	6.485	6.229	6.205	6.090	5.964	5.858	5.841	5.844	
Chainages	0	2.988	10	16.766	20	30	40	50	60	61.676	

Horizontal 1:1000 Vertical 1:200
SEWER LONGSECTION 1.0

RL1				
Invert Depth	1.266	1.247	1.226	1.200
Sewer Invert	5.15	5.263	5.377	5.49
Design Surface	6.416	6.510	6.603	6.690
Chainages	0	10	20	29.963

Horizontal 1:1000 Vertical 1:200
SEWER LONGSECTION 1.1

STAGE 4 ← → STAGE 6 (FUTURE)

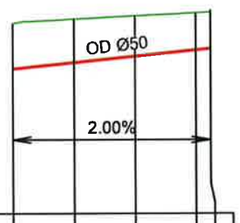
CH 90.82 E.O.W.

STAGE 4 WORKS

RL0														
Invert Depth	1.069	1.101	1.199	1.202	1.237	1.273	1.308	1.042	1.295	1.298	1.299	1.300	1.300	1.391
Sewer Invert	5.873	5.555	5.303	5.274	5.135	4.997	4.858	4.719	4.58	4.579	4.717	4.856	4.996	5.019
Design Surface	6.942	6.656	6.502	6.476	6.373	6.269	6.166	5.761	5.875	5.877	6.016	6.156	6.296	6.410
Chainages	0	10	17.909	20	30	40	50	60	70	70.131	80	90	100	101.617

Horizontal 1:1000 Vertical 1:200
SEWER LONGSECTION 3

STAGE 4 WORKS



RL1					
Invert Depth	1.491	1.423	1.323	1.223	1.254
Sewer Invert	5.685	5.885	6.085	6.285	6.332
Design Surface	7.176	7.308	7.408	7.508	7.586
Chainages	0	10	20	30	32.34

Horizontal 1:1000 Vertical 1:200
SEWER LONGSECTION 4.1

SCALE 1:200

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SEWER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3		STATUS FOR APPROVAL
DWG NUMBER DD660			REVISION C

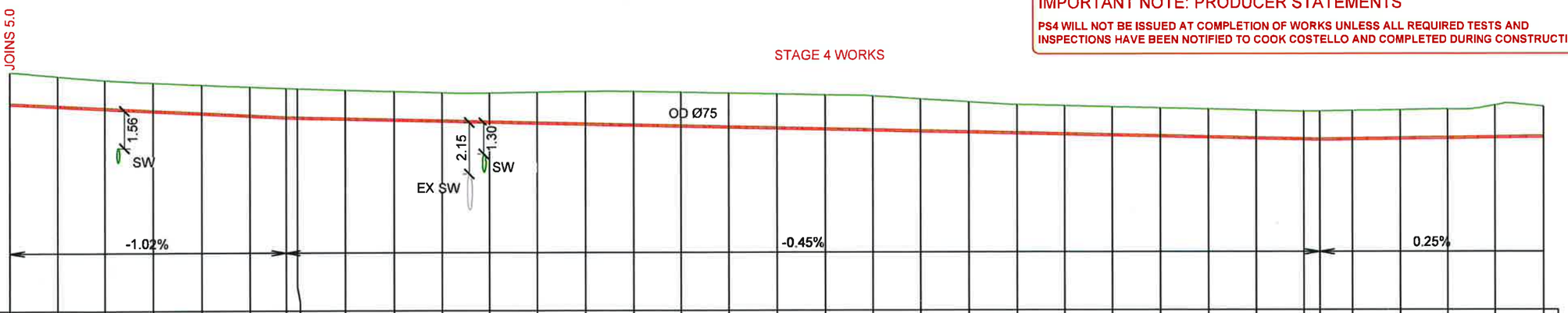
DATE PLOTTED: Wednesday, 18 March 2020 9:16:04 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



RL-2

Chainages	Invert Depth	Sewer Invert	Design Surface
0	1.342	6.573	7.915
10	1.274	6.471	7.746
20	1.212	6.37	7.582
30	1.201	6.268	7.469
40	1.210	6.167	7.376
50	1.227	6.065	7.293
57.578	1.247	5.988	7.236
60	1.240	5.978	7.218
70	1.220	5.933	7.153
80	1.208	5.888	7.096
90	1.202	5.844	7.046
100	1.236	5.799	7.035
110	1.309	5.755	7.064
120	1.383	5.71	7.093
130	1.425	5.665	7.091
140	1.432	5.621	7.053
150	1.440	5.576	7.016
160	1.447	5.532	6.978
170	1.454	5.487	6.941
180	1.443	5.442	6.886
190	1.359	5.398	6.757
200	1.274	5.353	6.628
210	1.204	5.309	6.513
220	1.199	5.264	6.463
230	1.193	5.219	6.413
240	1.188	5.175	6.363
250	1.183	5.13	6.313
260	1.177	5.085	6.263
270	1.177	5.041	6.218
273.315	1.202	5.026	6.228
280	1.204	5.043	6.247
290	1.208	5.068	6.276
300	1.208	5.094	6.302
310	1.351	5.119	6.470
320	1.274	5.144	6.418

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 2.0

RL1

Chainages	Invert Depth	Sewer Invert	Design Surface
300	1.208	5.094	6.302
310	1.351	5.119	6.470
320	1.274	5.144	6.418
321.994	1.266	5.15	6.416

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 2.0

RL2

Chainages	Invert Depth	Sewer Invert	Design Surface
0		7.268	
2.235	1.177	7.332	8.509
3.48	1.424	7.067	8.491
5.132	1.206	7.295	8.500
10	1.211	7.246	8.458
20	1.206	7.148	8.353
30	1.200	7.049	8.249
40	1.225	6.95	8.176
50	1.236	6.852	8.088
60	1.282	6.753	8.034
70	1.329	6.654	7.983
77.876	1.338	6.576	7.915

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 5.0

RL3

Chainages	Invert Depth	Sewer Invert	Design Surface
0		7.287	
10	1.233	7.36	8.593
20	1.211	7.432	8.643
24.865	1.200	7.468	8.667

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 5.1

Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

NOTES:
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- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
WATER = POTABLE WATER

BACKFILL

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:200 (0, 2, 4, 6, 8, 10)

SCALE 1:1000 (0, 10, 20, 30, 40, 50)

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SEWER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 2

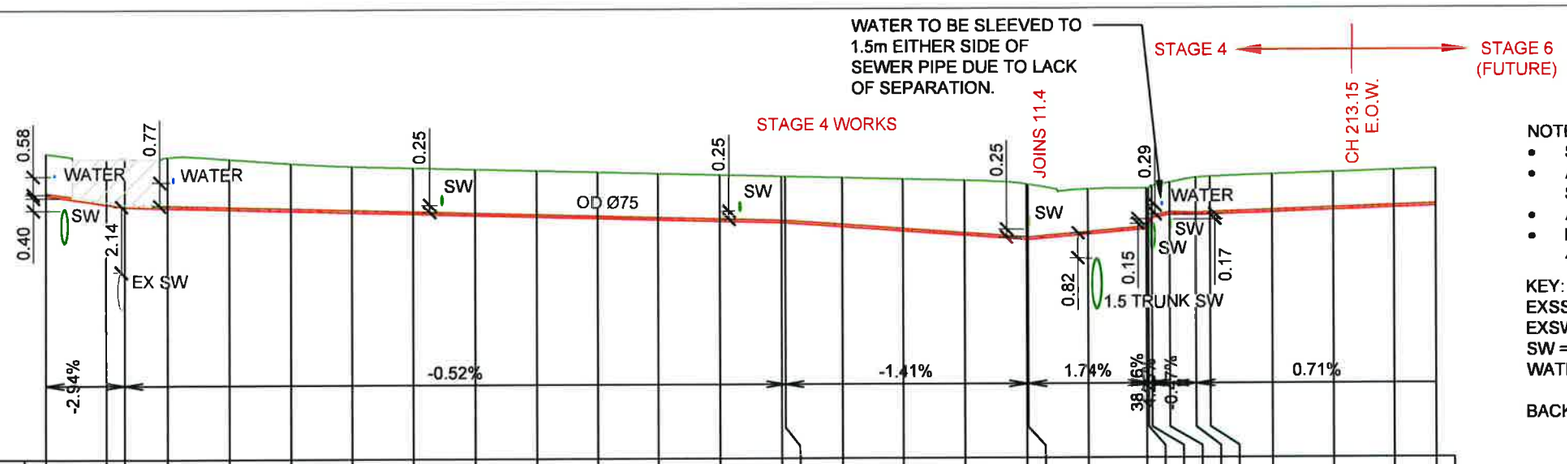
DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO 14333-004
SCALE 1:1000H @ A3 1:200V @ A3
STATUS FOR APPROVAL
DWG NUMBER DD661
REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:04 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

PHILIP COOK
WDC IQP#014



RL-2																												
Invert Depth	1.345	1.466	1.554	1.641	1.622	1.530	1.484	1.484	1.486	1.487	1.489	1.490	1.492	1.493	1.493	1.579	1.671	1.761	1.770	1.766	1.441	1.300	1.141	1.039	1.030	1.200	1.209	1.209	1.201	1.198	1.200
Sewer Invert	6.57	6.276	6.189	6.153	6.101	6.05	5.998	5.947	5.895	5.844	5.792	5.741	5.689	5.638	5.635	5.502	5.36	5.219	5.077	5.074	5.244	5.412	5.546	5.753	5.878	5.858	5.874	5.945	6.015	6.086	6.134
Design Surface	7.915	7.742	7.743	7.793	7.723	7.580	7.482	7.431	7.381	7.331	7.281	7.231	7.181	7.131	7.128	7.081	7.031	6.980	6.847	6.840	6.685	6.712	6.687	6.792	6.908	7.058	7.083	7.154	7.216	7.284	7.334
Chainages	0	10	12.97	20	30	40	50	60	70	80	90	100	110	120	120.595	130	140	150	160	160.235	170	179.653	180	180.534	183.474	187.715	190	200	210	220	226.846

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 6.0

NOTES:
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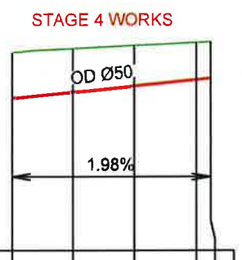
BACKFILL

Wastewater/~~Stormwater~~
Connection Approved
Waste & Drainage Representative's Signature

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

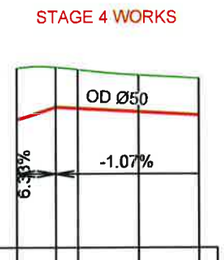
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL1						
Invert Depth	1.484	1.418	1.321	1.223	1.200	
Sewer Invert	5.932	6.13	6.327	6.525	6.571	
Design Surface	7.416	7.548	7.648	7.748	7.771	
Chainages	0	10	20	30	32.34	

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 6.1



RL2					
Invert Depth	1.678	1.303	1.262	1.196	1.200
Sewer Invert	6.141	6.544	6.505	6.397	6.292
Design Surface	7.819	7.846	7.767	7.593	7.492
Chainages	0	6.365	10	20	29.787

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 6.3

RL1														
Invert Depth	1.338	1.200	1.200	1.194	1.189	1.183	1.187	1.166	1.160	1.352	1.285	1.209	1.200	
Sewer Invert	5.782	6.144	6.147	6.203	6.259	6.314	6.351	6.411	6.588	6.765	6.943	7.12	7.14	
Design Surface	7.119	7.344	7.347	7.397	7.447	7.497	7.538	7.577	7.748	8.117	8.228	8.329	8.340	
Chainages	0	9.44	10	20	30	40	46.612	50	60	70	80	90	91.144	

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 6.4

SCALE 1:200

SCALE 1:1000

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SEWER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD662		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:04 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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WATER = POTABLE WATER

BACKFILL

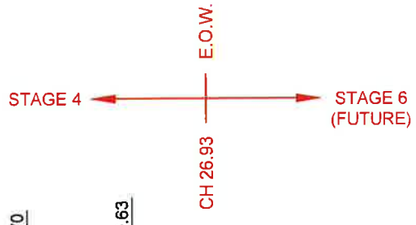
IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

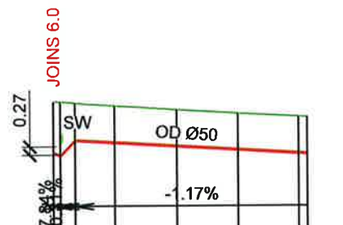


RL-2								
Invert Depth	1.206	1.625	1.464	1.301	1.363	1.216	1.068	1.061
Sewer Invert	5.97	5.499	5.624	5.674	5.824	6.041	6.258	6.268
Design Surface	7.176	7.124	7.088	6.975	7.187	7.257	7.326	7.329
Chainages	0	2.281	10	13.079	20	30	40	40.452

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 11

STAGE 4 WORKS



RL1								
Invert Depth	1.673	1.752	1.217	1.201	1.191	1.185	1.198	1.200
Sewer Invert	5.109	5.021	5.512	5.437	5.319	5.202	5.084	5.068
Design Surface	6.783	6.773	6.729	6.637	6.510	6.386	6.283	6.268
Chainages	0	1.126	3.557	10	20	30	40	41.384

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 11.4

SCALE 1:200

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	SEWER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD663		REVISION C	

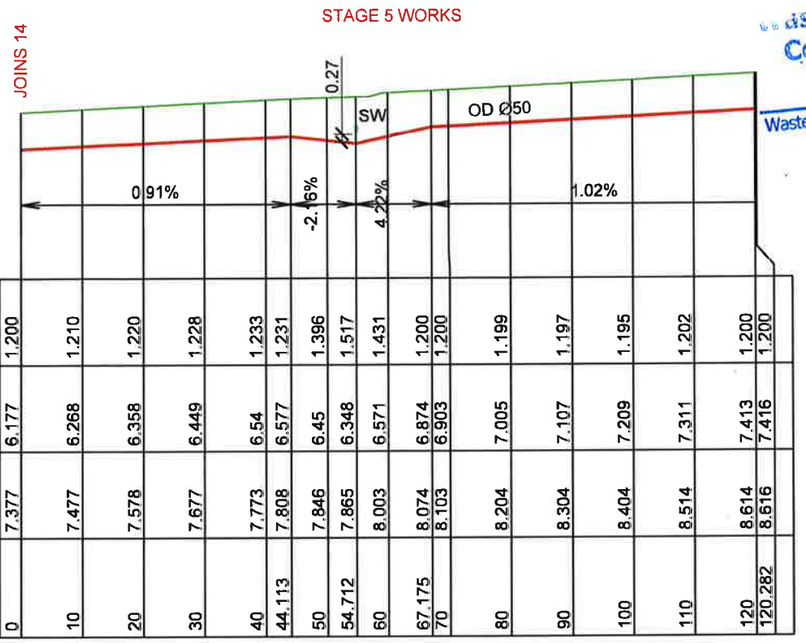
SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:05 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

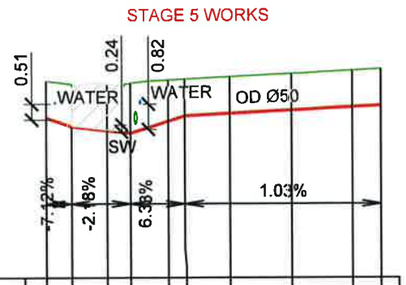
Wastewater / Stormwater Connection Approved
Waste & Drainage Representative's Signature



RL2																	
Invert Depth	1.200	1.210	1.220	1.228	1.233	1.231	1.396	1.517	1.431	1.200	1.200	1.199	1.197	1.195	1.202	1.200	1.200
Sewer Invert	6.177	6.268	6.358	6.449	6.54	6.577	6.45	6.348	6.571	6.874	6.903	7.005	7.107	7.209	7.311	7.413	7.416
Design Surface	7.377	7.477	7.578	7.677	7.773	7.808	7.846	7.865	8.003	8.074	8.103	8.204	8.304	8.404	8.514	8.614	8.616
Chainages	0	10	20	30	40	44.113	50	54.712	60	67.175	70	80	90	100	110	120	120.282

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 13



RL1											
Invert Depth	1.200	1.300	1.527	1.632	1.346	1.200	1.197	1.193	1.195	1.200
Sewer Invert	6.177	5.883	5.755	5.672	6.063	6.236	6.311	6.414	6.517	6.565
Design Surface	7.377	7.183	7.283	7.304	7.409	7.436	7.508	7.607	7.712	7.765
Chainages	0	4.126	10	13.823	20	22.733	30	40	50	54.668

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 13.1

RL1																		
Invert Depth	1.193	1.891	1.626	1.427	1.429	1.420	1.341	1.262	1.200	1.200	1.200	1.200	1.200	1.201	1.201	1.201	1.201	1.200
Sewer Invert	6.756	5.991	6.331	6.754	6.749	6.702	6.655	6.608	6.561	6.514	6.467	6.42	6.373	6.326	6.28	6.233	6.186	6.16
Design Surface	7.949	7.883	7.957	8.181	8.178	8.122	7.996	7.870	7.761	7.714	7.667	7.621	7.574	7.527	7.480	7.434	7.387	7.360
Chainages	0	2.727	10	19.05	20	30	40	50	60	70	80	90	100	110	120	130	140	145.458

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 13.3

NOTES:
- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
WATER = POTABLE WATER

BACKFILL

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200 (0, 2, 4, 6, 8, 10)

SCALE 1:1000 (0, 10, 20, 30, 40, 50)

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	KH	PC
B	SEWER AMENDED	AP	GM
A	1ST ISSUE	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3		STATUS FOR APPROVAL
DWG NUMBER DD664			REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:05 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:

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- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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EXSW = EXISTING STORMWATER
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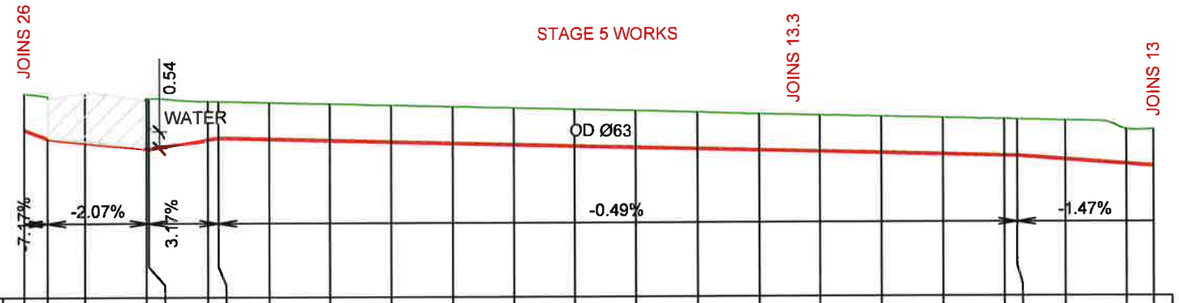
WATER = POTABLE WATER

BACKFILL

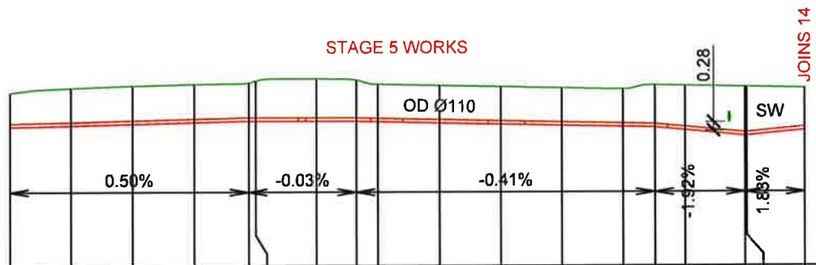


RL2

Invert Depth	1.199	1.300	1.632	1.650	1.661	1.262	1.200	1.202	1.204	1.206	1.208	1.211	1.213	1.215	1.203	1.191	1.193	1.196	1.198	1.200	1.200	1.279	1.141	1.200
Sewer Invert	7.401	7.124	6.997	6.791	6.783	7.088	7.141	7.101	7.052	7.003	6.954	6.905	6.856	6.807	6.759	6.71	6.661	6.612	6.563	6.514	6.504	6.388	6.242	6.177
Design Surface	8.600	8.424	8.630	8.441	8.444	8.350	8.342	8.303	8.256	8.209	8.163	8.116	8.069	8.022	7.961	7.901	7.854	7.807	7.761	7.714	7.704	7.667	7.383	7.377
Chainages	0	3.862	10	20	20.373	30	31.699	40	50	60	70	80	90	100	110	120	130	140	150	160	162.109	170	180	184.402

