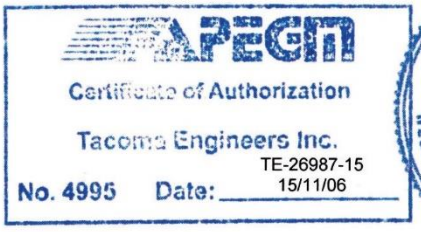
TACOMA ENGINEERS

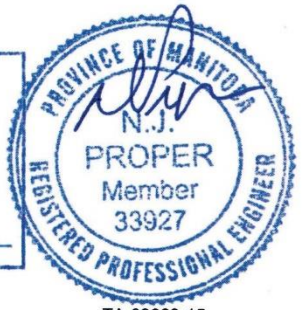
אישור הנדסה עבור נספח C

שרטוטים C-1 עד C-20 בנספח C שבמדריך ההתקנה NUDURA ICF נבדקו ואושרו ב-30 באוקטובר, 2015 על ידי Tacoma Engineers לשימוש במחוז אונטאריו. שרטוטים אלה נבחנו גם על פי התקינות הבאות:

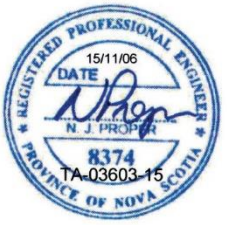
- תקינת בניה אלברטה 2014
- תקינת בניה בריטיש קולומביה 2012
- תקינת בניה מניטובה 2014
- תקינת בניה נובה סקוצ'ה 2014
- תקינת הבניה הארצית כפי שעודכנה על ידי תקינת Uniform Building and Accessibility בסקצ'ואן (2010)

TA-03603-15
15/11/06





TA-03603-15
15/11/06

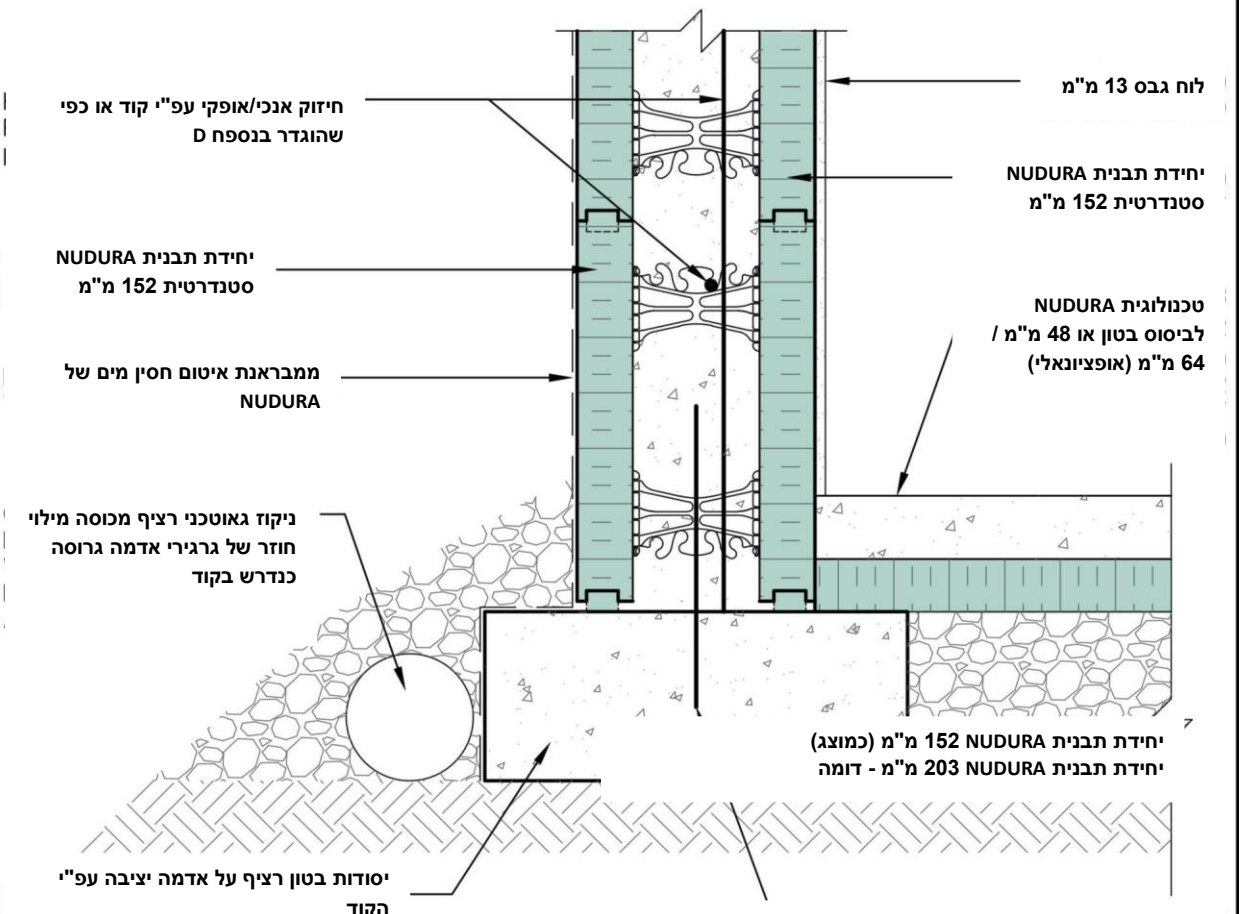


TA-03603-15

הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן

LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO

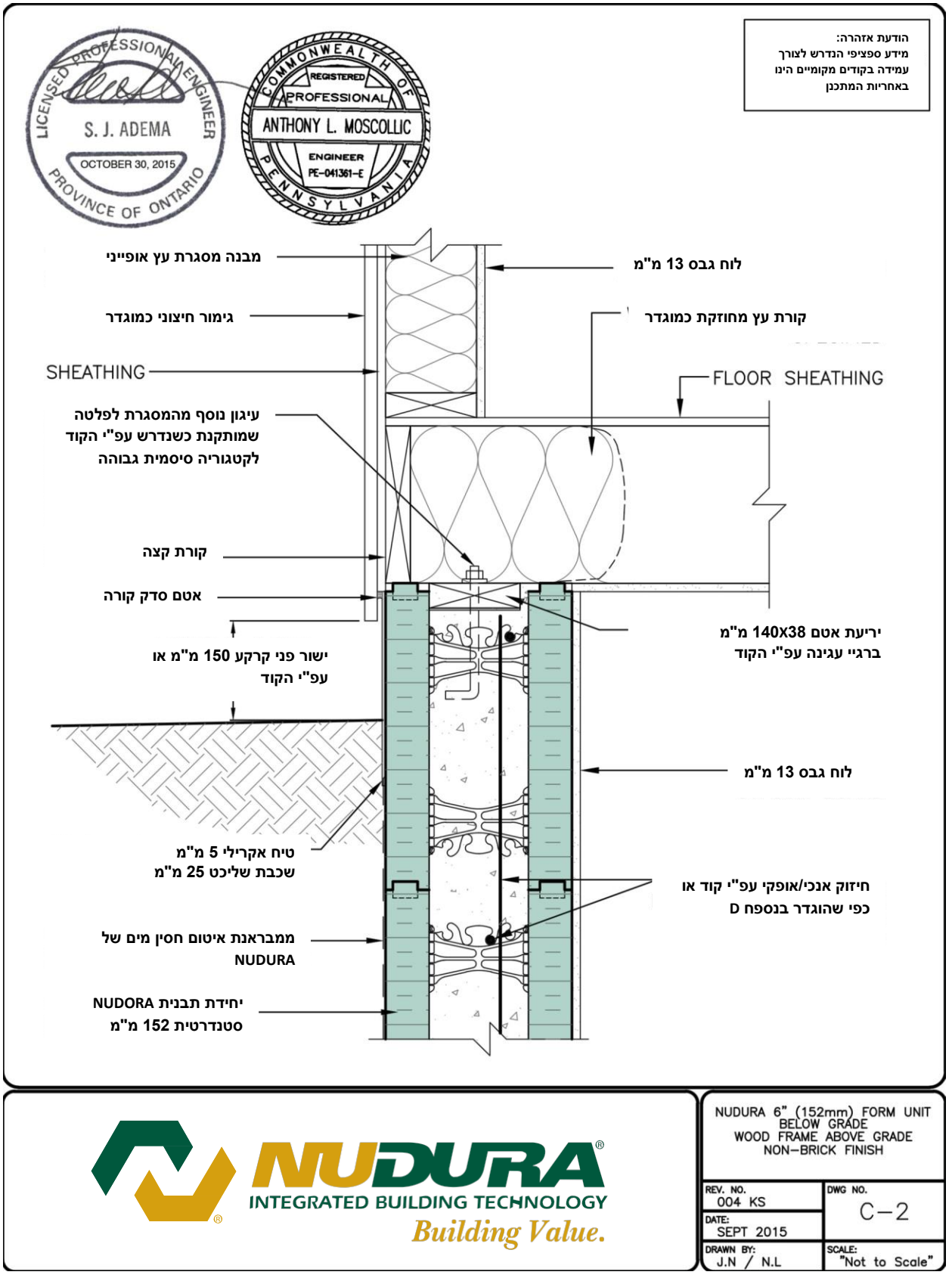
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E

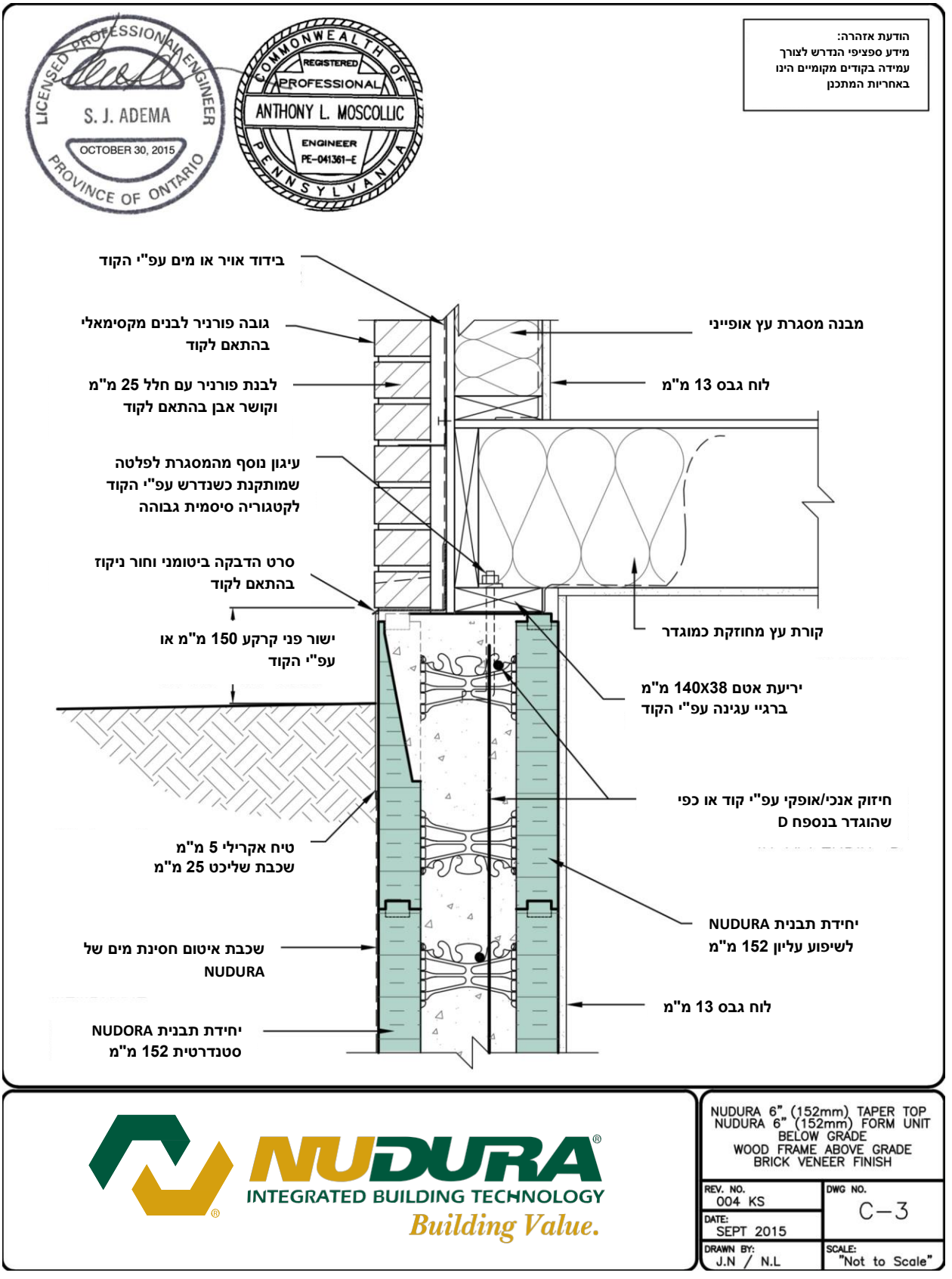


NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

NUDURA 6" (152mm) FORM UNIT FOOTING DETAIL
NUDURA FLOOR TECHNOLOGY
(BEST OPTION)

REV. NO. 004 KS	DWG NO. C-1
DATE: SEPT 2015	
DRAWN BY: J. NEILON	SCALE: "Not to Scale"

