

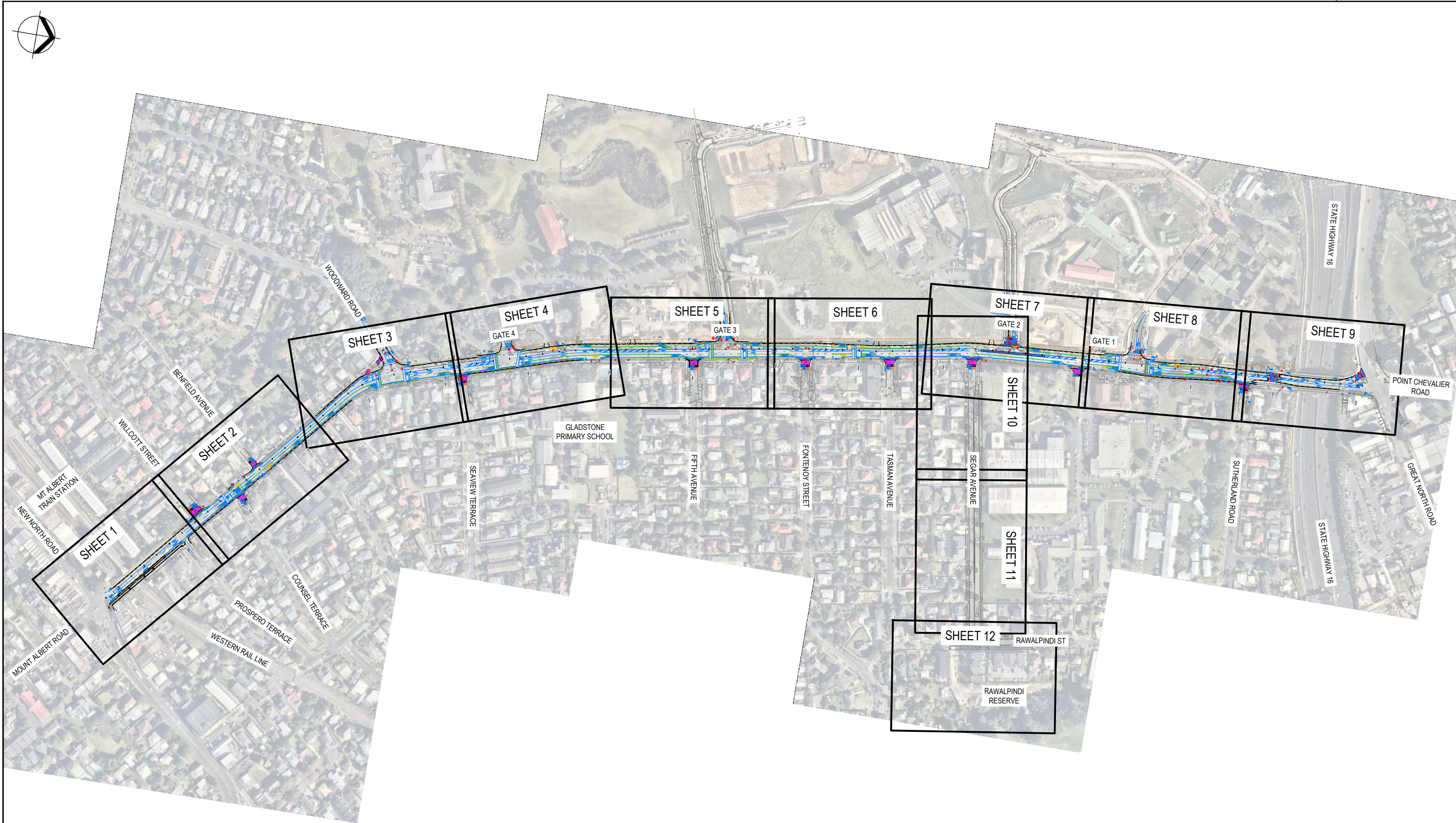
| DRAWING No. | TITLE |
|-----------------|--|
| 3230635-CA-0451 | ROAD LONG SECTIONS - GATE 4 |
| 3230635-CA-0452 | ROAD LONG SECTIONS - GATE 3 |
| 3230635-CA-0453 | ROAD LONG SECTIONS - GATE 2 |
| 3230635-CA-0454 | ROAD LONG SECTIONS - GATE 1 |
| | |
| 3230635-CA-0551 | DETAILED CROSS SECTIONS - SHEET 1 |
| 3230635-CA-0552 | DETAILED CROSS SECTIONS - SHEET 2 |
| 3230635-CA-0553 | DETAILED CROSS SECTIONS - SHEET 3 |
| 3230635-CA-0554 | DETAILED CROSS SECTIONS - SHEET 4 |
| 3230635-CA-0555 | DETAILED CROSS SECTIONS - SHEET 5 |
| 3230635-CA-0556 | DETAILED CROSS SECTIONS - SHEET 6 |
| 3230635-CA-0557 | DETAILED CROSS SECTIONS - SHEET 7 |
| 3230635-CA-0558 | DETAILED CROSS SECTIONS - SHEET 8 |
| 3230635-CA-0559 | DETAILED CROSS SECTIONS - SHEET 9 |
| 3230635-CA-0560 | DETAILED CROSS SECTIONS - SHEET 10 |
| 3230635-CA-0561 | DETAILED CROSS SECTIONS - SHEET 11 |
| 3230635-CA-0562 | DETAILED CROSS SECTIONS - SHEET 12 |
| 3230635-CA-0563 | DETAILED CROSS SECTIONS - SHEET 13 |
| 3230635-CA-0564 | DETAILED CROSS SECTIONS - SHEET 14 |
| 3230635-CA-0565 | DETAILED CROSS SECTIONS - PROSPERO TO WOODWARD DRIVEWAYS |
| | |
| 3230635-CU-0631 | EXISTING AND NEW UTILITIES - SHEET 1 |
| 3230635-CU-0632 | EXISTING AND NEW UTILITIES - SHEET 2 |
| 3230635-CU-0633 | EXISTING AND NEW UTILITIES - SHEET 3 |
| 3230635-CU-0634 | EXISTING AND NEW UTILITIES - SHEET 4 |
| 3230635-CU-0635 | EXISTING AND NEW UTILITIES - SHEET 5 |
| 3230635-CU-0636 | EXISTING AND NEW UTILITIES - SHEET 6 |
| 3230635-CU-0637 | EXISTING AND NEW UTILITIES - SHEET 7 |
| 3230635-CU-0638 | EXISTING AND NEW UTILITIES - SHEET 8 |
| 3230635-CU-0639 | EXISTING AND NEW UTILITIES - SHEET 9 |
| 3230635-CU-0640 | EXISTING AND NEW UTILITIES - SHEET 10 |
| 3230635-CU-0641 | EXISTING AND NEW UTILITIES - SHEET 11 |
| 3230635-CU-0642 | EXISTING AND NEW UTILITIES - SHEET 12 |
| | |
| 3230635-CU-0651 | UTILITIES TYPICAL CROSS SECTION - SHEET 1 |
| 3230635-CU-0652 | UTILITIES TYPICAL CROSS SECTION - SHEET 2 |
| 3230635-CU-0653 | UTILITIES TYPICAL CROSS SECTION - SHEET 3 |
| 3230635-CU-0654 | UTILITIES TYPICAL CROSS SECTION - SHEET 4 |
| | |
| 3230635-CA-0901 | SIGNS AND MARKINGS PLAN - SHEET 1 |
| 3230635-CA-0902 | SIGNS AND MARKINGS PLAN - SHEET 2 |
| 3230635-CA-0903 | SIGNS AND MARKINGS PLAN - SHEET 3 |
| 3230635-CA-0904 | SIGNS AND MARKINGS PLAN - SHEET 4 |
| 3230635-CA-0905 | SIGNS AND MARKINGS PLAN - SHEET 5 |
| 3230635-CA-0906 | SIGNS AND MARKINGS PLAN - SHEET 6 |
| 3230635-CA-0907 | SIGNS AND MARKINGS PLAN - SHEET 7 |
| 3230635-CA-0908 | SIGNS AND MARKINGS PLAN - SHEET 8 |
| 3230635-CA-0909 | SIGNS AND MARKINGS PLAN - SHEET 9 |
| 3230635-CA-0910 | SIGNS AND MARKINGS PLAN - SHEET 10 |
| 3230635-CA-0911 | SIGNS AND MARKINGS PLAN - SHEET 11 |
| 3230635-CA-0912 | SIGNS AND MARKINGS PLAN - SHEET 12 - (NOT USED) |

