PROJECT: COLLEGE OF THE REDWOODS MENDOCINO RESIDENCE HALL RE-ROOF
Redwoods Community College District
NMR Project No. 10-2529

BID DATE: **April 8, 2015 at 9:00 A.M.** All bids shall be received at the office of **Steven Roper, Director of Facilities and Planning**, College of the Redwoods, 7351 Tompkins Hill Road, Eureka, California 95501.

GENERAL: This **Addendum Number Two** shall be inserted into your set of Drawings and Specifications for this project and shall take precedence over the original Drawings and Specifications. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

I - CHANGES TO PRIOR ADDENDA (ITEMS NOTED WITH AN "A" PREFIX:

Refer to Addendum Number One, Item II – Changes to Bidding Requirements and refer to revised bid opening time noted in Section II below.

II - CHANGES TO BIDDING REQUIREMENTS (ITEMS NOTED WITH A "B" PREFIX):

Refer to Project Manual, Sections 00 11 13 Notice Inviting Bids, and Section 00 21 13 Instructions to Bidders and **change bid time to the following:** April 8, 2015 **at 9:00 A.M.**

III – CHANGES TO AGREEMENT & OTHER CONTRACT FORMS (ITEMS NOTED WITH AN "F" PREFIX):

None

IV – CHANGES TO CONDITIONS OF THE CONTRACT (ITEMS NOTED WITH A "C" PREFIX:

None

V – CHANGES TO SPECIFICATIONS (ITEMS NOTED WITH AN "S" PREFIX):

S1.01 Refer to Project Manual, **and attached Specification Section 00 01 03 Opinion of Probable Cost (OPC) Summary**: This section has been added to the project manual.

S1.02 Refer to Project Manual, Specification Section 00 01 10 Table of Contents: ADD the following sections -
INTRODUCTORY INFORMATION – Section 00 01 03 OPINION OF PROBABLE COST (OPC) SUMMARY
DRAWING EXHIBITS –New Exhibit A-11D Roof To Wall.

S1.03 Refer to Project Manual, Section 00 11 13 Notice Inviting Bids. Refer to Item II for change in bid opening time.

S1.04 Refer to Project Manual, Section 00 21 13 Instructions to Bidders. Refer to Item II for change in bid opening time.

S1.05 Refer to Project Manual, Section 01 22 00 Unit Prices.
Section 3.1, Item A – Revise plywood material callout to be 3/8" CDX. Unit of Measure shall be - One 4'x8' sheet.
Section 3.1, Item B – Replace Description text with the following:

> Description: Provide storm drain collection system at all downspout locations that shall be routed to existing storm drain piping based on locations provided in drawings. Contractor shall verify connection points to

existing storm drain system and provide best route for piping. Drawings indicate routing to known existing storm drain inlet and piping locations. Where routing is required beyond project scope, the best, direct route shall be provided with associated unit based cost. New material shall be NPS 6 corrugated PE drainage pipe and fittings with soil-tight coupled joints.

Section 3.1, Item C – ADD this Item to this section:

C Unit Price No. 3

1) Description: Remove existing deteriorated tongue & groove ceiling and heavy timber roof rafter when required as described on Drawing Sheet A1.1 under Demo note 2 when deterioration extends below the surface layer of plywood as noted under Item A. New ceiling material shall be 2x6 stain-grade tongue & groove boards. New timber rafter material shall be 3x10 paint grade, solid sawn or glue-laminated timber.

2) Unit of Measure: T&G – Lineal board foot
Heavy Timber rafter – Lineal board foot

S1.06 Refer to Project Manual, Section 01 23 00 Alternates
Section 3.1, Item A – ADD the following language to the description:

This Alternate applies to both Residence Hall buildings – 'Mendocino' and 'Del Norte'. Pricing of Additive Alternate shall be listed for each building.

Section 3.1, Item B - ADD this Item to this section:

Alternate No. 2 (Additive): Removal of existing drainage swales, drain inlets, and underground storm drain piping along north and southeast sides of the building and replace with linear trench drain. Provide trench drain along southwest side of building. Removal and replacement shall include, but not limited to, the following:

1. Remove 3'-0" wide concrete drainage swale including drain inlets and underground storm piping along the north side of the building.
2. Remove 3'-0" wide concrete drainage swale including drain inlets and underground piping along the southeast side of building.
3. Remove additional concrete or asphalt paving or landscaping as needed to provide access to tie-in to existing drain inlets or storm piping system.
4. Provide trenching for installation of trench drain and storm piping.
5. Provide trench drain along north side of the building with tie-in to existing storm drain system on the east. This incorporates establishment of grade heights, use of existing natural drainage patterns for maximum flow range, and use of materials and methods per manufacturer for installation.
6. Provide trench drain along southeast and southwest sides of the building with tie-in to existing storm drain system along the south walkway adjacent to the SSAT building. This incorporates establishment of grade heights, use of existing natural drainage patterns for maximum flow range, and use of materials and methods per manufacturer for installation.
7. Provide connections to rainwater leader locations on building.
8. Provide extended AC paving curb along northwest landscape area.

S1.07 Refer to Project Manual, Section 07 41 14 Metal Roof System. Revise Section 2.2, Item A4a – Profile to be a 1" high batten in lieu of 1 1/2".

S1.08 Refer to Project Manual, Section 33 41 00 Storm Utility Drainage Piping. DELETE Section 2.3 and Section 2.8.

S1.09 Refer to Project Manual, Section 01 23 00 Alternates, Item B –Alternate No. 2 (listed above under Item S1.06) **and attached manufacturer specification and installation sheets** for trench drain.

VI - CHANGES TO DRAWINGS (ITEMS NOTED WITH A "D" PREFIX):

D1.01 Refer to Drawing Exhibit A1.0, and **attached new Sheet AD2/A1.0**: Refer to additions, clarification, and adjustments made under Delta ADD2.
Revisions include: clarification of rain water leader locations with tie-in to storm drain system, including AC paving, concrete, and landscape work; Removal & replacement of existing swale drainage as an Additive Alternate 2, including concrete, AC paving curbing, and trench drain. Scope of work note includes the second residence hall for Add Alternate 1.

D1.02 Refer to Drawing Exhibit A1.1, and **attached new Sheet AD2/A1.1**: Refer to additions, clarification, and adjustments made under Delta ADD2.
Revisions include: Clarification of existing rain water leader locations; The addition of the lower porch roof; Investigation of the eave along the south end of the building; Inclusion of second residence hall to ADD-ALTERNATE 1; Text revisions in DEMO notes.

D1.03 Refer to Drawing Exhibit A1.2, and **attached new Sheet AD2/A1.2**: Refer to additions, clarification, and adjustments made under Delta ADD2.
Revisions include: Clarification of number of rain water leaders required and locations; Addition of gutter expansion joints; Addition of overflow scuppers to gutters; Clarify gutter installation over existing metal fascia at south end of building; Repair beam tops and add sheet metal caps over existing beam ends at lower porch; Inclusion of second residence hall to ADD-ALTERNATE 1.

D1.04 Refer to Drawing Exhibit A-3D, and **attached new Sheet AD2/3D**: Refer to additions, clarification, and adjustments made under Delta ADD2.
Revisions include: Addition of overflow scuppers to gutter; Adjustment to rain water leader attachment and routing; Clarification of text for rafter repair for damage beyond the initial demo of 15" of rafter tail.

D1.05 Refer to Drawing Exhibit A-9D, and **attached new Sheet AD2/9D**: Refer to additions, clarification, and adjustments made under Delta ADD2.
Revisions include: Clarification of anchorage conditions for upper walkway, posts, and building wall; Adjustment for post base offset.

D1.06 Refer to Drawing Exhibit A-11D, and **attached new Sheet AD2/11D**: New Detail added to project for roof to wall detail at lower porch roof.

