



City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 • 503-823-7300 • www.portlandoregon.gov/bds



Deferred Submittal Requirements and Application

Applicants will provide:

- A copy of this application
- Three (3) sets of plans
- One (1) set of calculations
- Two (2) sets of product information
- Drawings and calculations must be stamped and signed by an Engineer registered in Oregon and approved by the Architect/Engineer of record for the building.
- Permit fee (paid at time of submittal)
- If the DFS includes exterior elements, plan views and elevations identifying the location(s) as approved by the Architect and Engineer of Record must be submitted.
- One (1) copy of your main building permit approved plans (NOTE: Approved plans do not need to be submitted if your project has a development liaison assigned)

Contractor submittal information:

Contact name Ryan Richards

Address 222 SW Columbia Ave

City Portland State OR Zip Code 97201

Phone 503-209-3335 E-mail ryan.richards@skanska.com

Value of deferred submittal 40,000 Issued main building permit # 11-184400-000-00-CO

Description/Scope of work Roof Tie-off System

Fees

Deferred submittal (DFS) fees are collected in addition to the standard building review fee paid on the main building permit. DFS fees cover the cost of the additional processing and review time associated with the design build element.

The DFS fee for processing and reviewing deferred plan submittals is 10 percent of the building permit fee calculated using the value of the particular deferred portion of the project.,

Minimum fee: Residential, one and two family dwelling ...\$123 for DFS with valuation of less than or equal to \$222,000

Commercial and all other projects\$307 for DFS with valuation of less than or equal to \$680,000

The Bureau of Development Services (BDS) fee schedule is also available on the BDS web site at www.portlandoregon.gov/bds | select the Fees tab.

Helpful Information

Bureau of Development Services
1900 SW 4th Avenue, Portland, OR 97201

Submit your plans to:
Development Services Center (DSC), First Floor,
Tuesday - Friday:
8:00 am - 12:00 pm
Closed Mondays

Important Telephone Numbers

- BDS main number 503-823-7300
- DSC automated information line 503-823-7310
- Building code information 503-823-1456
- BDS 24 hour inspection request line 503-823-7000
- Residential information for one and two family dwellings..... 503-823-7388
- City of Portland TTY 503-823-6868

DEFERRED SUBMITTAL REQUIREMENTS AND APPLICATION

Hover, Brian

From: Jared Lewis [Jared@catenaengineers.com]
Sent: Monday, July 01, 2013 10:52 AM
To: Richards, Ryan; Cary Gaynor (Cary.Gaynor@portlandoregon.gov); Tim Knighton (Timothy.Knighton@portlandoregon.gov)
Cc: Maxson, Tim; Hover, Brian
Subject: RE: E09023 - 055000-077 - Guardian Fall Protection Anchors Submittal - Revised Drawings/Calcs from Guardian
Attachments: E09023 055000-077 - Guardian Fall Protection Anchors Submittal - Revised Drawings from Guardian - catena.pdf

All

We have reviewed the attached. It appears that the previous comments have been accounted for.

thanks

Jared O. W. Lewis, P.E., S.E.
LEED Green Associate

catena consulting engineers | 1111 ne flanders street | suite 206 | portland, or 97232
www.catenaengineers.com
office 503.467.4980 | mobile 503.380.8760

a connected series of related elements

From: Richards, Ryan [mailto:Ryan.Richards@skanska.com]
Sent: Tuesday, June 25, 2013 4:02 PM
To: Cary Gaynor (Cary.Gaynor@portlandoregon.gov); Tim Knighton (Timothy.Knighton@portlandoregon.gov); Jared Lewis
Cc: Maxson, Tim; Hover, Brian
Subject: E09023 - 055000-077 - Guardian Fall Protection Anchors Submittal - Revised Drawings/Calcs from Guardian
Importance: High

Cary/Tim/Jared,

Attached are updated Guardian Fall Protection Anchor Drawings/Calcs based on what has been installed out on the roof. I've also attached the original response with markups for reference. The City Structural Engineer reviewing this needs to see Catena's review stamp on the submittal. Can this be done? Let me know if there are any questions/comments.

