# UBC BCR Lot 7 - Civil Engineering Drawings

## **Issued for Development Permit**



Location Map (NTS)

## **Contact Information**

VDZ+A

Project Civil Engineering

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Project Owner

### Legal Address and Description:

Lot 7, District Lot 6494, Group 1, N,W,D, Plan EPP86350

## **Sheet List Table**

Sheet Number	Sheet Title
CV-00	COVER SHEET
CV-01	KEY PLAN
CV-03	SERVICING PLAN
CN-01	CIVIL NOTES

NOT FOR CONSTRUCTION



REVISIONS TABLE FOR SHEET

Project: UBC BCR LOT 7

Location: 3568, 3578, 3588 Wesbrook Mall Vancouver, B.C.

Drawn:	Stamp:
AB	
Checked:	
TW	PP No.: 1001970
Approved:	Original Sheet Size:
TW	24"x36"

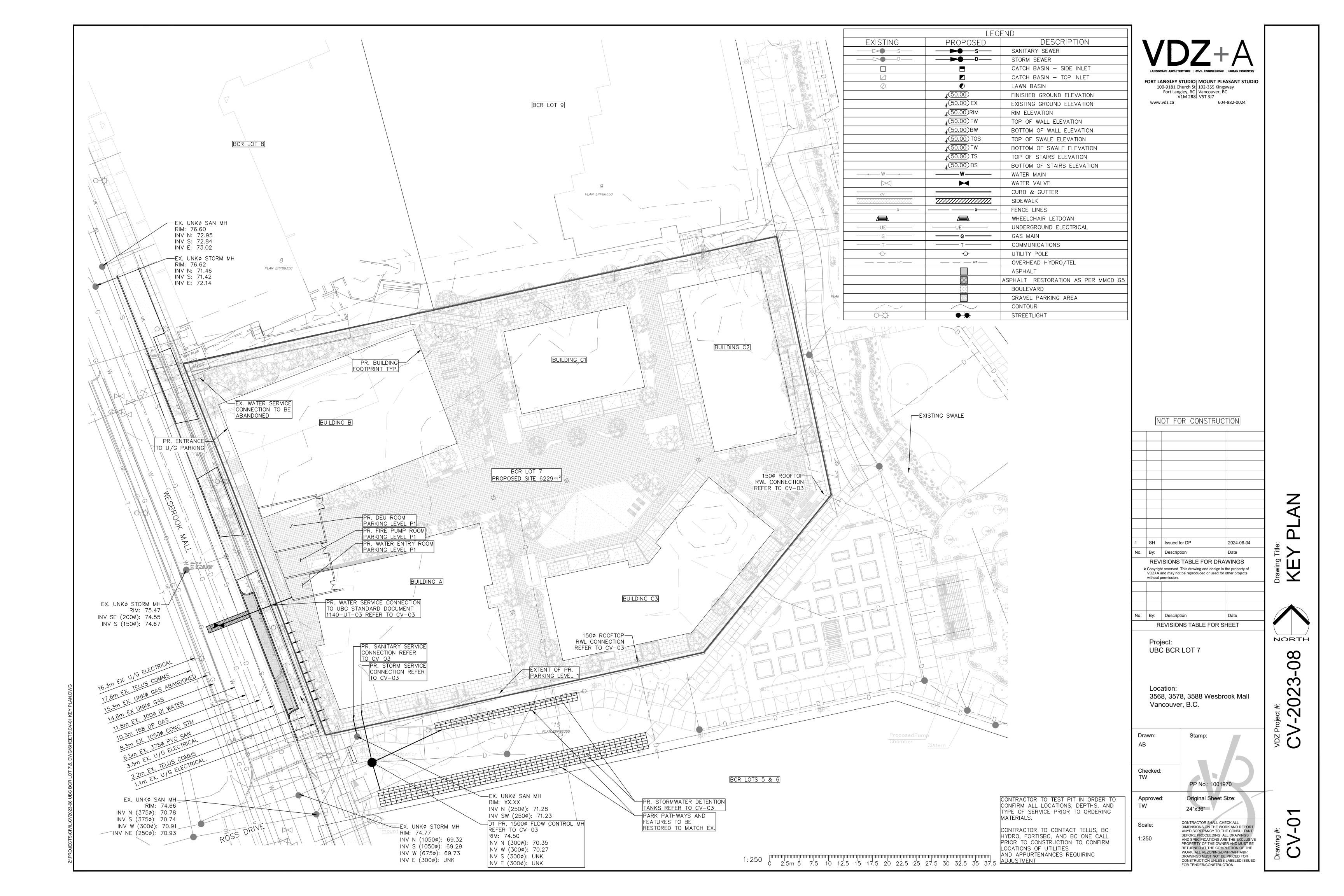
CONTRACTOR SHALL CHECK ALL
DIMENSIONS ON THE WORK AND REPORT
ANYDISCREPANCY TO THE CONSULTANT
BEFORE PROCEEDING. ALL DRAWINGS
AND SPECIFICATIONS ARE THE EXCLUSIVE
PROPERTY OF THE OWNER AND MUST BE
RETURNED AT THE COMPLETION OF THE
WORK. ALL REZONING/DP/PPA/FHA/BP
DRAWINGS MUST NOT BE PRICED FOR
CONSTRUCTION UNLESS LABELED ISSUED
FOR TENDER/CONSTRUCTION.

