

ROADWORKS

1. ALL TOPSOIL AND ORGANIC MATERIAL TO BE STRIPPED FROM WITHIN THE FULL RIGHT OF WAY PRIOR TO CONSTRUCTION.
2. SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.30m LAYERS.
3. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMD).
4. ROAD SUBDRAINS SHALL BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD R1.
5. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT.
6. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE IF REQUIRED BY THE MUNICIPALITY. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
7. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD R10, AND OPSD 509.010, AND OPSD 310.
8. CONCRETE CURBS SHALL BE CONSTRUCTED AS PER CITY STANDARD SC1.1 AND SC1.3 (BARRIER OR MOUNTABLE CURB AS SHOWN ON DRAWINGS).
9. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER CITY STANDARDS SC3 AND SC4.
10. PAVEMENT CONSTRUCTION AS PER GEOTECHNICAL INVESTIGATION PREPARED BY HOULE CHEVIER ENGINEERING LTD.

- HEAVY DUTY PARKING**
40mm SUPERPAVE 12.5
80mm SUPERPAVE 19.0
150mm OPSS GRANULAR A BASE
450mm OPSS GRANULAR B TYPE II
- LIGHT DUTY PARKING**
30mm SUPERPAVE 12.5
150 OPSS GRANULAR 'A' BASE
300 OPSS GRANULAR 'B' TYPE II

