

Building a Deck



Information Guide

The intention of this guide is to help homeowners and builders have a clear guide on the requirements for permits related to building a deck. This information is not meant to be an exhaustive list and there may be other information required depending on the specifics of your proposed project.

When is a permit required?

- When the building area of the deck is greater than 10 m² (108 ft²),
- If the deck is attached to another structure, or
- If the deck is elevated more than 600mm (23.5") from the walking surface to grade.

What do I need to acquire a permit?

- A completed [application form](#), available on the City of Stratford website,
- Site plan indicating the zoning information, locations and dimensions of the deck in relation to existing buildings and property lines. Indicate lot area and amount of property covered by buildings/deck (lot coverage).
- [Construction drawings](#) in pdf format that include plan view, elevations, section with related details, see examples on the following pages. As well if roof trusses are proposed, provide engineered sealed designs with the application.

How do I submit an application?

- Applications can be submitted through the City of Stratford's Electronic Portal: <https://v4.citywidesolutions.com/epermits/stratford/>, or
- Completed applications and related attachments can also be dropped off in person at the Building and Planning Services Reception Desk.

What does it cost?

- The fee for a Shed, Deck or Porch is outlined in Schedule A of the Building By-law #112-2005, available at: <https://www.stratford.ca/en/inside-city-hall/building.aspx#Fees>. Payment is required at the time of submitting the application. Please note that the application will not begin to be reviewed until payment has been received. We accept cash, debit, cheque, and credit card as forms of payment. If you wish to submit electronically, please complete the [credit card form](#) to be submitted with your application.

How long does it take to get a permit?

- The legislated timeframe for this type of permit is 10 business days. This estimate may change depending on the volume of permits, quality of drawings, and applicant's compliance with the application process.

Zoning Information:

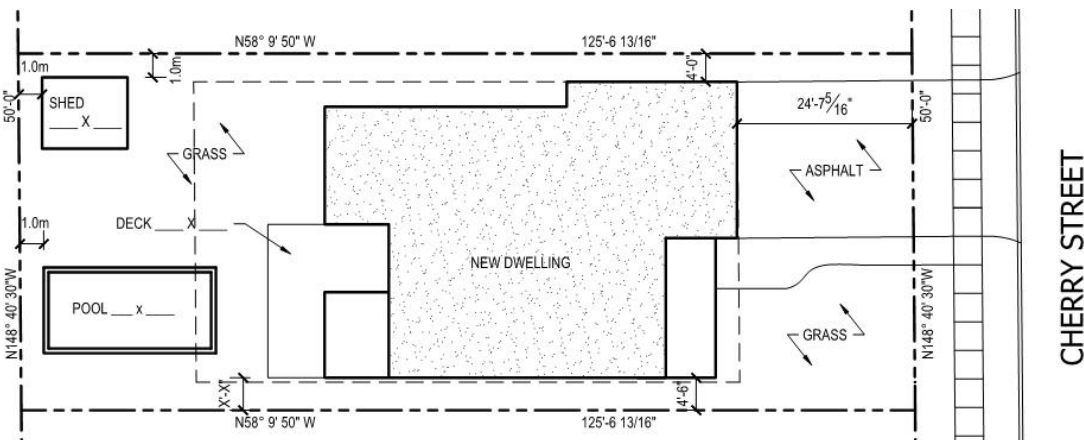
The City of Stratford online interactive [GIS map](#) will allow you to identify the zoning for your property.

Also available is our [Zoning By-Law No. 10-2022](#) which contains information you will need to reference for setback and lot coverage requirements.

If you have any questions on zoning one of the City Planners would be happy to assist you in your questions by emailing planning@stratford.ca.

Example Site Plan Drawing:

A site plan identifies building and other features in relation to property boundaries. The site plan should show the existing house, and any other structures as well as any proposed additions or new structures. Below is a sample of a Site Plan Drawing.



SITE PLAN
SCALE 1'-0" = 20'-0"

Contact Us:

Building Services
Monday – Friday, 8:30am – 4:30pm

82 Erie Street, 3rd Floor
Stratford, ON N5A 2M4

519-271-0250 ext. 345

building@stratford.ca
www.stratford.ca

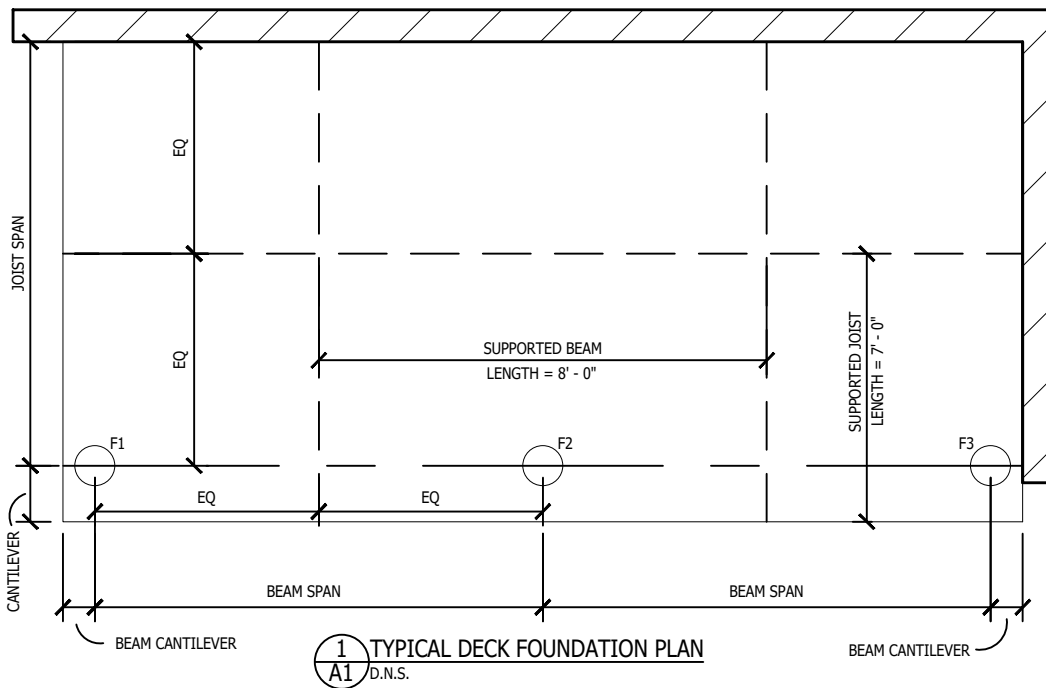
Other Helpful Contacts:

Ontario One Call:
www.on1call.com
1-800-400-2255

Electrical Safety Authority:
www.esasafe.com
1-877-372-7233

Upper Thames River Conservation
Authority:
www.thamesriver.on.ca
519-451-225

OCCUPIED SPACE



1 TYPICAL DECK FOUNDATION PLAN
A1 D.N.S.

TABLE A: FOOTING / PIER SIZING TABLE

MINIMUM FOOTING SIZE	MAXIMUM FOOTING CAPACITY	
	ROUND (DIA.)	SQUARE
10"	1139 LBS	1450 LBS
12"	1640 LBS	2089 LBS
14"	2233 LBS	2843 LBS
16"	2916 LBS	3713 LBS
18"	3691 LBS	4699 LBS
24"	6560 LBS	8352 LBS

TABLE 'A' NOTES:
MAX FOOTING CAPACITY IS BASED ON A SOIL BEARING CAPACITY OF 100 kPa (2088 psf).

REQUIRED FOOTING CAPACITY:
FOOTING LOAD = SUPPORTED BEAM LENGTH x SUPPORTED JOIST LENGTH x 50 LBS/SQFT (DECK LOADS, SEE O.B.C. 9.4.2.3.)

USE FOOTING/PIER SIZING TABLE TO DETERMINE MINIMUM FOOTING SIZE BASED ON FOOTING LOAD.

EXAMPLE (MIDDLE FOOTING)

- SUPPORTED BEAM LENGTH = 8'-0"
- SUPPORTED JOIST LENGTH = 7'-0"
- FOOTING LOAD = 7 x 8 x 50 = 2240 LBS

THEREFORE MIDDLE FOOTING WOULD REQUIRE 16" DIA. OR 14" SQUARE FOOTING.

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NO.	REVISION	DATE



CLIENT:
CITY OF STRATFORD

PROJECT:
DECK

LOCATION:
SAMPLE STRATFORD, ON

DRAWING:
FRAMING PLAN FOUNDATION PLAN & TABLES

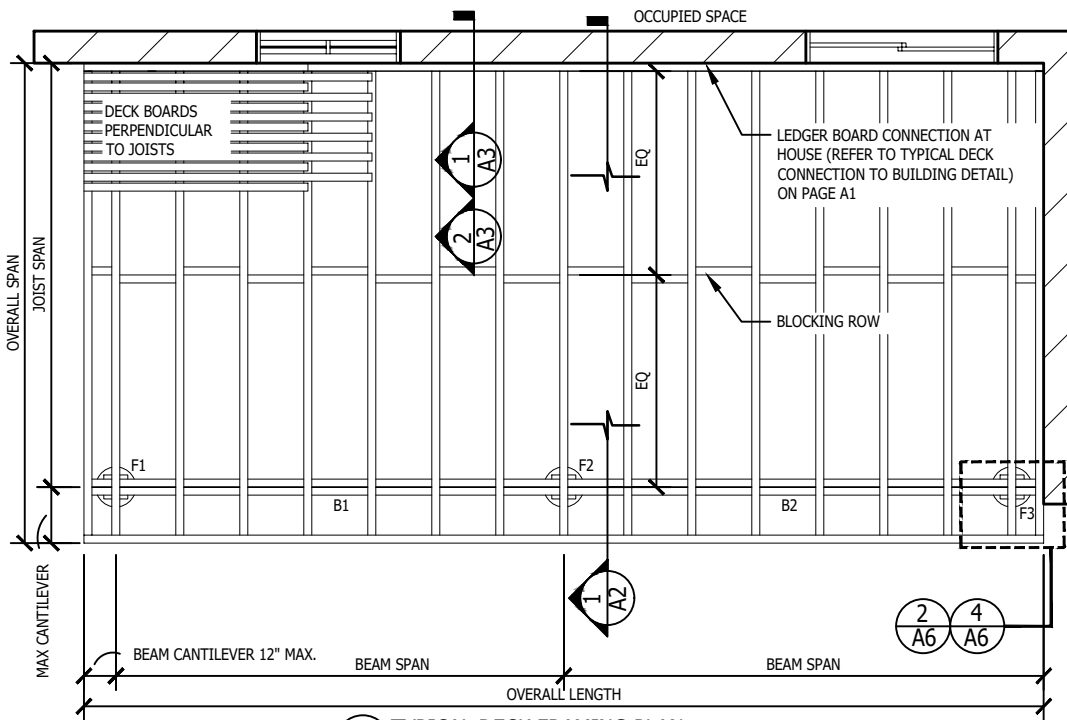
DRAWN:
C.O.A.

PROJECT #:
2026-02-03

SCALE:
D.N.S.

DATE:
2026.02.03

A1



2 TYPICAL DECK FRAMING PLAN
A1 D.N.S.

TABLE B: DECK BEAMS - PER CWC THE SPAN BOOK 2020, TABLE 10. 3a

LUMBER	SUPPORTED LENGTH	2" X 8"		2" X 10"		2" X 10"	
		2 - PLY	3 - PLY	2 - PLY	3 - PLY	2 - PLY	3 - PLY
SPRUCE -PINE- FIR, NO. 1 & 2	8"	7' - 2"	8' - 10"	8' - 9"	10' - 9"	10' - 2"	12' - 6"
	10"	6' - 5"	7' - 10"	7' - 10"	9' - 8"	9' - 1"	11' - 2"
	12"	5' - 10"	7' - 2"	7' - 2"	8' - 9"	8' - 4"	10' - 2"
	14"	5' - 5"	6' - 8"	6' - 8"	8' - 2"	7' - 8"	9' - 5"
	16"	5' - 1"	6' - 3"	6' - 2"	7' - 7"	7' - 2"	8' - 10"
	18"	4' - 9"	5' - 10"	5' - 10"	7' - 2"	6' - 9"	8' - 4"
	20"	4' - 6"	5' - 7"	5' - 7"	6' - 10"	6' - 5"	7' - 11"

TABLE 'B' NOTES: MAX BEAM CANTILEVER IS 12" FOR ALL SIZES. TABLES VALID FOR 1.9 kPa (40 psf) OCCUPANCY LIVE LOAD, 0.5 kPa (10 psf) DEAD LOAD AND GROUND SNOW LOADS UP TO 2.7 kPa (56.4 psf).

