

DETACHED SECONDARY SUITE AVERAGE FINISH GRADES CALCULATIONS

	LENGTH	AVERAGE ELEV.
A-B	56.0 +	60.8 / 2 X 1.0 = 58.4
B-C	60.8 +	62.0 / 2 X 8.0 = 491.2
C-D	62.0 +	62.0 / 2 X 13.0 = 806.0
D-E	62.0 +	65.8 / 2 X 27.3 = 1741.3
E-F	65.8 +	65.8 / 2 X 44.0 = 2895.2
F-G	65.8 +	63.3 / 2 X 27.3 = 1759.4
G-H	63.3 +	63.3 / 2 X 9.0 = 569.7
H-I	63.3 +	61.9 / 2 X 8.0 = 508.8
I-J	61.9 +	56.0 / 2 X 1.0 = 59.0
J-A	56.0 +	56.0 / 2 X 22.0 = 1232.0
TOTALS:	160.5	10112.5
AVERAGE GRADE:	10112.513 /	160.5 = 63.0

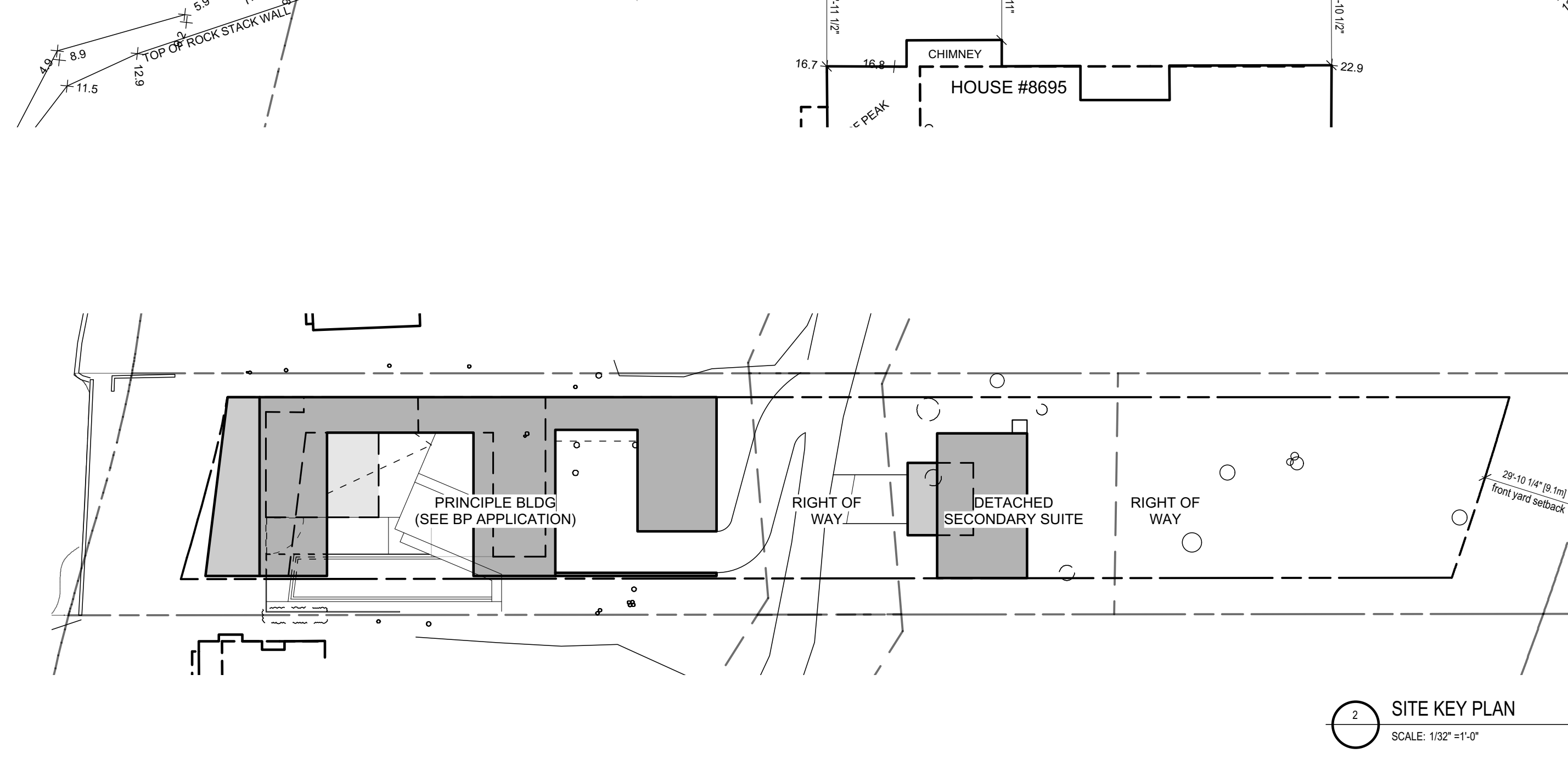
DETACHED SECONDARY SUITE AVERAGE NATURAL GRADES CALCULATIONS

	LENGTH	AVERAGE ELEV.
A-B	60.5 +	60.8 / 2 X 1.0 = 60.7
B-C	60.8 +	62.5 / 2 X 8.0 = 493.2
C-D	62.5 +	62.0 / 2 X 13.0 = 809.3
D-E	62.0 +	68.1 / 2 X 27.3 = 1772.6
E-F	68.1 +	65.8 / 2 X 44.0 = 3027.2
F-G	65.8 +	63.3 / 2 X 27.3 = 1809.4
G-H	63.3 +	63.4 / 2 X 9.0 = 570.2
H-I	63.4 +	61.9 / 2 X 8.0 = 501.2
I-J	61.9 +	61.8 / 2 X 1.0 = 61.9
J-A	61.8 +	60.5 / 2 X 22.0 = 1345.3
TOTALS:	160.5	10450.8
AVERAGE GRADE:	10450.812 /	160.5 = 65.1

Issue Notes

No.	Date	Issue Notes
1	9/10/21	Iss for DP
3	5/01/22	Iss for DP
4	2/10/22	Iss for DP

HOWE SOUND



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- GENERAL NOTES**
- DRAWINGS AND CONSTRUCTION TO COMPLY WITH B.C. BUILDING CODE 2018**
- EXCAVATIONS**
- Geotechnical Engineer is to certify a site is safe for workers when the slope of the excavations exceeds 3:4 horizontal to one vertical or excavation exceeds 48".
 - Inspections can only be done if site is posted as safe by Professional Engineer.
- FOUNDATIONS**
- Pad footings are required to have a minimum footing area of 4.3sf supporting 1 floor, 8sf supporting 2 floors, & 10.7sf supporting 3 floors.
 - Footings are to extend 18" below grade minimum.
 - Foundation walls of basement below grade and crawl spaces must be insulated with R12 to 24" below grade.
 - Provide 1/2" dia. anchor bolts @ 8'-0" o.c.
 - Anchor posts to footings to resist uplift.
- CRAWL SPACE**
- Provide crawl space access of 1'-8" x 2'-4", min. 18" clearance and ventilate to 1500th of area.
 - Groundcover of 2" concrete over 6 mil U.V. poly request.
- VENTILATION**
- Uniformly distribute ventilation to flat and vaulted roofs to 1/150 of insulated ceiling area. Venting is required to be berwey.
 - Min. 2x2 cross-purins to flat, vaulted ceilings, and decks over living areas to conform to #9.19.1.2.
 - Provide min. 2" 1/2" clearance between roof sheathing and insulation #9.19.1.3. Provide min 1" clearance between insulation and top of roof joists.
 - Ventilate attics to 1/300 of insulated ceiling area.
 - Roof vents must be uniformly distributed with a minimum of 25% at base and 25% in rooftop.
 - Provide attic hatch of 3.4sf in area with no dimension less than 1'-10".
 - Submit Mechanical Ventilation/Air Conditioning design and letter supervision by Professional Engineer, certified HRV or HVC Technician at frame and final inspection.
 - Continuous or intermittent exhaust fans are required to all bathrooms and kitchens as per #9.32.3.3.
- INSULATION**
- Insulation where subject to mechanical damage is to be covered as per #9.25.2.3.(7) with drywall or equivalent (eg. crawl storage areas).
 - Wall insulation to be R20 minimum if dwelling is not heated by natural gas.
 - Minimum insulation values R20 walls, R20 for flat or vaulted ceilings, and R40 for attic spaces.
 - Ceiling and walls to have 6 mil U.V. poly fully caulked as per #9.25.
 - R10 rigid insulation required around unheated stairs on grade, 20" vertical or horizontal from bottom edge of slab.
 - R12 rigid insulation required under entire slab area and a thermal break at the exterior walls for slabs with radiant heating.

