

HALO CAR WASH 3555 BORRISOKANE RD BARRHAVEN, ON

REVISION 06



KEY PLAN (N.T.S.)

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HALO CAR WASH
3555 BORRISOKANE RD, BARRHAVEN, ON
REV.06 - RE-ISSUED FOR APPROVAL - MARCH 31st, 2023
LRL PROJECT no: 210691

NOT AUTHENTIC UNLESS SIGNED AND DATED

D07-12-22-0085

#18788

GENERAL NOTES

- 1. ALL WORKS MATERIALS SHALL CONFIRM TO THE LAST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

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.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN MANNER THAT STRICTLY MEETS THE REQUIREMENT OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGES THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVELY FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONDS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCE, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR OTHER RECOGNIZED TECHNOLOGIES AND METHOD AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF OPSS 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY. AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON SITE AT ALL TIME WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT THE MOMENTS NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF WRITTEN DESCRIPTION AND DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTOR, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE SEWER WATERCOURSE AND AVOIDS DAMAGE TO CONTROL MEASURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FRO EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BRACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY THE APPLICABLE REGULATORY AGENCY. 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.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HHELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE RELEASE OF ANY SEDIMENT OR DEBRIS INTO ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL.

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR THAT ALL, THE CONTRACTOR ADMINISTRATOR OR A REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY RENEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

SPILL CONTROL NOTES

- 1. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METRES FROM WATERCOURSE, STREAMS, CREEKS, WOODLOTS, AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.

MUD MAT NOTES

- 1. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.

SITE GRADING NOTES

- 1. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.

ROADWORK SPECIFICATIONS

- 1. ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT, PREPARED BY IRL ASSOCIATES, DATED NOVEMBER 2020.

SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

GENERAL

- 1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.

SANITARY

- 1. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).

STORM

- 17. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.2, OR LATEST AMENDMENT.

WATERMAIN

- 30. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CAD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS ISSUED FOR CONSTRUCTION, THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE, NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY IRL ASSOCIATES LTD. (IRL) WITHOUT OBTAINING IRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST IRL AND TO RELEASE IRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS IRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

THE CONTRACTOR AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO ANY OF THE CONTRACT DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF IRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH IRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND DEPTH OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND CONDITIONS, OR FOR PROBLEMS ARISING FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE. THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.



Table with 4 columns: No., REVISIONS, BY, DATE. Contains revision history entries.



NOT AUTHENTIC UNLESS SIGNED AND DATED

IRL ENGINEERING | INGENIERIE logo and contact information: 5430 Canotek Road | Ottawa, ON, K1J 9G2

CLIENT: HALO CAR WASH INC.

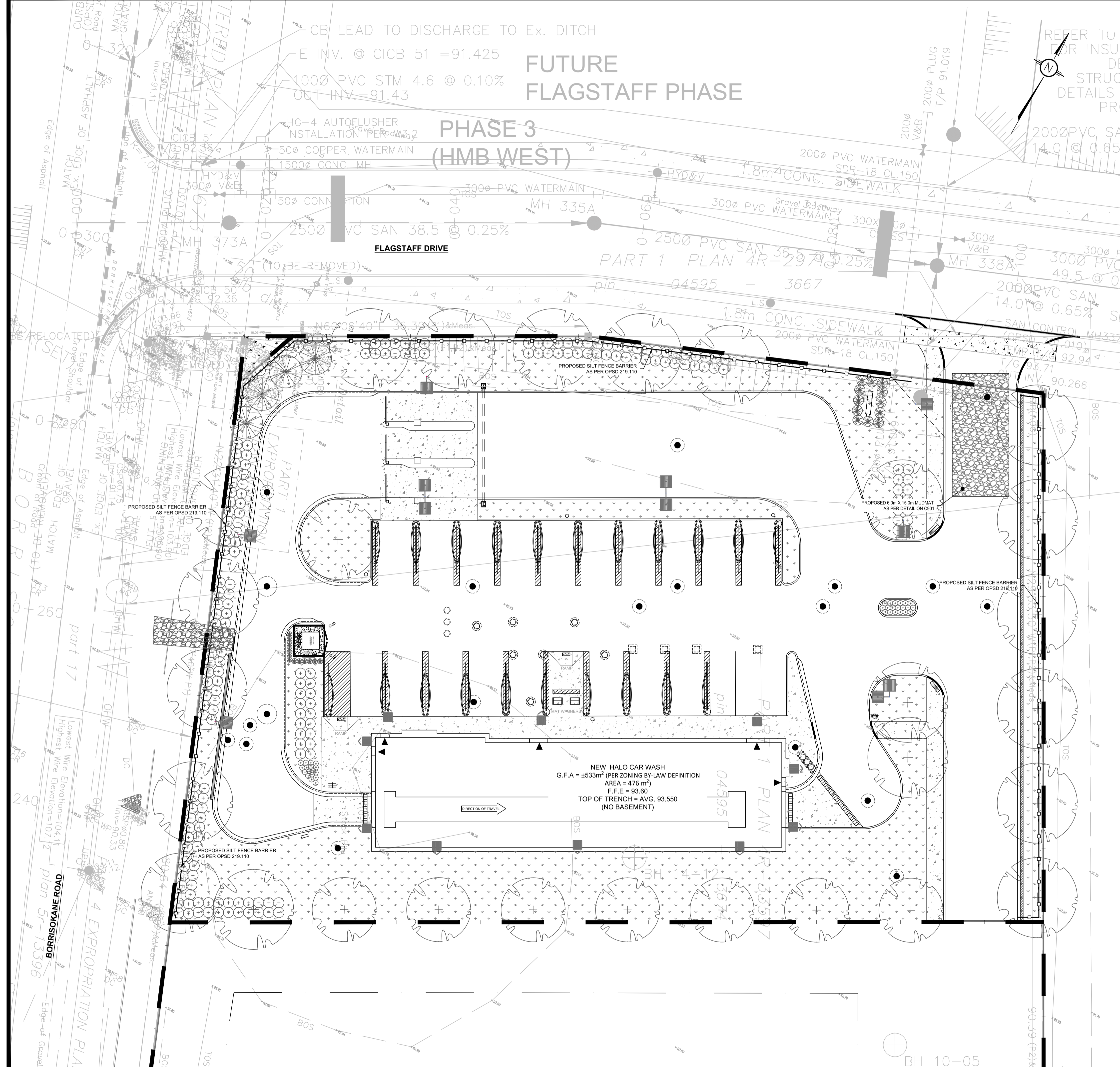
DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH 3555 BORRISOKANE RD BARRHAVEN, ON

DRAWING TITLE: GENERAL NOTES PROJECT NO: 210691 DATE: JANUARY 2022



D07-12-22-0085



LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
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- WATERSHED NAME
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USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE THE USE AND INTENT OF THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THE DATA AND INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS AND SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.

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UNAUTHORIZED CHANGES:

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IN ADDITION, THE CLIENT AGREES TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRI FROM ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

GENERAL NOTES:

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CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



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CLIENT: HALO CAR WASH INC.

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PROJECT: HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLAN

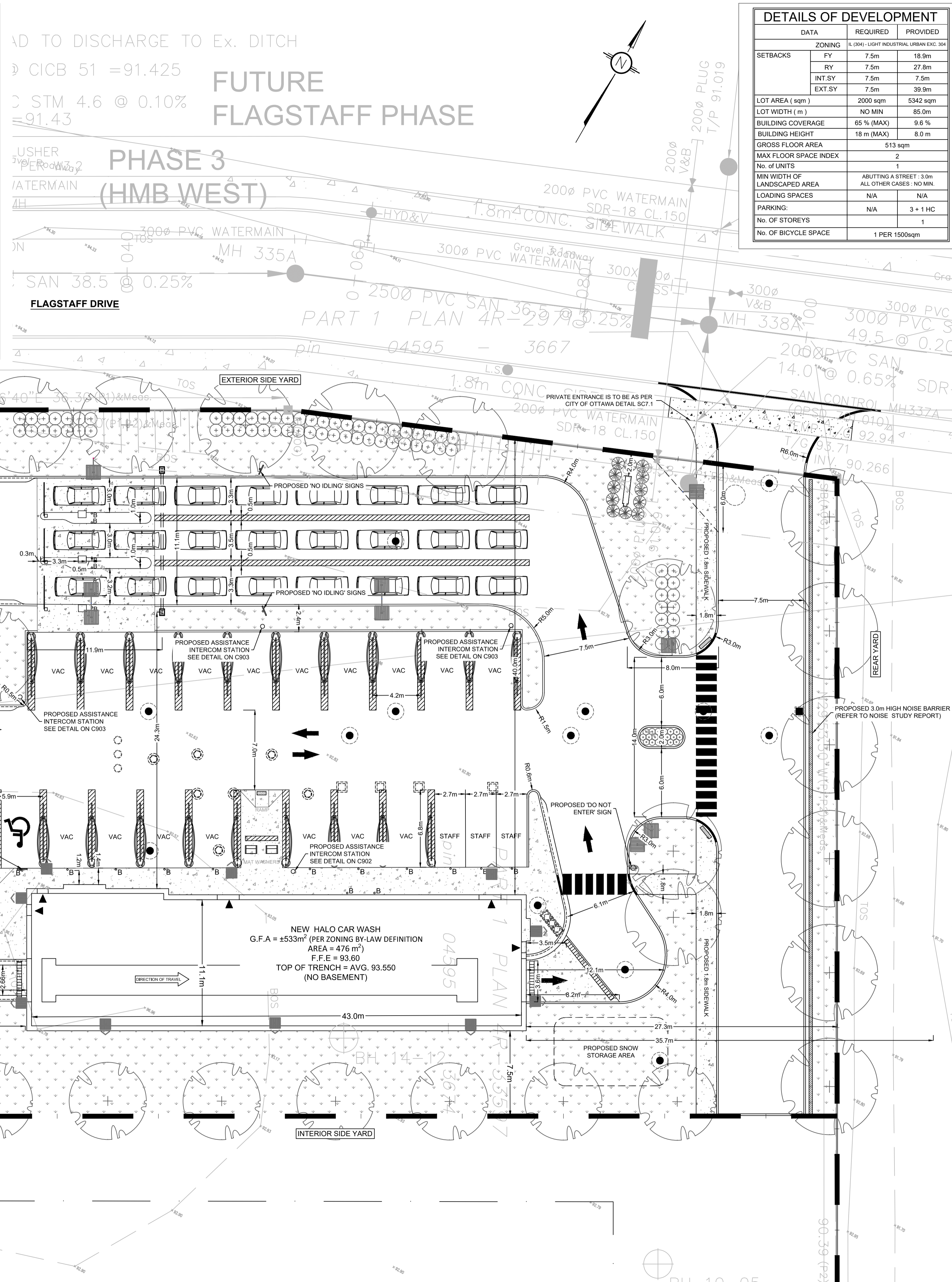
PROJECT NO: 210691 DATE: JANUARY 2022

C101

D07-12-22-0085 #18788



KEY PLAN
N.T.S.



DETAILS OF DEVELOPMENT		
DATA	REQUIRED	PROVIDED
ZONING	9.000 - LIGHT INDUSTRIAL URBAN EXC. 304	
SETBACKS		
FY	7.5m	18.9m
RY	7.5m	27.8m
INT.SY	7.5m	7.5m
EXT.SY	7.5m	39.9m
LOT AREA (sqm)	2000 sqm	5342 sqm
LOT WIDTH (m)	NO MIN	85.0m
BUILDING COVERAGE	65% (MAX)	9.6%
BUILDING HEIGHT	18 m (MAX)	8.0 m
GROSS FLOOR AREA		513 sqm
MAX FLOOR SPACE INDEX		2
No. of UNITS		1
MIN WIDTH OF LANDSCAPED AREA	ABUTTING A STREET: 3.0m ALL OTHER CASES: NO MIN.	
LOADING SPACES	N/A	N/A
PARKING	N/A	3 + 1 HC
No. of STOREYS		1
No. of BICYCLE SPACE		1 PER 1500sqm

LEGEND:

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- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

TOPOGRAPHIC INFORMATION
TOPOGRAPHIC INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. PART OF LOT 11, CONCESSION 3 (RIDEAU FRONT), GEOGRAPHIC TOWNSHIP OF NEPEAN, CITY OF OTTAWA. REVISED FLOOR AREA FOR MV. APPLICATION DATED JANUARY 21st 2022.

ELEVATION NOTES
1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that its relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES
1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

Bearings are grid, derived from Can-Net 2016 Real Time Network GPS observations referenced to Specified Control Points 01919761338 and 01919871649, MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

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No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



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LRJ
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lri.ca | (613) 842-3434

CLIENT: **HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: **HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON**

DRAWING TITLE: **SITE DEVELOPMENT PLAN**

PROJECT NO: 210691 DATE: JANUARY 2022

C201

PAVEMENT STRUCTURE

COURSE	MATERIAL	THICKNESS (mm)	
		AUTOMOBILE PARKING	TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL 3 A/C (PG 58-28)	50	40
BINDER	HL 8 A/C (PG 58-28)	-	50
BASECOURSE	OPSS GRANULAR "A"	150	150
SUBBASE	OPSS GRANULAR "B" TYPE II	350	450

NOTE:
IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY SURFICIAL OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELETERIOUS MATERIALS SHOULD BE REMOVED FROM THE PROPOSED PAVED AREAS. THE EXPOSED SUBGRADE SHOULD BE INSPECTED AND APPROVED BY GEOTECHNICAL PERSONNEL, AND ANY SOFT AREAS EVIDENT SHOULD BE SUBCAVATED AND REPLACED WITH SUITABLE EARTH BORROW APPROVED BY THE GEOTECHNICAL ENGINEER. THE SUBGRADE SHOULD BE SHAPED AND CROWNED TO PROMOTE DRAINAGE OF THE SITE DRAINAGE STRUCTURES. FOLLOWING APPROVAL OF THE PREPARATION OF THE SUBGRADE, THE PAVEMENT GRANULARS MAY BE PLACED.
REFER TO LATEST GEOTECHNICAL REPORT PREPARED BY LRL ENGINEERING LTD.

LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3.1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIST
- PROPOSED GRASS AREA (100MM TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- PROPOSED ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- MATCH INTO EXISTING ELEVATION
- EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- EXISTING STORM SEWER
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- EXISTING WATERMAIN
- EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
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- WATERSHED NAME
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SCALE: 1:200

SUBJECT FOR APPROVAL

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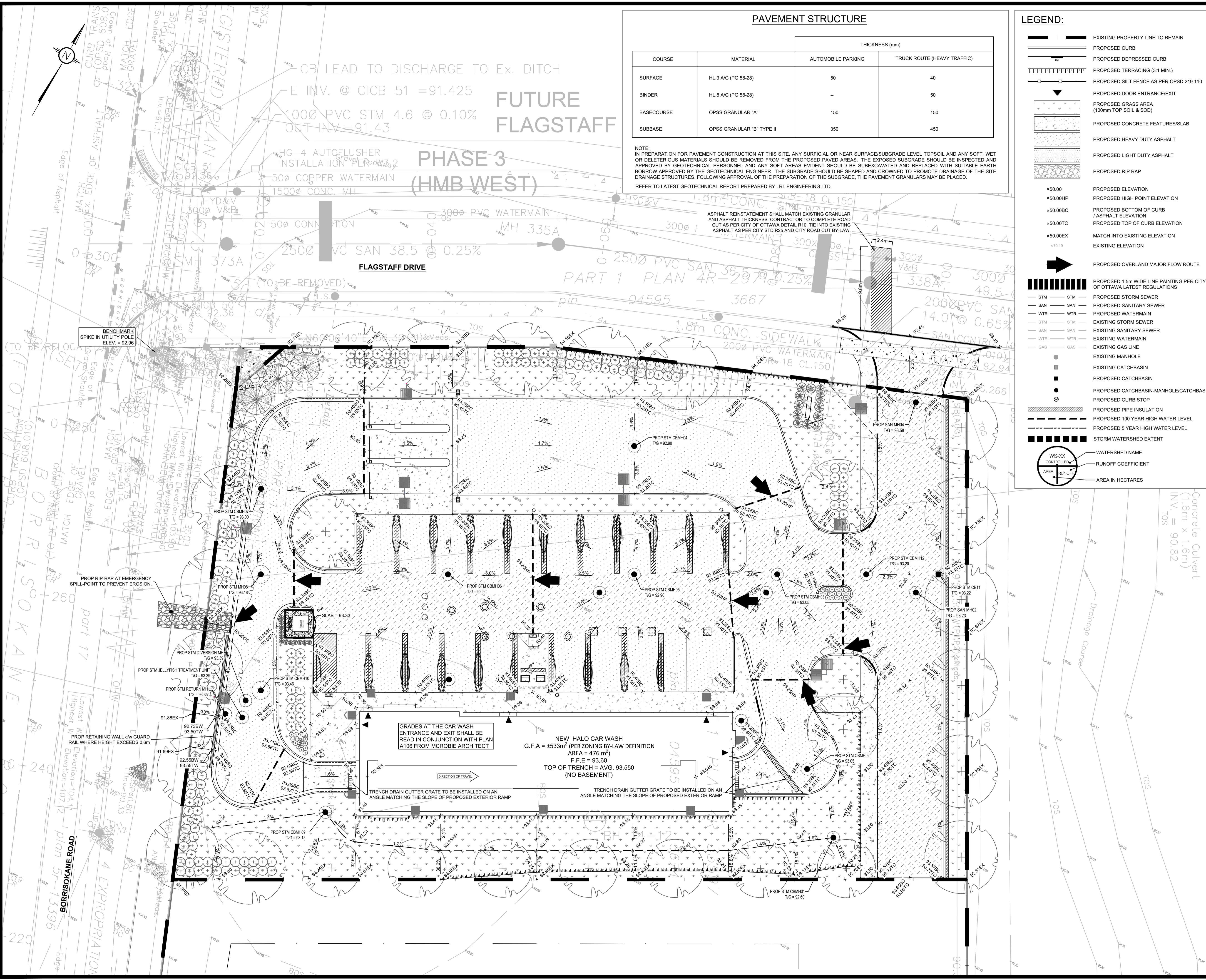
CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

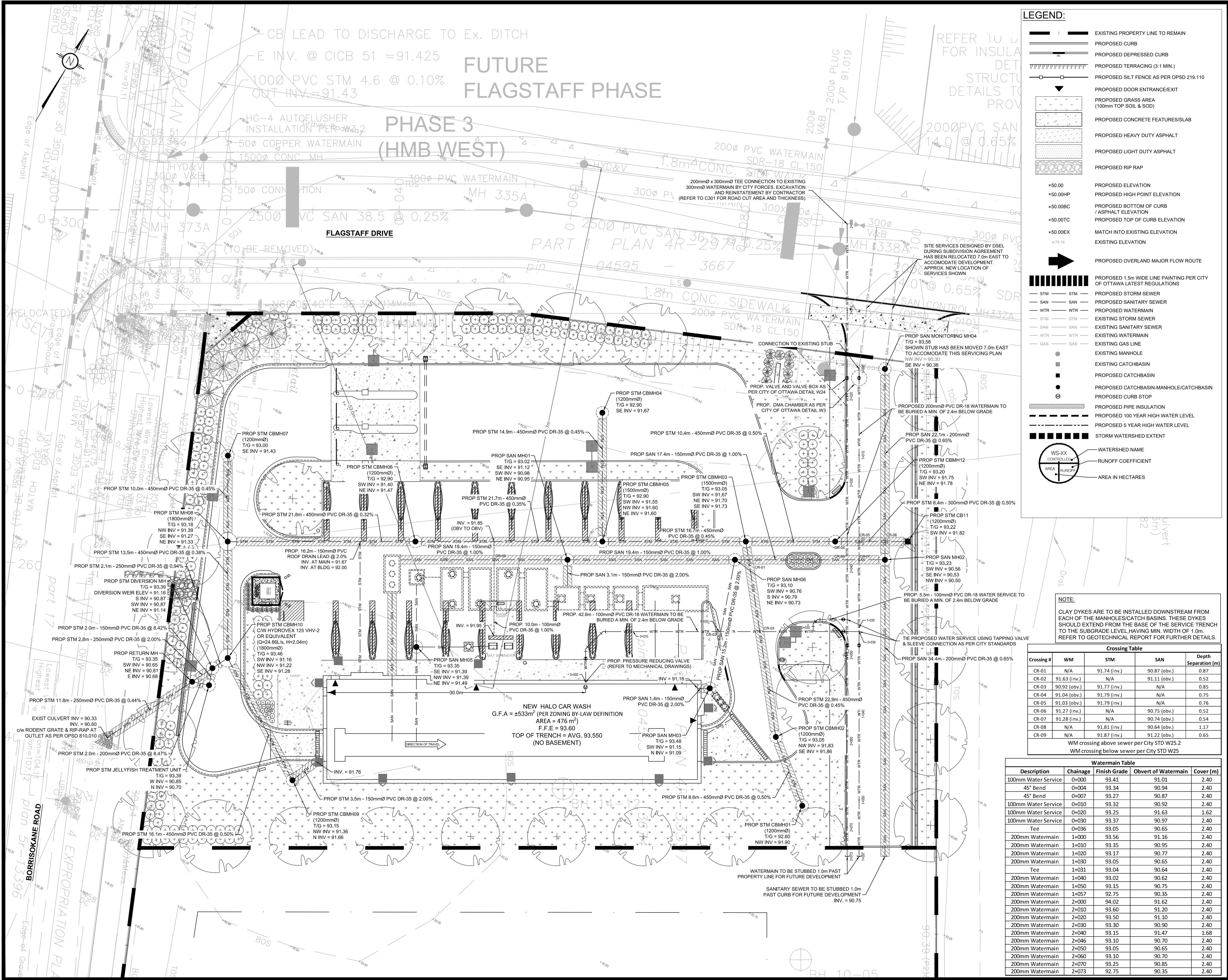
PROJECT: HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON

DRAWING TITLE: GRADING AND DRAINAGE PLAN

PROJECT NO: 210691
DATE: JANUARY 2022
C301



D07-12-22-0085



LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
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NOTE:
CLAY DYKES ARE TO BE INSTALLED DOWNSTREAM FROM EACH OF THE MANHOLES/CATCH BASINS. THESE DYKES SHOULD EXTEND FROM THE BASE OF THE SERVICE TRENCH TO THE SUBGRADE LEVEL, HAVING MIN. WIDTH OF 1.0m. REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS.

