



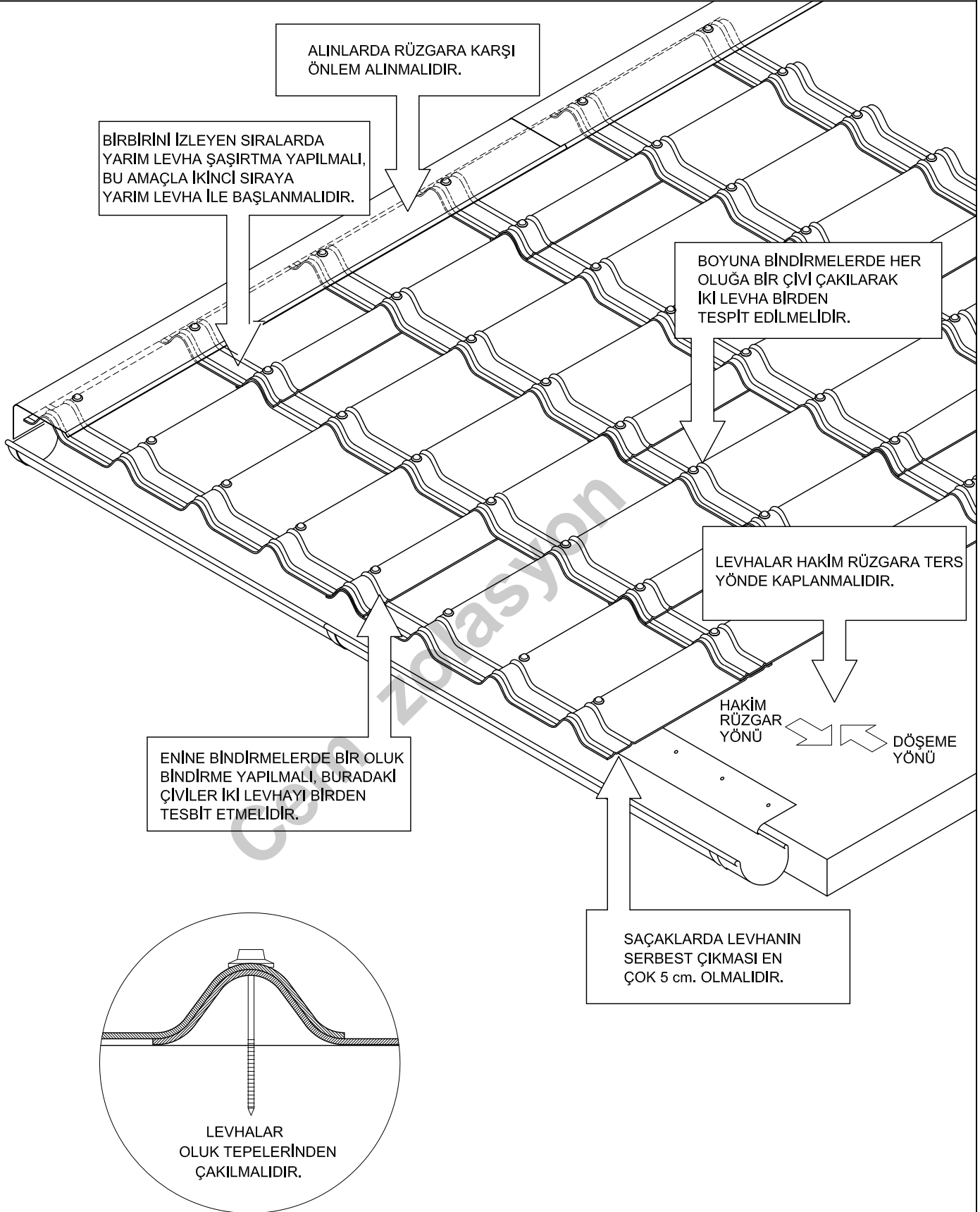
YENİ DALGAYI YAKALAYIN

RIDE THE WAVE

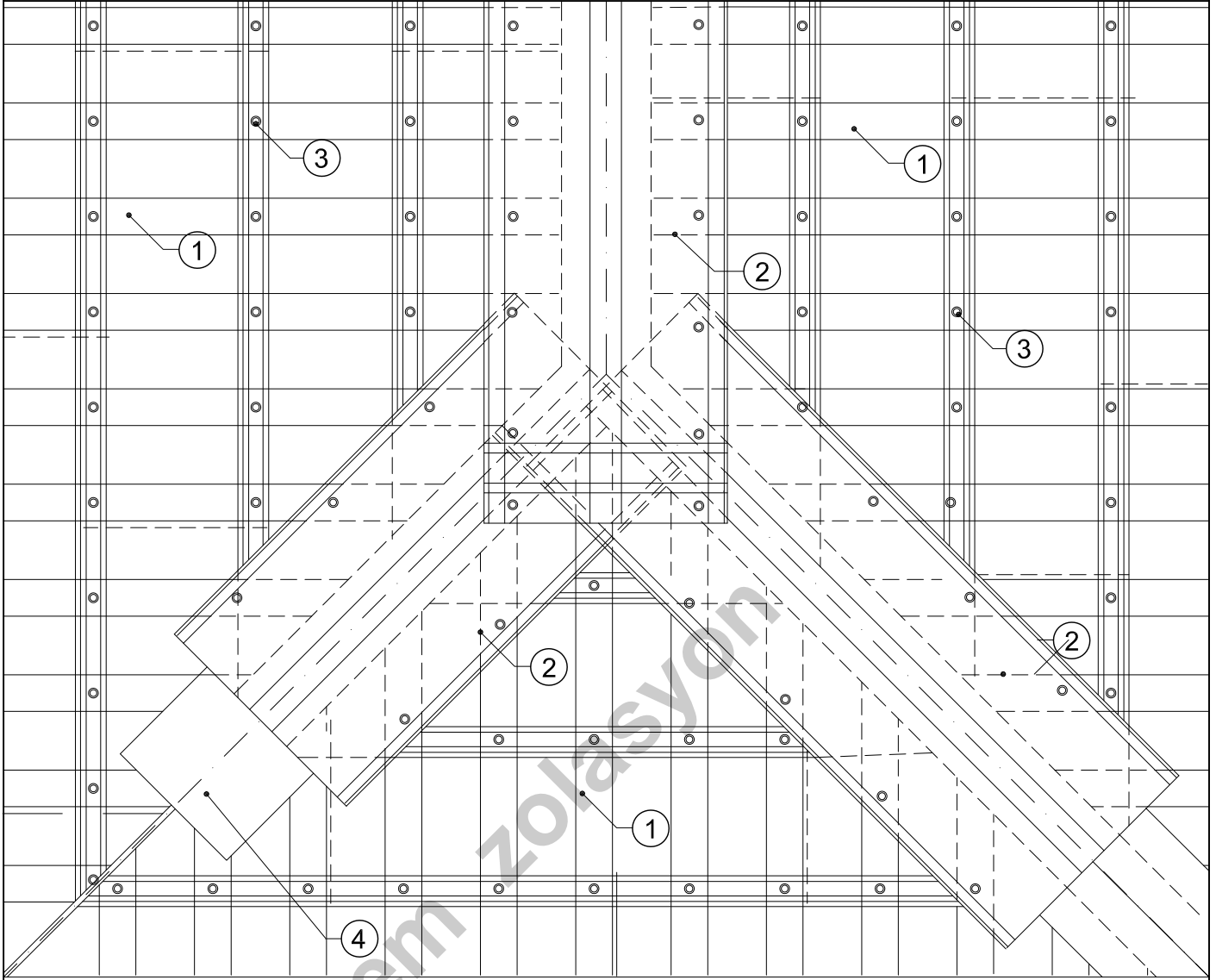
Cem Zolasyon



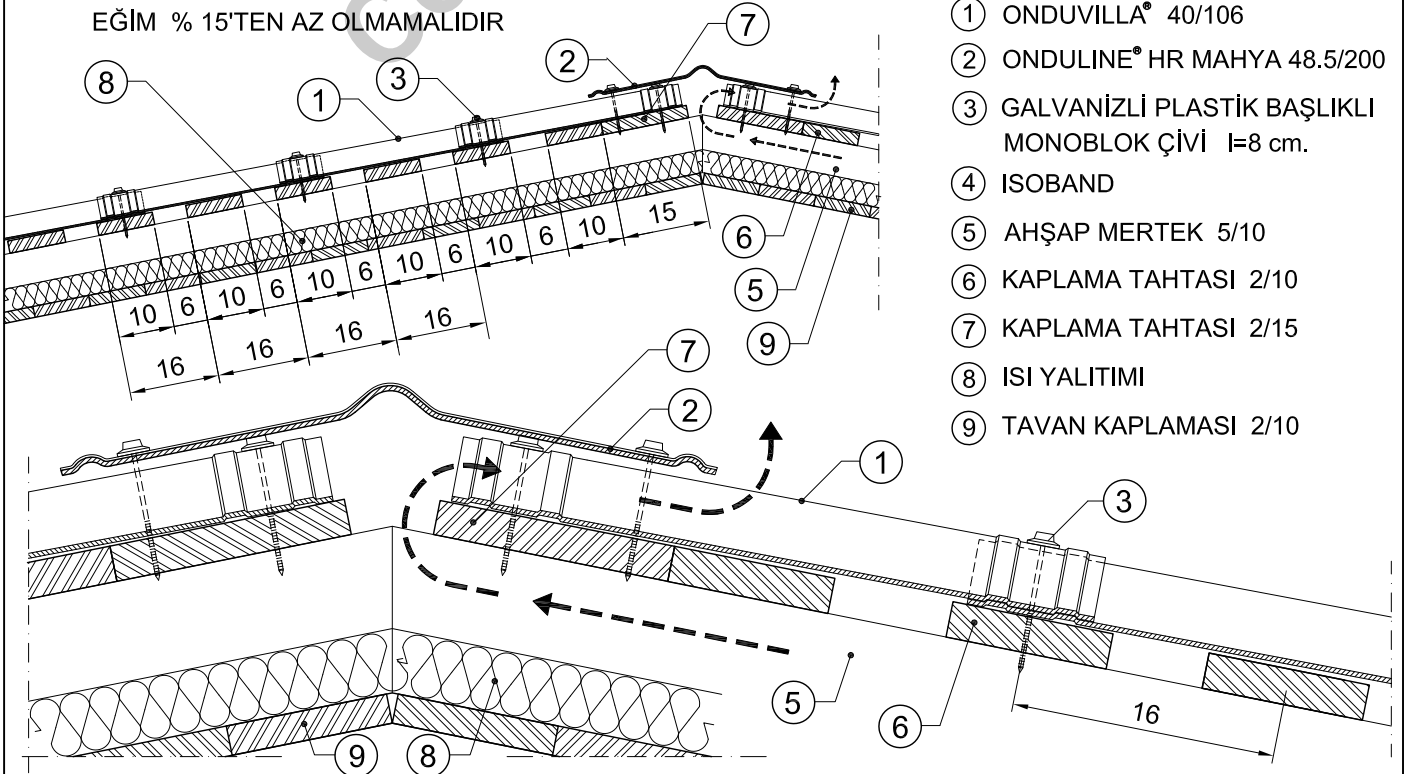
ONDUVILLA®
by Onduline®



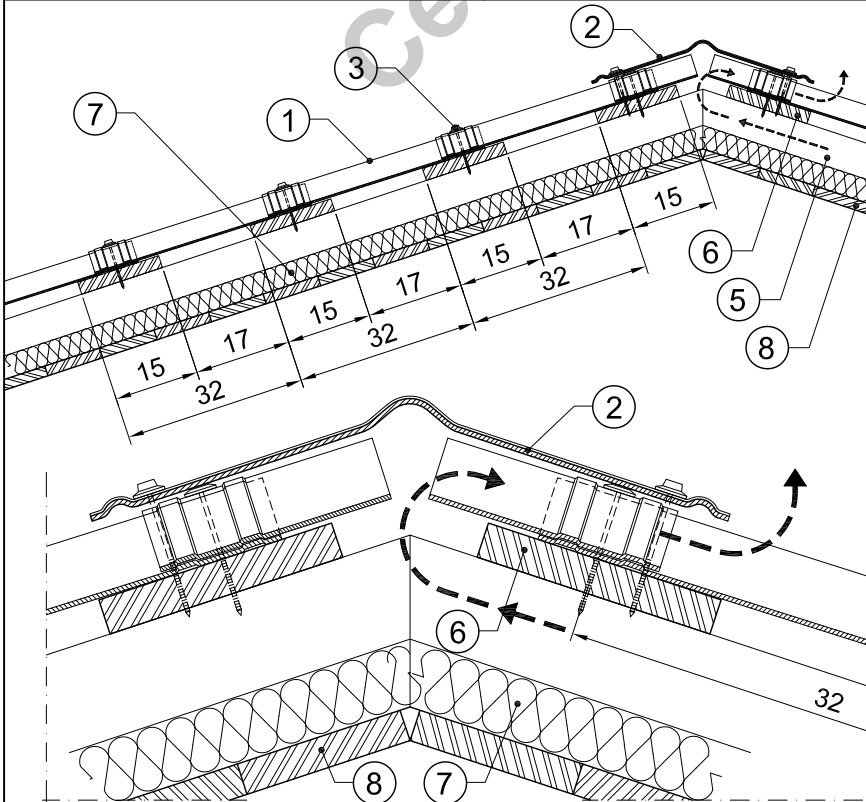