- STAIRS**
- Straight stair: Rise min. 5" max. 7.87" Run min. 8.25" max. 14"
 - Maximum 1" nosing on stair treads.
 - Minimum headroom is 6'-0" from a line through nosings, measured vertically.
 - Handrail to be between 32" to 38" from a line, measured vertically, through nosing.
 - Winders to conform to 9.8.4.5.
 - Primary stair minimum width 2'-10".
 - Stairs 4'-0" in width or greater require 2 handrails.
 - Handrail reqd. on interior stairs with three or more risers, and exterior stairs with four or more risers.
 - Handrail as a guard is to be between 36" and 38".
- CHIMNEY & FIREPLACES**
- Minimum 2" clearance between chimney and combustible framing.
 - Minimum 4" clearance between fireplace and combustible framing.
 - Masonry fireplace hearths must conform to #9.22.5.1.
 - Hard wired C.O. detectors are required in each bedroom or within 5 meters of each bedroom door in conformance with #9.32.4.2.
- GUARDRAILS**
- Guardrails to be minimum 42" exterior and 36" interior height.
 - No member facilitating climbing permitted from 5.5' to 36" above the floor or walking surface (in all guards).
 - Maximum 4" opening in all stair, deck and balcony guards (interior and exterior).
 - All glass guards to have top cap unless approved by Prof. Engineer.
 - A minimum of 38" in height is permitted for decks with 5'-11" of grade.
 - Guard required where the adjacent surface within 1.2 m of the walking surface has a slope of more than 1 in 2.
 - GLAZING
 - Glass in windows and doors to be double-glazed.
 - Glass in entrance, shower and sliding doors, and windows within 8" of floors and within 36" of deadbolts are all to be safety glass.
 - Sidelights 20" in width are to be safety glass.
 - Windows in walls enclosing showers or tubs are to be safety glass and be located above the waterproof wall finish height.
 - The bottom of an operable window in a bedroom is not to exceed 4'-11" above the floor, and have a min. opening width of 15" with an area of 3'5sf, unless the house is sprinklered.
 - Windows over stairs, ramps and landings that extend to less than 30" above the surface shall be protected with guards or be non-operable and designed to #4.1.5.15.
 - Window wells are to be 22" minimum width when required as a bedroom egress.
 - Bedroom windows required as exits must maintain the required opening during an emergency without the need for additional support in conformance with #9.7.1.2.2.b.
 - Where a protective enclosure is installed

- MASONRY VENEER WALLS**
- Provide masonry/veneer wall flashing ties and weep holes as per #9.20.
- GARAGES**
- Doors between garage and dwelling are to be a self-closing and weather-stripped solid core door.
 - Thicken slab at garage entry to 18" below grade.
- MOISTURE PROTECTION**
- Provide flashing between horizontal intersections of differing wall finishes. All flashing to slope away from the building a minimum of 6%.
 - Provide flashing at all wall-roof junctions, including parapets for solid guards on decks.
 - Raincoat assembly required for all buildings, with a minimum cavity break of 3/8".
 - All platforms are roofs.
 - All roofs must slope 1 in 50 AWAY from walls. This includes parapet walls surrounding decks.
 - 6" clearance required between deck membranes & floor.
- MISCELLANEOUS**
- Cross bridging required @ 7'-0" o.c. maximum for floor and roof joists.
 - Line or equal required to bathroom floors.
 - Waterproof wallboard required as the base around tubs and showers.
 - SP Drywall required to ceiling members at 24" o.c.
 - Provide 8" clearance between deck and siding.
 - Damp-proofing slabs, including crawl spaces, are to be 6 mil U/V poly.
 - Furnace and laundry room door width of 2'-8" min.
 - N.R.P. hinges required for outswing exterior doors.
 - Hardwired and interconnected smoke alarms required on every floor level differing by 36", within 5 meters of bedroom doors, and within 15 meters of each other.
 10. A B.C. dry chemical fire extinguisher is required near the kitchen.
 - Heating and air conditioning equipment must be secured to the building to resist overturning and displacement.

ZONING SUMMARY / PROJECT DATA - DETACHED SECONDARY SUITE

Legal Description: L&A BLOCK C, DISTRICT LOT 2361 GROUP 1, NWD PLAN EPP107987
 P.I.D.: 031-569-341
 Civic Address: 8715 Lawrence Way, West Vancouver, BC V7W 2T7
 Site Area: 3116.15 sq. m. (3,543 sq. ft.)
 Lot Width: 22.327 m (73.25')

# of Storeys	Required Min./ Permitted	Proposed
2		1

Site Coverage:
 Principle Building (see BP application): 834.84 sq. m. (10,062.9 sq. ft.)
 Detached Secondary Suite: 521.22 sq. m. (5,610.63 sq. ft.)
 TOTAL (for the property): 1,356.06 sq. m. (14,673.53 sq. ft.)
 Detached Secondary Suite Area: 111.5 sq. m. (1,200 sq. ft.)
 Detached Garage Area: 40.9 sq. m. (440 sq. ft.)
 (garage exemption: 440 sq. ft.)

Building Height (single storey)	4.57 m. (15'-0")	4.17 m. (13'-8")
Building Setbacks		
Side Yard - North (10% site width)	2.23 m. (7'-3.78")	5.57 m. (18'-3")
Side Yard - South (10% site width)	2.23 m. (7'-3.78")	3.36 m. (11'-0.31")
Combined (25% site width)	5.58 m. (18'-3.98")	8.92 m. (29'-2.34")
To Right-of-Way From Principle Building	4.9 m.	20.42 m. (67'-0")
Parking Spaces	1 off-street	1 off-street

DRAWING LIST

NO.	DESCRIPTION
A0.01	Site Plan
A0.02	Landscape Plan
A1.10	Floor and Roof Plans
A1.11	Building Sections Exterior Elevations Spatial Separation

MCLEOD BOVELL MODERN HOUSES

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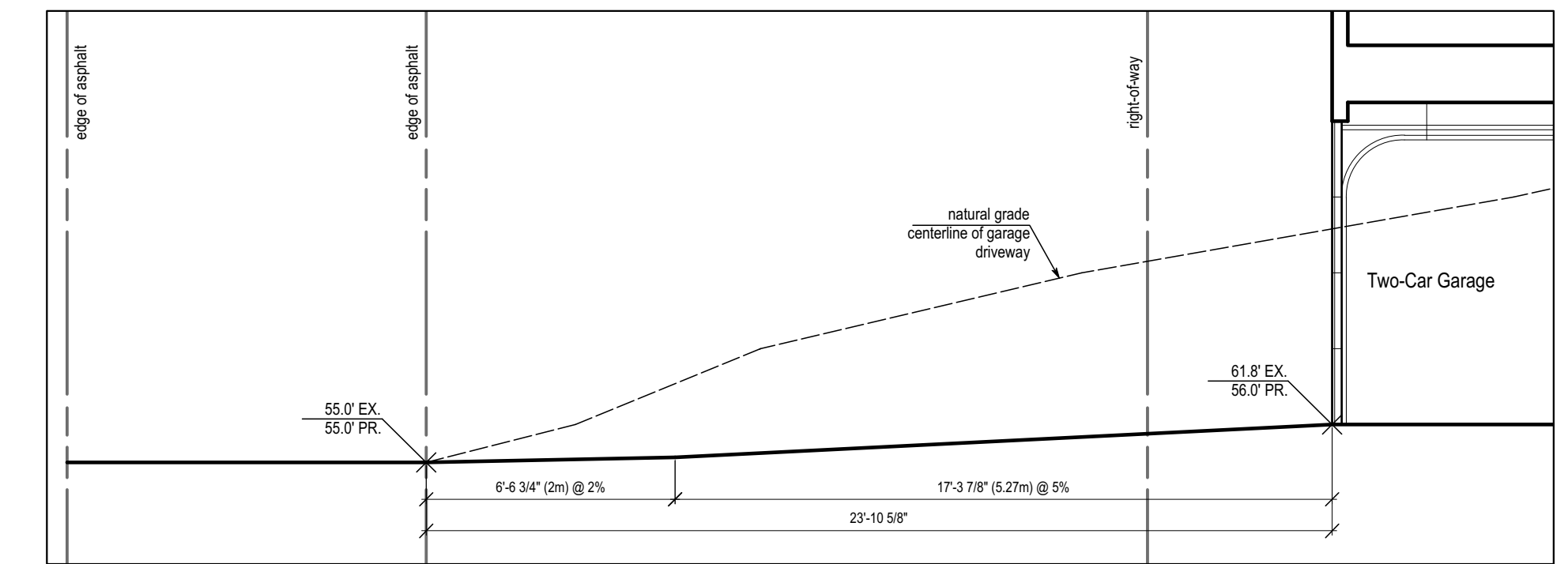
8715 Lawrence Way
West Vancouver
BC V7W 2T7