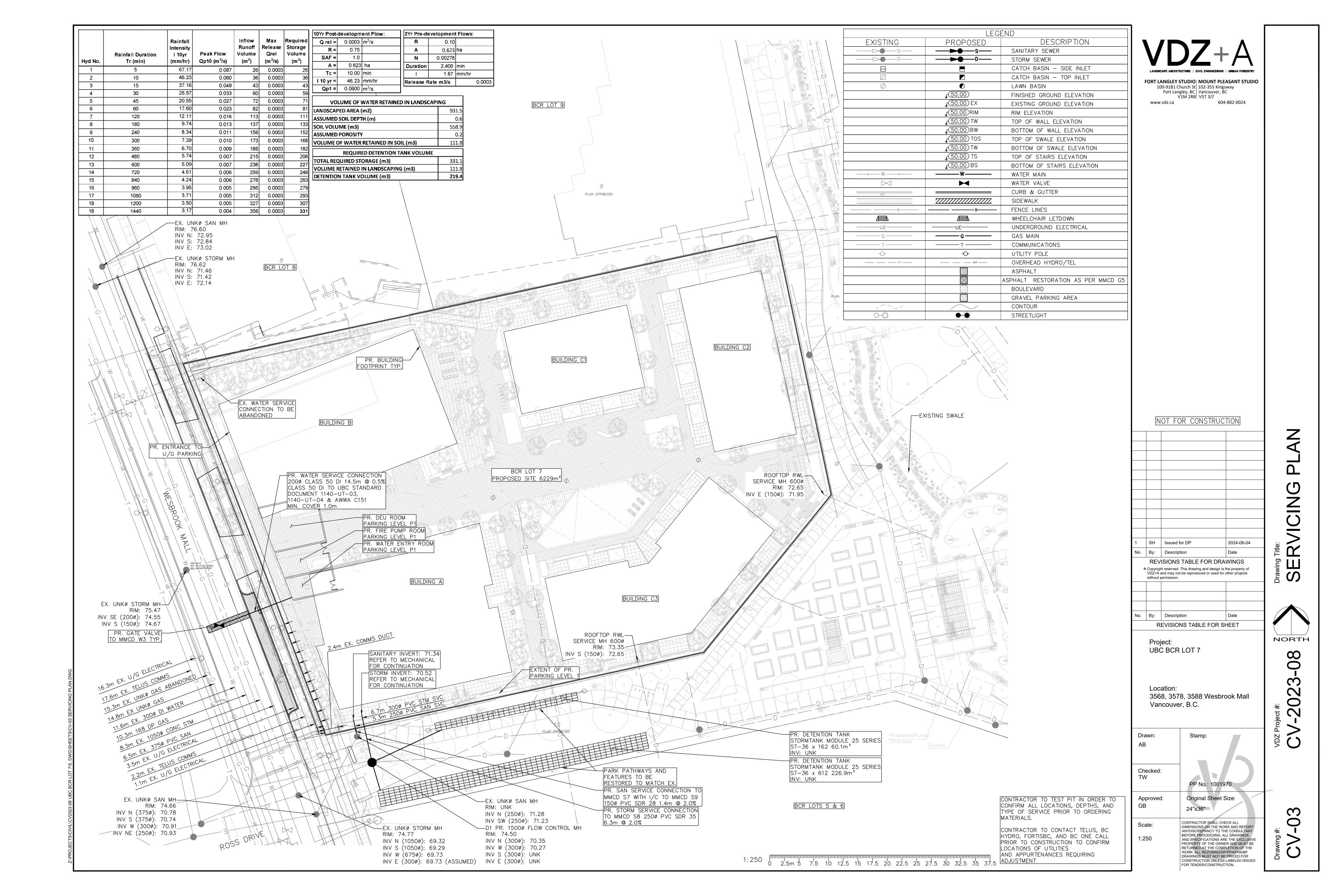
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NORTH

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2.0 THE GENERAL CONTRACTOR SHALL NOTIFY THE PRIMARY PROJECT CONTACT PRIOR TO COMMENCING WORK TO ENSURE THE PROJECT TEAM HAS THE LATEST PLANS AND SPECIFICATIONS ISSUED FOR CONSTRUCTION. THE GENERAL CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ISSUING PLANS AND SPECIFICATIONS TO ASSIGNED SUBCONTRACTORS. CIVIL PLANS PREPARED BY VAN DER ZALM AND ASSOCIATES WILL CONTAIN "ISSUED FOR CONSTRUCTION" WITHIN THE REVISIONS TABLE AND WILL INCLUDE PROPER SIGNATURE AND SEAL FROM THE PROJECT ENGINEER DATED THE SAME DATE MATCHING THE DATE LISTED WITHIN THE REVISIONS TABLE TO IDENTIFY CONSTRUCTION DRAWINGS.

3.0 THE CONTRACTOR IS CAUTIONED THAT "THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02 TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA". CLASS LEVEL D INDICATES THE UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING BC ONE CALL. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD). SUBSURFACE UTILITY INFORMATION HAS NOT BEEN PROVIDED TO CSA STANDARD S250 DETAIL

4.0 IF THE CONTRACTOR ENCOUNTERS ANY UTILITY LINES WITHIN THE SITE INCLUDING DRAINTILE OR IRRIGATION LINES, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND DIRECTION OF THOSE UTILITY LINES. NO UTILITY LINE SHALL BE BACKFILLED OR ALTERED WITHOUT REVIEW, DISCUSSION AND WRITTEN APPROVAL FROM THE PRIMARY PROJECT CONTACT. THE CONTRACTOR SHALL BEAR RESPONSIBILITY FOR THE RELOCATING OF ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS AT NO ADDITIONAL PAYMENT BY THE OWNER.

5.0 THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

6.0 ACTIVITIES PROHIBITED OUTSIDE OF THE CONSTRUCTION BOUNDARIES WOULD INCLUDE, BUT NOT BE LIMITED TO: SOIL AND OTHER MATERIAL STOCKPILING, EQUIPMENT OR MACHINERY STORAGE, DRIVING OF ANY VEHICLE, LEAKAGE OR SPILLAGE OF ANY "WASHOUT" OR OTHER TOXIC MATERIAL. THE COLLECTION OF OTHER DEBRIS AND SOIL STOCKPILING WILL BE IN AN AREA DETERMINED ON-SITE BY THE ENGINEER.

7.0 ALL RESTRICTED AREAS SHALL BE FENCED OFF WITH BRIGHT ORANGE POLYETHYLENE SAFETY NETTING AND STEEL STAKES AS SHOWN ON THE TREE PROTECTION DETAIL. AT NO TIME SHALL THIS FENCING BE REMOVED OR ACTIVITY OF ANY KIND TAKE PLACE WITHIN IT. FINAL PLACEMENT OF ALL PROTECTIVE FENCING SHALL BE COMPLETE BEFORE ANY WORK COMMENCES

8.0 ALL WATER AND SEWER UTILITY WORK WILL CONFORM TO THE BC BUILDING CODE, THE UBC UTILITIES CONSTRUCTION STANDARDS AND THE MMCD. IF THERE IS A CONFLICT BETWEEN APPLICABLE STANDARDS, THE MORE STRINGENT STANDARD WILL GOVERN.

