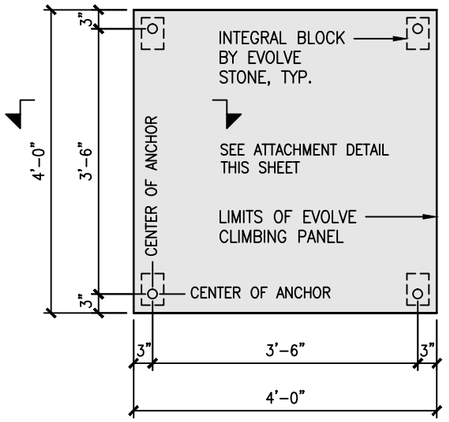


ELEVATION OF 48" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP STRUCTURAL WALL OF WOOD STUDS. FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED.

5. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

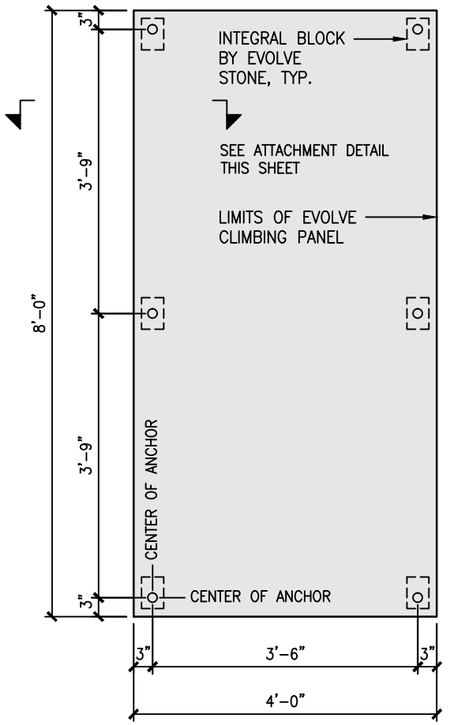
6. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

7. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{YB} = 45,000 PSI, MINIMUM.

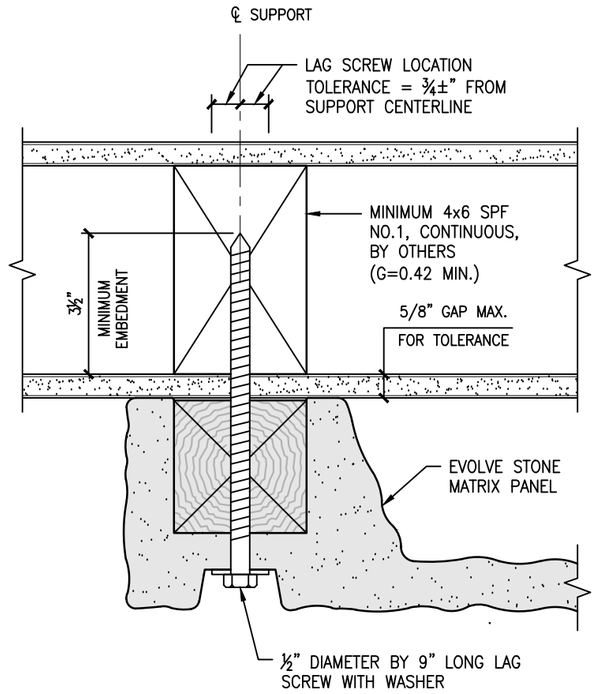
WARNING! THESE EVOLVE CUSTOM LLC ("EVOLVE") DRAWINGS DESCRIBE GENERAL GUIDELINES FOR ANCHORING EVOLVE'S PANELS TO A WALL. HOWEVER, SPECIFIC DECISIONS FOR HOW TO INSTALL AND ANCHOR EVOLVE'S PANELS TO A WALL ARE BEYOND THE CONTROL OF EVOLVE; AND THEREFORE, MUST BE INDEPENDENTLY VERIFIED BY A PROFRESSIONAL ENGINEER AND/OR BUILDING CODE INSPECTOR. ADDITIONALLY, THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL STEPS THAT EVOLVE'S PANELS ARE SAFELY INSTALLED IN ACCORDANCE WITH THE ENGINEER'S AND/OR INSPECTOR'S PLANS.

THE INFORMATION CONTAINED IN THESE DRAWINGS ARE PRESENTED WITHOUT ANY WARRANTY. ALL RISKS FOR USE AND INSTALLATION OF EVOLVE'S PANELS IS ENTIRELY ASSUMED BY THE CUSTOMER OF THE PANELS. EVOLVE DISCLAIMS ALL LIABILITY FOR USE OF INFORMATION PROVIDED IN THESE DRAWINGS.

DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



ELEVATION OF 96" TALL CLIMBING PANEL



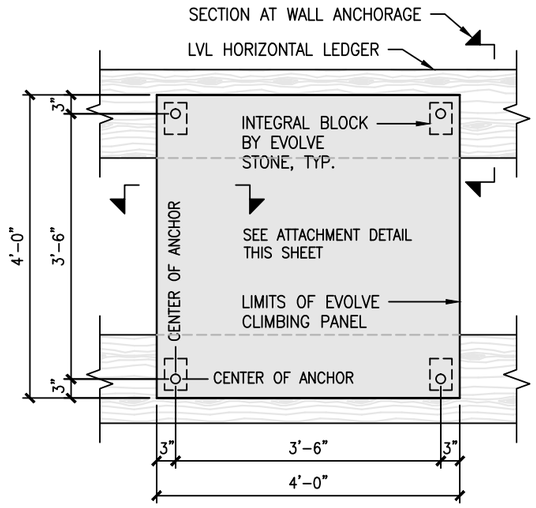
ATTACHMENT DETAIL TO WOOD STUD WALL

Project Number: 16-107

Date: 4/12/2017 Submission:

Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO WOOD STUD WALL

WP-1A



ELEVATION OF 48" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP STRUCTURAL WALL OF WOOD STUDS. FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED.

5. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

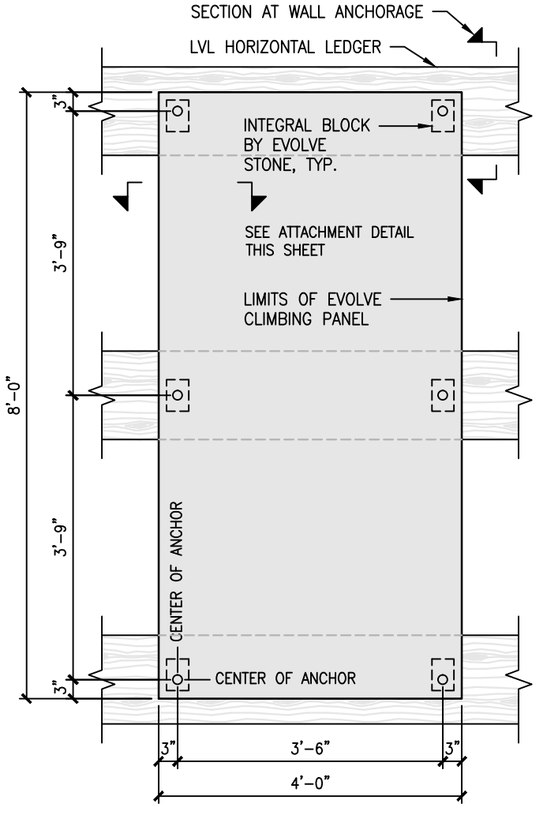
6. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

7. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{YB} = 45,000 PSI, MINIMUM.

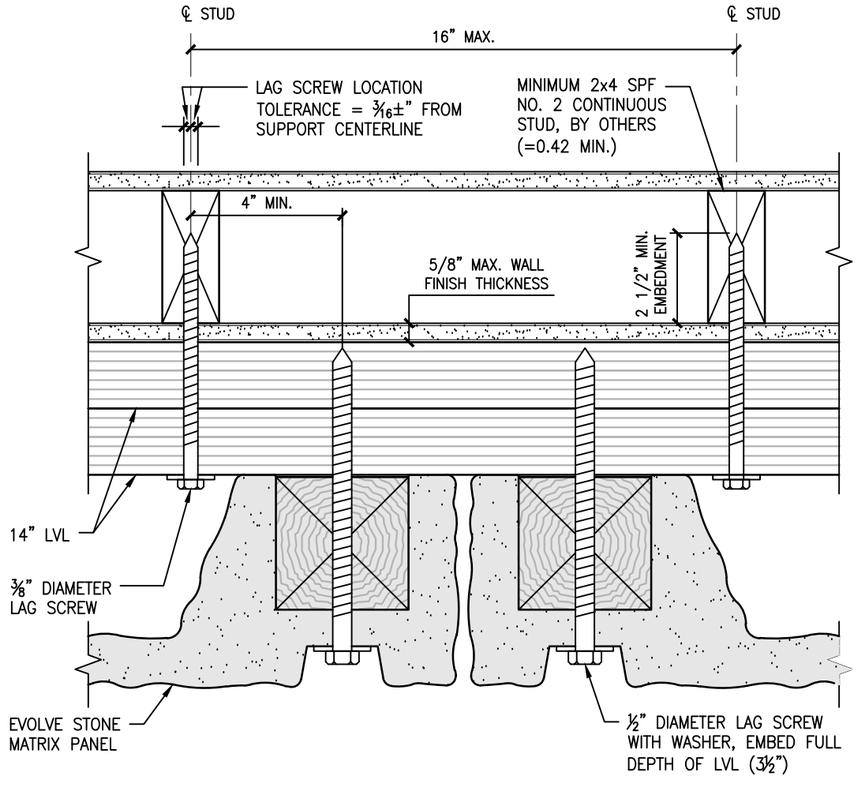
WARNING! THESE EVOLVE CUSTOM LLC ("EVOLVE") DRAWINGS DESCRIBE GENERAL GUIDELINES FOR ANCHORING EVOLVE'S PANELS TO A WALL. HOWEVER, SPECIFIC DECISIONS FOR HOW TO INSTALL AND ANCHOR EVOLVE'S PANELS TO A WALL ARE BEYOND THE CONTROL OF EVOLVE; AND THEREFORE, MUST BE INDEPENDENTLY VERIFIED BY A PROFRESSIONAL ENGINEER AND/OR BUILDING CODE INSPECTOR. ADDITIONALLY, THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL STEPS THAT EVOLVE'S PANELS ARE SAFELY INSTALLED IN ACCORDANCE WITH THE ENGINEER'S AND/OR INSPECTOR'S PLANS.

THE INFORMATION CONTAINED IN THESE DRAWINGS ARE PRESENTED WITHOUT ANY WARRANTY. ALL RISKS FOR USE AND INSTALLATION OF EVOLVE'S PANELS IS ENTIRELY ASSUMED BY THE CUSTOMER OF THE PANELS. EVOLVE DISCLAIMS ALL LIABILITY FOR USE OF INFORMATION PROVIDED IN THESE DRAWINGS.

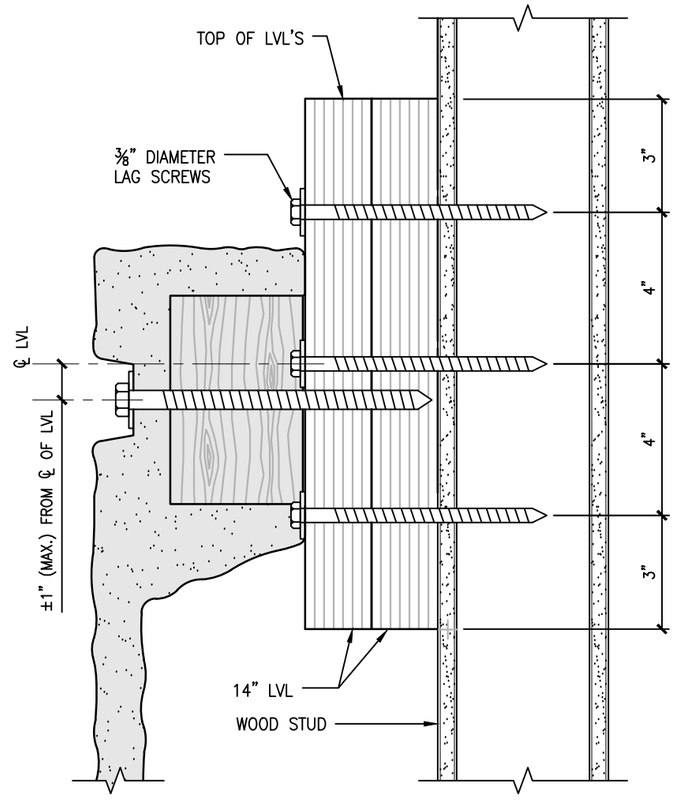
DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