TABLE C: DECK JOISTS - PER CWC THE SPAN BOOK 2020, TABLE 10. 1a

LUMBER	JOIST SIZE	12" SPACING (O.C.)	16" SPACING (O.C.)	24" SPACING (O.C.)	MAX JOIST CANTILEVER
		12" SPACING (O.C.)	16" SPACING (O.C.)	24" SPACING (O.C.)	
SPRUCE -PINE- FIR, NO. 1 & 2	2" X 6"	10' - 0"	9' - 1"	7' - 11"	NOT PERMITTED
	2" X 8"	13' - 2"	11' - 11"	10' - 1"	LESSER OF 16" OR 1/2 OF TOTAL JOIST LENGTH
	2" X 10"	16' - 10"	15' - 2"	12' - 4"	LESSER OF 24" OR 1/2 OF TOTAL JOIST LENGTH
	2" X 12"	20' - 3"	17' - 7"	14' - 4"	LESSER OF 24" OR 1/2 OF TOTAL JOIST LENGTH

TABLE 'C' NOTES: 2"X6" JOISTS MAY ONLY BE USED WHERE THE DECK IS LESS THAN 23 1/2" FROM GRADE WHERE NO GUARD IS TO BE PROVIDED. GUARDS REQUIRE MIN. 2" X 8" JOISTS.