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Project: CARRINGTON ROAD
IMPROVEMENTS PROJECT

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|-------------|-----------------|-------------------|
| Discipline | | CIVIL ENGINEERING |
| Drawing No. | 3230635-CA-0001 | Rev. B |



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|----------------------|----------|----|-----|------|----------|
| B PRELIMINARY DESIGN | | AH | CD | CMA | 18.12.24 |
| A CONCEPT DESIGN | | AH | CD | CMA | 18.10.24 |
| No. | Revision | By | Chk | Appd | Date |

| | | | | |
|--|----------------|------------|----------|----------------------------|
| Original Scale (A1) | Design | A. HOLT | 18.10.24 | Approved For Construction* |
| NTS | Drawn | R. HIDALGO | 18.10.24 | Date |
| Reduced Scale (A3) | Design Checker | | | |
| NTS | Drawn | | | |
| * Refer to Revision 1 for Original Signature | | | | |

 Beca Miskell



Client: 

Project: CARRINGTON ROAD IMPROVEMENTS PROJECT

Title: LOCALITY PLAN AND SHEET LAYOUT

| | | |
|-------------------------------|--|--------|
| Discipline: CIVIL ENGINEERING | | Rev. B |
| Drawing No. 3230635-CA-0002 | | |

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL

1. ALL NOTES HEREIN SHALL FORM PART OF THE CONTRACT.
2. ALL WORKS SHALL BE CONSTRUCTED AS DETAILED IN ALL DESIGN DRAWINGS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
4. THE CONTRACTOR MUST CHECK ALL DESIGN DRAWINGS AND IDENTIFY ANY INCONSISTENCIES BETWEEN THE DESIGN DRAWINGS AND AGAINST THE CONTRACT SPECIFICATIONS, BASIS OF PAYMENT AND SCHEDULE OF PRICES IN ADVANCE OF AND PRIOR TO ANY CONSTRUCTION WORKS. THE CONTRACTOR MUST NOTIFY THE ENGINEER IF THERE ARE ANY INCONSISTENCIES.

PROJECT COORDINATE SYSTEM AND HEIGHT DATUM

- COORDINATE SYSTEM : MT EDEN 2000
- HEIGHT DATUM : NZVD2016

TREES

1. NEW TREES LOCATIONS ARE INDICATIVE ONLY.
2. LOCATIONS OF NEW TREES WILL BE DETERMINED ON SITE IN ORDER TO AVOID IMPACT ON EXISTING UTILITIES.

CYCLE SEPARATORS ISLANDS

1. BREAKS IN ISLANDS TO BE CONFIRMED IN DETAILED DESIGN, TO CATER FOR TRACKING AT INTERSECTIONS AND DRIVEWAYS.

GREEN SPACE

1. AS DESIGN PROGRESSES THE GREEN SPACE WILL BE SPECIFIED IN MORE DETAIL (E.G. GRASS BERM, PLANTING, RAINGARDEN).

KERBS

1. ALL NEW KERBS WILL MATCH EXISTING KERB TYPES

TRAFFIC SIGNALS

1. LOCATIONS OF SIGNAL CABINETS AND POLES SHOWN IN PRELIMINARY DESIGN ARE INDICATIVE ONLY FOR THE PURPOSE OF SPACEPROOFING. SIGNAL DESIGN WILL BE COMPLETED IN DETAILED DESIGN.
2. COORDINATION OF TRAFFIC SIGNAL INFRASTRUCTURE WITH OTHER INFRASTRUCTURE WILL BE DONE DURING DETAILED DESIGN.

INTELLIGENT TRANSPORT SYSTEMS (ITS)

1. ITS INCLUDES CAMERAS, VARIABLE MESSAGE SIGNS, ENFORCEMENT CAMERAS AND RADARS.
2. ITS DESIGN WILL BE CARRIED OUT AND COMPLETED IN DETAILED DESIGN. DESIGN REQUIREMENTS ARE YET TO CONFIRMED WITH AUCKLAND TRANSPORT.
3. COORDINATION OF ITS INFRASTRUCTURE WITH OTHER INFRASTRUCTURE WILL BE DONE DURING DETAILED DESIGN.