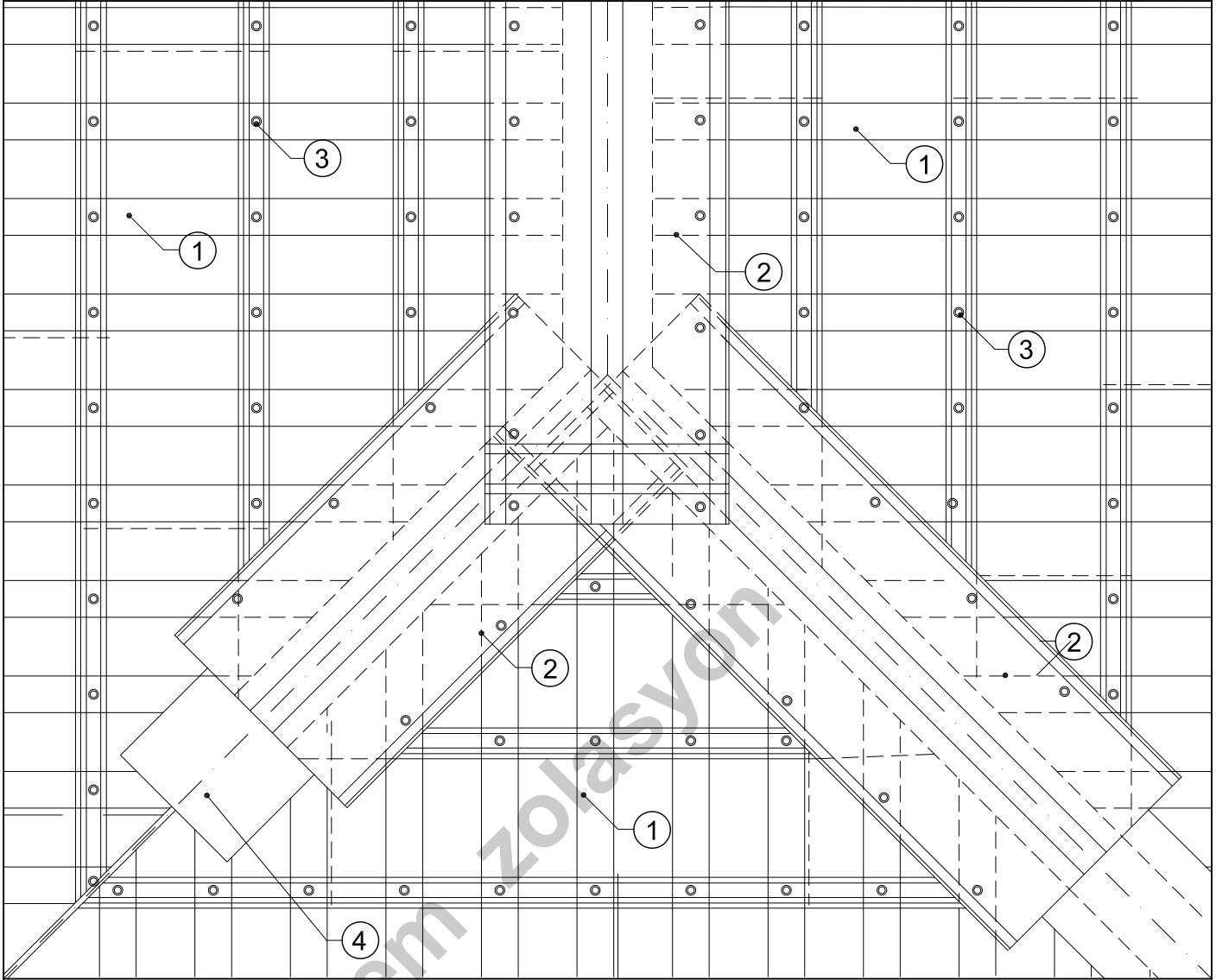
YUKARIDAKİ BİLGİLER TÜM EĞİMLERDE VE ALT YAPI SİSTEMLERİNDE GEÇERLİ OLAN TEMEL UYGULAMA ESASLARINI KAPSAR.



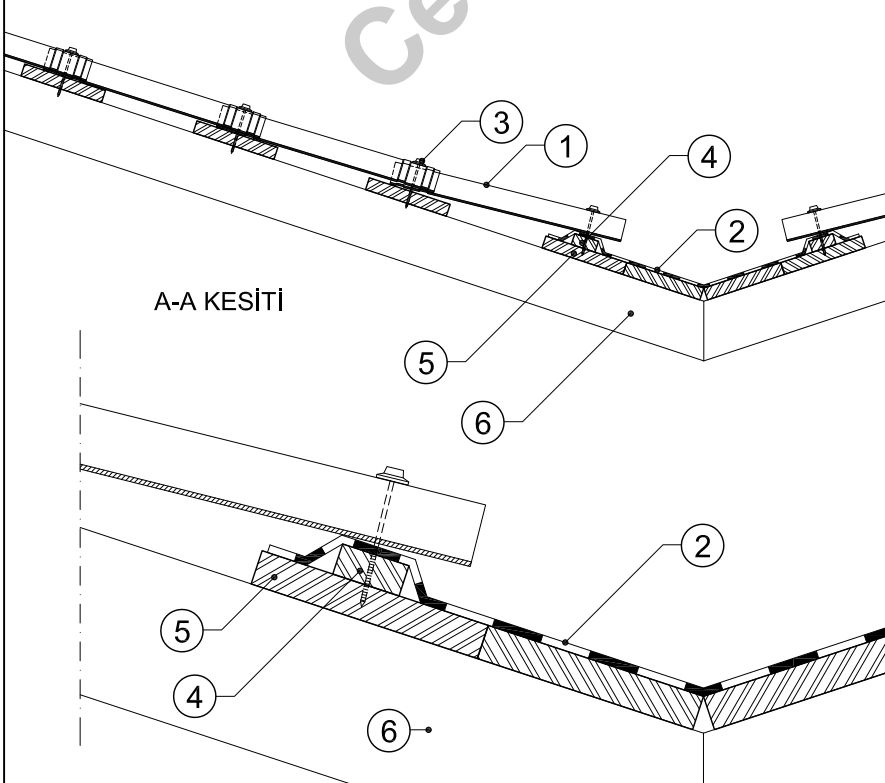
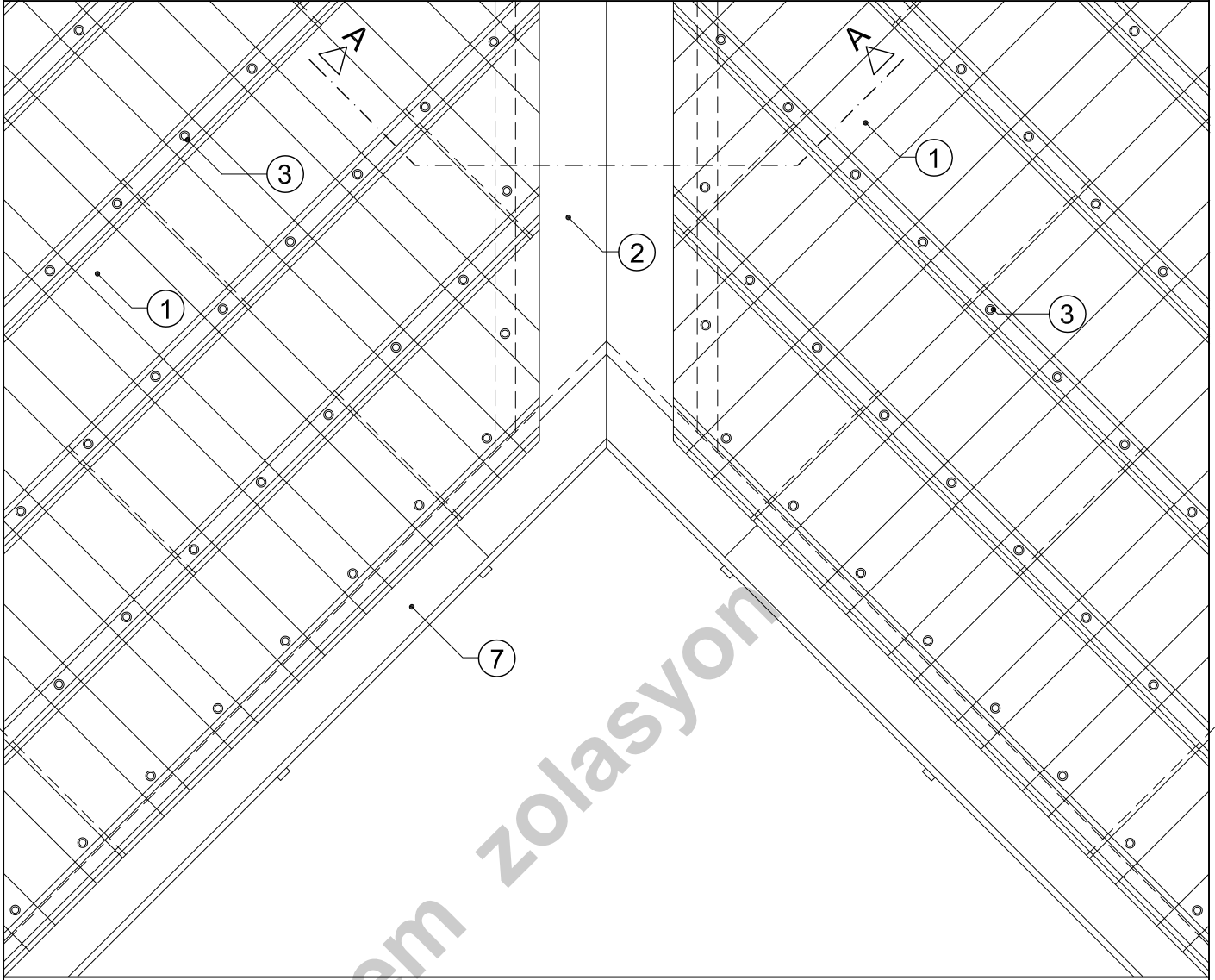
EĞİM % 15'TEN AZ OLMAMALIDIR



