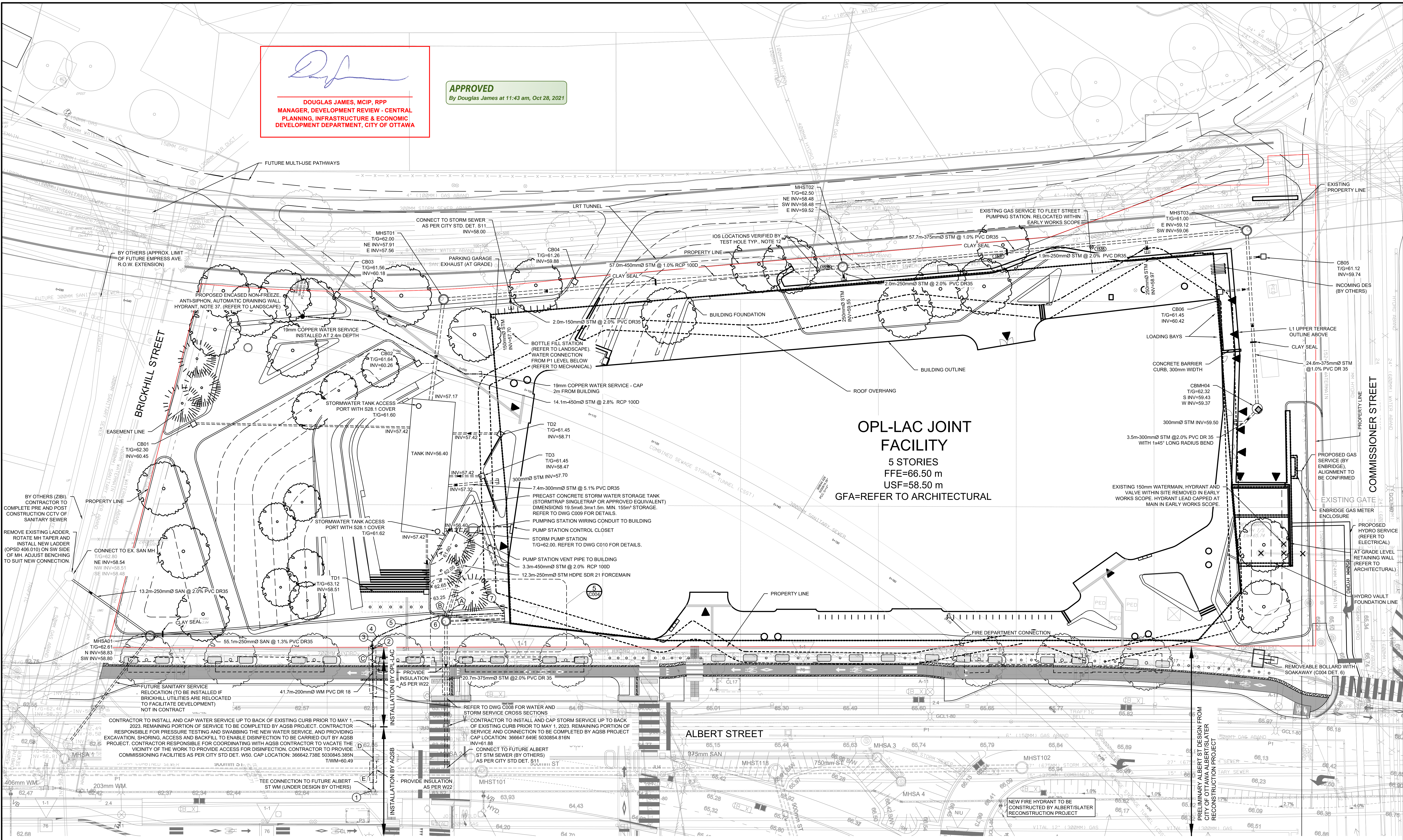


ISSUED

No.	Date	Description
0	10/07/19	ISSUED FOR COSTING
1	23/01/20	ISSUED FOR D.D. & COSTING
2	27/03/20	ISSUED FOR D.D. RESUBMISSION
3	27/05/20	ISSUED FOR 30% CO COSTING
4	05/06/20	ISSUED FOR SITE PLAN CONTROL
5	29/09/20	ISSUED FOR 60% CO COSTING
6	13/11/20	ISSUED FOR SITE PLAN CONTROL R1
7	18/01/21	ISSUED FOR 90% CO COSTING
8	25/02/21	ISSUED FOR 99% OWNER REVIEW
9	05/03/21	ISSUED FOR SITE PLAN CONTROL R2
10	17/08/21	ISSUED FOR SITE PLAN CONTROL R3

