GENERAL NOTES:

1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR $5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
5. COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DISINFECTION AND ALL RELEVANT REFERENCES TO OPSS, OPSD & AWWA GUIDELINES - ALL CURRENT VERSIONS AND 'AS AMENDED'.
6. RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
7. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
8. ALL ELEVATIONS ARE GEODETIC.
9. REFER TO THE GEOTECHNICAL INVESTIGATION REPORT (NO. PG6514-1, REV. 1, DATED JANUARY 11, 2023) AS WELL AS THE SLOPE STABILITY ANALYSIS (NO. PG6514-MEMO.01, DATED MARCH 10, 2023) BOTH PREPARED BY PATERSON GROUP INC., FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
11. REFER TO THE 'SITE SERVICING AND STORMWATER MANAGEMENT REPORT' (R-2023-069) PREPARED BY NOVATECH.
12. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
13. PROVIDE LINE / PARKING LOT PAINTING AS REQUIRED BY ARCHITECT.
14. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A SERVICING PLAN OF 119123-GP1 AND 119123-GP2 INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THE SERVICING PLANS. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
TWIN INLET CATCHBASIN (600x1450mm) 'DCB'	705.020	OPSD
DITCH INLET CB 'TYPE A' (600x1200mm) 'DICB'	705.040	OPSD
STORM / SANITARY MANHOLE (1200mmØ)	701.010	OPSD
STORM / CATCHBASIN MANHOLE (2400mmØ)	701.013	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
WATERTIGHT MH FRAME AND COVER	401.030	OPSD
DITCH INLET GRATING	403.010	OPSD
SEWER TRENCH	S6	CITY OF OTTAWA
SANITARY / STORM SEWER / CB LEAD	PVC DR 35	
STORM SUPER-PIPE (600mm DIAMETER AND OVER)	CONCRETE 65-D	

3. THE WEEPING TILE SERVICE SHALL BE EQUIPPED WITH A BACKFLOW PREVENTION DEVICE AS PER THE CITY OF OTTAWA STANDARD DETAIL S18.
4. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.8m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
6. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
7. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
8. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
9. TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED.
10. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
11. ALL WEEPING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
12. THE CONTRACTOR IS TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

GRADING NOTES:

1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
2. EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
3. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
4. THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
5. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
6. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
7. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
8. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON PLANS 119123-GR1 AND 119123-GR2.

PAVEMENT STRUCTURES:

☐	LIGHT DUTY PAVEMENT 50mm HL-3 or SUPERPAVE 12.5 150mm GRANULAR "A" 300mm GRANULAR "B" TYPE II ASPHALT GRADE PG 58-34 - TRAFFIC LEVEL 'B' *INSTALLED PER GEOTECHNICAL REPORT
▨	HEAVY DUTY PAVEMENT 40mm HL-3 or SUPERPAVE 12.5 50mm HL-8 or SUPERPAVE 19.0 150mm GRANULAR "A" 450mm GRANULAR "B" TYPE II ASPHALT GRADE PG 58-34 - TRAFFIC LEVEL 'B' *INSTALLED PER GEOTECHNICAL REPORT
▨	HEAVY DUTY CONCRETE ROADWAY CONCRETE AND HEAVY DUTY GRANULAR BASE INSTALLED PER GEOTECHNICAL REPORT
▨	HEAVY DUTY PAVEMENT - ROADWAY RE-INSTATEMENT MATCH EXISTING GRANULAR STRUCTURE OF ROADWAY IN TRENCHES MATCH EXISTING ASPHALT THICKNESSES IN TRENCHES NEW ASPHALT GRADE: PG 58-34 PROVIDE MUNICIPAL ROADWAY ASPHALT OVERLAY AS SHOWN, PER CITY STANDARD DETAIL R10. REFER TO AMENDED ROAD ACTIVITY BY-LAW 2003-445.