9.0 PRIOR TO PLACEMENT OF STRUCTURAL SOIL, SUBGRADE OR SOIL DRAINAGE MEDIUM, REFER TO GEOTECHNICAL SOIL RECOMMENDATIONS AND VERIFY PLACEMENT IS ACCEPTABLE TO THE PROJECT GEOTECHNICAL ENGINEER. 10.0 SUBSTITUTIONS OR DEVIATIONS FROM THE CIVIL PROJECT PLANS OR SPECIFICATIONS ARE NOT ALLOWED WITHOUT WRITTEN APPROVAL FROM THE

PROJECT ENGINEER. 11.0 OPEN TRENCH OPERATIONS IN EXISTING PAVEMENT SHALL BE VERTICAL AND REPLACED WITH HOT MIX ASPHALT AFTER BACKFILL AND COMPACTION. ALL PAVEMENTS, BOULEVARD, ETC. ARE TO BE RESTORED TO ORIGINAL

CONDITION WHERE NO IMPROVEMENTS ARE PROPOSED UNDER THIS CONTRACT. 12.0 THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE UBC UTILITIES OR OTHER APPROVING AGENCIES.

13.0 ALL ONSITE SERVICES TO BE CONSTRUCTED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE, THE B.C. BUILDING CODE (2018), MASTER MUNICIPAL SPECIFICATIONS (MMCD) AND PASS THE INSPECTION OF THE UBC UTILITIES BUILDING DEPARTMENT, ALL WORKS CONSTRUCTED WITHIN THE EXISTING MUNICIPAL RIGHTS-OF-WAY TO CONFORM TO THE UBC UTILITIES ENGINEERING DEPARTMENT STANDARDS AND SPECIFICATIONS AND BE CARRIED OUT UNDER THEIR INSPECTION. TIE INTO EXISTING SERVICES MUST BE CONFIRMED THROUGH THE UBC AND MUST PROVIDE 48 HOURS NOTICE OF START OF WORK.

14.0 THE CONTRACTOR SHALL ENSURE ALL APPROVALS REQUIRED FOR THE PROPOSED WORK HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR IS TO CHECK WITH BC HYDRO, TELUS AND FORTIS BC PRIOR TO COMMENCING WORK FOR VERIFICATIONS OF LOCATIONS AND INVERTS OF ALL GAS MAINS AND UNDERGROUND UTILITIES TO ENSURE NO CONFLICTS.

15.0 ALL LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND SERVICES DETERMINED BY APLIN & MARTIN GEOMATICS LAND SURVEYING LTD. AND THE ENGINEER CANNOT BE RESPONSIBLE FOR THEIR ACCURACY. CONTRACTOR TO CONFIRM ALL OFFSITE TIE-IN ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION.

16.0 THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE UBC UTILITIES OR OTHER APPROVING AGENCIES.

17.0 ANY MATERIAL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER. 18.0 ANY SURVEY MONUMENTS MUST BE PROTECTED AND ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

19.0 ALL EXISTING IMPROVEMENT SHALL BE RESTORED TO THE SATISFACTION OF THE UBC UTILITIES SPECIFICATIONS. IN SPECIAL CASES THE UBC INSPECTOR MAY REQUIRE WRITTEN ACCEPTANCE BY THE AFFECTED PROPERTY OWNERS FOR RESTORATION WORKS PERFORMED BY THE CONTRACTOR.

20.0 SEE LANDSCAPE ARCHITECT'S DRAWINGS FOR FEATURE LAYOUTS, DIMENSIONS AND LANDSCAPE AND GRADING DETAILS.

21.0 CONTRACTOR TO PROVIDE 48 HOURS NOTICE PRIOR TO CONSTRUCTION WITHIN ROAD ALLOWANCES.

22.0 ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THIS PROJECT.

23.0 CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS UPON COMPLETION OF THE PROJECT.

24.0 ELEVATIONS ARE REFERRED TO GEODETIC DATUM.

25.0 SEE ARCHITECT'S DRAWINGS FOR BUILDING DETAILS, DIMENSIONS AND FINISHED FLOOR ELEVATIONS.

26.0 SANITARY AND WATER SERVICE CONNECTIONS TO BE TERMINATED AS SHOWN ON PLANS BY 'ON-SITE' SERVICING CONTRACTOR. CONTINUATION BY BUILDING PLUMBING CONTRACTORS INCLUDING SEWER CLEANOUTS REQUIRED IMMEDIATELY OUTSIDE BUILDING.

27.0 CONTRACTOR TO CONFIRM WITH THE MECHANICAL ENGINEER PRIOR TO CONSTRUCTION TO CONFIRM SIZES AND LOCATIONS OF CONNECTIONS TO BUILDINGS.

28.0 ALL SERVICES TO BE LAID OUT RELATIVE TO BUILDING PARAMETERS. 29.0 ALL BUILDINGS CORNERS TO BE SURVEYED PRIOR TO SITE SERVICING 30.0 THE ONSITE CONTRACTOR SHOULD TAKE PHOTOS ALONG ALL XXX STREET SITE FRONTAGE AND PROPERTY LINES TO VERIFY THE EXISTING CONDITION PRIOR TO ANY SITE CONSTRUCTION. IF THIS IS NOT DONE, THE APPLICANT COULD BE ASSESSED FOR DAMAGES AND WILL BE REQUIRED TO UNDERTAKE ANY AND ALL RESTORATION WORKS AS DIRECTED BY THE UBC.

31.0 TOPOGRAPHIC AND LEGAL SURVEY INFORMATION PROVIDED BY APLIN & MARTIN GEOMATICS LAND SURVEYING LTD. 32.0 PHASING NOTES:

32.1 AT PHASE LINE, WATERMAINS TO HAVE TEMPORARY BLOW-OFF PER MMCD STD. W8.

32.2 AT PHASE LINE, SANITARY AND STORM MAINS TO HAVE TEMPORARY WATERTIGHT CAPS.

33.0 REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER, PRIOR TO CONSTRUCTION.

34.0 CONTRACTOR TO SECURE ALL REQUIRED PERMITS PRIOR TO BEGINNING CONSTRUCTION.

ARCHAEOLOGICAL MATERIALS UNCOVERED DURING EXCAVATION. 36.0 ALL DIMENSIONS AND ELEVATIONS SHOWN IN PLAN ARE IN METRES. ALL DIAMETERS OF PIPES AND CONCRETE STRUCTURES AND DETAIL DIMENSIONS ARE IN MILLIMETRES.