*Douglas James*  
**DOUGLAS JAMES, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW - CENTRAL  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

**APPROVED**  
By Douglas James at 11:43 am, Oct 28, 2021



- NOTES:**
- GENERAL**
- COORDINATES ARE IN MTM ZONE 9 (76°30' WEST LONGITUDE) NAD-83 (ORIGINAL).
  - OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA PRIOR TO STARTING CONSTRUCTION.
  - SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING.
  - REFER TO 'SITE SERVICES AND STORMWATER MANAGEMENT DESIGN BRIEF, OTTAWA PUBLIC LIBRARY - LAC JOINT FACILITY' PREPARED BY MORRISON HERSHFIELD FOR SITE SERVICING REPORT.
  - REFER TO GEOTECHNICAL INVESTIGATION REPORT (NO. 1913180) DATED JUNE 18, 2020 PREPARED BY GOLDEN ASSOCIATE FOR SUBSURFACE CONDITIONS. CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT SHALL REVIEW EXCAVATIONS PRIOR TO THE PLACEMENT OF GRANULAR MATERIAL.
  - CONTRACTOR TO VERIFY ALL EXISTING UTILITY ELEVATIONS AT CONNECTION AND CROSSING LOCATIONS PRIOR TO CONSTRUCTION AND ADVISE THE ENGINEER OF ANY DISCREPANCIES.
  - UNLESS DIRECTED OTHERWISE ANY DAMAGED ASPHALT OR CURBS REGARDLESS OF WHETHER WITHIN OR EXTERNAL TO THE SITE SHALL BE REINSTATED IN ACCORDANCE WITH CITY STD. DET. R10 AND S1.
  - UNLESS DIRECTED OTHERWISE THE CONTRACTOR SHALL REINSTATE ALL SIGNS, LIGHTING AND OTHER STREET FURNITURE DISTURBED BY THE WORK.
  - THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT TRAFFIC MANAGEMENT PLANS FOR WORK IN STREET IN ACCORDANCE WITH OTM BOOK 7.
  - CLAY SEALS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL S24 AND SHALL BE INSTALLED AT 50m INTERVALS IN ALL PIPE TRENCHES. CLAY SEAL TO EXTEND FULL TRENCH WIDTH AND FROM BOTTOM OF TRENCH EXCAVATION TO UNDERSIDE OF ROAD STRUCTURE, WITH A MINIMUM THICKNESS OF 10mm.
  - LOCATE AND CAP ANY EXISTING STORM, SANITARY AND WATER SERVICES AT THE PROPERTY LINE. ABANDON EXISTING SERVICES WITHIN THE R.O.W. PER STANDARD CITY OF OTTAWA DETAIL S114 (TYPICAL).
  - IOS TEST HOLE LOCATIONS AND ALIGNMENT BETWEEN TEST HOLES OBTAINED FROM FARRELL, MOFFATT AND WOODLAND SURVEY, MARCH 1 TO MARCH 4, 2021.
  - SUBMIT SHOP DRAWINGS FOR APPROVAL FOR ALL PRECAST STRUCTURE, GRATES & COVERS, TRENCH DRAINS.
- SEWERS**
- ALL STORM SEWERS, SANITARY SEWERS AND CATCH BASINS LEADS SHALL BE PVC DR 35 UNLESS OTHERWISE SPECIFIED.
  - REFER TO DETAIL 1 ON DRAWING FOR SEWER INSTALLATION.
  - ALL SEWER MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE 2021 EDITION OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND STANDARD DRAWINGS. PVC PIPE TO BE CLASS 150 DR18 TO LATEST EDITION OF A.W.W.A. SPECIFICATION C900 AND CSA B137.3 LATEST AMENDMENT WITH DASHED BELL AND SPOUT COUPLINGS.
  - MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES ON STORM SEWERS LESS THAN 900mm DIAMETER SHALL BE CONSTRUCTED WITH A 300mm SLURP BENCHING SHALL BE INSTALLED IN WAINWICHANCE HOLES ON STORM SEWERS 1000mm AND ABOVE.
