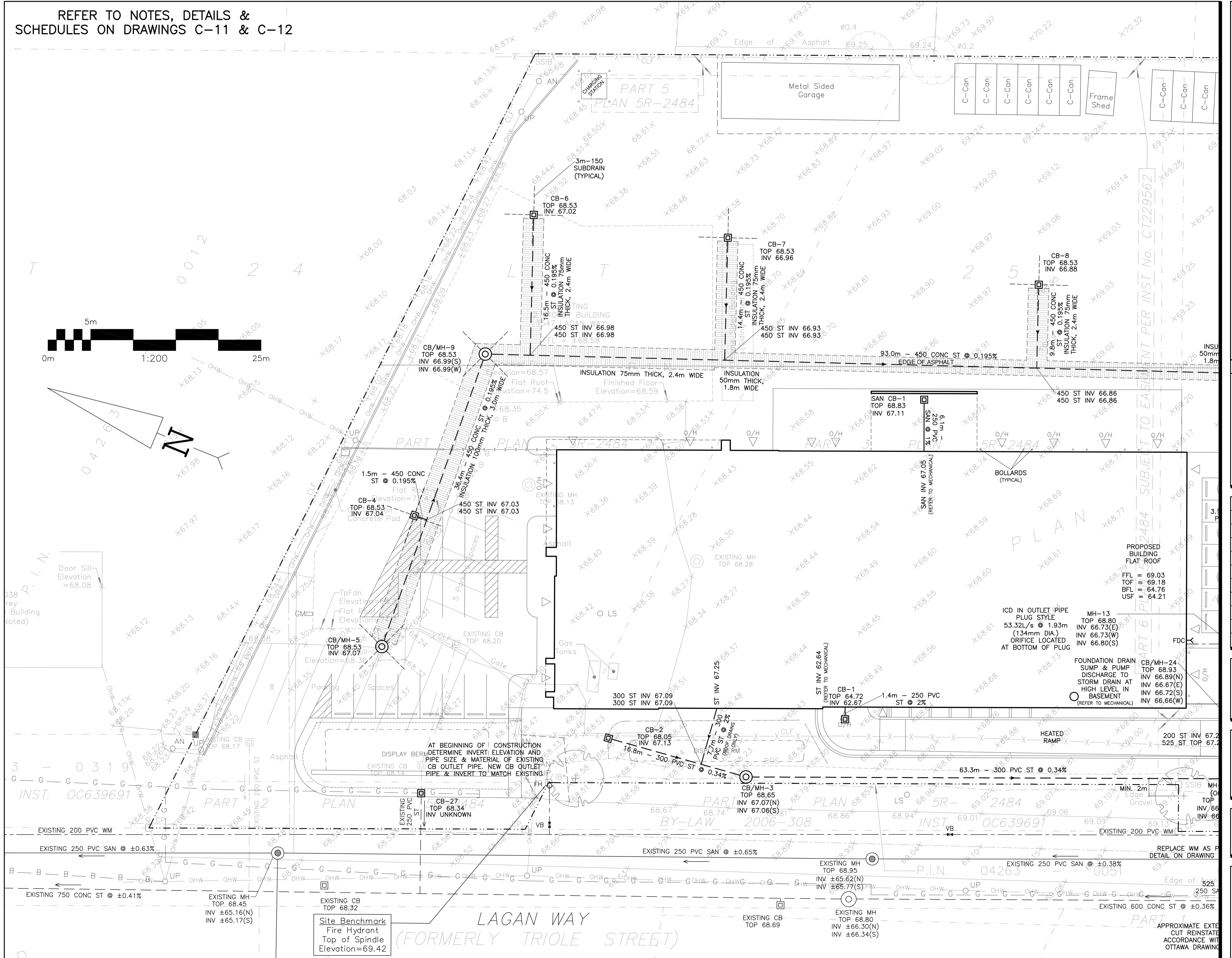


REFER TO NOTES, DETAILS &
SCHEDULES ON DRAWINGS C-11 & C-12



LEGEND

FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING
· — · · —	PROPERTY LINE
CB	 CATCH BASIN
MH	 STORM MANHOLE
VMH	 CATCH BASIN/MANHOLE
MH	 SANITARY MANHOLE
FH	 FIRE HYDRANT
FDC	 FIRE DEPARTMENT CONNECTION
CS	 CURB STOP & STANDPOST
VB	 VALVE & VALVE BOX
(M)	WATER METER
(R)	REMOTE WATER METER
<u>SAN</u>	SANITARY SEWER
<u>ST</u>	STORM SEWER
<u>WS/WM</u>	WATER SERVICE/WATERMAIN
SPL	SPRINGLINE OF PIPE
INV	INVERT OF PIPE
— — — —	CENTERLINE OF SWALE
— — — —	150mm BARRIER CURB
<u>D.C</u>	DEPRESSED CURB
	ROAD CUT REINSTATEMENT

PLAN



16-25	ISSUED FOR APPROVAL
13-25	ISSUED FOR COORDINATION
ATE	REVISION

PROPOSED DICKIE MOORE
RENTALS PROPERTY
REDEVELOPMENT
1547 LAGAN WAY
OTTAWA ONTARIO

THE SERVICING PLAN (NORTH AREA STORM)

A circular stamp with the following text:
TOP: "PROFESSIONAL ENGINEER"
MIDDLE: "D.B. GRAY" (over "7016502")
MIDDLE: "DEC 16-25" (over "PROFESSIONAL ENGINEER")