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 14



RL3

Invert Depth	1.107	1.205	1.229	1.228	1.237	1.301	1.361	1.321	1.200	1.200	1.200	1.200	1.201	1.350	1.423	1.570	1.564	1.350
Sewer Invert	7.512	7.562	7.611	7.661	7.705	7.705	7.702	7.7	7.685	7.644	7.603	7.562	7.521	7.5	7.407	7.22	7.225	7.4
Design Surface	8.619	8.767	8.840	8.889	8.942	9.006	9.062	9.021	8.886	8.845	8.804	8.762	8.723	8.850	8.830	8.790	8.789	8.750
Chainages	0	10	20	30	38.875	40	50	56.511	60	70	80	90	100	105.156	110	119.728	120	129.551

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 26

Wastewater/~~Stormwater~~ Connection Approved
Waste & Drainage Representative's Signature

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:200

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS AND SS LONGSECTION 26 UPDATED	18-03-20	KH	PC
B	SEWER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO 14333-004
SCALE 1:1000H @ A3 1:200V @ A3
STATUS FOR APPROVAL
DWG NUMBER DD665
REVISION C

SCALE 1:1000

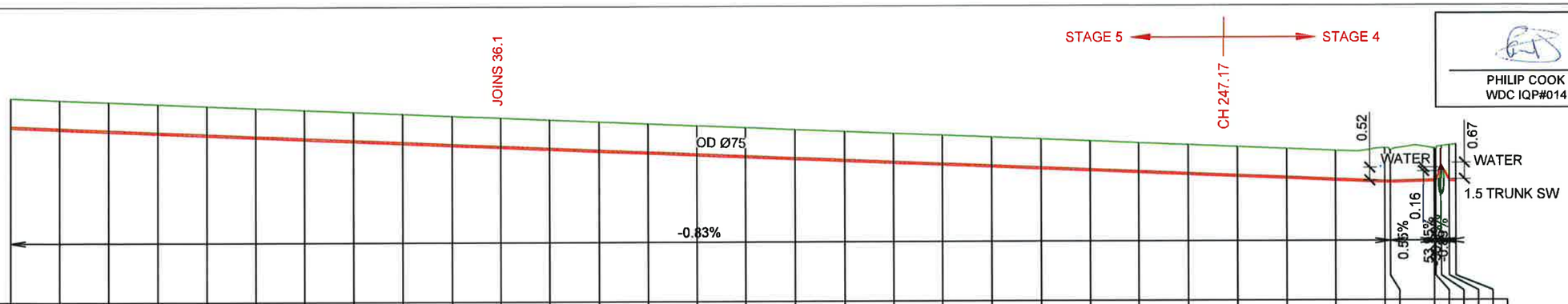
DATE PLOTTED: Wednesday, 18 March 2020 9:16:05 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

PHILIP COOK
WDC IQP#014



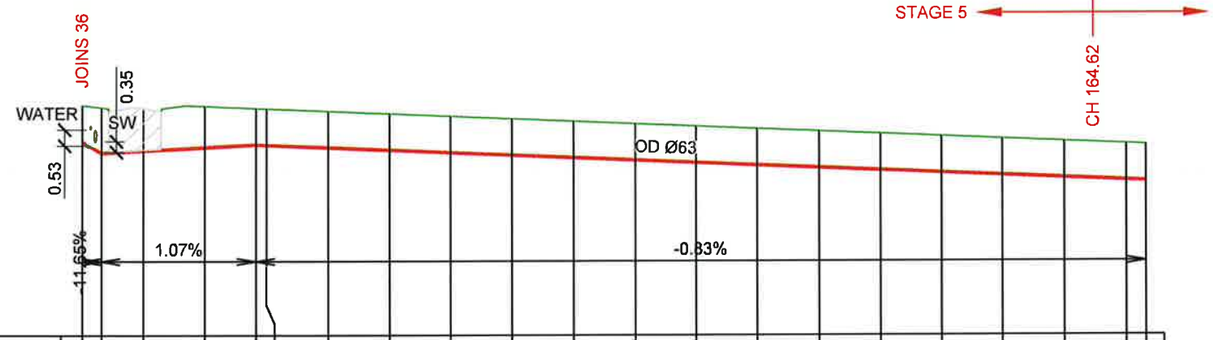
RL1																																									
Invert Depth	1.197	1.201	1.201	1.202	1.202	1.203	1.203	1.204	1.204	1.204	1.204	1.204	1.203	1.203	1.203	1.203	1.202	1.202	1.202	1.202	1.201	1.201	1.201	1.201	1.200	1.200	1.200	1.200	1.384	1.325	1.330	1.300	0.806	1.443	1.488
Sewer Invert	8.079	7.996	7.913	7.831	7.748	7.665	7.582	7.5	7.417	7.334	7.252	7.169	7.086	7.003	6.921	6.838	6.755	6.673	6.59	6.507	6.424	6.342	6.259	6.176	6.094	6.011	5.928	5.845	5.763	5.753	5.802	5.804	6.418	5.821	5.809
Design Surface	9.276	9.197	9.114	9.032	8.950	8.868	8.786	8.703	8.621	8.538	8.456	8.373	8.290	8.207	8.124	8.041	7.958	7.875	7.792	7.709	7.626	7.543	7.460	7.377	7.294	7.211	7.128	7.045	7.146	7.078	7.132	7.104	7.223	7.264	7.297
Chainages	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	281.121	290	290.286	291.424	293.037	294.385

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 36

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
WATER = POTABLE WATER

BACKFILL



RL1																										
Invert Depth	1.204	1.490	1.401	1.357	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200
Sewer Invert	7.257	6.891	6.964	7.071	7.16	7.146	7.064	6.981	6.898	6.816	6.733	6.651	6.568	6.486	6.403	6.32	6.238	6.155	6.073	5.99	5.964					
Design Surface	8.460	8.381	8.366	8.429	8.360	8.346	8.264	8.181	8.099	8.016	7.933	7.851	7.768	7.686	7.603	7.521	7.438	7.356	7.273	7.190	7.164					
Chainages	0	3.138	10	20	28.311	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	173.185					

Horizontal 1:1000 Vertical 1:200

SEWER LONGSECTION 36.1

Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

SCALE 1:200 (0, 2, 4, 6, 8, 10)

SCALE 1:1000 (0, 10, 20, 30, 40, 50)

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	SEWER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET 7

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3		STATUS FOR APPROVAL
DWG NUMBER DD666			REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD660-SS LS.dwg

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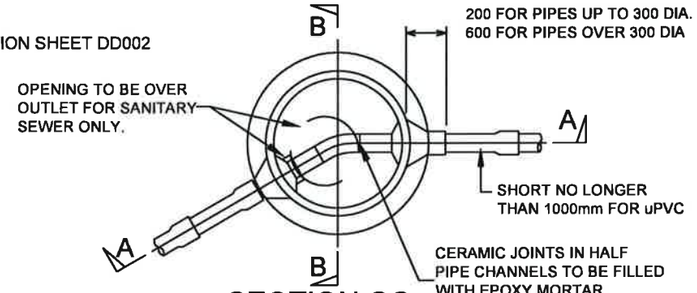
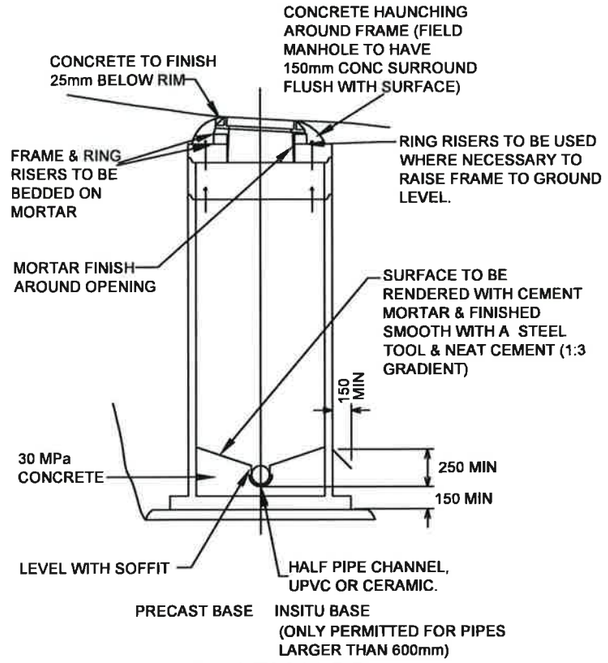
NOTE:
SEE CONSTRUCTION SHEET DD002



SECTION CC

NOTES:

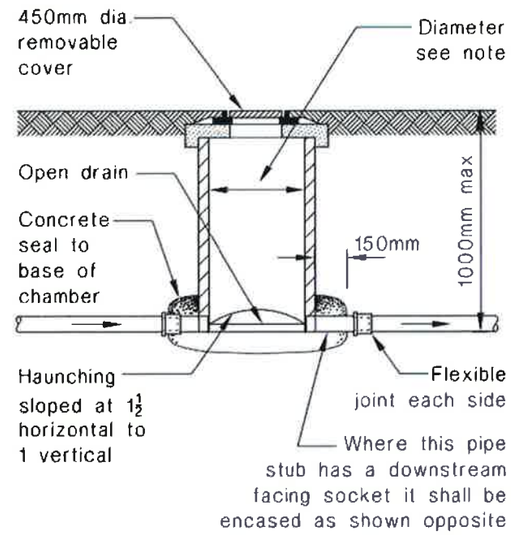
1. THIS DETAIL IS APPLICABLE FOR PIPE DIAMETERS UP TO 600mm & FOR MANHOLE DEPTHS UP TO 5.0m.
2. ALL STEEL FITTINGS TO BE HOT DIP GALVANISED ZINC COATINGS TO BE NOT LESS THAN 700g/m
3. 150mm THICK REINFORCED CONCRETE LIDS WITH HEAVY DUTY DUCTILE IRON FRAMES & COVERS TO BE USED IN DRIVEWAYS, CARRIAGEWAYS & BERMS. 100mm THICK CONCRETE LIDS WITH LIGHT DUTY CAST IRON FRAMES & COVERS MAY BE USED ELSEWHERE.
4. PRECAST MANHOLE BASES SHALL BE USED IN ALL INSTANCES WITH MINIMUM SIZED HOLES CUT FOR PIPE ENTRY.
5. NO ADDITIONAL THIN PLASTERING OF BENCHING OR INVERTS IS PERMITTED.
6. ALL MANHOLE THROATS ARE TO BE PAINTED GREEN FOR STORMWATER, RED FOR SEWER. PAINTING ON MANHOLE COVERS IS OPTIONAL. IF COVERS ARE PAINTED THEY SHALL BE GREEN FOR STORMWATER, RED FOR SEWER WITH 50mm WIDE WHITE STRIP PAINTED THROUGH THE CENTRE OF THE COVER.
7. ALL CONCRETE TO BE 20 MPa AT 28 DAYS.
8. STORMWATER MANHOLES DO NOT REQUIRE HALF PIPE CHANNELS, OR SHORT PIPE SECTIONS BEYOND THE ENTRY OR EXITS.
9. STEPPED RUNGS NOT TO BE PROVIDED FOR SEWER MANHOLES.
10. BASE TO BE COMPACTED TO RESILIANT MODULUS OF 40 MPa FOR ALL PIPES, MANHOLES, SUMPS, PITS, ETC.



SECTION BB

NZ BUILDING CODE E1

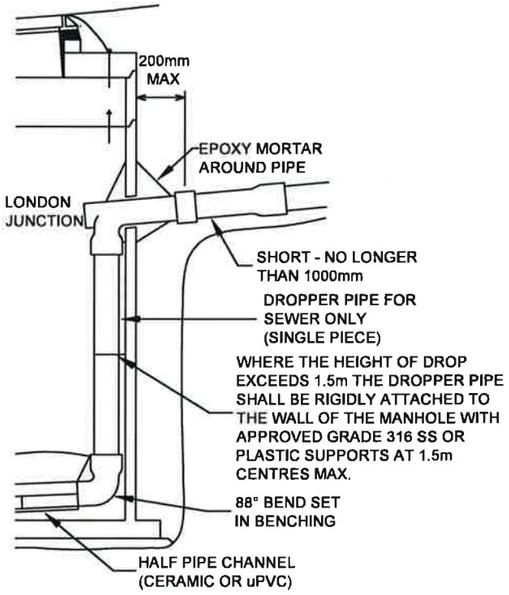
Figure 11: Typical Inspection Chamber
Paragraphs 3.5.3, 3.7.1 and 3.7.4



SECTION

NOTE:
Inspection chamber diameter to be:
-450 mm for drains 100 mm dia or less.
-600 mm for drains greater than 100 mm dia.

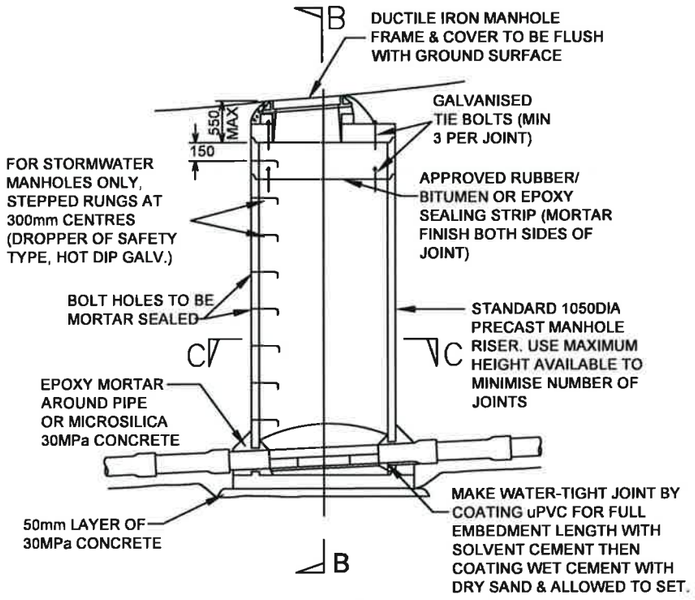
600Ø MANHOLE WITH TRAFFICABLE LID



SECTION A-A INTERNAL DROP

NOTE:

1. THIS DETAIL IS APPLICABLE FOR PIPE DIAMETERS UP TO 250mm & FOR MANHOLE DEPTHS UP TO 5.0m & FOR MANHOLE DIAMETERS > 1200mm
2. FOR MANHOLE DIAMETERS < 1200mm AN EXTERNAL DROP MUST BE USED (SEE NZS 4404, SHEET CM-004)



SECTION AA

STANDARD PRECAST MANHOLE (SEWER & STORMWATER)

REFER TO NZS 4404:2010
NOT TO SCALE

Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
TYPICAL MANHOLE DETAIL

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD670			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:07 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

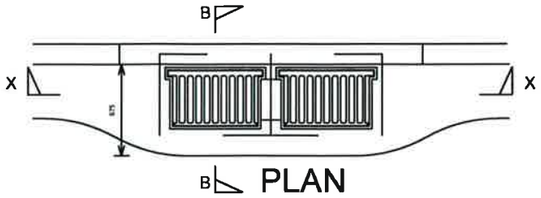
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

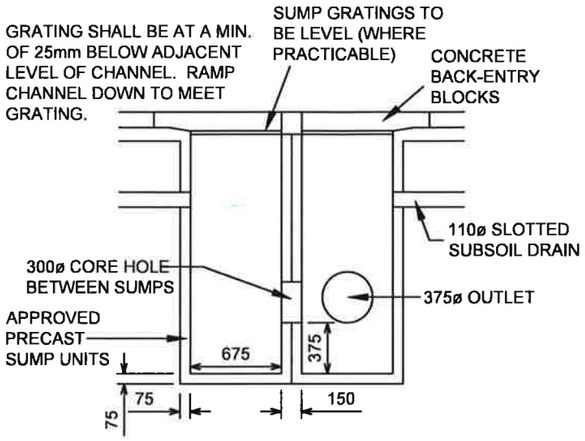
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION SHEET DD002

PHILIP COOK
WDC IQP#014

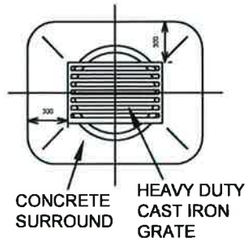


PLAN

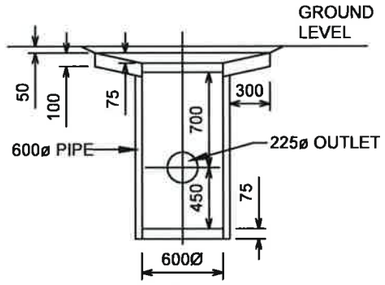


SECTION X-X
DOUBLE SUMP

SHEET 34 WDC EES 2010 - NOT TO SCALE



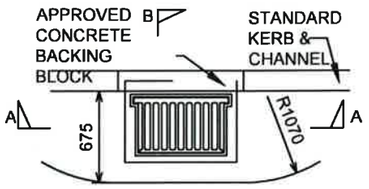
PLAN



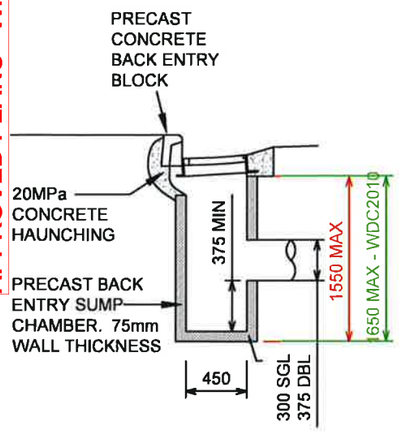
SECTION

FIELD SUMP DETAIL

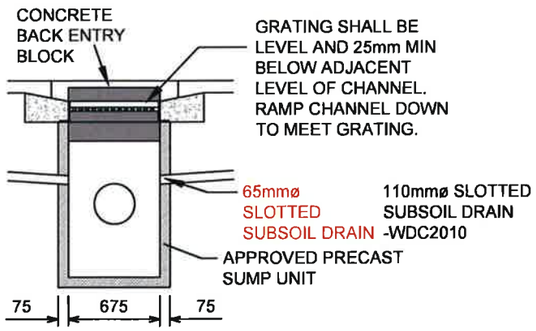
SHEET 34 WDC EES 2010 - NOT TO SCALE



B PLAN

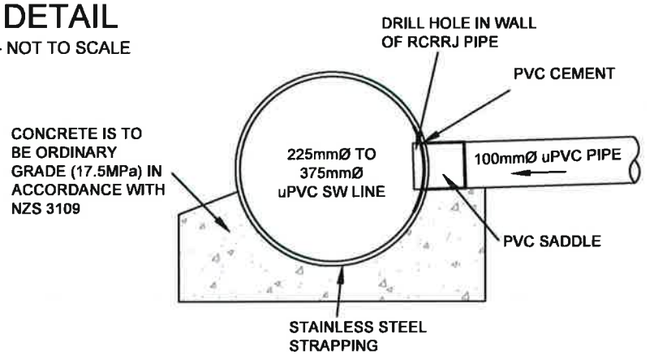


SECTION B-B

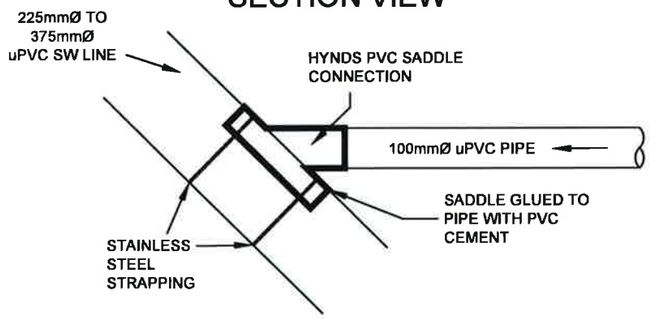


SECTION A-A
SINGLE SUMP

SHEET 34 WDC EES 2010 - NOT TO SCALE



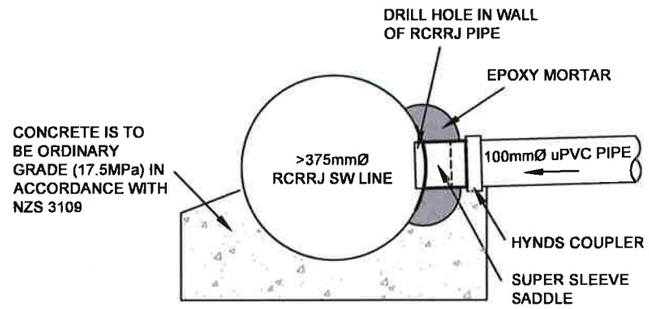
SECTION VIEW



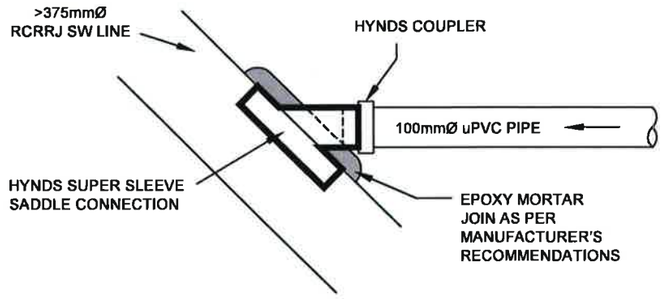
PLAN VIEW

SADDLE CONNECTION DETAIL FOR PVC PIPES

NOT TO SCALE



SECTION VIEW



PLAN VIEW

SADDLE CONNECTION DETAIL FOR CONCRETE PIPES

NOT TO SCALE

Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

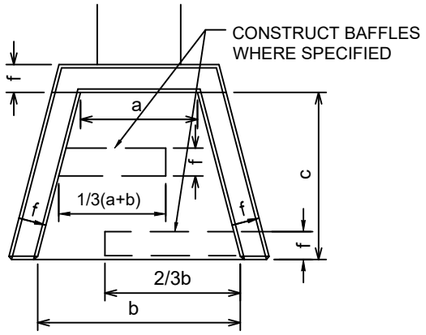
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
TYPICAL SUMP DETAIL
& SADDLE CONNECTION DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD671			REVISION B