Crossing Table

Crossing #	WM	STM	SAN	Depth Separation (m)
CR-01	N/A	91.74 (inv.)	90.87 (obv.)	0.87
CR-02	91.63 (inv.)	N/A	91.11 (obv.)	0.52
CR-03	90.92 (obv.)	91.77 (inv.)	N/A	0.85
CR-04	91.04 (obv.)	91.79 (inv.)	N/A	0.75
CR-05	91.03 (obv.)	91.79 (inv.)	N/A	0.76
CR-06	91.27 (inv.)	N/A	90.75 (obv.)	0.52
CR-07	91.28 (inv.)	N/A	90.74 (obv.)	0.54
CR-08	N/A	91.81 (inv.)	90.64 (obv.)	1.17
CR-09	N/A	91.87 (inv.)	91.22 (obv.)	0.65

WM crossing above sewer per City STD W25.2
WM crossing below sewer per City STD W25

Watermain Table

Description	Chainage	Finish Grade	Obvert of Watermain	Cover (m)
100mm Water Service	0+000	93.41	91.01	2.40
45° Bend	0+004	93.34	90.94	2.40
45° Bend	0+007	93.27	90.87	2.40
100mm Water Service	0+010	93.32	90.92	2.40
100mm Water Service	0+020	93.25	91.63	1.62
100mm Water Service	0+030	93.37	90.97	2.40
Tee	0+036	93.05	90.65	2.40
200mm Watermain	1+000	93.56	91.16	2.40
200mm Watermain	1+010	93.35	90.95	2.40
200mm Watermain	1+020	93.17	90.77	2.40
200mm Watermain	1+030	93.05	90.65	2.40
Tee	1+031	93.04	90.64	2.40
200mm Watermain	1+040	93.02	90.62	2.40
200mm Watermain	1+050	93.15	90.75	2.40
200mm Watermain	1+057	92.75	90.35	2.40
200mm Watermain	2+000	94.02	91.62	2.40
200mm Watermain	2+010	93.60	91.20	2.40
200mm Watermain	2+020	93.50	91.10	2.40
200mm Watermain	2+030	93.30	90.90	2.40
200mm Watermain	2+040	93.15	90.75	1.68
200mm Watermain	2+046	93.10	90.70	2.40
200mm Watermain	2+050	93.05	90.65	2.40
200mm Watermain	2+060	93.10	90.70	2.40
200mm Watermain	2+070	93.25	90.85	2.40
200mm Watermain	2+073	92.75	90.35	2.40

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LRI ENGINEERING & INGÉNIERIE
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www.lri.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. **DRAWN BY:** M.L. **APPROVED BY:** M.B.

PROJECT: HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON

DRAWING TITLE: SERVICING PLAN

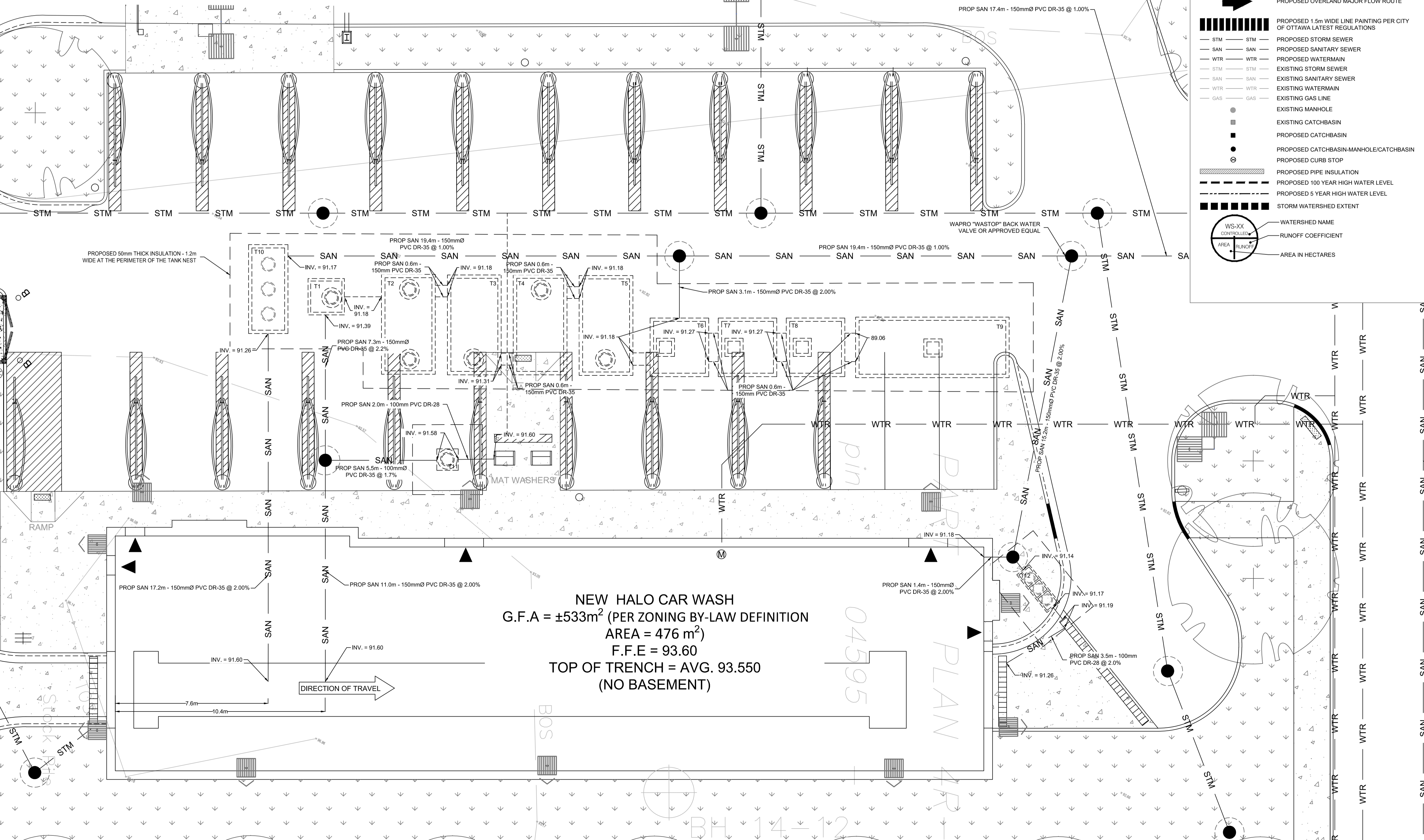
PROJECT NO.: 210691 **DATE:** JANUARY 2022

C401

List of Underground Tanks

Water Reclamation Tanks			
For Validation	Tank ID	Tank Name	Model
	T1	Wilkinson Sand Tank	Wilkinson Model H4H
	T2	Wilkinson Settling Tank	Wilkinson Model H22.2H
	T3	Wilkinson Settling Tank	Wilkinson Model H22.2H
	T4	Wilkinson Settling Tank	Wilkinson Model H22.2H
	T5	Wilkinson Settling Tank	Wilkinson Model H22.2H
	T6	Wilkinson Aeration Tank	Wilkinson Model 2.5M
	T7	Wilkinson Clean Water Tank	Wilkinson Model 2.5M
	T8	Wilkinson Clarifier Tank	Wilkinson Model 2.5M
	T9	Wilkinson Biological Tank	Wilkinson Model H50.1S
Sediment Trap and other tanks on site			
	T10	Wilkinson Oil Grit Separator	Wilkinson Model 1075
	T11	Wilkinson Mat Washer Grit Tank	Wilkinson Model H1.35S
	T12	Wilkinson Oil Interceptor	Wilkinson Model 230

NOTE: FOR ADDITIONAL INFORMATION, REFER TO WATER RECLAMATION SYSTEM DESIGN BY AQUA BIO. ALL THE PROPOSED UNDERGROUND WILKINSON TANKS TO BE TRAFFIC RATED AND TO BE PROPERLY INSTALLED AS PER WILKINSON INSTALLATIONS GUIDELINES.



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UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRI ASSOCIATES LTD. (LRI) WITHOUT OBTAINING LRI'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRI AND TO RELEASE LRI FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRI FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRI'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRI AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRI AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

5m 2 0 5m
SCALE: 1:200

SUBJECT FOR APPROVAL

No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
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03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
 ENGINEERING | INGENIERIE
 5430 Canotek Road | Ottawa, ON, K1J 9G2
 www.lri.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

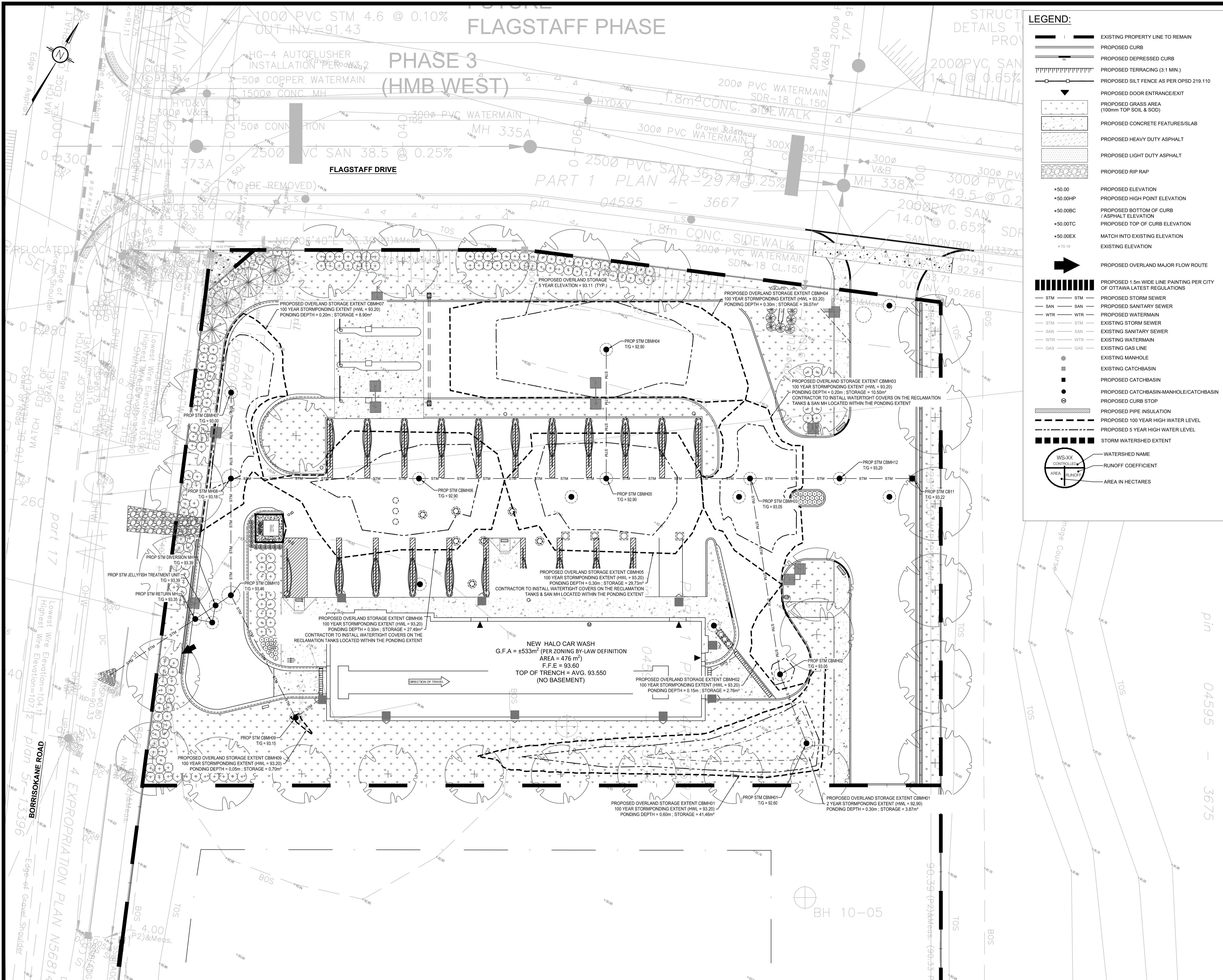
DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH
 3555 BORRISOKANE RD
 BARRHAVEN, ON

DRAWING TITLE: CAR WASH WASTEWATER TREATMENT & RECLAMATION SYSTEM

PROJECT NO: 210691 DATE: JANUARY 2022

C402



LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIST
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- *50.00 PROPOSED ELEVATION
- *50.00HP PROPOSED HIGH POINT ELEVATION
- *50.00BC PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- *50.00TC PROPOSED TOP OF CURB ELEVATION
- *50.00EX MATCH INTO EXISTING ELEVATION
- x 70.19 EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- STM - STM PROPOSED STORM SEWER
- SAN - SAN PROPOSED SANITARY SEWER
- WTR - WTR PROPOSED WATERMAIN
- STM - STM EXISTING STORM SEWER
- SAN - SAN EXISTING SANITARY SEWER
- WTR - WTR EXISTING WATERMAIN
- GAS - GAS EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WS-XX WATERSHED NAME
- AREA RUNOFF COEFFICIENT
- AREA IN HECTARES

USE AND INTERPRETATION OF DRAWINGS

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CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND NOTES, OR FROM FAILURE TO OBTAIN NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT.

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SUBJECT FOR APPROVAL

No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT: **HALO CAR WASH INC.**

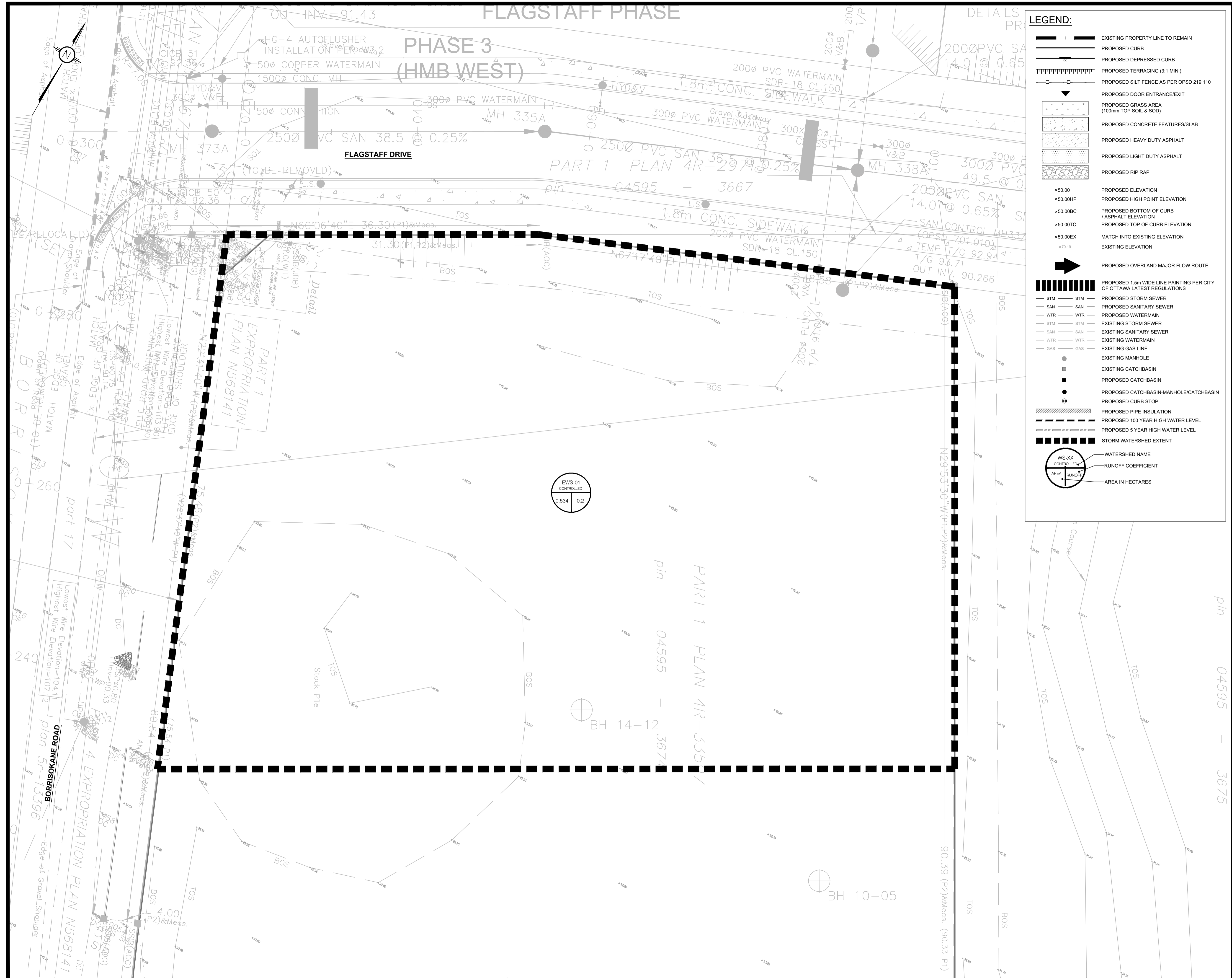
DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: **HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON**

DRAWING TITLE: **STORMWATER MANAGEMENT PLAN**

PROJECT NO: 210691 DATE: JANUARY 2022

C601



LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- PROPOSED ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- MATCH INTO EXISTING ELEVATION
- EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT

Watershed Name: WS-XX

Runoff Coefficient: AREA CONTROLLED

Area in Hectares: AREA, RUNOFF

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE THE WORK AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE BUT NOT LIMITED TO THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS REQUIRED BY ALL WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

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SUBJECT FOR APPROVAL

No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT: **HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: **HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON**

DRAWING TITLE: **PRE-DEVELOPMENT
WATERSHED PLAN**

PROJECT NO: 210691 DATE: JANUARY 2022

C701

#18788

FLAGSTAFF PHASE

PHASE 3 (HMB WEST)

FLAGSTAFF DRIVE

NEW HALO CAR WASH
G.F.A. = ±533m² (PER ZONING BY-LAW DEFINITION)
AREA = 476 m²
F.F.E. = 93.60
TOP OF TRENCH = AVG. 93.550
(NO BASEMENT)

LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIST
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- PROPOSED ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- MATCH INTO EXISTING ELEVATION
- EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

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SCALE: 1:200

SUBJECT FOR APPROVAL

No.	REVISIONS	BY	DATE
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05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

NOT AUTHENTIC UNLESS SIGNED AND DATED

L.R.I.
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5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lri.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON

DRAWING TITLE: POST-DEVELOPMENT WATERSHED PLAN

PROJECT NO: 210691 DATE: JANUARY 2022

C702

FLAGSTAFF PHASE

PHASE 3 (HMB WEST)

FLAGSTAFF DRIVE

NEW HALO CAR WASH
G.F.A = ±533m² (PER ZONING BY-LAW DEFINITION)
AREA = 476 m²
F.F.E = 93.60
TOP OF TRENCH = AVG. 93.550
(NO BASEMENT)

LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- PROPOSED ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- MATCH INTO EXISTING ELEVATION
- EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE THE SCOPE AND INTENT OF THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.