35.0 IMMEDIATELY STOP WORK AND NOTIFY THE ENGINEER OF ANY SUSPECTED

#### ROADWORKS NOTES:

1.0 THE DEVELOPER SHALL EMPLOY A PROFESSIONAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING FOR PERFORMANCE OF IN PLACE TESTING DURING THE PREPARATION OF THE SUB-GRADE AND CONSTRUCTION OF THE ROAD STRUCTURE TO VERIFY THE ADEQUACY OF THE PROPOSED AND EXISTING ROAD STRUCTURE AND SUB-GRADE. SELECTION OF THE PROFESSIONAL ENGINEER IS TO BE APPROVED BY THE UBC.

2.0 ALL MANHOLE LIDS, VALVE COVERS, CATCH BASINS AND LIDS OF ANY OTHER STRUCTURE TO BE ADJUSTED TO SUIT FINAL OR PROPOSED ROAD, DRIVEWAY, SIDEWALK, PATHWAY, AND BOULEVARD/LANDSCAPE AREAS. 3.0 GEOTECHNICAL ENGINEER TO APPROVE ALL SUBGRADES PRIOR TO PLACING BASE MATERIALS.

4.0 FOR FENCE LOCATIONS, SEE LANDSCAPE ARCHITECT PLANS

5.0 ALL PAVEMENT MARKINGS TO BE INCLUDED IN CONTRACT. 6.0 LOCATIONS OF DRIVEWAYS, WHEELCHAIRS RAMPS, ETC., SHALL BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION OF THE PROPOSED

CONCRETE CURB/GUTTER AND SIDEWALK. 7.0 ALL LOOSE, ORGANIC, OTHERWISE DELETERIOUS MATERIALS OR SOFT SPOT(S) ARE TO BE EXCAVATED AND REMOVED FROM THE ROADWAY AND UTILITY TRENCHES IN THE ROADWAY AS PER THE GEOTECHNICAL CONSULTANT'S REPORT OR AS DIRECTED BY THE UBC UTILITIES SPECIFICATIONS.

8.0 ALL NEW SURFACES SHALL BE SMOOTHLY TIED INTO EXISTING SURFACES. 9.0 THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS AND BYLAWS OF THE REGULATORY AUTHORITIES. FEDERAL AND PROVINCIAL GOVERNMENT DEPARTMENTS INCLUDING THE "LAND DEVELOPMENT GUIDELINES FOR THE PROTECTION OF AQUATIC HABITAT" AS PRODUCED BY THE

DEPARTMENT OF FISHERIES AND OCEANS CANADA. 10.0 BENKELMAN BEAM TESTING WILL BE REQUIRED TO CONFIRM THE SUITABILITY OF THE ROAD STRUCTURE PRIOR TO PAVING.

11.0 COMPACTION TESTING AND CONCRETE TESTING BY CONTRACTOR. 12.0 FOR FENCE LOCATIONS, SEE ARCHITECT AND LANDSCAPE ARCHITECT'S

PLANS. 13.0 ALL PAVEMENT MARKINGS TO BE INCLUDED IN CONTRACT. 14.0 CURBS ONSITE TO BE TYPE "R" CURB (ROLLOVER) IN ACCORDANCE WITH

MMCD STD. DWG C4 UNLESS NOTED OTHERWISE 15.0 LOCATIONS OF DRIVEWAYS, WHEELCHAIR RAMPS, ETC. SHALL BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION OF THE PROPOSED CONCRETE CURB AND GUTTER AND SIDEWALK.

16.0 COMPACTION TESTING, ASPHALT TESTING AND CONCRETE TESTING BY CONTRACTOR.

17.0 BOULEVARDS ARE TO BE CONSTRUCTED TO THE CURRENT EDITION OF THE MMCD AND THE UBC UTILITIES STANDARDS. 18.0 RESTORATION OF EXISTING DRIVEWAYS, PARKING AREAS, AND WALKWAYS

TO CONFORM TO THE UBC UTILITIES SPECIFICATIONS.

### TESTING NOTES:

1.0 ALL TESTING TO BE PERFORMED BY A CSA OR CCIL (CANADIAN CERTIFIED TESTING LABORATORIES) CERTIFIED LABORATORY.

2.0 FREQUENCY OF DENSITY TESTS FOR EXCAVATING, TRENCHING AND BACKFILLING SHALL BE ONE TEST PER 50 LINEAL METERS OF TRENCH PER METER OF DEPTH. MATERIAL TO BE COMPACTED IN 300mm LIFTS.

3.0 FREQUENCY OF DENSITY TESTS FOR ROADWAY EXCAVATION, EMBANKMENT (SUB-GRADE FILL) AND COMPACTION SHALL BE ONE TEST PER 250m2 PER

4.0 FREQUENCY OF FOR GRANULAR BASE AND SUB-BASE SHALL BE ONE TEST PER 30 LINEAL METERS WITHIN SIDEWALK AND DRIVEWAY AREA.

5.0 FREQUENCY OF DENSITY TESTS FOR CURB BASE SHALL BE ONE TEST PER 100 LINEAL METERS. 6.0 FREQUENCY OF MARSHALL TESTS FOR HOT-MIX ASPHALT CONCRETE

FOR EACH TYPE OF ASPHALT MIX, MINIMUM ONE PER DAY. 7.0 FOR STREET PAVING, CORE LOCATIONS WILL BE SELECTED FOR EACH PASS OF THE PAVING MACHINE AS FOLLOWS:

PAVING SHALL BE ONE TEST PER 400 TONNES OF MIX PLACED OR ONE TEST

7.1 ACROSS THE WIDTH, CORE LOCATIONS WILL BE SELECTED RANDOMLY FROM ONE-SIXTH INCREMENTS

7.2 ALONG THE LENGTH, CORE LOCATIONS WILL HAVE A RANDOMLY SELECTED START WITH CORES AT A SPACING OF APPROXIMATELY, BUT NOT TO EXCEED, 30 METERS.

7.3 FOR OTHER PAVING OPERATIONS, A MINIMUM OF ONE CORE FOR EVERY 250 SQUARE METERS OF ASPHALT MIX PLACED.

8.0 FREQUENCY OF PLASTIC CONCRETE TESTS FOR SIDEWALK SHALL BE ONE TEST PER 150 LINEAL METERS OF A MINIMUM OF ONE PER DAY. 9.0 FREQUENCY OF PLASTIC CONCRETE TESTS FOR CURB AND GUTTER SHALL BE ONE TEST PER 300 LINEAL METERS OF A MINIMUM OF ONE PER DAY.