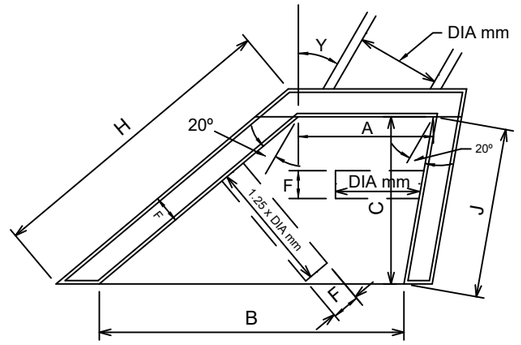
DATE PLOTTED: Wednesday, 18 March 2020 9:16:09 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



PLAN

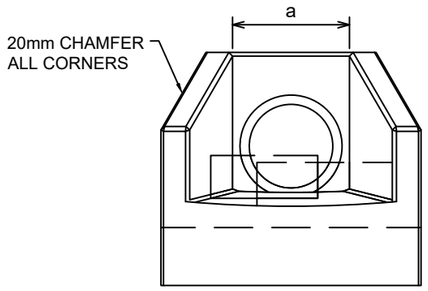
SHEET 35 WDC EES 2010 - NOT TO SCALE



PLAN

SHEET 35 WDC EES 2010 - NOT TO SCALE

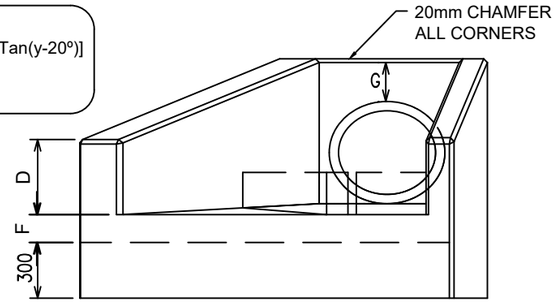
NOTES:
1. SEE CONSTRUCTION SHEET DD002
2. ALL INLET AND OUTLET HEADWALL STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



END ELEVATION

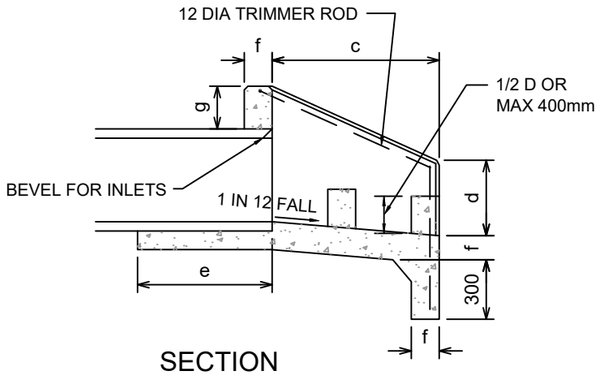
SHEET 35 WDC EES 2010 - NOT TO SCALE

A. Sec y x (a)
B. C Tan (y+20º) + [A-C Tan(y-20º)]
H. C x Sec (y + 20º)
J. C x Sec (y - 20º)



END ELEVATION

SHEET 35 WDC EES 2010 - NOT TO SCALE



SECTION

SHEET 35 WDC EES 2010 - NOT TO SCALE

PRINCIPAL DIMENSIONS (mm)							
DIA OF PIPE	a	b	c C	d D	e E	f F	g G
150	300	450	600	200	325	100	150
230	380	600	700	250	425	100	150
300	450	750	750	300	525	100	150
375	550	900	850	350	625	100	150
450	630	1100	900	400	725	150	230
525	700	1200	1000	450	825	150	230
600	800	1400	1100	550	900	150	230
750	1000	1700	1200	600	1050	150	300
900	1170	2000	1450	650	1225	150	300
1050	1380	2300	1700	750	1375	150	300
1200	1520	2600	2100	750	1550	150	450
1350	1680	2800	2400	750	1725	150	450

NOTES:
1. REINFORCE FLOORS & WALLS WITH:
   - 150 - 375 665 MESH
   - 450 - 600 633 MESH OR D10 RODS AT 250 CRS
   - 675 - 900 D12 RODS AT 250 CRS
   - 1050 - 1350 D12 RODS AT 150 CRS
2. ALL REINFORCEMENT SHALL BE PLACED CENTRALLY IN WALLS AND FLOOR, AND SHALL BE CONTINUOUS BETWEEN WALLS AND FLOOR.
3. LAPS IN STRUCTURAL GRADE BARS TO BE 300 MIN.
4. THERE SHALL BE A LEAST 2 BARS - WHETHER MESH OR M.S. OVER THE TOP OF THE PIPE.
5. CONCRETE IS TO BE ORDINARY GRADE (17.5MPa) IN ACCORDANCE WITH NZS 3109.
6. BAFFLES ARE TO BE CONSTRUCTED AS SHOWN WHEN OUTLET VELOCITIES AND SOIL CONDITIONS DICTATE, IN EXTREME CASES SPECIFIC DESIGN MAY BE REQUIRED BY THE COUNCIL.
7. INLET STRUCTURES SHALL HAVE REVERSE APRON FALL AND NO BAFFLES.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

INLET AND OUTFALL STRUCTURES

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
INLET AND OUTLET STRUCTURES

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD672		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:09 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

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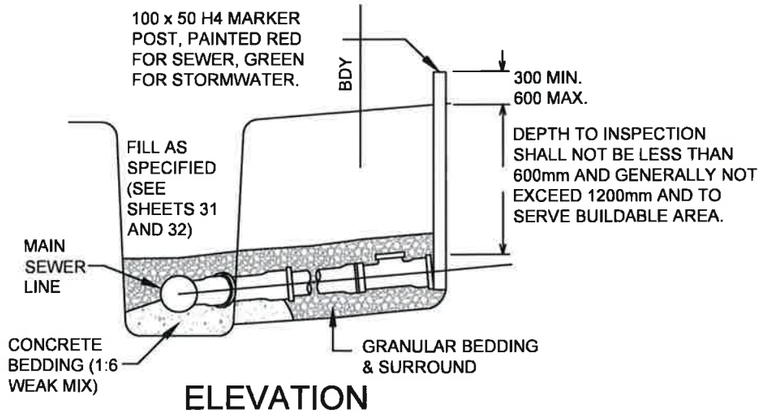
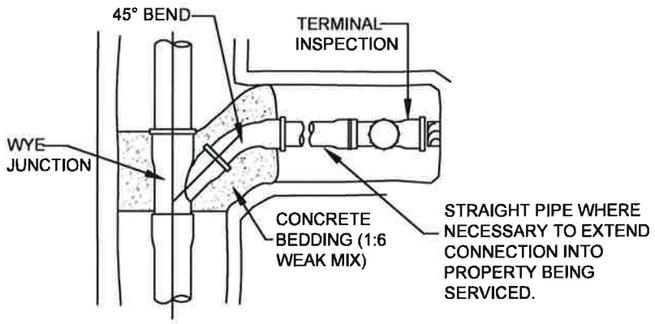


ELEVATION



NOTES:

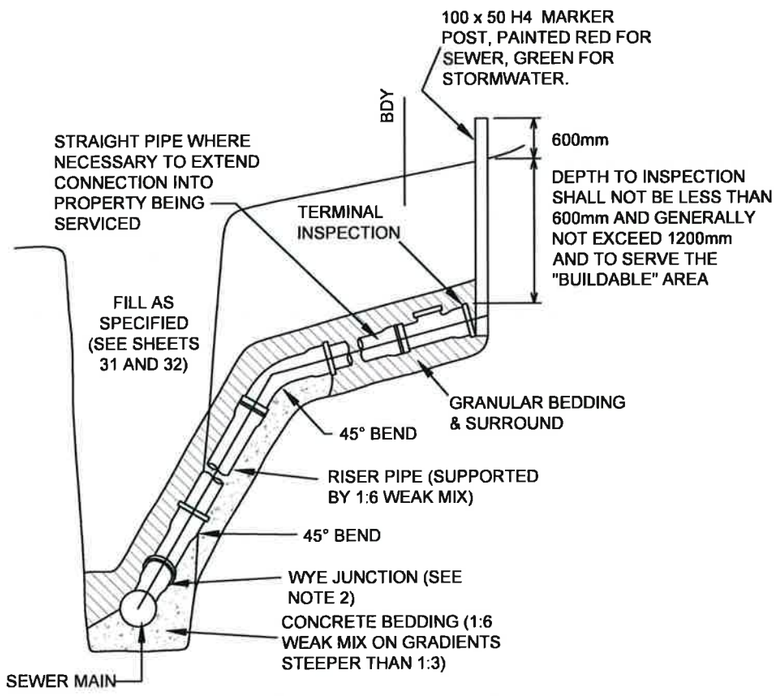
1. THE TERMINAL INSPECTION SHALL BE LOCATED NOT LESS THAN 300mm INSIDE THE PROPERTY BEING SERVICED AND BE FREE OF OBSTRUCTIONS.
2. FOR STORMWATER CONNECTIONS, JUNCTIONS TO BE (IN ORDER OF PREFERENCE):
   a. PREFABRICATED STANDARD WYE JUNCTIONS
   b. PREFABRICATED FACTORY SPECIAL CONNECTION
   c. FIELD FABRICATED EPOXY MORTARED SADDLE FLANGE CONNECTION WITH APPROPRIATE INSERT ADAPTOR.
3. TERMINAL BLANK END REQUIRED FOR STORMWATER CONNECTIONS.
4. PIPES AND FITTINGS ARE TO BE SEWER GRADE uPVC, VITRIFIED CLAY, CONCRETE OR CERAMIC AND TO RELEVANT NZ STANDARD.
5. PIPELINES THAT ARE LIKELY TO CARRY COMMERCIAL OR INDUSTRIAL WASTE ARE TO SATISFY THE MANUFACTURER'S REQUIREMENTS.
6. SPECIFIC DESIGN MAY BE REQUIRED IN POTENTIALLY UNSTABLE AREAS.
7. JOINT FLEXIBILITY IS TO BE MAINTAINED WHERE PIPELINES ARE IN CONTACT WITH CONCRETE. PIPES SHALL BE SEPARATED FROM CONCRETE USING DPC.
8. AS-BUILT PLANS ARE REQUIRED FOR ALL CONNECTIONS.

MARKING OF SS & SW CONNs

NOTE THAT RED PAINT IS NO LONGER TO BE USED FOR SW SERVICES. IT IS FOR SEWER SERVICES ONLY.

CONNECTIONS SHALL BE SEALED WITH REMOVABLE CAPS UNTIL REQUIRED. THE CAPS ARE TO BE PAINTED:
RED FOR SEWER WITH 'SS' PAINTED/FIXED ONTO THE END CAP.
GREEN FOR STORMWATER WITH 'SW' PAINTED/FIXED ONTO THE END CAP.

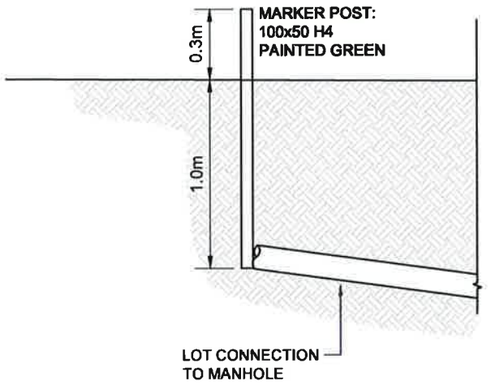
POSITIONS ARE ALSO TO BE MARKED WITH A WOODEN STAKE (MIN 100x50) EXTENDING FROM THE INVERT OF THE CONNECTION TO 600mm ABOVE GROUND LEVEL. STAKES ARE TO BE PAINTED:
RED FOR SEWER WITH 'SS' PAINTED/FIXED ONTO THE STAKE
GREEN FOR STORMWATER WITH 'SW' PAINTED/FIXED ONTO THE END CAP.



RAMPED RISER CONNECTION

SHEET 36 WDC EES 2010 - NOT TO SCALE
(REQUIRES SPECIFIC APPROVAL)

NOTE:
SEE CONSTRUCTION SHEET DD002



TYPICAL STORMWATER CONNECTION MARKER DETAIL

NTS

Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

STORMWATER AND SEWER CONNECTIONS

FOR ALL ENVIRONMENTS

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS: WFH PROPERTIES LIMITED, THE LANDING - STAGES 4 & 5, ONE TREE POINT, RUAKAKA

TITLE: STORMWATER & SEWER CONNECTIONS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD673			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:09 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

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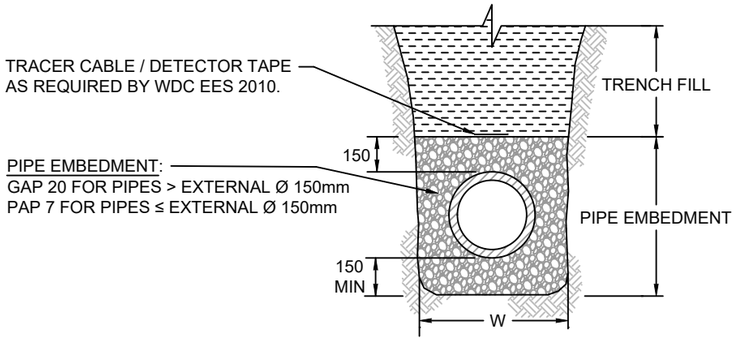
NOTE:
SEE CONSTRUCTION SHEET DD002

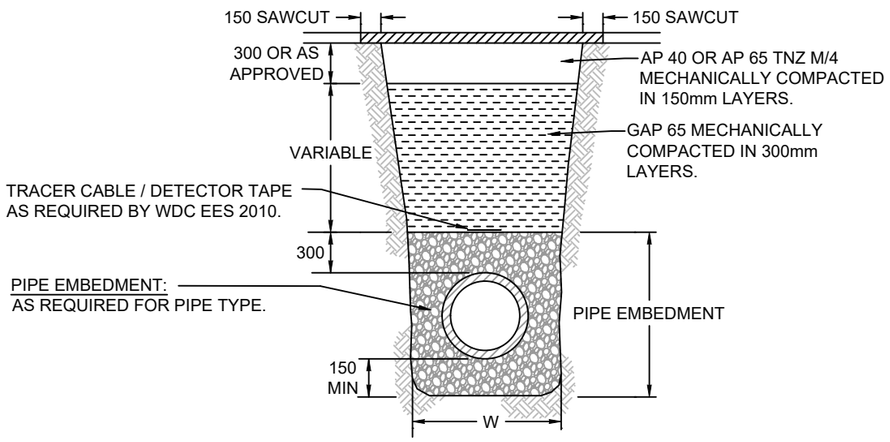


PIPE BEDDING DETAIL FOR STORMWATER (CONCRETE OR uPVC), GRAVITY SEWER (uPVC), WATERMAIN (PE80) & LOW PRESSURE SEWER (PE100)

(NZS 4404-2010, CM002)
FOR FLEXIBLE & RIGID PIPES (SEE NOTE 4)

W	TYPE OF PIPE
D + 450	CONCRETE
D + 450	uPVC, PE & PP

VARIATION IN W REQUIRE ADDITIONAL DESIGN COMPENSATION.
D = EXTERNAL Ø OF PIPE



PIPE BEDDING DETAIL WITH ADDITIONAL BACKFILL REQUIREMENTS UNDER CARRIAGEWAYS

(ALL TYPES OF PIPE)

ACID SULPHATE NOTE:

CALCIUM CARBONATE (AGRICULTURAL LIME) TO BE MIXED IN WITH THE BEDDING AND BACKFILL AROUND WHERE ALL STANDARD CONCRETE PIPES AND MANHOLES ARE TO BE INSTALLED. LIMING RATE 23KG/CaCO3/TONNE OF SOIL. AS A PERCENTAGE ~2.5% BY WEIGHT LIME MIXED IN WITH THE SOIL. ALL METAL FITTINGS AND CONNECTIONS TO BE PAINTED OR WRAPPED TO BE PROTECTED FROM THE SOIL.

NOTES

1. SEE CONSTRUCTION NOTES DD002.
2. ALL DIMENSIONS IN MILLIMETRES.
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH NZS 4404-2010 SHEET CM-001 & CM-002.
4. PIPE CLASSIFICATION:
   a. RIGID PIPES: VC, RC, STEEL, AND DI.
   b. FLEXIBLE PIPES: PVC, GRP, AND PE.
4. PLACEMENT OF EMBEDMENT, TRENCHFILL & COMPACTION TO MEET THE REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS.
5. EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT. WHEN EXCAVATED, REPLACE WITH GRANULAR MATERIAL AS SPECIFIED & SUPPORT AS REQUIRED.
6. ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR - SEE NZS 4404-2010 SHEET CM-001.
7. IN SOME AREAS LOCAL PRACTICE MAY ALLOW USE OF SELECTED EXCAVATED MATERIAL AS PIPE EMBEDMENT.
8. IN UNSUITABLE GROUND CONDITIONS SPECIFIC DESIGN IS REQUIRED REFER TO WSA 03 & WSA 04 (WATER SERVICES ASSOCIATION OF AUSTRALIA) DRAWINGS FOR GUIDANCE.
9. CONCRETE PIPES SHOULD BE BASED ON FIGURES 11 TO 13 IN AS/NZS 3725.