EROSION AND SEDIMENT CONTROL NOTES :

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

1. ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE AS A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
2. EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION IN ACCORDANCE WITH THE "GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES" (GOVERNMENT OF ONTARIO, MAY 1987). THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEETING ALL REGULATORY AGENCY REQUIREMENTS.
3. TO PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF NEARBY CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA (WHERE APPLICABLE). THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. TO LIMIT EROSION: MINIMIZE THE AMOUNT OF EXPOSED SOILS AT ANY GIVEN TIME, RE-VEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE AND PROTECT EXPOSED SLOPES WITH NATURAL OR SYNTHETIC MULCHES.
5. FOR MATERIAL STOCKPILING: MINIMIZE THE AMOUNT OF EXPOSED MATERIALS AT ANY GIVEN TIME; APPLY TEMPORARY SEEDING, TARPS, COMPACTION AND/OR SURFACE ROUGHENING AS REQUIRED TO STABILIZE STOCKPILED MATERIALS THAT WILL NOT BE USED WITHIN 14 DAYS.
6. THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURES ARE NO LONGER REQUIRED. NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
7. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
8. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
9. ROADWAYS ARE TO BE SWEPT AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR THE MUNICIPALITY.
10. THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS. MONITOR DUST LEVELS DURING SITE PREPARATION/EXCAVATION, AND CONSTRUCTION ACTIVITIES, AND WHEN DUST LEVELS BECOME VISUALLY APPARENT SPRAY WATER TO MINIMIZE THE RELEASE OF DUST FROM GRAVEL, PAVED AREAS AND EXPOSED SOILS. USE CHEMICAL DUST SUPPRESSANTS ONLY WHERE NECESSARY ON PROBLEM AREAS.

WATERMAIN NOTES:

1. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN BY CITY OF OTTAWA FORCES. CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE CITY OF OTTAWA FORCES.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
HYDRANT INSTALLATION	W19	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION AT OPEN STRUCTURES	W23	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING OVER SEWER	W25.2	CITY OF OTTAWA
CATHODIC PROTECTION FOR PVC WATERMAIN	W40	CITY OF OTTAWA
ANODE INSTALLATION FOR PVC WATERMAIN	W42	CITY OF OTTAWA
WATERMAIN MATERIAL	PVC DR 18	

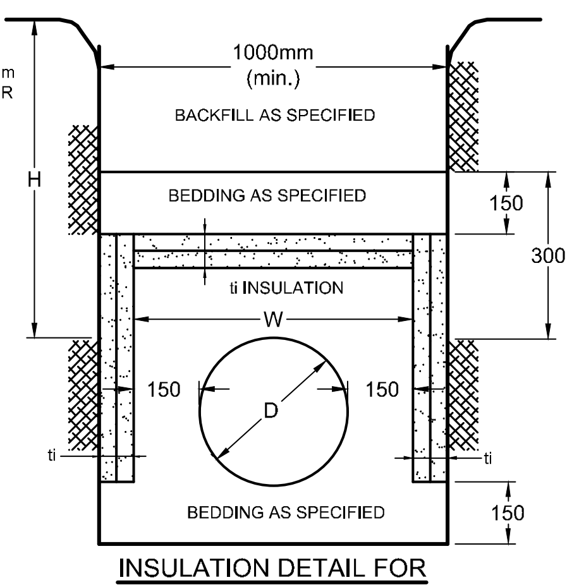
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
4. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, WHERE POSSIBLE UNLESS OTHERWISE INDICATED.
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

INSULATION NOTES:

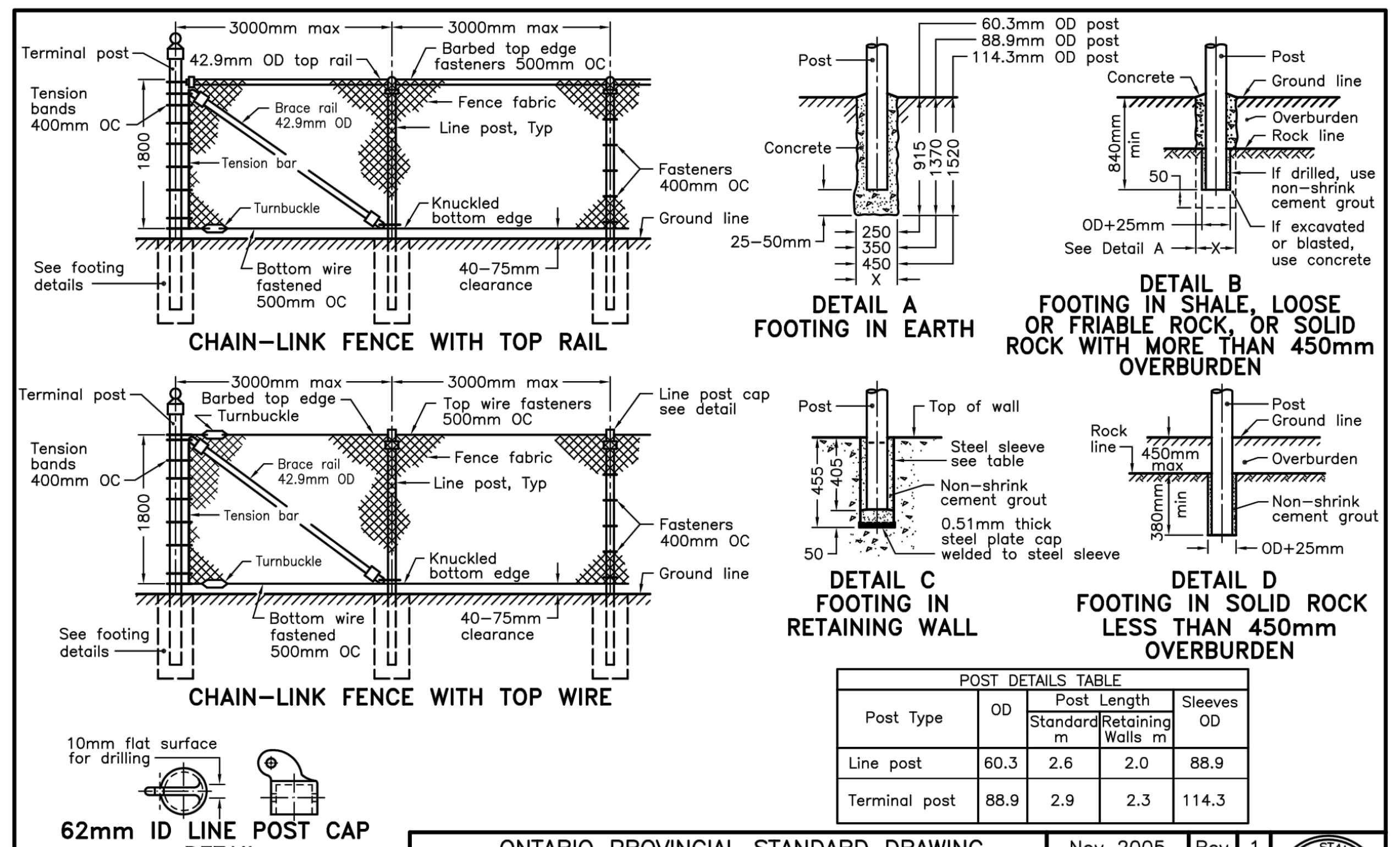
1. THE THICKNESS OF SEWER INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER LESS THAN 1800mm (SEE TABLE BELOW)

ti = THICKNESS OF INSULATION (mm)
h = DEPTH OF COVER
W = D + 300 (1000 min.)
W = WIDTH OF INSULATION (mm)
D = O.D OF PIPE (mm)

COVER (mm)	INSULATION THICKNESS (mm)
1800-1500	50
1500-1200	75
1200-900	100
900-600	125



INSULATION DETAIL FOR SHALLOW SEWERS
NOT TO SCALE



POST DETAILS TABLE

Post Type	OD	Post Length Standard m	Post Length Retaining Walls m	Sleeves OD
Line post	60.3	2.6	2.0	88.9
Terminal post	88.9	2.9	2.3	114.3

NOTE:
A Fence as viewed from the roadway.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2005 | Rev 1
FENCE, CHAIN-LINK INSTALLATION – ROADWAY
OPSD – 972.130