VI – CHANGES – GENERAL – RESPONSES TO INQUIRIES (ITEMS NOTED WITH A "G" PREFIX):

None

Respectfully,

Dan S. Rossetto
Nichols, Melburg, and Rossetto

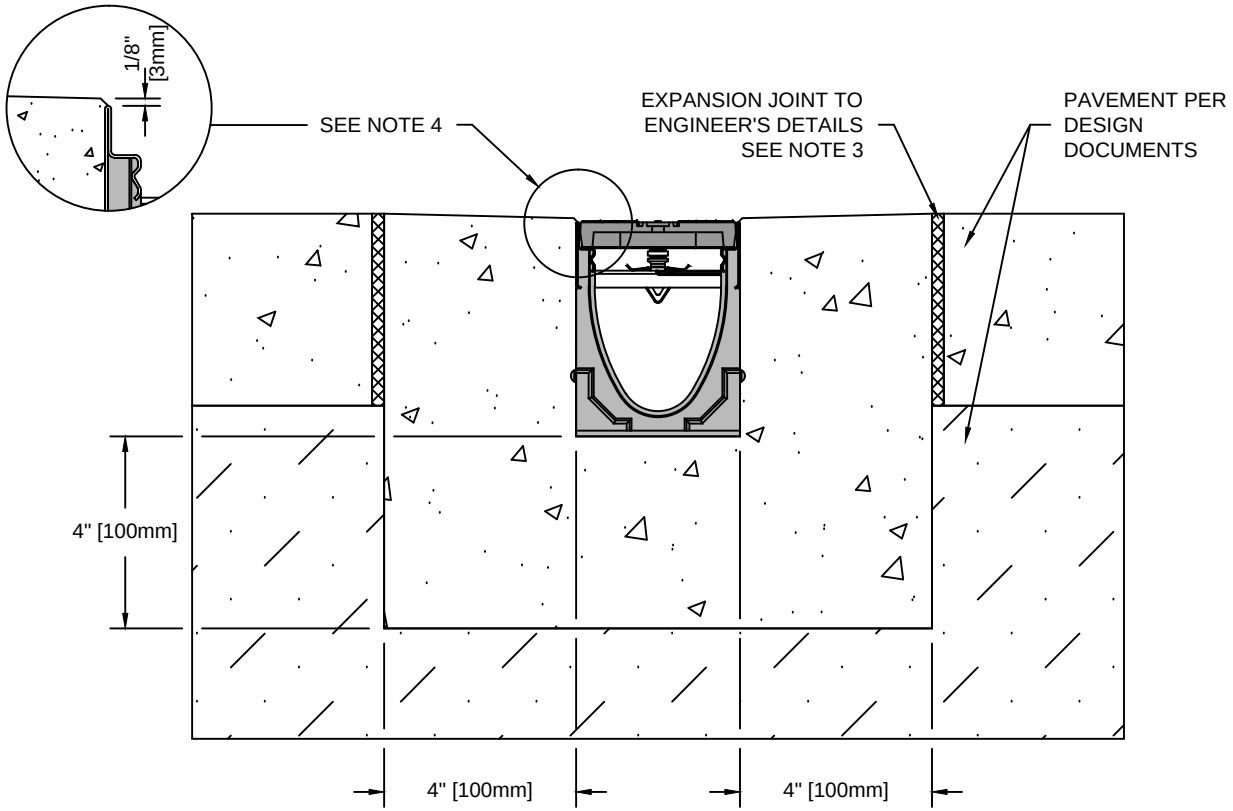
Attachments: Specifications: 00 01 03
Manufacturer Specifications and Installation details for ACO trench drain.
Drawing Exhibits: ADD2/A1.0, ADD2/A1.1, ADD2/A1.2, ADD2/3D, ADD2/9D, ADD2/11D.

OPINION OF PROBABLE COST SUMMARY

I. CONSTRUCTION COSTS

A	Removal of existing roofing material w/ abatement, repair & replacement of framing members and substrate, and installation of new roofing material with waterproofing, new fascia, new gutter & rainwater leaders		$	190,448.00
B	Complete removal of stone fireplace & chimney as Additive Alternate 1		$	6,200.00
C	Removal of existing drainage swale and area drains and replacement with trench drain providing connection of rainwater leaders to storm drain system as Additive Alternate 2		$	73,652.00
	Total Construction		$	270,300.00
F	Regional Adjustment Multiplier	1.14		
	Subtotal Construction Costs		$	308,142.00
F	General Conditions	13%	$	40,058.46
G	Overhead & Profit	11%	$	33,895.62
H	Bonds & Insurance	3%	$	9,244.26
I	Contingency	10%	$	30,814.20
	Subtotal Mark Ups		$	114,012.54
TOTAL CONSTRUCTION COST			$	422,154.54

END OF SECTION



B

NOTES:
1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

SPECIFICATION CLAUSE

K100 KLASSIKDRAIN - LOAD CLASS B

GENERAL

THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE K100 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS

CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 4" (100mm) NOMINAL INTERNAL WIDTH WITH A 5.1" (130mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'QUICKLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

K1-B-ECP

DATE: 03/21/13

K100 - KLASSIKDRAIN - LOAD CLASS: B

Exposed Concrete Pavement

INSTALLATION DRAWING - ACO DRAIN

ACO Polymer Products, Inc.

825 W. Beechcraft St
Casa Grande, AZ 85122
Tel: 520-421-9988
Fax: 520-421-9899

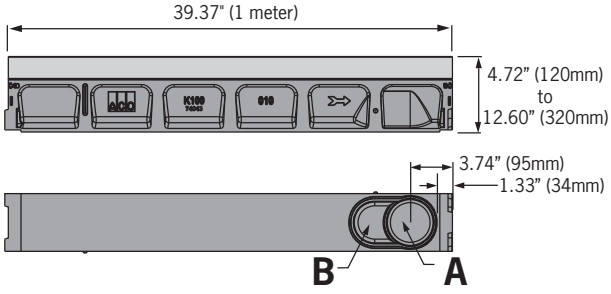
9470 Pinecone Dr.
Mentor, OH 44060
Tel: 440-285-7000
Fax: 440-285-8517

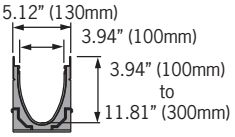
4211 Pleasant Rd.
Fort Mill, SC 29708
Tel: 800-543-4764
Fax: 803-802-1063

Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764

KlassikDrain - K100 Galvanized steel edge rail channel system

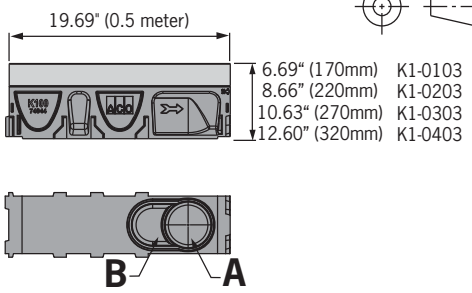
One meter channel



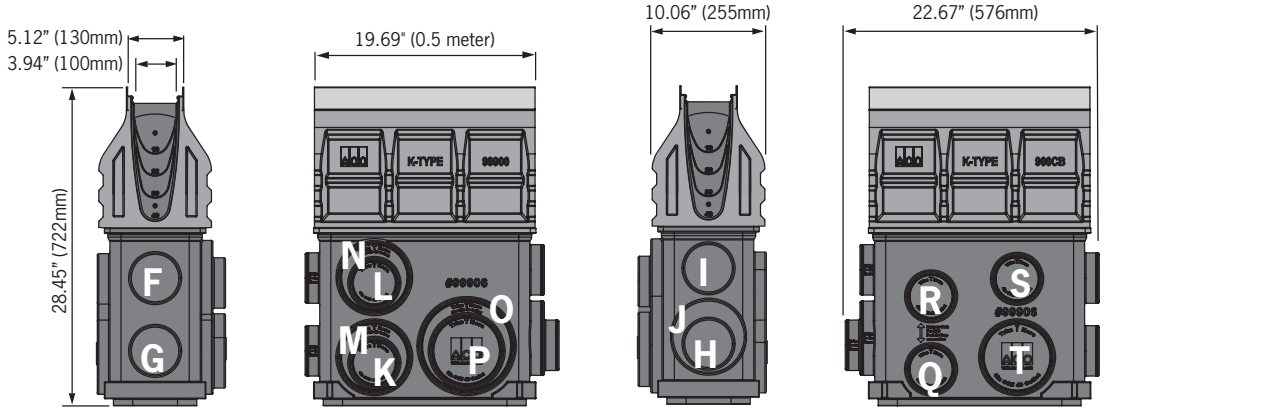


Knock-outs included on every 5th channel

Half meter channel



Type K901G In-line catch basin



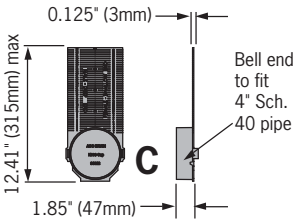
Total capacity = 10.49 gallons.

Outlet flow rates

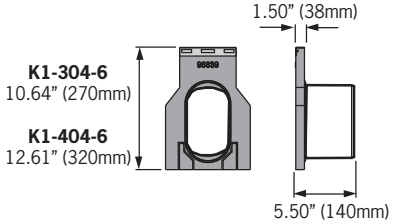
Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Bottom outlet - K00	4" round	3.94"	108	0.24
A	Bottom outlet - K40	4" round	11.81"	187	0.42
B	Bottom outlet - K00	6" oval	3.94"	177	0.39
B	Bottom outlet - K40	6" oval	11.81"	306	0.68
C	End outlet - K20	4" round	7.87"	132	0.29
C	End outlet - K40	4" round	11.81"	171	0.38
D	K1-308-6 6" outlet cap	6" oval	9.84"	233	0.52
E	K1-408-6 6" outlet cap	6" oval	11.81"	264	0.59
F	Type K1-901G	4" round	19.30"	226	0.50
G	Type K1-901G	4" round	25.67"	265	0.59
H	Type K1-901G	4" round	25.30"	263	0.59
I	Type K1-901G	4" round	18.56"	222	0.49
J	Type K1-901G	6" round	25.85"	586	1.30
K	Type K1-901G	4" round	26.43"	269	0.60
L	Type K1-901G	4" round	19.36"	227	0.51
M	Type K1-901G	6" round	27.30"	604	1.35
N	Type K1-901G	6" round	19.99"	505	1.12
O	Type K1-901G	8" round	27.30"	1051	2.34
P	Type K1-901G	6" round	26.43"	593	1.32
Q	Type K1-901G	4" round	27.17"	273	0.61
R	Type K1-901G	4" round	20.68"	235	0.52
S	Type K1-901G	4" round	18.99"	224	0.50
T	Type K1-901G	6" round	27.17"	602	1.34

Note: These are the pipe flow rates at the specified outlet, **NOT** channel flow rates. Catch basin flow rates are without trash bucket - using trash bucket reduces flow.

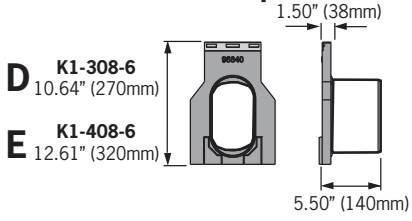
End Caps



6" Oval inlet cap



6" Oval outlet cap



ACO Specification Information

ACO DRAIN

KlassikDrain - K100 Galvanized steel edge rail channel system

Description	Part No.	Invert Inches[2]	Invert mm[2]	Weight Lbs.
K1-00 Neutral channel - 39.37" (1m)[1]	**74041**	**3.94**	**100**	**28.1**
K1-1 Sloped channel - 39.37" (1m)	**74001**	4.13	105	28.1
K1-2 Sloped channel - 39.37" (1m)	**74002**	4.33	110	28.9
K1-3 Sloped channel - 39.37" (1m)	**74003**	4.53	115	29.7
K1-4 Sloped channel - 39.37" (1m)	**74004**	4.72	120	30.5
K1-5 Sloped channel - 39.37" (1m)[1]	**74005**	4.92	125	31.3
K1-6 Sloped channel - 39.37" (1m)	**74006**	5.12	130	32.1
K1-7 Sloped channel - 39.37" (1m)	**74007**	5.31	135	32.9
K1-8 Sloped channel - 39.37" (1m)	**74008**	5.51	140	33.7
K1-9 Sloped channel - 39.37" (1m)	**74009**	5.71	145	34.5
K1-10 Sloped channel - 39.37" (1m)[1]	**74010**	5.91	150	35.3
K1-010 Neutral channel - 39.37" (1m)[1]	**74043**	**5.91**	**150**	**35.3**
K1-0103 Neutral channel - 19.69" (0.5m)[1]	**74044**	**5.91**	**150**	**17.0**
K1-11 Sloped channel - 39.37" (1m)	**74011**	6.10	155	36.1
K1-12 Sloped channel - 39.37" (1m)	**74012**	6.30	160	36.9
K1-13 Sloped channel - 39.37" (1m)	**74013**	6.50	165	37.7
K1-14 Sloped channel - 39.37" (1m)	**74014**	6.69	170	38.5
K1-15 Sloped channel - 39.37" (1m)[1]	**74015**	6.89	175	39.3
K1-16 Sloped channel - 39.37" (1m)	**74016**	7.09	180	40.1
K1-17 Sloped channel - 39.37" (1m)	**74017**	7.28	185	40.9
K1-18 Sloped channel - 39.37" (1m)	**74018**	7.48	190	41.7
K1-19 Sloped channel - 39.37" (1m)	**74019**	7.68	195	42.5
K1-20 Sloped channel - 39.37" (1m)[1]	**74020**	7.87	200	43.4
K1-020 Neutral channel - 39.37" (1m)[1]	**74045**	**7.87**	**200**	**43.4**
K1-0203 Neutral channel - 19.69" (0.5m)[1]	**74046**	**7.87**	**200**	**20.5**
K1-21 Sloped channel - 39.37" (1m)	**74021**	8.07	205	44.2
K1-22 Sloped channel - 39.37" (1m)	**74022**	8.27	210	45.0
K1-23 Sloped channel - 39.37" (1m)	**74023**	8.46	215	45.8
K1-24 Sloped channel - 39.37" (1m)	**74024**	8.66	220	46.6
K1-25 Sloped channel - 39.37" (1m)[1]	**74025**	8.86	225	47.4
K1-26 Sloped channel - 39.37" (1m)	**74026**	9.06	230	48.2
K1-27 Sloped channel - 39.37" (1m)	**74027**	9.25	235	49.0