Bottom: "PROFESSIONAL ENGINEER"
Bottom: "ONTARIO"
Bottom: "VALID UNLESS
RENEWED & DATED"

Drawing No.
C-2
of 13

REFER TO NOTES, DETAILS &
SCHEDULES ON DRAWINGS C-11 & C-12

LEGEND

IRST FLOOR ELEVATION
OP OF FOUNDATION
ASEMENT FLOOR ELEVATION
NDERSIDE OF FOOTING
ROPERTY LINE
ATCH BASIN
TORM MANHOLE
ATCH BASIN/MANHOLE
ANITARY MANHOLE
IRE HYDRANT
IRE DEPARTMENT CONNECTION
URB STOP & STANDPOST
ALVE & VALVE BOX
WATER METER
EMOTE WATER METER
ANITARY SEWER
TORM SEWER
WATER SERVICE/WATERMAIN
PRINGLINE OF PIPE
NVERT OF PIPE
ENTERLINE OF SWALE
50mm BARRIER CURB
EPRESSED CURB
OAD CUT REINSTATEMENT

1000



ISSUED FOR APPROVAL

ISSUED FOR COORDINATION

REVISION

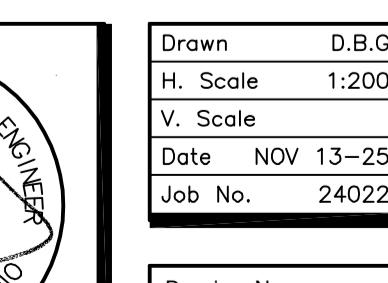
ENGINEERING INC.

**DICKIE MOORE
PROPERTY
DEVELOPMENT
LAGAN WAY
WATERLOO, ONTARIO**

awing Title

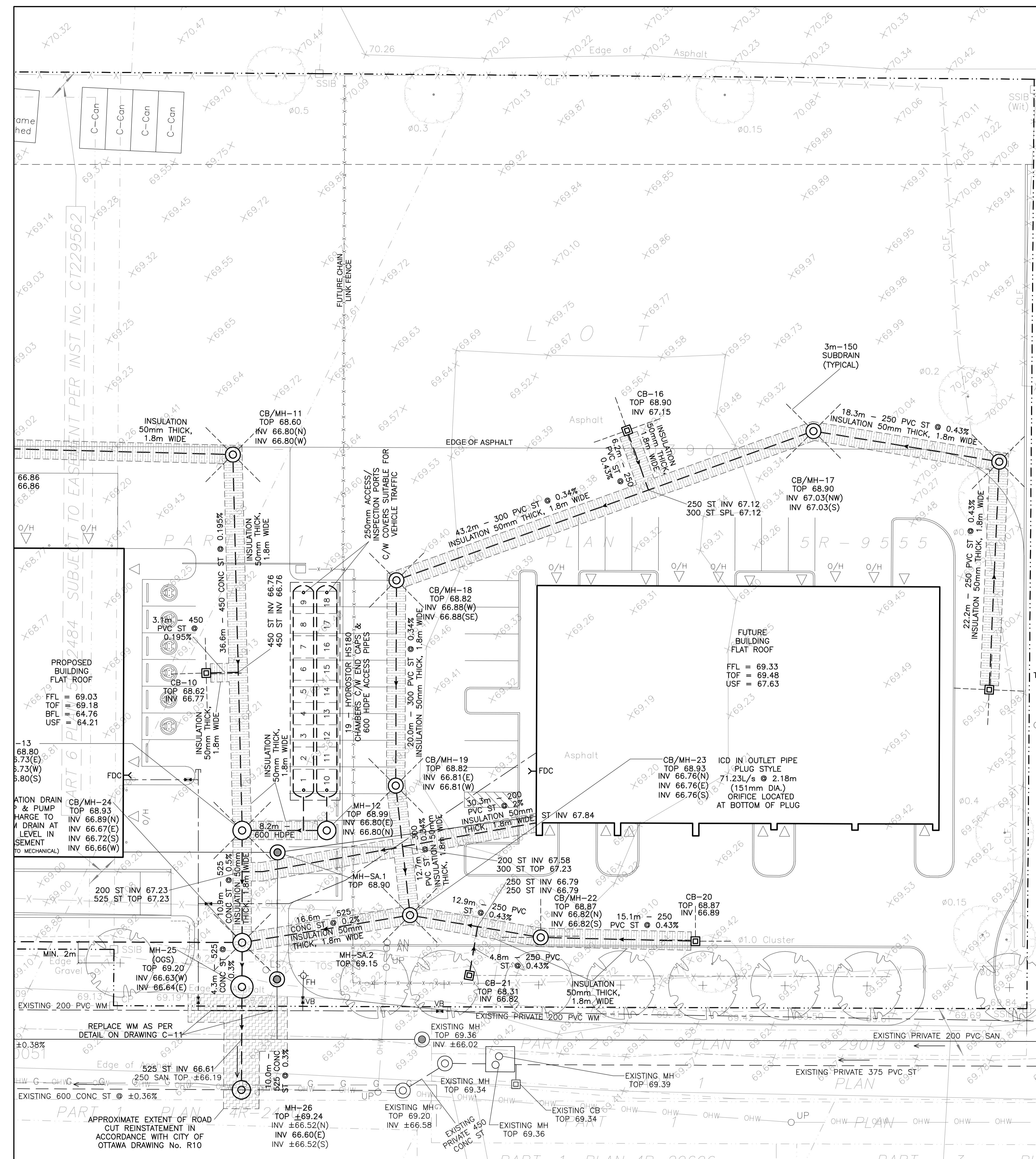
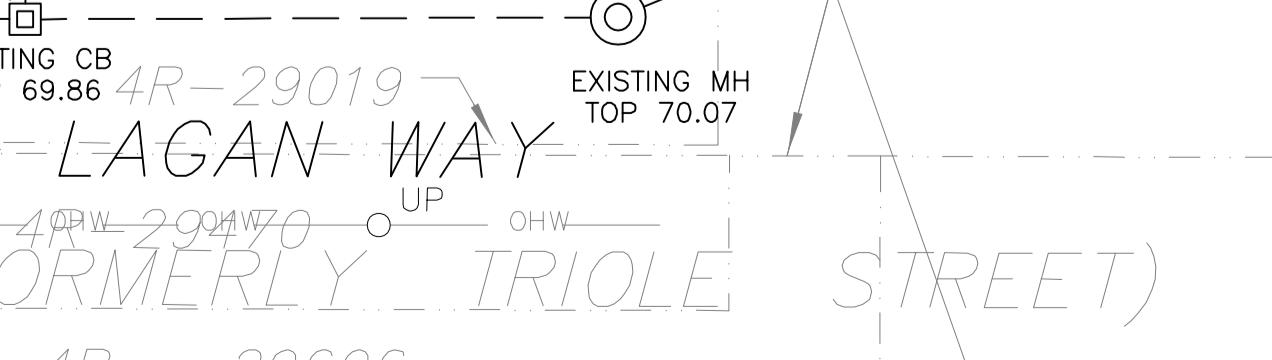
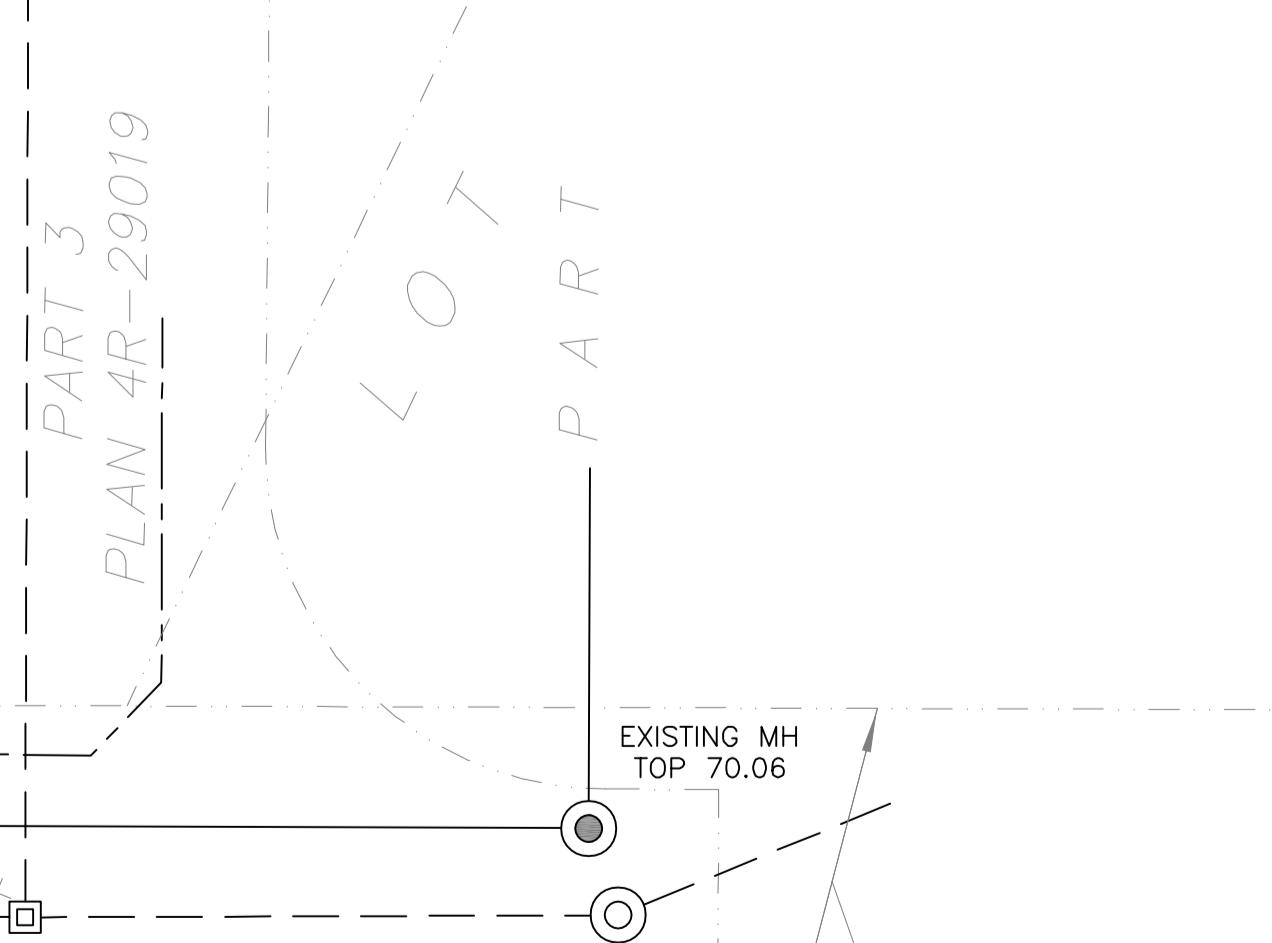
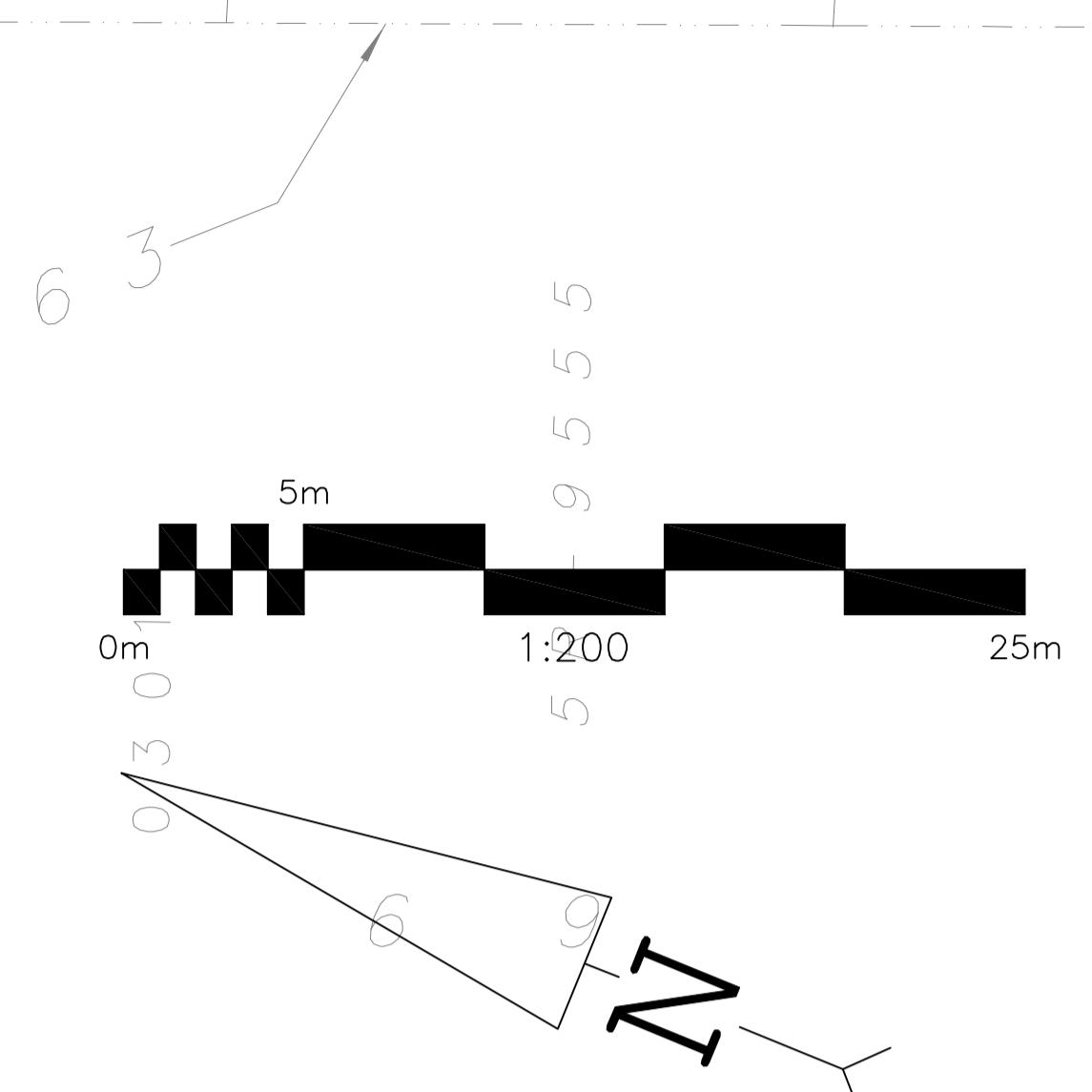
SITE SERVICING PLAN