scale AS NOTED drawn by MC
 date reviewed by YN
 project code status
 LAWR DD

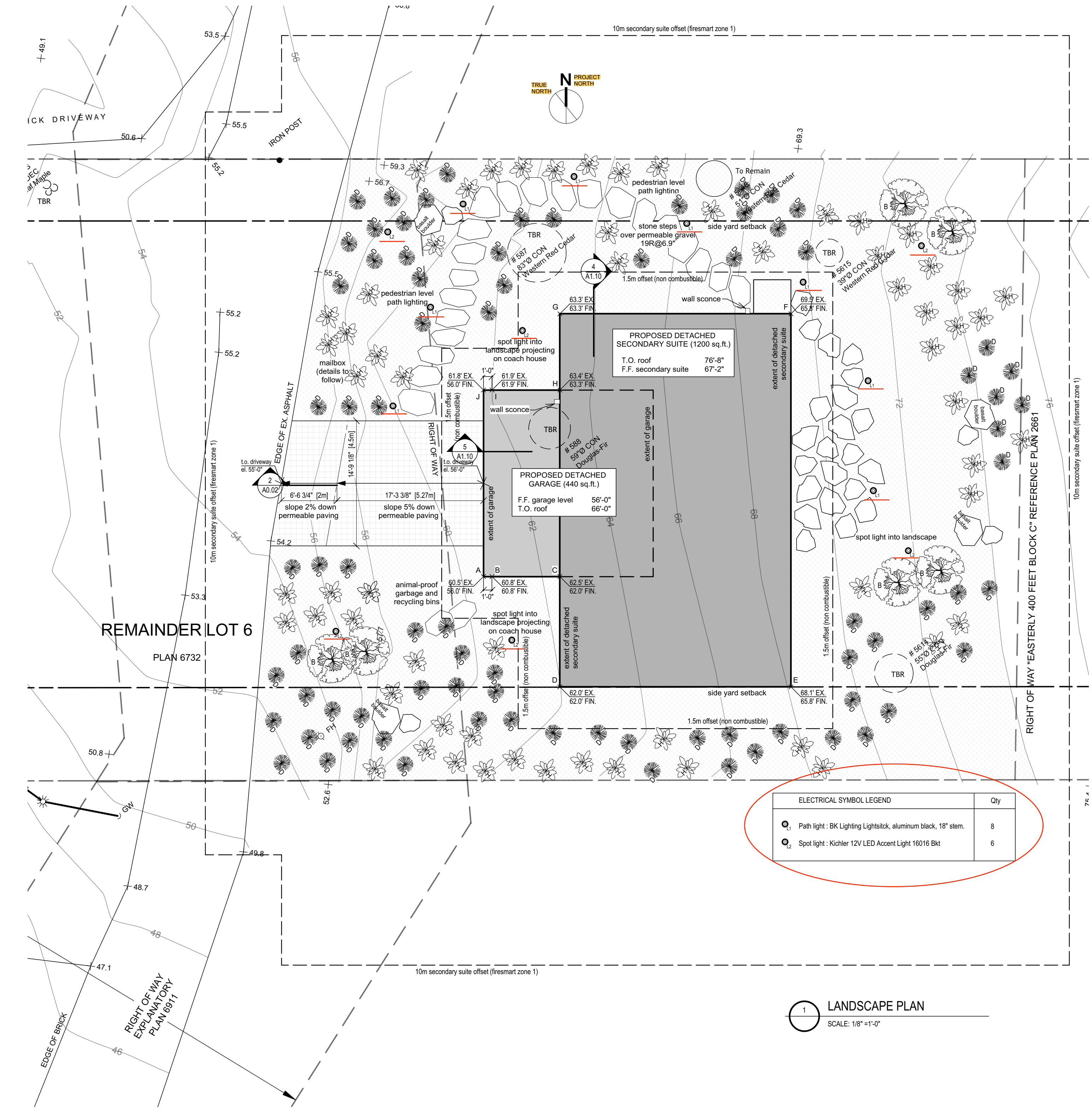
Detached Secondary Suite Site Plan

A0.01

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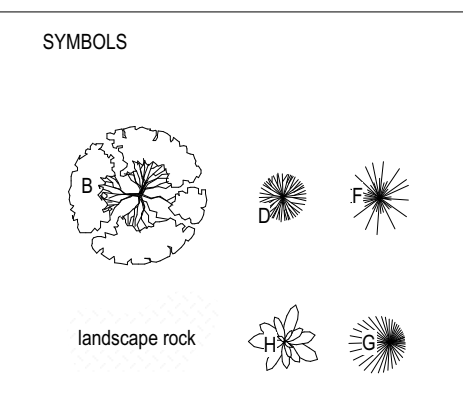


2 DRIVEWAY CROSS-SECTION
SCALE: 1/4" = 1'-0"



1 LANDSCAPE PLAN
SCALE: 1/8" = 1'-0"

PLANT ID	LATIN NAME	COMMON NAME	SIZE
B	Acer crinumum	Vine Maple	5cm caliper specimen
D	Aster divaricatus	Whitewood Aster	#1 pot
F	Polystichum muricatum	Serrated Fern	#1 pot
G	Gaultheria shallon	Sale	#3 pot
H	Rhododendron macrophyllum	Plastic rhododendron	#5 pot



FIRESMART LANDSCAPE GUIDELINES

Non-Combustible Zone (0.6m to 1.5m Offset from Dwelling)

- crushed basalt aggregate ground cover (2" to 6")
- no new or retained planting

Zone 1 (1.5m to 10.0m Offset from Dwelling)

- crushed basalt aggregate ground cover (2" to 6")
- no new or retained conifer shrubs or trees

Zone 2 (10.0m to 30.0m Offset from Dwelling)

- no new conifer shrubs or trees
- remove existing combustible material from forested areas
- prune existing tree branches min 2m above finished grade

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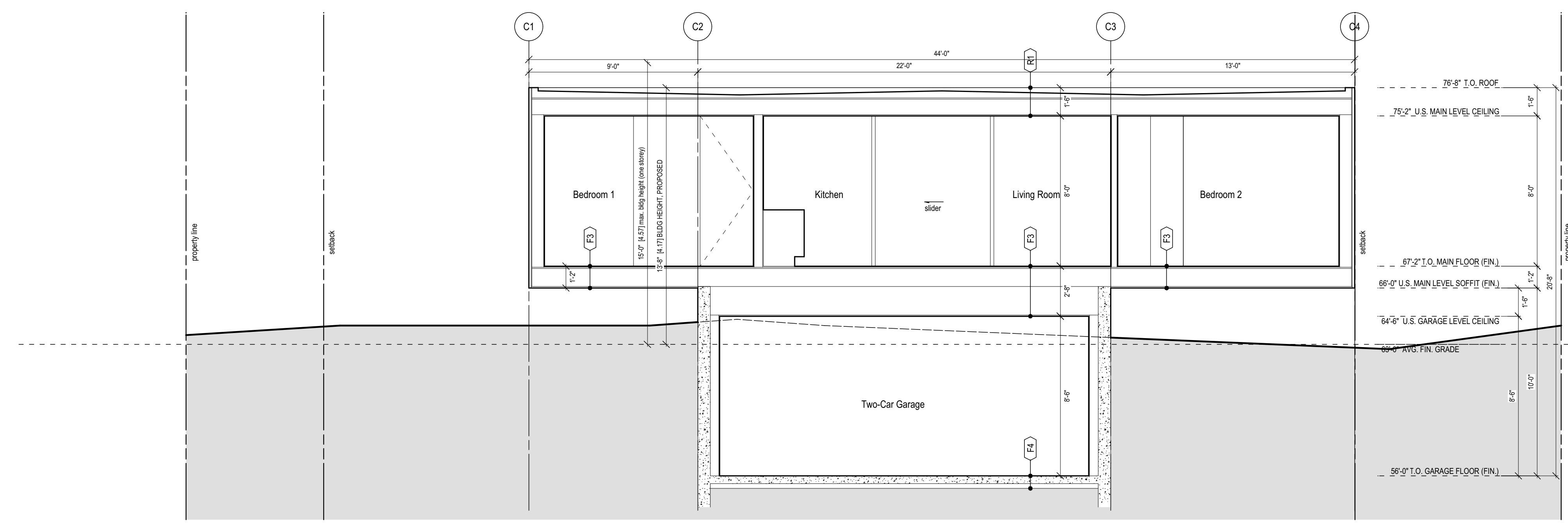
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date JAN 21, 2021 reviewed by YN
project code LAWR status DD

