

GENERAL NOTES AND DETAILS

GENERAL INFORMATION

ALL THE DRAWINGS AND DESIGN IS BASED ON THE ONTARIO BUILDING CODE 2012.

THE CONTRACTOR IS TO BE FAMILIAR WITH ALL SECTIONS OF THE SPECIFICATIONS BEFORE COMMENCING ANY PART OF THE WORK. THESE DRAWINGS AND SPECIFICATIONS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS OF ALL OTHER DISCIPLINES.

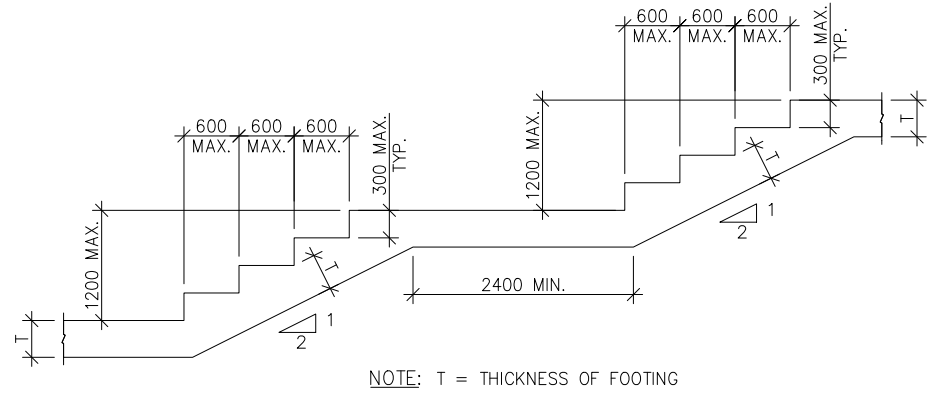
THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

PROVIDE DETAILED SHOP DRAWINGS OF CONCRETE REINFORCEMENT.

PROVIDE DETAILED SHOP DRAWINGS STAMPED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO TO THE ENGINEER FOURTEEN DAYS PRIOR TO FABRICATION OF STRUCTURAL STEEL.

OPEN WEB STEEL JOISTS AND METAL DECK.

SHOP DRAWING REVIEW BY THE ENGINEER IS SOLELY TO ASCERTAIN CONFORMANCE TO THE GENERAL DESIGN CONCEPT. RESPONSIBILITY FOR APPROVAL OF DETAIL DESIGN INHERENT IN SHOP DRAWINGS RESTS WITH THE CONTRACTOR AND REVIEW BY THE ENGINEER SHALL NOT IMPLY SUCH APPROVAL. REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR FOR PROPER COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.



STEPPED FOOTING DETAIL

STRUCTURAL STEEL

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION IS TO CONFORM TO THE REQUIREMENTS OF CSA-S16.1, CSA-S136, THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION (CISC) "CODE OF STANDARD PRACTICE FOR BUILDINGS" AND "STEEL JOIST FACTS".

STRUCTURAL STEEL SHALL COMPLY WITH CAN3-S16.1 UNLESS OTHERWISE NOTED.

ITEM	APPLICABLE SPECIFICATIONS
ROLLED SECTIONS	C40.21 ~ 350W
HSS (TUBE) SECTIONS	ASTM A500-C455 C- F _y =50 ksi
CONNECTION BOLTS	A325 (BEARING TYPE)
ANCHOR BOLTS	A307

STEEL TO BE FABRICATED AND ERECTED BY A SHOP CERTIFIED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1. DO NOT GRIND CONTINUOUS MEMBERS WITHOUT THE SPECIFIED APPROVAL OF THE ENGINEER.

WELDING TO CONFORM TO CSA W59-13. WELDERS TO BE QUALIFIED TO CSA W47.1.

PREPARE SURFACES OF ALL STRUCTURAL STEEL AND JOISTS ACCORDING TO SSPC SP 3. APPLY ONE COAT OF PRIMER CONFORMING TO CISC 1-73A.

CONCRETE

CONCRETE WORK SHALL COMPLY WITH CLAUSE 14 - CAN3-A23.1 UNLESS OTHERWISE NOTED.

SUBMIT FOR REVIEW THE PROPOSED MIX DESIGN FOR EACH CLASS OF CONCRETE TO BE USED.

CONCRETE STRENGTHS	f _c (MPa)	MAX. W/C RATIO	CLASS OF EXPOSURE
EXTERIOR FOOTINGS & WALLS	25	0.55	F2
CONCRETE EXPOSED TO CHLORIDES, FREEZING & THAWING (E.G.: SIDEWALKS)	32	0.45	C2
INTERIOR FOOTINGS, WALLS, SLABS	25	0.55	N
SLABS ON GRADE	25	0.50	N

CONCRETE EXPOSED TO FREEZE AND THAWING SHOULD BE AIR-ENTRAINED ACCORDING TO CSA A23.1

CONCRETE COVER CLEAR TO REINFORCEMENT:

U/S FOOTINGS (AGAINST SOIL)	75mm
U/S FOOTINGS (NOT AGAINST SOIL)	50mm
FOOTINGS (SIDES & TOP)	40mm
WALLS - AGAINST SOIL	50mm
WALLS	40mm
PIERS (TO TIES)	40mm

REINFORCING STEEL

DETAIL AND PLACE REINFORCING STEEL IN ACCORDANCE WITH REINFORCING STEEL MANUAL OF STANDARD PRACTICE- RS09- LATEST EDITION AND CAN3-A23.1 UNLESS OTHERWISE NOTED.

REINFORCING STEEL TO CONFORM TO CSA-G30.18-M92, GRADE 400.

WELDED WIRE MESH TO CONFORM TO CSA-G30.5.

FORMWORK MATERIALS TO BE SPRUCE SHEATHING TO CSA-0151-M FOR UNEXPOSED WORK, HIGH DENSITY OVERLAP ONE SIDE TO CSA 0121 FOR EXPOSED WORK. LUMBER TO CSA 014-M. NAILS, SPIKES AND STAPLES TO CSA-B111.

CURE AND PROTECT FRESHLY PLACED CONCRETE IN ACCORDANCE WITH CLAUSE 21 OF CSA/CAN3-A23.1-M. ALL SLABS ON GRADE TO RECEIVE A MACHINE TROWELLED FINISH.

CONCRETE TESTING TO BE PERFORMED IN ACCORDANCE WITH CSA/CAN3-A23.1-M.

NON-FERROUS GROUT: PRE-MIXED, NON-SHRINK, MASTER BUILDERS 713 OR APPROVED EQUIVALENT, MINIMUM 35 MPa COMPRESSIVE STRENGTH.

WELDING OF REINFORCING STEEL TO CONFORM TO CSA W186.

FOUNDATION

BEARING: ALL FOOTINGS TO BEAR ON UNDISTURBED SOIL WITH DESIGN BEARING CAPACITY:

FOOTING: 100 kPa(SLS) ; 1000 kPa(ULS)

STRIP FOOTING: 500 kPa(SLS) ; 1000 kPa(ULS)

ACCORDING TO SOIL REPORT NO. 09-251 DATED APRIL 12, 2010 BY HOUSE CHEVREUR ENGINEERING LIMITED.

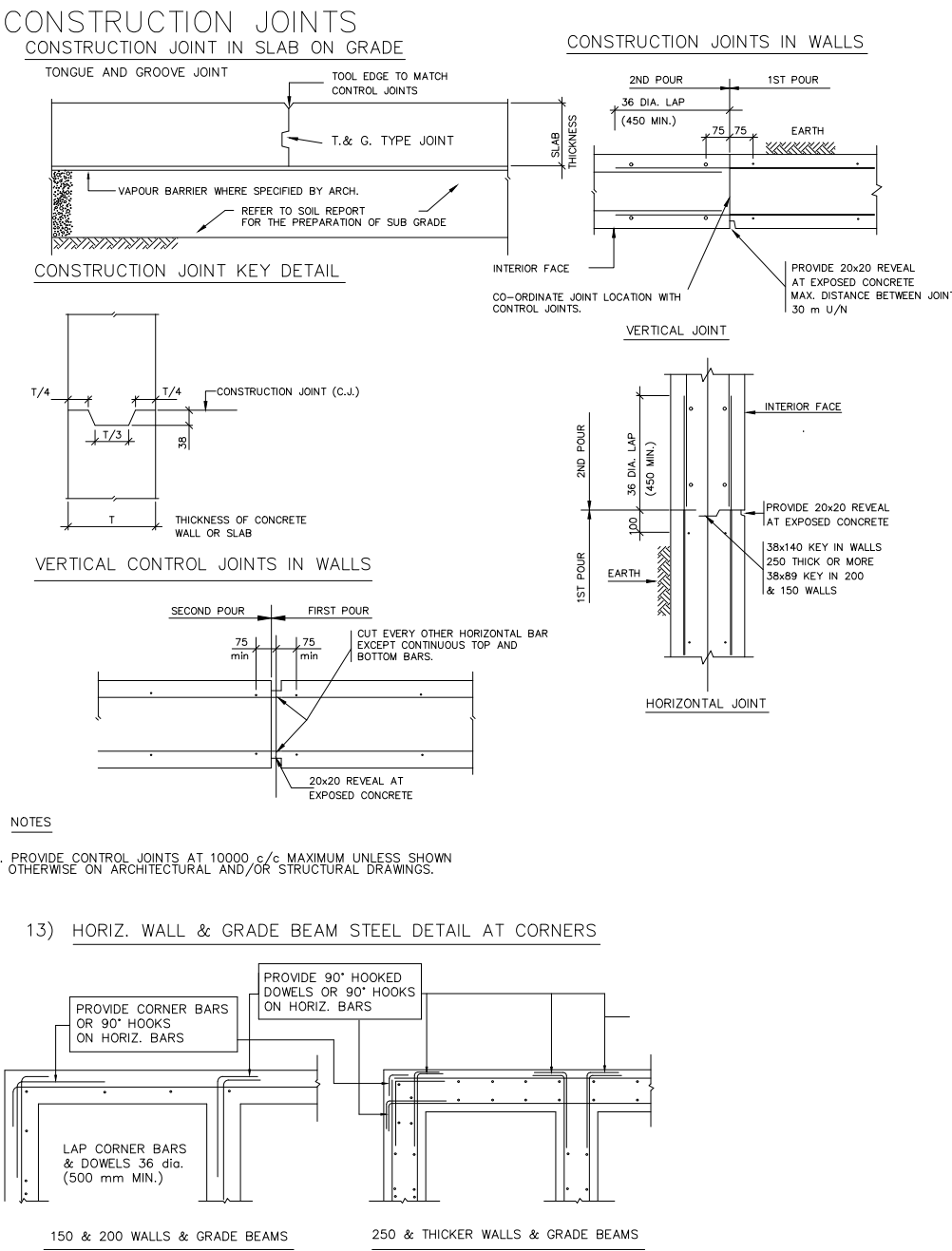
BEARING CAPACITY MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO POURING THE FOOTING PADS.

FROST COVER: (FINISHED GRADE TO U/S FOOTING) PROVIDE 1500mm MIN. FROST COVER U/N OR PROVIDE EQUIVALENT PROTECTION USING POLYSTYRENE INSULATION APPROVED BY GEOTECHNICAL ENGINEER.

COMPLY WITH ALL PROVINCIAL AND MUNICIPAL TRENCHING AND EXCAVATION SAFETY REGULATIONS, CONFORM TO ONTARIO BUILDING CODE AND CANADIAN CONSTRUCTION SAFETY CODE.

REFER TO THE SOIL REPORT FOR THE BACK FILLING AND PREPARATION OF THE SUB GRADE FOR THE SLAB ON GRADE.

UNLESS OTHERWISE OUTLINED IN SOIL REPORT DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM ANY BEARING STRATA AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL. ADJUST FOOTINGS AND TRENCH ELEVATIONS TO MEET THIS REQUIREMENT.



ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED IN THESE NOTES AND DRAWINGS:

ARCH.	AT (SPACING: c/c)	T	TOP
ARCH. <td>ARCHITECTURE<td>TOJ<td>TOP OF JOIST</td></td></td>	ARCHITECTURE <td>TOJ<td>TOP OF JOIST</td></td>	TOJ <td>TOP OF JOIST</td>	TOP OF JOIST
B <td>BOTTOM<td>TOS<td>TOP OF STEEL</td></td></td>	BOTTOM <td>TOS<td>TOP OF STEEL</td></td>	TOS <td>TOP OF STEEL</td>	TOP OF STEEL
c/c <td>CENTRE TO CENTRE<td>TYP<td>TYPICAL</td></td></td>	CENTRE TO CENTRE <td>TYP<td>TYPICAL</td></td>	TYP <td>TYPICAL</td>	TYPICAL
CL <td>CENTRE LINE<td>U/N<td>UNLESS NOTED OTHERWISE</td></td></td>	CENTRE LINE <td>U/N<td>UNLESS NOTED OTHERWISE</td></td>	U/N <td>UNLESS NOTED OTHERWISE</td>	UNLESS NOTED OTHERWISE
CONT. <td>CONTINUOUS<td>UL<td>UPPER LAYER</td></td></td>	CONTINUOUS <td>UL<td>UPPER LAYER</td></td>	UL <td>UPPER LAYER</td>	UPPER LAYER
EA <td>EACH<td>UNDER<td>UNDERGROUPE</td></td></td>	EACH <td>UNDER<td>UNDERGROUPE</td></td>	UNDER <td>UNDERGROUPE</td>	UNDERGROUPE
EE <td>EACH END<td>V<td>VERTICAL</td></td></td>	EACH END <td>V<td>VERTICAL</td></td>	V <td>VERTICAL</td>	VERTICAL
EW <td>EACH FACE<td></td><td></td></td>	EACH FACE <td></td> <td></td>		
EW <td>EACH WAY<td></td><td></td></td>	EACH WAY <td></td> <td></td>		
EL <td>ELEVATION<td></td><td></td></td>	ELEVATION <td></td> <td></td>		
FF <td>FAR FACE<td></td><td></td></td>	FAR FACE <td></td> <td></td>		
H <td>HORIZONTAL<td></td><td></td></td>	HORIZONTAL <td></td> <td></td>		
HDMR <td>HEAVY DUTY GALVANIZED LADDER TYPE MASONRY REINFORCING, 4-#9 SIDE RODS<td></td><td></td></td>	HEAVY DUTY GALVANIZED LADDER TYPE MASONRY REINFORCING, 4-#9 SIDE RODS <td></td> <td></td>		
IF <td>INSIDE FACE<td></td><td></td></td>	INSIDE FACE <td></td> <td></td>		
LL <td>LOWER LAYER<td></td><td></td></td>	LOWER LAYER <td></td> <td></td>		
m <td>METRES<td></td><td></td></td>	METRES <td></td> <td></td>		
mm <td>MILLIMETRES<td></td><td></td></td>	MILLIMETRES <td></td> <td></td>		
max <td>MAXIMUM<td></td><td></td></td>	MAXIMUM <td></td> <td></td>		
MECH <td>MECHANICAL<td></td><td></td></td>	MECHANICAL <td></td> <td></td>		
NF <td>NEAR FACE<td></td><td></td></td>	NEAR FACE <td></td> <td></td>		
NTS <td>NOT TO SCALE<td></td><td></td></td>	NOT TO SCALE <td></td> <td></td>		
OF <td>OUTSIDE FACE<td></td><td></td></td>	OUTSIDE FACE <td></td> <td></td>		
PL <td>PLATE<td></td><td></td></td>	PLATE <td></td> <td></td>		

DESIGN LOAD DATA

DEAD LOAD

ROOFING	= 0.5 kPa
DECK	= 0.1 kPa
JOIST	= 0.2 kPa
BEAMS	= 0.2 kPa
TOTAL	= 1.0 kPa

LIVE LOAD

= 1.0 kPa

SPECIFIED GROSS UPLIFT ON ROOF

= 1.4 kPa

SPECIFIED SNOW LOADING ON ROOF

S_g = 2.40 kPa
S_r = 0.40 kPa
I_s = 1.0 (ULS) ; 0.9 (SLS)
C_b = 0.8 ; C_w = 1.0 ; C_g = 1.0 ; C_e = 1.0
S = I_s [S_g (C_b C_w C_g C_e) + S_r] = 2.32 kPa + SNOW DRIFTING AS INDICATED ON PLAN

WIND LOAD (PHASE 2)

P = I_w q C_e C_g C_p

WHERE:
q₁₀ = REFERENCE VELOCITY PRESSURE (0.30 kPa)
q₃₀ = REFERENCE VELOCITY PRESSURE (0.41 kPa)
C_e = EXPOSURE FACTOR (1.1)
C_g = GUST FACTOR (2.5)
C_p = EXTERNAL PRESSURE COEFFICIENT
I_s = 1.0 (ULS) ; 0.75 (SLS)

		DIRECTION ALONG NORTH/SOUTH	DIRECTION ALONG EAST/WEST
WIND MOMENT	KN.m	839	1800
WIND BASE SHEAR	KN	152	347

WIND LOAD (PHASE 4)

P = I_w q C_e C_g C_p

WHERE:
q₁₀ = REFERENCE VELOCITY PRESSURE (0.30 kPa)
q₃₀ = REFERENCE VELOCITY PRESSURE (0.41 kPa)
C_e = EXPOSURE FACTOR (1.1)
C_g = GUST FACTOR (2.5)
C_p = EXTERNAL PRESSURE COEFFICIENT
I_s = 1.0 (ULS) ; 0.75 (SLS)

		DIRECTION ALONG NORTH/SOUTH	DIRECTION ALONG EAST/WEST
WIND MOMENT	KN.m	238	1062
WIND BASE SHEAR	KN	46	205

SEISMIC LOADING

SFRS:
CONVENTIONAL CONSTRUCTION OF MOMENT AND BRACED FRAMES

M_y = 1.0
R_d = DUCTILITY FACTOR (1.5)
R_o = OVERSTRENGTH FACTOR (1.3)
I_E = IMPORTANCE FACTOR (1.0)
W = BUILDING WEIGHT (2253 kN)
F_o = 1.0
F_v = 1.0
SITE CLASS = "C"

S_g(0.2)= 0.62
S_g(0.5)= 0.30
S_g(1.0)= 0.13
S_g(2.0)= 0.045
PGA=0.32

REFER TO 'FOUNDATION' NOTES FOR SLS AND ULS CAPACITIES OF SOIL.

STRUCTURAL IRREGULARITIES - Table 4.1.8.6

TYPE	IRREGULARITY TYPE	YES	NO
1	VERTICAL STIFFNESS IRREGULARITY		●
2	MASS IRREGULARITY		●
3	VERTICAL GEOM. IRREGULARITY		●
4	INPLANE DISCONTINUITY IN VERT. LATERAL FORCE RESISTING ELEMENT		●
5	OUT OF PLANE OFFSET		●
6	WEAK STOREY		●
7	TORSIONAL SENSITIVITY (B _x = 1.2 (N-S) & 1.5 (E-W))		●
8	NON-ORTHOGONAL SYSTEMS		●

SEISMIC LOADING (PHASE 2)

USE EQUIVALENT STATIC FORCE METHOD (PASE 2)

T_a(N-S) = 0.085x(11.12)^{1/4} = 0.51 (MOMENT FRAME) W = (DL + 0.25xSL) = 2253 kN

T_a(E-W) = 0.025x11.12 = 0.278 (BRACED FRAME)

S(T)_{N-S} = 0.3

S(T)_{E-W} = 0.54

S(2.0) = 0.045

S(0.2) = 0.62

V = S(T_a)M₀W₀/(R_dR_o) = (0.75)(1.0)(1.0)(W)/(1.5x1.3) = 0.385W

V = (2/3)(0.62)(1.0)(W)/(1.5x1.3) = 0.212W ← GOVERNS

= 478 kN ← 100% E.Q. LOAD

East West Direction		North South Direction	
BASE SHEAR	OVERTURNING MOMENT	BASE SHEAR	OVERTURNING MOMENT
KN	KN.M	KN	KN.M
478	5317	478	5317

SEISMIC LOADING (PHASE 4)

USE EQUIVALENT STATIC FORCE METHOD (PHASE 4)

T_a(N-S) = 0.085x(11.12)^{1/4} = 0.51 (MOMENT FRAME) W = (DL + 0.25xSL) = 989 kN

T_a(E-W) = 0.025x11.12 = 0.278 (BRACED FRAME)

S(T)_{N-S} = 0.3

S(T)_{E-W} = 0.54

S(2.0) = 0.045

S(0.2) = 0.62

V = S(T_a)M₀W₀/(R_dR_o) = (0.75)(1.0)(1.0)(W)/(1.5x1.3) = 0.385W

V = (2/3)(0.62)(1.0)(W)/(1.5x1.3) = 0.212W ← GOVERNS

= 210 kN ← 100% E.Q. LOAD

East West Direction		North South Direction	
BASE SHEAR	OVERTURNING MOMENT	BASE SHEAR	OVERTURNING MOMENT
KN	KN.M	KN	KN.M
240	2240	240	2240

SFRS (DIAPHRAGMS AND THEIR CONNECTIONS)

SRFS DIAPHRAGMS AND THEIR CONNECTIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH ARTICLE 4.1.8.15 OF OBC 2012 BY MULTIPLYING DESIGN FORCES BY R_dR_o (1.5*1.3).

SFRS (FOUNDATIONS)

SRFS FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH ARTICLE 4.1.8.16- OBC BY MULTIPLYING THE DESIGN FORCES BY R_dR_o (1.5*1.3).

SFRS (Connections)

THE CONNECTIONS FOR THE MOMENT FRAMES AND BRACED FRAMES ARE TO BE DESIGNED BY THE STEEL FABRICATOR ACCORDING TO SECTION 27.10 - CSA S16 FOR THE CONVENTIONAL CONSTRUCTION (R_d=1.5, R_d=1.3)

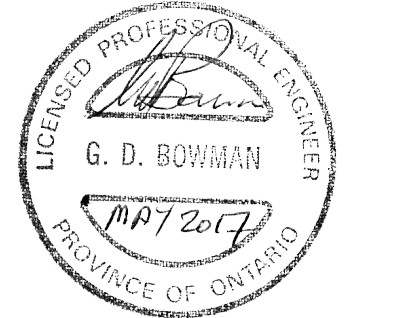
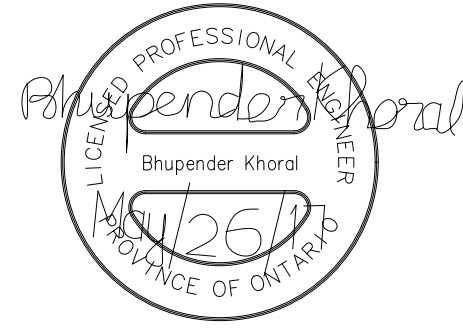
STRUCTURAL SEPARATION

STRUCTURAL SEPARATION BETWEEN THE EXISTING AND NEW CONSTRUCTION HAS BEEN PROVIDED PER ARTICLE 4.1.8.14

GENERAL NOTES

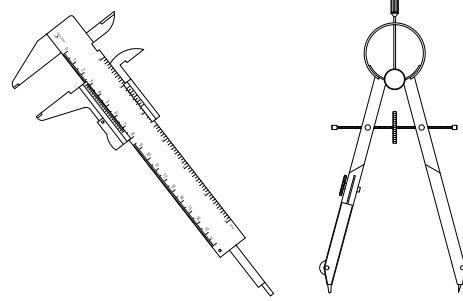
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DESIGN & SYSTEMS

STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
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Project Architect:

KWC Architects Inc.
383 Parkdale Ave. Suite 201
Ottawa, Ontario, K1V 4R4

Client Name:

M CON Products Inc.
2150 Richardson Side Rd
Carleton Place, ON, K7A 1L0

Project Name:

M CON Shop Expansion
2150 Richardson Side Rd

Project Number:

170224-01

Drawn By:

D.B.