STREET LIGHTING

1. LOCATIONS OF LIGHT POLES SHOWN IN PRELIMINARY DESIGN IS INDICATIVE ONLY FOR THE PURPOSE OF SPACEPROOFING. LIGHTING DESIGN WILL BE COMPLETED WHEN DETAILED DESIGN IS COMPLETE.
2. COORDINATION OF STREETLIGHT POLES WITH OTHER INFRASTRUCTURE WILL BE DONE DURING DETAILED DESIGN.

RETAINING WALLS

1. THE SCOPE, TYPE AND EXTENT OF RETAINING WALLS HAS BEEN ASSUMED. WILL BE CONFIRMED DURING DETAILED DESIGN THROUGH COORDINATION WITH THE CARRINGTON RESIDENTIAL DEVELOPMENT.

STORMWATER

1. ALL EXISTING STORMWATER ASSET LEVELS ARE SOURCED FROM AUCKLAND COUNCIL GIS. THE DESIGN LEVELS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM ALL EXISTING STORMWATER ASSET LOCATION AND LEVELS ON SITE PRIOR TO BREAKING OF ANY GROUND.
2. NEW MANHOLES TO BE BENCHED IN ACCORDANCE WITH THE SPECIFICATION AND THE AUCKLAND COUNCIL CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION: CHAPTER 4 - STORMWATER AND ARE TO HAVE CLASS D LOAD RATED LIDS. REFER TO SW05.
3. NEW MANHOLES TO BE STANDARD PRECAST 1050DIA IN ACCORDANCE WITH AUCKLAND COUNCIL STORMWATER CODE OF PRACTICE.
4. MANHOLES OVER 0.9m DEEP SHALL HAVE TYPE 316 STAINLESS STEEL OR STEP IRONS IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
5. ALL NEW PIPES ARE TO BE LAID IN ACCORDANCE WITH THE SPECIFICATION AND THE AUCKLAND COUNCIL CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION: CHAPTER 4 - STORMWATER. REFER TO SW01 AND SW02.
6. NEW PIPE SIZES SHALL BE AS FOLLOWS UNLESS SPECIFIED OTHERWISE
 - CATCHPIT LEADS - 225mm DIA CLASS 4
 - ALL OTHER NEW PIPES - 450mm DIA CLASS 4
7. ALL NEW CATCHPIT LEADS SHALL HAVE MINIMUM 1.0m COVER AND 1.0% MINIMUM GRADE UNLESS OTHERWISE STATED ON THE DRAWINGS. THE CONTRACTOR IS TO ADVISE THE ENGINEER WHERE THIS CANNOT BE ACHIEVED.
8. REDUNDANT PIPES SHALL BE REMOVED WHERE POSSIBLE, AND THE TRENCH/EXCAVATION BACKFILLED WITH WELL COMPACTED HARDFILL. WHERE PIPES CANNOT PRACTICABLY BE REMOVED (AS AGREED WITH THE ENGINEER), PIPES MAY BE CAPPED AT EITHER END AND ABANDONED INSITU. ABANDONED PIPES SHALL BE ACCURATELY AS-BUILT.
9. WHERE EXISTING CATCHPIT LEADS ARE REUSED. THE CONTRACTOR MUST CONFIRM CONDITION OF AND COVER TO THE EXISTING PIPE WITH THE ENGINEER.
10. ALL NEW CATCHPITS TO BE STREET CATCHPITS AND LINTEL TO SUIT TASMAN GRATE UNLESS SPECIFIED OTHERWISE. REFER TO TDM DRAWING RD0022,23 AND 24.
11. NEW CATCHPIT GRATES TO BE TASMAN GRATES UNLESS SPECIFIED OTHERWISE.
12. EXISTING SUBSOIL CONNECTIONS TO CATCHPITS TO BE EXTENDED/MODIFIED TO CONNECT TO NEW OR RELOCATED CATCHPITS.

WATERCARE WATERMAIN

1. THE WATERMAIN ALIGNMENT AND LOCATIONS OF THE AIR VALVE, SCOUR VALVE AND VALVE CHAMBER HAVE BEEN PROVIDED BY THE BECA WATER TEAM WORKING FOR WATERCARE. THE ALIGNMENT AND VALVE LOCATIONS ARE INDICATIVE ONLY AND HAVE NOT BEEN CONFIRMED OR APPROVED BY WATERCARE.
2. THE WATERMAIN IS LOCATED IN THE NEW CARRIAGEWAY AS IT IS UNLIKELY THAT THERE IS ADEQUATE SPACE FOR IT IN THE BERM DUE TO OTHER UTILITIES THAT NEED TO BE PROVIDED FOR.
3. THE INTENT OF THE ALIGNMENT IN THE NEW LEFT HAND NORTHERN LANE IS TO RESTRICT MAINTENANCE ACTIVITIES TO ONE LANE OF TRAFFIC AND CONSTRUCTION ACTIVITIES CAN OCCUR WITHOUT DISRUPTING TRAFFIC (AS THIS IS WITHIN THE EXISTING BERM).
4. THE EXISTING UTILITIES SHOWN ARE BASED ON BEFORE-U-DIG INFORMATION AND WILL BE CONFIRMED WITH THE SLOT TRENCH INVESTIGATION DATA. ANY SERVICE IN THE EXISTING BERM (THAT BECOMES THE NEW CARRIAGEWAY) WILL BE RELOCATED INTO THE NEW BERM.