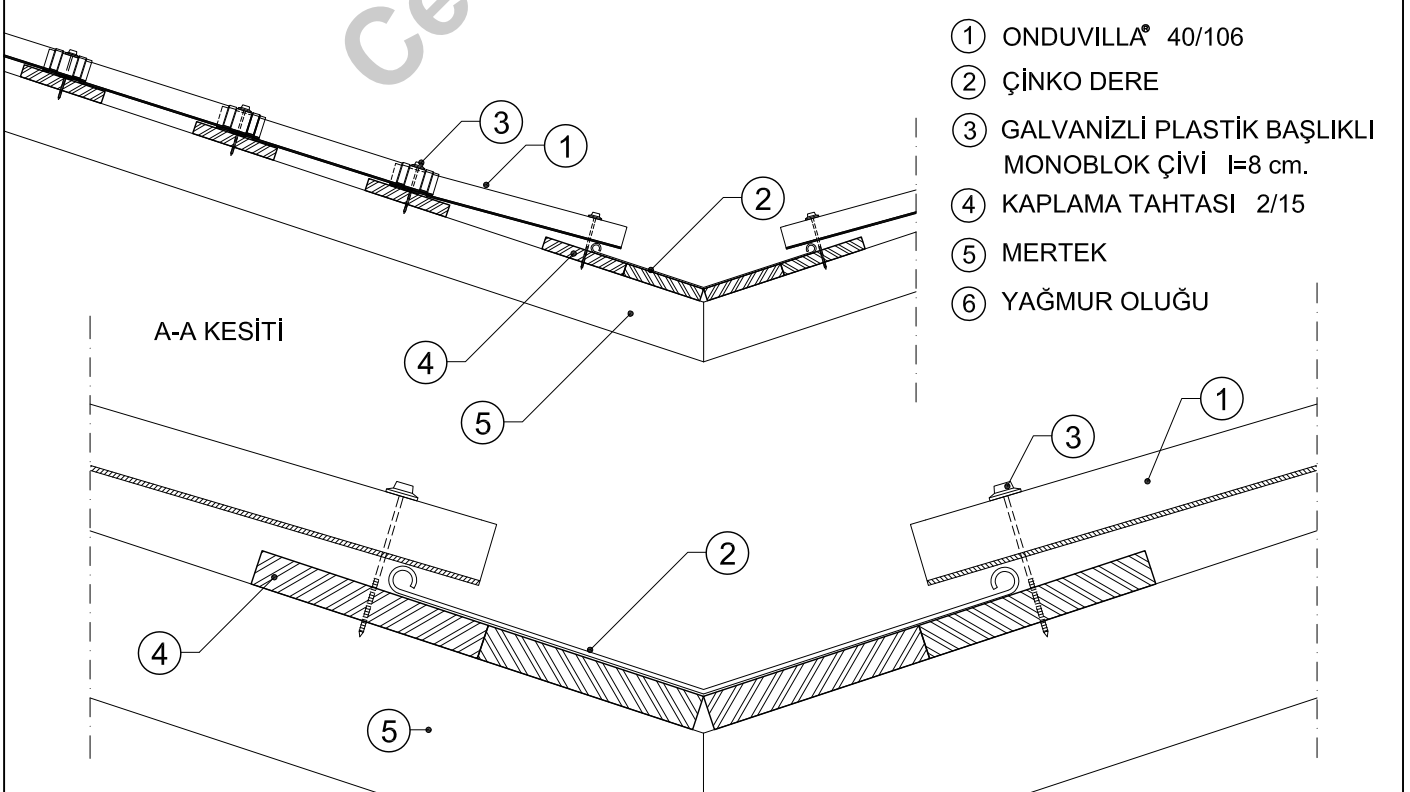
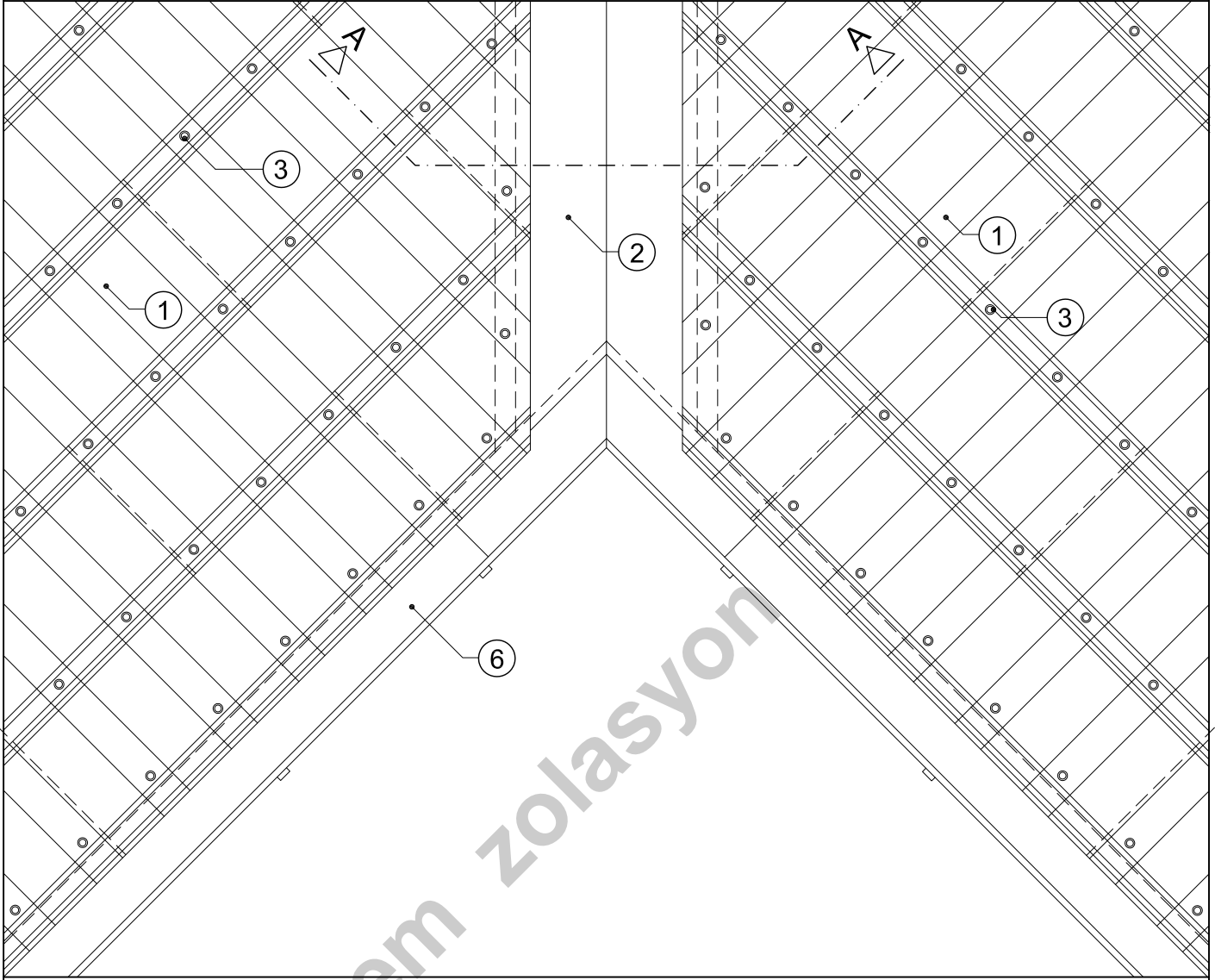
- ① ONDUVILLA® 40/106
- ② ONDULINE® HR MAHYA 48.5/200
- ③ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ l=8 cm.
- ④ ISOBAND
- ⑤ AHŞAP MERTEK 5/10
- ⑥ KAPLAMA TAHTASI 2/10
- ⑦ KAPLAMA TAHTASI 2/15
- ⑧ ISI YALITIMI
- ⑨ TAVAN KAPLAMASI 2/10



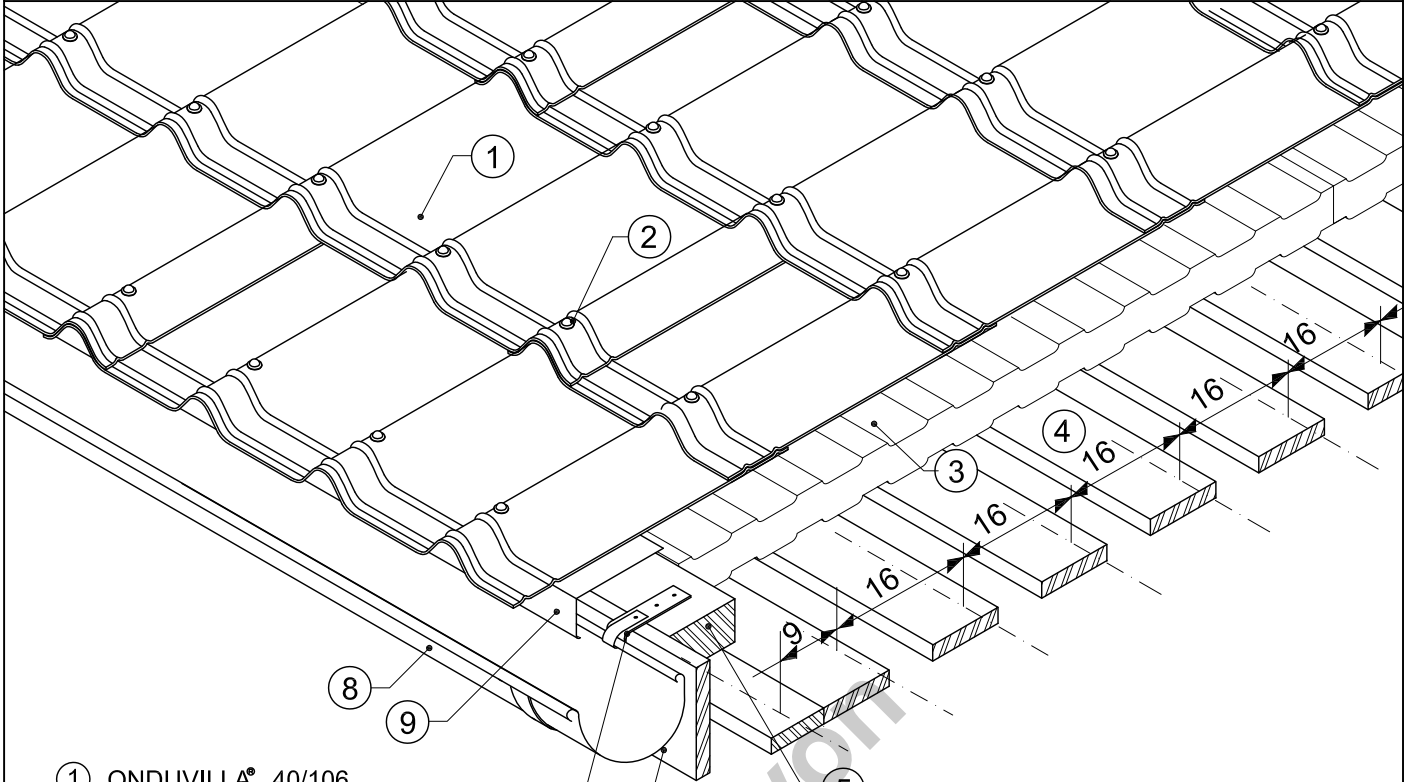
- ① ONDUVILLA® 40/106
- ② ONDULINE® HR MAHYA 48.5/200
- ③ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ l=8 cm.
- ④ ISOBAND
- ⑤ AHŞAP MERTEK 5/10
- ⑥ KAPLAMA TAHTASI 2/15
- ⑦ ISI YALITIMI
- ⑧ TAVAN KAPLAMASI 2/10