Description	Part No.	Invert Inches[2]	Invert mm[2]	Weight Lbs.
K1-28 Sloped channel - 39.37" (1m)	**74028**	9.45	240	49.8
K1-29 Sloped channel - 39.37" (1m)	**74029**	9.65	245	50.6
K1-30 Sloped channel - 39.37" (1m)[1]	**74030**	9.84	250	51.4
K1-030 Neutral channel - 39.37" (1m)[1]	**74047**	**9.84**	**250**	**51.4**
K1-0303 Neutral channel - 19.69" (0.5m)[1]	**74048**	**9.84**	**250**	**24.0**
K1-31 Sloped channel - 39.37" (1m)	**74031**	10.04	255	52.2
K1-32 Sloped channel - 39.37" (1m)	**74032**	10.24	260	53.0
K1-33 Sloped channel - 39.37" (1m)	**74033**	10.43	265	53.8
K1-34 Sloped channel - 39.37" (1m)	**74034**	10.63	270	54.6
K1-35 Sloped channel - 39.37" (1m)[1]	**74035**	10.83	275	55.4
K1-36 Sloped channel - 39.37" (1m)	**74036**	11.02	280	56.2
K1-37 Sloped channel - 39.37" (1m)	**74037**	11.22	285	57.0
K1-38 Sloped channel - 39.37" (1m)	**74038**	11.42	290	57.9
K1-39 Sloped channel - 39.37" (1m)	**74039**	11.61	295	58.7
K1-40 Sloped channel - 39.37" (1m)[1]	**74040**	11.81	300	59.5
K1-040 Neutral channel - 39.37" (1m)[1]	**74049**	**11.81**	**300**	**59.5**
K1-0403 Neutral channel - 19.69" (0.5m)[1]	**74050**	**11.81**	**300**	**27.5**
K1-901G In-line catch basin - 19.69" (0.5m)[3]	**94608**	27.63	702	52.6
K1-621G catch basin - 19.69" (0.5m)[3]	**94617**	28.86	733	55.8
K1-631G catch basin - 19.69" (0.5m)[4]	**94631**	40.86	1038	65.8
K1-Series 600 Optional plastic riser	**99902**	-	-	10.0
Foul air trap - fits both 900 & 600 series basins	**90854**	-	-	1.2
K1-304-6 6" Inlet Cap	**96839**	9.84	250	5.2
K1-308-6 6" Outlet Cap	**96840**	9.84	250	5.0
K1-404-6 6" Inlet Cap	**96834**	11.81	300	6.0
K1-408-6 6" Outlet Cap	**96836**	11.81	300	5.8
Universal end cap	**96822**	11.81	300	0.4
Debris strainer for 4" bottom knockout	**93488**	-	-	0.2
4" Oval to 6" round outlet adapter	**95140**	-	-	1.1
K1-Installation device	**97477**	-	-	2.8
Grate removal tool	**01318**	-	-	0.3
K1-QuickLok locking bar	**02899**	-	-	0.1

Notes:
1. This channel offers a bottom knockout feature; 4" round/6" oval.
2. Inverts shown are for the male end; for female invert depth subtract 5mm (≈0.2") from the male invert (except for neutral channels, where it will be same as male invert). To calculate the overall channel depth add 20mm (≈0.8") to invert depth.
3. This catch basin kit includes a polymer concrete top, removable Quicklok locking bar, trash bucket and plastic base. Select an appropriate grate.
4. This catch basin kit includes a polymer concrete top, removable Quicklok locking bar, deep trash bucket, plastic riser and plastic base. Select an appropriate grate.

Specifications

General
The surface drainage system shall be ACO Drain K100 complete with gratings secured with 'QuickLok' locking as manufactured by ACO Polymer Products, Inc. or approved equal.

Materials
The trench system bodies shall be manufactured from polyester polymer concrete with the minimum properties as follows:

Compressive strength:	14,000 psi
Flexural strength:	4,000 psi
Water absorption	0.07%
Frost proof	YES
Salt proof	YES
Dilute acid and alkali resistant	YES

The nominal clear opening shall be 4" (100mm) with overall width of 5.12" (130mm). Pre-cast units shall be manufactured with either an invert slope of 0.5% or with neutral invert and have a wall thickness of at least 0.50" (13mm). Each unit will feature a partial radius in the trench bottom and a male to female interconnecting end profile. Units shall have horizontal cast in anchoring keys on the outside wall to ensure maximum mechanical bond to the surrounding bedding material and pavement surface. The galvanized steel edge rail will be integrally cast in by the manufacturer to ensure maximum homogeneity between polymer concrete body and edge rail. Each edge rail shall be at least 3/32" (2.5mm) thick.

Grates
Grates shall be specified. See separate ACO Spec Info grate sheets for details. After removal of grates and 'QuickLok' bar there shall be uninterrupted access to the trench to aid maintenance.

Installation
The trench drain system shall be installed in accordance with the manufacturer's installation instructions and recommendations.

ACO Polymer Products, Inc.

Northeast Sales Office
P.O. Box 245
Chardon, OH 44024
Tel: (440) 285-7000
Toll free: (800) 543-4764
Fax: (440) 285-7005

West Sales Office
P.O. Box 12067
Casa Grande, AZ 85130
Tel: (520) 421-9988
Toll Free: (888) 490-9552
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Type 478Q Longitudinal ductile iron grate (ADA)

Product Features

- Certified to EN 1433 Load Class E - 135,000 lbs - 2,788 psi
- Uses 'QuickLok' boltless locking system
- Suitable for use with K100, KS100, C100, H100-8, H100-10, H100K-8 H100KS-8, and NW100 channels
- Manufactured from ductile iron to ASTM A 536-84 - Grade 65-45-12
- E- coated for improved resistance against rust
- Complies with ADA - American Disabilities Act of 1990 Section 4.5.4
- Bicycle Tire Penetration Resistant to AS 3996 - 2006

Specifications

General

The surface drainage system shall be ACO Drain K100, KS100, C100, H100-8, H100-10, H100K-8, H100KS-8, and NW100 channels* complete with ACO Type 478Q longitudinal ductile iron grate with 'QuickLok' locking as manufactured by ACO Polymer Products, Inc. or similar approved.

Materials

The covers shall be manufactured from ductile iron and have ***minimum*** properties as follows:

- ***Independently certified to meet Load Class E to EN 1433 - 135,000 lbs - 2,788 psi***
- ***Ductile iron to ASTM A 536-84 - Grade 65-45-12***
- ***Intake area of 22.5 sq. in. (145.16 cm²) per half meter of grate***

The overall width of 4.85" (123.1mm) and overall length of 19.69" (500mm). Slots measure at a maximum of 0.28" (7mm).

Installation

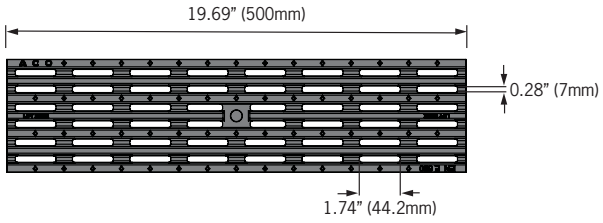
The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.

* delete as appropriate

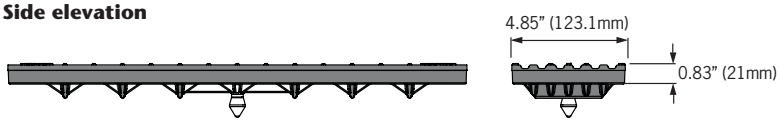
ACO DRAIN

Type 478Q Longitudinal ductile iron grate (ADA)

Plan view

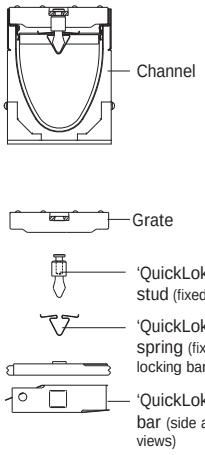


Side elevation



Description	Part No.	Length inches *(mm)*	Width inches *(mm)*	Weight lbs.
QuickLok grate				
Type 478Q Ductile iron longitudinal grate	**03314**	19.69 (*500*)	4.85 (*123.1*)	12.8
QuickLok locking bar	**02899**	-	-	0.5
QuickLok grate removal tool	**01318**	-	-	0.3

'QuickLok' locking mechanism



ACO 'QuickLok' is a patented boltless locking system, grates are removed and replaced with the minimum time and effort for ease of maintenance. The unique design provides a positive 'snap down' fit into the locking bar. A stud is fixed to the grate which 'locks' into the spring clip in the locking bar.

