

Certain layers such as lots, zoning and dp areas are updated bi-weekly. This map is for general information only.  
The City of Kelowna does not guarantee its accuracy. All information should be verified.

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**CITY OF KELOWNA**  
**MEMORANDUM**

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**Date:** November 12, 2015 (Revised – access, signage, road reserve)  
**File No.:** Z15-0052  
**To:** Urban Planning Department (LK)  
**From:** Development Engineering Manager (SM)  
**Subject:** 340 Hwy 33 W and 145 Dougall Rd N                      RU1 to C4

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The Development Engineering Department has the following comments and requirements associated with this application to rezone the property at 145 Dougall Rd N from RU1 to C4 and consolidate with 340 Highway 33 W to accommodate a proposed car wash.

The road and utility upgrading requirements outlined in this report will be a requirement of this development.

The Development Engineering Technologist for this project is Jason Ough

**1.     General**

These are Development Engineering comments/requirements and are subject to the review and requirements from the Ministry of Transportation (MOTI) Infrastructure Branch.

**2.     Domestic Water and Fire Protection**

- (a)   The property is located within the Rutland Water District (RWD) service area. The water system must be capable of supplying domestic and fire flow demands of the project in accordance with the Subdivision, Development & Servicing Bylaw. The developer is responsible, if necessary, to arrange with RWD staff for any service improvements and the decommissioning of existing services. Only one water service will be permitted to a consolidated lot.
- (b)   A water meter is mandatory for each property and must be installed inside the building on the water service inlet as required by the City Plumbing Regulation and Water Regulation bylaws. The developer or building contractor must purchase the meter from the City at the time of application for a building permit from the Inspection Services Department, and prepare the meter setter at his cost. Boulevard landscaping, complete with underground irrigation system, must be integrated with the on-site irrigation system.

**3.     Sanitary Sewer**

The developer's consulting mechanical engineer will determine the development requirements of the proposed development and establish the service needs. The existing lot at 145 Dougall Road is serviced with a 100mm diameter sanitary service. Only one service per lot will be permitted for this development. The applicant will arrange for the removal and disconnection of the existing service and the installation of one new larger service, if required, at the applicants cost.



**4. Storm Drainage**

- (a) The developer must engage a consulting civil engineer to provide a storm water management plan which meets the requirements of the City Storm Water Management Policy and Design Manual. The storm water management plan must also include provision of a lot grading plan, identify minimum basement elevation (MBE), overland drainage routes, floodplain elevations and setbacks, and provision of a storm drainage service for the lot and /or recommendations for onsite drainage containment and disposal systems. The on-site drainage systems may be connected to the existing municipal drainage system in Highway 33 with an overflow service.
- (b) Storm drainage systems, oil and grit separator and overflow service(s) for the site will be reviewed and approved by Engineering when site servicing designs are submitted.

**5. Road Improvements**

- (a) The Developer is required to add a left turn lane to southbound Dougall Road N at the Highway 33 intersection. Turning bay must be minimum 25m including taper and painted lane delineation.
- (b) Access to property from Dougall Road North will be restricted to right in - right out with appropriate signage installed.
- (c) Access to the public lane on the east property line must be modified to meet the required 9m maximum. This space must be defined with curbing.
- (d) The estimated cost of required road improvement works, for bonding purpose, must be determined based upon a design provided by the developer to be reviewed by the City of Kelowna and MOTI.

**6. Road Dedication and Subdivision Requirements**

- (a) The developer is required to consolidate the two subject properties.
- (b) The developer is required dedicate roadway fronting 145 Dougall Road North to align with the property line at 340 Highway 33 to achieve the standard minor collector Right Of Way width.
- (c) The developer is required to provide 0.8m road reserve along the east property line to meet the minimum lane width for commercial property.
- (d) Grant Statutory Rights Of Way if required for utility services.
- (e) If any road dedication or closure affects lands encumbered by a Utility right-of-way (such as Hydro, Telus, Gas, etc.) please obtain the approval of the utility. Any works required by the utility as a consequence of the road dedication or closure must be incorporated in the construction drawings submitted to the City's Development Manager.

**7. Electric Power and Telecommunication Services**

All proposed service connections are to be installed underground. It is the developer's responsibility to make a servicing application with the respective electric power, telephone and cable transmission companies to arrange for these services, which would be at the applicant's cost.

**8. Design and Construction**

- (a) Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.
- (b) Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.
- (c) Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).
- (d) A "Consulting Engineering Confirmation Letter" (City document 'C') must be completed prior to submission of any designs.
- (e) Before any construction related to the requirements of this subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Development Engineering Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

**9. Survey Monuments and Iron Pins**

If any legal survey monuments or property iron pins are removed or disturbed during construction, the developer will be invoiced a flat sum of \$1,200.00 per incident to cover the cost of replacement and legal registration. Security bonding will not be released until restitution is made.

**10. Other Engineering Comments**

- (a) Provide all necessary Statutory Rights-of-Way for any utility corridors required, including those on proposed or existing City Lands.
- (b) If any road dedication affects lands encumbered by a Utility right-of-way (such as Terasen, etc.) please obtain the approval of the utility prior to application for final subdivision approval. Any works required by the utility as a consequence of the road dedication must be incorporated in the construction drawings submitted to the City's Development Manager.

**11. Development Permit and Site Related Issues**

- (a) Access and Manoeuvrability
  - (i) An SU-9 standard size vehicle must be able to manoeuvre onto and off the site without requiring a reverse movement onto public roadways.
  - (ii) Indicate on the site, the locations of loading bays as well as the garbage and recycle bins.