#### GRADING NOTES:

1.0 ALL ELEVATIONS AND DIMENSIONS ARE METRIC.

2.0 SITE PREPARATION, STRIPPING, EXCAVATION AND OPERATIONS TO BE REVIEWED BY A GEOTECHNICAL ENGINEER AND ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.

3.0 CUT AND FILL SLOPES TO BE REVIEWED AND APPROVED BY GEOTECHNICAL ENGINEER.

4.0 ALL SITE GRADES SHOWN ARE FINISHED GRADING ELEVATIONS AND ARE TO BE REVIEWED BY GEOTECHNICAL ENGINEER.

#### STORM & SANITARY NOTES:

1.0 ALL STORM AND SANITARY PIPES LESS THAN OR EQUAL TO 150mm@ SHALL BE PVC SDR 28 UNLESS OTHERWISE NOTED. ALL STORM AND SANITARY PIPES GREATER THAN 150mmØ SHALL BE PVC SDR 35 UNLESS OTHERWISE NOTED. REFER TO PLANS DETAILS AND SPECIFICATIONS REGARDING SEWER FITTINGS AND APPURTENANCES. CONTACT THE PRIMARY PROJECT CONTACT REGARDING USE OF SUITABLE MAIN FITTINGS IF NOT SPECIFIED IN PLAN, DETAIL OR PROJECT SPECIFICATION. MINIMUM COVER SHALL BE 1.2 METERS FOR ANY SANITARY MAIN OR SERVICE. ADDITIONAL PIPE PROTECTION WILL BE REQUIRED IF MINIMUM COVER IS NOT FEASIBLE.

2.0 ALL MANHOLE AND CATCH BASIN LIDS SHOWN ON CONTRACT DRAWINGS ARE TO FINISHED GRADE ELEVATIONS.

3.0 ELEVATION OF MANHOLE LID AND CATCH BASIN ON PAVEMENT TO BE SET TO TOP OF BASE COURSE ELEVATION, WHEN THE FINAL LIFT IS LAID (AT A LATER DATE) THE MANHOLE LID AND CATCH BASIN GRATE ARE TO BE RAISED TO FINISH GRADE AT THE DEVELOPER'S COST.

4.0 ALL CATCH BASIN/LAWN BASIN LEADS TO BE 150mm IN DIAMETER AT 1.0% SLOPE MIN UNLESS OTHERWISE NOTED. DOUBLE CATCH BASIN LEADS TO BE 250mm IN DIAMETER @1.0% SLOPE MIN UNLESS OTHERWISE STATED.

5.0 OFFSET OF ALL INSPECTION CHAMBERS (I.C.) TO BE IN ACCORDANCE WITH THE CURRENT UBC UTILITIES SUPPLEMENTARY SPECIFICATIONS, MMCD, AND THE UBC DETAIL DRAWINGS.

6.0 CONNECT ALL EXISTING DRAINAGE UP TO 150mm DIAMETER IN SIZE WITH TYPE 1 I.C. IN BOULEVARDS AND TYPE 2 I.C. IN DRIVEWAYS. TOP ELEVATIONS OF ALL TYPE 1 AND TYPE 2 I.C.'S ARE TO BE PLACED IN CONFORMANCE WITH THE UBC UTILITIES SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS.

7.0 ALL EXISTING I.C.'S AND X-DRAINS ARE TO BE FLUSHED TO ENSURE PROPER WORKING ORDER AND REPLACED IF NECESSARY.

8.0 CHAINAGES TO I.C.'S ARE APPROXIMATE ONLY, EXACT LOCATION TO BE DETERMINED IN FIELD BY THE UBC INSPECTOR.

9.0 MARK ALL CAPPED STUB ENDS WITH STAKE IN ACCORDANCE WITH MMCD. 10.0 ALL GAS AND WATER CONNECTIONS X-INGS UNDER DITCHES ARE TO BE RAISED OVER STORM SEWER BEFORE BACKFILLING OF TRENCH AT DEVELOPER'S

11.0 FLOW ARROWS SHOWN ON PLAN PROVIDE DIRECTION OF FLOW DOWNHILL.

12.0 STORM SEWER TO BE PVC PIPE PER CSA. C/W GASKETS (UNLESS OTHERWISE NOTED) AND SHALL HAVE A MINIMUM SDR 35 SPECIFICATION FOR MAIN LINES AND A MINIMUM SDR 28 FOR SERVICE CONNECTIONS.

13.0 ALL SANITARY SEWER PIPES SHALL BE PVC MINIMUM SDR 35 SPECIFICATION FOR PIPES 200mmØ OR GREATER FOR MAIN LINES AND MINIMUM SDR 28 FOR 100Ø AND 150Ø FOR SERVICE CONNECTIONS.

14.0 ALL MANHOLES BARRELS SHALL BE 1050mm DIAMETER UNLESS NOTED OTHERWISE.

15.0 STANDARD TOP-INLET CATCH BASINS SHALL BE INSTALLED AS PER MMCD STD. S11 (600mm DIAMETER).

16.0 CATCH BASIN SHALL BE 30mm BELOW FINISHED GUTTER GRADE. 17.0 ALL LAWN BASINS SHALL BE IN ACCORDANCE WITH MMCD STD. DET. S12

18.0 ALL WYES TO BE MANUFACTURED.

19.0 ALL STORM AND SANITARY SEWERS IN ASPHALT AND VEHICULAR AREAS TO BE DWV PIPE WHERE COVER IS LESS THAN 1.0m.

20.0 EXISTING INVERTS MUST BE VERIFIED IN THE FIELD BY CONTRACTOR PRIOR TO ORDERING MATERIALS.

21.0 THE CONTRACTOR SHALL BE RESPONSIBLE IN ENSURING THAT THE FINISHED RIM ELEVATION OF THE STORM AND SANITARY SEWER MANHOLES MATCHES THE FINISHED ROAD GRADES AND ELEVATIONS.