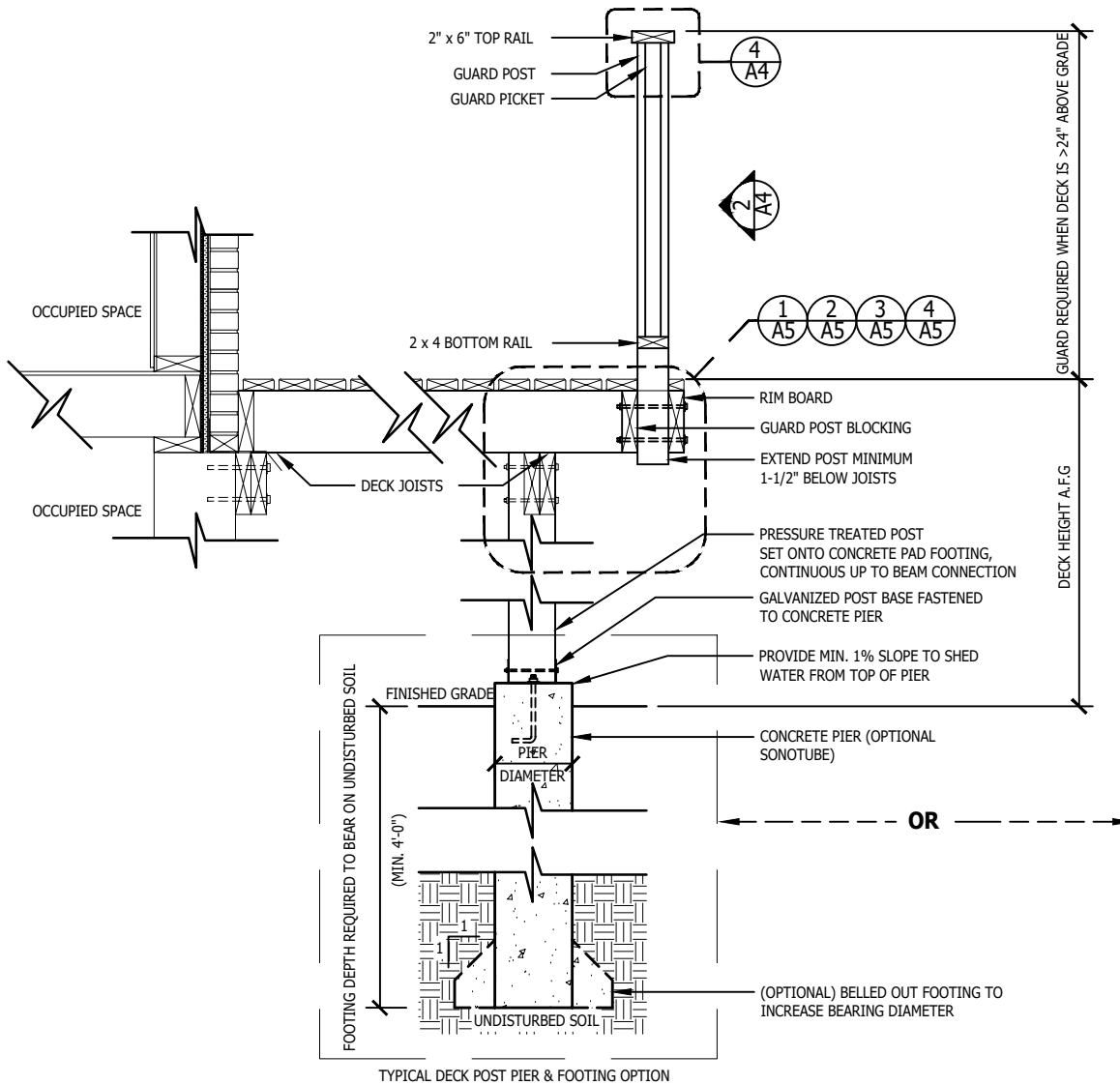
TRUE NORTH

NORTH

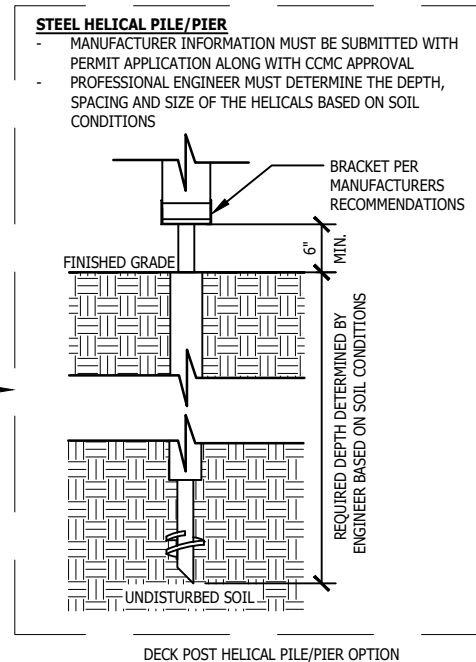
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USE OF STEEL HELICAL PILES IS SUBJECT TO MUNICIPAL APPROVAL. CONTACT THE BUILDING DEPARTMENT TO DISCUSS USE OF THIS OPTION



TYPICAL DECK POST PIER & FOOTING OPTION



DECK POST HELICAL PILE/PIER OPTION

1 FOUNDATION CONNECTIONS
A2 N.T.S.

NO.	REVISION	DATE
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CLIENT:
CITY OF STRATFORD

PROJECT:
DECK

LOCATION:
SAMPLE STRATFORD, ON

DRAWING:
POST CONNECTION AND FOUNDATION DETAILS

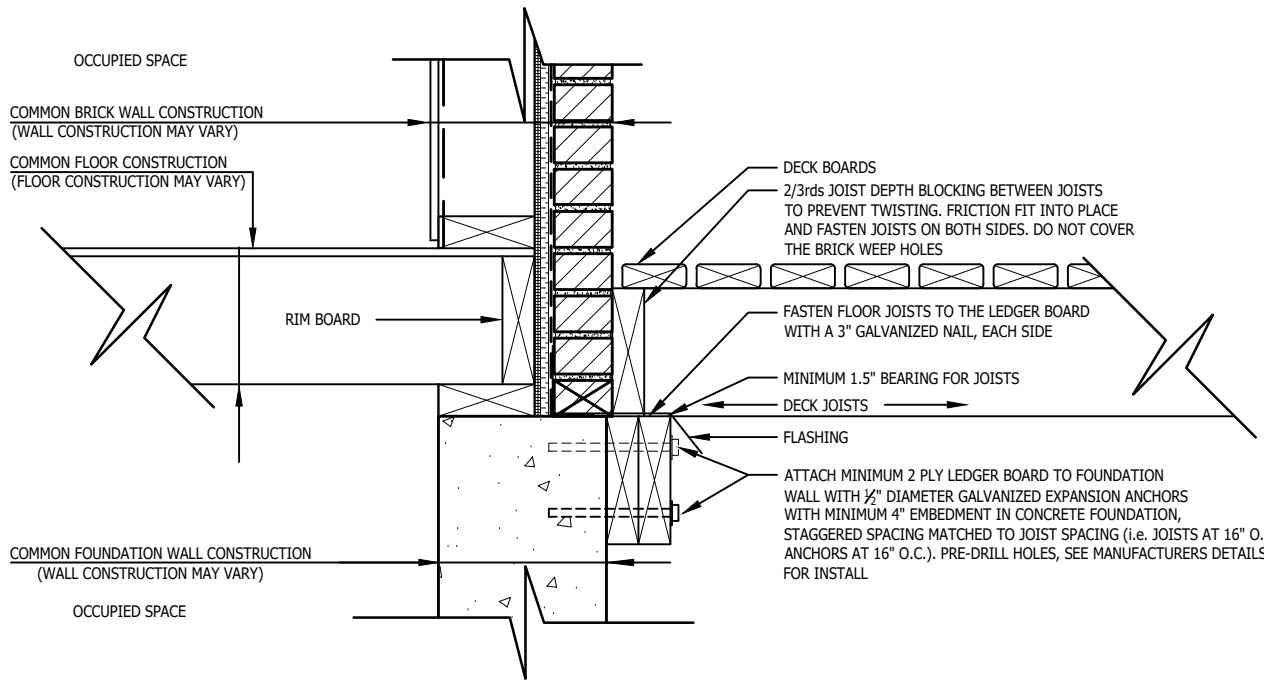
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PROJECT #:
2026-02-03