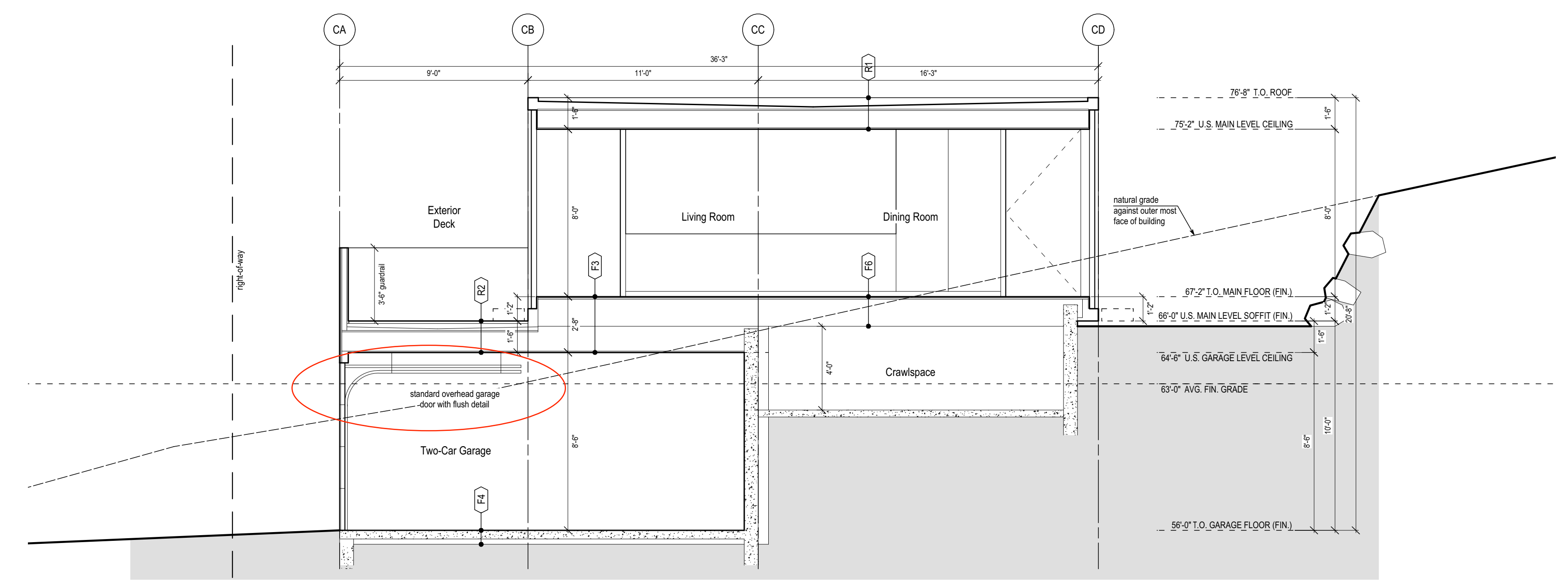
Detached
Secondary Suite
Landscape Plan

A0.02

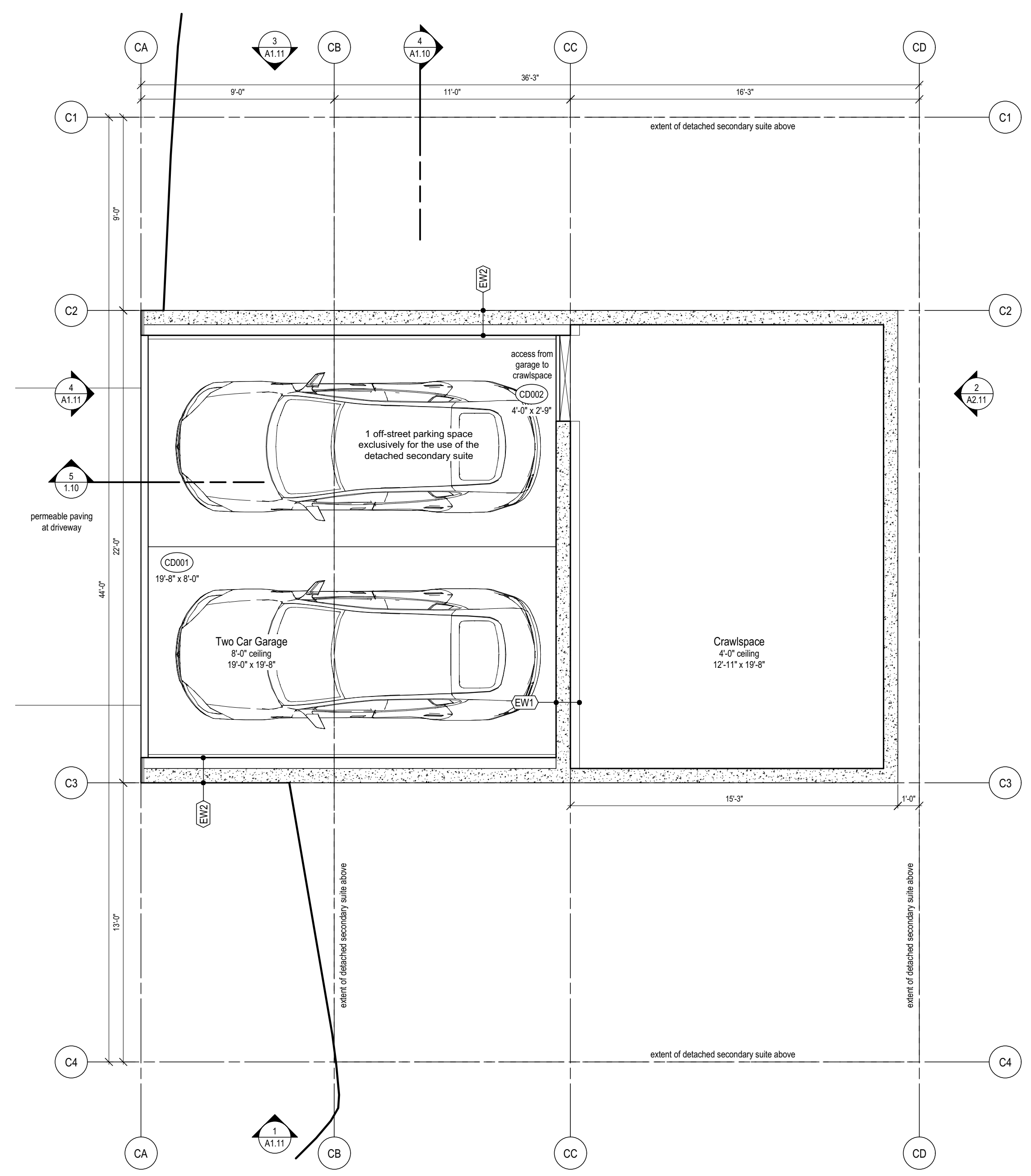
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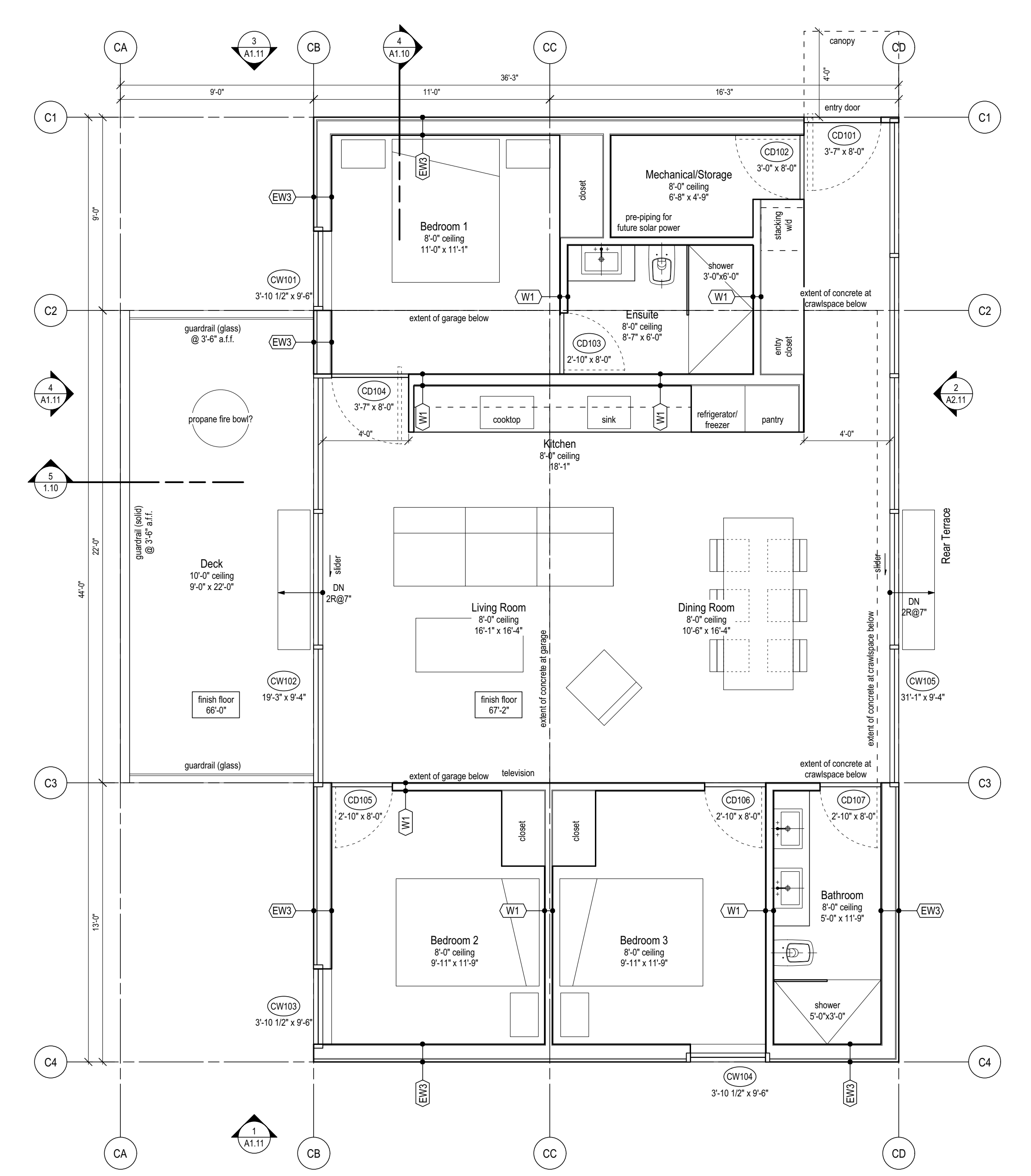
4 BLDG SECTION -
SCALE: 1/4" = 1'-0"