[illegible]

 Beca  Boffa Miskell

Client: 

Project: CARRINGTON ROAD
IMPROVEMENTS PROJECT

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|-----------------------------------|--|----------------------|
| Title GENERAL NOTES | Discipline CIVIL ENGINEERING | |
| | Drawing No. 3230635-CA-0003 | Rev. B |

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PRELIMINARY
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- ALL SIGN DETAILS SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING:
 - TRAFFIC CONTROL DEVICES (TCD) MANUAL
 - NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM) PART 1: TRAFFIC SIGNS
 - NZTA P24:2020 SPECIFICATION FOR PERMANENT TRAFFIC SIGNS
 - AT TRANSPORT DESIGN MANUAL (TDM): SIGNAGE & MARKINGS STANDARD ENGINEERING DETAILS
2. ALL RETROREFLECTIVE SHEETING USED FOR TRAFFIC SIGNS MUST CONFORM WITH THE REQUIREMENTS OF AS/NZS 1906.1:2017.
3. THE LATERAL PLACEMENT OF SIGNS ON THE LOCAL ROADS SHALL BE AS PER MOTSAM PART 1 SECTION 1.7.3(A):
 - A MINIMUM OF 300mm FROM THE KERB FACE TO THE EDGE OF SIGN WHERE NON-MOUNTABLE KERBS ARE USED
 - DESIRABLY, A MINIMUM OF 500mm WHERE MOUNTABLE KERBS ARE USED
4. AS PER TCD MANUAL PART 1 SECTION 7.3.3 THE MINIMUM VERTICAL DISTANCE FOR GROUND MOUNTED SIGNS, MEASURED FROM THE UNDERSIDE OF THE SIGN OR THE LOWEST SIGN IN AN ASSEMBLY OF SIGNS, AND THE SURFACE OF THE ADJACENT ROAD PAVEMENT, TRAFFICABLE SHOULDER, OR TOP OF KERB AND/OR CHANNEL, WHICHEVER IS THE GREATER DIMENSION, SHALL BE:
 - 2.0m FOR ALL OTHER SIGNS ALONG THE LOCAL ROAD (NOT OVER OR NEAR A FOOTPATH)
 - 2.5m FOR ALL SIGNS LOCATED OVER FOOTPATHS AND FOR ALL TRANSIT LANE AND BUS LANE SIGNS.
5. ALL REFLECTORISED GROUND MOUNTED SIGNS SHALL BE ORIENTATED SUCH THAT THEY ARE TURNED ABOUT 5 DEGREES (MAXIMUM OF 10 DEGREES) FROM THE DRIVER'S LINE OF SIGHT OR THE NORMAL OF THE ROAD CENTRE LINE.
6. CONTRACTOR TO BE RESPONSIBLE FOR THE INSTALLATION OF ALL SIGNS, SIGN MOUNTINGS, POLES, FOUNDATIONS IN ACCORDANCE WITH NZTA P24.
7. CHANNEL STIFFENING SPACING IN CONJUNCTION WITH POST SPACING SHALL BE CALCULATED IN ACCORDANCE WITH THE CHANNEL MANUFACTURER'S RECOMMENDATION AND CONFORM TO DEFLECTION REQUIREMENTS.
8. THE CONTRACTOR SHALL INSTALL ALL SMALL SIGNS (SIGN PANEL AREA LESS THAN 4.7m²) AS PER STANDARD SIGN SUPPORTS AND FOUNDATION REQUIREMENTS IN ACCORDANCE WITH NZTA P24:2020 UNLESS STATED OTHERWISE ON THE DRAWING.
9. TRAFFIC SIGN POSITIONS ARE INDICATIVE ONLY AND ARE TO BE CONFIRMED BY THE SITE ENGINEER PRIOR TO INSTALLATION TO AVOID CONFLICT AND OBSTRUCTION TO SIGNS BY OTHER ROADSIDE FURNITURE AND VEGETATION.
10. THE CONTRACTOR SHALL IDENTIFY AND LOCATE ALL EXISTING AND/OR NEW UTILITY AND DRAINAGE SERVICES AT THE POSITIONS OF SIGN INSTALLATIONS. WHERE THERE IS A CONFLICT WITH THESE SERVICES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND ADVISE OF ANY PROPOSED RELOCATION OR FOUNDATION MODIFICATION TO REMOVE THE CONFLICT. THE ENGINEER SHALL REVIEW AND COMMENT ON THE APPROPRIATENESS OF THE PROPOSED MODIFICATION PRIOR TO THE SIGN INSTALLATION.
11. THE CONTRACTOR SHALL PROTECT ALL EXISTING SIGNS. IF ANY EXISTING SIGNS ARE IN CONFLICT WITH THE NEW INFRASTRUCTURE, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO CONFIRM WHERE TO RELOCATE THE SIGN OR IF IT SHOULD BE REMOVED.
12. THE CONTRACTOR SHALL ASSESS THE CONDITIONS OF ALL EXISTING SIGNS AND SHALL CONFIRM WITH THE ENGINEER IF ANY EXISTING SIGNS ARE TO BE REUSED OR REPLACED WITH NEW SIGNS.
13. ALL EXISTING STREET NAME SIGNS AFFECTED BY THE PHYSICAL CONSTRUCTION WORKS TO BE REPLACED WITH NEW SIGNS IF/AS AGREED WITH THE ENGINEER. (SIGNS TO BE DESIGNED TO AUCKLAND TRANSPORT TDM STANDARDS).
14. SIGN SOCKETS SHALL BE SAFETY GROUND SOCKETS, FINISHED FLUSH (-0mm, +5mm) WITH THE EXISTING SURFACE TO ENSURE THEY ARE NOT A TRIP HAZARD IF THE SIGN IS REMOVED. THEY SHALL BE LOCKABLE BY USING A STAINLESS STEEL WEDGE. SOCKETS SHALL BE 600mm LONG AND TO SUIT A 76mm DIAMETER POLE. SOCKETS SHALL BE INSTALLED AS PART OF THE CONCRETE WORKS WHERE RELEVANT (WITHIN FOOTPATHS AND TRAFFIC ISLANDS), AND SHALL COMPLY WITH THE REQUIREMENT OF P24 'PERFORMANCE BASED SPECIFICATION FOR TRAFFIC SIGNS'.

1. ALL ROAD MARKING DETAILS SHALL BE IN ACCORDANCE WITH:
 - NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM) PART 2: MARKINGS
 - TRAFFIC CONTROL DEVICES (TCD) MANUAL
2. ALL HIGH PERFORMANCE LONG LIFE (HPLL) MARKING SHALL BE INITIALLY MARKED WITH PILOT LINE IN PAINT. LONG LIFE MARKING SHALL BE IN ACCORDANCE WITH NZTA P/30 LONG LIFE PAVEMENT MARKINGS MARKED A MINIMUM OF THREE WEEKS AFTER APPLICATION OF THE PILOT MARKING.
3. OBSOLETE ROAD MARKINGS SHALL BE REMOVED BY WATER BLASTING IN ACCORDANCE WITH NZRF LINE REMOVAL GUIDE. 'BLACKING OUT' OF MARKING IS NOT PERMITTED.
4. RAISED REFLECTIVE PAVEMENT MARKERS (RRPMs) SHALL COMPLY WITH NZTA P/14 AND NZTA M/12 SPECIFICATIONS.
5. TRAFFIC ISLAND AND RAISED MEDIAN KERB SHALL BE PAINTED WHITE IN ACCORDANCE WITH MOTSAM PART 2 SECTION 2.08.03 RAISED ISLANDS.