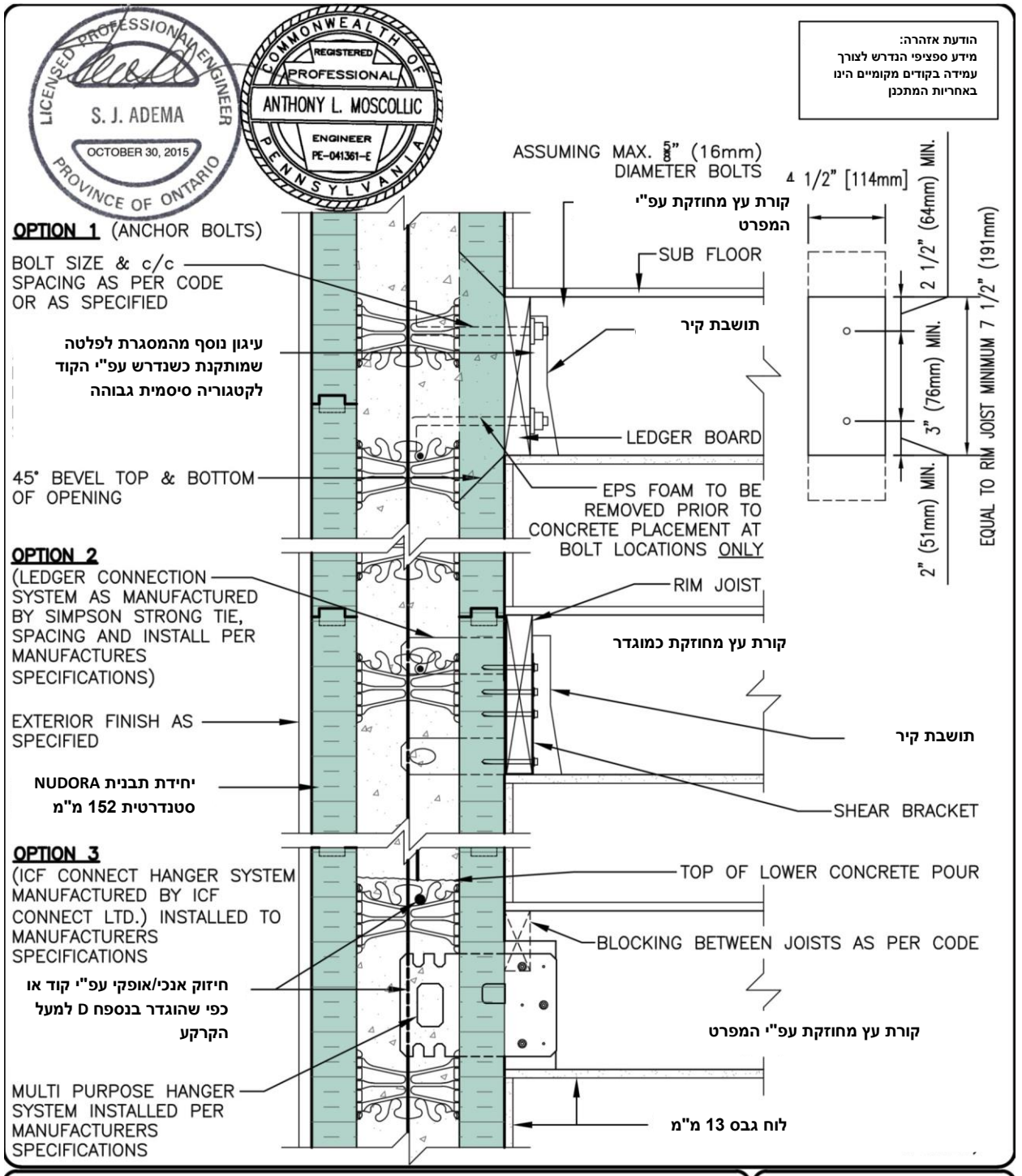

הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
מבנה מסגרת עץ אופייני
גימור חיצוני כמוגדר
SHEATHING
עיגון נוסף מהמסגרת לפלטה
שמותקנת כשנדרש עפ"י הקוד
לקטגוריה סיסמית גבוהה
קורת קצה
אטם סדק קורה
ישור פני קרקע 150 מ"מ או
עפ"י הקוד
טיח אקרילי 5 מ"מ
שכבת שליכט 25 מ"מ
ממבראנת איטום חסין מים של
NUDURA
יחידת תבנית NUDORA
סטנדרטית 152 מ"מ
לוח גבס 13 מ"מ
קורת עץ מחוזקת כמוגדר
FLOOR SHEATHING
יריעת אטם 140X38 מ"מ
ברגיי עגינה עפ"י הקוד
לוח גבס 13 מ"מ
חיזוק אנכי/אופקי עפ"י קוד או
כפי שהוגדר בנספח D
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) FORM UNIT
BELOW GRADE
WOOD FRAME ABOVE GRADE
NON-BRICK FINISH
REV. NO. 004 KS
DWG NO. C-2
DATE: SEPT 2015
DRAWN BY: J.N / N.L
SCALE: "Not to Scale"

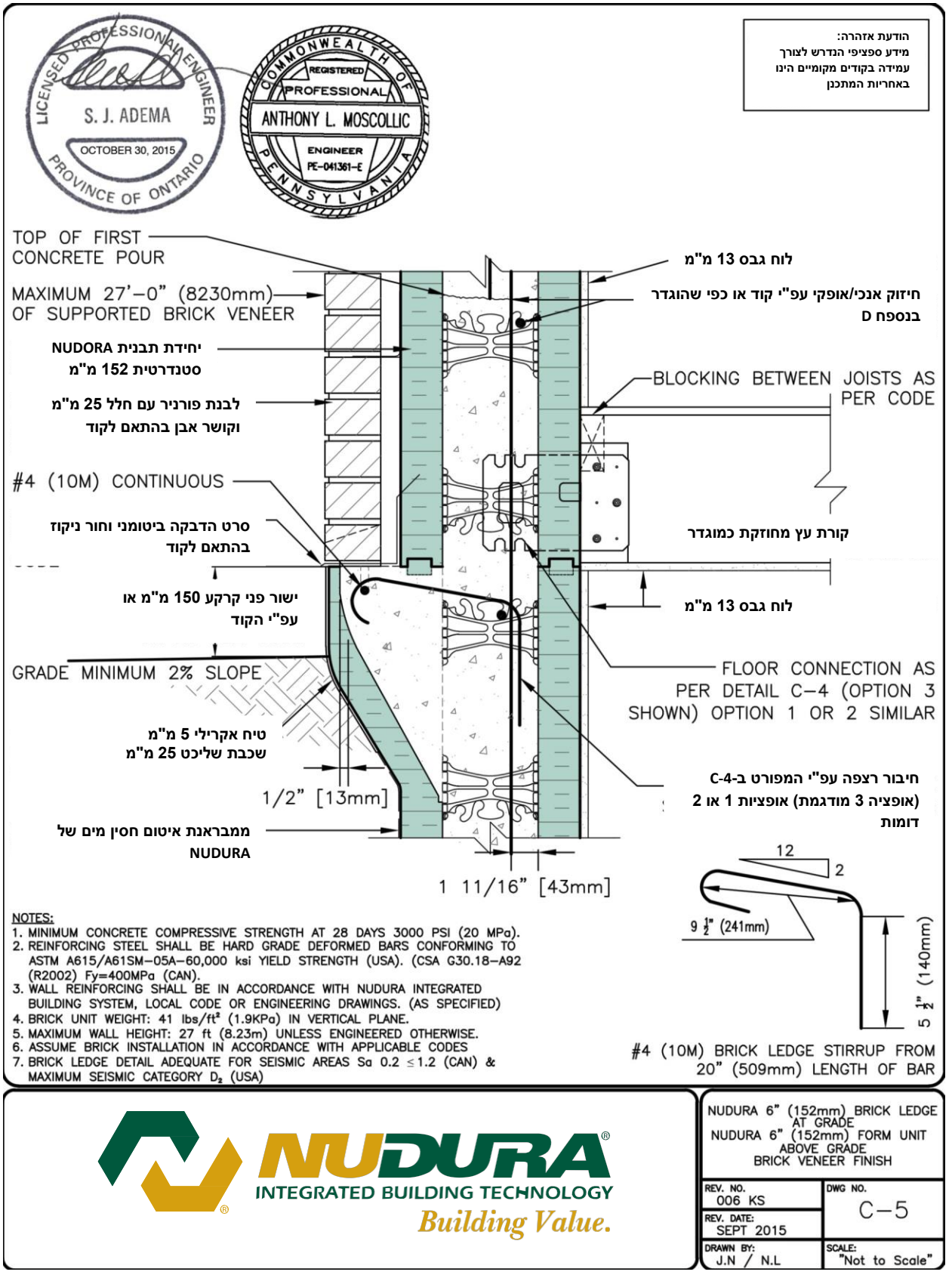


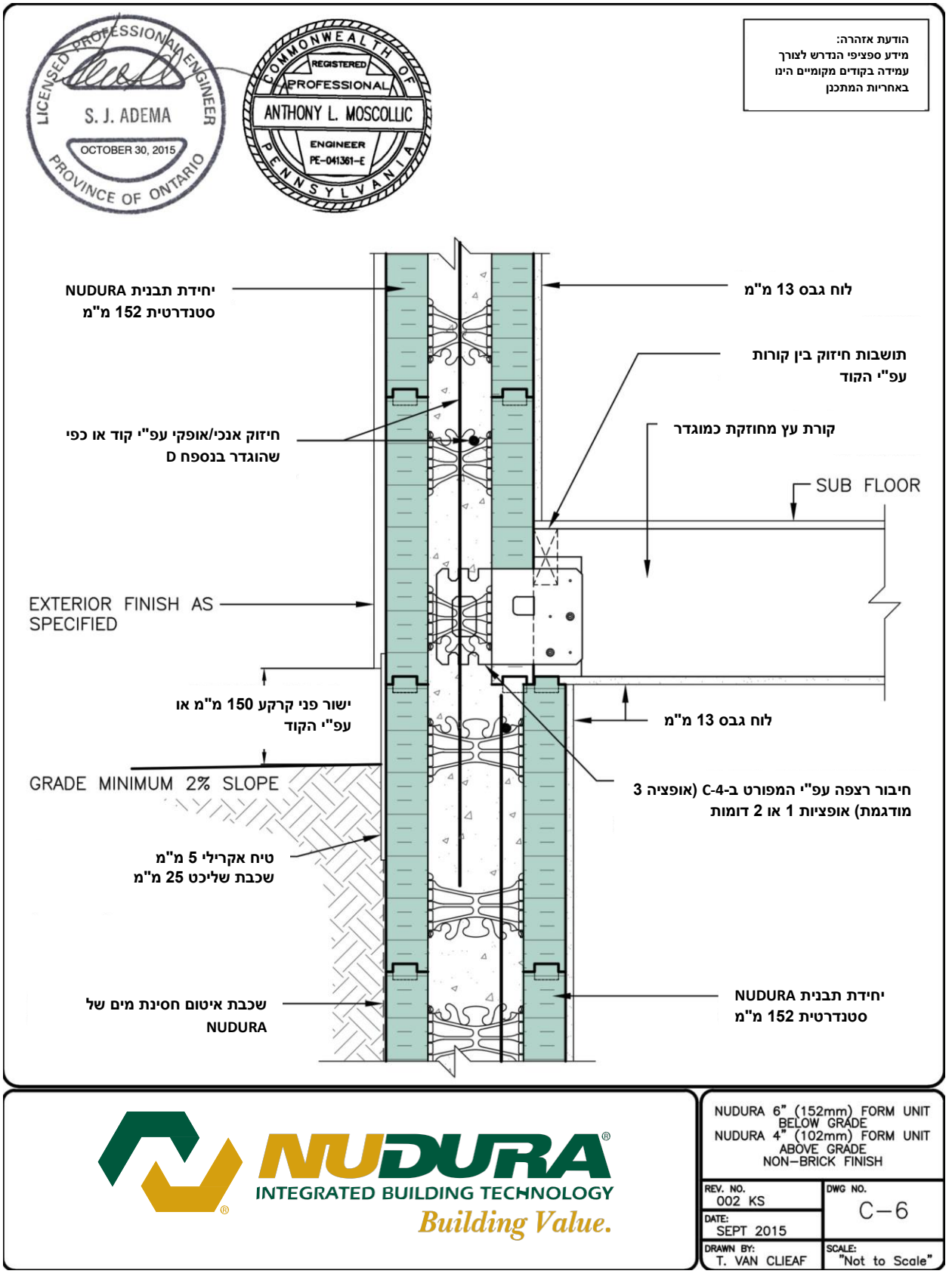
NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

NUDURA 6" (152mm) TAPER TOP
NUDURA 6" (152mm) FORM UNIT
BELOW GRADE
WOOD FRAME ABOVE GRADE
BRICK VENEER FINISH

REV. NO. 004 KS	DWG NO. C-3
DATE: SEPT 2015	
DRAWN BY: J.N / N.L	SCALE: "Not to Scale"


הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
ASSUMING MAX. 5/8" (16mm) DIAMETER BOLTS
4 1/2" [114mm]
2 1/2" (64mm) MIN.
3" (76mm) MIN.
2" (51mm) MIN.
EQUAL TO RIM JOIST MINIMUM 7 1/2" (191mm)
OPTION 1 (ANCHOR BOLTS)
BOLT SIZE & c/c SPACING AS PER CODE OR AS SPECIFIED
קורת עץ מחוזקת עפ"י המפרט
SUB FLOOR
תושבת קיר
עיגון נוסף מהמסגרת לפלטה שמותקנת כשנדרש עפ"י הקוד לקטגוריה סיסמית גבוהה
LEDGER BOARD
45° BEVEL TOP & BOTTOM OF OPENING
EPS FOAM TO BE REMOVED PRIOR TO CONCRETE PLACEMENT AT BOLT LOCATIONS ONLY
OPTION 2
(LEDGER CONNECTION SYSTEM AS MANUFACTURED BY SIMPSON STRONG TIE, SPACING AND INSTALL PER MANUFACTURES SPECIFICATIONS)
RIM JOIST
קורת עץ מחוזקת כמוגדר
EXTERIOR FINISH AS SPECIFIED
תושבת קיר
יחידת תבנית NUDORA סטנדרטית 152 מ"מ
SHEAR BRACKET
OPTION 3
(ICF CONNECT HANGER SYSTEM MANUFACTURED BY ICF CONNECT LTD.) INSTALLED TO MANUFACTURERS SPECIFICATIONS
TOP OF LOWER CONCRETE POUR
BLOCKING BETWEEN JOISTS AS PER CODE
חיזוק אנכי/אופקי עפ"י קוד או כפי שהוגדר בנספח D למעל הקרקע
קורת עץ מחוזקת עפ"י המפרט
MULTI PURPOSE HANGER SYSTEM INSTALLED PER MANUFACTURERS SPECIFICATIONS
לוח גבס 13 מ"מ
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) FORM UNIT
FLOOR CONNECTION OPTIONS
FLOOR TYPES AND
EXTERIOR FINISH AS SPECIFIED
REV. NO. 005 KS
DWG NO. C-4
DATE: SEPT 2015
DRAWN BY: J.N / N.L
SCALE: 'Not to Scale

