



STRUCTURAL ENGINEERING PACKAGE

DRAWINGS:

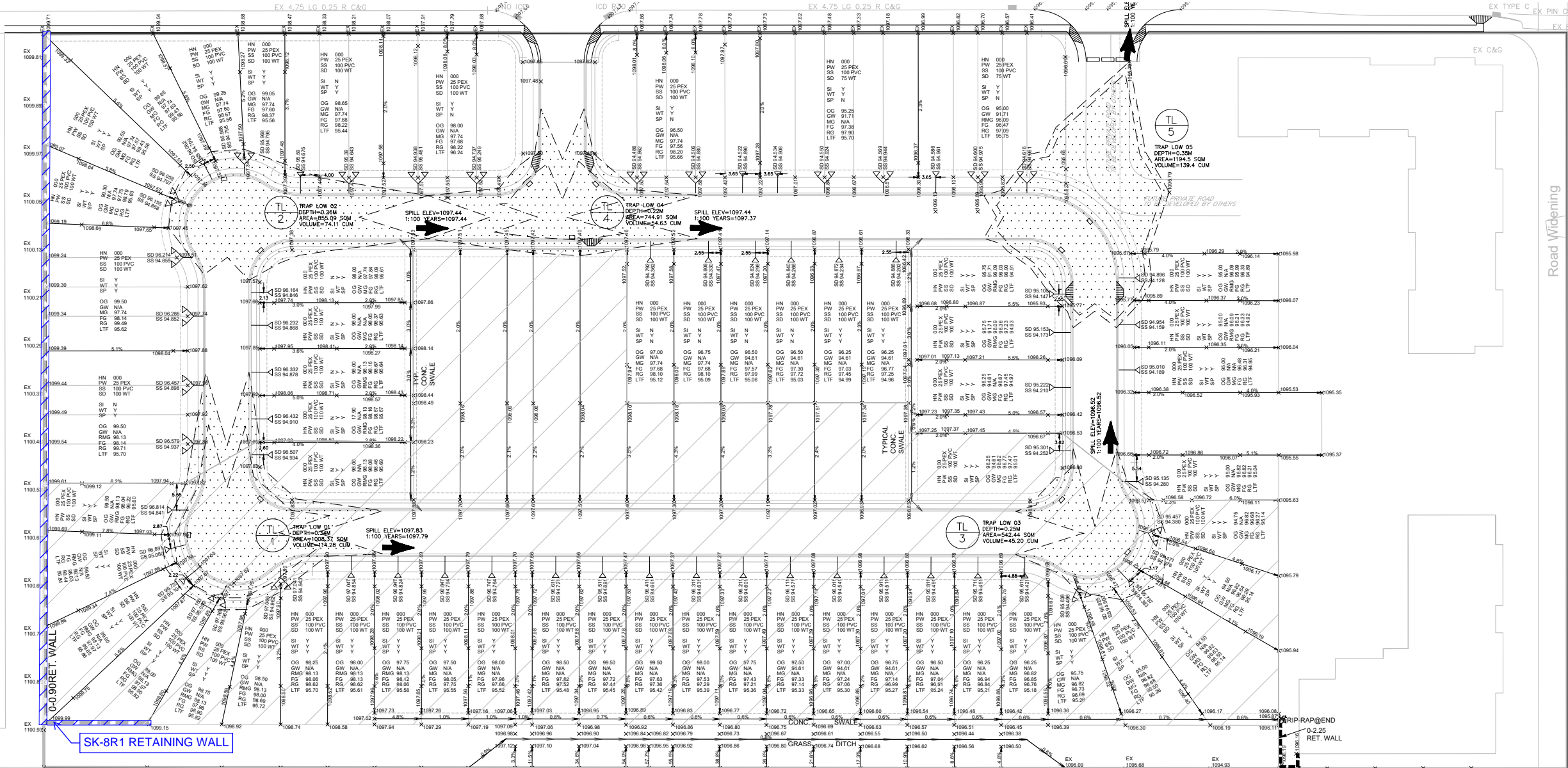
000 - COVER PAGE
001 - RETAINING WALL SITE PLAN
002 - RETAINING WALL DETAIL

ISSUED FOR BUILDING PERMIT
DATE: June 11, 2024

CLIENT: PLANET EARTH BUILDERS

LOT: 1
BLOCK: 1
PLAN: 041 0640

SOUTH WINDSONG,
AIRDRIE, ALBERTA



- NOTES:
- ALL STRIP FOOTINGS (INCLUDING GARAGE) ARE TO BE 24"x10" C/W 4-10M REBAR MINIMUM (UNLESS A SOIL INSPECTION IS CONDUCTED AND IS APPROVED BY BLUELINE ENGINEERING), OR UNLESS NOTED OTHERWISE IN THIS PLAN.
 - CANTILEVERS ARE TO FOLLOW THE SK-1 DETAIL.
 - USE SK-7 CORNER DETAIL FOR ALL FOUNDATION WALL CORNERS.
 - ALL FOUNDATION WALLS ARE TO FOLLOW SK-8 STANDARD FOUNDATION WALL DETAIL UNLESS OTHERWISE SPECIFIED IN THIS DRAWING, OR BY BLUELINE ENGINEERING.
 - REINFORCEMENT MATERIAL TO BE DEFORMED BILLET STEEL CONFORMING TO CAN/CSA-G30.18-M92 MINIMUM YIELD STRENGTH 400MPa.
 - ALL CONCRETE IS TO BE MINIMUM 32 MPa Type 50 UNLESS NOTED OTHERWISE.
 - ON-SITE SOIL BEARING CAPACITY IS TO BE MINIMUM 120 kPa UNLESS NOTED OTHERWISE. BUILDER ASSUMES ALL RESPONSIBILITY FOR ON-SITE SOIL CONDITIONS.
 - ALL STRUCTURAL PADS ARE TO BE CENTERED UNDER THE TELEPOST.
 - REFER TO THE SUPPLIER LAYOUTS FOR ALL TELEPOST OR BUILT-UP-POST LOCATIONS AND SPECIFICATIONS.
