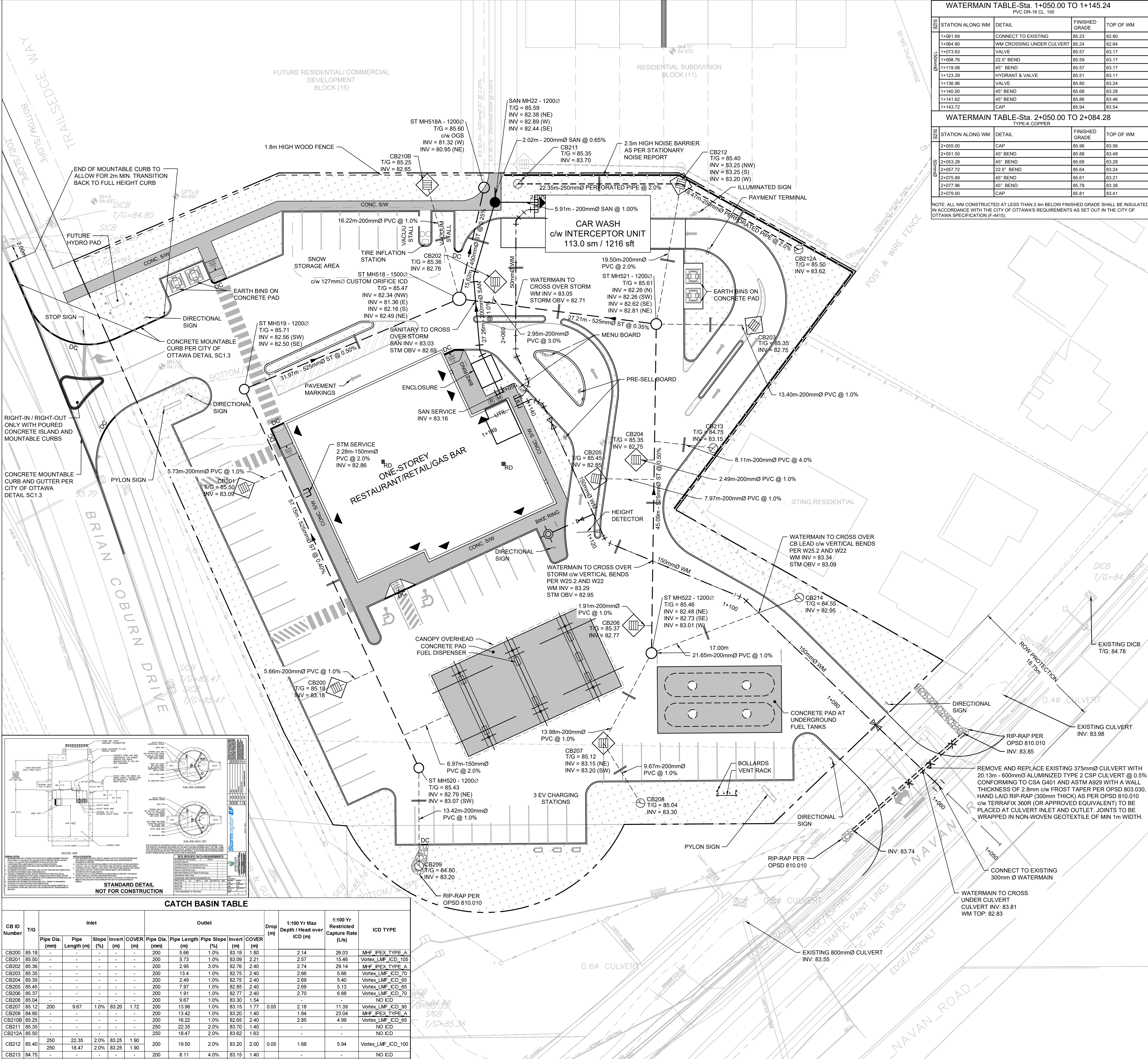


GENERAL CONSTRUCTION NOTES

1. ALL MATERIAL (SANITARY, STORM & WATERMAIN) AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS, AND ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
2. SERVICING DESIGN DRAWINGS TO BE READ IN CONJUNCTION WITH THE SITE SERVICING REPORT (JULY 16, 2025) PREPARED BY J.L. RICHARDS & ASSOCIATES LIMITED (29899-003).
3. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE TO THE CENTRELIN OF SEWER OR MAINTENANCE HOLE.
4. THE NOMINAL DIAMETER OF PIPES ARE REFERRED TO IN PLAN VIEW.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL AND REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION AND ALL ASSOCIATED WORKS TO THE SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA.
7. ALL CONNECTIONS TO EXISTING WATERMAIN TO BE COMPLETED BY CITY OF OTTAWA FORCES. CONTRACTOR TO PROVIDE EXCAVATION BACKFILLING, COMPACTION AND REINSTATEMENTS, IN ACCORDANCE WITH CURRENT CITY SPECIFICATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE, VIA EXCAVATION, THE EXACT LOCATION AND ELEVATION OF THE EXISTING WATERMAINS, SEWERS AND UNDERGROUND STRUCTURES AS REQUIRED FOR ALL CONNECTIONS, RELOCATIONS, AND BLANKINGS.
9. ALL WATERMAINS SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
10. WATERMAINS CROSSING BELOW OR OVER A SEWER SHALL BE IN ACCORDANCE WITH CITY STANDARD DRAWING W25 AND W25.2.
11. PROVIDE A MINIMUM OF 2.4m COVER ON ALL WATERMAINS AND WATER SERVICES. OTHERWISE PROVIDE THERMAL INSULATION AS PER THE CITY STANDARD DRAWING W22 (IN SHALLOW TRENCHES) AND W23 (AT OPEN STRUCTURES).
12. WATERMAIN THRUST BLOCKS TO BE CONSTRUCTED PER CITY STANDARD DRAWINGS W25.3 AND W25.4. THRUST BLOCKS ARE REQUIRED AT ALL BENDS, TEES, PLUGS, DEAD END CAPS, VALVES, REDUCERS, OR OTHER FITTINGS WHERE CHANGES OCCUR IN PIPE DIAMETER OR DIRECTION. ALL IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
13. WATERMAIN SERVICE LATERAL TO BUILDING TO BE PVC DR-18. WATER SERVICE EXTENSION TO CAR WASH TO BE 50mm TYPE K COPPER.
14. ALL WATER DISTRIBUTION INFRASTRUCTURE TO BE PROVIDED WITH CATHODIC CORROSION PROTECTION AS PER CITY STANDARD W40.
15. HYDRANTS SHALL BE INSTALLED AS PER CITY STANDARD DRAWING W19.
16. ALL GROUNDWATER PUMPED FROM THE SITE TO BE METERED AND A PERMIT TO TAKE WATER OBTAINED AS APPLICABLE.
17. AT ALL CONNECTION POINTS, REINSTATE SURFACES TO EXISTING CONDITION OR BETTER:
 - ASPHALT RESTORATION SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DRAWING NO. R10.
 - THICKNESS OF GRANULARS AND ASPHALT LAYERS SHALL MATCH EXISTING.
 - BOULEVARDS SHALL BE REINSTATED WITH MINIMUM 100mm TOPSOIL AND SOD.
17. SANITARY AND STORM SEWERS EQUAL TO OR LESS THAN 300mm DIA. SHALL BE PVC DR-35. STORM SEWERS GREATER THAN 300mm DIA. TO BE 100-D R.C. SEWERS TO BE INSULATED WHERE MINIMUM COVERAGE OF 2.0m IS NOT ACHIEVED (REFER TO INSULATION DETAIL).
18. SANITARY AND STORM SERVICE LATERALS TO BUILDING TO BE PVC DR-28.
