

**540 ZIPRICK ROAD, BC  
DEVELOPMENT PERMIT APPLICATION**

***DESIGN RATIONALE***



2023.06.07

***Prepared by:***

IBA Architecture Inc.

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***To be submitted to:***

Planning Department  
City of Kelowna



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## 1.0 OVERVIEW

The proposed town housing development thoroughly addresses the main goals pursued by the City of Kelowna for these land uses. Strategies have been discussed among the project's Architect and the City Planning for minimizing the impact of the development on the natural environment, topography, open space, and visual character of City of Kelowna.

The OCP Land use Designation was adopted accordingly, and the aimed Zoning: MF2 accepts that the form and character may include *multiple dwelling housing* units.

We believe that the proposed townhouse typology – duplex and five plex– addresses all significant elements of the OCP and are deemed to be affordable forms of housing in the Kelowna area market. They have become an excellent product type to satisfy the mid to upper market housing demand, much of which has not been available in the overall Ziprick Road.

## 2.0 PROJECT DESCRIPTION

The suitable topography of the developable land lends itself to this multi-family form product type.

This townhouse form project develops along Ziprick Road, on the east side, with 2 residential Units and 5 units on Simpson Avenue on the South, a total number of 7 units. It comprises diversified building types – duplex and five-plex configurations based on their relationship with the topographic setting and the road/grading.

This site, of approximately 0.28 acres among the multifamily and single-family residential areas.

The architectural design has tackled a wide range of different floor plans options, in combination with diverse section developments. We propose two & three-storey units, and walk-out units, ensuring an attractive broad housing mix in this neighborhood.

As per the city's coordination, IBA has proposed that Unit #1 be a two-storey building. Additionally, we have suggested a 4m setback from the north property line for Unit #7, to ensure a smooth transition between the adjacent buildings and this townhouse development.

The Architectural exterior design has been carefully designed considering the adjacent neighborhood architectural context, and the specific sensibilities that were put on the table by the participants during the preliminary design stage.

Therefore, a refined craftsman style with a modern and vibrant-looking neighborhood.

In addition, the buildings' envelopes have been conceived with parameters that enable the efficiency of both energy and construction costs, emphasizing the differentiation of the buildings through the choice of colours, architectural accents and landscaping, rather than over-complicating the layout of the facade (form factor, opaque walls to openings ratio...) or over-designing the buildings' elevations.

Special attention was given to the landscaped areas and to the interface with the pedestrian connectivity between the development and the neighborhood.

### 3.0 SITE AND PARKING ACCESS

The proposed roads and the architectural design giving a responsible and conscious solution from many perspectives: cost efficiencies, yield efficiencies, tax impact to municipality, neighborhood character and efficient use of the land.

Regarding parking, the units have double and single garages, with a minimum driveway length of 6.5 m, and provisions for visitor on-site parking as per the Parking and Loading zoning bylaw.

### 4.0 ZONING AND OCP AMENDMENT

The current zone of the site is RU1.

The developer of this site, decided to submit rezoning application to MF2.

We recommend that the city of Kelowna allow for the rezoning of this site to MF2 for the following reasons:

- The site will be more developable.
- The developer feel that the design quality of this project can be inspirational for other future developments nearby that benefit the neighbourhood
- The proposed area of the units benefits the resident of the building. And satisfy the community's need for larger units with several bedrooms.

## 5.0 SUSTAINABILITY AND CRIME PREVENTION

This increased density over the traditional or even small-lot residential forms of housing is not only able to help mitigate increasing costs for first time buyers, but also enables efficiencies in achieving reductions in cost of city services per capita, energy consumption, carbon footprint, heat island effect, ...

Envelope details that prevent water and moisture ingress, yet still allow the assemblies to dry, will prevent mould growth. Reducing thermal bridging combined with appropriate thermal insulation will reduce heating and cooling loads. Providing windows in all of the occupied spaces allows natural day lighting and reducing energy consumption required for illumination. Operable windows also allow for natural ventilation, thus reducing the need for mechanical ventilation to provide fresh air and adding "livability".

Extensive use of materials from natural sources is used to the largest extent possible and thereby reduces the carbon footprint accordingly. A properly designed and detailed building will also reduce heating and cooling loads, increase air quality, and reduce energy consumption.

Carefully selected landscaping material will help reduce the project's use of water. This will prove an attractive, colourful and interesting variety of grass, shrubs and large trees for shade, privacy and path definition. Special attention was placed on the connection to the adjacent parks, which should provide a style of development which is highly desirable within the Kelowna community.

The design of the buildings and landscaping promote natural surveillance and do not provide opportunistic hiding spaces. The entrances are clearly visible from the street and well-lit public sidewalks surround the building.

The intentions of CPTED have been addressed in the following ways: well-maintained entrances and frontages are intended to promote pride in ownership amongst the residents. This will discourage vandalism, encourage surveillance, and will improve the overall maintenance of the site. The ground-oriented entrance has been provided to reinforce this principle.

The social lifestyle of the site will help promote further surveillance and territorial reinforcement. Separation of private, semi-private and public spaces will be achieved with overall landscaping and finish materials to separate and add comfort to the residents and visitors. Large windows help to provide eyes to the street and surrounding areas. To support interaction and familiarity among the residents and users, an abundance of common outdoor space has been provided.

Site lighting to the streetscape and pathways will be clearly lit, to illuminate the faces of users, and provide illumination levels that do not create high contrast areas that could potentially conceal offenders.

This unique and attractive project will endure due to its sense of community, and the fact that it presents a prominent streetscape and connection to the surrounding neighborhood. It also provides well-thought-out external traffic patterns.

## 6.0 LANDSCAPING

The Developer has selected M2 Landscaping Architecture LTD. to create an interesting and aesthetically pleasing landscape solution the architectural style of the project. This will also compliment the character of the surrounding and future neighborhoods. The site design proposes a series of green pockets for the use and enjoyment of the families, with play areas for children to benefit from the outdoors.

Carefully selected landscaping material will help reduce the projects use of water. Several annual and perennial shrubs have been selected for along Ziprick Road and Simpson Avenue and the internal roads throughout the site, and in special groupings adjoining the buildings' ends. This will prove an attractive, colorful and interesting variety of grass, shrubs and large trees for shade, privacy and path definition. Trees will be planted along the roads. Given enough time to mature.

The landscape concept for the boundary areas, and the small community gardens, will provide a visually exciting and high volume of green space.

## 7.0 SUMMARY

The project owner and the design team feel that the combination of a quality design coupled with leading-edge technology, pedestrian-friendly landscape features, and modern building materials will provide for a very functional and highly desired residential neighbourhood project.

It is also our desire that this project will be one of many to be built in an area critical to the continued sustainability and growth of our City internationally.

We look forward to your enthusiastic support and recognition for all the project brings to our community.

**8.0 ARCHITECTURAL RENDERINGS**



**View From Simpson Avenue.**

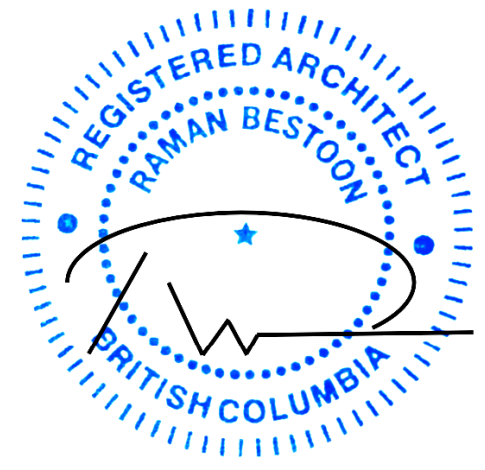


**View From Simpson Avenue.**



**View From Ziprick Road.**

**END**



# 540 ZIPRICK TOWNHOUSES

540 ZIPRICK ROAD, KELOWNA BC

## ARCHITECTURAL SHEET LIST

- A0.00 COVER SHEET
- A0.02 PERSPECTIVE
- A0.03 STREET VIEW
- A0.04 ZONING ANALYSIS
- A1.01 SITE PLAN
- A2.01 MAIN FLOOR PLAN
- A2.02 SECOND FLOOR PLAN
- A2.03 THIRD FLOOR PLAN
- A2.04 ROOF PLAN
- A2.05 ENLARGED FLOOR PLANS - BUILDING B
- A2.07 ENLARGED FLOOR PLANS - BUILDING A
- A3.01 BUILDING B ELEVATIONS
- A3.02 BUILDING A ELEVATIONS
- A4.01 BUILDING SECTIONS

## LANDSCAPE SHEET LIST

- L1 LANDSCAPE PLAN
- L2 SHRUB PLAN WEST
- L3 LIGHTING PLAN
- L4 PERMEABILITY PLAN
- L5 IRRIGATION PLAN
- L6 LANDSCAPE DETAILS
- L7 IRRIGATION DETAILS
- L8 LANDSCAPE SPECIFICATIONS

### ARCHITECTURAL:

IBA Architecture Inc.  
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### LANDSCAPE:

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### SURVEYOR:

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CONTACT: Jen Ashton  
259A Lawrence Avenue  
PHONE: 250-763-7322  
EMAIL: jen@runnallsdenby.com

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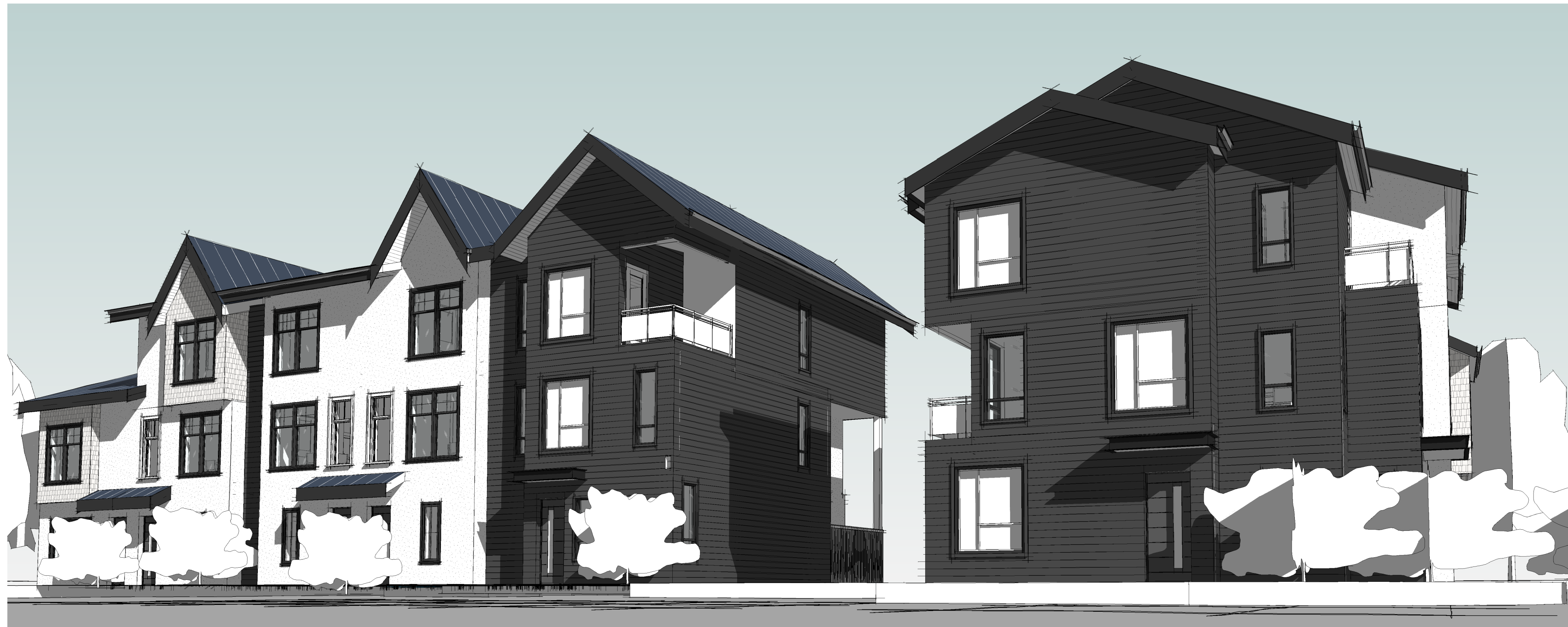
PROJECT  
**ZIPRICK TOWNHOUSES**

ADDRESS  
**540 ZIPRICK ROAD,  
KELOWNA BC**

SHEET TITLE  
**COVER SHEET**

**A0.00**

DESIGNED: Designer DRAWN: Author  
SCALE: 1/2" = 1'-0" FILE: 0001



1 FROM SIMPSON AVE. VIEW 1  
A0.02



2 FROM SIMPSON AVE, VIEW 2  
A0.02



3 FROM ZIPRICK ROAD, VIEW 3  
A0.02

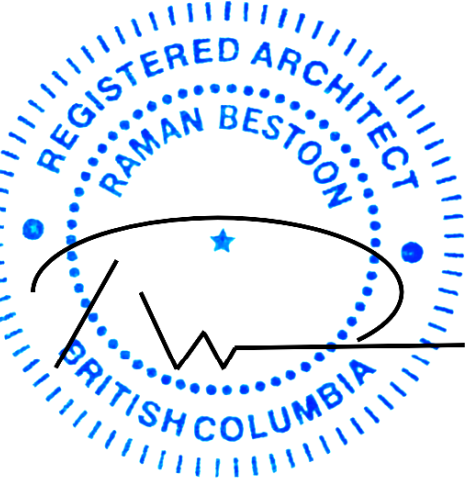


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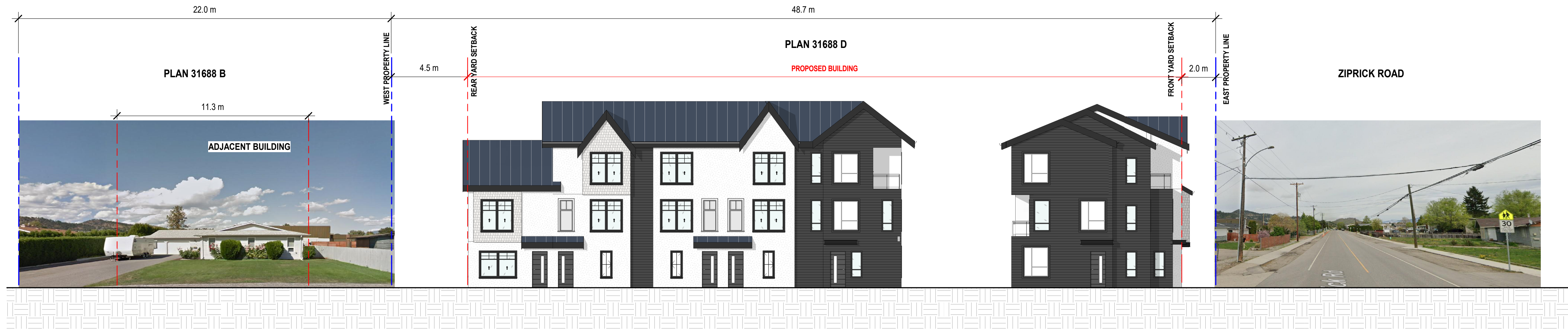
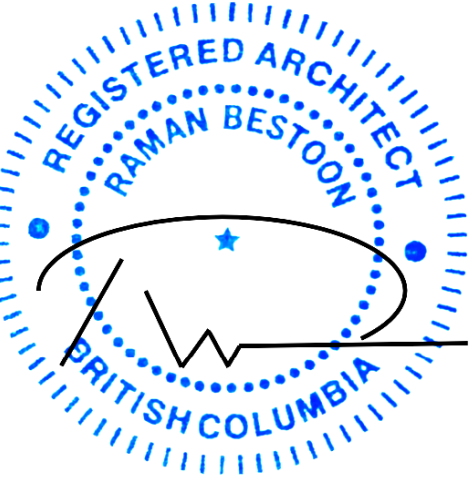
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SHEET TITLE  
**PERSPECTIVE**

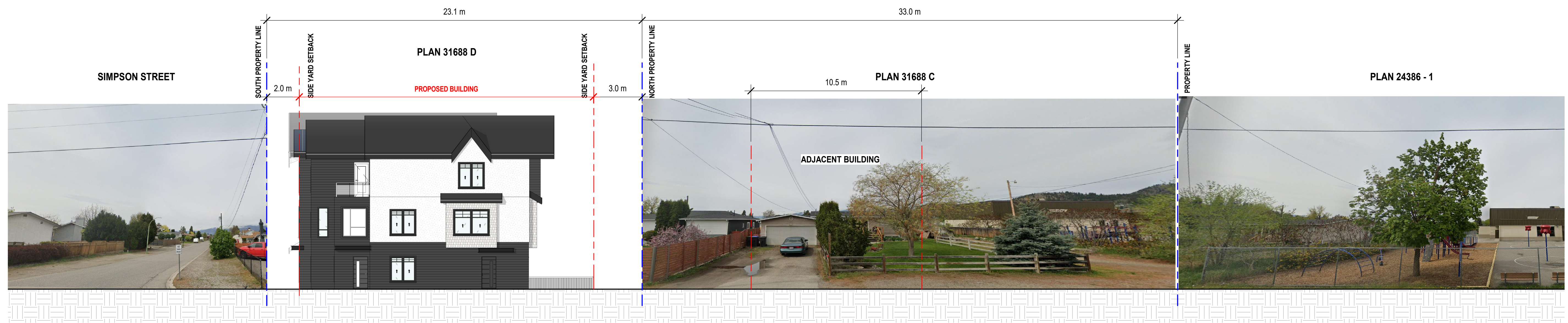
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DESIGNED: Designer DRAWN: Author  
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Incl\Projects\2022\A22-05 540 Ziprick Road  
Townhouses\3.0 CAD\540 Ziprick Road  
Townhouses (2023.01.16) New.rvt



**1** SIMPSON STREET VIEW  
A0.03 3/32" = 1'-0"



**2** ZIPRICK STREET VIEW  
A0.03 3/32" = 1'-0"

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**ZIPRICK TOWNHOUSES**

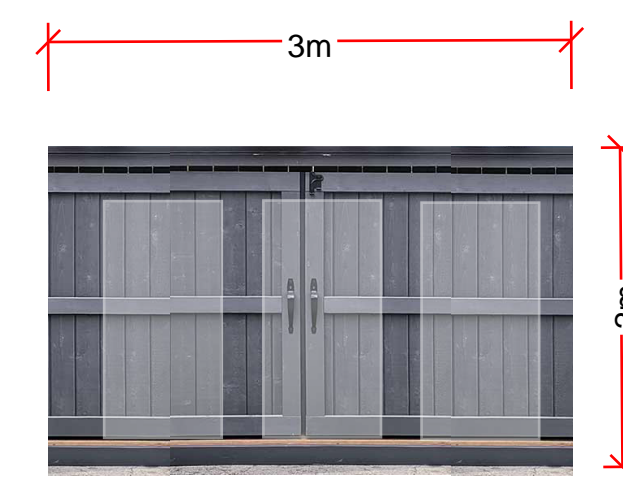
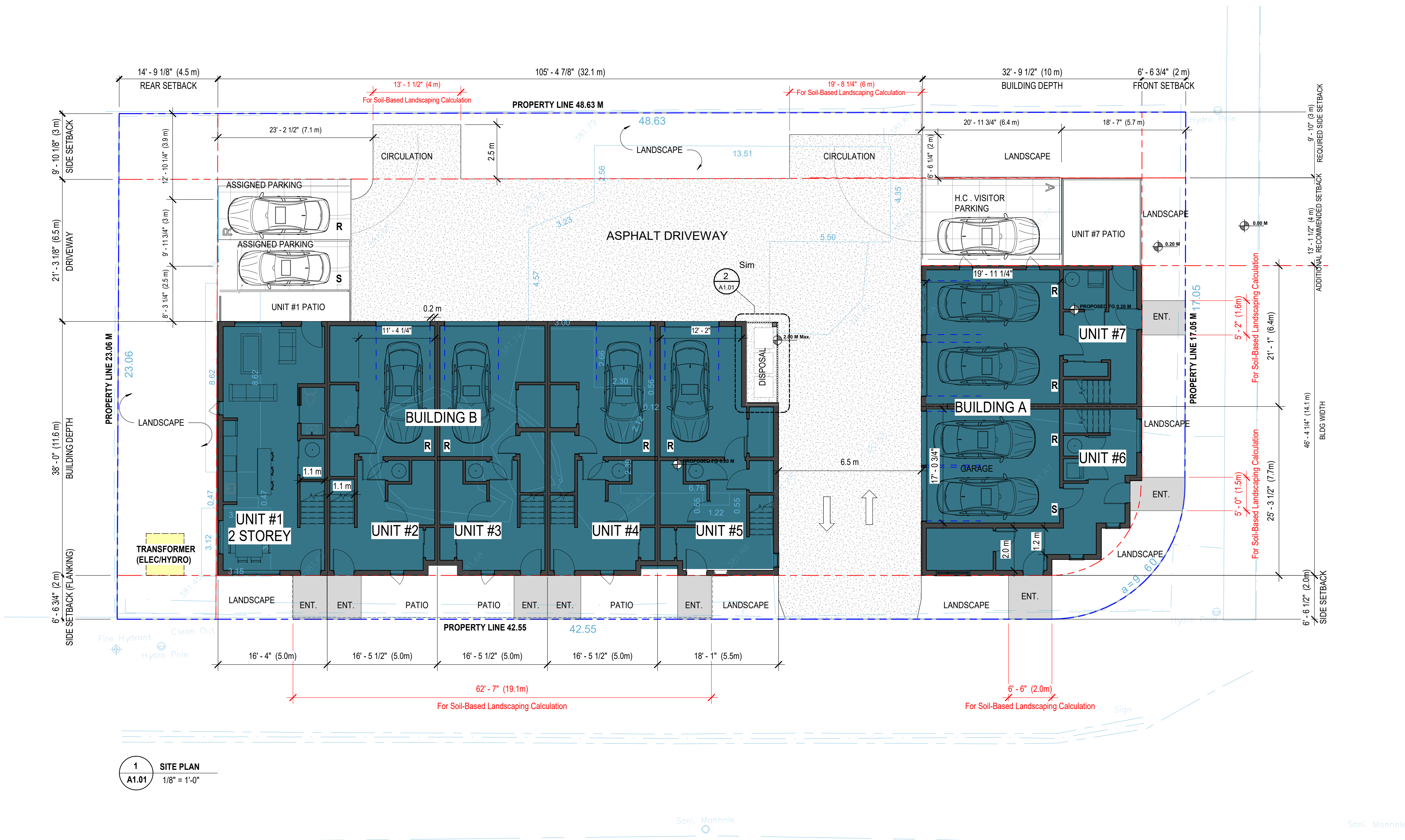
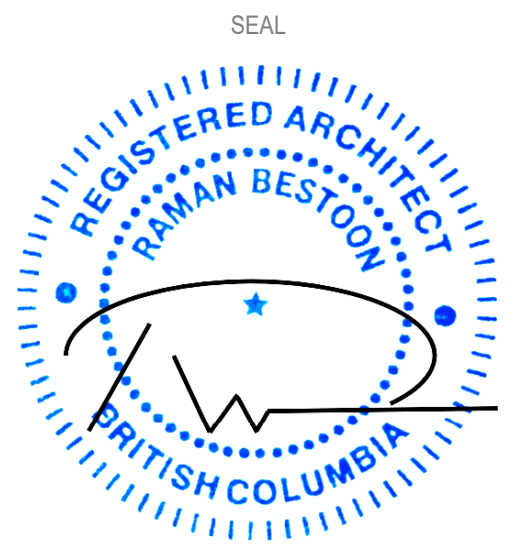
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SHEET TITLE  
**STREET VIEW**

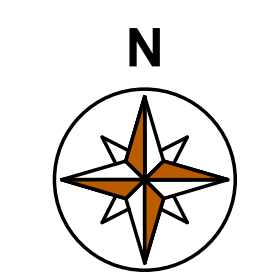
**A0.03**

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SCALE:	3/32" = 1'-0"	FILE:	0001