Checked By:

B.K. - E.J.

Date Created:

14/03/17

Issued For:

TENDER

Date Modified:

17/05/17

Drawing Scale:

N. T. S

Drawing Name:

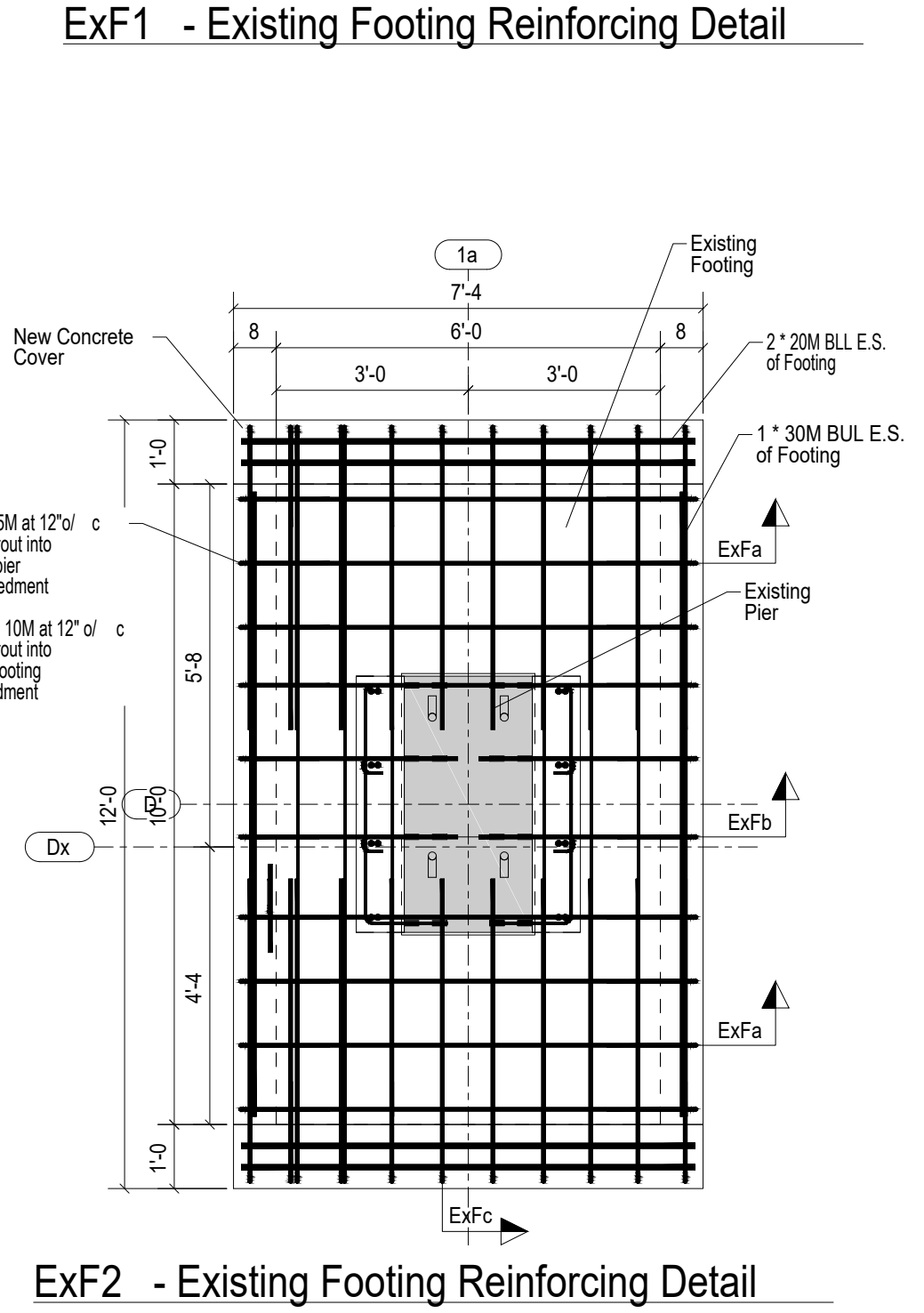
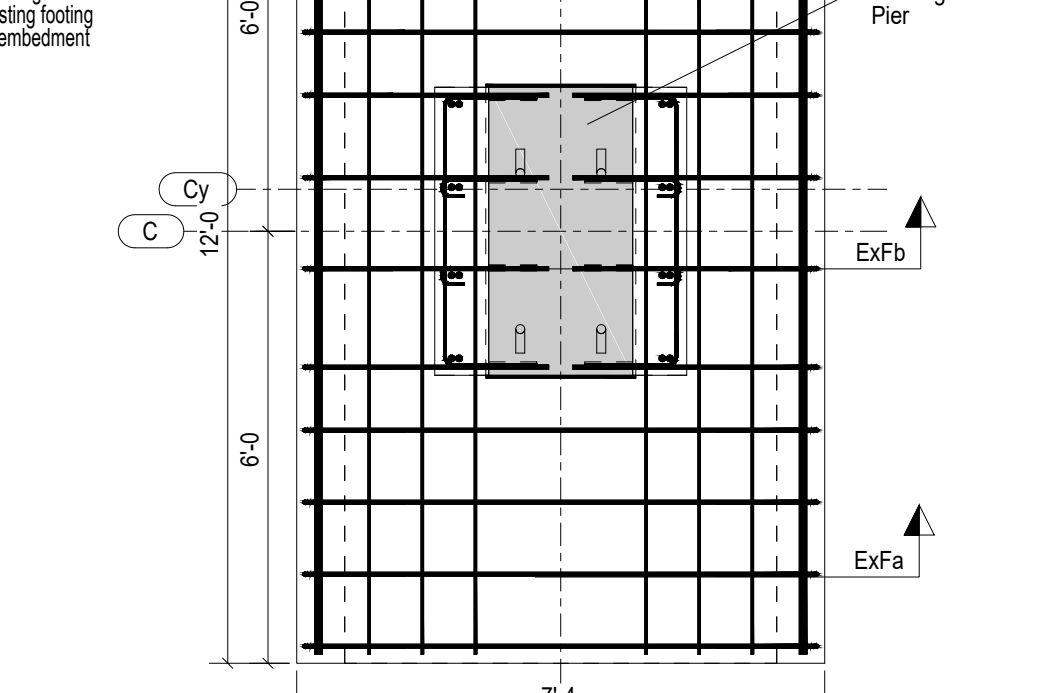
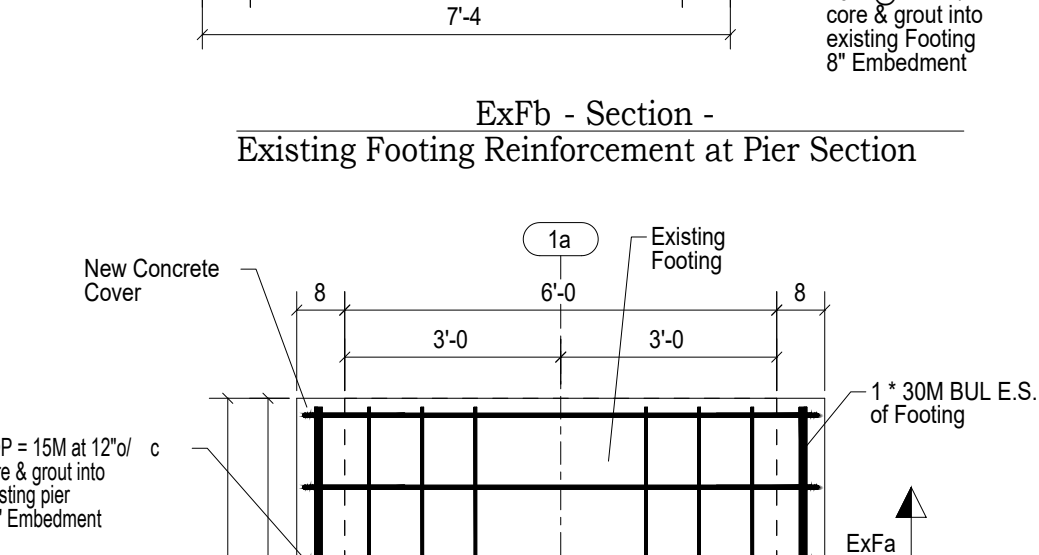
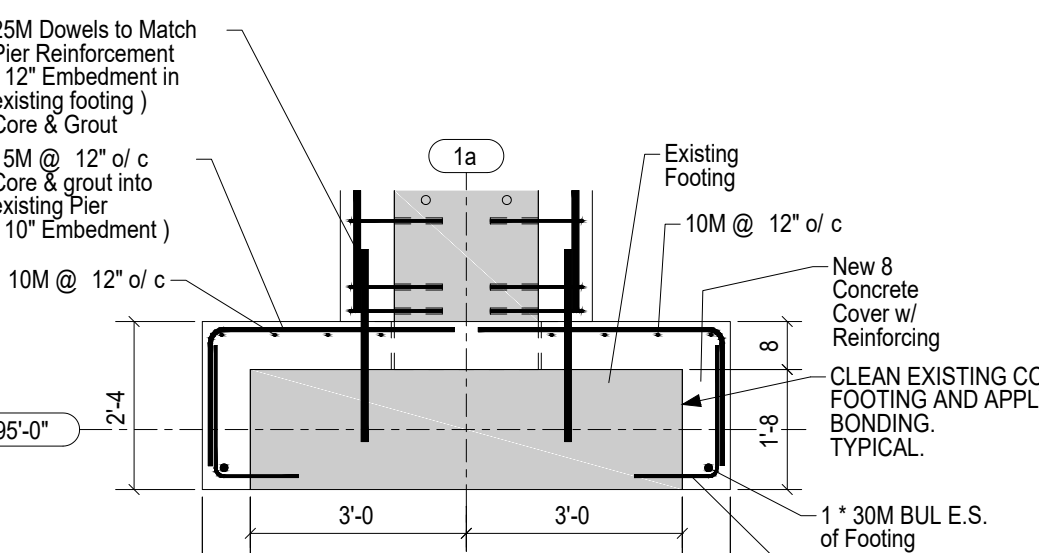
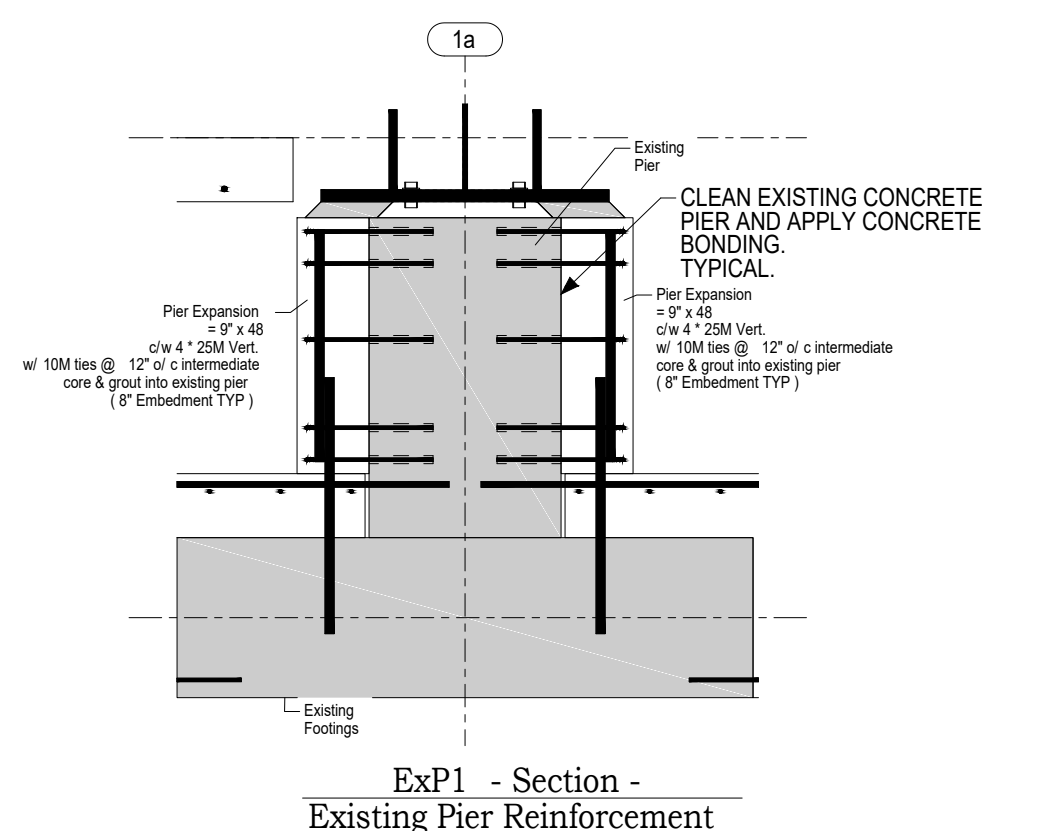
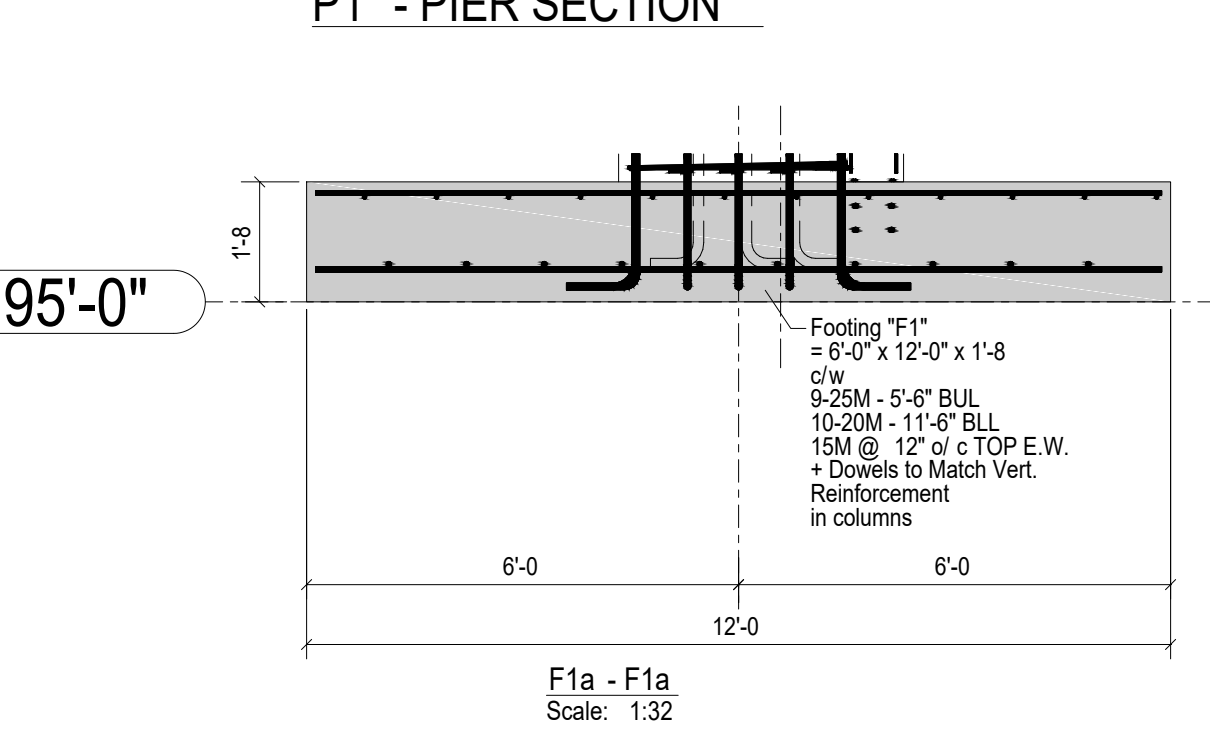
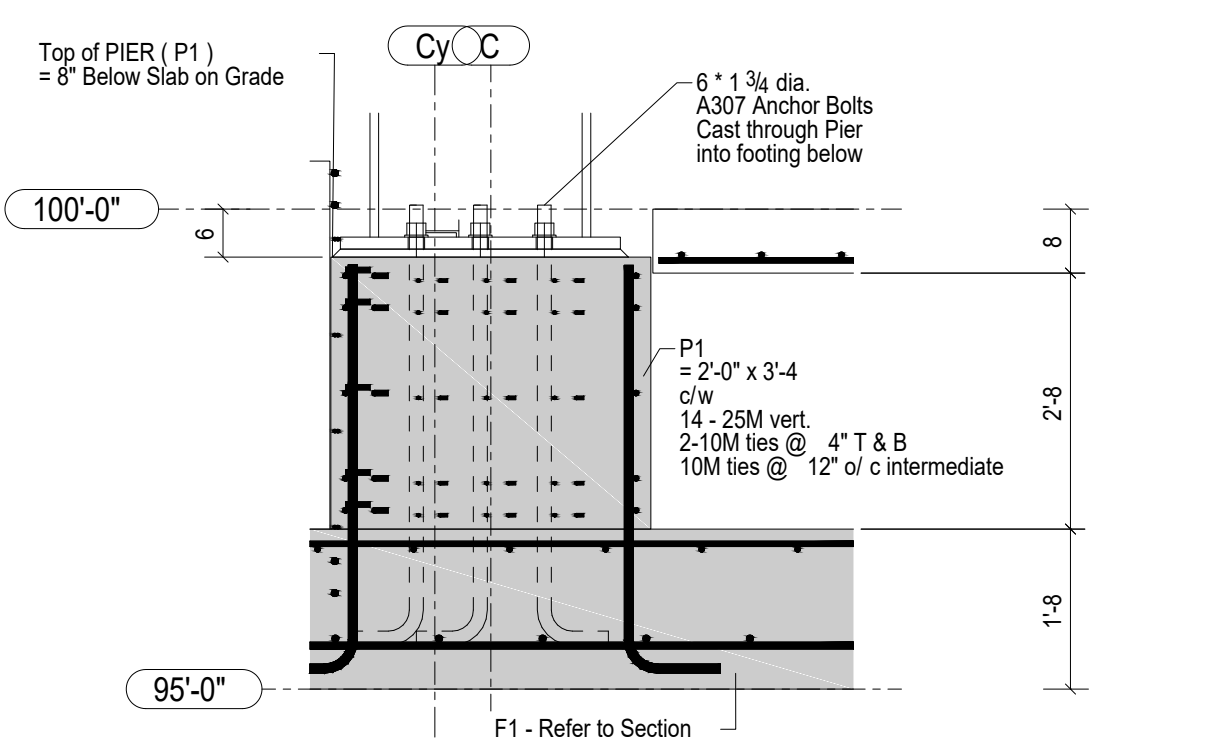
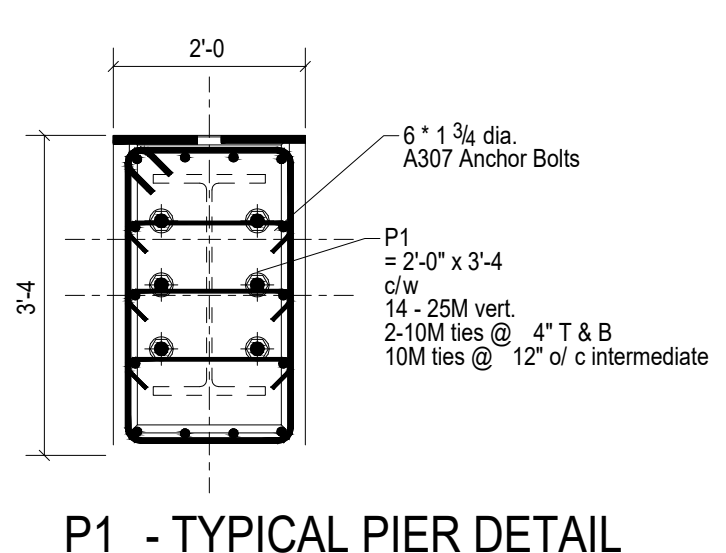
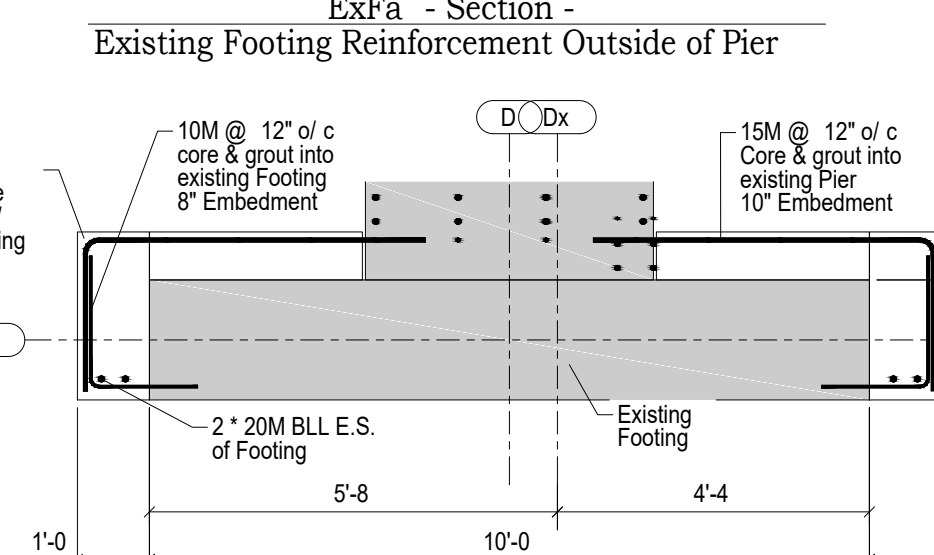
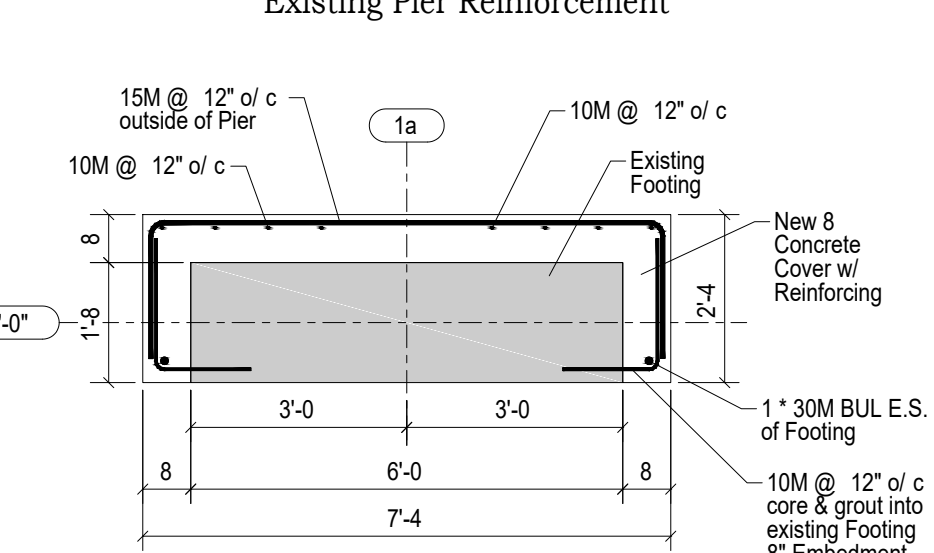
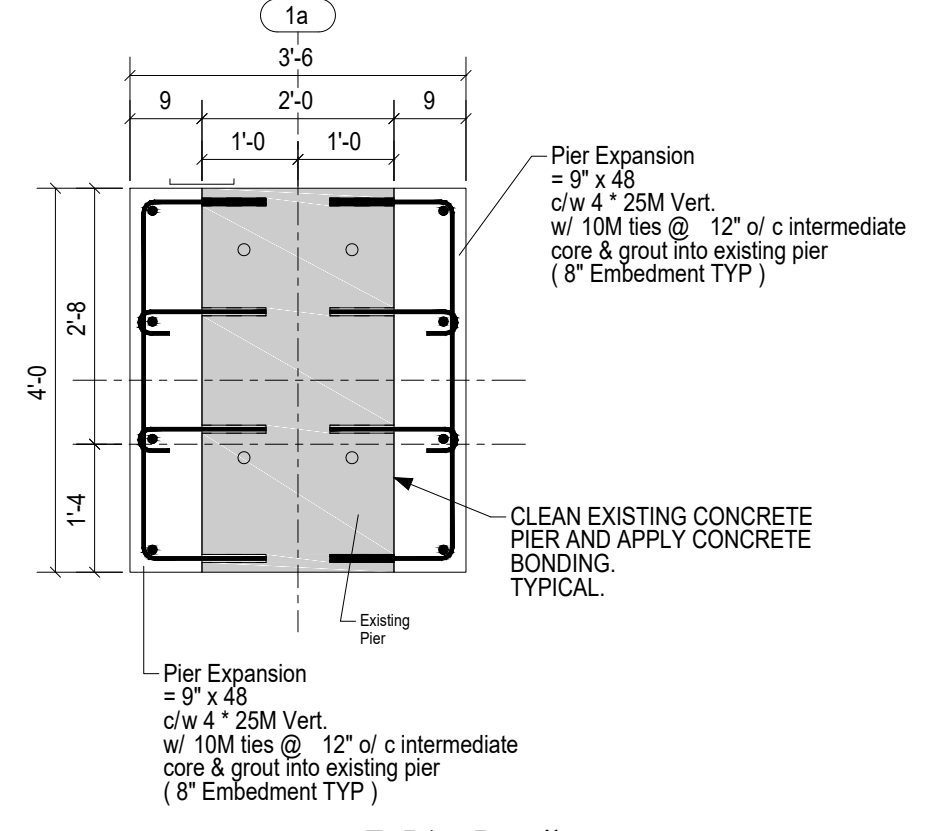
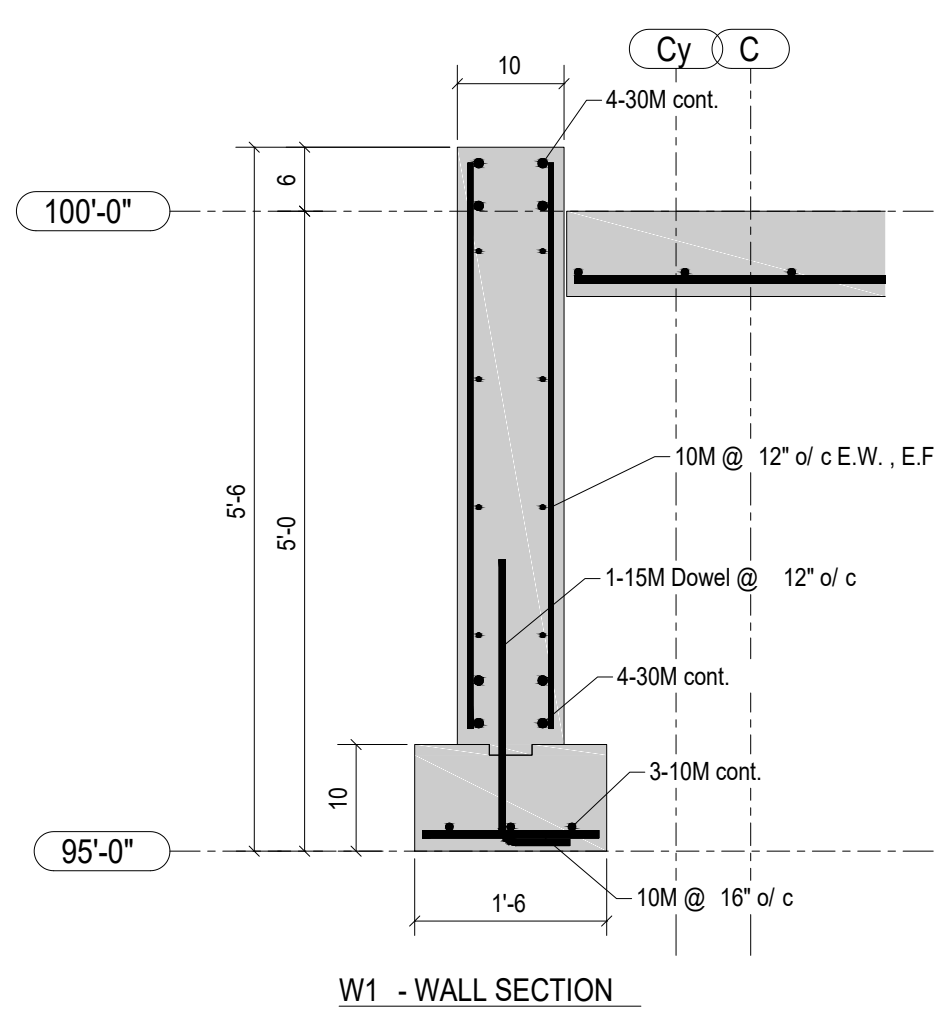
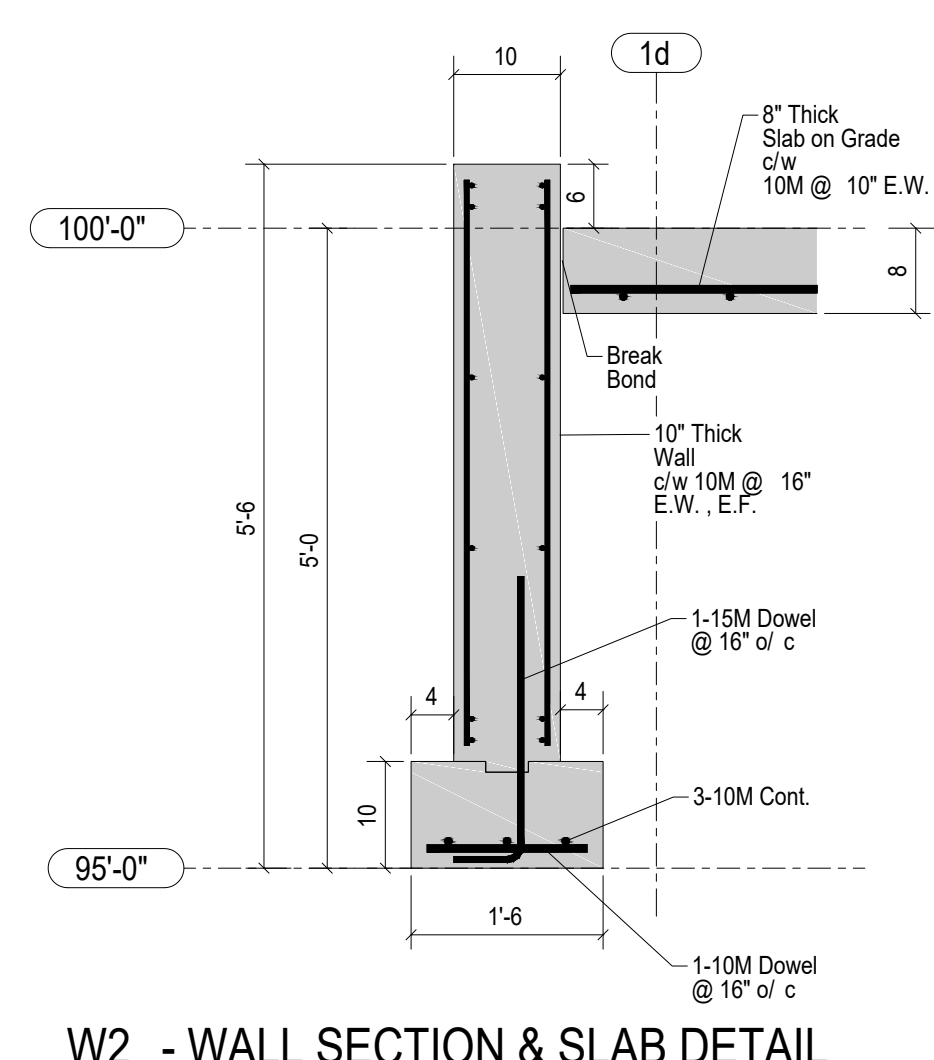
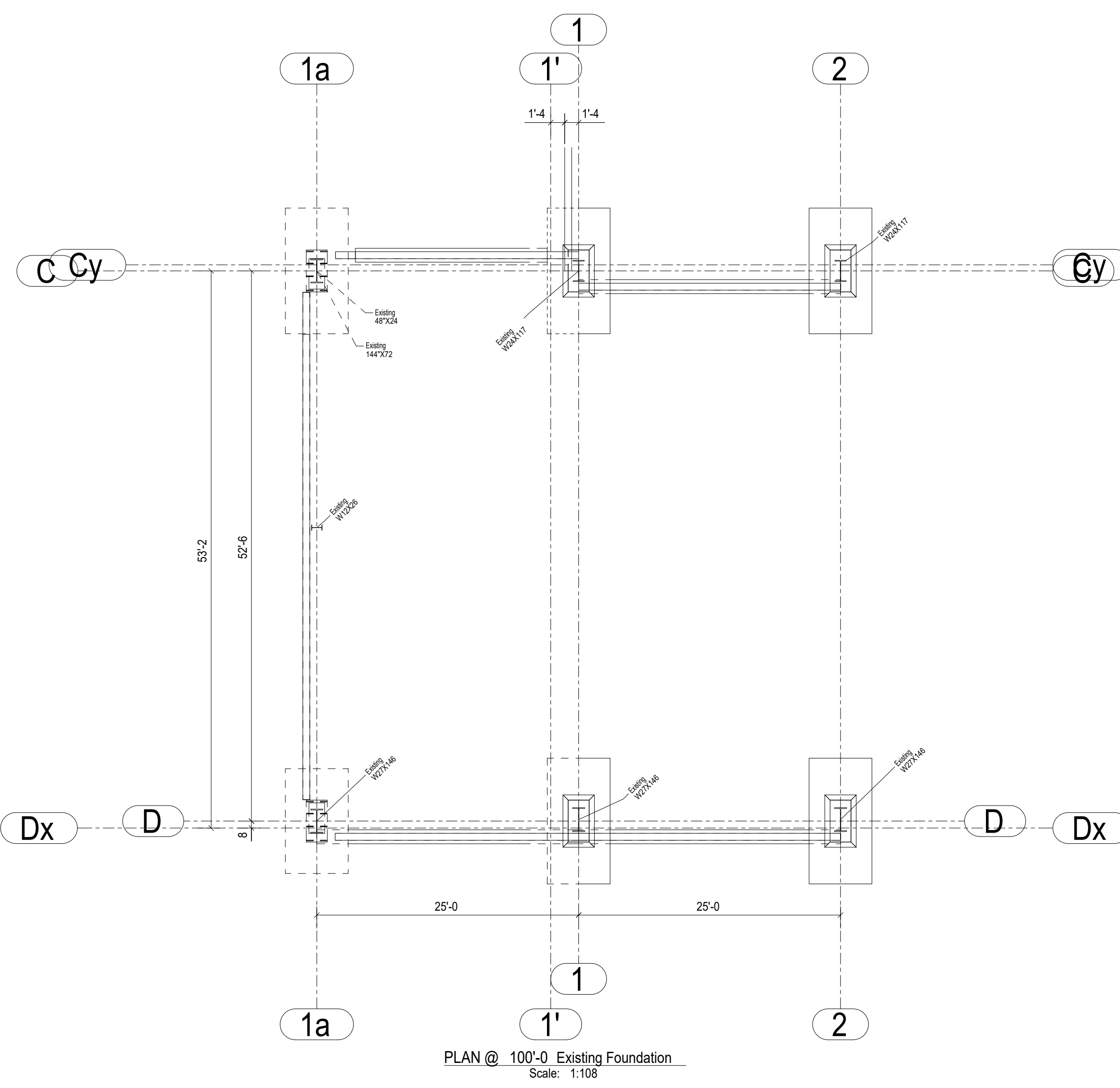
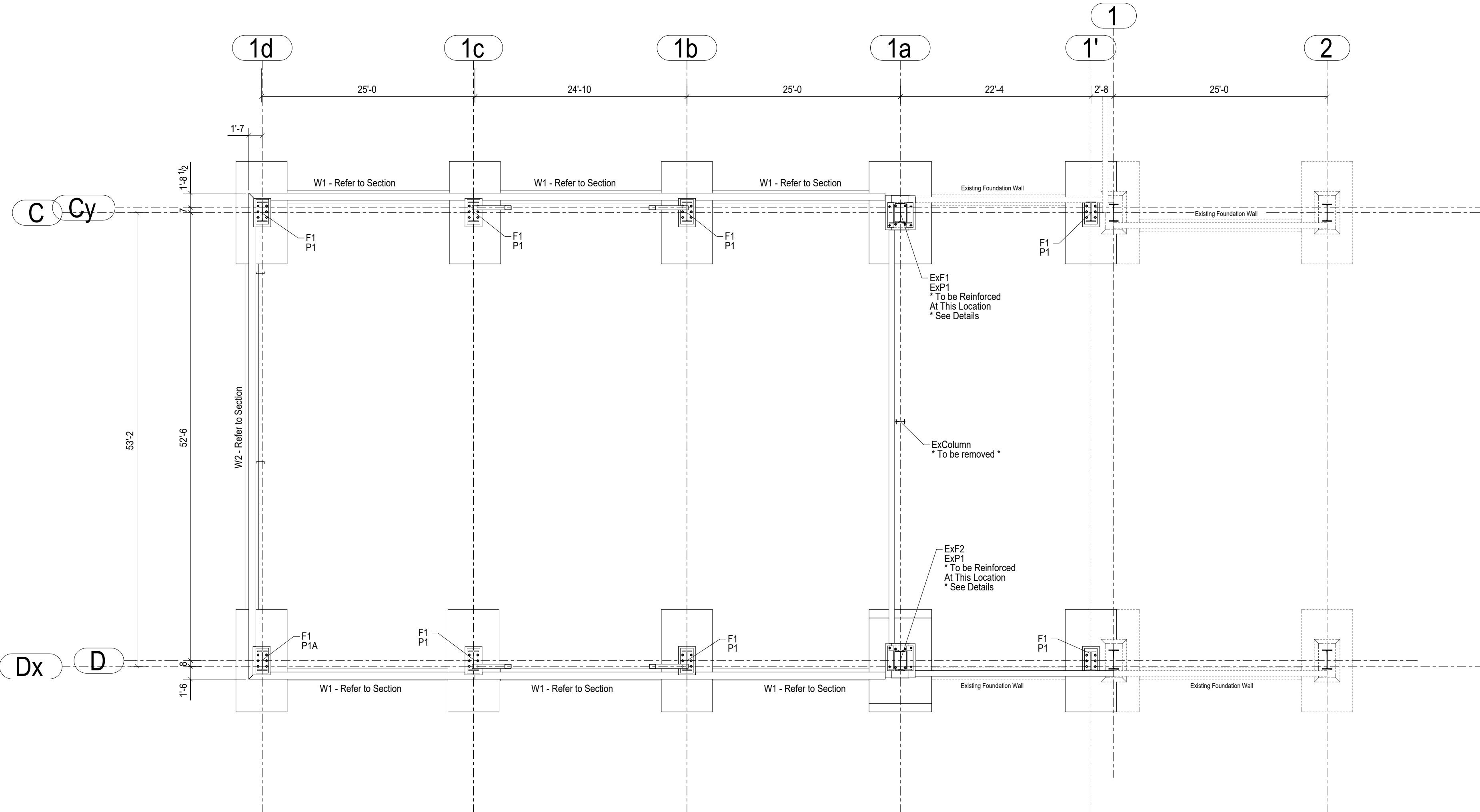
GENERAL NOTES