**14. Administration Charge**

An administration charge will be assessed for processing of this application, review and approval of engineering designs and construction inspection. The administration charge is calculated as (3% of Total Off-Site Construction Cost plus GST)

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Steve Muenz, P. Eng.  
Development Engineering Manager

jo



**Rutland**  
WATERWORKS DISTRICT

106 – 200 Dougall Road North  
Kelowna, BC V1X 3K5  
www.rutlandwaterworks.com

p: (250) 765-5218  
f: (250) 765-7765  
e: info@rutlandwaterworks.com

December 15, 2015

Urban Options Planning & Permits  
287 Rialto Drive  
Kelowna BC V1V 1E9

**RE: Lot A, Plan 33700 – 340 Hwy 33 – 145 Dougall Rd File # DP 15-0235 RWD  
File 15/13**

In response to City of Kelowna request for comment the following is a summary of  
Rutland Waterworks District requirements:

1. Capital Expenditure Charges **\$9,820.00**

Please pay by separate cheque, noting file # 15/13/CEC

2. Additional Costs:

2 Service Removals, New 50 mm Service (to property line) \$ 1,400.00  
(Materials and Installation only)

38 mm Positive Displacement Water Meter 752.27

District Inspection Fee (6.5% of Est. Cost below) 650.00

3. **Estimated** Costs of Required Works (for bonding purposes): **\$10,000.00**

Please pay by separate cheque, noting file # 15/13 (works/bonding) **\$12802.27**



December 15, 2015  
Urban Options Planning & Permits  
Page 2

Further, as noted in Mould's letter should any changes be made to the building design, a revised set of plans must be provided to the District to confirm the above calculations.

Upon receipt of above noted fees a water certificate will be issued.

Should you have any questions or require further information, please contact the undersigned.

Sincerely,



Pete Preston  
General Manager

Encl.

- c. Mould Engineering  
City of Kelowna (Planning Department)

PP/clp



# Mould Engineering

December 15, 2015

Rutland Waterworks District  
106 – 200 Dougall Road N  
Kelowna, BC V1X 3K5

ATTN: Pete Preston

Dear Pete:

Re: 340 Highway 33 – Lot A, Plan 33700; 145 Dougall Road – Lot 4, Plan 9924  
Rezoning, Development and Development Variance Permit Application  
Z15-0052, DP15-0235, DVP15-0236

As requested, we have examined the water supply considerations and fire flow requirements for the above-noted development permit application. The following analysis is based on the information provided in the City of Kelowna application package. Our comments are as follows:

1. The development is located at the intersection of Highway 33 and Dougall Road, as shown on the attached map. There are two properties involved as follows: Lot A, Plan 33700, (southern lot) which is currently zoned C4 (Urban Centre Commercial) and Lot 4, Plan 9924, (northern lot) which is currently zoned RU1 (Large Lot Housing). The southern lot is the current site of the Centex gas station and the existing structures are to remain. The application includes rezoning the northern lot to C4 and constructing a new building, with a mixed use of commercial space, a car wash and a residential unit. It appears that the two lots will be amalgamated; however, no information was provided regarding this amalgamation. The new building will not have an automatic sprinkler system.
2. The existing maximum daily flow requirement for the properties is 0.076 lps (1.0 lpgm) for the northern property and 0.51 lps (6.8 lpgm) for the southern property. The additional demand for the proposed new building on the northern property is estimated at 2.27 lps (30 lpgm). The water use for the southern property will not change. The computer model of the distribution system has been analyzed, and the water system is able to supply the increase in maximum daily and peak hourly demand.
3. The District currently supplies the lots with a small diameter service each, both from the 150 mm AC watermain along the alley to the east of the properties. These existing services must be removed and the corporation stop shut off at the main. A new 50mm service is required to supply the increased demand and should be installed off the 200mm PVC watermain on Dougall Road, as shown on the attached map. Also, a new 38mm meter is required to service the building. Drawings need to be provided to the District for review and approval of the final design of the meter and backflow prevention installation.
4. The estimated fire flow requirements for the proposed building governs, and equate to 8,000 lpm (1,760 lpgm) for a 2.0 hour duration, in accordance with the Fire Underwriters Survey



Guidelines (see attached sheet). Two hydrants are necessary to disperse this flow and there are two existing hydrants within 90 m of the building, one to the north on the east side of Dougall Road, and one to the south, also on Dougall Road, fronting the property. The water distribution system is capable of supplying the required fire flows

5. The Capital Expenditure Charge (CEC) estimate for this development is as follows:

**Residential Unit, Commercial Building without Sprinkler System:**

1. Credit for 1 Existing Single-Family Service	\$ (2,700)
2. Proposed Building:	
1 Single-Family Unit @ \$2,700 /unit	\$ 2,700
Commercial Space (706 m <sup>2</sup> ), First 350 m <sup>2</sup> (min. charge)	\$ 2,700
Additional 356 m <sup>2</sup> @ \$20/m <sup>2</sup>	\$ 7,120
<b>Total CEC</b>	<b>\$ 9,820</b>

**Plus Additional Costs:**

3. 2 Service Removals, New 50mm Service (to Property Line) (Materials and Installation only)	\$ 1,400.00
4. 38mm Positive Displacement Water Meter	\$ 752.27
5. District Inspection Fee (6.5% of Est. Cost below)	\$ 650.00
<b>Items 1-5 above should be collected by the District</b>	<b>\$ 12,622.27</b>