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
TRENCH & HEADWALL DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD674			REVISION B

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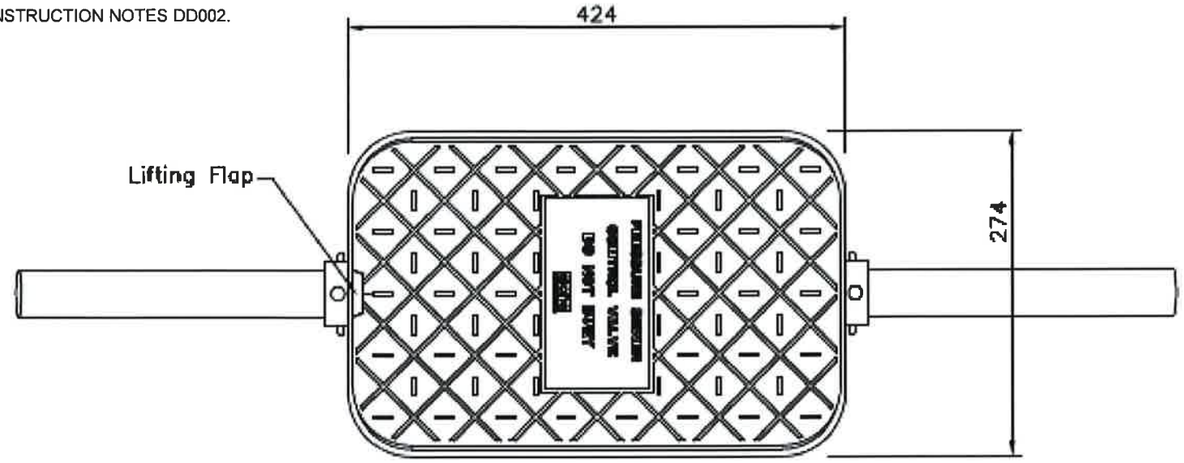
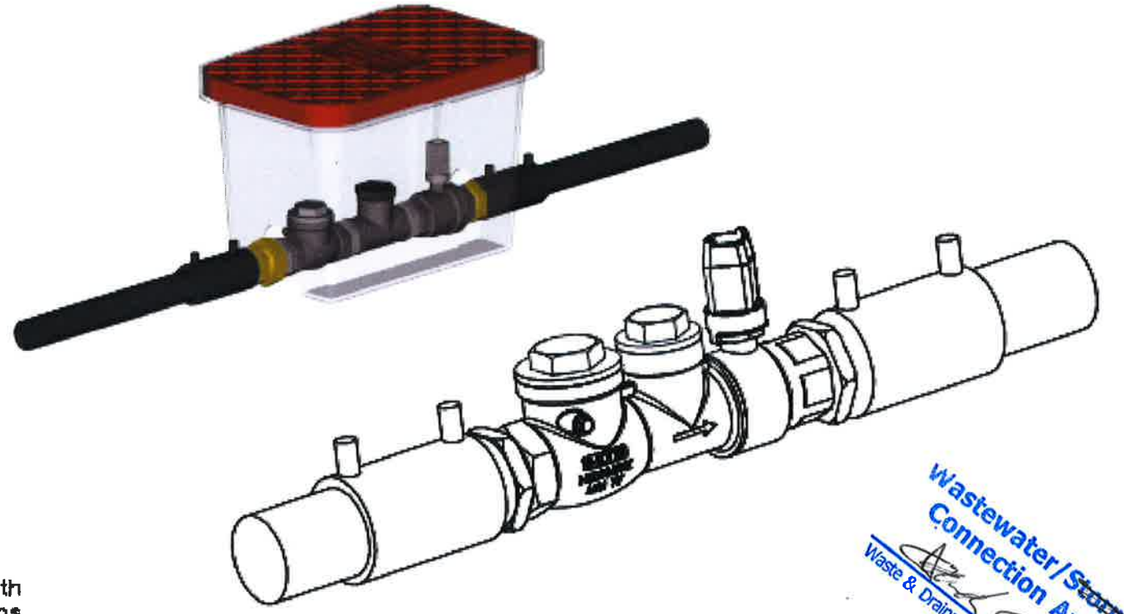
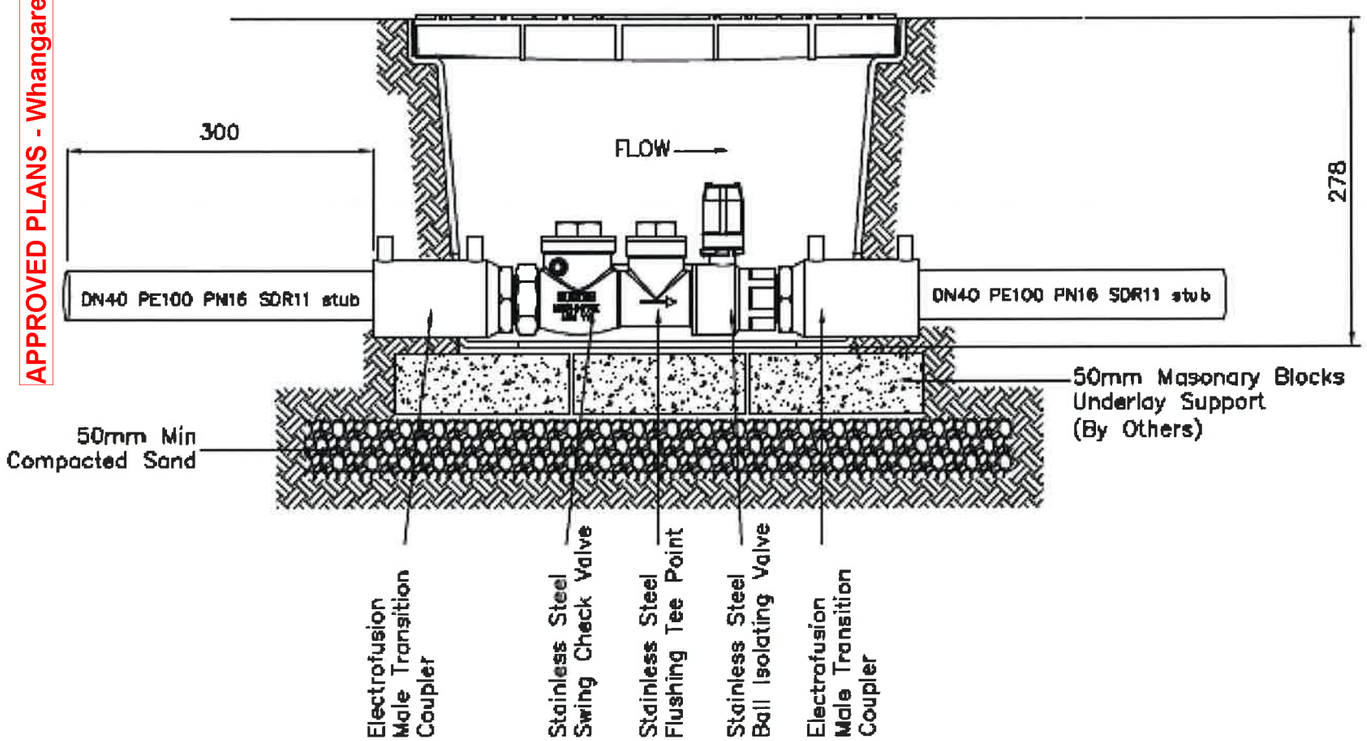
NOTES:
SEE CONSTRUCTION NOTES DD002.

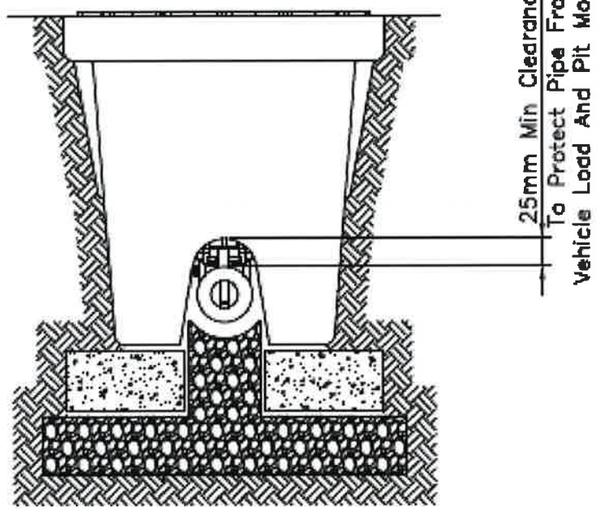
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020





Each boundary kit supplied with
300mm length DN40 PE100 PN16 SRD11 stubs
each end E/F welded and complete unit pressure
tested to 16 Bar by Ecoflow





Wastewater/Stormwater
Connection Approved
Waste & Drainage Representative's Signature

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
BOUNDARY KIT WITH EXTENDED STUBS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD675			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:10 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

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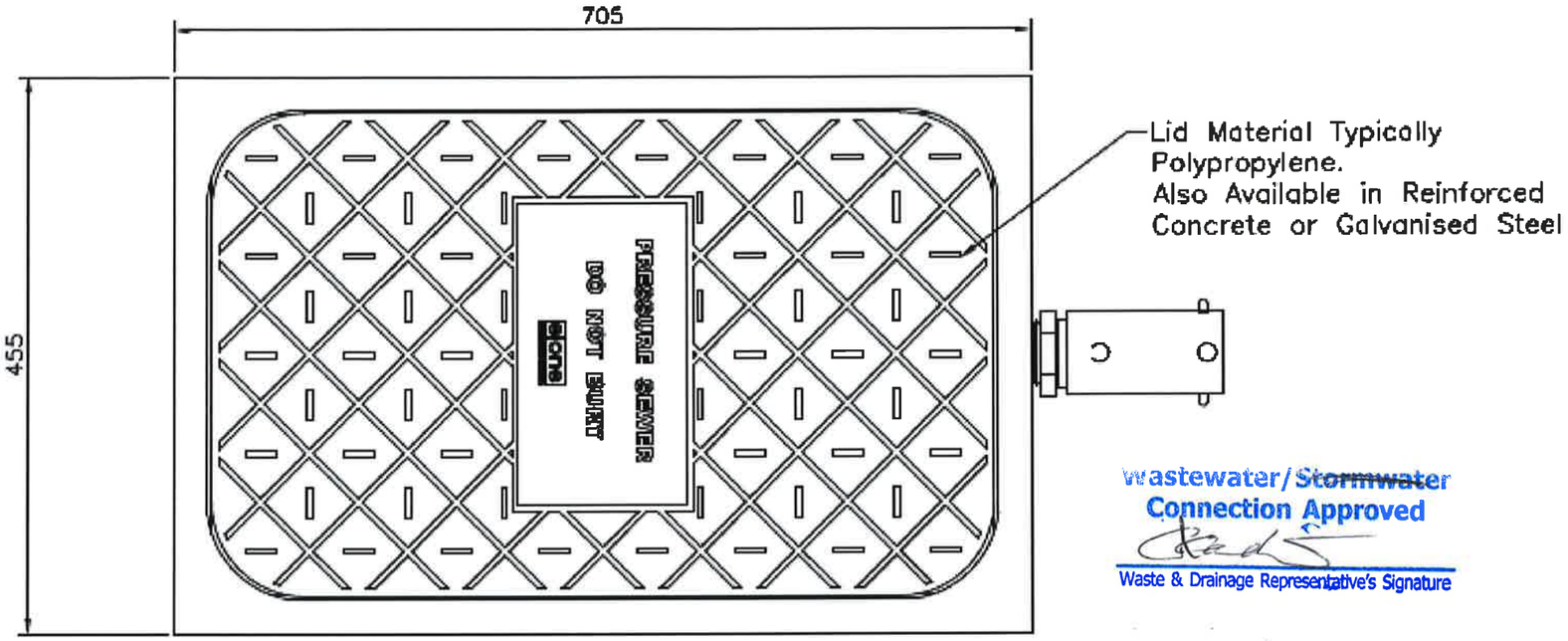
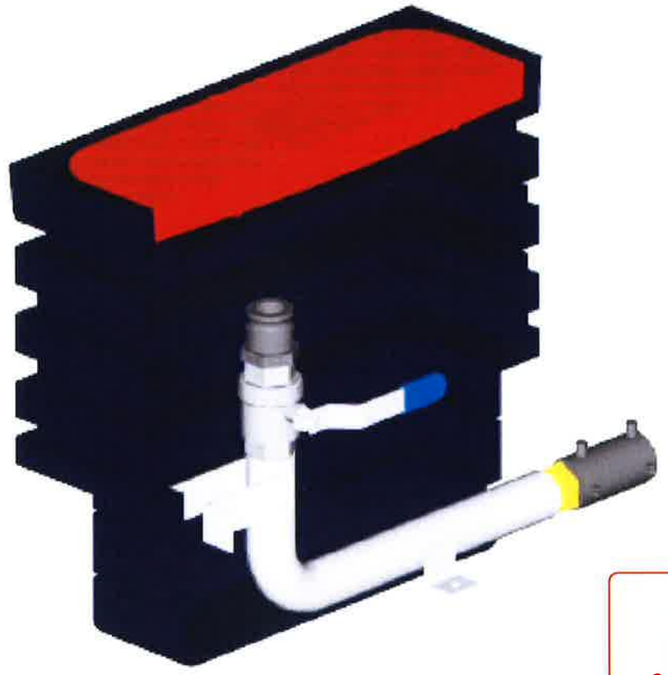
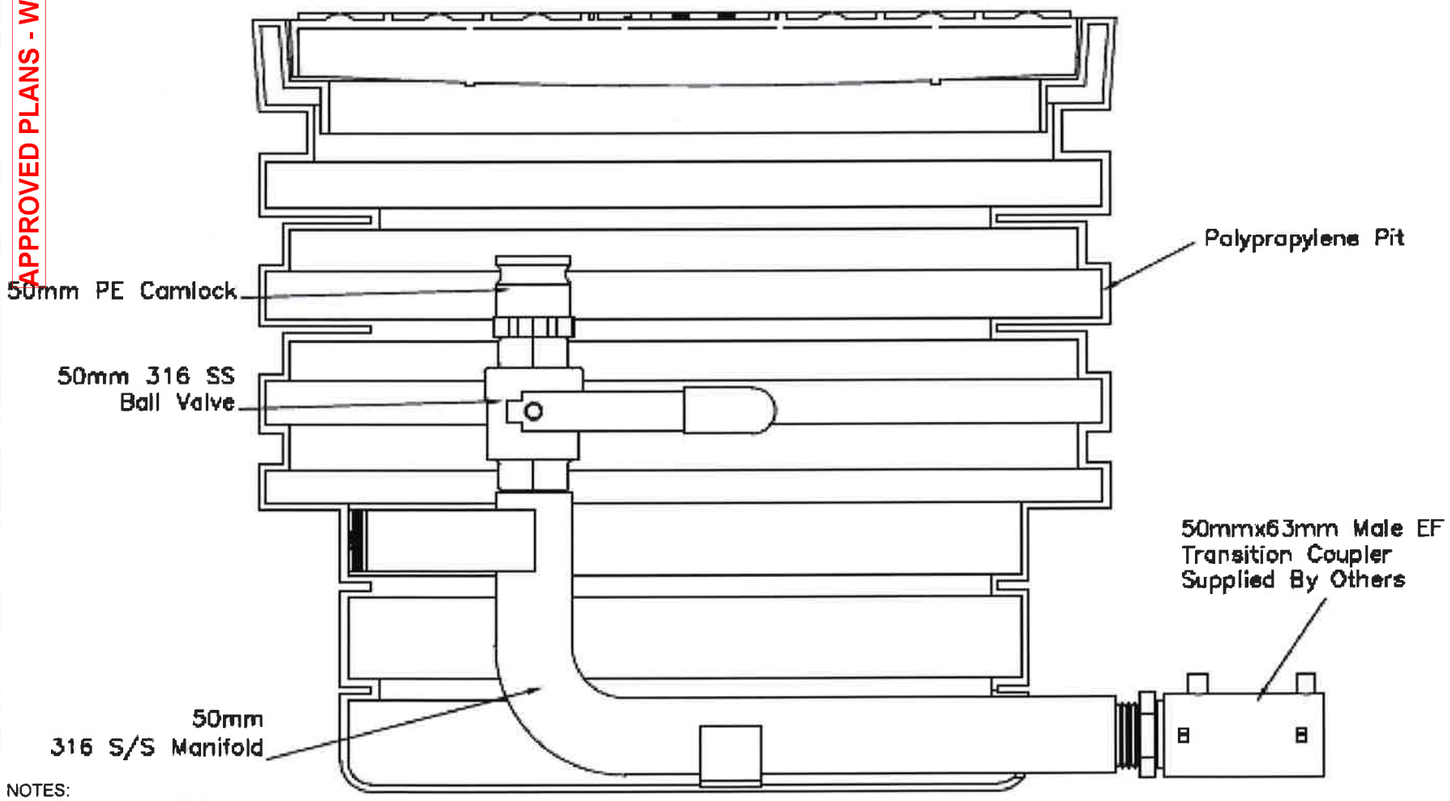
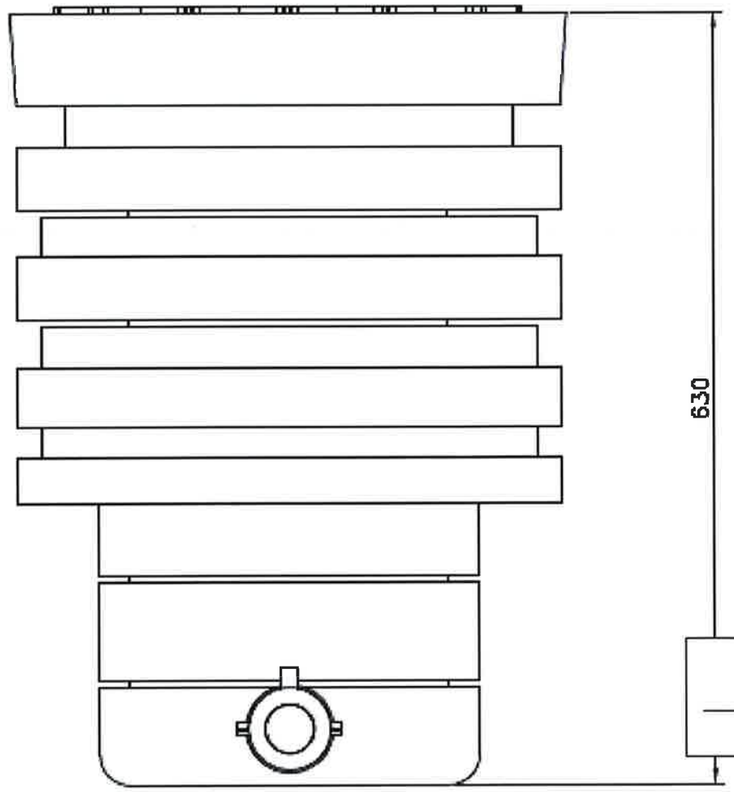
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020





Wastewater/Stormwater
Connection Approved
Waste & Drainage Representative's Signature





IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

NOTES:
SEE CONSTRUCTION NOTES DD002.

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
FLUSHING POINT DETAIL

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD676			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:10 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

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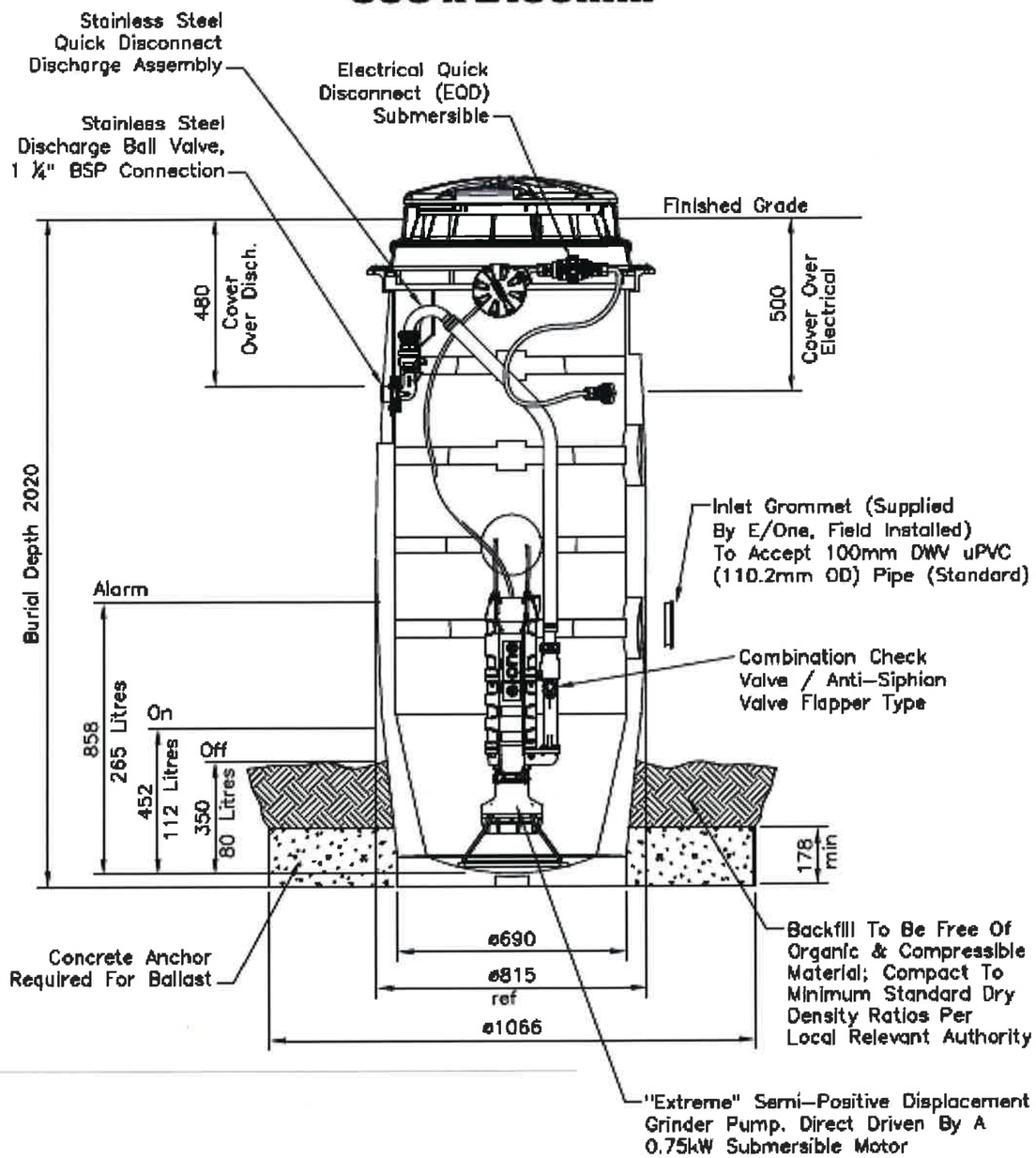
NOTES:
SEE CONSTRUCTION NOTES DD002.