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AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CAD FILES OR OTHER ELECTRONIC MEDIA AND COPIES THEREOF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

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UNAUTHORIZED CHANGES:

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

SCALE: 1:200

SUBJECT FOR APPROVAL

No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
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01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



NOT AUTHENTIC UNLESS SIGNED AND DATED



LRJ
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

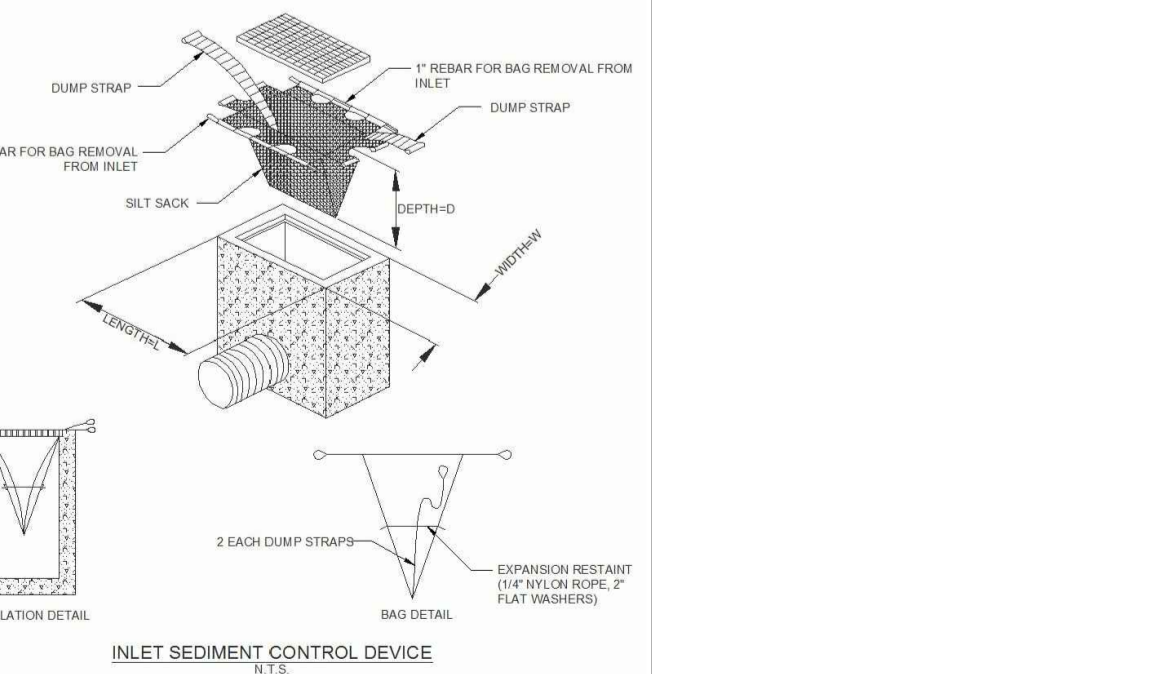
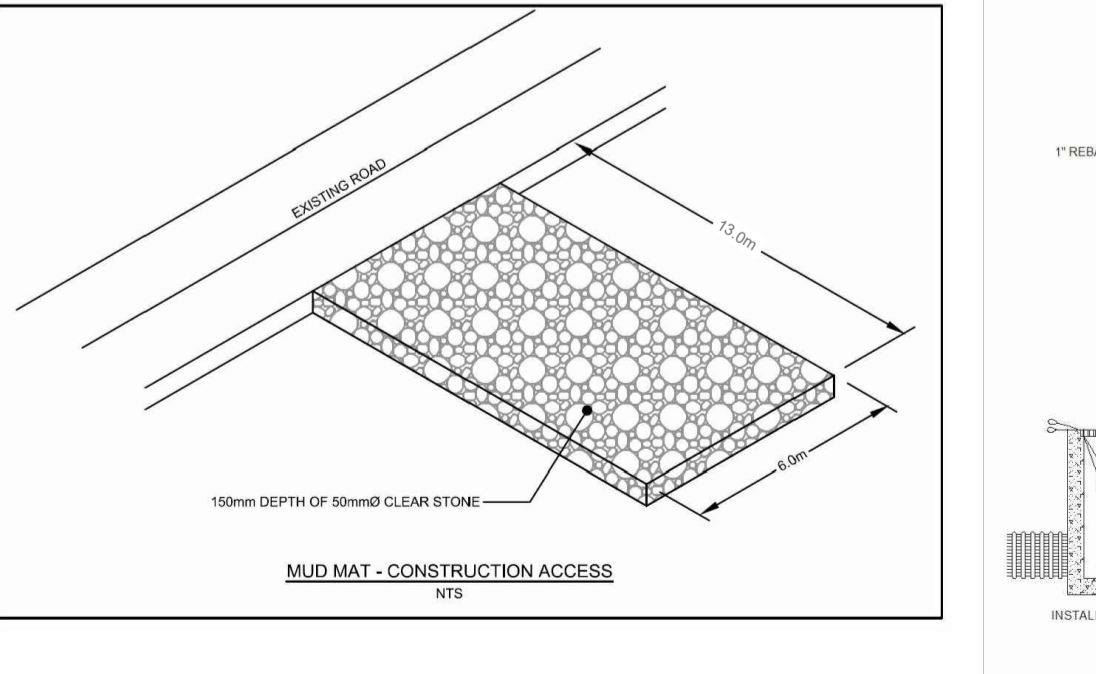