The 'QuickLok' stud is made from stainless steel and high density nylon, the locking bar and clip are stainless steel, for use in both general purpose and corrosive environments.

ACO Polymer Products, Inc.

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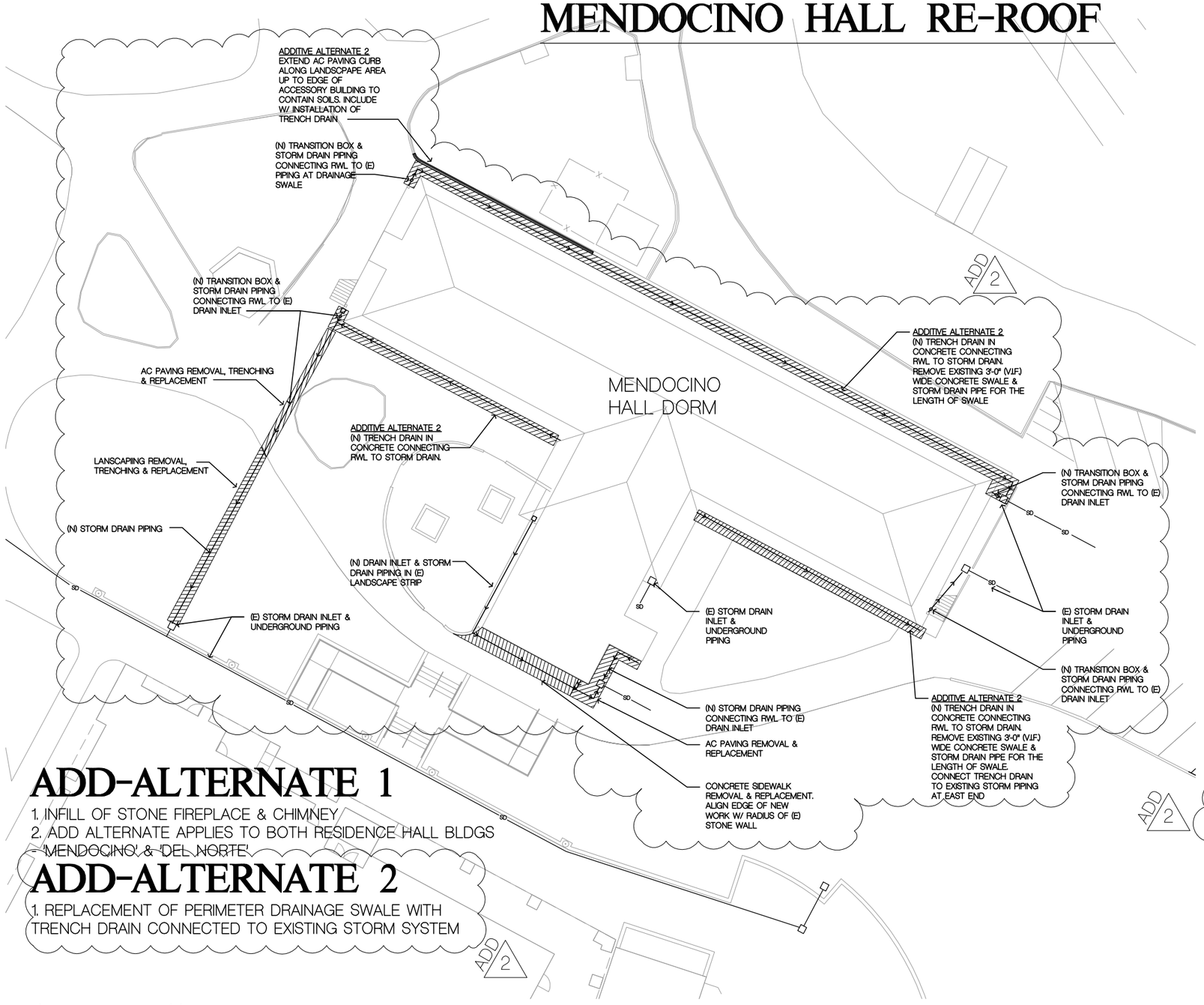
COLLEGE OF THE REDWOODS
MENDOCINO HALL RE-ROOF



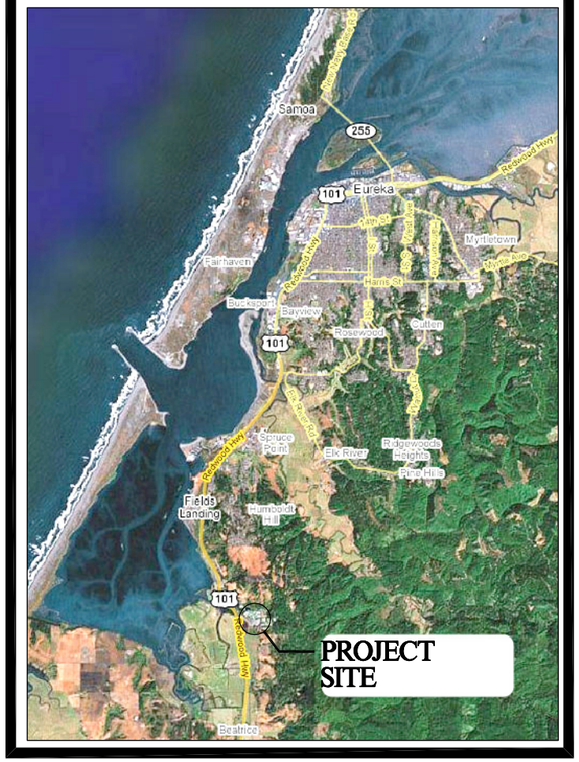
ADD-ALTERNATE 1

1. INFILL OF STONE FIREPLACE & CHIMNEY
2. ADD ALTERNATE APPLIES TO BOTH RESIDENCE HALL BLDGS - 'MENDOCINO' & 'DEL NORTE'

ADD-ALTERNATE 2

1. REPLACEMENT OF PERIMETER DRAINAGE SWALE WITH TRENCH DRAIN CONNECTED TO EXISTING STORM SYSTEM

VICINITY MAP



SCOPE OF WORK

ROOF REPLACEMENT PROJECT INCLUDING REMOVAL OF EXISTING ROOF MATERIAL TO THE SHEATHING WITH ASBESTOS ABATEMENT, REPAIR & REPLACEMENT OF FRAMING MEMBERS AND THE INSTALLATION OF NEW ROOFING MATERIAL INCLUDING WATERPROOFING AND DETAILING AS INDICATED IN DRAWINGS AND SPECIFICATIONS.
PROJECT INCLUDES REMOVAL OF STONE FIREPLACE & CHIMNEYS FROM BOTH RESIDENCE HALL BLDGS AND ADDITION OF STORM WATER COLLECTION SYSTEM AS ADD-ALTERNATES.

SITE UTILITY NOTES

1. CONTRACTOR SHALL PROVIDE UNDERGROUND TIGHTLINE DRAINAGE COLLECTION FOR ALL RAIN DOWNSPOUTS. TIGHTLINE PIPING SHALL CONNECT TO EXISTING CAMPUS STORM DRAIN LINES AS INDICATED. CONTRACTOR SHALL VERIFY ROUTING TO EXISTING STORM DRAINAGE SYSTEM CONNECTIONS AND DEPTHS TO ALLOW FOR PROPER DRAINAGE OF NEW PIPING.