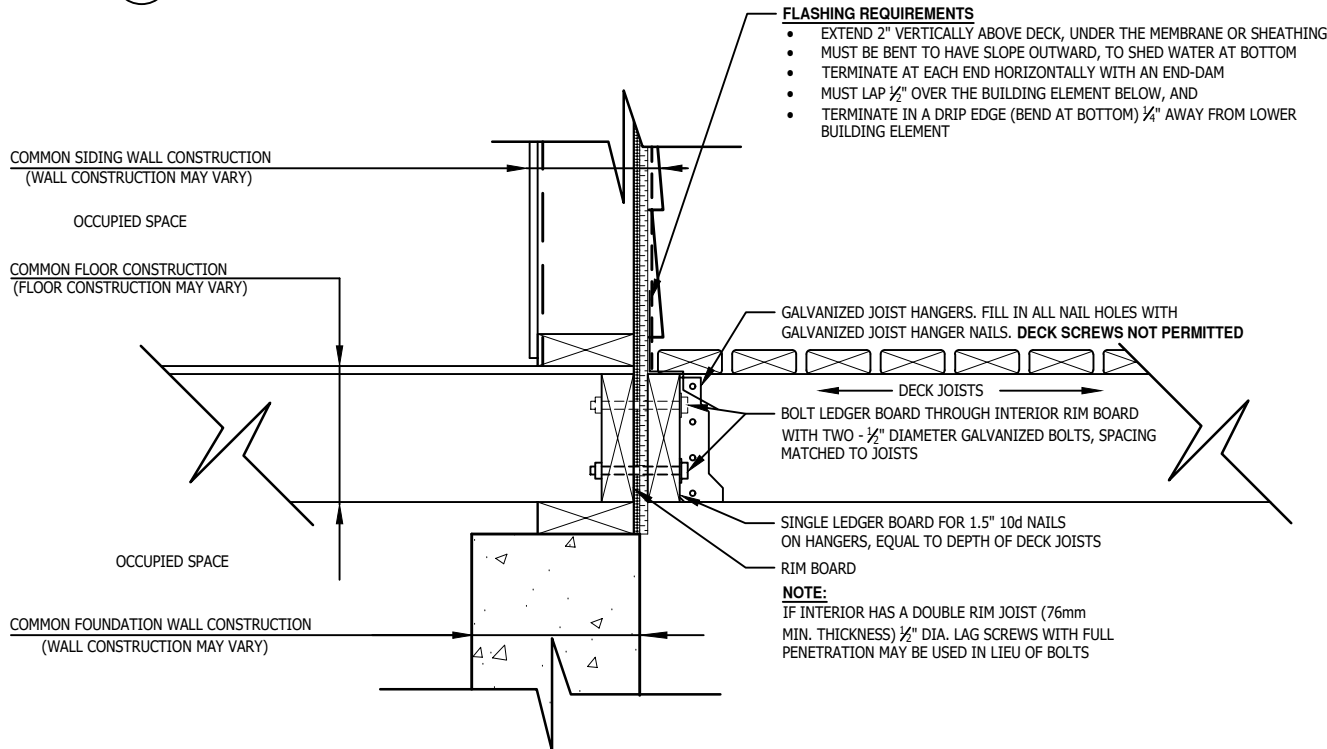
SCALE:
D.N.S.

DATE:
2026.02.03

A2



1 TYPICAL DECK CONNECTION TO BUILDING DETAIL (BRICK/STONE)
A3 SCALE: NTS



2 TYPICAL DECK CONNECTION TO BUILDING DETAIL (SIDING)
A3 SCALE: NTS

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NO.	REVISION	DATE



CLIENT:
 CITY OF STRATFORD

PROJECT:
 DECK

LOCATION:
 SAMPLE STRATFORD, ON

DRAWING:
 DECK TO BUILDING CONNECTION DETAILS

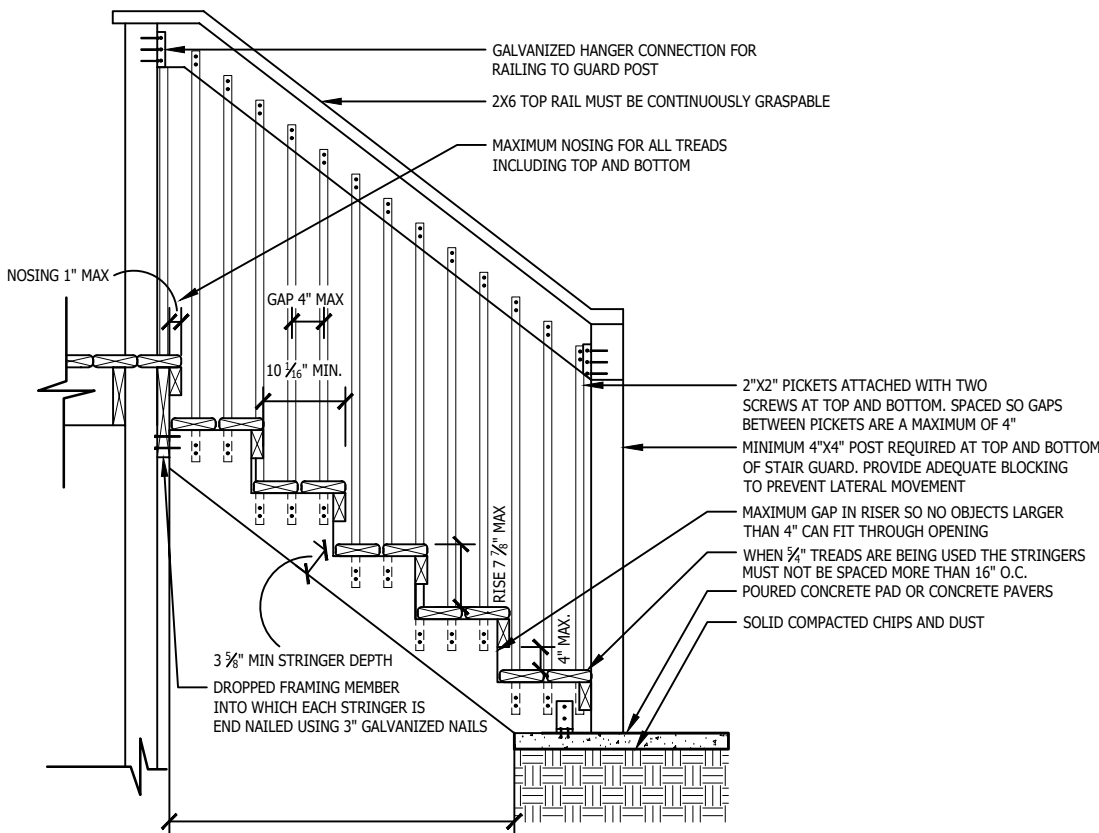
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PROJECT #:
 2026-02-03