**2 Recycling**  
1/8" = 1'-0"



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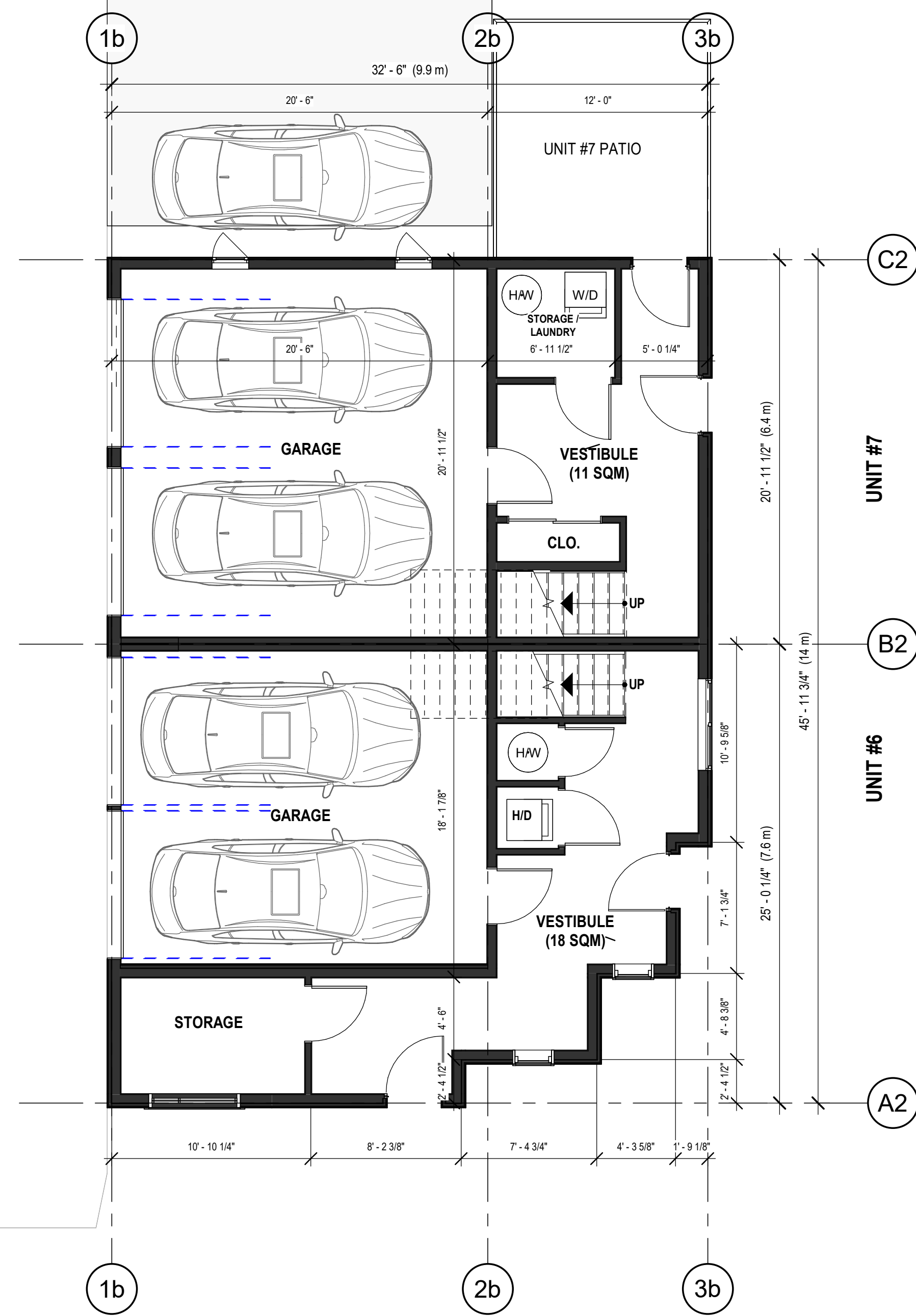
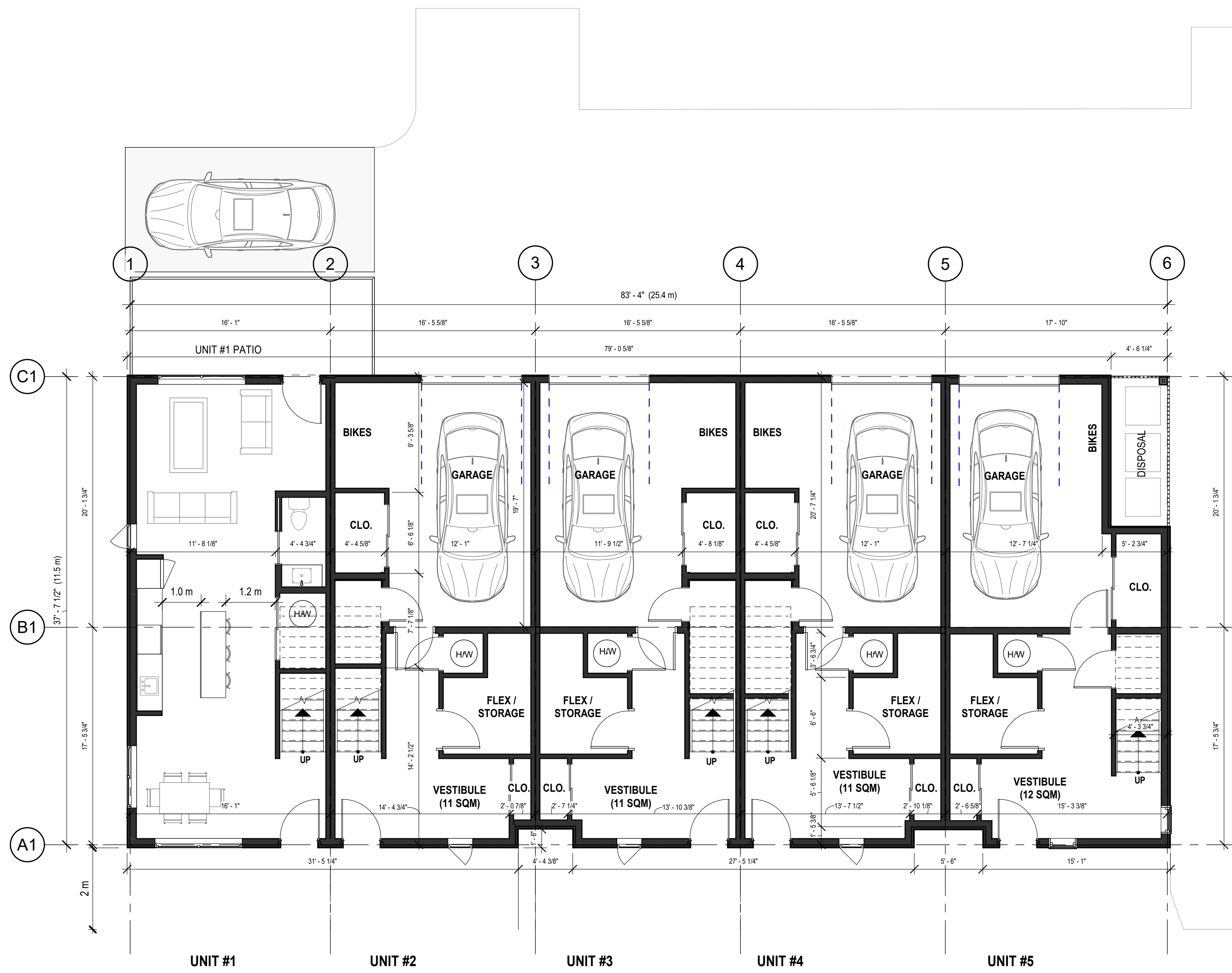
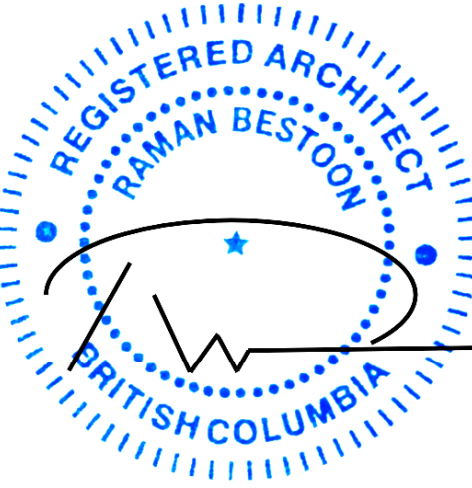
PROJECT  
**ZIPRICK TOWNHOUSES**

ADDRESS  
**540 ZIPRICK ROAD, KELOWNA BC**

SHEET TITLE  
**SITEPLAN**

**A1.01**

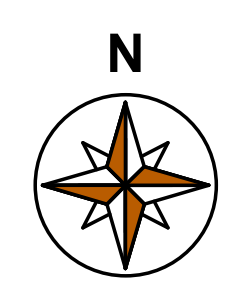
DESIGNED: Designer DRAWN: Author  
SCALE: 1/8" = 1'-0" FILE: 0001



**1** GROUND FLOOR  
**A2.01** 3/16" = 1'-0"

BUILDING B MAIN FLOOR AREA = 3,113.10 SQFT  
BUILDING B MAIN FLOOR AREA WITHOUT GARAGES = 1,783.9 SQFT

BUILDING A MAIN FLOOR AREA = 1,456.3 SQFT  
BUILDING B MAIN FLOOR AREA WITHOUT GARAGES = 640 SQFT



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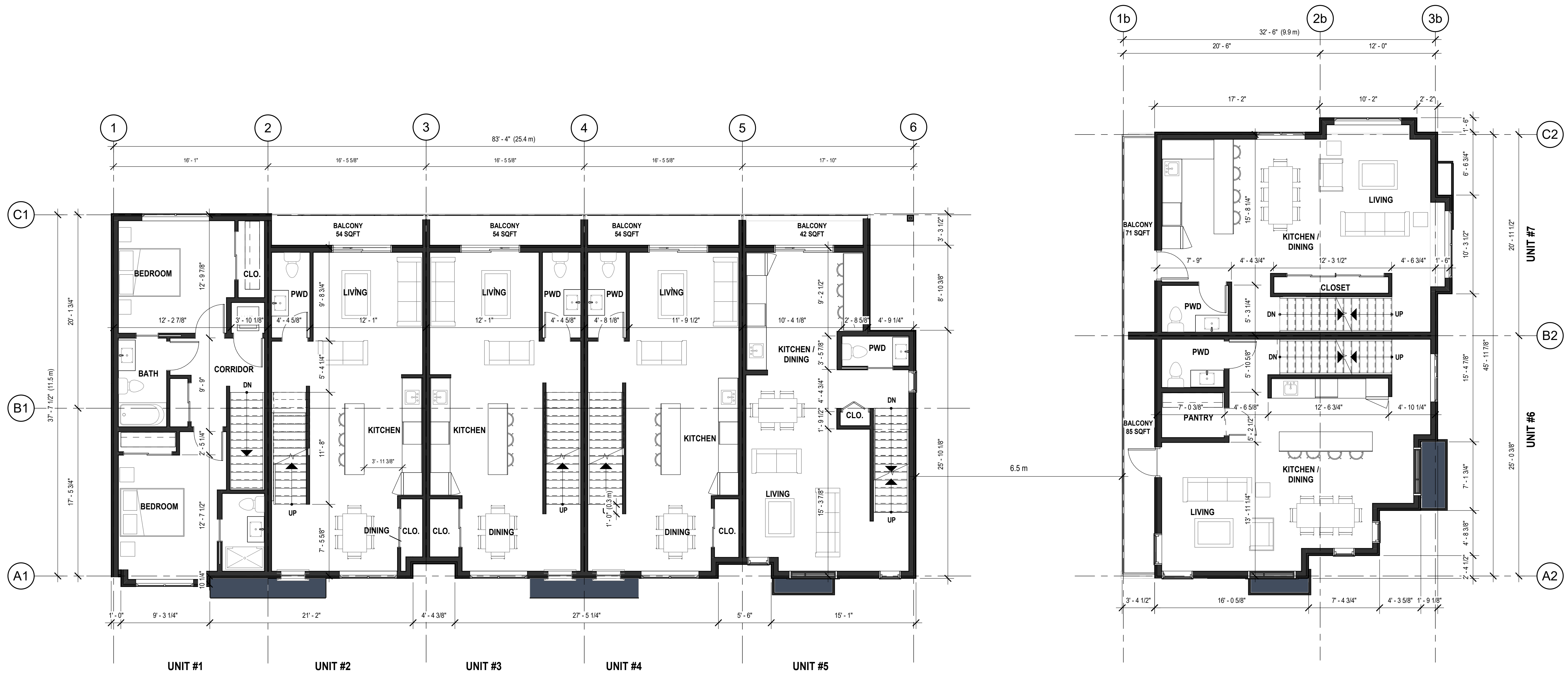
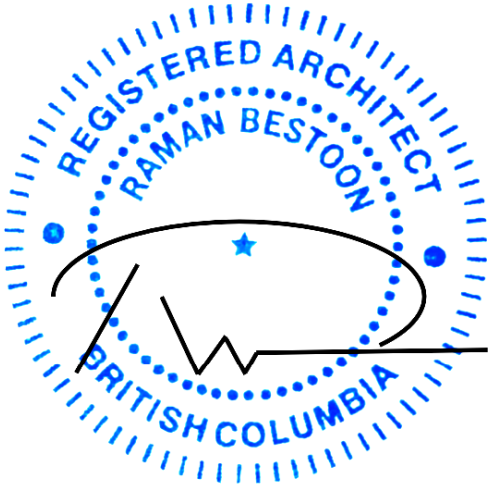
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PROJECT  
**ZIPRICK TOWNHOUSES**

ADDRESS  
**540 ZIPRICK ROAD,  
KELOWNA BC**

SHEET TITLE  
**MAIN FLOOR PLAN**

**A2.01**



1 SECOND FLOOR  
A2.02 3/16" = 1'-0"

BUILDING B SECOND FLOOR AREA = 2,915.25 SQFT  
BUILDING A SECOND FLOOR AREA = 1329 SQFT

GROSS FLOOR AREA = 4,244.25 SQFT

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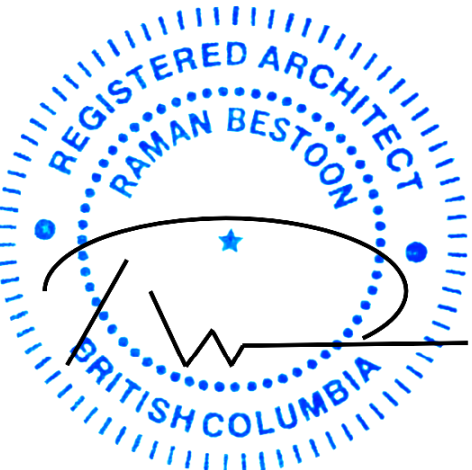
PROJECT  
**ZIPRICK TOWNHOUSES**

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SHEET TITLE  
**SECOND FLOOR PLAN**

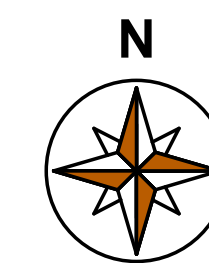
**A2.02**

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**1** THIRD FLOOR  
A2.03 3/16" = 1'-0"

BUILDING B THIRD FLOOR AREA = 2,516 SQFT  
BUILDING A THIRD FLOOR AREA = 1,459.5 SQFT  
GROSS FLOOR AREA = 3,975.5 SQFT



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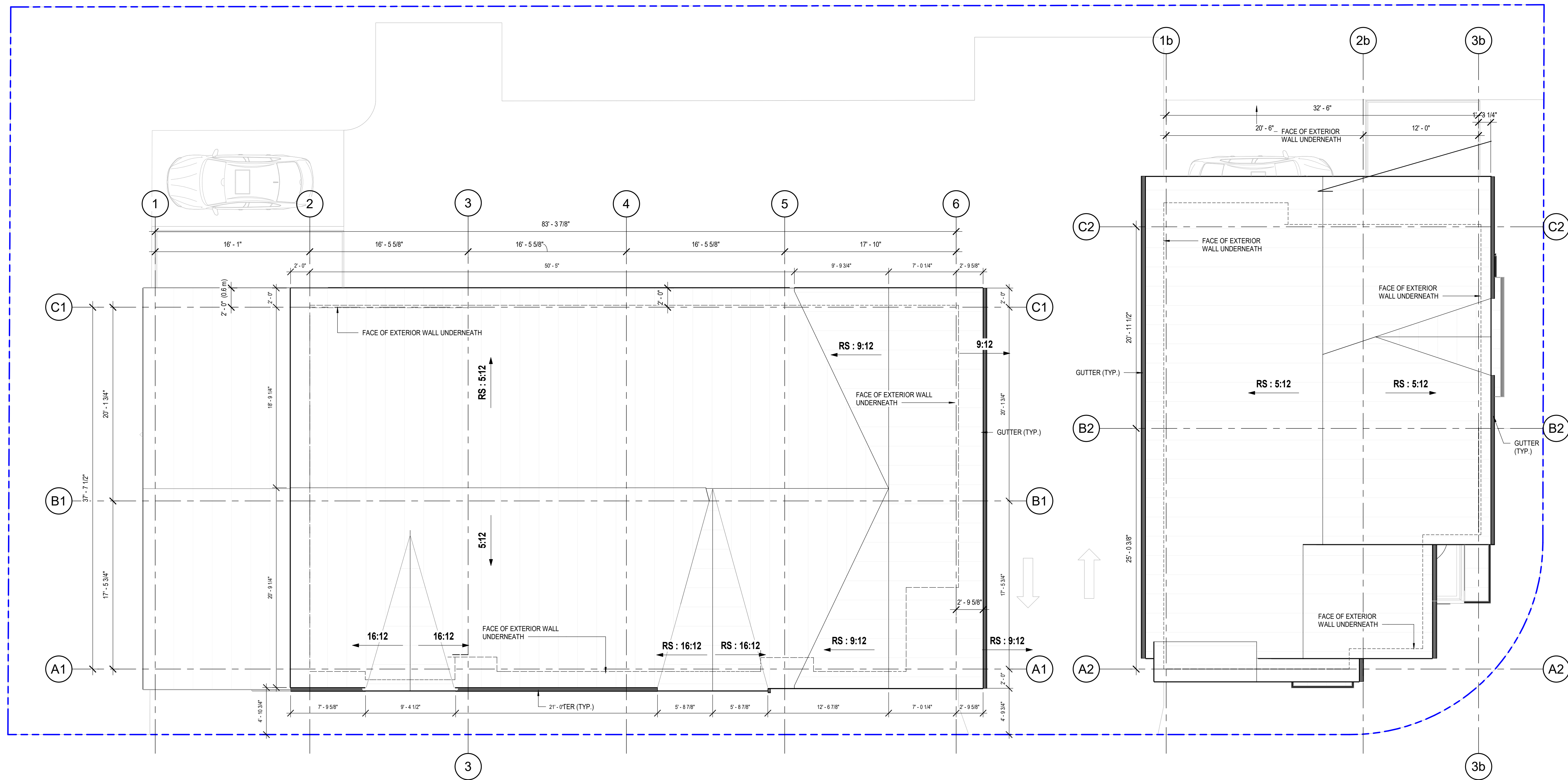
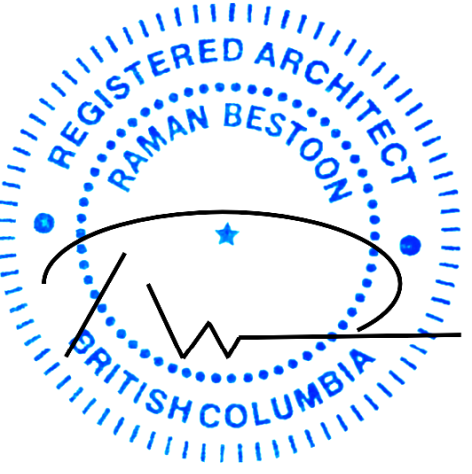
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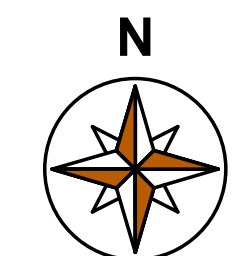
SHEET TITLE  
**THIRD FLOOR PLAN**

**A2.03**

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**1** ROOF PLAN  
A2.04 3/16" = 1'-0"



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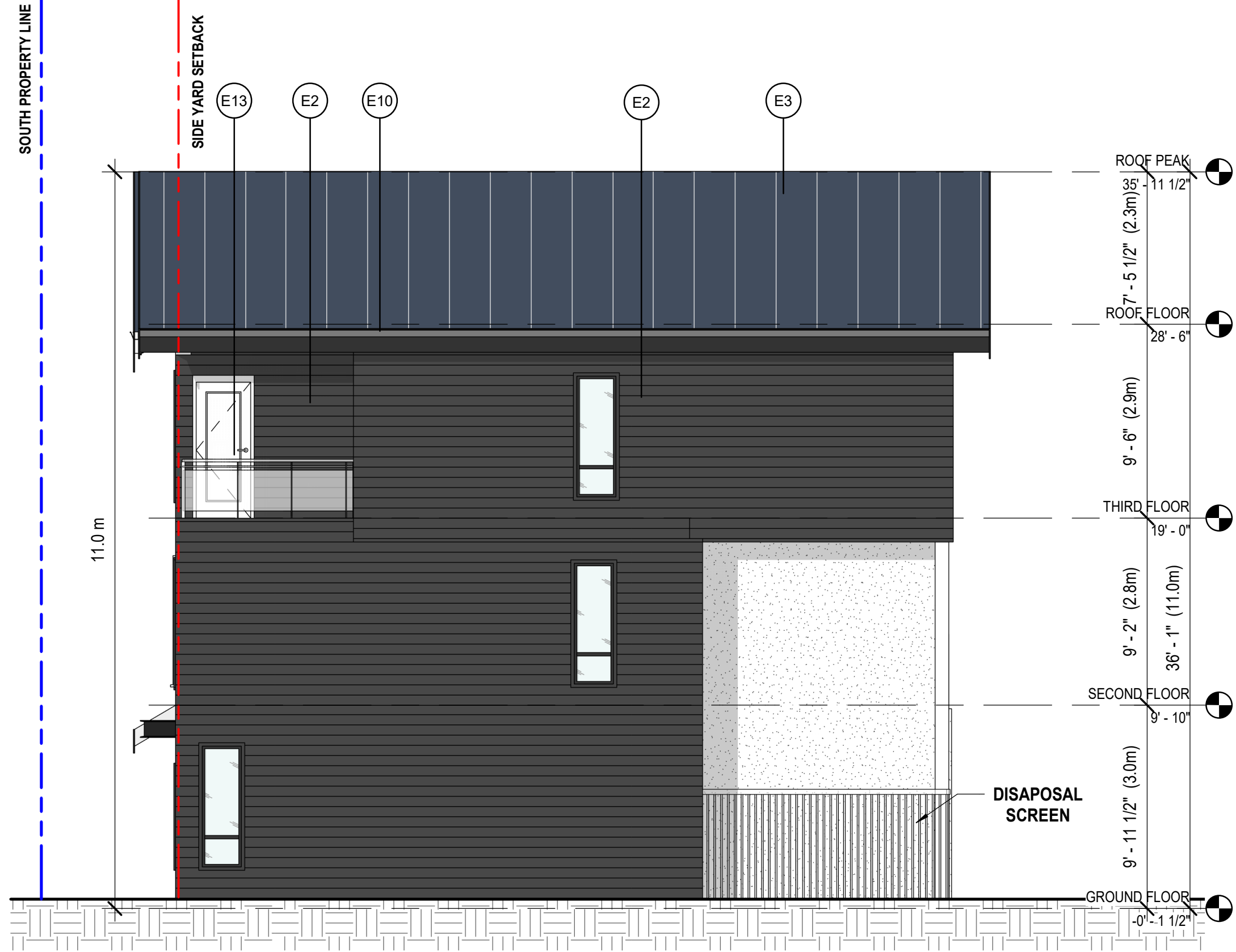
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**540 ZIPRICK ROAD,  
KELOWNA BC**

SHEET TITLE  
**ROOF PLAN**

**A2.04**

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SCALE:	3/16" = 1'-0"	FILE:	0001



3 2-BUILDING B - EAST ELEVATION  
A3.01 3/16" = 1'-0"