19. SANITARY AND STORM SERVICES TO BE IN ACCORDANCE WITH CITY STANDARD DRAWING S11.1 AND PROVIDED WITH 0.6m MINIMUM VERTICAL CLEARANCE TO WATERMAIN. REFER TO WATERMAIN TABLE FOR CROSSING DETAILS.
20. SERVICES TO BE TERMINATED 1.0m FROM BUILDING WALL (TYPICAL).
21. BUILDER TO INSTALL BACKWATER VALVES ON SANITARY AND STORM SERVICE LATERALS IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL DRAWINGS S14, S14.1, S14.2.
22. ALL STORM & SANITARY MAINTENANCE HOLES C/W FRAME AND COVER AS PER CITY STANDARD DRAWINGS 24 AND 24.1. SANITARY AND STORM MAINTENANCE HOLES TO HAVE WATERTIGHT COVERS PER OPSD 401.030.
23. CLAY SEALS TO BE AS PER CITY OF OTTAWA DETAIL S8 & THE GEOTECHNICAL INVESTIGATION REPORTS PREPARED BY EXP FOR THIS PROJECT DATED AUGUST 2024.
24. CLAY SEALS IN THE REAR YARD ARE TO BE PLACED TO THE UNDERSIDE OF THE TOPSOIL LAYER.
25. ALL CATCH BASIN MAINTENANCE HOLES C/W FRAME AND COVERS AS PER CITY STANDARD DRAWING S28 AND 28.1.
26. ALL STREET CATCH BASINS TO BE 600x600mm PRECAST CONCRETE PER OPSD 705.010 C/W FRAME AND COVER AS PER CITY STANDARD DRAWING S19.
27. ALL CATCH BASIN LEADS TO BE PVC DR-35 INSTALLED WITH 1% GRADIENT MINIMUM, UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.
28. 6m SUBDRAIN STUBS, WRAPPED IN FILTER SOCK, TO BE INSTALLED ON EITHER SIDE OF EACH CATCH BASIN, APPROXIMATELY 300mm BELOW THE SUBGRADE LEVEL.
29. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN. PLEASE REFER TO THE 'VERTICAL CONTROL POINTS' SKETCH PROVIDED BY STANTEC SEPTEMBER 27, 2024 FOR LOCATION AND DESCRIPTION OF CONTROL POINTS.
30. CATCH BASINS FOR LANDSCAPED APPLICATION TO BE IN ACCORDANCE WITH CITY STANDARD DETAIL S31.
31. CONCRETE CURB TO BE BARRIER TYPE AS PER STANDARD DRAWING SC1.1.
32. CONCRETE SIDEWALKS AND WALKWAYS TO BE CONSTRUCTED AS PER CITY OF OTTAWA DETAIL SC2 (OR SC1.4) AND SC4.
33. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.
34. EXCAVATION FOR THE INSTALLATION OF SERVICES ALONG OR IN PROXIMITY OF A BUILDING OR A STRUCTURE IS TO BE CONTAINED WITHIN A TRENCH BOX WIDTH AND IS TO ENSURE NO CONFLICT WITH ANY FUTURE FOOTINGS. SERVICE TRENCHES SHALL BE BACKFILLED WITH GRANULAR 'A' COMPACTED TO 100% SPMD WHERE ADJACENT TO A BUILDING FOR THE SECTION PARALLEL TO THE UNIT PLUS 5.0 M PAST THE FRONT AND REAR OF THE UNIT. SELECT SUBGRADE MATERIAL. COMPACTED TO 100% SPD TO 1.0m BELOW EXISTING GRADE FOR FULL TRENCH WIDTH OF DISTURBED AREA SHALL BE USED FOR BACKFILL, INCLUDING ALONG ANY SEWERS AND WATERMAINS ADJACENT TO A BUILDING OR OTHER STRUCTURE.
35. MATCH EXISTING ELEVATIONS AT PROPERTY LIMITS. ENSURE POSITIVE DRAINAGE TOWARDS A SUITABLE OUTLET WHETHER INDICATED OR NOT.
36. THE CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AS SHOWN, INCLUDING HANDICAPPED PARKING SYMBOLS.
37. ROAD STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS.
38. PAVEMENT DESIGN TO BE IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION REPORT (SEPTEMBER 12, 2024), PREPARED BY EXP SERVICES INC. (Project Number: OTT-21004743-B0).