Revision No:

1

Drawing No:

S000

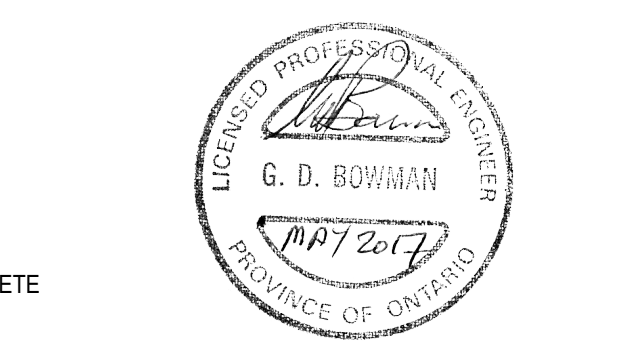
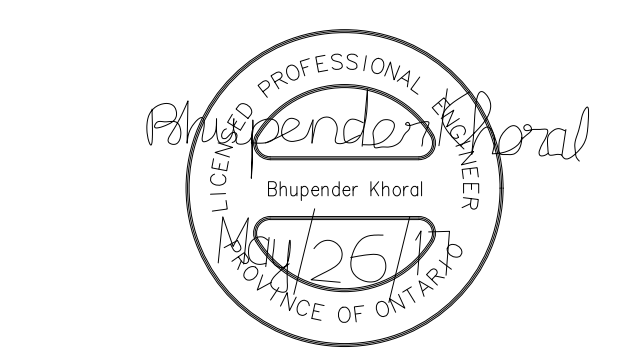


GENERAL NOTES

Contractor to verify all dimensions prior to fabri

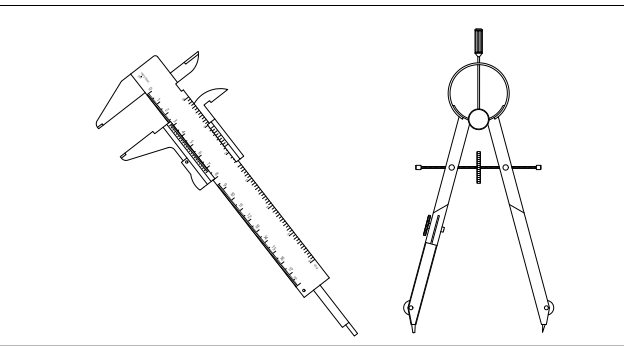
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Revision Number	Revision Description	Date	By	CHK
1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



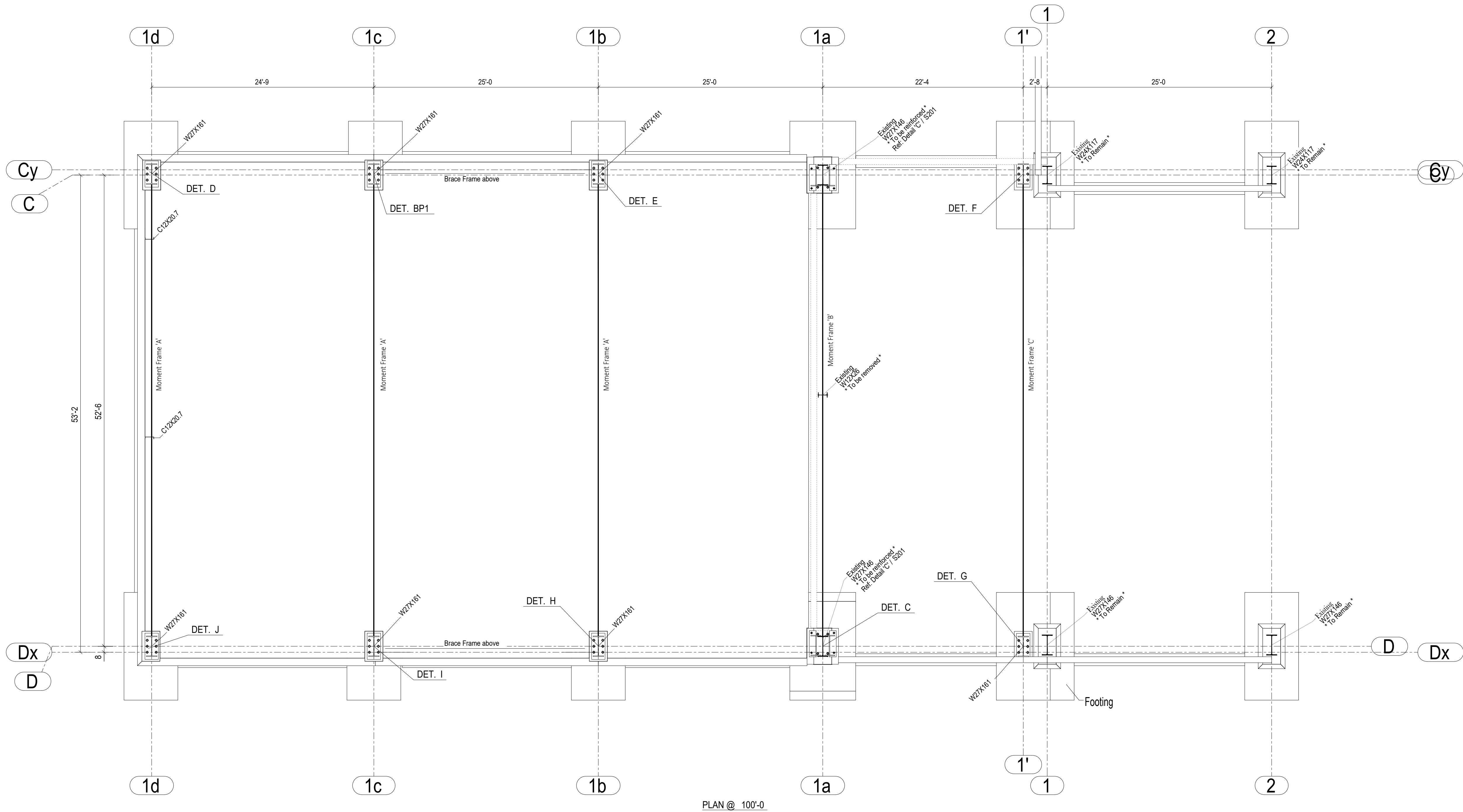
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Project Architect: **KWC Architects Inc.**
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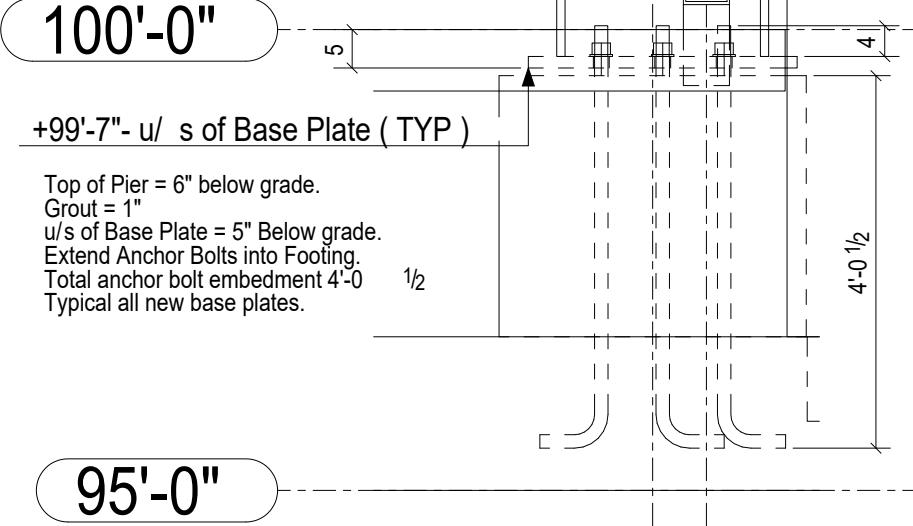
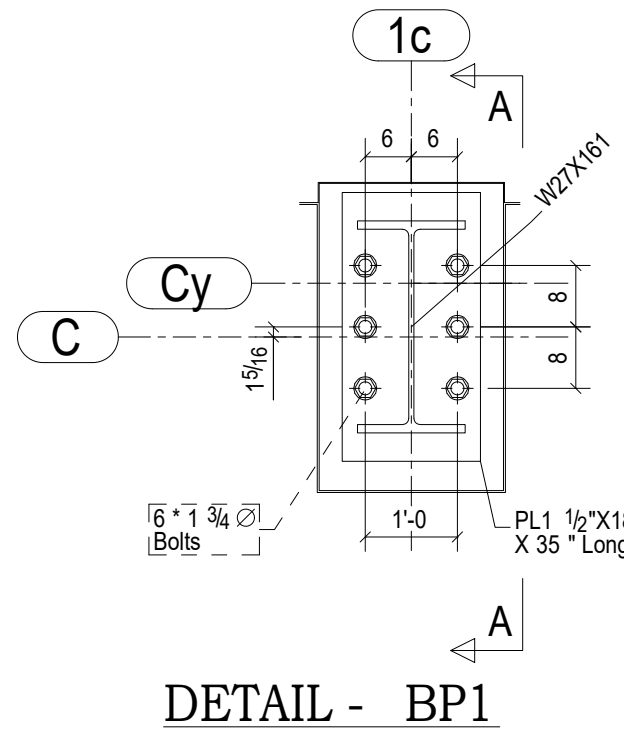
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Carp, ON, K0A 1L0