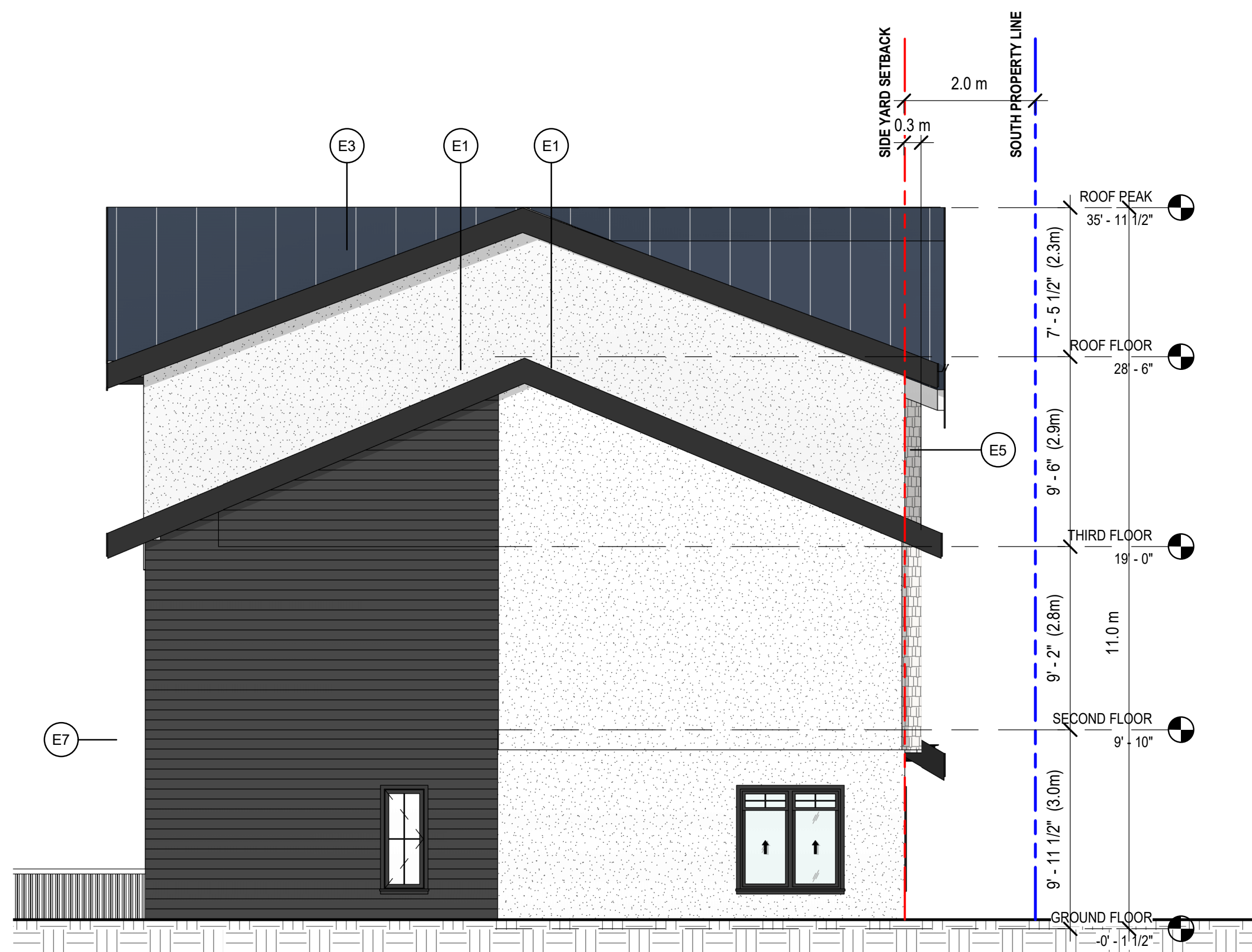
1 1-BUILDING B - SOUTH ELEVATION  
A3.01 3/16" = 1'-0"

MATERIAL LEGEND



MATERIAL SCHEDULE

MATERIAL ID	DESCRIPTION
E1	STUCCO SMOOTH FINISH / WHITE
E2	CEMENT BOARD / BLACK
E3	STANDING SEAM METAL ROOF PANEL / BLACK
E5	CEMENT BOARD SINGLE SIDING / WHITE
E6	CEMENT FASCIA BOARD / COLOR TO MATCH 'E2'
E7	CEMENT FASCIA BOARD / COLOR TO MATCH 'E1'
E8	VINYL WINDOW FRAME AND TRIM / COLOR TO MATCH 'E2'
E10	PAINTED METAL GUTTER / COLOR TO MATCH 'E2'
E11	POWDER COATED STEEL CANOPY / BLACK
E13	FROSTED GLASS PRIVACY SCREEN



4 3-BUILDING B - WEST ELEVATION  
A3.01 3/16" = 1'-0"



2 4-NORTH ELEVATION BUILDING B  
A3.01 3/16" = 1'-0"

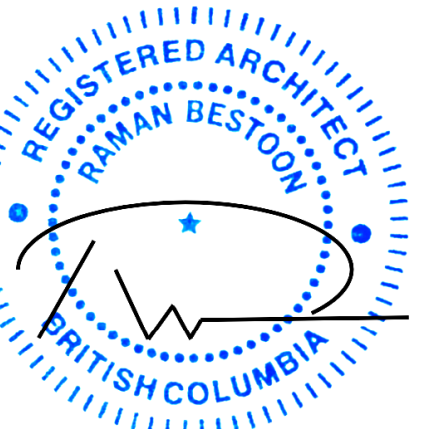


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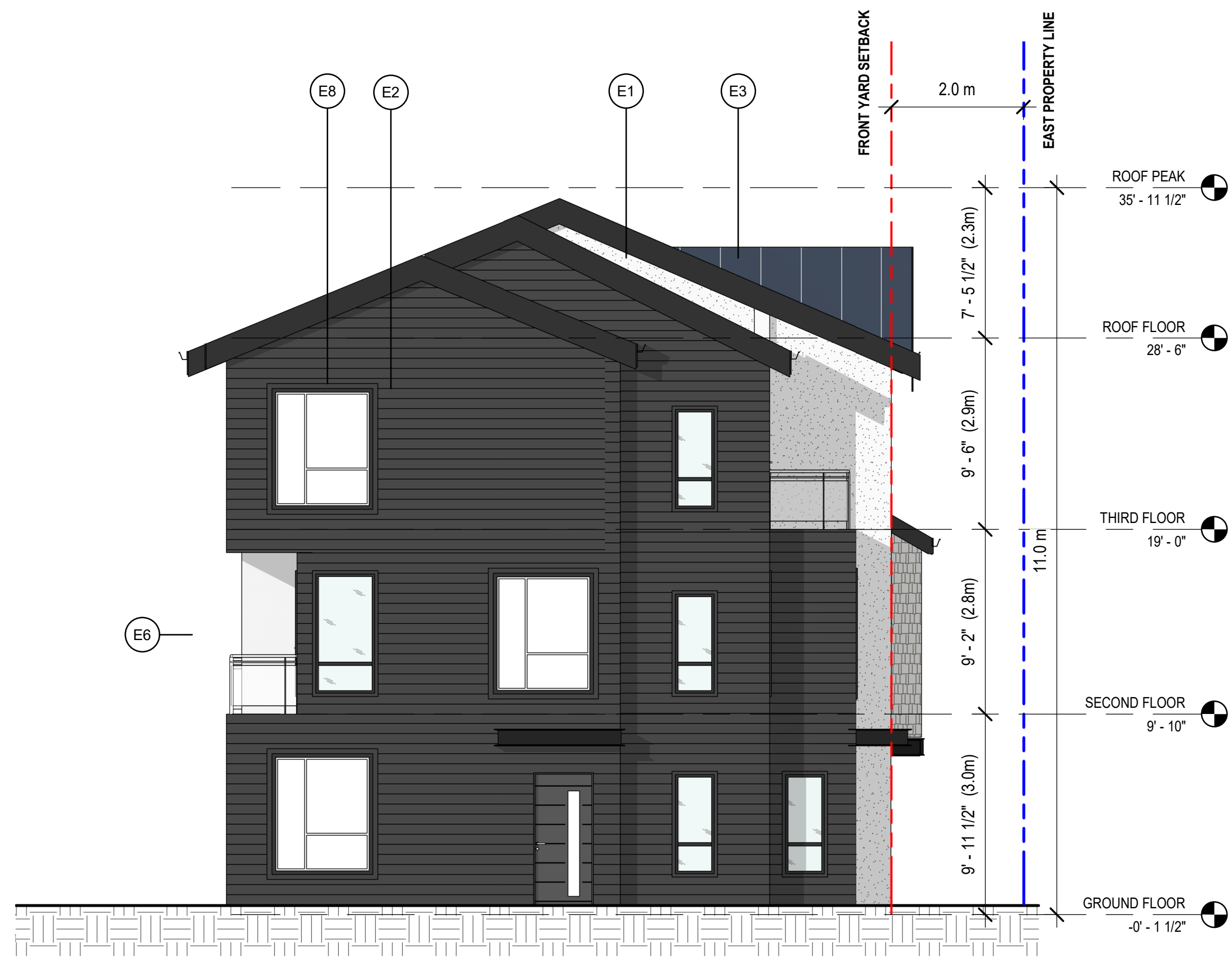
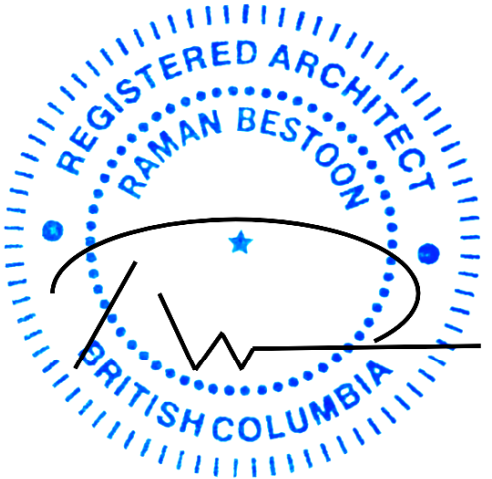
ADDRESS  
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SHEET TITLE  
BUILDING B ELEVATIONS

A3.01

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Townhouses\3.0 CAD\540 Ziprick Road  
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2 #2 BUILDING A - SOUTH ELEVATION  
A3.02 3/16" = 1'-0"



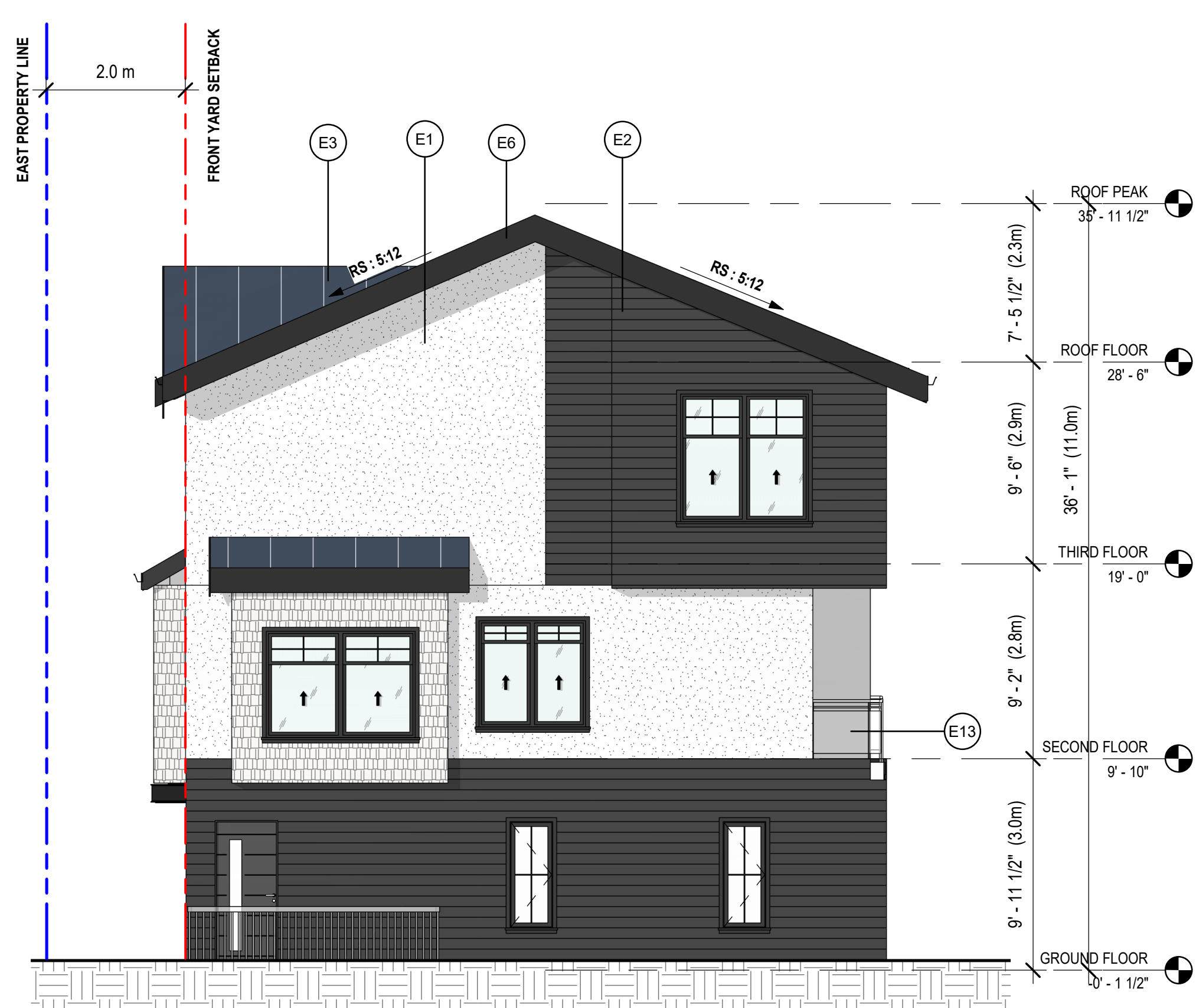
1 #1 BUILDING A - EAST ELEVATION  
A3.02 3/16" = 1'-0"

MATERIAL LEGEND



MATERIAL SCHEDULE

MATERIAL ID	DESCRIPTION
E1	STUCCO SMOOTH FINISH / WHITE
E2	CEMENT BOARD / BLACK
E3	STANDING SEAM METAL ROOF PANEL / BLACK
E5	CEMENT BOARD SINGLE SIDING / WHITE
E6	CEMENT FASCIA BOARD / COLOR TO MATCH 'E2'
E7	CEMENT FASCIA BOARD / COLOR TO MATCH 'E1'
E8	VINYL WINDOW FRAME AND TRIM / COLOR TO MATCH 'E2'
E10	PAINTED METAL GUTTER / COLOR TO MATCH 'E2'
E11	POWDER COATED STEEL CANOPY / BLACK
E13	FROSTED GLASS PRIVACY SCREEN



4 #3 BUILDING A - NORTH ELEVATION  
A3.02 3/16" = 1'-0"



3 #4 BUILDING A - WEST ELEVATION  
A3.02 3/16" = 1'-0"

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SHEET TITLE  
**BUILDING A ELEVATIONS**

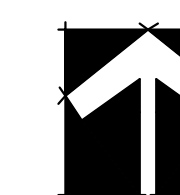
**A3.02**

DESIGNED: Designer DRAWN: Author  
SCALE: As indicated FILE: 0001



**LANDSCAPE ARCHITECTURE**

#220 - 26 Lorne Mews  
 New Westminster, British Columbia  
 V3M 3L7  
 Tel: 604.553.0044  
 Fax: 604.553.0045  
 Email: office@m2la.com



6			
5			
4			
3	14/01/2023	ISSUED FOR DP SUBMISSION	GL/BN
2	18/07/2023	ISSUED FOR DP SUBMISSION	GL/BN
1	JAN 2023	PRELIMINARY DESIGN	GL/BN
NO.	DATE	REVISION DESCRIPTION	DR.

SEAL:

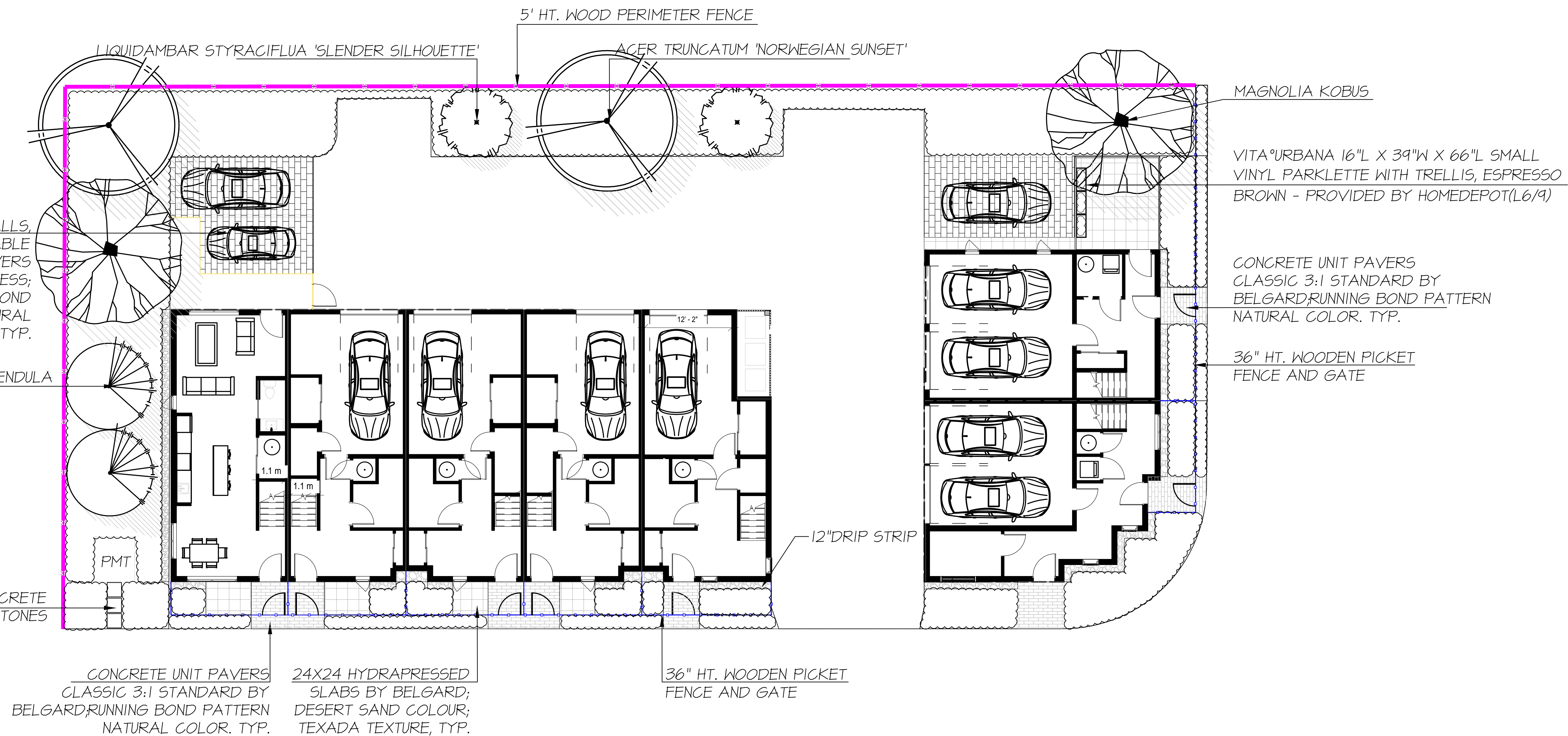
PROJECT:

**TOWNHOUSE DEVELOPMENT  
 540 ZIPRICK ROAD  
 KELOWNA, BC**

DRAWING TITLE:

**LANDSCAPE PLAN**

DATE:	26 JAN 2023	DRAWING NUMBER:	
SCALE:	1/8"=1'-0"		
DRAWN:	GL		<b>L1</b>
DESIGN:	MTLM		
CHK'D:			<b>OF 8</b>
M2LA PROJECT NUMBER:			<b>22-061</b>



KEY		QTY	BOTANICAL NAME	COMMON NAME	M2 JOB NUMBER: 22-061	PLANTED SIZE / REMARKS
TREE						
	2		ACER TRUNCATUM 'NORWEGIAN SUNSET'	NORWEGIAN SUNSET MAPLE		6CM CAL; B&B
	2		LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE SHEET GUM		6CM CAL; B&B
	2		MAGNOLIA KOBUS	KOBUS MAGNOLIA		6CM CAL; B&B
	2		PICEA OMORIKA PENDULA	SERBIAN SPRUCE PENDULA		3 M HT; B&B

NOTES: \* PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNTA STANDARDS. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. \* REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. \* SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. \* SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY.

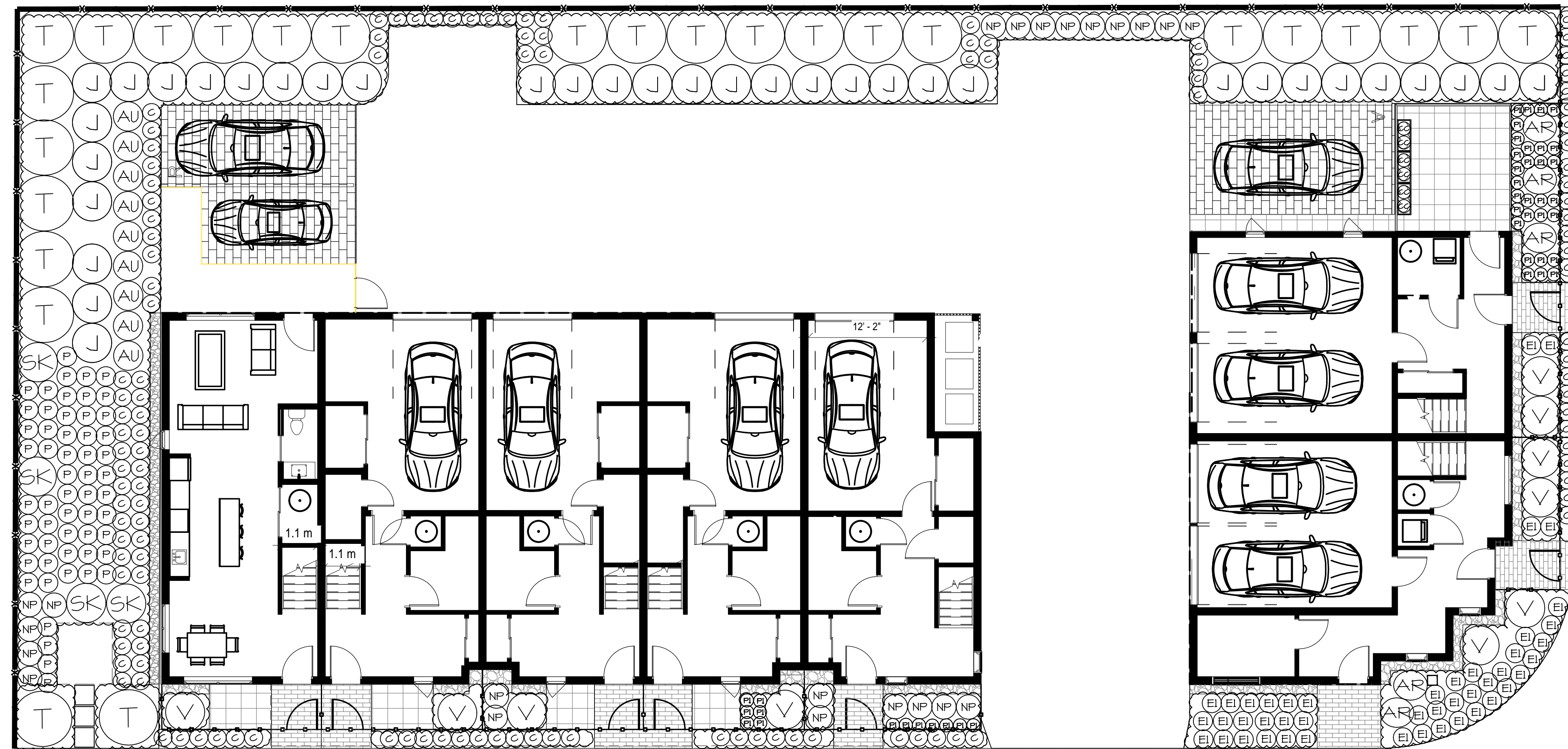
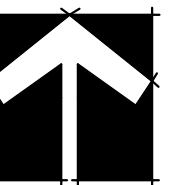
ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. PROVIDE CERTIFICATION UPON REQUEST.