SCALE:
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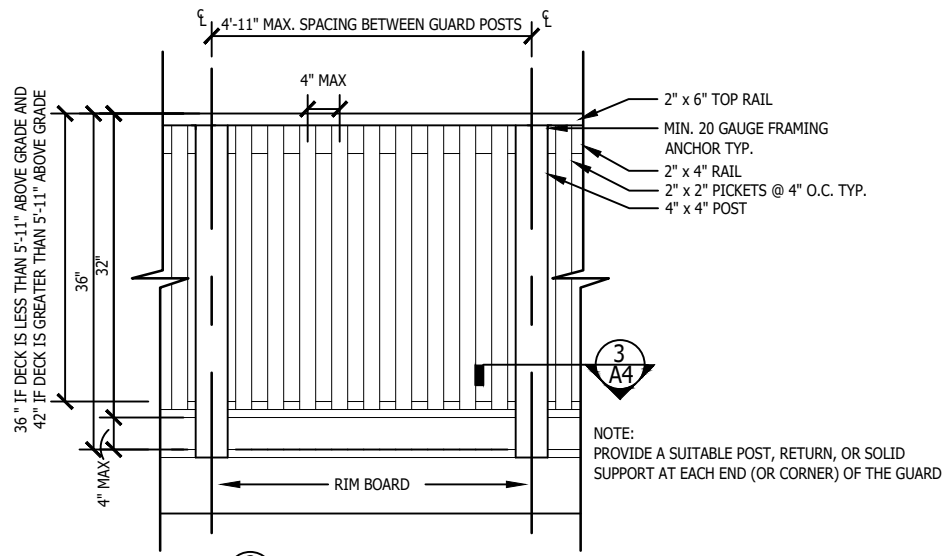
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A3

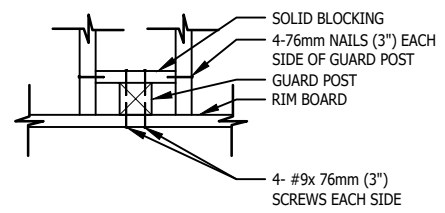


MID-POINT SUPPORT IS NEEDED WHEN STRINGERS ARE CUT TO ACCEPT TREADS AND SPAN GREATER THAN 6'-0"

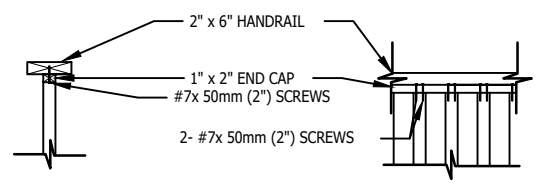
1 STAIR SECTION
A4 SCALE: NTS



2 A4 SCALE: NTS



3 GUARD POST ATTACHMENT DETAIL
A4 SCALE: NTS



4 END CAP AND PICKET ATTACHMENT DETAIL
A4 SCALE: NTS

NOTES:

- A GUARD IS NOT REQUIRED ON A DECK THAT IS LESS THAN 24" ABOVE GRADE
- A GUARD SHALL BE INSTALLED ON DECKS THAT ARE GREATER THAN 24" ABOVE GRADE. THE REQUIRED GUARD HEIGHT SHALL BE 36" TALL
- A GUARD SHALL BE INSTALLED ON DECKS THAT ARE GREATER THAN 5'-11" ABOVE GRADE. THE REQUIRED GUARD SHALL BE 42" TALL
- GUARDS AND CONNECTION DETAILS SHALL CONFORM TO SB-7 OF THE ONTARIO BUILDING CODE
- FOR PREFABRICATED GUARD SYSTEMS, PROVIDE ENGINEERING FOR GUARD SYSTEM AND GLASS (IF APPLICABLE) FROM THE MANUFACTURER

GUARDS CONSTRUCTED PER SB-7 OF THE O.B.C.

36" STAIR GUARD REQUIRED ON STAIRS WITH FINISHED DECK HEIGHT OF 24" OR HIGHER.

STAIR HANDRAIL REQUIRED ON STAIRS WITH THREE OR MORE RISERS. (HEIGHT 34" MIN. - 42" MAX.)

STRINGERS MUST BE SUPPORTED AND SECURED AT TOP AND BOTTOM (MAX. SPACING 35 1/2"). MID-POINT SUPPORT IS NEEDED WHEN STRINGERS ARE CUT TO ACCEPT TREADS AND ARE GREATER THAN 6'-0" IN LENGTH.

WOODEN STRINGERS TO BE TREATED FOR GROUND CONTACT

STAIR CONFIGURATION

RISE: MAX= 7 7/8", MIN=5"
 RUN: MAX= 14", MIN= 10 1/6"
 WIDTH: MIN= 34" (MEASURED BETWEEN INTERIOR FACES OF GUARDS)

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NO.	REVISION	DATE



CLIENT: CITY OF STRATFORD

PROJECT: DECK

LOCATION: SAMPLE STRATFORD, ON

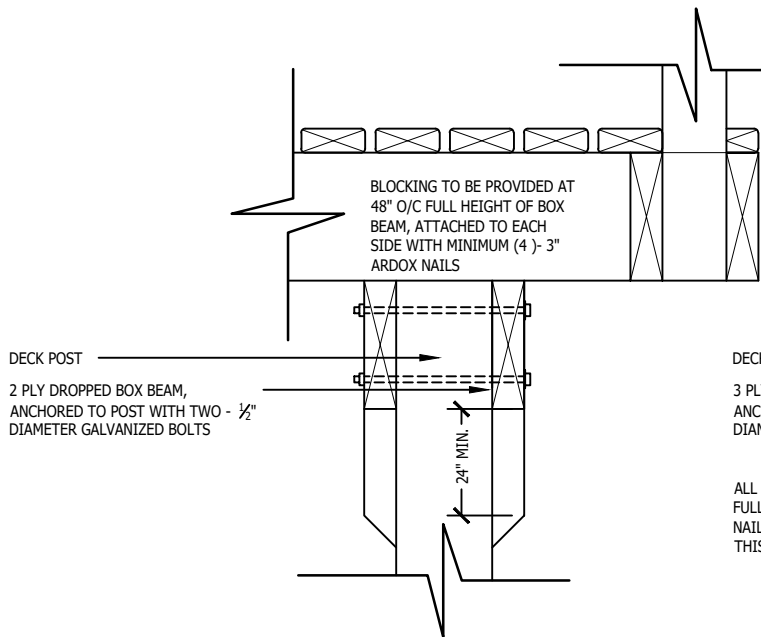
DRAWING: STAIR, GUARD FRAMING SECTIONS AND DETAILS