Project Name: **M CON Shop Expansion**
2150 Richardson Side Rd

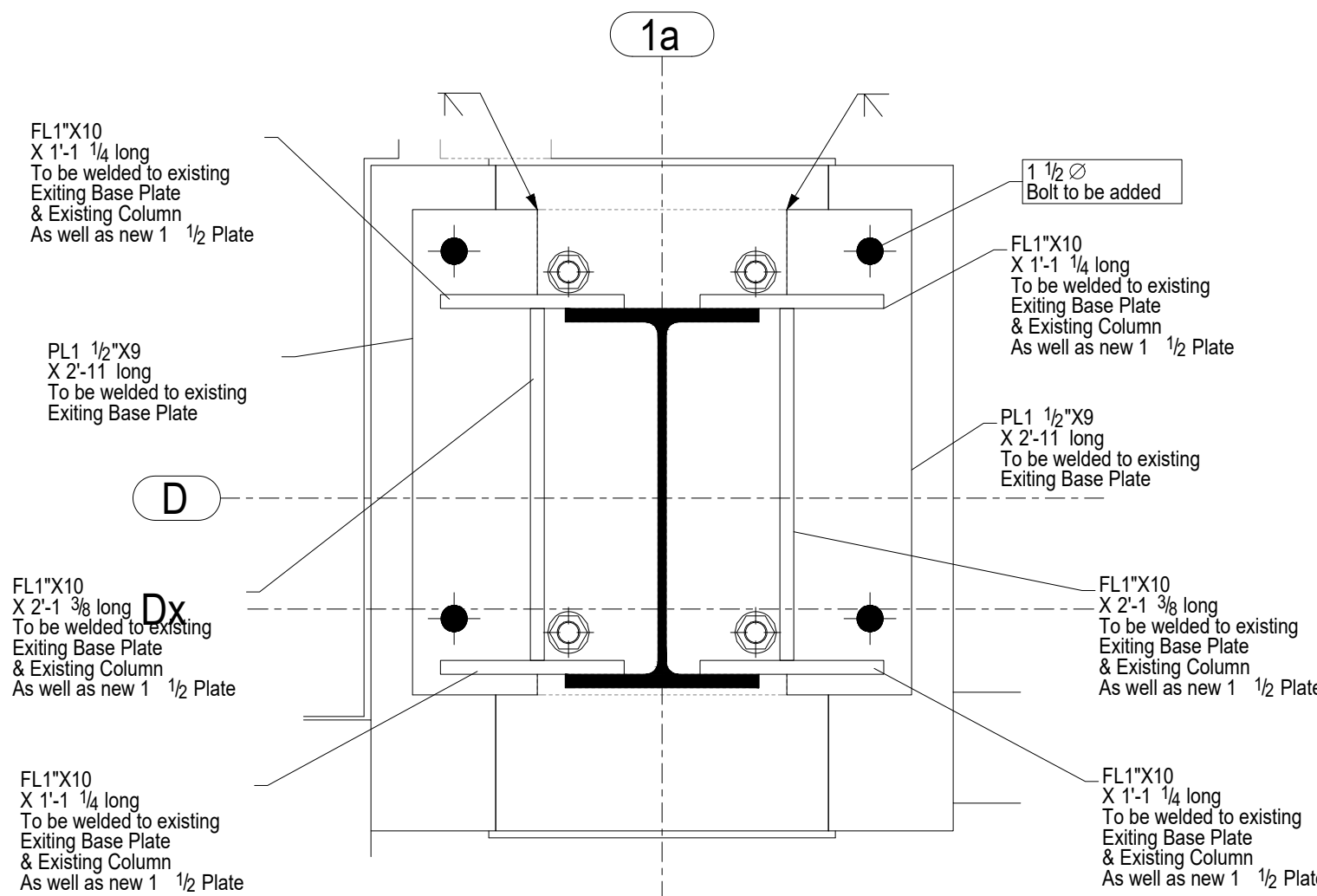
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Drawn By:	D.B.	Checked By:	B.K. - E.J.
Date Created:	28/02/17	Issued For:	TENDER
Date Modified:	24/05/17	Drawing Scale:	N. T. S



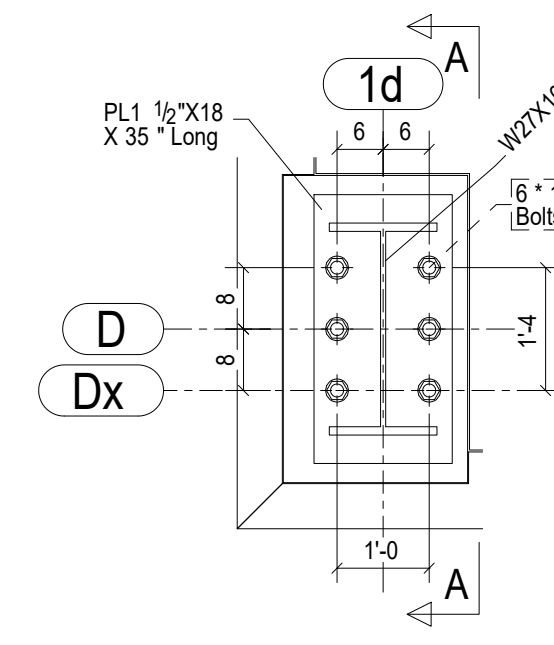
PLAN @ 100'-0"



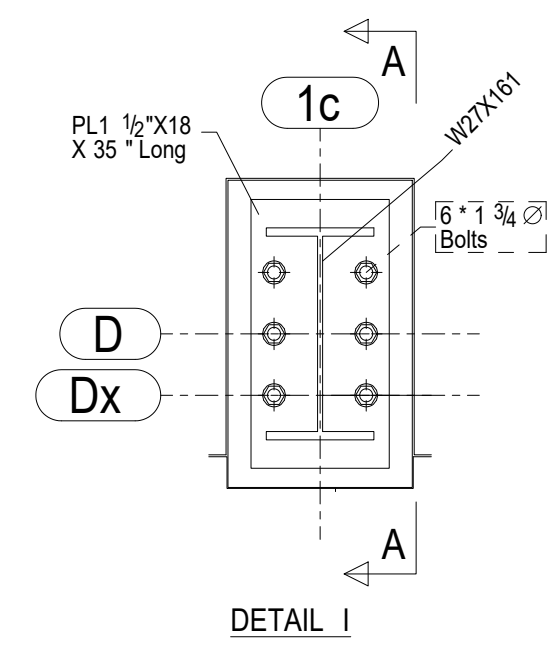
A - A



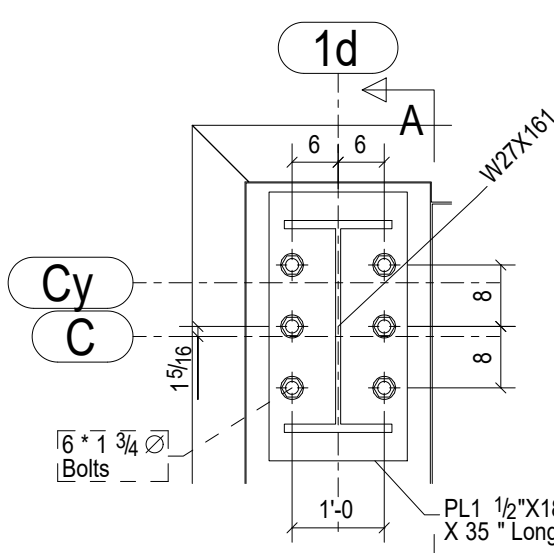
DETAIL C - TYPICAL BASE PLATE DETAIL



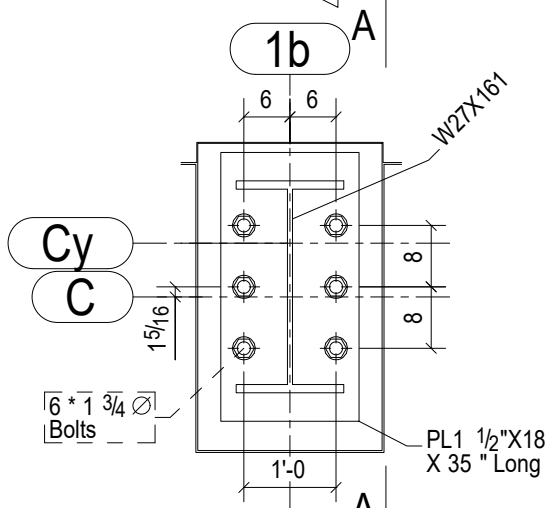
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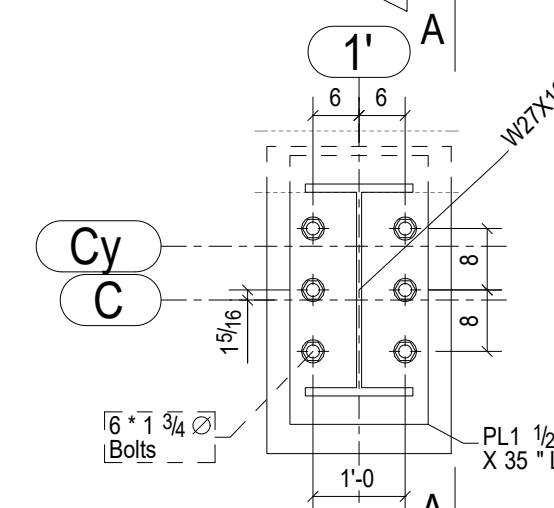
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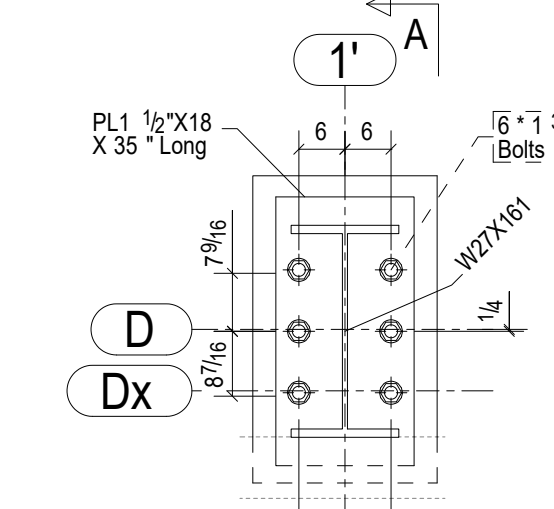
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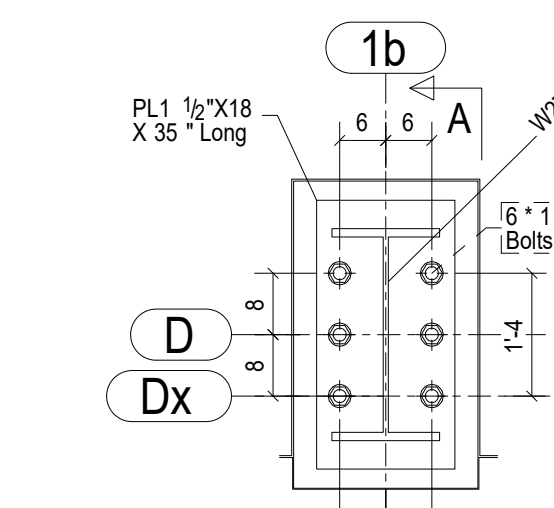
DETAIL E



DETAIL F



DETAIL G



DETAIL H

GENERAL NOTES

Contractor to verify all dimensions prior to fabri

All dimensions on this drawing are to be compared to Architectural

Do not scale these drawings.

DESIGN & SYSTEMS

STRUCTURAL & WELDING ENGINEERS

SUITE 251, 2378 HOLLY LANE,
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+1 (613) 738-7482

Project Architect: **KWC Architects Inc.**
383 Parkdale Ave. Suite 201
Ottawa, Ontario, K1Y 4R4

Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name: **M CON Shop Expansion**
2150 Richardson Side Rd

Project Number: 170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 14/03/17 Issued For: TENDER

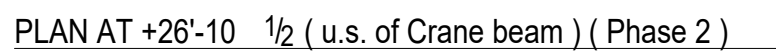
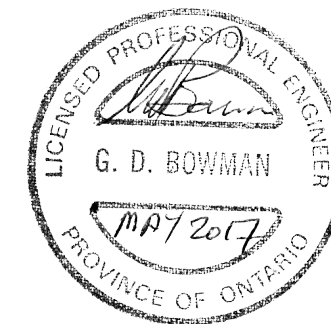
Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name: Phase 2 Expansion
Anchor Bolt Layout

Revision No: 1 Drawing No: S201

Contractor to verify all dimensions prior to fabri
All dimensions on this drawing are to be compared
to Architectural

A circular professional seal for a Licensed Professional Engineer in the Province of Ontario. The seal contains the text "LICENSED PROFESSIONAL ENGINEER" around the top and "PROVINCE OF ONTARIO" around the bottom. In the center, the name "Bhupender Khorol" is printed, with the handwritten license number "14426/17" below it. The seal is stamped over a handwritten signature "Bhupender Khorol" and the date "May 26/17".



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Rev Date	Revision By:	CHK By:

Project Architect

Client Name:

Project Name:

Project Number:

Drawn By

Checked By:

Date Created:

Issued For:

Date Modified:

Drawing Scale:

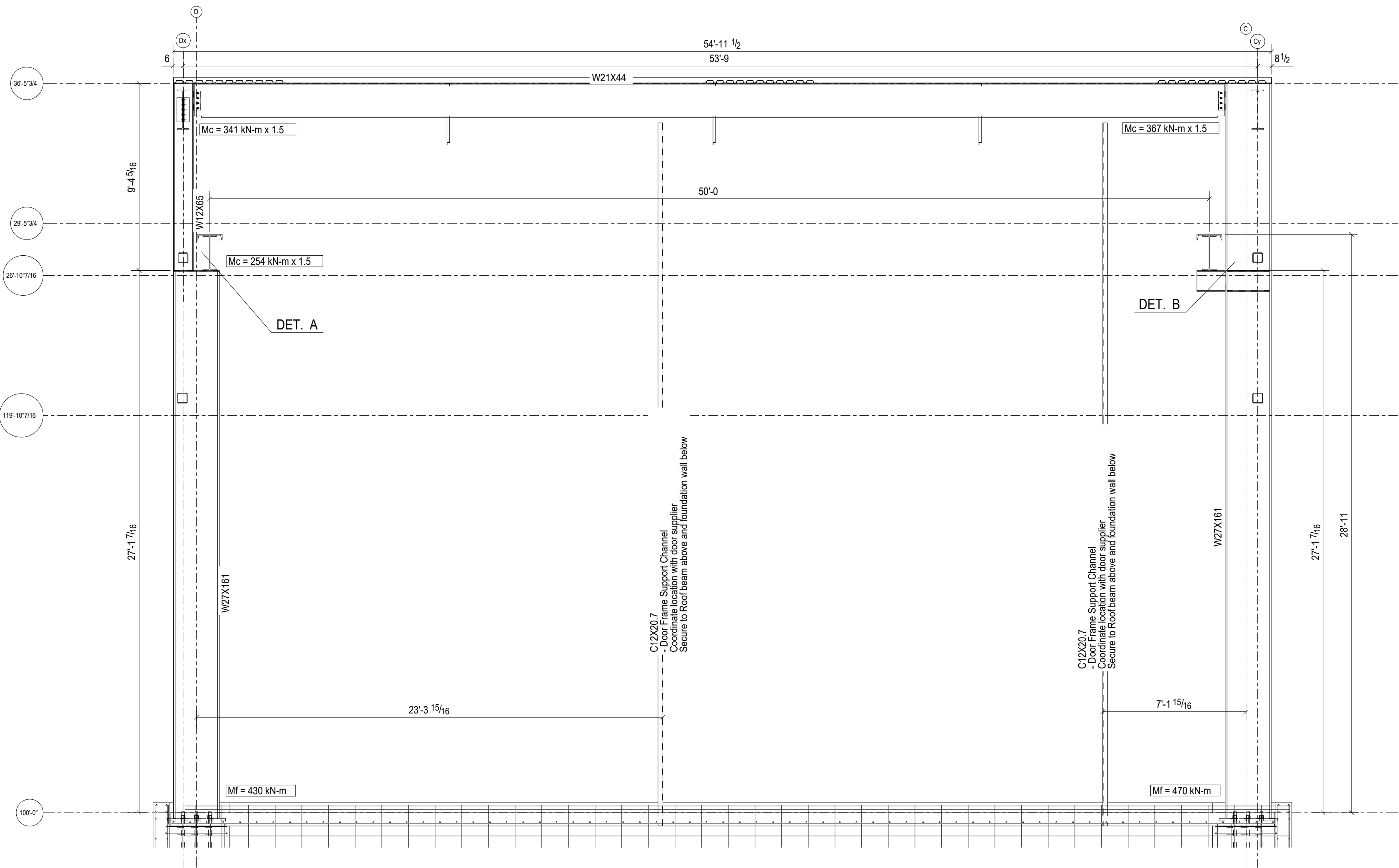
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Revision No:

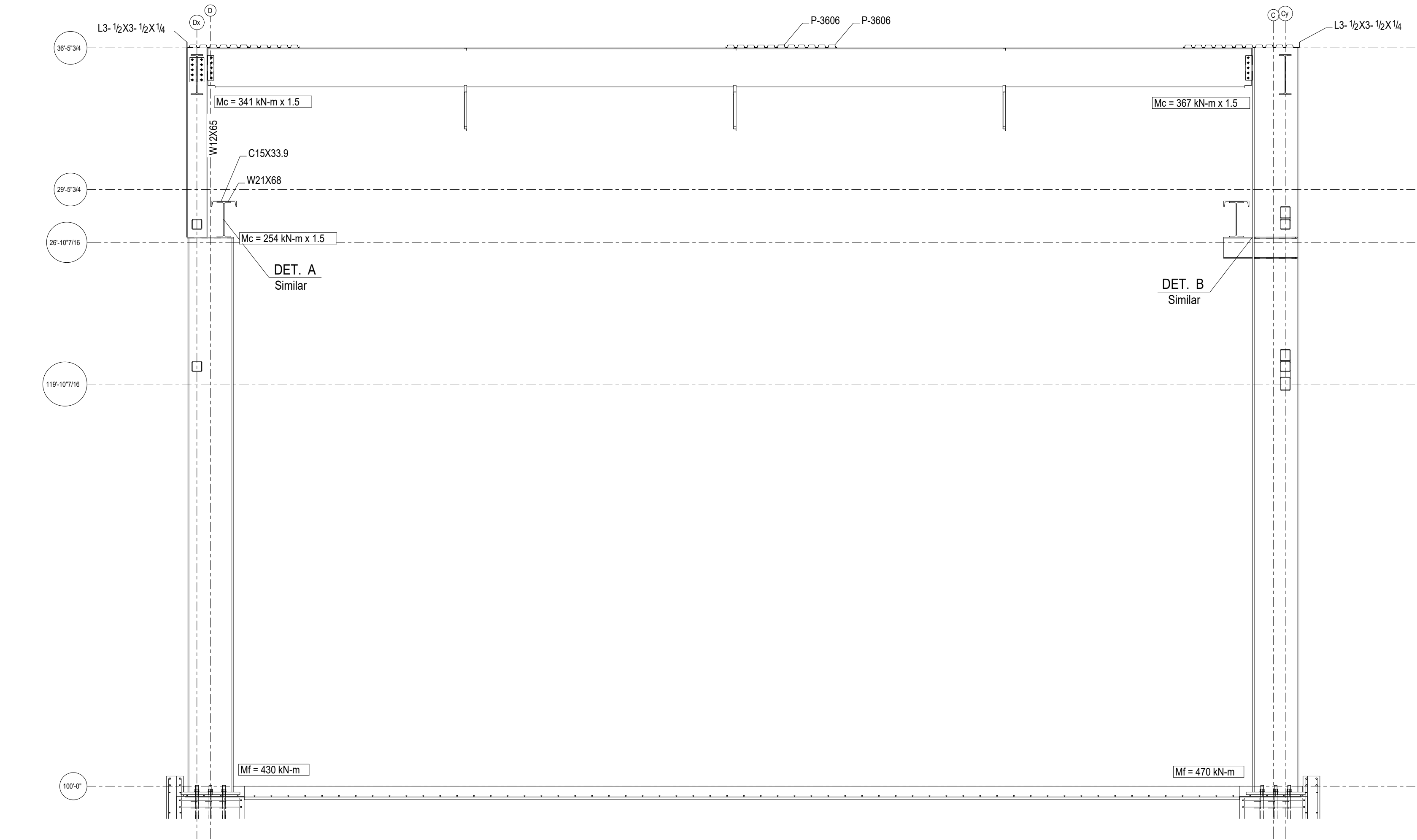
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Drawing No:

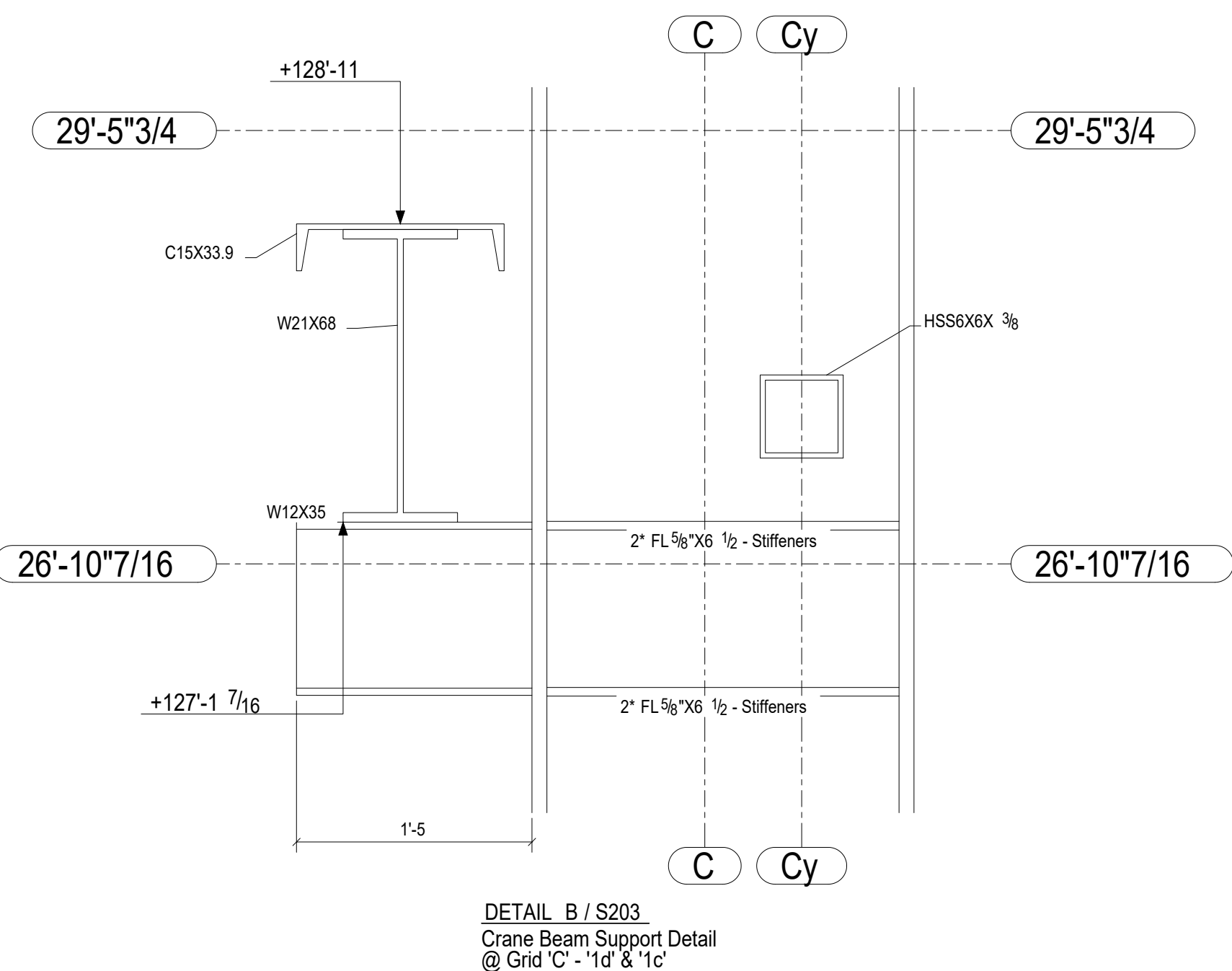
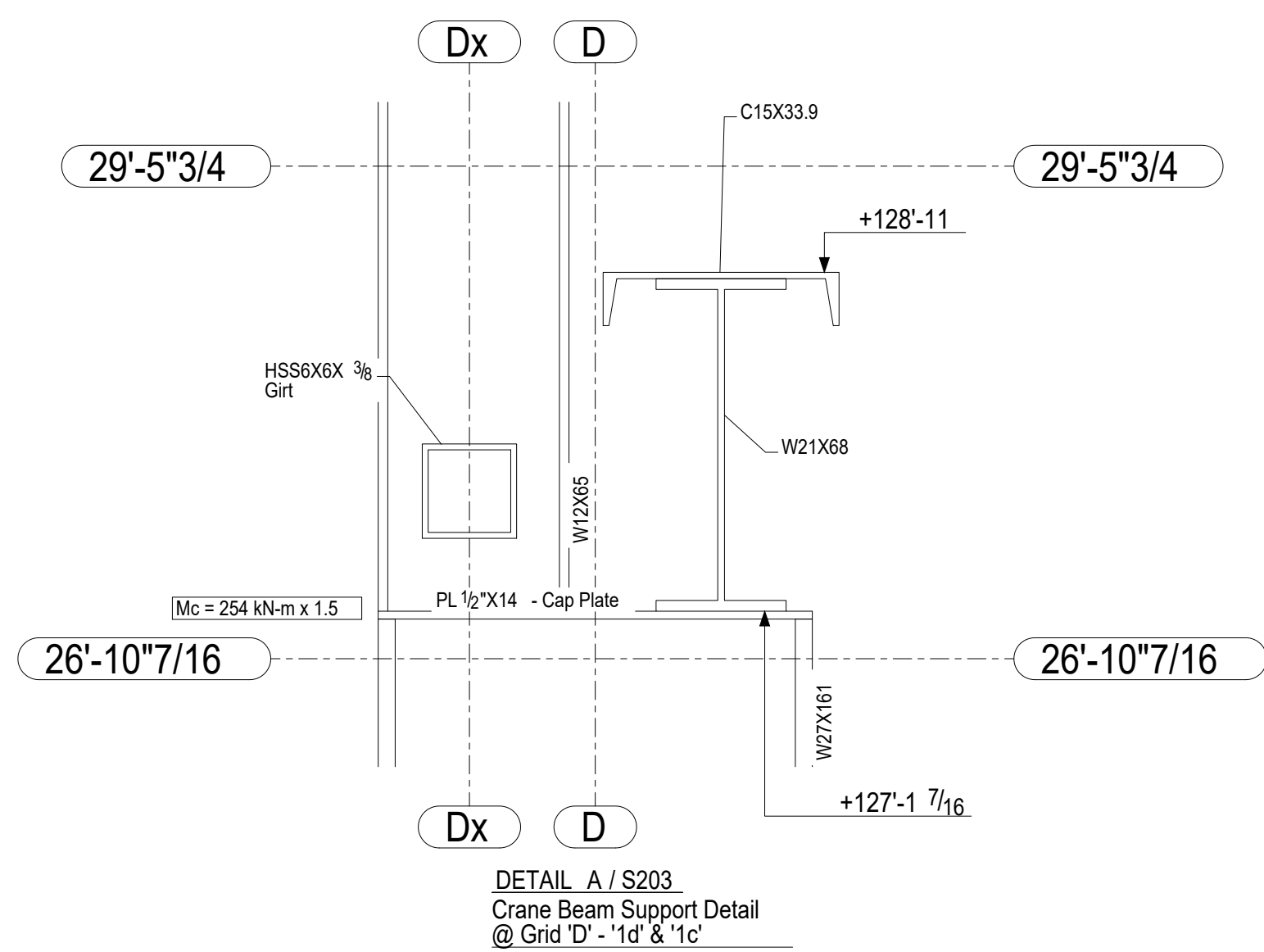
S202



ELEVATION ON GRID 1d



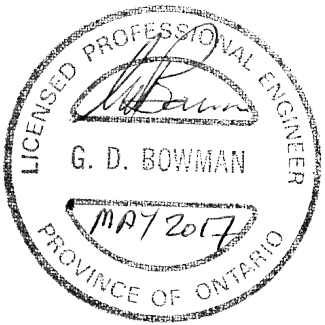
ELEVATION ON GRID 1c



GENERAL NOTES

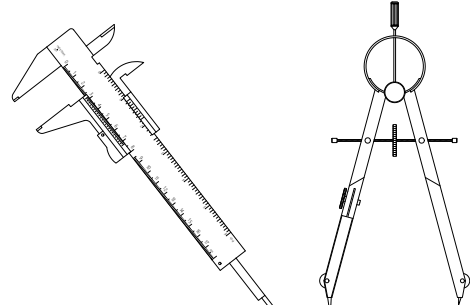
Contractor to verify all dimensions prior to fabri
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1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
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Client Name:
M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

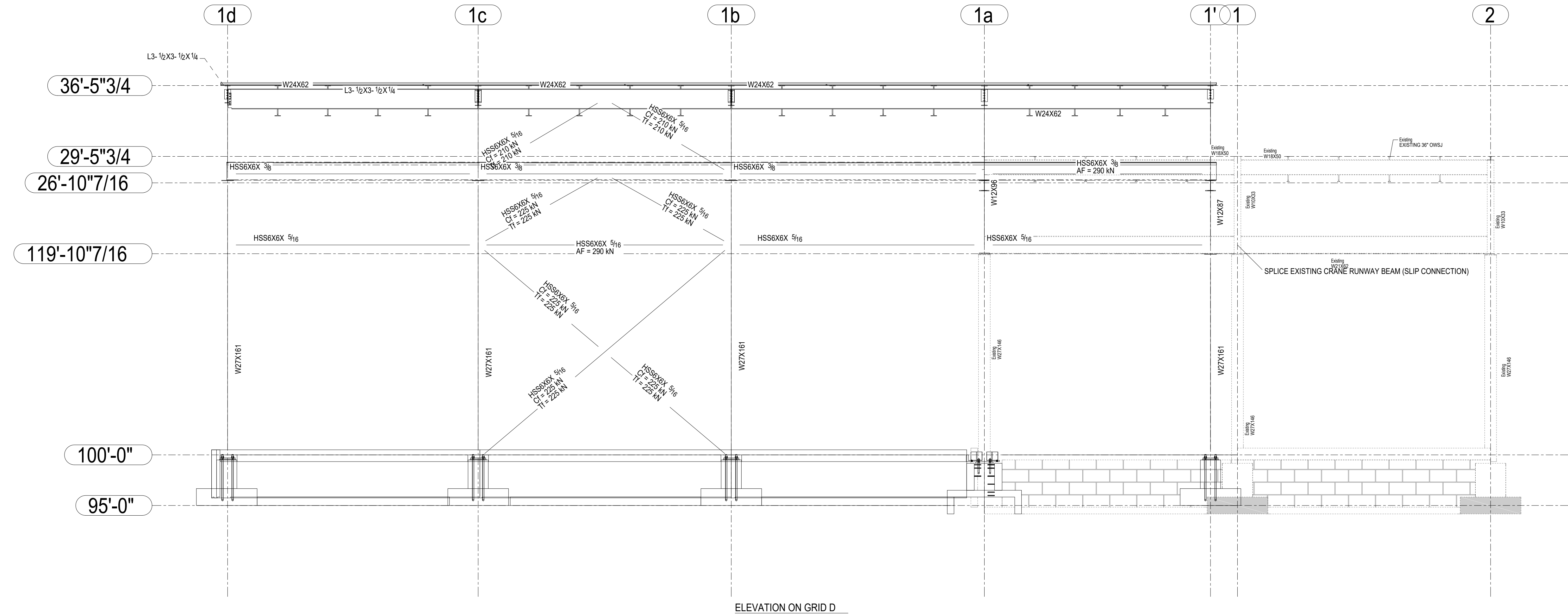
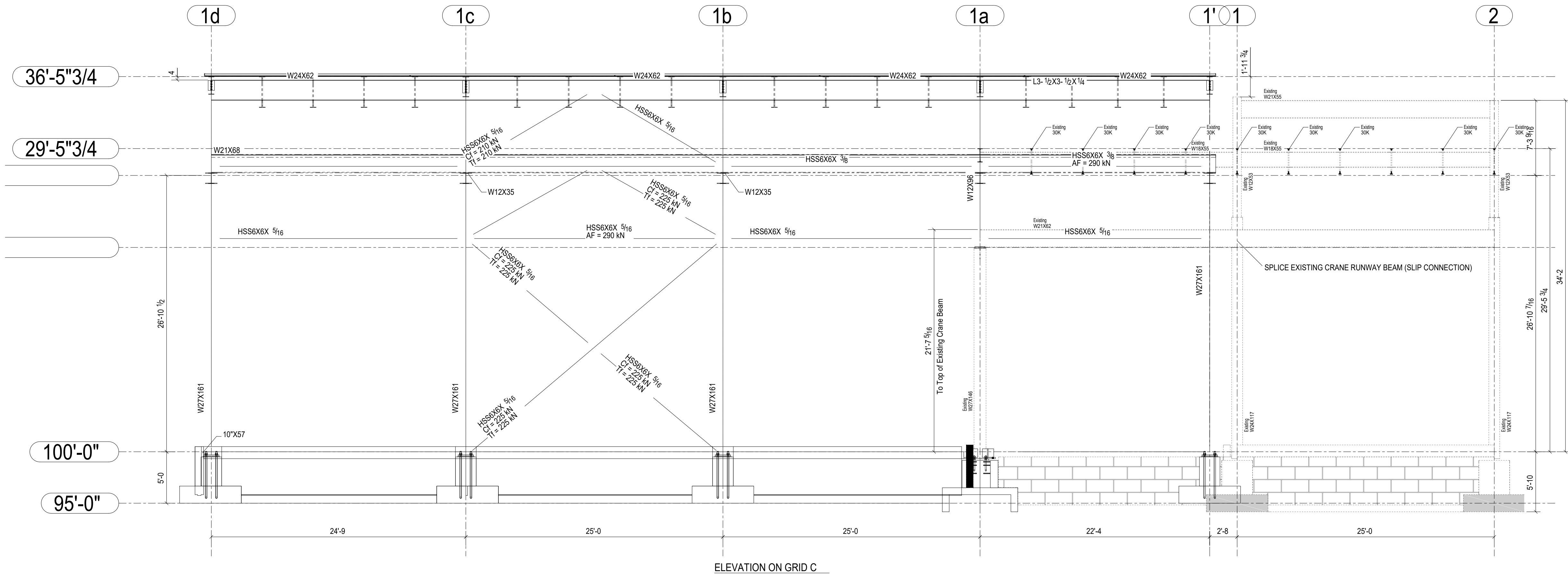
Project Number:
170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 14/03/17 Issued For: TENDER

Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
Phase 2 Expansion
Elevation at Grid '1d'
Elevation at Grid '1c'

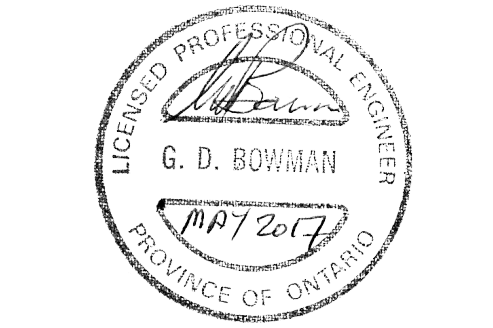
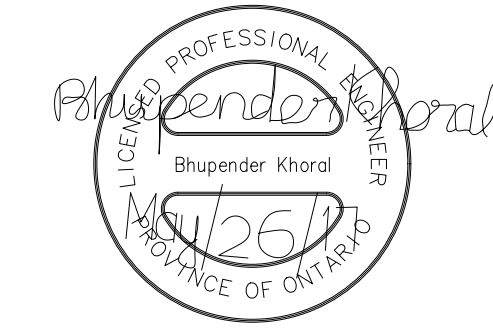


GENERAL NOTES

Contractor to verify all dimensions prior to fabri

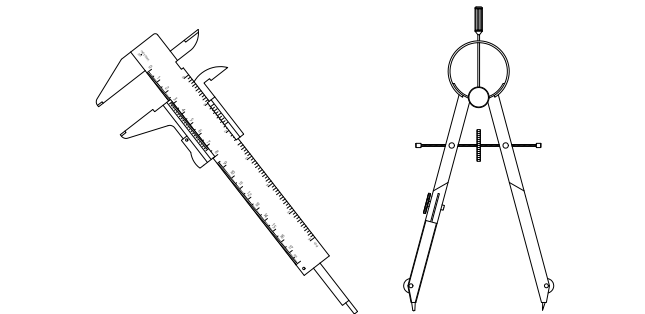
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1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

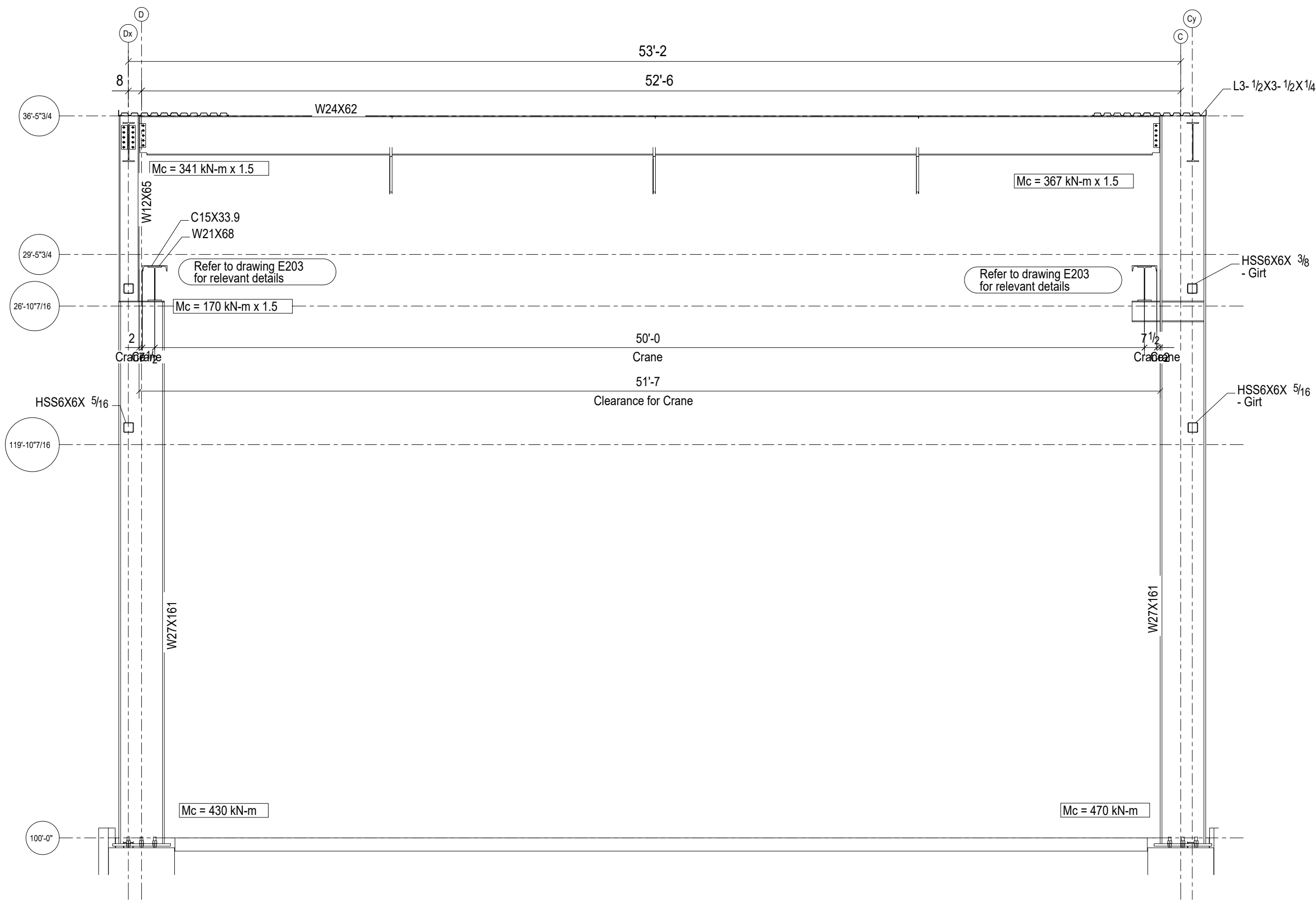
Project Number: 170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

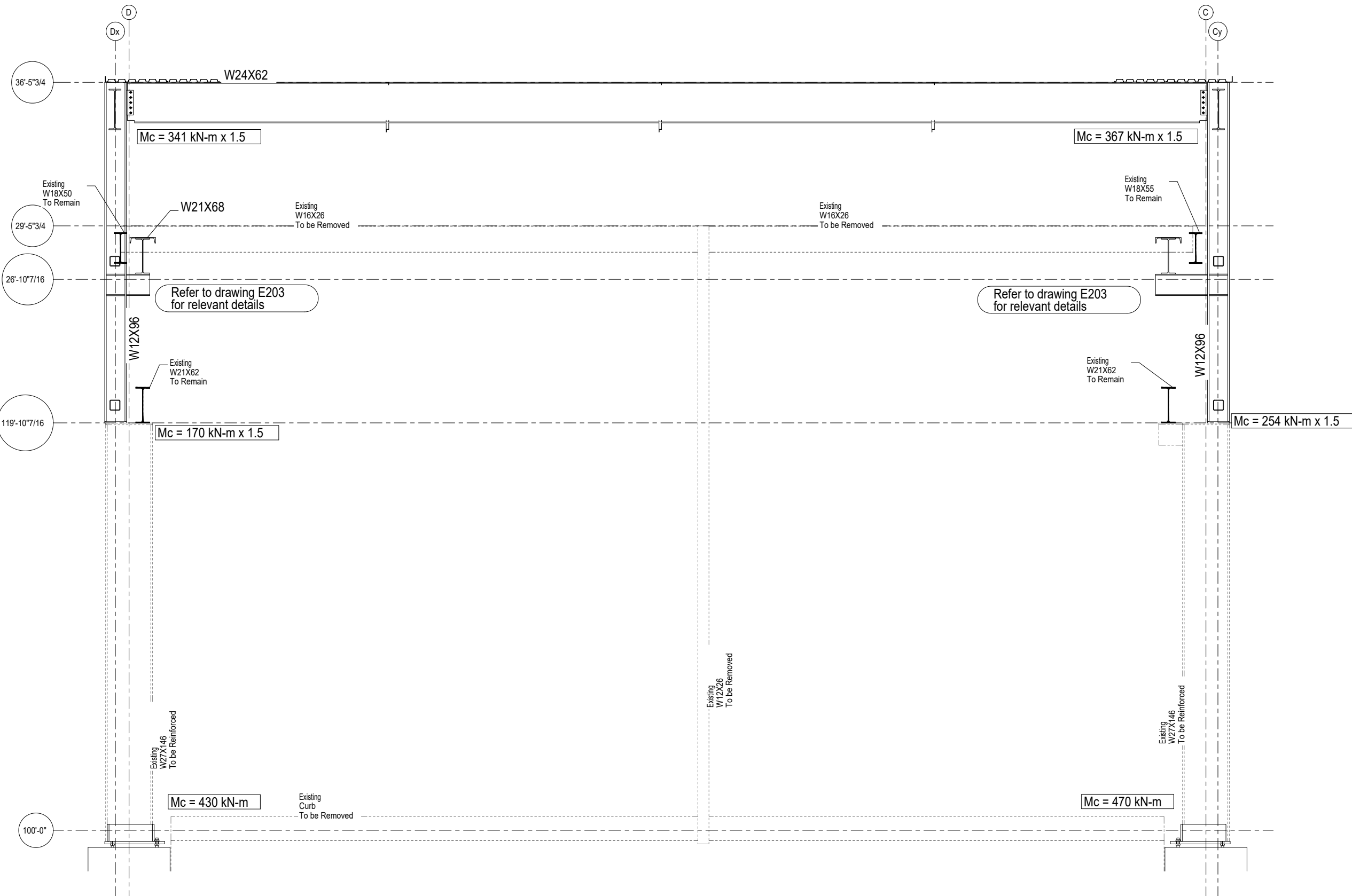
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Date Modified: 25/05/17 Drawing Scale: N. T. S