- ACCESS LANES AND HEAVY TRUCK LOADING AREAS:
- 50mm WEAR COURSE - HL-3 OR SUPERPAVE 12.5 Cat. B - ASPHALTIC CONCRETE
 - 70mm BINDER COURSE - HL-3 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
 - 150mm BASE - OPSS GRANULAR 'A' CRUSHED STONE
 - 600mm SUBBASE - OPSS GRANULAR 'B' TYPE II
- ASPHALT CEMENT TO BE A MINIMUM PERFORMANCE GRADE (PG) 58-34
- THE PAVEMENT GRANULAR BASE AND SUBBASE SHOULD BE PLACED IN MAXIMUM 300mm LIFTS AND COMPACTED TO A MINIMUM OF 100% OF THE MATERIALS SPMD USING SUITABLE COMPACTION EQUIPMENT.
- SUBGRADE TO BE EITHER FILL, IN-SITU SOILS, OR OPSS GRANULAR 'B' TYPE I OR II MATERIAL PLACED OVER IN SITU SOILS OR FILL.
- IF SOFT SPOTS DEVELOP IN THE SUBGRADE DURING COMPACTION OR DUE TO CONSTRUCTION TRAFFIC, THE AFFECTED AREAS SHOULD BE EXCAVATED AND REPLACED WITH OPSS GRANULAR 'B' TYPE I OR II MATERIAL.
- REQUIREMENT FOR ADDITIONAL GRANULAR 'B' AND/OR GEOTEXTILE TO BE CONFIRMED ON SITE BY GEOTECHNICAL ENGINEER.