WATER SUPPLY SERVICING

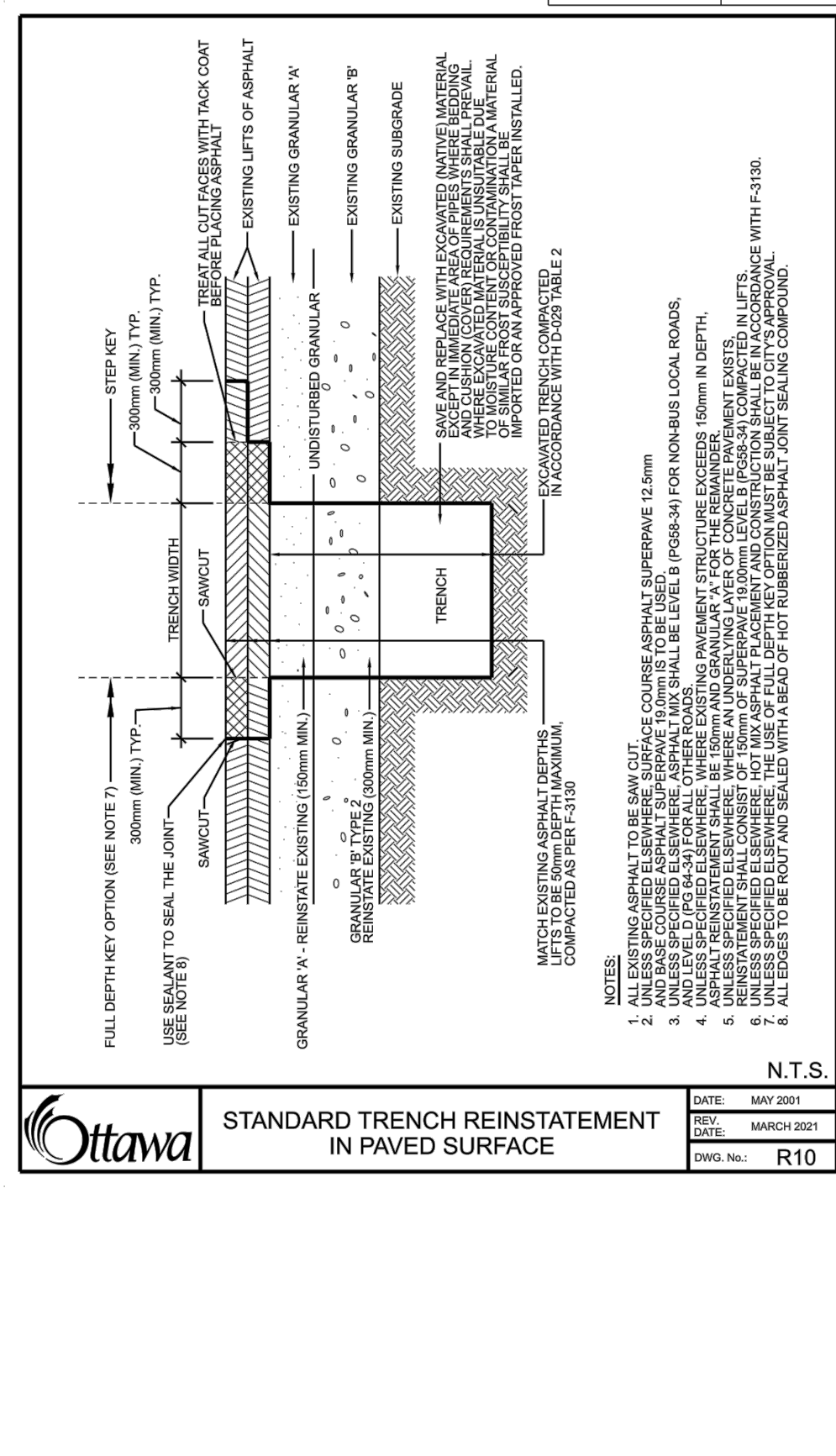
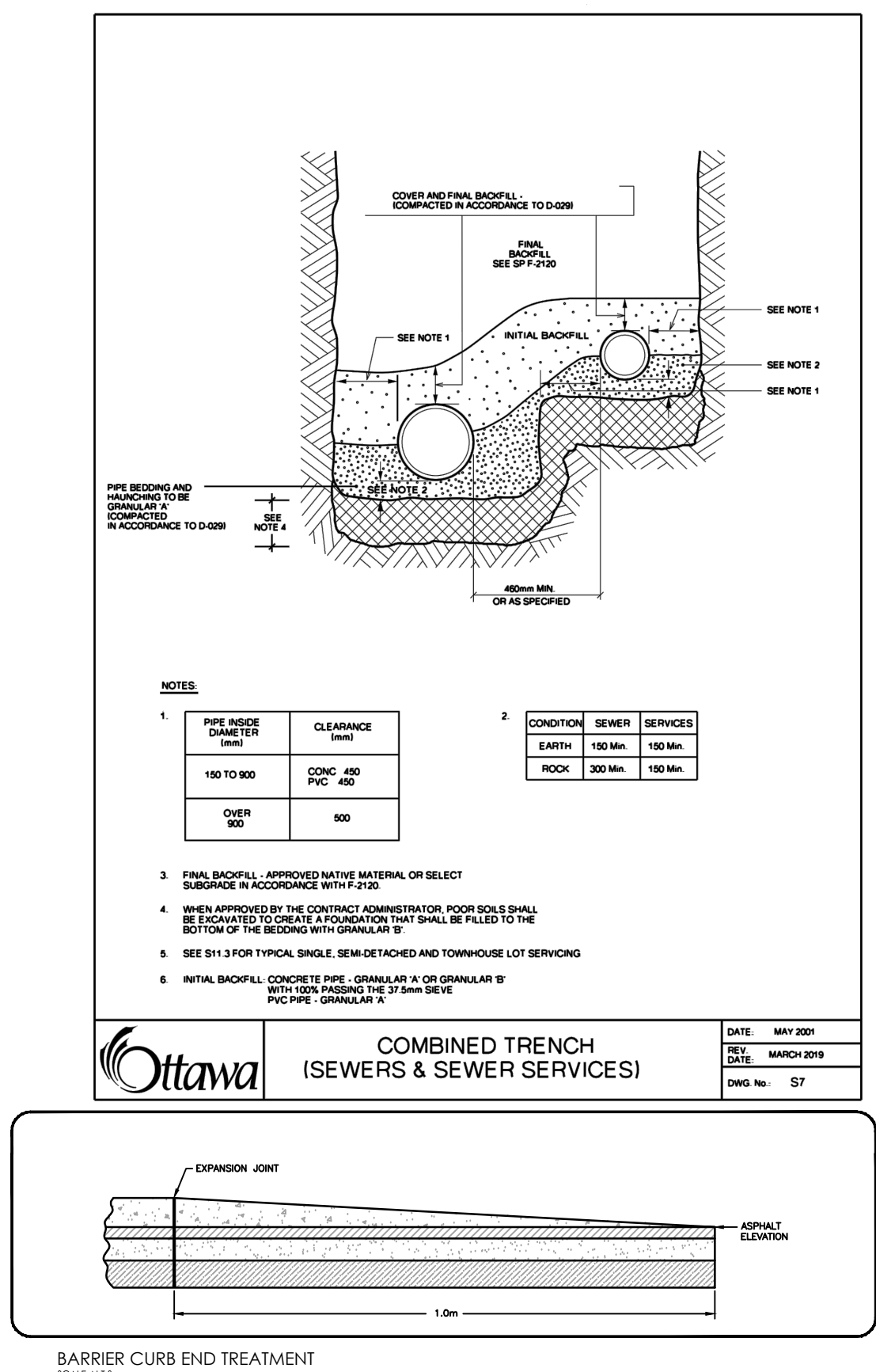
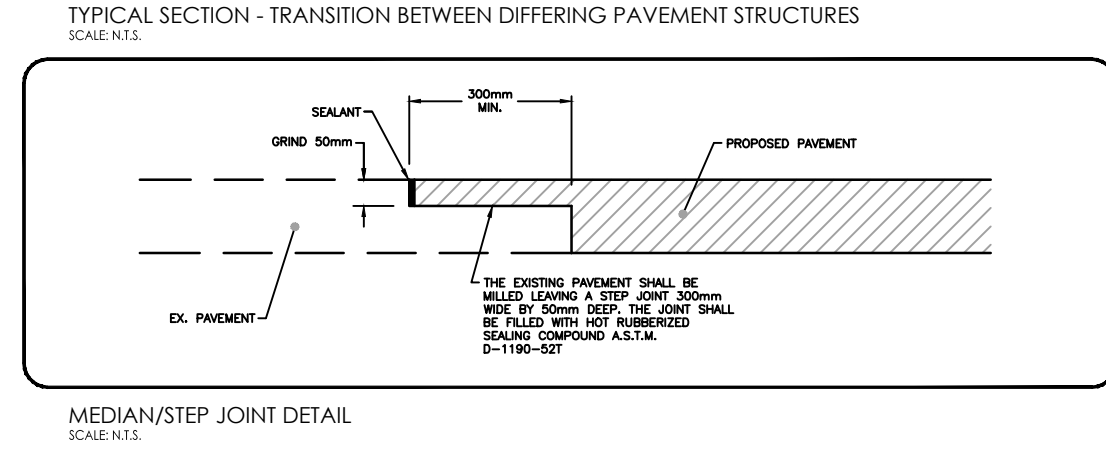
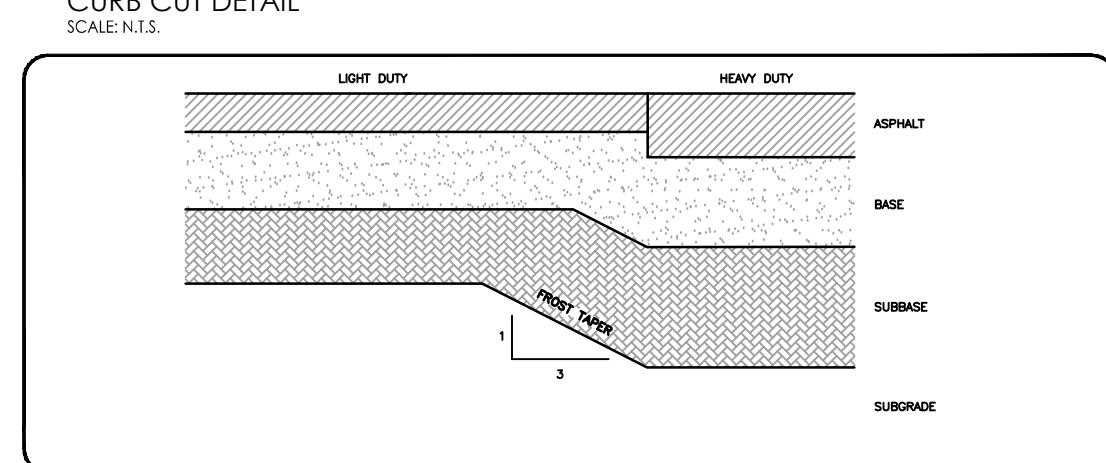
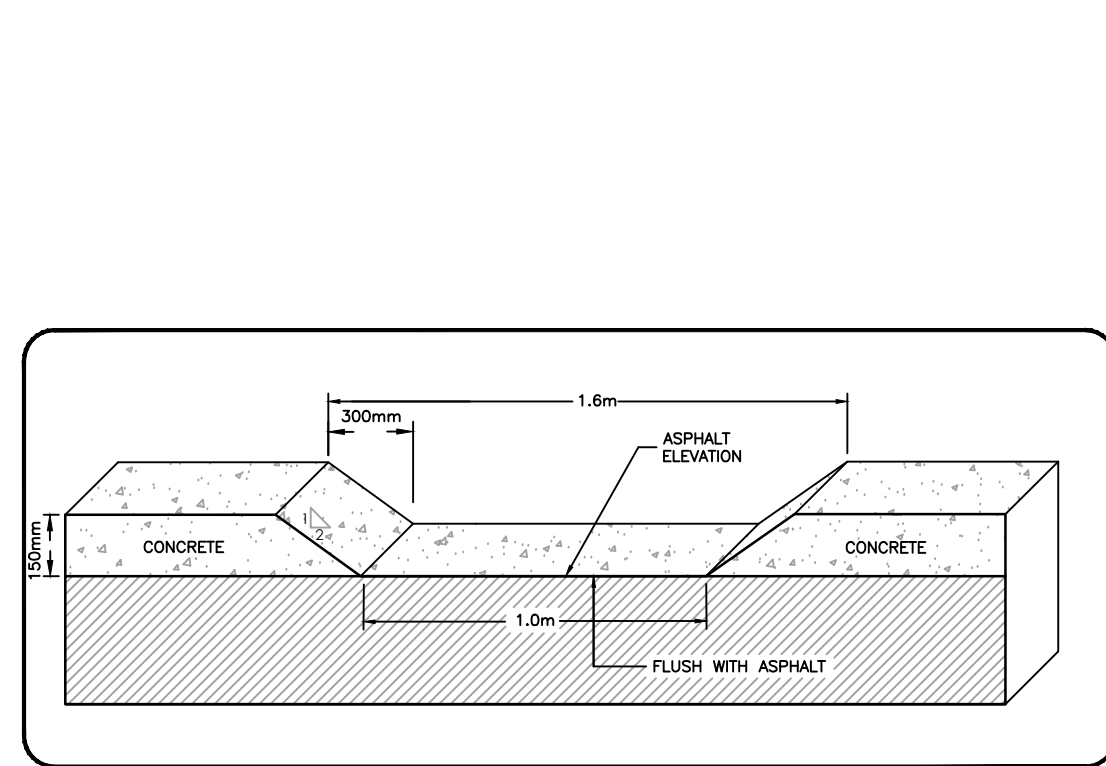
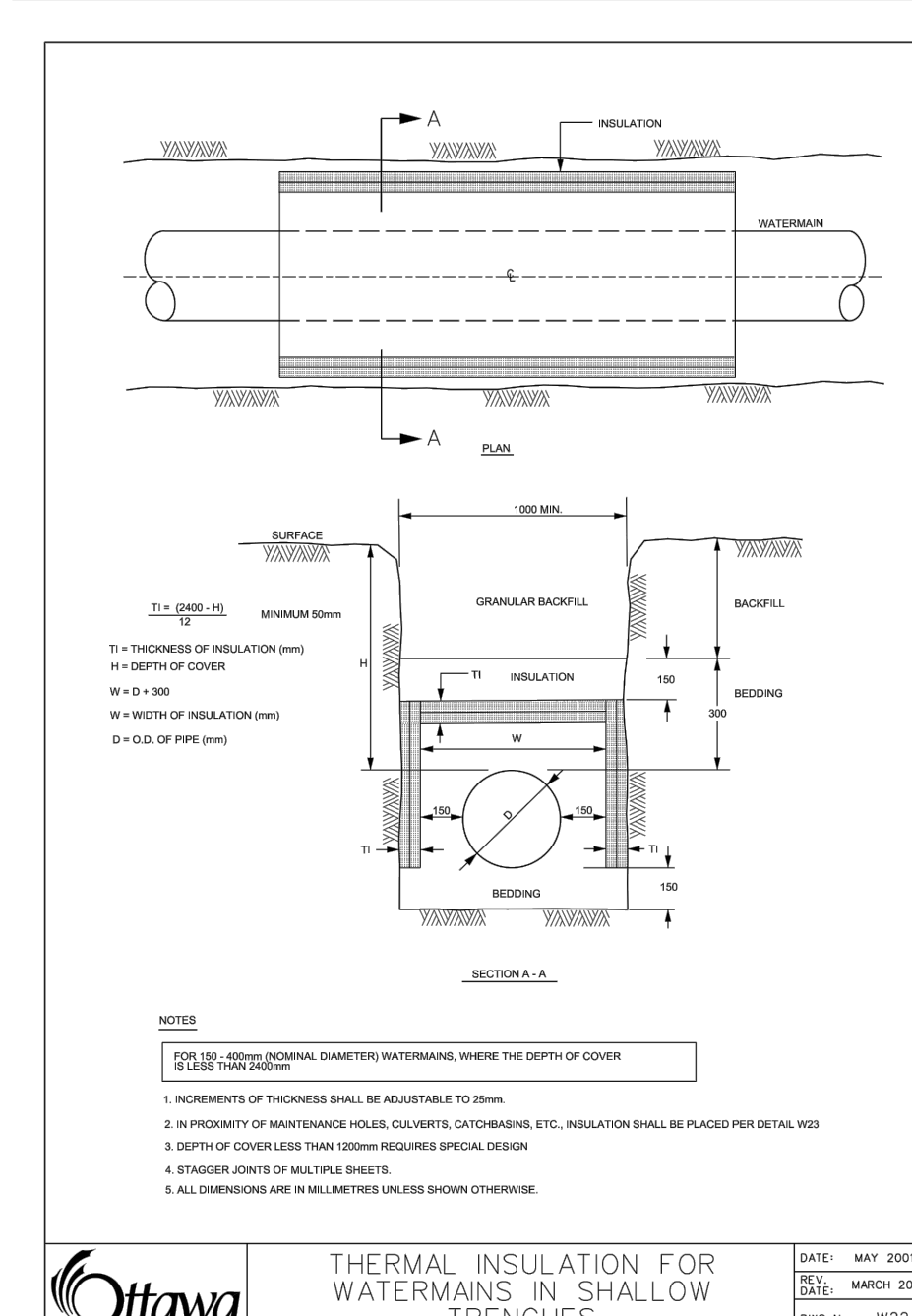
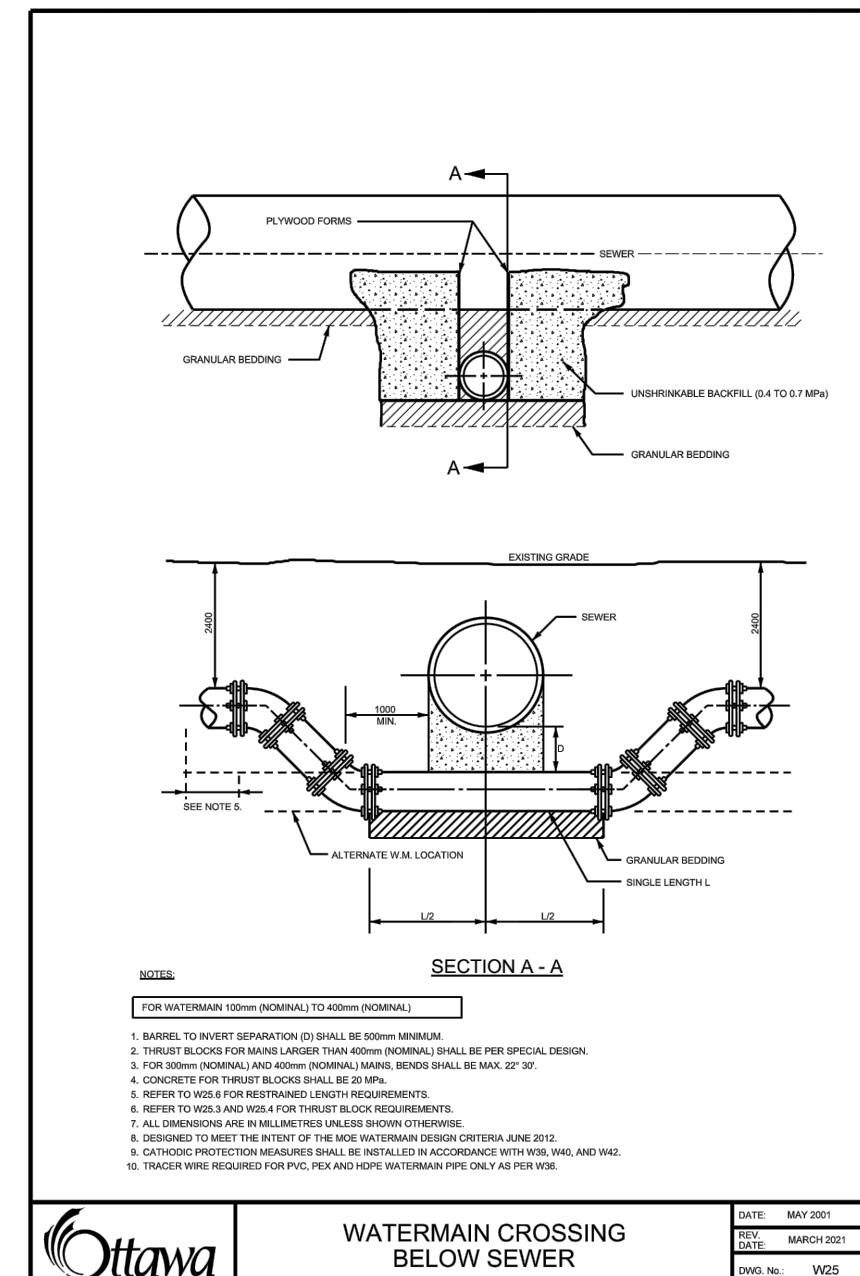
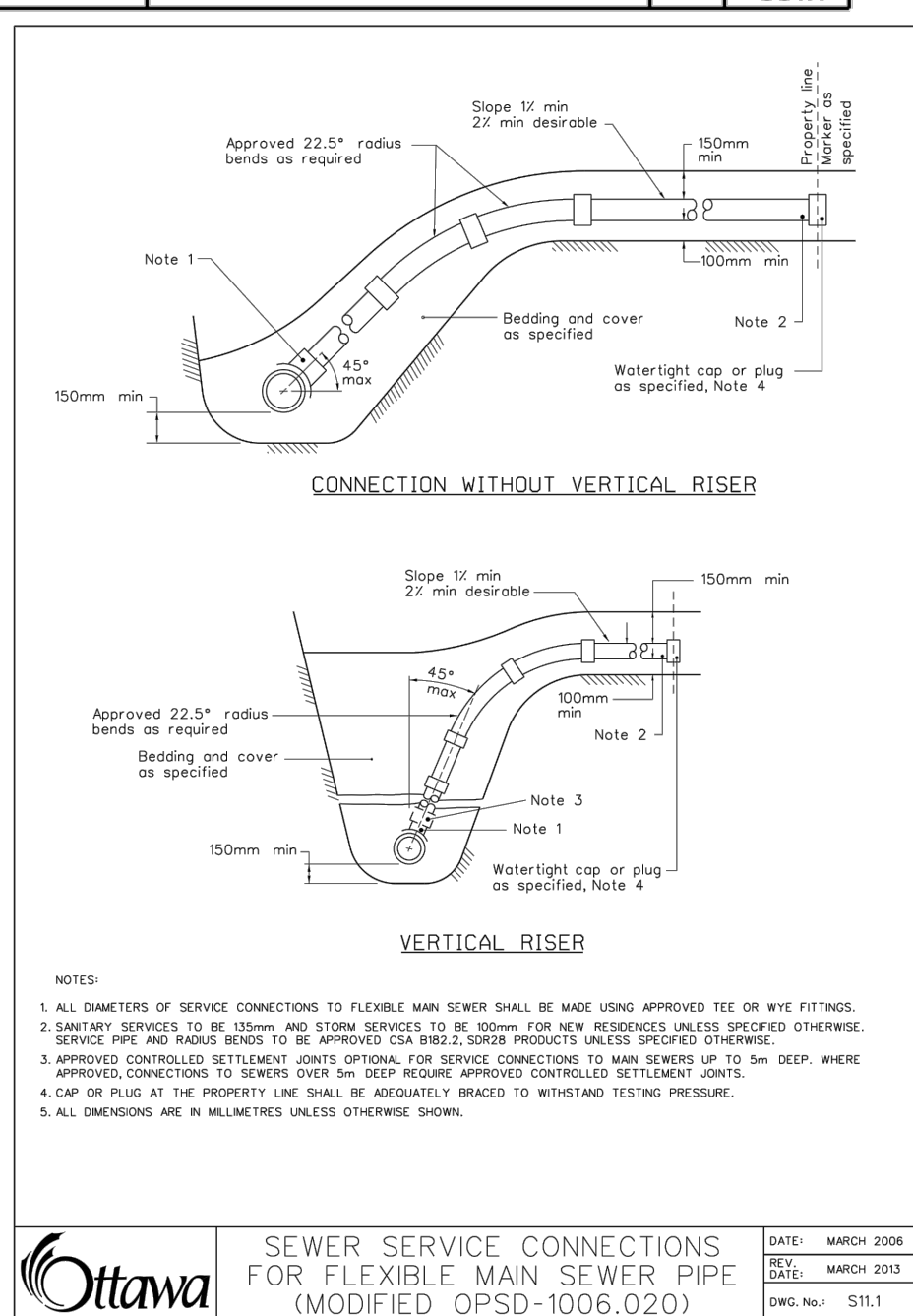
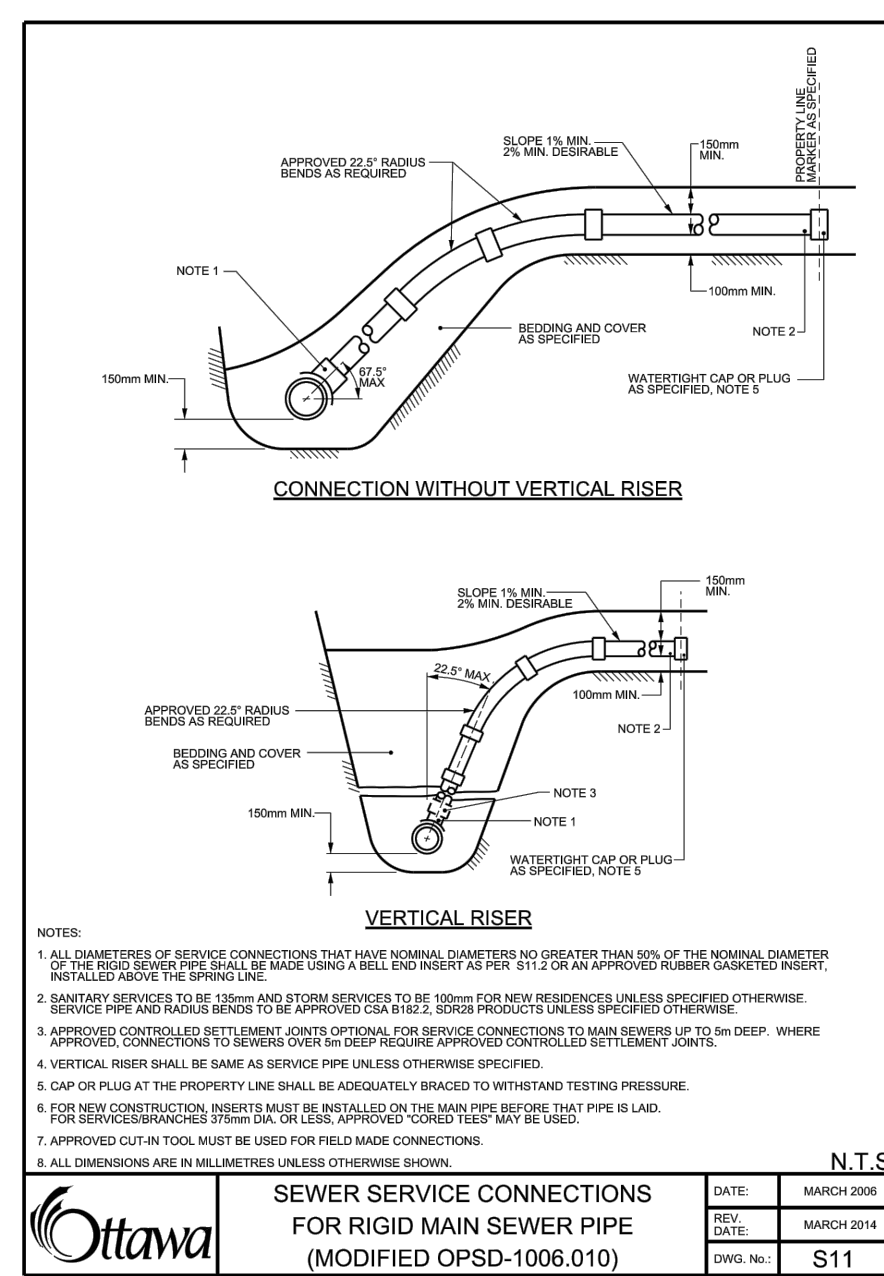
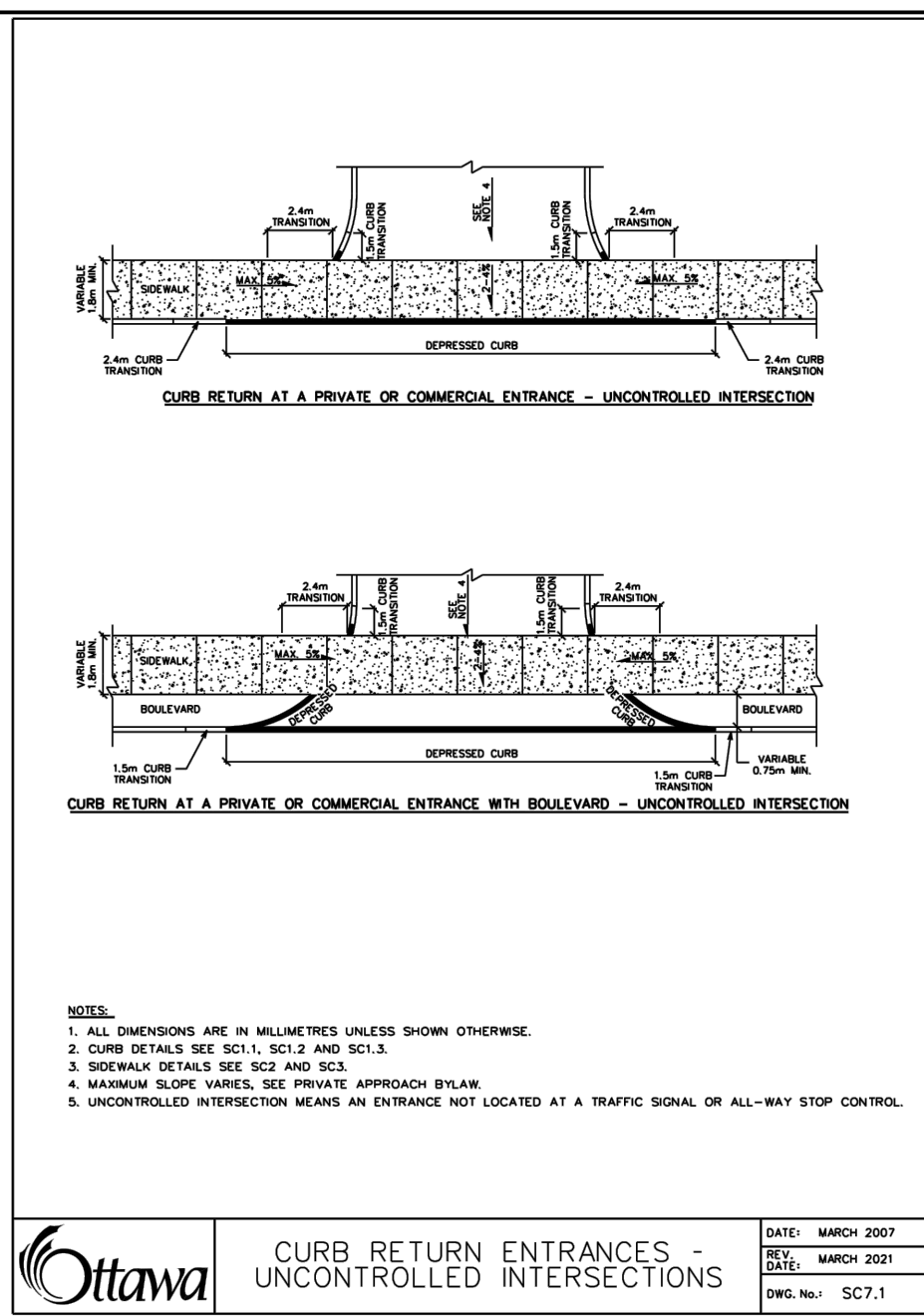
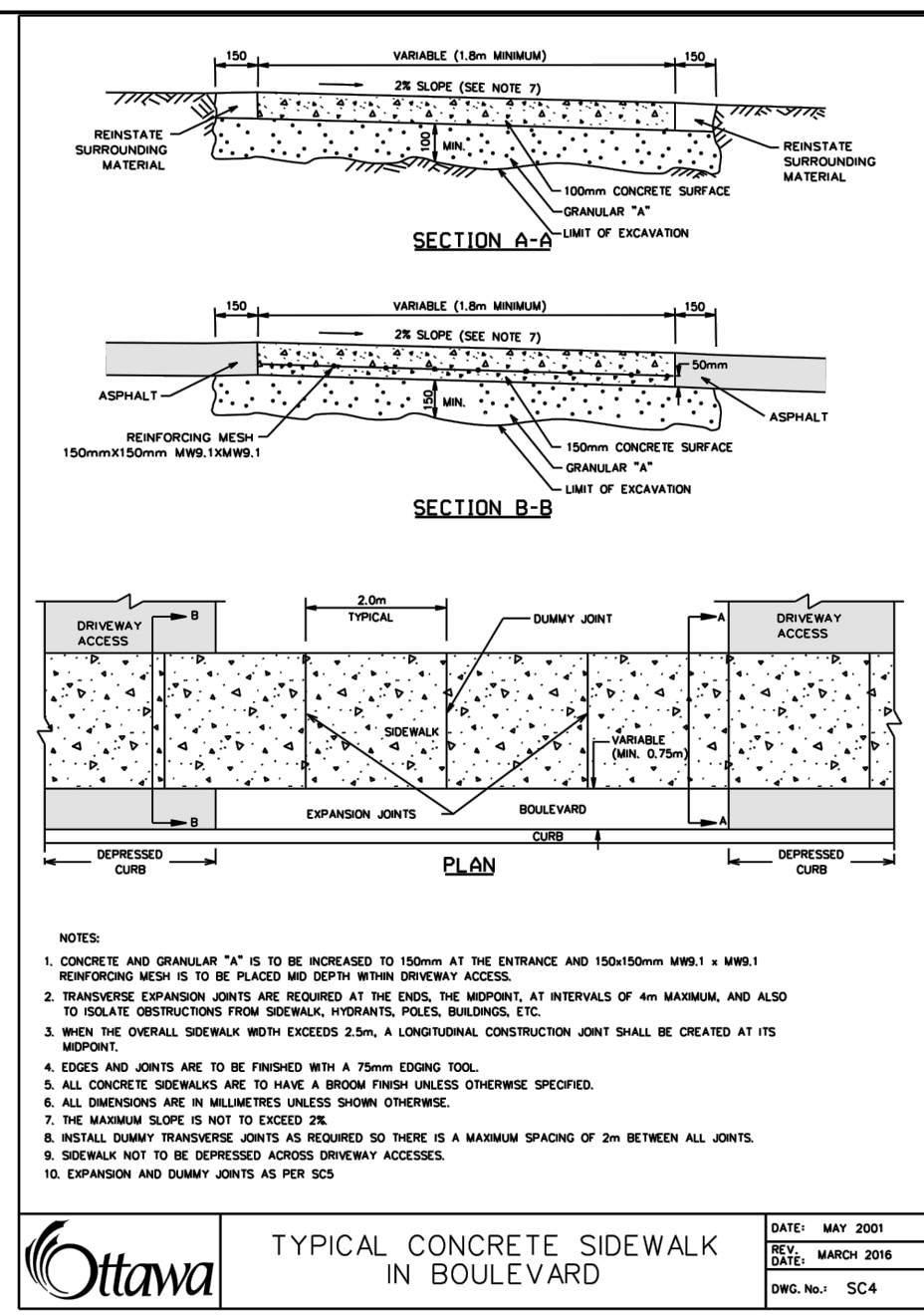
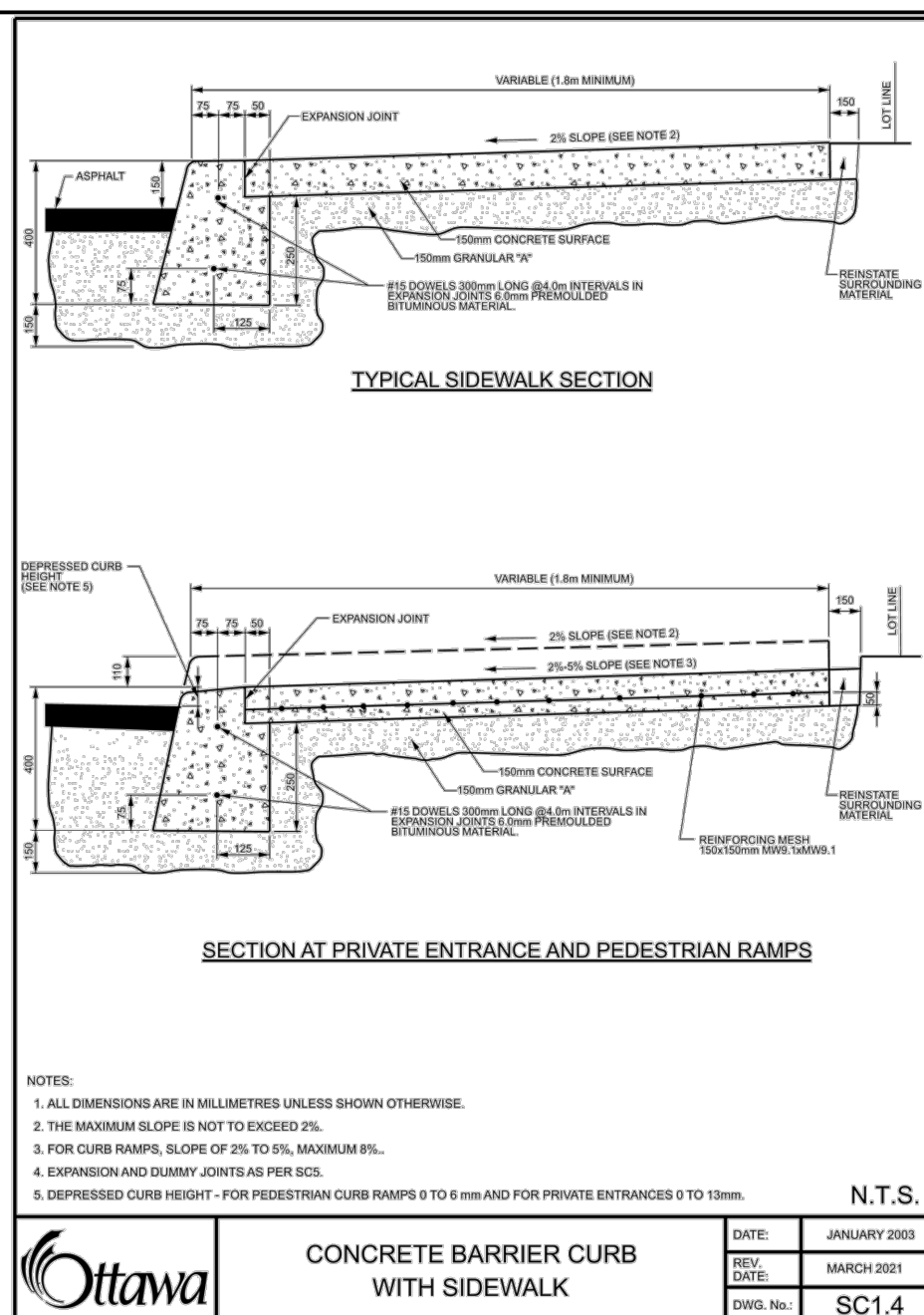
