

1.0 GENERAL

- 1.1 USE BAR SCALE TO CONFIRM ACTUAL PLOT SCALE. EXISTING AND NEW ELEVATIONS ARE GEODETIC IN METERS. PIPE DIMENSIONS ARE NOMINAL AND IN MILLIMETERS UNLESS OTHERWISE NOTED.
- 1.2 "ENGINEER" REFERS TO D.B. GRAY ENGINEERING INC. UNLESS OTHERWISE NOTED.
- 1.3 EXISTING ELEVATIONS AND LOCATIONS, INVERTS AND SIZES OF EXISTING SERVICES & UTILITIES ARE NOT NECESSARILY SHOWN ON PLAN AND THOSE SHOWN ARE DERIVED FROM AVAILABLE INFORMATION AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING CONSTRUCTION. REPORT ANY DIFFERENCES TO ENGINEER. UNDERGROUND LOCATES (INCLUDING ONTARIO ONE CALL: 1-800-400-2255) SHALL BE CONDUCTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION.
- 1.3.1 SITE BOUNDARIES, EXISTING GRADE ELEVATIONS AND OTHER EXISTING FEATURES ARE DERIVED FROM TOPOGRAPHIC SKETCH PREPARED BY FARLEY, SMITH & DENIS SURVEYING LTD. FILE No. 132-22. IT IS THE RESPONSIBILITY OF THE USER OF THE DRAWING TO VERIFY THAT THE DRAWINGS MARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON SURVEY PLAN AND THESE DRAWINGS.
- 1.4 REFER TO ARCHITECTURAL SITE PLAN AND LANDSCAPE PLAN FOR EXACT LOCATION OF PROPOSED BUILDING, DRIVEWAY, WALKWAYS, ETC. LAYOUT SHALL BE COMPLETED BY THE CONTRACTOR AND REVIEWED BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. AT ALL TIMES THE CONTRACTOR IS RESPONSIBLE FOR THE ACCURACY OF THE LAYOUT INCLUDING LINES AND GRADES.
- 1.5 DRAWINGS SHALL BE READ IN CONJUNCTION WITH SITE SERVICING STUDY & STORMWATER MANAGEMENT REPORT No. 22076-REV.02 PREPARED BY D.B. GRAY ENGINEERING INC.
- 1.6 REFERENCE THE LATEST REVISION OF THE GEOTECHNICAL INVESTIGATION PREPARED BY RUBICON ENVIRONMENTAL (2008) INC. JOB NUMBER R63048.11. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
- 1.7 CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND CURRENT CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS.
- 1.8 ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS SHALL APPLY WHERE NO CITY OF OTTAWA STANDARD SPECIFICATIONS OR DRAWINGS ARE AVAILABLE.
- 1.9 REINSTATE AREAS DISTURBED BY CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS. REINSTATE CITY PROPERTIES TO CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.