ELEVATION OF 96" TALL CLIMBING PANEL



ATTACHMENT DETAIL TO WOOD STUD WALL



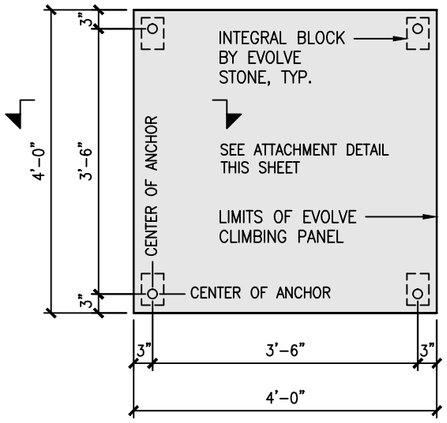
SECTION AT WALL ANCHORAGE

Project Number: 16-107

Date: 4/12/2017 Submission:

Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO WOOD STUD WALL

WP-1B



ELEVATION OF 48" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP STRUCTURAL WALL OF HOLLOW CONCRETE MASONRY UNITS (CMU). FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED.

5. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

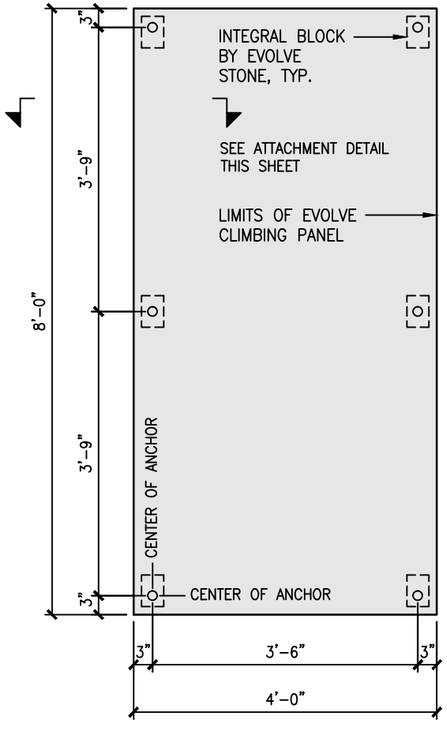
6. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

7. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{YB} = 45,000 PSI, MINIMUM.

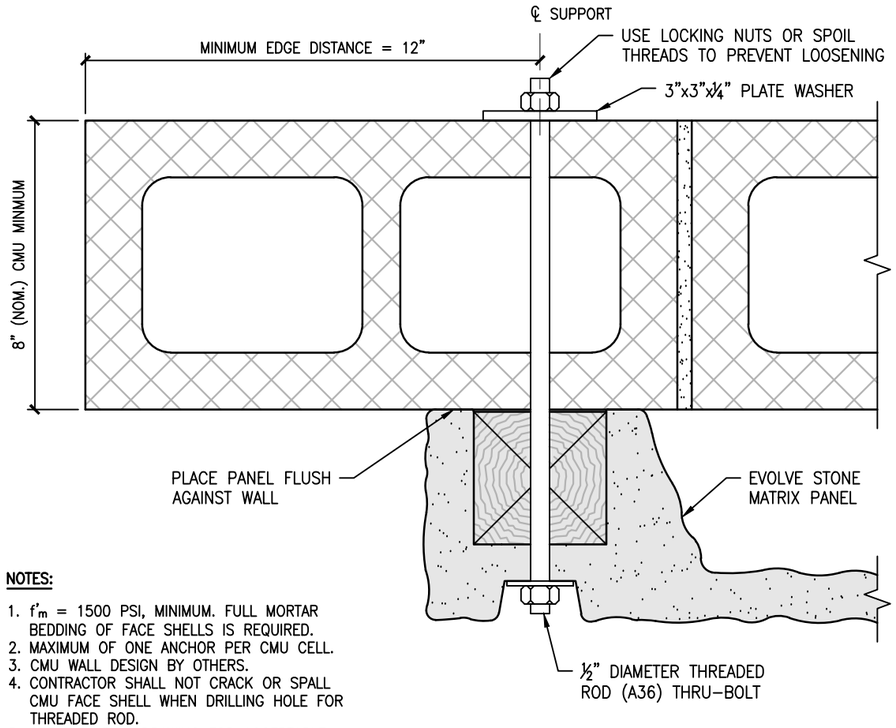
WARNING! THESE EVOLVE CUSTOM LLC ("EVOLVE") DRAWINGS DESCRIBE GENERAL GUIDELINES FOR ANCHORING EVOLVE'S PANELS TO A WALL. HOWEVER, SPECIFIC DECISIONS FOR HOW TO INSTALL AND ANCHOR EVOLVE'S PANELS TO A WALL ARE BEYOND THE CONTROL OF EVOLVE; AND THEREFORE, MUST BE INDEPENDENTLY VERIFIED BY A PROFRESSIONAL ENGINEER AND/OR BUILDING CODE INSPECTOR. ADDITIONALLY, THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL STEPS THAT EVOLVE'S PANELS ARE SAFELY INSTALLED IN ACCORDANCE WITH THE ENGINEER'S AND/OR INSPECTOR'S PLANS.