LEGEND	
	VISITOR PARKING STALLS, AQUAPAVE PERMEABLE CONCRETE UNIT PAVERS 80MM THICKNESS, HERRINGBONE BOND PATTERN, NATURAL COLOUR, TYP.
	24"x24" HYDRAPRESSED SLABS, DESERT SAND COLOUR TEXADA TEXTURE
	CONCRETE UNIT PAVERS 60MM THICKNESS, RUNNING BAND PATTERN, NATURAL COLOUR
	DRAIN ROCK
	36" HT. WOODEN PICKET FENCE AND GATE
	5' HT. SOLID WOOD PERIMETER FENCE



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PLANT SCHEDULE				M2 JOB NUMBER: 22-061
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
<b>SHRUB</b>				
AR	5	AZALEA JAPONICA 'BLUE DANUBE'	AZALEA; BLUISH-VIOLET	#2 POT
AU	4	EUONYMUS FORTUNEI 'COLORATUS'	WINTERCREEPER	#2 POT; 30CM
NP	22	NANDINA DOMESTICA 'FIREPOWER'	FIREPOWER NANDINA	#2 POT
J	35	PHILADELPHUS LEINISII	MOCK ORANGE	#3 POT; 60CM
T	26	FRAXINUS LAUROCERASUS	COMMON ENGLISH LAUREL	#3 POT; 60CM
SK	4	SKIMMIA JAPONICA (10% MALE)	JAPANESE SKIMMIA	#3 POT
V	10	VIBURNUM DAVIDII	DAVID'S VIBURNUM	#3 POT
<b>GRASS</b>				
C	122	CAREX STIPATA	AWL-FRUITED SEDGE	#1 POT
P	43	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#1 POT
<b>VINE</b>				
GC	6	HEDERA HELIX 'GOLDEN INSOT'	GOLDEN INSOT IVY	#1 POT;
<b>GC</b>				
E	45	PACHYSANDRA TERMINALIS	JAPANESE SPURGE	#1 POT; 15CM
P	56	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT;

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ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. PROVIDE CERTIFICATION UPON REQUEST.

NO.	DATE	REVISION DESCRIPTION	DR.
3	MAY 10, 2023	ISSUED FOR DP SUBMISSION	GL/JEN
2	FEB 01, 2023	ISSUED FOR DP SUBMISSION	GL/JEN
1	JUN 28, 2022	PRELIMINARY DESIGN	GL/JEN

SEAL:

PROJECT:

**TOWNHOUSE DEVELOPMENT  
 540 ZIPRICK ROAD  
 KELOWNA, BC**

DRAWING TITLE:  
**SHRUB  
 PLAN**

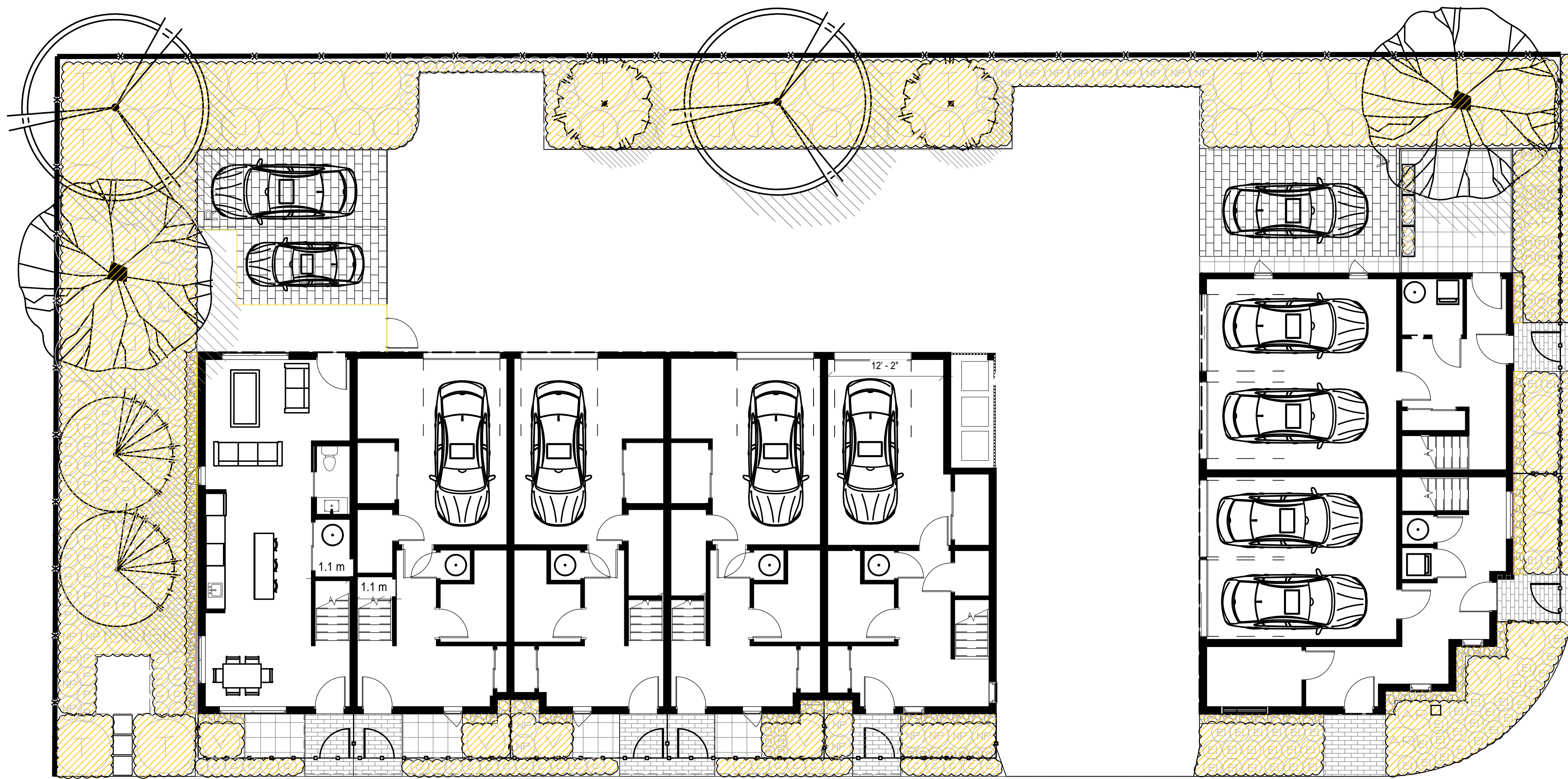
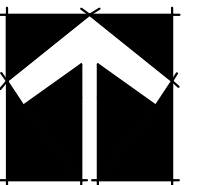
DATE: 26-JAN-2023	DRAWING NUMBER:
SCALE: 1/8"=1'-0"	<b>L2</b>
DRAWN: GL	
DESIGN: MTLM	
CHK'D:	





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**LEGEND**

PERMEABLE AREAS

PERMEABLE PAVING AND LANDSCAPE AREAS: 3700 SQUARE FEET

TOTAL LOT AREA: 12,009 SQUARE FEET

HARDSCAPE COVERAGE %: 69%

PERMEABLE AREA COVERAGE %: 31%

**LEGEND**

- VISITOR PARKING STALLS, AQUAPAVE PERMEABLE CONCRETE UNIT PAVERS 80MM THICKNESS, HERRINGBONE BOND PATTERN, NATURAL COLOUR, TYP.
- 24"x24" HYDRAPRESSED SLABS, DESERT SAND COLOUR TEXADA TEXTURE
- CONCRETE UNIT PAVERS 60MM THICKNESS, RUNNING BAND PATTERN, NATURAL COLOUR
- DRAIN ROCK
- 36" HT. WOODEN PICKET FENCE AND GATE
- 5' HT. SOLID WOOD PERIMETER FENCE

NO.	DATE	REVISION DESCRIPTION	DR.
3	MAY 10, 2023	ISSUED FOR DP SUBMISSION	GL/JEN
2	FEB 01, 2023	ISSUED FOR DP SUBMISSION	GL/JEN
1	JAN 26, 2023	PRELIMINARY DESIGN	GL/JEN

SEAL:

PROJECT:

**TOWNHOUSE DEVELOPMENT  
 540 ZIPRICK ROAD  
 KELOWNA, BC**

DRAWING TITLE:

**PERMEABILITY  
 PLAN**

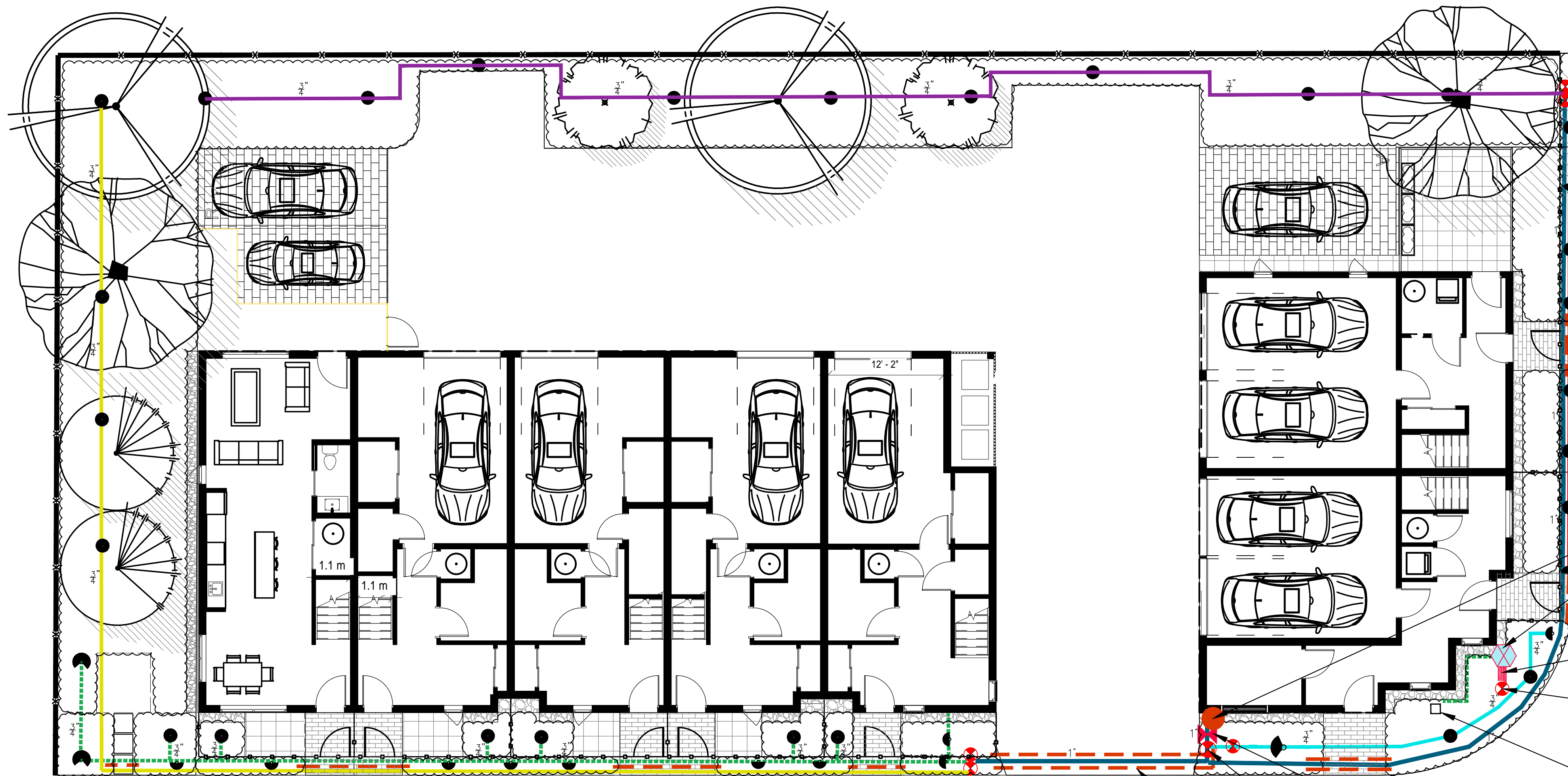
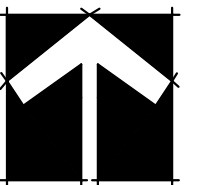
DATE: 26-JAN-2023	DRAWING NUMBER:
SCALE: 1/8"=1'-0"	<b>L4</b>
DRAWN: GL	
DESIGN: MTLM	
CHK'D:	

M2LA PROJECT NUMBER: 22-061



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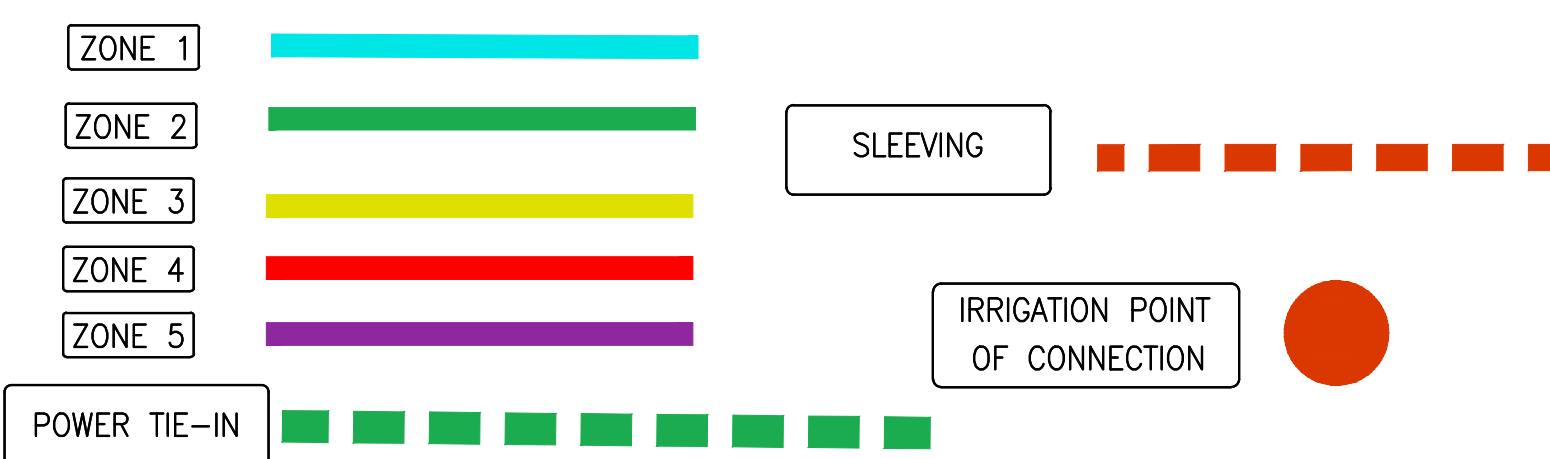


- WATER MAIN CONNECTION BY MECHANICAL
- RAINBIRD HYBRID OUTDOOR MOUNTED CONTROLLER-ATTACHMENT LOCATION BY OWNER
- WIRING TO REMOTE CONTROL VALVES
- LOCKABLE VALVE BOX WITH PEB REMOTE VALVE CONTROLLERS
- JUNCTION BOX-BY OWNER, POWER SUPPLY TO BE DETERMINED ONSITE BY ELECTRICIAN
- BACKFLOW PREVENTION DEVICE

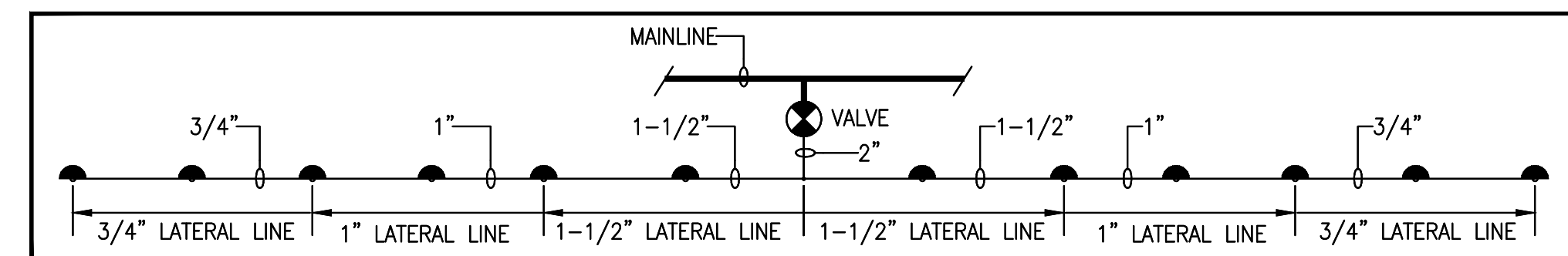
MASTER SHUT-OFF VALVE CONTROLLER  
 2" MIN. PVC SLEEVES UNDER HARD SURFACES

## RAINBIRD VALVES, CONTROLLER, SENSOR

IRRIGATION LEGEND		
KEY	MANUFACTURER	DESCRIPTION
	RAINBIRD	1802 & 1804 SERIES FULL 360- NOZZLE TYPE AS PER CONTRACTOR
	RAINBIRD	1800 SERIES HALF - NOZZLE TYPE AS PER CONTRACTOR
	RAINBIRD	1800 THIRD - NOZZLE TYPE AS PER CONTRACTOR
	RAINBIRD	1800 SERIES THREE QUARTER - NOZZLE TYPE AS PER CONTRACTOR
	RAINBIRD	1800 SERIES QUARTER - NOZZLE TYPE AS INDICATED
	RAINBIRD	XFS SUB-SURFACE DRIPLINE - XFS-06-24-500 (24" SPACING)
	RAINBIRD	PEB VALVE IN LOCKABLE VALVE BOX
		1-1/2" STUB-OUT PROVIDED BY MECHANICAL CONTRACTOR FOR IRRIGATION HOOK-UPS.
		SCHEDULE 40 PVC SLEEVE (1-1/2" UNLESS OTHERWISE INDICATED)
		SCHEDULE 40 1-1/2" MAINLINE.
		CLASS 200 NON-PRESSURE LATERAL LINE. (SIZE AS INDICATED)
	RAINBIRD	ESP-LX MODULAR SERIES 4 STATION CONTROLLER INSTALLED AT LOCATION AS DIRECTED BY OWNER (CONTROLLER TEMPORARILY ON DRAWING)
	RAINBIRD	WR2 SERIES WIRELESS RAIN/FREEZE SENSOR C/W CONTROLLER LOCATE SENSOR AT ROOF EDGE WHICH WILL RECEIVE MAXIMUM EXPOSURE TO WEATHER CONDITIONS.
	RAINBIRD	DRIP EMITTER
	STANDARD	THREADED HOSE BIB
	RAINBIRD	BACKFLOW PREVENTION DEVICE



- ### IRRIGATION NOTES
- SYSTEM BASED ON A 1-1/2" WATER SERVICE WITH A MINIMUM OF 58 PSI.
  - CONTROL WIRE TO BE TWU 14 GAUGE WIRE AND GROUND WIRE TO BE TWU 12 GAUGE WIRE.
  - IRRIGATION SPRAY HEADS TO BE HUNTER MPR40 C/W MP ROTATOR, 4" IN LAWN AREAS AND 6" OR 12" POP-UPS IN SHRUBS BEDS AS NEEDED. ADJUST NOZZLES TO PROVIDE HEAD TO HEAD COVERAGE WHILE MINIMIZING OVER-SPRAY TO HARD SURFACES. NOZZLES AS INDICATED OR AS NEEDED.
  - USE CHECK VALVES IN SPRINKLER HEADS TO PREVENT HEAD DRAINAGE AT LOW POINTS. ALLOW FOR 10% OF THE HEADS TO HAVE CHECK VALVES.
  - ELECTRIC VALVES TO BE RAINBIRD PEB (OR APPROVED EQUIVALENT). ALL VALVES MUST BE IN VALVE BOXES. ELECTRICIAN TO PROVIDE 1-1/4" CONDUIT WITH PULL.
  - MAIN LINES STUBBED OFF AS REQUIRED TO SUPPLY STATIONS. MAIN LINES TO BE SCHEDULE 40 PIPE.
  - USE SCHEDULE 40 PIPE, 4" DIAMETER PVC CONDUIT SLEEVE, UNDER PAVED AREAS, UNLESS OTHERWISE SPECIFIED.
  - CLASS 200 PVC IRRIGATION LINE SIZED AS REQUIRED. VELOCITY IS NOT TO EXCEED 5 FT. PER SECOND.
  - BACKFLOW PREVENTION TO BE SIZED AND TYPE IN ACCORDANCE WITH LOCAL CODES AND AS SPECIFIED BY MECHANICAL ENGINEER.
  - PROVIDE A 1" QUICK COUPLER BY THE BACK FLOW PREVENTER(S) FOR WINTERIZATION.
  - WINTERIZATION - ENTIRE IRRIGATION SYSTEM MUST BE COMPLETELY EMPTIED OF WATER BY THE BLOW-OUT CONNECTION PROVIDED AND ATTACHING AN AIR COMPRESSOR TO IT. THIS SHOULD BE DONE BEFORE NIGHT TEMPERATURES DROP BELOW FREEZING UPON COMPLETION OF THIS WORK. THE CONTRACTOR SHALL ENSURE THAT THE OWNER'S REPRESENTATIVE IS FAMILIAR WITH THIS PROCEDURE.
  - IRRIGATION SYSTEM/INSTALLATION TO I.I.A.B.C. STANDARDS.
  - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONNECT THE IRRIGATION SYSTEM TO NOTED WATER AND ELECTRICAL SUPPLY AS PER LOCAL REQUIREMENTS AND CODE.
  - AFTER THE ENTIRE SYSTEM HAS BEEN PRESSURE TESTED AND ALL REPAIRS MADE, THE CONTRACTOR SHALL OPERATE THE SYSTEM IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE FOR ACCEPTANCE AND APPROVAL.
  - ALL DAMAGE CAUSED TO EXISTING SERVICES, PAVING AND PLANTING AREA, WHETHER THEIR LOCATION IS KNOWN OR NOT WILL BE MADE GOOD WITHOUT COST TO THE OWNER.
  - AN "AS-BUILT" DRAWING AND ALL OTHER NECESSARY INFORMATION PERTAINING TO THE INSTALLATION, OPERATION AND MAINTENANCE OF THE IRRIGATION SYSTEM SHALL BE PROVIDED FOR THE OWNER BY THE CONTRACTOR.
  - IRRIGATION SYSTEM SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. DURING THIS PERIOD, THE CONTRACTOR SHALL CHECK, CLEAN AND ADJUST SPRINKLER HEADS AND CORRECT DEFECTS.



PIPE SIZING CONVENTION

IRRIGATION LAYOUT IS DIAGRAMMATIC. ENSURE THAT PIPING, VALVES, ETC. ARE LOCATED WITHIN SOFT LANDSCAPE AREAS WHERE POSSIBLE AND THAT VALVES BOXES AND PIPING ARE LOCATED AWAY FROM TREE ROOT BALLS.

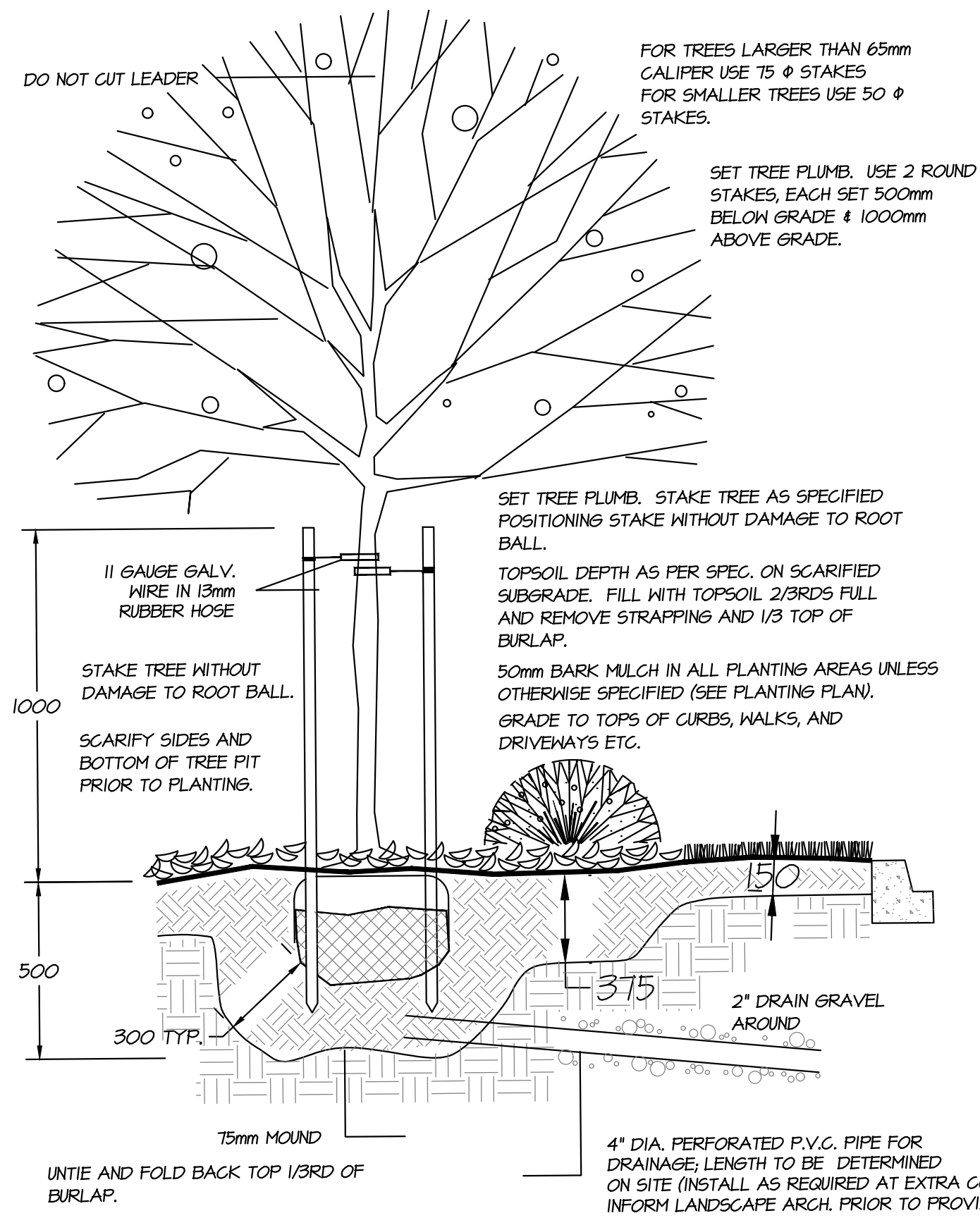
INSTALL IRRIGATION LINES AWAY FROM EXISTING TREE ROOT SYSTEM. HAND EXCAVATE TRENCHES FOR IRRIGATION LINES WHERE ROOTS FROM EXISTING TREES MAY BE COMPROMISED.