**Estimated Cost of Required Works (for Bonding Purposes):**

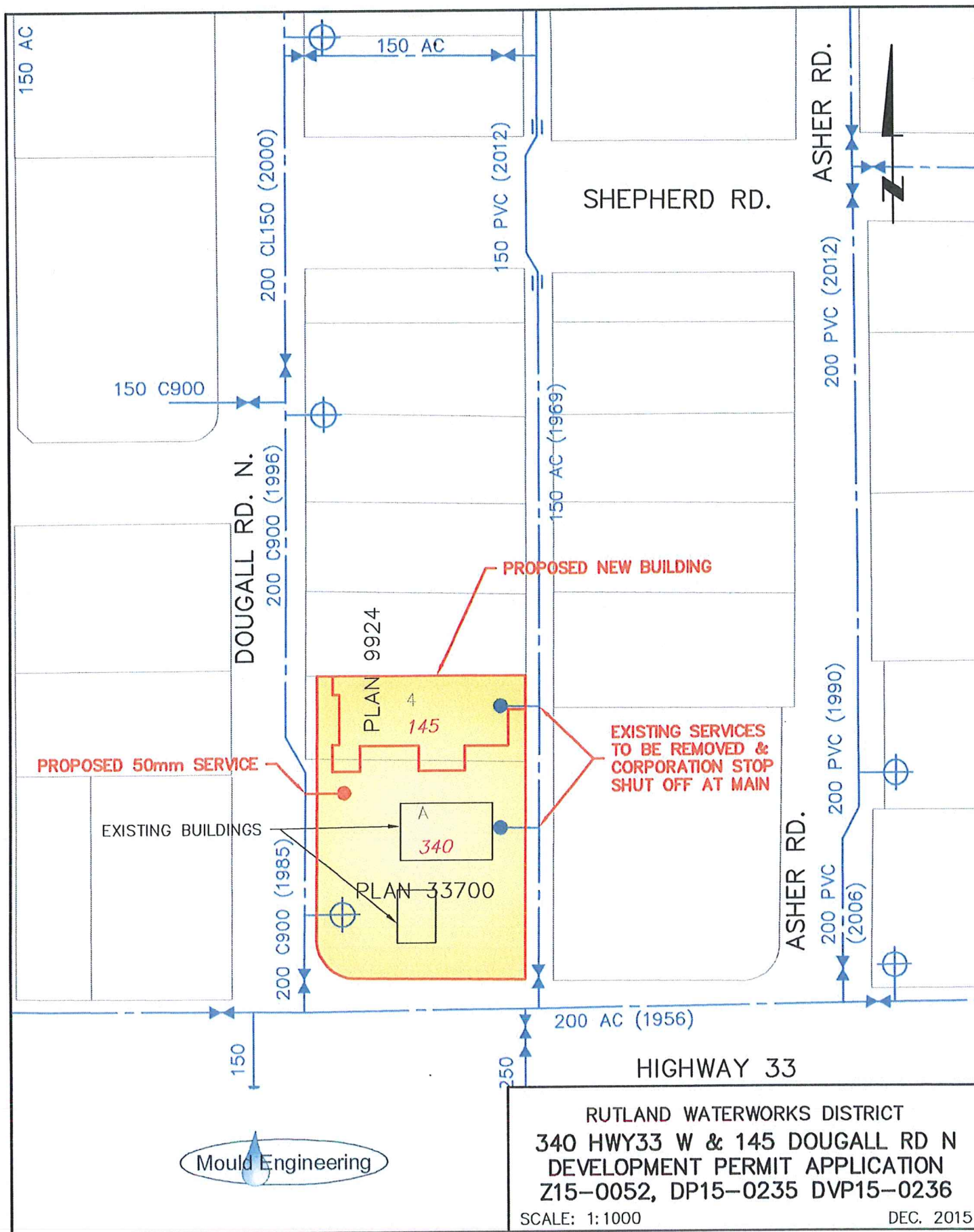
6. Removal of 2 Existing Services (Excavation and Backfill)	\$ 5,000
7. New 50mm Service, (to Property Line) (Excavation and Backfill)	\$ 5,000
<b>Total Bonding Required</b>	<b>\$ 10,000</b>

The District should not have any concerns with the development permit application, subject to the above charges being addressed. If any changes are made to the building design, a revised set of plans must be provided to the District to confirm the above calculations. If you need more information, please contact our office at (250) 868-2072.

Yours truly,  
MOULD ENGINEERING



Jason Beath  
JB/jb  
Enclosures



# Mould Engineering

## Fire Flow Estimate (in accordance with Fire Underwriters Survey Guidelines)

**District:** Rutland Waterworks District **Date:** December 15, 2015

**Address:** 340 Highway 33 (Lot A, Plan 3370)  
145 Dougall Road (Lot 4, Plan 9924)

**Description:** Existing Centex Gas Station, Proposed Car Wash, Retail Space, Residential Unit  
Fire Flow Required as per drawings

1. Type of Construction: **Wood Frame**  $C = 1.0$

Ground Floor Area: **706 m<sup>2</sup>** **No. of Stories:** **1**  
Note: Taken From Architectural Drawings

Total Floor Area: **706 m<sup>2</sup>**

Fire Flow (F) from Table:  $F = 220 \times C \sqrt{\text{Area}}$   
 $F = 5,846 \text{ lpm}$   $\Rightarrow$  Use: **6,000 lpm (A)**