PROPOSED 250mmØ WATERMAIN TABLE: NORTH / SOUTH ON-SITE LOOP

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
0+000	96.37	93.99 *	CONNECTION TO EXISTING 250mmØ PVC STUB /w 11.25° H.BEND
0+004.0	96.45	94.00	250mmØ VALVE & VALVE BOX @ PROPERTY LINE
0+005.4	96.40	94.00	11.25° HORIZONTAL BEND
0+009.0	96.22	94.05 **	CROSS BELOW 200mmØ CB LEAD [Inv=94.49m] (±0.4m CLEARANCE)
0+025	96.54	94.14	- - -
0+050	96.94	94.54	- - -
0+071.9	97.15	94.75 **	CROSS BELOW 200mmØ CB LEAD [Inv=95.44m] (±0.7m CLEARANCE)
0+075	97.18	94.78	- - -
0+100	97.44	95.04	- - -
0+125	97.85	95.45	- - -
0+140.3	98.02	95.62 **	CROSS BELOW 200mmØ CB LEAD [Inv=96.29m] (±0.7m CLEARANCE)
0+143.8	98.23	95.83	250 x 250 x 150 TEE (HYDRANT No. 01)
0+150	98.58	96.18	- - -
0+172.7	99.94	97.54	250 x 250 x 150 TEE (BUILDING 'B' WATER SERVICE @ 2+000)
0+175	100.09	97.69	250mmØ VALVE & VALVE BOX
0+183.0	100.57	98.17	11.25° HORIZONTAL BEND
0+200	101.57	99.17	- - -
0+214.8	102.05	99.65 **	CROSS BELOW 200mmØ CB LEAD [Inv=100.34m] (±0.7m CLEARANCE)
0+225	102.32	99.92	- - -
0+250	102.97	100.57	- - -
0+275	103.57	101.17	- - -
0+276.3	103.58	101.18	45° HORIZONTAL BEND
0+277.7	103.59	101.19	250 x 250 x 150 TEE (HYDRANT No. 02)
0+279.2	103.60	101.20	45° HORIZONTAL BEND
0+280.2	103.61	101.20	CROSS ABOVE 375mmØ STM [Obv=100.04m] (±0.9m CLEARANCE)
0+300	103.60	101.20	- - -
0+311.1	103.50	101.10	250mmØ VALVE & VALVE BOX
0+325	103.68	101.28	- - -
0+350	103.49	101.09	- - -
0+375	103.73	101.33	- - -
0+400	103.61	101.21	- - -
0+425	103.49	101.09	- - -
0+450	103.71	101.31	- - -
0+455.6	103.70	101.30	45° HORIZONTAL BEND
0+460.1	103.66	101.26	45° HORIZONTAL BEND
0+475	103.46	101.06	- - -
0+500	103.20	100.80	- - -
0+525	102.92	100.52	- - -
0+550	102.60	100.20	- - -
0+564.0	102.25	99.85	250mmØ VALVE & VALVE BOX
0+567.2	102.15	99.75	11.25° HORIZONTAL BEND
0+570.0	102.08	99.68	250 x 250 x 150 TEE (HYDRANT No. 03)
0+575	101.95	99.55	- - -
0+577.9	101.90	99.50	11.25° HORIZONTAL BEND
0+600	101.39	98.99	- - -
0+625	100.31	97.91	- - -
0+639.6	99.70	97.30 **	CROSS BELOW 200mmØ CB LEAD [Inv=97.87m] (±0.6m CLEARANCE)
0+650	99.33	96.93	- - -
0+675	98.30	95.90	- - -
0+691.3	97.65	95.25	22.5° HORIZONTAL BEND
0+694.3	97.58	95.18	11.25° HORIZONTAL BEND
0+700	97.49	94.98	- - -
0+712.2	97.70	94.55	22.5° HORIZONTAL BEND
0+713.6	97.68	94.50	CROSS BELOW 375mmØ STM [Inv=94.99m] (±0.5m CLEARANCE)
0+722.6	97.15	94.49 *	CONNECTION TO EXISTING 200mmØ PVC STUB /w 250 x 200 REDUCER
1+000	97.58	94.34 *	CONNECTION TO EXISTING 200mmØ PVC STUB /w 200 x 150 REDUCER
1+003.6	97.95	94.40	45° HORIZONTAL BEND
1+006.4	97.93	94.45	45° HORIZONTAL BEND
1+025	97.15	94.65	- - -
1+026.1	97.11	94.65	45° HORIZONTAL BEND
1+028.9	97.08	94.70	45° HORIZONTAL BEND
1+036.2	97.42	94.75	150mmØ BUILDING 'A' SERVICE CAP (1.0m FROM FOUNDATION WALL)
2+000	99.94	97.54	250 x 250 x 150 BUILDING 'B' SERVICE TEE (0+172.7)
2+004.1	100.03	97.43	CROSS ABOVE 375mmØ STM [Obv=96.32m] (±0.8m CLEARANCE)
2+005.1	100.03	97.40	150mmØ VALVE & VALVE BOX
2+006.6	100.25	97.35	150mmØ BUILDING 'A' SERVICE CAP (1.0m FROM FOUNDATION WALL)