  - STORM SEWER MAINTENANCE HOLE COVERS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL S24.1 ON FRAMES TO DETAIL S25.
  - CONTRACTOR SHALL MAINTAIN EXISTING SEWER FLOW DURING CONSTRUCTION IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS.
  - ALL MAINTENANCE HOLES, CATCH BASINS AND CLEANOUTS SHALL BE ADJUSTED TO POST-CONSTRUCTION GRADE.
- WATERMANS**
- REFER TO DETAIL 1 ON DRAWING C004 FOR WATERMAIN INSTALLATION.
  - ALL WATERMAIN MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE 2021 EDITION OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND STANDARD DRAWINGS. PVC PIPE TO BE CLASS 150 DR18 TO LATEST EDITION OF A.W.W.A. SPECIFICATION C900 AND CSA B137.3 LATEST AMENDMENT WITH DASHED BELL AND SPOUT COUPLINGS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER PERMIT AS REQUIRED FROM THE CITY OF OTTAWA, AND COMPLYING WITH ALL CITY OF OTTAWA REQUIREMENTS. THE CITY MAY REQUIRE THAT CERTAIN ACTIVITIES (E.G. VALVE OPERATION, CONNECTION OF NEW WATER SERVICE TO EXISTING WATERMAIN, DESIGN) BE CARRIED OUT ONLY BY CITY FORCES.
  - ALL VALVES 300mm DIAMETER AND SMALLER SHALL INCLUDE A VALVE BOX AS PER C04.
  - THE NEW WATERMAIN IS TO BE INSTALLED WITH A MINIMUM OF 24m COVER (INCLUDING FORECAST LEAD) WHERE 24m COVER IS NOT POSSIBLE. PROVIDE INSULATION IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAILS W22 & W23.
  - THRUST RESTRAINT SHALL BE PROVIDED BY BOTH RESTRAINING/RETAINING RODS AND THRUST BLOCKS AT ALL DEAD END CAPS, PLUGS, VALVES, BENDS AND REDUCERS AS PER CITY OF OTTAWA STANDARD DETAILS W23.3, W23.4, W25.5 AND W25.6. ALL TEMPORARY THRUST RESTRAINTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
  - THRUST PROTECTION SHALL BE PROVIDED FOR ALL NEW PVC WATERMANS IN ACCORDANCE WITH THE SPECIFICATIONS AND ALL CITY OF OTTAWA STANDARD DETAILS W26.
  - CATHODIC PROTECTION SHALL BE PROVIDED FOR ALL NEW WATERMANS IN ACCORDANCE WITH THE SPECIFICATIONS AND ALL CITY OF OTTAWA STANDARD DETAILS W29, W40, W41, W42 AND W43. CATHODIC PROTECTION OF EXISTING WATERMANS SHALL ALSO BE PROVIDED AT CONNECTIONS BETWEEN EXISTING AND NEW WATERMANS.
  - ADJUST ALL VALVE CHAMBERS, VALVE BOXES AND HYDRANTS TO FINISHED GRADE.
- UTILITY NOTE**
- REFER TO DRAWING C100 FOR UTILITY PROTECTION REQUIREMENTS.
  - THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS AND NECESSARILY SHOWN ON THE CONTRACTOR'S RECORD DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUPPORTING AND PROTECTING ANY EXISTING UTILITIES, AS REQUIRED, IN ACCORDANCE WITH THE UTILITY OWNERS REQUIREMENTS. CONTRACTOR IS REQUIRED TO OBTAIN LOCATES IN ADVANCE OF CONSTRUCTION WORK AND FORWARD COPIES OF THE LOCATES TO THE CONSULTANT AND THE OWNER PRIOR TO EXCAVATION.
  - ADJUST CROSSING OF EX. UTILITIES TO BE IN ACCORDANCE WITH CITY STD. DET. S10.