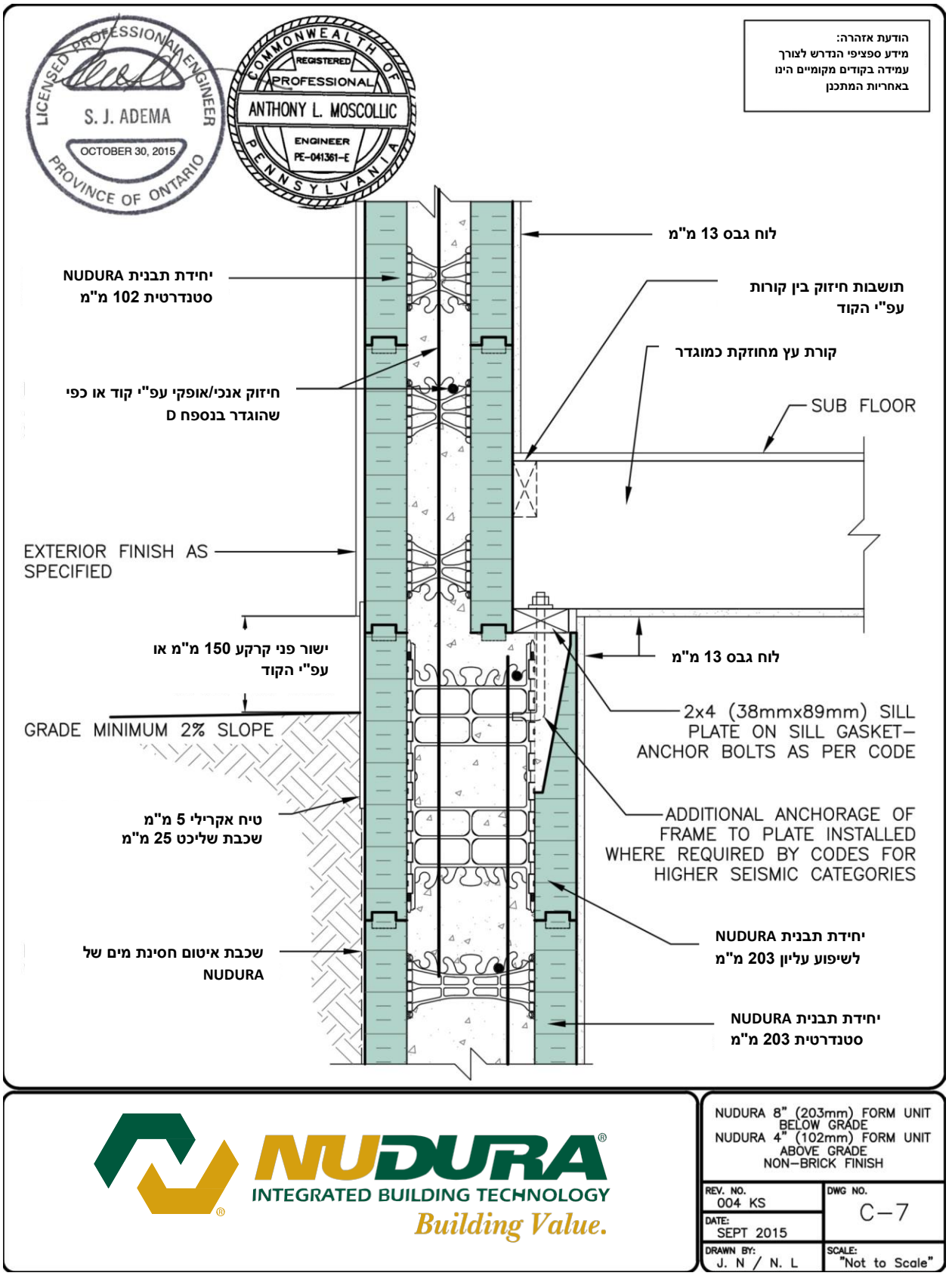

LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
TOP OF FIRST CONCRETE POUR
MAXIMUM 27'-0" (8230mm) OF SUPPORTED BRICK VENEER
יחידת תבנית NUDORA סטנדרטית 152 מ"מ
לבנת פורניר עם חלל 25 מ"מ וקושר אבן בהתאם לקוד
#4 (10M) CONTINUOUS
סרט הדבקה ביטומני וחור ניקוז בהתאם לקוד
ישור פני קרקע 150 מ"מ או עפ"י הקוד
GRADE MINIMUM 2% SLOPE
טיח אקרילי 5 מ"מ שכבת שליכט 25 מ"מ
1/2" [13mm]
ממבראנת איטום חסין מים של NUDURA
1 11/16" [43mm]
לוח גבס 13 מ"מ
חיזוק אנכי/אופקי עפ"י קוד או כפי שהוגדר בנספח D
BLOCKING BETWEEN JOISTS AS PER CODE
קורת עץ מחוזקת כמוגדר
לוח גבס 13 מ"מ
FLOOR CONNECTION AS PER DETAIL C-4 (OPTION 3 SHOWN) OPTION 1 OR 2 SIMILAR
חיבור רצפה עפ"י המפורט ב-C-4 (אופציה 3 מודגמת) אופציות 1 או 2 דומות
12
2
9 1/2" (241mm)
5 1/2" (140mm)
#4 (10M) BRICK LEDGE STIRRUP FROM 20" (509mm) LENGTH OF BAR
NOTES:
1. MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS 3000 PSI (20 MPa).
2. REINFORCING STEEL SHALL BE HARD GRADE DEFORMED BARS CONFORMING TO ASTM A615/A615M-05A-60,000 ksi YIELD STRENGTH (USA). (CSA G30.18-A92 (R2002) Fy=400MPa (CAN).
3. WALL REINFORCING SHALL BE IN ACCORDANCE WITH NUDURA INTEGRATED BUILDING SYSTEM, LOCAL CODE OR ENGINEERING DRAWINGS. (AS SPECIFIED)
4. BRICK UNIT WEIGHT: 41 lbs/ft² (1.9KPa) IN VERTICAL PLANE.
5. MAXIMUM WALL HEIGHT: 27 ft (8.23m) UNLESS ENGINEERED OTHERWISE.
6. ASSUME BRICK INSTALLATION IN ACCORDANCE WITH APPLICABLE CODES
7. BRICK LEDGE DETAIL ADEQUATE FOR SEISMIC AREAS Sa 0.2 ≤1.2 (CAN) & MAXIMUM SEISMIC CATEGORY D2 (USA)
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) BRICK LEDGE AT GRADE
NUDURA 6" (152mm) FORM UNIT ABOVE GRADE
BRICK VENEER FINISH
REV. NO. 006 KS
REV. DATE: SEPT 2015
DRAWN BY: J.N / N.L
DWG NO. C-5
SCALE: "Not to Scale"

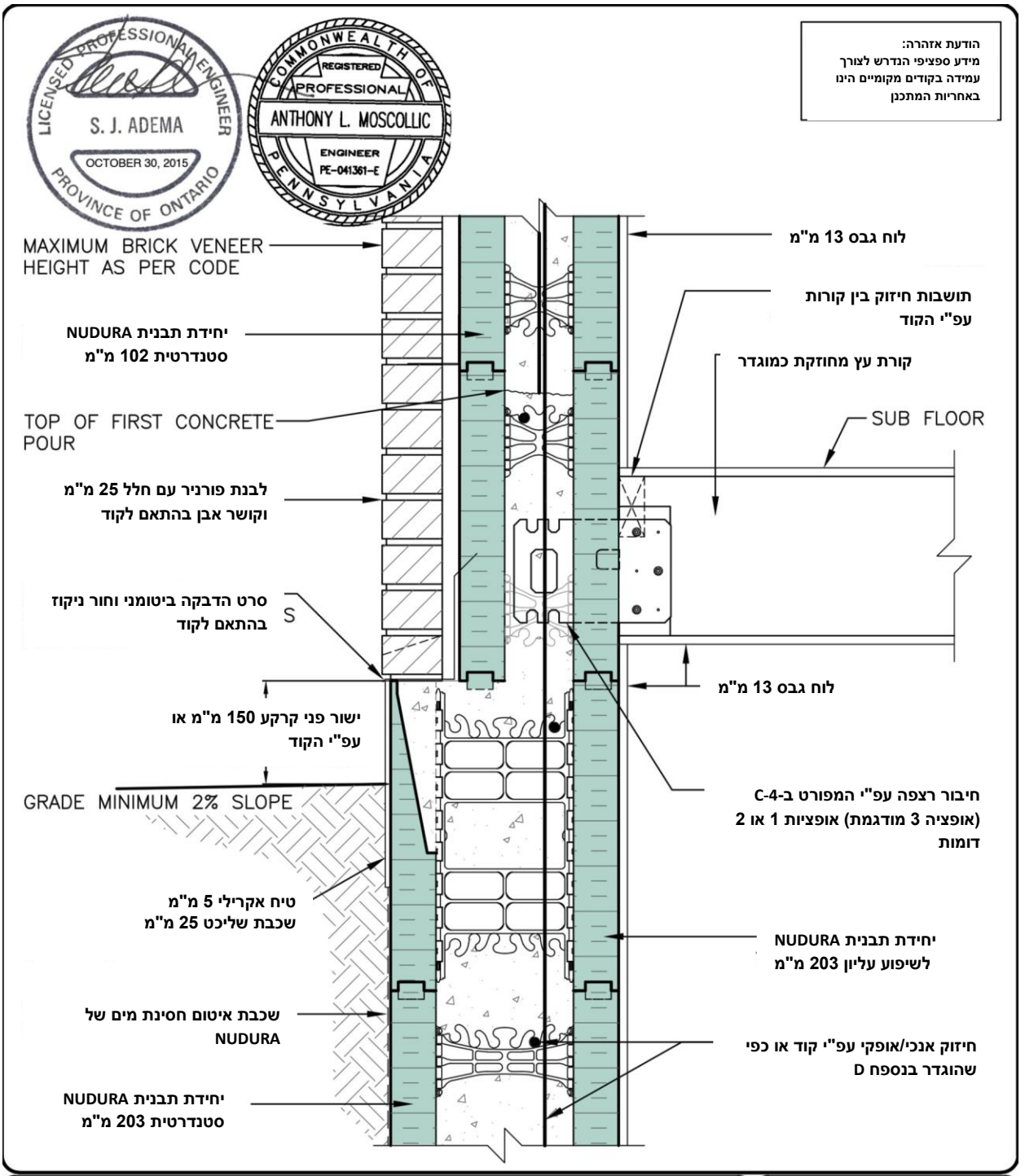


NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

NUDURA 6" (152mm) FORM UNIT BELOW GRADE
NUDURA 4" (102mm) FORM UNIT ABOVE GRADE
NON-BRICK FINISH

REV. NO. 002 KS	DWG NO. C-6
DATE: SEPT 2015	
DRAWN BY: T. VAN CLIEAF	SCALE: "Not to Scale"

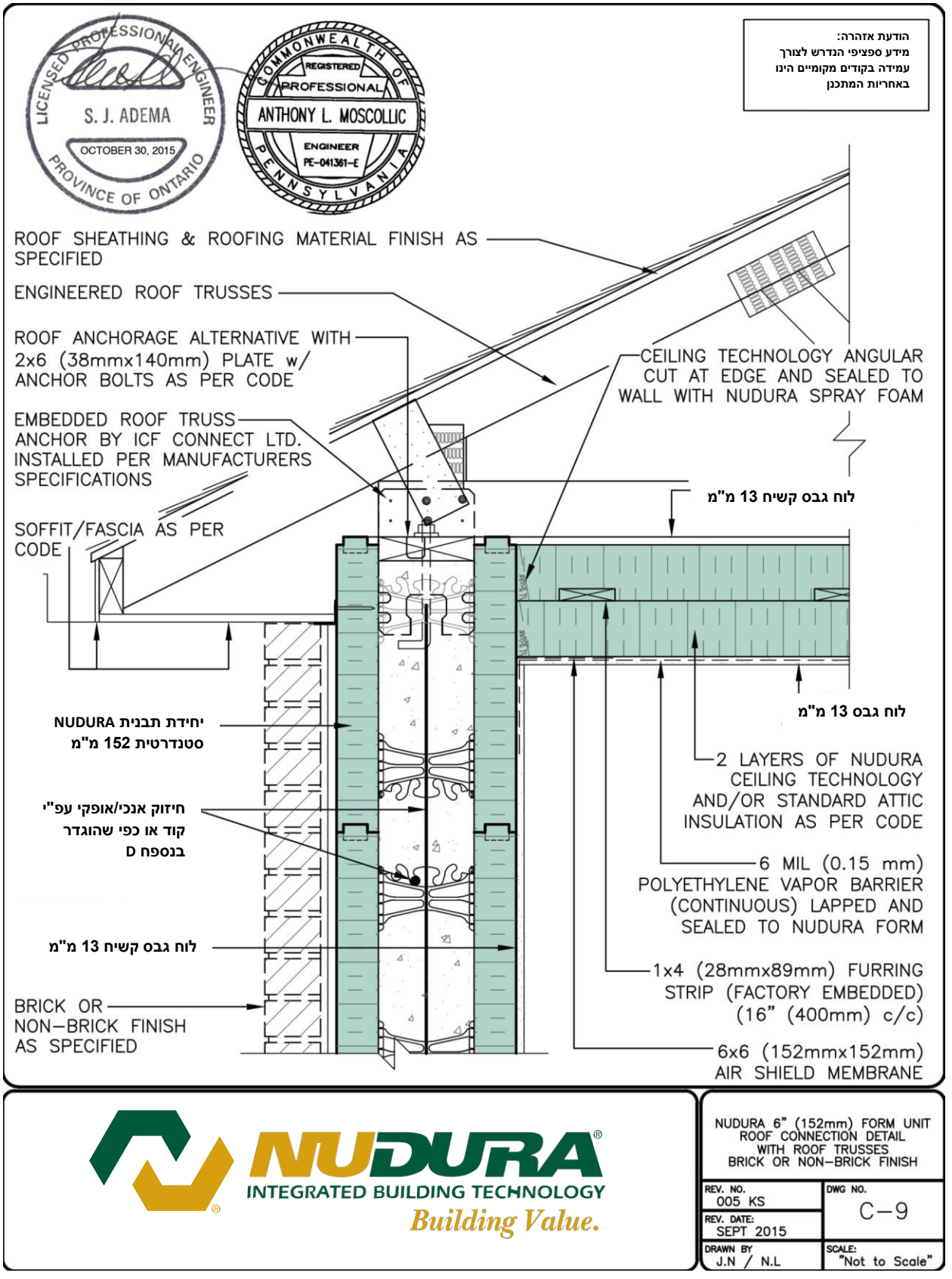

LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
לוח גבס 13 מ"מ
יחידת תבנית NUDURA
סטנדרטית 102 מ"מ
תושבות חיזוק בין קורות
עפ"י הקוד
קורת עץ מחוזקת כמוגדר
חיזוק אנכי/אופקי עפ"י קוד או כפי
שהוגדר בנספח D
SUB FLOOR
EXTERIOR FINISH AS
SPECIFIED
ישור פני קרקע 150 מ"מ או
עפ"י הקוד
לוח גבס 13 מ"מ
GRADE MINIMUM 2% SLOPE
2x4 (38mmx89mm) SILL
PLATE ON SILL GASKET–
ANCHOR BOLTS AS PER CODE
טיח אקרילי 5 מ"מ
שכבת שליכט 25 מ"מ
ADDITIONAL ANCHORAGE OF
FRAME TO PLATE INSTALLED
WHERE REQUIRED BY CODES FOR
HIGHER SEISMIC CATEGORIES
יחידת תבנית NUDURA
לשיפוע עליון 203 מ"מ
שכבת איטום חסינת מים של
NUDURA
יחידת תבנית NUDURA
סטנדרטית 203 מ"מ
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 8" (203mm) FORM UNIT
BELOW GRADE
NUDURA 4" (102mm) FORM UNIT
ABOVE GRADE
NON–BRICK FINISH
REV. NO.
004 KS
DWG NO.
C–7
DATE:
SEPT 2015
DRAWN BY:
J. N / N. L
SCALE:
"Not to Scale"