1. THE CONTRACTOR SHALL CONSTRUCT WATERMAIN, WATER SERVICES, CONNECTIONS & APPURTENANCES AS PER CITY OF OTTAWA SPECIFICATIONS & SHALL CO-ORDINATE AND PAY ALL RELATED COSTS INCLUDING THE COST OF CONNECTION, INSPECTION & DISINFECTION BY CITY PERSONNEL.
2. WATERMAIN PIPE MATERIAL SHALL BE PVC CL50 DR16. DEFLECTION OF WATERMAIN PIPE IS NOT TO EXCEED 1/2 OF THAT SPECIFIED BY THE MANUFACTURER. PVC WATERMAINS TO BE INSTALLED WITH TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W36.
3. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STANDARD W26 (UNLESS OTHERWISE NOTED). WATER SERVICES WITHIN RIGHT OF WAYS TO EXTEND 2.0m BEYOND PROPERTY LINE. STAND POST TO BE INSTALLED AT PROPERTY LINE. WATER SERVICES WITHIN PRIVATE BLOCKS TO EXTEND TO 1.0m FROM PROPOSED FOUNDATIONS. STAND POST TO BE INSTALLED AS SHOWN ON THE SITE SERVICING PLAN (CROSS-SECTION TO BE CONFIRMED PRIOR TO CONSTRUCTION).
4. FIRE HYDRANTS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W18 AND W19.
5. WATER VALVES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W24.
6. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W17 UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL TO BE SPECIFIED BY PROJECT GEOTECHNICAL CONSULTANT.
7. SERVICE CONNECTIONS SHALL BE INSTALLED A MINIMUM OF 2400mm FROM ANY CATCHBASIN, MANHOLE OR OBJECT THAT MAY CONTRIBUTE TO FREEZING. THERMAL INSULATION SHALL BE INSTALLED ON ALL PROPOSED CUTS ON THE W/M STREET SIDE WHERE 2400mm SEPARATION CANNOT BE ACHIEVED AS PER CITY OF OTTAWA W22 & W23.
8. CATHODIC PROTECTION TO BE SUPPLIED ON METALLIC FITTINGS AS PER CITY OF OTTAWA W40 AND W42.
9. THRUST BLOCKS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25.1 AND W25.2.
10. WATERMAIN TO HAVE MIN 2.4m COVER. WHERE WATERMAIN COVER IS LESS THAN 2.4m, INSULATION TO BE SPECIFIED IN ACCORDANCE WITH CITY STANDARD W22.
11. WATERMAIN CROSSINGS ABOVE AND BELOW SEWERS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W25 AND W25.2.
12. PRESSURE REDUCING VALVES (PRVs) TO BE INSTALLED AS PER ONTARIO PLUMBING CODE.
13. CONNECTIONS TO EXISTING WATERMAIN ARE TO BE DONE BY CITY FORCES. EXCAVATION AND BACKFILL ARE TO BE PROVIDED BY CONTRACTOR.