NO.	DATE	REVISION DESCRIPTION	DR.
3	MAY 20 2023	ISSUED FOR DP SUBMISSION	GL/EN
2	FEB 01 2023	ISSUED FOR DP SUBMISSION	GL/EN
1	JAN 26 2023	PRELIMINARY DESIGN	GL/EN

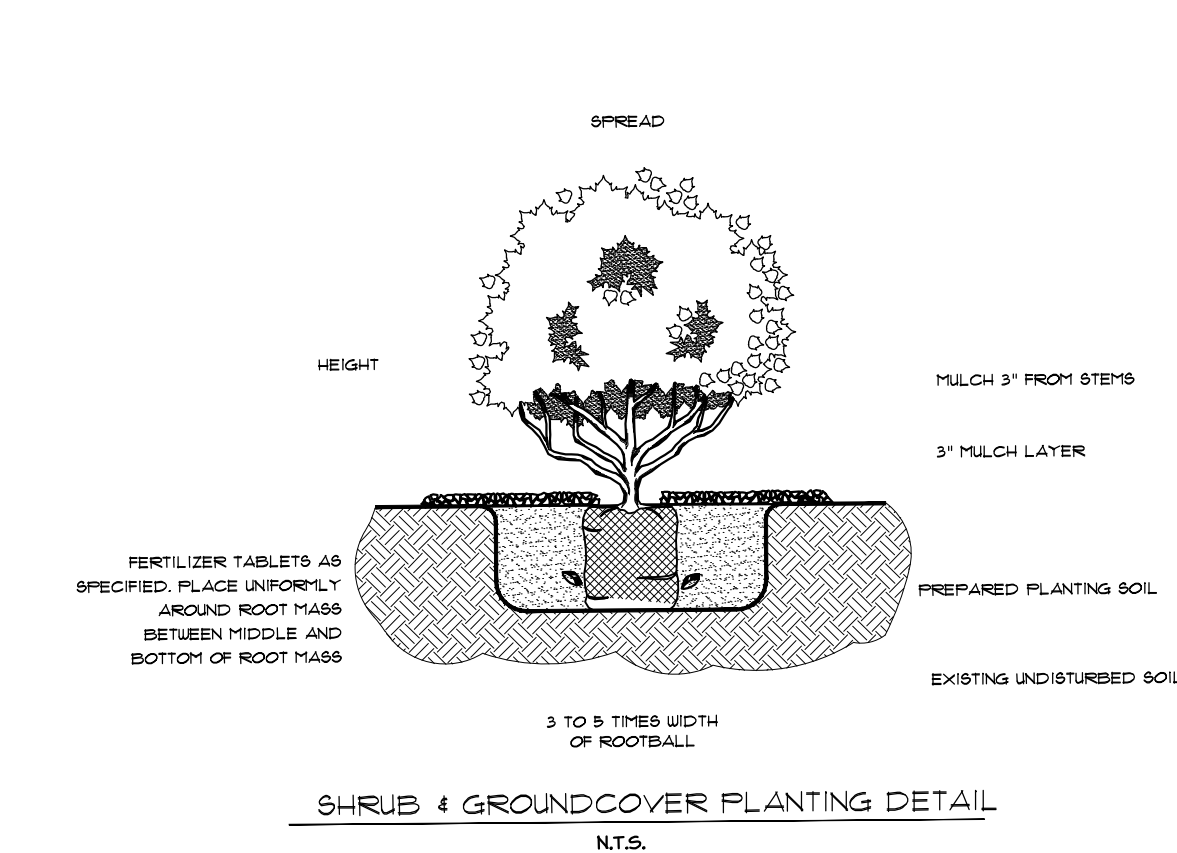
SEAL:

PROJECT:  
**TOWNHOUSE DEVELOPMENT  
 540 ZIPRICK ROAD  
 KELOWNA, BC**

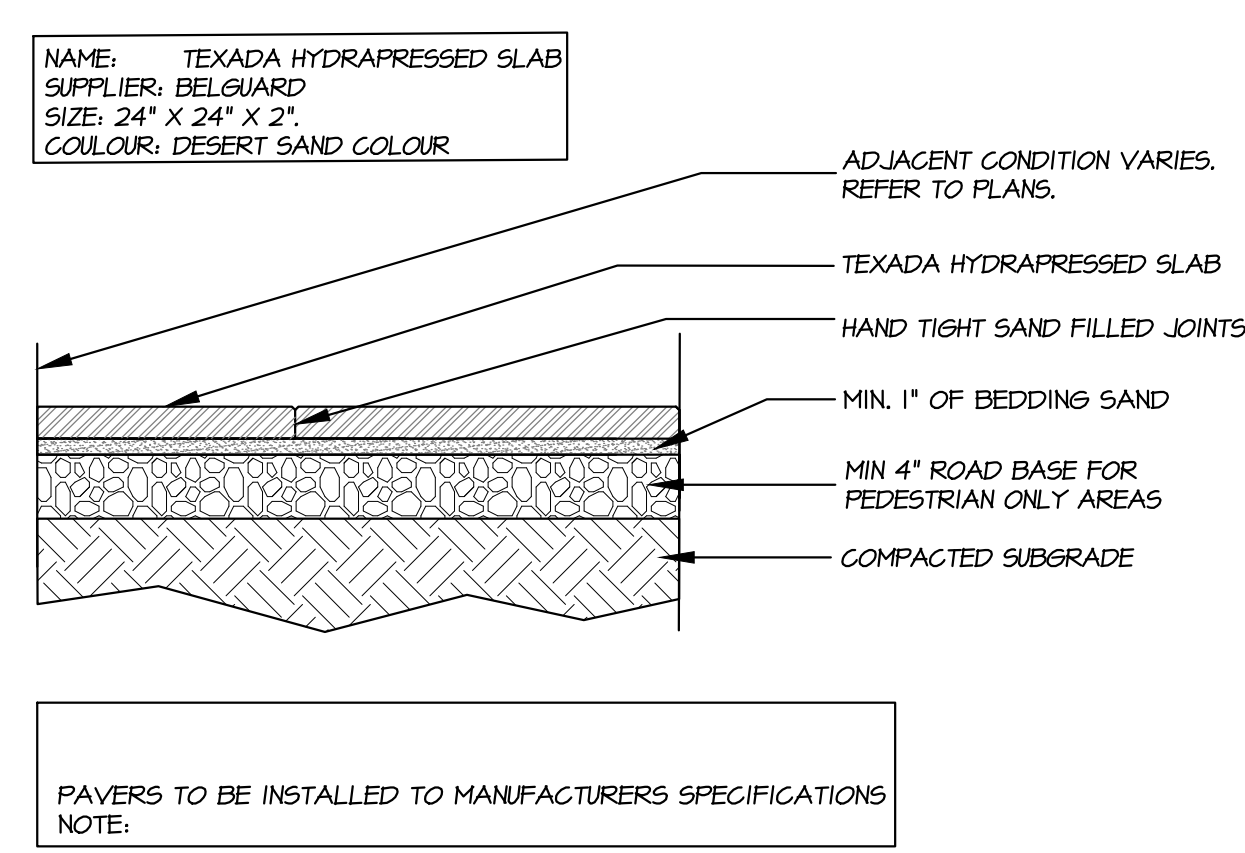
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SCALE: 1/8"=1'-0"	
DRAWN: GL	
DESIGN: MTLM	
CHK'D:	OF 8
M2LA PROJECT NUMBER:	<b>22-061</b>



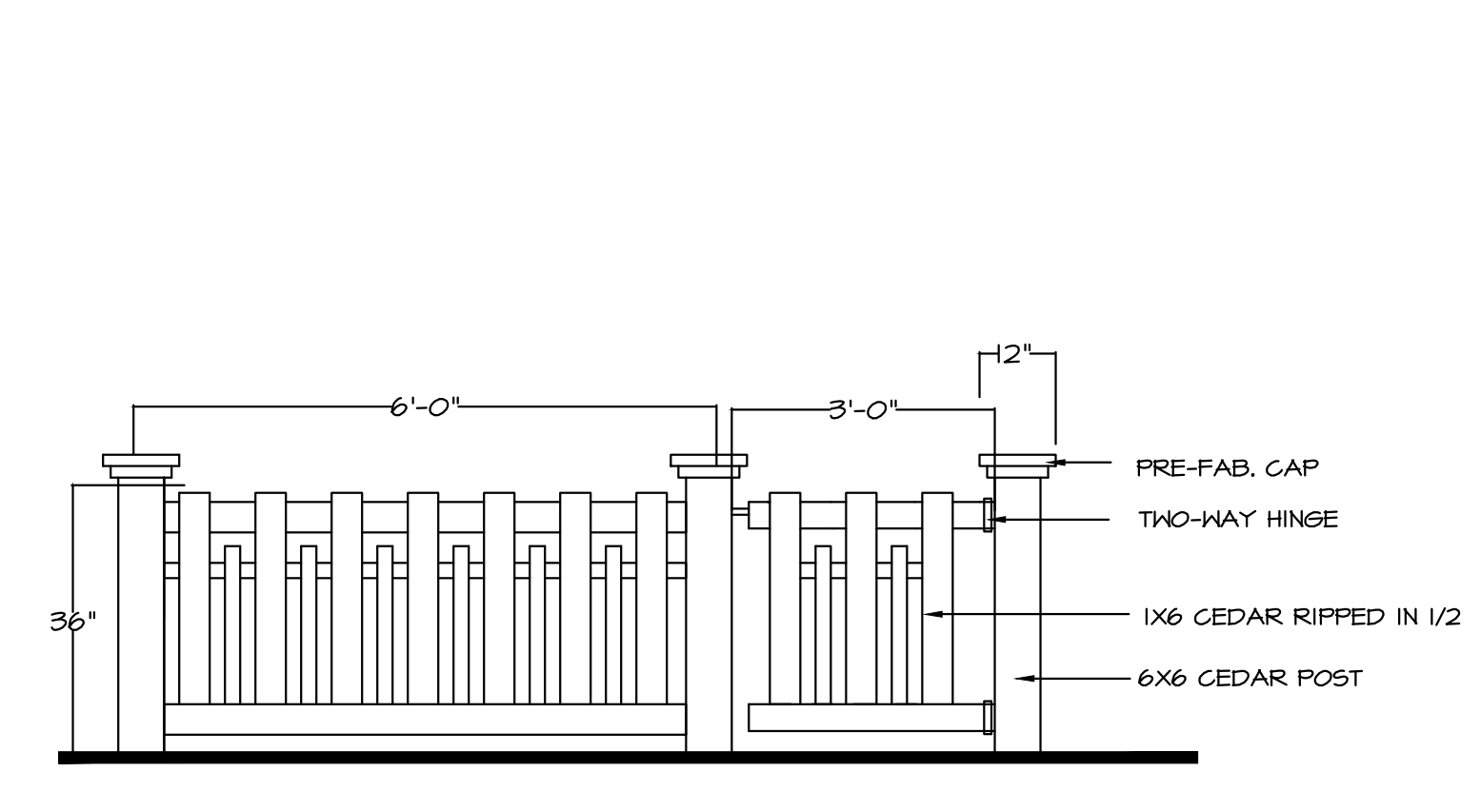
1 TREE PLANTING ON GRADE  
L6 SCALE :NTS



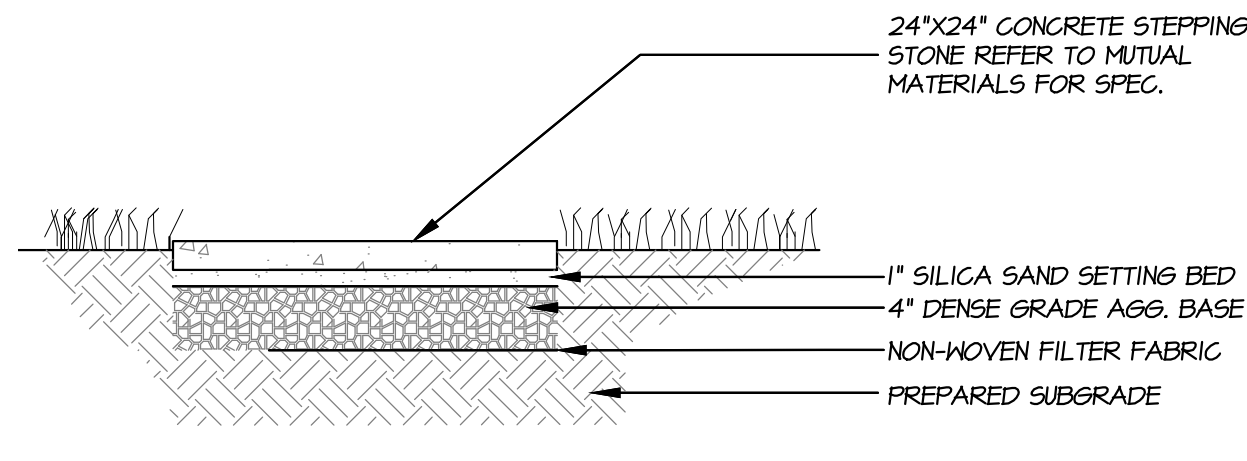
2 SHRUB PLANTING ON GRADE  
L6 SCALE :NTS



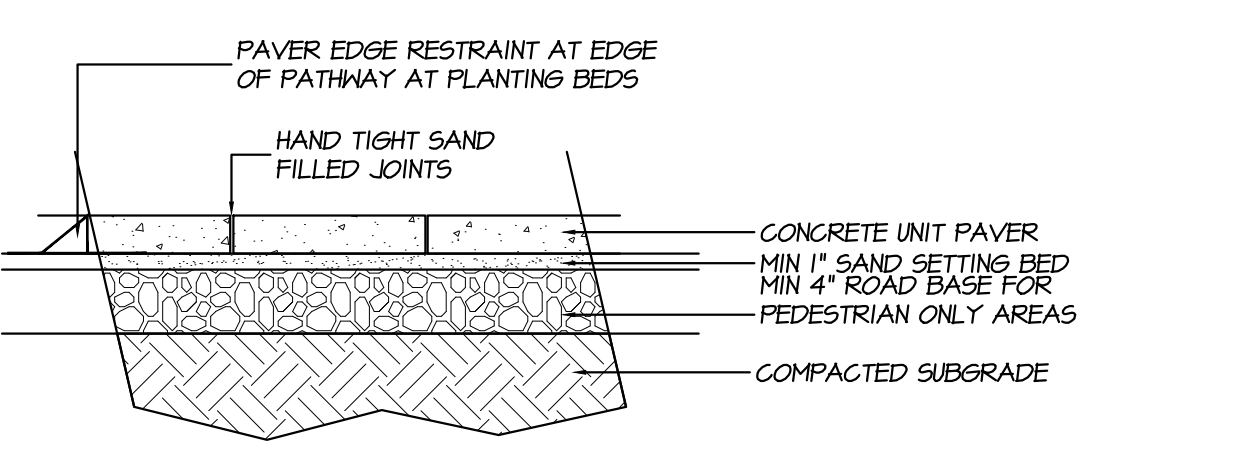
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L6 SCALE :1\"/>



4 3' HT. WOOD PICKET FENCE  
L6 SCALE :1/2\"/>



5 CONCRETE STEPPING STONE  
L6 SCALE :1\"/>

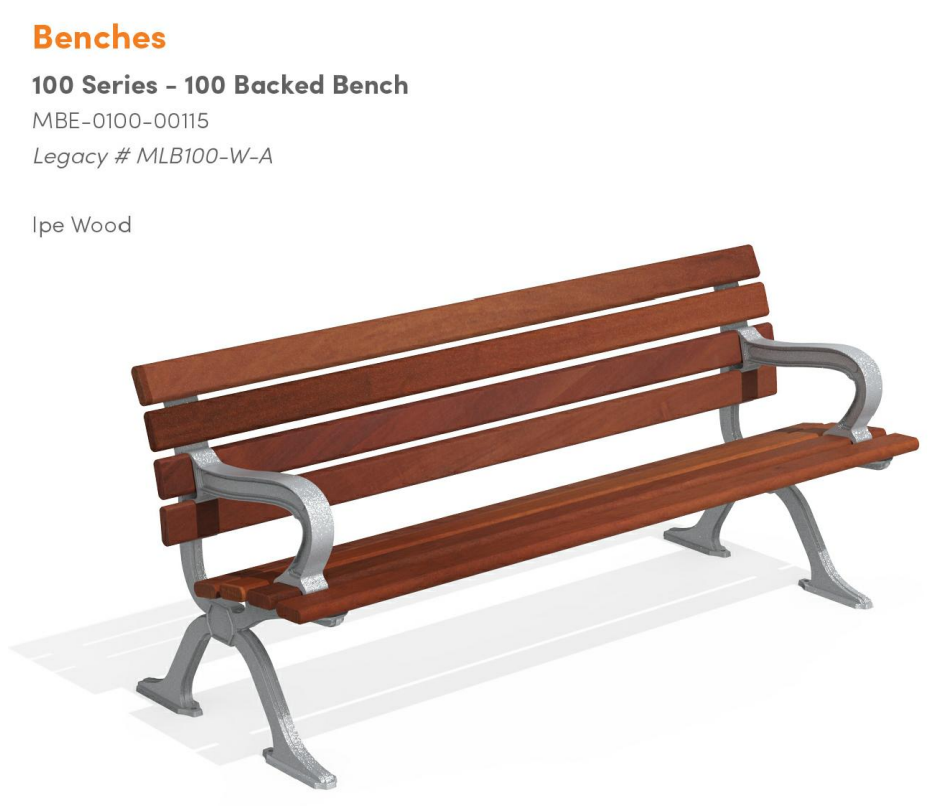


6 CONCRETE UNIT PAVERS ON GRADE  
L6 SCALE :1\"/>

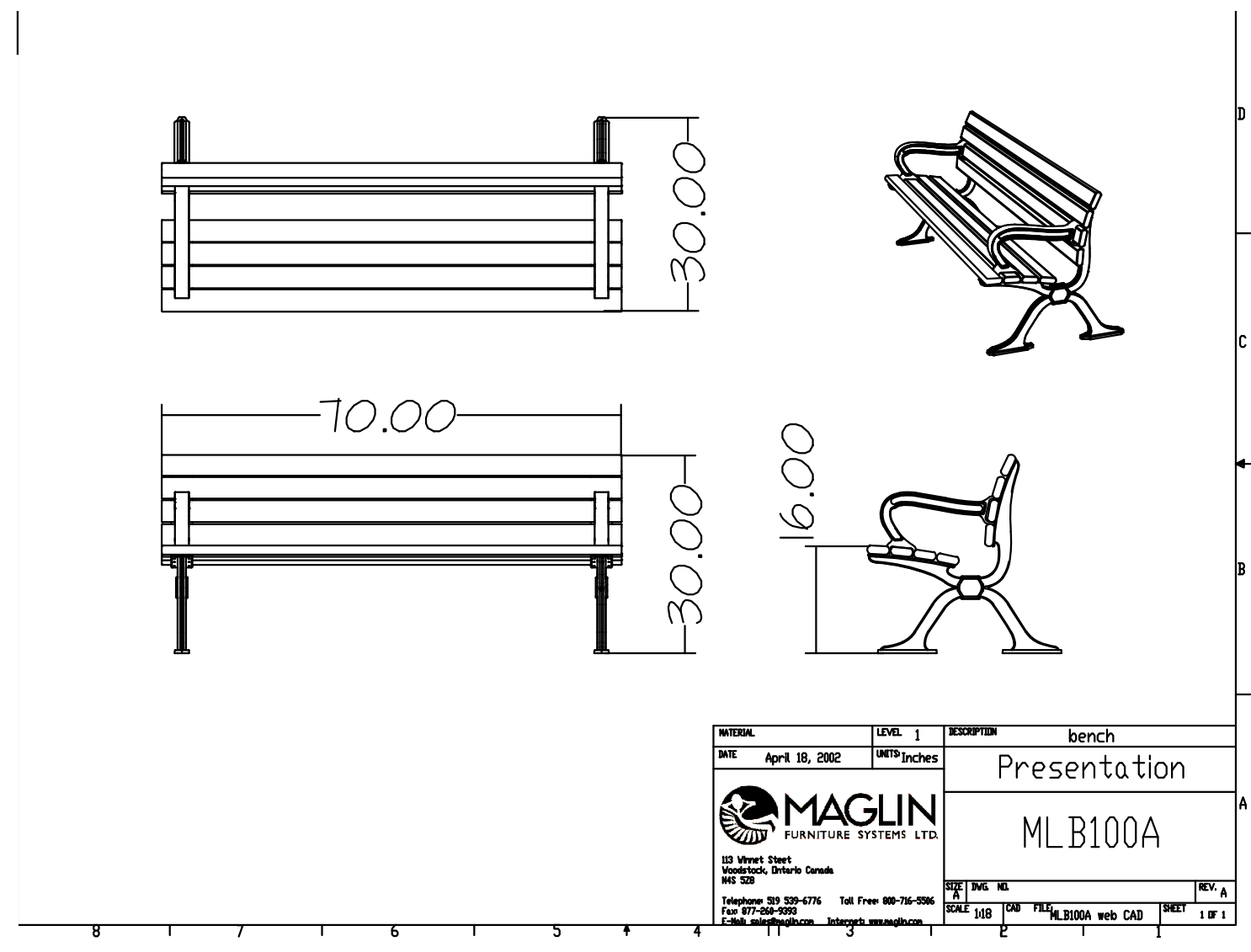
Vita Urbana 16\"/>



9 TRELLIS PLANTER SUPPLY FROM HOMEDEPOT  
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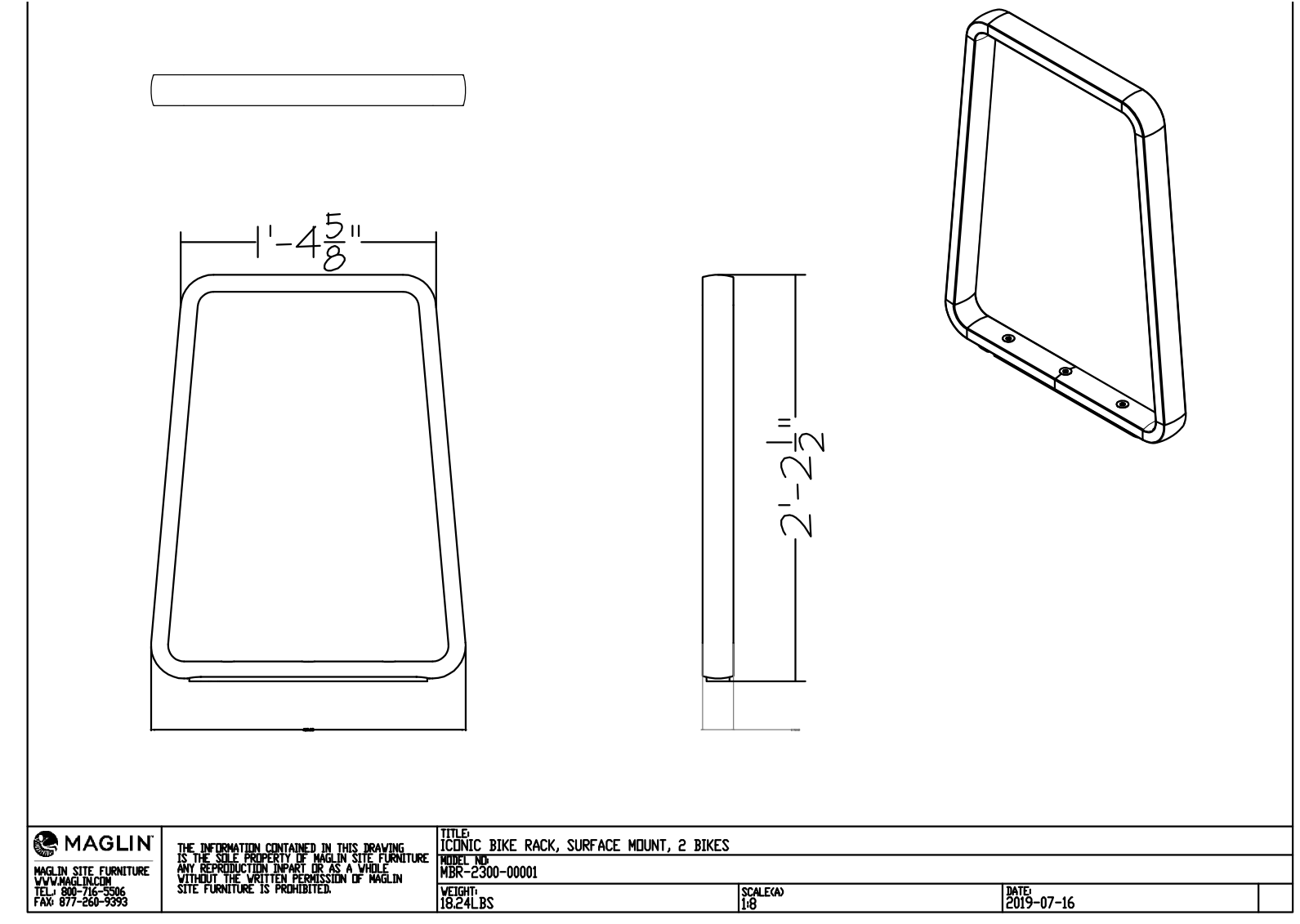