DRAWN: C.O.A. PROJECT #: 2026-02-03

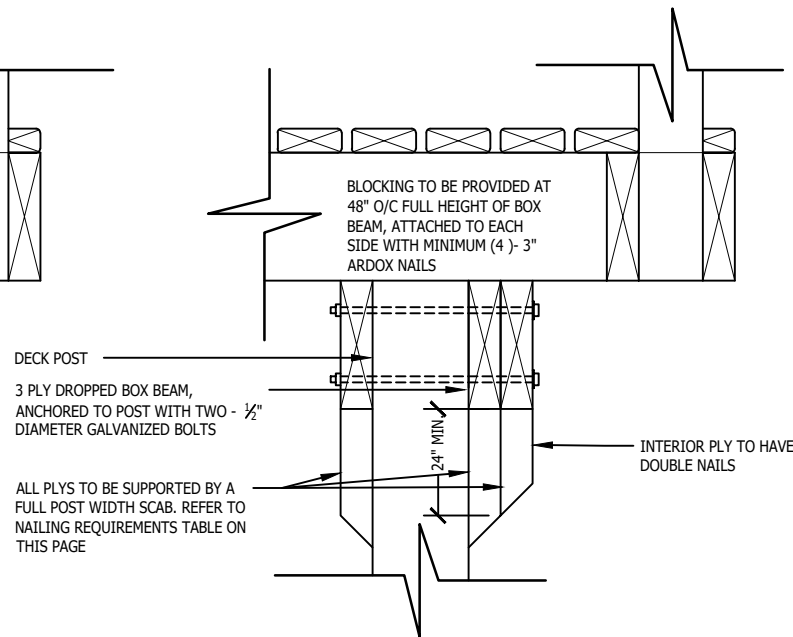
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DATE: 2026.02.03

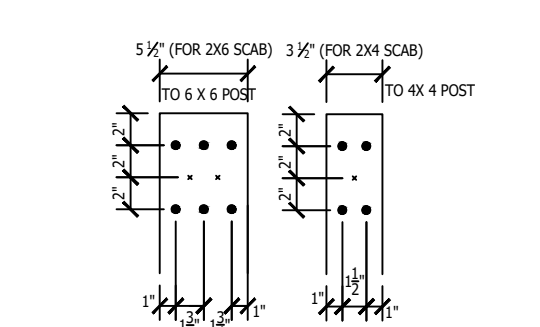
A4



1 BEAM CONNECTIONS (A)
A5 N.T.S.



2 BEAM CONNECTIONS (B)
A5 N.T.S.



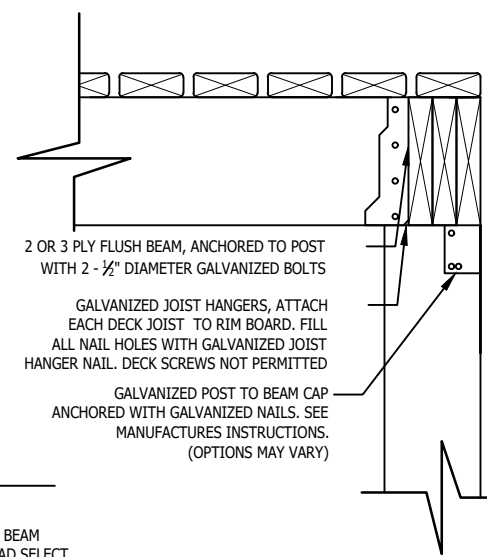
5 MINIMUM NAIL SPACING (6"X6" & 4"X4" SCAB)
A5 N.T.S.

NAILING TABLE

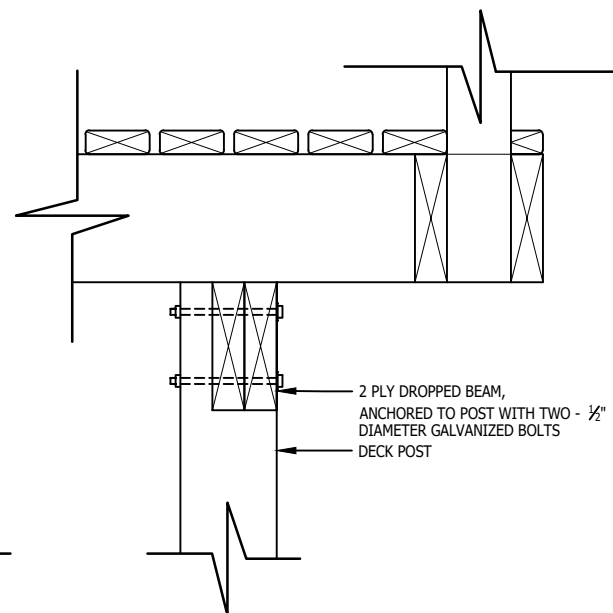
FOOTING POUNDS	3" NAILS		3 1/2" NAILS	
	2 PLY	3 PLY	2 PLY	3 PLY
2000	13	9	9	6
3000	19	13	13	9
4000	25	17	17	12
5000	32	21	21	14
7000	44	30	30	20
8500	54	36	36	24

HOW TO USE AND APPLY THE NAIL REQUIREMENTS TABLE

1. SELECT SIZE OF NAILS
2. SELECT NUMBER OF PLYS IN BEAM
3. BASED ON THE FOOTING LOAD SELECT THE NUMBER OF NAILS REQUIRED IN EACH SCAB BLOCK
4. FOR 3 PLY BEAMS ONLY - REMEMBER THE INTERIOR SCAB BLOCK NEEDS TWICE THE AMOUNT OF NAILS
5. USING THE NAIL SPACING, DETERMINE THE MINIMUM SCAB SIZE