2.0 SITE SERVICING PLAN

- 2.1 WATER SERVICES, APPURTENANCES AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS. ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS SHALL APPLY WHERE NO CITY OF OTTAWA STANDARD SPECIFICATIONS OR DRAWINGS ARE AVAILABLE.
- 2.2 DECOMMISSIONING OF EXISTING WATER SERVICES SHALL BE PERFORMED BY CITY OF OTTAWA FORCES. CONTRACTOR SHALL PERFORM EXCAVATION, BACKFILL AND REINSTATEMENT.
- 2.3 WATER SERVICE MATERIAL SHALL BE PVC DR 18 IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARD SPECIFICATIONS.
- 2.4 CONNECTIONS TO MUNICIPAL WATERMAIN SHALL BE PERFORMED BY CITY OF OTTAWA FORCES. CONTRACTOR SHALL PERFORM EXCAVATION, BACKFILL AND REINSTATEMENT.
- 2.5 PROVIDE A MINIMUM 2.4m COVER OVER WATER SERVICES. WHERE THE MINIMUM COVER IS NOT POSSIBLE NOTIFY THE ENGINEER AND INSULATE IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. W22. WHERE LESS THAN 2.4m CLEARANCE FROM AN OPEN STRUCTURE (e.g. CATCH-BASIN, MANHOLE, WINDOW WELL, ETC.) INSULATE IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. W23.
- 2.6 PROVIDE THROUGH BLOCKS AS PER CITY OF OTTAWA DWG. No. W25.3 & W25.4 AT ALL VALVES, TEES, CAPS, BENDS, REDUCERS AND HYDRANTS OR OTHER FITTINGS WHERE CHANGES OCCUR IN PIPE DIAMETER OR DIRECTION. RESTRAINING AS PER AS PER CITY OF OTTAWA DWG. No. W25.5 & W25.6 ALL CONNECTIONS, RESTRAINT RODS AND VALVE BOLTS TO BE STAINLESS STEEL. CATHODIC PROTECTION & ANODE INSTALLATION AS PER CITY OF OTTAWA DWG. No. W40, W42, W44 & W47.
- 2.7 WATER SERVICES SHALL CROSS ABOVE THE COMBINED SEWER WITH A MINIMUM 250mm BARREL TO BARREL VERTICAL SEPARATION IN ACCORDANCE WITH MOE PROCEDURE F-6-1 AND CITY OF OTTAWA DRAWING No. W25.2. WHERE IT IS NOT POSSIBLE FOR THE WATER SERVICE TO CROSS ABOVE THE SEWER WITH A MINIMUM 250mm BARREL TO BARREL VERTICAL SEPARATION THE WATER SERVICE SHALL CROSS BELOW THE SEWER WITH A MINIMUM 500mm BARREL TO BARREL VERTICAL SEPARATION IN ACCORDANCE WITH MOE PROCEDURE F-6-1 AND CITY OF OTTAWA DRAWING No. W25. WATER SERVICE PIPE SEGMENT SHALL BE CENTERED AT POINT OF CROSSING SO JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
- 2.8 WATER METER SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. W32.
- 2.9 SEWER SERVICES, APPURTENANCES AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS. ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS SHALL APPLY WHERE NO CITY OF OTTAWA STANDARD SPECIFICATIONS OR DRAWINGS ARE AVAILABLE.
- 2.10 DECOMMISSIONING OF EXISTING SEWER SERVICES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. S11.4.
- 2.11 SEWER SERVICE MATERIALS SHALL BE PVC SDR-35 FOR DIAMETERS GREATER THAN 150mm AND SDR-28 FOR DIAMETERS 150mm OR LESS.
- 2.12 CONNECT PROPOSED SANITARY AND STORM SEWER SERVICES TO EXISTING MUNICIPAL COMBINED SEWER IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. S11.1.
- 2.13 PROVIDE A MINIMUM 2m COVER OVER SEWER SERVICES. WHERE THE MINIMUM COVER IS NOT POSSIBLE NOTIFY THE ENGINEER AND INSULATE IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. W22.
- 2.14 SANITARY BUILDING DRAIN SHALL BE INSTALLED WITH NORMALLY OPEN BACKWATER VALVE IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. S14.1 OR S14.2.
- 2.15 STORM BUILDING DRAIN SHALL BE INSTALLED WITH NORMALLY CLOSED BACKWATER VALVE IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. S14.
- 2.16 RAINWATER LEADERS INSIDE BUILDING SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURE FROM A WATER COLUMN THE HEIGHT OF THE RAINWATER LEADER. PERFORM PRESSURE TESTS ON THE SYSTEMS IN ACCORDANCE WITH THE MECHANICAL ENGINEER'S INSTRUCTIONS.