- ① ONDUVILLA® 40/106
- ② BITULINE® DERE
- ③ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ l=8 cm.
- ④ YÜKSELTME ÇİTASI 3/5
- ⑤ KAPLAMA TAHTASI 2/15
- ⑥ MERTEK
- ⑦ YAĞMUR OLUĞU

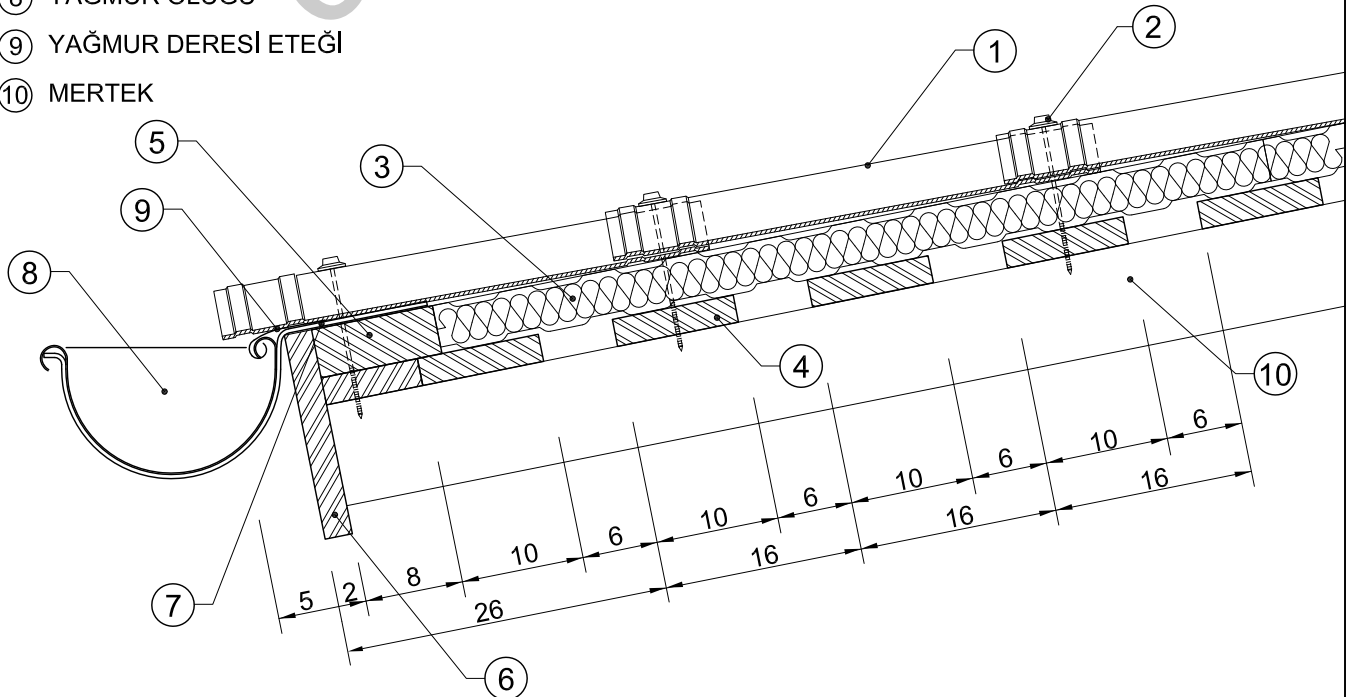


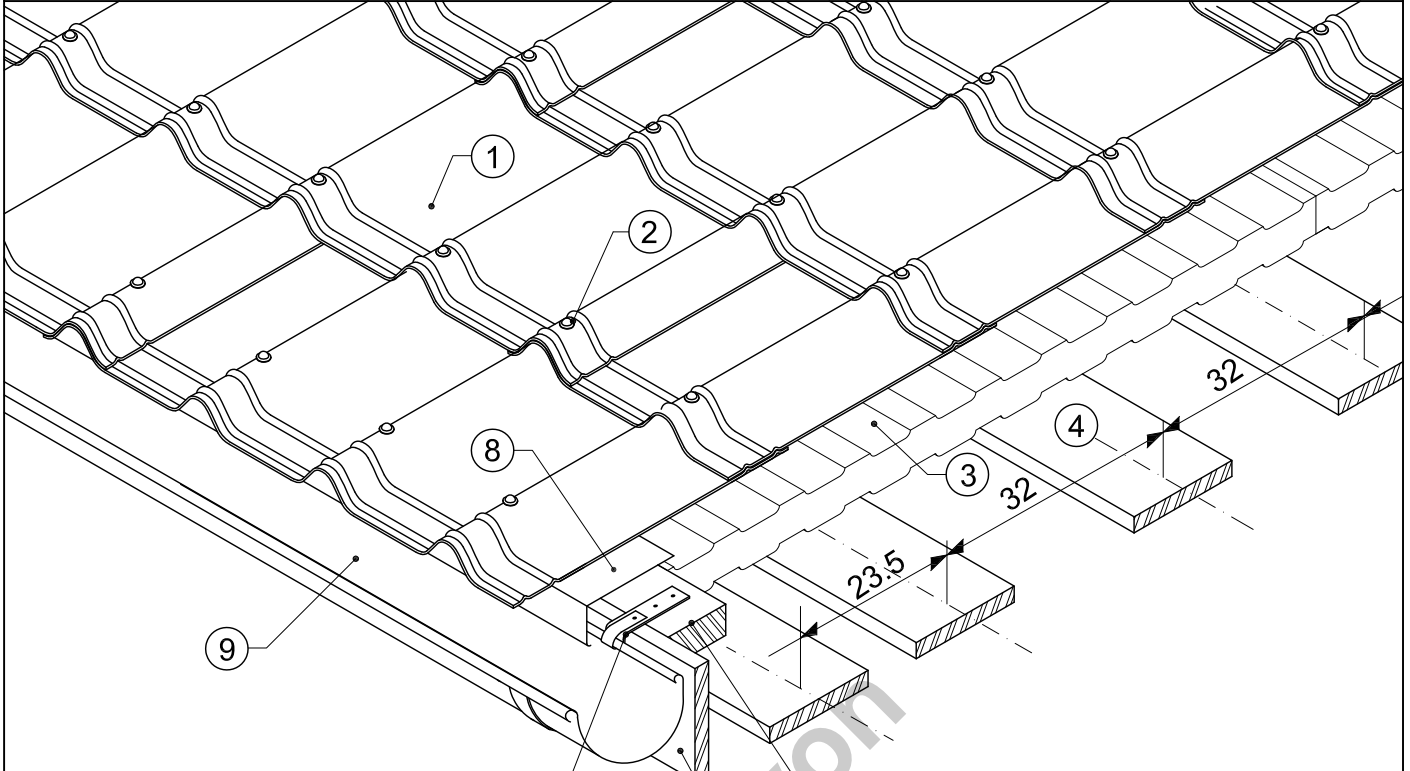
- ① ONDUVILLA® 40/106
- ② ÇİNKO DERE
- ③ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ İ=8 cm.
- ④ KAPLAMA TAHTASI 2/15
- ⑤ MERTEK
- ⑥ YAĞMUR OLUĞU



- ① ONDUVILLA® 40/106
- ② GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ
- ③ EPS VEYA XPS İŞİ YALITIM LEVHASI
- ④ KAPLAMA TAHTASI 2 / 10
- ⑤ ÇITA (EN 10 cm. OLACAK , ÇITA KALINLIĞI İŞİ YALITIM LEVHASI KALINLIĞI İLE EŞİT OLACAKTIR.)
- ⑥ ALIN TAHTASI 2/15
- ⑦ YAĞMUR OLUĞU KELEPÇESİ
- ⑧ YAĞMUR OLUĞU
- ⑨ YAĞMUR DERESİ ETEĞİ
- ⑩ MERTEK

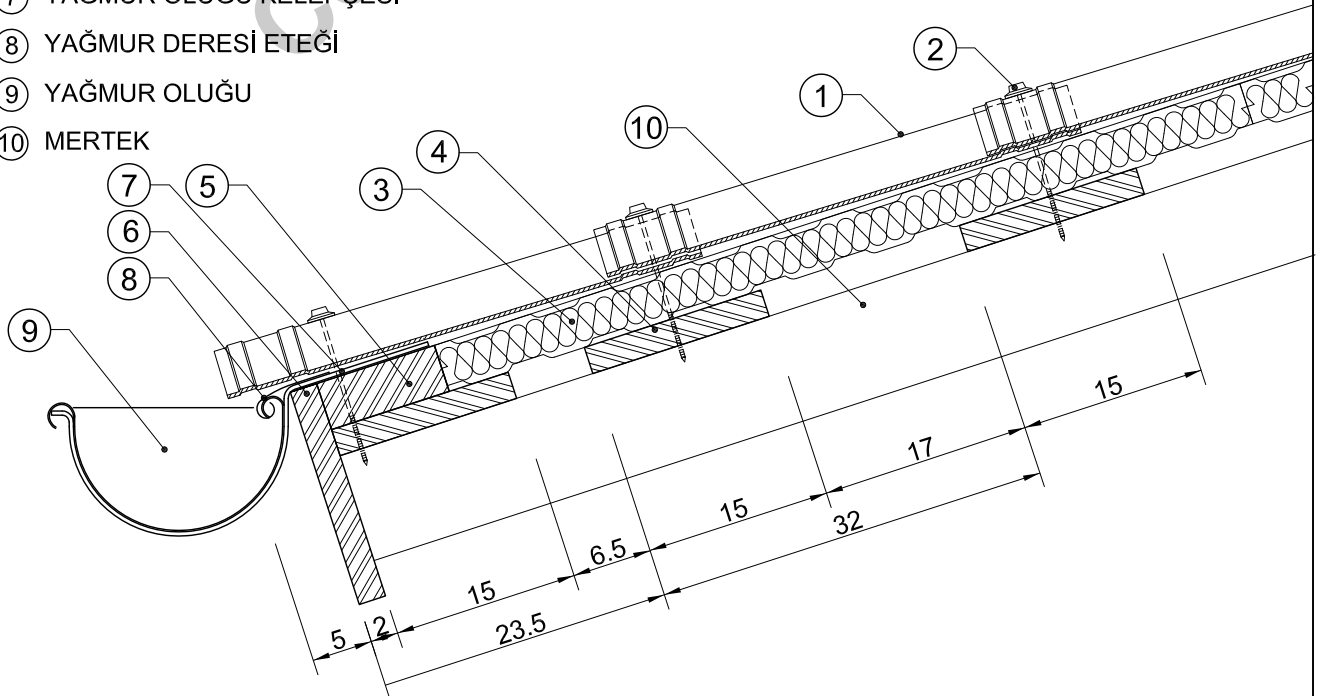
% 15 - % 30 EĞİM OLMASI DURUMUNDA UYGULANIR
% 15'TEN DAHA AZ EĞİMLERDE UYGULANAMAZ