THE INFORMATION CONTAINED IN THESE DRAWINGS ARE PRESENTED WITHOUT ANY WARRANTY. ALL RISKS FOR USE AND INSTALLATION OF EVOLVE'S PANELS IS ENTIRELY ASSUMED BY THE CUSTOMER OF THE PANELS. EVOLVE DISCLAIMS ALL LIABILITY FOR USE OF INFORMATION PROVIDED IN THESE DRAWINGS.

DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



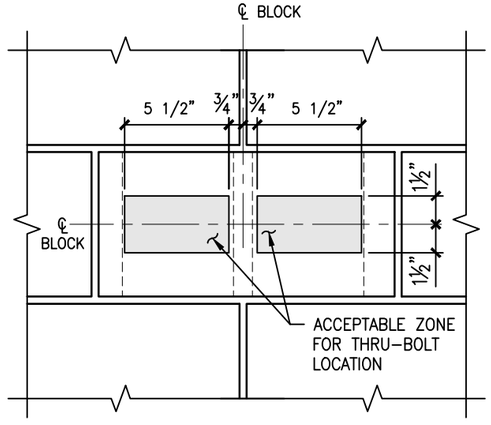
ELEVATION OF 96" TALL CLIMBING PANEL



NOTES:

1. f'_m = 1500 PSI, MINIMUM. FULL MORTAR BEDDING OF FACE SHELLS IS REQUIRED.
2. MAXIMUM OF ONE ANCHOR PER CMU CELL.
3. CMU WALL DESIGN BY OTHERS.
4. CONTRACTOR SHALL NOT CRACK OR SPALL CMU FACE SHELL WHEN DRILLING HOLE FOR THREADED ROD.
5. SEE ELEVATION DRAWING FOR ACCEPTABLE THRU-BOLT LOCATIONS.

ATTACHMENT DETAIL TO HOLLOW CONCRETE MASONRY UNIT WALL



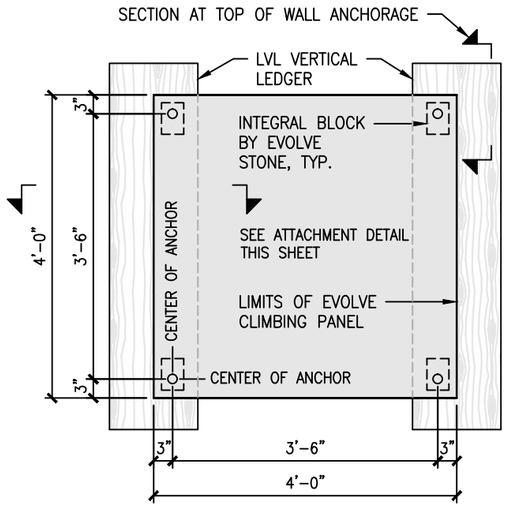
HOLLOW CMU WALL ELEVATION

Date: 4/12/2017 Submission:

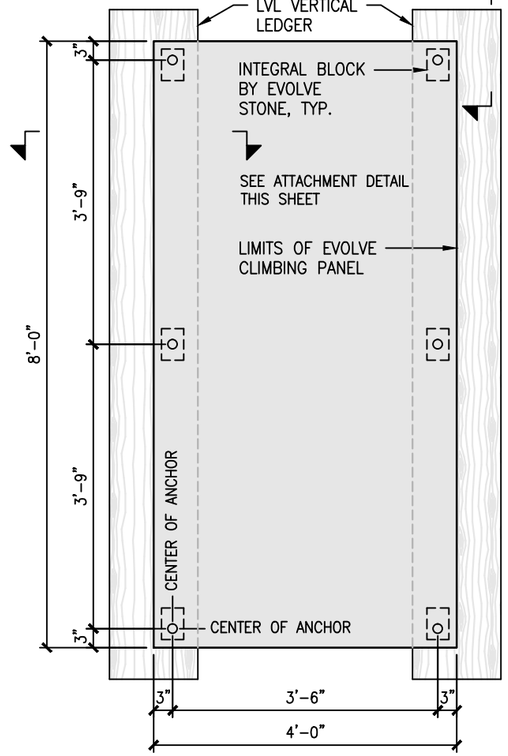
Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO HOLLOW CMU WALL

Project Number: 16-107

WP-2A



ELEVATION OF 48" TALL CLIMBING PANEL



ELEVATION OF 96" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP STRUCTURAL WALL OF HOLLOW CONCRETE MASONRY UNITS (CMU). FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED.

5. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

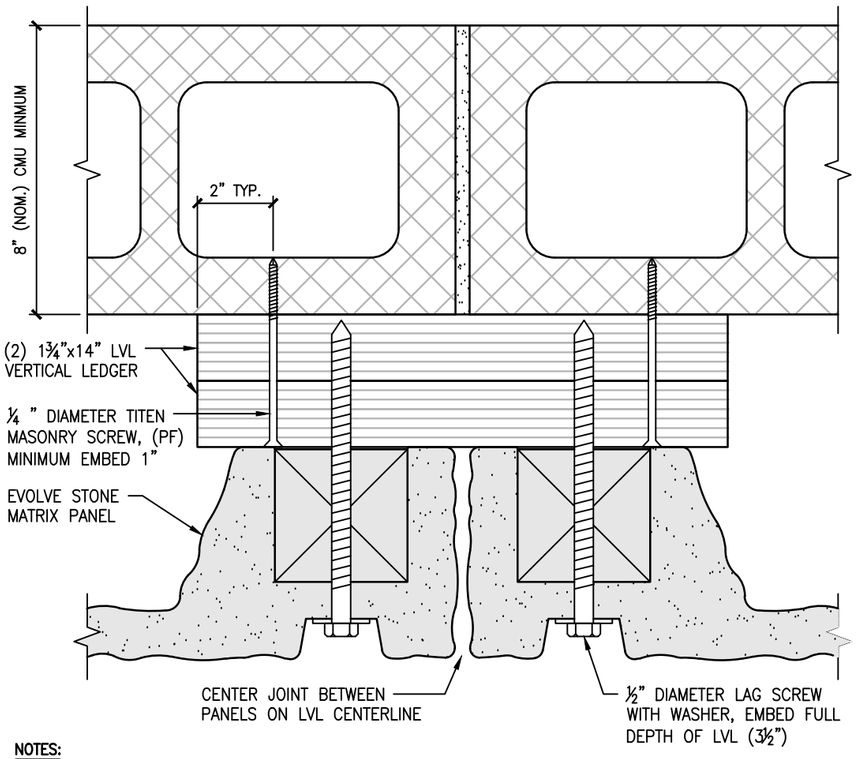
6. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

7. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{YB} = 45,000 PSI, MINIMUM.