Thanks,

Ryan Richards, LEED® AP
Project Manager

Skanska USA Building
Operations
www.skanska.com
222 SW Columbia Street, Suite 300
Portland, OR 97201 United States
Phone +1 503 382 0900
Mobile +1 503 209 3335
Fax +1 866 829 9869

11-1924400-DTS-0700

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CITY OF PORTLAND ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 • Charlie Hales, Mayor • Dean Marriott, Director

6/4/2013

Skanska USA Building, Inc.
222 SW Columbia St, Suite 300
Portland, OR 97201

Project: 9023.0, CBWIP Support Facility

Submittal: 77.010, Fall Protection Anchors

Spec. # 05 50 00

MAKE CORRECTIONS NOTED

Comments:

- 1. See comments in red on pages 10 and 13, and structural engineer review stamp on page 7.

The review by the Engineer of any shop drawings, product data, samples, construction methods and equipment, or other submittals is only for conformance with the general concept of the project and does not extend to consideration of structural integrity, safety, detailed compliance with Contract Requirements, or any other obligation of the Contractor. Action shown is subject to the requirements of the plans and specifications. The Contractor is responsible for confirming and correlating all dimensions and fabrications and construction techniques; coordinating his work with that of all other trades; and the satisfactory performance of his entire work in strict accordance with the Contract Documents. The review does not relieve the Contractor from his obligation to fully perform all Contract Requirements, nor does such review give rise to any right of action or suit in favor of the Contractor or third persons against the Engineer or Owner.

Please contact this office with any questions you may have.

Sincerely,

Cary Gaynor
Project Manager

cc: Main File, James Bowen, Mike Lombardi, Larry Wright

Guardian responded and revised calculations.

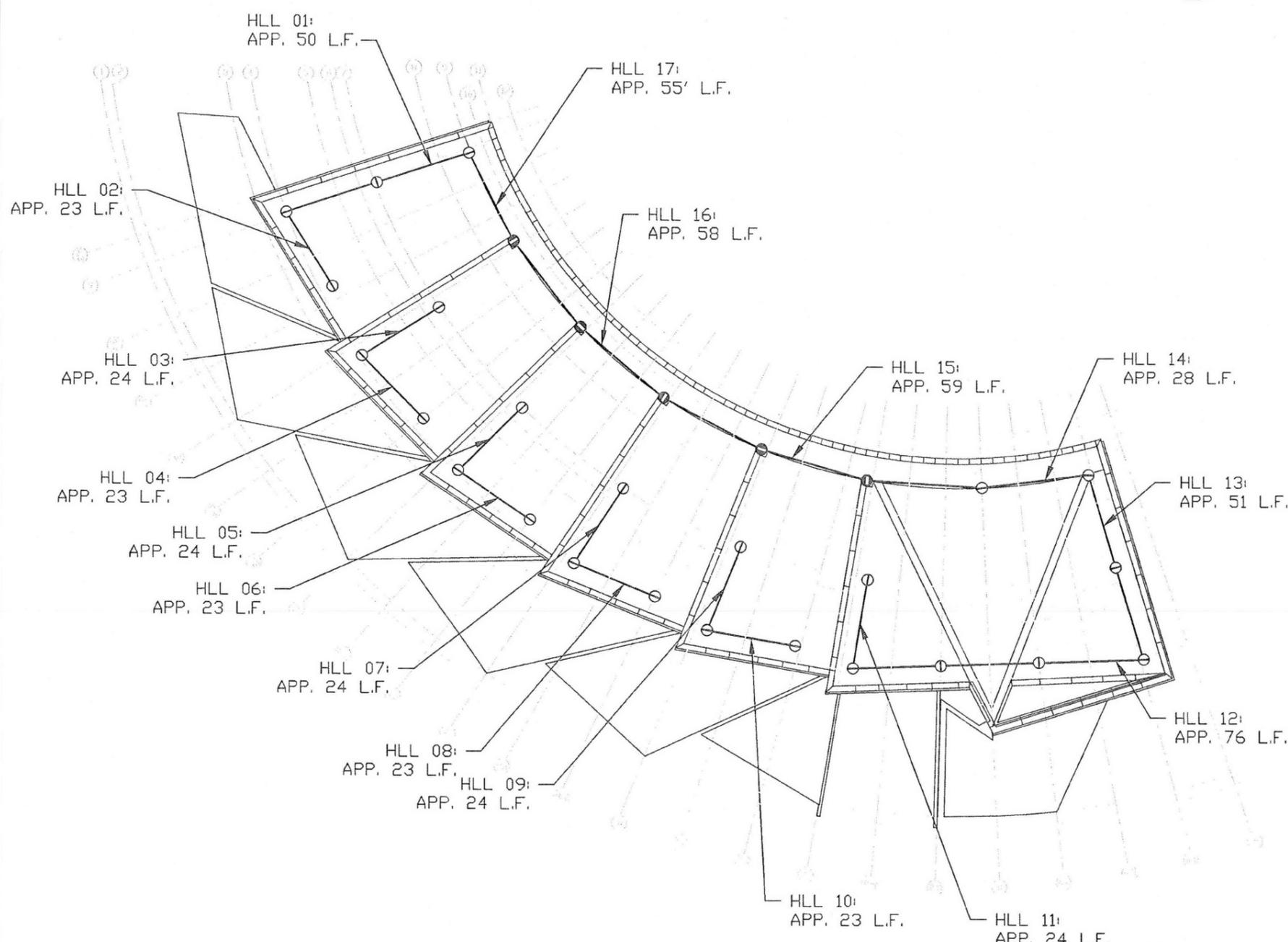
City of Portland
REVIEWED FOR CODE
COMPLIANCE
AUG 19 2013
Permit Number