3.0 GRADING PLAN

- 3.1 NEW GRADES SHALL MATCH EXISTING GRADES ON PROPERTY LINES. NO EXCESS DRAINAGE SHALL BE DIRECTED TOWARDS ADJACENT PROPERTIES DURING OR AFTER CONSTRUCTION. THERE SHALL BE NO ALTERATION TO EXISTING GRADES OR DRAINAGE PATTERNS ON PROPERTY LINES.
- 3.2 ENSURE ADEQUATE DRAINAGE AWAY FROM BUILDING TO CATCH-BASINS AND AREA DRAINS. GRADING SHALL BE GRADUAL BETWEEN PROPOSED GRADE ELEVATIONS SHOWN ON THE DRAWINGS.
- 3.3 RETAINING WALLS SHALL BE SETBACK A MINIMUM 150mm FROM PROPERTY LINES. RETAINING WALLS GREATER THAN 600mm IN HEIGHT REQUIRE A GUARD. REFER TO ARCHITECTURAL SITE PLAN AND/OR LANDSCAPE PLAN. RETAINING WALLS GREATER THAN 1,000mm IN HEIGHT SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
- 3.4 WHETHER A RESULT OF POOR WORKMANSHIP OR DAMAGE DEFECTIVE GRADING SHALL BE CORRECTED.

4.0 EROSION & SEDIMENT CONTROL PLAN

- 4.1 THE EROSION & SEDIMENT CONTROL PLAN IS A "LIVING DOCUMENT" AND SHALL BE REVISED IN THE EVENT THE SPECIFIED CONTROL MEASURES ARE NOT SUFFICIENT. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM DURING CONSTRUCTION INCLUDING BUT NOT LIMITED TO LIMITING THE AMOUNT OF EXPOSED SOIL, USING SEDIMENT CAPTURE FILTER SOCK INSERTS IN CATCH-BASINS AND CATCH-BASIN/MANHOLE AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY. AT MINIMUM THE CONTRACTOR SHALL INSTALL, MAINTAIN AND REMOVE THE FOLLOWING CONTROL MEASURES IN ACCORDANCE WITH NOTES 4.2 TO 4.7.
- 4.2 PRIOR TO COMMENCING CONSTRUCTION INSTALL TERRAFIX GEOSYNTHETICS INC. SILTSACK OR APPROVED EQUIVALENT SEDIMENT CAPTURE FILTER SOCK INSERTS IN ALL EXISTING MUNICIPAL CATCH-BASINS AND CATCH-BASIN/MANHOLE ADJACENT TO THE SITE.
- 4.3 INSPECT SEDIMENT CAPTURE FILTER SOCK INSERTS AT THE END OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REPAIR OR REPLACE DAMAGED SEDIMENT CAPTURE FILTER SOCK INSERTS.
- 4.4 INSTALL A SILT FENCE BARRIER AROUND STOCKPILED SEDIMENT OR SOIL.
- 4.5 REMOVE ANY MATERIAL DEPOSITED ON THE PUBLIC ROAD BY SHOVELING AND SWEEPING OR VACUUMING AND DISPOSING IN A CONTROLLED AREA. DO NOT SHOVEL, SWEEP OR DISPOSE ANY MATERIAL INTO ANY STORMWATER CONVEYANCE SYSTEM.
- 4.6 REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.
- 4.7 CONSTRUCTION IS CONSIDERED TO BE COMPLETE WHEN THE FOLLOWING CONDITIONS HAVE BEEN MET:
  - A. ALL STRUCTURES AND HARD SURFACES HAVE BEEN CONSTRUCTED.
  - B. ALL STOCKPILED MATERIALS HAVE BEEN REMOVED.
  - C. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15<sup>TH</sup> TO SEPTEMBER 15<sup>TH</sup>).
  - D. THERE ARE NO AREAS OF EXPOSED EARTH.