WARNING! THESE EVOLVE CUSTOM LLC ("EVOLVE") DRAWINGS DESCRIBE GENERAL GUIDELINES FOR ANCHORING EVOLVE'S PANELS TO A WALL. HOWEVER, SPECIFIC DECISIONS FOR HOW TO INSTALL AND ANCHOR EVOLVE'S PANELS TO A WALL ARE BEYOND THE CONTROL OF EVOLVE; AND THEREFORE, MUST BE INDEPENDENTLY VERIFIED BY A PROFRESSIONAL ENGINEER AND/OR BUILDING CODE INSPECTOR. ADDITIONALLY, THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL STEPS THAT EVOLVE'S PANELS ARE SAFELY INSTALLED IN ACCORDANCE WITH THE ENGINEER'S AND/OR INSPECTOR'S PLANS.

THE INFORMATION CONTAINED IN THESE DRAWINGS ARE PRESENTED WITHOUT ANY WARRANTY. ALL RISKS FOR USE AND INSTALLATION OF EVOLVE'S PANELS IS ENTIRELY ASSUMED BY THE CUSTOMER OF THE PANELS. EVOLVE DISCLAIMS ALL LIABILITY FOR USE OF INFORMATION PROVIDED IN THESE DRAWINGS.

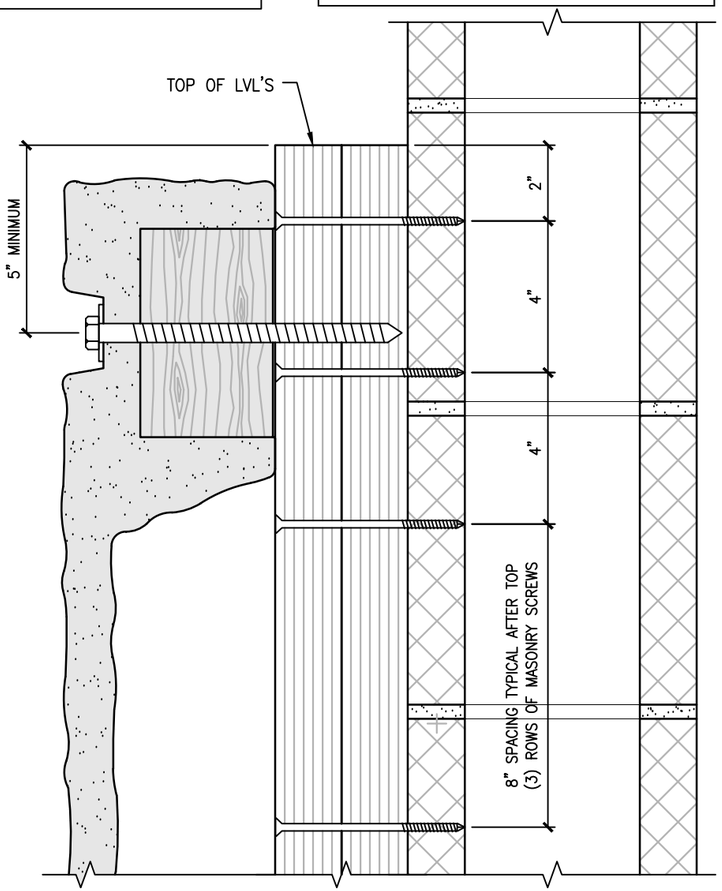
DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



NOTES:

1. f'_m = 1500 PSI, MINIMUM. FULL MORTAR BEDDING OF FACE SHELLS IS REQUIRED.
2. CMU WALL DESIGN BY OTHERS.
3. PROVIDE 2" MINIMUM OFFSET BETWEEN LAG SCREW AND ANY MASONRY SCREW.
4. MICROLAM LVL MEMBERS SHALL HAVE F_b = 2,600 PSI AND E = 2,000,000 PSI, MINIMUM.

ATTACHMENT DETAIL TO LVL VERTICAL LEDGER ON HOLLOW CONCRETE MASONRY WALL



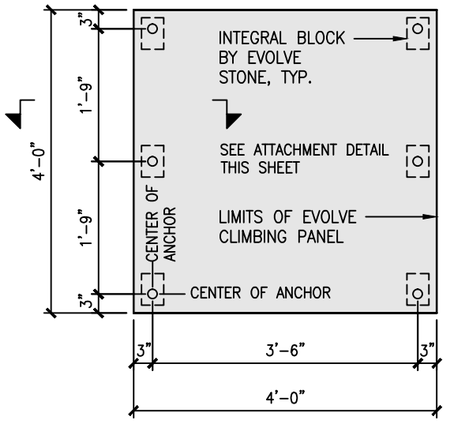
SECTION AT TOP OF WALL ANCHORAGE

Project Number: 16-107

Date: 4/12/2017 Submission:

Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO HOLLOW CMU WALL

WP-2B



ELEVATION OF 48" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP STRUCTURAL WALL OF HOLLOW CONCRETE MASONRY UNITS (CMU). FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED.

5. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

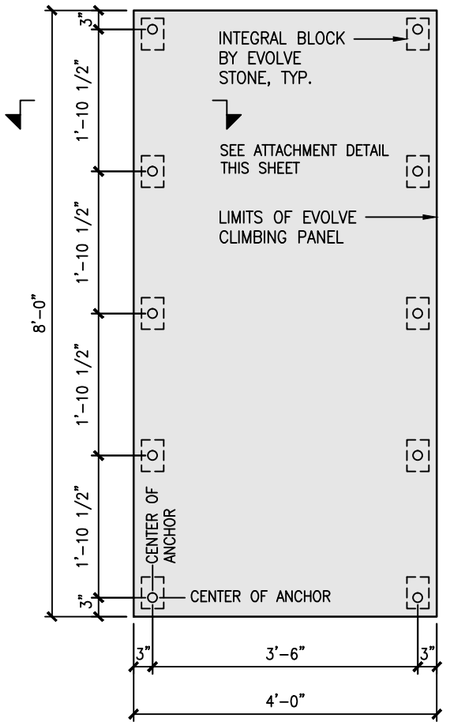
6. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

7. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{YB} = 45,000 PSI, MINIMUM.

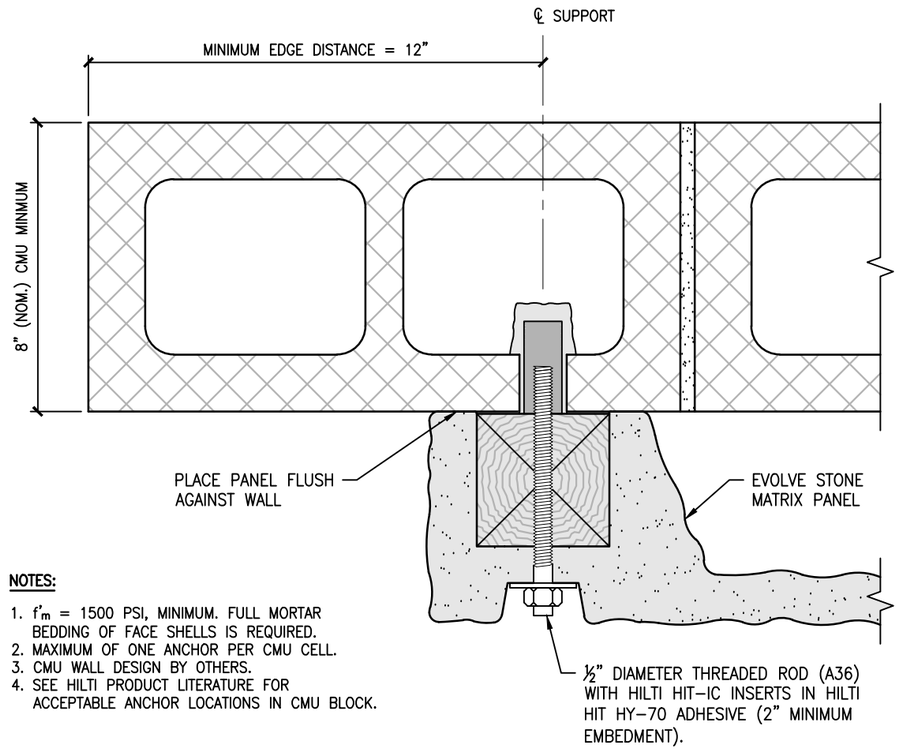
WARNING! THESE EVOLVE CUSTOM LLC ("EVOLVE") DRAWINGS DESCRIBE GENERAL GUIDELINES FOR ANCHORING EVOLVE'S PANELS TO A WALL. HOWEVER, SPECIFIC DECISIONS FOR HOW TO INSTALL AND ANCHOR EVOLVE'S PANELS TO A WALL ARE BEYOND THE CONTROL OF EVOLVE; AND THEREFORE, MUST BE INDEPENDENTLY VERIFIED BY A PROFRESSIONAL ENGINEER AND/OR BUILDING CODE INSPECTOR. ADDITIONALLY, THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL STEPS THAT EVOLVE'S PANELS ARE SAFELY INSTALLED IN ACCORDANCE WITH THE ENGINEER'S AND/OR INSPECTOR'S PLANS.

THE INFORMATION CONTAINED IN THESE DRAWINGS ARE PRESENTED WITHOUT ANY WARRANTY. ALL RISKS FOR USE AND INSTALLATION OF EVOLVE'S PANELS IS ENTIRELY ASSUMED BY THE CUSTOMER OF THE PANELS. EVOLVE DISCLAIMS ALL LIABILITY FOR USE OF INFORMATION PROVIDED IN THESE DRAWINGS.

DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



ELEVATION OF 96" TALL CLIMBING PANEL



NOTES:

1. f'_m = 1500 PSI, MINIMUM. FULL MORTAR BEDDING OF FACE SHELLS IS REQUIRED.
2. MAXIMUM OF ONE ANCHOR PER CMU CELL.
3. CMU WALL DESIGN BY OTHERS.
4. SEE HILTI PRODUCT LITERATURE FOR ACCEPTABLE ANCHOR LOCATIONS IN CMU BLOCK.

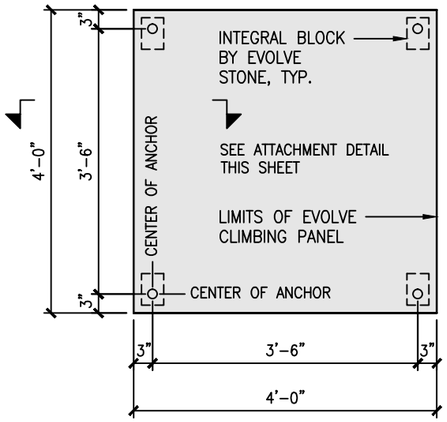
ATTACHMENT DETAIL TO HOLLOW CONCRETE MASONRY UNIT WALL

Project Number: 16-107

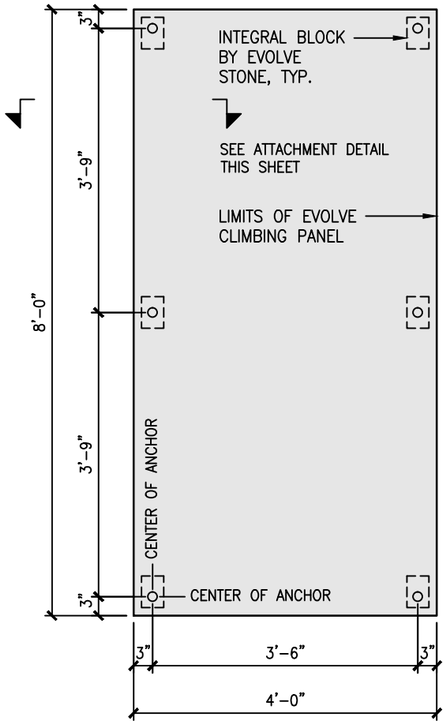
Date: 4/12/2017 Submission:

Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO HOLLOW CMU WALL

WP-2C



ELEVATION OF 48" TALL CLIMBING PANEL



ELEVATION OF 96" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP STRUCTURAL WALL OF FULLY GROUTED CONCRETE MASONRY UNITS (CMU). FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED.