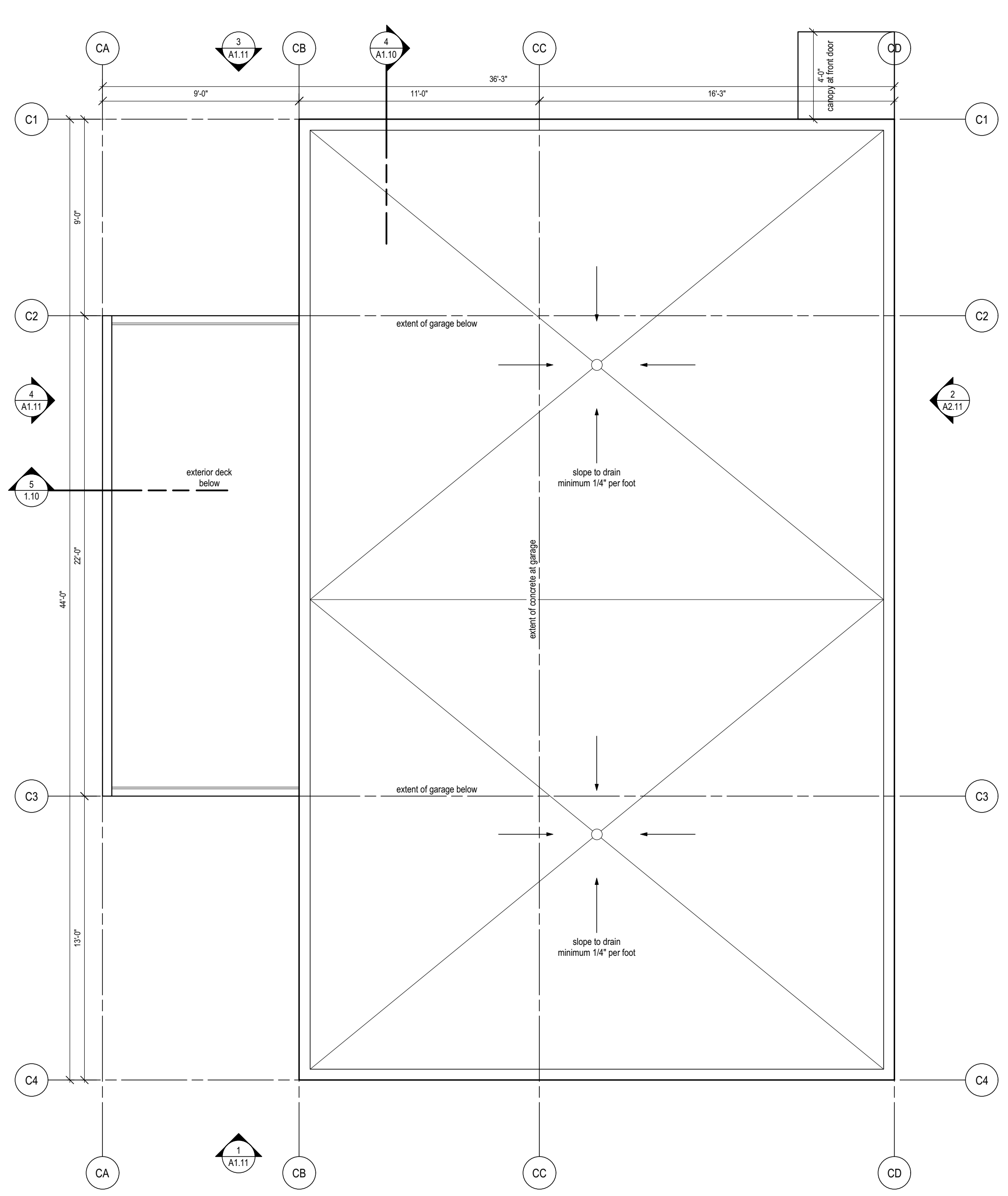
5 BLDG SECTION -
SCALE: 1/4" = 1'-0"



1 FLOOR PLAN - GARAGE LEVEL (440 SQ. FT.)
SCALE: 1/4" = 1'-0"



2 FLOOR PLAN - MAIN LEVEL (1,200 SQ. FT.)
SCALE: 1/4" = 1'-0"



3 ROOF PLAN (SITE COVERAGE = 1398 sq. ft. = 129.88 sq. m.)
SCALE: 1/4" = 1'-0"

FLOOR ASSEMBLIES

- F1. Basement Slab-on-Grade**
concrete finish slab; smooth finish; no saw cut; max 1/8" radius; reinforcement and mix specifications per struct.
1" rigid insulation
concrete slab on grade; reinforcement and mix specifications per struct.
10 mil. poly vapour / air barrier
8" XPS rigid insulation; R40
6" layer of 3/4" drain rock over engineered fill as req'd
- F2. Floor Over Interior Space**
3/4" finish layout as per A1 Series floor finish plans
1 3/4" concrete topping
3/4" plywood subfloor
T/J joints per structural
2x dropped ceiling framing at 16" o.c. to suit ceiling finish
- F3. Floor Over Exterior Space**
3/4" finish layout as per A1 Series floor finish plans
1 3/4" concrete topping
3/4" plywood subfloor
T/J joints per structural
2x BASF Watlite closed cell Sprayfoam Insulation R28
2x dropped ceiling framing at 16" o.c. to suit ceiling finish
- F4. Garage Slab on Grade**
concrete slab-on-grade sloped to drain 1/8" in 1' reinforcement and mix specifications per struct.
10 mil. poly vapour / air barrier
3" XPS rigid insulation; R15
6" layer of 3/4" drain rock over engineered fill as req'd
- F5. Patio Over Slab on Grade**
Finish layout as per A1 Series floor finish plans
XL format tile finish per Material Specifications/
adjustable pedestal system; specifications and o.c. spacing bd
concrete slab-on-grade sloped to drain 1/8" in 1' reinforcement and mix specifications per struct.
6" layer of 3/4" drain rock over engineered fill as req'd
- F6. Floor Over Craw Space**
3/4" finish layout as per A1 Series floor finish plans
1 3/4" concrete topping
3/4" plywood subfloor
T/J joints per structural
2x BASF Watlite closed cell Sprayfoam Insulation R28
crawl space
concrete slab on grade; reinforcement and mix specifications per struct.