1. ALL RRPMS SHALL BE SUPPLIED AND INSTALLED IN CONJUNCTION WITH THE FOLLOWING:

- NZTA MANUAL OF TRAFFIC SIGNS AND MARKINGS (MOTSAM) PART 2: MARKINGS
- TRAFFIC CONTROL DEVICES (TCD) MANUAL

1. CONTRACTOR SHALL REMARK ALL FIRE HYDRANT MARKINGS AND SYMBOLS AFFECTED WITHIN THE EXTENT OF THE WORKS.
2. FIRE HYDRANT MARKINGS WIDTH TO BE INSTALLED IN ACCORDANCE WITH MOTSAM PART 2, SECTION 4, FIGURE 4.07.
3. WHERE FIRE HYDRANT MARKINGS ARE LOCATED ON ZEBRA CROSSINGS, THE HYDRANT MARKINGS SHALL BE PLACED BETWEEN THE WHITE ZEBRA STRIPES.
4. WHERE FIRE HYDRANT MARKINGS ARE LOCATED ON GREEN CYCLEWAY MARKINGS, THE HYDRANT MARKINGS SHALL BE MARKED AFTER THE GREEN MARKINGS HAVE BE APPLIED.

[illegible]

1. TACTILE AND DIRECTIONAL GROUND SURFACE INDICATORS ARE TO BE INSTALLED IN ACCORDANCE WITH AUCKLAND TRANSPORT TDM DRAWING FP0006 AND RTS14.
2. TACTILE AND DIRECTIONAL GROUND SURFACE INDICATORS ARE SHOWN DIAGRAMMATICALLY.
3. TACTILE GROUND SURFACE INDICATORS MUST BE SET PERPENDICULAR TO THE DIRECTION OF CROSSING.
4. STAGGERED ARRANGEMENT IS GENERALLY NOT PERMITTED UNLESS SPECIFIED OTHERWISE BY THE ENGINEER
5. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND LAYOUT OF ALL TACTILES.
6. THE CONTRACTOR TO AGREE ALL TACTILE PAVER ARRANGEMENTS WITH THE ENGINEER PRIOR TO INSTALLATION.

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TABLE 1: NEW UTILITIES REQUIREMENTS