WATERMAIN TABLE-Sta. 1+050.00 TO 1+145.24			
PVC DR-18 CL 150			
STATION ALONG WM	DETAIL	FINISHED GRADE	TOP OF WM
1+061.69	CONNECT TO EXISTING	85.23	82.80
1+064.80	WM CROSSING UNDER CULVERT	85.24	82.84
1+073.63	VALVE	85.57	83.17
1+098.76	22.5" BEND	85.59	83.17
1+119.08	45" BEND	85.57	83.17
1+123.29	HYDRANT & VALVE	85.51	83.11
1+136.96	VALVE	85.80	83.24
1+140.00	45" BEND	85.68	83.28
1+141.62	45" BEND	85.86	83.46
1+143.72	CAP	85.94	83.54

WATERMAIN TABLE-Sta. 2+050.00 TO 2+084.28			
TYPE-K COPPER			
STATION ALONG WM	DETAIL	FINISHED GRADE	TOP OF WM
2+055.00	CAP	85.96	83.56
2+051.50	45" BEND	85.88	83.48
2+053.28	45" BEND	85.68	83.28
2+057.72	22.5" BEND	85.64	83.24
2+075.89	45" BEND	85.61	83.21
2+077.96	45" BEND	85.78	83.38
2+079.00	CAP	85.81	83.41

NOTE: ALL WM CONSTRUCTED AT LESS THAN 2.4m BELOW FINISHED GRADE SHALL BE INSULATED IN ACCORDANCE WITH THE CITY OF OTTAWA'S REQUIREMENTS AS SET OUT IN THE CITY OF OTTAWA SPECIFICATION (F-4415).

KEY PLAN
N.T.S.

LEGEND

- SITE BOUNDARY
- DEDICATED SNOW STORAGE AREA
- EXISTING CATCH BASIN
- CATCH BASIN c/w ICD
- TEE AND ELBOW REAR YARD CATCH BASIN AND PERFORATED PIPE
- PROPOSED CATCH BASIN LEAD
- PROPOSED WATERMAIN, HYDRANT, CURB STOP AND SERVICE POST, VALVE & VALVE BOX AND REDUCER
- EXISTING WATERMAIN, VALVE & HYDRANT
- PROPOSED STORM SEWER & MANHOLE
- EXISTING STORM SEWER & MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE
- EXISTING SANITARY SEWER & MANHOLE
- CONCRETE BARRIER CURB
- RD
- DEPRESSURE CURB
- MOUNTABLE CURB
- CONC. SIDEWALK
- WOOD PRIVACY BARRIER
- NOISE BARRIER
- GRASSSED AREA
- RIP-RAP PER OPSD 810.010 (TYPE B)
- CLAY SEALS
- REMOVE AND REINSTATE
- WATER METER
- REMOTE METER

THESE DRAWINGS HAVE BEEN PRODUCED BY J.L. RICHARDS & ASSOCIATES LIMITED AND ARE SUBJECT TO COPYRIGHT AND USE RESTRICTIONS SET OUT IN THE APPLICABLE PROJECT CONTRACT. ANY USE, REUSE, OR MODIFICATION OF THESE DRAWINGS FOR PURPOSES OTHER THAN THE ORIGINAL PROJECT OR EXECUTION OF THE DESCRIBED WORK IS NOT PERMITTED OR ENDORSED WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF J.L.R. MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, OF THE SUITABILITY OR FITNESS OF THESE DRAWINGS FOR ANY OTHER PURPOSE, AND ANY PARTY WHICH CHOOSES TO USE, MODIFY, OR OTHERWISE RELY ON THESE DRAWINGS WITHOUT J.L.R.'S AUTHORIZATION ACCEPTS THESE LIMITATIONS AND DOES SO AT THEIR SOLE RISK AND WITHOUT LIABILITY TO J.L.R.

VERIFY SHEET SIZE AND SCALES. THE BAR TO THE RIGHT IS 25mm IF THIS IS A FULL SIZE DRAWING.