2. Occupancy: **Non-Combustible (Low Hazard)** Add/Subtract **-25%** **-1,500 lpm**

Sub-Total **4,500 lpm (B)**

3. Automatic Sprinklers: **No** Add/Subtract **0%** **0 lpm**

4. Exposure:

	Distance		Add
1. Front (West)	18	m (Dougall Road, Commercial Bldg)	15%
2. Side (North)	0	m (Existing Residential, Future Commercial)	25%
3. Side (South)	6	m (Existing Gas Station Bldg)	20%
4. Rear (East)	6	m (Lane, Existing Bldg)	20%
Total			80% x (B)
			3,600 lpm
Total			8,100 lpm

Total Fire Flow Required **8,000 lpm**  
1,760 Imp gpm  
2,114 USgpm

5. Fire Flow Duration: **2 hours**

Notes: - Exposures estimated from Site Plan and City of Kelowna aerial photographs



REVISIONS		DATE	BY	APP'D
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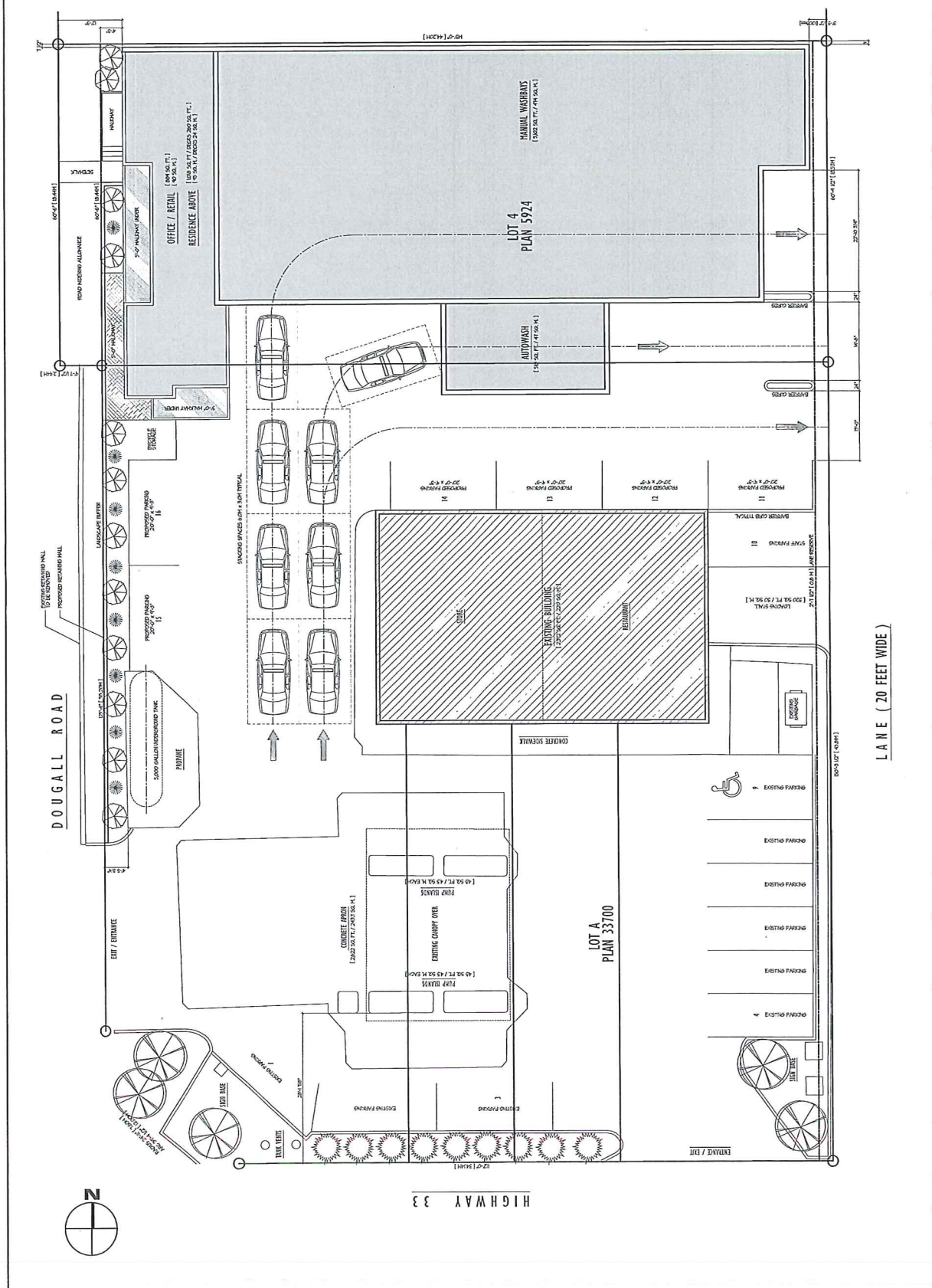
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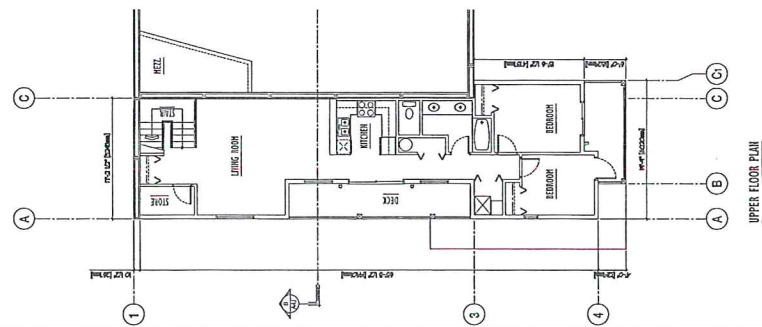
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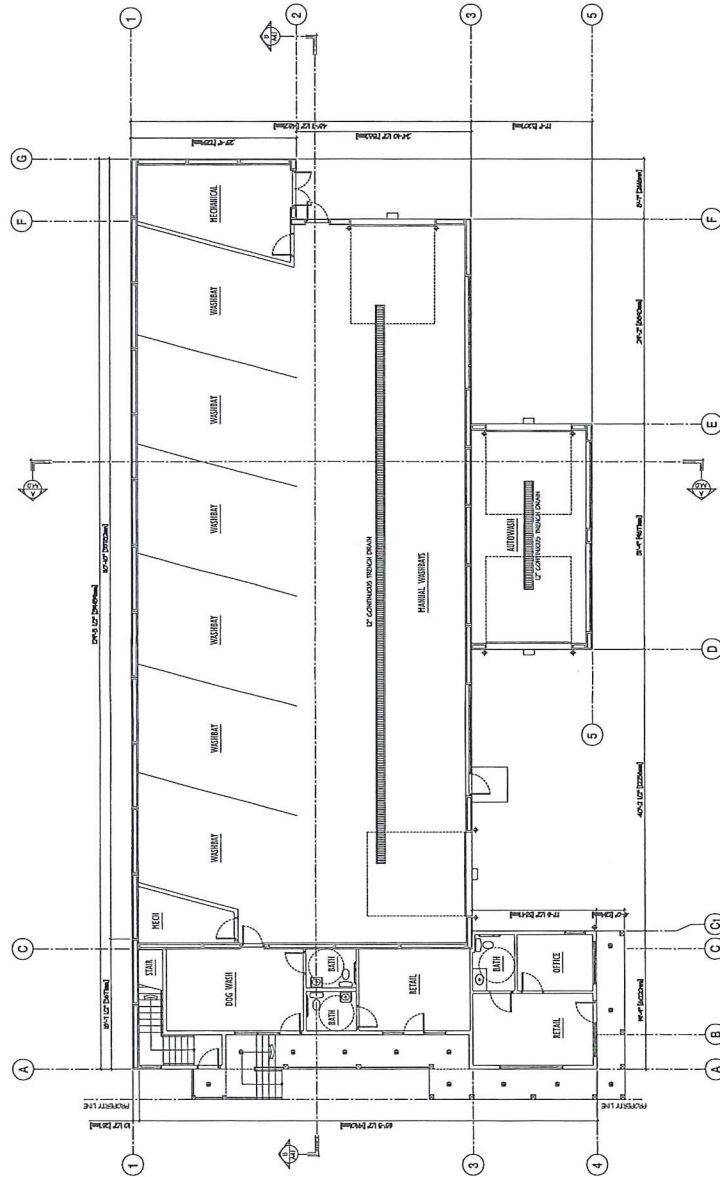
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OWNER: HARRIS BUSINESS PARK  
DESIGNER: TED J. THOMAS & ASSOCIATES LTD.  
DATE: 10/1/2019  
FILE NAME: 101ST PLAN  
SHEET NO.: 101ST PLAN