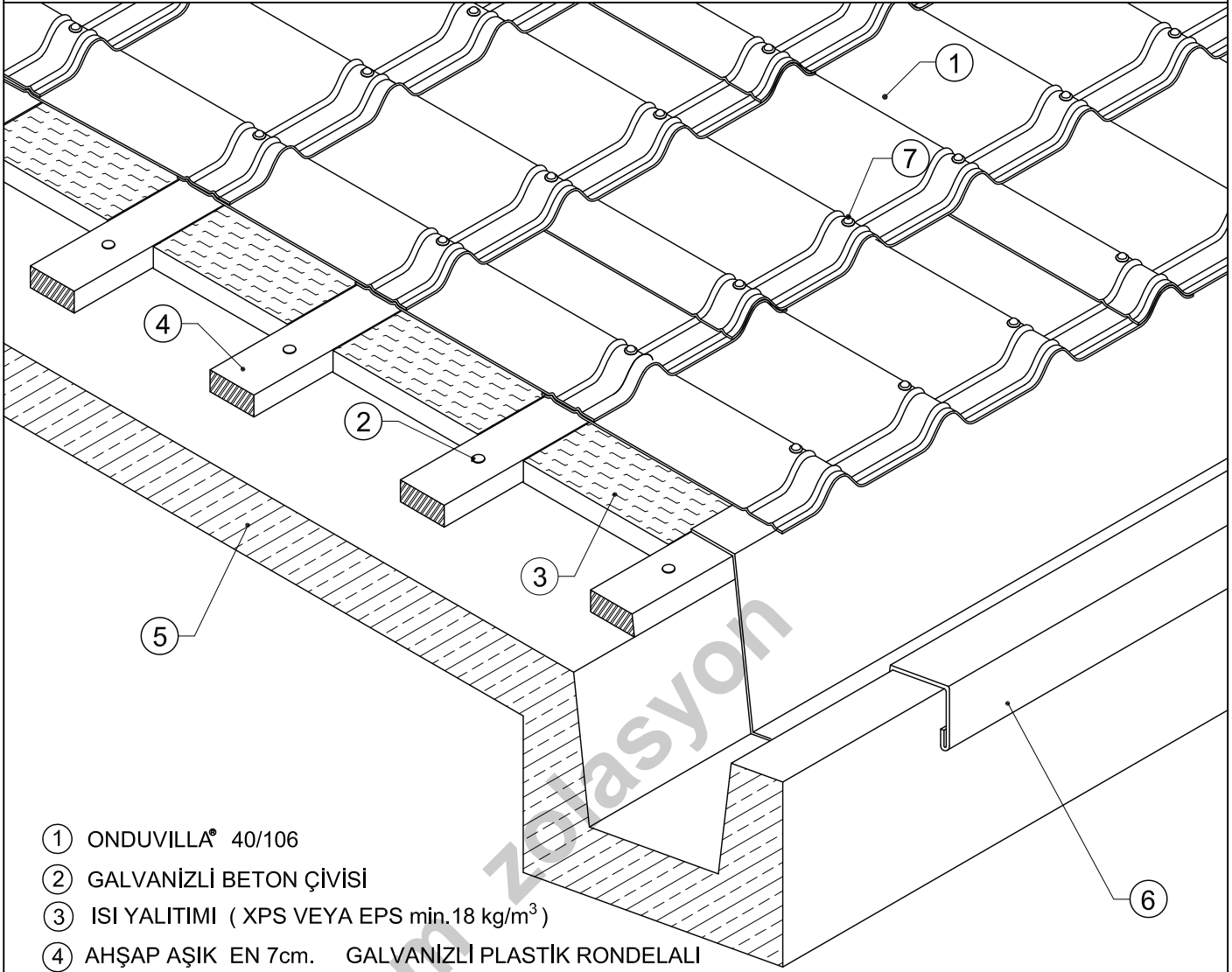




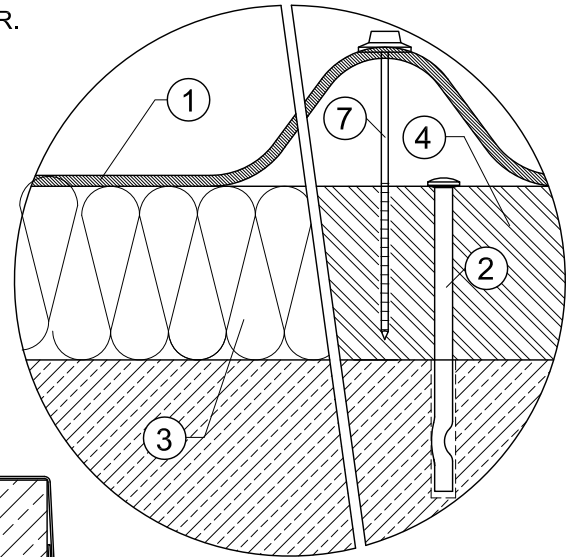
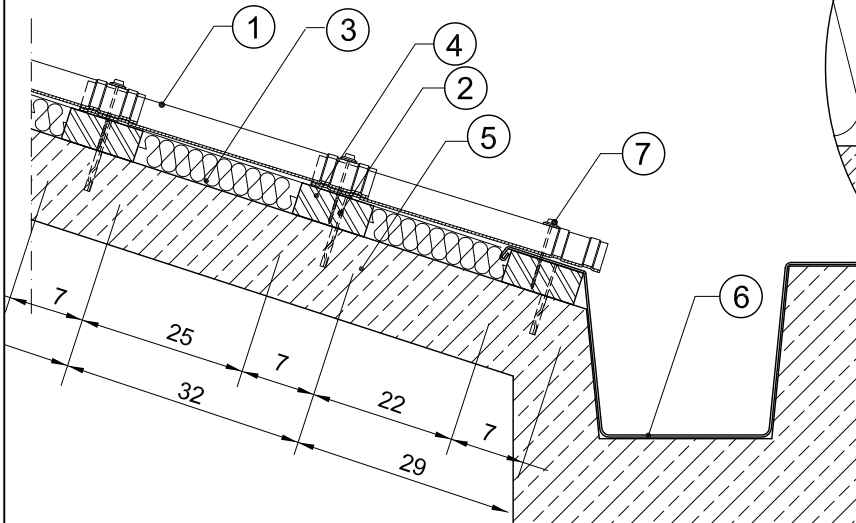
- ① ONDUVILLA® 40/106
- ② GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ
- ③ EPS VEYA XPS ISI YALITIM LEVHASI
- ④ KAPLAMA TAHTASI 2/15
- ⑤ ÇITA (EN 10 cm. OLACAK , ÇITA KALINLIĞI ISI YALITIM LEVHASI KALINLIĞI İLE EŞİT OLACAKTIR.)
- ⑥ ALIN TAHTASI 2/15
- ⑦ YAĞMUR OLUĞU KELEPÇESİ
- ⑧ YAĞMUR DERESİ ETEĞİ
- ⑨ YAĞMUR OLUĞU
- ⑩ MERTEK

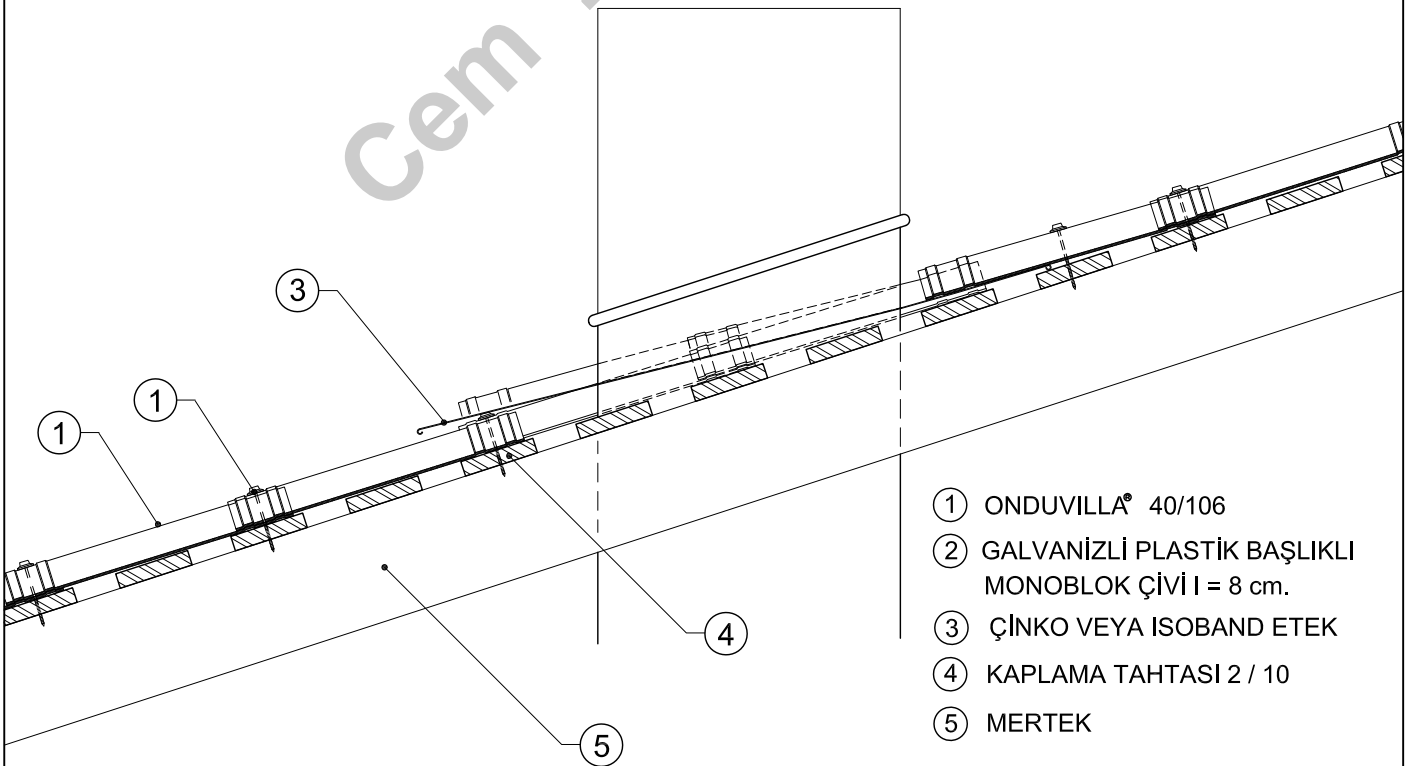
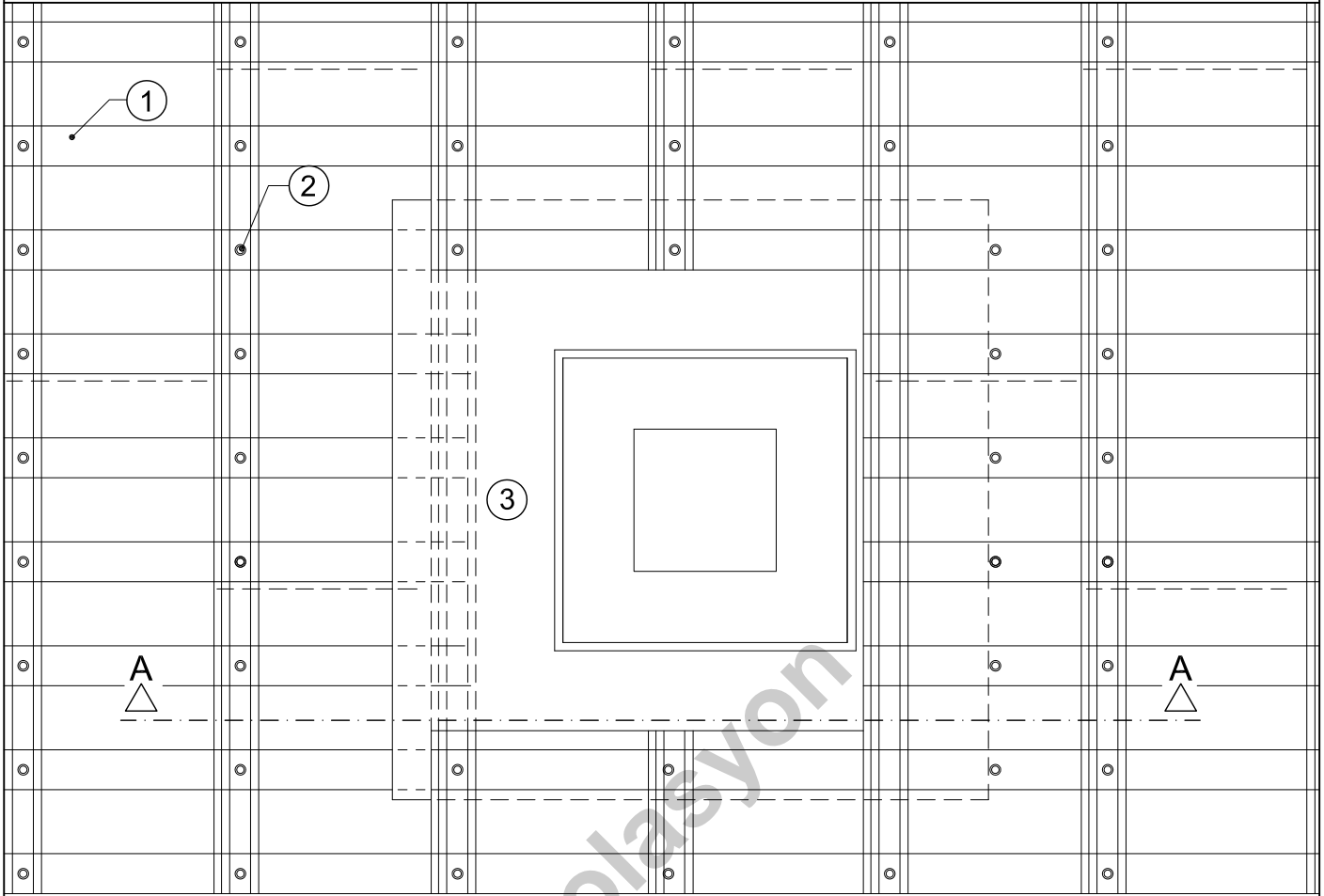
EĞİMİN % 30 'DAN FAZLA OLMASI DURUMUNDA UYGULANIR