NUMBER	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
1	63.02	60.62*	TEE CONNECTION TO FUTURE 200mm WATERMAIN
2	62.88	60.48*	200mm VALVE & VALVE BOX, W24
3	63.08	60.68*	45° BEND
4	63.08	60.68*	22.5° BEND
5	63.13	60.73*	11.25° BEND
6	63.29	60.89*	11.25° BEND
7	62.85	60.45*	CAP 1.0m FROM BUILDING

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE	SURFACE ELEVATION
A	250mm SAN OBV=59.64	250mm STM INV=62.04	2.4m	63.53m
B	200mm WM OBV=60.34	250mm STM INV=62.15	1.81m	63.74m
C	200mm WM OBV=60.48	HYDRO OTTAWA DUCTBANK INV=61.84*	1.36m	62.88m
D	375mm SAN OBV=59.37	200mm WM INV=60.37	1.00m	62.97m
E	900mm STM OBV=60.53	200mm WM INV=60.78	0.25m*	62.99m

NO.	TRENCH DRAIN WIDTH	GRATE	ELEVATION			TD CONNECTION		
			T/F RAME	LOW/INV	DI (mm)	TYPE	LENGTH (m)	INV.
TD1	100mm		63.12	58.51	200	PVC DR35	8.1	57.90
TD2	100mm	STAINLESS STEEL ACCESSIBLE, HEEL SAFE, LIGHT DUTY (ACO 447040) OR APPROVED EQUIVALENT	61.45	58.71	200	PVC DR35	6.6	57.90
TD3	100mm		61.45	58.47	200	PVC DR35	4.4	57.50
TD4	200mm	DUCTILE IRON EDGE RAIL & GRATE, ACCESSIBLE, HEAVY DUTY (ACO 447040) OR APPROVED EQUIVALENT	61.45	60.42	200	PVC DR35	4.1	59.20

NOTE: POLYMER CONCRETE TRENCH DRAIN WITH 2% INTERNAL SLOPE AND MATCHING CATCH BASIN, UNLESS OTHERWISE SPECIFIED.

STRUCTURE	STRUCTURE TYPE	COVER TYPE (NOTE 1)	TOP OF GRATE	INVERT	NORTHING	EASTING
MHST01	701.010	S24.1	62.00	57.91 (NE) 57.65 (E)	5030883.221	366592.066
MHST02	701.010	S24.1	62.50	59.52 (E) 58.48 (NE) 58.48 (SW)	5030937.162	366614.647
MHST03	701.010	S24.1	61.00	59.12 (E) 59.06 (SW)	5030991.949	366637.043
CBM04	701.010	S28.1	62.32	59.43 (S) 59.37 (W)	5030981.363	366660.844
MHST05*	701.010	S28.1 (SEE NOTE 2)	63.43	62.14 (NE) 62.20 (NW) 62.08 (SE)	5030861.922	366633.928

NOTE 1: STRUCTURE COVERS TO BE ORIENTED AS SHOWN ON PLAN  
NOTE 2: S28.1 COVER SPECIFIED FOR DISCHARGE MANHOLE TO PROVIDE VENTING  
\* INCLUDE INSULATION BETWEEN STRUCTURES AND WATERMAIN AS PER W23

STRUCTURE	STRUCTURE TYPE	COVER TYPE (NOTE 1)	TOP OF GRATE	INVERT	NORTHING	EASTING
MHSA01	701.010	S24	62.61	58.83 (N) 58.80 (SW)	5030822.618	366615.979

NOTE 1: STRUCTURE COVERS TO BE ORIENTED AS SHOWN ON PLAN

NO.	COVER	STRUCT.	ELEVATION			CB CONNECTION		
			T/F RAME	LOW/INV	DI (mm)	TYPE	LENGTH (m)	INV.
CB01	C004 DET 4	C004 DET 4	62.30	61.80	200	PVC DR35	31.2	-
CB02	C004 DET 4	C004 DET 4	61.64	61.14	-	-	1.8	61.10
CB03	C004 DET 4	C004 DET 4	61.56	61.06	200	PVC DR35	15.4	60.75
CB04	C004 DET 4	C004 DET 4	61.26	60.76	200	PVC DR35	0.5	60.75
CB05	S19.1	705.010A	61.12	60.62	200	PVC DR35	1.6	60.59
CB06	S19.1	705.010A	61.45	60.42	200	PVC DR35	4.1	60.34

ALL CONNECTIONS TO CONCRETE SEWERS SHALL BE PER CITY STD. DET. S11.  
ALL CONNECTIONS TO PVC SEWERS SHALL BE PER CITY STD. DET. S11.1.

**LEGEND**

- NEW STORM SEWER
- NEW SANITARY SEWER
- NEW WATERMAIN
- NEW MANHOLE
- NEW CATCH BASIN
- NEW WATER VALVE AND VALVE BOX
- NEW FIRE HYDRANT
- NEW ENTRANCE
- NEW FIRE DEPARTMENT CONNECTION
- EXISTING MANHOLE
- EXISTING CATCH BASIN
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT STANDARD
- REMOVALS
- BOLLARD (REFER TO DWG. C004 DETAIL 6)

**KWC Architects Inc.**  
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**PROFESSIONAL ENGINEER**  
J.G. FOLKES  
Aug 18, 2021  
PROVINCE OF ONTARIO

**OPL - LAC JOINT FACILITY**

555 ALBERT ST  
OTTAWA ON  
K1R 7X3

**SCALE:** 1:200 HORIZONTAL  
0m 10m 20m

SCALE: 1:200  
Project No: 0022  
Date: #198/21

**DATE:** 2021-12-20