SCALE: 1:250

CLIENT:

CONSULTANT:

CONSULTANT:

PROJECT:

GAS STATION, COMMERCIAL BUILDING, DRIVE-THRU RESTAURANT & CAR WASH
2130 BRIAN COBURN BLVD - BLOCK 16
OTTAWA, ONTARIO

DRAWING:

DESIGN: MM

DRAWN: KC

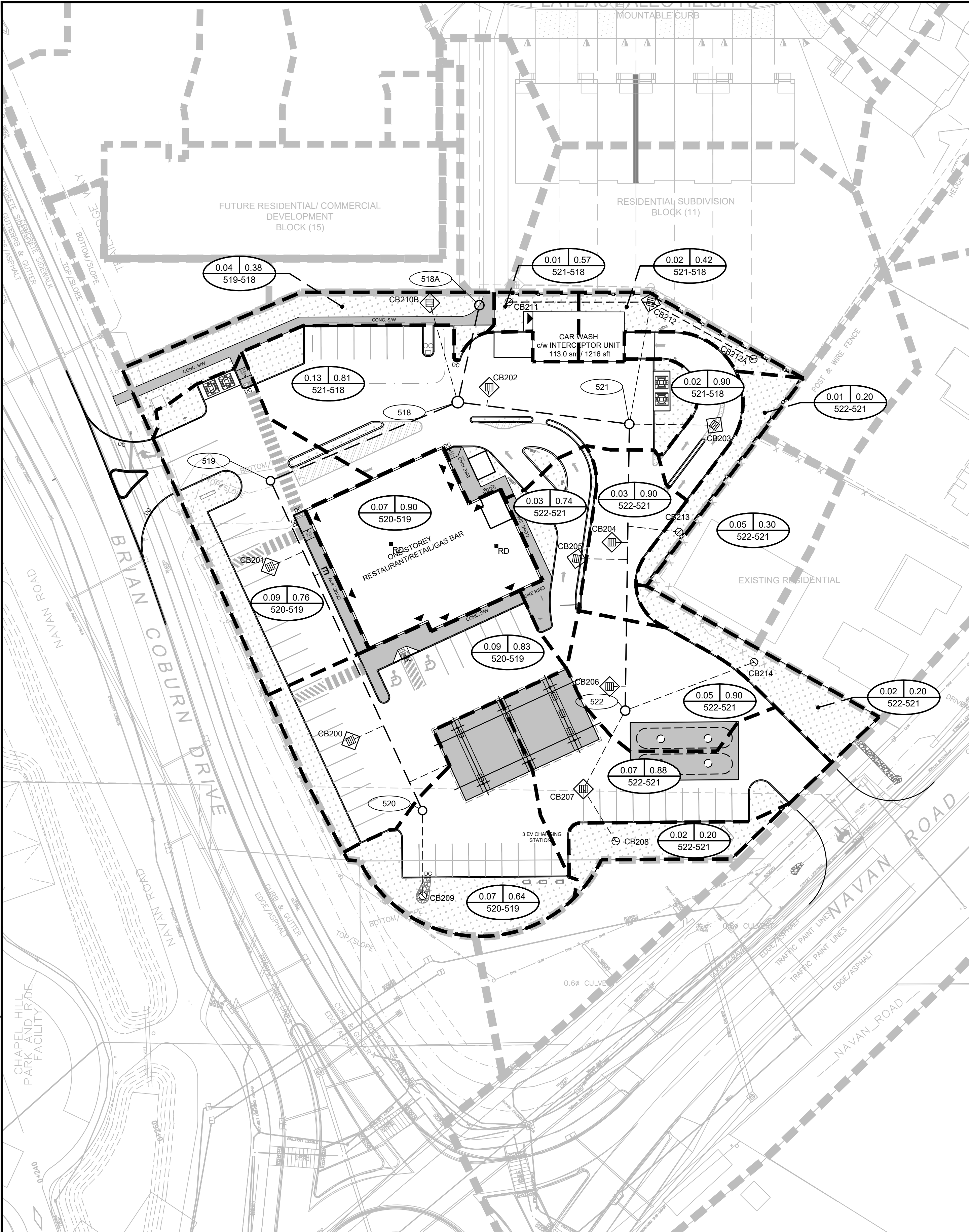
CHECKED: KF

JLR #: 29899-002

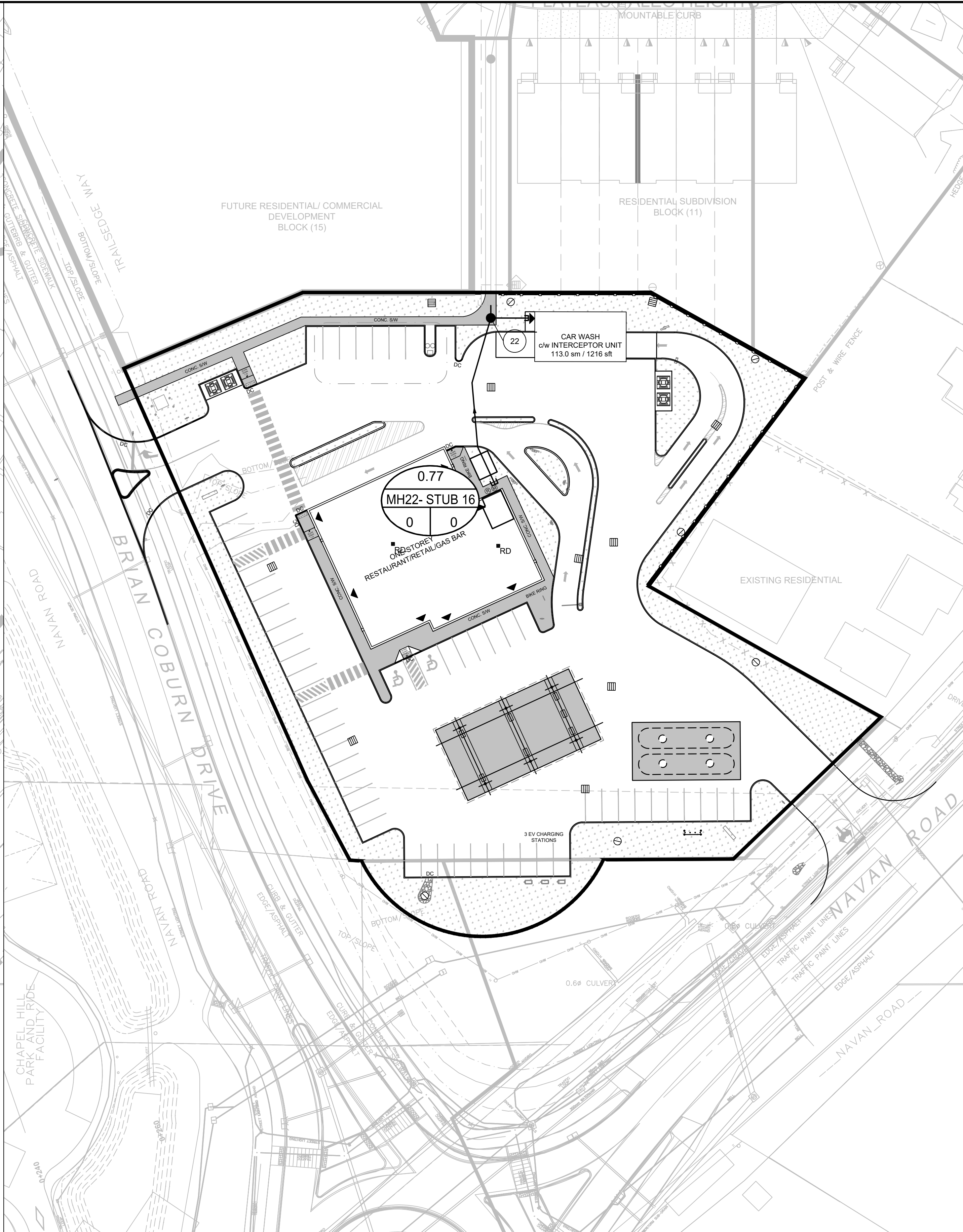
DRAWING #:

C01

File Location: P:\2000\028899-002 - Navan Subdivision\05-Production\01-Civil\3 - BLOCK 16 - Gas Bar\29899-003 C.DST-DSAN.dwg



STORM DRAINAGE



SANITARY DRAINAGE

KEY PLAN
N.T.S.

LEGEND

- SITE BOUNDARY
- - - PROPOSED STORM DRAINAGE BOUNDARY
- MAJOR OVERLAND FLOW DIRECTION
- AREA IN HECTARES
- RUNOFF COEFFICIENT
- PIPE REACH UPSTREAM CATCHBASIN TO DOWNSTREAM CATCHBASIN
- EXISTING STORM SEWER & MANHOLE
- PROPOSED STORM SEWER & MANHOLE
- PROPOSED SANITARY DRAINAGE BOUNDARY
- AREA IN HECTARES
- PIPE REACH UPSTREAM MAINTENANCE HOLE TO DOWNSTREAM MAINTENANCE HOLE
- POPULATION
- NUMBER OF UNITS
- EXISTING SANITARY SEWER & MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE

No.	ISSUE / REVISION	DD/MM/YY
5	ISSUED FOR FIFTH ENGINEERING SUBMISSION	30/09/2025
4	ISSUED FOR FOURTH ENGINEERING SUBMISSION	21/07/2025
3	ISSUED FOR THIRD ENGINEERING SUBMISSION	31/01/25
2	ISSUED FOR SECOND ENGINEERING SUBMISSION	13/09/24
1	ISSUED FOR FIRST ENGINEERING SUBMISSION	22/12/23