(SOUTH AREA SECTOR)



SS
ED

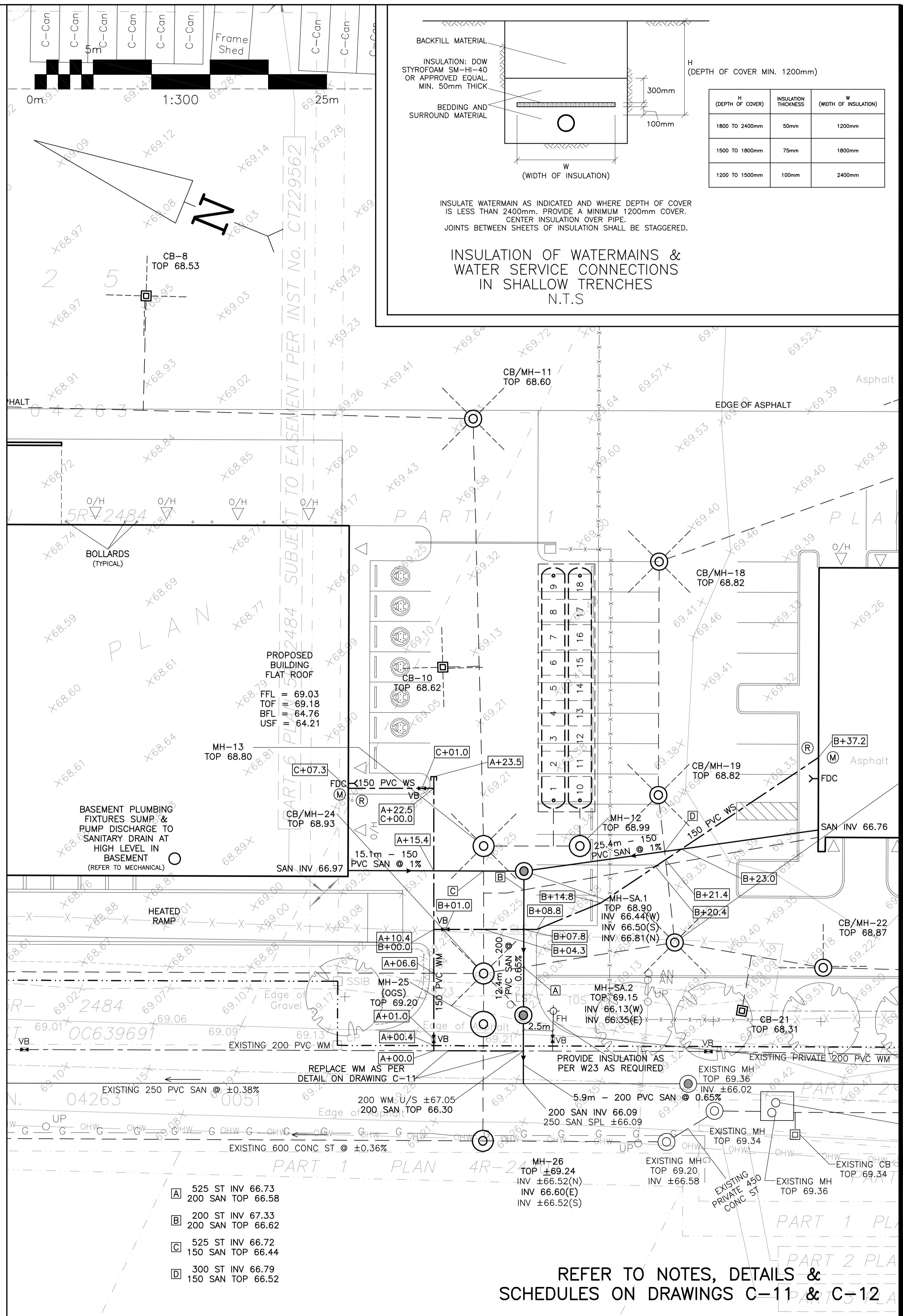
Drawing No.
C-3
of 13



WATER SERVICE/WATERMAIN PROFILE TABLE

DIAMETER/MATERIAL: 150mm/PVC DR18

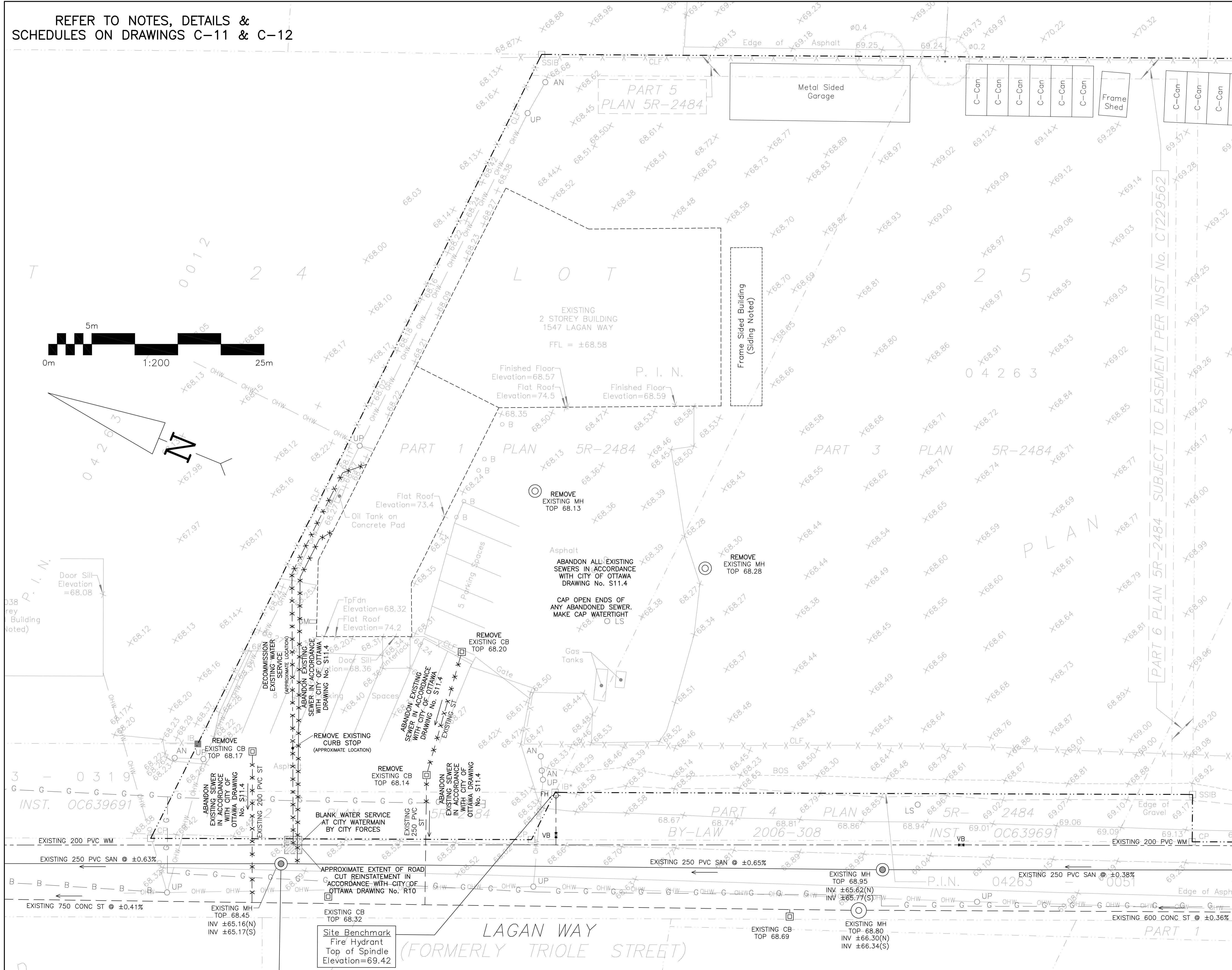
STATION	DESCRIPTION	GRADE ELEVATION	TOP OF PIPE	DEPTH OF COVER	NOTES
A+00.0	200mm x 150mm TEE CONNECTION IN 200mm MUNICIPAL WATERMAIN TO CITY OF OTTAWA STANDARDS	±69.24	±66.88	±2.36	START OF 50mm THICK INSULATION AS PER CITY OF OTTAWA DRAWING No. W22
A+00.4	-	±69.23	66.88	±2.35	ON PROPERTY LINE
A+01.0	150mm VALVE & VALVE BOX TO CITY OF OTTAWA STANDARDS	±69.21	66.88	±2.33	-
A+02.0	22.5° VERTICAL BEND DOWN TO CITY OF OTTAWA STANDARDS	69.17	66.88	2.29	-
A+03.2	22.5° VERTICAL BEND UP TO CITY OF OTTAWA STANDARDS	69.14	66.39	2.75	END OF 50mm THICK INSULATION AS PER CITY OF OTTAWA DRAWING No. W22
A+06.6	-	69.07	66.39	2.68	CROSSING 300 ST INV 66.90 WM TOP 66.39 - 510mm CLEARANCE (MIN. 500mm REQ'D)
A+10.4 (B+00.0)	150mm x 150mm TEE TO CITY OF OTTAWA STANDARDS	68.98	66.39	2.59	-
A+15.4	-	68.88	66.39	2.49	CROSSING 150 SAN INV 66.89 WM TOP 66.39 - 500mm CLEARANCE (MIN. 500mm REQ'D)
A+22.5 (C+00.0)	150mm x 150mm TEE TO CITY OF OTTAWA STANDARDS	68.82	66.39	2.43	-
A+23.5	150mm END CAP TO CITY OF OTTAWA STANDARDS	68.79	66.39	2.40	-
C+00.0 (A+22.5)	150mm x 150mm TEE TO CITY OF OTTAWA STANDARDS	68.82	66.39	2.43	-
C+01.0	150mm VALVE & VALVE BOX TO CITY OF OTTAWA STANDARDS	68.85	66.39	2.46	-
C+07.3	-	69.02	66.39	2.63	ENTRY INTO BUILDING
B+00.0 (A+10.4)	150mm x 150mm TEE TO CITY OF OTTAWA STANDARDS	68.98	66.39	2.59	-
B+01.0	150mm VALVE & VALVE BOX TO CITY OF OTTAWA STANDARDS	68.99	66.39	2.60	-
B+02.0	22.5° VERTICAL BEND DOWN TO CITY OF OTTAWA STANDARDS	68.99	66.39	2.60	-
B+03.2	22.5° VERTICAL BEND UP TO CITY OF OTTAWA STANDARDS	69.00	65.91	3.09	-
B+04.3	-	69.00	65.91	3.09	CROSSING 525 ST INV 66.69 WM TOP 65.91 - 780mm CLEARANCE (MIN. 500mm REQ'D)
B+07.7	-	69.02	65.91	3.11	CROSSING 200 SAN INV 66.41 WM TOP 65.91 - 500mm CLEARANCE (MIN. 500mm REQ'D)
B+08.8	22.5° HORIZONTAL BEND TO CITY OF OTTAWA STANDARDS	69.02	65.91	3.11	-
B+14.8	11.25° HORIZONTAL BEND TO CITY OF OTTAWA STANDARDS	69.02	65.96	3.06	-
B+20.4	-	68.94	66.00	2.94	CROSSING 200 ST INV 66.50 WM TOP 66.00 - 500mm CLEARANCE (MIN. 500mm REQ'D)
B+21.4	-	68.94	66.03	2.91	CROSSING 150 SAN INV 66.62 WM TOP 66.03 - 590mm CLEARANCE (MIN. 500mm REQ'D)
B+23.0	-	68.90	66.04	2.86	CROSSING 300 ST INV 66.79 WM TOP 66.04 - 750mm CLEARANCE (MIN. 500mm REQ'D)
B+37.2	-	69.32	66.19	3.13	ENTRY INTO BUILDING



LEGEND		
FFL	FIRST FLOOR ELEVATION	
TOF	TOP OF FOUNDATION	
BFL	BASEMENT FLOOR ELEVATION	
USF	UNDERSIDE OF FOOTING	
PROPERTY LINE		
CATCH BASIN		
STORM MANHOLE		
CATCH BASIN/MANHOLE		
SANITARY MANHOLE		
FIRE HYDRANT		
FIRE DEPARTMENT CONNECTION		
CURB STOP & STANDPOST		
VALVE & VALVE BOX		
WATER METER		
REMOTE WATER METER		
SANITARY SEWER		
STORM SEWER		
WATER SERVICE/WATERMAIN		
SPRINGLINE OF PIPE		
INVERT OF PIPE		
CENTERLINE OF SWALE		
150mm BARRIER CURB		
DEPRESSED CURB		
ROAD CUT REINSTATEMENT		

Engineer's Seal	Drawn D.B.G. H. Scale 1:200 V. Scale Date NOV 13-25 Job No. 24022
Drawing No. C-4 of 13	

REFER TO NOTES, DETAILS &
SCHEDULES ON DRAWINGS C-11 & C-12



LEGEND

FFL	FIRST FLOOR ELEVATION	
TOF	TOP OF FOUNDATION	
BFL	BASEMENT FLOOR ELEVATION	
USF	UNDERSIDE OF FOOTING	
· — · · —	PROPERTY LINE	
CB		CATCH BASIN
MH		STORM MANHOLE
VMH		CATCH BASIN/MANHOLE
MH		SANITARY MANHOLE
FH		FIRE HYDRANT
FDC		FIRE DEPARTMENT CONNECTION
CS		CURB STOP & STANDPOST
VB		VALVE & VALVE BOX
(M)		WATER METER
(R)		REMOTE WATER METER
<u>SAN</u>		SANITARY SEWER
<u>ST</u>		STORM SEWER
<u>WS/WM</u>		WATER SERVICE/WATERMAIN
SPL		SPRINGLINE OF PIPE
INV		INVERT OF PIPE
— — — —		CENTERLINE OF SWALE
— — — —		150mm BARRIER CURB
D.C		DEPRESSED CURB
— — — —		ROAD CUT REINSTATEMENT

PLAN



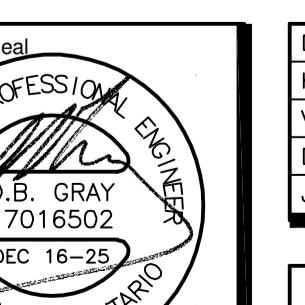
16-25	ISSUED FOR APPROVAL
13-25	ISSUED FOR COORDINATION
ATE	REVISION

GRAY ENGINEERING INC.

Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains
g Point Circle 613-425-8044
Ontario long@thegpointcircle.com

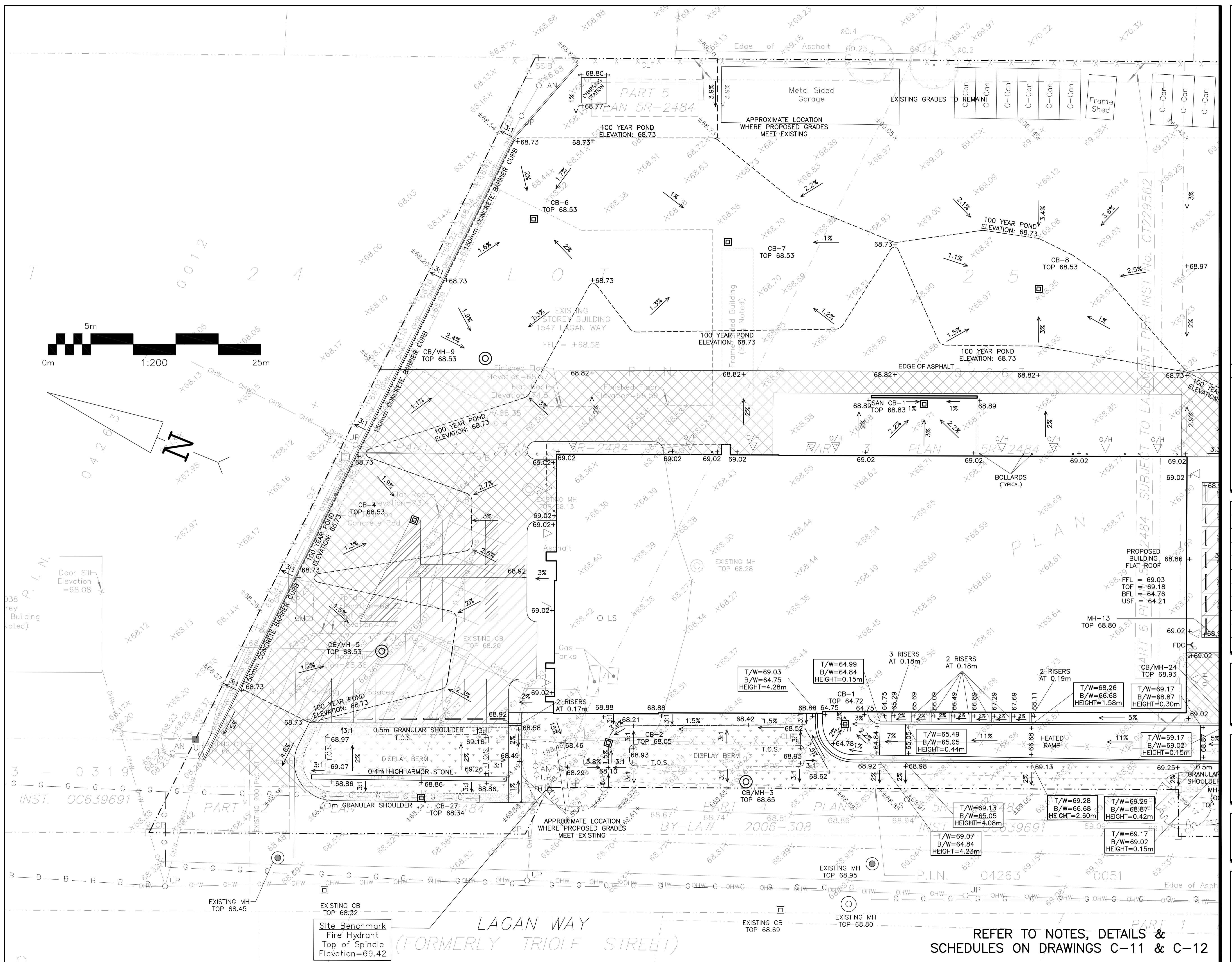
PROPOSED DICKIE MOORE
RENTALS PROPERTY
REDEVELOPMENT
1547 LAGAN WAY
OTTAWA ONTARIO

EXISTING CONDITIONS, REMOVALS & DECOMMISSIONING PLAN (NORTH AREA)



rawn D.B.C.
. Scale 1:200
. Scale
ate NOV 13-29
b. No. 24022

Drawing No.
C-5
of 13



<u>LEGEND</u>	
FL	FIRST FLOOR ELEVATION
OF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
SF	UNDERSIDE OF FOOTING
— · · —	PROPERTY LINE
B	 CATCH BASIN
H	 STORM MANHOLE
H	 CATCH BASIN/MANHOLE
H	 SANITARY MANHOLE
H	 FIRE HYDRANT
C	 FIRE DEPARTMENT CONNECTION
9.99	EXISTING GRADE ELEVATION
9.99	PROPOSED GRADE ELEVATION
% →	EXISTING SLOPE OF GRADE
% →	PROPOSED SLOPE OF GRADE
→	EMERGENCY OVERLAND FLOW
— · —	CENTERLINE OF SWALE
— — —	150mm BARRIER CURB
— C —	DEPRESSED CURB
· · · ·	SILT FENCE BARRIER
	GRANULAR PAVEMENT
	LIGHT-DUTY PAVEMENT
	HEAVY-DUTY PAVEMENT
* * * * *	LANDSCAPE