 - BLUELINE ENGINEERING IS TO BE NOTIFIED IMMEDIATELY IF THE GROUND WATER LEVEL IS HIGHER THAN THE PROPOSED FOOTING LEVEL. IF THE GRADE SLIP IS NOT PRESENTED TO BLUELINE ENGINEERING, OR IF BLUELINE ENGINEERING IS NOT MADE AWARE OF THE HIGH WATER TABLE PRIOR TO THE STAMPING OF THIS FOUNDATION PLAN, THE BUILDER ASSUMES ALL RESPONSIBILITY AND COSTS ASSOCIATED WITH THE NECESSARY CORRECTIVE MEASURES AS PER THE 2023 NBC-AE.
 - BLUELINE ENGINEERING IS TO BE NOTIFIED IMMEDIATELY IF ANY CHANGES ARE MADE TO THE FLOOR JOIST AND/OR ROOF TRUSS LAYOUTS, OR THE ARCHITECTURAL, MECHANICAL, AND/OR ELECTRICAL DRAWINGS.
 - THIS INTERPRETATION OF THE ARCHITECTURAL DRAWINGS IS TO BE USED AS A REFERENCE FOR STRUCTURAL MARKUPS AND DETAILS ONLY. DESIGNER ASSUMES ALL LIABILITY FOR BUILDING CODE, BYLAW, AND ARCHITECTURAL REGULATIONS OUTSIDE THE SCOPE OF BLUELINE ENGINEERING.
 - REFER TO THE SUPPLIER LAYOUTS AND ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATIONS OF ALL PADS AND FOOTINGS. BUILDER IS REQUIRED TO VERIFY THE LOCATION OF ALL PADS AND FOOTINGS WITH THE ARCHITECTURAL DESIGNER AND LAYOUT SUPPLIER PRIOR TO CONSTRUCTION.
 - ALL EXTERIOR PADS AND FOOTINGS ARE REQUIRED TO BE A MINIMUM 4'-0" BELOW GRADE FOR FROST PROTECTION, UNLESS NOTED OTHERWISE IN THIS DRAWING, BY BLUELINE ENGINEERING, OR A SUPERSEDED GEOTECHNICAL REPORT SPECIFIC TO THE AREA. IN ALL CASES, THE GREATER FROST PROTECTION DEPTH MUST BE USED UNLESS SPECIFICALLY STATED OTHERWISE.