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ADDENDUM TWO (Rev. A1.0)

RESIDENCE HALL 'MENDOCINO' REROOF
COLLEGE OF THE REDWOODS - EUREKA CAMPUS

AD2
A1.0

DR. WT
DT. 03/27/15
SC. AS NOTED
NO. 10-2529.00

Plot Date: March 30, 2015 - 4:42 pm
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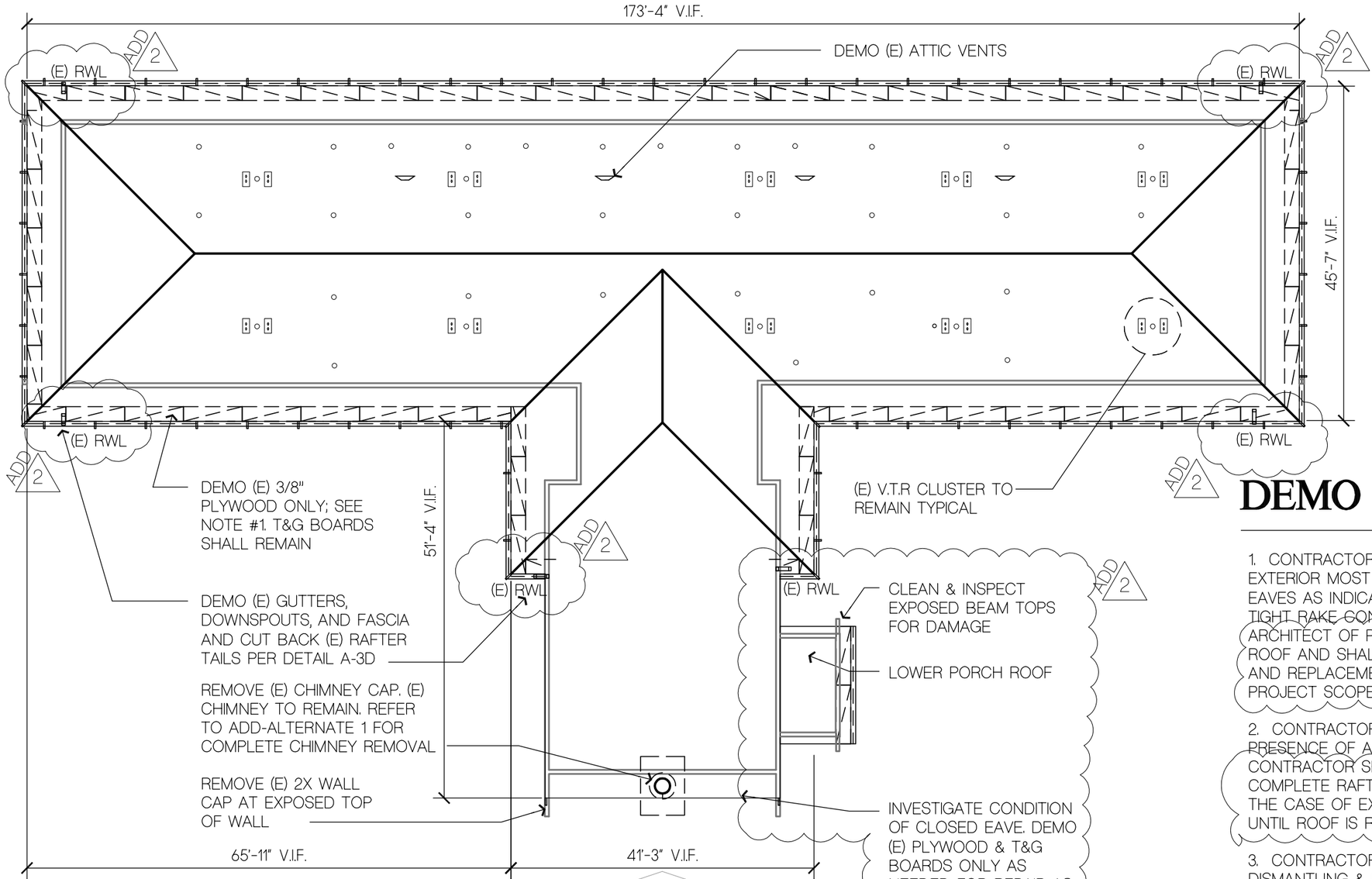
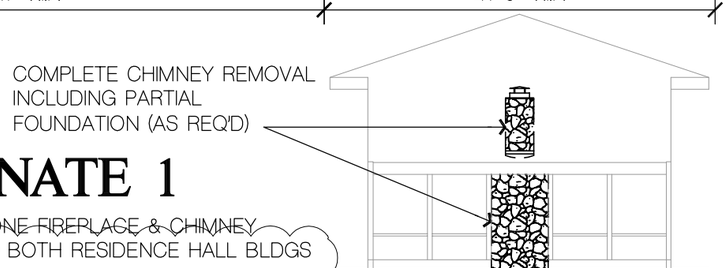


DEMO NOTES

1. CONTRACTOR SHALL REMOVE & REPLACE PERIMETER EXTERIOR MOST 2 FEET OF THE PLYWOOD SHEATHING ALONG EAVES AS INDICATED (SHOWN DASHED). NOT REQUIRED AT TIGHT RAKE CONDITION. CONTRACTOR SHALL INFORM ARCHITECT OF PRESENCE OF DAMAGE WITHIN THE BODY OF ROOF AND SHALL PROVIDE A COST ASSOCIATED W/ REMOVAL AND REPLACEMENT WHEN OUTSIDE OF THE INTENDED PROJECT SCOPE OF 2'-0" PERIMETER

2. CONTRACTOR SHALL INFORM ARCHITECT OF THE PRESENCE OF ANY DAMAGED FRAMING WHERE OCCURS. CONTRACTOR SHALL PROVIDE COST ASSOCIATED WITH COMPLETE RAFTER AND T&G REMOVAL AND REPLACEMENT IN THE CASE OF EXTENSIVE ROT DAMAGE NOT READILY VISIBLE UNTIL ROOF IS REMOVED.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISMANTLING & DISCONNECTION OF ANY MECHANICAL, ELECTRICAL, & COMMUNICATION EQUIPMENT, CONDUIT, & PIPING AS REQUIRED FOR INSTALLATION OF NEW ROOF



ADD-ALTERNATE 1

ADD 2

1. COMPLETE REMOVAL OF STONE FIREPLACE & CHIMNEY
2. ADD ALTERNATE APPLIES TO BOTH RESIDENCE HALL BLDGS 'MENDOCINO' & 'DEL NORTE'

NORTH

DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

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ADDENDUM TWO (Rev. A1.1)