SCAN

11-184400 DES 0700

DRAWINGS (UPDATED)

11-184400-DEFS-07-60



- ABSORBINATOR HORIZONTAL LIFELINE GENERAL NOTES:**
1. EACH SINGLE POINT ANCHOR IS DESIGNED FOR USE BY ONE INDIVIDUAL AS A PERSONAL FALL ARREST OR RESTRAINT SYSTEM.
 2. EACH HORIZONTAL LIFELINE IS DESIGNED FOR UP TO TWO USERS IN FALL ARREST OR FOUR USERS IN FALL RESTRAINT.
 3. HORIZONTAL LIFELINES SHARING THE SAME END ANCHORAGE SHALL BE USED ONLY BY THE NUMBER OF USERS ALLOWED AS IF THE LIFELINES WERE ONE CONTINUOUS LINE.
 4. 25 FEET OF VERTICAL CLEARANCE IS REQUIRED FOR SYSTEMS TO BE USED IN FALL ARREST.
 5. THE SYSTEMS SHALL BE USED IN FALL RESTRAINT IF THE MINIMUM VERTICAL CLEARANCE IS NOT MET.
 6. THE FALL PROTECTION ANCHORS AND LIFELINES SHALL NOT BE USED TO HOIST MATERIALS OR EQUIPMENT.
 7. A COMPETENT PERSON INDEPENDENT OF THE USER SHALL INSPECT THESE SYSTEMS ON A BI-ANNUAL BASIS.
 8. A QUALIFIED PERSON TRAINED IN THE OPERATION OF HORIZONTAL LIFELINES SHALL INSPECT THESE SYSTEMS ON AN ANNUAL BASIS.
 9. ALL WORKERS USING THESE SYSTEMS SHALL BE TRAINED ON THE PROPER USE OF HORIZONTAL LIFELINES.
 10. RETIREMENT OF THESE SYSTEMS SHALL RESULT IN TERMINATION OF ALL COMPONENTS RENDERING THEM USELESS FOR ANY OTHER FALL PROTECTION SYSTEM.
 11. NO SUBSTITUTIONS TO MATERIALS OR MANUFACTURER'S EQUIPMENT IS PERMITTED.
 12. INITIAL CABLE SAG FROM HORIZONTAL PLANE AT MID-SPAN TO BE WITHIN TWO AND SIX INCHES.
 13. SYSTEM SHALL BE INSTALLED IN STRAIGHT RUNS AND THERE SHALL NOT BE ABRUPT TURNS IN THE CABLE.
 14. REFER TO THE SYSTEMS USER GUIDE FOR ADDITIONAL INFORMATION.