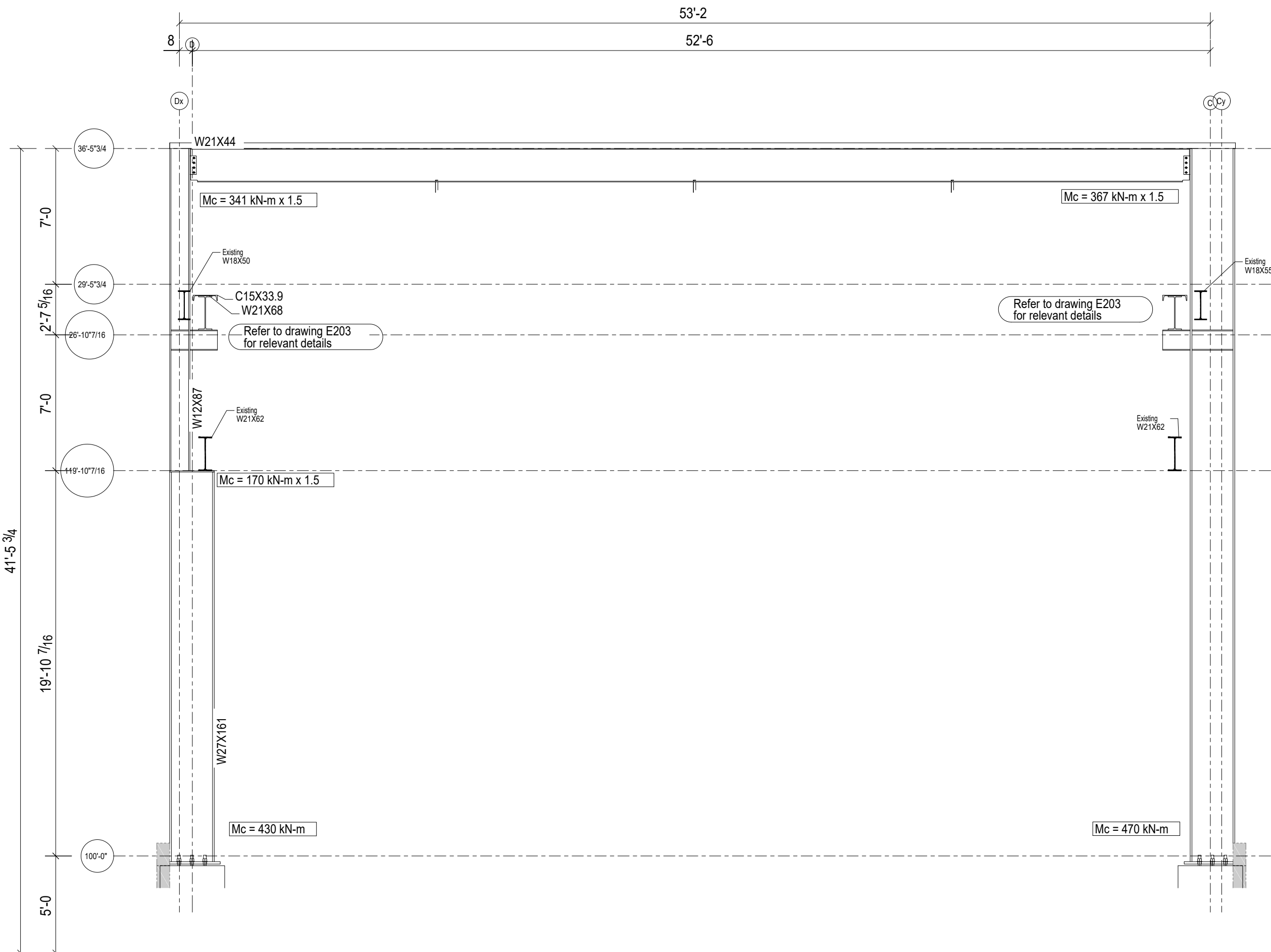
Drawing Name:
Phase 2 Expansion
Elevation at Grid 'C'
Elevation at Grid 'D'



ELEVATION ON GRID 1b



ELEVATION ON GRID 1a

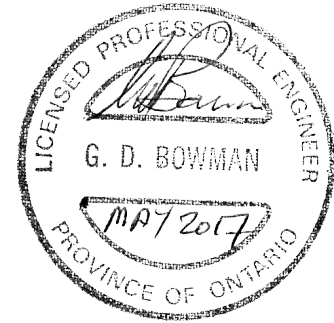
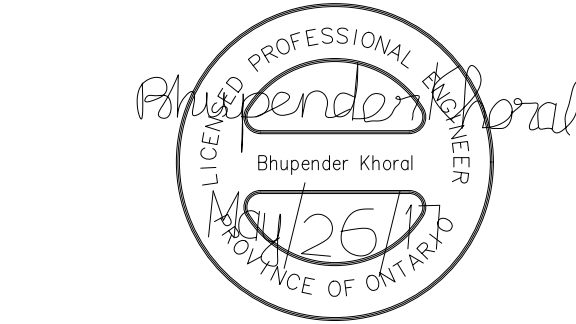


ELEVATION ON GRID 1'

GENERAL NOTES

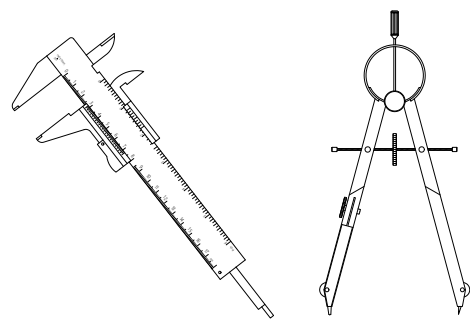
Contractor to verify all dimensions prior to fabri
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1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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Client Name:

M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:

M CON Shop Expansion
2150 Richardson Side Rd

Project Number:

170224-01

Drawn By:

D.B.

Checked By:

B.K. - E.J.

Date Created:

14/03/17

Issued For:

TENDER

Date Modified:

25/05/17

Drawing Scale:

N. T. S

Drawing Name:

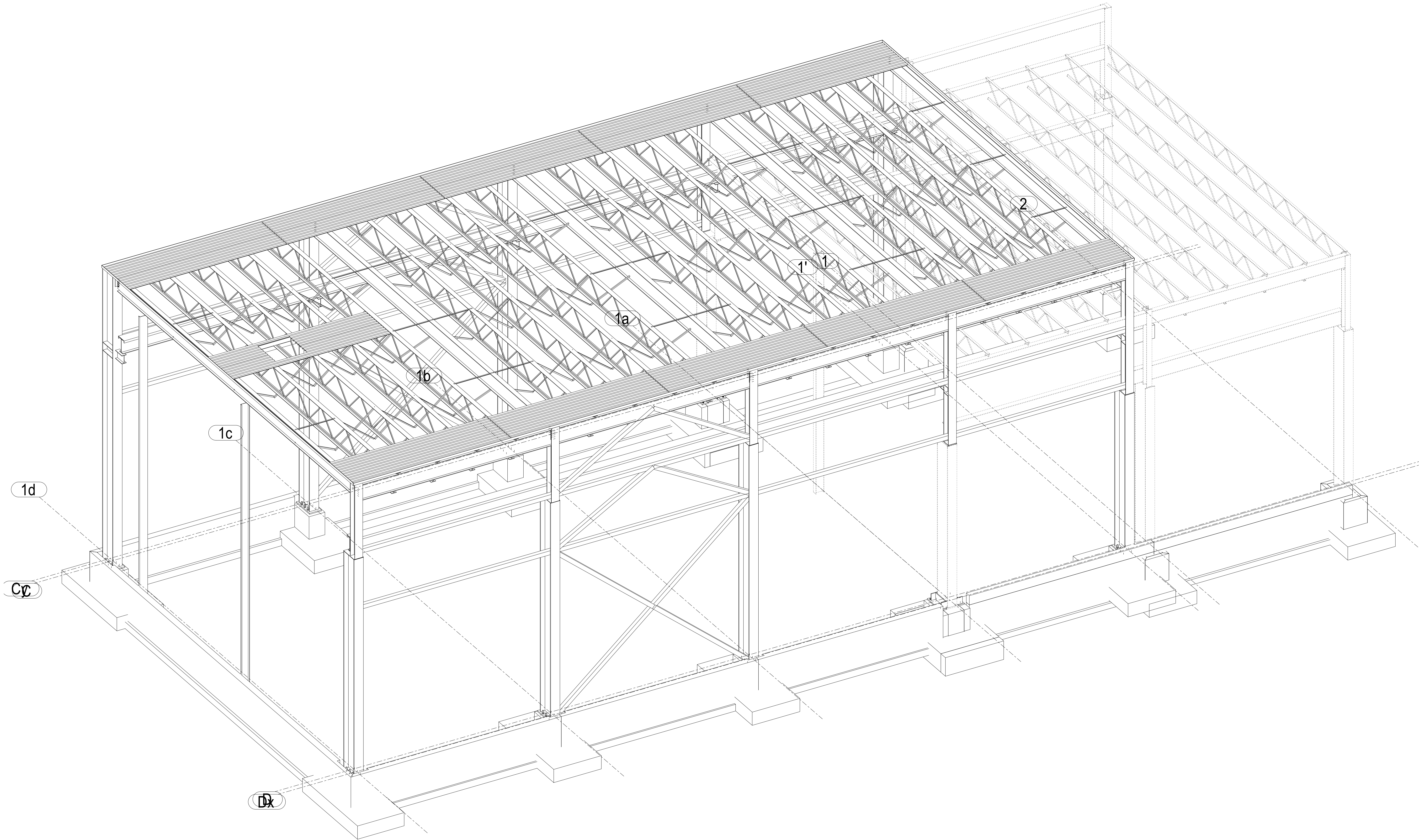
Phase 2 Expansion
Elevation at Grid '1b' & '1c'
Elevation at Grid '1'

Revision No:

1

Drawing No:

S205

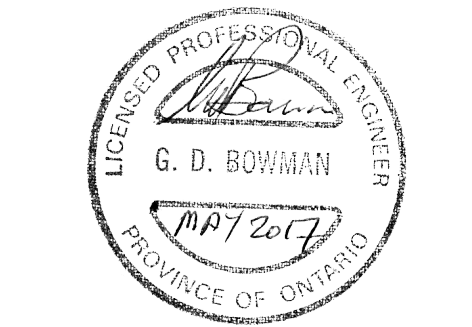
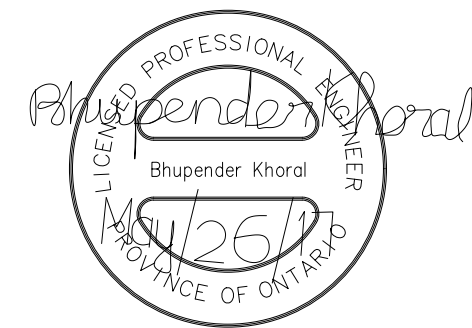


3D View @ 100'-0" - Top of Slab on Grade
Scale: 1:60

GENERAL NOTES

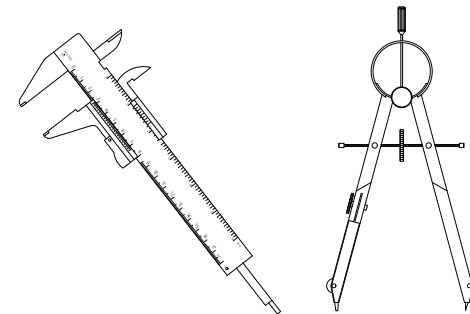
Contractor to verify all dimensions prior to fabri
All dimensions on this drawing are to be compared
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1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
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SUITE 251, 2378 HOLLY LANE,
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Project Architect: **KWC Architects Inc.**
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Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
**M CON Shop Expansion
2150 Richardson Side Rd**

Project Number: 170224-01

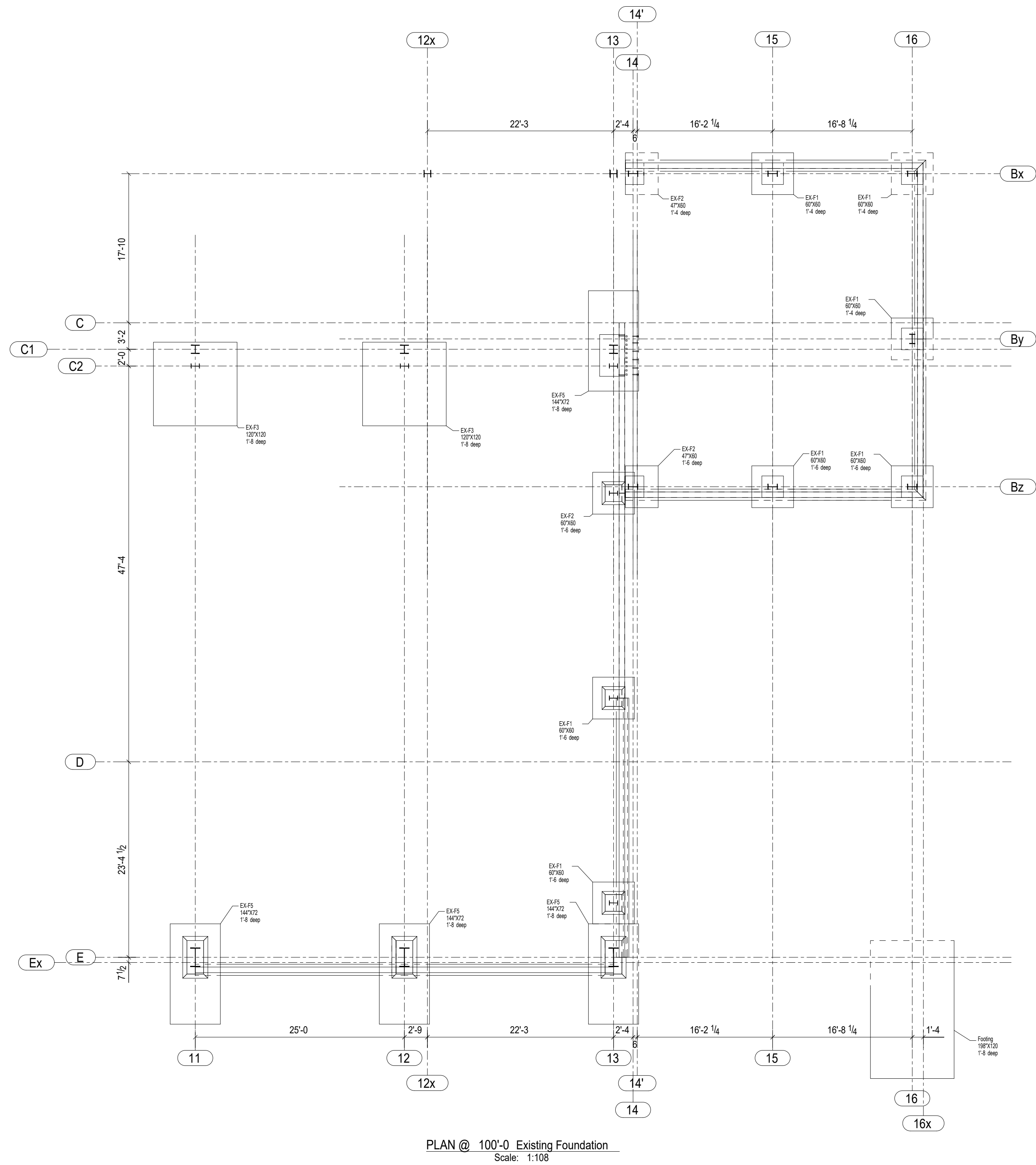
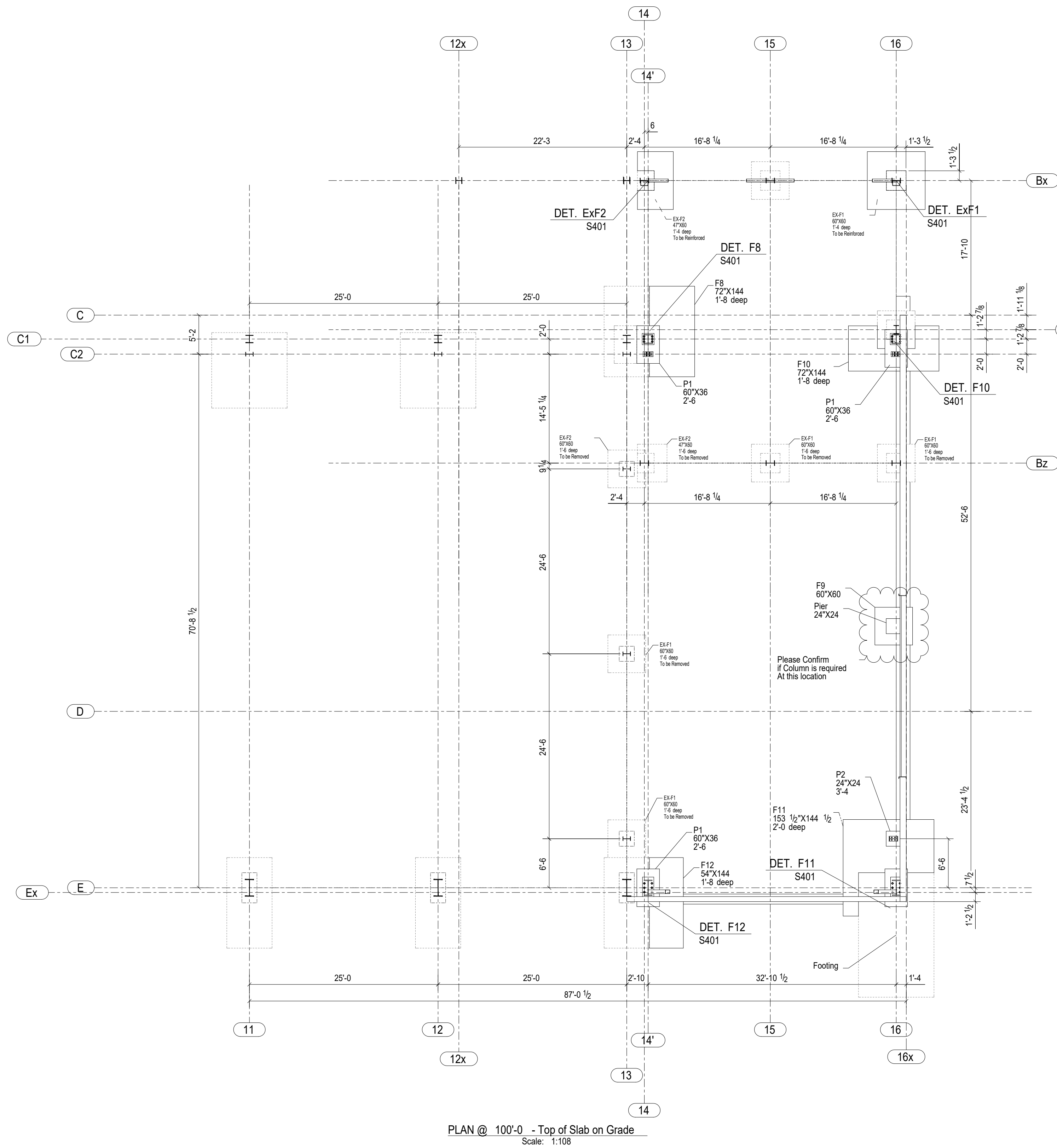
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Date Created: 23/05/17 Issued For: TENDER

Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
**Phase 2 Expansion
3D View**

Revision No: 1 Drawing No: **S206**

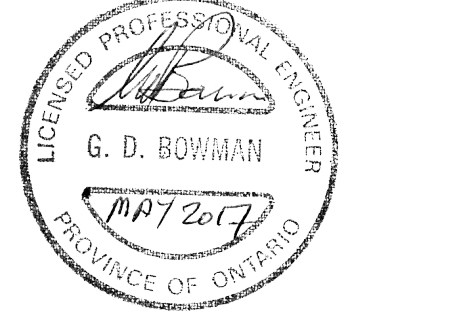


GENERAL NOTES

Contractor to verify all dimensions prior to fabri

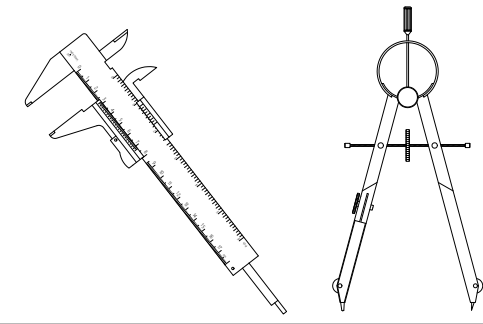
All dimensions on this drawing are to be compared to Architectural

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1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
OTTAWA, ON K1V 7P1
+1 (613) 738-7462