## MAIN FLOOR PLAN



## MAIN FLOOR PLAN

REVISIONS			
DATE	REV	DESCRIPTION	BY
3/20/15	A	ISSUED FOR CLIENT REVIEW	BT
03/25/15	B	ADD PROJECT, ZONE 04 ADD PROJECT, ZONE 05 ZONED FOR DEVELOPMENT FUTURE	BT

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PHONE : 250 763 5220  
FAX : 250 763 2206  
E-MAIL: [omnisc@edmonton.ca](mailto:omnisc@edmonton.ca)

PROJECT	PROPOSED CARWASH ADDITION CENTER PETROLEUM - 340 HWY. 33W, NEMOHIA, BC CHANDAN [ RUBY ] DULAT	
	JOB NO. 2015-02	REVISION: B
	DRAWN BY: BENKALLO	
	DATE: 27TH MARCH 2005	
	FILE NAME:	FLOOR PLAN
	CHK. BY:	BO THOMAS
	A2.0	



PROJECT TITLE  
**340 HIGHWAY 33 W**

LOCATION  
Kelowna, BC

DRAWING TITLE  
**CONCEPTUAL  
LANDSCAPE PLAN**

REVISION	DATE	BY	DESCRIPTION
1	11/1/20	Development	Final
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3			
4			
5			