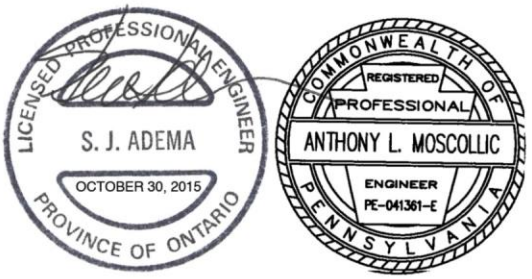


NUDURA® INTEGRATED BUILDING TECHNOLOGY *Building Value.*

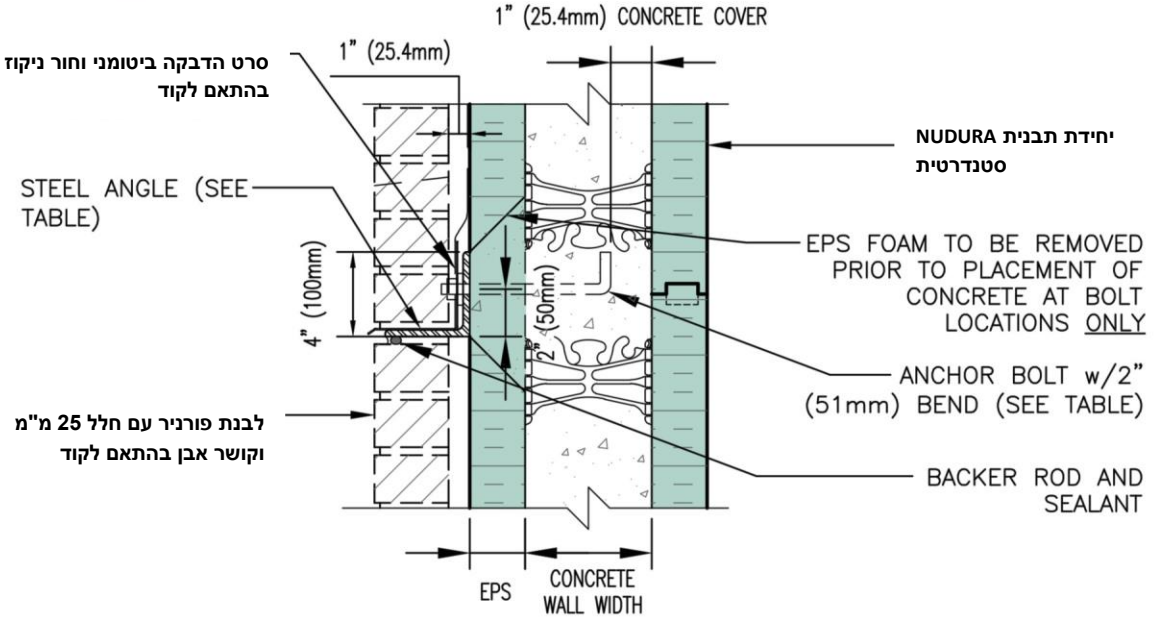
NUDURA 8" (203mm) FORM UNIT BELOW GRADE
NUDURA 4" (102mm) FORM UNIT ABOVE GRADE
BRICK VENEER FINISH

REV. NO. 005 KS	DWG NO. C-8
REV. DATE: SEPT 2015	
DRAWN BY: J.N / N.L	SCALE: "Not to Scale"


הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
ROOF SHEATHING & ROOFING MATERIAL FINISH AS SPECIFIED
ENGINEERED ROOF TRUSSES
ROOF ANCHORAGE ALTERNATIVE WITH 2x6 (38mmx140mm) PLATE w/ ANCHOR BOLTS AS PER CODE
EMBEDDED ROOF TRUSS ANCHOR BY ICF CONNECT LTD. INSTALLED PER MANUFACTURERS SPECIFICATIONS
SOFFIT/FASCIA AS PER CODE
CEILING TECHNOLOGY ANGULAR CUT AT EDGE AND SEALED TO WALL WITH NUDURA SPRAY FOAM
לוח גבס קשיח 13 מ"מ
לוח גבס 13 מ"מ
יחידת תבנית NUDURA סטנדרטית 152 מ"מ
חיזוק אנכי/אופקי עפ"י קוד או כפי שהוגדר בנספח D
לוח גבס קשיח 13 מ"מ
BRICK OR NON-BRICK FINISH AS SPECIFIED
2 LAYERS OF NUDURA CEILING TECHNOLOGY AND/OR STANDARD ATTIC INSULATION AS PER CODE
6 MIL (0.15 mm) POLYETHYLENE VAPOR BARRIER (CONTINUOUS) LAPPED AND SEALED TO NUDURA FORM
1x4 (28mmx89mm) FURRING STRIP (FACTORY EMBEDDED) (16" (400mm) c/c)
6x6 (152mmx152mm) AIR SHIELD MEMBRANE
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) FORM UNIT ROOF CONNECTION DETAIL WITH ROOF TRUSSES BRICK OR NON-BRICK FINISH
REV. NO. 005 KS
REV. DATE: SEPT 2015
DWG NO. C-9
DRAWN BY J.N / N.L
SCALE: "Not to Scale"



הודעת אזהרה:
מידע ספציפי הנדרש לצורך עמידה בקודים מקומיים הינו באחריות המתכנן



	HEIGHT OF SUPPORTED BRICK ABOVE ANGLE	
	10'–0" (3050mm)	20'–0" (6100mm)
ANGLE SIZE	L4" x 4" x 1/4" (L102mm x 102mm x 6.35mm)	L4" x 4" x 1/4" (L102mm x 102mm x 6.35mm)
ANCHOR SIZE	1/2" DIAMETER (12.5mm DIAMETER)	1/2" DIAMETER (12.5mm DIAMETER)
ANCHOR SPACING	24" (610mm)	16" (406mm)

NOTES:

1 ASSUMES BRICK INSTALLATION IN ACCORDANCE WITH APPLICABLE CODES.
2 MINIMUM STEEL Fy=43.5 ksi (300 MPa) YIELD STRENGTH FOR ANGLES.
3 ANGLES AND BOLTS TO BE GALVANIZED OR STAINLESS STEEL TO MEET THE REQUIREMENT OF TABLE 5.1 OF CSA A370–04 (CAN) OR ASTM E754 (USA) (CONNECTIONS FOR MASONRY ANCHORS AND TIES).

NUDURA® INTEGRATED BUILDING TECHNOLOGY Building Value.

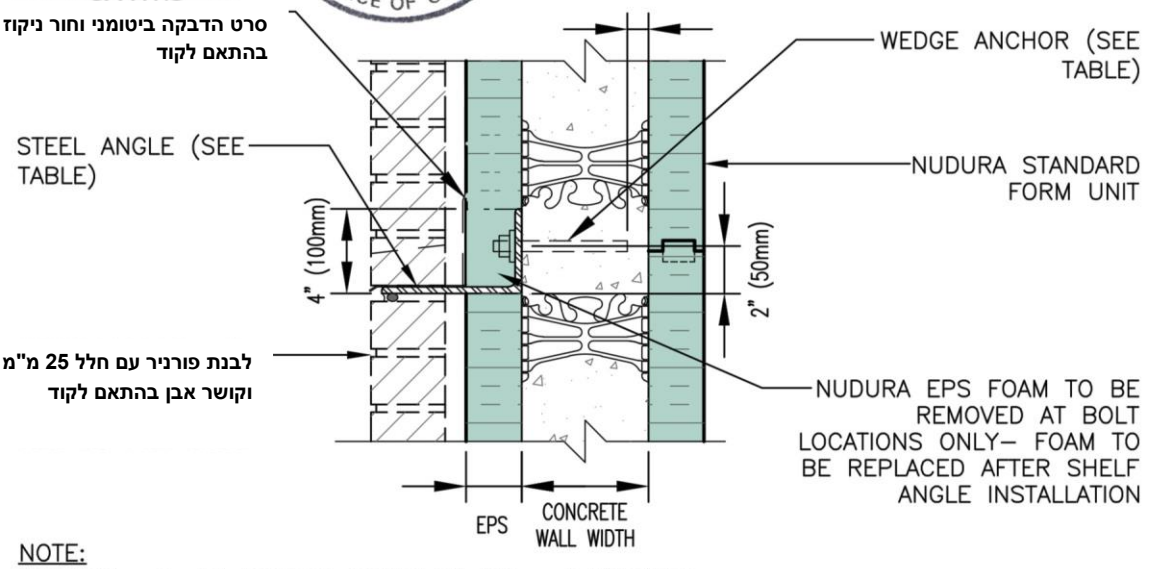
BRICK SHELF ANGLE
BACK OF ANGLE FLUSH WITH EPS EXTERIOR
(MULTI–STORY APPLICATION)
PRE–INSTALLATION MOUNT

REV. NO. 004 KS	DWG NO. C–10
REV. DATE: SEPT 2015	
DRAWN BY J.N / N.L	SCALE: "Not to Scale"

הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E

LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO



NOTE:
MAINTAIN u/s OF ANCHOR SHAFT 2" (50mm) MINIMUM CLEARANCE FROM WEBS AND 1" (25mm) COVER ALL AROUND

HILTI ANCHORS TO BE SIZED AS PER TABLE BELOW

	HEIGHT OF SUPPORTED BRICK ABOVE ANGLE	
	10'–0" (3050mm)	20'–0" (6100mm)
ANGLE SIZE	L6" x 4" x 5/16" (L152mm x 102mm x 7.9mm)	L6" x 4" x 3/8" (L152mm x 102mm x 9.5mm)
ANCHOR SIZE */ EMBEDMENT	HSL M12/25 3.2" (80mm)	HSL M16/25 4.2" (105mm)
ANCHOR SPACING	16" (406mm)	16" (406mm)

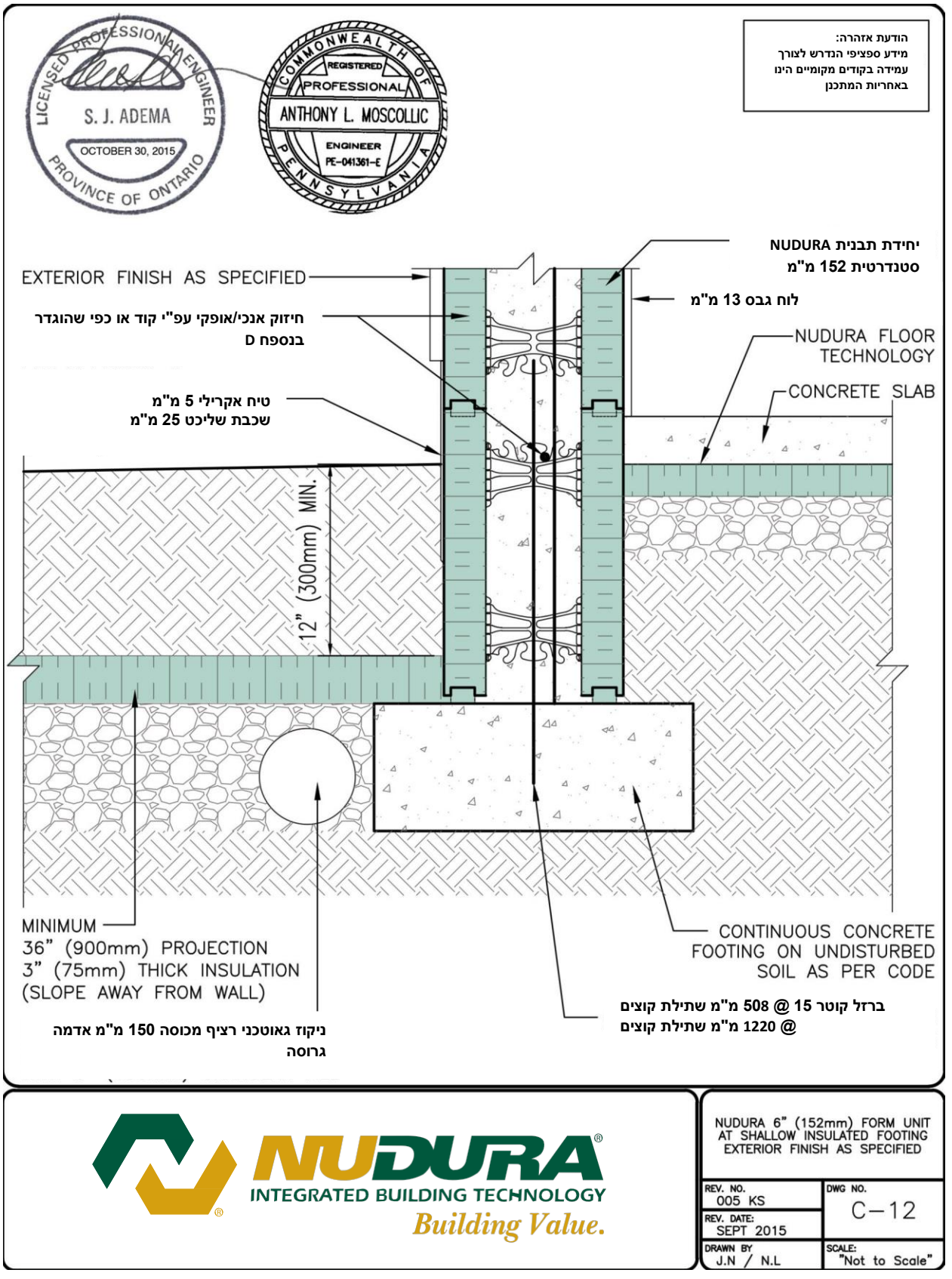
* ANCHORS SPECIFIED ABOVE ARE HILTI HEAVY DUTY ANCHORS

NOTE:
1 CONTRACTOR TO INSTALL ANCHORS AS PER SUPPLIER'S SPECIFICATIONS.
2 ASSUMES BRICK INSTALLATION IN ACCORDANCE WITH APPLICABLE CODES.
3 MINIMUM STEEL Fy=43.5 ksi (300 MPa) YIELD STRENGTH FOR ANGLES
4 ANGLES AND BOLTS TO BE GALVANIZED OR STAINLESS STEEL TO MEET THE REQUIREMENT OF TABLE 5.1 OF CSA A370–04 (CAN) OR ASTM E754 (USA) (CONNECTIONS FOR MASONRY ANCHORS AND TIES).

NUDURA® INTEGRATED BUILDING TECHNOLOGY
Building Value.

BRICK SHELF ANGLE
BACK OF ANGLE FLUSH
WITH CONCRETE
(POST INSTALLATION MOUNT)

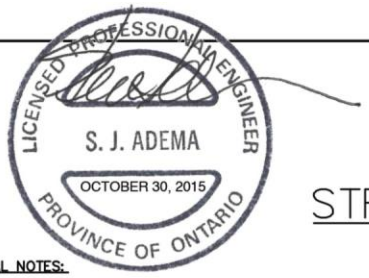
REV. NO. 004 KS	DWG NO. C–11
REV. DATE: SEPT 2015	
DRAWN BY J.N / N.L	SCALE: "Not to Scale"



NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

NUDURA 6" (152mm) FORM UNIT
AT SHALLOW INSULATED FOOTING
EXTERIOR FINISH AS SPECIFIED

REV. NO. 005 KS	DWG NO. C-12
REV. DATE: SEPT 2015	
DRAWN BY J.N / N.L	SCALE: "Not to Scale"



STRUCTURAL NOTES

(DETAIL C–14, C–15, C–16)

GENERAL NOTES:

1. THE DESIGN AND CONSTRUCTION OF ALL WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF PART 9 OF THE NATIONAL BUILDING CODE (CAN), SECTION R404/R611 OF THE 2012 IRC, SECTIONS R404 AND R608 OF THE 2015 IBC, LOCAL REGULATIONS AND BYLAWS AND THE OCCUPATIONAL HEALTH AND SAFETY ACT. THIS DESIGN APPLIES TO RESIDENTIAL BUILDINGS ONLY.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND MEASUREMENTS AT THE SITE AND REPORT TO THE ENGINEER ANY DISCREPANCIES OR UNSATISFACTORY CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE PROJECT BEFORE PROCEEDING WITH THE WORK.
3. AN AUTHORIZED NUDURA TRAINED INSTALLER SHALL BE CONTACTED BY THE CONTRACTOR FOR INSPECTIONS OF THE FOUNDATION, REINFORCING STEEL PLACEMENT, ONLY IF REQUIRED BY THE BUILDING OFFICIAL.