KEY PLAN



2	DEC 16-25	ISSUED FOR APPROVAL
1	NOV 13-25	ISSUED FOR COORDINATION
No.	DATE	REVISION

D. B. GRAY ENGINEERING INC.

Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains

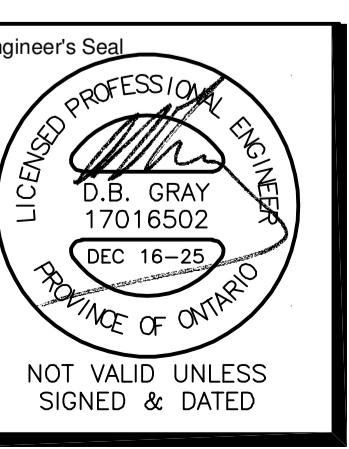
Project

**PROPOSED DICKIE MOORE
RENTALS PROPERTY
REDEVELOPMENT
1547 LAGAN WAY
OTTAWA, ONTARIO**

Drawing Title

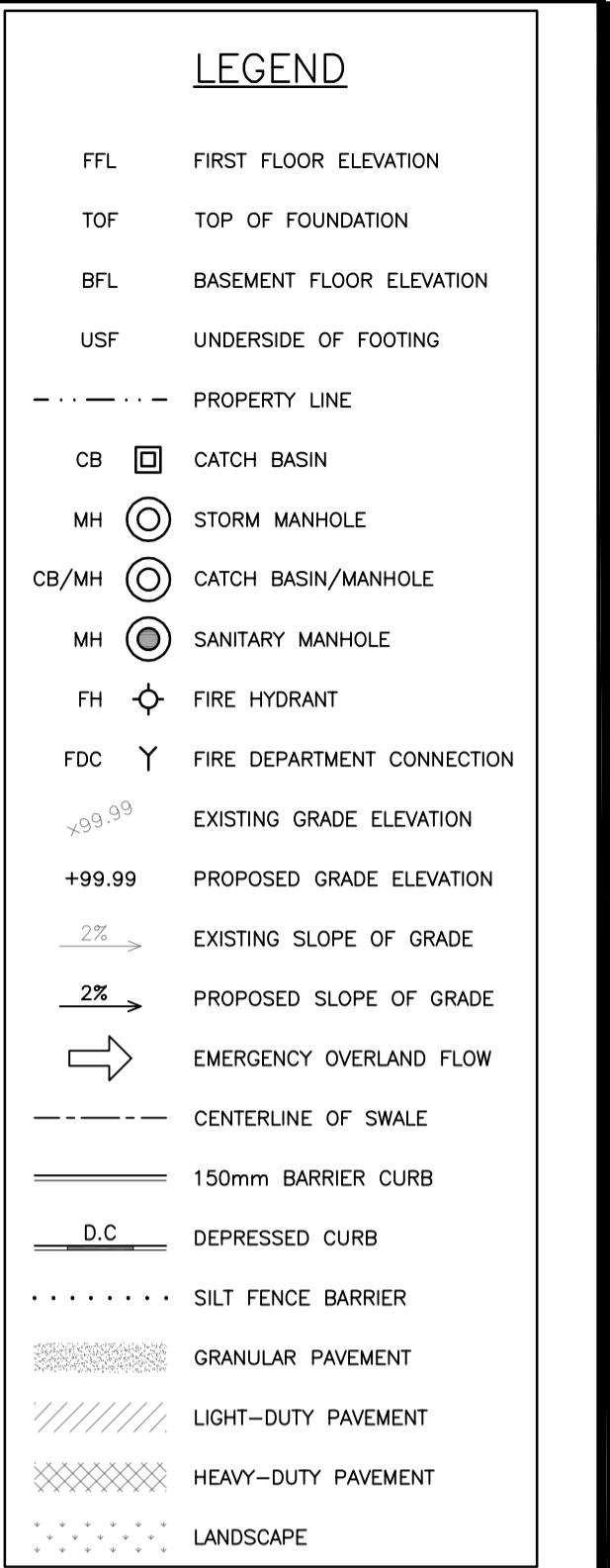
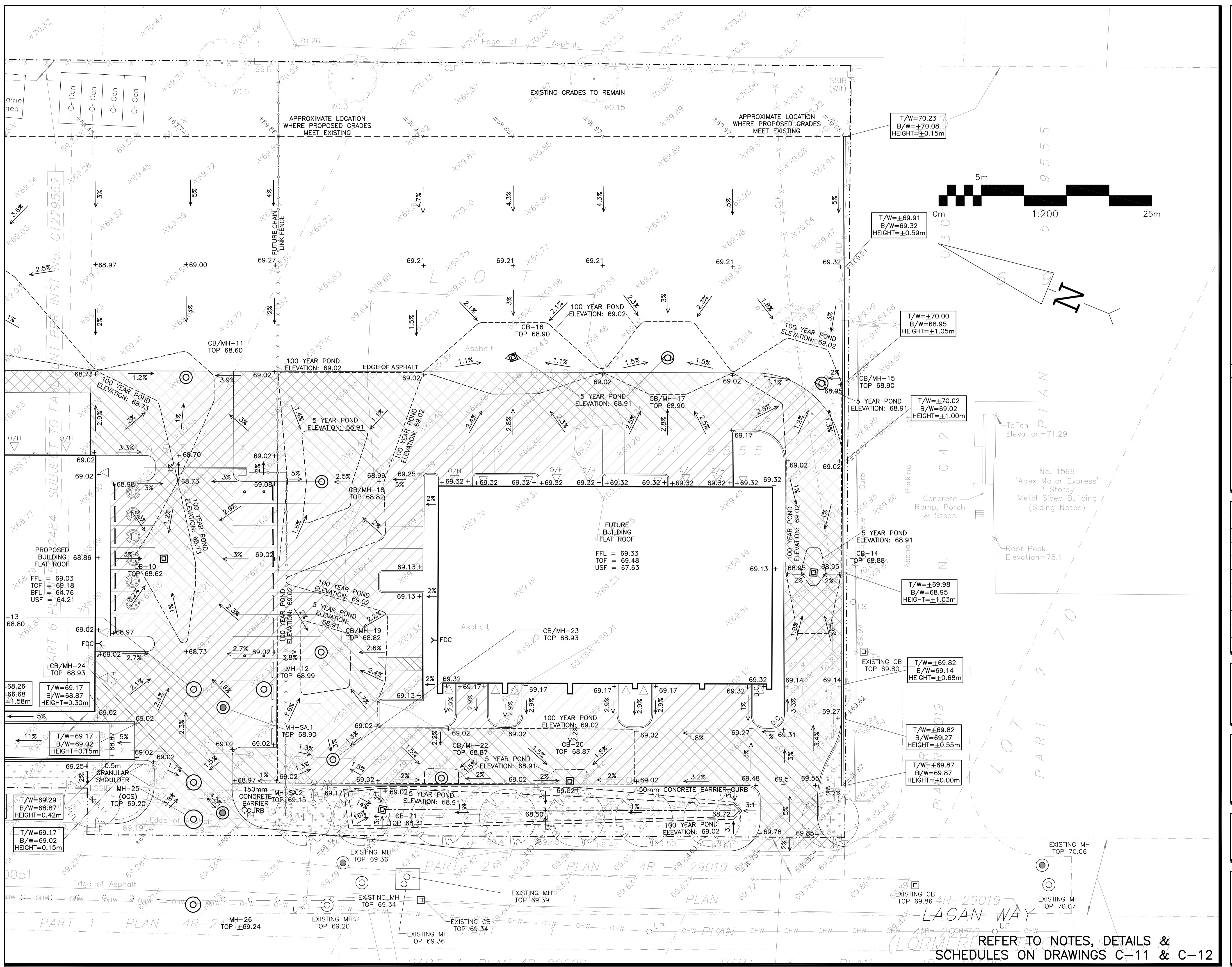
GRADING PLAN

(NORTH AREA)



Drawn	D.B.G
H. Scale	1:200
V. Scale	
Date	NOV 13-25
Job No.	24022

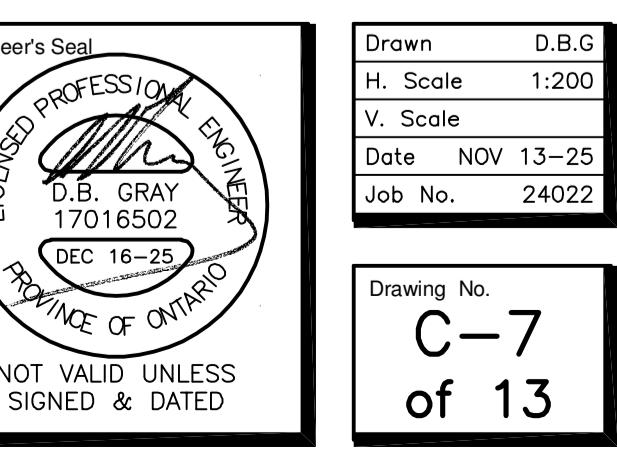
Drawing No.
C-6
of 13



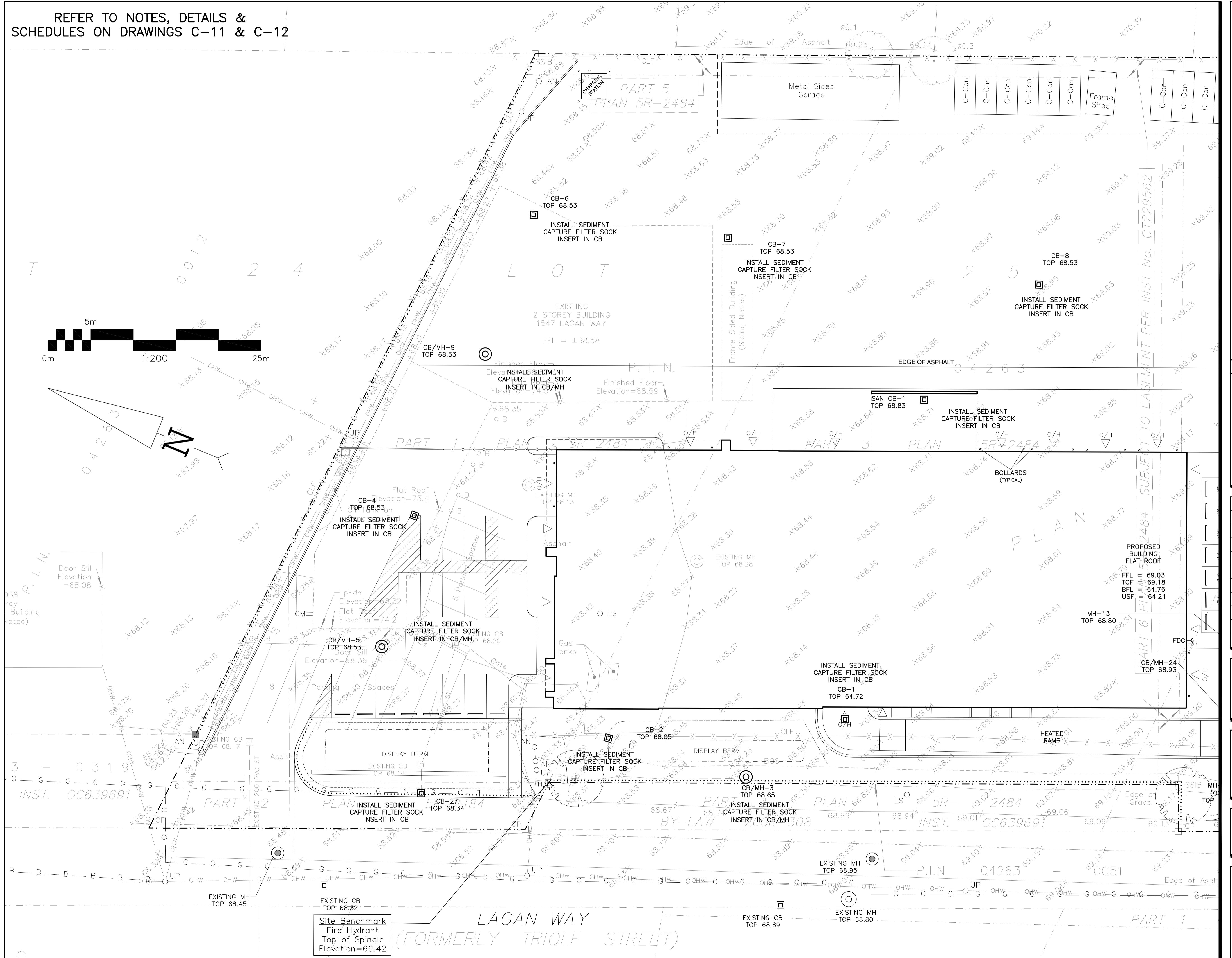
D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Draining - Storm & Sanitary Sewers - Watermain
700 Long Point Circle 613-425-8044
Ottawa, Ontario d.gray@dbgrayengineering.com

Project
PROPOSED DICKIE MOORE RENTALS PROPERTY REDEVELOPMENT
1547 LAGAN WAY
OTTAWA, ONTARIO

GRADING PLAN (SOUTH AREA)



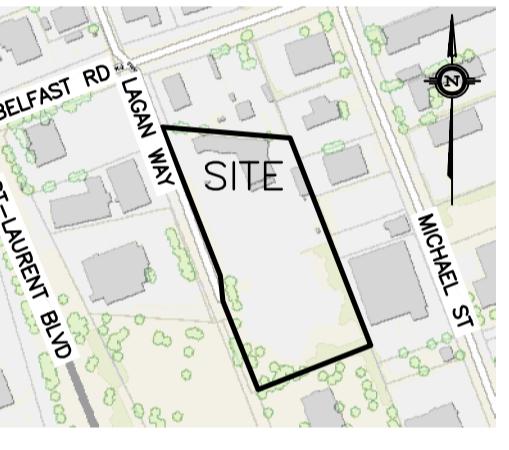
REFER TO NOTES, DETAILS &
SCHEDULES ON DRAWINGS C-11 & C-12



LEGEND

FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING
· — · · —	PROPERTY LINE
CB 	CATCH BASIN
MH 	STORM MANHOLE
/MH 	CATCH BASIN/MANHOLE
MH 	SANITARY MANHOLE
FH 	FIRE HYDRANT
FDC 	FIRE DEPARTMENT CONNECTION
<i>+99.99</i>	EXISTING GRADE ELEVATION
<i>+99.99</i>	PROPOSED GRADE ELEVATION
 2%	EXISTING SLOPE OF GRADE
 2%	PROPOSED SLOPE OF GRADE
	EMERGENCY OVERLAND FLOW
— — — — —	CENTERLINE OF SWALE
— — — — —	150mm BARRIER CURB
<u>D.C</u>	DEPRESSED CURB
· · · · ·	SILT FENCE BARRIER
	GRANULAR PAVEMENT
	LIGHT-DUTY PAVEMENT
	HEAVY-DUTY PAVEMENT
	LANDSCAPE

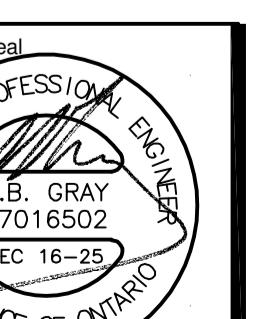
PLAN



16-25	ISSUED FOR APPROVAL
13-25	ISSUED FOR COORDINATION
ATE	REVISION

**PROPOSED DICKIE MOORE
RENTALS PROPERTY
REDEVELOPMENT
1547 LAGAN WAY
OTTAWA ONTARIO**

EROSION & SEDIMENT CONTROL PLAN (NORTH AREA)