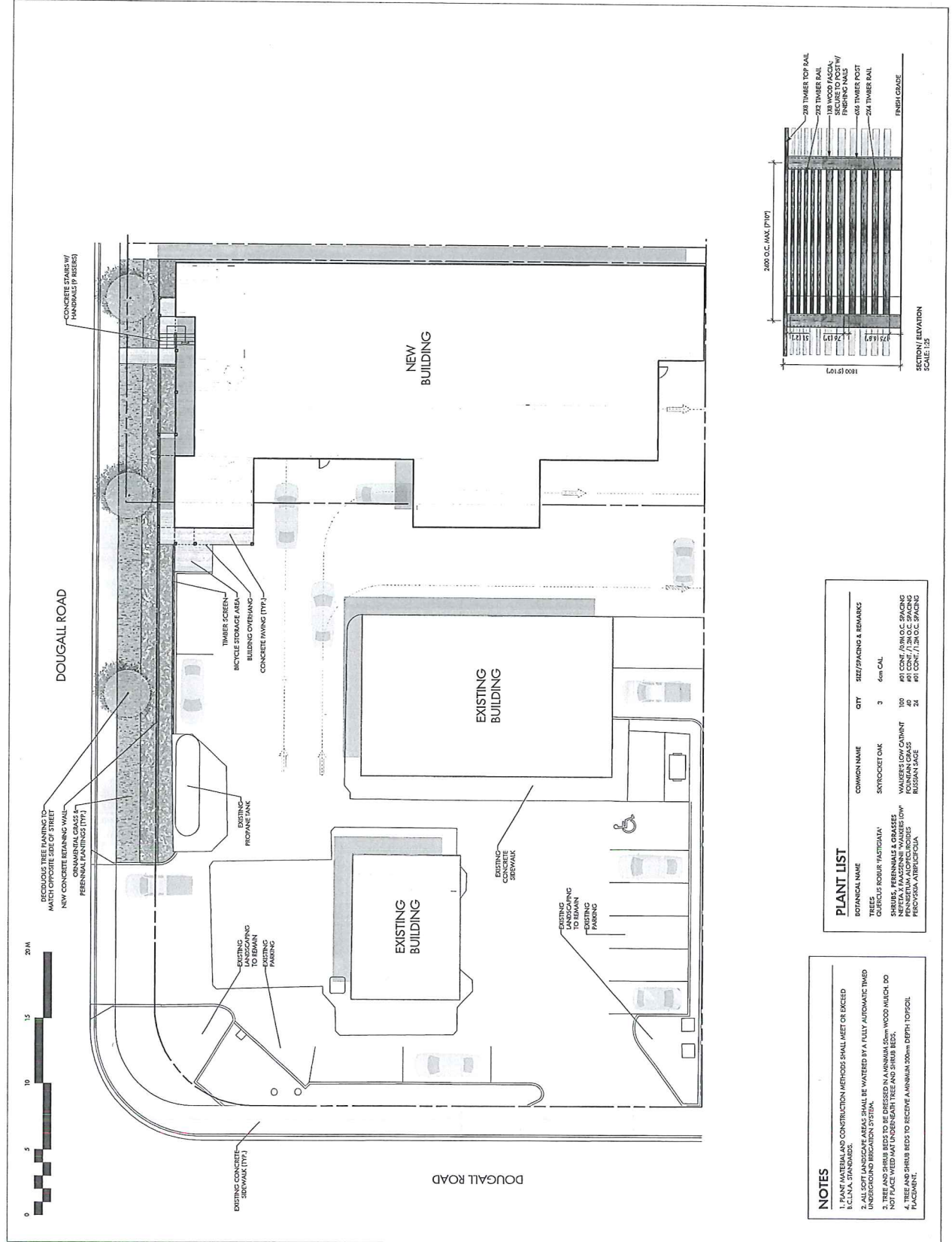
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DRAWN BY	KL
CHECKED BY	KL
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DATE	11/1/20

1/24



**L1/2**

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# PLANT LIST

BOTANICAL NAME	COMMON NAME	QTY	SIZE / SPACING & REMARKS
TREES			
QUERCUS ROBUR 'ASTICATA'	SKYPOCKET OAK	3	4m CAL
SHRUBS, PERENNIALS & GRASSES			
NETTIA & MAISONNI WALKERS LOW	WALKERS LOW QUINCE	100	P10 CONT. / 10 IN O.C. SPACING
PEROVSKIA ATRIPLEXICOLA	RUSSIAN SAGE	24	P10 CONT. / 10 IN O.C. SPACING

# NOTES

1. EXIST. MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED B.C. STANDARDS.
2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIED SYSTEM.
3. TREE AND SHRUB BEDS TO BE DESIGNED AS A MINIMUM 120cm WOOD MULCH, DO NOT PLACE WED MAT UNDERNEATH TREE AND SHRUB BEDS.
4. TREE AND SHRUB BEDS TO RECEIVE A MINIMUM 200mm DEPTH TOPSOIL PLACEMENT.