MODEL 2010iP
800 x 2100mm



Wastewater/Stormwater Connection Approved
Waste & Drainage Representative's Signature

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

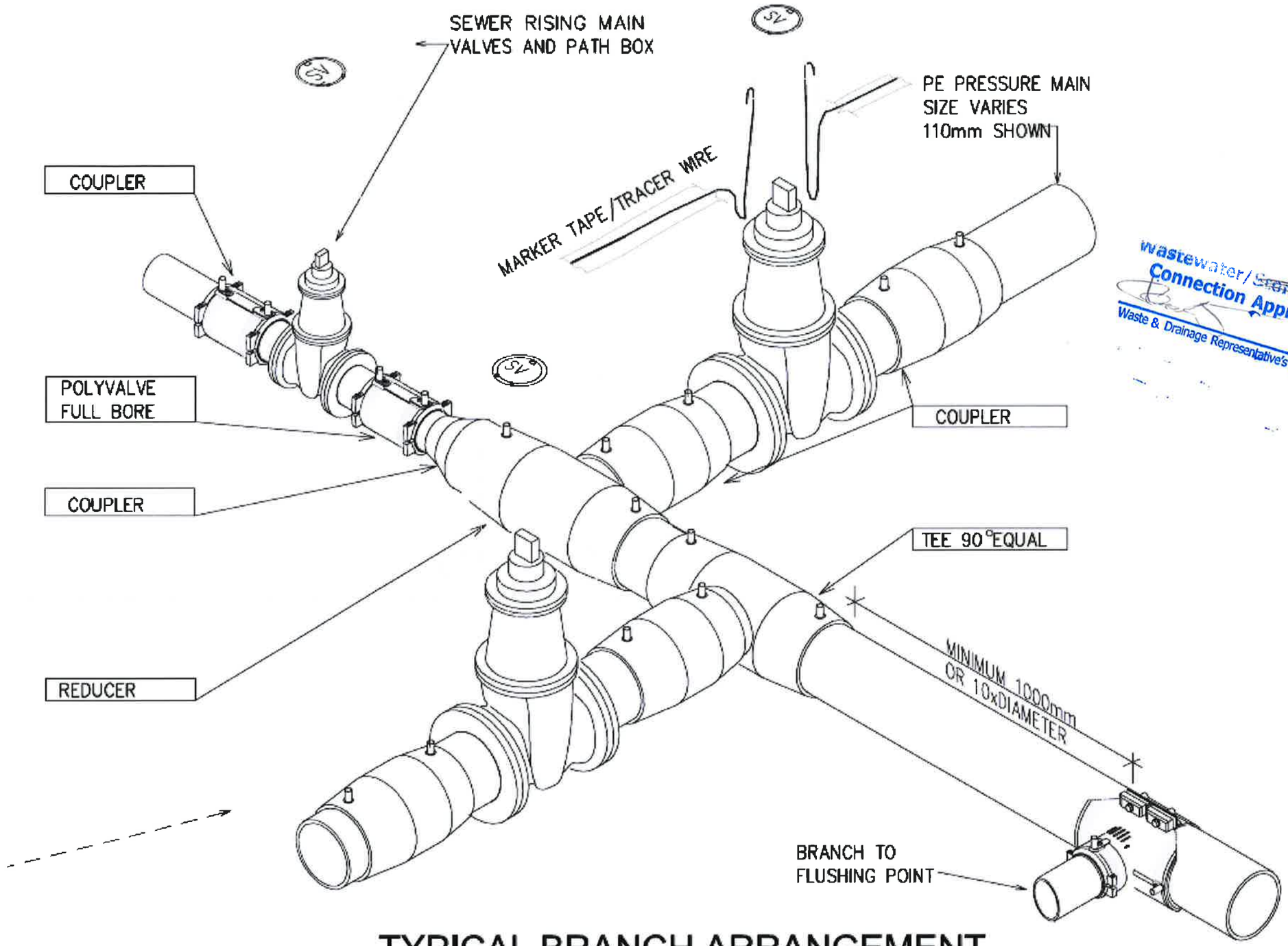
TITLE
2010 IP SIMPLEX
800 x 2100 IP

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD677			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:10 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTES:
SEE CONSTRUCTION NOTES DD002.



TYPICAL BRANCH ARRANGEMENT

Wastewater/Stormwater
Connection Approved
Waste & Drainage Representative's Signature

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
TYPICAL BRANCH ARRANGEMENT

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD678		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD670-Drainage Typ Det.dwg

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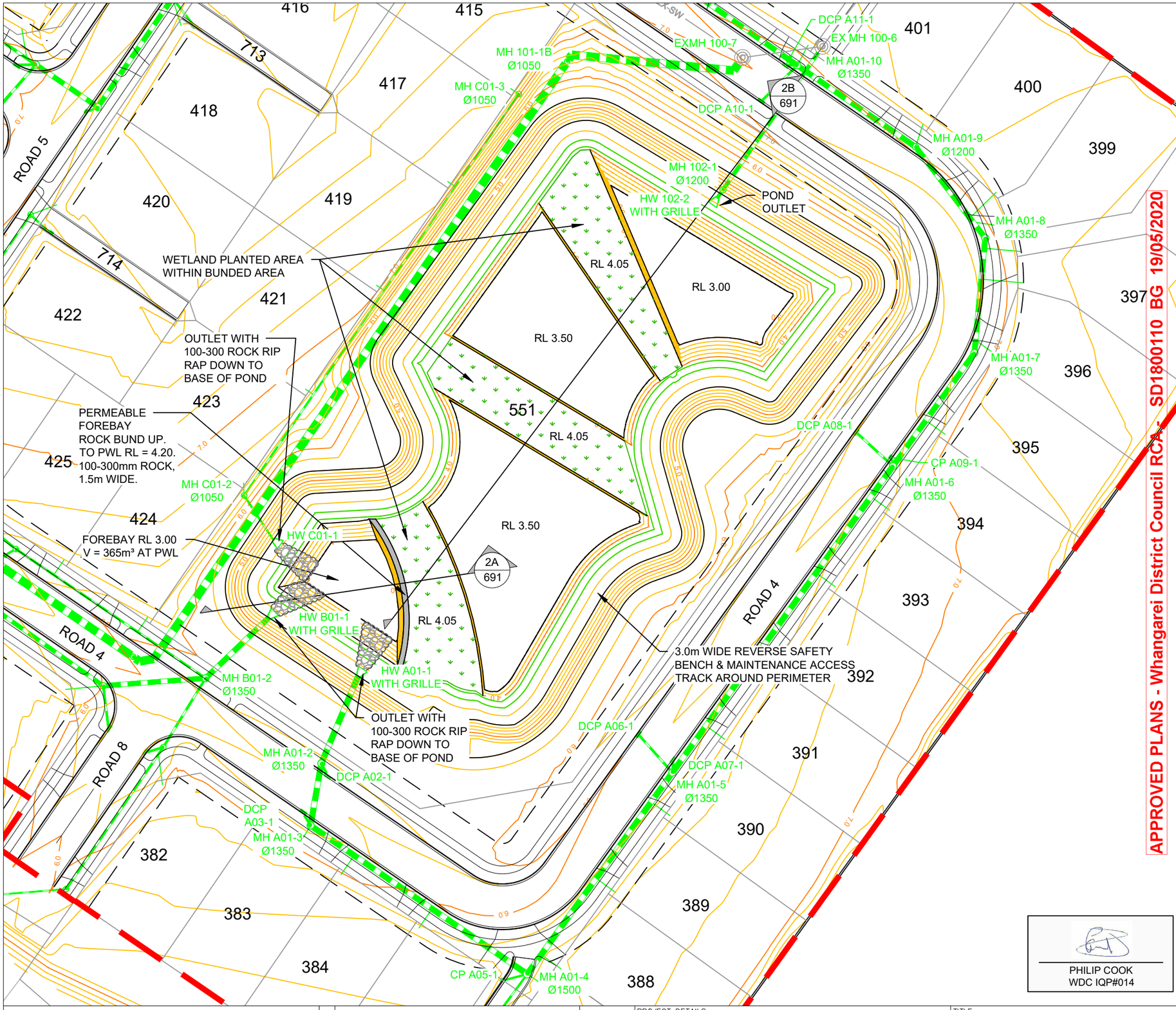

N

APPROVED PLANS - Whangarei District Council RCAT SD1800110 BG 19/05/2020

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LEGEND

EX-SW	EXISTING STORMWATER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED STORMWATER CONNECTION 100mmØ
	PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
	DESIGN CONTOURS MAJOR (1.0m INCREMENTS)
	DESIGN CONTOURS MINOR (0.2m INCREMENTS)
	PLANTED AREA BATHYMETRIC BUNDS

NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
3. ALL PIPES 225Ø - 450Ø ARE uPVC SN8
4. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE
5. ALL INLET & OUTLET HEADWALL STRUCTURES WITH PIPE >375 TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR THE HEADWALL SIZE.
6. SEE APPROVED LANDSCAPING PLAN FOR POND PLANTING DETAIL.

PHILIP COOK
WDC IQP#014

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POND DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:750 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD690		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:17 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD690-Pond Details.dwg

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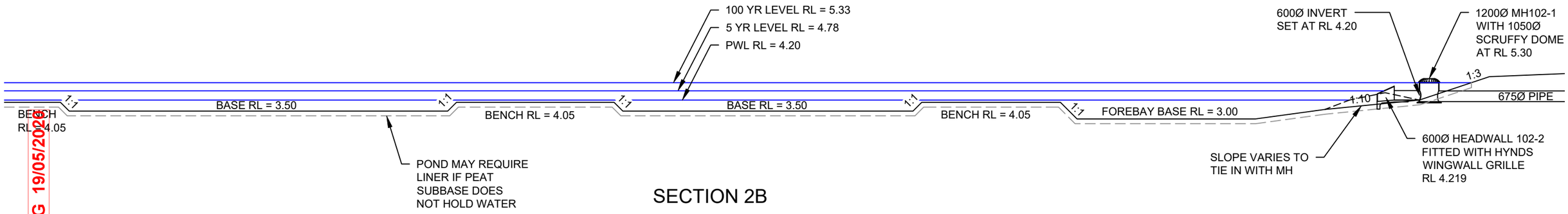
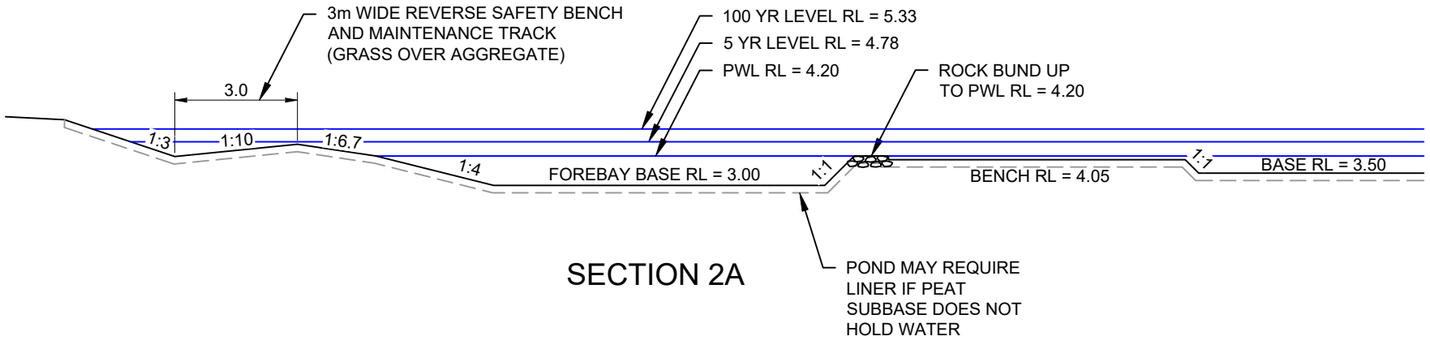
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



SECTION 2B



SECTION 2A

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POND CROSS SECTIONS

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:250 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD691			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD690-Pond Details.dwg

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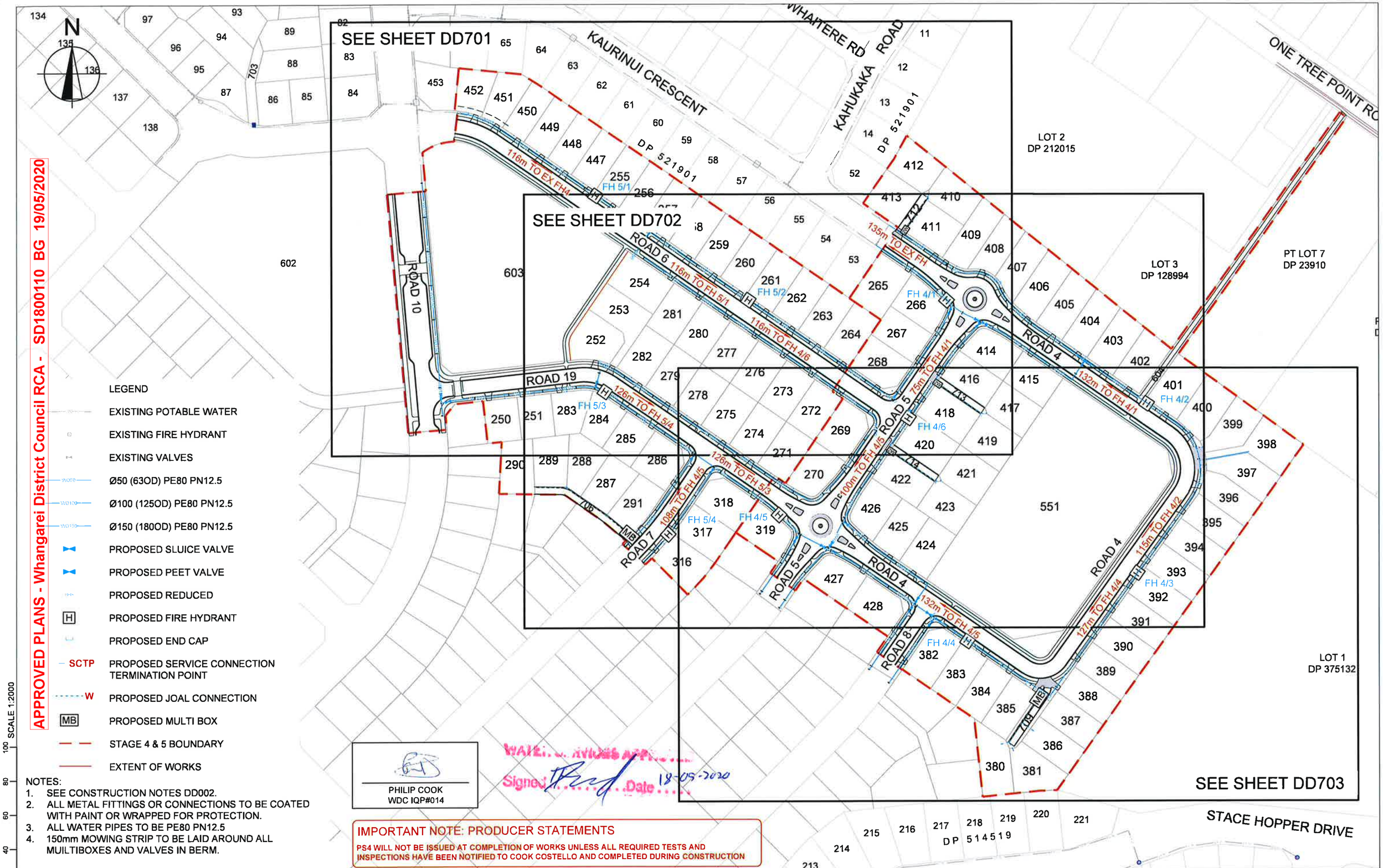

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

LEGEND

- EXISTING POTABLE WATER
- EXISTING FIRE HYDRANT
- EXISTING VALVES
- Ø50 (63OD) PE80 PN12.5
- Ø100 (125OD) PE80 PN12.5
- Ø150 (180OD) PE80 PN12.5
- PROPOSED SLUICE VALVE
- PROPOSED PEET VALVE
- PROPOSED REDUCED
- H PROPOSED FIRE HYDRANT
- PROPOSED END CAP
- SCTP PROPOSED SERVICE CONNECTION TERMINATION POINT
- W PROPOSED JOAL CONNECTION
- MB PROPOSED MULTI BOX
- STAGE 4 & 5 BOUNDARY
- EXTENT OF WORKS

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
3. ALL WATER PIPES TO BE PE80 PN12.5
4. 150mm MOWING STRIP TO BE LAID AROUND ALL MUILTIBOXES AND VALVES IN BERM.

PHILIP COOK
WDC IQP#014

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:2000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	WATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER PLAN
OVERVIEW

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:2000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD700		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:19 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD700-WAT Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LEGEND

W	EXISTING POTABLE WATER
	EXISTING FIRE HYDRANT
	EXISTING VALVES
WØ50	Ø50 (63OD) PE80 PN12.5
WØ100	Ø100 (125OD) PE80 PN12.5
WØ150	Ø150 (180OD) PE80 PN12.5
SV	PROPOSED SLUICE VALVE
PV	PROPOSED PEET VALVE
	PROPOSED REDUCED
H	PROPOSED FIRE HYDRANT
	PROPOSED END CAP
SCTP	PROPOSED SERVICE CONNECTION TERMINATION POINT
W	PROPOSED JOAL CONNECTION
MB	PROPOSED MULTI BOX
	STAGE 4 & 5 BOUNDARY
E.O.W	EXTENT OF WORKS

NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
3. ALL WATER PIPES TO BE PE80 PN12.5.
4. 150mm MOWING STRIP TO BE LAID AROUND ALL MUILTIBOXES AND VALVES IN BERM.