ROOF ASSEMBLIES

- R1. Roof Over Interior Space (unvented)**
3" of 1" dia. angular ballast (confirm w/ structural for allowance)
simple mat. soprana (bc)
2-ply sbs Soprema Sopraflex system
protection boards; spec TBD
lapper package varies from 1/2" to 3 1/2" sloped to drain
3" XPS insulation; R15
self-adhered air / vapour barrier approved?
3/4" ext grade T&G plywood sheathing
T/J joints per structural
2x BASF Watlite closed cell Sprayfoam Insulation R28
2x dropped ceiling framing at 16" o.c. to suit ceiling finish
- R2. Typical Deck Over Interior Space (unvented)**
Finish layout as per A1 Series floor finish plans
XL format tile finish per Material Specifications/
adjustable pedestal system; specifications and o.c. spacing bd
2-ply sbs Soprema Sopraflex system
protection boards; spec TBD
lapper package varies from 1/2" to 3 1/2" sloped to drain
self-adhered air / vapour barrier approved?
3/4" ext grade T&G plywood sheathing
1 1/2" joints per structural
2x BASF Watlite closed cell Sprayfoam Insulation R28
2x dropped ceiling framing at 16" o.c. to suit ceiling finish
- R3. Patio Over Suspended Slab (unvented)**
Finish layout as per A1 Series floor finish plans
XL format tile finish per Material Specifications/
adjustable pedestal system; specifications and o.c. spacing bd
2-ply sbs Soprema Sopraflex system
protection boards; spec TBD
lapper package varies from 1/2" to 3 1/2" sloped to drain
suspended concrete slab
reinforcement and mix specifications per structural
2x BASF Watlite closed cell Sprayfoam Insulation R28
2x dropped ceiling framing at 16" o.c. to suit ceiling finish

WALL ASSEMBLIES

- EW1. Exposed Concrete Wall @ Interior Space**
drainage rock @ below grade portions only
1/2" simple drainage mat @ below grade portions only
5" rigid insulation @ below grade portions only
fully reinforced 80 m. E-pro damp-proofing @ below grade portions only
architectural concrete wall
- EW2. Exterior Concrete Wall @ Interior Space**
drainage rock @ below grade portions only
1/2" simple drainage mat @ below grade portions only
fully reinforced 80 m. E-pro damp-proofing @ below grade portions only
concrete wall (see structural); to holes plugged and painted
2" rigid insulation
2x wood framing @ 16" o.c.
2x BASF Watlite closed cell Sprayfoam Insulation 5 1/2" @ R6in
1/2" gypsum wallboard
vapour retarding primer paint
- EW3. Exterior Aluminum or Stucco Clad Wall**
3/16" or 1/4" Aluminum panel (bronze anodized), or
3/4" Stucco with K-ath
Vertical 1/2" wood slatting @ 16" o.c. or aluminum hat track
Vaporshield "RevealShield" air barrier
1/2" exterior grade plywood sheathing
2 x wood framing @ 16" o.c.
2x BASF Watlite closed cell Sprayfoam Insulation 7 1/4" @ R6in
1/2" gypsum wallboard
vapour retarding primer paint

WI. Typical Interior Wall

- 1/2" gypsum wallboard
2x 2x wood framing @ 16" o.c.
acoustic batt insulation
1/2" gypsum wallboard

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scale	drawn by
1/4" = 1'-0"	MC
date	reviewed by
JAN 21, 2022	YV
project code	status
LAWR	DD

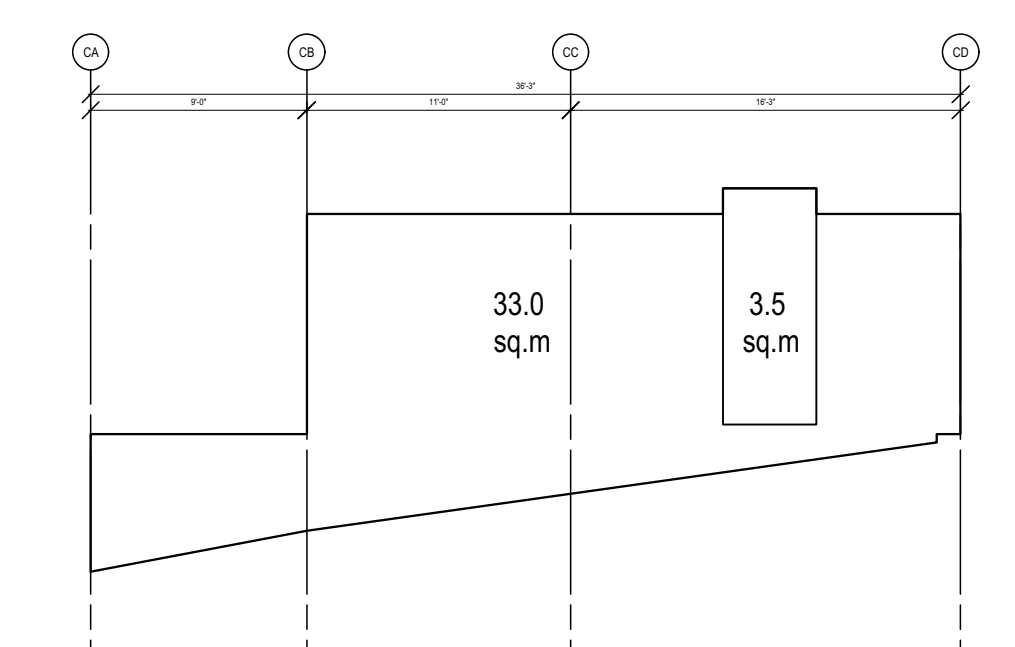
Detached
Secondary Suite -
Bsmt and Main Plans
Building Sections

A1.10

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No.	Date	Issue Notes
1	8/10/21	Iss for DP
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- m1 Board and batten pattern stained wood wire brushed, open system (Western Red Cedar or Acroya)
- m2 Flush light pattern stained wood, wire brushed, open system (Western Red Cedar or Acroya)
- m3 White Painted Aluminum, 1/4" thick, exposed fastener, open system
- m4 Glazing, bronze anodized aluminum frame
- m5 Concrete architectural finish
- m6 Painted aluminum vertical screening/guard rail
- m7 Aluminum panel (bronze anodized)
- m8 Bronze painted steel canopy
- m9 Glass guardrail
- m10 Conventional stucco