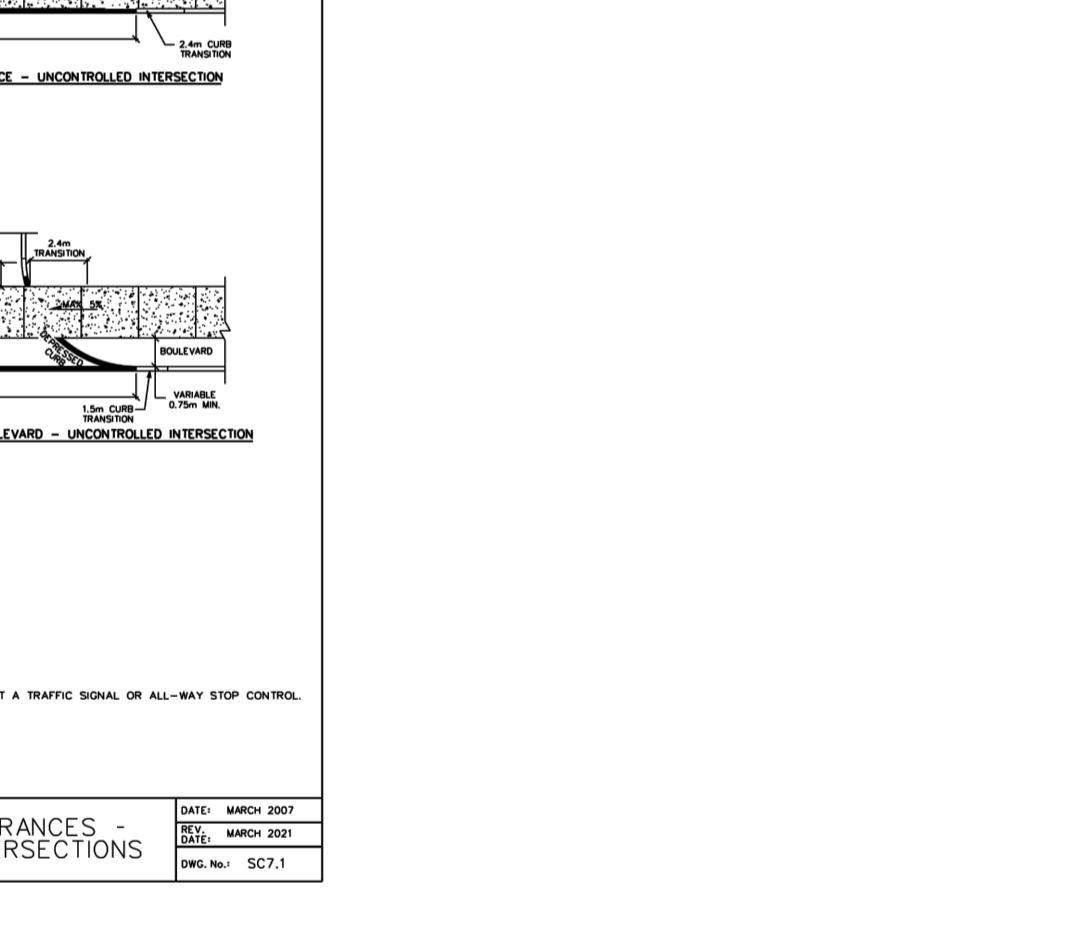
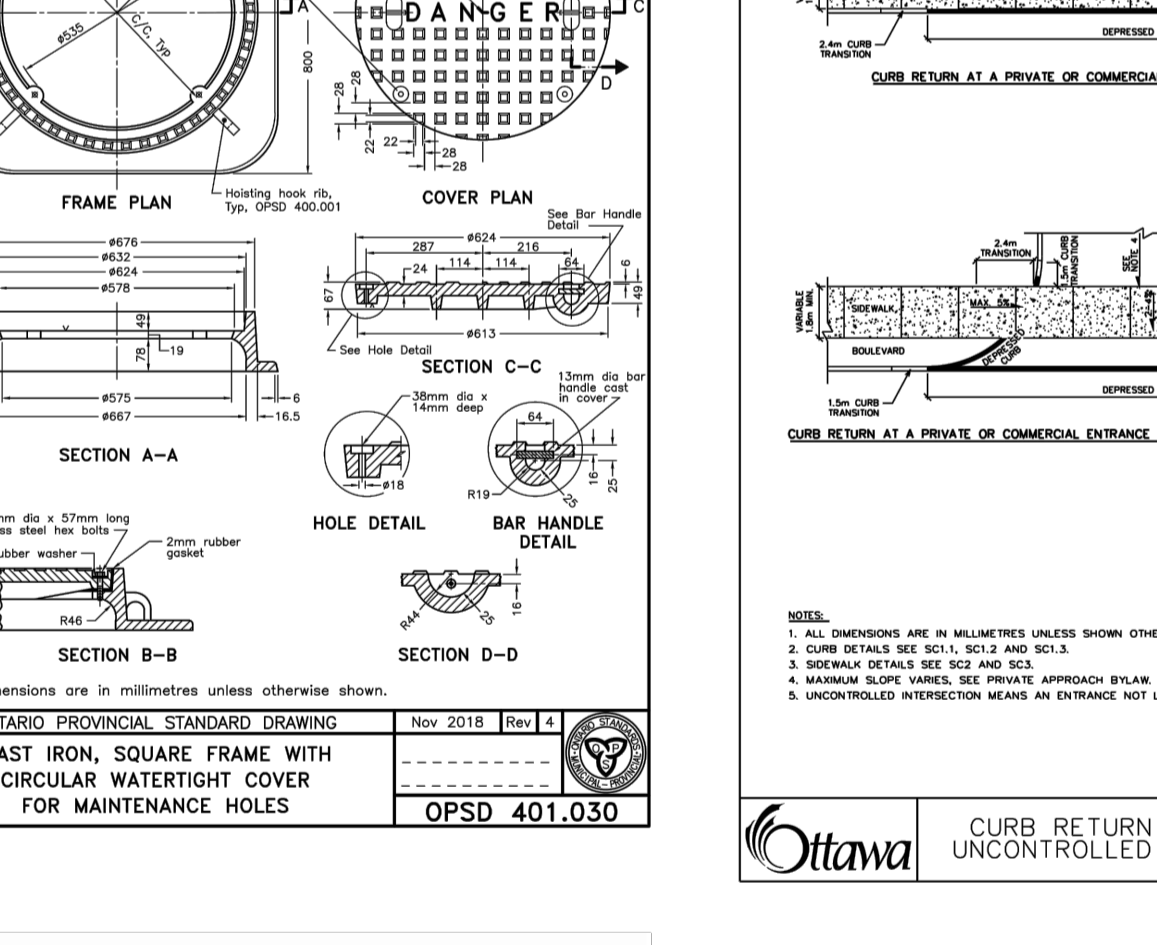
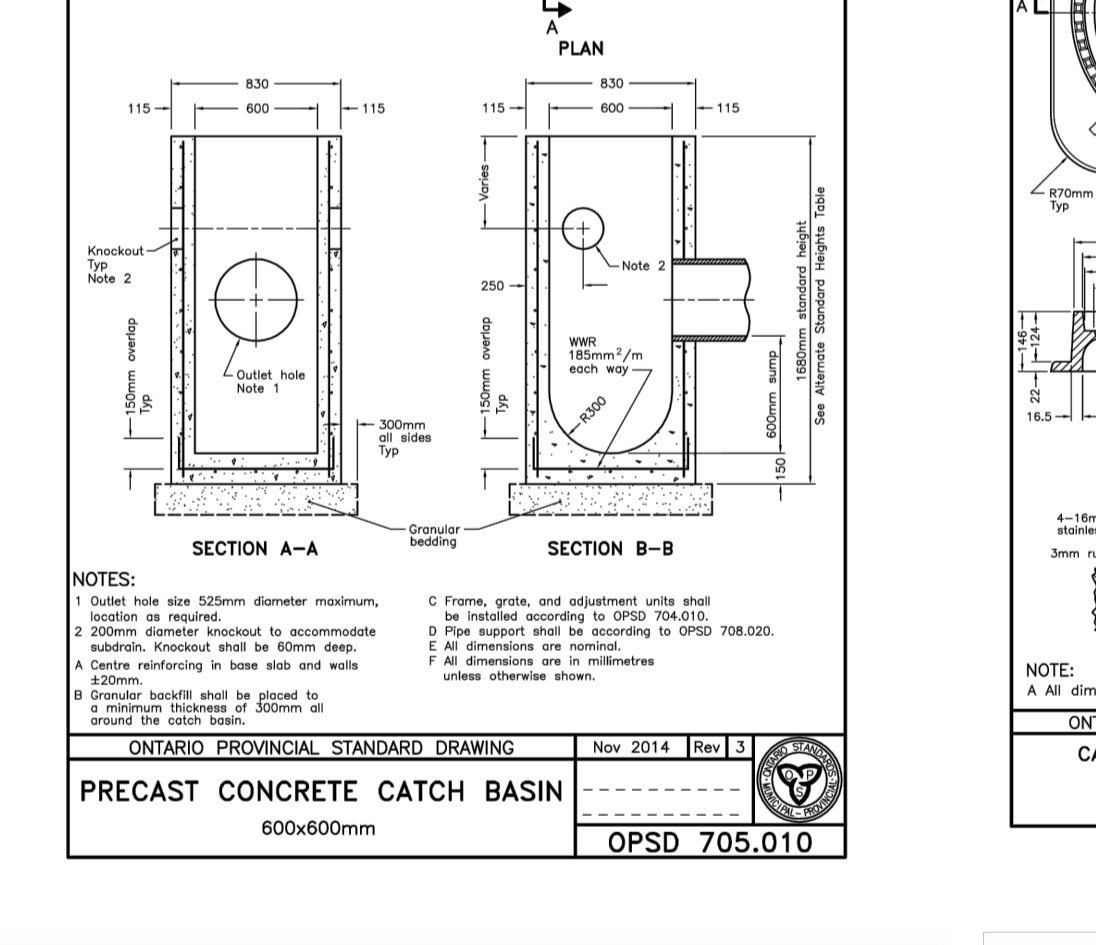
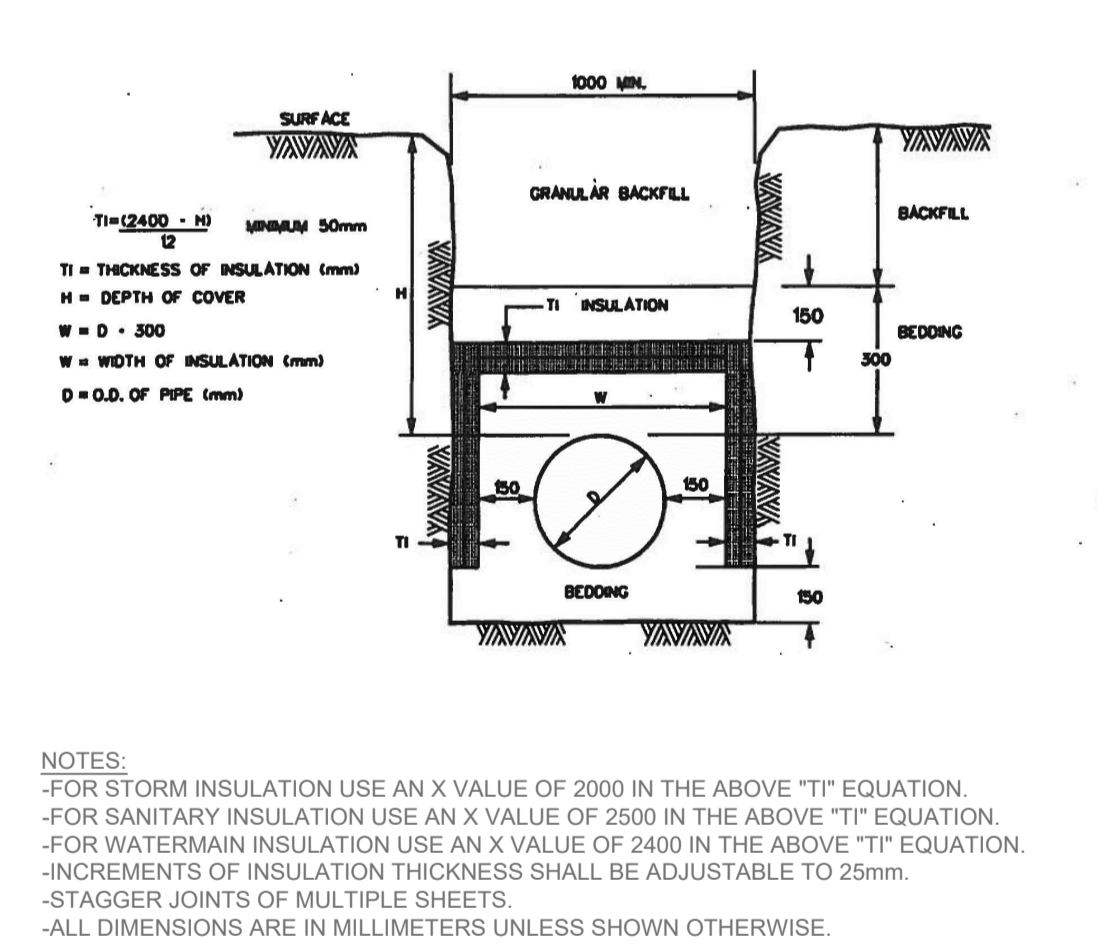
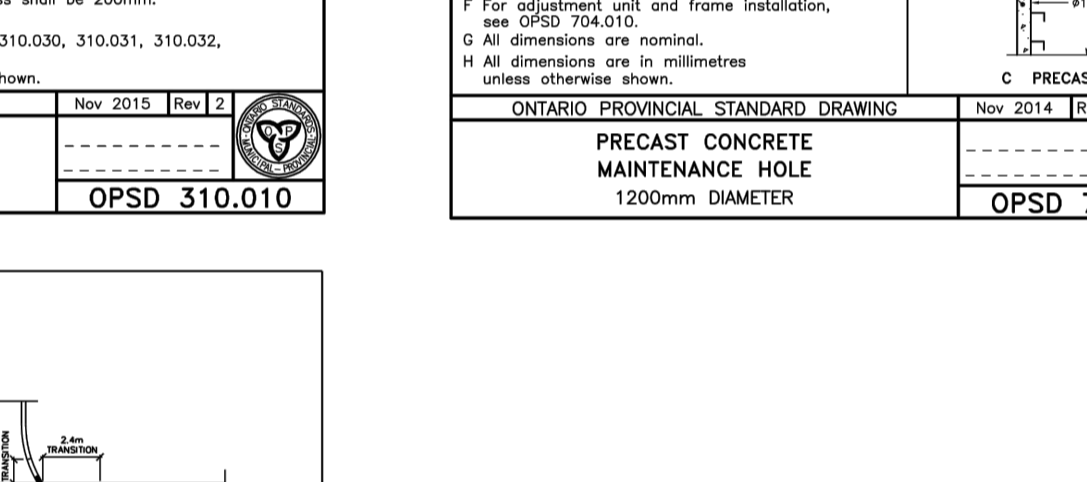
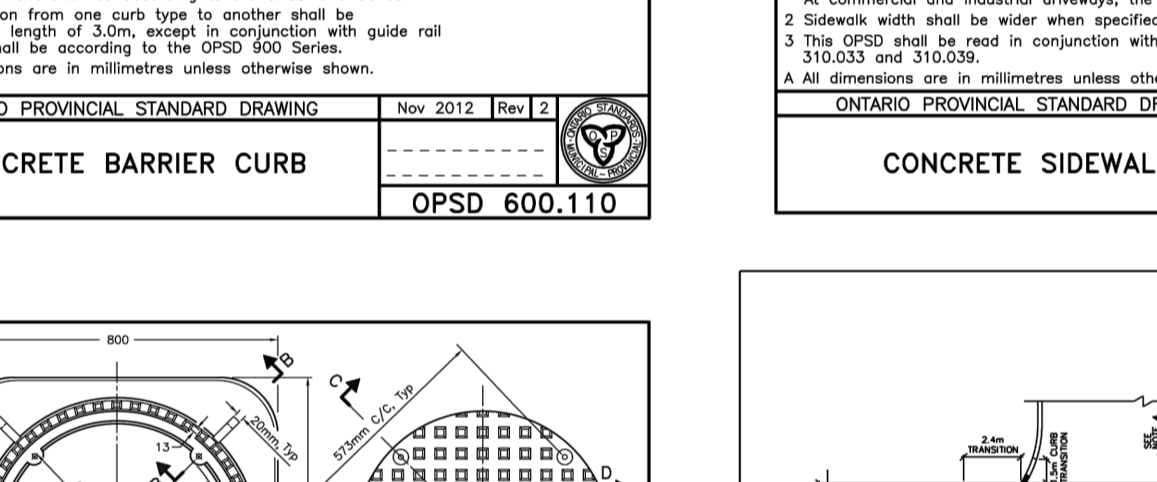
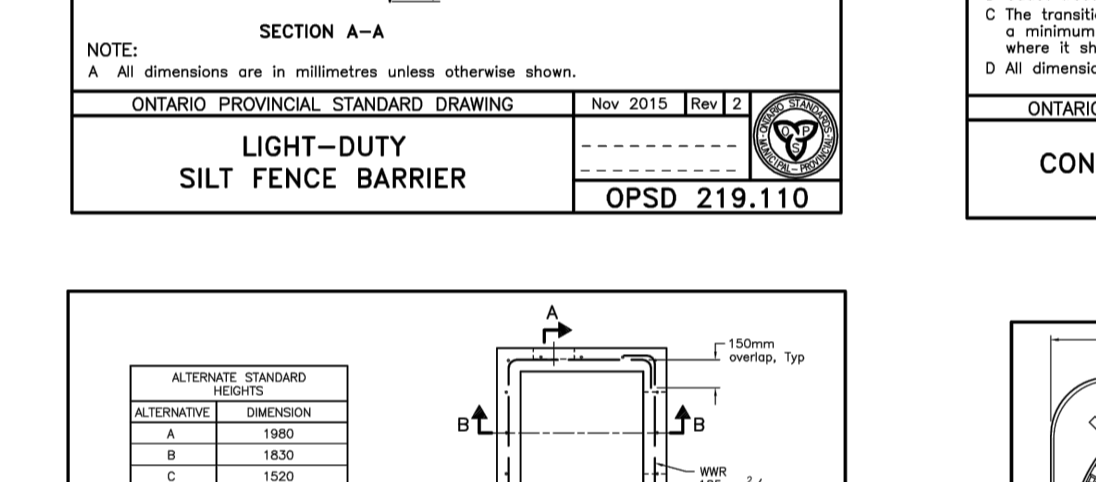
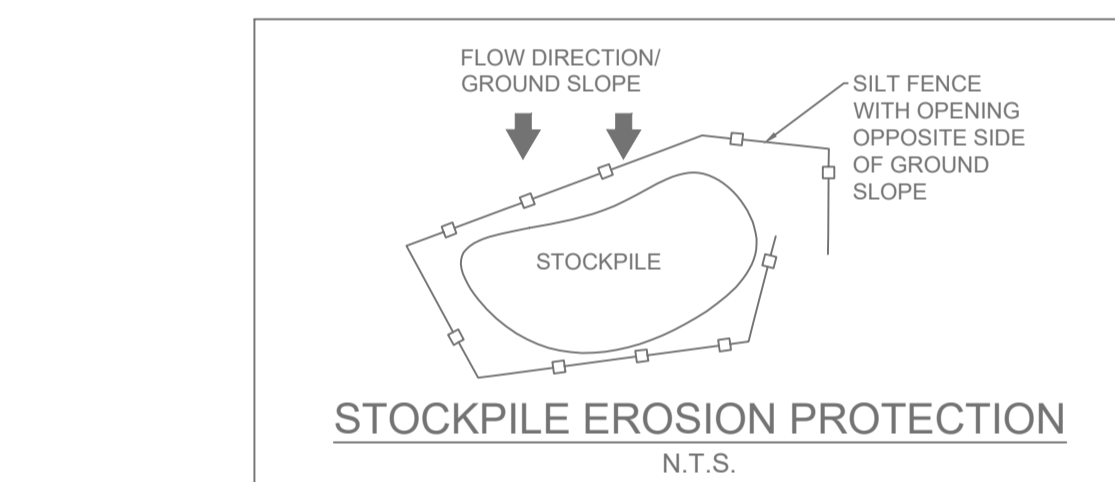
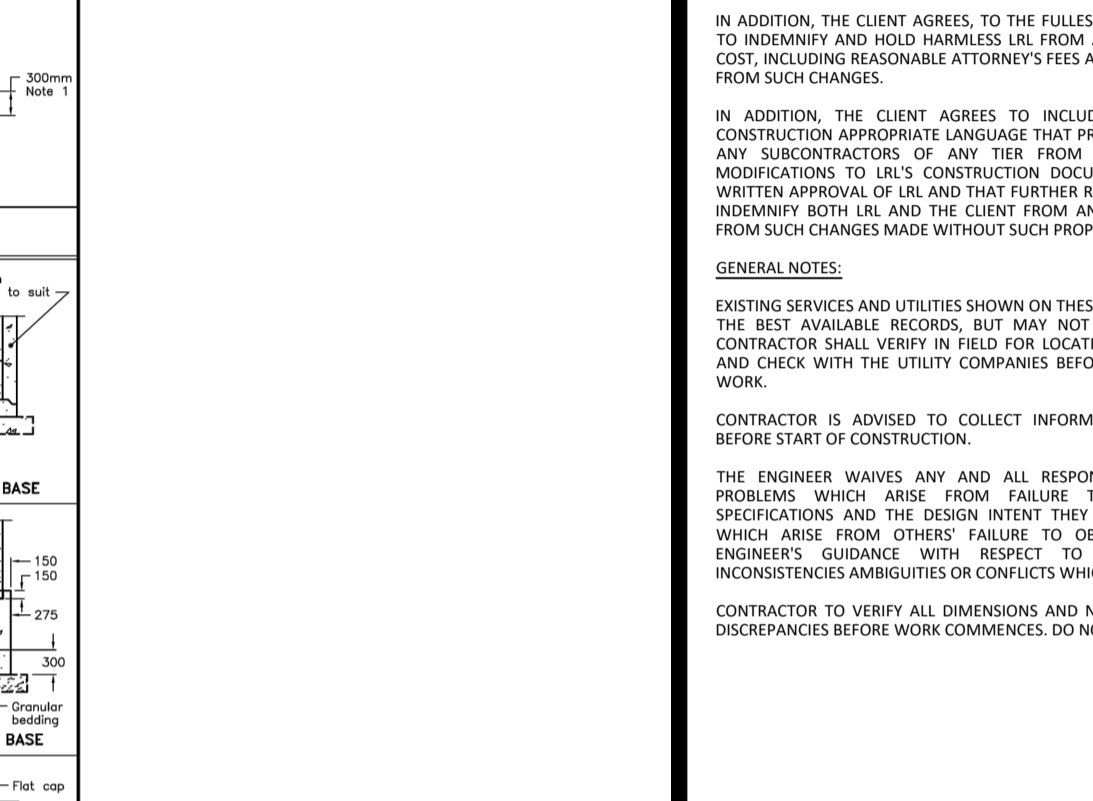
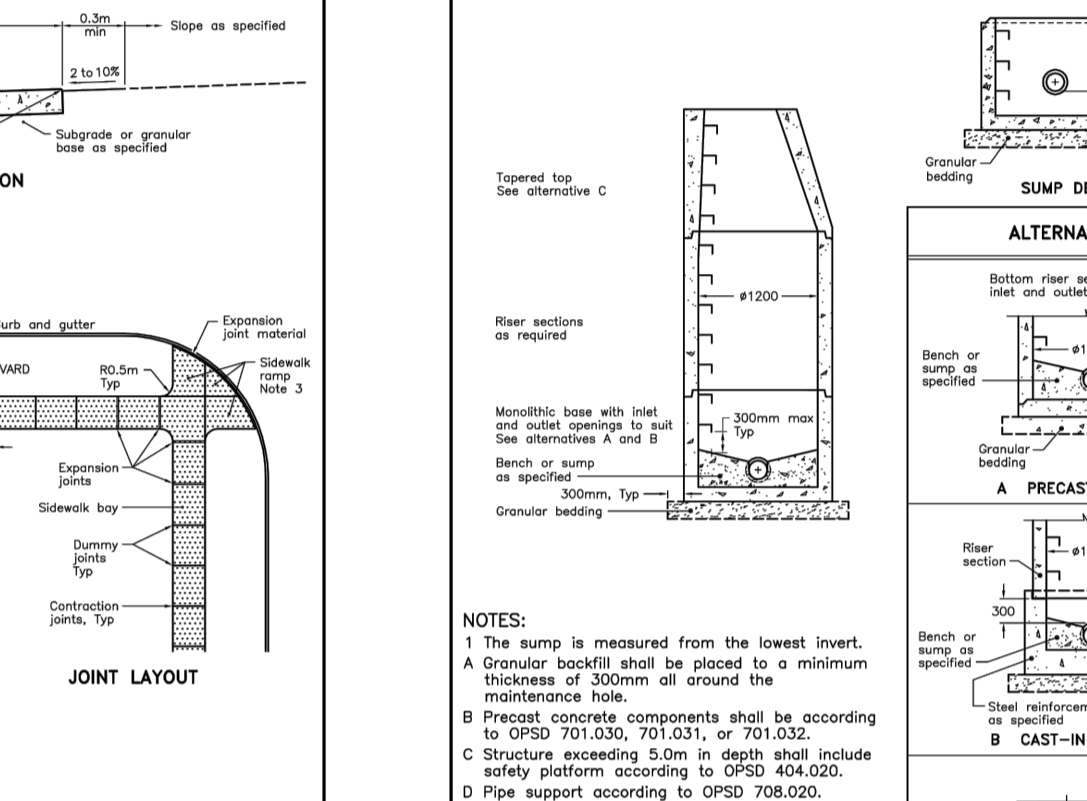
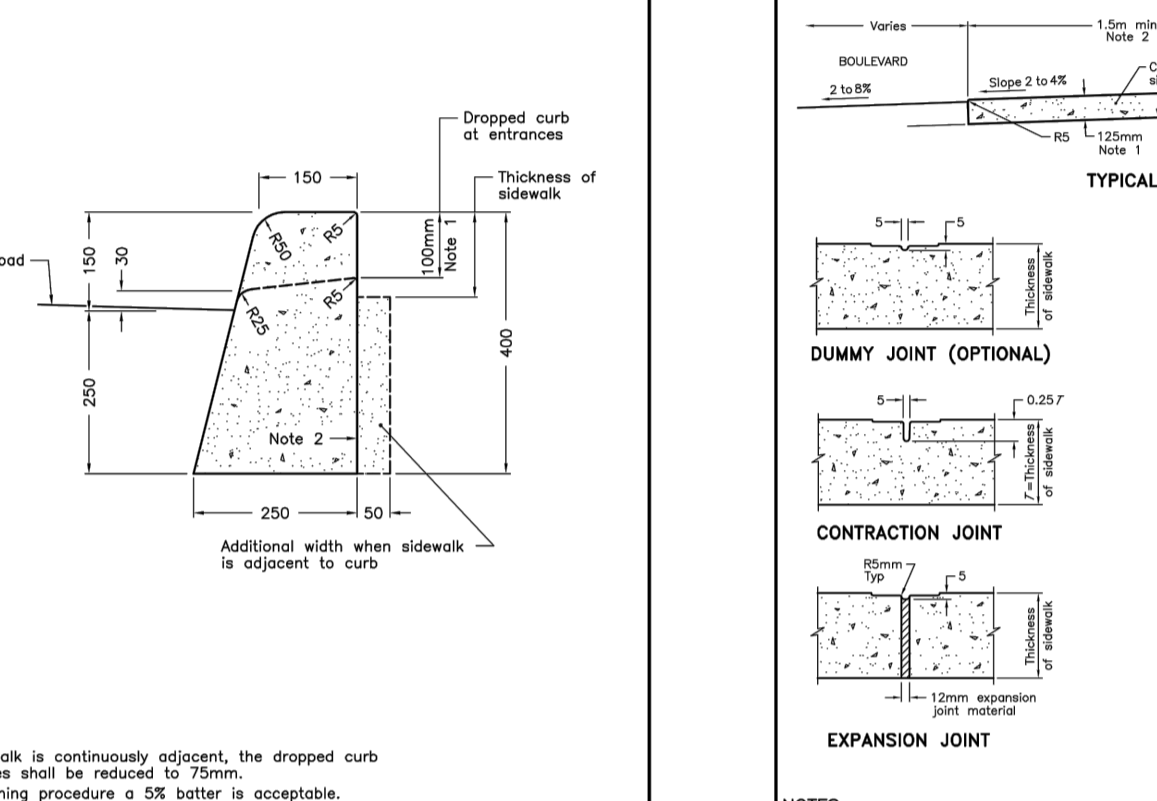
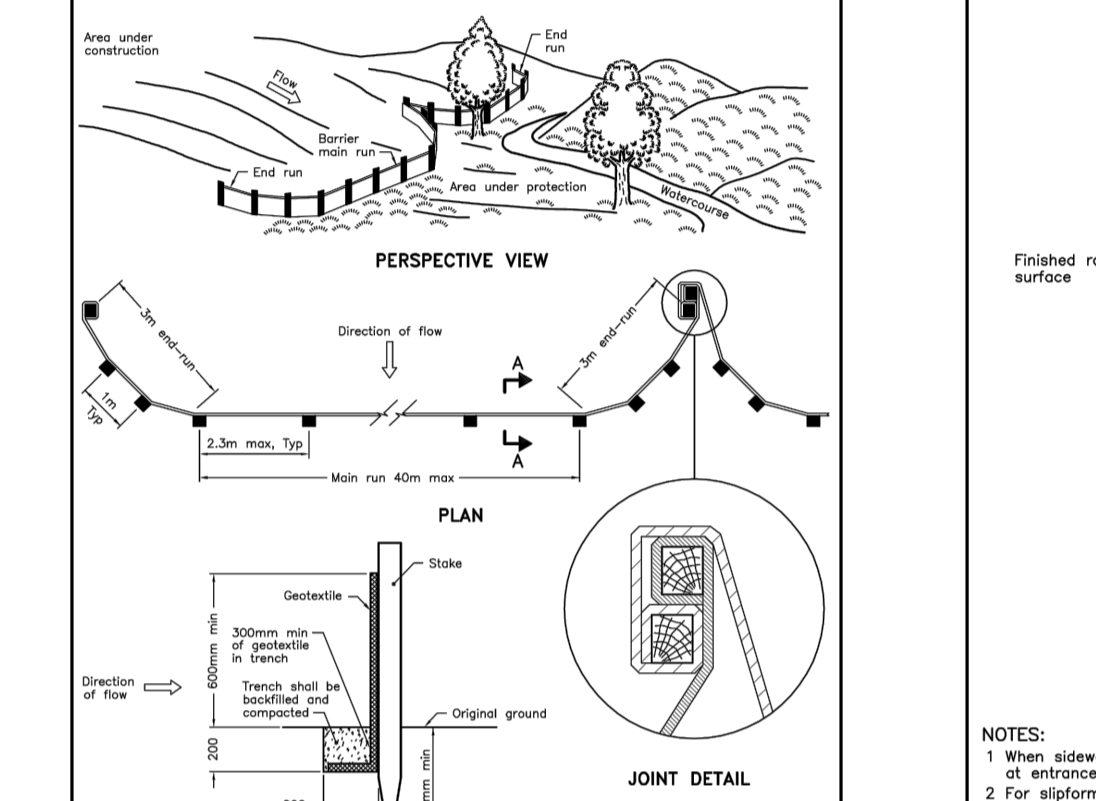
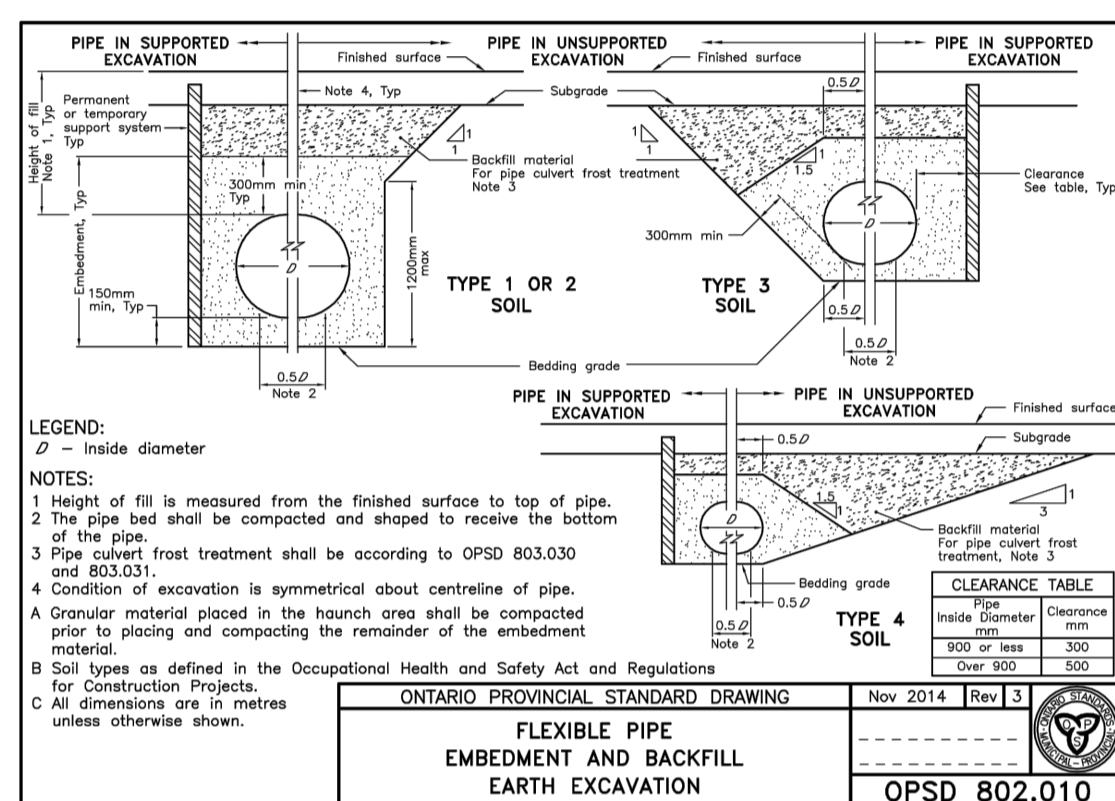
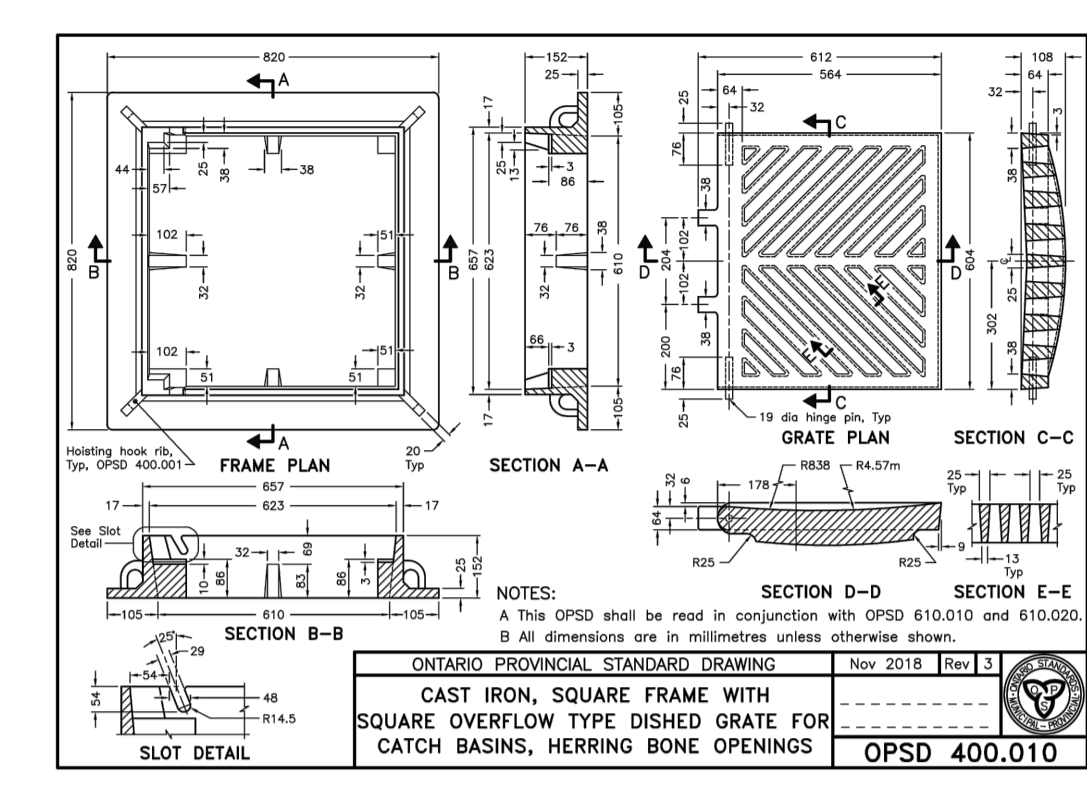
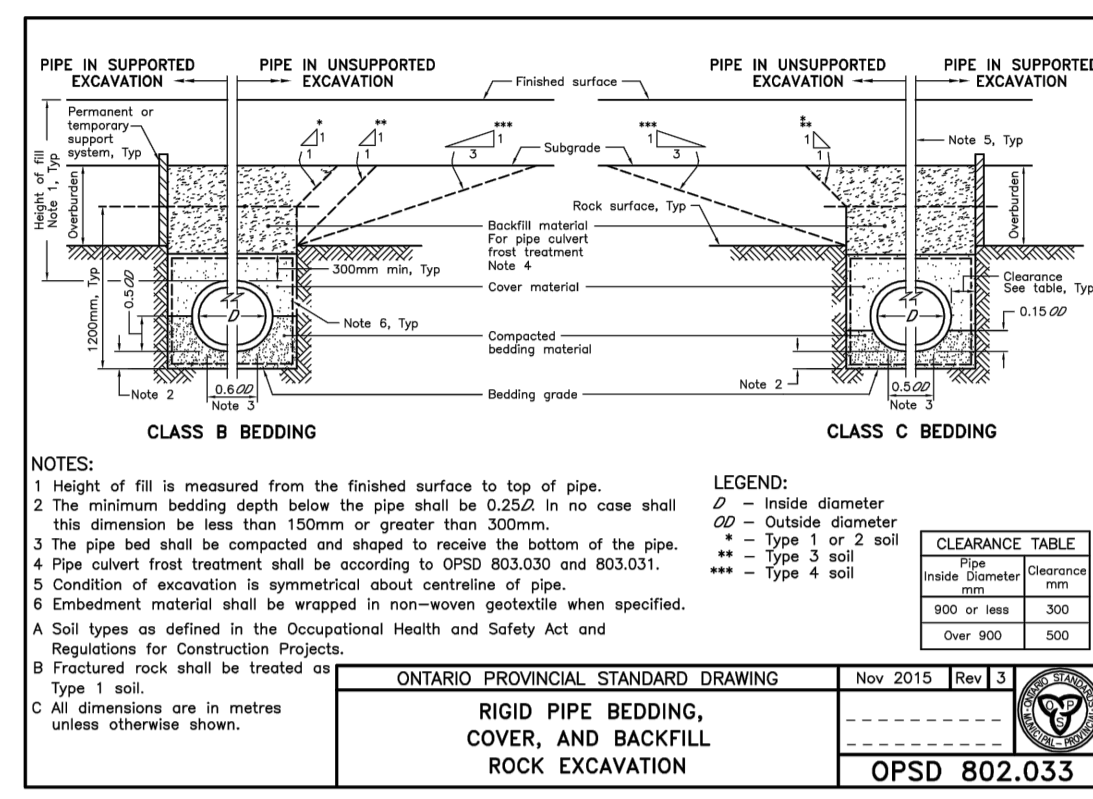
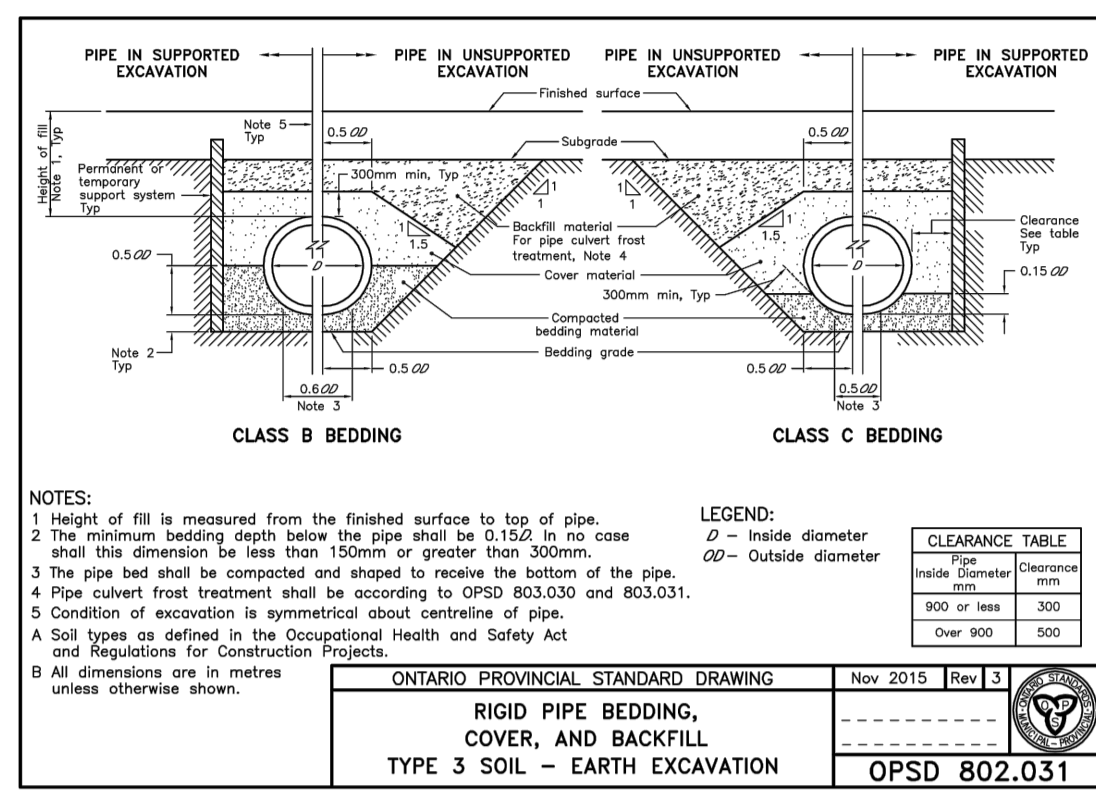
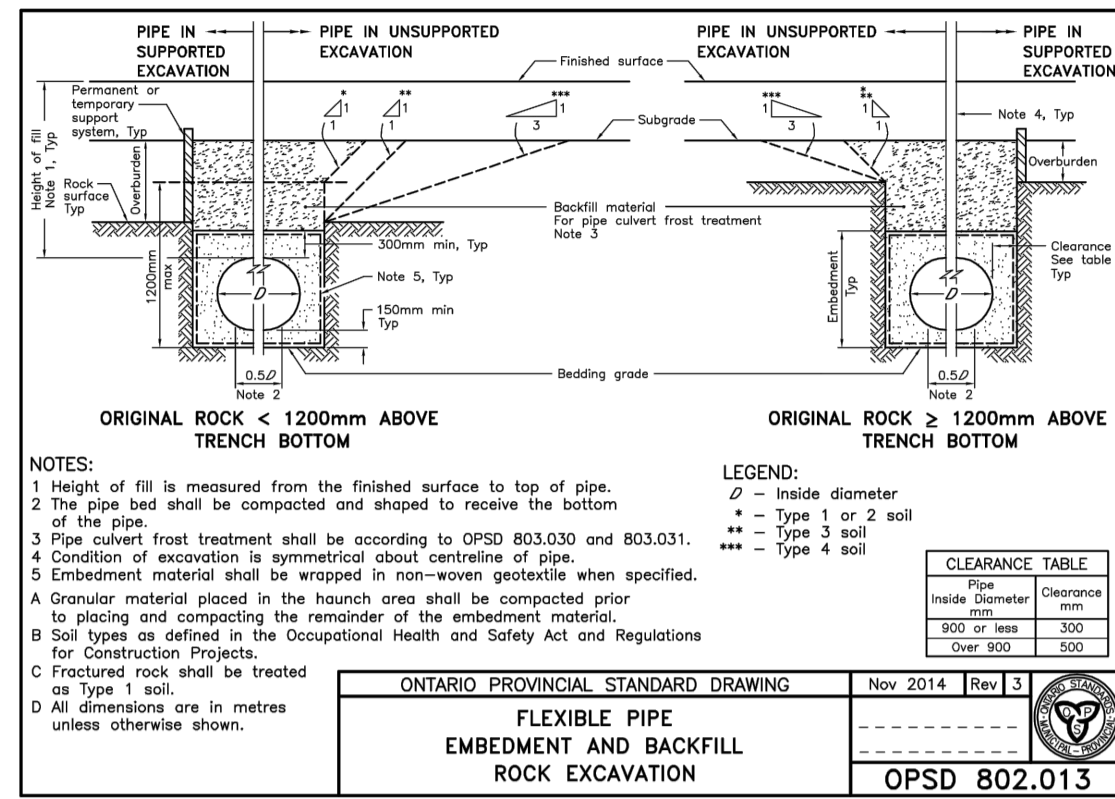
PROJECT
**HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON**