RESIDENCE HALL 'MENDOCINO' REROOF
COLLEGE OF THE REDWOODS - EUREKA CAMPUS

AD2
A1.1

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NO. 10-2529.00

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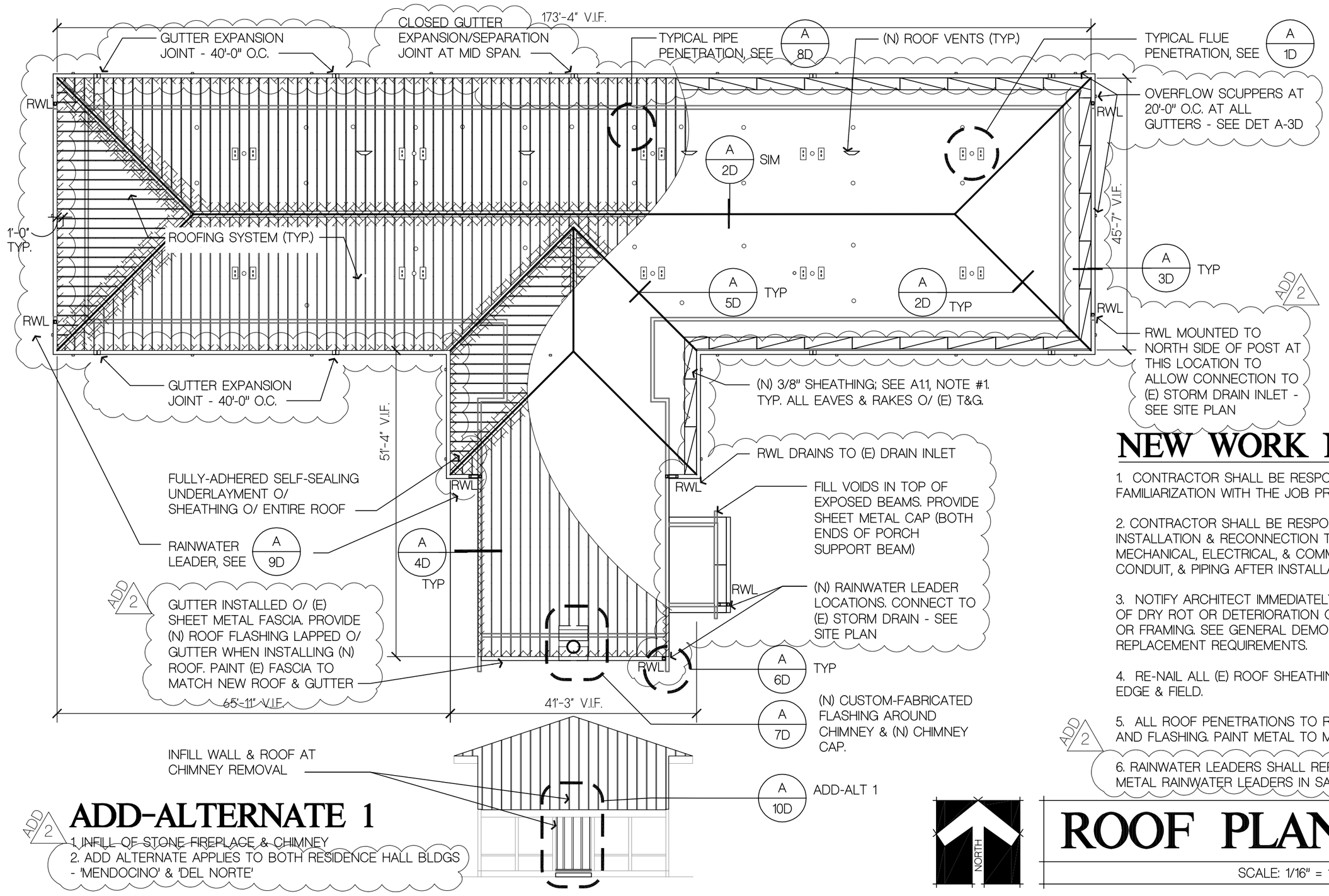

NEW WORK NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZATION WITH THE JOB PRIOR TO BIDDING.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION & RECONNECTION TO WORKING ORDER ALL MECHANICAL, ELECTRICAL, & COMMUNICATION EQUIPMENT, CONDUIT, & PIPING AFTER INSTALLATION OF NEW ROOF.

3. NOTIFY ARCHITECT IMMEDIATELY UPON THE DISCOVERY OF DRY ROT OR DETERIORATION OF THE ROOF SHEATHING OR FRAMING. SEE GENERAL DEMO NOTES, SHEET A1.1 FOR REPLACEMENT REQUIREMENTS.

4. RE-NAIL ALL (E) ROOF SHEATHING W/ 10d @ 4" O.C. @ EDGE & FIELD.

5. ALL ROOF PENETRATIONS TO RECEIVE NEW BOOT/JACK AND FLASHING. PAINT METAL TO MATCH ROOF.

ADD 2

6. RAINWATER LEADERS SHALL REPLACE CURRENT PVC & METAL RAINWATER LEADERS IN SAME LOCATIONS - U.O.N.

ADD-ALTERNATE 1

ADD 2

1. INFILL OF STONE FIREPLACE & CHIMNEY
2. ADD ALTERNATE APPLIES TO BOTH RESIDENCE HALL BLDGS - 'MENDOCINO' & 'DEL NORTE'

NORTH

ROOF PLAN

SCALE: 1/16" = 1'-0"

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ADDENDUM TWO (Rev. A1.2)

RESIDENCE HALL 'MENDOCINO' REROOF
COLLEGE OF THE REDWOODS - EUREKA CAMPUS

AD2
A1.2

DR. WT
DT. 03/27/15
SC. AS NOTED
NO. 10-2529.00

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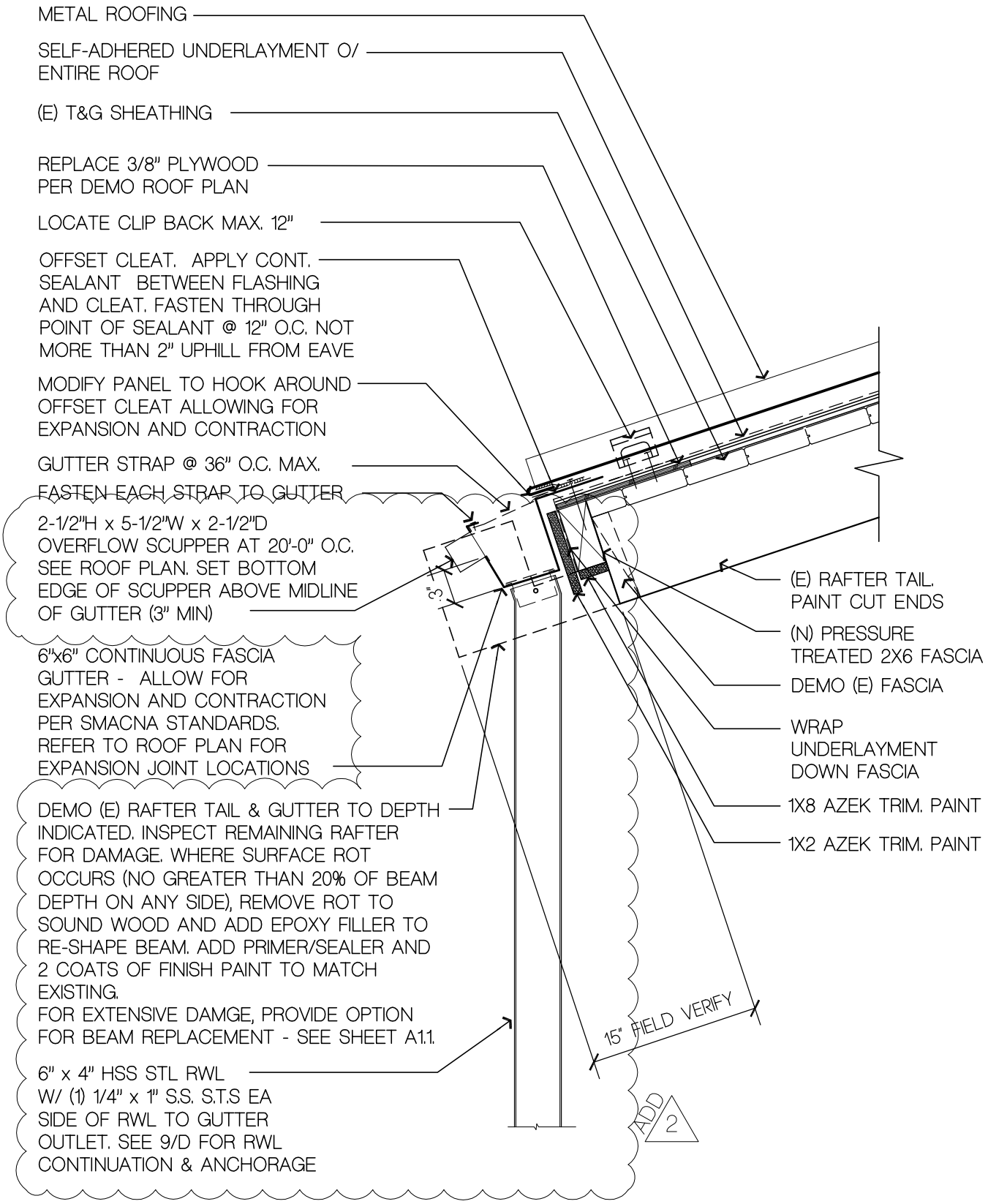