DISCLAIMER:

1. THIS ENGINEERING DRAWING PACKAGE, INCLUSIVE OF ALL RELATED DOCUMENTS AND PLANS, IS PROVIDED WITH THE EXPLICIT UNDERSTANDING THAT THE ENGINEERING STAMPS AFFIXED TO THE FOUNDATION PLAN ARE SOLELY APPLICABLE TO THE ENGINEERING MARK-UPS AND MODIFICATIONS. THE FOUNDATION PLAN ITSELF, AS PREPARED BY THE DRAFTER, REMAINS SEPARATE AND DISTINCT FROM OUR ENGINEERING.

2. THE ENGINEERING STAMPS APPLIED HEREIN ARE NOT INTENDED TO IMPLY COMPREHENSIVE REVIEW OR ENDORSEMENT OF THE ENTIRE FOUNDATION PLAN. OUR ENGINEERING ASSESSMENTS AND ENDORSEMENTS ARE SPECIFICALLY LIMITED TO THE ALTERATIONS, MODIFICATIONS, OR ADDITIONS EXPLICITLY DETAILED WITHIN OUR MARK-UPS.

3. IT IS IMPERATIVE TO ACKNOWLEDGE THAT ANY STRUCTURAL OR FOUNDATIONAL ASPECTS NOT DIRECTLY ADDRESSED BY OUR MARK-UPS REMAIN THE RESPONSIBILITY OF THE ORIGINAL DRAFTER OR DESIGNATED PROFESSIONALS. WE ASSUME NO LIABILITY OR RESPONSIBILITY FOR PORTIONS OF THE FOUNDATION PLAN THAT FALL OUTSIDE THE SCOPE OF ENGINEERING CONTRIBUTION.

4. RECIPIENTS OF THIS DRAWING PACKAGE ARE ADVISED TO EXERCISE DUE DILIGENCE AND SEEK APPROPRIATE EXPERTISE FOR ANY COMPONENTS OF THE FOUNDATION PLAN THAT LIE BEYOND THE EXPLICIT MODIFICATIONS MARKED WITH OUR ENGINEERING STAMPS. OUR STAMP IS NOT AN ENDORSEMENT OF THE DRAFTER'S WORK AS A WHOLE, BUT RATHER A REFLECTION OF OUR REVIEWED CONTRIBUTIONS.

5. THIS DISCLAIMER IS PRESENTED TO ENSURE A CLEAR UNDERSTANDING OF OUR ENGINEERING ASSESSMENTS AND ENDORSEMENTS. ANY UNINTENDED MISINTERPRETATION OR MISUSE OF OUR STAMP IS NOT ENDORSED OR SANCTIONED BY BLUELINE ENGINEERING.

BY UTILIZING THIS DRAWING PACKAGE, YOU AGREE TO ACKNOWLEDGE AND ADHERE TO THE LIMITATIONS OUTLINED IN THIS DISCLAIMER.

- GENERAL NOTES:
- THIS DRAWING IS TO BE USED AS A REFERENCE FOR STRUCTURAL FRAMING AND/OR CONCRETE ONLY AND MUST NOT BE SCALED.
 - ALL DIMENSIONS ARE BASED ON THE ARCHITECTURAL DRAWINGS AND ARE TO BE USED AS A REFERENCE ONLY. EXACT ON-SITE CONDITIONS MAY VARY. BUILDERS ARE EXPECTED TO USE THEIR DISCRETION REGARDING ALL DIMENSIONS.
 - ALL ERRORS OR OMISSIONS MUST BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY AND PRIOR TO ANY CONSTRUCTION.
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO THE COMMENCEMENT OF WORK.
 - VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE DESIGN ENGINEER.
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 - FRAMING: BUILDERS MAY ADD STUDS WHERE NECESSARY. STUDS PLACED BETWEEN WINDOWS ARE AN ESTIMATION BASED ON THE ARCHITECTURAL DRAWINGS. BUILDER IS EXPECTED TO USE THEIR DISCRETION.
 - FRAMING: APPROPRIATE SPRAY FOAM INSULATION MAY BE REQUIRED TO MEET THE 2023 NBC AE.
 - BUILDER IS TO USE THE MOST UP-TO-DATE VERSION OF ALL DRAWINGS. ALL RE-STAMPED AND/OR RE-ISSUED DRAWINGS SUPERSEDE PREVIOUSLY ISSUED/STAMPED DRAWINGS. BLUELINE ENGINEERING DOES NOT ACCEPT ANY RESPONSIBILITY FOR CASES IN WHICH OUT-DATED OR SUPERSEDED DRAWINGS ARE USED IN PLACE OF NEW DRAWINGS.