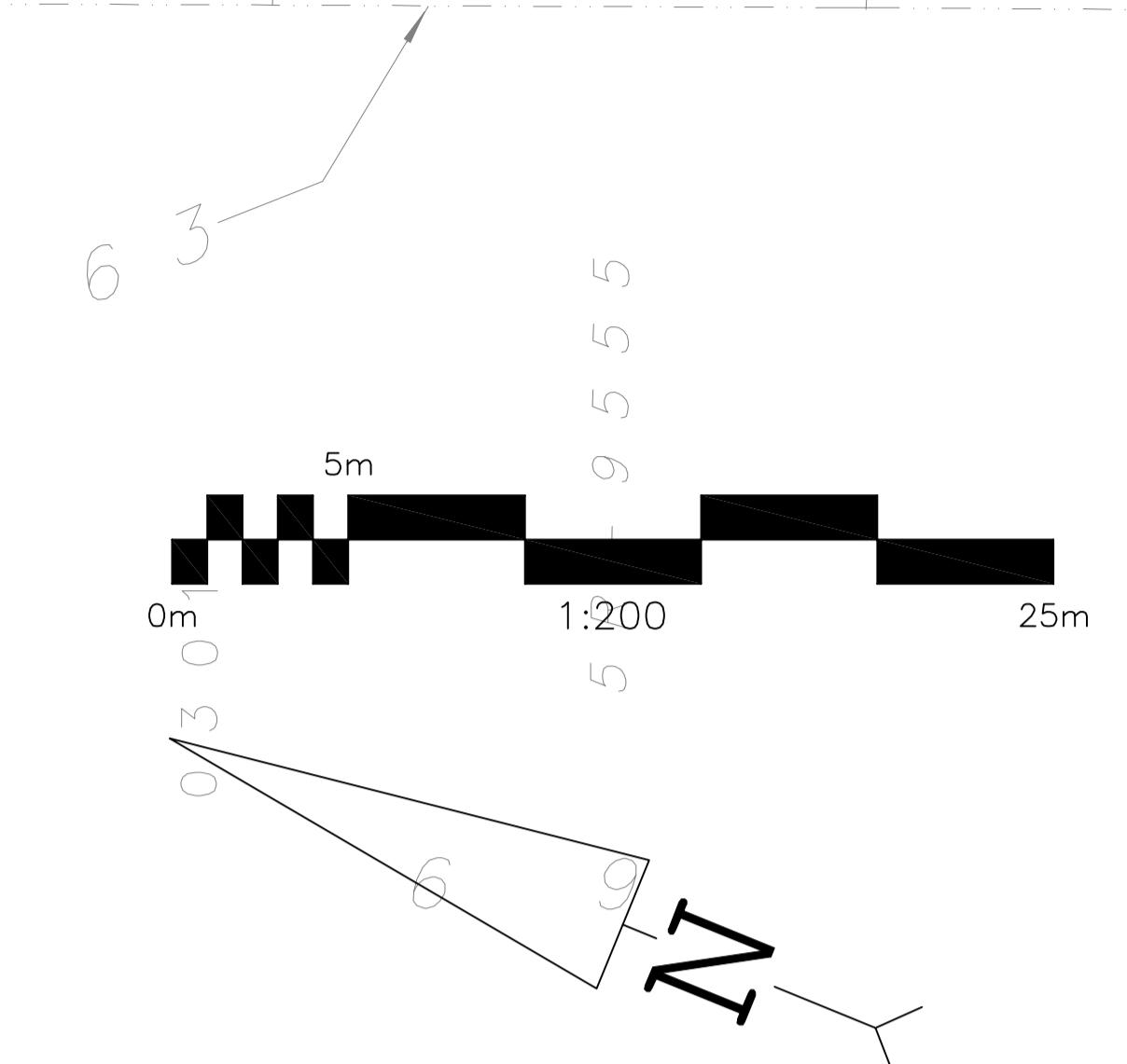
rawn	D.B.G
. Scale	1:200
. Scale	
ate	NOV 13-25
pp No.	24022

Drawing No.
C-8
of 13

REFER TO NOTES, DETAILS &
SCHEDULES ON DRAWINGS C-11 & C-12

LEGEND

FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING
—	PROPERTY LINE
CB	CATCH BASIN
MH	STORM MANHOLE
CB/MH	CATCH BASIN/MANHOLE
MH	SANITARY MANHOLE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
+99.99	EXISTING GRADE ELEVATION
+99.99	PROPOSED GRADE ELEVATION
2%	EXISTING SLOPE OF GRADE
2%	PROPOSED SLOPE OF GRADE
→	EMERGENCY OVERLAND FLOW
—	CENTERLINE OF SWALE
—	150mm BARRIER CURB
D.C.	DEPRESSED CURB
...	SILT FENCE BARRIER
...	GRANULAR PAVEMENT
...	LIGHT-DUTY PAVEMENT
...	HEAVY-DUTY PAVEMENT
...	LANDSCAPE



KEY PLAN

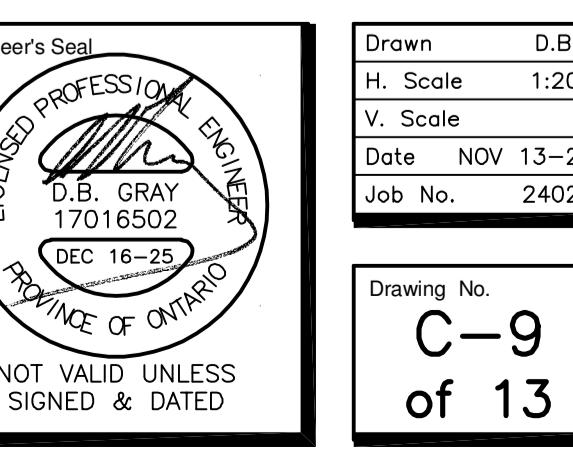


2 DEC 16-25	ISSUED FOR APPROVAL
1 NOV 13-25	ISSUED FOR COORDINATION
No. DATE	REVISION

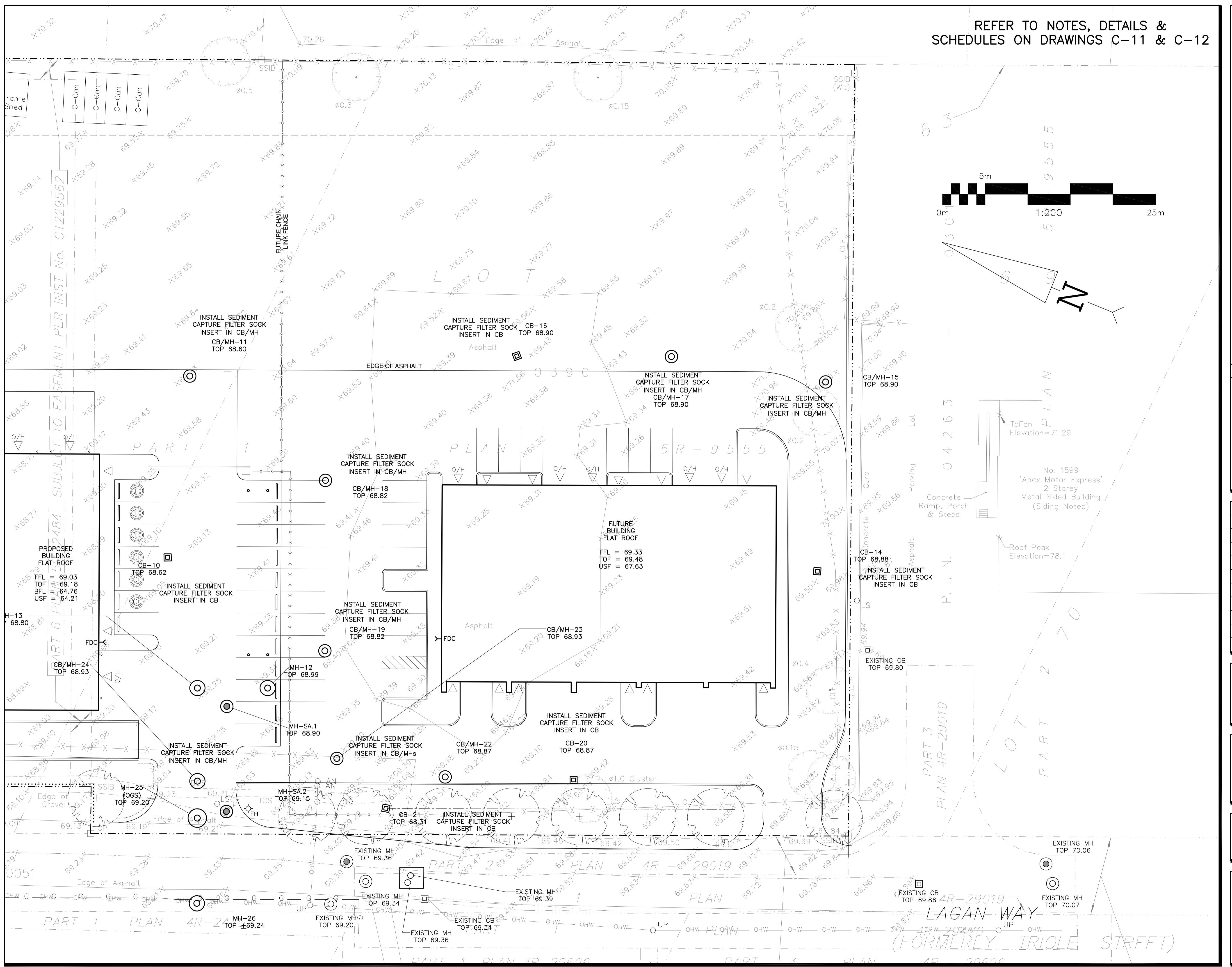
D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermain
700 Long Point Circle 613-425-8044
Ottawa, Ontario d.gray@dbgrayengineering.com

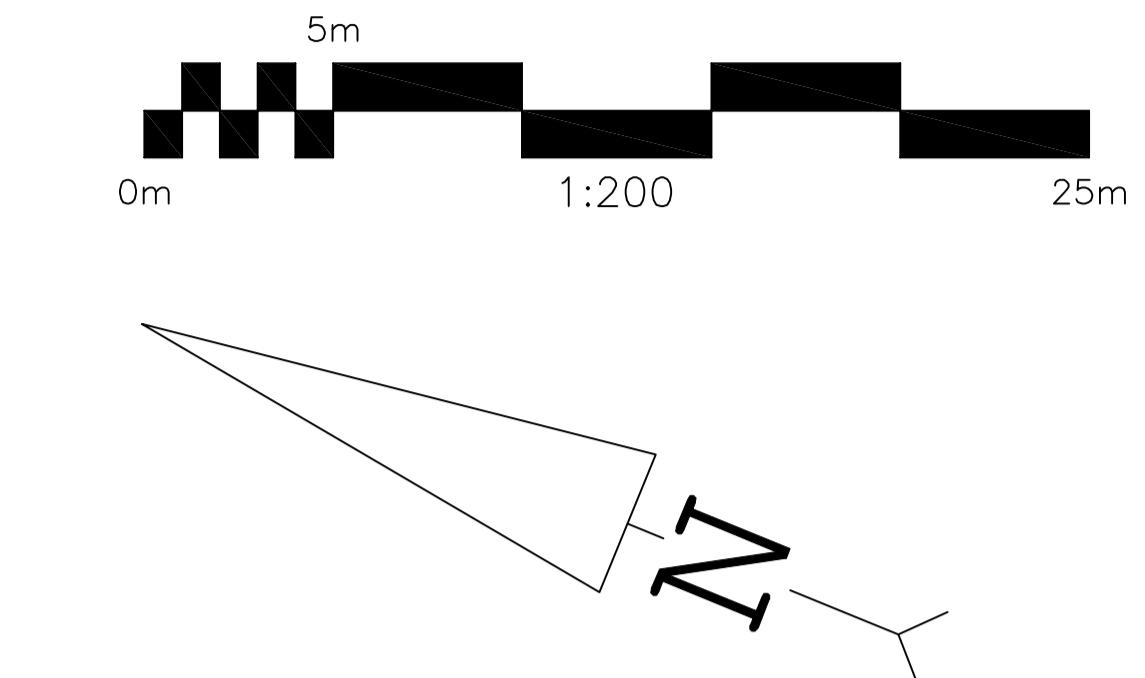
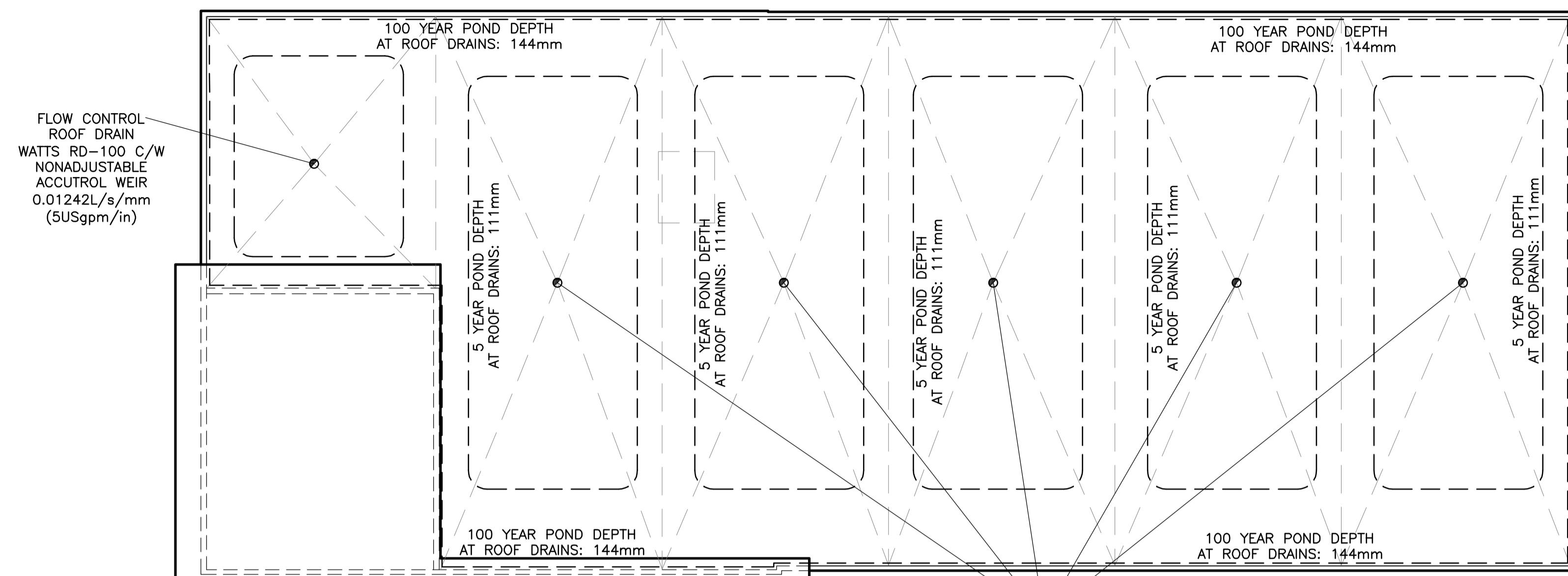
Project
PROPOSED DICKIE MOORE RENTALS PROPERTY REDEVELOPMENT 1547 LAGAN WAY OTTAWA, ONTARIO