- WORKER EQUIPMENT NOTES:**
1. ANCHORS SHALL BE RIGGED SUCH THAT THE USER CAN NEITHER FREE FALL MORE THAN 6 FEET, NOR CONTACT ANY LOWER LEVEL. (OSHA 1926.502(D)(14))
 2. USE OF ANSI Z359-2007 APPROVED PERSONAL FALL PROTECTION EQUIPMENT THAT IS RATED TO 1,000 LBS MAXIMUM ARRESTING FORCE (HUMAN BODY) IS REQUIRED.
 3. USE OF AN ANSI Z359-2007 APPROVED FULL BODY HARNESS IS REQUIRED.

- STRUCTURAL NOTES:**
1. HORIZONTAL LIFELINE ANCHOR LOADS ARE LIMITED TO A MAXIMUM FORCE OF 2,500 LBS WITH USE OF THE GUARDIAN SHOCK ABSORBER.
 2. FALL PROTECTION ANCHORS ARE DESIGNED FOR AN ULTIMATE LOAD OF 5,000 LBS.
 3. THE ABILITY OF THE BUILDING STRUCTURE TO SUPPORT THE LOADS TRANSFERRED FROM THE ANCHORS ATTACHMENT SURFACE SHALL BE ENSURED BY OTHERS.