STORM AND SANITARY SEWERS

1. SANITARY SEWERS 375mm DIA. OR SMALLER SHALL BE PVC SDR35. SANITARY SEWERS LARGER THAN 375mm SHALL BE CONCRETE CSA 207.2 CLASS 1000 AS PER OPSD 807.010.
2. STORM SEWERS 375mm DIA. OR SMALLER SHALL BE PVC SDR 35. STORM SEWERS LARGER THAN 375mm DIA. SHALL BE CONCRETE CSA 207.2 CLASS 1000 AS PER OPSD 807.010.
3. ALL STORM AND SANITARY SEWER BEDDING SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S6 AND S7 CLASS 'B' BEDDING, UNLESS OTHERWISE NOTED. SUITABLE BEDDING AND COVER MATERIAL TO BE SPECIFIED BY GEOTECHNICAL CONSULTANT.
4. STORM AND SANITARY MANHOLES SHALL BE 1200mm DIAMETER IN ACCORDANCE WITH OPSD-701.01 (UNLESS OTHERWISE NOTED) w/w FRAME AND COVER AS PER CITY OF OTTAWA S24 AND S25. ALL STORM MANHOLES WITH SEWERS 300mm DIA. SEWERS AND OVER IN SIZE SHALL BE BENCHES. ALL OTHER STORM MANHOLES SHALL BE COMPLETED WITH 300mm SLUMPS AS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SLUMPS.
5. ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS, TO BE INSTALLED WITH LASER AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
6. FOR STORM SEWER INSTALLATION (EXCLUDING CB LEADS) THE MINIMUM DEPTH OF COVER OVER THE CROWN OF THE SEWER IS 2.0m. FOR SANITARY SEWERS THE MINIMUM DEPTH OF COVER IS 2.5m OVER PIPE OBVERT.
7. SAFETY PLATFORMS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 404.02.
8. DROP STRUCTURES TO BE INSTALLED AS PER CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.
9. ALL STORM AND SANITARY SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
10. STORM AND SANITARY SERVICE LATERALS TO BE SDR 28 INSTALLED AT MIN. 1.0% SLOPE. SINGLE STORM SERVICES TO BE 100mm. SINGLE SANITARY SERVICES TO BE 150mm. (SERVICES WITHIN RIGHT OF WAYS TO EXTEND 2.0m BEYOND PROPERTY LINE. SERVICES WITHIN PRIVATE BLOCKS TO EXTEND TO 1.0m FROM PROPOSED FOUNDATIONS).
11. CATCH BASINS SHALL BE IN ACCORDANCE WITH CITY STANDARDS c/w FRAME AND GRATE AS PER S20, S20 AND S21 FOR REAR YARDS, AND S3 FOR STREET CUTS. PROVIDE 150mm ADJUSTED SPACERS. ALL CATCH BASINS SHALL HAVE SLUMPS (600mm DIA. STREET CATCH BASIN LEADS SHALL BE 200mm DIA./MM) PVC SDR 35 AT 1.0% GRADE WHERE NOT OTHERWISE SHOWN ON PLAN. CATCH BASINS WILL BE INSTALLED WITH INLET CONTROL DEVICES (ICD) AS PER ICD SCHEDULE ON STORM DRAINAGE PLAN.
12. STREET CATCH BASINS TO BE INSTALLED c/w SUBDRAINS 3m LONG IN FOUR ORTHOGONAL DIRECTIONS OR LONGITUDINALLY WHEN PLACED ALONG A CURB, AND AT AN ELEVATION OF 300mm BELOW SUBGRADE LEVEL. REAR LOT PERFORATED PIPE TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S29. REAR LOT STRUCTURES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W31.
13. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING NO. S8. THE SEALS SHOULD BE AT LEAST 1.5m LONG IN THE TRENCH DIRECTION AND EXTEND FROM TRENCH WALL TO TRENCH WALL. GENERALLY, THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUBBEDDING AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPACTABLE BROWN SILTY CLAY FLAKES INSTALLED IN MAXIMUM 300mm THICK LAYERS COMPACTED TO A MINIMUM OF 95% OF THE MATERIAL'S SPMD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT STRATEGIC LOCATIONS AT NO MORE THAN 60m INTERVALS IN THE SERVICE TRENCHES. FOR DETAILS REFER TO GEOTECHNICAL INVESTIGATION REPORT.