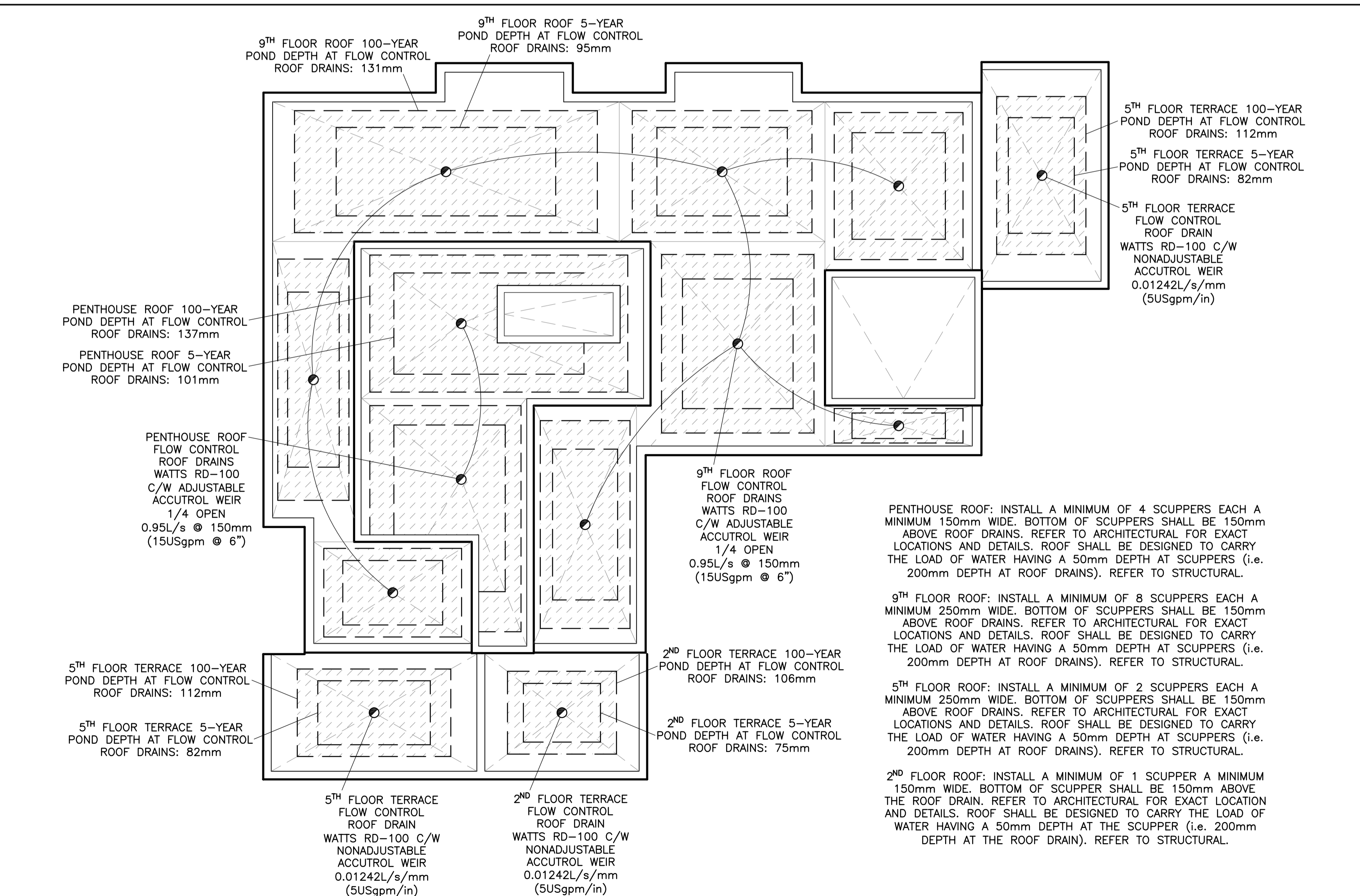
5.0 ROOF DRAINAGE PLAN

- 5.1 FLOW CONTROL ROOF DRAINS:
  - A. FLOW CONTROL ROOF DRAINS SHALL BE WATTS RD-100 C/W A FLOW CONTROL WEIR AS INDICATED ON THE DRAWINGS.
  - B. OPENING AT THE TOP OF THE FLOW CONTROL WEIR SHALL BE A MINIMUM 50mm IN DIAMETER.
  - C. PRIOR TO INSTALLATION SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.
  - D. ALL OTHER ROOF DRAINS SHALL BE CONVENTIONAL ROOF DRAINS WITHOUT FLOW CONTROL. REFER TO MECHANICAL SCUPPERS.
- 5.2 SCUPPERS:
  - A. MINIMUM NUMBER AND WIDTH OF SCUPPERS SHALL BE AS INDICATED ON THE DRAWINGS. BOTTOM OF SCUPPERS SHALL BE 150mm ABOVE ROOF DRAINS. REFER TO ARCHITECTURAL FOR EXACT LOCATIONS AND DETAILS.
  - B. ROOF SHALL BE DESIGNED TO CARRY THE LOAD OF WATER HAVING A 50mm DEPTH AT SCUPPERS (i.e. 200mm DEPTH AT ROOF DRAINS). REFER TO STRUCTURAL.