PHILIP COOK
WDC IQP#014

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

N

APPROVED PLANS
- Whangarei District Council
RCA - SD1800110
BG 19/05/2020

REMOVE END CAP AND CONNECT TO EX 100mm WATERMAIN

REMOVE END CAP AND CONNECT TO EX 150mm WATERMAIN

REMOVE END CAP & CONNECT TO EX RIDERMAIN

REMOVE END CAP & CONNECT TO EX 150mm WATERMAIN

50x32mm PE TEE TO PV TO 2 WAY COPPER YOKE IN JUMBO METER BOX IN BERM

SEPARATE SERVICE CONNECTIONS FOR EACH LOT

100x150mm TEE

150x50mm TAPPING SADDLE

100x25mm TAPPING SADDLE TO PV TO 2 WAY COPPER YOKE IN JUMBO METER BOX IN BERM

100x100mm TEE

100x50mm TEE

150x100mm TEE

150mm END CAP

90° BEND

FH 5/1 FH 5/2 FH 5/3 FH 4/1 FH 4/6

ROAD 10 ROAD 19 ROAD 6 ROAD 4 ROAD 5

JOAL 712 JOAL 713

STAGE 3 STAGE 4 STAGE 5 STAGE 7

E.O.W

SCALE 1:1000

REV.	REVISION DETAILS	DRAWN	APP.	DATE
C	NEW IQP DETAILS	KH	PC	18-03-20
B	WATER AMENDED	AP	GM	28-02-20
A	1ST ISSUE	KH	GM	29-11-19

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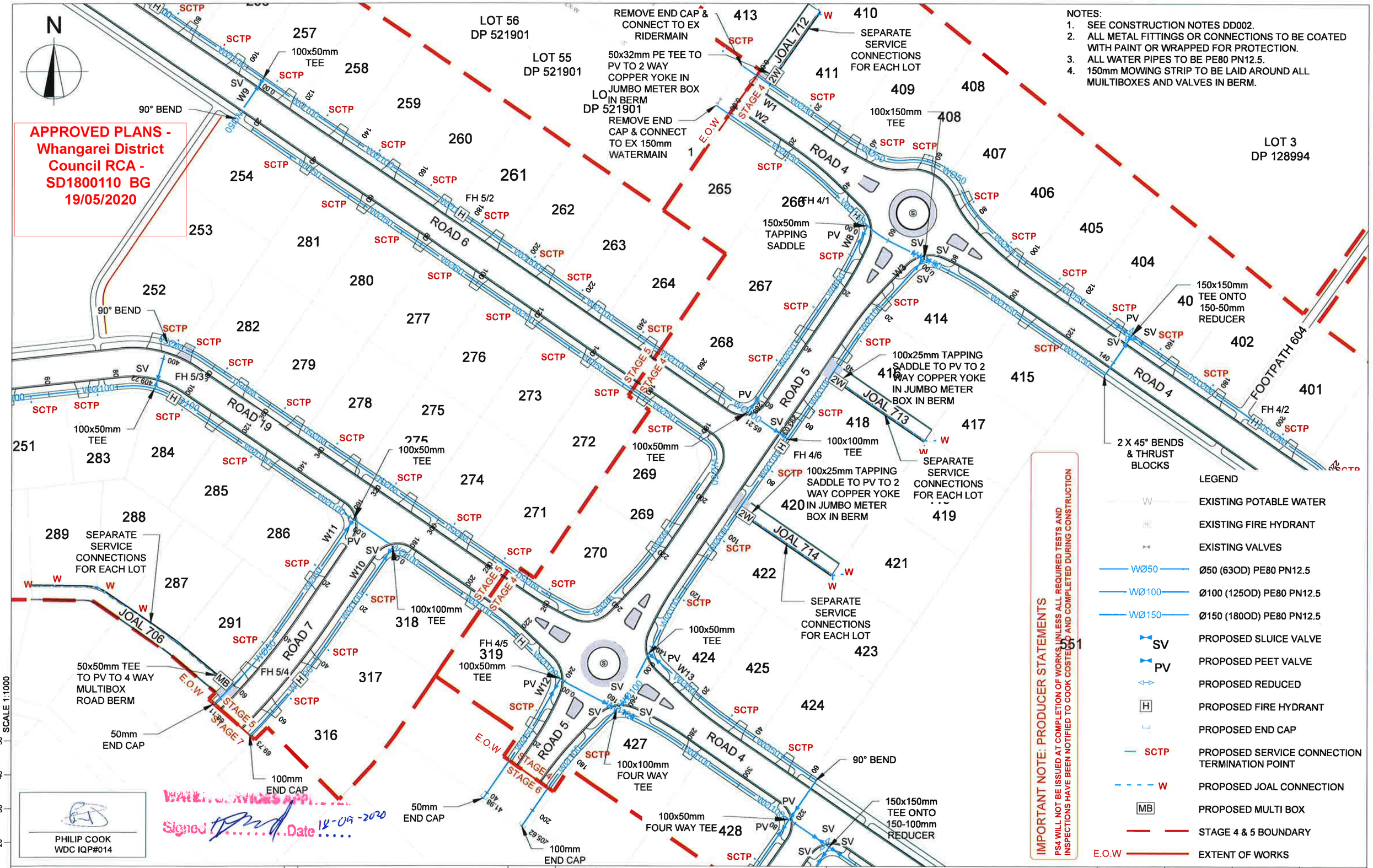
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER PLAN
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD701			REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:20 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD700-WAT Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



NOTES:
1. SEE CONSTRUCTION NOTES DD002.
2. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
3. ALL WATER PIPES TO BE PE80 PN12.5.
4. 150mm MOWING STRIP TO BE LAID AROUND ALL MUILTIBOXES AND VALVES IN BERM.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LEGEND

W	EXISTING POTABLE WATER
H	EXISTING FIRE HYDRANT
	EXISTING VALVES
WØ50	Ø50 (63OD) PE80 PN12.5
WØ100	Ø100 (125OD) PE80 PN12.5
WØ150	Ø150 (180OD) PE80 PN12.5
SV	PROPOSED SLUICE VALVE
PV	PROPOSED PEET VALVE
	PROPOSED REDUCED
H	PROPOSED FIRE HYDRANT
	PROPOSED END CAP
SCTP	PROPOSED SERVICE CONNECTION TERMINATION POINT
W	PROPOSED JOAL CONNECTION
MB	PROPOSED MULTI BOX
	STAGE 4 & 5 BOUNDARY
E.O.W	EXTENT OF WORKS

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	WATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

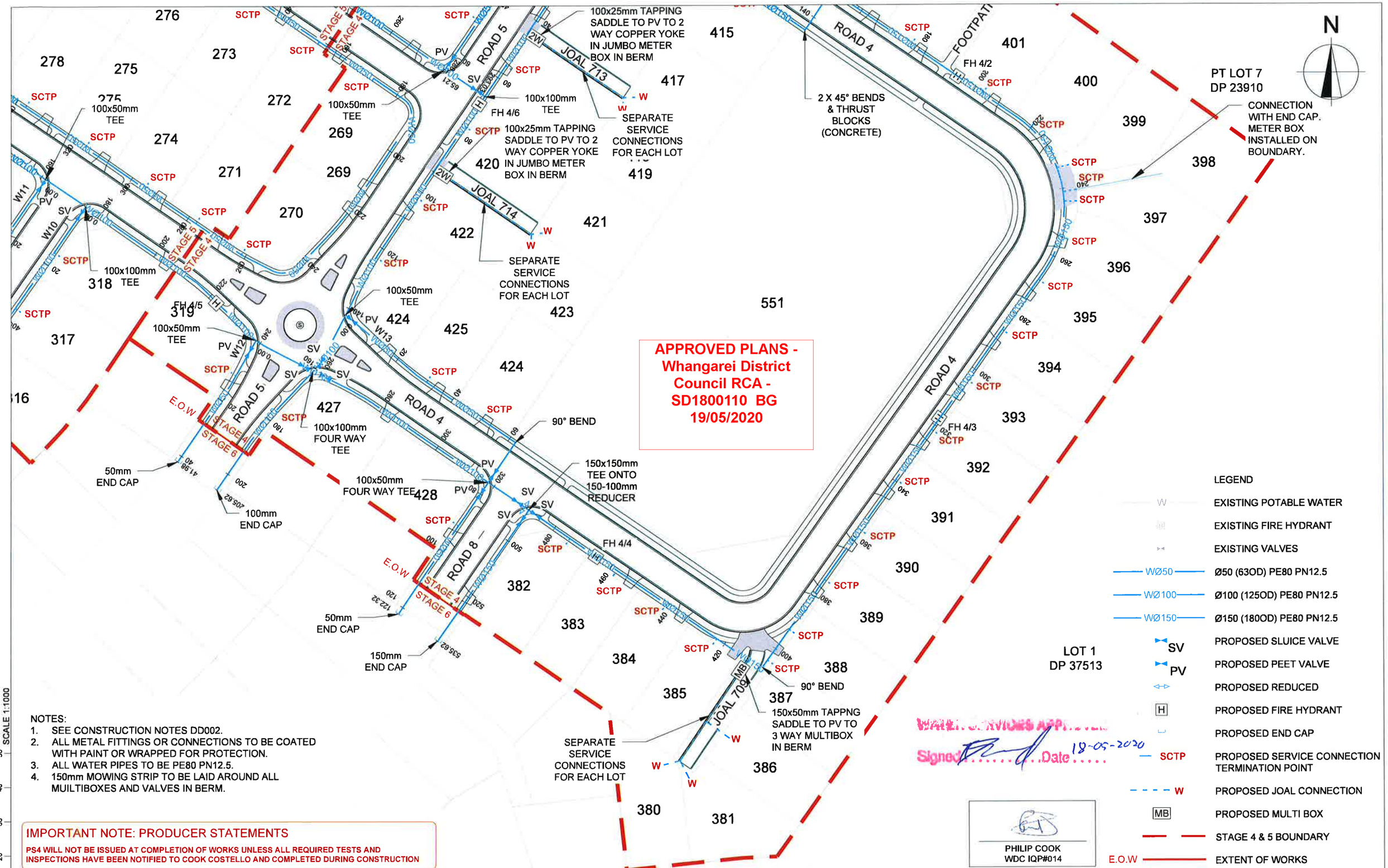
TITLE
POTABLE WATER PLAN
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD702		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:20 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD700-WAT Plan.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY



NOTES:

1. SEE CONSTRUCTION NOTES DD002.
2. ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.
3. ALL WATER PIPES TO BE PE80 PN12.5.
4. 150mm MOWING STRIP TO BE LAID AROUND ALL MUILTIBOXES AND VALVES IN BERM.

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	WATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER PLAN
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD703		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD700-WAT Plan.dwg

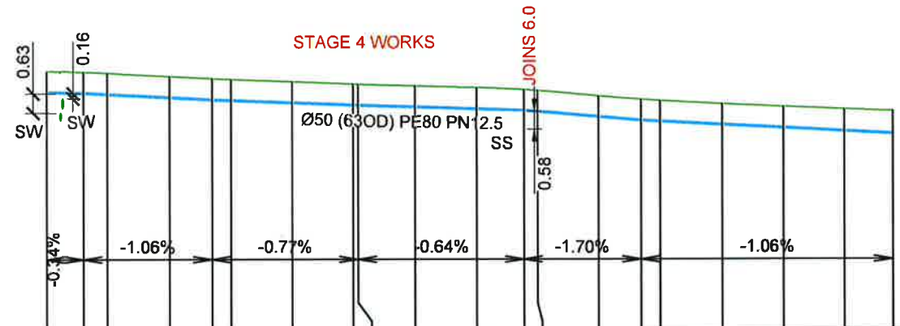
DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

WATER SERVICES APPROVAL
Signed ..... Date 19-05-2020



RL2																							
Invert Depth	0.700	0.700	0.706	0.707	0.708	0.700	0.704	0.700	0.699	0.705	0.712	0.691	0.698	0.693	0.701	0.693	0.695	0.710	0.735	0.760
Water Invert	7.781	7.76	7.719	7.613	7.54	7.516	7.439	7.363	7.357	7.298	7.234	7.185	7.147	6.977	6.86	6.827	6.721	6.615	6.509	6.425
Design Surface	8.481	8.460	8.425	8.320	8.248	8.216	8.144	8.063	8.056	8.002	7.946	7.876	7.845	7.670	7.561	7.520	7.416	7.325	7.243	7.185
Chainages	0	6.094	10	20	26.91	30	40	50	50.8	60	70	77.762	80	90	96.887	100	110	120	130	137.86

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W1

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

SCALE 1:200

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	WATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD710		REVISION C	

SCALE 1:1000

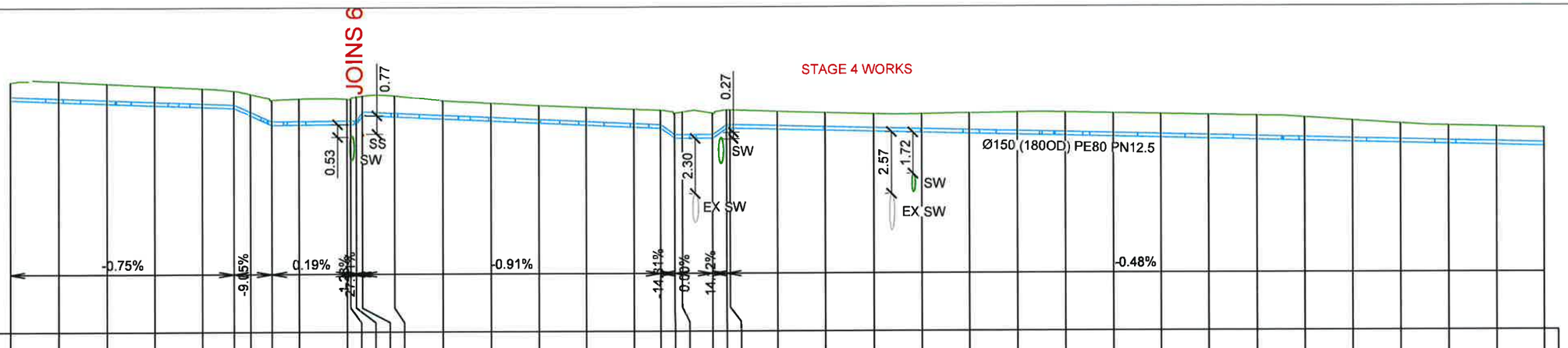
DATE PLOTTED: Wednesday, 18 March 2020 9:16:22 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD710-WAT LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL



RL-2

Chainages	Invert Depth	Water Invert	Design Surface
0	0.750	7.642	8.392
10	0.861	7.567	8.429
20	0.832	7.493	8.324
30	0.803	7.418	8.221
40	0.775	7.344	8.119
46.576	0.722	7.295	8.016
50	0.892	6.985	7.877
54.384	1.047	6.588	7.635
60	1.089	6.599	7.688
70	1.056	6.618	7.675
70.745	1.060	6.62	7.680
71.931	1.135	6.635	7.770
73.221	0.813	6.992	7.806
80	0.873	6.931	7.803
90	0.763	6.839	7.602
100	0.742	6.748	7.491
110	0.735	6.657	7.392
120	0.738	6.566	7.303
130	0.749	6.475	7.224
135.479	0.758	6.425	7.183
138.412	1.050	6.005	7.055
140	1.097	6.005	7.102
146.316	1.049	6.005	7.054
149.295	0.758	6.426	7.184
150	0.759	6.422	7.181
160	0.742	6.374	7.116
170	0.734	6.326	7.060
180	0.732	6.279	7.010
190	0.773	6.231	7.004
200	0.850	6.183	7.033
210	0.927	6.135	7.062
220	0.967	6.087	7.054
230	0.975	6.039	7.014
240	0.984	5.991	6.975
250	0.993	5.943	6.936
260	1.002	5.895	6.898
270	0.969	5.848	6.817
280	0.888	5.8	6.688
290	0.807	5.752	6.559
300	0.762	5.704	6.466
310	0.760	5.656	6.416
320	0.758	5.608	6.366

Horizontal 1:1000 Vertical 1:200
WATER LONGSECTION W2

STAGE 4 ← → STAGE 6 (FUTURE)
CH 524.97 E.O.W.

RL0

Chainages	Invert Depth	Water Invert	Design Surface
300	0.762	5.704	6.466
310	0.760	5.656	6.416
320	0.758	5.608	6.366
330	0.756	5.56	6.316
340	0.754	5.512	6.266
350	0.751	5.464	6.216
356.56	0.750	5.433	6.183
360	0.756	5.437	6.193
370	0.772	5.45	6.222
380	0.788	5.463	6.251
388.654	0.791	5.474	6.265
390	0.778	5.487	6.265
400	0.877	5.58	6.457
406.525	0.771	5.641	6.412
410	0.700	5.601	6.301
420	0.736	5.487	6.223
430	0.761	5.373	6.134
440	0.746	5.259	6.005
450	0.740	5.145	5.885
457.478	0.752	5.059	5.811
460	0.751	5.054	5.805
470	0.781	5.033	5.815
480	0.837	5.013	5.850
490	0.765	4.992	5.757
495.61	0.762	4.98	5.742
500	0.750	5.042	5.792
510	0.750	5.181	5.931
520	0.750	5.321	6.071
530	0.750	5.46	6.210
535.625	0.846	5.539	6.385

Horizontal 1:1000 Vertical 1:200
WATER LONGSECTION W2

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

WATER SERVICES APPROVAL
Signed ..... Date 18-05-2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	WATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR

CCL REF NO 14333-004
SCALE 1:1000H @ A3 1:200V @ A3
STATUS FOR APPROVAL
DWG NUMBER DD711
REVISION C

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:22 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD710-WAT LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

WATER SERVICES APPROVAL
Signed ..... Date 18-05-2020

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

RL-2

Invert Depth	1.135	0.968	0.768	0.721	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.701	0.701	0.700	0.681	0.887	1.000	1.049	0.996	0.964	0.843	0.687	0.700	0.700	0.695	0.697	0.700
Water Invert	6.635	6.698	6.762	6.778	6.742	6.692	6.641	6.591	6.541	6.491	6.441	6.391	6.341	6.291	6.241	6.21	5.918	5.656	5.694	5.747	5.859	6.022	6.339	6.363	6.43	6.496	6.563	6.6
Design Surface	7.769	7.667	7.529	7.500	7.442	7.391	7.341	7.291	7.241	7.191	7.141	7.091	7.041	6.991	6.940	6.890	6.804	6.656	6.743	6.744	6.823	6.865	7.026	7.063	7.129	7.191	7.260	7.300
Chainages	0	10	20	22.661	30	40	50	60	70	80	90	100	110	120	130	136.164	140	143.434	150	159.289	160	161.037	166.297	170	180	190	200	205.618

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W3

SCALE 1:200

SCALE 1:1000

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	WATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

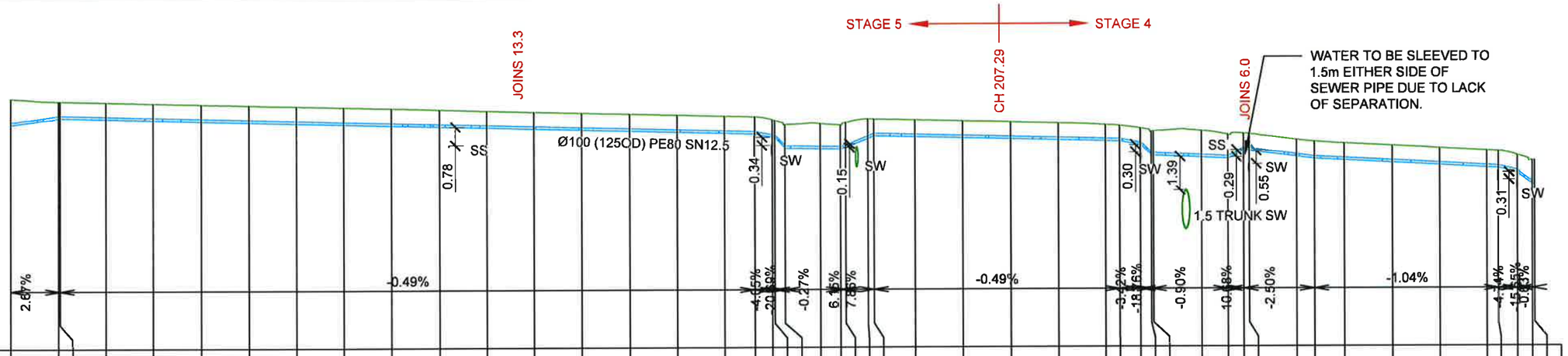
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD712		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:23 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD710-WAT LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

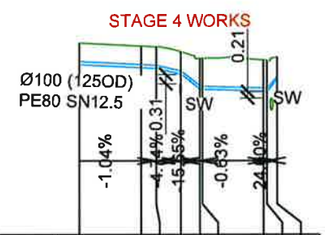


RL-2

Chainages	Invert Depth	Water Invert	Design Surface
0	1.078	7.337	8.415
10	0.708	7.605	8.312
10.327	0.698	7.613	8.311
20	0.700	7.566	8.266
30	0.703	7.517	8.220
40	0.706	7.468	8.173
50	0.708	7.419	8.127
60	0.711	7.369	8.080
70	0.714	7.32	8.034
80	0.716	7.271	7.988
90	0.707	7.222	7.929
100	0.698	7.173	7.871
110	0.700	7.124	7.824
120	0.702	7.075	7.777
130	0.705	7.026	7.731
140	0.707	6.977	7.684
150	0.709	6.928	7.637
156.361	0.711	6.896	7.607
160	0.725	6.749	7.474
160.482	0.717	6.729	7.447
162.625	1.000	6.286	7.286
170	1.052	6.266	7.317
174.223	0.986	6.254	7.240
175.309	1.037	6.321	7.358
180	0.806	6.69	7.496
181.299	0.699	6.792	7.490
190	0.701	6.749	7.450
200	0.703	6.7	7.403
210	0.704	6.65	7.354
220	0.702	6.601	7.303
230	0.680	6.552	7.232
232.955	0.657	6.537	7.194
237.284	0.689	6.389	7.078
239.588	0.998	5.957	6.955
240	1.008	5.953	6.962
250	1.102	5.863	6.965
255.493	1.000	5.814	6.814
258.784	0.689	6.166	6.855
260	0.699	6.135	6.835
270	0.694	5.885	6.579
273.765	0.715	5.791	6.505
280	0.700	5.726	6.426
290	0.700	5.622	6.322
300	0.700	5.519	6.219
310	0.700	5.415	6.115
312.479	0.700	5.389	6.089
316.441	0.721	5.202	5.923
319.557	0.998	4.714	5.711
320	1.002	4.711	5.713