DESIGN PARAMETERS:

1. DESIGN LOADS ARE UNFACTORED UNLESS NOTED OTHERWISE:
   - SOIL PRESSURE (LIVE) = 20.4 kN/m³ (130 pcf)
     DRAINED EARTH IN ACCORDANCE WITH NBC & IRC (CAN)
   - AREA SURCHARGE (LIVE) = 2.4 kPa (50 psf) (CAN AND USA)
2. FOUNDATIONS TO BEAR DIRECTLY ON MATERIAL SUITABLE FOR 75 kPa (1,566 psf) BEARING PRESSURE, UNLESS NOTED. REFER TO SOIL ENGINEERS REPORT FOR FOUNDATION DEPTHS, BEARING PREPARATION, ETC. AS MAY BE REQUIRED BY THE LOCAL BUILDING OFFICIAL.
3. SOIL BEARING CAPACITY SPECIFIED MAY NEED TO BE VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FOUNDATIONS AND SLABS, ANY NON–CONFORMANCE WITH THE SPECIFIED MINIMUM CATEGORIES MUST BE IMMEDIATELY REPORTED TO THE STRUCTURAL ENGINEER.

CONCRETE AND REINFORCING STEEL:

1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITIONS OF CSA. A23.1,2&3 (CAN) & ACI 318 (USA) FOR MATERIALS AND WORKMANSHIP.
2. USE MINIMUM GRADE 400 (60 ksi)YIELD STRENGTH DEFORMED REBAR PLACED IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE.
3. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
   - 20 MPA (2,900 psi) FOR FOOTINGS
   - 20 MPA (2,900 psi) FOR WALLS
4. ALL CONCRETE SHALL BE TESTED BY A CSA CERTIFIED OR IAS ACCREDITED CONCRETE TESTING LABORATORY.
5. USE HIGH FREQUENCY VIBRATION TO PLACE ALL CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOIST DURING THE FIRST TWO DAYS OF CURING.
7. TAKE ADEQUATE MEASURES TO PROTECT CONCRETE FROM EXPOSURE TO FREEZING TEMPERATURES AT LEAST 7 DAYS AFTER CONCRETE PLACEMENT.
8. MAINTAIN THE FOLLOWING CLEAR CONCRETE COVER TO REINFORCEMENT:
   - 75 mm (3 inches) FOR CONCRETE PLACED AGAINST THE EARTH (BOTTOM OF FOOTINGS).
9. MINIMUM BAR LAP LENGTH SHALL BE:
   - MINIMUM 40 TIMES THE BAR DIAMETER (10M = 450mm, 15M = 640mm) (CAN) OR,
   - IN ACCORDANCE WITH TABLE R611.5.4(1) OF IRC 2009/2012 OR TABLE 608.5.4(1) OF IRC 2015 (USA)

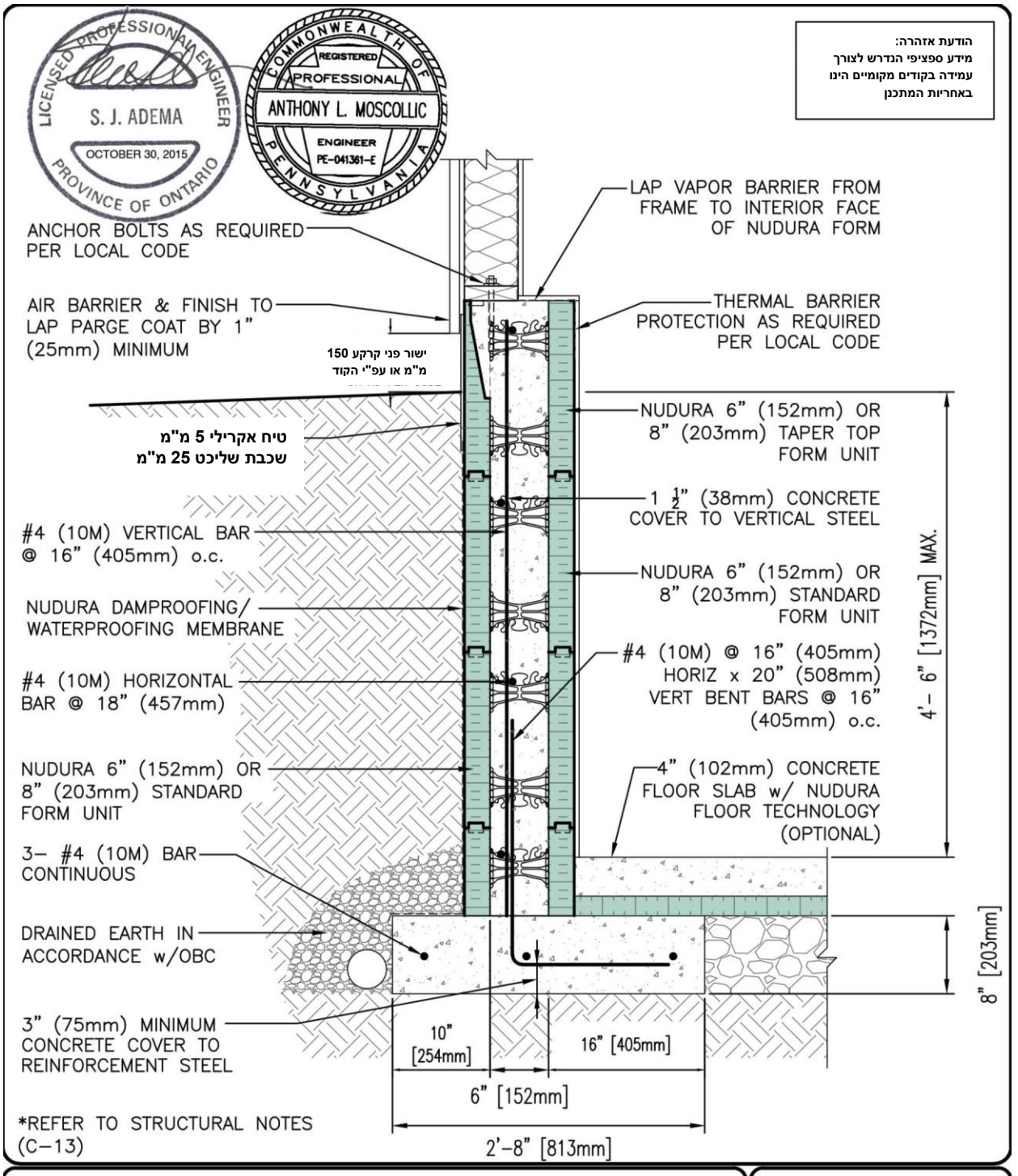
FOUNDATIONS:

1. FOOTINGS TO BEAR DIRECTLY ON UNDISTURBED NATIVE SOILS OR APPROVED ENGINEERED FILL SUITABLE FOR MINIMUM DESIGN BEARING PRESSURES (REFER TO SOIL ENGINEERS REPORT FOR RECOMMENDATIONS).
2. SOFT AREAS UNCOVERED DURING EXCAVATION SHALL BE SUB–EXCAVATED TO SOUND MATERIAL AND FILLED WITH CLEAN, FREE DRAINING GRANULAR SOIL COMPACTED TO 100% STANDARD PROCTOR DRY DENSITY (SPDD).
3. DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 (35 DEGREES) IN THE LINE OF SLOPE BETWEEN ADJACENT FOOTING EXCAVATIONS OR ALONG STEPPED FOOTINGS. USE STEPS NOT EXCEEDING 600 mm (24 INCHES) IN HEIGHT AND NOT LESS THAN 600 mm (24 INCHES) IN LENGTH, IN ACCORDANCE WITH NBC OR PROV. CODES SECTION 9.15.3.9 (CAN) OR APPLICABLE CLAUSES FOR SLOPE CONDITION OF SECTION R403 OF THE 2009, 2012, AND 2015 IRC (USA).
4. MAINTAIN UNSUPPORTED SIDES OF EXCAVATION ONLY IF SAFE INCLINATION OF THE SIDES OF THE EXCAVATION IS PROVIDED IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS.
5. ERECT, MAINTAIN, AND IF REQUIRED, REMOVE A SUPPORTING SHORING SYSTEM ALONG THE SIDES OF THE EXCAVATION, DESIGNED BY A PROFESSIONAL ENGINEER, IN ACCORDANCE WITH THE SOILS REPORT AND WPHMS OR OHSA STANDARDS.
6. PROTECT SOIL FROM FREEZING ADJACENT TO AND BELOW ALL FOOTINGS.
7. BACKFILL AGAINST FOUNDATION WALL IN SUCH A MANNER THAT THE LEVEL OF BACKFILL MATERIAL ON ONE SIDE OF THE WALL IS NEVER MORE THAN 450 mm (18 INCHES) DIFFERENT FROM THE LEVEL ON THE LOWER SIDE OF THE WALL, EXCEPT WHERE TEMPORARY SUPPORT FOR THE WALL IS PROVIDED OR WALLS ARE DESIGNED FOR SUCH UNEVEN PRESSURES (AS IN ATTACHED DETAIL).
8. SHOULD UNDERGROUND WATER BE ENCOUNTERED, PROVIDE DE–WATERING FACILITIES TO KEEP WATER LEVEL BELOW FOOTINGS AND POUR AN ADDITIONAL 75 mm (3") LAYER OF LEAN CONCRETE UNDER ALL FOOTINGS.
9. LOCATE ALL FOOTINGS AND PIERS CENTRALLY UNDER COLUMNS AND WALLS UNLESS NOTED OTHERWISE.

NUDURA® INTEGRATED BUILDING TECHNOLOGY
Building Value.

LATERALLY UNSUPPORTED KNEE WALL DETAILS FOR NUDURA FORM UNIT ONE OR TWO STOREY WOOD FRAME BRICK AND NON–BRICK FINISH

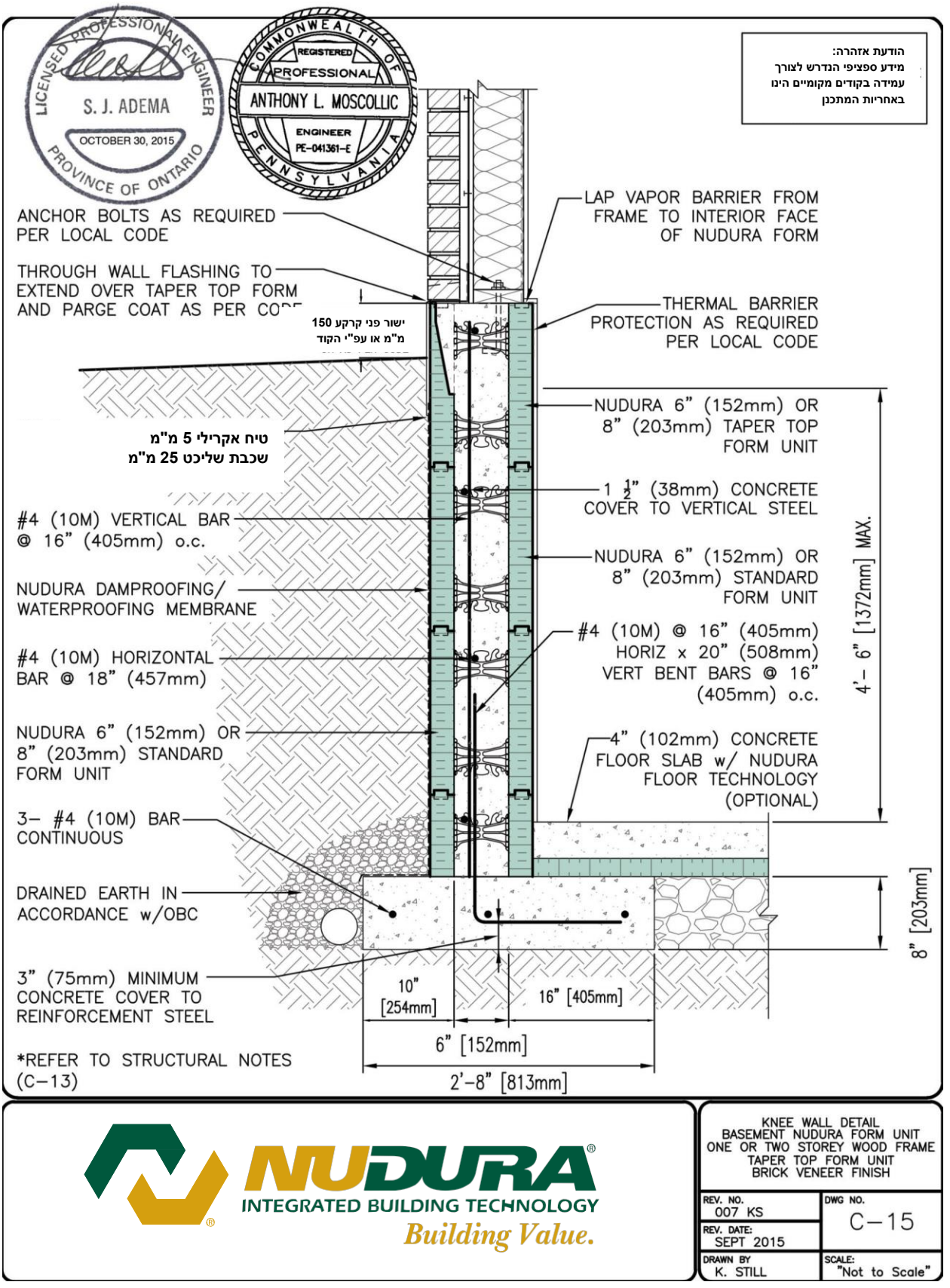
REV. NO.	DWG NO.
005 KS	C–13
DATE: SEPT 2015	
DRAWN BY: T. VAN CLIEAF	SCALE:

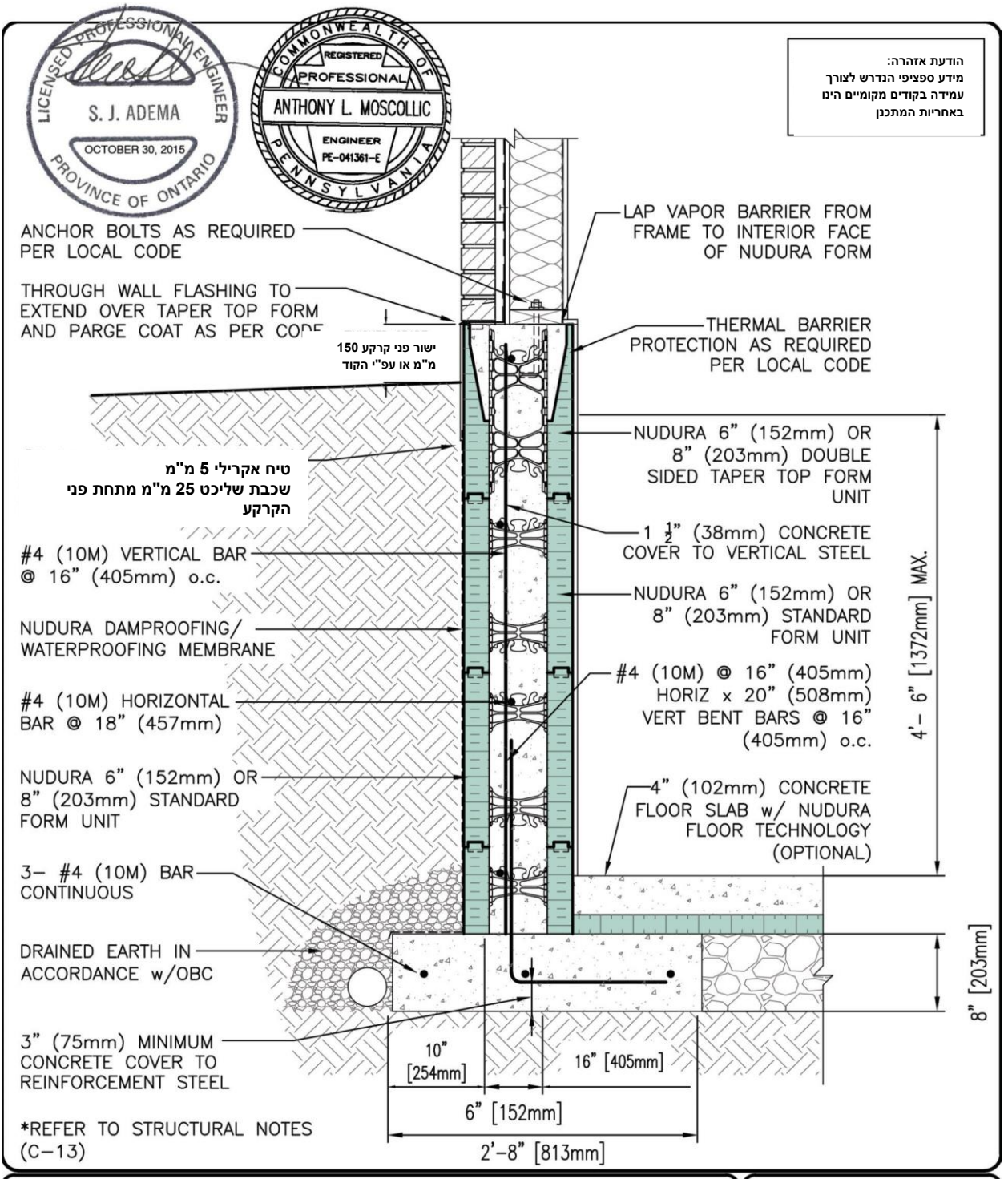


NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

KNEE WALL DETAIL
BASEMENT NUDURA FORM UNIT
ONE OR TWO STOREY WOOD FRAME
TAPER TOP FORM UNIT
NON–BRICK FINISH

REV. NO. 007 KS	DWG NO. C–14
REV. DATE: SEPT 2015	
DRAWN BY K. STILL	SCALE: "Not to Scale"