22.0 ALL C.B.'S IN ASPHALT AND PARKING AREAS TO BE 600mm@ AND SHALL BE CONSTRUCTED WITH DONUT FRAME AND GRATE TO SUPPORT H20 LOADING. 23.0 STORM AND SANITARY CONNECTIONS ARE TO TERMINATE 1m FROM BUILDINGS AND HAVE 1M OF COVER. SEE MECHANICAL ENGINEER'S DRAWINGS FOR CONFIRMATION OF LOCATION. DESIGN AND REQUIREMENT OF INSPECTION CHAMBERS OR STORM SUMPS ARE THE RESPONSIBILITY OF THE MECHANICAL ENGINEER.

24.0 ALL BUILDING CORNERS AND LANDSCAPING FEATURES (INCL. FENCING) TO BE STAKED PRIOR TO SITE SERVICING.

25.0 MANHOLES LIDS TO BE ORIENTED TO AVOID CURBS AND UNIT PAVER PLACEMENTS (SEE PAVING PLAN).

26.0 STORM SEWERS SHALL BE VIDEO INSPECTED PER MMCD SPECIFICATIONS. 27.0 SANITARY SEWERS SHALL BE PRESSURE TESTED AND VIDEO INSPECTED PER MMCD SPECIFICATIONS.

28.0 UNLESS PRIOR APPROVAL IS GIVEN TO THE DEVELOPER BY THE UBC UTILITIES, TIE-INS AND CONNECTIONS TO EXISTING SANITARY SEWERS ARE TO BE PERFORMED BY THE UBC AT THE DEVELOPER'S COST.

29.0 ALL SERVICE CONNECTIONS SHALL BE MADE TO THE MAIN WHEREVER POSSIBLE. SHOULD A CONNECTION HAVE TO BE MADE TO A MANHOLE, THE CONNECTION INVERT SHALL BE AT THE SAME ELEVATION AS THE CROWN OF THE HIGHEST SEWER MAIN.

30.0 ALL GRANULAR PIPE BEDDING SHALL BE TYPE 1 ONLY AS PER THE UBC SPECIFICATIONS.

31.0 ALL SANITARY SEWER PIPES SHALL BE PVC MINMUM SDR 35

#### SPECIFICATION FOR PIPES 200

32.0 ALL MANHOLES TO BE INSTALLED PER MMCD STD. DET. S1, MANHOLE CONNECTIONS TO BE INSTALLED AS PER MMCD STD. DET. S2. AND MANHOLE INSIDE RAMP CONNECTIONS TO BE INSTALLED PER MMCD STD. DET. S3.

33.0 EXISTING INVERTS TO BE VERIFIED IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION.

34.0 ALL STORM AND SANITARY SYSTEMS TO BE IN ACCORDANCE WITH B.C. BUILDING CODE (2018).

35.0 ALL BUILDING CORNERS AND FEATURES (INCL. FENCING) TO BE STAKED PRIOR TO SITE SERVICING.

36.0 ALL STORM AND SANITARY SEWER SYSTEMS TO BE TESTED PER SECTION 3.6 OF THE B.C. PLUMBING CODE. THE ENGINEER IS TO BE NOTIFIED 48 HOURS PRIOR TO TESTING.

37.0 SANITARY AND STORM SEWER BEDDING AND BACKFILL SPECIFICATIONS PER MMCD DWG G4.

38.0 DURING CONSTRUCTION AND AT ANY TIME PRIOR TO ACCEPTANCE AND PRESSURIZATION OF WATERMAINS, THE CONTRACTOR SHALL INSTALL A 300mm x 300mm SQUARE 18mm SHEET OF PLYWOOD OVER THE PUMPER NOZZLE OF EACH HYDRANT TO INDICATE THAT THE HYDRANT IS NOT IN USE.

39.0 STORM AND SANITARY MAIN BEDDING AND BACKFILL SPECIFICATION PER MMCD DWG G4.

40.0 ALL CBs ARE TO BE IN ACCORDANCE WITH MMCD DETAIL S11 AND S12 41.0 ALL CATCH BASIN/LAWN BASIN LEADS TO BE 150mm IN DIAMETER AT 1.0% SLOPE MIN UNLESS OTHERWISE NOTED. DOUBLE CATCH BASIN LEADS TO BE 200mm IN DIAMETER.

42.0 INSPECTION CHAMBERS ARE TO BE IN ACCORDANCE WITH MMCD STANDARD DETAIL S9 IN CONJUNCTION WITH S10

#### **WATERWORKS NOTES:**

1.0 ASSUME TEST PRESSURE OF 1380 kPA(200PSI).

2.0 ALL WATER VALVES ARE TO BE KEPT FLUSH WITH THE FIRST LIFT OF ASPHALT BOXES TO BE ADJUSTED TO FINAL GRADE PRIOR TO PLACING FINAL

3.0 WATERMAIN PIPE TO BE PVC DR18 PRESSURE PIPE CONFORMING TO AWWA C900 AND CERTIFIED TO CSA B137.3 (RATED TO 200 PSI).

4.0 WATERMAIN OR SERVICE PIPE WALLS TO HAVE WRAPPED JOINTS PER LOCAL & MUNICIPAL HEALTH STANDARDS IF CLOSER THAN 0.5m VERTICAL OR 3.0m METERS HORIZONTAL TO SANITARY OR STORM MAIN PIPE WALLS.

5.0 MINIMUM GRADE OF WATERMAINS IS TO 0.1%. 6.0 MINIMUM PIPE COVER IS TO BE 1.0m TO FINISHED GRADE OR ALTERNATIVE TO MEET H-20 LIVE ROAD REQUIREMENTS AS APPROVED BY THE ENGINEER.

THROUGHOUT. 8.0 ALL FITTINGS AND BENDS TO HAVE CONCRETE THRUST BLOCKS.

7.0 ALL FITTINGS, BENDS AND PIPE JOINTS TO HAVE JOINT RESTRAINS

9.0 VALVES AND BOXES TO BE INSTALLED AS PER MMCD W3. 10.0 VALVE BODIES, COMPONENTS & HYDRANTS TO BE DUCTILE IRON.

11.0 ALL TESTING AND CHLORINATION OF WATERMAINS TO BE DONE BY THE CONTRACTOR UNDER THE INSPECTION OF THE UBC UTILITIES INSPECTOR AND ENGINEER. THE ENGINEER IS TO BE NOTIFIED 48 HOURS PRIOR TO TESTING. PRESSURE TEST TO BC BUILDING CODE (2018) AND CHLORINATE AND FLUSH TO MINISTRY OF HEALTH AND AWWA STANDARDS. TESTING TO BE APPROVED BY THE UBC PRIOR TO TIE-IN TO MUNICIPAL WATERMAIN.