GRADING

1. ALL GRANULAR BASE & SUB BASE COURSE MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAX DRY DENSITY.
2. SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.15m LAYERS.
3. ALL DISTURBED GRASSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, WITH 500mm MIN. TOPSOIL. THE RELOCATION OF TREES AND SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.
4. 100 YEAR PONDING DEPTH TO BE 0.30m (MAXIMUM).
5. EMBANKMENTS TO BE SLOPED AT MIN. 3:1, UNLESS OTHERWISE SPECIFIED.
6. ALL SWALES TO BE MIN. 0.15m DEEP WITH MAX. 3:1 SLOPE UNLESS OTHERWISE NOTED. THE MINIMUM LONGITUDINAL SLOPE TO BE 1.5% OR 1.0% WHEN PERFORATED SUBDRAIN IS INSTALLED.
7. ALL ROOF DOWNSPOUTS TO DISCHARGE TO THE GROUND ONTO SPLASH PADS AND SHALL NOT BE DIRECTED TO THE STORM SEWER, OR THE BUILDING FOUNDATION DRAIN.
8. TOP OF GRATE (TIG) ELEVATIONS FOR ALL STREET CATCHBASINS SHOWN ON PLANS REFER TO THE ELEVATION AT EDGE OF PAVEMENT, OR GUTTERLINE WHERE APPLICABLE.
9. ALL RETAINING WALLS GREATER THAN 1.0m IN HEIGHT ARE TO BE DESIGNED, APPROVED, AND STAMPED BY STRUCTURAL ENGINEER.
10. FENCES OR RAILINGS ARE REQUIRED FOR RETAINING WALLS GREATER THAN 0.60m IN HEIGHT.
11. EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
12. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO TREE CUTTING.
13. REFER TO DRAWING EC-1 FOR EROSION AND SEDIMENT CONTROL DETAILS.
14. FROST PROTECTION TO BE PROVIDED FOR FOUNDATIONS WHERE DEPTH OF COVER IS LESS THAN 1.5m AS PER GEOTECHNICAL RECOMMENDATIONS.



GENERAL NOTES AND SPECIFICATIONS

1. ALL MATERIALS AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH OPS AND CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS AND OPSD SUPPLEMENT. ONTARIO PROVINCIAL STANDARDS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF SAME INCLUDING WATER PERMIT AND ASSOCIATED COSTS.
3. SERVICE AND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SERVICES AND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATES FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REINSTATEMENT.
4. ALL DISTURBED AREAS SHALL BE REINSTATED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER & THE CITY. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH OPSD 509.010 AND OPSD 310.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATION FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONTRACTOR AS DEFINED IN THE ACT.
6. THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENTATION CONTROL PLAN THAT WILL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION FOR RECEIVING STORM SEWERS OR DRAINAGE DURING CONSTRUCTION ACTIVITIES. THIS PLAN SHALL INCLUDE BUT NOT LIMITED TO FILTER CLOTH ON CATCH BASINS, STRAW BALE CHECK DAMS AND SEDIMENT CONTROLS AROUND ALL DISTURBED AREAS. DEWATERING SHALL BE PUMPED INTO SEDIMENT TRAPS.
7. SITE PLAN PREPARED BY DAVID BLAKELY ARCHITECT, INC.
8. TOPOGRAPHIC SURVEY SUPPLIED BY ANNS, O'SULIVAN, VOLLEBECK LTD.
9. LANDSCAPE ARCHITECTURE PLAN PREPARED BY OTHERS, REFER TO ORIGINAL LANDSCAPE ARCHITECTURE PLAN FOR ALL LANDSCAPING FEATURES (e.g. TREES, WALKWAYS, PARK DETAILS, NOISE BARRIERS, FENCES, ETC.).
10. GEOTECHNICAL INVESTIGATION 63978.79 PREPARED BY HOULE CHEVIER ENGINEERING DATED MARCH 3, 2016. GEOTECHNICAL INFORMATION PRESENTED ON THESE DRAWINGS MAY BE INTERPRETED FROM THE ORIGINAL REPORT. REFER TO ORIGINAL GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS AND TO VERIFY ASSUMPTIONS MADE HEREIN.
11. STREET LIGHTING TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
12. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO ENGINEER.
13. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PERMITTED BY THE CONTRACT ADMINISTRATOR AND DIRECTOR OF ENGINEERING HAS BEEN OBTAINED.
14. HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE TO BE NOTIFIED IF DEEPLY BURIED ARCHEOLOGICAL REMAINS ARE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES.

1	ISSUED FOR REVIEW	WAJ	KJK	23.05.17
Revision		By	Appd.	YY.MM.DD

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		Dwn.	Chkd.	Dgn.	YY.MM.DD

Permit-Seal



Client/Project
CAVANAGH CONSTRUCTION LTD.

TRAIL WEST
AKERSON ROAD BLOCKS 76, 77 & 78
Ottawa, ON, Canada

Title
DETAIL SHEET

Project No.	Scale
16401706	AS NOTED
Drawing No.	Sheet
	Revision