* CONNECTIONS TO EXISTING 250mmØ / 200mmØ WM STUBS. EXACT ELEVATIONS TO BE FIELD DETERMINED.

** PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAILS W22 IN SHALLOW TRENCHES WHERE COVER IS LESS THAN 2.4m AND/OR W23 ADJACENT TO OPEN STRUCTURES.

*** PIPE CROSSINGS WITH WATERMAINS ARE TO BE IN ACCORDANCE WITH CITY STANDARDS W25 AND W25.2 TO AVOID CONFLICTS, WHERE POSSIBLE.

CRITICAL SEWER PIPE CROSSING TABLE

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE	SURFACE ELEVATION
Ⓐ	150mmØ T/WM=95.80	250mmØ SAN INV=96.53	± 0.7m	98.30 m
Ⓑ	375mmØ STM OBV=95.45	150mmØ U/S WM=95.75	± 0.3m	98.30 m
Ⓒ	375mmØ STM OBV=96.27	250mmØ SAN INV=97.75	± 1.5m	99.93 m
Ⓓ	375mmØ STM OBV=96.32	150mmØ U/S WM=97.28	± 1.0m	100.03 m
Ⓔ	375mmØ STM OBV=100.04	250mmØ U/S WM=100.95	± 0.9m	103.55 m
Ⓕ	250mmØ T/WM=94.50	375mmØ STM INV=94.99	± 0.5m	97.68 m

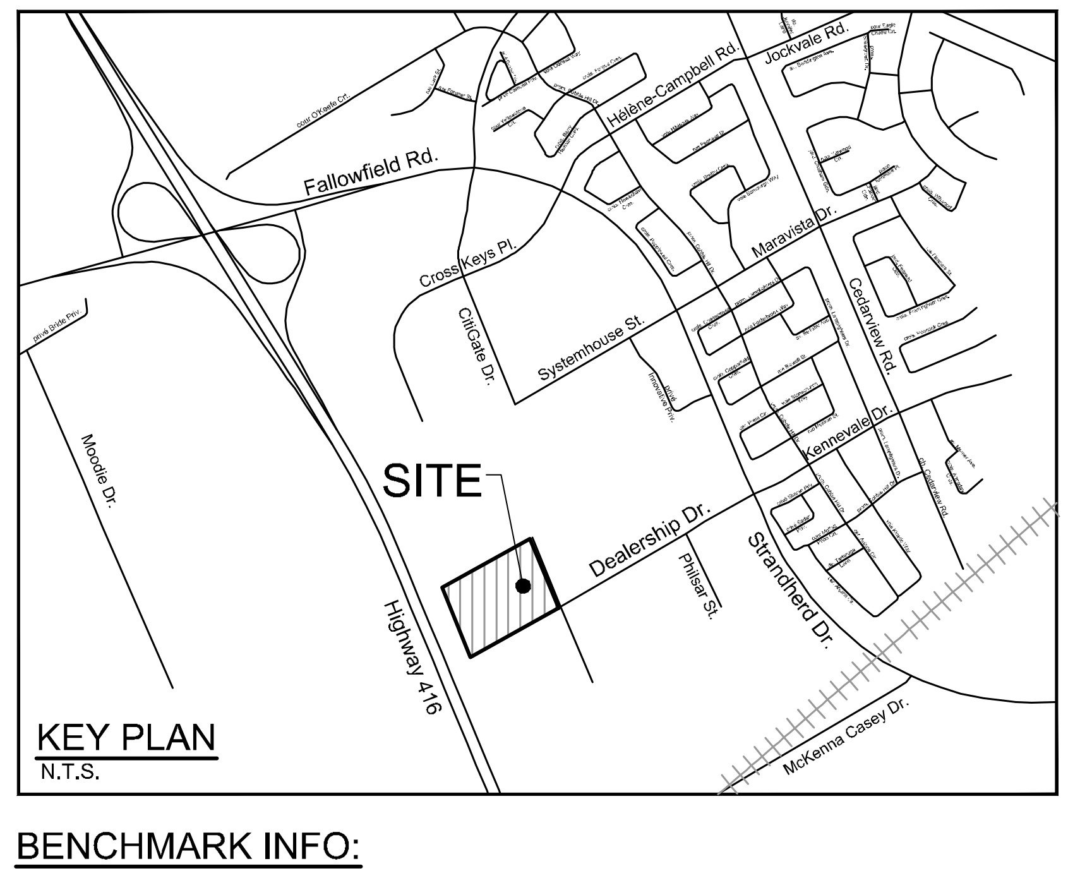
* SEE 119123-GP1 AND GP2 PLANS FOR SEWER CROSSING LOCATIONS AND NOTES ON 119123-NLD