DRAWING TITLE
SANITARY DRAINAGE AREA

PROJECT NO.
210691

DATE
JANUARY 2022

C703



USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE THE USE AND INTENT OF THE DRAWINGS. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDUMS AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS REQUIRED BY ALL WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND RETAINED UNLESS OTHERWISE SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

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GENERAL NOTES:

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NOT AUTHENTIC UNLESS SIGNED AND DATED

PROFESSIONAL ENGINEER
M. BASNET
 100501996
 2023/03/31
 PROVINCE OF ONTARIO

SUBJECT FOR APPROVAL

06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

No.	REVISIONS	BY	DATE
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PROFESSIONAL ENGINEER
M. BASNET
 100501996
 2023/03/31
 PROVINCE OF ONTARIO

LRJ
 ENGINEERING | INGENIERIE
 5430 Canotek Road | Ottawa, ON, K1J 9G2
 www.lri.ca | (613) 842-3434

CLIENT
HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT
HALO CAR WASH 3555 BORRISOKANE RD BARRHAVEN, ON

DRAWING TITLE
CONSTRUCTION DETAIL PLAN

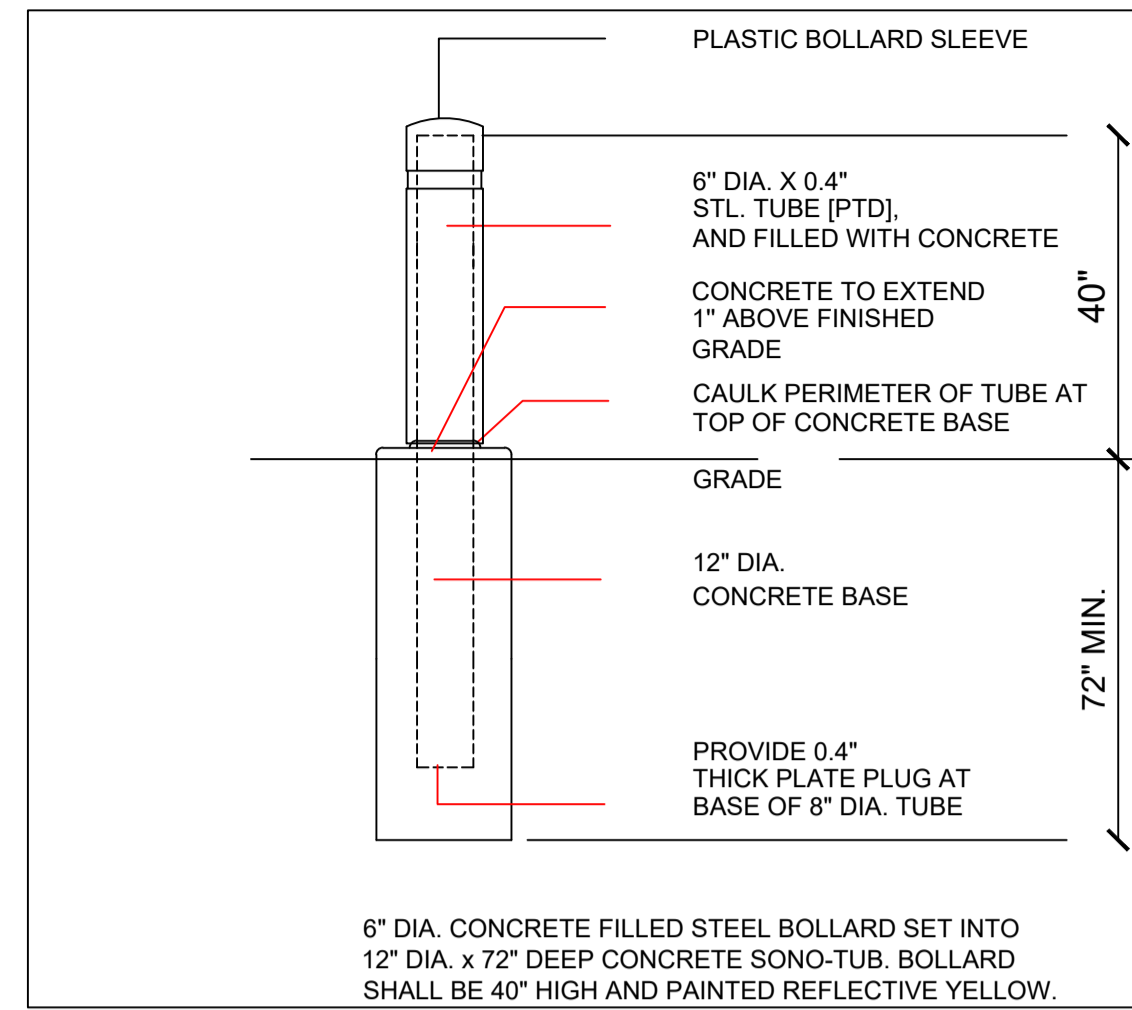
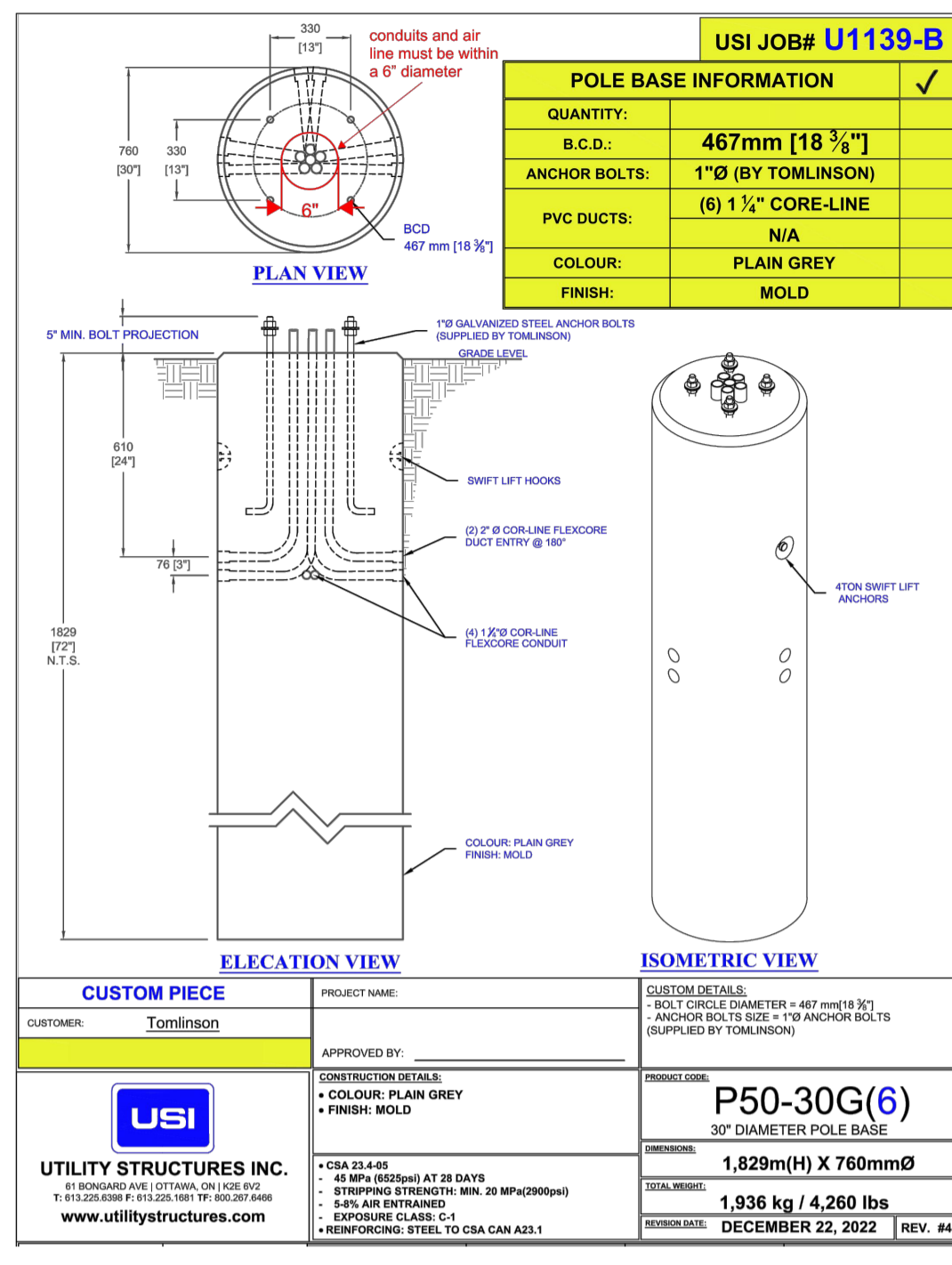
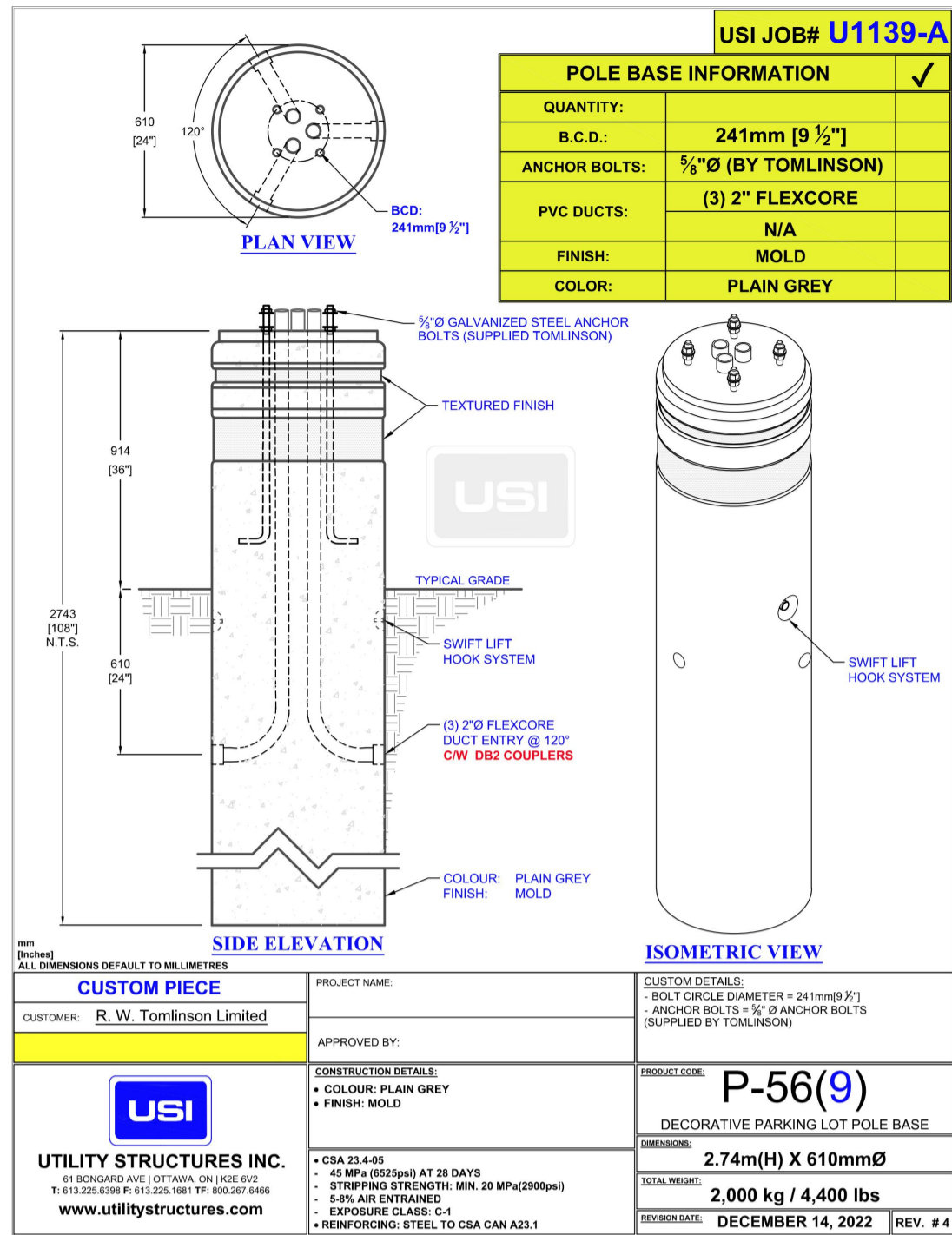
PROJECT NO.
210691