Drawing Title
EROSION & SEDIMENT CONTROL PLAN (SOUTH AREA)



Drawing No.
C-9 of 13

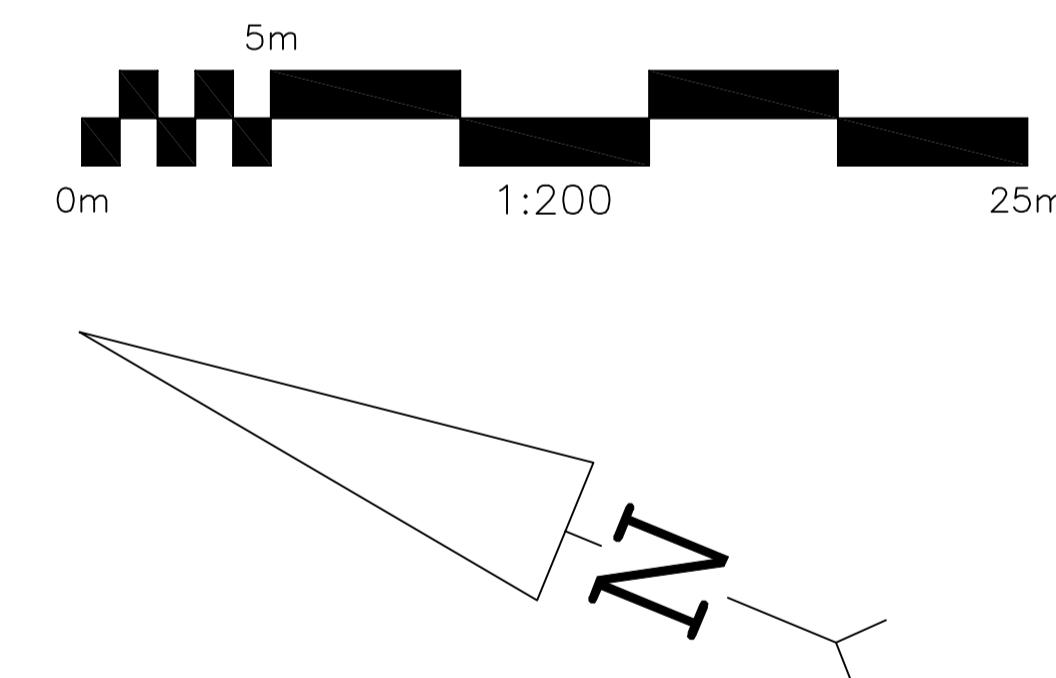
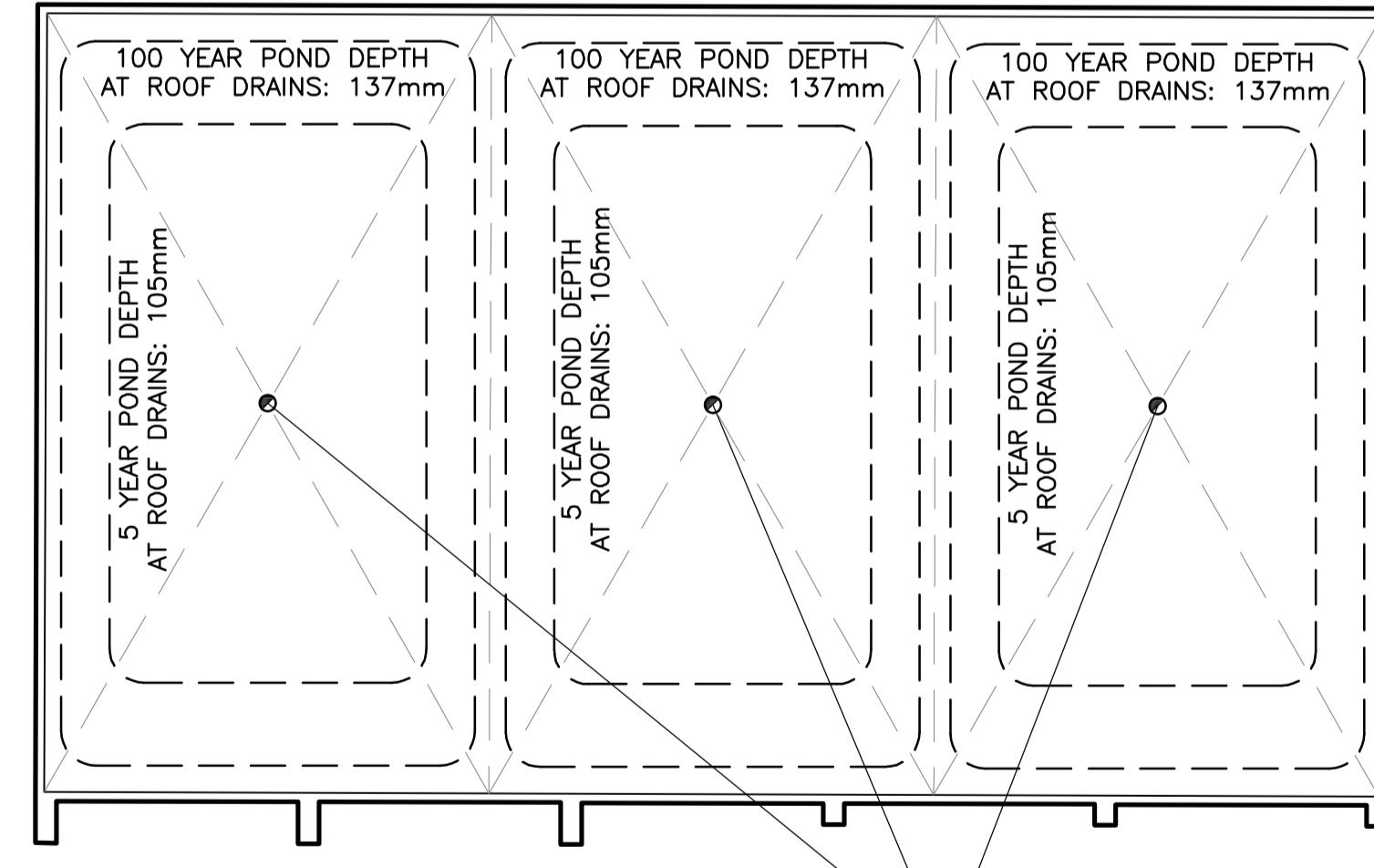




INSTALL A MINIMUM OF 12 SCUPPERS EACH A MINIMUM 550mm WIDE. BOTTOM OF SCUPPERS SHALL BE 150mm ABOVE ROOF DRAINS. REFER TO ARCHITECTURAL FOR EXACT LOCATIONS AND DETAILS. ROOF SHALL BE DESIGNED TO CARRY THE LOAD OF WATER HAVING A 50mm DEPTH AT SCUPPERS (i.e. 200mm DEPTH AT ROOF DRAINS). REFER TO STRUCTURAL.

RAINWATER LEADERS (RWL) INSIDE BUILDING SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURE FROM A WATER COLUMN THE HEIGHT OF THE RWL. CONDUCT A PRESSURE TEST ON THE SYSTEM AS PER THE MECHANICAL ENGINEER'S INSTRUCTIONS (SEE MECHANICAL).

PROPOSED BUILDING ROOF DRAINAGE PLAN



INSTALL A MINIMUM OF 6 SCUPPERS EACH A MINIMUM 450mm WIDE. BOTTOM OF SCUPPERS SHALL BE 150mm ABOVE ROOF DRAINS. REFER TO ARCHITECTURAL FOR EXACT LOCATIONS AND DETAILS. 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.

RAINWATER LEADERS (RWL) INSIDE BUILDING SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURE FROM A WATER COLUMN THE HEIGHT OF THE RWL. CONDUCT A PRESSURE TEST ON THE SYSTEM AS PER THE MECHANICAL ENGINEER'S INSTRUCTIONS (SEE MECHANICAL).

FUTURE BUILDING ROOF DRAINAGE PLAN

REFER TO NOTES, DETAILS &
SCHEDULES ON DRAWINGS C-11 & C-12

KEY PLAN

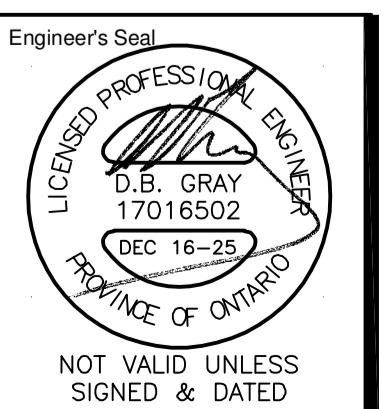


2	DEC 16-25	ISSUED FOR APPROVAL
1	NOV 13-25	ISSUED FOR COORDINATION
No.	DATE	REVISION

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 DICKIE MOORE RENTALS PROPERTY REDEVELOPMENT
1547 LAGAN WAY
OTTAWA, ONTARIO

Drawing Title
ROOF PLANS



Drawn D.B.G.
H. Scale 1:200
V. Scale
Date NOV 13-25
Job No. 24022

Drawing No.
C-10
of 13

1. GENERAL

1.1 USE BAR SCALE TO CONFIRM ACTUAL PLOT SCALE. EXISTING AND NEW ELEVATIONS AND INVERTS SHOWN ARE GEODETIC AND ARE IN METERS. ALL PIPE DIMENSIONS ARE NOMINAL AND IN MILLIMETERS UNLESS OTHERWISE NOTED.
 1.2. UNLESS OTHERWISE STATED, "ENGINEER" REFERS TO D. B. GRAY ENGINEERING INC.
 1.3. SITE BOUNDARIES AND EXISTING GRADES AND OTHER FEATURES DERIVED FROM TOPOGRAPHIC SURVEY PREPARED BY FARLEY, SMITH & DENIS SURVEYING LTD. JOB NO. 140-24-24. IT IS THE RESPONSIBILITY OF THE USER OF THE SURVEY PLANS AND THEIR DRAWINGS TO DETERMINE THAT THE JOB BOUNDARIES HAVE NOT BEEN ALTERED OR DISTORTED AND THAT THE SURVEY DRAWINGS AND INFORMATION CONFORM WITH THE INFORMATION SHOWN ON SURVEY PLANS. THESE DRAWINGS SHALL BE COMPLETED BY THE CONTRACTOR AND SHALL BE 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 REFER TO THE LATEST EDITION OF THE APPENDIXES OF THE GEOTECHNICAL INVESTIGATION BY PATERSON GROUP INC. FILE: PG7133-1. CONSTRUCTION SHALL CONFORM TO THE GEOTECHNICAL INVESTIGATION TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER INCLUDING: SUB-GRADE PREPARATION AND CONSTRUCTION OF THE PAVEMENT STRUCTURE; EXCAVATION AND BACKFILLING; SERVICE TRENCH EXCAVATION AND PIPE BEDDING AND BACKFILL; AND THE COMPACTION OF MATERIALS.
 1.7 DRAWINGS ARE TO BE READ IN CONJUNCTION WITH SITE SERVICING STUDY & STORMWATER MANAGEMENT REPORT No. 20069 PREPARED BY D. B. GRAY ENGINEERING INC.
 1.8 CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT AND CURRENT CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS.
 1.9 ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS SHALL APPLY WHERE NO CITY OF OTTAWA STANDARD SPECIFICATIONS OR DRAWINGS ARE AVAILABLE.
 1.11 REINSTATE CITY PROPERTIES TO CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.

2. EROSION AND SEDIMENT CONTROL PLAN

2.1 THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATER COURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING SEDIMENT CAPTURE FILTER SOCK INSERTS IN CATCH BASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS. LOG DAILY EROSION AND SEDIMENT CONTROL MEASURES. DO NOT REMOVE UNTIL CONSTRUCTION IS COMPLETE.
 2.2 PRIOR TO COMMENCEMENT OF CONSTRUCTION AT ALL MUNICIPAL CATCH BASINS ADJACENT TO THE SITE AND AT ANY MANHOLES OR CATCH BASINS THAT WILL RECEIVE DISCHARGE FROM DE-WATERING OPERATIONS AND ALL NEW CATCH BASINS AS THEY ARE INSTALLED; INSTALL SEDIMENT CAPTURE FILTER SOCK INSERTS (TERRAFIX GEOSYNTHETICS APPROVED OR APPROVED EQUIVALENT) AT THE END OF EACH DAY. EACH DAY, REMOVE EACH RAINFOREST SEDIMENT AS RECOMMENDED BY THE MANUFACTURER IMMEDIATELY AFTER CONSTRUCTION. DO NOT REMOVE UNTIL CONSTRUCTION IS COMPLETE.
 2.3 INSTALL A SILT FENCE BARRIER AROUND STOCKPILED SEDIMENT OR SOIL PRIOR TO COMMENCEMENT OF CONSTRUCTION. INSTALL A SILT FENCE BARRIER AS SHOWN ON PLANS. INSPECT ALL SILT FENCES AT THE END OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT DEPOSITS WHEN THE LEVEL OF DEPOSITS REACHES ONE THIRD THE HEIGHT OF THE FENCE. IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED SECTION OF FENCE. DO NOT REMOVE ANY SILT FENCES IN ANY PHASE UNTIL CONSTRUCTION IS COMPLETE.
 2.4 ANY MATERIAL DEPOSITED ON A PUBLIC ROAD SHALL BE REMOVED BY SWEEPING AND SHOVELING OR VACUUMING AND DISPOSING SEDIMENT IN A CONTROLLED AREA. DO NOT SWEET OR HOSE MATERIAL INTO ANY STORMWATER CONVEYANCE SYSTEM.
 2.5 CONSTRUCTION IS CONSIDERED COMPLETE WHEN THE FOLLOWING CONDITIONS HAVE BEEN MET:
 A. ALL SOILS AND SEDIMENT HAVE BEEN REMOVED.
 B. ALL HARD SURFACES HAVE BEEN CONSTRUCTED.
 C. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15TH TO SEPTEMBER 15TH).
 D. THERE ARE NO AREAS OF EXPOSED EARTH.
 E. STOCKPILED MATERIALS HAVE BEEN REMOVED.
 2.6 REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.