GUARDIAN SYSTEM LEGEND

⊙	GUARDIAN CB-12 ANCHOR
⊕	GUARDIAN MEGA SWIVEL ANCHOR
—	CABLE AND ABSORBINATOR SYSTEM

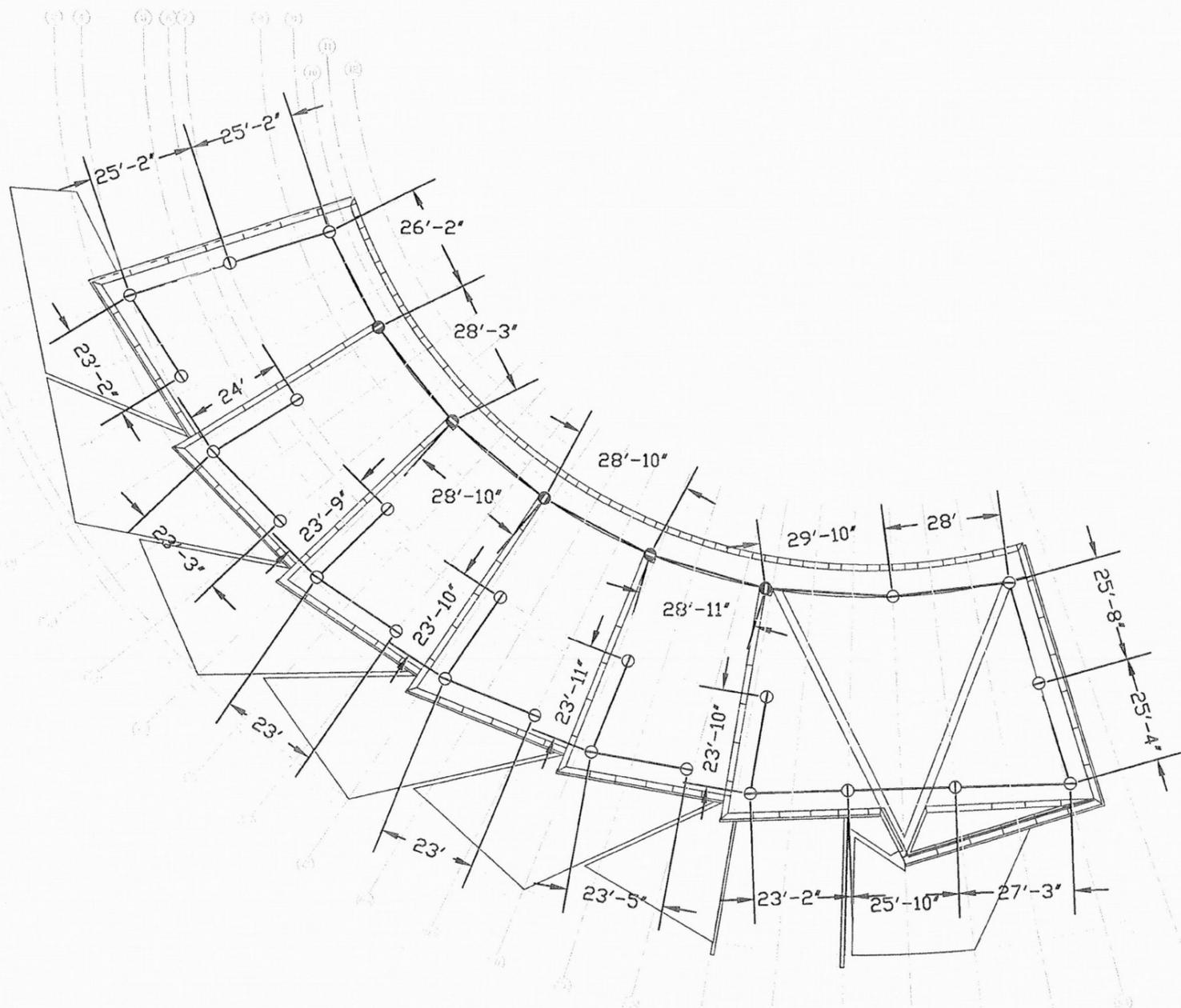
- ANCHOR PLACEMENT GENERAL NOTES:**
1. FINAL ANCHOR LOCATIONS TO BE DETERMINED IN FIELD.
 2. ANCHORS SHALL NOT BE PLACED CLOSER THAN 6 FEET TO THE LEADING EDGE OF A FALL HAZARD UNLESS NOTED OTHERWISE.
 3. ANCHOR U-BAR TO BE INSTALLED WITH THE ORIENTATION SHOW IN PLANS.
 4. CONTRACTOR TO ENSURE NO OBSTRUCTIONS EXIST BETWEEN ANCHOR POINTS THAT MAY INTERFERE WITH INSTALLATION OF HORIZONTAL LIFELINES.

BUILDING PLAN VIEW
SCALE: 1/32" = 1'-0"
NORTH



BUREAU OF ENVIRONMENTAL SERVICES ABSORBINATOR SYSTEM PLAN		GUARDIAN FALL PROTECTION
ORIGINAL ISSUE DATE: 05/03/13	CLIENT: DEALERS SUPPLY - OREGON	DRAWING NO: BES-01
REVISION 1 DATE: 06/04/13	LOCATION: PORTLAND, OR	SHEET NO: 1 OF 3
REVISION 2 DATE: --/--	PROJECT NO: ESG01333	PREPARED BY: ALM

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BUILDING PLAN VIEW

SCALE 1/32" = 1'-0"