DATE
JANUARY 2022

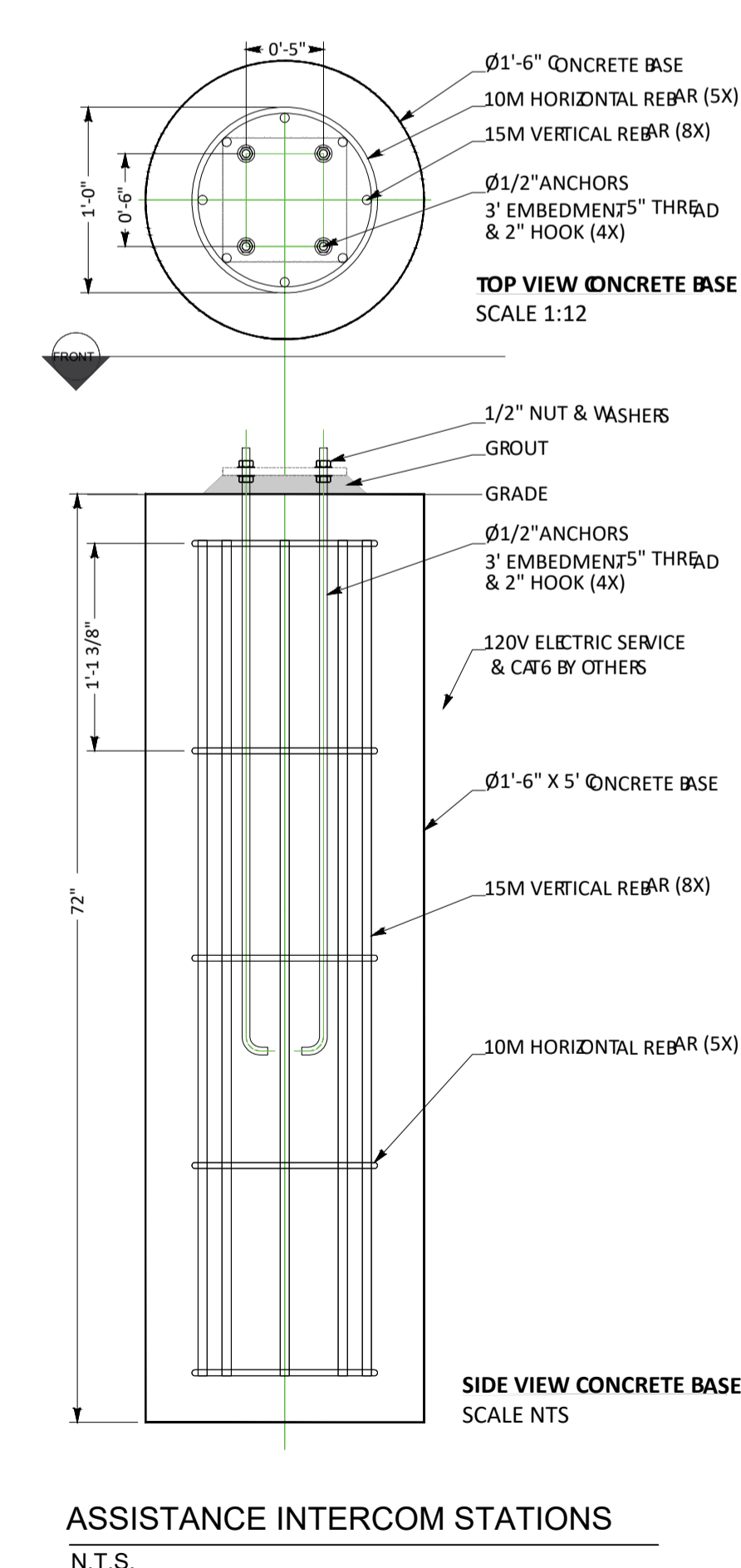
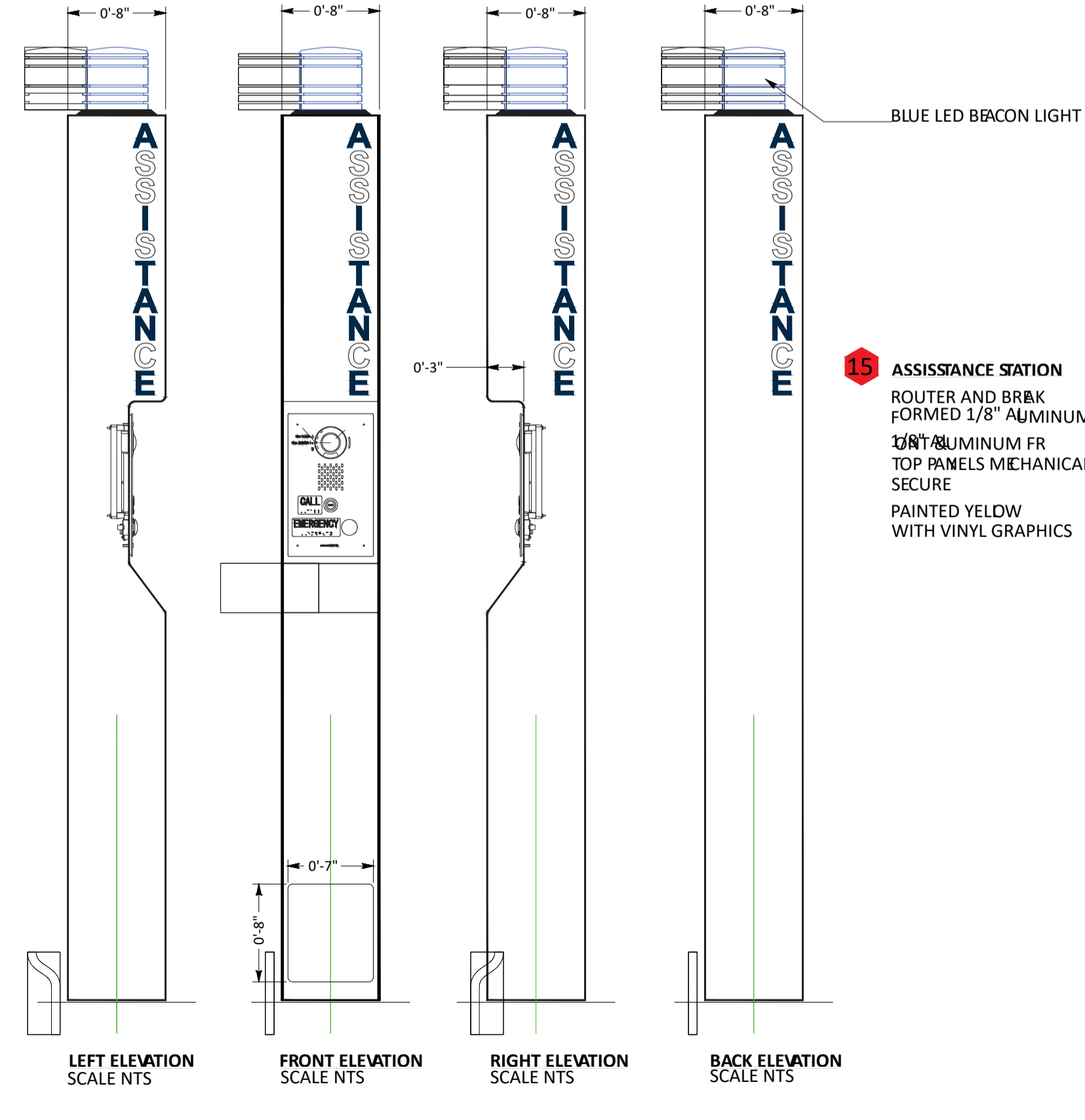
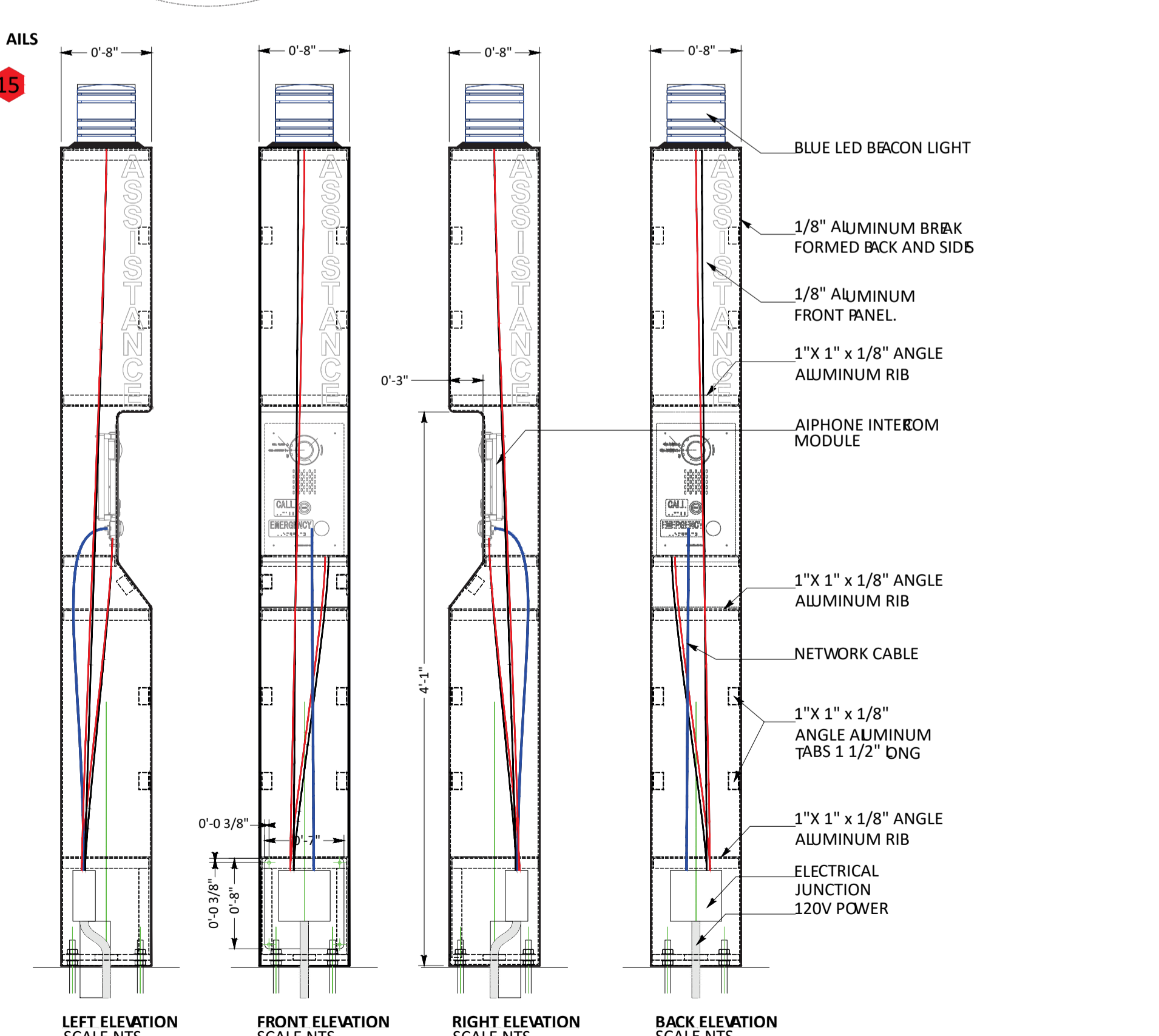
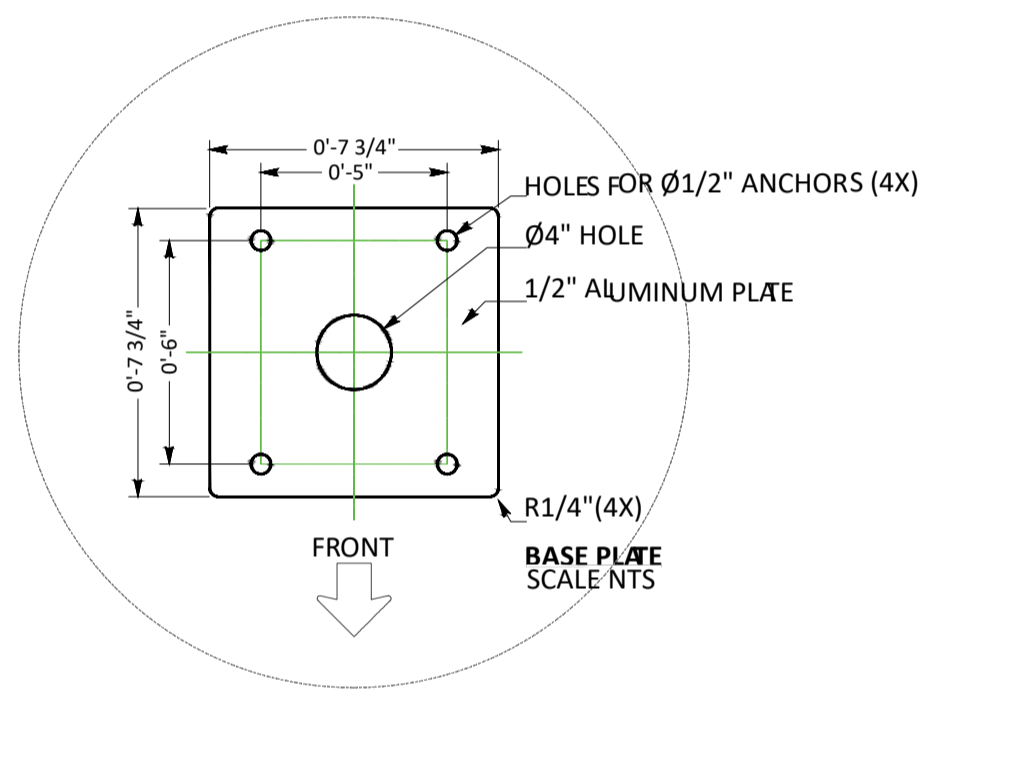
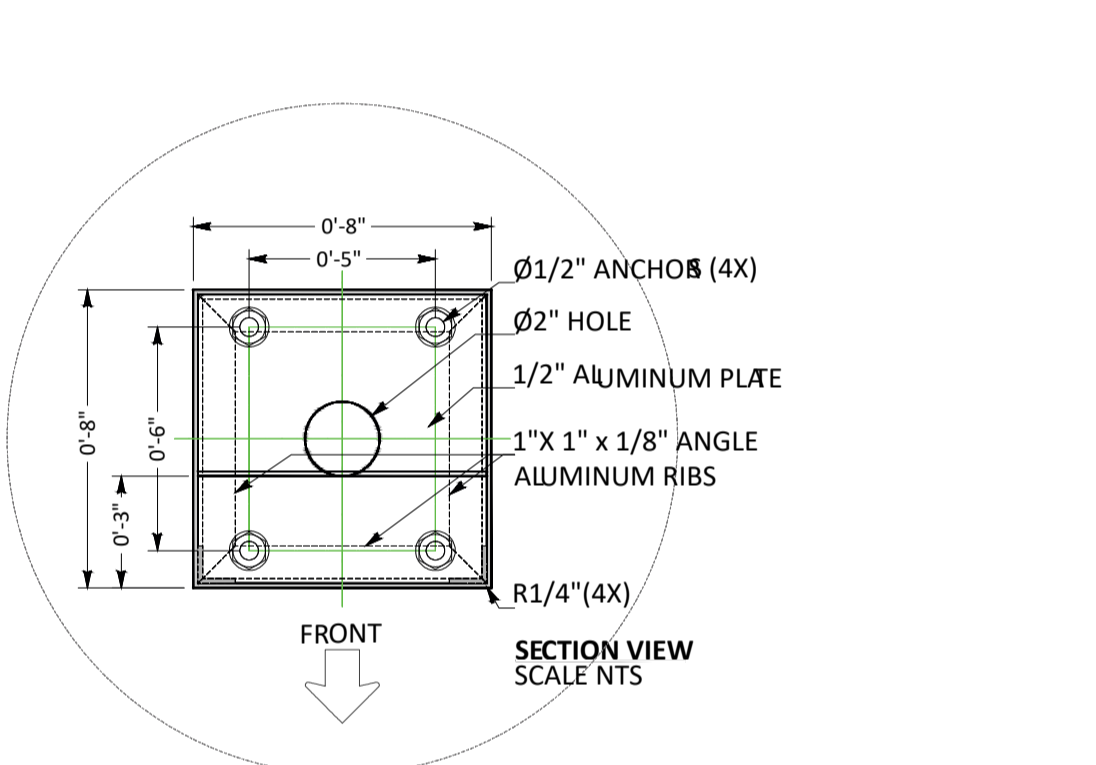
C901

18788

D07-12-22-0085



BOLLARD DETAIL
N.T.S.



ASSISTANCE INTERCOM STATIONS
N.T.S.

ASSISTANCE INTERCOM STATIONS
N.T.S.

ASSISTANCE INTERCOM STATIONS
N.T.S.

NOTE:
DETAIL TO BE VERIFIED AND STAMPED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION

USE AND INTERPRETATION OF DRAWINGS
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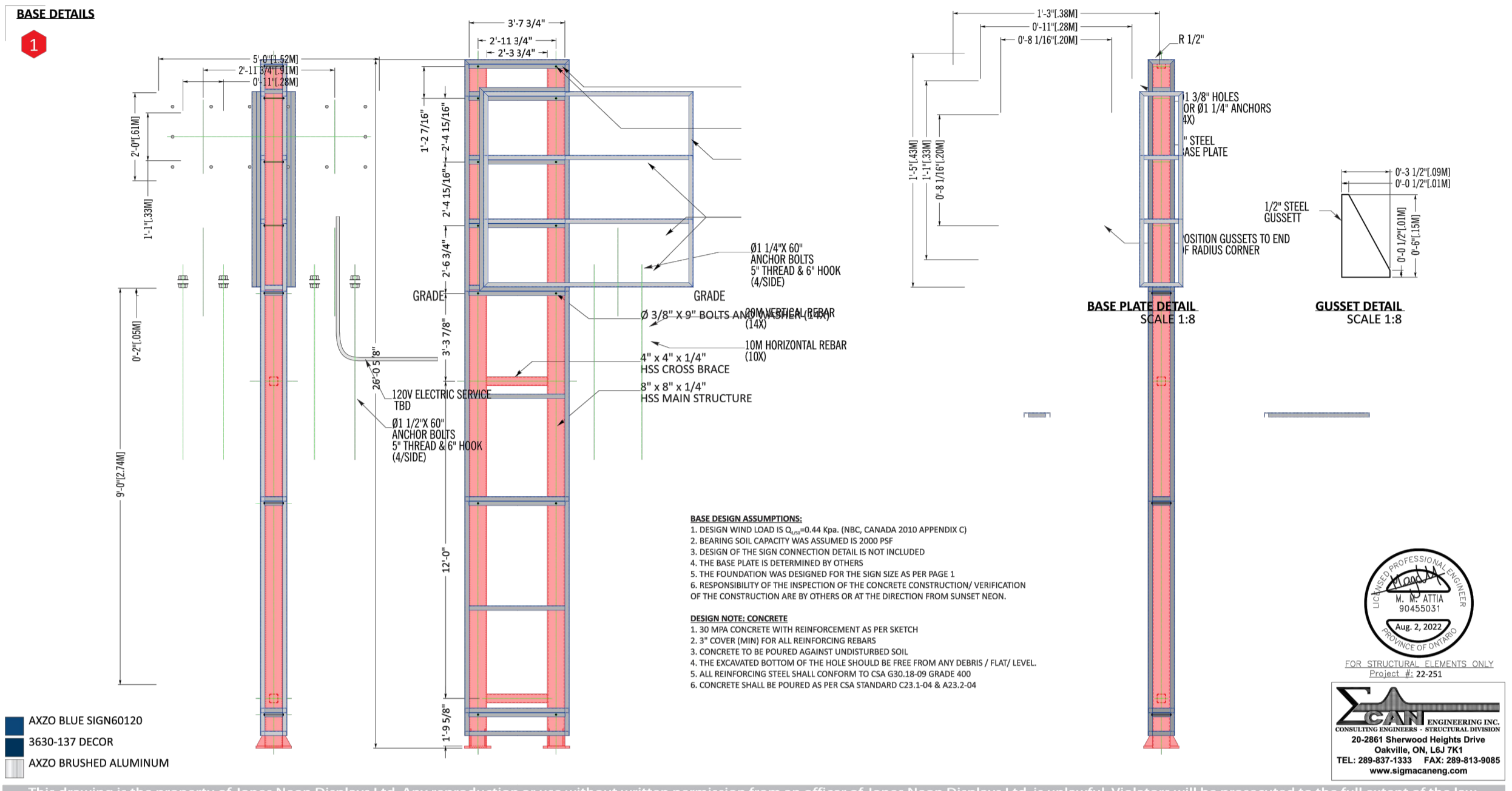
CLIENT
HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.
PROJECT
HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON

DRAWING TITLE
CONSTRUCTION DETAIL PLAN

PROJECT NO.
210691
DATE
JANUARY 2022





BASE DESIGN ASSUMPTIONS:

- DESIGN WIND LOAD (CL. 10.4.4) 50k (N.C. CANADA 2010 APPENDIX C)
- BEARING SOIL CAPACITY WAS ASSUMED IS 2000 PSF
- DESIGN OF THE SIGN CONNECTIONS TO BE NOT INCLUDED
- THE BASE PLATE IS DETERMINED BY OTHER
- THE FOUNDATION WAS DESIGNED FOR THE SIGN SIZE AS PER PAGE 1
- RESPONSIBILITY OF THE INSPECTION OF THE CONCRETE CONSTRUCTION/ VERIFICATION OF THE CONSTRUCTION ARE BY OTHERS OR AT THE DISCRETION FROM SUNSET NEON.

DESIGN NOTE - CONCRETE:

- 30 MPA CONCRETE WITH REINFORCEMENT AS PER SKETCH
- 3" COVER (MIN) FOR ALL REINFORCING REBARS
- CONCRETE TO BE POURED AGAINST UNDISTURBED SOIL
- THE EXCAVATED BOTTOM OF THE HOLE SHOULD BE FREE FROM ANY DEBRIS / FLAT LEVEL
- ALL REINFORCING STEEL SHALL CONFORM TO CSA G30.18 OR GRADE 400
- CONCRETE SHALL BE POURED AS PER CSA STANDARD C23.1-04 B.4.3.2-04

BASE PLATE DETAIL SCALE 1:8

GUSSET DETAIL SCALE 1:8

FOR STRUCTURAL ENGINEERS ONLY
FIGURE 1-2-23

JONES neon displays
1140 Blair Road, Burlington, ON L7M 1K9
e: info@jonesneon.com
t: 905.335.6664 | f: 905.335.2712

This drawing is the property of Jones Neon Displays Ltd. Any reproduction or use without written permission from an officer of Jones Neon Displays Ltd. is unlawful. Violators will be prosecuted to the full extent of the law.