INLET CONTROL DEVICE DATA TABLE: AREA A-5 (OUTLET PIPE of STM MH 06)

DESIGN EVENT	ICD TYPE (PLUG TYPE)	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	$\frac{1}{2}$ PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m^3)	AVAILABLE STORAGE
1:2 YR	CIRCULAR 230mmØ ORIFICE PLUG	375mmØ PVC DR35	122.0	61.0	1.14	96.11	129	> 1,375 m^3
1:5 YR			165.4	82.7	2.10	97.07	174	
1:100 YR			181.6	90.8	2.53	97.50	436	

LEGEND

	SITE BOUNDARY
	℄ SWALE AND DIRECTION OF FLOW
127.55 *127.45*	PROPOSED ELEVATION *EXISTING ELEVATION*
127.55(S)	PROPOSED SWALE ELEVATION
127.55	PROPOSED TERRACE ELEVATION
	MAXIMUM 3: 1 SIDESLOPE
2.0%	PARKING GRADE AND DIRECTION
FFE	PROPOSED FINISHED FLOOR ELEVATION
USF	PROPOSED UNDER SIDE OF FOOTING ELEVATION
	PROPOSED BUILDING ENTRANCE
	PROPOSED LIMIT OF BUILDING OVERHANG
T/G=	TOP OF GRATE ELEVATION
MH100 ○	PROPOSED STORM MANHOLE
CB1 □	PROPOSED CATCHBASIN
CB1 ▨	PROPOSED CATCHBASIN WITH TEMPORARY SILTSACK
CBT1 ○	PROPOSED CATCHBASIN TEE
CBE1 ⊕	PROPOSED CATCHBASIN ELBOW
	PROPOSED STORM SEWER AND DIRECTION OF FLOW
	PROPOSED CATCHBASIN LEAD AND DIRECTION OF FLOW
	PROPOSED CATCHBASIN SUBDRAIN AND DIRECTION OF FLOW
MH101 ●	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SEWER AND DIRECTION OF FLOW
	PROPOSED WATERMAIN
BEND	PROPOSED BEND AND THRUSTBLOCK 11.25°, 22.5°, 45° OR TEE
VVB ⊗	PROPOSED VALVE AND VALVE BOX
HYD	PROPOSED HYDRANT C/W VALVE & LEAD
	PROPOSED CAP
Ⓐ	PIPE CROSSING LOCATION
⊘	PROPOSED ROOF DRAIN
	PROPOSED BARRIER CURB
DC	PROPOSED DEPRESSED CURB
	TACTILE WALKING SURFACE INDICATOR (TWSI)
	CURB CUTOUT
	PROPOSED LIGHT STANDARD
	PROPOSED SIAMESE CONNECTION
GM	PROPOSED GAS METER LOCATION
HM	PROPOSED HYDRO METER LOCATION
☒	PROPOSED TRANSFORMER PAD C/W BOLLARDS
▨	CLAY DIKE AS PER CITY OF OTTAWA DETAIL S8
	SILT FENCE AS PER OPSD 219.110
	MAJOR OVERLAND FLOW ROUTE
	STRAW BALES AS PER OPSD 219.100
MM	CONSTRUCTION ACCESS MUD MAT