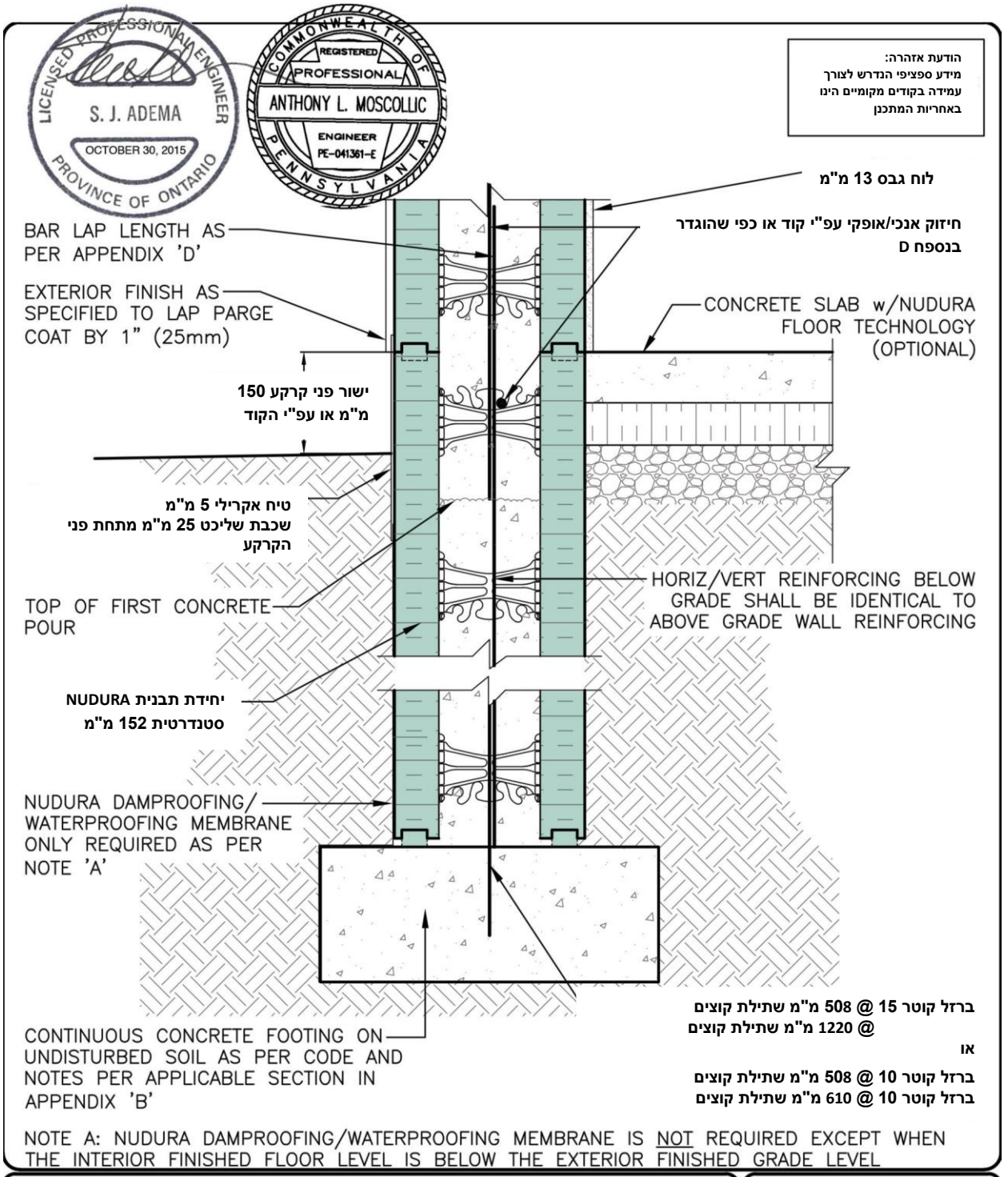

הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
ANCHOR BOLTS AS REQUIRED PER LOCAL CODE
THROUGH WALL FLASHING TO EXTEND OVER TAPER TOP FORM AND PARGE COAT AS PER CO
LAP VAPOR BARRIER FROM FRAME TO INTERIOR FACE OF NUDURA FORM
THERMAL BARRIER PROTECTION AS REQUIRED PER LOCAL CODE
ישור פני קרקע 150 מ"מ או עפ"י הקוד
טיח אקרילי 5 מ"מ
שכבת שליכט 25 מ"מ
NUDURA 6" (152mm) OR 8" (203mm) TAPER TOP FORM UNIT
1 ½" (38mm) CONCRETE COVER TO VERTICAL STEEL
#4 (10M) VERTICAL BAR @ 16" (405mm) o.c.
NUDURA 6" (152mm) OR 8" (203mm) STANDARD FORM UNIT
NUDURA DAMPROOFING/ WATERPROOFING MEMBRANE
#4 (10M) @ 16" (405mm) HORIZ x 20" (508mm) VERT BENT BARS @ 16" (405mm) o.c.
#4 (10M) HORIZONTAL BAR @ 18" (457mm)
4'- 6" [1372mm] MAX.
NUDURA 6" (152mm) OR 8" (203mm) STANDARD FORM UNIT
4" (102mm) CONCRETE FLOOR SLAB w/ NUDURA FLOOR TECHNOLOGY (OPTIONAL)
3- #4 (10M) BAR CONTINUOUS
DRAINED EARTH IN ACCORDANCE w/OBC
8" [203mm]
3" (75mm) MINIMUM CONCRETE COVER TO REINFORCEMENT STEEL
10" [254mm]
16" [405mm]
6" [152mm]
2'-8" [813mm]
*REFER TO STRUCTURAL NOTES (C-13)
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
KNEE WALL DETAIL
BASEMENT NUDURA FORM UNIT
ONE OR TWO STOREY WOOD FRAME
TAPER TOP FORM UNIT
BRICK VENEER FINISH
REV. NO. 007 KS
DWG NO. C-15
REV. DATE: SEPT 2015
DRAWN BY K. STILL
SCALE: "Not to Scale"

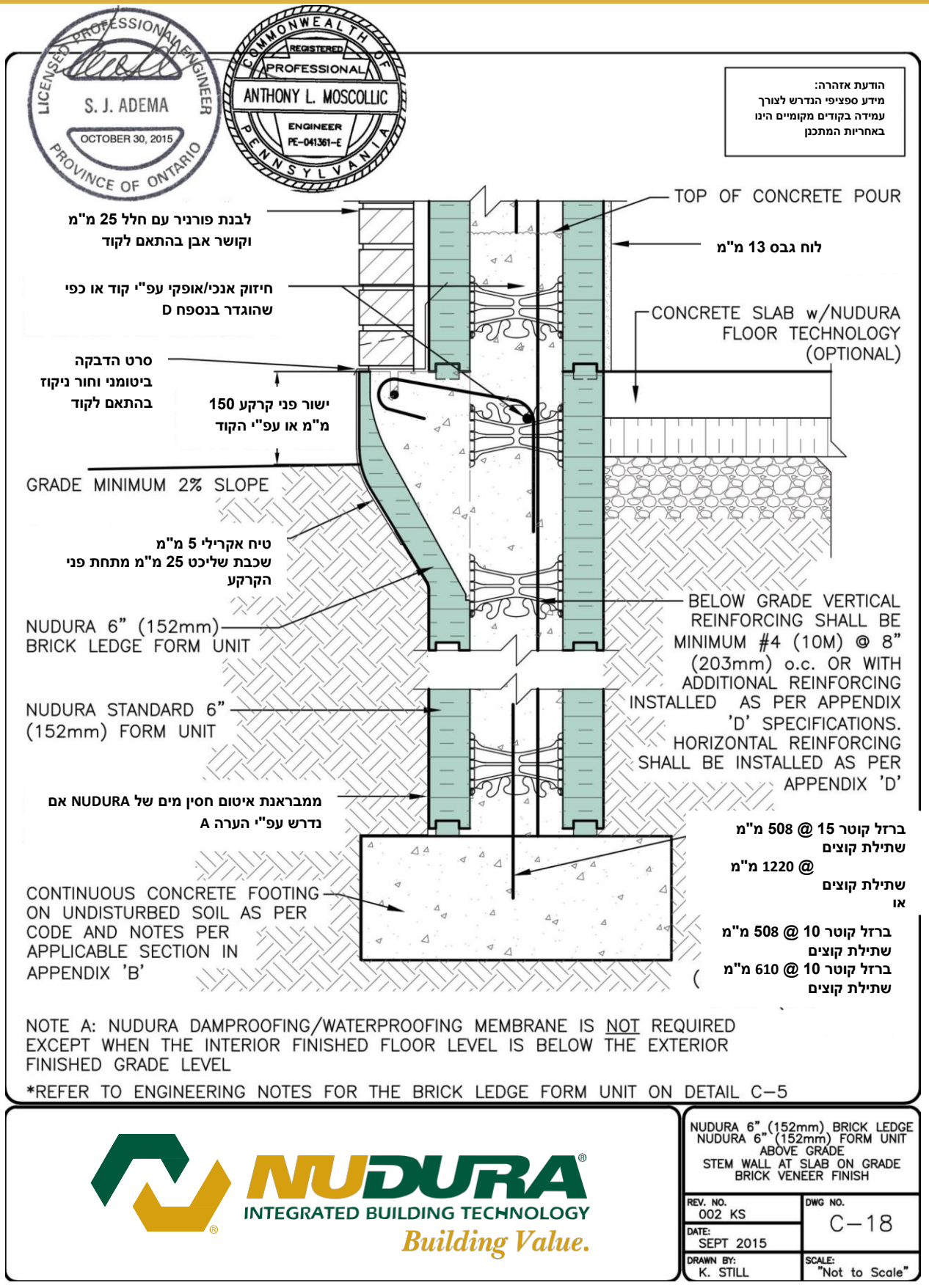


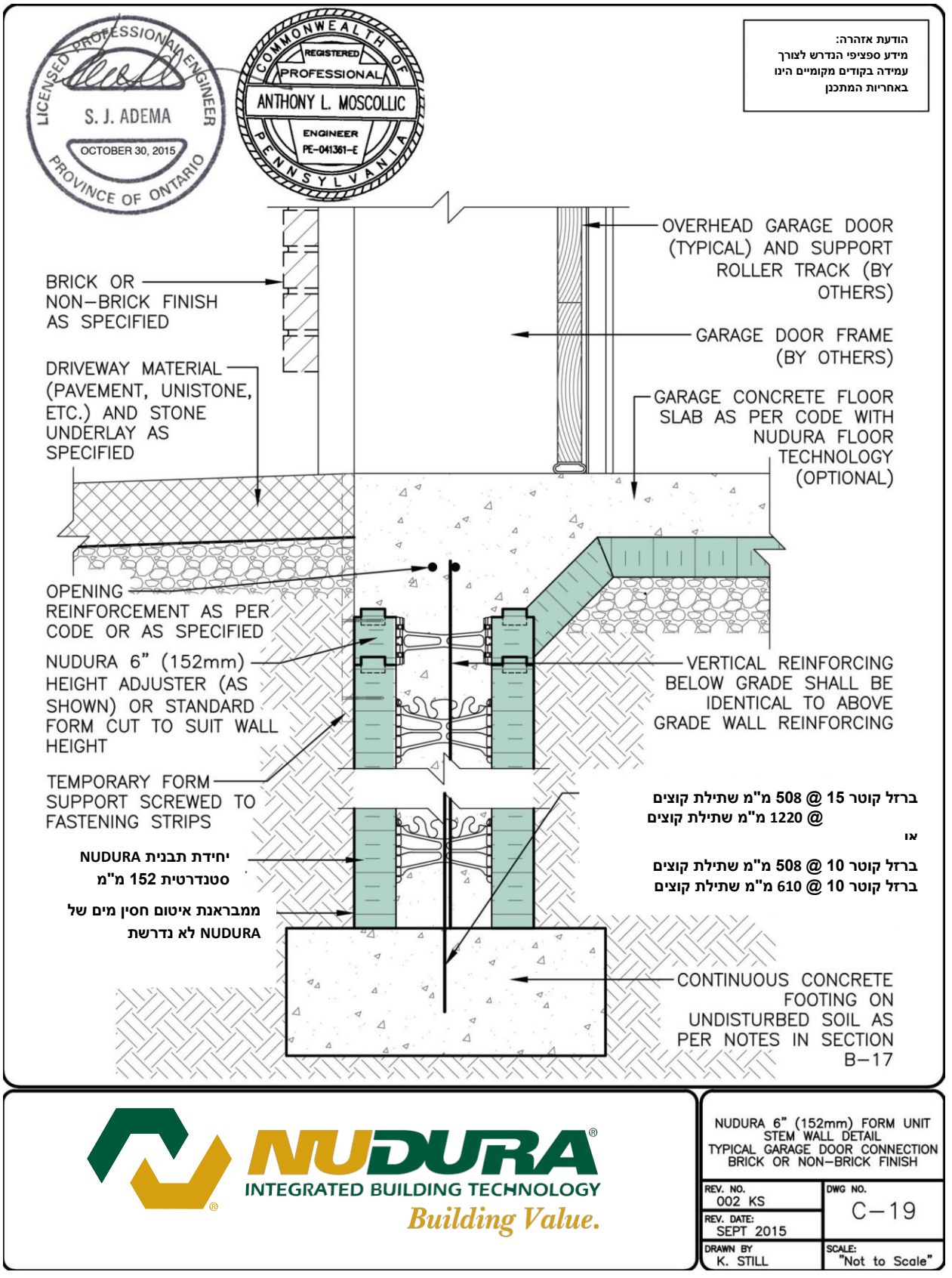
NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