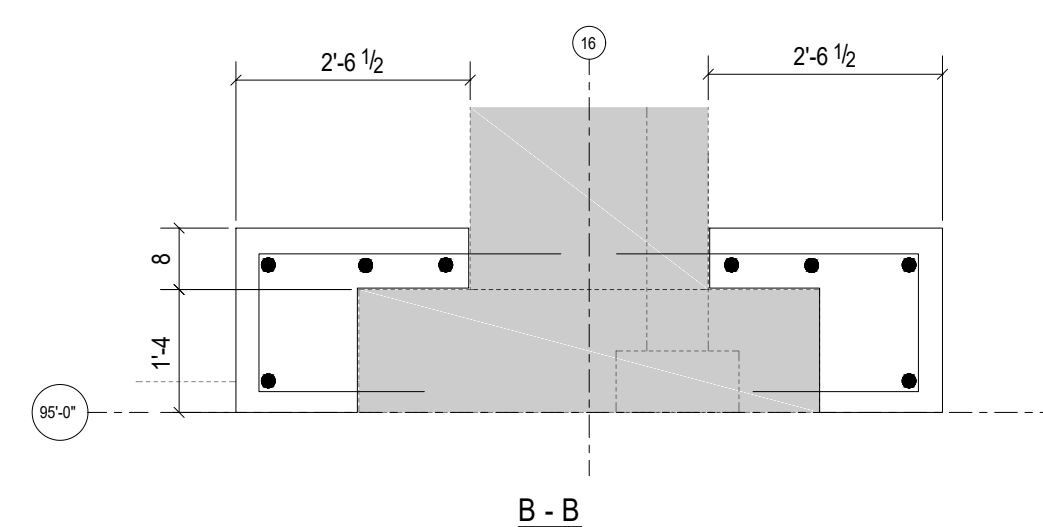
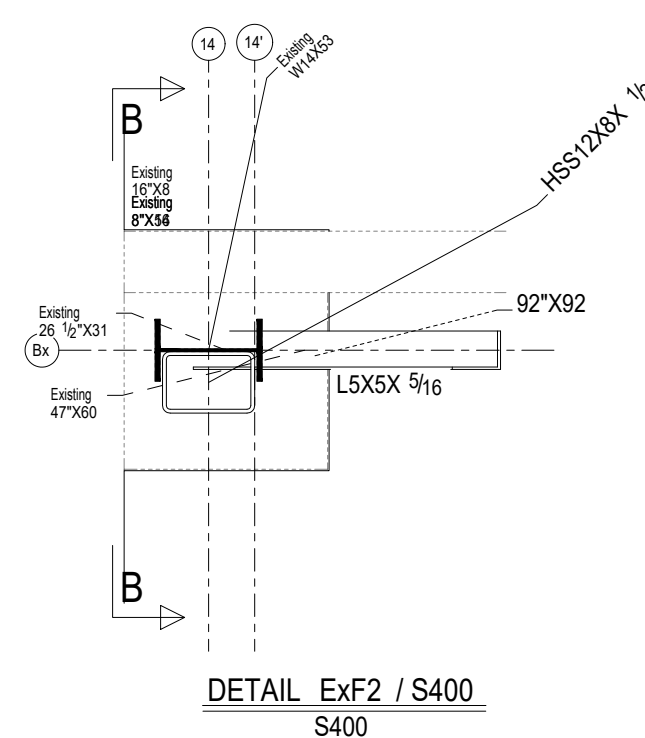
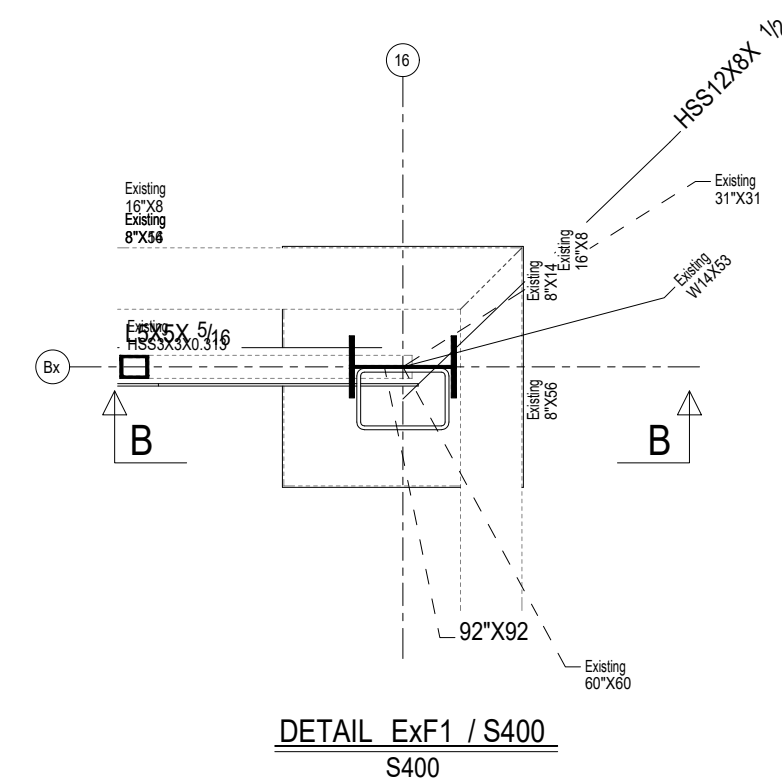
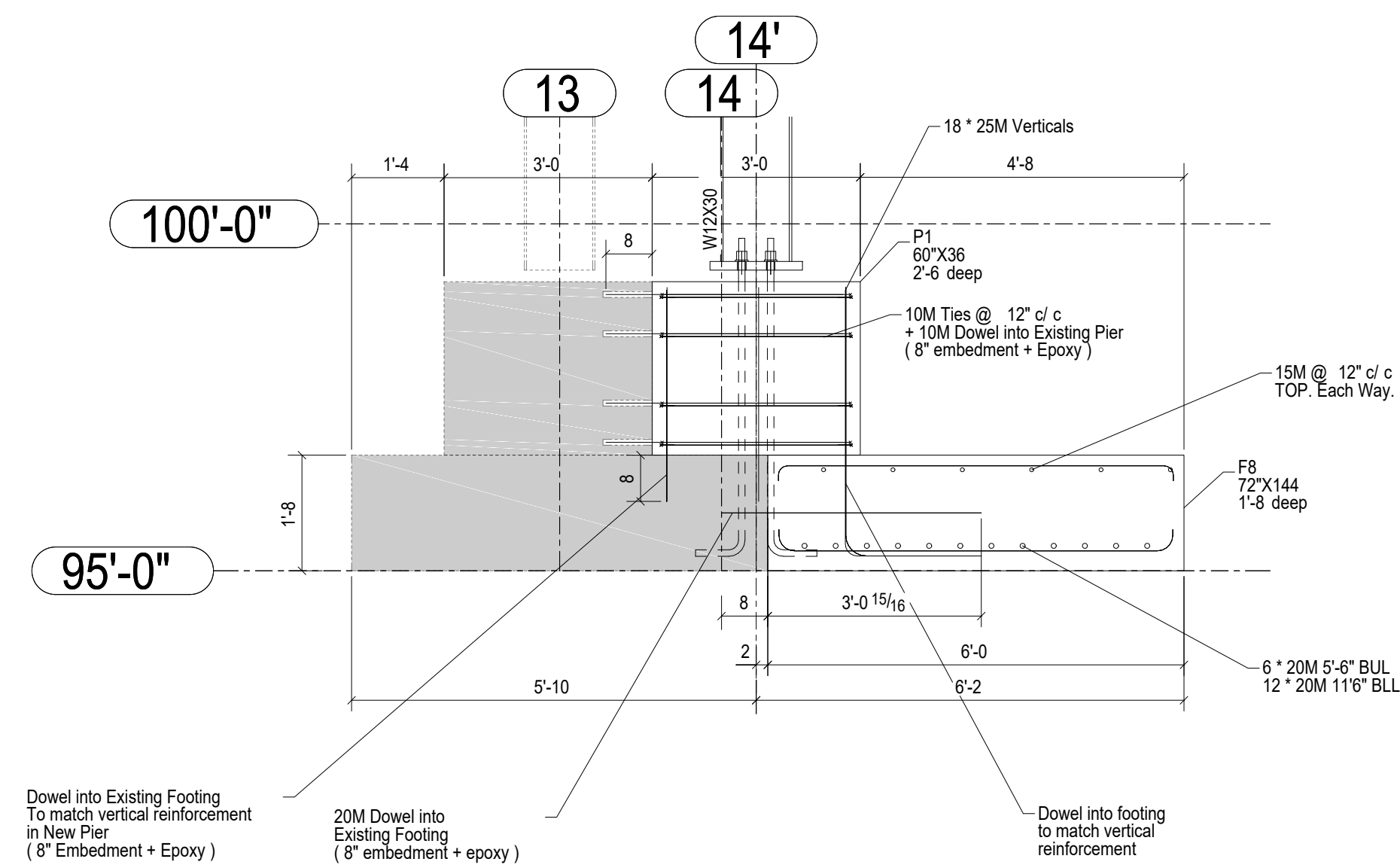
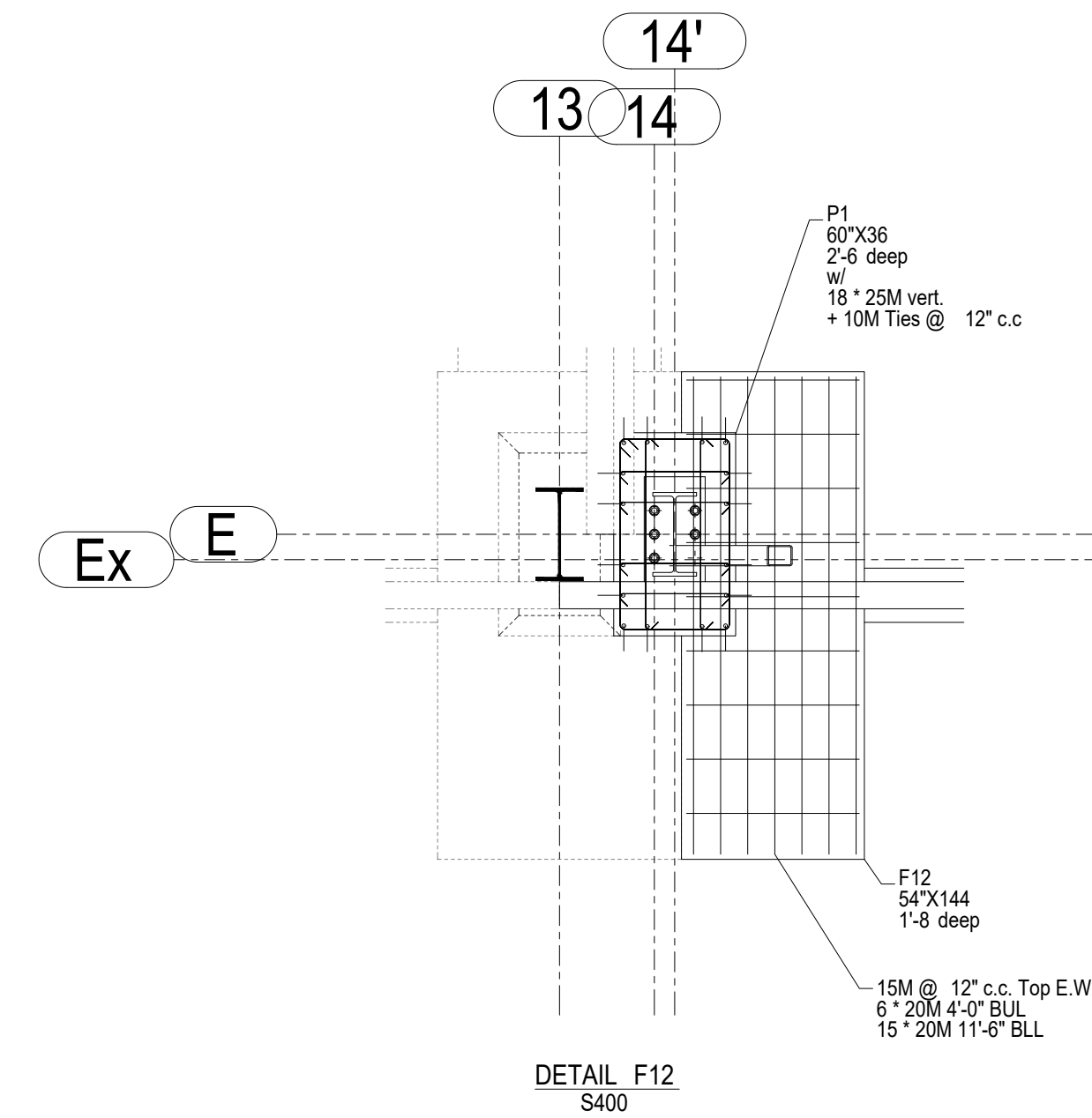
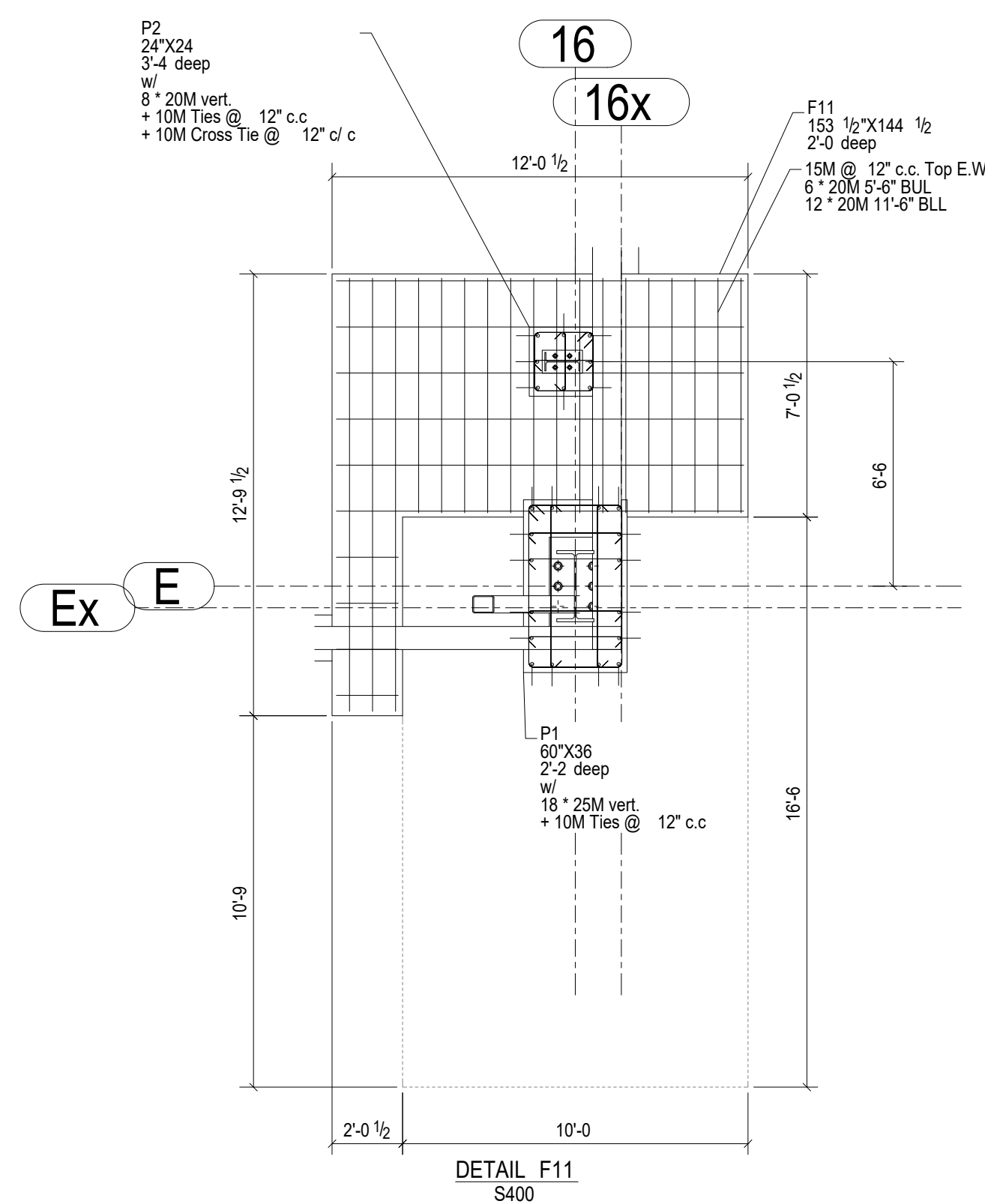
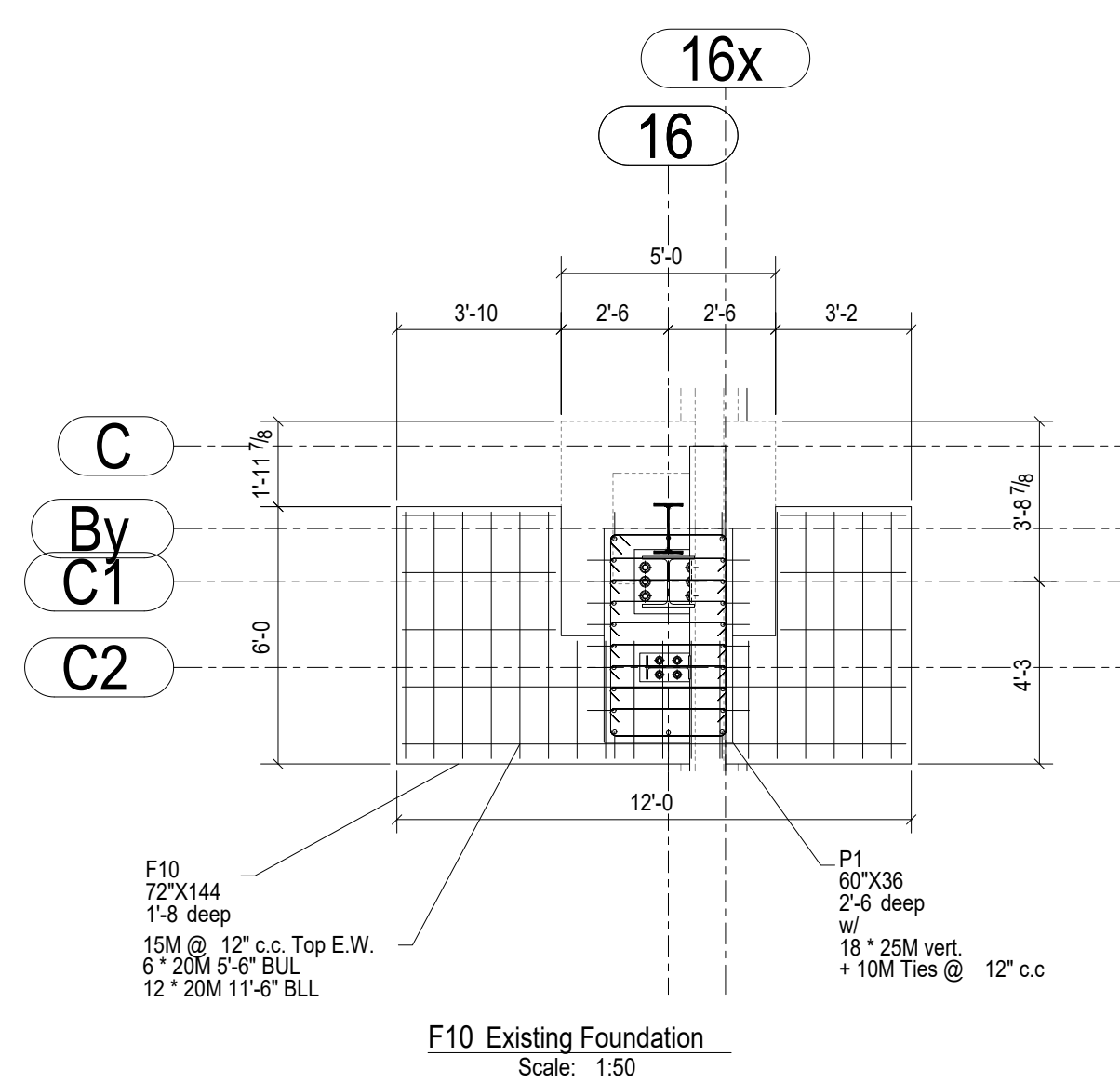
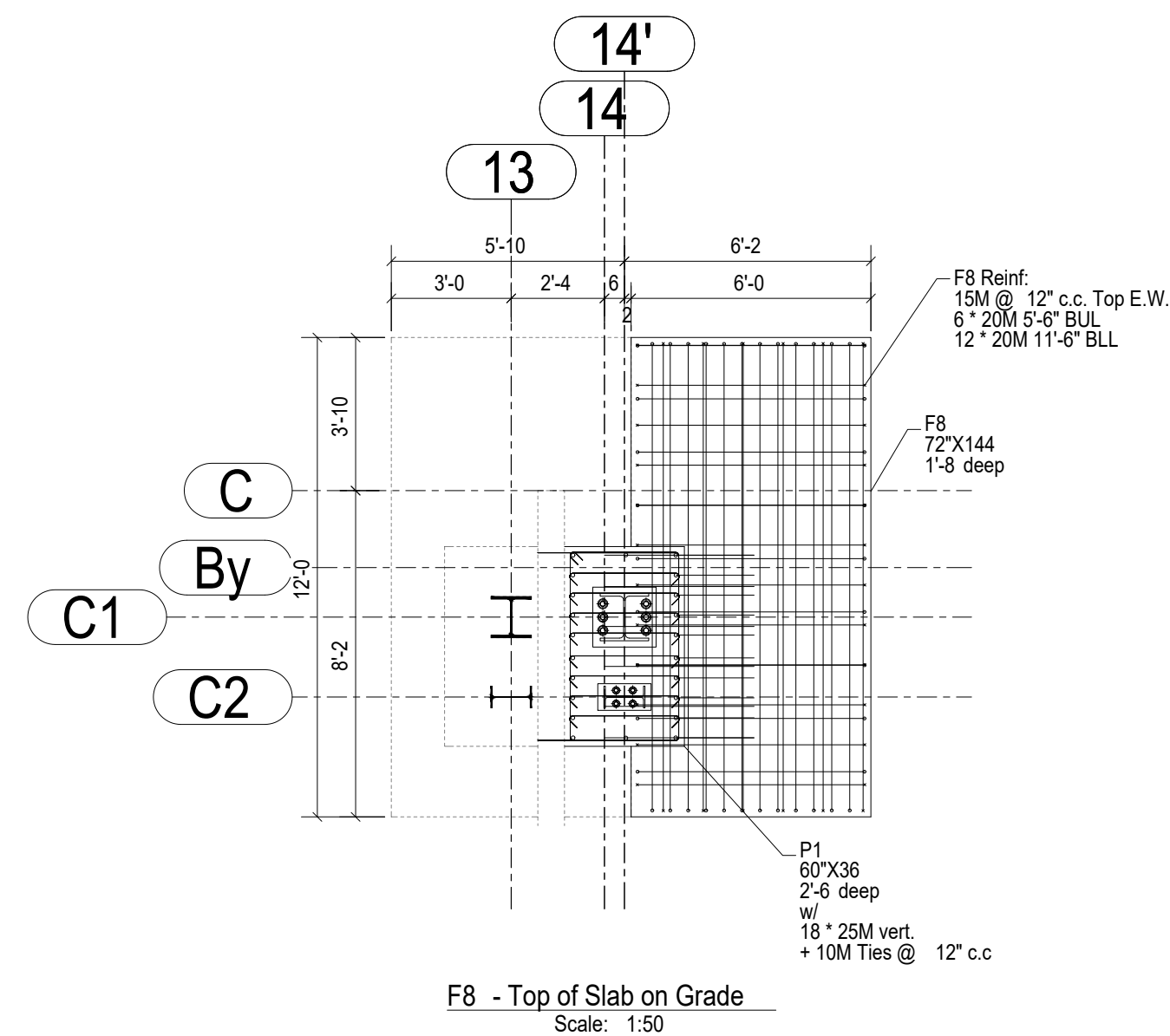
Project Architect: **KWC Architects Inc.**
383 Parkdale Ave. Suite 201
Ottawa, Ontario, K1Y 4R4

Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

Project Number:		170224-01	
Drawn By: D.B.		Checked By: B.K. - E.J.	
Date Created: 28/02/17		Issued For: TENDER	
Date Modified: 25/05/17		Drawing Scale: N. T. S	

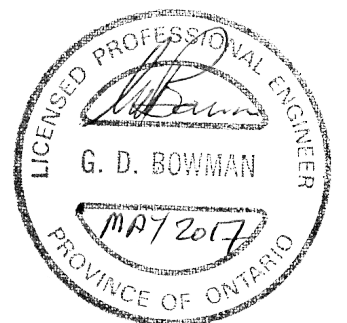
Drawing Name:
Phase 4 Expansion
Foundation Plan
New & Existing



GENERAL NOTES

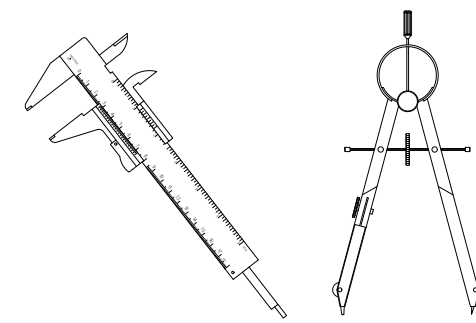
Contractor to verify all dimensions prior to fabri
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1	For Tender	05/25/2017	D.B.	B.K. - E.I.
0	For Permit	03/17/2017	D.B.	E.I.
Revision Number	Revision Description	Rev Date	Revision By:	CHK By:

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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Client Name:

M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:

M CON Shop Expansion
2150 Richardson Side Rd

Project Number:

170224-01

Drawn By

D.B.

Checked By:	
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B.K. - E.J.