BlueLine

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11/06/2024

REVISIONS

DESCRIPTION	DATE
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LEGAL DESCRIPTION

LOT: 1
BLOCK: 1
PLAN: 041 0640

SOUTH WINDSONG,
AIRDRIE, ALBERTA

CLIENT: PLANET EARTH BUILDERS

SHEET TITLE

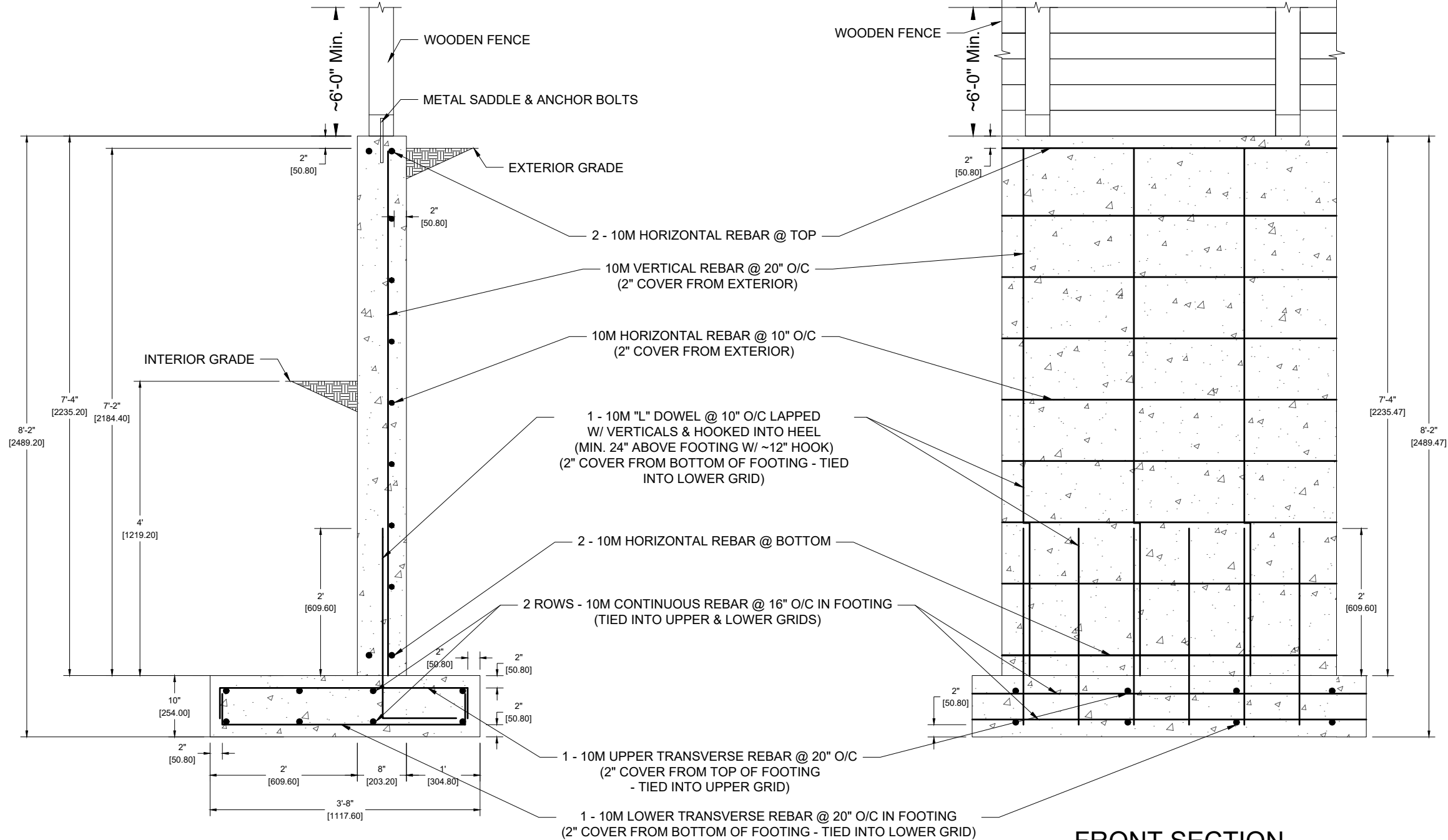
RETAINING WALL SITE PLAN

SCALE : NOT TO SCALE

DATE : 11/06/2024

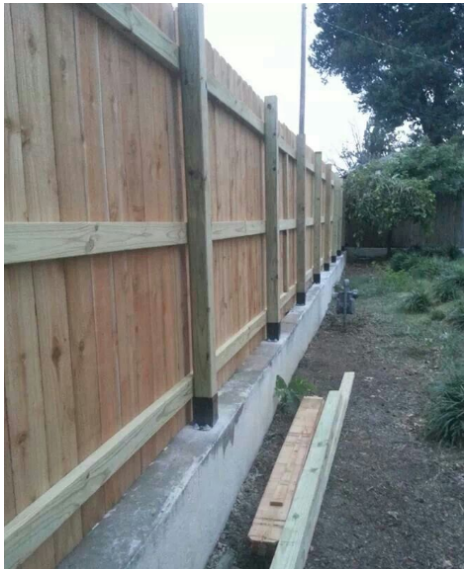
SHEET NUMBER

001



SIDE SECTION

FRONT SECTION



SK-8R1
RETAINING WALL DETAIL 1
SCALE : NOT TO SCALE

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Check Summary

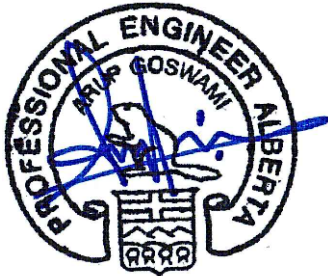
Ratio	Check	Provided	Required	Combination
Stability Checks				
0.919	Overturning	2.18	2.00	1.00 + 1.0H
0.254	Sliding	4.63	1.50	1.00 + 1.0H
0.595	Bearing Pressure	2500 psf	1487 psf	1.00 + 1.0H
0.180	Bearing Eccentricity	4"	22"	1.00 + 1.0H
Shear Checks				
0.197	Shear	7084 lb/ft	1398 lb/ft	1.4D + 1.5H
0.687	Moment	3.02 ft-k/ft	2.07 ft-k/ft	1.4D + 1.5H
0.000	Min Steel	0.01 in²	0 in²	1.4D + 1.5H
0.665	Development	18"	12"	1.4D + 1.5H
0.813	S&T Max Spacing	16"	19.7"	1.4D + 1.5H
1.000	S&T Min Steel	0.02 in²/in	0.02 in²/in	1.4D + 1.5H