PROJECT TITLE  
**340 HIGHWAY 33 W**

DATE  
February, BC

DRAWING TITLE  
**WATER CONSERVATION  
& IRRIGATION PLAN**

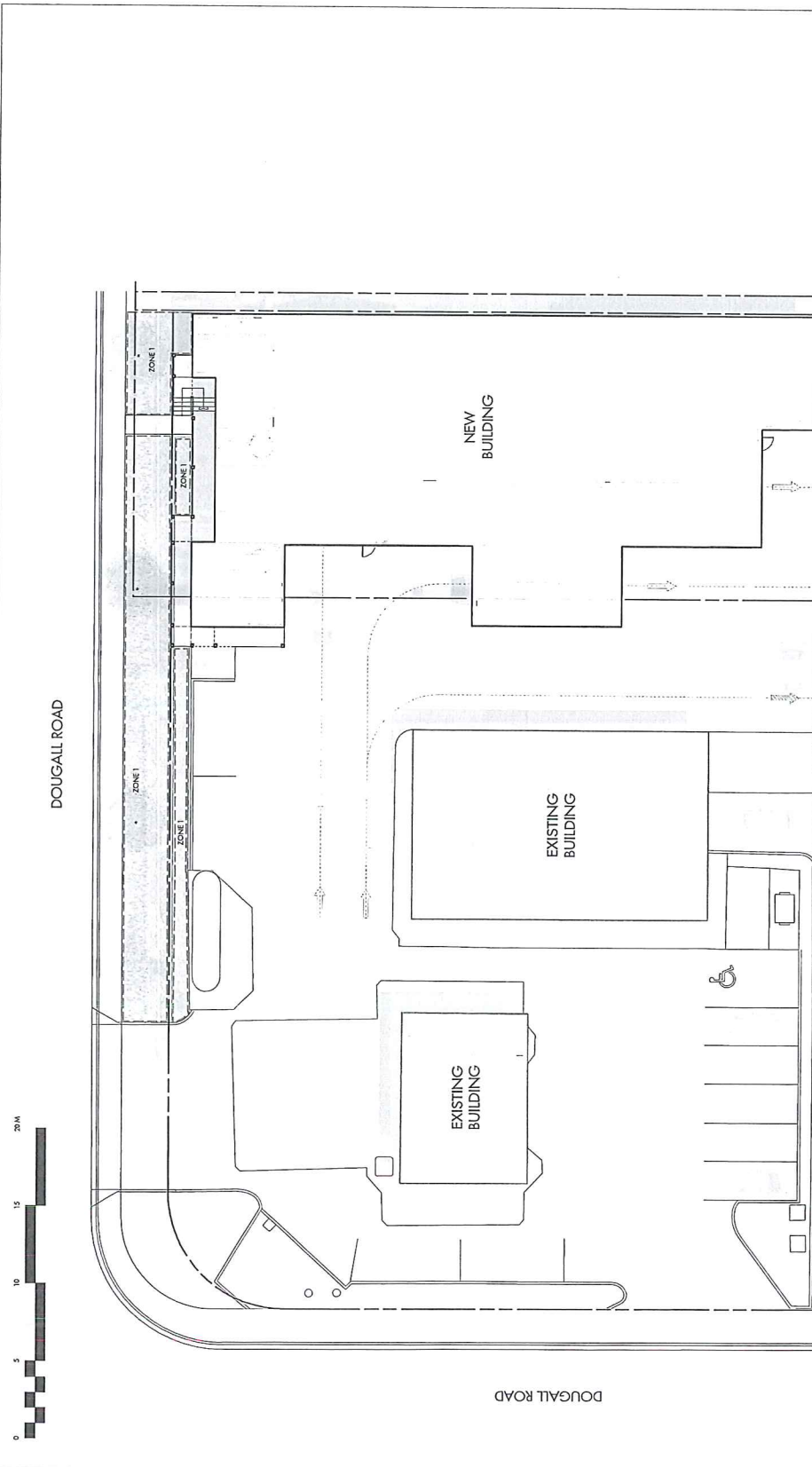
NO.	DESCRIPTION	DATE
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3		
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5		

PROJECT NO.	1804
CLIENT	SP
DESIGNER	CD
DATE	May 26, 2015
SCALE	1:100



**L2/2**

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#### IRRIGATION NOTES

1. IRRIGATION PRODUCTS AND INSTALLATION METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE WATER EFFICIENCY SURFACE DRAINAGE (WESD) STANDARD AND THE SUPPLEMENTARY SPECIFICATIONS IN THE CITY OF KILGOMRAIRY TWO PART, SCHEDULE 1.
2. THE IRRIGATION SYSTEM SHALL MEET THE REQUIREMENTS, REGULATIONS, AND BYLAWS OF THE WATER PURVISOR.
3. THE IRRIGATION SYSTEM SHALL BE EQUIPPED WITH AN APPROVED BACKFLOW PREVENTION DEVICE, WATER METER, AND SHUT OFF VALVE LOCATED OUTSIDE THE BUILDING ACCESSIBLE TO THE CITY.
4. AN APPROVED SMART CONTROLLER SHALL BE INSTALLED. THE IRRIGATION SCHEDULING TIMES SHALL UTILISE A MAXIMUM ET VALUE OF 77 / MONTH (KILGOMRAIRY JULY ET), TAKING INTO CONSIDERATION SOIL TYPE, PLANT, AND MICROCLIMATE.
5. Drip line and emitters shall incorporate technology to limit root intrusion.
6. IRRIGATION SLEEVES SHALL BE INSTALLED TO ROUTE IRRIGATION LINES UNDER HARD SURFACES AND DRIVEWAYS.
7. IRRIGATION PIPE SHALL BE SIZED TO ALLOW FOR A MAXIMUM FLOW OF 1.5m / SEC.
8. A FLOW SENSOR AND MASTER VALVE SHALL BE CONNECTED TO THE CONTROLLER AND PROGRAMMED TO SHUT FLOW TO THE SYSTEM IN CASE OF AN IRRIGATION WATER LEAK.