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ADD2_EAVE DETAIL

MENDOCINO HALL RE-ROOF
COLLEGE OF THE REDWOODS

AD2
3D

DR. BPL
DT. 12/15/14
SC. 1"=1'-0"
NO. 10-2529.00

Plot Date: March 30, 2015 - 2:49 pm
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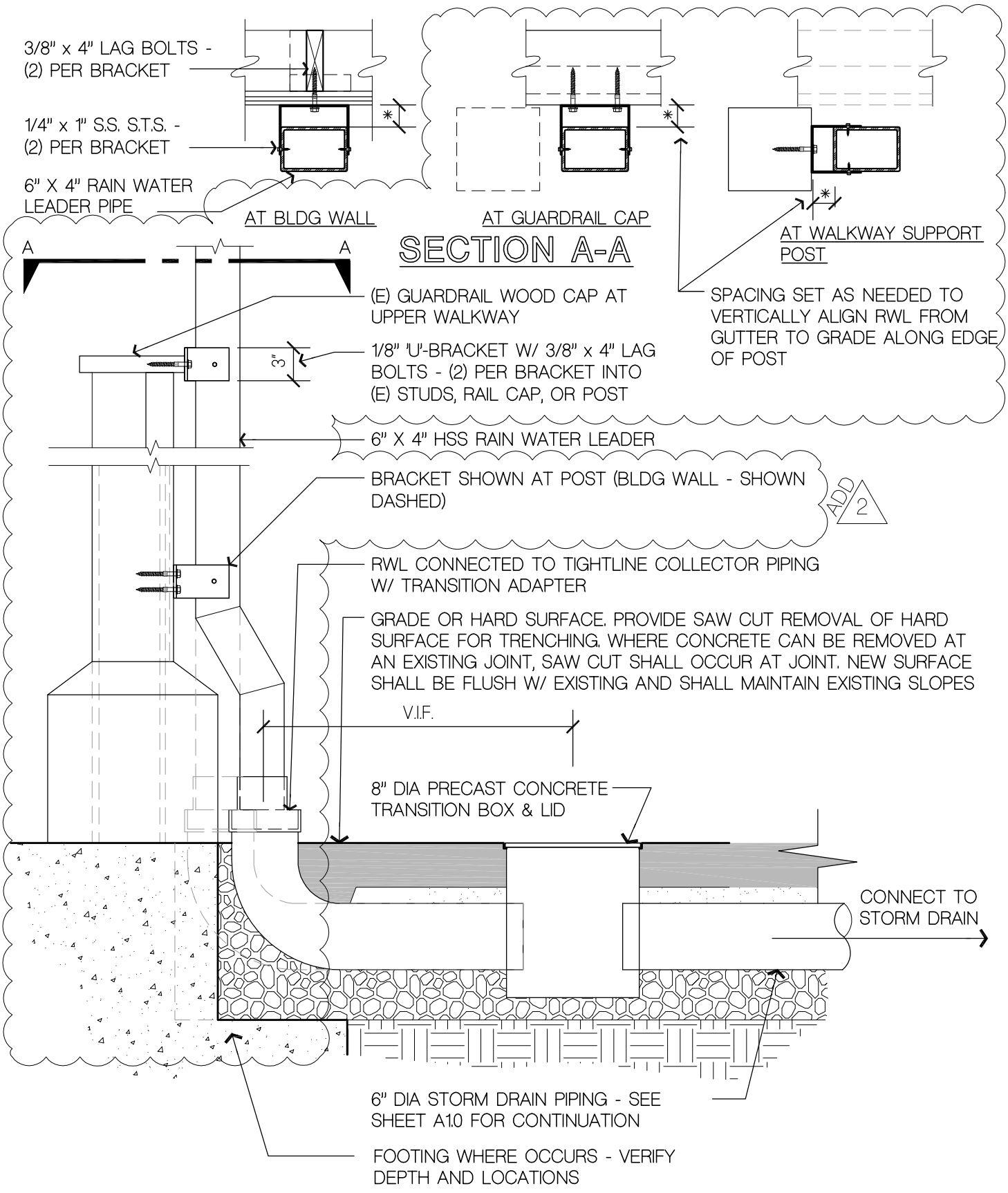

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ADD2_RAIN WATER LDR

MENDOCINO HALL REROOF
COLLEGE OF THE REDWOODS

AD2

9D

DR. WT
DT. 12/15/14
SC. 1"=1'-0"
NO. 10-2529.00

Plot Date: March 27, 2015 - 4:44 pm
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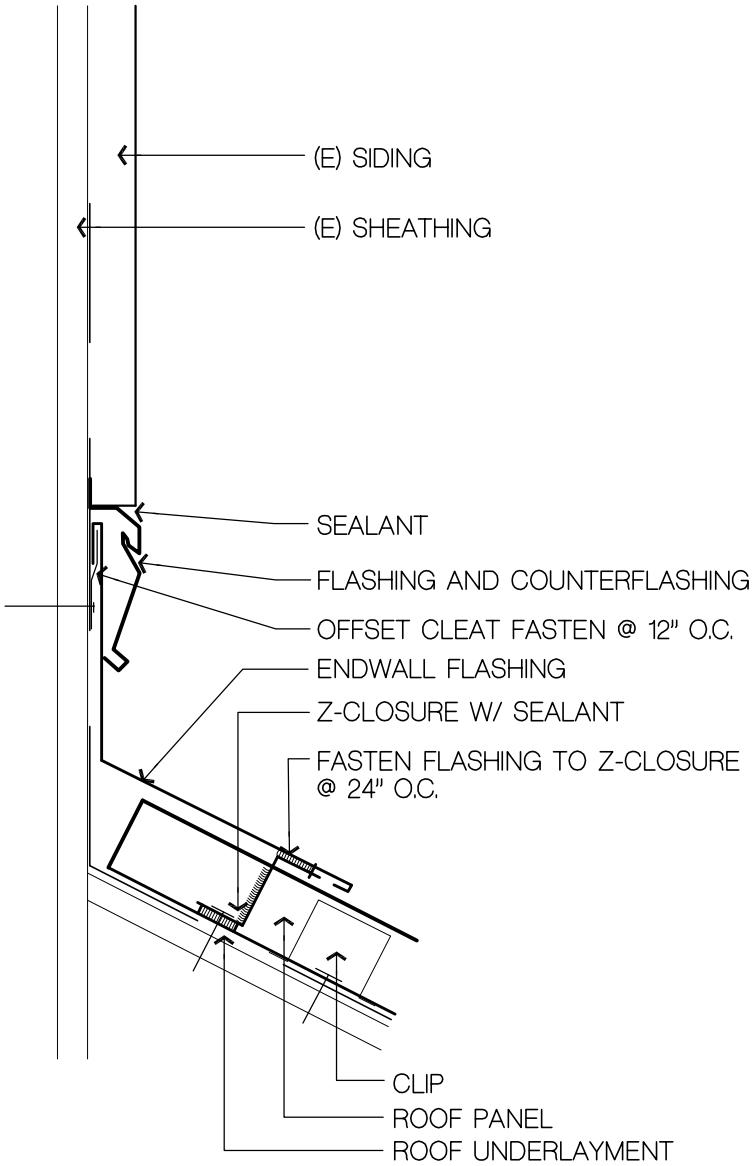

10-2529

ROOF TO WALL AT PORCH

SCALE: 3" = 1'-0"

1

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ADD2 - ROOF TO WALL

MENDOCINO HALL REROOF
COLLEGE OF THE REDWOODS

AD2

11D

DR. WT
DT. 03/27/14
SC. 1"=1'-0"
NO. 10-2529.00