ICD	PROPOSED INLET CONTROL DEVICE
1:5 YR 1:100 YR	APPROXIMATE PONDING LIMITS
	STORM DRAINAGE BOUNDARY
0.637 A-1 0.36	AREA (ha) SUB-CATCHMENT AREA ID 1:5 YR POST-DEV. RUNOFF COEFFICIENT
+102.52	*EXISTING ELEVATION*
	EXISTING STORM MANHOLE AND SEWER
	EXISTING SANITARY MANHOLE AND SEWER
	EXISTING WATERMAIN
EX. WMH	*EXISTING WATER MANHOLE*
VVB ⊗	*EXISTING VALVE AND VALE BOX*
	EXISTING FIRE HYDRANT
EX.CB □	*EXISTING CATCHBASIN*
T/G	*EXISTING TOP OF GRATE*
EX UP	*EXISTING UTILITY POLE C/W GUY WIRES*
LS	*EXISTING LIGHT STANDARD*
TSL	*EXISTING TRAFFIC STREET LIGHT*
x x	*EXISTING FENCE*
G	*EXISTING UNDERGROUND GASMAIN*
UH	*EXISTING UNDERGROUND HYDRO*
UB	*EXISTING UNDERGROUND BELL CABLE*
B	*EXISTING BELL PEDESTAL*
	EXISTING TREES / SHRUBS
▨	HEAVY DUTY ASPHALT/FIRE ROUTE
▨	GEO-GRID SLOPE STABILIZATION PER GEOTECHNICAL RECOMMENDATIONS
▨	ROADCUT REINSTATEMENT
▨	WATERMAIN INSULATION AREA AS PER CITY OF OTTAWA DETAIL W22



KEY PLAN
N.T.S.

BENCHMARK INFO:

OLS JOB BENCHMARK No. 1 ON THE TOP OF SPINDLE OF THE EXISTING MUNICIPAL FIRE HYDRANT LOCATED NEAR THE MID-BLOCK OF THE SUBJECT SUTE IN THE EAST BOULEVARD OF CITIGATE DRIVE HAVING A GEODETIC ELEVATION OF 97.69m. (JOB BENCHMARK No. 2 AT THE NORTH-EAST CORNER OF CITIGATE AND DEALERSHIP DRIVE IS ALSO SHOWN ON THE OLS SURVEYOR'S PLAN Ref. No. 21797-21 PrtLt17 Con4(RF) T F.

ALL ELEVATIONS ARE REFERRED TO THE CGVD28 GEODETIC DATUM. BEARINGS ARE GRID, DERIVED FROM CONTROL MONUMENT No. 00820118014 HAVING A GEODETIC ELEVATION OF 103.306m.

THE EXISTING GRADES SHOWN ON THE PLANS ARE TAKEN DIRECTLY FROM TOPOGRAPHICAL SURVEY PLAN (Ref. No. 21797-21 PrtLt17 Con4(RF) T F), PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK SIGNED AND DATED JULY 29, 2021.

SURROUNDING BACKGROUND TOPO INFORMATION BEYOND THE LIMITS OF THE SITE SURVEY ARE SHOWN FROM CITY OF OTTAWA 1:1000 MAPPING INFORMATION FOR CONTEXT ONLY.