3. GRADING & DRAINAGE

3.1 NEW GRADES TO MATCH EXISTING AT PROPERTY LINE. NO EXCESS DRAINAGE WILL BE DIRECTED TOWARDS THE ADJACENT PROPERTIES DURING OR AFTER CONSTRUCTION. THERE WILL BE NO ALTERATION, EXPANSION, AND/OR REMOVAL OF EXISTING DRAINS OR DRAINS TO BE PROVIDED.
 3.2 ALL AREAS SHALL BE GRADED TO ENSURE ADEQUATE DRAINAGE AWAY FROM BUILDINGS TO CATCH BASINS, SWALES, DITCHES AND OTHER APPROVED DISPOSAL AREAS. GRAADING SHALL BE GRADUAL BETWEEN FINISHED SPOT ELEVATIONS SHOWN ON DRAWINGS TO PREVENT PONDING (OTHER THAN PONDING FOR STORMWATER MANAGEMENT).
 3.3 WHETHER RESULT OF POOR WORKMANSHIP OR DAMAGE, DEFECTIVE GRADED SHALL BE CORRECTED.
 3.4 CONCRETE CURBS SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC1.1. CONCRETE SIDEWALK SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC4. CONCRETE CURBS WITH CONCRETE SIDEWALK SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC14. MONOLITHIC CONCRETE CURBS AND SIDEWALK SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC17.3. CONCRETE SIDEWALKS SHALL BE TO CITY OF OTTAWA SPECIFICATION SECTION F-3531. CONCRETE SHALL BE CSA 32 MPC CLASS C-2, THE AIR ENTRAINMENT SHALL BE 5% TO 8% PRIOR TO PLACEMENT AND THE SLUMP SHALL BE LESS THAN 40 mm ± 20 mm FOR EXTRUDED CONCRETE CURBS AND LESS THAN 90 mm FOR PLACED CONCRETE CURBS AND SIDEWALK.
 3.5 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.

4. SITE SERVICES

4.1 EXISTING WATER SERVICE CONNECTIONS TO BE ABANDONED SHALL BE BLANKED AT CITY WATERMAIN BY CITY FORCES. CONTRACTOR SHALL PROVIDED EXCAVATION, BEDDING AND REINSTATEMENT. EXISTING SEWER SERVICE CONNECTIONS SHALL BE ABANDONED AS PER CITY OF OTTAWA STANDARDS AND CITY DRAWING S11.4. CONNECTION TO WATERMAIN BY CITY OF OTTAWA FORCES, CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL AND REINSTATEMENT.
 4.2 WATER METER SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. NO. W30 W31 (40 & 50mm). WATER SERVICE LINE SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. NO. W33 (38 & 50mm).
 4.3 ALL WATERMAINS AND WATER SERVICE MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL SPECIFICATIONS (OPSS & OPSD). WATERMAINS AND WATER SERVICE MATERIALS SHALL BE PVC DR18 TO AWCA 9-00, CSA B137.3 & CSA B137.4. METALLIC WARNING TAPE SHALL BE INSTALLED OVER ALL WATERMAINS. PROVIDE THRUST 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. W44 & W47.
 4.4 PROVIDE A MINIMUM 2.4 m COVER OVER WATER SERVICES AND WATERMAIN. WHERE THE MINIMUM COVER IS NOT POSSIBLE INSULATE AS PER CITY OF OTTAWA DWG. NO. W21 (IN DITCHED AREAS) OR NO. W22. WHERE LESS THAN 2.4 m CLEARANCE FROM AN OPEN STRUCTURE (EX. MANHOLES, CATCH BASINS & WINDOW WELLS) PLACE INSULATION AROUND WATER SERVICES AND WATER SERVICE CONNECTIONS AS PER CITY OF OTTAWA DWG. NO. W23.
 4.5 ATTACHING WATER SERVICE CONNECTIONS INSTALLED PARALLEL TO A SEWER SHALL BE LAID WITH A MINIMUM 2.5m BARREL TO BARREL HORIZONTAL SEPARATION FROM SEWERS AND SEWER MANHOLES.
 4.6 WATERMAINS AND WATER SERVICES SHALL CROSS ABOVE A SEWER AS PER CITY OF OTTAWA DWG. NO. W25.2; PROVIDE A MINIMUM 250mm BARRELL TO BARRELL VERTICAL SEPARATION. IF IT IS NOT POSSIBLE FOR A WATERMAIN OR WATER SERVICE TO CROSS ABOVE A SEWER THE WATERMAIN SHALL CROSS BELOW A SEWER AS PER CITY OF OTTAWA DRAWING NO. W25.2; PROVIDE A MINIMUM 500mm BARREL TO BARREL VERTICAL SEPARATION AND ENSURE THAT THE WATER PIPE IS CENTERED AT THE POINT OF CROSSING SO JOINTS ARE AS FAR AS POSSIBLE FROM THE SEWER.
 4.7 ALL SEWER MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL SPECIFICATIONS (OPSS & OPSD). SEWER MATERIALS SHALL BE REINFORCED CONCRETE. PIPE LINES SHALL BE SDR-35 (SDR-20 FOR DIAMETERS 150mm OR LESS) AND SHALL CONFORM TO CSA B182.2 AND SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS. REINFORCED CONCRETE SEWERS SHALL CONFORM TO CSA 257.2 CL 50-D WITH RUBBER GASKETS TO CSA A-257.3.
 4.8 SEWERS SHALL HAVE A MINIMUM 2.0m OF COVER ON SHALL BE INSULATED AS PER DETAIL AND CITY OF OTTAWA STANDARD DRAWING S35.
 4.9 THE SANITARY BUILDING DRAIN SHALL BE INSTALLED WITH A NORMALLY FULL-PORT BACKWATER VALVE TO CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. NO. S14.1 OR S14.2. THE BACKWATER VALVE SHALL BE INSTALLED SO THAT ALL PLUMBING FIXTURES ABOVE THE EXTERIOR GRADE ELEVATION DRAINS TO THE DOWNTREAM SIDE. ALL PLUMBING FIXTURES AND ALL FIXTURES BELOW THE EXTERIOR GRADE ELEVATION DRAINS TO THE UPSTREAM SIDE OF THE VALVE.
 4.10 THE STORM DRAIN SERVING THE FOUNDATION DRAINS SHALL BE INSTALLED WITH A NORMALLY CLOSED BACKWATER VALVE TO CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. NO. S14.
 4.11 CONNECT PROPOSED SANITARY SEWER SERVICE CONNECTION TO EXISTING MUNICIPAL SANITARY SEWER AS PER CITY OF OTTAWA DWG. NO. S11.1 (FLEXIBLE MAIN SEWER).
 4.12 MANHOLES & CATCH BASINS:
 A. PRECAST MANHOLE UNITS: TO OPSS 1351 AND OPSD 701.010 WITH BASE SLAB OR MONOLITHIC BASE. TOP SECTIONS ECCENTRIC CONE OR FLAT LAB TOP TYPE WITH OPENING OFFSET FOR VERTICAL LADDER INSTALLATION.
 B. MANHOLE STEPS: TO OPSD 405.01
 C. ADJUSTING RINGS: TO ASTM C 478M.
 D. ALUMINUM SURFACES IN CONTACT WITH OR CAST INTO CONCRETE SHALL HAVE POLYETHYLENE ANCHOR INSULATING SLEEVES.
 E. PRECAST CATCH BASIN SECTION: TO OPSD 1351.
 F. JOINTS: SHALL BE MADE WATERTIGHT USING BUTYL BASED, FLEXIBLE WATERSTOP/JOINT SEALANT MATERIAL.
 G. SANITARY SEWERS: BENCH TO PROVIDE A SMOOTH U-SHAPE CHANNEL PER OPSD 701.021. SLOPE INVERT TO ESTABLISH SEWER GRADE.
 H. STORM SEWERS: MANHOLES SHALL HAVE A 300mm SUMP AND CATCH BASINS AND DITCH INLETS SHALL HAVE A 600mm SUMP.
 I. FRAMES, GRATES AND COVERS TO CITY OF OTTAWA DRAWINGS OR OPSD (AS PER CATCH BASIN & MANHOLE SCHEDULE). GRATES AND COVERS TO BEAR EVENLY ON FRAMES.
 J. GRANULAR BEDDING AND BACKFILL: OPSS GRANULAR A. RE-CYCLED GRANULAR MATERIALS ARE NOT PERMITTED.
 G. PRIOR TO INSTALLATION SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW.

4.13 AS INDICATED ON PLANS: AT ALL CATCH BASINS AND CATCH BASIN MANHOLES PROVIDE MINIMUM 3m LONG, 150mm DIAMETER, PERFORATED SUB-DRAINS AT THE SUB-GRADE LEVEL. HDPE OR FILTER FABRIC Sock & END PLUG (PSD 1000 OR APPROVED EQUAL).

4.14 ROOF DRAINS SHALL BE FLOW CONTROL TYPE EACH INSTALLED WITH A WER WITH A PARABOLIC SLOP EACH SLOT SHALL RELEASE 5 L/s/gpm/inch. OPENING AT TOP OF 150mm IN DIAMETER. WATS POLE DRAIN WITH WATS ACCUTROL WEIR RD-100-A1 OR APPROVED EQUAL PRIOR TO INSTALLATION SUBMIT SHOP DRAWING TO ENGINEER FOR REVIEW.

4.15 RAINWATER LEADERS (RWL) INSIDE BUILDING SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURE FROM A WATER COLUMN THE HEIGHT OF THE RWL. CONDUCT A PRESSURE TEST ON THE SYSTEM AS PER THE MECHANICAL ENGINEER'S INSTRUCTIONS (SEE MECHANICAL).

4.16 THE INLET CONTROL DEVICES (ICD) LOCATED AT THE OUTLET PIPE OF MANHOLE MH-13 AND CATCH BASIN/MANHOLE CB-MH-23 SHALL BE A PLUG STYLE WITH A ROUND ORIFICE (WITH THE ORIFICE LOCATED AT THE BOTTOM OF THE PLUG). MANUFACTURED BY PEDRO PLASTICS (OR APPROVED EQUAL) AND SIZED BY THE MANUFACTURER FOR A DISCHARGE RATE AS INDICATED ON PLAN. PRIOR TO INSTALLATION SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL.