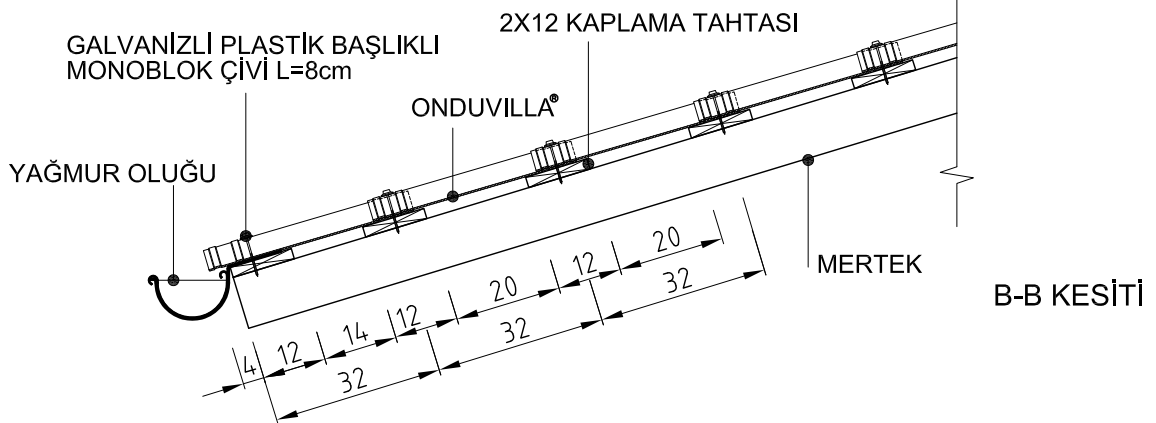
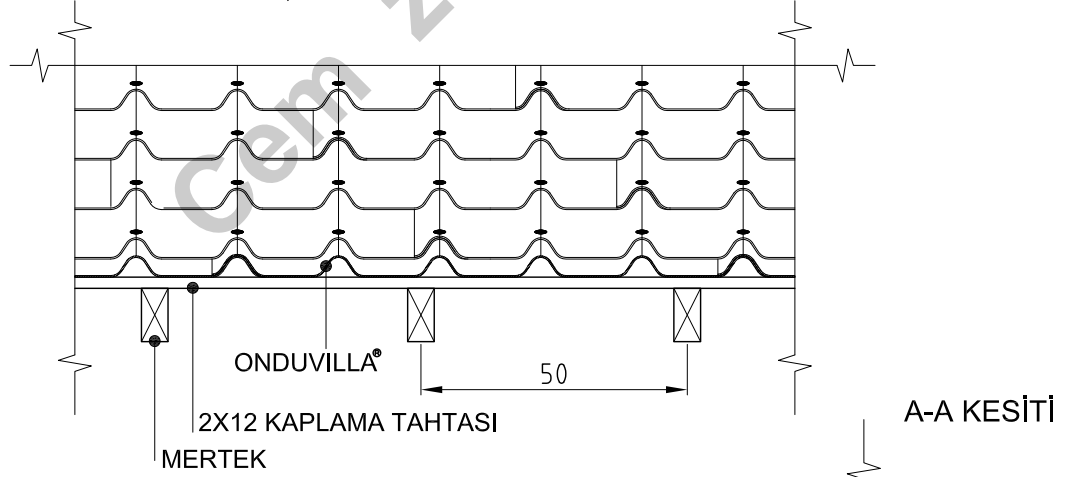
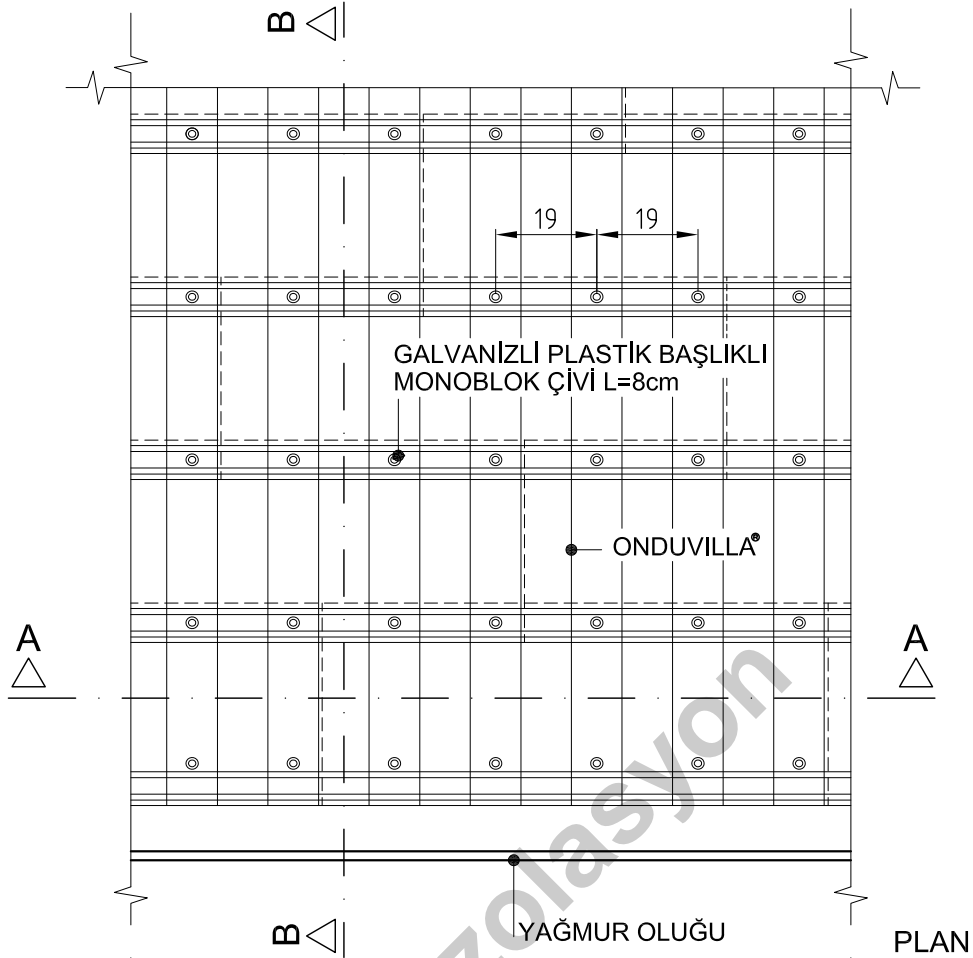
- ① ONDUVILLA® 40/106
- ② GALVANİZLİ BETON ÇİVİSİ
- ③ ISI YALITIMI (XPS VEYA EPS min.18 kg/m³)
- ④ AHŞAP AŞIK EN 7cm. GALVANİZLİ PLASTİK RONDALALI
BETON ÇİVİSİ İLE TESBİT EDİLECEK, ÇİVİ ARALIKLARI EN ÇOK 1 m. OLACAKTIR.
ÇİTA KALINLIĞI ISI YALITIMI KALINLIĞI İLE EŞİT OLACAKTIR.
- ⑤ BETONARME ÇATI
- ⑥ ÇİNKO DERE
- ⑦ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ

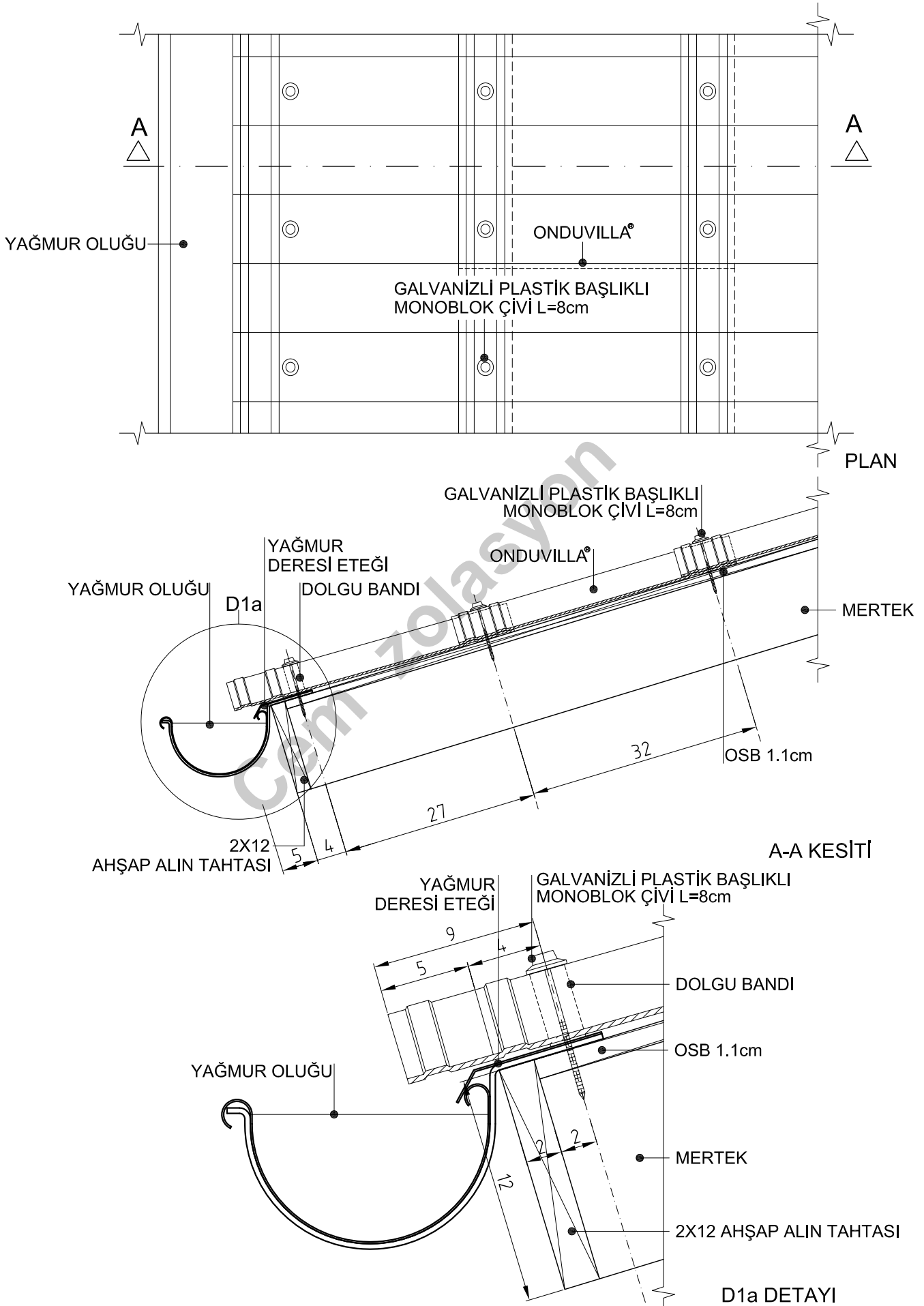


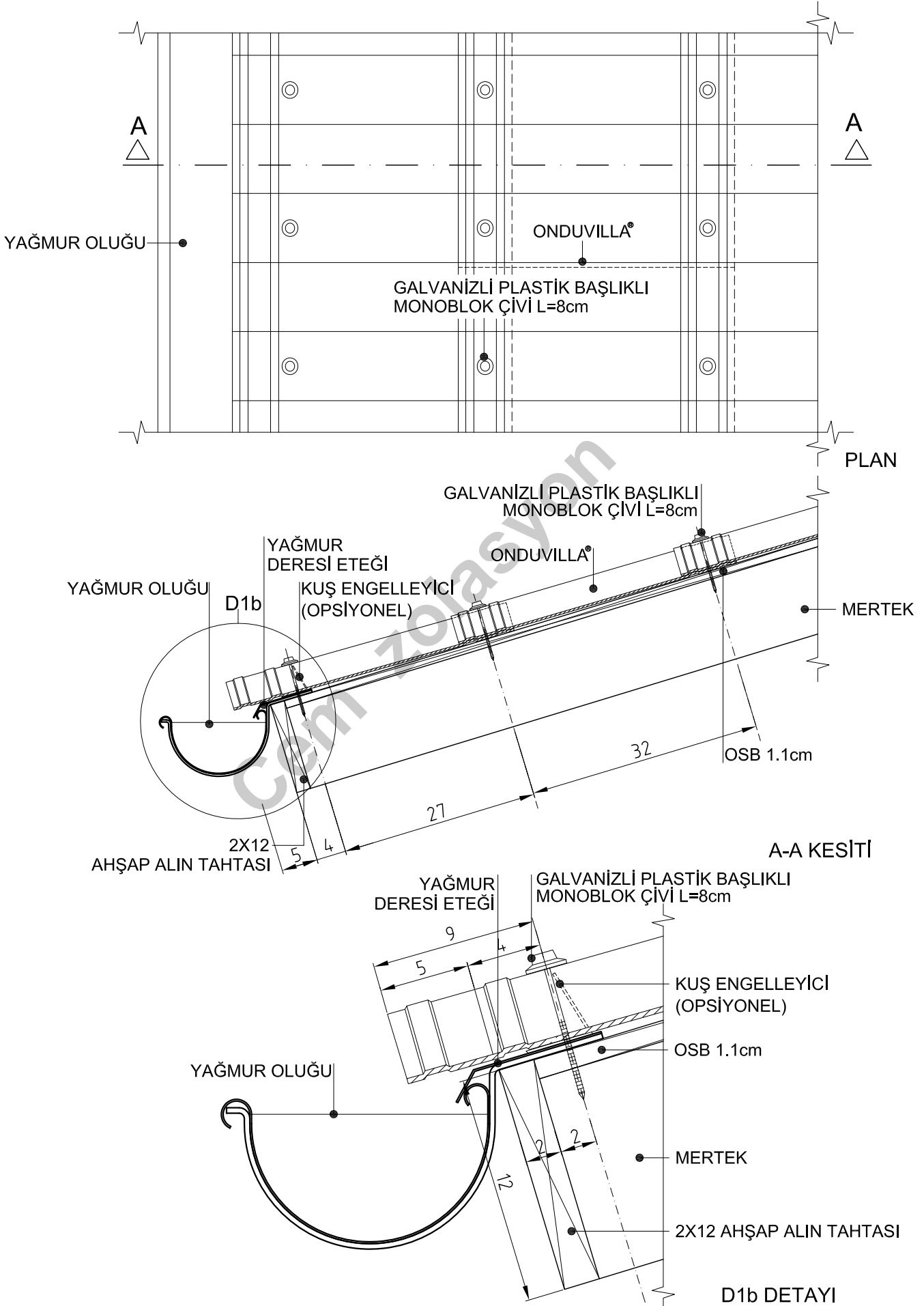


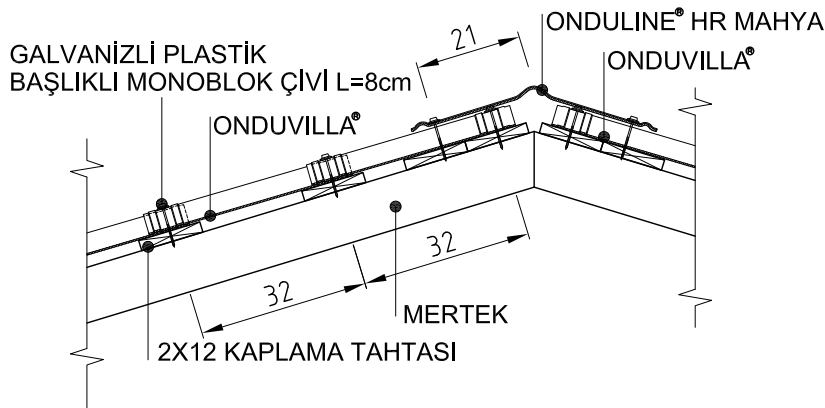
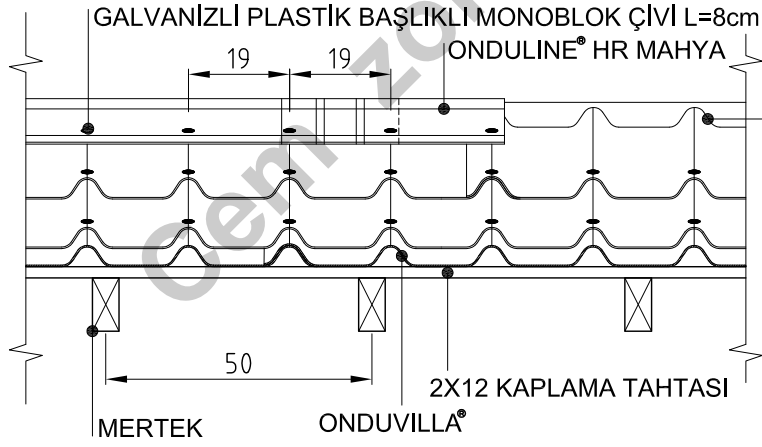
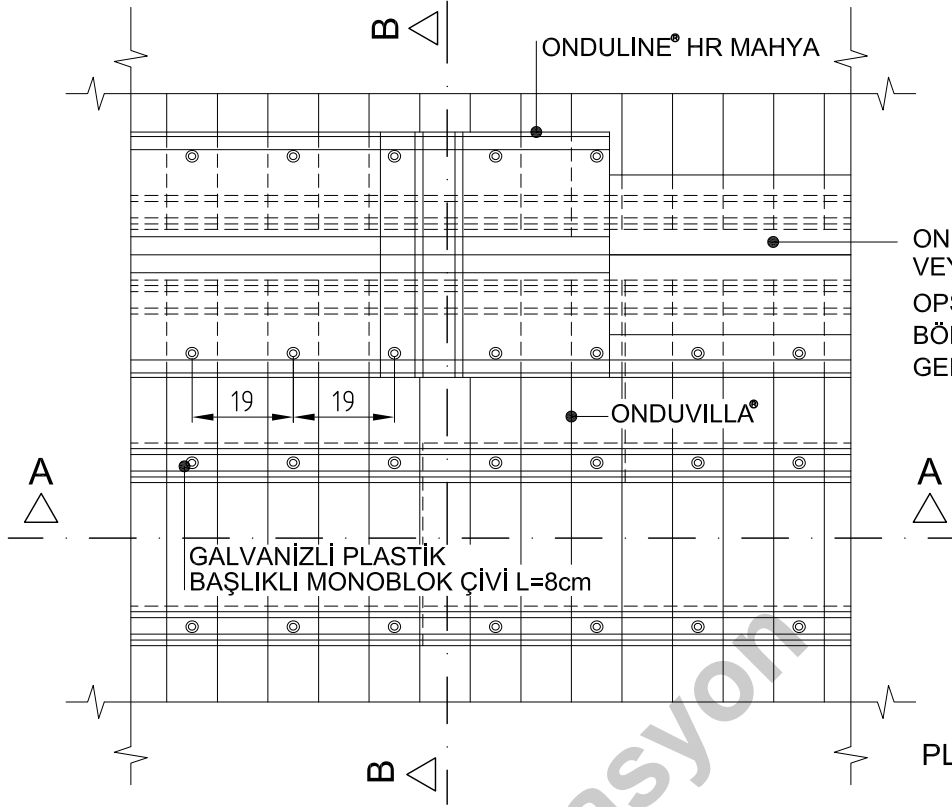
- ① ONDUVILLA® 40/106
- ② GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ İ = 8 cm.
- ③ ÇİNKO VEYA ISOBAND ETEK
- ④ KAPLAMA TAHTASI 2 / 10
- ⑤ MERTEK