Heel Checks				
0.219	Shear	7084 lb/ft	1551 lb/ft	1.4D + 1.5H
0.357	Moment	2.17 ft-k/ft	0.78 ft-k/ft	1.4D + 1.5H
0.000	Min Steel	0.01 in²	0 in²	1.4D + 1.5H
0.399	Development	30"	12"	1.4D + 1.5H
0.813	S&T Max Spacing	16"	19.7"	1.4D + 1.5H
1.000	S&T Min Steel	0.02 in²/in	0.02 in²/in	1.4D + 1.5H
Stem Checks				
0.725	Moment	4.36 ft-k/ft	3.16 ft-k/ft	1.4D + 1.5H
0.642	d/d Limit	0.4085	0.6364	1.4D + 1.5H
0.226	Shear	5848 lb/ft	1322 lb/ft	1.4D + 1.5H
0.000	Min Steel	0.02 in²/in	0 in²/in	1.4D + 1.5H
0.624	Base Development	8"	5"	1.4D + 1.5H
0.648	Lap Splice Length	24"	15.6"	1.4D + 1.5H
0.000	Bar Cutoff Extension	14.6"	0"	1.4D + 1.5H
0.118	Bar Cutoff Shear	5848 lb/ft	687.3 lb/ft	1.4D + 1.5H
1.000	Horz Min Steel	0.02 in²/in	0.02 in²/in	1.4D + 1.5H
0.528	Horz Bar Spacing	10"	19.7"	1.4D + 1.5H

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STAMP



11/06/2024
ID# 64279
PERMIT TO PRACTICE: P 14964

REVISIONS

DESCRIPTION **DATE**

LEGAL DESCRIPTION

LOT: 1
BLOCK: 1
PLAN: 041 0640

SOUTH WINDSONG,
AIRDRIE, ALBERTA

CLIENT: PLANET EARTH BUILDERS

SHEET TITLE

RETAINING WALL DETAIL 1

SCALE : NOT TO SCALE

DATE : 11/06/2024

SHEET NUMBER

002