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W4



RL0

Chainages	Invert Depth	Water Invert	Design Surface
300	0.700	5.519	6.219
310	0.700	5.415	6.115
312.479	0.700	5.389	6.089
316.441	0.721	5.202	5.923
319.557	0.998	4.714	5.711
320	1.002	4.711	5.713
330	1.008	4.648	5.657
330.536	1.000	4.645	5.645
332.203	0.700	5.055	5.755

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W4

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200

SCALE 1:1000

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	WATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W4

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD713		REVISION C	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:23 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD710-WAT LS.dwg

DO NOT REPRODUCE WITHOUT WRITTEN AUTHORITY

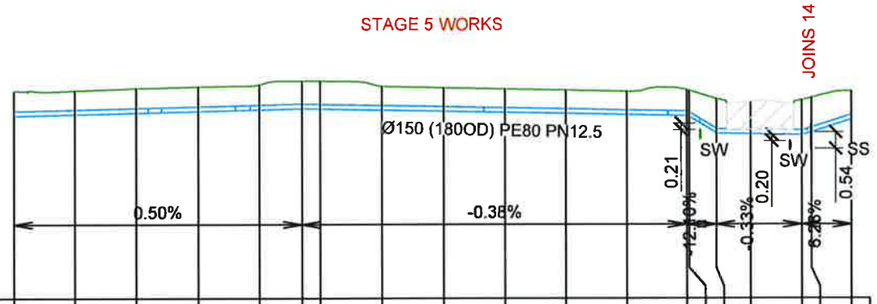
IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

PHILIP COOK
WDC IQP#014

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



RL2

Invert Depth	0.803	0.768	0.794	0.795	0.816	0.889	0.898	0.767	0.759	0.756	0.753	0.750	0.831	0.857	1.122	1.067	1.135	1.111	0.900
Water Invert	7.914	7.964	8.014	8.064	8.114	8.149	8.137	8.099	8.061	8.023	7.985	7.946	7.91	7.866	7.333	7.315	7.287	7.388	7.797
Design Surface	8.717	8.732	8.808	8.859	8.930	9.038	9.036	8.866	8.820	8.779	8.738	8.697	8.740	8.722	8.455	8.381	8.422	8.499	8.697
Chainages	0	10	20	30	40	46.978	50	60	70	80	90	100	109.638	110	114.401	120	128.384	130	136.535

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W5

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

SCALE 1:200

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS AND WATER LONGSECTION W5 UPDATED	18-03-20 KH	PC
B	WATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W5

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD714		REVISION C	

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:23 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD710-WAT LS.dwg

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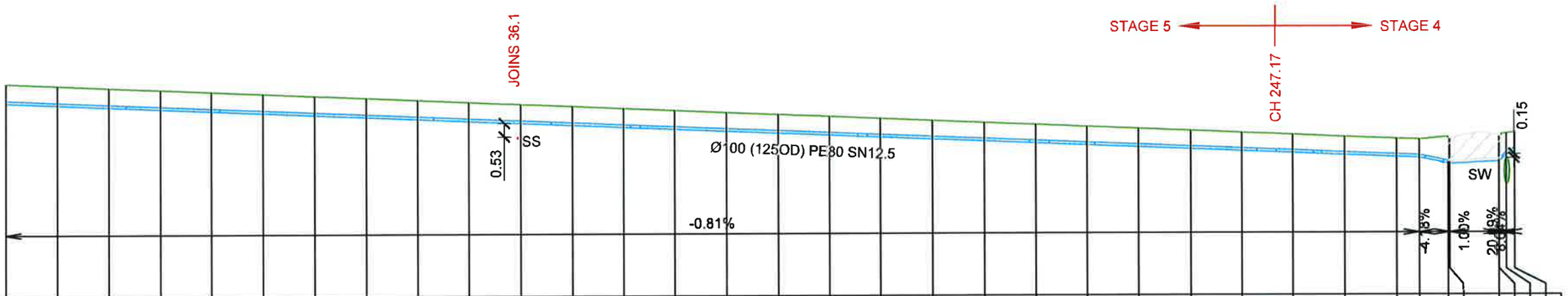
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

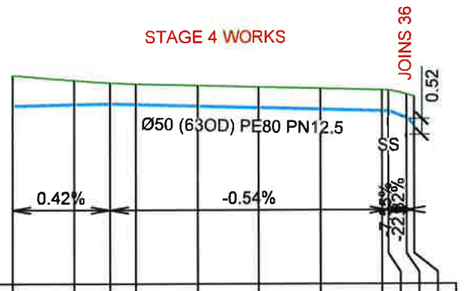


RL1

Chainages	Invert Depth	Water Invert	Design Surface
0	0.750	8.492	9.242
10	0.751	8.411	9.162
20	0.750	8.331	9.080
30	0.748	8.25	8.998
40	0.746	8.169	8.915
50	0.745	8.088	8.833
60	0.743	8.008	8.751
70	0.741	7.927	8.668
80	0.740	7.846	8.586
90	0.738	7.766	8.503
100	0.736	7.685	8.421
110	0.734	7.604	8.338
120	0.731	7.524	8.255
130	0.729	7.443	8.172
140	0.727	7.362	8.089
150	0.725	7.281	8.006
160	0.723	7.201	7.924
170	0.721	7.12	7.841
180	0.719	7.039	7.758
190	0.716	6.959	7.675
200	0.714	6.878	7.592
210	0.712	6.797	7.509
220	0.710	6.716	7.426
230	0.708	6.636	7.344
240	0.706	6.555	7.261
250	0.704	6.474	7.178
260	0.701	6.394	7.095
270	0.699	6.313	7.012
274.404	0.709	6.277	6.987
280	0.953	6.043	6.996
280.303	0.997	6.031	7.028
290	0.998	6.127	7.125
290.031	0.995	6.127	7.122
291.426	0.798	6.419	7.217
293.031	0.700	6.558	7.257

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W7



RL1

Chainages	Invert Depth	Water Invert	Design Surface
0	1.005	6.752	7.757
10	0.805	6.794	7.599
15.813	0.700	6.819	7.519
20	0.688	6.796	7.484
30	0.691	6.743	7.434
40	0.695	6.689	7.384
50	0.699	6.635	7.334
60	0.703	6.581	7.284
61.052	0.693	6.575	7.268
64.003	0.786	6.352	7.138
65.206	0.984	6.084	7.068

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W8

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200

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REV.	REVISION DETAILS	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20 KH	PC
B	WATER AMENDED	28-02-20 AP	GM
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W7 & W8

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD715		REVISION C	

SCALE 1:1000

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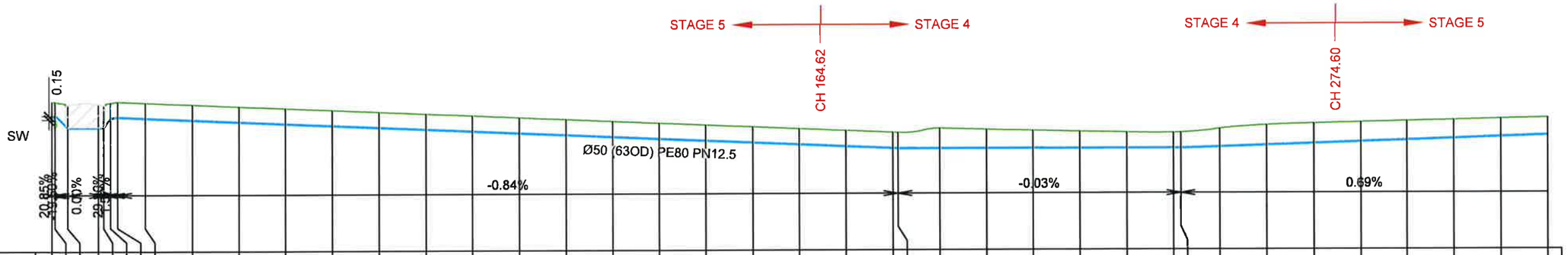
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

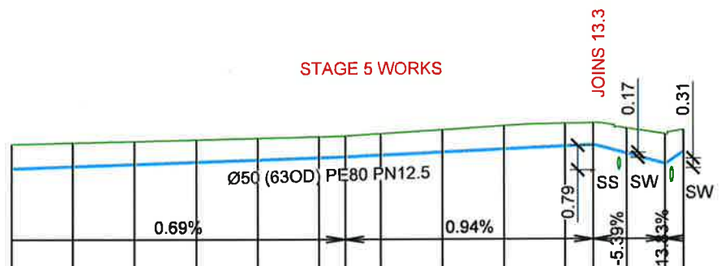


RL2

Chainages	Invert Depth	Water Invert	Design Surface
0	0.736	7.637	8.373
0.673	0.582	7.777	8.359
3.433	1.006	7.239	8.245
10	1.034	7.239	8.273
11.131	1.000	7.239	8.239
12.584	0.666	7.663	8.329
14.088	0.681	7.687	8.367
20	0.684	7.637	8.321
30	0.685	7.554	8.238
40	0.686	7.47	8.156
50	0.687	7.386	8.073
60	0.688	7.302	7.991
70	0.689	7.219	7.908
80	0.691	7.135	7.826
90	0.692	7.051	7.743
100	0.693	6.967	7.660
110	0.694	6.884	7.578
120	0.695	6.8	7.495
130	0.696	6.716	7.413
140	0.698	6.633	7.330
150	0.699	6.549	7.248
160	0.700	6.465	7.165
170	0.701	6.381	7.082
180	0.702	6.298	7.000
181.102	0.705	6.288	6.993
190	0.878	6.286	7.164
200	0.831	6.283	7.114
210	0.784	6.28	7.064
220	0.737	6.277	7.015
230	0.701	6.274	6.975
240	0.691	6.271	6.962
241.589	0.700	6.271	6.971
250	0.802	6.329	7.131
260	0.882	6.398	7.280
270	0.881	6.467	7.347
280	0.859	6.535	7.394
290	0.837	6.604	7.441
300	0.815	6.673	7.488
310	0.793	6.742	7.535
320	0.771	6.811	7.581

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W9



RL2

Chainages	Invert Depth	Water Invert	Design Surface
300	0.815	6.673	7.488
310	0.793	6.742	7.535
320	0.771	6.811	7.581
330	0.749	6.88	7.628
340	0.727	6.948	7.675
350	0.705	7.017	7.722
354.215	0.702	7.046	7.748
360	0.720	7.101	7.821
370	0.751	7.195	7.946
380	0.783	7.29	8.072
390	0.757	7.384	8.141
394.559	0.731	7.427	8.158
400	0.844	7.134	7.978
406.2	0.989	6.8	7.789
409.215	0.706	7.217	7.923

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W9

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200 (0, 2, 4, 6, 8, 10)

SCALE 1:1000 (0, 10, 20, 30, 40, 50)

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	WATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS W9

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD716		REVISION C	

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PHILIP COOK
WDC IQP#014

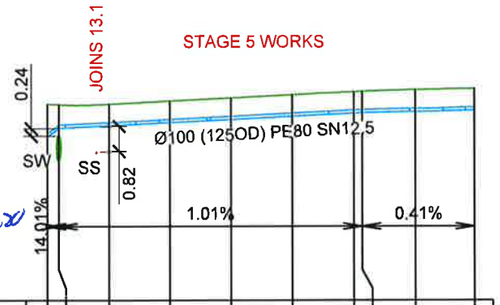
WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

NOTE:
SEE CONSTRUCTION NOTES DD002.

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SW = PROPOSED STORMWATER
SS = PROPOSED SEWER

BACKFILL

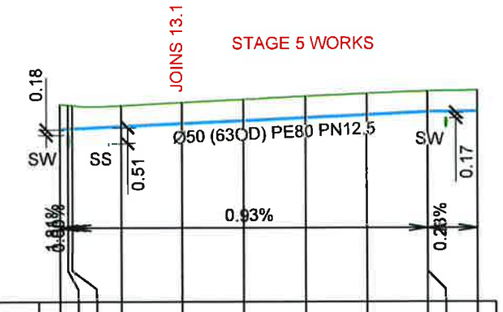


RL1

Invert Depth	1.040	0.764	0.700	0.699	0.698	0.698	0.695	0.692	0.712	0.700
Water Invert	6.318	6.581	6.663	6.764	6.864	6.965	7.066	7.08	7.116	7.156
Design Surface	7.357	7.345	7.363	7.463	7.562	7.663	7.761	7.771	7.828	7.856
Chainages	0	1.878	10	20	30	40	50	51.356	60	69.726

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W10



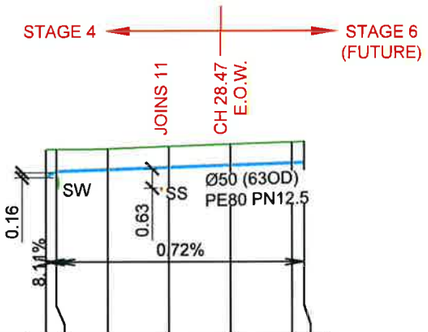
RL1

Invert Depth	0.835	0.790	0.776	0.701	0.708	0.715	0.721	0.717	0.695	0.700
Water Invert	6.565	6.588	6.588	6.663	6.756	6.849	6.942	7.036	7.128	7.147
Design Surface	7.400	7.378	7.364	7.364	7.464	7.564	7.663	7.753	7.824	7.847
Chainages	0	1.278	2.007	10	20	30	40	50	59.969	60	68.108

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W11

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

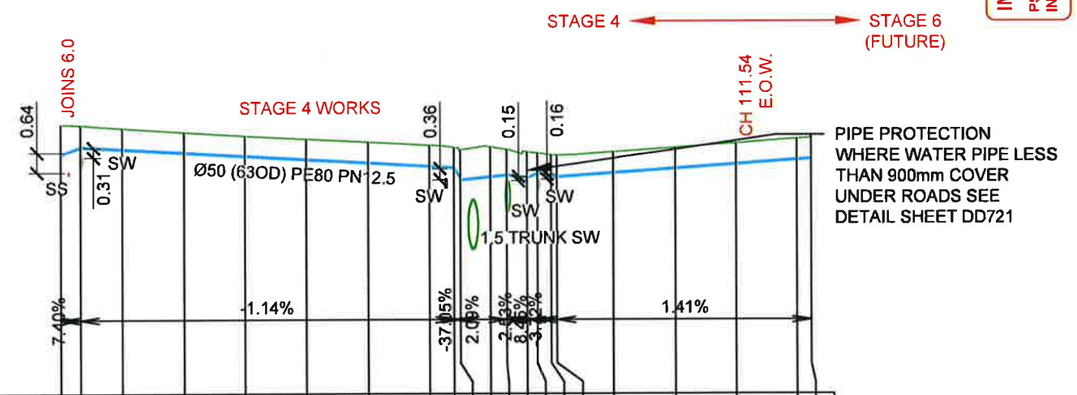


RL1

Invert Depth	0.872	0.738	0.699	0.705	0.703	0.701	0.700
Water Invert	6.168	6.307	6.366	6.438	6.51	6.582	6.596
Design Surface	7.040	7.045	7.066	7.143	7.213	7.283	7.296
Chainages	0	1.711	10	20	30	40	41.98

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W12



RL-2

Invert Depth	0.982	0.728	0.705	0.688	0.679	0.689	0.699	0.710	0.682	1.000	0.986	0.848	0.855	0.669	0.695	0.722	0.700	0.700	0.700	0.700	0.806
Water Invert	5.752	5.991	5.914	5.8	5.686	5.573	5.459	5.345	5.299	4.903	5.006	5.063	4.979	5.123	5.039	5.005	5.133	5.274	5.415	5.556	5.589
Design Surface	6.734	6.719	6.619	6.488	6.365	6.261	6.158	6.054	5.982	5.903	5.992	5.911	5.834	5.792	5.734	5.727	5.833	5.974	6.115	6.256	6.395
Chainages	0	3.235	10	20	30	40	50	60	64.002	65.071	70	72.716	76.026	77.732	80	80.906	90	100	110	120	122.321

Horizontal 1:1000 Vertical 1:200

WATER LONGSECTION W13

SCALE 1:200

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	WATER AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER LONGSECTIONS
W10, W11, W12 & W13

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE 1:1000H @ A3 1:200V @ A3		STATUS FOR APPROVAL
DWG NUMBER DD717			REVISION C

SCALE 1:1000

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD710-WAT LS.dwg

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APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

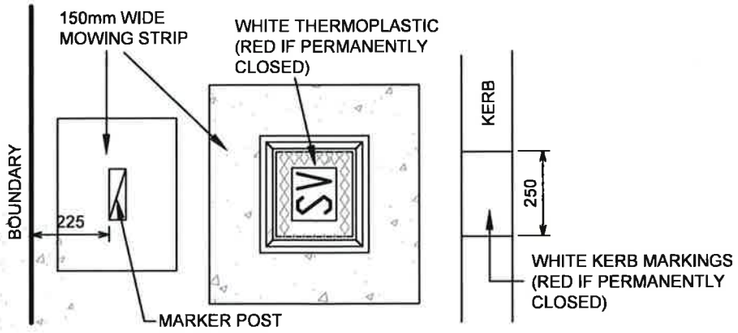
IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTE:
SEE CONSTRUCTION NOTES DD002

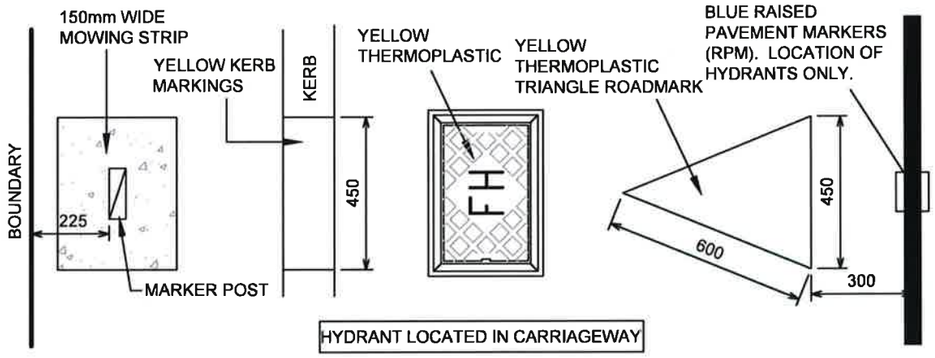
PHILIP COOK
WDC IQP#014

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020



VALVE MARKING

SHEET 48 WDC EES 2010 - NOT TO SCALE



HYDRANT MARKINGS

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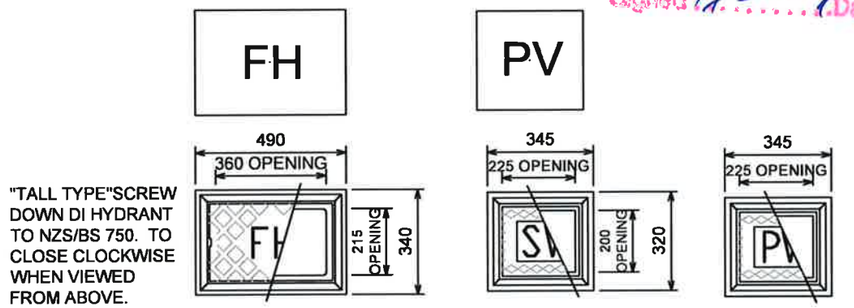
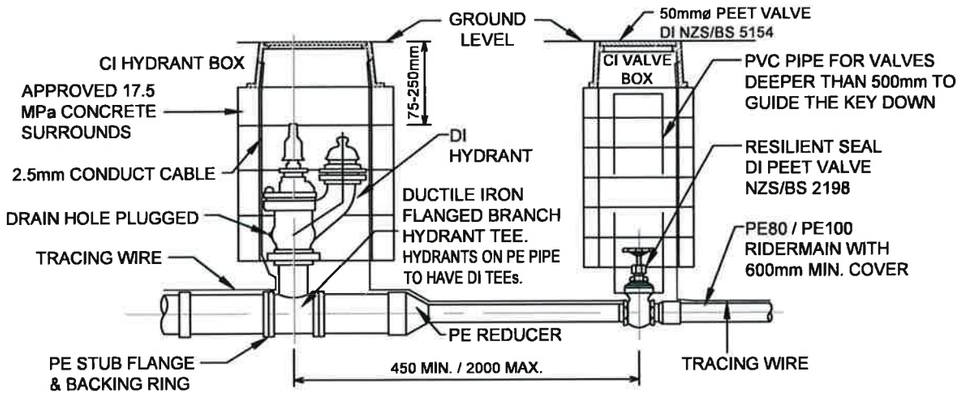


CAST IRON HYDRANT BOX

CAST IRON VALVE BOX

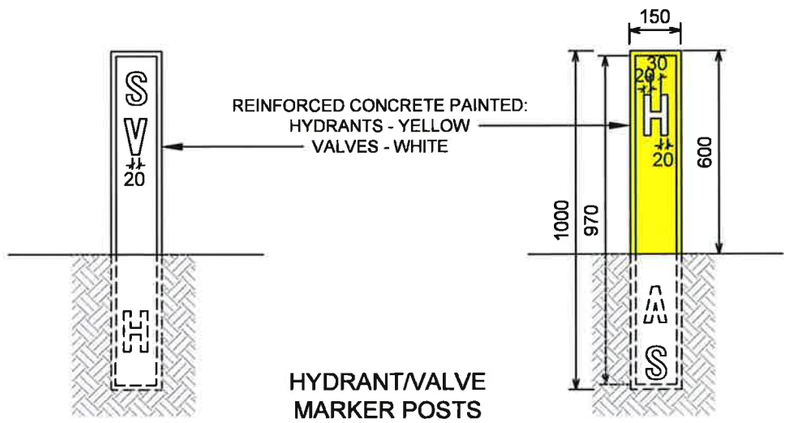


ELEVATION

NOTES
1. DEFLECTION OF JOINTS IS NOT TO EXCEED THE MANUFACTURER'S RECOMMENDATION.
2. WHERE THERE ARE MORE THAN 15 CONNECTIONS FROM A RIDER MAIN, AN ISOLATING PEET VALVE SHOULD BE PROVIDED IN THE MIDDLE OF THE RIDER MAIN.
3. ALL UNDERGROUND BOLTS TO BE STAINLESS STEEL AND WRAPPED WITH DENSO TAPE, MASTIC AND POLYTAPE.
4. SERVICE CONNECTIONS TO TERMINATE JUST OUTSIDE FRONT BOUNDARY WITH AN APPROVED MANIFOLD, METER BOX (INCLUDING BASE) AND DIAPHRAGM VALVE INCLUDING DUAL CHECK VALVE.
5. DIMENSIONS TO BE SUPPLIED WITH AS-BUILTS.