6.0 CONSTRUCTION

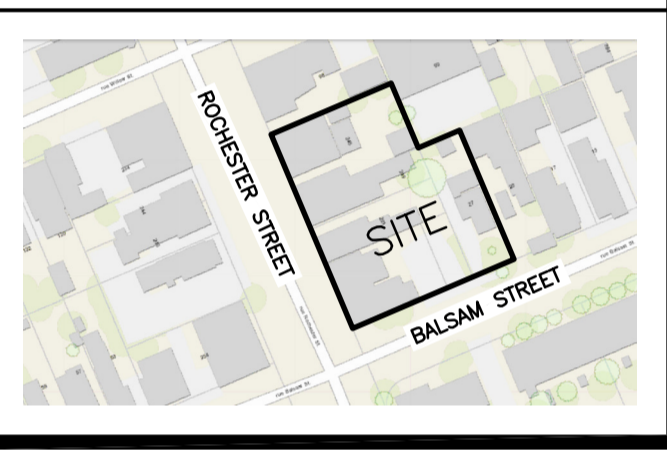
- 6.1 PRIOR TO COMMENCING CONSTRUCTION:
  - A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
  - B. LOCATIONS, DEPTHS AND SIZES OF EXISTING INFRASTRUCTURE INDICATED ON THE DRAWINGS ARE FOR GUIDANCE ONLY. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. ALL EXISTING INFRASTRUCTURE IS NOT NECESSARILY INDICATED ON THE DRAWINGS. THOSE SHOWN ARE DERIVED FROM AVAILABLE INFORMATION AND MUST BE CONFIRMED ON SITE.
  - C. EXISTING GRADE ELEVATIONS INDICATED ON THE DRAWINGS ARE FOR GUIDANCE ONLY. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. CONFIRM EXISTING GRADE ELEVATIONS AND REPORT ANY DIFFERENCES TO THE ENGINEER.
  - D. NOTIFY ALL APPLICABLE OWNERS, UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION OF PROPOSED WORK AND LOCATE AND CLEARLY IDENTIFY ALL EXISTING SERVICES, UTILITIES AND STRUCTURES ON AND ADJACENT TO THE SITE. UNDERGROUND LOCATES INCLUDING BUT NOT LIMITED TO ONTARIO ONE CALL 1-800-400-2255 SHALL BE CONDUCTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION. CONFIRM LOCATIONS, DEPTHS AND SIZES OF EXISTING INFRASTRUCTURE BY CAREFUL TEST EXCAVATIONS AND REPORT ANY DIFFERENCES TO THE ENGINEER.
  - E. INSTALL CONSTRUCTION FENCING AROUND THE AREA OF WORK. DO NOT REMOVE FENCING UNTIL WORK IS COMPLETE.
- 6.2 COORDINATE AND SCHEDULE WORK WITH THE AUTHORITIES AND OTHER TRADES.
- 6.3 SCHEDULE WORK TO PROVIDE THE MINIMUM DISRUPTION TO SERVICES.
- 6.4 MAINTAIN AND PROTECT FROM DAMAGE, SERVICES, UTILITIES AND STRUCTURES ENCOUNTERED.
- 6.5 PROVIDE TRAFFIC CONTROL AND SAFETY MEASURES INCLUDING ANY NECESSARY PERSONNEL AND THE SUPPLY, INSTALLATION, REMOVAL AND REPLACEMENT OF ALL NECESSARY SIGNAGE AND BARRIERS, AS REQUIRED BY THE AUTHORITIES. IF APPLICABLE, PROVIDE TRAFFIC MANAGEMENT PLAN AS PER CITY OF OTTAWA REQUIREMENTS.
- 6.6 PROTECT EXISTING BUILDINGS, TREES AND OTHER PLANTS, LAWNS, FENCING, SERVICE POLES, WIRES, PAVEMENT, SURVEY BENCH MARKS AND MONUMENTS AND OTHER SURFACE FEATURES FROM DAMAGE WHILE WORK IS IN PROGRESS. DO NOT DISTURB SOIL WITHIN BRANCH SPREAD OF TREES OR SHRUBS THAT ARE TO REMAIN.