5. LOAD TEST REQUIREMENTS FOR EPOXY SYSTEMS SHALL COMPLY WITH THE MOST RESTRICTIVE OF THE MANUFACTURER'S REQUIREMENTS, PER ICC TESTING REPORTS, AND IN ACCORDANCE WITH ALL APPLICABLE CODES.

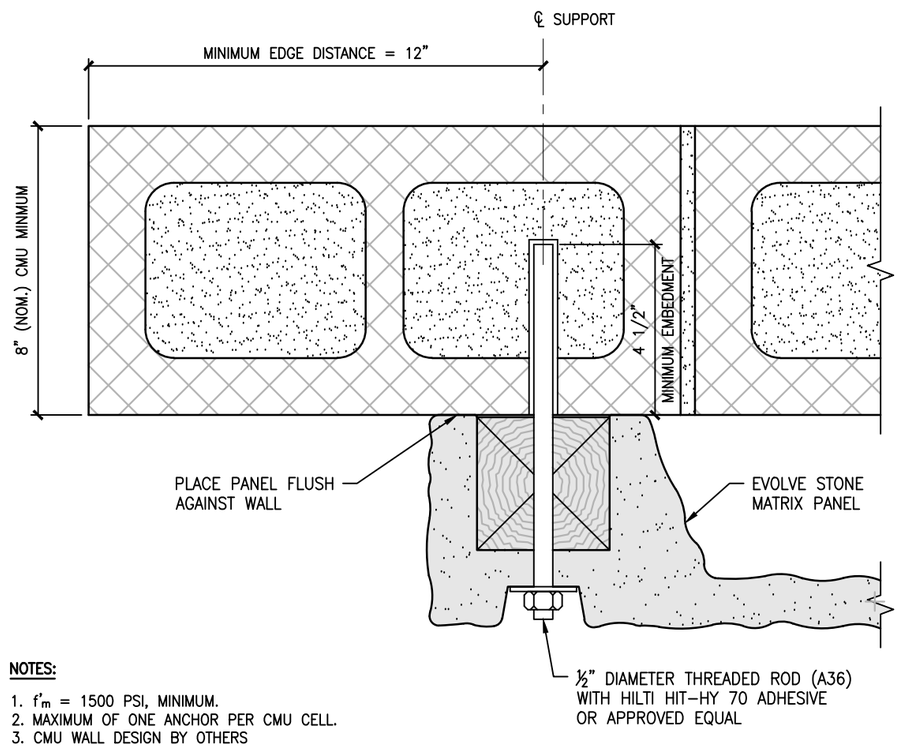
6. EPOXY ANCHORAGE SYSTEMS ARE BASED ON HILTI, INC. PRODUCTS AS NOTED ON THIS DESIGN SHEET.

7. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

8. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

9. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{yb} = 45,000 PSI, MINIMUM.

DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



NOTES:

1. f'_m = 1500 PSI, MINIMUM.
2. MAXIMUM OF ONE ANCHOR PER CMU CELL.
3. CMU WALL DESIGN BY OTHERS

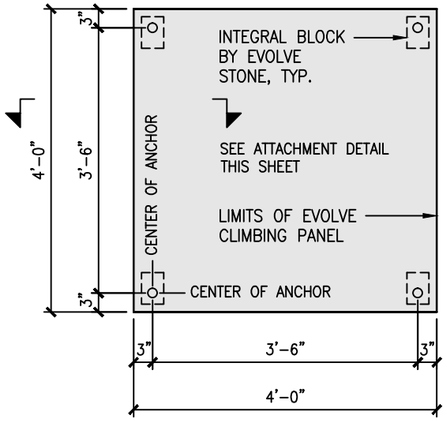
ATTACHMENT DETAIL TO FULLY GROUTED CONCRETE MASONRY UNIT WALL

Project Number: 16-107

Date: 4/12/2017 Submission:

Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO GROUTED CMU WALL

WP-3



ELEVATION OF 48" TALL CLIMBING PANEL

NOTES AND ASSUMPTIONS

1. CONNECTION DESIGNS ARE BASED ON THE FOLLOWING REFERENCE STANDARDS AND TECHNICAL DATA:

   NDS 2012, ACI-318-08, AISC 360-05, NDS 2012 – TECHNICAL REPORT 12 – GENERAL DOWEL EQUATIONS FOR CALCULATING LATERAL CONNECTION VALUES, HILTI ANCHORAGE SYSTEMS TECHNICAL DATA 2017.

2. CLIMBING WALL DESIGN LOADS ARE BASED ON RECOMMENDATIONS IN "GENERAL SPECIFICATION FOR THE DESIGN AND ENGINEERING OF ARTIFICIAL CLIMBING STRUCTURES," FIRST EDITION, DATED JANUARY 2009. THE DESIGN ASSUMES THAT A MAXIMUM OF ONE UN-ROPED CLIMBER WILL LOAD A PANEL AT ANY GIVEN TIME. LEAD LINE CLIMBING IS NOT ALLOWED. MORE THAN ONE UN-ROPED CLIMBER ON A SINGLE PANEL SIMULTANEOUSLY IS NOT ALLOWED.

3. THE SCOPE OF THE CURRENT ENGINEERING ANALYSIS IS LIMITED TO THE DESIGN OF THE FASTENERS USED TO ATTACH THE EVOLVE STONE CLIMBING PANELS TO A BACK-UP CONCRETE STRUCTURAL WALL. FASTENER TYPES, SIZES, LOCATIONS, AND INSTALLATION TOLERANCES HAVE BEEN NOTED.