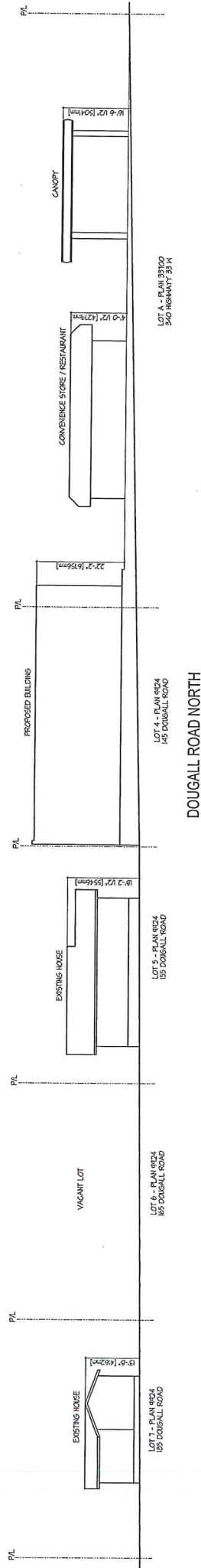
#### IRRIGATION LEGEND

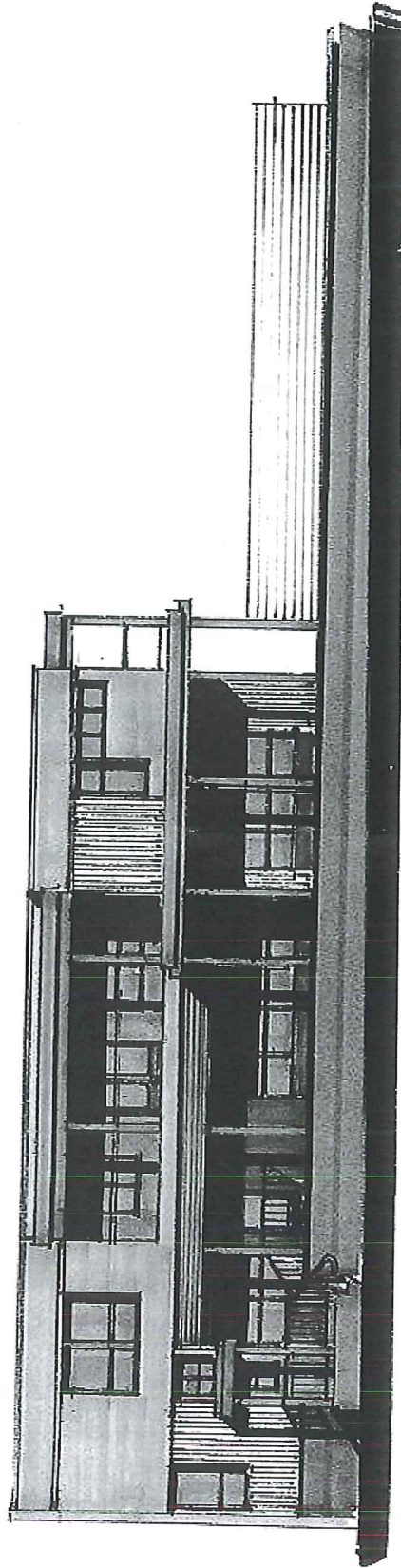
ZONE 1: HIGH EFFICIENCY SURFACE DRAIN IRRIGATION FOR MODERATE  
TOTAL AREA: 144 m<sup>2</sup>  
ESTIMATED ANNUAL WATER USE: 11,400 L / year  
ESTIMATED ANNUAL WATER USE: 91 L / m<sup>2</sup> / year

#### WATER CONSERVATION CALCULATIONS

KILGOMRAIRY MAXIMUM WATER BUDGET (WB) = 144 mm / year  
ESTIMATED LANDSCAPE WATER USE (ML) = 91 L / m<sup>2</sup> / year  
WATER BALANCE = 72 mm / year  
\*REFER ATTACHED IRRIGATION APPLICATION FOR DETAILED CALCULATIONS

PROPOSED CARWASH ADDITION  
CENTEX PETROLEUM  
340 HWY 33 W

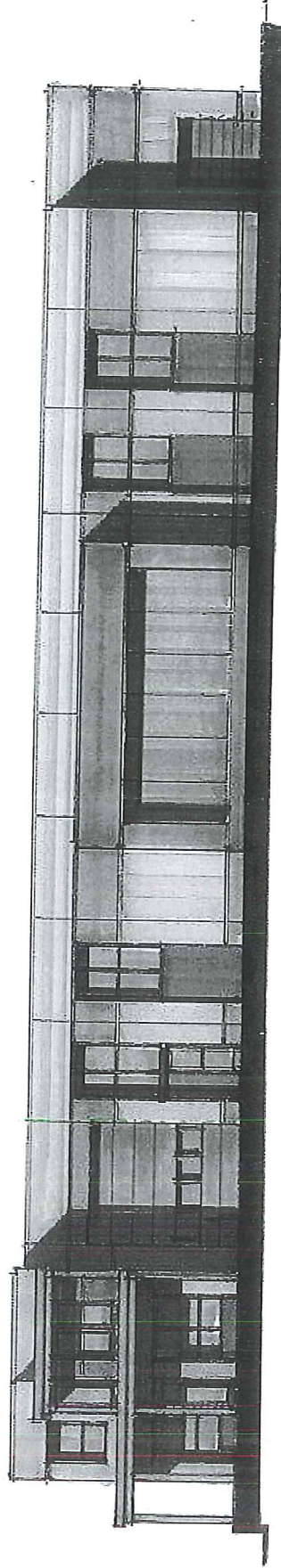




WEST ELEVATION

PROPOSED CARWASH ADDITION  
CENTEX PETROLEUM  
340 HWY 34 W





SOUTH ELEVATION

PROPOSED CARWASH ADDITION  
CENTEX PETROLEUM  
340 HWY 33W

PROPOSED CARWASH ADDITION  
CENTEX PETROLEUM  
340 HWY 33 W