Date Created

16/03/17

Issued For:	
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TENDER

Date Modified

25/05/17

Drawing Scale

N. T. S.

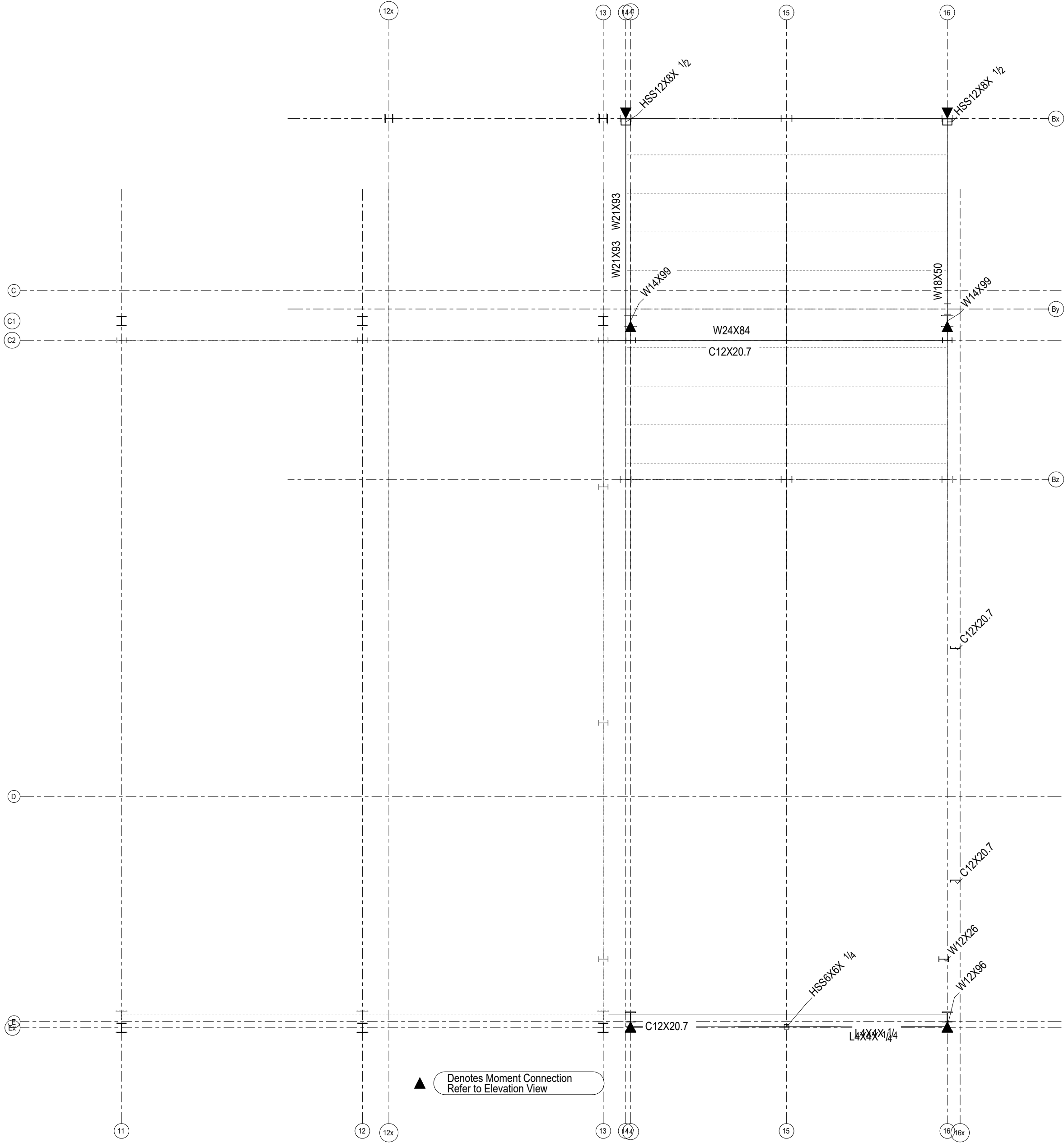
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Phase 4 Expansion Foundation Details

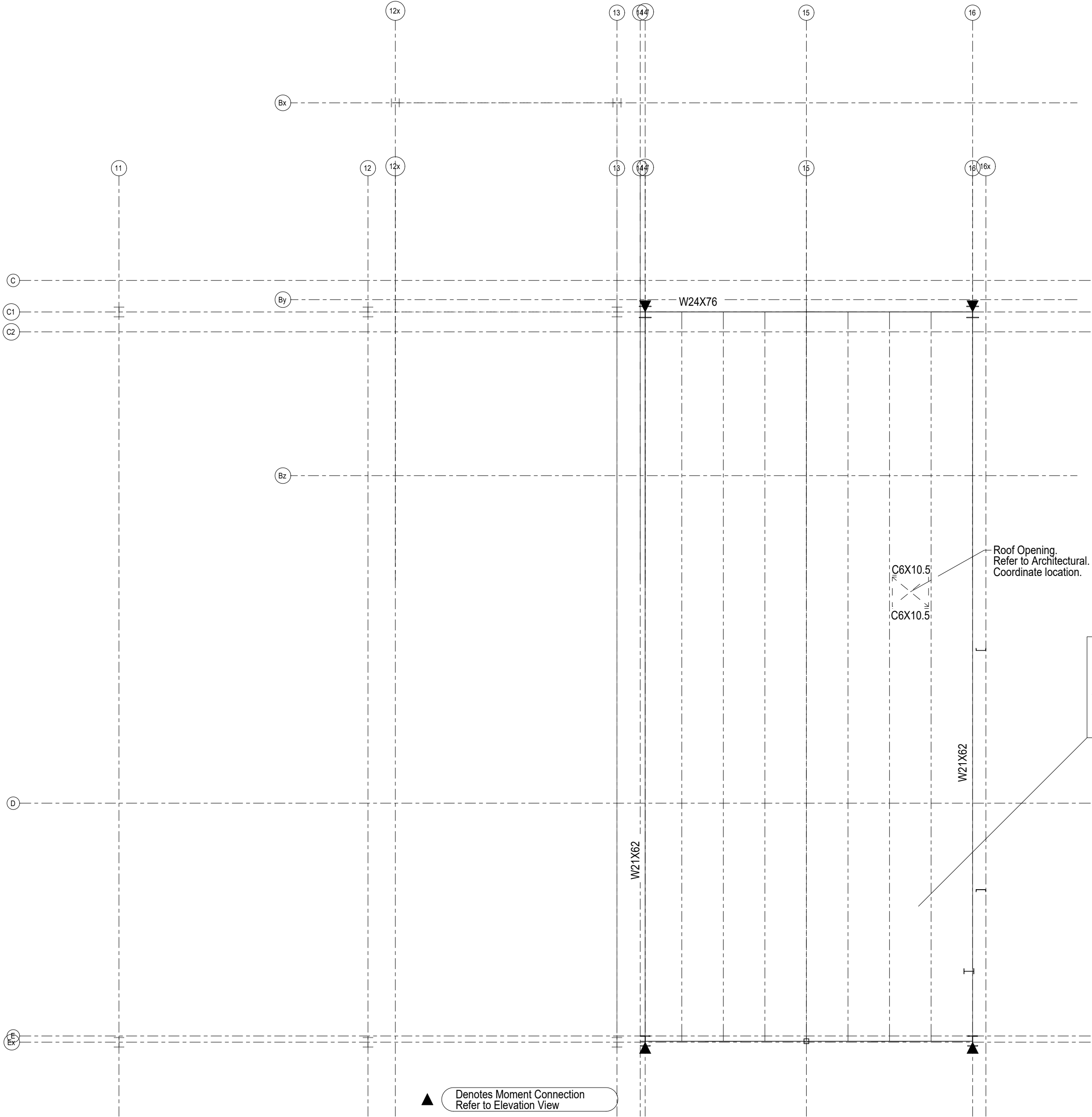
Revision No:

Drawing No:

S401



PLAN @ 122'-6 9/16 (u.s. New Crane Beam) (Phase 4)

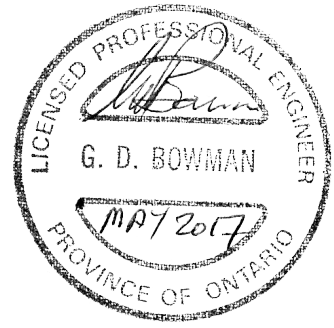
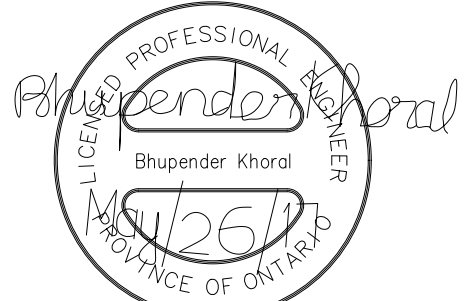


PLAN @ 134.50' (Top of OWSJ HP)

PHASE 4 ROOF DECKING
20 GAUGE 1.5"x6" STEEL DECK
FASTEN STEEL DECK TO SUPPORTING STEEL FRAMING USING HILTI
X-HSN-24 FASTENERS WITH A 36/5 PATTERN (INTERIOR)
PERIMETER FASTENERS @ 6" O/C
SIDE LAP SCREWS HILTI S-SLC @ 6" O/C
PERIMETER ANGLE (L3.5X3.5X1/4) *TO BE WELDED CONTINUOUS

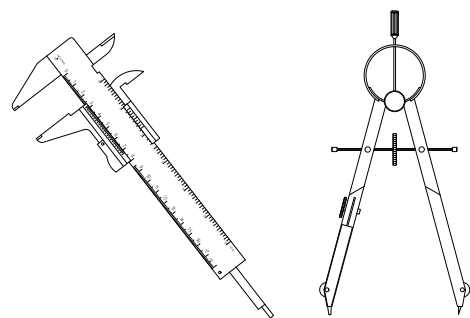
GENERAL NOTES
Contractor to verify all dimensions prior to fabri
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Do not scale these drawings.



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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Client Name:
M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

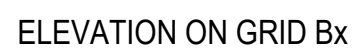
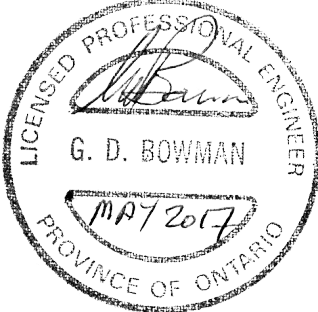
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Drawn By: D.B.		Checked By: B.K. - E.J.	
Date Created: 16/03/17		Issued For: TENDER	
Date Modified: 25/05/17		Drawing Scale: N. T. S	

Drawing Name:
Phase 4 Expansion
Low Roof Plan
High Roof Plan

Revision No:	1	Drawing No:	S403
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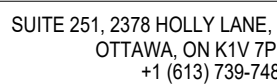
Contractor to verify all dimensions prior to fabri
All dimensions on this drawing are to be compared
to Architectural

Do not scale these drawings



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Rev Date	Revision By:	CHK By:

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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Client Name:

M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:

M CON Shop Expansion
2150 Richardson Side Rd

Project Number:

170224-01

Drawn By

D.B.

Checked By:

By: B.K. - E.J.

Date Created

16/03/17

Issued For:

TENDER

Date Modified

25/05/17

Drawing Scale

Scale: N.T. 5

Drawing Name

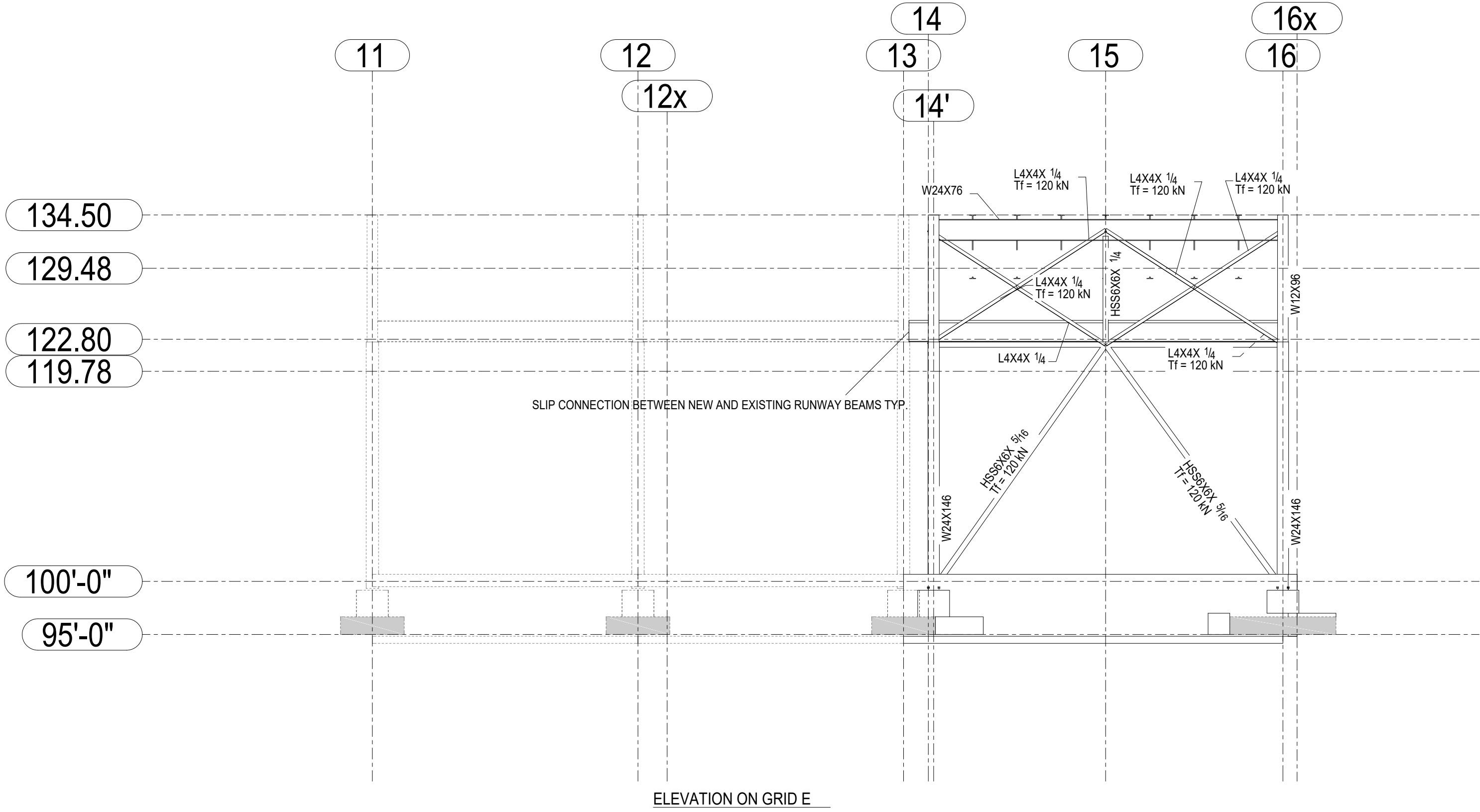
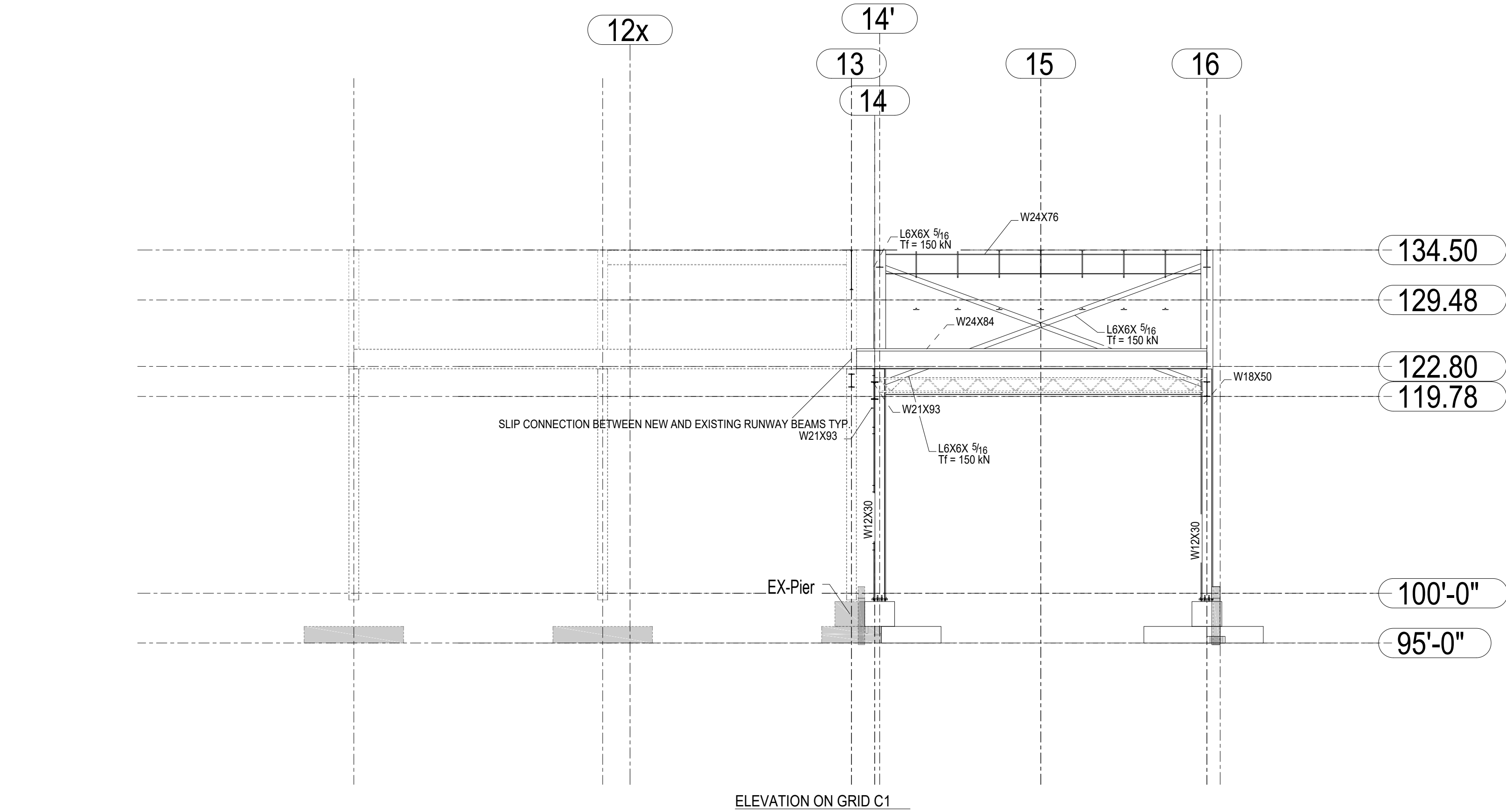
Phase 4 Expansion
Elevation Along Grid 14 & 16
Elevation Along Bx

Revision No:

/

Drawing No:

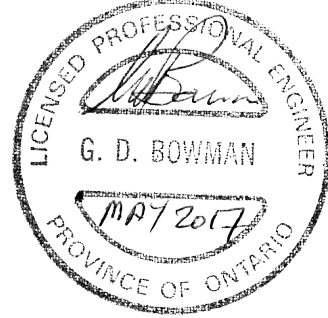
S404



GENERAL NOTES

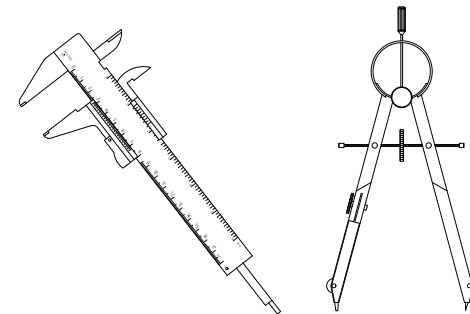
Contractor to verify all dimensions prior to fabri
All dimensions on this drawing are to be compared
to Architectural

Do not scale these drawings.



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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383 Parkdale Ave. Suite 201
Ottawa, Ontario, K1Y 4R4

Client Name:

M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:

M CON Shop Expansion
2150 Richardson Side Rd

Project Number:

170224-01

Drawn By:

D.B.

Checked By:

B.K. - E.J.

Date Created:

16/03/17

Issued For:

TENDER

Date Modified:

25/05/17

Drawing Scale:

N. T. S

Drawing Name:

Phase 4 Expansion
Elevation Along Grid 'C1'
Elevation Along Grid 'E'

Revision No:

1

Drawing No:

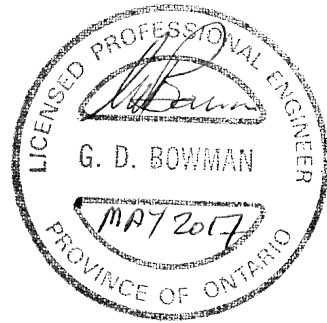
S405

GENERAL NOTES

Contractor to verify all dimensions prior to fabri

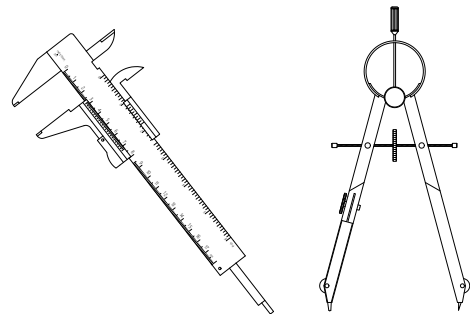
All dimensions on this drawing are to be compared to Architectural

Do not scale these drawings.



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK By

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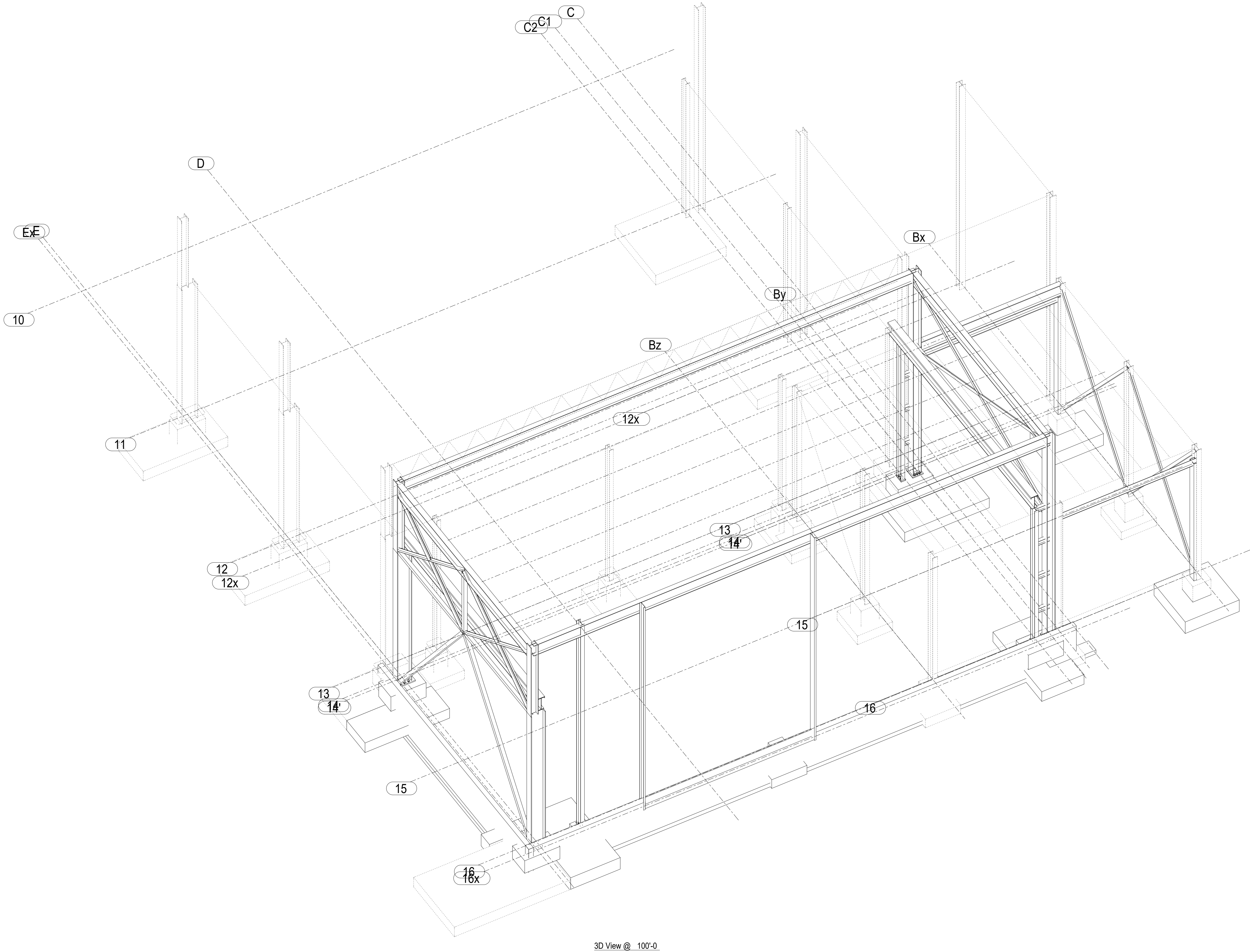
Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 25/05/17 Issued For: TENDER

Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
Phase 4 Expansion
3D View

Revision No: 1 Drawing No: S406



3D View @ 100'-0