BUILDING 'A' ROOF DRAIN TABLE: AREA R-1 (ROOF DRAINS A1 to A24)

AREA ID *	ROOF DRAIN No. (WATTS MODEL)	ROOF DRAIN OPENING SETTING	1:5 YEAR RELEASE RATE	APPROX. 5-YR PONDING DEPTH	1:100 YEAR RELEASE RATE	APPROX. 100-YR PONDING DEPTH
R-1	RD 1 (RD-100-A-ADJ)	3/4 EXPOSED	1.26 L/s	11 cm	1.34 L/s	13 cm
R-1	RD 2 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	15 cm
R-1	RD 3 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-1	RD 4 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-1	RD 5 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-1	RD 6 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-1	RD 7 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-1	RD 8 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-1	RD 9 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-1	RD 10 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-1	RD 11 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-1	RD 12 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-1	RD 13 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	15 cm
R-1	RD 14 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 15 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 16 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 17 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 18 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm
R-1	RD 19 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm
R-1	RD 20 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 21 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 22 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 23 (RD-100-A-ADJ)	3/4 EXPOSED	1.34L/s	11 cm	1.58 L/s	15 cm
R-1	RD 24 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm

BUILDING 'B' ROOF DRAIN TABLE: AREA R-2 (ROOF DRAINS B1 to B24)

AREA ID *	ROOF DRAIN No. (WATTS MODEL)	ROOF DRAIN OPENING SETTING	1:5 YEAR RELEASE RATE	APPROX. 5-YR PONDING DEPTH	1:100 YEAR RELEASE RATE	APPROX. 100-YR PONDING DEPTH
R-2	RD 1 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm
R-2	RD 2 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 3 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 4 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 5 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 6 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm
R-2	RD 7 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm
R-2	RD 8 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 9 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 10 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 11 (RD-100-A-ADJ)	3/4 EXPOSED	1.34 L/s	11 cm	1.58 L/s	15 cm
R-2	RD 12 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	14 cm
R-2	RD 13 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-2	RD 14 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-2	RD 15 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-2	RD 16 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-2	RD 17 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-2	RD 18 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-2	RD 19 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-2	RD 20 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-2	RD 21 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	11 cm	1.58 L/s	14 cm
R-2	RD 22 (RD-100-A-ADJ)	3/4 EXPOSED	0.87 L/s	11 cm	1.34 L/s	14 cm
R-2	RD 23 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.89 L/s	15 cm
R-2	RD 24 (RD-100-A-ADJ)	FULLY EXPOSED	1.34 L/s	11 cm	1.58 L/s	13 cm

* REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2023-069) PREPARED BY NOVATECH FOR DRAINAGE AREA IDENTIFIERS AND STORMWATER MANAGEMENT DETAILS.

**ALL CONTROLLED FLOW ROOF DRAINS FOR PROPOSED BUILDINGS TO BE WATTS 'ADJUSTABLE ACCUTROL' ROOF DRAINS.

ALL PROJECT NOTES, DETAILS AND SPECIFICATIONS ARE TO MEET THE MOST CURRENT AND AMENDED VERSIONS OF THE CITY OF OTTAWA AND PROVINCIAL STANDARDS

THIS PLAN IS TO BE READ IN CONJUNCTION WITH CIVIL PLANS 119123-GP1&2 AND PLANS 119123-GR1&2

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

No.	REVISION	DATE	BY
1	ISSUED FOR CITY OF OTTAWA REVIEW	MAY 3/23	DDB

SCALE
NOT TO SCALE

DESIGN SM / BM / DDB
CHECKED DDB
DRAWN SM
CHECKED BM / DDB
APPROVED DDB

FOR REVIEW ONLY

Drew Blair
D. D. BLAIR
100122737
May 3 2023

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Website www.novatech-eng.com

LOCATION
CITY of OTTAWA
575 DEALERSHIP DRIVE - PROPOSED WAREHOUSES

DRAWING NAME
NOTES, LEGEND AND DETAILS

PROJECT No. 119123
REV REV # 1
DRAWING No. 122151-NLD

M:\2019\119123\CAD\Design\119123-NLD.dwg, NLD1, May 03, 2023 - 10:04am, smatthews

PLAN24x36.DWG - 914.4mmx609.6mm