4. THE ADEQUACY OF THE BACK-UP STRUCTURE SUPPORTING THE CLIMBING WALL PANEL HAS NOT BEEN ASSESSED. STRUCTURAL ADEQUACY OF THE BACK-UP STRUCTURE FOR THE PROJECT'S GOVERNING BUILDING CODES SHALL BE ASSESSED AND DESIGNED BY AN ENGINEER OLICENSED IN THE STATE WHERE THE PANEL INSTALLATION IS LOCATED..

5. LOAD TEST REQUIREMENTS FOR EPOXY SYSTEMS SHALL COMPLY WITH THE MOST RESTRICTIVE OF THE MANUFACTURER'S REQUIREMENTS, PER ICC TESTING REPORTS, AND IN ACCORDANCE WITH ALL APPLICABLE CODES.

6. EPOXY ANCHORAGE SYSTEMS ARE BASED ON HILTI, INC. PRODUCTS AS NOTED ON THIS DESIGN SHEET.

7. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

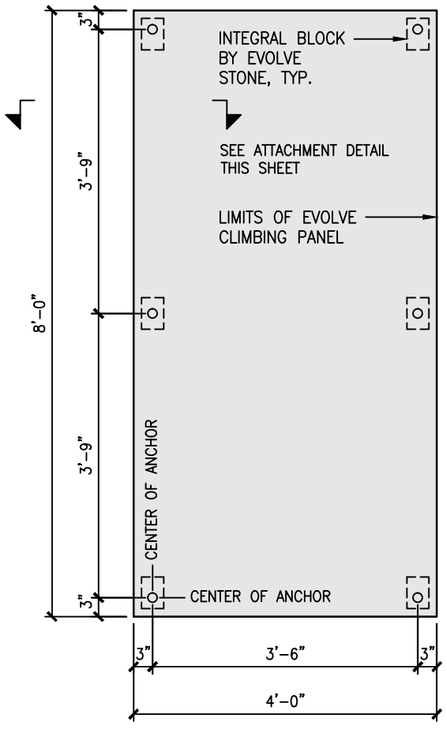
8. PANELS MAY ONLY BE ATTACHED TO VERTICAL WALLS. ATTACHMENT TO OVERHANGING WALLS IS NOT PERMITTED.

9. LAG SCREWS SHALL COMPLY WITH ANSI/ASME STANDARD B18.2.1 AND SHALL HAVE F_{YB} = 45,000 PSI, MINIMUM.

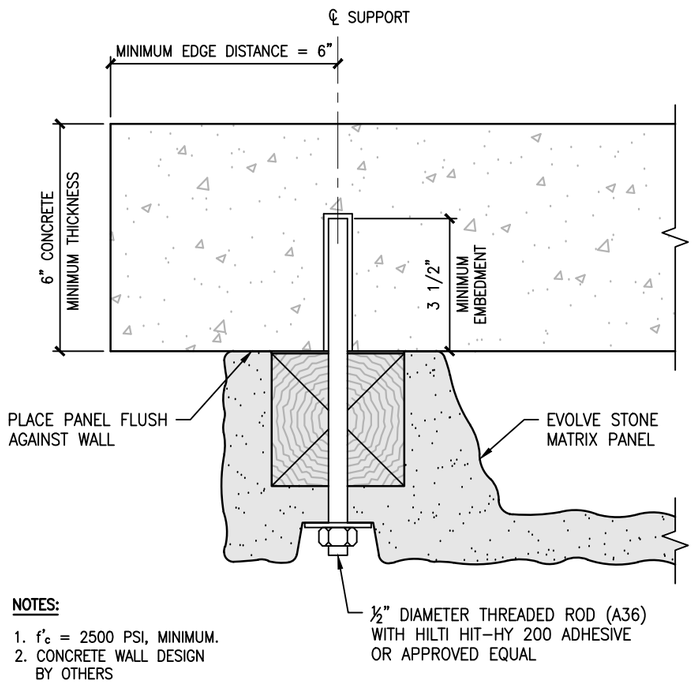
WARNING! THESE EVOLVE CUSTOM LLC ("EVOLVE") DRAWINGS DESCRIBE GENERAL GUIDELINES FOR ANCHORING EVOLVE'S PANELS TO A WALL. HOWEVER, SPECIFIC DECISIONS FOR HOW TO INSTALL AND ANCHOR EVOLVE'S PANELS TO A WALL ARE BEYOND THE CONTROL OF EVOLVE; AND THEREFORE, MUST BE INDEPENDENTLY VERIFIED BY A PROFRESSIONAL ENGINEER AND/OR BUILDING CODE INSPECTOR. ADDITIONALLY, THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL STEPS THAT EVOLVE'S PANELS ARE SAFELY INSTALLED IN ACCORDANCE WITH THE ENGINEER'S AND/OR INSPECTOR'S PLANS.

THE INFORMATION CONTAINED IN THESE DRAWINGS ARE PRESENTED WITHOUT ANY WARRANTY. ALL RISKS FOR USE AND INSTALLATION OF EVOLVE'S PANELS IS ENTIRELY ASSUMED BY THE CUSTOMER OF THE PANELS. EVOLVE DISCLAIMS ALL LIABILITY FOR USE OF INFORMATION PROVIDED IN THESE DRAWINGS.

DISCLAIMER! THE 4'x8' AND 4'x4' MODULAR ROCK PANELS MAY SLIGHTLY VARY IN OVERALL WIDTH AND HEIGHT +/- 1"



ELEVATION OF 96" TALL CLIMBING PANEL



NOTES:

1. f'_c = 2500 PSI, MINIMUM.
2. CONCRETE WALL DESIGN BY OTHERS

ATTACHMENT DETAIL TO CONCRETE WALL

Project Number: 16-107

Date: 4/12/2017 Submission:

Project Title: CLIMBING WALL ANCHORAGE ATTACHMENT TO CONCRETE WALL

WP-4