Benches  
100 Series - 100 Backed Bench  
MBE-0100-00115  
Legacy # MLB100-W-A  
Ipe Wood



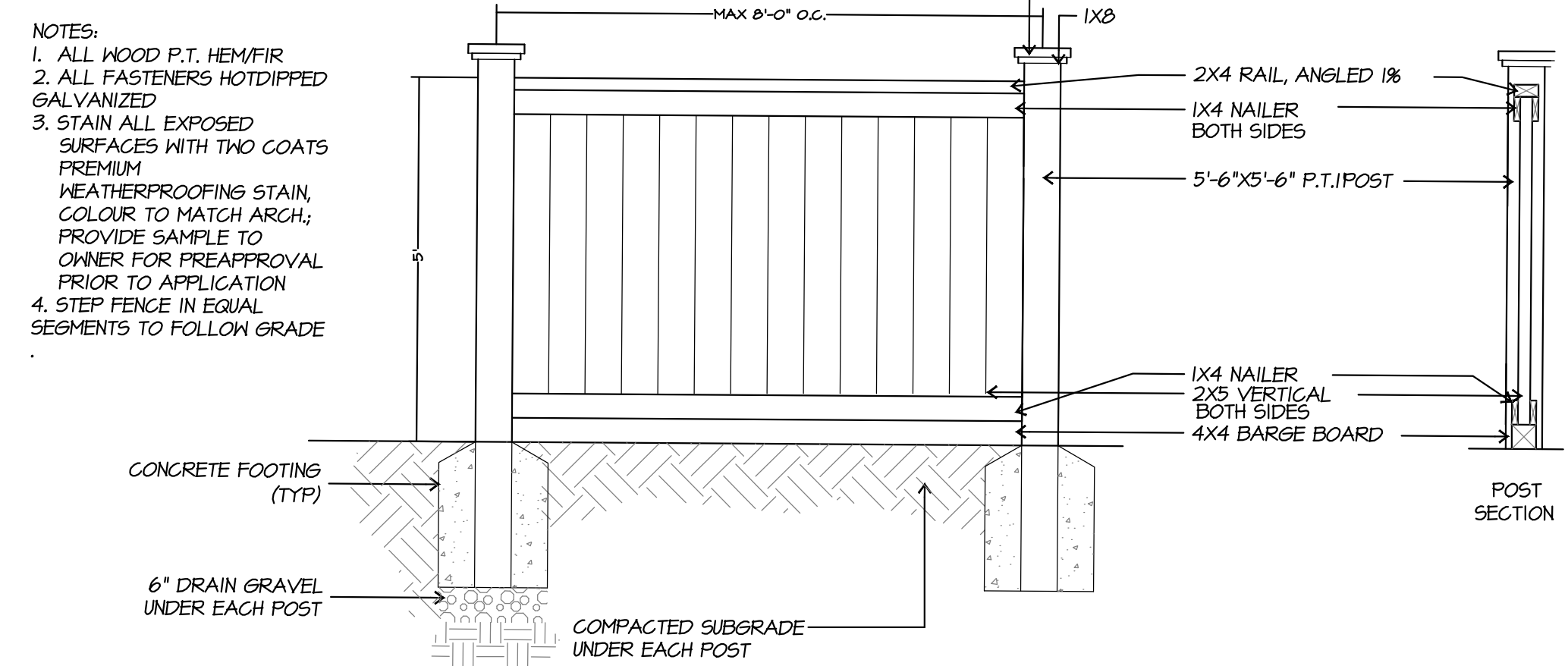
MAGLIN Site Furniture 800.718.5506 | maglin.com

LEVEL 1 10000000 bench  
DATE April 18, 2022 10:00 AM  
MAGLIN PLANTING SYSTEM LTD  
Presentation  
MLB100A



8 MAGLIN BIKE RACK  
L6 SCALE :NTS

7 MAGLIN BENCH  
L6 SCALE :NTS



10 5' Ht. SOLID WOOD PERIMETER FENCE  
L6 SCALE :1/2\"/>

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NO.	DATE	REVISION DESCRIPTION	DR.
6			
5			
4			
3	MAY 20, 2022	ISSUED FOR DP SUBMISSION	GL/EN
2	FEB 01, 2023	ISSUED FOR DP SUBMISSION	GL/EN
1	JAN 26, 2023	PRELIMINARY DESIGN	GL/EN

SEAL:

PROJECT:  
**TOWNHOUSE DEVELOPMENT  
540 ZIPRICK ROAD  
KELOWNA, BC**

DRAWING TITLE:  
**LANDSCAPE  
DETAILS**

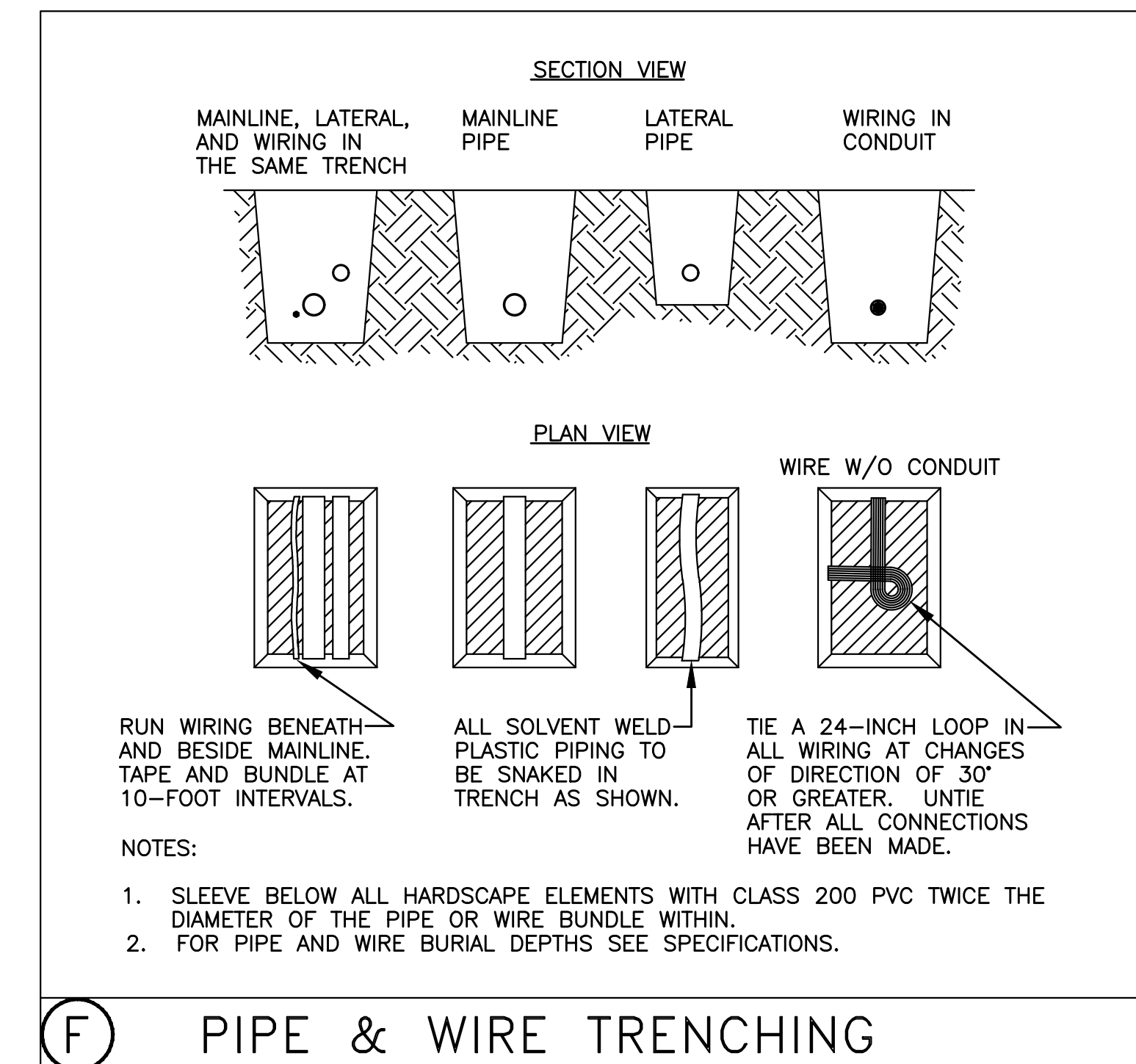
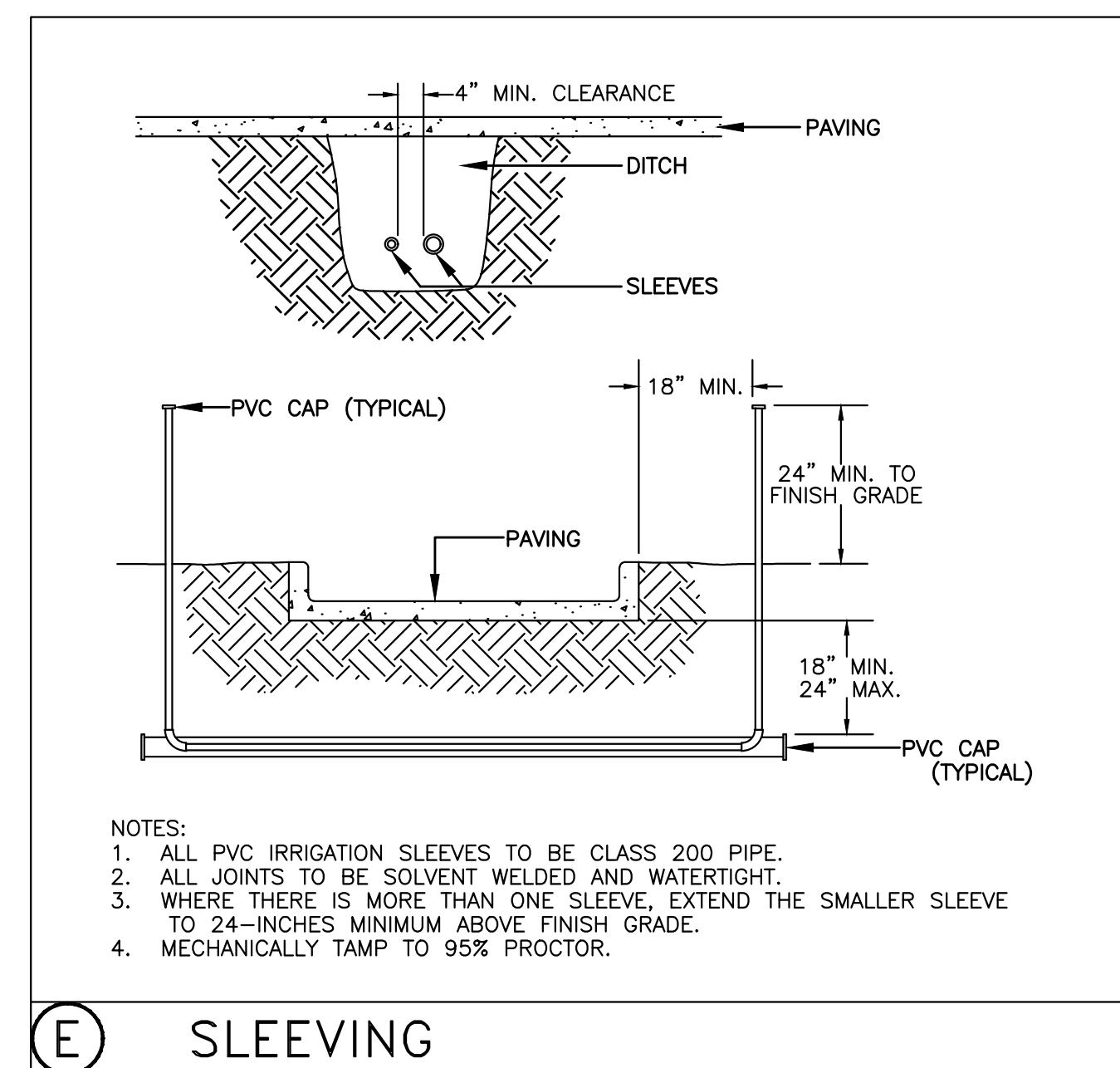
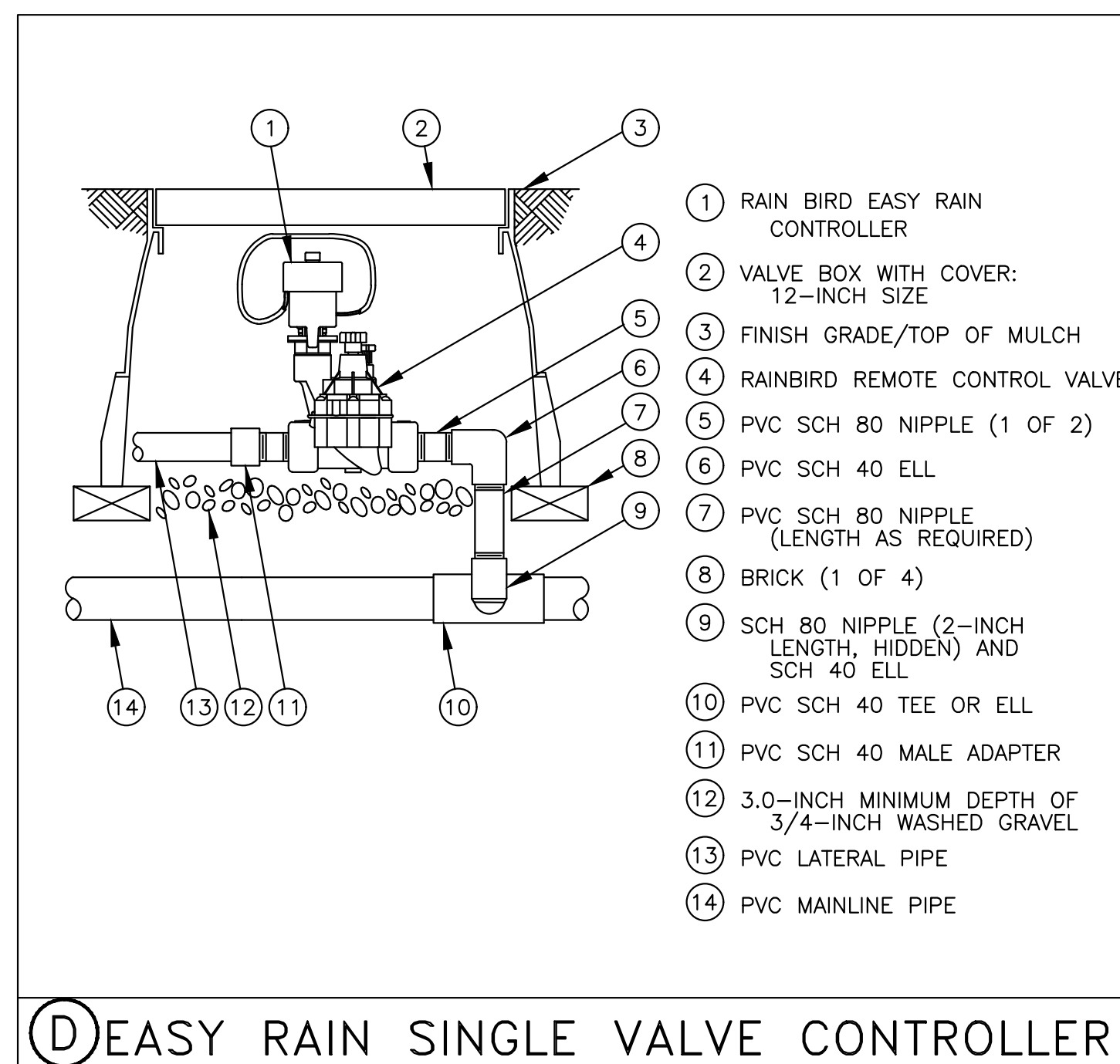
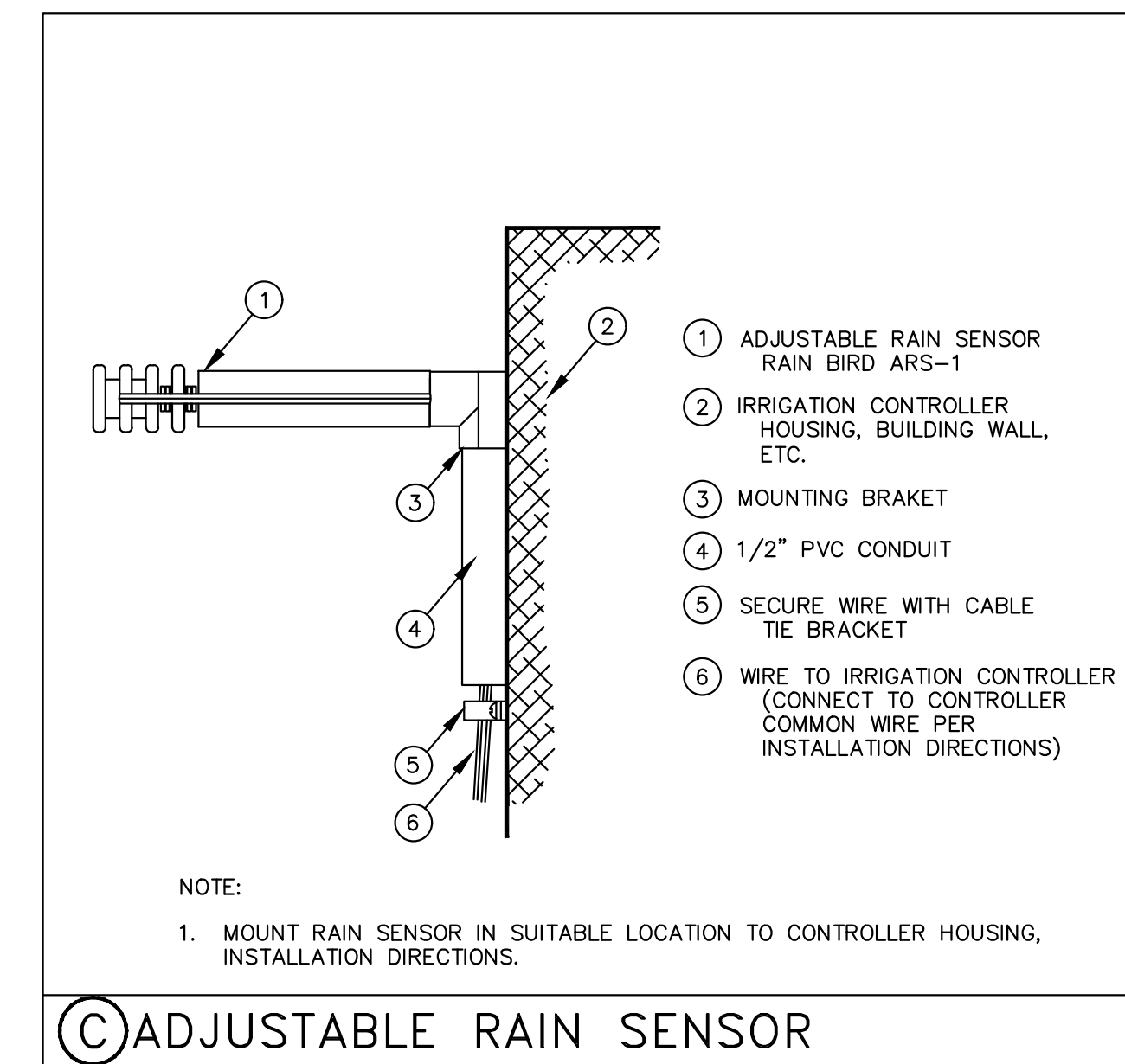
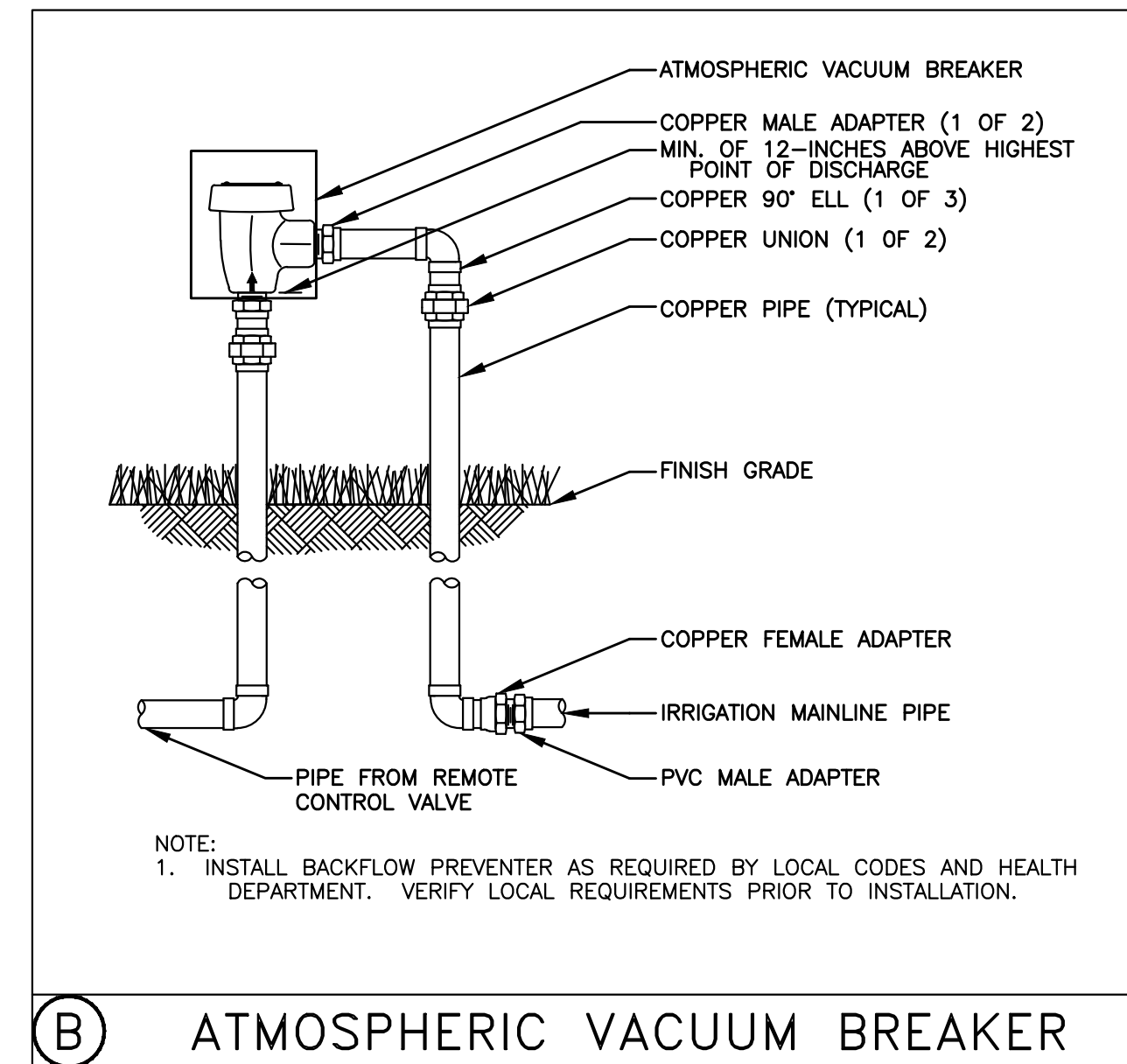
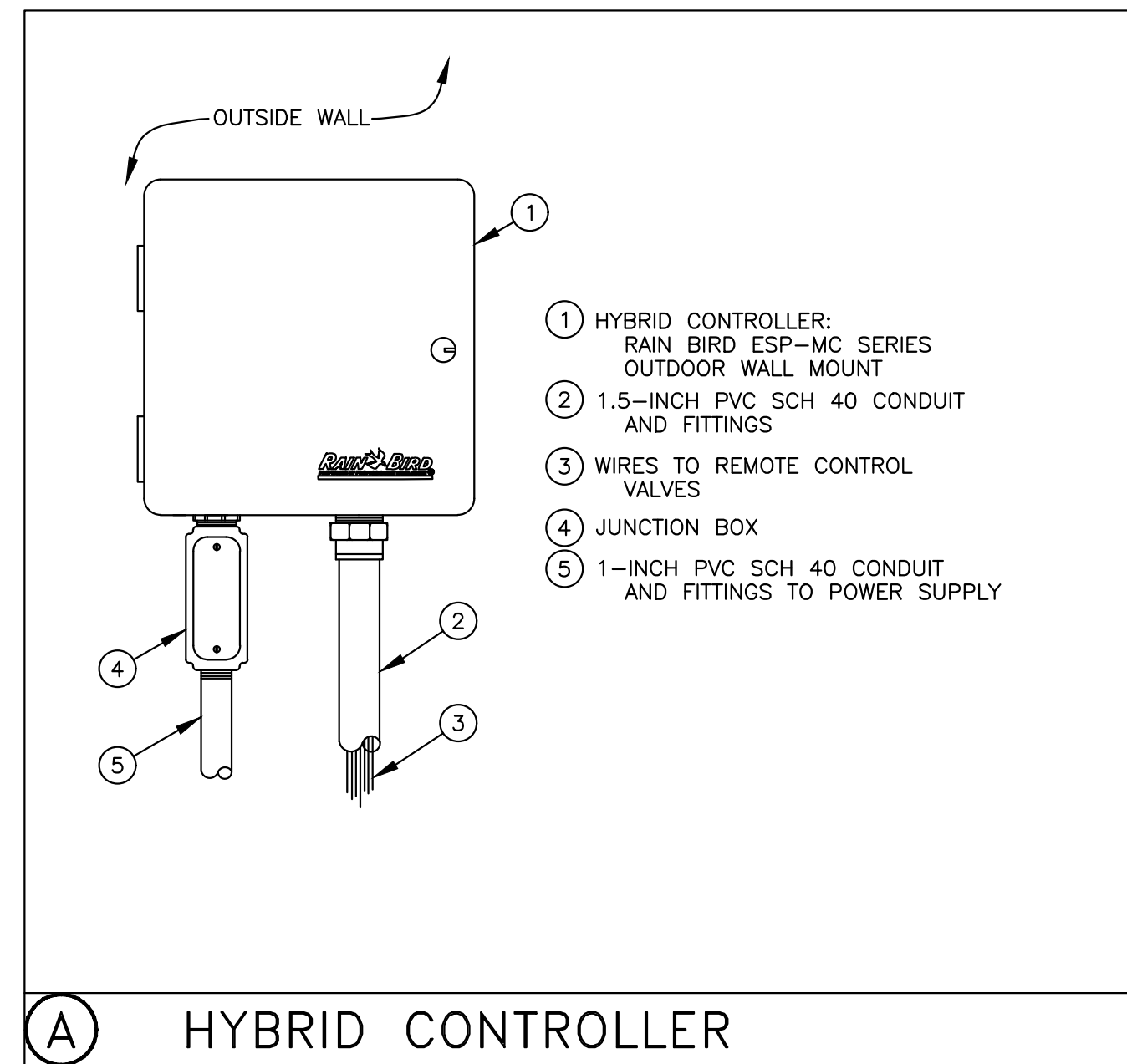
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DRAWN: GL	
DESIGN: MTLM	
CHK'D:	