- 6.7 PROTECT WORK AREA AGAINST FLOODING AND DAMAGE. DEWATER AS REQUIRED TO KEEP WORK AREA FREE OF WATER. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE DIRECTED TO A SEDIMENT CONTROL MEASURE. ENSURE THAT THE DISCHARGED WATER DOES NOT CAUSE EROSION OR OTHER DAMAGE TO ADJACENT LANDS.
- 6.8 EXCAVATION, TRENCHING, ENGINEERED FILL, COMPACTION & BACKFILL SHALL BE AS PER THE GEOTECHNICAL INVESTIGATION.
- 6.9 EXCAVATION & BACKFILL:
  - A. SHORE AND BRACE EXCAVATIONS, PROTECT SLOPES AND BANKS AND PERFORM ALL WORK IN ACCORDANCE WITH ONTARIO REGULATION 213/91 UNDER THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND OTHER AUTHORITIES HAVING JURISDICTION.
  - B. PROTECT EXISTING BUILDINGS, INFRASTRUCTURE, ETC. FROM DAMAGE.
  - C. EXCAVATIONS SHALL NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
  - D. REMOVE OBSTRUCTIONS, ICE AND SNOW/FROM SURFACES TO BE EXCAVATED.
  - E. SAWCUT PAVEMENT, CURBS AND SIDEWALKS NEATLY ALONG LIMITS OF PROPOSED EXCAVATIONS SO THAT SURFACE MAY BREAK EVENLY AND CLEANLY.
  - G. CUT AND FILL AS NECESSARY TO ACHIEVE THE REQUIRED SUB-GRADE ELEVATION. DISPOSE OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL OFF SITE.
  - H. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF. DO NOT OBSTRUCT FLOW OF SURFACE DRAINAGE OR NATURAL WATERCOURSES.
  - I. COORDINATE AND PAY FOR GEOTECHNICAL INSPECTIONS AND COMPACTION TESTS OF SUBGRADE AND EACH LIFT OF BEDDING, SURROUND MATERIAL AND BACKFILL. SUBMIT GEOTECHNICAL INSPECTIONS AND COMPACTION REPORTS TO THE ENGINEER.
  - J. SUBGRADE, BEDDING, SURROUND MATERIAL AND BACKFILL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
  - K. EXCAVATE TO LINES, GRADES, ELEVATIONS AND DIMENSIONS AS INDICATED.
  - L. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
  - M. ALL STRUCTURES WITHIN PAVED AREAS SHALL HAVE 4:1 FROST TAPERS FROM FROST LINE TO SUB-GRADE.
  - N. CORRECT OVER-EXCAVATION WITH GRANULAR A COMPACTED TO NOT LESS THAN 95% OF CORRECTED MAXIMUM DRY DENSITY.
  - O. SUB-GRADE AND AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
  - P. PIPE BEDDING AND SURROUND MATERIAL SHALL BE OPSS GRANULAR A. SURROUND MATERIAL FOR CONCRETE PIPE MAY BE CLEAN WELL GRADED SAND. RE-CYCLED GRANULAR MATERIALS ARE NOT PERMITTED.