Customer: Halo Car Wash

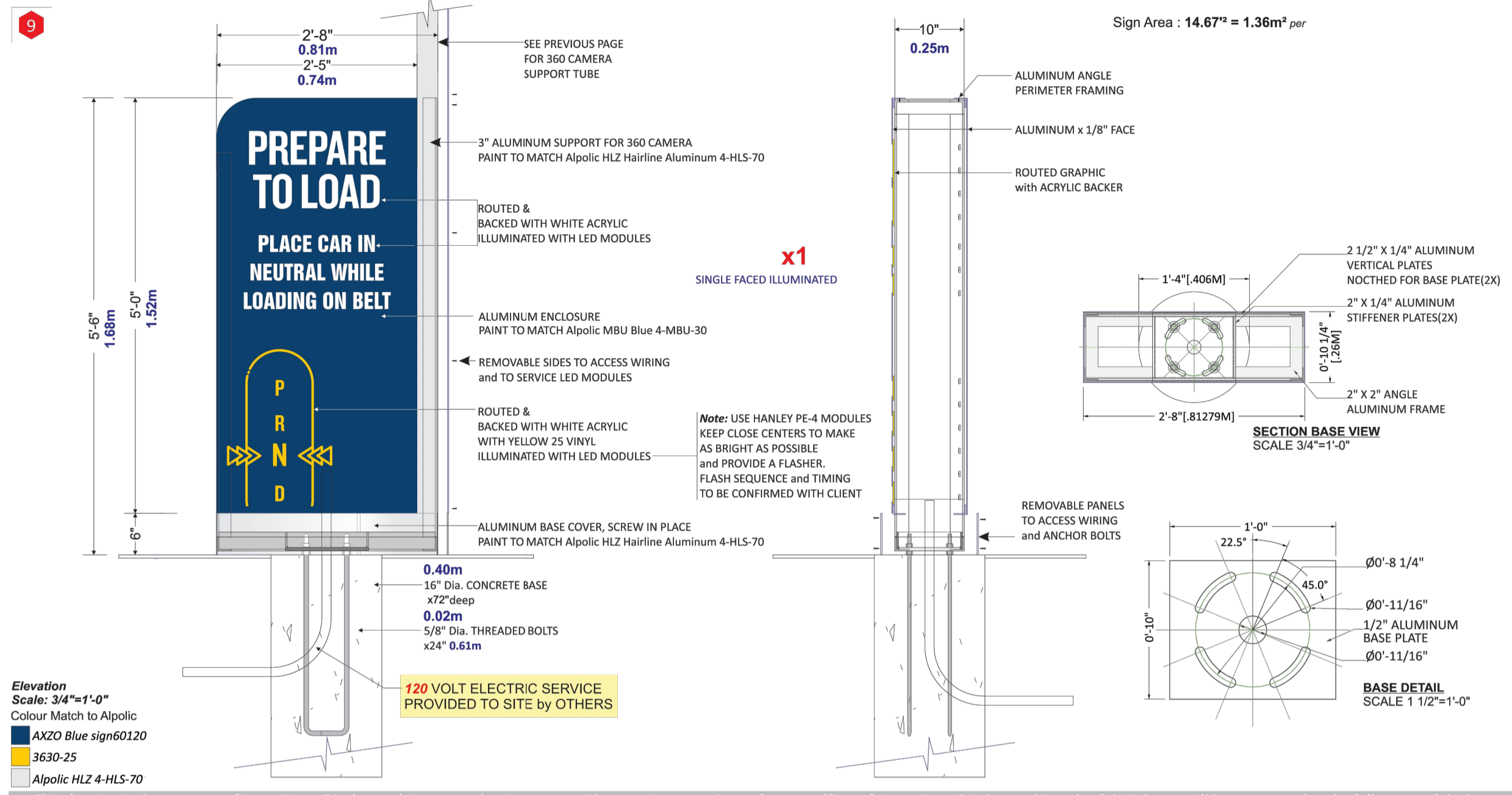
Date: 22/07/11
Scale: as shown

Revision: R2
22/07/2019: VN, SIGNS ADDED
22/07/27: VN, REVISE DRAWING

Permit Required
Conceptual artwork
Production artwork
Site check completed
Indoor
Outdoor

Production Approval:
Signature: _____
Date: _____

JONES neon displays
1140 Blair Road, Burlington, ON L7M 1K9
e: info@jonesneon.com
t: 905.335.6664 | f: 905.335.2712



Elevation Scale: 3/4"=1'-0"
Colour Match to Alpicol

Customer: Halo Car Wash

Date: Feb 8/2022
Scale: as shown

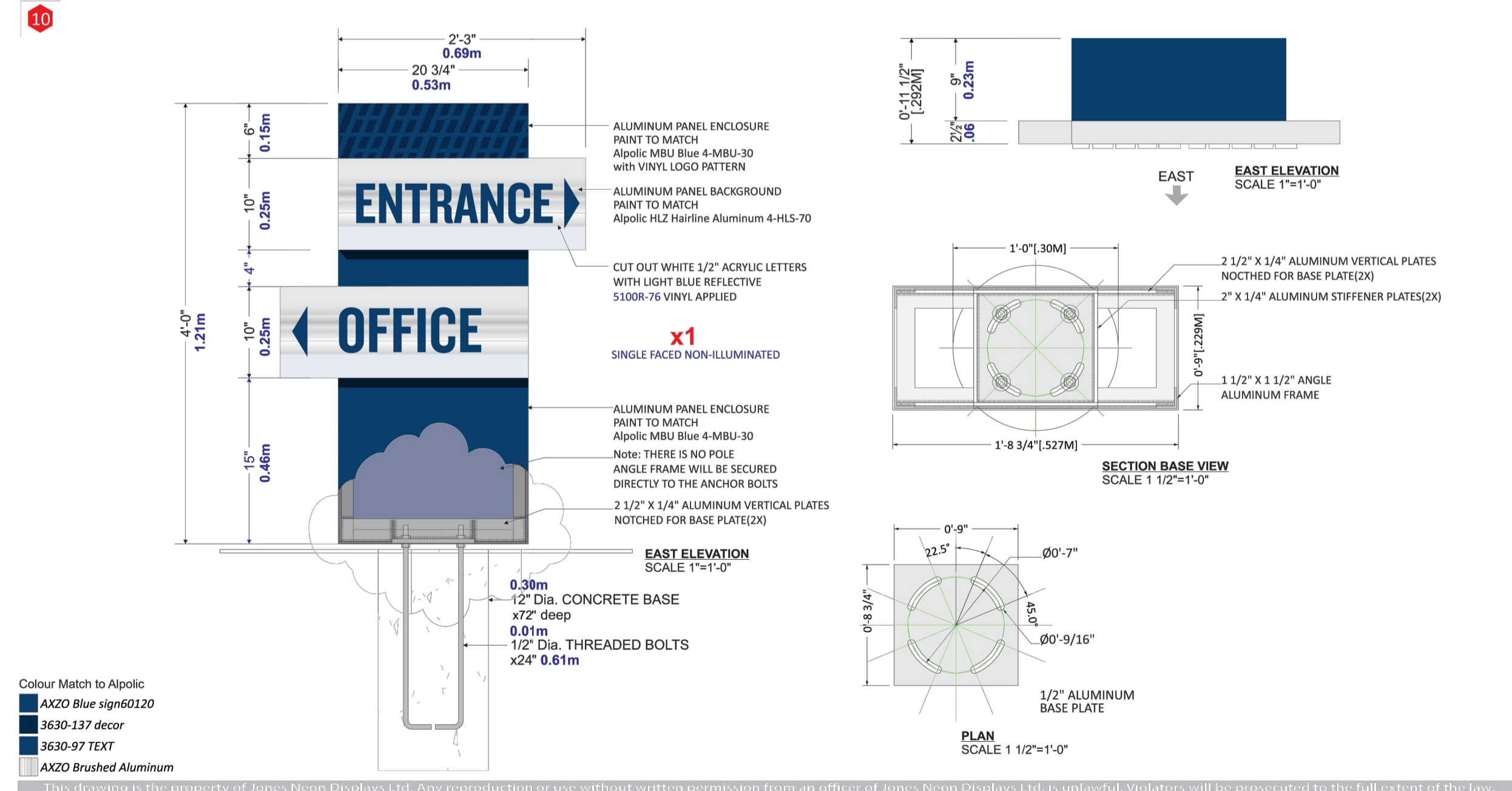
Revision: R7
22/02/17: VN, SIGNS ADDED
22/05/12: VN, VACUUM BOOTH FONT CHANGE
22/05/12: VN, VACUUM BOOTH QNTY CHANGE

Permit Required
Conceptual artwork
Production artwork
Site check completed
Indoor
Outdoor

Production Approval:
Signature: _____
Date: _____

JONES neon displays
1140 Blair Road, Burlington, ON L7M 1K9
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Colour Match to Alpicol

- AXZO Blue sign60120
- 3630-137 decor
- 3630-97 TEXT
- AXZO Brushed Aluminum

Customer: Halo Car Wash

Date: Feb 8/2022
Scale: as shown

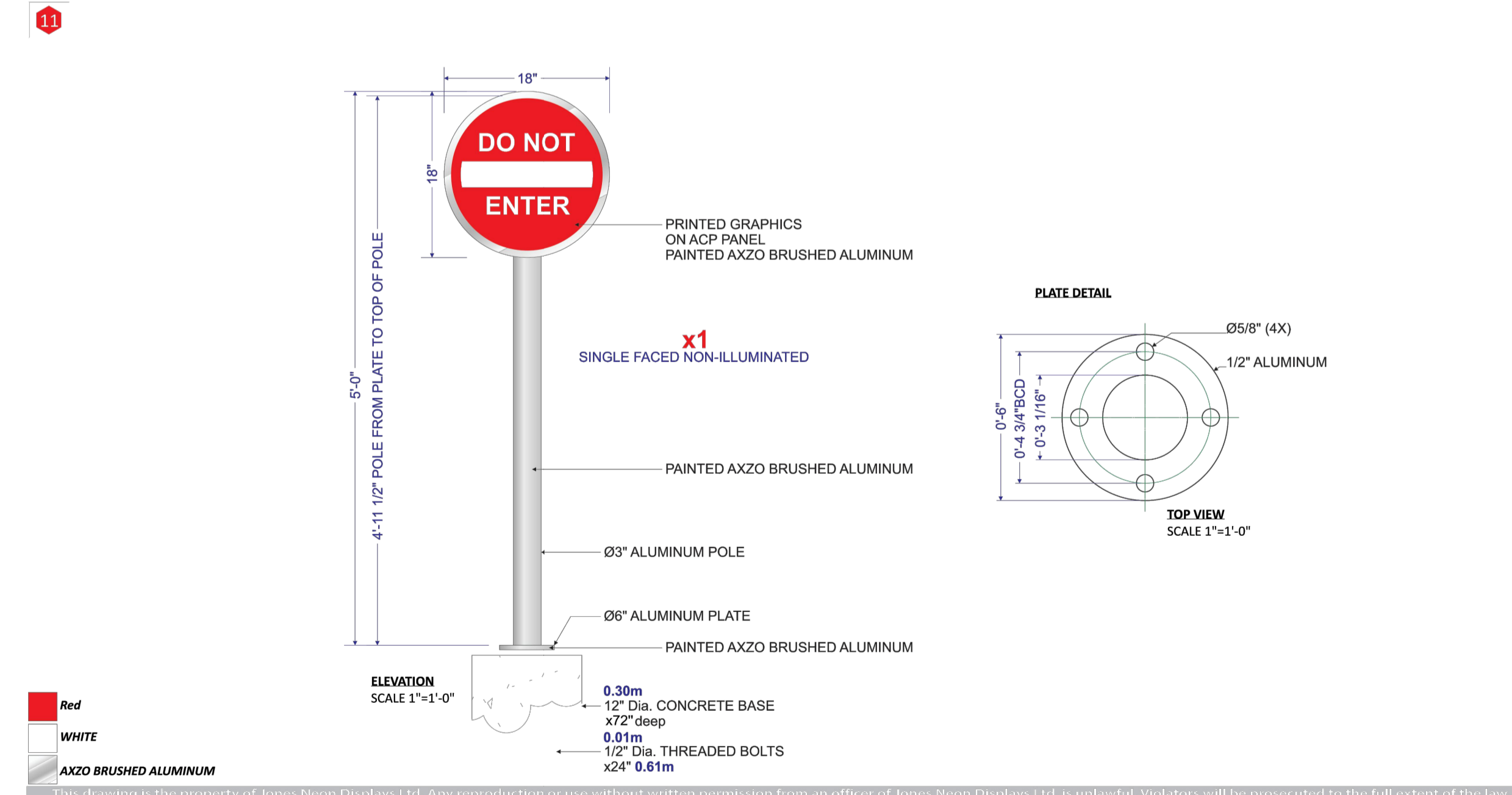
Revision: R7
22/02/17: VN, SIGNS ADDED
22/05/12: VN, VACUUM BOOTH FONT CHANGE
22/05/12: VN, VACUUM BOOTH QNTY CHANGE

Permit Required
Conceptual artwork
Production artwork
Site check completed
Indoor
Outdoor

Production Approval:
Signature: _____
Date: _____

JONES neon displays
1140 Blair Road, Burlington, ON L7M 1K9
e: info@jonesneon.com
t: 905.335.6664 | f: 905.335.2712

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Elevation Scale 1"=1'-0"

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USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CAD FILES OR OTHER ELECTRONIC MEDIA AND COPIES THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATE THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS A KNOWLEDGEABLE ACCEPTANCE OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY JNL ASSOCIATES LTD. (JNL) WITHOUT OBTAINING JNL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST JNL AND TO RELEASE JNL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS JNL FROM ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND CONDITIONS, OR FROM ANY CHANGES OR MODIFICATIONS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

SUBJECT FOR APPROVAL

No.	REVISIONS	BY	DATE
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrj.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH
3555 BORRISOKANE RD
BARRHAVEN, ON