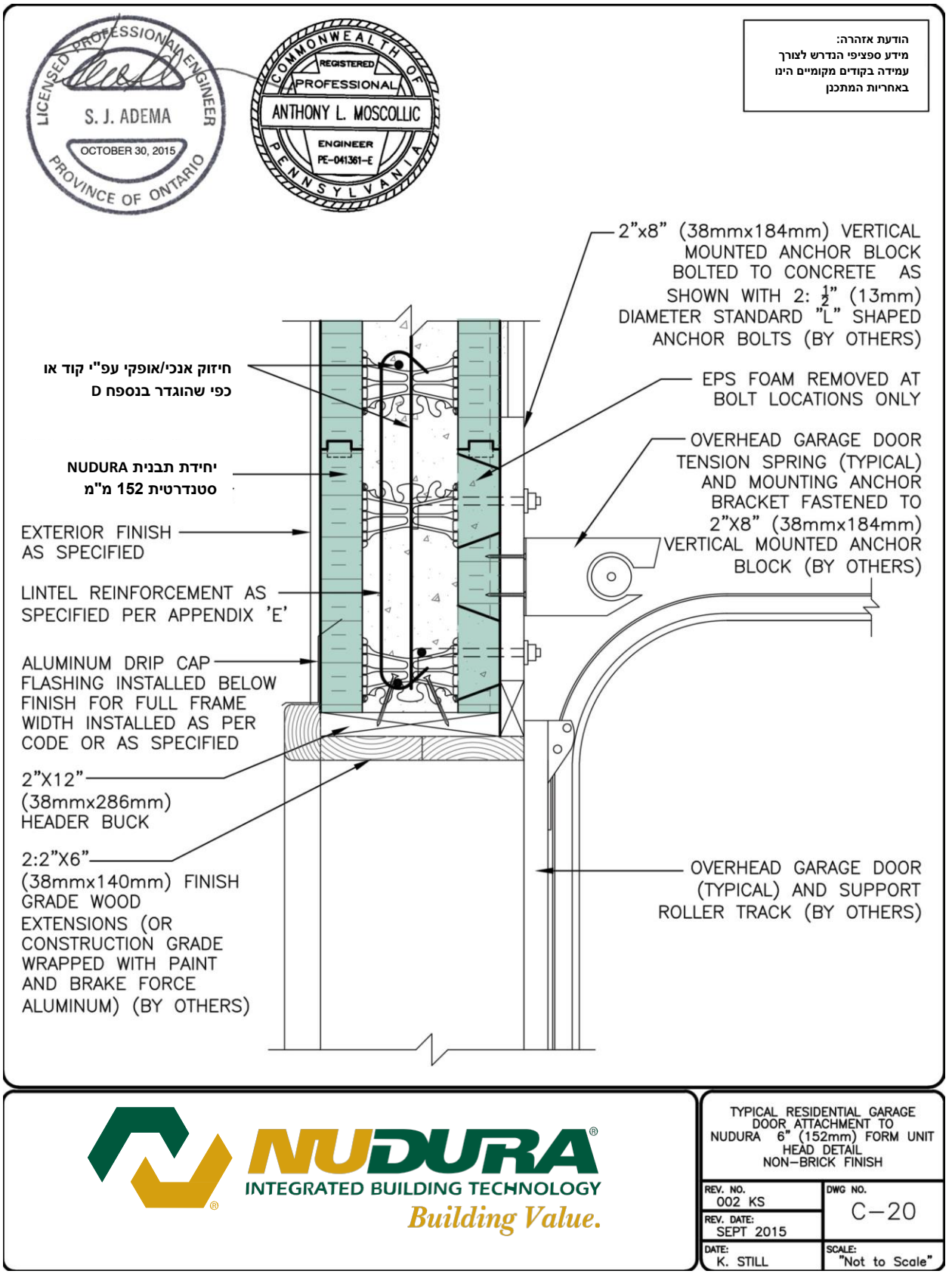
KNEE WALL DETAIL
BASEMENT NUDURA FORM UNIT
ONE OR TWO STOREY WOOD FRAME
DOUBLE SIDED TAPER TOP FORM
BRICK VENEER FINISH

REV. NO. 007 KS	DWG NO. C–16
REV. DATE: SEPT 2015	
DRAWN BY K. STILL	SCALE: "Not to Scale"


LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
לוח גבס 13 מ"מ
חיזוק אנכי/אופקי עפ"י קוד או כפי שהוגדר
בנספח D
BAR LAP LENGTH AS PER APPENDIX 'D'
EXTERIOR FINISH AS SPECIFIED TO LAP PARGE COAT BY 1" (25mm)
CONCRETE SLAB w/NUDURA FLOOR TECHNOLOGY (OPTIONAL)
ישור פני קרקע 150
מ"מ או עפ"י הקוד
טיח אקרילי 5 מ"מ
שכבת שליכט 25 מ"מ מתחת פני
הקרקע
TOP OF FIRST CONCRETE POUR
HORIZ/VERT REINFORCING BELOW GRADE SHALL BE IDENTICAL TO ABOVE GRADE WALL REINFORCING
יחידת תבנית NUDURA
סטנדרטית 152 מ"מ
NUDURA DAMPROOFING/ WATERPROOFING MEMBRANE ONLY REQUIRED AS PER NOTE 'A'
ברזל קוטר 15 @ 508 מ"מ שתילת קוצים
@ 1220 מ"מ שתילת קוצים
או
ברזל קוטר 10 @ 508 מ"מ שתילת קוצים
ברזל קוטר 10 @ 610 מ"מ שתילת קוצים
CONTINUOUS CONCRETE FOOTING ON UNDISTURBED SOIL AS PER CODE AND NOTES PER APPLICABLE SECTION IN APPENDIX 'B'
NOTE A: NUDURA DAMPROOFING/WATERPROOFING MEMBRANE IS NOT REQUIRED EXCEPT WHEN THE INTERIOR FINISHED FLOOR LEVEL IS BELOW THE EXTERIOR FINISHED GRADE LEVEL
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) FORM UNIT STEM WALL AT SLAB ON GRADE NUDURA FLOOR TECHNOLOGY NON-BRICK FINISH
REV. NO. 002 KS
DWG NO. C-17
DATE: SEPT 2015
DRAWN BY: K. STILL
SCALE: "Not to Scale"

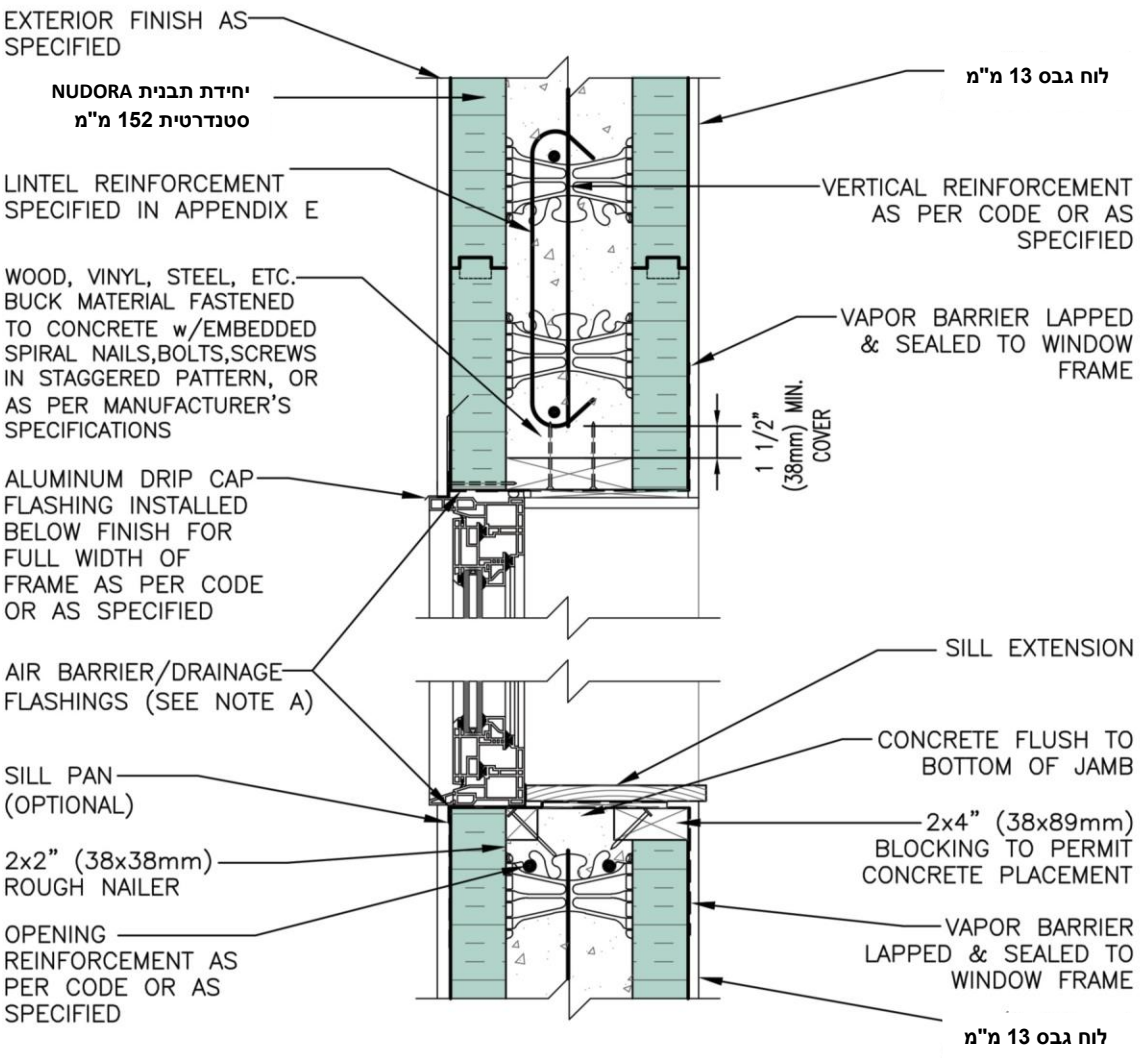

LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
לבנת פורניר עם חלל 25 מ"מ
וקושר אבן בהתאם לקוד
חיזוק אנכי/אופקי עפ"י קוד או כפי
שהוגדר בנספח D
סרט הדבקה
ביטומני וחור ניקוז
בהתאם לקוד
ישור פני קרקע 150
מ"מ או עפ"י הקוד
GRADE MINIMUM 2% SLOPE
טיח אקרילי 5 מ"מ
שכבת שליכט 25 מ"מ מתחת פני
הקרקע
NUDURA 6" (152mm)
BRICK LEDGE FORM UNIT
NUDURA STANDARD 6"
(152mm) FORM UNIT
ממבראנת איטום חסין מים של NUDURA אם
נדרש עפ"י הערה A
CONTINUOUS CONCRETE FOOTING
ON UNDISTURBED SOIL AS PER
CODE AND NOTES PER
APPLICABLE SECTION IN
APPENDIX 'B'
TOP OF CONCRETE POUR
לוח גבס 13 מ"מ
CONCRETE SLAB w/NUDURA
FLOOR TECHNOLOGY
(OPTIONAL)
BELOW GRADE VERTICAL
REINFORCING SHALL BE
MINIMUM #4 (10M) @ 8"
(203mm) o.c. OR WITH
ADDITIONAL REINFORCING
INSTALLED AS PER APPENDIX
'D' SPECIFICATIONS.
HORIZONTAL REINFORCING
SHALL BE INSTALLED AS PER
APPENDIX 'D'
ברזל קוטר 15 @ 508 מ"מ
שתילת קוצים
@ 1220 מ"מ
שתילת קוצים
או
ברזל קוטר 10 @ 508 מ"מ
שתילת קוצים
ברזל קוטר 10 @ 610 מ"מ
שתילת קוצים
NOTE A: NUDURA DAMPROOFING/WATERPROOFING MEMBRANE IS NOT REQUIRED
EXCEPT WHEN THE INTERIOR FINISHED FLOOR LEVEL IS BELOW THE EXTERIOR
FINISHED GRADE LEVEL
*REFER TO ENGINEERING NOTES FOR THE BRICK LEDGE FORM UNIT ON DETAIL C-5
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) BRICK LEDGE
NUDURA 6" (152mm) FORM UNIT
ABOVE GRADE
STEM WALL AT SLAB ON GRADE
BRICK VENEER FINISH
REV. NO. 002 KS
DWG NO. C-18
DATE: SEPT 2015
DRAWN BY: K. STILL
SCALE: "Not to Scale"


LICENSED PROFESSIONAL ENGINEER
S. J. ADEMA
OCTOBER 30, 2015
PROVINCE OF ONTARIO
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
ANTHONY L. MOSCOLLIC
ENGINEER
PE-041361-E
הודעת אזהרה:
מידע ספציפי הנדרש לצורך
עמידה בקודים מקומיים הינו
באחריות המתכנן
BRICK OR NON–BRICK FINISH AS SPECIFIED
DRIVEWAY MATERIAL (PAVEMENT, UNISTONE, ETC.) AND STONE UNDERLAY AS SPECIFIED
OVERHEAD GARAGE DOOR (TYPICAL) AND SUPPORT ROLLER TRACK (BY OTHERS)
GARAGE DOOR FRAME (BY OTHERS)
GARAGE CONCRETE FLOOR SLAB AS PER CODE WITH NUDURA FLOOR TECHNOLOGY (OPTIONAL)
OPENING REINFORCEMENT AS PER CODE OR AS SPECIFIED
NUDURA 6" (152mm) HEIGHT ADJUSTER (AS SHOWN) OR STANDARD FORM CUT TO SUIT WALL HEIGHT
TEMPORARY FORM SUPPORT SCREWED TO FASTENING STRIPS
VERTICAL REINFORCING BELOW GRADE SHALL BE IDENTICAL TO ABOVE GRADE WALL REINFORCING
ברזל קוטר 15 @ 508 מ"מ שתילת קוצים
@ 1220 מ"מ שתילת קוצים
או
ברזל קוטר 10 @ 508 מ"מ שתילת קוצים
ברזל קוטר 10 @ 610 מ"מ שתילת קוצים
יחידת תבנית NUDURA
סטנדרטית 152 מ"מ
ממבראנת איטום חסין מים של
NUDURA לא נדרשת
CONTINUOUS CONCRETE FOOTING ON UNDISTURBED SOIL AS PER NOTES IN SECTION B–17
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
NUDURA 6" (152mm) FORM UNIT
STEM WALL DETAIL
TYPICAL GARAGE DOOR CONNECTION
BRICK OR NON–BRICK FINISH
REV. NO. 002 KS
REV. DATE: SEPT 2015
DRAWN BY K. STILL
DWG NO. C–19
SCALE: "Not to Scale"



NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

TYPICAL RESIDENTIAL GARAGE DOOR ATTACHMENT TO NUDURA 6" (152mm) FORM UNIT HEAD DETAIL NON–BRICK FINISH	
REV. NO. 002 KS	DWG NO. C–20
REV. DATE: SEPT 2015	
DATE: K. STILL	SCALE: "Not to Scale"