12.0 CHANGES IN GRADE TO BE MADE BY DEFLECTION OF PIPE JOINTS TO A MAXIMUM OF HALF OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION OR BY USING A TYTXTYT FITTING

13.0 ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE MMCD AND THE UBC UTILITIES SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS.

14.0 CONTRACTOR NOT TO INSTALL SERVICES OR WORK ON PRIVATE PROPERTY WITHOUT WRITTEN APPROVAL FROM PROPERTY OWNER, APPROVAL TO BE OBTAINED BY THE DEVELOPER.

15.0 BUILDING CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL DRIVEWAY LOCATIONS PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR ANY NECESSARY WATER SERVICE CONNECTION RELOCATIONS.

16.0 REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER, PRIOR TO CONSTRUCTION. 18.0 THE CONTRACTOR SHALL SUPPLY ALL MATERIALS AND FITTINGS REQUIRED

FOR THE TIE-IN OF THE NEW WATER MAINS BY THE UBC. 19.0 ALL NEW WATER MAINS, AT TIE-IN POINTS, ARE TO BE CAPPED 1.5m FROM THE EXISTING WATER MAIN. THE PROPOSED WATER MAIN IS TO BE SET

AT THE LINE AND GRADE TO MEET THE EXISTING WATER MAIN. 20.0 TIE-INS TO EXISTING WATER MAINS AND FINAL TESTING AND CHLORINATION OF NEW MAINS IS TO BE PERFORMED BY THE UBC AT THE DEVELOPER'S COST.

21.0 ALL DOMESTIC SERVICE CONNECTIONS WILL BE A MINIMUM OF 19 mm DIAMETER UNLESS OTHERWISE SPECIFIED.

22.0 WHERE 100 mm DIAMETER PIPE IS USED IT WILL BE DUCTILE IRON (D.I.) AND SHALL CONFORM TO THE UBC SPECIFICATIONS.

23.0 NO MCAVITY FITTINGS OR VALVES ETC. ARE TO BE USED.

24.0 NO CAST IRON VALVES ON FITTINGS.

25.0 ALL WATER MAINS 100mm TO 300mm SHALL BE AWWA PVC C900. ALL WATER MAIN 350mm OR GREATER SHALL BE AWWA PVC C905. MINIMUM PIPE COVER SHALL BE 1.0m. REFER TO THE IRRIGATION PLAN, CIVIL PLANS AND DETAILS, AND THE PROJECT SPECIFICATIONS FOR MAINS SMALLER THAN 100mm IN DIAMETER. CONTACT THE PRIMARY PROJECT CONTACT REGARDING USE OF SUITABLE MAIN FITTINGS UNLESS SPECIFIED IN PLANS AND DETAILS.

26.0 CONTRACTOR TO PROVIDE THIRD PARTY TEST RESULTS FOR CHLORINATION TEST, PRESSURE TEST, AND BACTERIOLOGICAL TEST FOR ALL WATERWORKS.

FORT LANGLEY STUDIO | MOUNT PLEASANT STUDIO 100-9181 Church St | 102-355 Kingsway Fort Langley, BC | Vancouver, BC V1M 2R8 V5T 3J7 604-882-0024

NOT FOR CONSTRUCTION SH Issued for DP 2024-06-04 By: Description REVISIONS TABLE FOR DRAWINGS • Copyright reserved. This drawing and design is the property of VDZ+A and may not be reproduced or used for other projects without permission By: Description **REVISIONS TABLE FOR SHEET** Project: **UBC BCR LOT 7** Location:

3568, 3578, 3588 Wesbrook Mall

PP No.: 1001970

Original Sheet Size:

CONTRACTOR SHALL CHECK ALL

FOR TENDER/CONSTRUCTION.

DIMENSIONS ON THE WORK AND REPORT ANYDISCREPANCY TO THE CONSULTANT

BEFORE PROCEEDING. ALL DRAWINGS

AND SPECIFICATIONS ARE THE EXCLUSIVE

PROPERTY OF THE OWNER AND MUST BE RETURNED AT THE COMPLETION OF THE WORK. ALL REZONING/DP/PPA/FHA/BP DRAWINGS MUST NOT BE PRICED FOR CONSTRUCTION UNLESS LABELED ISSUED

24"x36"

Vancouver, B.C.

Drawn:

Checked:

Approved:

TW

Scale:

3 S

0 S

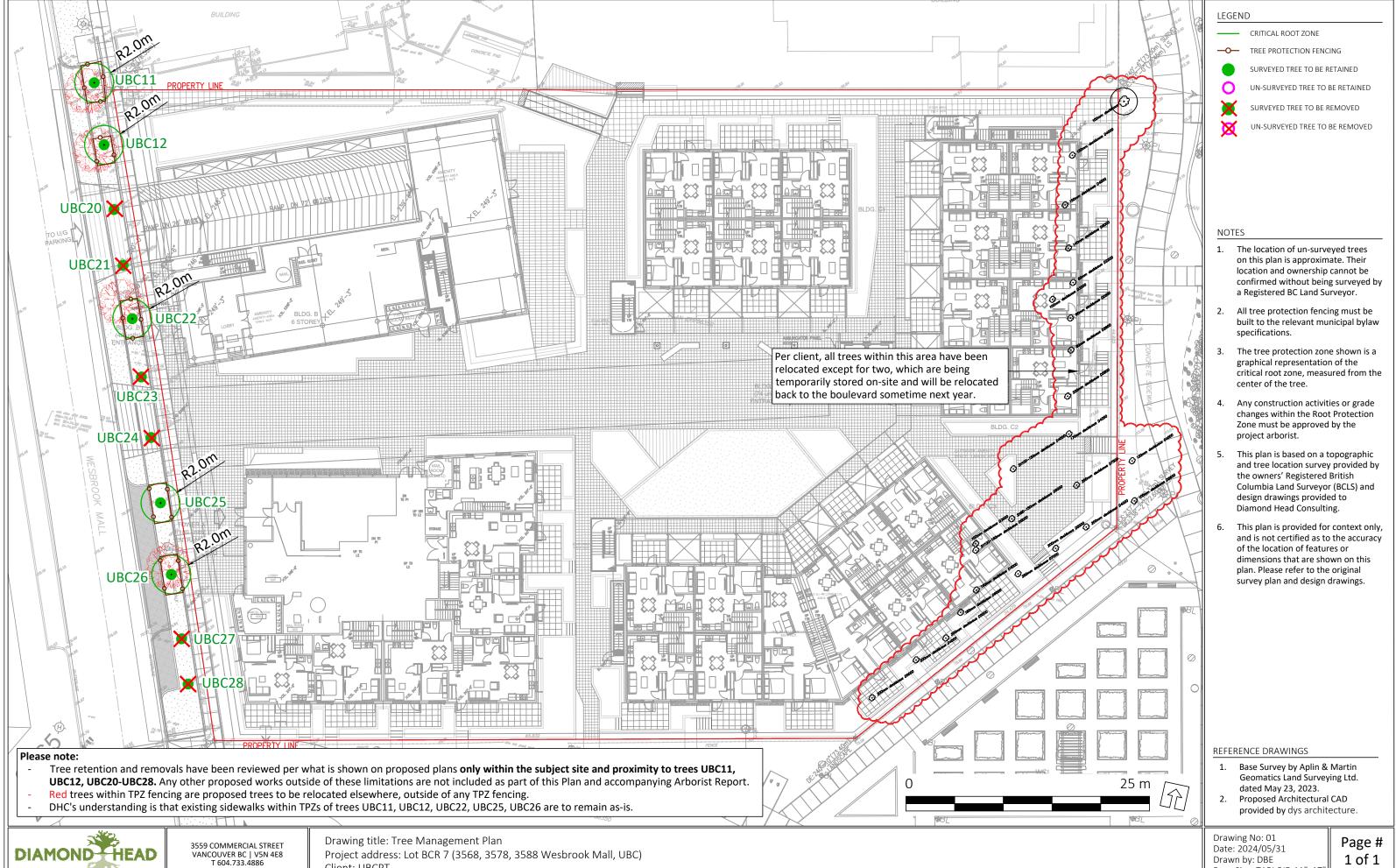
LOT 7 PLAN EPP86350 PID: 030-727-791 CIVIC ADDRESS: \_\_\_WESBROOK MALL VANCOUVER, BC SKETCH SHOWING TOPOGRAPHIC SURVEY OF LOT 7 AND PORTIONS OF LOTS 8 AND 9 LOT 8 PLAN EPP86350 PID: 030-727-804 CIVIC ADDRESS: 3508 WESBROOK MALL VANCOUVER, BC ALL OF DISTRICT LOT 6494 GROUP 1 LOT 9 PLAN EPP86350 PID: 030-727-812 CIVIC ADDRESS: 5768 GRAY AVENUE, VANCOUVER, BC NEW WESTMINSTER DISTRICT PLAN EPP86350 SCALE 1 : 150 ALL DISTANCES ARE IN METRES PLAN EPP86350 PICTURE #1 PICTURE #7 PLAN EPP86350 CONCRETE PAD PLAN EPP86350 PICTURE #2 SYMBOL LEGEND LAWN BASIN ∠ CATCH BASIN PICTURE #6 SERVICE BOX (LABELLED) STORM DRAIN MANHOLE o pole hyd ALL ELEVATIONS AND DISTANCES SHOWN ARE IN METRES. PLAN EPP86350 STREET SIGN THIS PLAN SHOWS HORIZONTAL GROUND LEVEL DISTANCES UNLESS OTHERWISE SPECIFIED. TO COMPUTE GRID DISTANCES, MULTIPLY GROUND LEVEL DISTANCES BY THE COMBINED FACTOR OF 0.9995923. lamp stnd base mo lamp D400 WATER VALVE IRRIGATION VALVE LEGAL BOUNDARIES ARE BASED ON LAND TITLE OFFICE RECORDS AND FIELD SURVEY, AND SUBJECT TO CHANGE. LAMP STANDARD ELEVATIONS ARE DERIVED FROM UBC MONUMENT W-W, LOCATED ON EAST MALL IN FRONT OF THE CEME BUILDING (BETWEEN AGRONOMY ROAD AND UNIVERSITY BOULEVARD) × 74.58 storm structure no mh sign c/l end 590w POWER POLE GEODETIC ELEVATION = `93.631 CONTOUR INTERVAL = 0.25 METRES DECIDUOUS TREE THIS PLAN SHOWS THE LOCATION OF VISIBLE FEATURES ONLY, AND DOES NOT INDICATE BURIED SERVICES THAT MAY EXIST ON OR AROUND THE SUBJECT SITE. CONIFEROUS TREE THESE PROPERTIES MAY BE SUBJECT TO THE FOLLOWING CHARGES: TREE SPECIES AND DIMENSIONS TO BE CONFIRMED BY A QUALIFIED ARBORIST. TREE SYMBOLS ARE NOT AN INDICATION OF DRIP LINE LOCATION D5000 DIAMETER 5000mm EASEMENT BB567950 APPURTENANT TO LOTS 16,17 & 19 PLAN BCP26848 UNLESS SPECIFICALLY LABELLED. STATUTORY RIGHT OF WAY CA5039546 SHAW CABLESYSTEMS LTD.  $\mathbb{C}$ 2023 COPYRIGHT RESTRICTION THIS PLAN IS THE EXCLUSIVE PROPERTY OF APLIN & MARTIN AND MAY NOT BE ALTERED OR REPRODUCED WITHOUT WRITTEN CONSENT OF SAME. LEASE CA8671919 UBC PROPERTIES INVESTMENTS LTD. EASEMENT BB567951 APPURTENANT TO LOTS 16,17, 18 & 20 PLAN BCP26848 THIS PLAN IS PREPARED SOLELY FOR A LIMITED CONTRACTUAL USE BETWEEN APLIN & MARTIN AND OUR CLIENT. IT IS NOT TO BE USED FOR THE LOCATION OF PROPERTY LINES. WE ACCEPT NO RESPONSIBILITY FOR ANY UNAUTHORIZED USE.

LEASE CA9609040 UBC PROPERTIES INVESTMENTS LTD.

FIELD SURVEY: MAY 23, 2023

FIELD SURVEY: APRIL 8, 2020 FILE 8613CA-294/LOT7

APLIN & MARTIN GEOMATICS LAND SURVEYING LTD. 201, 12448 82nd AVENUE SURREY, BC V3W3E9 604-597-9189



Client: UBCPT

Page Size: TABLOID 11"x17"

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