THESE DRAWINGS HAVE BEEN PRODUCED BY J.L. RICHARDS & ASSOCIATES LIMITED AND ARE SUBJECT TO COPYRIGHT AND USE RESTRICTIONS SET OUT IN THE APPLICABLE PROJECT CONTRACT. ANY USE, REUSE, OR MODIFICATION OF THESE DRAWINGS FOR PURPOSES OTHER THAN THE ORIGINAL PROJECT OR EXECUTION OF THE DESCRIBED WORK IS NOT PERMITTED OR ENDORSED WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF J.L.R. J.L.R. MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, OF THE SUITABILITY OR FITNESS OF THESE DRAWINGS FOR ANY OTHER PURPOSE, AND ANY PARTY WHICH CHOOSES TO USE, MODIFY, OR OTHERWISE RELY ON THESE DRAWINGS WITHOUT J.L.R.'S AUTHORIZATION ACCEPTS THESE LIMITATIONS AND DOES SO AT THEIR SOLE RISK AND WITHOUT LIABILITY TO J.L.R.

VERIFY SHEET SIZE AND SCALES. THE BAR TO THE RIGHT IS 25mm IF THIS IS A FULL SIZE DRAWING.

SCALE: 1:400

CLIENT:

Heafey GROUP

CONSULTANT:

J.L. Richards
ENGINEERS - ARCHITECTS - PLANNERS

CONSULTANT:

PROFESSIONAL STAMP
K.R. FERREY MORENO
100122432
2025-10-01
PROVINCE OF ONTARIO

PROJECT NORTH

PROJECT:

GAS STATION, COMMERCIAL BUILDING, DRIVE-THRU RESTAURANT & CAR WASH
2130 BRIAN COBURN BLVD - BLOCK 16
OTTAWA, ONTARIO

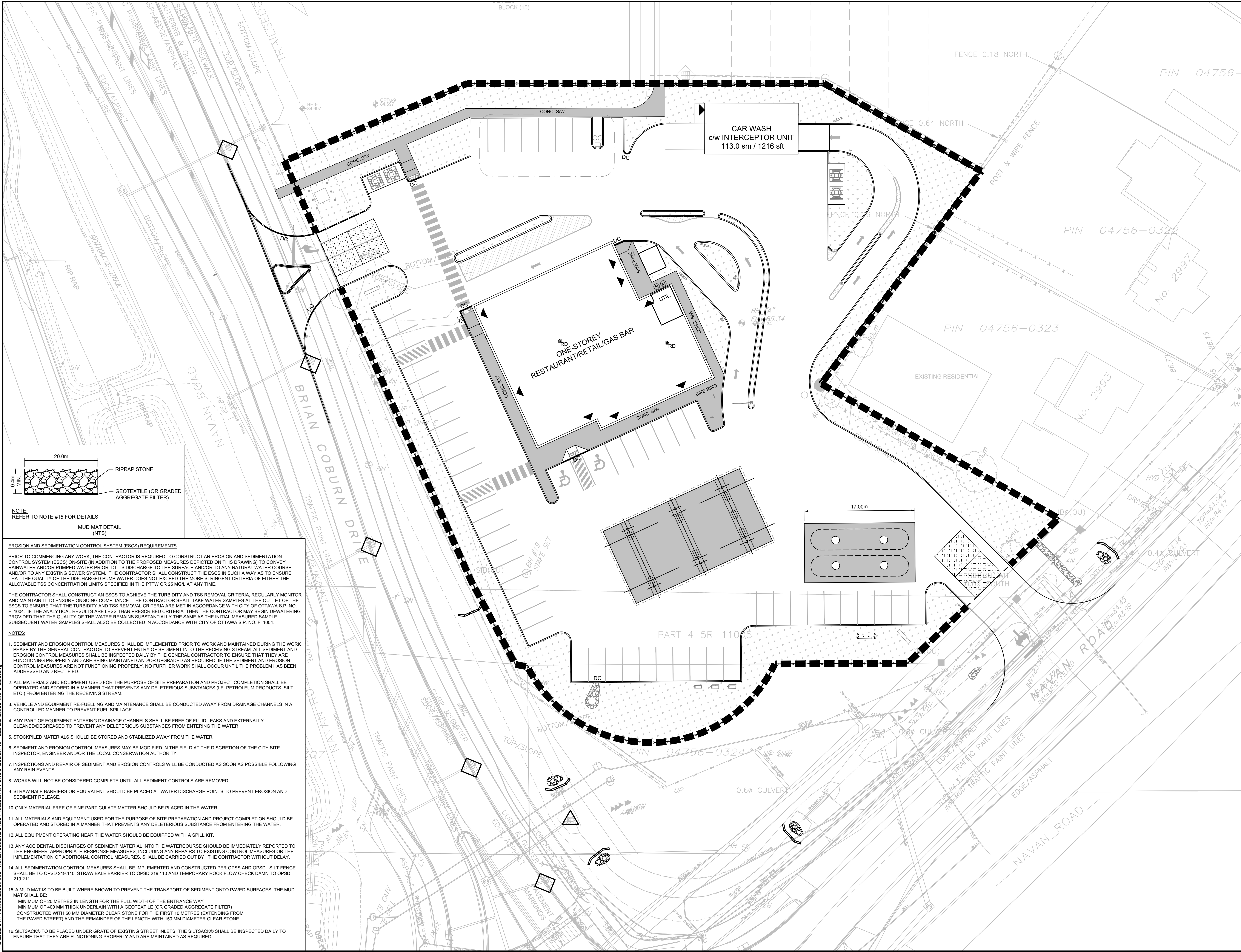
DRAWING:

STORM AND SANITARY DRAINAGE PLANS

DESIGN: MM	DRAWING #:
DRAWN: KC	C03
CHECKED: KF	
JLR #: 29899-002	

PLOT DATE: Tuesday, September 30, 2025 1:59:44 PM
CITY FILE NO. D07-16-21-0027

File Location: P:\2000\028899-002 - Navan Subdivision\05-Production\01-Civil\3. BLOCK 16 - Gas Bar\29899-003 C ESC.dwg



KEY PLAN
N.T.S.

LEGEND

SITE BOUNDARY

PROPOSED SILT FENCE

PROPOSED MUD MAT

PROPOSED STRAW BALE BARRIER

PROPOSED ROCK FLOW CHECK DAM

SILTSACK® FOR EXISTING STREET INLET

SILTSACK® FOR EXISTING CURB INLET CB's

5 ISSUED FOR FIFTH ENGINEERING SUBMISSION

30/09/2025

4 ISSUED FOR FOURTH ENGINEERING SUBMISSION

21/07/2025

3 ISSUED FOR THIRD ENGINEERING SUBMISSION

31/01/25

2 ISSUED FOR SECOND ENGINEERING SUBMISSION

13/09/24

1 ISSUED FOR FIRST ENGINEERING SUBMISSION

22/12/23

No.

ISSUE / REVISION

DDMMYY

THESE DRAWINGS HAVE BEEN PRODUCED BY J.L. RICHARDS & ASSOCIATES LIMITED AND ARE SUBJECT TO COPYRIGHT AND USE RESTRICTIONS SET OUT IN THE APPLICABLE PROJECT CONTRACT. ANY USE, REUSE, OR MODIFICATION OF THESE DRAWINGS FOR PURPOSES OTHER THAN THE ORIGINAL PROJECT OR EXECUTION OF THE DESCRIBED WORK IS NOT PERMITTED OR ENDORSED WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF J.L.R. J.L.R. MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, OF THE SUITABILITY OR FITNESS OF THESE DRAWINGS FOR ANY OTHER PURPOSE, AND ANY PARTY WHICH CHOOSES TO USE, MODIFY, OR OTHERWISE RELY ON THESE DRAWINGS WITHOUT J.L.R.'S AUTHORIZATION ACCEPTS THESE LIMITATIONS AND DOES SO AT THEIR SOLE RISK AND WITHOUT LIABILITY TO J.L.R.

VERIFY SHEET SIZE AND SCALES. THE BAR TO THE RIGHT IS 25mm IF THIS IS A FULL SIZE DRAWING.

SCALE: 1:250

CLIENT:

Heafey GROUP

CONSULTANT:

J.L. Richards

ENGINEERS - ARCHITECTS - PLANNERS

CONSULTANT:

J.L. Richards

ENGINEERS - ARCHITECTS - PLANNERS

PROFESSIONAL STAMP

PROJECT NORTH

PROJECT:

GAS STATION, COMMERCIAL BUILDING, DRIVE-THRU RESTAURANT & CAR WASH

2130 BRIAN COBURN BLVD - BLOCK 16

OTTAWA, ONTARIO

DRAWING:

DESIGN: MM

DRAWN: KC

CHECKED: KF

JLR #:

29899-002

DRAWING #:

C04

PLOT DATE: Tuesday, September 30, 2025 1:59:58 PM
CITY FILE NO. D07-16-21-0027