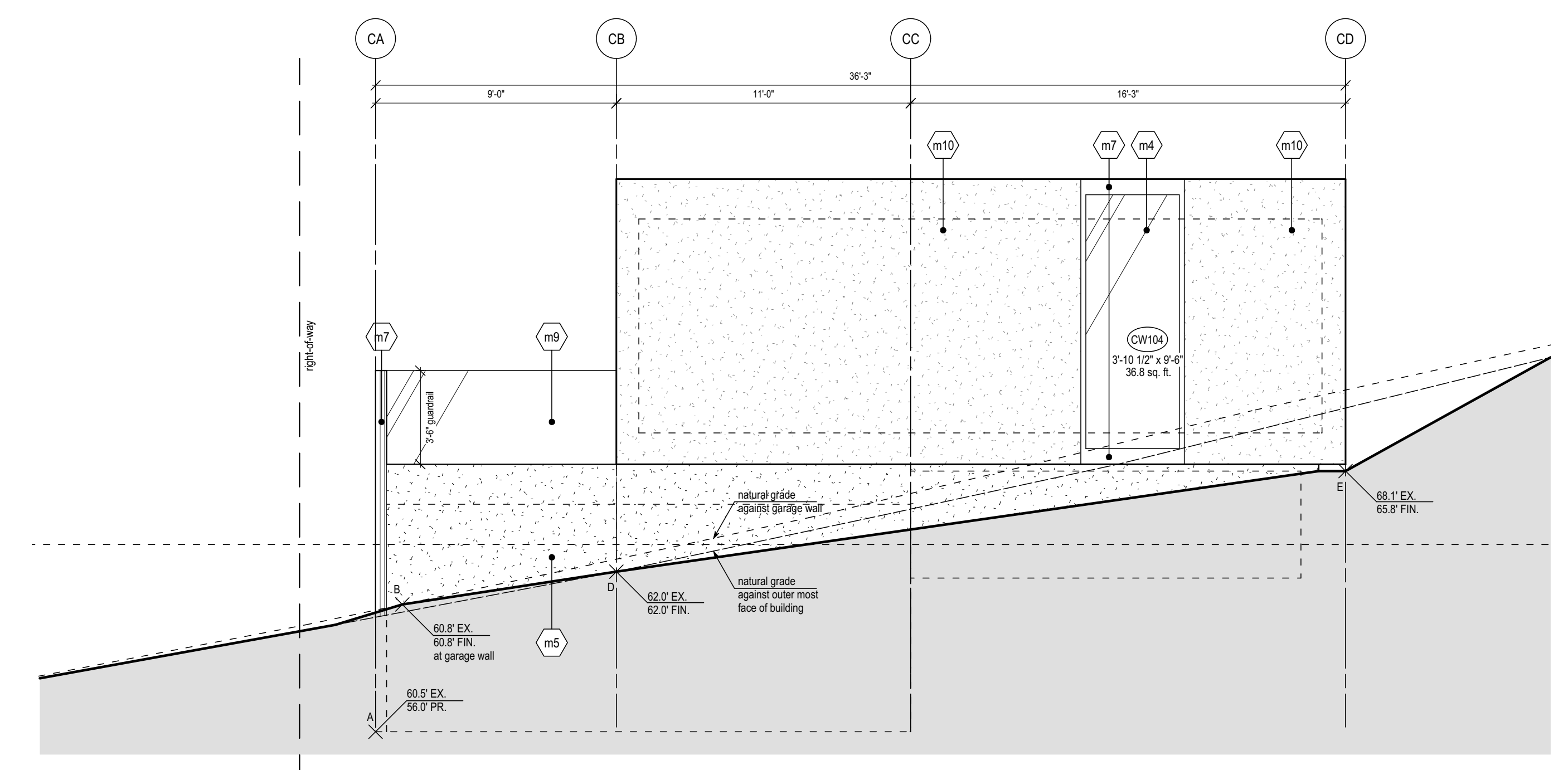
Spatial Separation Calculation South Elevation

Total area of exposed building face = 33.0 sq.m
 Total area of glazed openings = 3.5 sq.m
 % glazed openings proposed = 10.6%

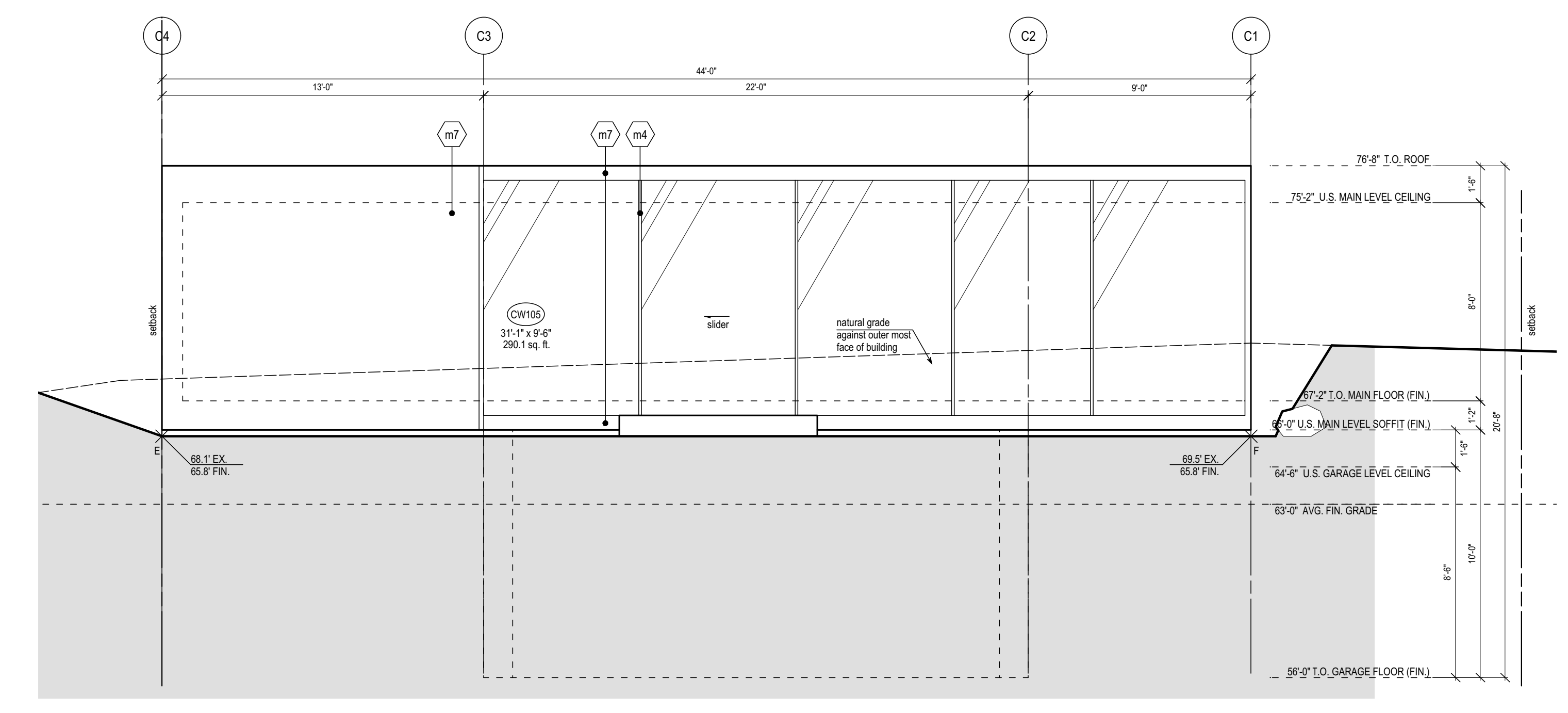
% of exposing building face allowable as per BCBC table 3.2.3.1.D @ (10'-11 3/4") 3.35m limiting dist. (note: all spaces sprinklered to NFPA 13R) = 53.75%

glazing target = 17.75 sq.m

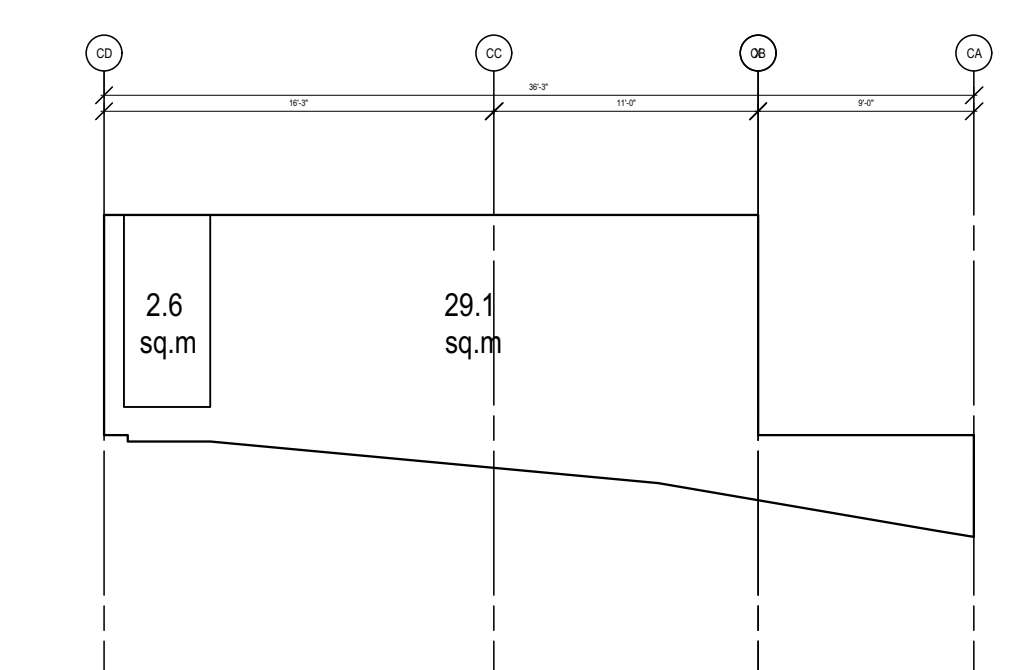
5 SPATIAL SEPARATION - SOUTH ELEVATION
SCALE: 1/8"=1'-0"



