



DON  
REID  
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STORM AND SANITARY SEWERS

- SANITARY SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DR35. SANITARY SEWERS LARGER THAN 375mm SHALL BE CONCRETE CSA A 257.2 CLASS 100D AS PER OPSD 807.010.
- STORM SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DR35. STORM SEWERS LARGER THAN 375mm DIA. SHALL BE CONCRETE CSA A 257.2 CLASS 100-D AS PER OPSD 807.010.
- 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.
- STORM AND SANITARY MANHOLES SHALL BE 1200mm DIAMETER IN ACCORDANCE WITH OPSD-701.01 (UNLESS OTHERWISE NOTED) c/w FRAME AND COVER AS PER CITY OF OTTAWA S24, S24.1, AND S25 WHERE APPLICABLE. CATCH BASIN MANHOLE FRAME AND COVERS PER S19, S28, AND S28.1 WHERE APPLICABLE. ALL STORM MANHOLES WITH SEWERS 900mm DIA SEWERS AND OVER IN SIZE SHALL BE BENCHED. ALL OTHER STORM MANHOLES SHALL BE COMPLETED WITH 300mm SUMPS AS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SUMPS.
- ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS. TO BE INSTALLED WITH LASER AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
- 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.
- ALL STORM AND SANITARY SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES
- STORM AND SANITARY SERVICE LATERALS TO BE SDR 28 INSTALLED AT MIN. 1.0% SLOPE. SINGLE STORM SERVICES TO BE 100mmØ, SINGLE SANITARY SERVICES TO BE 135mmØ. (SERVICES TO EXTEND 2.0m BEYOND PROPERTY LINE)
- CATCH BASINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS S1, S2 AND S3 c/w FRAME AND GRATE AS PER S19.1 FOR PRIVATE WORKS OR S19 FOR PUBLIC WORKS. CURB INLET FRAME AND GRATE PER S22 AND S23. PROVIDE 150mm ADJUSTED SPACERS. ALL CATCH BASINS SHALL HAVE SUMPS (600mm DEEP). STREET CATCH BASIN LEADS SHALL BE 200mm DIA (MIN) PVC DR 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.
- 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.
- CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5m LONG (IN THE TRENCH DIRECTION) AND SHOULD 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 PLACED IN MAXIMUM 225mm THICK LOOSE 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.
- GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300 mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
- CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSD 410 AND OPSD 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.
- ANY SEWER ABANDONMENT TO BE CONDUCTED ACCORDING TO CITY OF OTTAWA STANDARD S114