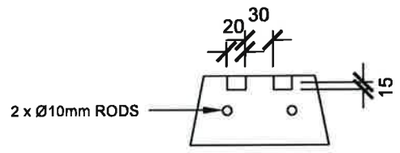
FH & VALVE INSTALLATION DETAILS

SHEET 45 WDC EES 2010 - NOT TO SCALE



HYDRANT/VALVE MARKER POSTS

NOT TO SCALE



CROSS SECTION

NOT TO SCALE

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER TYPICAL DETAILS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD720		REVISION B	

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD720-WAT Typ Det.dwg

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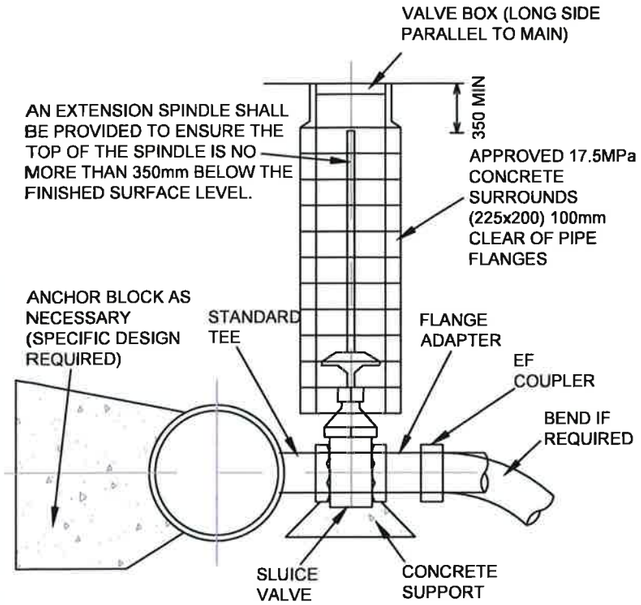
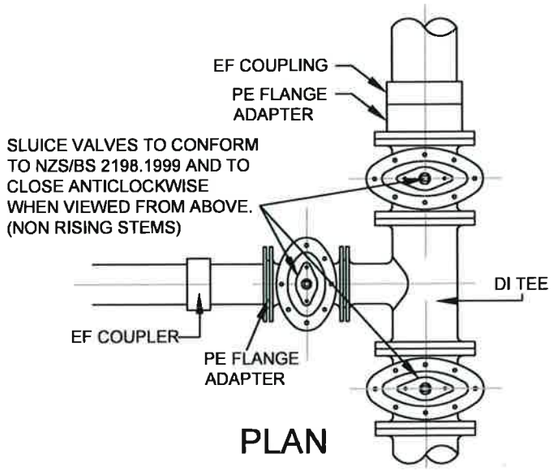


ELEVATION



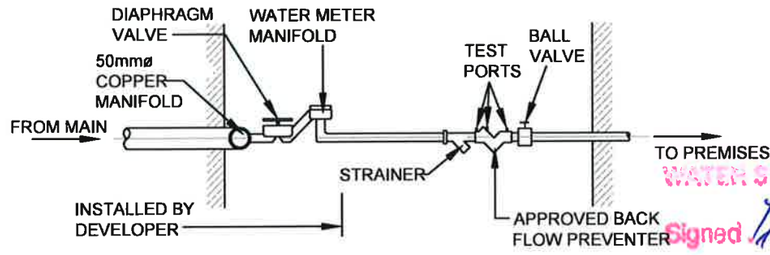
PLAN

VALVE INSTALLATION DETAILS

SHEET 49 WDC EES 2010 - NOT TO SCALE

NOTE:
SEE CONSTRUCTION NOTES DD002

PHILIP COOK
WDC IQP#014



WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

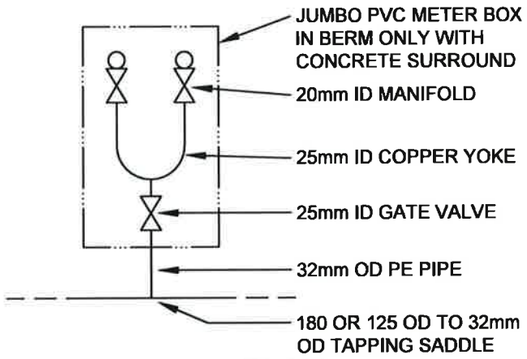
METERED SUPPLY WITH DOUBLE CHECK VALVE BACK FLOW PREVENTER

SHEET 47 WDC EES 2010 - NOT TO SCALE

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

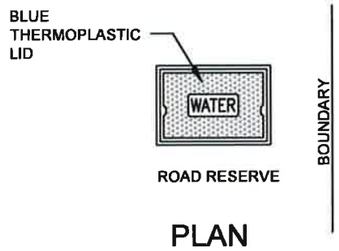
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020



PLAN

2 WAY WATER CONNECTIONS TO MAINS

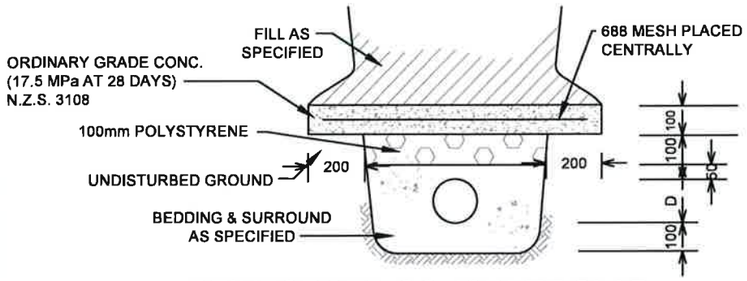
NOT TO SCALE



PLAN

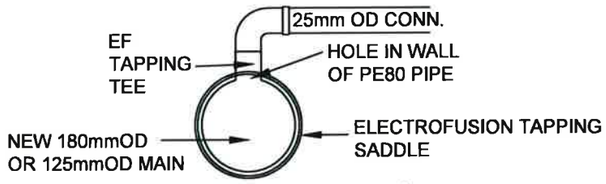
SHEET 46 WDC EES 2010 - NOT TO SCALE

GENERAL:
1. WEAK MIX CONCRETE:
   1 PART CEMENT TO 6 PARTS AGGREGATE.
2. CEMENT STABILISED BEDDING AND BACK FILL:
   1 PART CEMENT TO 20 PARTS AGGREGATE.
3. ALLOW 48 HOURS CURING PRIOR TO BACK FILLING ANY CONCRETE OR STABILISED MATERIAL.

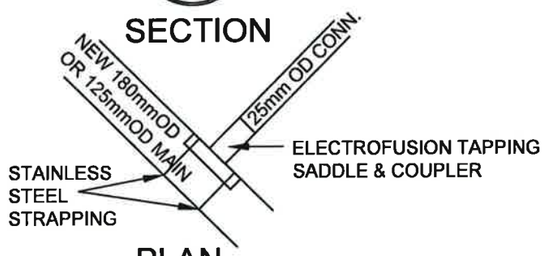


REINFORCED CONCRETE SLAB PROTECTION

FOR WATER PIPELINES
THAT HAVE LESS THAN 600mm COVER AND ARE NOT UNDER CONCRETE ROADS OR DRIVEWAYS.
NOT TO SCALE.



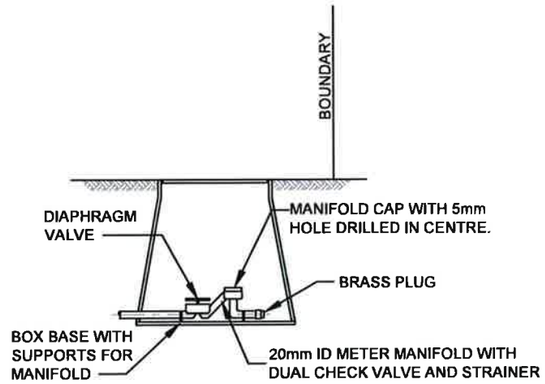
SECTION



PLAN

WATER CONNECTIONS TO MAINS

NOT TO SCALE



SINGLE METER BOX CONNECTION

SHEET 46 WDC EES 2010 - NOT TO SCALE

NOTE:
1. ALL FITTINGS TO BE WDC APPROVED
2. BACKFLOW PREVENTERS SHALL BE PROVIDED IF REQUIRED BY WDC BYLAWS AND SHALL BE INSTALLED IN A SEPARATE BOX.

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C	NEW IQP DETAILS	18-03-20	KH	PC
B	WATER CONNECTIONS TO MAINS DETAILS AMENDED	28-02-20	AP	GM
A	1ST ISSUE	29-11-19	KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER TYPICAL DETAILS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD721			REVISION C

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD720-WAT Typ Det.dwg

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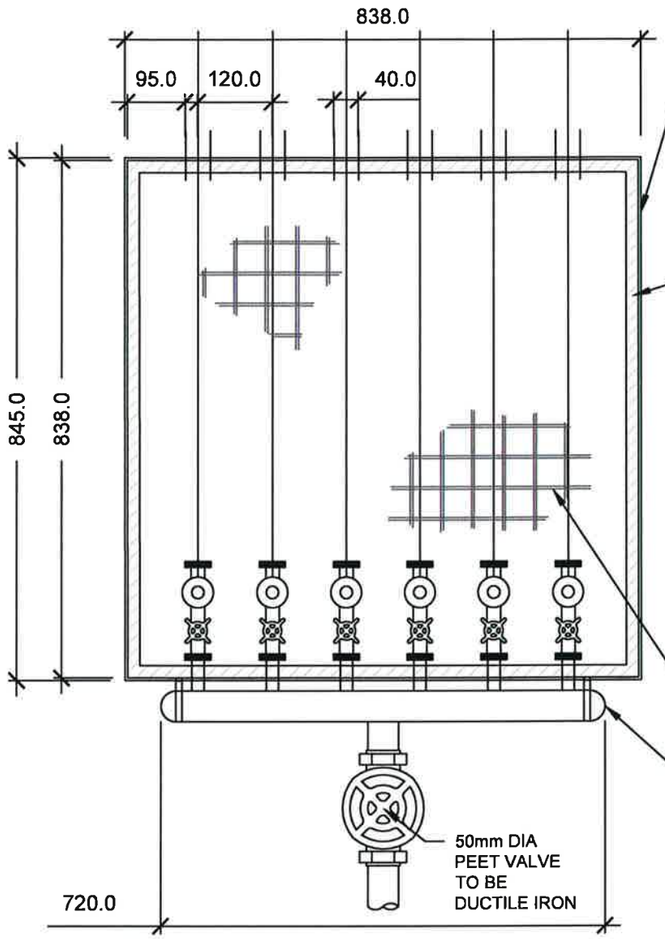
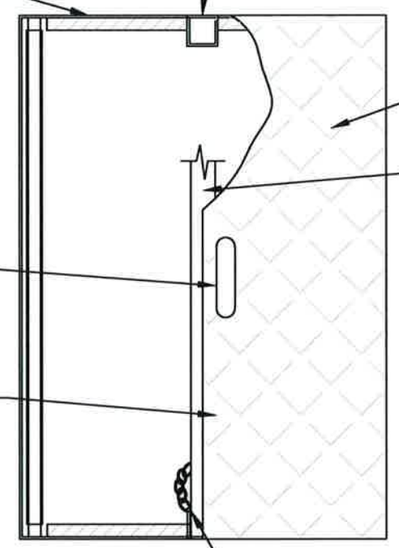
NOTE:
SEE CONSTRUCTION NOTES DD002

IMPORTANT NOTE: PRODUCER STATEMENTS

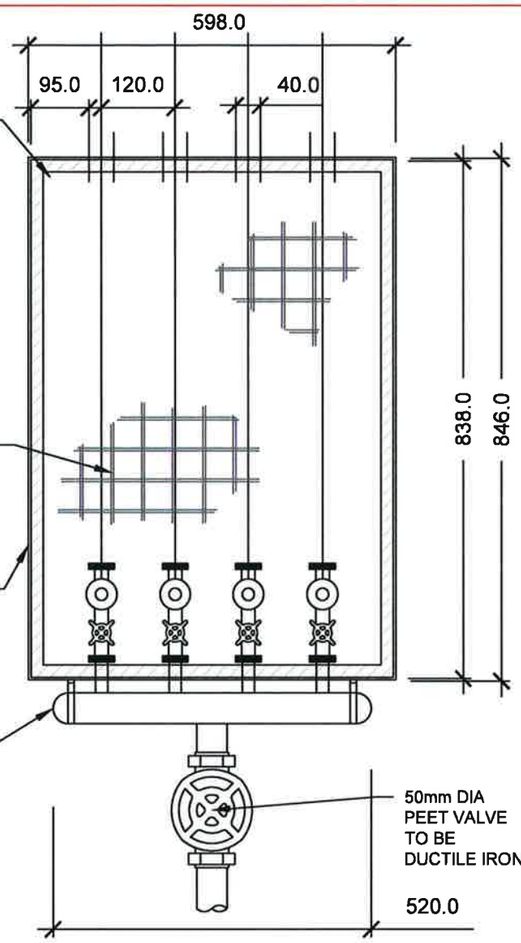
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



6 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10



CHAMBER BOX - TYPICAL LID DETAIL
SCALE 1:10



4 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10

4mm HOT DIPPED GALVANISED (HDG) WITH 6x40mm DIA PENETRATION FOR HOUSE CONNECTIONS & 6x30mm DIA PENETRATIONS FOR MANIFOLD

20mm JAM WELDED AROUND TOP LIP OF CHAMBER BOX FOR DOORS TO CLOSE FLUSH

20mm HOT DIPPED GALVANISED (HDG) JAM WELDED AROUND BOTTOM LIP OF CHAMBER BOX FOR MESH TO BE FIXED TO

100x30mm PENETRATION FOR HANDLE. ALTERNATIVELY 'HOBSONVILLE BOLT' TO BE USED

200mm DIA HOT DIPPED GALVANISED (HDG) ROD WELDED TO EITHER END OF BOX WITH 25mm DIA (HDG) SLEEVE. SLEEVE TO BE FIXED TO LID TO PROVIDE HINGE

50x50x4mm HOT DIPPED GALVANISED (HDG) MESH BASE PLATE TO BE FIXED TO BOTTOM OF CHAMBER BOX

50x50mm HOT DIPPED GALVANISED (HDG) BOX STEEL SUPPORT FOR CENTRAL BRACE

CHAIN TETHER

20mm HOT DIPPED GALVANISED (HDG) JAM WELDED AROUND BOTTOM LIP OF CHAMBER BOX FOR MESH TO BE FIXED TO

6mm HOT DIPPED GALVANISED (HDG) DUAL CHEQUER PLATE LIDS

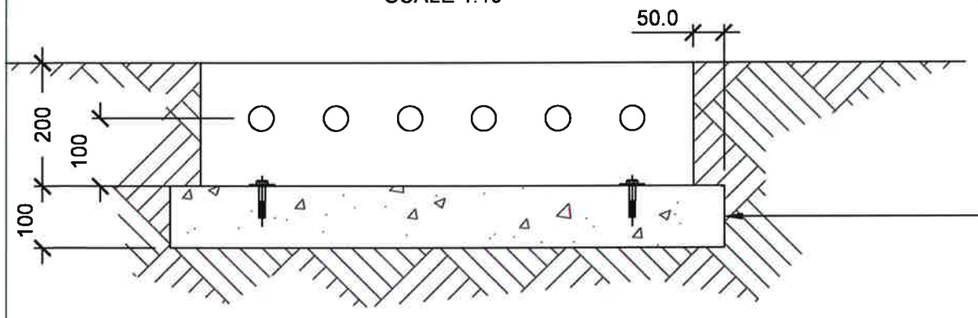
40mm REMOVABLE HOT DIPPED GALVANISED (HDG) CENTRAL BRACE. TO BE TETHERED TO CHAMBER BOX

50x50x4mm HOT DIPPED GALVANISED (HDG) MESH BASE PLATE TO BE FIXED TO BOTTOM OF CHAMBER BOX

4mm HOT DIPPED GALVANISED (HDG) WITH 4x40mm DIA PENETRATION FOR HOUSE CONNECTIONS & 4x30mm DIA PENETRATIONS FOR MANIFOLD

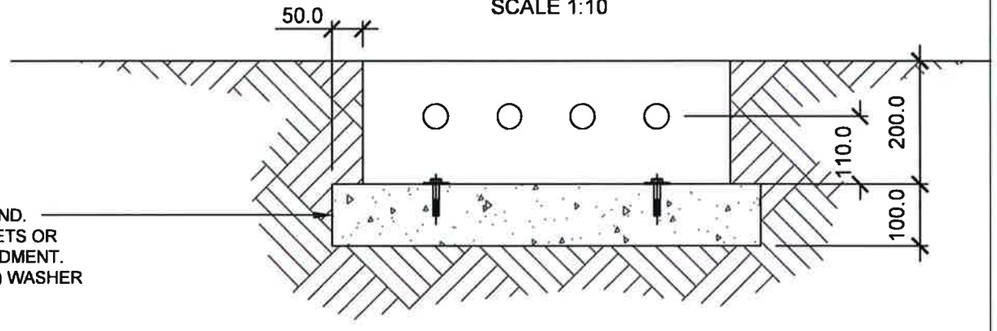
APPROVED PLANS - Whangarei District Council RCA - SD1800110 BG 19/05/2020

50mm DIA STAINLESS STEEL (SS) MANIFOLD FIXED TO BOX EXTERIOR. 6/4x30mm DIA PENETRATIONS FOR INDIVIDUAL MANIFOLD FEED



6 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

100mm CONCRETE BASE POURED ON GOOD GROUND. CHAMBER BOX TO BE FIXED TO BASE BY 4 CHEMSETS OR CAST INSITU RAG END BOLTS. MIN OF 50mm EMBEDMENT. MINIMUM 75x75mm HOT DIPPED GALVANISED (HDG) WASHER OR PLATE TO BE USED TO SPAN GAP IN MESH.



4 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

PHILIP COOK
WDC IQP#014

WATER SERVICES APPROVED
Signed ..... Date 18-05-2020

4/6 WAY MANIFOLD CHAMBER BOX

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	NEW IQP DETAILS	18-03-20 KH	PC
A	1ST ISSUE	29-11-19 KH	GM

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 4 & 5
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER TYPICAL DETAILS
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
29-11-2019	K HANSARD	A PARKER	G McGREGOR
CCL REF NO 14333-004	SCALE NTS @ A3		STATUS FOR APPROVAL
DWG NUMBER DD722			REVISION B

DATE PLOTTED: Wednesday, 18 March 2020 9:16:25 a.m. FILE PATH: C:\Users\Karren\AppData\Local\Temp\BricsCAD\bp_1\14333-004-DD720-WAT Typ Det.dwg

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