| PROSPERO TCE TO WOODWARD RD (CH 120 - CH 400) | | WOODWARD RD TO FARM RD (CH 400 - CH 820) | | FARM RD TO GNR (CH 820 - CH 1615) | |
|---|--|--|--|---|--|
| VECTOR POWER | NO SCOPE REQUIRED | <u>WESTERN SIDE</u> CH 450 TO CH 820 - ALLOW FOR THE FOLLOWING NEW DUCTS: 1 X 150mm HV DUCT 1 X 100mm LV DUCT 1 X 150mm HV Duct (FOR FUTURE PROOFING) 1 X 100mm LV DUCT (FOR FUTURE PROOFING) CH 825 - ALLOW FOR RELOCATION OF AN EXISTING GROUND SWITCHGEAR AT GATE 3 <u>EASTERN SIDE</u> CH 545 TO CH 715 - EXISTING OVERHEAD POWER LINES TO BE UNDERGROUNDED. IN THIS AREA, THE FOLLOWING DUCTS ARE TO BE PROVIDED: 1 X 150mm HV 1 X 100mm LV 1 X 150mm HV (FOR FUTURE PROOFING) 1 X 100mm LV (FOR FUTURE PROOFING) | | <u>WESTERN SIDE</u> CH 820 TO CH 1520 - ALLOW FOR THE FOLLOWING NEW DUCTS: 1 X 150mm HV DUCT 1 X 100mm LV DUCT 1 X 150mm HV Duct (FOR FUTURE PROOFING) 1 X 100mm LV DUCT (FOR FUTURE PROOFING) <u>EASTERN SIDE</u> CH 1275 TO CH 1410 - EXISTING OVERHEAD POWER LINES TO BE UNDERGROUNDED. IN THIS AREA, THE FOLLOWING DUCTS ARE TO BE PROVIDED: 1 X 150mm HV 1 X 100mm LV 1 X 150mm HV (FOR FUTURE PROOFING) 1 X 100mm LV (FOR FUTURE PROOFING) | |
| VECTOR FIBRE | <u>WESTERN SIDE</u> CH 330 TO CH 400 - ALLOW FOR 1 X 100mm NEW VECTOR FIBRE DUCT REQUIRED TO REPLACE EXISTING DUCT CH 330 - ALLOW FOR 1 X NEW CHAMBER REQUIRED TO REPLACE EXISTING CHAMBER. CHAMBER SIZE TO BE SIKA PIT 1200 (L) X 600(W) X 700(D) <u>EASTERN SIDE</u> CH 140 - ALLOW FOR 1 X NEW CHAMBER REQUIRED TO REPLACE EXISTING CHAMBER. CHAMBER SIZE TO BE SIKA PIT 1200 (L) X 600 (W) X 700 (D) | <u>WESTERN SIDE</u> CH 400 TO CH 590 - ALLOW FOR 1 X 100mm NEW VECTOR FIBRE DUCT REQUIRED (TO REPLACE EXISTING DUCT) AND ANOTHER 50m TO JOIN EXISTING DUCT WITHIN UNITEC GATE 4 CH 460 - ALLOW FOR 1 X NEW CHAMBER REQUIRED TO REPLACE EXISTING CHAMBER. CHAMBER SIZE TO BE SIKA PIT 1200 (L) X 600 (W) X 700 (D) <u>EASTERN SIDE</u> NO SCOPE REQUIRED | | NO SCOPE REQUIRED | |
| VECTOR GAS | <u>WESTERN SIDE</u> NO SCOPE REQUIRED <u>EASTERN SIDE</u> CH 120 TO CH 180 - ALLOW FOR NEW 1 X 50mm PE NEW GAS MAIN REQUIRED TO REPLACE EXISTING | <u>WESTERN SIDE</u> CH 655 TO CH 820 - ALLOW FOR 1 X NEW 50mm PE GAS MAIN REQUIRED TO REPLACE EXISTING <u>EASTERN SIDE</u> CH 530 TO CH 655 - ALLOW FOR 1 X NEW 50mm PE GAS MAIN REQUIRED TO REPLACE EXISTING BETWEEN CH 530 AND CH 655. SIZE AND EXTENT OF NEW GAS MAIN TBC WITH VECTOR GAS | | <u>WESTERN SIDE</u> CH 820 TO CH 1150 - ALLOW FOR 1 X NEW 50mm PE GAS MAIN REQUIRED TO REPLACE EXISTING CH 1290 TO CH 1490 - ASSUME 1 X NEW 50mm PE GAS MAIN REQUIRED TO REPLACE EXISTING <u>EASTERN SIDE</u> NO SCOPE REQUIRED | |
| CHORUS | <u>WESTERN SIDE</u> CH 390 TO CH 400 - ALLOW FOR 2 X 100mm CHORUS DUCTS <u>EASTERN SIDE</u> CH 210 TO CH 380 - ALLOW FOR 1 X NEW 40mm DUCT TO REPLACE EXISTING | <u>WESTERN SIDE</u> CH 400 TO CH 820 - ALLOW FOR 4 X 100mm CHORUS DUCTS CH 530, CH 590, CH 600, CH 690, CH 790 - ALLOW FOR NEW CHAMBERS OF THE FOLLOWING SIZES: 3 X SIKA 1200 (L) X 600 (W) X 700 (D) 1 X MINI PIT (SIZE TBC BY CHORUS) 1 X SIKA 1200 (L) X 1200 (W) X 900 (D) <u>EASTERN SIDE</u> NO SCOPE REQUIRED | | <u>WESTERN SIDE</u> CH 828, CH 830, CH 850, CH 1025, CH 1145, CH 1190, CH 1270, CH 1355, CH 1430, CH 1490 - ALLOW FOR NEW CHAMBERS OF THE FOLLOWING SIZES: 4 X SIKA 1200 (L) X 600 (W) X 700 (D) 4 X SIKA 1200 (L) X 1200 (W) X 900 (D) 2 X CHAMBER SIZES TBC BY CHORUS CH 820 TO CH 1320 - ALLOW FOR 4 X 100mm CHORUS DUCTS CH 1350 TO CH 1490 - ALLOW FOR 4 X 100mm CHORUS DUCTS <u>EASTERN SIDE</u> CH 1025, CH 1270 AND CH 1490 - ALLOW FOR NEW CHAMBERS OF THE FOLLOWING SIZE: 3 X SIKA 2100 (L) X 1200 (W) X 900 (D) CH 1470 TO CH 1490 - ALLOW FOR 4 X 100mm DUCTS | |
| WATERCARE - WATER | <u>WESTERN SIDE</u> NO SCOPE REQUIRED <u>EASTERN SIDE</u> CH 120 TO CH 320 - ALLOW FOR 1 X NEW LOCAL WATERMAIN REQUIRED TO REPLACE EXISTING | <u>WESTERN SIDE</u> CH 460 TO CH 820 - ALLOW FOR 1 X LOCAL WATERMAIN REQUIRED TO REPLACE EXISTING <u>EASTERN SIDE</u> NO SCOPE REQUIRED | | <u>WESTERN SIDE</u> CH 820 TO CH 1190 - ALLOW FOR 1 X LOCAL WATERMAIN REQUIRED TO REPLACE EXISTING <u>EASTERN SIDE</u> NO SCOPE REQUIRED | |
| WATERCARE - WASTEWATER | <u>WESTERN SIDE</u> CH 365 TO CH 380 - ALLOW FOR 1 X NEW WASTEWATER TO REPLACE EXISTING CH 370 ALLOW FOR 1 X NEW WASTEWATER MANHOLE TO REPLACE EXISTING <u>EASTERN SIDE</u> CH 250 TO CH 320 - ALLOW FOR 1 X NEW WASTEWATER REQUIRED TO REPLACE EXISTING | NO SCOPE REQUIRED | | NO SCOPE REQUIRED | |
| EON NZ (FIBRE) | NO SCOPE REQUIRED | <u>WESTERN SIDE</u> CH 400 TO CH 820 - ASSUME 1 X 100mm NEW EONFIBRE DUCT REQUIRED TO REPLACE EXISTING ALLOW FOR 3 X NEW CHAMBERS REQUIRED FOR EONFIBRE. CHAMBER SIZE TO BE SIKA 1200 (L) X 1200 (W) X 900 (D) <u>EASTERN SIDE</u> NO SCOPE REQUIRED | | <u>WESTERN SIDE</u> CH 820 TO CH 1520 - ALLOW FOR 1 X 100mm NEW EONFIBRE DUCT REQUIRED TO REPLACE EXISTING ALLOW FOR 3 NEW CHAMBERS REQUIRED FOR EONFIBRE. CHAMBER SIZE TO BE SIKA 1200 (L) X 1200 (W) X 900 (D) <u>EASTERN SIDE</u> NO SCOPE REQUIRED | |
| LINZ | PROTECT OR RELOCATE LINZ SURVEY MARKS AS ANNOTATED ON THE PLANS | PROTECT OR RELOCATE LINZ SURVEY MARKS AS ANNOTATED ON THE PLANS | | PROTECT OR RELOCATE LINZ SURVEY MARKS AS ANNOTATED ON THE PLANS | |
| OTHER UTILITIES (ASSET OWNER UNKNOWN) | NO SCOPE REQUIRED AS ALL ASSETS IN THIS AREA HAVE KNOWN OWNERS | <u>WESTERN SIDE</u> SCOPE IN THIS AREA IS ESTIMATED FOR THE PURPOSE OF COST ESTIMATING, AND WILL NEED TO BE CONFIRMED ONCE ASSET OWNER/S ARE IDENTIFIED. CH 800 TO CH 820 - ALLOW FOR 2 X 100mm DUCTS REQUIRED TO REPLACE EXISTING ALLOW FOR 1 X NEW CHAMBERS REQUIRED TO REPLACE EXISTING. CHAMBER SIZE TO BE SIKA 1200 (L) X 1200 (W) X 900 (D) <u>EASTERN SIDE</u> NO SCOPE REQUIRED AS ALL ASSETS IN THIS AREA HAVE KNOWN OWNERS | | NO SCOPE REQUIRED AS ALL ASSETS IN THIS AREA HAVE KNOWN OWNERS | |
| AT BT | | <u>WESTERN SIDE</u> CH 450 TO CH 820 - ALLOW FOR 1 X 100mm COMMS DUCT ALLOW FOR 3 X NEW CHAMBERS. ASSUME CHAMBER SIZE TO BE SIKA 1200 (L) X 1200 (W) X 900 (D) <u>EASTERN SIDE</u> SCOPE TO BE CONFIRMED BY AT BT | | <u>WESTERN SIDE</u> CH 820 TO CH 1520 - ALLOW FOR 1 X 100mm COMMS DUCT ALLOW FOR 5 X NEW CHAMBERS. ASSUME CHAMBER SIZE TO BE SIKA 1200 (L) X 1200 (W) X 900 (D) <u>EASTERN SIDE</u> SCOPE TO BE CONFIRMED BY AT BT | |