1 BLDG ELEVATION - SOUTH
SCALE: 1/4"=1'-0"



2 BLDG ELEVATION - EAST
SCALE: 1/4"=1'-0"



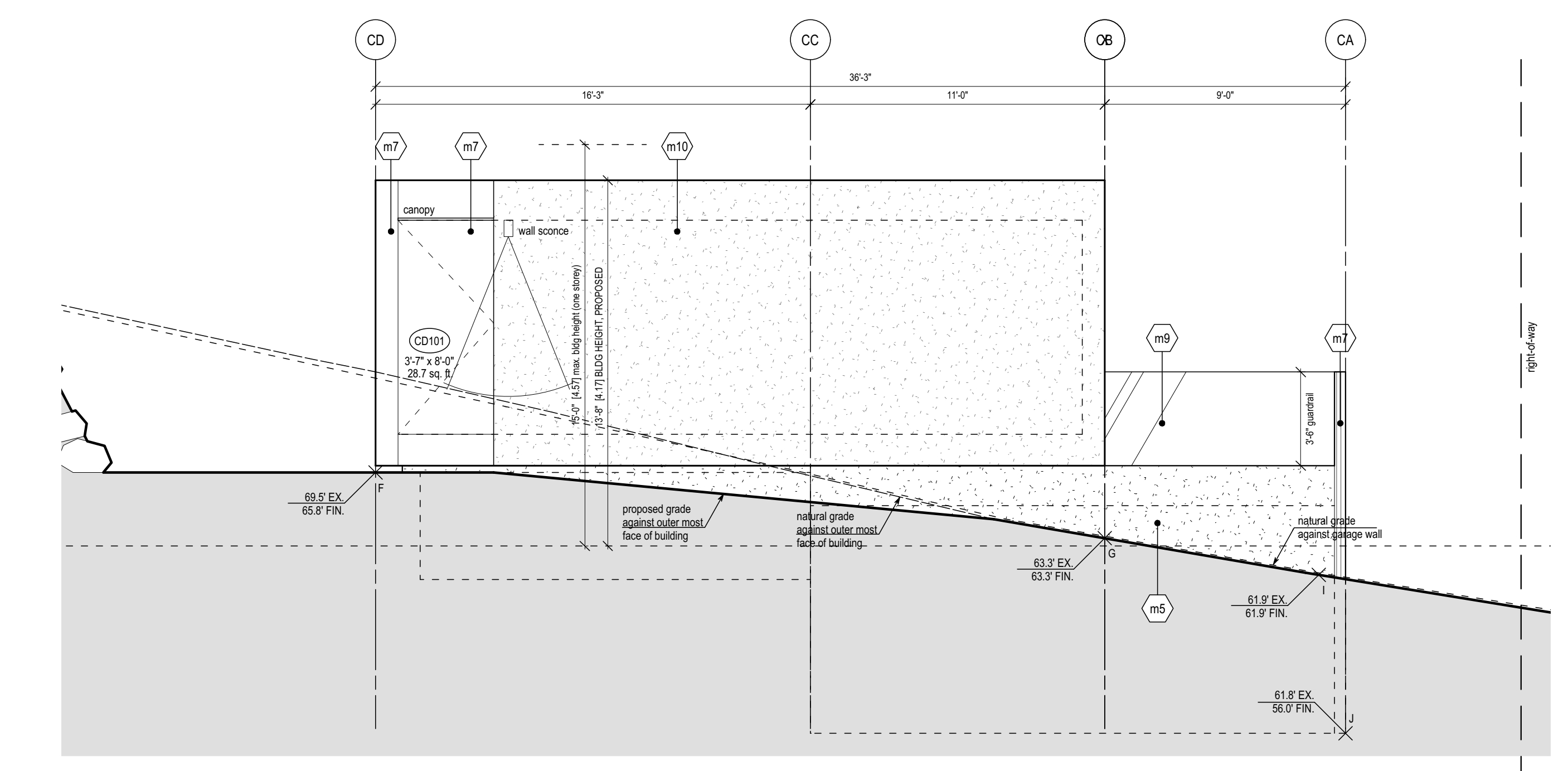
Spatial Separation Calculation North Elevation

Total area of exposed building face = 29.1 sq.m
 Total area of glazed openings = 2.6 sq.m
 % glazed openings proposed = 8.9%

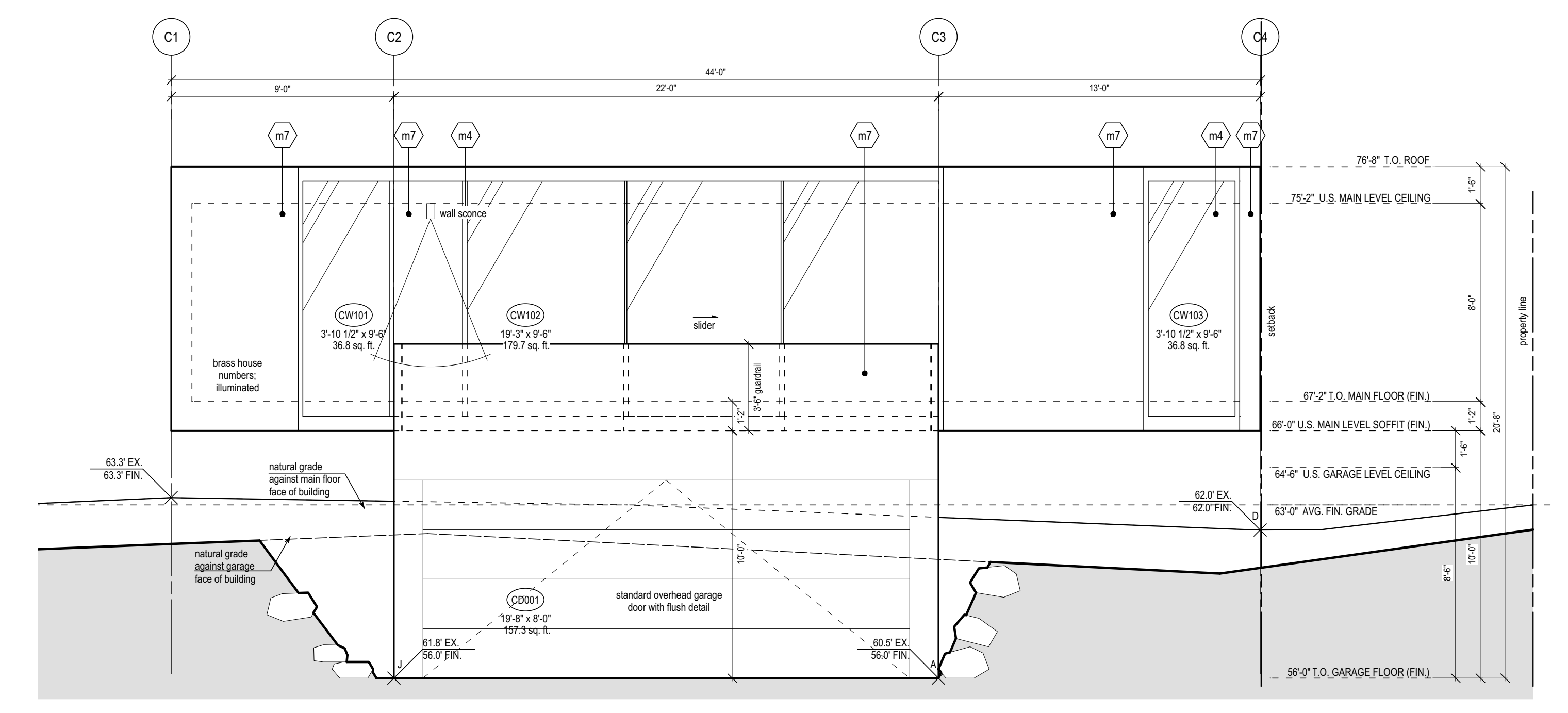
% of exposing building face allowable as per BCBC table 3.2.3.1.D @ (18'-3 1/8") 5.56m limiting dist. (note: all spaces sprinklered to NFPA 13R) = 100%

glazing target = 29.1 sq.m

6 SPATIAL SEPARATION - NORTH ELEVATION
SCALE: 1/8"=1'-0"



3 BLDG ELEVATION - NORTH
SCALE: 1/4"=1'-0"



4 BLDG ELEVATION - WEST
SCALE: 1/4"=1'-0"

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Detached
Secondary Suite -
Exterior Elevations /
Spatial Separation