3 BEAM CONNECTIONS (C)
A5 N.T.S.



4 BEAM CONNECTIONS (D)
A5 N.T.S.

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NO.	REVISION	DATE



CLIENT:
CITY OF STRATFORD

PROJECT:
DECK

LOCATION:
SAMPLE
STRATFORD, ON

DRAWING:
BEAM CONNECTION DETAILS
& SCAB NAILING TABLE

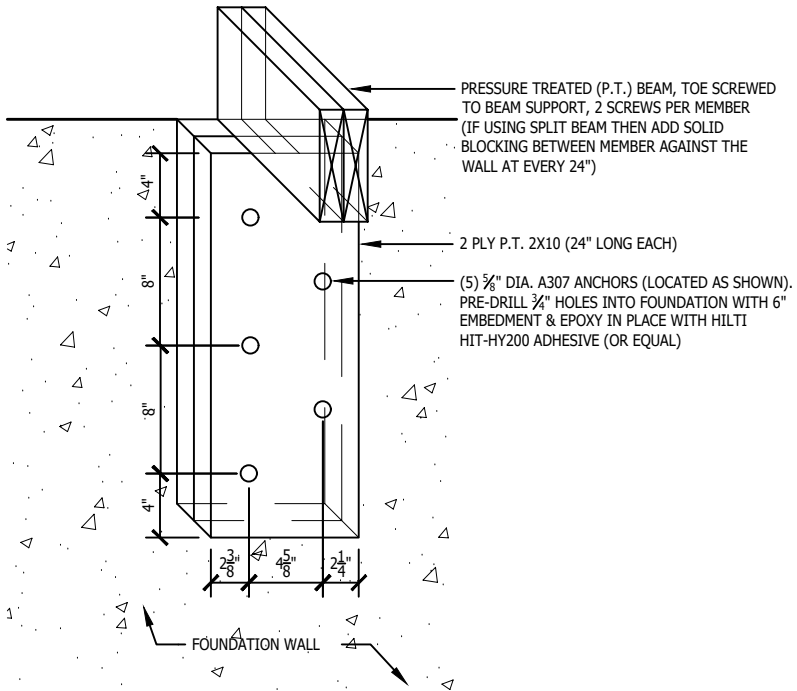
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PROJECT #:
2026-02-03

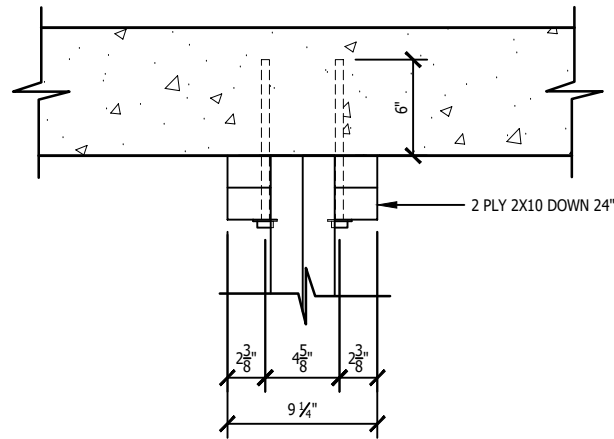
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DATE:
2026.02.03

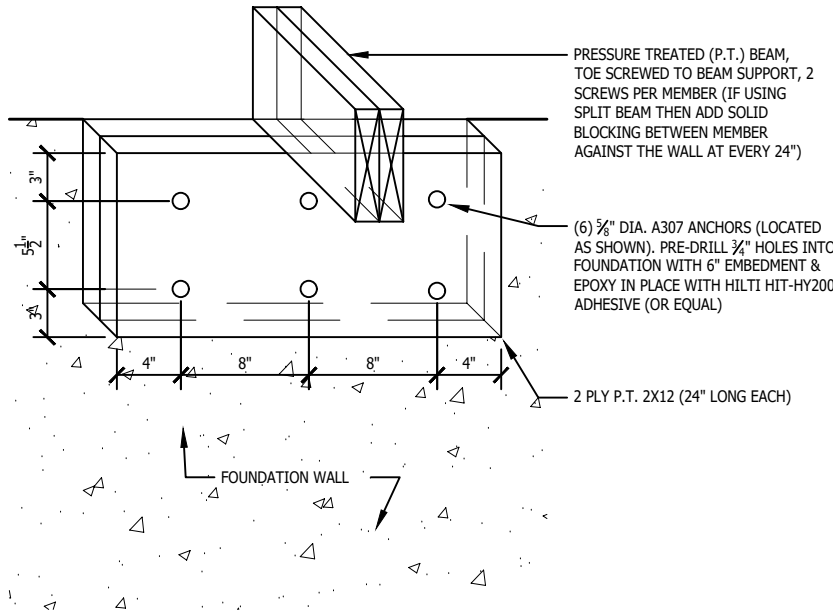
A5



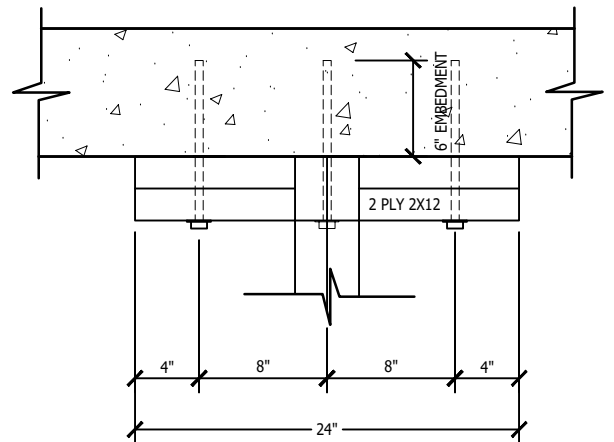
1 3D VIEW
A6 SCALE: NTS



2 PLAN VIEW
A6 SCALE: NTS



3 3D VIEW
A6 SCALE: NTS



4 PLAN VIEW
A6 SCALE: NTS

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NO.	REVISION	DATE



CLIENT:
CITY OF STRATFORD

PROJECT:
DECK

LOCATION:
SAMPLE STRATFORD, ON

DRAWING:
LEDGER BOARD CONNECTION DETAILS

DRAWN:
C.O.A.

PROJECT #:
2026-02-03

SCALE:
D.N.S.

DATE:
2026.02.03

A6