M2LA PROJECT NUMBER: 22-061-03-2ip **OF 8** **22-061**



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 V3M 3L7  
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NO.	DATE	REVISION DESCRIPTION	DR.
1	JAN 26, 2023	PRELIMINARY DESIGN	GL/BN
2	FEB 01, 2023	ISSUED FOR DP SUBMISSION	GL/BN
3	MAY 30, 2023	ISSUED FOR DP SUBMISSION	GL/BN
4			
5			
6			

NO. DATE REVISION DESCRIPTION DR.

PROJECT:

TOWNHOUSE DEVELOPMENT  
 540 ZIPRICK ROAD  
 KELOWNA, BC

DRAWING TITLE:

IRRIGATION  
 DETAILS

DATE: 26-JAN-2023 DRAWING NUMBER:

SCALE: AS SHOWN

DRAWN: GL

DESIGN: MTLM

CHK'D:

M2LA PROJECT NUMBER: 22-061

OF 8

22-061-03.rvt

PART ONE GENERAL REQUIREMENTS	
11 REFERENCES	<p>1. CCDC Doc 2208 Comply with all articles in the General Conditions of Contract in conjunction with this section unless superseded by other Contract Documents.</p> <p>2. B.C. Landscape Standard, 7th edition 2008, prepared by the B.C. Society of Landscape Architects and the B.C. Nursery Association, jointly. All works and materials shall meet standards as set out in the B.C. Landscape Standard unless superseded by this specification or as directed by the Landscape Architect with written instruction.</p> <p>3. MASTER MUNICIPAL SPECIFICATIONS &amp; STANDARD DETAILS, 2000 edition, prepared by the Consulting Engineers of British Columbia, Roadbuilders and Heavy Construction Association, and the Municipal Engineers Division</p> <p>4. STANDARD FOR LANDSCAPE IRRIGATION SYSTEM, 2006. Prepared by the Irrigation Industry Association of British Columbia</p> <p>5. MUNICIPAL BYLAWS AND ENGINEERING SPECIFICATIONS WHERE NOTED.</p>
12 TESTING	<p>1. A current (not more than one month) test for all growing medium to be used on this site is required. Provide and pay for testing by an independent testing facility pre-approved by the Landscape Architect. Deliver growing medium test results to Landscape Architect for review and approval prior to placement. Refer to Section 3.4 Growing Medium Testing for procedure.</p> <p>2. Owner reserves the right to test or re-test materials. Contractor responsible to pay for testing if materials do not meet specification.</p>
13 SUBMITTALS	<p>1. Any alternate products differing from that contained in the contract documents must be pre-approved by the Landscape Architect.</p> <p>2. Submittals to consist of product sample or manufacturer's product description.</p>
14. SITE REVIEW	<p>1. Under the terms of the Landscape Architect's Contract with the Owner and where the Landscape Architect is the designated reviewer, the Landscape Architect will observe construction as is necessary in their opinion to confirm conformance to the plans and specifications. Contact Owner's Representative to arrange for site observation at the appropriate times. Allow two days notice. Observation schedule may include but will not be limited to the following:</p> <p>11. Start Up Site Meeting: General Contract: Prior to any site disturbance, a meeting with the general contractor to review free preservation issues, general landscape issues and municipal requirements.</p> <p>12. Start Up Site Meeting, Landscape Contract: If applicable: At the start of work with Owner's Representative, Site Superintendent and Landscape Contractor, a meeting to be held to review expected work and to verify the acceptability of the subgrade and general site conditions to the Landscape Contractor. Provide growing medium test results for this meeting.</p> <p>13. Progress Site Visits: To observe materials and workmanship as necessary through the course of the work. Review of different aspects of the work may be dealt with on any single visit. Such elements may include: Site Layout, Rough Grading, Growing Medium - quality, depths, finish grading, Drainage and Drainage Materials, Lawns or Grass areas, Planting - plant material including negotiations with suppliers, nursery inspections, plant sizes, quality, quantity, planting practice and layout, Free support, Mulch, Irrigation Systems, Play Equipment, Site Furniture, and other elements of the site development where the Landscape Architect is the designated reviewer such as Pedestrian Paving, Fencing, Non-structural walls and slabs, Unit Paving.</p> <p>14. Substantial Performance: Review of all work, accounting of all substitutions, deletions, plant counts, preparations of deficiency list, and recommendations for completion.</p> <p>15. Certificate of Completion: Upon the declaration of Substantial Performance, a recommendation for the issuance of the Certificate of Completion will be made to the Payment Certifier as defined in the contract.</p> <p>16. Deficiency Review: Prior to the completion of the holdback period, check for completion of deficiencies. Once completed, a Schedule 'C' will be issued where required.</p> <p>17. Warranty Review: Prior to the completion of the warranty period (1-11 months after issuance of the Certificate of Completion), review all warranty material and report recommendations for warranty replacement.</p>
15. WORMMANSHP	<p>1. Unless otherwise instructed in the Contract Documents, the preparation of the subgrade shall be the responsibility of the General Contractor. Placement of growing medium constitutes acceptance of the subgrade by the Landscape Contractor. Any subsequent corrections to the subgrade required are the responsibility of the Landscape Contractor.</p> <p>2. All work and superintendents shall be performed by personnel skilled in landscape contracting. In addition, all personnel applying herbicides and/or pesticides shall hold a current license issued by the appropriate authorities.</p> <p>3. A site visit is required to become familiar with site conditions before bidding and before start of work.</p> <p>4. Confirm location of all services before proceeding with any work.</p> <p>5. Notify Landscape Architect of any discrepancies. Obtain approval from Landscape Architect prior to deviating from the plans.</p> <p>6. Take appropriate measures to avoid environmental damage. Do not dump any waste materials into water bodies. Conform with all federal, provincial and local statutes and guidelines.</p> <p>7. Collect and dispose of all debris and/or excess material from landscape operations. Keep paved surfaces clean and repair damage resulting from landscape work. Repairs are to be completed prior to final acceptance.</p> <p>8. Where new work connects with existing, and where existing work is altered, make good to match existing undisturbed condition.</p>
16. WARRANTIES	<p>1. Guarantee all materials and workmanship for a minimum period of one full year from the date of Certificate of Completion.</p> <p>2. Refer to individual sections for specific warranties.</p>

## PART TWO SCOPE OF WORK

21 SCOPE OF WORK	<p>1. Other conditions of Contract may apply. Confirm Scope of Work at time of tender.</p> <p>2. Work includes supply of all related items and performing all operations necessary to complete the work in accordance with the drawings and specifications and generally consists of the following:</p> <p>21. Retention of Existing Trees where shown on drawings.</p> <p>22. Finish Grading and Landscape Drainage.</p> <p>23. Supply and placement of growing medium.</p> <p>24. Testing of imported growing medium and/or site topsoil.</p> <p>25. Supply and incorporation of additives to meet requirements of soil test and Table One.</p> <p>26. Preparation of planting beds, supply of plant material and planting.</p> <p>27. Preparation of rough grass areas, supply of materials and sodding.</p> <p>28. Preparation of lawn areas, supply of materials and sodding.</p> <p>29. Supply and placement of bark mulch.</p> <p>30. Maintenance of planted and seeded/sodded areas until accepted by Owner.</p> <p>21.1. SEPARATE PROC. Establishment Maintenance, Section 3.11.</p> <p>21.2. Other work: Work other than this list, not specified by Landscape Architect.</p>																																																																
22. MATERIALS	<p>1. Growing Medium: Conform to BC Landscape Standard for definitions of imported and on-site topsoil. Refer to Table One below.</p> <p>TABLE ONE: PROPERTIES OF GROWING MEDIUM FOR LEVEL 1 GROWNED AND LEVEL 2 MODERATE AREAS Canadian System of Soil Classification Textural Class "Loamy Sand" to "Sandy Loam"</p> <table border="1"> <thead> <tr> <th>Applications</th> <th>Low Traffic Areas, Trees and Large Shrubs</th> <th>High Traffic Lawn Areas</th> <th>Planting Areas and Planters</th> </tr> </thead> <tbody> <tr> <td>Growing Medium Types</td> <td>ZL</td> <td>ZH</td> <td>ZP</td> </tr> </tbody> </table> <p>Texture</p> <table border="1"> <thead> <tr> <th>Coarse Gravel:</th> <th>0 - 1%</th> <th>0 - 1%</th> <th>0 - 1%</th> </tr> </thead> <tbody> <tr> <td>larger than 25mm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>All Gravel:</td> <td>0 - 5%</td> <td>0 - 5%</td> <td>0 - 5%</td> </tr> <tr> <td>larger than 2mm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Percent Of Dry Weight of Growing Medium Excluding Gravel</p> <table border="1"> <thead> <tr> <th>Sand:</th> <th>50 - 80%</th> <th>70 - 90%</th> <th>40 - 80%</th> </tr> </thead> <tbody> <tr> <td>larger than 0.05mm smaller than 2.0mm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Silt:</td> <th>10 - 25%</th> <th>0 - 15%</th> <th>10 - 25%</th> </tr> <tr> <td>larger than 0.002mm smaller than 0.05mm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Clay:</td> <th>0 - 25%</th> <th>0 - 15%</th> <th>0 - 25%</th> </tr> <tr> <td>smaller than 0.002mm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Clay and Silt Combined:</td> <th>maximum 35%</th> <th>maximum 15%</th> <th>maximum 35%</th> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Organic Content (coast):</th> <th>3 - 10%</th> <th>3 - 5%</th> <th>10 - 20%</th> </tr> </thead> <tbody> <tr> <td>Organic Content (interior):</td> <td>3 - 5%</td> <td>3 - 5%</td> <td>15 - 20%</td> </tr> <tr> <td>Acidity (pH):</td> <td>6.0 - 7.0</td> <td>6.0 - 7.0</td> <td>4.5 - 6.5</td> </tr> </tbody> </table> <p>Drainage: Percolation shall be such that no standing water is visible 60 minutes after at least 10 minutes of moderate to heavy rain or irrigation.</p> <p>2. Fertilizer: An organic and/or inorganic compound containing Nitrogen (N), Phosphate (P), and Potash (soluble Z) in proportions required by soil test.</p> <p>3. Lime: Ground agricultural limestone. Meet requirements of the B.C. Landscape Standard.</p> <p>4. Organic Additive: Commercial product to the requirements of the B.C. Landscape Standard, 6th edition and pre-approved by the Landscape Architect. Recommended suppliers: The Answer Garden Products, Fraser Richmond Soils &amp; Fibre, Stream Organics Management.</p> <p>5. Sand: Clean, washed pump sand to meet requirements of the B.C. Landscape Standard.</p> <p>6. Composted Bark Mulch: 10mm (3/8") minus Fir/Henlock bark chips and fines, free of chunks and sticks, dark brown in colour and free of all soil, stones, roots or other extraneous matter. Fresh orange in colour bark will be rejected.</p> <p>7. Herbicides and Pesticides: If used, must conform to all federal, provincial and local statutes. Applicants must hold current licenses issued by the appropriate authorities in the area.</p> <p>8. Filter Fabric: A non biodegradable blanket or other filtering membrane that will allow the passage of water but not fine soil particles. (Such as MIRAF 1401N, GEOLON 400 OR AMOCO 4545 or alternate product pre-approved by the Landscape Architect.)</p> <p>9. Drainage Piping if required: Schedule 40 PVC nominal sizes.</p> <p>10. Drain Rock: Clean, round, inert, durable, and have a maximum size of 19mm and containing no material smaller than 10mm.</p> <p>11. Plant Material: To the requirements of the B.C. Landscape Standard. Refer to 3.9, Plants and Planting. All plant material must be provided from a certified disease free nursery. Provide proof of certification.</p> <p>12. Sod: Refer to individual sections in this specification.</p> <p>13. Supplier and installers of segmental block walls to provide engineered drawings for all walls signed and sealed drawings for all walls, individually, in excess of 1.2m, or combinations of walls collectively in excess of 1.2m. Installations must be reviewed and signed off by Certified Professional Engineer, include cost of engineering services in Tender price.</p> <p>14. Miscellaneous: Any other material necessary to complete the project as shown on the drawings and described herein.</p>	Applications	Low Traffic Areas, Trees and Large Shrubs	High Traffic Lawn Areas	Planting Areas and Planters	Growing Medium Types	ZL	ZH	ZP	Coarse Gravel:	0 - 1%	0 - 1%	0 - 1%	larger than 25mm				All Gravel:	0 - 5%	0 - 5%	0 - 5%	larger than 2mm				Sand:	50 - 80%	70 - 90%	40 - 80%	larger than 0.05mm smaller than 2.0mm				Silt:	10 - 25%	0 - 15%	10 - 25%	larger than 0.002mm smaller than 0.05mm				Clay:	0 - 25%	0 - 15%	0 - 25%	smaller than 0.002mm				Clay and Silt Combined:	maximum 35%	maximum 15%	maximum 35%	Organic Content (coast):	3 - 10%	3 - 5%	10 - 20%	Organic Content (interior):	3 - 5%	3 - 5%	15 - 20%	Acidity (pH):	6.0 - 7.0	6.0 - 7.0	4.5 - 6.5
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PART THREE SOFT LANDSCAPE DEVELOPMENT	
31. RETENTION OF EXISTING TREES	<p>1. Prior to any work on-site - protect individual trees or plant groupings indicated as retained on landscape plans as vegetation retention areas.</p> <p>1.1. In some instances the Landscape Architect will tag trees or areas to remain. Discuss free retention areas at a start-up meeting with the Landscape Architect.</p> <p>2. A physical barrier must be installed to delineate clearing boundaries. Refer to physical barrier detail. If detail not provided, comply with local municipal requirements.</p> <p>3. No machine travel through or within vegetation retention areas or under crowns of trees to be retained is allowed.</p> <p>4. Do not stockpile soil, construction materials, or excavated materials within vegetation retention areas.</p> <p>5. Do not park, fuel or service vehicles within vegetation retention areas.</p> <p>6. No debris fires, clearing fires or trash burning shall be permitted within vegetation retention areas.</p> <p>7. No excavations, drain or service trenches nor any other disruption shall be permitted within vegetation retention areas without a review of the proposed encroachment by the Landscape Architect.</p> <p>8. Do not cut branches or roots of retained trees without the approval of the Landscape Architect.</p> <p>9. Any damage to existing vegetation intended for preservation will be subject to evaluation by an I.S.A. Certified Arborist using the "Guide for Plant Appraisal", Eighth Edition, 1992.</p> <p>10. Replacement planting of equivalent value to the disturbance will be required. The cost of the evaluation and of the replacement planting will be the responsibility of the General Contractor and/or the persons responsible for the disturbance.</p> <p>11. In municipalities with specific tree retention/replacement bylaws ensure compliance to bylaws.</p> <p>12. In situations where required construction may disturb existing vegetation intended for preservation, contact Landscape Architect for review prior to commencing construction.</p>
32. GRADES	<p>1. Ensure subgrade is prepared to conform to depths specified in Section 3.5, Growing Medium Supply, below. Where planting is indicated close to existing trees, prepare suitable planting pockets for material indicated on the planting plan. Shape subgrade to eliminate free standing water and conform to the site grading and drainage plan.</p> <p>2. On slopes in excess of 3:1 trench broad across slope to 150mm (6") minimum at 15m (5ft) intervals minimum.</p> <p>3. Scarify the entire subgrade immediately prior to placing growing medium. Re-cultivate where vehicular traffic results in compaction during the construction procedures. Ensure that all planting areas are smoothly contoured after light compaction to finished grades.</p> <p>4. Eliminate standing water from all finished grades. Provide a smooth, firm and even surface and conform to grades shown on the Landscape Drawings. Do not exceed maximum minimum gradients defined by the B.C. Landscape Standard.</p> <p>5. Construct swales true to line and grade, smooth and free of sags or high points. Minimum slope 2%, maximum side slopes 10%. Assume positive drainage to collection points.</p> <p>6. Slope not to exceed the following maximums: Rough Grass 3:1, Lawn 4:1, Landscape plantings 2:1.</p> <p>7. Finished soil/mulch elevation at building to comply with municipal requirements.</p> <p>8. Inform Landscape Architect of completion of finish grade prior to placement of seed, sod, plants or mulch.</p>
33. LANDSCAPE DRAINAGE	<p>1. Related Work: Growing medium and Finish Grading, Grass areas, Trees Shrubs and Groundcovers, Planters, Crb Walls.</p> <p>2. Work Included: Site finish grading and surface drainage. Installation of any drainage systems detailed on landscape plans. Note Catch basins shown on landscape plans for coordination only, confirm scope of work prior to bid.</p> <p>2.1. Coordinate all landscape drainage work with rest of site drainage. Refer to engineering drawings and specifications for connections and other drainage work.</p> <p>2.2. Determine exact location of all existing utilities and structures and underground utilities prior to commencing work, which may not be located on drawings and conduct work so as to prevent interruption of service or damage to them. Protect existing structures and utility services and be responsible for damage caused.</p> <p>2.3. Planter drains on slab. Refer to Section 3.10, Installing Landscapes on Structures.</p> <p>3. Execution</p> <p>3.1. Do trenching and backfilling in accordance with engineering details and specifications.</p> <p>3.2. Lay drains on prepared bed, true to line and grade with inverts smooth and free of sags or high points. Ensure barrel of each pipe is in contact with bed throughout full length.</p> <p>3.3. Commence laying pipe at outlet and proceed in upstream direction.</p> <p>3.4. Lay perforated pipes with perforations at 8pm and 4pm positions.</p> <p>3.5. Make joints tight in accordance with manufacturer's directions.</p> <p>3.6. Do not allow water to flow through the pipes during construction except as approved by Engineer.</p> <p>3.7. Make watertight connections to existing drains, new or existing manholes or catchbasins where indicated or as directed by Landscape Architect.</p> <p>3.8. Plug upstream ends of pipe with watertight clean caps.</p> <p>3.9. Surround and cover pipe with drain rock in uniform 150mm layers to various depths as shown in details, minimum 100mm.</p> <p>3.10. Cover drain rock with non-woven filter cloth lap over edges and seams minimum 150mm.</p> <p>3.11. Assume positive drainage.</p> <p>3.12. Back fill remainder of trench as indicated.</p> <p>3.13. Protect subdrains from flotation during installation.</p>
34. GROWING MEDIUM TESTING	<p>1. Submit representative sample of growing medium proposed for use on this project to an independent laboratory. Provide test results to Landscape Architect prior to placing. Test results to include:</p> <p>1.1. Physical properties, % content of gravel, sand, silt, clay and organics.</p> <p>1.2. Acidity (PH) and quantities of lime or sulphur required to bring within specified range.</p> <p>1.3. Nutrient levels of principle and trace elements and recommendations for required soil amendments.</p> <p>1.4. Carbon/Nitrogen level.</p>
35. GROWING MEDIUM SUPPLY AND PLACEMENT	<p>1. Supply all growing medium required for the performance of the Contract. Do not load, transport or spread growing medium when it is so wet that its structure is likely to be damaged.</p> <p>2. Supply all growing medium admixtures as required by the soil test. Amended growing medium must meet the specification for growing medium as defined in Table One for the various areas.</p> <p>2.1. Thoroughly mix required amendments into the full depth of the growing medium.</p> <p>2.2. Special mixes may be required for various situations. Refer to drawing notes for instructions.</p> <p>3. Place the amended growing medium in all grass and planting areas. Spread growing medium in uniform layers not exceeding 6" (150mm), over uniform subgrade free of standing water.</p> <p>4. Minimum depths of growing medium placed and compacted to 80%:</p> <p>4.1. On-grade:</p> <p>4.1.1. Seeded and sodded lawn.....6" (150mm)</p> <p>4.1.2. Mass planted shrubs &amp; groundcovers.....15" (400mm)</p> <p>4.1.3. Groundcover only areas, if defined on plan.....9" (225mm)</p> <p>4.1.4. Tree &amp; large shrub pits.....depth to conform to depth of rootball - width shall be at least twice the width of the root ball with saucer shaped sides.</p> <p>4.2. On-Slab:</p> <p>4.2.1. Irrigated lawn.....9" (225mm)</p> <p>4.2.2. Groundcover areas.....12" (300mm)</p> <p>4.2.3. Lawn with automatic irrigation.....12" (300mm)</p> <p>4.2.4. Shrub &amp; groundcover areas.....15" (380mm)</p> <p>4.2.5. Trees and specimen shrubs.....30" (760mm) over columns and/or edge of slab vertically column locations on-site for tree locations.)</p> <p>4.2.6. Depth noted includes 1" to 2" (25-50mm) sand over filter fabric.</p> <p>4.2.7. Maximum 18" depth growing medium except where rounded for trees over column pits.</p> <p>5. Manually spread growing medium/planting soil around existing trees, shrubs and obstacles.</p> <p>6. In perimeter seeded grass areas, feather growing medium out to nothing at edges and blend into existing grades.</p> <p>7. Finished grades shall conform to the elevations shown on landscape and site plans.</p>
36. ROUGH GRASS AREA - SEEDING	<p>1. General: Rough grass areas are noted on the drawings as "Rough Grass". Treat all areas defined as rough grass between all property lines of the project including all boulevards to edge of roads and lanes.</p> <p>2. Preparation of Surfaces: To B.C. Landscape Standard Class 3 Areas (Rough grass Section 7.11.3)</p> <p>2.1. Clean existing soil by mechanical means of debris over 50mm in dimension.</p> <p>2.2. Roughly grade surfaces to allow for maintenance specified and for positive drainage.</p> <p>3. Time of Seeding: Seed from early spring (generally April 1st) to late fall (September 15th) of each year. Further extensions may be obtained on concurrence of the Landscape Architect.</p> <p>4. Seed Supply &amp; Testing: All seed must be obtained from a recognized seed supplier and shall be No. 1 grass mixture delivered in containers bearing the following information:</p> <p>4.1. Analysis of the seed mixture</p> <p>4.2. Percentage of each seed type</p> <p>5. Seed Mixture: All varieties shall be rated as strong performers in the Pacific Northwest and are subject to client approval.</p> <p>70% Creeping Red Fescue 20% Annual Ryegrass 5% Sunk Perennial Ryegrass 5% Kentucky Bluegrass</p> <p>For Winter Areas use a mixture of Wildflowers with Hard Fescues (Terralink Coastal Wildflowers) with Hard Fescue or pre-approved alternate.</p> <p>6. Fertilizer: Mechanical seeding: Apply a complete synthetic slow-release fertilizer with maximum 35% water soluble nitrogen and a formulation ratio of 18-18-18 - 50% sulphur urea coated, 112 kg/ha/100lbs/acre) using a mechanical spreader.</p> <p>7. Seeding: Apply seed at a rate of 112#/A (100lbs /acre) with a mechanical spreader. Incorporate seed into the top 1/4" (6mm) of soil and lightly compact.</p> <p>8. Acceptance: Provide adequate protection of the seeded areas until conditions of acceptance have been met. Comply with Section 3.7 hydroseeding.</p>
37. HYDROSEEDING	<p>1. May be used as an alternate to mechanical seeding in rough grass areas.</p> <p>2. May not be used in areas of lawn unless pre-approved by the Landscape Architect prior to bidding.</p> <p>3. Preparation and Growing Medium</p> <p>3.1. In areas of Rough Grass: Comply with Section 36 Rough Grass.</p> <p>3.2. Where approved for use in areas of lawn, comply with Section 38 Lawn Areas: Sodding.</p> <p>4. Protection: Ensure that fertilizer in solution does not come in contact with the foliage of any trees, shrubs, or other susceptible vegetation. Do not spray seed or mulch on objects not expected to grow grass. Protect existing site equipment, roads, landscaping, reference points, monuments, markers and structures from damage. Where contamination occurs, remove seeding slurry to satisfaction and if by means approved by the Landscape Architect.</p> <p>5. Mulch shall consist of virgin wood fibre or recycled paper fibre designed for hydraulic seeding and dye for ease of monitoring application. If using recycled paper material for wood fibre substitute use 15% by weight. Conform to B.C. Landscape Standard for such requirements.</p> <p>6. Water: Shall be free of any impurities that may have an injurious effect on the success of seeding or may be harmful to the environment.</p> <p>7. Equipment: Use industry standard hydraulic seeder/mulcher equipment with the tank volume certified by an identification plate or sticker affixed to the view on the equipment. The hydraulic seeder/mulcher shall be capable of sufficient application to mix the material into a homogeneous slurry and to maintain the slurry in a homogeneous state until it is applied. The discharge pumps and gun nozzles shall be capable of applying the materials uniformly over the designated area.</p>