DRAWING TITLE: CONSTRUCTION DETAIL PLAN

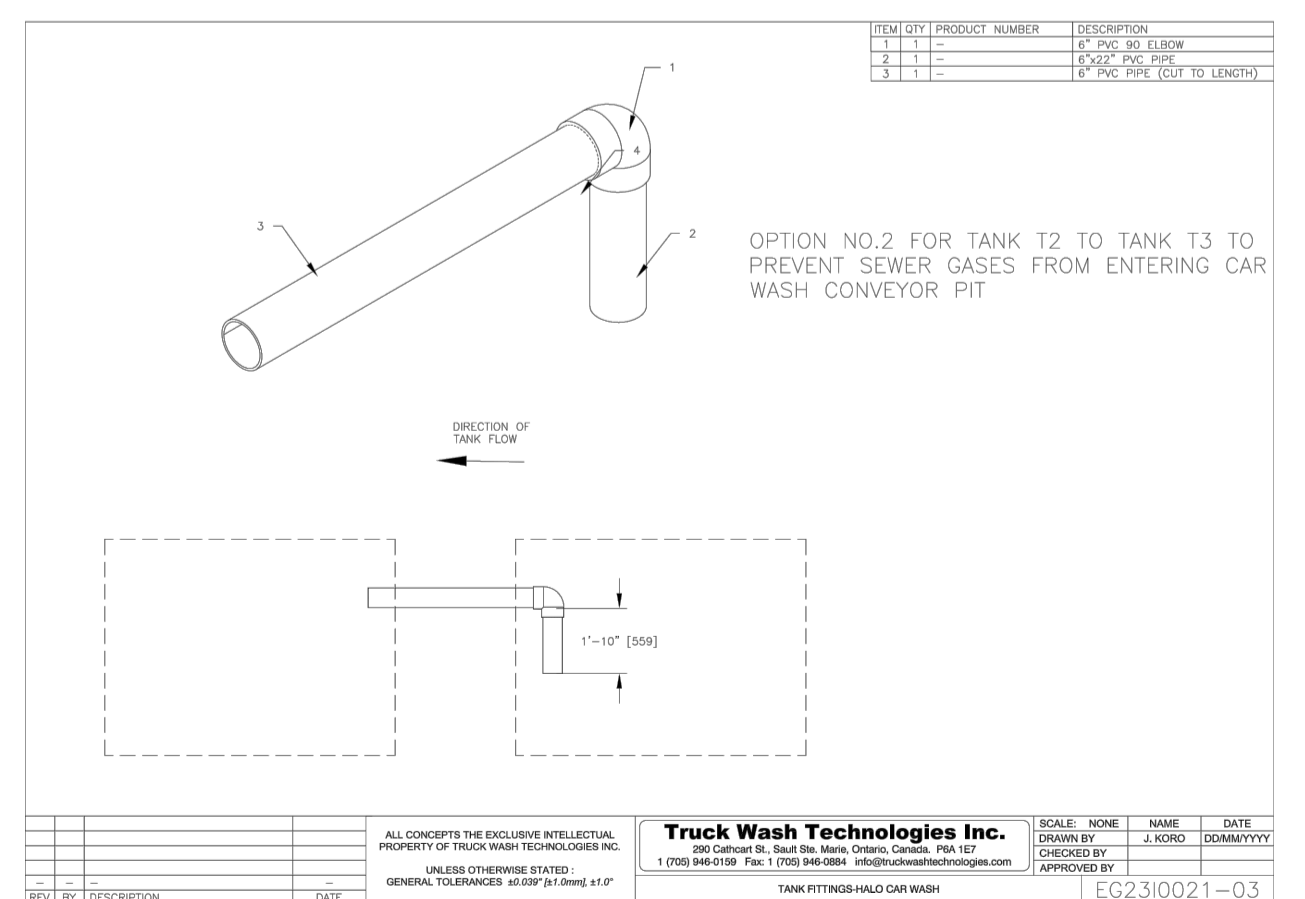
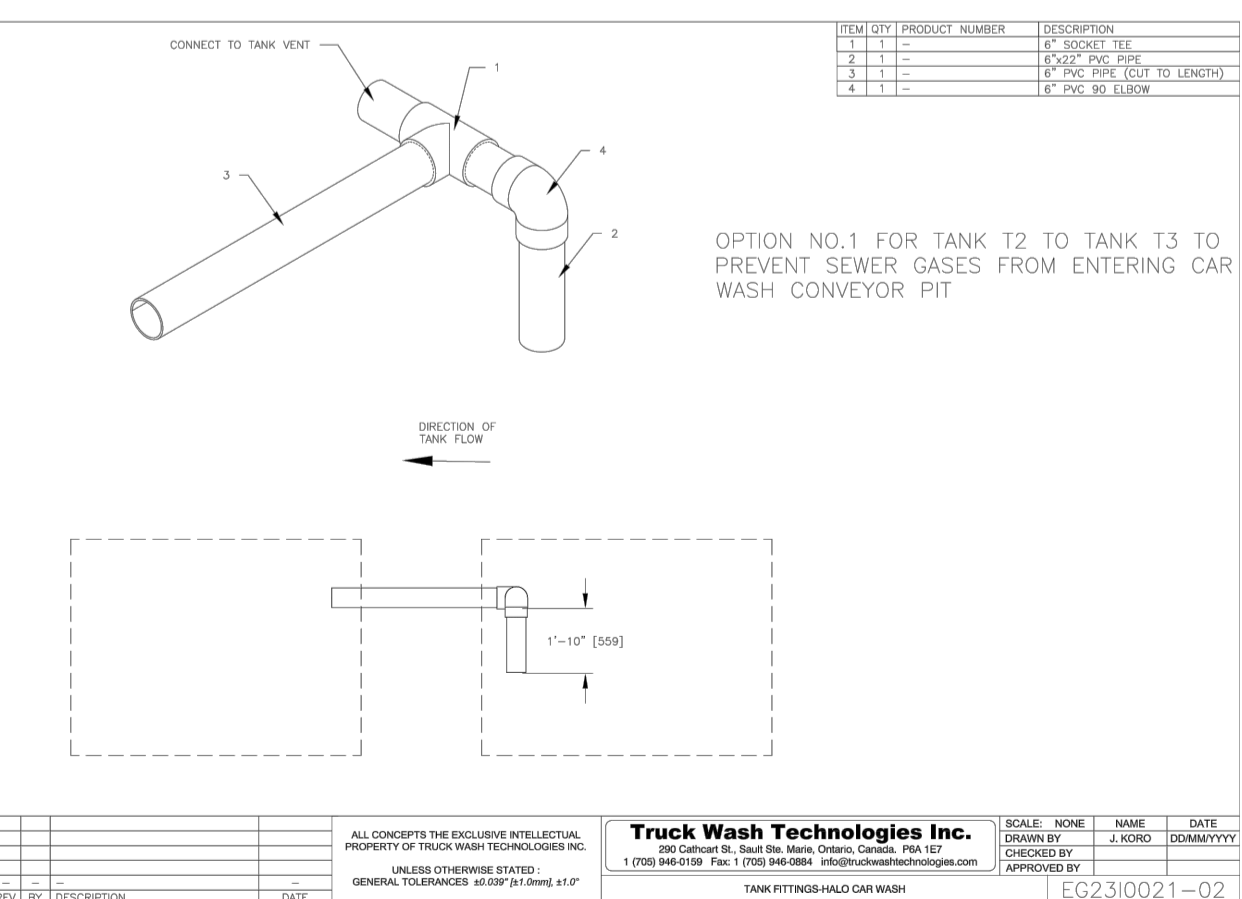
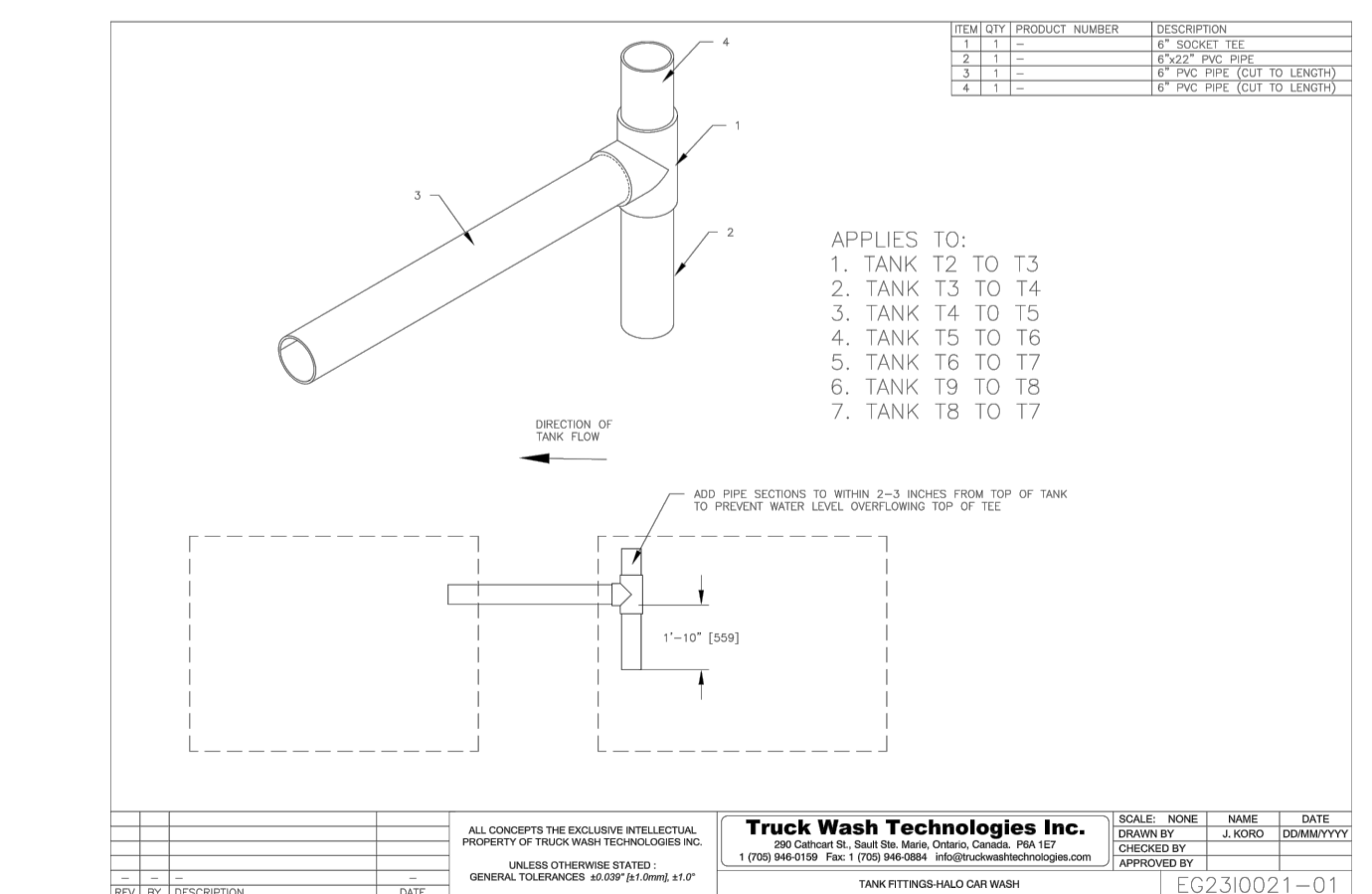
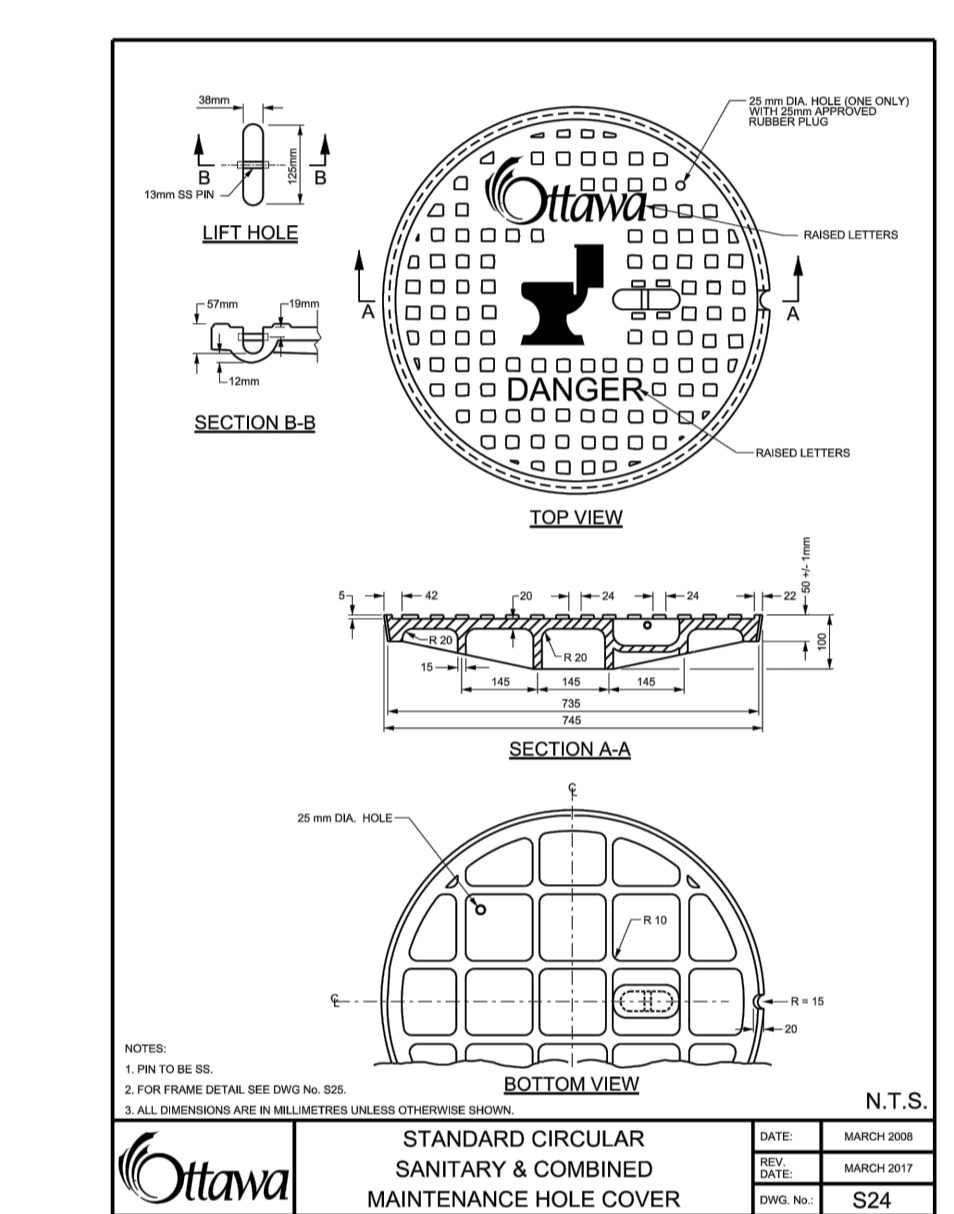
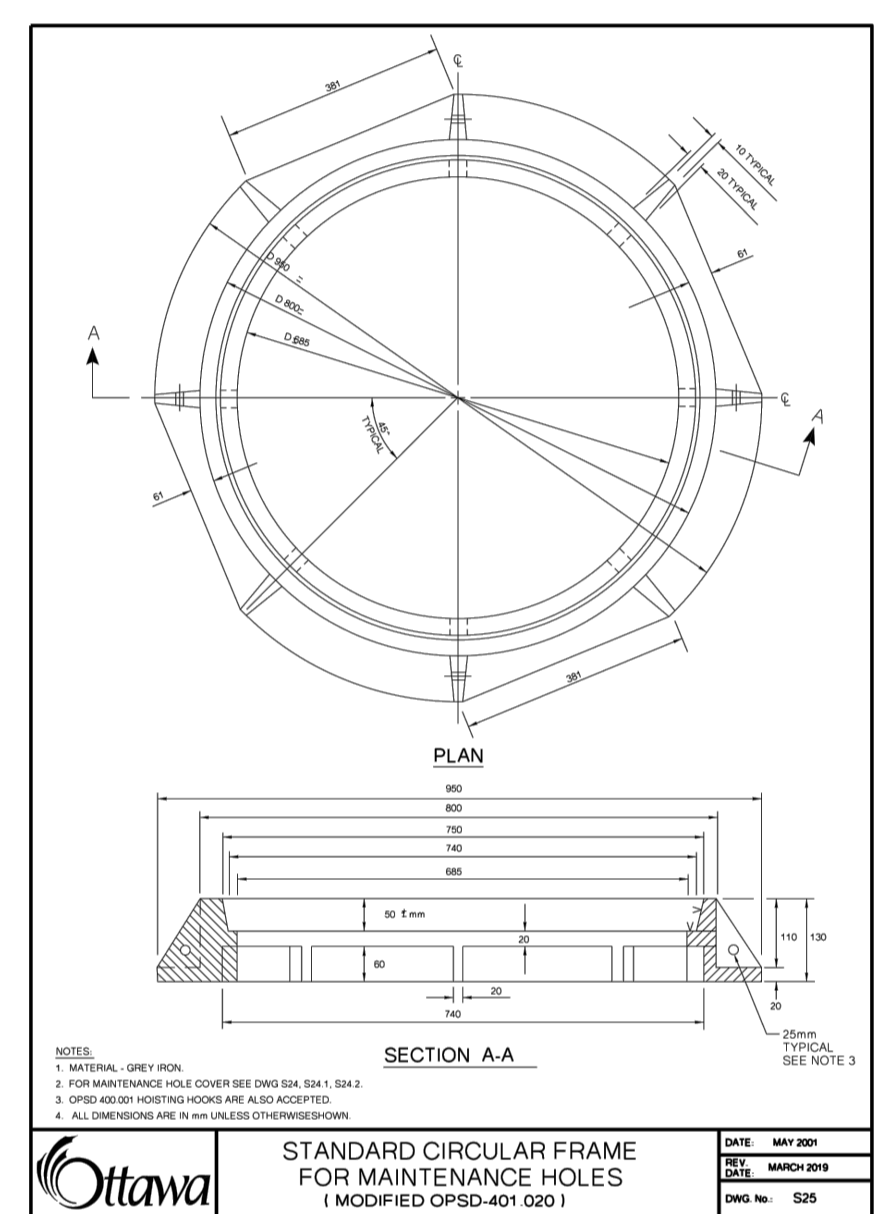
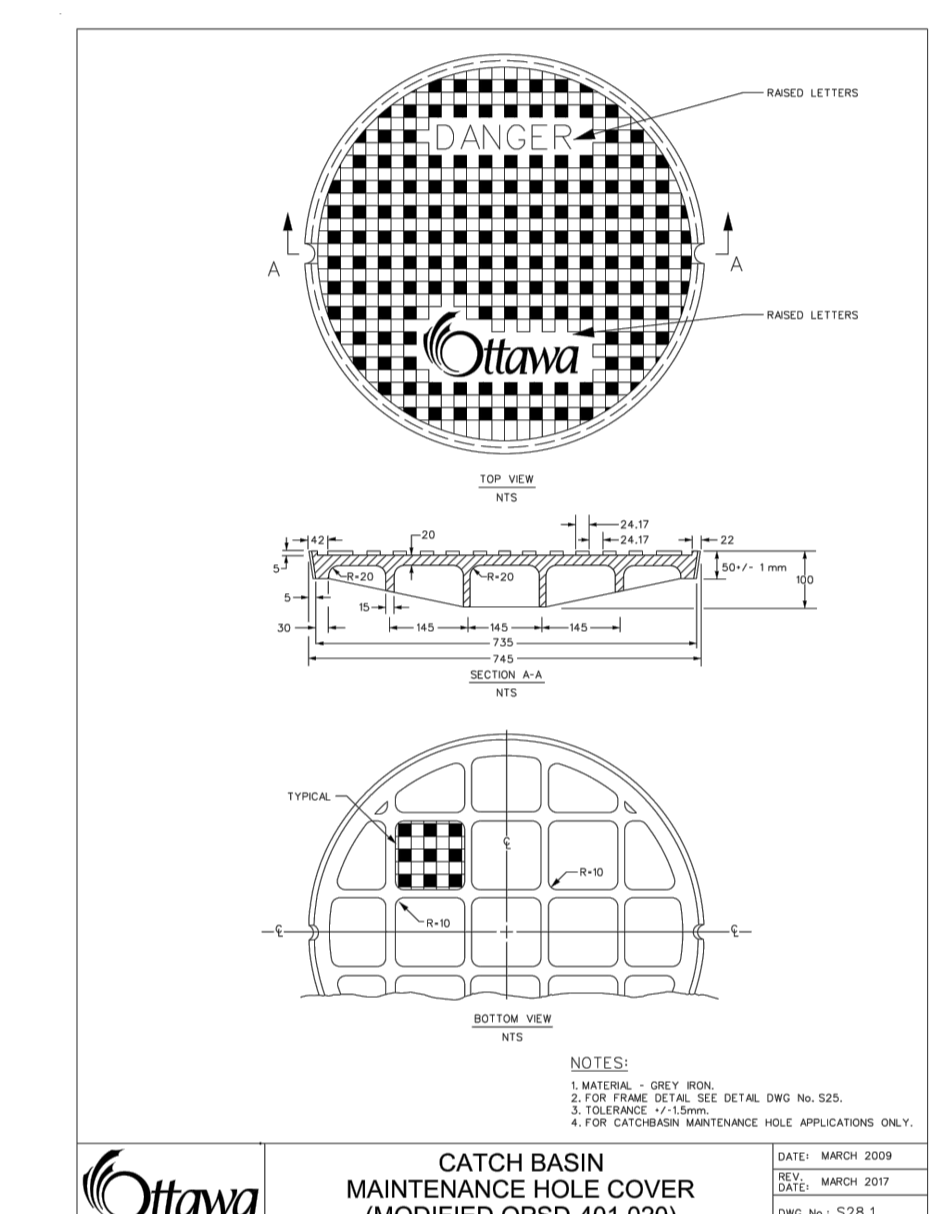
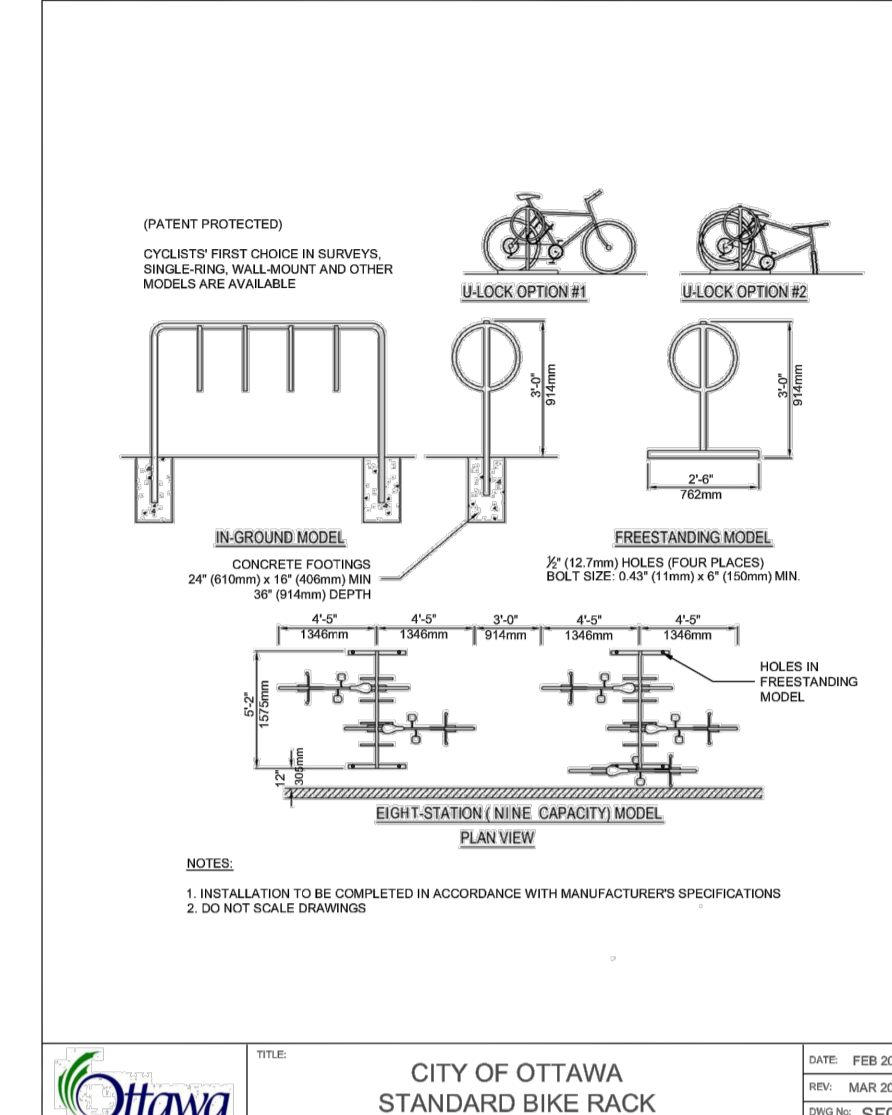
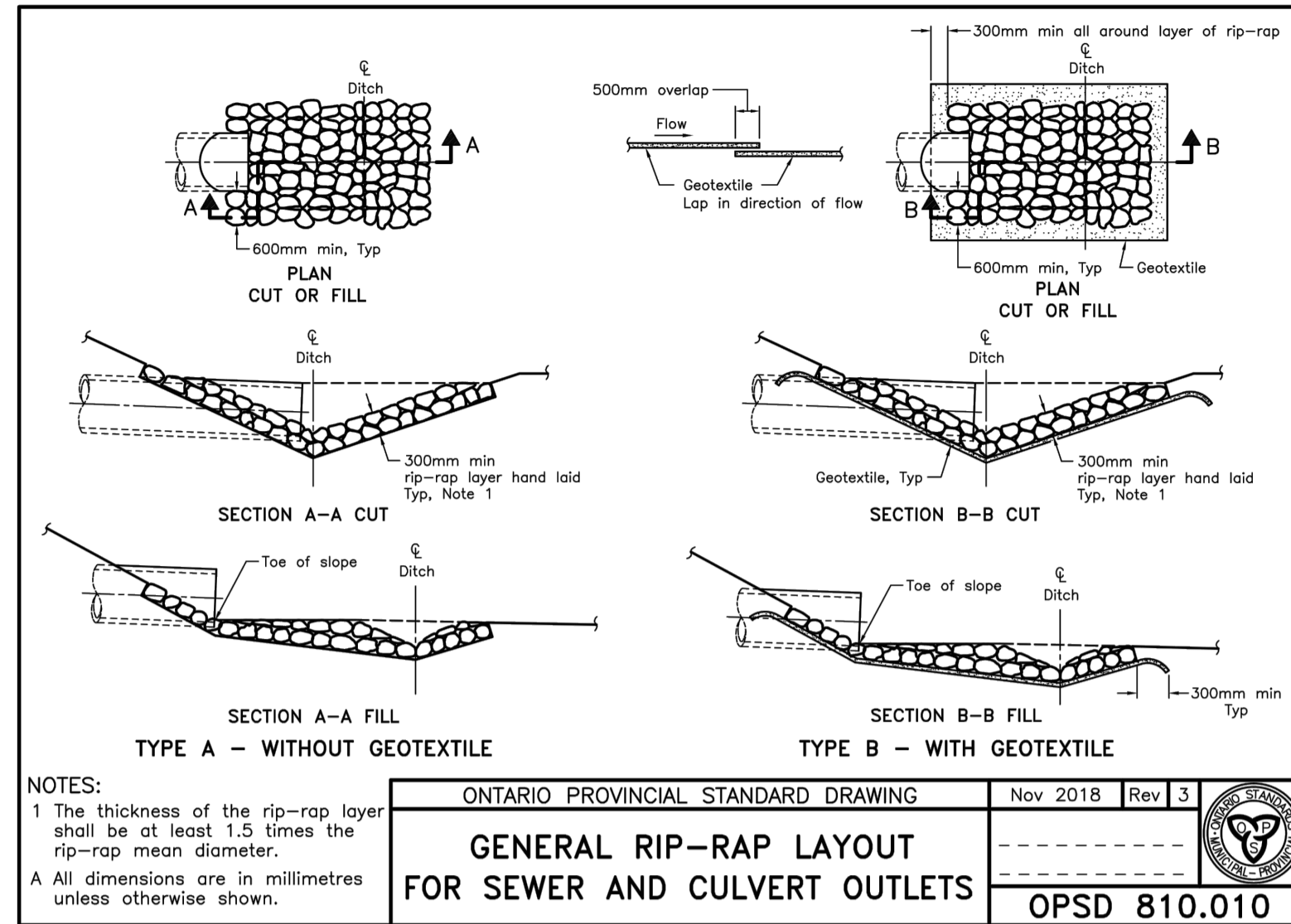
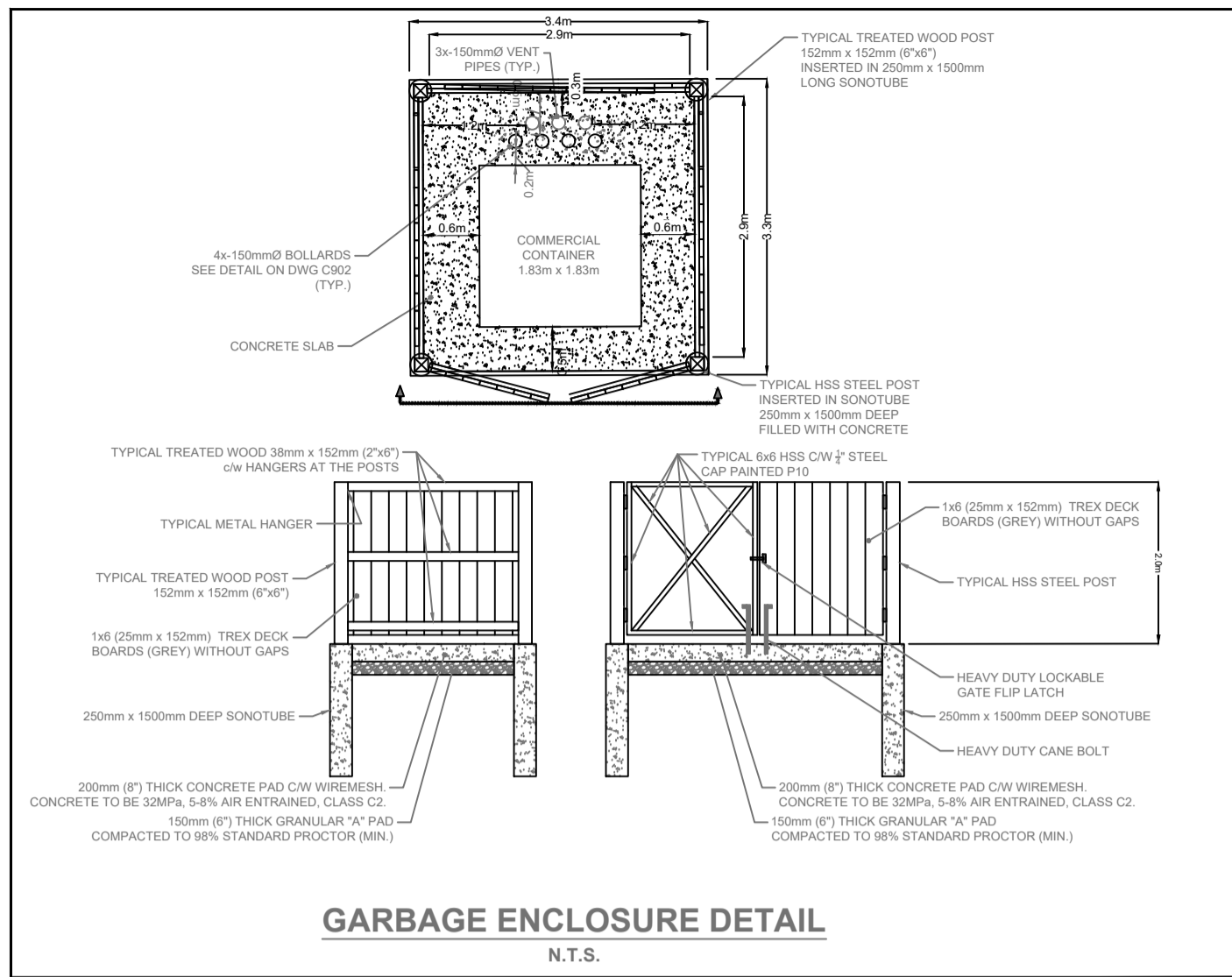
PROJECT NO: 210691

DATE: JANUARY 2022

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D07-12-22-0085

#1878



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