NORTH

City of Portland
 REVIEWED FOR CODE
 COMPLIANCE
 AUG 19 2013
 Permit Number

GUARDIAN SYSTEM LEGEND

⊖	GUARDIAN CB-12 ANCHOR
⊕	GUARDIAN MEGA SWIVEL ANCHOR
—	CABLE AND ABSORBINATOR SYSTEM

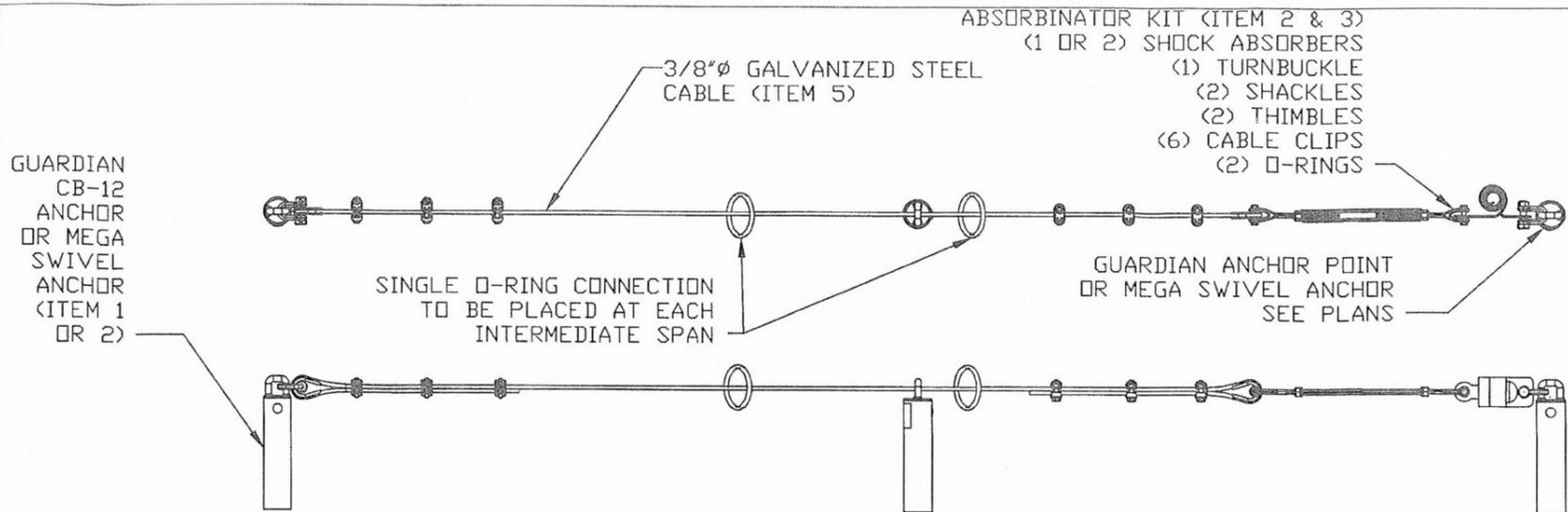
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 3. ANCHOR U-BAR TO BE INSTALLED WITH THE ORIENTATION SHOWN IN PLANS.
 4. CONTRACTOR TO ENSURE NO OBSTRUCTIONS EXIST BETWEEN ANCHOR POINTS THAT MAY INTERFERE WITH INSTALLATION OF HORIZONTAL LIFELINES.



NOTE: SCALED FOR 11x17 PAPER

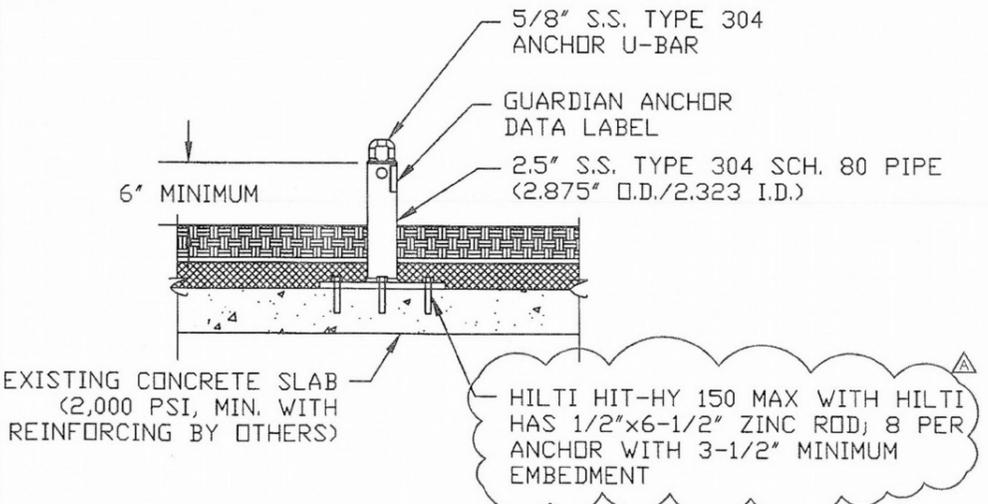
BUREAU OF ENVIRONMENTAL SERVICES ABSORBINATOR SYSTEM PLAN		GUARDIAN FALL PROTECTION
ORIGINAL ISSUE DATE: 05/03/13	CLIENT: DEALERS SUPPLY - OREGON	DRAWING NO: BES-02
REVISION 1 DATE: 06/04/13	LOCATION: PORTLAND, OR	SHEET NO: 2 OF 3
REVISION 2 DATE: --/--	PROJECT NO: ESG01333	PREPARED BY: ALM