EX. 450mmØ STM  
INV. =82.44  
SPRINGLINE = 82.67

EX. 30m-450mmØ STORM SEWER @ 1.36%

EX. CBMH 2  
T/G = 85.65  
N. INV= 82.19  
S. INV= 82.34  
W. INV= 82.28

EX. 52m-250mmØ STORM SEWER @ 1.86%

28.6m-200mmØ PVC SDR 35  
CB LEAD @ 1.00% MIN.  
INV @ CONNECTION=82.44

EX. SAN OBV = 83.79

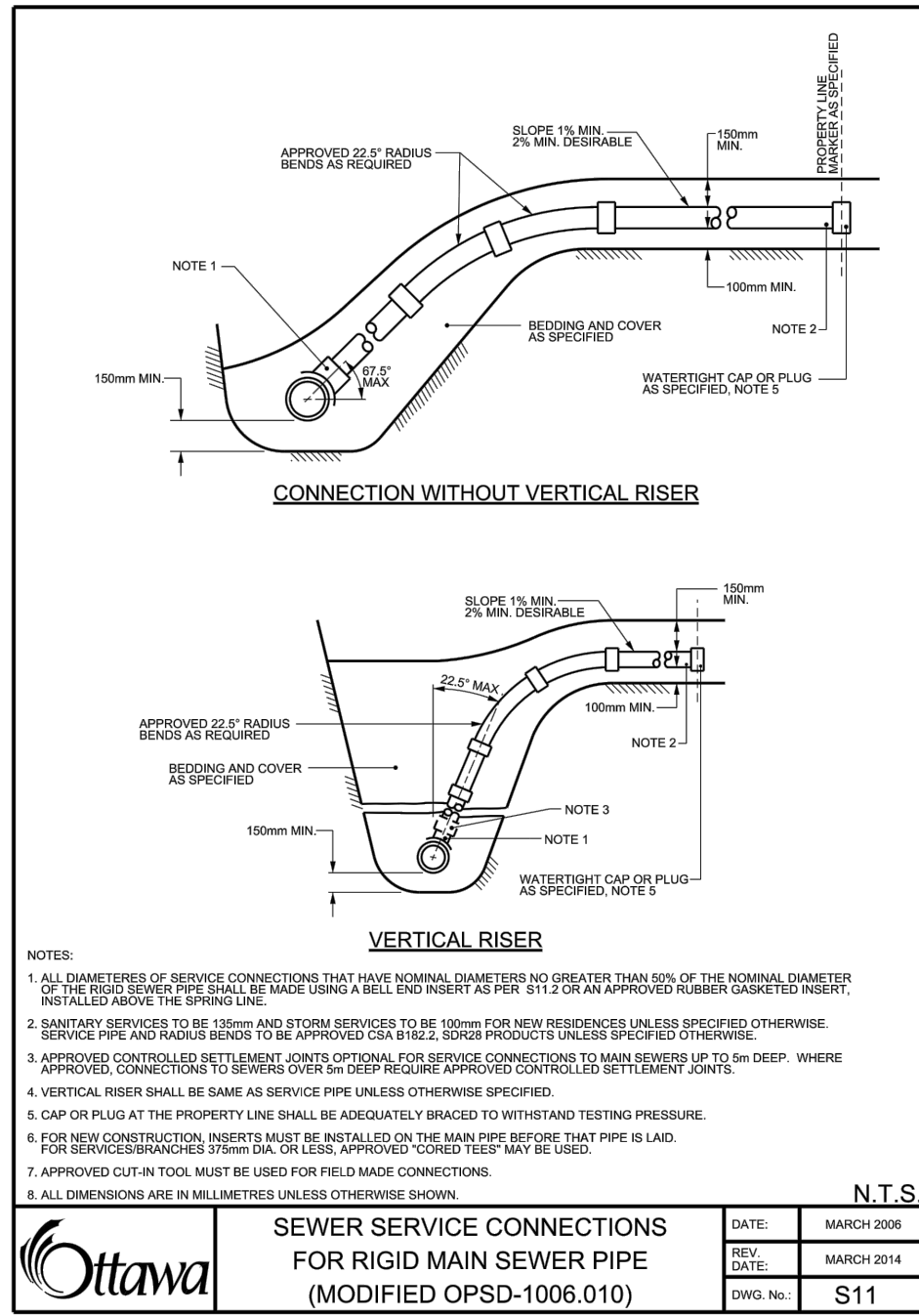
CB-12  
T/G=85.55  
NW INV=84.17

STM LEAD INV = 84.16

1 NEW STORM CB CONNECTION  
1:100

GENERAL NOTES AND SPECIFICATIONS

- 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.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF SAME INCLUDING WATER PERMIT AND ASSOCIATED COSTS.
- 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.
- 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.
- 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 CONSTRUCTOR AS DEFINED IN THE ACT.
- 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 BE LIMITED TO CATCH BASIN INSERTS, STRAW BALE CHECK DAMS AND SEDIMENT CONTROLS AROUND ALL DISTURBED AREAS. DEWATERING SHALL BE PUMPED INTO SEDIMENT TRAPS.
- REFER TO LANDSCAPE ARCHITECTURE PLAN FOR ALL LANDSCAPING FEATURES (ie. TREES, WALKWAYS, PARK DETAILS, NOISE BARRIERS, FENCES etc.)
- STREET LIGHTING TO CITY OF OTTAWA STANDARDS.
- 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.
- THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL BY THE CONTRACT ADMINISTRATOR AND DIRECTOR OF ENGINEERING HAS BEEN OBTAINED.
- HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE TO BE NOTIFIED IF DEEPLY BURRIED ARCHEOLOGICAL REMAINS ARE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES.



NOTES:		VERTICAL RISER	
1. ALL DIMENSIONS OF SERVICE CONNECTIONS THAT HAVE NORMAL DIAMETER NO GREATER THAN 50% OF THE NOMINAL DIAMETER OF THE RECEIVING PIPE SHALL BE MADE USING A WELL END JOINT AS PER S11.2 OR AN APPROVED EQUIVALENT JOINT TO INSURE		N.T.S.	
2. SANITARY SERVICES TO BE 150mm AND STORM SERVICES TO BE 100mm FOR NEW RESIDENCES UNLESS SPECIFIED OTHERWISE. SERVICE PIPE AND MANHOLE BENDS TO BE APPROVED C900 R12.2. SPOKE PRODUCTS UNLESS SPECIFIED OTHERWISE.			
3. APPROVED CONTROLLED SETTLEMENT JOINTS FOR SERVICE CONNECTIONS TO MAIN EXCEEDING UP TO 10m DEEP, WHERE APPROVED, CONNECTIONS TO SERVICES OVER 5m DEEP REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.			
4. VERTICAL RISER SHALL BE MADE AS SERVICE PIPE UNLESS OTHERWISE SPECIFIED.			
5. CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE.			
6. FOR NEW CONSTRUCTION, INSERTS MUST BE INSTALLED ON THE MAIN AND SERVICE PIPE. IF THE PIPE IS LARGER FOR SERVICE CONNECTIONS 300mm DIA. OR LARGER, APPROVED "CORDED TEE" MAY BE USED.			
7. APPROVED CUT AND TOOL MUST BE USED FOR FIELD MADE CONNECTIONS.			
8. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.			
Ottawa			
		DATE: MARCH 2006	
		DATE: MARCH 2014	
		DWG. NO: S11	



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Legend

- F100A
- AREA ID
  - RUNOFF COEFFICIENT
  - STORM DRAINAGE AREA ha.
  - PROPOSED STORM DRAINAGE BOUNDARY
  - PROPOSED CATCHBASIN
  - PROPOSED CATCHBASIN LEAD
  - EXISTING CATCHBASIN MANHOLE
  - EXISTING CATCHBASIN
  - EXISTING CATCHBASIN LEAD

Notes

1	ISSUED FOR CLIENT REVIEW	AJ	KS	20.02.21
Revision		By	Appd.	YY.MM.DD

File Name:	163601309-DB	AJ	KS	AJ	20.02.19
		Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

Client/Project

OTTAWA PARAMDEIC SERVICES HEADQUARTERS  
2495 DON REID DRIVE  
EXTERIOR PARKING LOT EXTENSION

Ottawa, ON

Title

STORM DRAINAGE PLAN

Project No.	Scale
163601309	0 2.5 7.5 12.5m 1:250

Drawing No.	Sheet	Revision
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SD-1

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