TABLE 2: NEW ROAD CROSSINGS ACROSS CARRINGTON ROAD

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| CH 180 | ALLOW FOR 1 X 100mm NEW VECTOR FIBRE DUCT ALLOW FOR 2 x 100mm TRAFFIC SIGNAL DUCTS |
| CH 420 | ALLOW FOR 2 x 100mm TRAFFIC SIGNAL DUCTS |
| CH 510 | ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 525 | ALLOW FOR THE FOLLOWING VECTOR POWER DUCTS: 1 X 100mm LV 1 X 100mm LV (FOR FUTURE PROOFING) 1 X 150mm HV (FOR FUTURE PROOFING) ALLOW FOR 2 x 100mm CHORUS DUCTS ALLOW FOR 2 X 100mm TRAFFIC SIGNAL DUCTS ALLOW FOR NEW 750mm WATERMAIN |
| CH 630 | ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 790 | ALLOW FOR 2 X 100mm CHORUS DUCTS |
| CH 790 | ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 830 | ALLOW FOR 2 x 100mm TRAFFIC SIGNAL DUCTS |
| CH 885 | ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 1025 | ALLOW FOR 2 x 100mm TRAFFIC SIGNAL DUCTS |
| CH 1025 | ALLOW FOR 2 X 100mm CHORUS DUCTS |
| CH 1065 | ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 1145 | ALLOW FOR 1 X 100mm CHORUS DUCT ASSUME 1 X 100mm EONFIBRE DUCT ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 1270 | ALLOW FOR 1 X 100mm CHORUS DUCT |
| CH 1350 | ALLOW FOR THE FOLLOWING VECTOR POWER DUCTS: 1 X 100mm LV 1 X 100mm LV (FOR FUTURE PROOFING) 1 X 150mm HV (FOR FUTURE PROOFING) ALLOW FOR 2 X 100mm TRAFFIC SIGNAL DUCTS ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 1440 | ALLOW FOR 750mm WATERMAIN |
| CH 1455 | ALLOW FOR NEW 225mm STORMWATER PIPE |
| CH 1500 | ALLOW FOR 6 X 100mm CHORUS DUCTS |

UTILITIES NOTES

1. EXISTING UTILITIES INFORMATION HAS BEEN COLLATED AND SHOWN ON DRAWINGS USING AVAILABLE HISTORICAL INFORMATION. THERE REMAINS A RISK THAT UNKNOWN UTILITIES MAY EXIST WITHIN THE PROJECT FOOTPRINT OR THAT THE SHOWN LOCATION OF EXISTING UTILITIES MAY DIFFER TO THAT ON SITE. THE CONTRACTOR SHALL LOCATE AND POSITIVELY IDENTIFY ALL EXISTING UTILITIES ON SITE PRIOR TO BREAKING OF ANY GROUND. AUCKLAND TRANSPORT PERMIT TO WORK PROCESS IS TO BE ADHERED TO AT ALL TIMES.
2. EXISTING UTILITIES LAYOUT PLANS IDENTIFY SIGNIFICANT ABOVE GROUND ASSETS THAT ARE ASSUMED TO BE IMPACTED AS A RESULT OF ROAD WIDENING.
3. THE CONTRACTOR MUST FOLLOW THE BEFOREUDIG PROCESS AND CONFIRM THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO EXCAVATION. ANY UTILITIES DAMAGED SHALL BE AT THE CONTRACTOR'S EXPENSE.
4. ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE RELEVANT SERVICE AUTHORITIES, AT THE CONTRACTORS EXPENSE.
5. ALL UTILITIES SHALL BE CONSIDERED LIVE UNLESS STATED OTHERWISE IN WRITING AND ON SITE BY THE RELEVANT NETWORK UTILITY OWNERS, (NUOs).
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND LIDS, WHERE THEY HAVE NOT BEEN IMPACTED BY DESIGN.
7. WHERE THERE IS A CLASH WITH EXISTING UTILITIES ON-SITE, THE CONTRACTOR SHALL PROTECT THE UTILITIES (WHERE POSSIBLE) OR RELOCATE FOLLOWING CONFIRMATION WITH THE RELEVANT NUOs AND THE ENGINEER.
8. UTILITY LIDS SHALL BE ADJUSTED TO MATCH NEW SURFACE LEVELS IN ACCORDANCE WITH THE RELEVANT NUOs REQUIREMENTS. THE CONTRACTOR SHALL LIAISE WITH THE RELEVANT NUOs TO CONFIRM REQUIREMENTS.
9. CONTRACTOR TO CHECK CONDITION OF PIT LIDS AND REPLACE WHERE CONDITION IS UNACCEPTABLE AS AGREED WITH THE ENGINEER. INFILL LIDS SHOULD BE INSTALLED WITHIN THE CONCRETE FOOTPATH OR CYCLEWAY.

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| A | PRELIMINARY DESIGN | WS | LA | CMA | 18.12.24 | | | | |
| No. | Revision | By | Chk | Appd | Date | | | | |

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| NTS | Drawn | L.CHEN | 25.11.24 | Date |
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| NTS | Dwg Check | | | |
| | * Refer to Revision 1 for Original Signature | | | |



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| Project: | CARRINGTON ROAD IMPROVEMENTS PROJECT |
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| Title: | UTILITIES NOTES |
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| Discipline | CIVIL ENGINEERING |
| Drawing No. | 3230635-CA-0005 |
| Rev. | A |

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL NOTES

- 1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE BECA DRAWINGS.
- 2. DRAWINGS ARE NOT TO BE SCALED, USED DIMENSIONED MEASUREMENTS ONLY.
- 3. ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
- 4. CONTRACTORS TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORK.
- 5. CONTRACTORS ARE RESPONSIBLE FOR CONFIRMING THE LOCATION OF ALL UNDERGROUND SERVICES ON SITE PRIOR TO COMMENCING WORK.