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 AUG 13 2013
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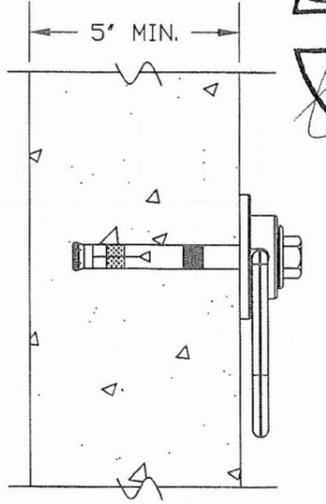
DETAIL 1: ABSORBINATOR LIFELINE INSTALLATION

SCALE: 3/4" = 1'-0"



DETAIL 2: ANCHOR ON CONCRETE INSTALLATION

SCALE: 3/4" = 1'-0"



DETAIL 3: MEGA SWIVEL INSTALLATION, TYP.

SCALE: 3" = 1'-0"



LIFELINE NOTES:

1. SEE BES-01 FOR HORIZONTAL LIFELINE GENERAL NOTES, WORKER EQUIPMENT NOTES, AND STRUCTURAL NOTES.
2. ABSORBINATOR DELUXE KITS WITH TWO SHOCK ABSORBERS SHALL BE USED FOR SPANS OVER 60 FEET.
3. INITIAL CABLE SAG FROM HORIZONTAL PLANE AT MID-SPAN TO BE WITHIN TWO AND SIX INCHES.
4. CLAMPS TO BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED IN USER'S MANUAL.
5. REFER TO SYSTEM USER GUIDE FOR ADDITIONAL INFORMATION.

STRUCTURAL NOTES:

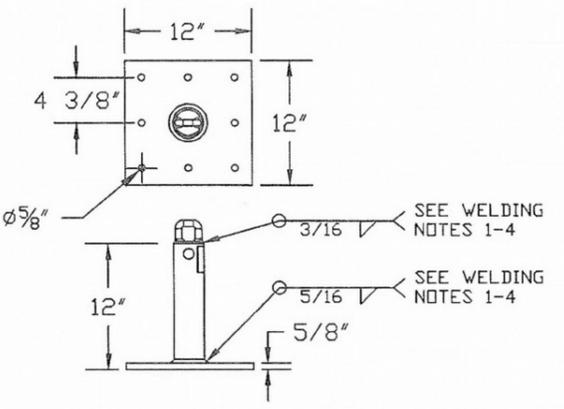
1. HORIZONTAL LIFELINE ANCHOR LOADS ARE LIMITED TO A MAXIMUM FORCE OF 2,500 LBS WITH USE OF THE GUARDIAN SHOCK ABSORBER.
2. FALL PROTECTION ANCHORS ARE DESIGNED FOR AN ULTIMATE LOAD OF 5,000 LBS.
3. THE ABILITY OF THE BUILDING STRUCTURE TO SUPPORT THE LOADS TRANSFERRED FROM THE ANCHORS ATTACHMENT SURFACE SHALL BE ENSURED BY OTHERS.