5. CONSTRUCTION:

5.1 PRIOR TO COMMENCING WORK:
 A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES.
 B. SIZE, DEPTH AND LOCATION OF EXISTING INFRASTRUCTURE (SERVICES, UTILITIES AND OTHER STRUCTURES) AND ARE NOT NECESSARILY SHOWN ON DRAWINGS AND THOSE INDICATED ON DRAWINGS ARE NOT NECESSARILY SHOWN. THESE ARE FOR GUIDANCE ONLY AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING ANY WORK. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. NOTIFY ALL APPLICABLE OWNERS, UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION OF PROPOSED WORK AND LOCATE AND CLEARLY IDENTIFY ALL EXISTING INFRASTRUCTURE ON THE SITE 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 OF BURIED INFRASTRUCTURE BY CAREFULLY EXCAVATING TEST PITS AND REPORT ANY DIFFERENCES TO THE ENGINEER. ANY ISSUES ARISING FROM FAILURE OF CONTRACTOR TO DETERMINE THE SIZE, DEPTH AND LOCATION OF ALL EXISTING INFRASTRUCTURE WILL BE AT THE CONTRACTOR'S EXPENSE.
 C. EXERCISE DUE DILIGENCE ON DRAWINGS AND PERMIT FOR AVAILABLE INFORMATION AND ARE FOR GUIDANCE ONLY AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING CONSTRUCTION. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. REPORT ANY DIFFERENCES TO ENGINEER.
 D. COORDINATE AND SCHEDULE WORK WITH THE OWNER, AUTHORITIES AND OTHER TRADES.
 E. SCHEDULE WORK TO PROVIDE THE MINIMUM DISRUPTION TO SERVICES.
 F. INSTALL CONSTRUCTION FENCING AROUND THE AREA OF WORK. DO NOT REMOVE FENCING UNTIL WORK IS COMPLETE.
 5.2 MAINTAIN AND PROTECT FROM DAMAGE, SERVICES, UTILITIES AND STRUCTURES ENCOUNTERED.
 5.3 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 BOUNDARY OF PLANTS OR SHRUBS THAT ARE TO REMAIN.
 5.4 PROVIDE TRAFFIC CONTROL AND SAFETY MEASURES AS REQUIRED BY THE AUTHORITIES, INCLUDING ANY NECESSARY PERSONNEL AND THE SUPPLY, INSTALLATION, REMOVAL AND REPLACEMENT OF ALL NECESSARY SIGNAGE AND BARRIERS. IF APPLICABLE, PROVIDE TRAFFIC MANAGEMENT PLAN AS PER CITY OF OTTAWA REQUIREMENTS.
 5.5 FENCE OFF ALL OPEN EXCAVATIONS AT THE END OF EACH WORK DAY. FENCES SHALL BE INSTALLED AND MAINTAINED A GOOD AND EFFECTIVE CONDITION.
 5.6 REMOVE OBSTRUCTIONS, ICE AND SNOW, FROM SURFACES TO BE EXCAVATED.
 5.7 CUT PAVEMENT AND / OR SIDEWALK NEARLY ALONG LIMITS OF PROPOSED EXCAVATION IN ORDER THAT SURFACE MAY BREAK EVENLY AND CLEANLY.
 5.8 COORDINATE AND PAY FOR GEOTECHNICAL INSPECTIONS AND COMPACTION TESTS OF, SERVICING TRENCHES (SUB-GRADE, PIPE BEDDING AND EACH LAYER OF SURROUND MATERIAL, AND BACKFILL); AND PAVEMENT STRUCTURES (SUB-GRADE, SUB-BASE, BASE AND ASPHALT); TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT AND ENGINEER. GEOTECHNICAL INSPECTIONS AND COMPACTION TESTS TO ENGINEER FOR REVIEW. A MINIMUM OF ONE SET OF INSPECTIONS AND COMPACTION TESTS SHALL BE COMPLETED ON EACH PIPE SEGMENT GREATER THAN 15 m IN LENGTH. A MINIMUM ONE SET OF INSPECTION AND COMPACTION TESTS SHALL BE COMPLETED FOR EVERY 500 m² OF PAVEMENT AREA.
 5.9 CUT AND FILL AS NECESSARY TO ACHIEVE THE PROPOSED GRADE ELEVATIONS. DISPOSE OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL OFF SITE. ANY REQUIRED FILL SHALL BE CLEAN WELL GRADED SAND TO OPSS 1004 UNLESS OTHERWISE REQUESTED BY GEOTECHNICAL ENGINEER. FILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF COMPACTED DRY DENSITY. FILL SHALL BE PLACED IN LAYERS AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL CONSULTANT AND REPORT AND TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT. PLACE MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300mm COMPACTED THICKNESS.
 5.10 PROTECT WORK AREA AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF. DETERMINE AS REQUIRED TO KEEP WORK AREA FREE OF WATER. DISCHARGE FROM DETERWATERING OPERATIONS SHALL BE DIRECTIONED TO A SEDIMENT CONTROL MEASURE AND/OR A VEGETATED DISCHARGE AREA. ENSURE THAT THE DISCHARGED WATER DOES NOT CAUSE EROSION OR OTHER DAMAGE TO ADJACENT LANDS.

5.11 EXCAVATION, TRENCHING, & 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. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.
 C. EXCAVATION SHALL NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
 D. DO NOT OBSTRUCT FLOW OF SURFACE DRAINAGE OR NATURE OF WATERCOURSES.
 E. EXCAVATE TO LINES, GRADES, ELEVATIONS AND DIMENSIONS AS INDICATED.
 F. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
 G. ALL STRUCTURES WITHIN PAVED AREAS SHALL HAVE 4:1 FROST TAPERS FROM FROST LINE TO SUB-GRADE.
 H. CORRECT OVER-EXCAVATION WITH GRANULAR A COMPACTED TO NOT LESS THAN 95% OF CORRECTED MAXIMUM DRY DENSITY.
 I. SUB-GRADE AND AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
 J. DO NOT USE BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
 K. PIPE BEDDING AND SURROUND MATERIAL SHALL BE OPSS GRANULAR A. RE-CYCLED GRANULAR MATERIALS ARE NOT PERMITTED.
 L. DO NOT USE BACKFILL OR SURROUND BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
 M. PIPE BEDDING SHALL BE 150mm THICK. SHAPE BED TRUE TO GRADE AND TO PROVIDE CONTINUOUS, UNIFORM BEARING SURFACE FOR PIPE.
 N. PLACE SURROUND MATERIAL AROUND PIPES TO FULL WIDTH OF TRENCH AND TO 300mm ABOVE PIPES.
 O. PLACE BEDDING AND SURROUND MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS. PLACE FILL AND BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300mm COMPACTED THICKNESS.
 P. COMPACT EACH LAYER TO 95% OF CORRECTED MAXIMUM DRY DENSITY BEFORE PLACING SUCCEEDING LAYER.
 Q. DO NOT BACKFILL AREAS AROUND CONCRETE PIPES UNTIL 24 HOURS AFTER PLACEMENT OF CONCRETE.
 R. BACKFILL MATERIAL WITH A 50% OF PROPOSED GRADE MATERIALS MATCH THE SURROUNDING 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.

5.12 PIPES:

A. HANDLE PIPE USING METHODS RECOMMENDED BY MANUFACTURER.
 B. LAY, CUT AND JOIN PIPES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 C. USE ONLY FITTINGS RECOMMENDED BY PIPE MANUFACTURER.
 D. LAY PIPES IN SHAPED BED TRUE TO LINE AND GRADE AND ENSURE BARREL OF EACH PIPE IS IN CONTACT WITH SHAPED BED THROUGHOUT ITS FULL LENGTH, FREE OF SACKS OR HIGH POINTS.
 E. DO NOT EXCEED MAXIMUM JOINT DEFLECTION RECOMMENDED BY PIPE MANUFACTURER.
 F. WHENEVER WORK IS SUSPENDED, INSTALL REMOVABLE WATERTIGHT BULKHEAD AT OPEN END OF LAST PIPE LAID TO PREVENT ENTRY OF FOREIGN MATERIALS.
 G. WHEN STOPPAGE OF WORK OCCURS, BLOCK PIPES TO PREVENT CREEP DURING DOWN TIME. MAKE WATERTIGHT CONNECTIONS TO MANHOLES.
 H. JOINTS SHALL BE STRUCTURALLY SOUND AND WATERTIGHT.
 I. REPAIR OR REPLACE PIPE, JOINT OR BEDDING FOUND DEFECTIVE.

5.13 SEWERS AND SEWER SERVICE CONNECTIONS:

A. CONSTRUCT TRENCHES AS PER CITY DWG S6 & S7.
 B. INSTALL PIPE JOINTS NOT MORE THAN 1.2 m FROM SIDE OF RIGID STRUCTURES.
 C. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
 D. PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. SPECIFICALLY, THE LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410. REPAIR AND RETEST SEWER LINE AS REQUIRED. REPAIR VISIBLE LEAKS REGARDLESS OF TEST RESULTS.
 E. CONDUCT TWO CCTV INSPECTIONS OF SEWERS. FIRST INSPECTION AFTER COMPLETION OF CONSTRUCTION. SECOND INSPECTION IMMEDIATELY PRIOR TO END OF WARRANTY PERIOD. A PAN AND TILT CAMERA SHALL BE USED. REPAIR SEWER LINE AS REQUIRED. SUBMIT REPORTS AND DVDS TO ENGINEER.
 F. CONDUCT TWO CCTV INSPECTIONS OF THE MUNICIPAL STORM SEWER FROM THE FIRST MANHOLE UPSTREAM OF THE STORM SEWER CONNECTION TO THE FIRST MANHOLE DOWNSTREAM. THE FIRST CCTV INSPECTIONS SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF CONSTRUCTION AND THE SECOND CCTV INSPECTION SHALL BE COMPLETED AFTER THE COMPLETION OF CONSTRUCTION. A PAN AND TILT CAMERA SHALL BE USED. SUBMIT REPORTS AND DVDS TO THE ENGINEER.

5.14 WATERMAINS AND WATER SERVICE CONNECTIONS:

A. CONSTRUCT TRENCHES AS PER CITY DWG W17.
 B. 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.
 C. PRESSURE TESTING AS PER AWWA C-605-5 AND CITY OF OTTAWA DESIGN GUIDELINES – WATER DISTRIBUTION SECTION 4.6.13 & CITY DWG. W46.

5.15 5.15 MANHOLES, CATCH BASINS:

A. JOINTS: SHALL BE MADE WATERTIGHT.
 B. SET PRECAST CONCRETE BASE ON 150mm MINIMUM OF GRANULAR BEDDING COMPACTED TO 100% CORRECTED MAXIMUM DRY DENSITY.
 C. MAKE EACH JOINT WATERTIGHT WITH RUBBER RING GASKETS.
 D. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
 E. PLACE FRAME AND COVER ON TOP SECTION TO ELEVATION AS INDICATED IF ADJUSTMENT REQUIRED USE CONCRETE RINGS TO A MAXIMUM OF 300mm.
 F. CLEAN UP DEBRIS FOR SURFACE MATERIALS. REMOVE FINS AND SURPLUS MATERIALS. PREVENT DEBRIS FROM ENTERING SYSTEM.
 G. PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. SPEC

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GEORGIA PHIL

T O W N S H I P

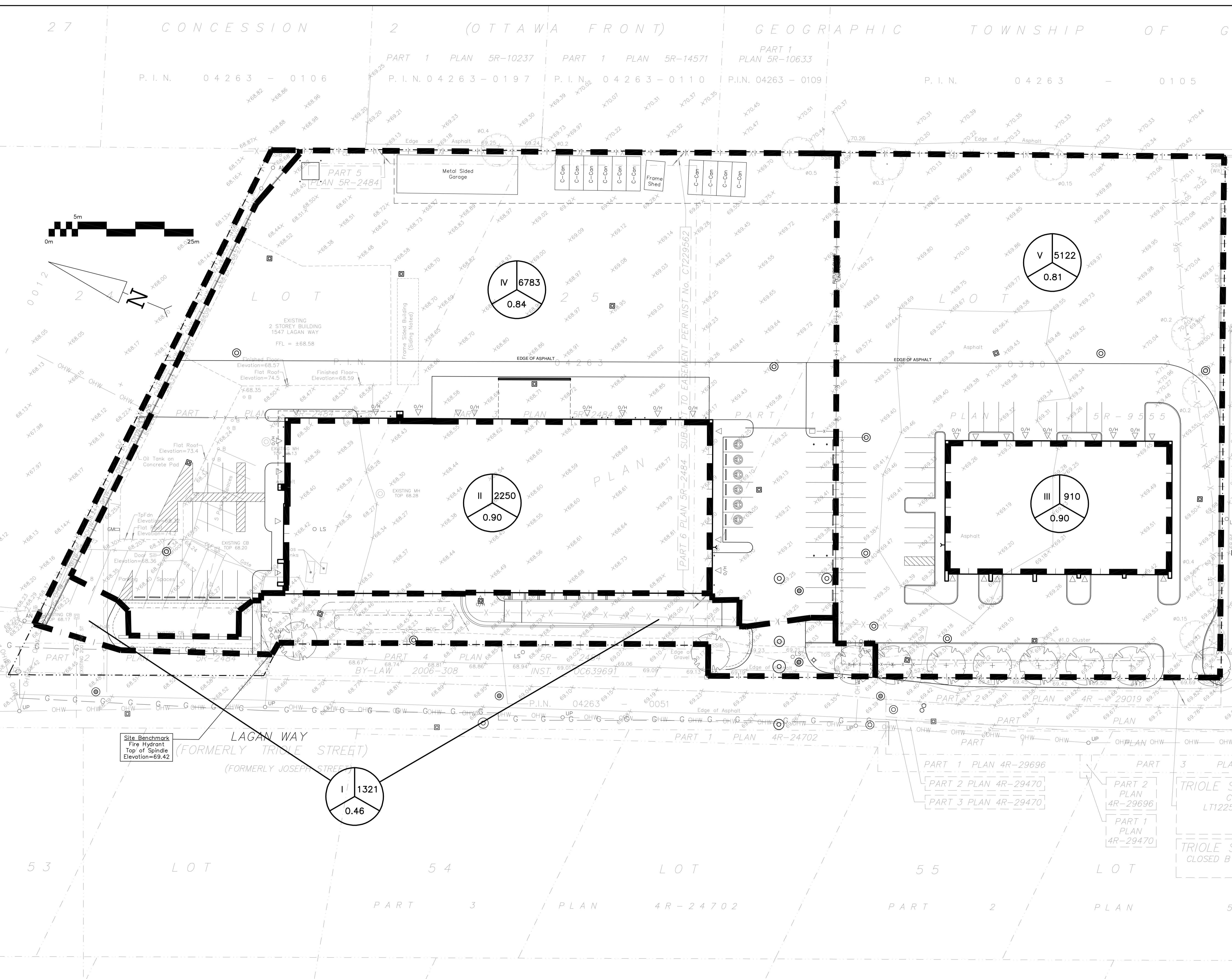
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LEGEND

DRAINAGE AREA

AREA (sq.m)

5 YEAR
RUNOFF
COEFFICIENT



KEY PLAN



2	DEC 16-25	ISSUED FOR APPROVAL
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1 NOV 13-25 ISSUED FOR COORDINATION

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Page 1 of 1

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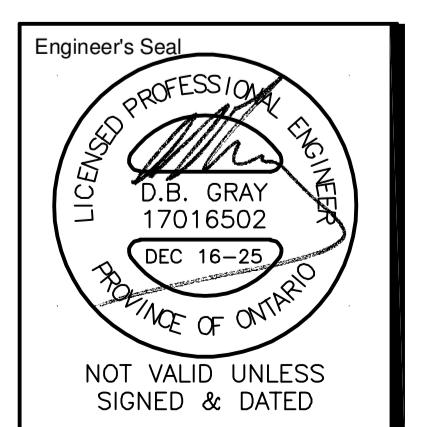
D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains

Project

**PROPOSED DICKIE MOORE
RENTALS PROPERTY
REDEVELOPMENT
1547 LAGAN WAY
OTTAWA, ONTARIO**

Drawing Title

POST-DEVELOPMENT DRAINAGE PLANS



Drawn	D.
H. Scale	1:
V. Scale	
Date	NOV 13-
Job No.	24

Drawing No.
C-13
of 13