- Q. DO NOT USE BEDDING, SURROUND OR BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
  - R. PIPE BEDDING SHALL BE 150mm THICK. SHAPE BED TRUE TO GRADE AND TO PROVIDE CONTINUOUS, UNIFORM BEARING SURFACE FOR PIPE.
  - S. PLACE SURROUND MATERIAL AROUND PIPES TO FULL WIDTH OF TRENCH AND TO 300mm ABOVE PIPES.
  - T. PLACE BEDDING AND SURROUND MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS.
  - U. PLACE FILL AND BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300mm COMPACTED THICKNESS.
  - V. COMPACT EACH LAYER TO 95% OF CORRECTED DRY DENSITY BEFORE PLACING SUCCEEDING LAYER.
  - W. DO NOT BACKFILL AROUND OR OVER CAST-IN-PLACE CONCRETE WITHIN 24 HOURS AFTER PLACING OF CONCRETE.
  - X. BACKFILL MATERIALS WITHIN 1.8m OF PROPOSED GRADE SHALL MATCH THE MATERIALS EXPOSED ON THE TRENCH WALLS. BACKFILL BELOW 1.8m OF THE PROPOSED CAN CONSIST OF EITHER ACCEPTABLE NATIVE MATERIAL; ROCK; OR IMPORTED GRANULAR MATERIAL CONFORMING TO OPSS GRANULAR B TYPE I OR II. ANY ORGANIC SOILS OR TOPSOIL, IF ENCOUNTERED, SHALL BE REMOVED FROM THE EXCAVATION. IF ROCK IS USED AS BACKFILL IT SHALL BE WELL SHATTERED AND GRADED AND 200mm OR SMALLER IN DIAMETER. TO PREVENT INGRESS OF FINE MATERIAL INTO VOIDS IN THE ROCK FILL, THE UPPER SURFACE OF THE ROCK FILL SHALL BE COVERED WITH 150mm LAYER OF COMPACTED, WELL GRADED CRUSHED STONE PLACED ON GEOTEXTILE FABRIC.
  - Y. FENCE OFF ALL OPEN EXCAVATIONS AT THE END OF EACH WORK DAY. FENCES SHALL BE INSTALLED AND MAINTAINED IN A GOOD AND WORKMAN LIKE MANNER.
- 6.10 PIPES AND FITTINGS:
- A. HANDLE, CUT AND ASSEMBLE PIPES AND FITTINGS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  - B. USE ONLY FITTINGS AS RECOMMENDED BY PIPE MANUFACTURER.
  - C. LAY PIPES ON PREPARED BED, TRUE TO LINE AND GRADE AND ENSURE BARREL OF EACH PIPE IS IN CONTACT WITH SHAPED BED THROUGHOUT ITS FULL LENGTH, FREE OF SAGS OR HIGH POINTS.
  - D. DO NOT EXCEED MAXIMUM JOINT DEFLECTION RECOMMENDED BY PIPE MANUFACTURER.
  - E. WHENEVER WORK IS SUSPENDED, INSTALL REMOVABLE WATERTIGHT BULKHEAD AT OPEN END OF LAST PIPE LAID TO PREVENT ENTRY OF FOREIGN MATERIALS.
  - F. WHEN STOPPAGE OF WORK OCCURS, BLOCK PIPES TO PREVENT CREEP DURING DOWN TIME. MAKE WATERTIGHT CONNECTIONS TO MANHOLES.
  - G. JOINTS SHALL BE STRUCTURALLY SOUND AND WATERTIGHT.
  - H. WHETHER A RESULT OF POOR WORKMANSHIP OR DAMAGE DEFECTIVE PIPES AND FITTINGS SHALL BE REPAIRED OR REPLACED.
- 6.11 SEWERS AND SEWER SERVICES:
- A. CONSTRUCT SEWER TRENCHES AS PER CITY DWG S6 & S7.
  - B. RIGID STRUCTURES, INSTALL PIPE JOINTS NOT MORE THAN 1.2m FROM SIDE OF STRUCTURE.
  - C. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
- 6.12 WATER SERVICE:
- A. INSTALL AND TEST TRACER WIRE ON THE WATER SERVICE CONNECTION AS PER 4.3.12 OF THE CITY OF OTTAWA WATER DISTRIBUTION DESIGN GUIDELINES AND DRAWING W36.
  - B. PRESSURE TESTING AS PER AWWA C-605-5 AND CITY OF OTTAWA DESIGN GUIDELINES - WATER DISTRIBUTION SECTION 4.6.13.
  - C. CHLORINATION AS PER AWWA C-651-05 AND CITY OF OTTAWA DESIGN GUIDELINES - WATER DISTRIBUTION SECTION 4.6.13 & CITY DWG. W46.
- 6.13 PAVEMENT:
- A. COORDINATE AND PAY FOR GEOTECHNICAL INSPECTIONS AND COMPACTION TESTS OF EACH LIFT OF SUBBASE, BASE AND ASPHALTIC CONCRETE. SUBMIT GEOTECHNICAL INSPECTIONS AND COMPACTION REPORTS TO THE ENGINEER.
- 6.14 MAINTAIN RECORD DRAWINGS AND RECORD ACCURATELY DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND CHANGES MADE BY CHANGE ORDER OR ADDITIONAL INSTRUCTIONS. UPDATE DAILY AND MAKE AVAILABLE ON-SITE FOR REVIEW THROUGHOUT THE CONSTRUCTION PERIOD. MARK CHANGES IN RED. RECORD DRAWINGS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO CHANGES OF DIMENSION AND DETAIL; CHANGES TO GRADE ELEVATIONS; AND HORIZONTAL AND VERTICAL LOCATIONS OF UNDERGROUND SERVICES, UTILITIES AND APPURTENANCES REFERENCED TO A PERMANENT SURFACE STRUCTURE. SUBMIT DRAWINGS TO ENGINEER AT THE END OF CONSTRUCTION. SUBMIT A RECORD DRAWING OF AS-BUILT GRADE ELEVATIONS, PREPARED BY A SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
- 6.15 WHETHER RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE PRODUCTS OR DAMAGE: DEFECTIVE PORTIONS OF CURBS, SIDEWALK AND ASPHALT SHALL BE CORRECTED OR REMOVED AND REPLACED. PROMPTLY MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH REMOVALS OR REPLACEMENTS.
- 6.16 REINSTATE ALL AREAS DISTURBED BY CONSTRUCTION. REINSTATE PAVEMENTS, CURBS AND SIDEWALKS, TO THICKNESS, STRUCTURE AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION. REINSTATE LANDSCAPED AREAS TO THE CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
- 6.17 CLEAN AND REINSTATE AREAS AFFECTED BY THE WORK.



ROOF DRAINAGE PLAN

KEY PLAN



No.	DATE	REVISION
4	APR 14-23	RE-ISSUED FOR APPROVAL
3	MAR 6-23	RE-ISSUED FOR APPROVAL
2	OCT 24-22	ISSUED FOR APPROVAL
1	SEP 22-22	PRELIMINARY

**D. B. GRAY ENGINEERING INC.**  
*Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermain*  
 700 Long Point Circle 613-425-8044  
 Ottawa, Ontario d.gray@dbgrayengineering.com

Project  
**PROPOSED 9-STORY MIXED-USE BUILDING**  
 245-263 ROCHESTER STREET & 27 BALSAM STREET  
 OTTAWA, ONTARIO

NOTES AND ROOF DRAINAGE PLAN

Engineer's Seal  
  
 NOT VALID UNLESS SIGNED & DATED

Drawn D.B.G.  
 H. Scale 1:150  
 V. Scale  
 Date SEP 1-22  
 Job No. 22076

Drawing No.  
**C-3**  
 of 4

D02-02-22-0102 & D07-12-22-0156