MEGA SWIVEL DRILLING NOTES:

1. DRILL STRAIGHT INTO SUBSTRATE: 5/8" DIAMETER HOLE 4" DEEP; ONLY USE AN INDUSTRIAL SDS HAMMER DRILL AND DRILL BIT.
2. ENSURE SWIVEL PLATE CAN REST FIRMLY ON FACE OF SUBSTRATE; IF PLATE DOES NOT REST ON SUBSTRATE, DRILL ANOTHER HOLE.
3. THE CONCRETE SUBSTRATE MUST BE AT A MINIMUM 5" THICK AND AT LEAST 10" FROM ANY EDGE OR CORNER.
4. REFER TO PRODUCT'S USER MANUAL FOR ADDITIONAL INFORMATION.

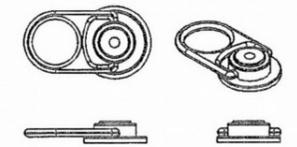
WELDING NOTES:

1. ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER USING E-70XX ROD OR WIRE FEED.
2. PREP GALVANIZED AREAS PER AWS D19.0 PRIOR TO WELDING.
3. TOUCH-UP GALVANIZED AREA AFTER WELDING PER ASTM A780.



1 CB-12 ROOF ANCHOR DETAIL

SCALE: 3/4" = 1'-0"



2 MEGA SWIVEL ANCHOR

SCALE: 1 1/2" = 1'-0"

NOTE: SCALED FOR 11x17 PAPER

ITEM	QTY	DESCRIPTION	DIMENSION	MATERIAL	PART NUMBER
1	24	CB-12 ROOF ANCHOR	SEE DETAIL	S.S. 304	GUARDIAN PART #1538#01
2	5	MEGA SWIVEL ANCHOR	SEE DETAIL	FORGED ALLOY STL	GUARDIAN PART #00293
3	16	ABSORBINATOR KIT UP TO 60'	--	S.S. 304	GUARDIAN PART #15044-SS
4	1	ABSORBINATOR KIT UP TO 100'	--	S.S. 304	GUARDIAN PART #15045-SS
5	612 L.F.	CABLE DIA. 3/8" - 7X19	SEE PLANS	S.S. 304	GUARDIAN PART #01400-SS
6	192	HILTI-HY 150 + HAS ROD	1/2" x 6 1/2"	ZINC COATED STEEL	GUARDIAN PART #99999

BUREAU OF ENVIRONMENTAL SERVICES ABSORBINATOR SYSTEM INSTALLATIONS & MATERIALS		GUARDIAN FALL PROTECTION
ORIGINAL ISSUE DATE: 05/03/13	CLIENT: DEALERS SUPPLY - OREGON	DRAWING NO: BES-03
REVISION 1 DATE: 06/04/13	LOCATION: PORTLAND, OR	SHEET NO: 3 OF 3
REVISION 2 DATE: -/-	PROJECT NO: ESG01333	PREPARED BY: ALM

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GUARDIAN

FALL PROTECTION

May 17, 2013

Reference: Bureau of Environmental Services
Portland, OR
Project Number: ESG01333

To Whom It May Concern:

This letter is in regards to the fall protection system at Bureau of Environmental Services facility in Portland, OR. Comments are in response to concerns of the fall protection system anchorage type brought forth by Tim Maxson at Skanska USA Building.

The Hilti HY 150 Max epoxy anchors are specified in the project specific, PE stamped, shop drawings (Drawing No: BES-03) and calculations dated 05/03/2013.

The HILTI HY 150 Max-SD is an acceptable substitute for the HILTI HY 150 Max epoxy anchors specified in the Guardian stamped shop drawings and calculations

Please contact me with any questions.

Sincerely,



Stephanie Campagna

Lead Design Engineer, EIT

800-466-6385 ext. 142

stephaniec@guardianfall.com

phone: (800) 466-6385 fax: (800) 670-7892

web: www.guardianfall.com

address: 26609 79th Avenue South Kent, WA 98042



GUARDIAN
FALL PROTECTION