PLANTING NOTES

- 1. PLANT SPECIES SELECTED TO ACHIEVE MAXIMUM HEIGHT OF 600MM AND PLACED TO AVOID ENCROACHMENT ONTO ADJACENT FOOTPATH / CYCLE LANE / CARRIAGEWAY.
- 2. ALL TREE AND VEGETATION PRUNING TO BE UNDERTAKEN IN ACCORDANCE WITH THE PROJECT ARBORISTS REQUIREMENTS AND WITH ASSET OWNER APPROVAL.
- 3. ALL TREE PROTECTION WORKS TO BE IN ACCORDANCE WITH THE PROJECT ARBORIST'S REQUIREMENTS.
- 4. ALL TREE TRANSPLANTING WORKS TO BE UNDERTAKEN TO A METHODOLOGY APPROVED BY THE PROJECT ARBORIST.
- 5. ALL TREE PITS TO BE IN ACCORDANCE WITH AUCKLAND COUNCIL URBAN FOREST TEAM REQUIREMENTS.
- 6. ALL TOPSOIL DEPTHS AND PLANTING TO BE IN ACCORDANCE WITH AUCKLAND COUNCIL CODE OF PRACTICE FOR LAND DEVELOPMENT CHAPTER 7.
- 7. FINAL LOCATIONS FOR TRANSPLANTED TREES TO BE FINALISED AT DETAILED DESIGN.
- 8. INDICATIVE PLANTING SPECIES HAVE BEEN PROVIDED WITHIN URBAN DESIGN STRATEGY. TO BE FINALISED AT DETAILED DESIGN.

KEYNOTES

TREES

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| T10 | SPECIMEN TREE AND TREE PIT - SMALL NEW 45L-80L GRADE SPECIMEN TREE WITH SMALL MATURE SIZE TO BE PLANTED IN NEW TREE PIT WITH ACCESS TO A MINIMUM 8M3 SOIL VOLUME. |
| T11 | SPECIMEN TREE AND TREE PIT - MID-SIZED NEW 80L-160L GRADE SPECIMEN TREE WITH MID-SIZED MATURE SIZED TO BE PLANTED IN NEW TREE PIT WITH ACCESS TO A MINIMUM 10M3 SOIL VOLUME. |
| T12 | SPECIMEN TREE AND TREE PIT - LARGE NEW 80L-400L GRADE SPECIMEN TREE WITH LARGE MATURE SIZE TO BE PLANTED IN NEW TREE PIT WITH ACCESS TO A MINIMUM 15M3 SOIL VOLUME. |
| T13 | SPECIMEN TREE AND TREE PIT - SW DEVICE NEW 45L-80L GRADE SPECIMEN TREE WITH SMALL MATURE SIZE AND SHALLOW ROOTS TO BE PLANTED WITHIN STORMWATER DEVICE WITH ACCESS TO A MINIMUM 8M3 SOIL MEDIA. |
| T14 | SPECIMEN TREE IN STRUCTURAL SOIL TREE PIT NEW 80L-160L GRADE SPECIMEN TREE WITH MID-SIZED MATURE SIZED TO BE PLANTED IN NEW STRUCTURAL SOIL TREE PIT WITH ACCESS TO A MINIMUM 10M3 SOIL VOLUME. |

VEGETATION

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| V10 | REINSTATED/NEW GRASS HYDROSEEDDED GRASS TO AT DETAILS ON MIN. 250MM IMPORTED APPROVED TOPSOIL ON PERMEABLE SUBGRADE. |
| V11 | AMENITY PLANTING 1.0L – 5.0L GRADE MIXED LOW GROWING NATIVE AND EXOTIC PLANTING TO PROVIDE VISUAL AMENITY IN THE STREET ENVIRONMENT. ALL GARDENS TO RECEIVE 400MM DEPTH QUALITY TOPSOIL OVER PERMEABLE SUBGRADE AND 100MM SETTLED DEPTH WOODCHIP MULCH. GARDENS TO RECEIVE A NOMINAL 5 NO. PLANTS PER M2. |
| V12 | RAIN GARDEN PLANTING 1.0L TO 2.0L GRADE PLANTING IN MIN 400MM DEPTH PROPRIETARY RAIN GARDEN SOIL MEDIA OVER RAIN GARDEN FILTER MATERIAL. MIN 100MM DEPTH 50-60MM RIVER STONE MULCH APPLIED TO ALL PLANTED AREAS. GARDENS TO RECEIVE A NOMINAL 5 NO. PLANTS PER M2. |
| V13 | STORMWATER TREATMENT SWALE PLANTING 1.0L TO 2.0L GRADE PLANTING IN MIN 400MM DEPTH PLANTING MEDIA IN FORMED SWALE CHANNEL TO ENGINEER'S DETAILS. MIN 100MM DEPTH 40-80MM RIVER STONE MULCH APPLIED TO ALL PLANTED AREAS. PLANTED AREAS TO RECEIVE A NOMINAL 5 NO. PLANTS PER M2. |
| V14 | REVEGETATION PLANTING 1.0L – 5L GRADE NATIVE PLANTING FOR AMENITY AND LOW MAINTENANCE LAND COVER BETWEEN THE SWALE AND BOUNDARY ON THE ROAD RESERVE. ALL EARTHWORKS TO RECEIVE MIN 300MM DEPTH QUALITY TOPSOIL OVER PERMEABLE SUBGRADE AND 100MM SETTLED DEPTH WOODCHIP MULCH. PLANTED AREAS TO RECEIVE A NOMINAL 4 NO. PLANTS PER M2. |

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| Not To Scale | Drawn | ZKe | 12.12.24 | |
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| | Dwg Check | HOd | 18.12.24 | Date |
| * Refer to Revision 1 for Original Signature | | | | |



Boffa Miskell



Client:



Project:

CARRINGTON ROAD IMPROVEMENTS PROJECT

Title:

LANDSCAPE NOTES
SOFT LANDSCAPE

Discipline

LANDSCAPE ARCHITECTURE

Drawing No.

3230635-AL-2001

Rev.

A

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