PART THREE SOFT LANDSCAPE DEVELOPMENT - CONT																									
8. Application Rate:	<p>8.1 Seed Mixture: 196 kg/ha (105 lbs/acre)</p> <p>8.2 Fertilizer: 112 kg/ha (100 lbs/acre)</p> <p>8.3 Coastal Wildflower Mix: Where specified, apply (31 lbs/acre) (0.4 lb./sq. ft. of grass seed)</p> <p>8.4. Notes:</p> <p>8.4.1. At the time of Tender provide a complete chart of all components of the mix proposed including mulch, tackifier, water etc. Sloped sites require tackifier.</p> <p>8.4.2. Fertilizer:</p> <p>8.4.2.1. Rough Grass: If a soil analysis is available, comply with results.</p> <p>8.4.2.2. Lawn: Where hydroseeding is approved, comply with soil analysis recommendations.</p> <p>9. Accurately measure the quantities of each of the materials to be charged into the tank either by mass or by a commonly accepted system of mass-calibrated volume measurements. The materials shall be added to the tank while it is being filled with water; in the following sequence: seed, fertilizer. Thoroughly mix into a homogeneous slurry. After charging, add no water or other material to the mixture. Do not leave slurry in the tank for more than 40 hours.</p> <p>10. Distribute slurry uniformly over the surface of the area to be hydroseeded. Blend application into previous applications and existing grass areas to form uniform surfaces.</p> <p>11. Clean up: Remove all materials and other debris resulting from seeding operations from the job site.</p> <p>12. Maintenance: Begin maintenance immediately after seeding and continue for 60 days after Substantial Completion and until accepted by the Owner. Re-seed at three week intervals where germination has failed. Protect seeded areas from damage with temporary wire or fence fences complete with signage until grass area is taken over by the Owner. Water in sufficient quantities to ensure deep penetration and at frequent intervals to maintain vigorous growth until grass is taken over by the Owner. It is the Owner's responsibility to supply water at no extra cost to the Contractor.</p> <p>13. Acceptance of the Rough Grass Areas: Proper germination of all specified grass species is the responsibility of the Landscape Contractor. The grass shall be reasonably well established, with no apparent dead or bare spots and shall be reasonably free of weeds (to B.C. Landscape Standard, Section 13 Maintenance Level 4 (Open space). Sixty days after substantial completion, areas meeting the conditions above will be taken over by the Owner. Areas seeded in Fall will be accepted in Spring one month after start of growing season, provided that the above conditions for acceptance are fulfilled.</p>																								
38. LAWN AREAS - SODDING	<p>1. General: Treat all areas defined as lawn areas on the landscape plan between all property lines of the project including all boulevards to edge of roads and lanes.</p> <p>2. Growing Medium: Comply with Section 2.2.1, Growing Medium. Prior to sodding, request an inspection of the finished grade, and depth and condition of growing medium by the Landscape Architect.</p> <p>3. Time of Sodding: Sod from April 1st to October 1st. Further extensions may be obtained on concurrence of the Landscape Architect.</p> <p>4. Sod Supply: Conform to all conditions of B.C. Landscape Standard, Section 8, B.C. Standard for Turfgrass Sod.</p> <p>5. Specified Turfgrass by area: Refer to Table 2 below.</p> <table border="1"> <thead> <tr> <th colspan="4">TABLE 2 SPECIFIED TURFGRASS BY AREA</th> </tr> <tr> <th>Area</th> <th>Description</th> <th>Quality Grade</th> <th>Major Species</th> </tr> </thead> <tbody> <tr> <td>CLASS 1</td> <td>Lawn, all areas noted on drawings as lawn in urban development sites including boulevard grass</td> <td>No 1 Premium</td> <td>Kentucky Blue for sun, Fescues for shade</td> </tr> <tr> <td>CLASS 2</td> <td>Grass - public parks, industrial and institutional sites</td> <td>No 2 Standard</td> <td>same</td> </tr> <tr> <td>CLASS 3</td> <td>Rough Grass</td> <td>seed hydroseeding</td> <td></td> </tr> <tr> <td>SPECIAL</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>6. Lime: The lime shall be as defined in Section 2.2.3, Materials. Apply at rates recommended in required soil test. Refer to Section 3.4 for method.</p> <p>7. Fertilizer: Refer to Section 2.2.2 Materials. Apply specified fertilizer at rates shown in the required soil test. Apply with a mechanical spreader. Cultivate into growing medium 48 hours prior to sodding. Apply separately from lime.</p> <p>8. Sodding: Prepare a smooth, firm, even surface for laying sod. Lay sod staggered with sections closely butted, without overlapping or gaps, smooth and even with adjoining areas and roll lightly. Water to obtain moisture penetration of 3" to 4" (75 - 100mm). Comply with requirements of B.C. Landscape Standard Section 8, B.C. Standard for Turfgrass Sod.</p> <p>9. Maintenance: Begin maintenance immediately after sodding and continue for 60 days after Substantial Completion and until accepted by the Owner. Protect sodded areas from damage with temporary wire or fence fences complete with signage until lawn is taken over by the Owner. Water to obtain moisture penetration of 3" to 4" (75 - 100mm) at intervals necessary to maintain sufficient growth. Keep grass cut at height of between 1-1/2" (40mm) and 2" (50mm). Provide adequate protection of sodded areas against damage until the turf has been taken over by Owner. Repair any damaged areas, re-grade as necessary. Aeration may be required if in the Landscape Architect's opinion, drainage through the sod base medium is impaired.</p> <p>10. Acceptance of Lawn Areas: The turf shall be reasonably well established, with no apparent dead spots or bare spots and shall be reasonably free of weeds (to B.C. Landscape Standard, Section 13 Maintenance Level 2 (Appearance). Use herbicides if necessary for weed removal unless other conditions of contract forbid their use. After the lawn has been cut at least twice, areas meeting the conditions above will be taken over by the Owner.</p>	TABLE 2 SPECIFIED TURFGRASS BY AREA				Area	Description	Quality Grade	Major Species	CLASS 1	Lawn, all areas noted on drawings as lawn in urban development sites including boulevard grass	No 1 Premium	Kentucky Blue for sun, Fescues for shade	CLASS 2	Grass - public parks, industrial and institutional sites	No 2 Standard	same	CLASS 3	Rough Grass	seed hydroseeding		SPECIAL			
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39. PLANTS AND PLANTING	<p>1. Conform to planting layout as shown on Landscape Plans.</p> <p>2. Obtain approval of Landscape Architect for layout and preparation of planting prior to commencement of planting operations.</p> <p>3. Make edge of beds with smooth clean defined lines.</p> <p>4. Time of Planting:</p> <p>4.1. Plant trees, shrubs and groundcovers only during periods that are normal for such work as determined by local weather conditions when seasonal conditions are likely to ensure successful adaptation of plants to their new location.</p> <p>5. Standards:</p> <p>5.1 All plant material shall conform to the requirements of the B.C. Landscape Standard, 7th edition 2008, unless exceeded by drawing Plant Schedule or this specification.</p> <p>5.1.1. Refer to B.C. Landscape Standard, Section 9, Plants and Planting and to Section 12, BCLM Standard for Container-Grown Plants for minimum standards.</p> <p>5.1.2. Refer to Plant Schedule for specific plant and container sizes and comply with requirements.</p> <p>5.2. Plant material obtained from areas with less severe climatic conditions shall be grown to withstand the site climate.</p> <p>6. Review:</p> <p>6.1. Review at the source of supply and/or collection point does not prevent subsequent rejection of any of all planting stock at the site.</p> <p>7. Availability:</p> <p>7.1. Area of search includes the Lower Mainland and Fraser Valley. Refer to Plant Schedule for any extension of area.</p> <p>7.2. Supply proof of the availability of the specified plant material within 30 days of the award of the Contract.</p> <p>8. Substitution:</p> <p>8.1. Obtain written approval of the Landscape Architect prior to making any substitutions to the specified material. Non-approved substitutions will be rejected.</p> <p>8.2. Allow a minimum of 5 days prior to delivery for requests to substitute.</p> <p>8.3. Substitutions are subject to B.C. Landscape Standard - definition of Conditions of Availability.</p> <p>9. Plant Species &amp; Location:</p> <p>9.1. Plants shall be true to name and of the height, caliper and size of root ball as shown on the landscape/site plan plant schedule. Caliper of trees is to be taken 6" (15cm) above grade.</p> <p>9.2. Plant all specified species in the location as shown on the landscape drawings. Notify Landscape Architect if conflicting rock or underground/overhead services are encountered.</p> <p>9.3. Deviation of given planting location will only be allowed after review of the proposed deviation by the Landscape Architect.</p> <p>10. Excavation:</p> <p>10.1. Trees and large shrubs: Excavate a saucer shaped free pit to the depth of the rootball and to at least twice the width of the rootball. Assume that finished grade is at the original grade the tree was grown at.</p> <p>11. Drainage of Planting Holes:</p> <p>11.1. Provide drainage of planting pits where required; ie. on sloped conditions, break out the side of the planting pit to allow drainage down slope; and in flat conditions, mound to raise the rootball above impervious layer. Notify the Landscape Architect where the drainage of planting holes is limited.</p> <p>12. Planting and Fertilizing Procedures:</p> <p>12.1. Plant all trees and shrubs with the roots placed in their natural growing position. If burrapped, loosen around the top of the ball and cut away or fold under. Do not pull burrap from under the ball. Carefully remove containers without injuring the rootballs. After settled in place, cut in twice. For wire baskets, clip and remove top three rows of wire.</p> <p>12.2. Fill the planting holes by gently firming the growing medium around the root system in 6" (15cm) layers. Settle the soil with water. Add soil as required to meet finish grade. Leave no air voids. When 2/3 of the topsoil has been placed, apply fertilizer as recommended by the required soil test at the specified rates.</p> <p>12.3. Where planting is indicated adjacent to existing trees, use special care to avoid disturbance of the root system or natural grades of such trees.</p> <p>12.4. Where trees are in lawn areas, provide a clean cut mulched 900mm (3 ft) diameter circle centered on the tree.</p> <p>13. Staking of Trees:</p> <p>13.1. Use two 2"x2"x5' stakes, unless superseded by municipal requirements. Set stakes minimum 2 ft. in soil. Do not drive stake through rootball.</p> <p>13.2. Leave the tree carefully vertical.</p> <p>13.3. Tie with pre-approved commercial, flat woven polypropylene fabric belt, minimum width 19mm (3/4"). Approved product: ArborTie - available from DeepRoot.</p> <p>13.4. Confers trees over 2-4 ft high: Guy with three 2-4 strand wires (11 gauge). Drive three stakes equidistant around the tree completely below grade.</p> <p>13.5. Trees 6 ft+ on wood or Concrete Decks: Guy as above using three deadend (m. 2"x2"x4") buried to the maximum possible depth instead of stakes.</p> <p>13.6. Mark all guy wires with visible tagging material.</p> <p>14. Pruning:</p> <p>14.1. Limit pruning to the minimum necessary to remove dead or injured branches. Preserve the natural character of the plants, do not cut the leader. Use only clean, sharp tools. Make all cuts clean and cut to the branch collar leaving no stubs. Shape affected areas so as not to retain water. Remove damaged material.</p> <p>15. Mulching:</p> <p>15.1. Mulch all planting areas with an even layer of mulch to 2-1/2" - 3" (65 - 75mm) depth. Confirm placement of mulch in areas labeled "Groundcover Area" on drawings. Mulch 3 ft. (900mm) diameter circle around trees in lawn areas, leave a clean edge.</p> <p>16. Acceptance:</p> <p>16.1. The establishment of all plant material is the responsibility of the Landscape Contractor.</p> <p>17. Plant Material Maintenance:</p> <p>17.1. Maintain all plant material for 60 days after landscape work has received a Certificate of Completion.</p> <p>17.2. Watering: Conform to B.C. Landscape Standard, Section 13.3 - Watering and generally as follows:</p> <p>17.2.1. Water to supplement natural rainfall such that the soil moisture content is kept to 50% to 100% of field capacity. Water to the full depth of the root zone each time. The Owner is responsible to supply water at no extra cost to the Contractor. Confirm source of water prior to beginning work.</p> <p>17.3. Use appropriate measures to combat pests or diseases damaging plant material. Comply with all local governing statutes and guidelines for chemical control.</p> <p>17.4. Plant material which fails to survive shall be replaced in the next appropriate season as determined by the Landscape Architect.</p> <p>17.5. Repair tree guards, stakes, and guy wires, when necessary.</p> <p>17.6. Maintain areas relatively weed free. Appearance Level 2, B.C. Landscape Standard, Chapter 13.</p> <p>17.7. Maintain mulch to specified depths.</p> <p>18. Plant Warranty:</p> <p>18.1. Replace all unsatisfactory plant material except those designated "Specimen" for a period of one (1) year after the Certificate of Completion. Replace all unsatisfactory plant material designated "Specimen" for a period of two (2) years after the Certificate of Completion. Replace all unsatisfactory trees and shrubs and continue to replace these until the specified number is complete and satisfactory to the Landscape Architect. Such replacement shall be subject to the notification, inspection and approval as specified for the original planting, and shall not constitute an extra to the Contract.</p> <p>18.2. These Plants, identified as hardy within one zone of the Canada Department of Agriculture hardiness zone for the area, specified by the Landscape Architect and installed by the Landscape Contractor which are killed through below normal temperatures (below the average of the extreme minimum temperatures officially recorded in the area concerned, in the last 10 years), will not be replaced without cost of replacement borne by the Owner.</p> <p>18.3. A review may be requested during the latter part of the warranty growing season. All plant material showing well developed foliage, healthy growth and bud forming, will be taken over.</p>																								

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18.4. For all plant material, the Landscape Architect reserves the right to extend the Contractor's responsibility for another growing season if, in his opinion, leaf development and growth is not sufficient to ensure future satisfactory growth.	<p>18.5. Where the Owner is responsible for plant maintenance and has not provided adequate maintenance, the plant replacement section of the contract may be declared void. The Landscape Architect shall determine whether maintenance has been satisfactory using the B.C. Landscape Standard, Section 13, Maintenance as the guide. The required maintenance standard is a minimum of Level Three - Medium. Refer to Section 3.11, Establishment Maintenance.</p> <p>18.6. The Landscape Contractor is responsible to replace any plant material or repair any construction included in the Contract that is damaged or stolen until the issuance of the Certificate of Completion.</p> <p>18.7. Deviation from the specifications may require extension of the Warranty Period as determined by the Landscape Architect.</p>
3.10. INSTALLING LANDSCAPE ON STRUCTURES	<p>1. Verify that drainage and protection material is completely installed and acceptable before beginning work. Contact Landscape Architect for instructions if not in place.</p> <p>2. Coordinate work with construction of planters and planter drainage.</p> <p>2.1. Verify that planter drains are in place and positive drainage to roof drains is present prior to placing any drain rock or soil.</p> <p>3. Provide clean out at all through-slab drain locations. Use 300mm min. dia. PVC Pipe filled with drain rock unless specific drawing detail shown.</p> <p>4. Install drain rock evenly to a minimum depth of 4" (100mm) alternate sheet drain if specified. Install sheet drain as per manufacturer's recommendations.</p> <p>5. Cover drain rock (or alternate sheet drain if specified on drawing details) with filter fabric (approx 6-150mm) at all edges. Obtain approval of drainage system prior to placing growing medium.</p> <p>6. Place an even layer of 25 - 50mm clean washed pump sand over filter fabric.</p> <p>7. Place growing medium to depths specified in Section 3.5 above for various surface treatments. Refer to Drawing details for any light weight fill required to alter grade. Use Styrofoam block over drain rock shaped to provide smooth surface transition at edges. But all pieces tightly together and cover with filter fabric to prevent soil from migrating down over.</p>
3.11. ESTABLISHMENT MAINTENANCE (Provide a separate price for this section)	<p>1. Intere: The intent of "establishment" maintenance is to provide sufficient care to newly installed plant material for a relatively short period of time to ensure or increase the long term success of the planting. The objective is the adaptation of plants to a new site in order to obtain the desired effect. From the planting while reducing the rate of failure and unnecessary work associated with improper establishment. Establishment of maintenance procedures apply to all new and related vegetation including cultivated turfgrass areas and new trees and shrubs.</p> <p>2. Maintenance Period: Provide maintenance of installed landscaping for 12 months following substantial completion.</p> <p>3. Related Standards and Legislation: B.C. Landscape Standard, latest edition; Fertilizer Code, B.C. Pesticide Control Act.</p> <p>4. Site Review: In addition to the inspections at substantial completion, at final progress draw application, and at the end of the guarantee period, there should be three other reviews during the 12 months to be done by the Contractor and a designated representative of the Owner. Maintain a logbook and reporting procedures and submit to the designated representative.</p> <p>5. Scheduling: Prepare a schedule of anticipated visits and submit to designated representative at start-up. Maintenance operations shall be carried out predominately during the growing season between March 1st and November 30th, however, visits at other times of the year may be required.</p> <p>6. Maintenance Level: Comply with B.C. Landscape Standard, Section 13, Table 7, Maintenance Level "Medium".</p> <p>7. Materials: Comply with Part Two of this specification.</p> <p>7.1. Fertilizers: To the requirements of the B.C. Landscape Standard. Formulations and rates as required by soil testing.</p> <p>8. Plant Material Establishment:</p> <p>8.1. Watering: During the first growing season, water new plants at least every ten (10) days between April 1st and July 31st, and every twenty (20) days between August 1st and September 15th. Minimum 25 gallons per tree per application. During the second growing season, water new plants at least every twenty days between April 1st and July 31st and once between August 1st and September 31st. Apply water at a rate and duration such that the water content reaches field capacity to the full depth of the growing medium. Apply water again when the water content reaches 25% of field capacity. Provide and irrigate with water in the event that any automatic irrigation system malfunctions or has not been completely installed. Scheduled applications of water shall be missed only when rainfall has penetrated the soil fully as required.</p> <p>8.2. Mulch: Maintain mulches in the original areas and to the original depths.</p> <p>8.3. Weed Control: Remove all weeds from all areas at least once per month during the growing season by hoeing or cultivation to a maximum depth of 80mm, hand-pulling, or, if necessary, by the use of herbicides.</p> <p>8.4. Pest and Disease Control: Inspect all planted areas for pests and diseases periodically and at least every two months during the growing season by an experienced person. Carry out treatment for pests or diseases promptly and consistently for maximum effectiveness. Comply with all B.C. Pesticide Control Act and municipal requirements.</p> <p>8.5. Tree Support: Maintain stakes, guy wires and ties one full growing season. Check ties at least every two months to ensure that they are not causing a depression in the bark. Loosen, repair or replace ties as necessary. Remove all stakes, guy wires and ties after the first growing season where large trees require continuing support in the opinion of the Landscape Architect. All tagging of guy wires shall be visible and in good repair.</p> <p>8.6. Pruning: Inspect all trees and shrubs at least every two months during the growing season, prune to remove all dead, weak or diseased wood. Maintain the natural shape of the plant. Carry out clipping or shaping only if required in the maintenance contract for specific varieties or conditions.</p> <p>8.7. Fertilizing: Once during the twelve month period of establishment maintenance fertilize shrubs, trees and groundcovers according to soil analysis requirements.</p> <p>9. Grass Areas Establishment:</p> <p>9.1. Watering: Use hoses and sprinklers, irrigation systems or other methods to apply water to Class 1 and Class 2 grassed areas (B.C. Landscape Standard, Section 7, Lawns and Grasses) such that the grass is maintained in a turfed condition. Supply and irrigate with water in the event of any irrigation system malfunction, or incomplete installation at no expense to the owner. Apply water to prevent puddles or erosion of the soil. Apply water at a rate and duration so that the water content in the growing medium reaches field capacity to the full depth of the growing medium. Apply water again when the water content reaches 25% of field capacity.</p> <p>9.2. Weed, Insect and Disease Control: Inspect grass areas each time they are mowed for weeds, insect pests, and diseases and treat promptly when necessary by appropriate manual methods, or by the use of chemicals in compliance with the B.C.S.L.A./B.C.L.M.A. Landscape Standard's latest edition. Kill broadleafed weeds in grassed areas by a general application of a suitable herbicide if the weed population exceeds 10 Broadleaf weeds or 50 annual weeds or weedy grass</p>