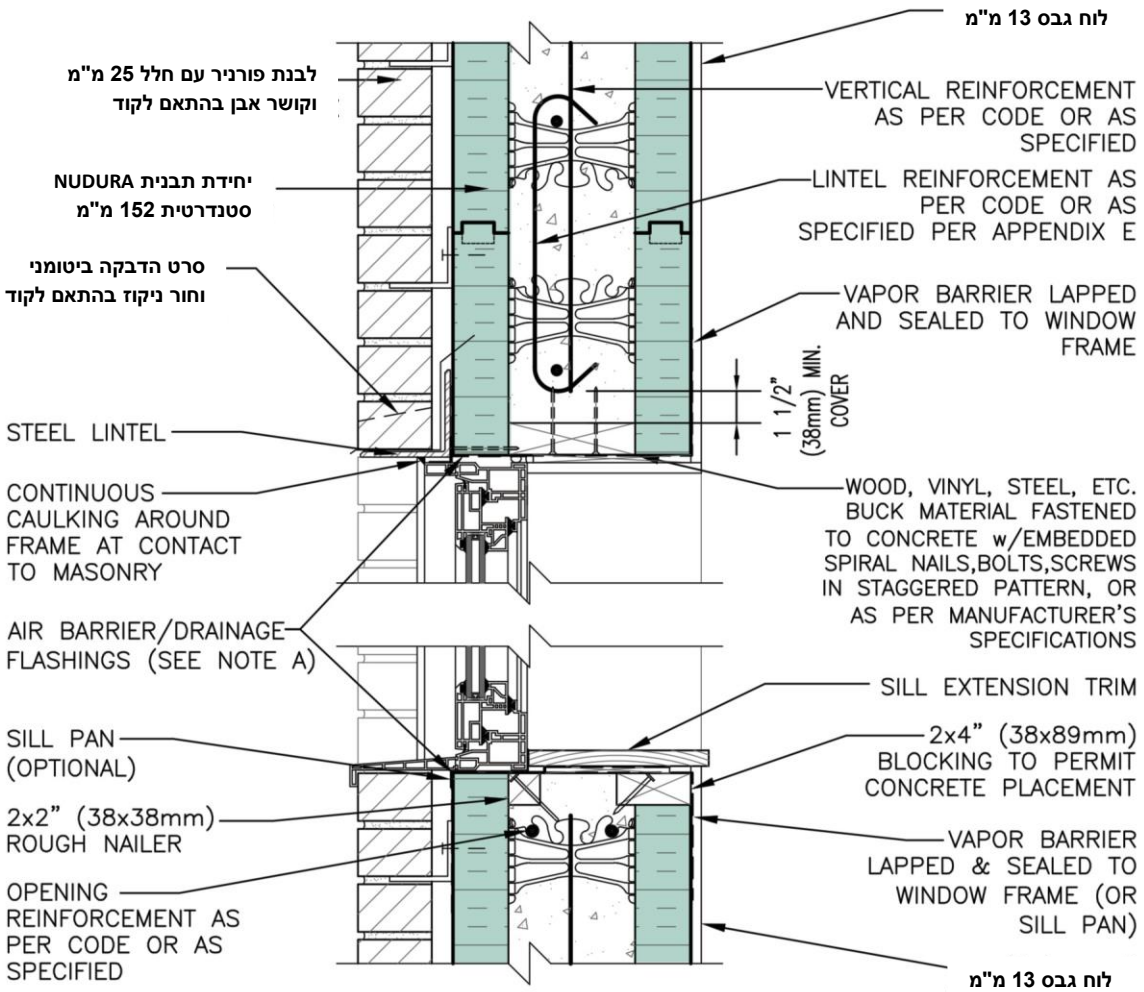
הודעת אזהרה:
מידע ספציפי הנדרש לצורך עמידה בקודים מקומיים הינו באחריות המתכנן

NOTE A: AIR BARRIER/DRAINAGE FLASHINGS TO BE INSTALLED AROUND COMPLETE OPENING PERIMETER AS PER SECTION 9.1 OF THE NUDURA INSTALLATION MANUAL OR AS DETAILED BY LOCAL APPLICABLE CODES (CODE GOVERNS)

NUDURA® INTEGRATED BUILDING TECHNOLOGY *Building Value.*

STANDARD 6" (152mm) FORM UNIT
WINDOW HEAD/SILL DETAIL
NON-BRICK FINISH
WINDOW TO EXTERIOR

REV. NO. 001 KS	DWG NO. C-21
DATE: SEPT 2015	
DRAWN BY: K. STILL	SCALE: 1 1/2"=1'-0"



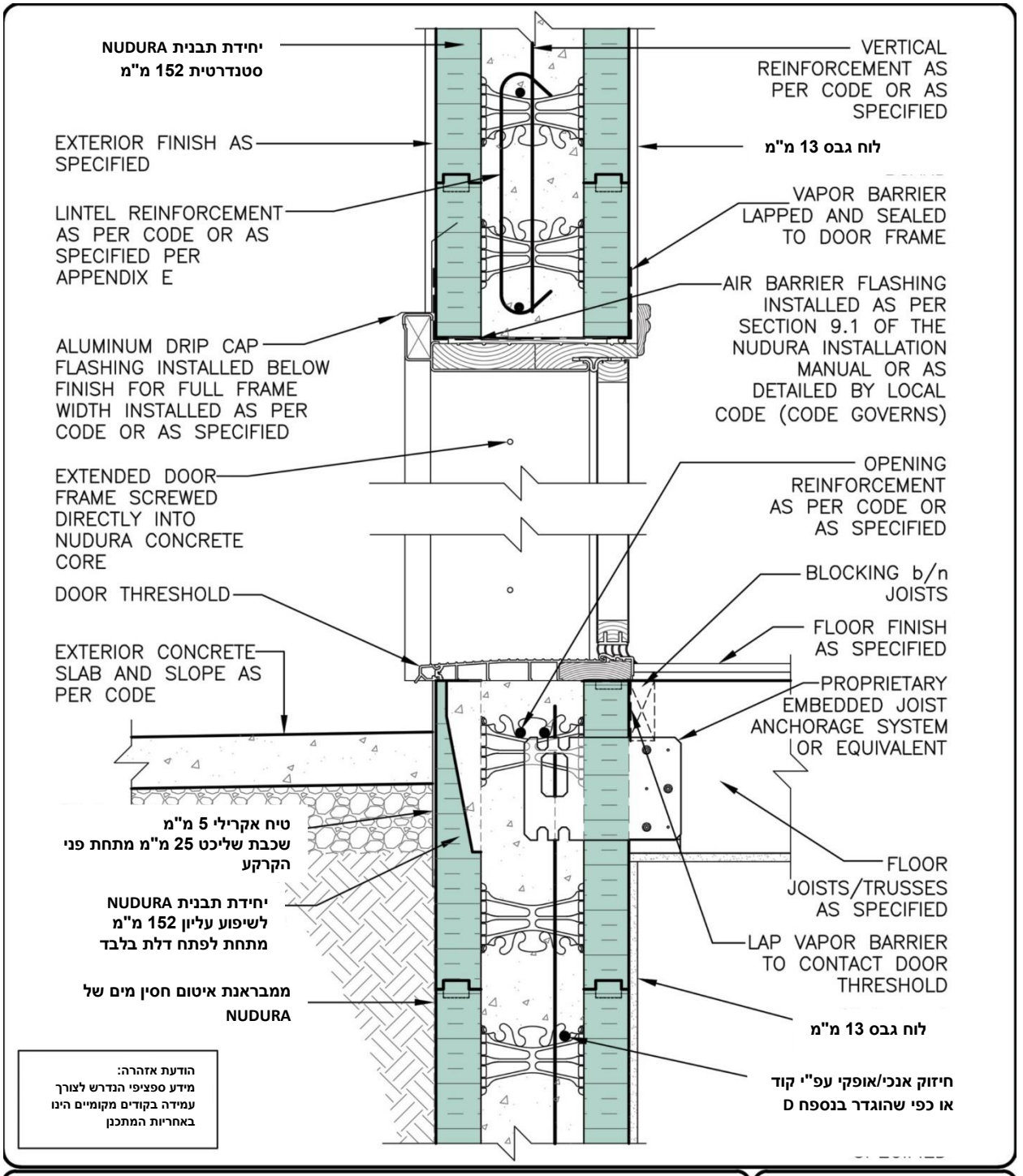
NOTE A: AIR BARRIER/DRAINAGE FLASHINGS TO BE INSTALLED AROUND COMPLETE OPENING PERIMETER AS PER SECTION 9.1 OF THE NUDURA INSTALLATION MANUAL OR AS DETAILED BY LOCAL APPLICABLE CODES (CODE GOVERNS)

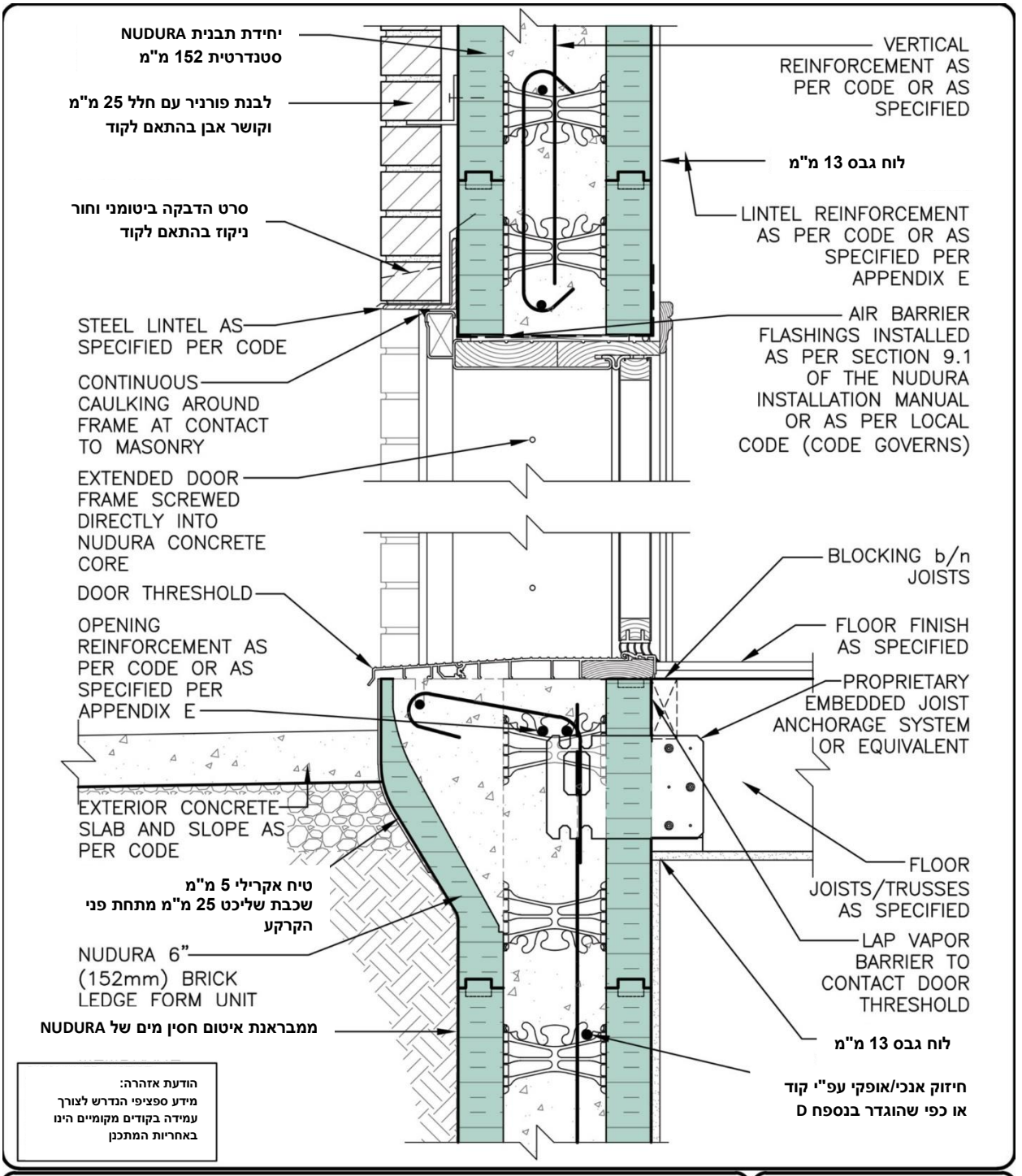
הודעת אזהרה:
מידע ספציפי הנדרש לצורך עמידה בקודים מקומיים הינו באחריות המתכנן

NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

STANDARD 6" (152mm) FORM UNIT
WINDOW HEAD/SILL DETAIL
BRICK VENEER FINISH

REV. NO. 001 KS	DWG NO. C-22
DATE: SEPT 2015	
DRAWN BY: K. STILL	SCALE: 1 1/2"=1'-0"


יחידת תבנית NUDURA
סטנדרטית 152 מ"מ
EXTERIOR FINISH AS SPECIFIED
LINTEL REINFORCEMENT AS PER CODE OR AS SPECIFIED PER APPENDIX E
ALUMINUM DRIP CAP FLASHING INSTALLED BELOW FINISH FOR FULL FRAME WIDTH INSTALLED AS PER CODE OR AS SPECIFIED
EXTENDED DOOR FRAME SCREWED DIRECTLY INTO NUDURA CONCRETE CORE
DOOR THRESHOLD
EXTERIOR CONCRETE SLAB AND SLOPE AS PER CODE
טיח אקרילי 5 מ"מ
שכבת שליכט 25 מ"מ מתחת פני הקרקע
יחידת תבנית NUDURA
לשיפוע עליון 152 מ"מ
מתחת לפתח דלת בלבד
ממבראנת איטום חסין מים של NUDURA
VERTICAL REINFORCEMENT AS PER CODE OR AS SPECIFIED
לוח גבס 13 מ"מ
VAPOR BARRIER LAPPED AND SEALED TO DOOR FRAME
AIR BARRIER FLASHING INSTALLED AS PER SECTION 9.1 OF THE NUDURA INSTALLATION MANUAL OR AS DETAILED BY LOCAL CODE (CODE GOVERNS)
OPENING REINFORCEMENT AS PER CODE OR AS SPECIFIED
BLOCKING b/n JOISTS
FLOOR FINISH AS SPECIFIED
PROPRIETARY EMBEDDED JOIST ANCHORAGE SYSTEM OR EQUIVALENT
FLOOR JOISTS/TRUSSES AS SPECIFIED
LAP VAPOR BARRIER TO CONTACT DOOR THRESHOLD
לוח גבס 13 מ"מ
חיזוק אנכי/אופקי עפ"י קוד
או כפי שהוגדר בנספח D
הודעת אזהרה:
מידע ספציפי הנדרש לצורך עמידה בקודים מקומיים הינו באחריות המתכנן
NUDURA
INTEGRATED BUILDING TECHNOLOGY
Building Value.
STANDARD 6" (152mm) FORM UNIT
DOOR HEAD/THRESHOLD DETAIL
NON-BRICK FINISH
REV. NO. 001 KS
DWG NO. C-23
DATE: SEPT 2015
DRAWN BY: K. STILL
SCALE: 1 1/2"=1'-0"



NUDURA®
INTEGRATED BUILDING TECHNOLOGY
Building Value.

STANDARD 6" (152mm) FORM UNIT
DOOR HEAD/THRESHOLD DETAIL
BRICK VENEER FINISH

REV. NO. 001 KS	DWG NO. C–24
DATE: SEPT 2015	
DRAWN BY: K. STILL	SCALE: 1 1/2"=1'–0"