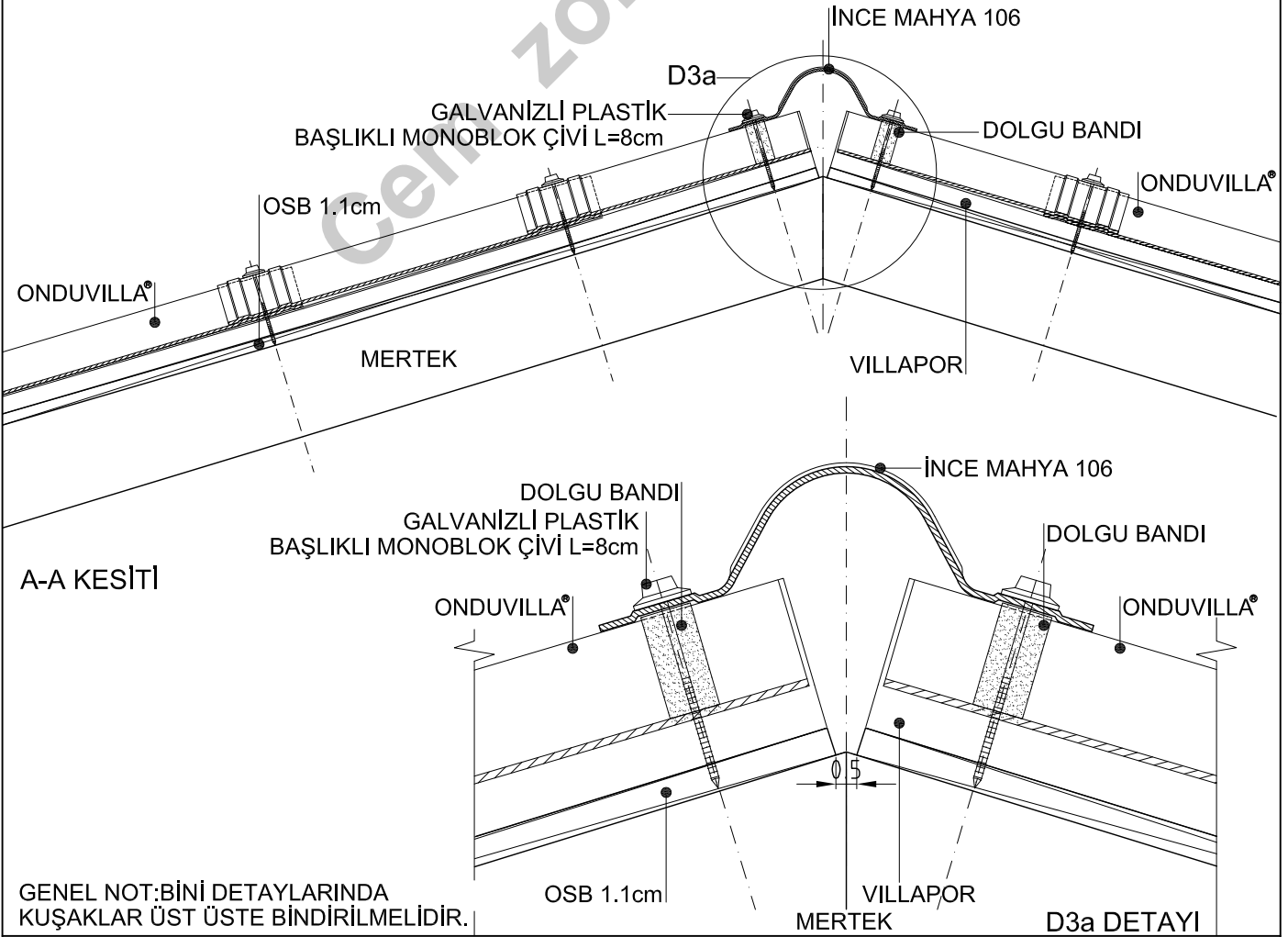
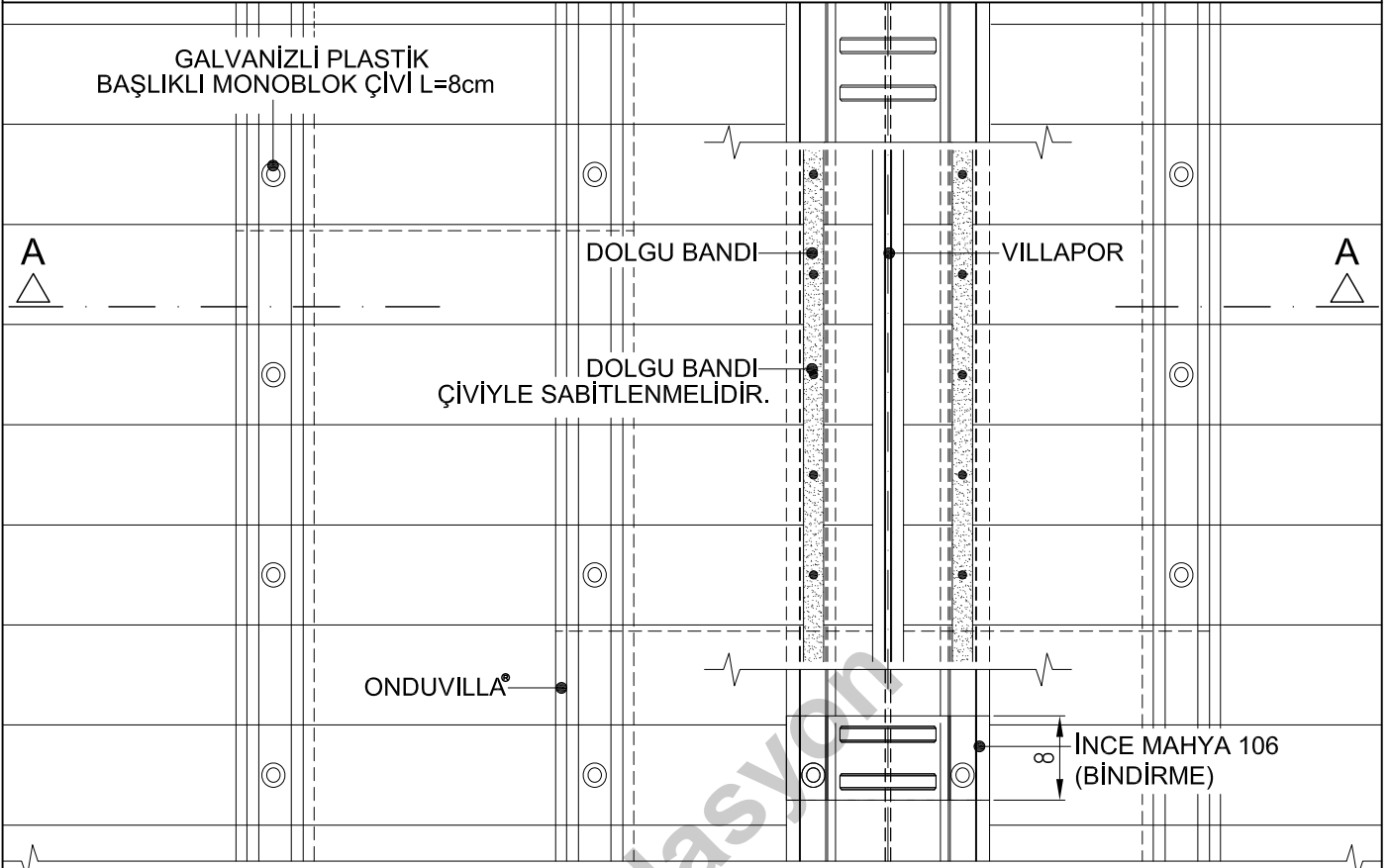
A-A KESİTİ



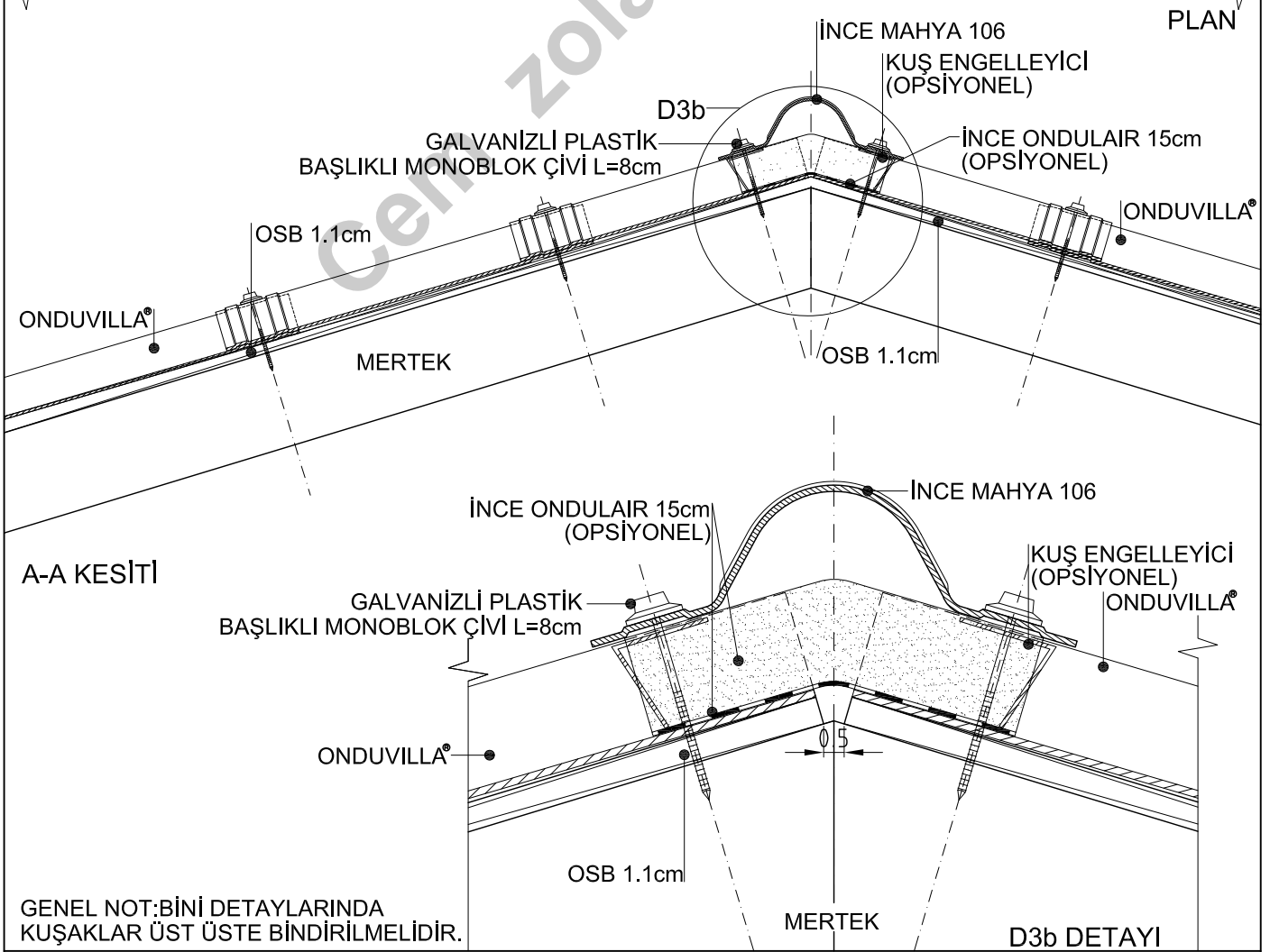
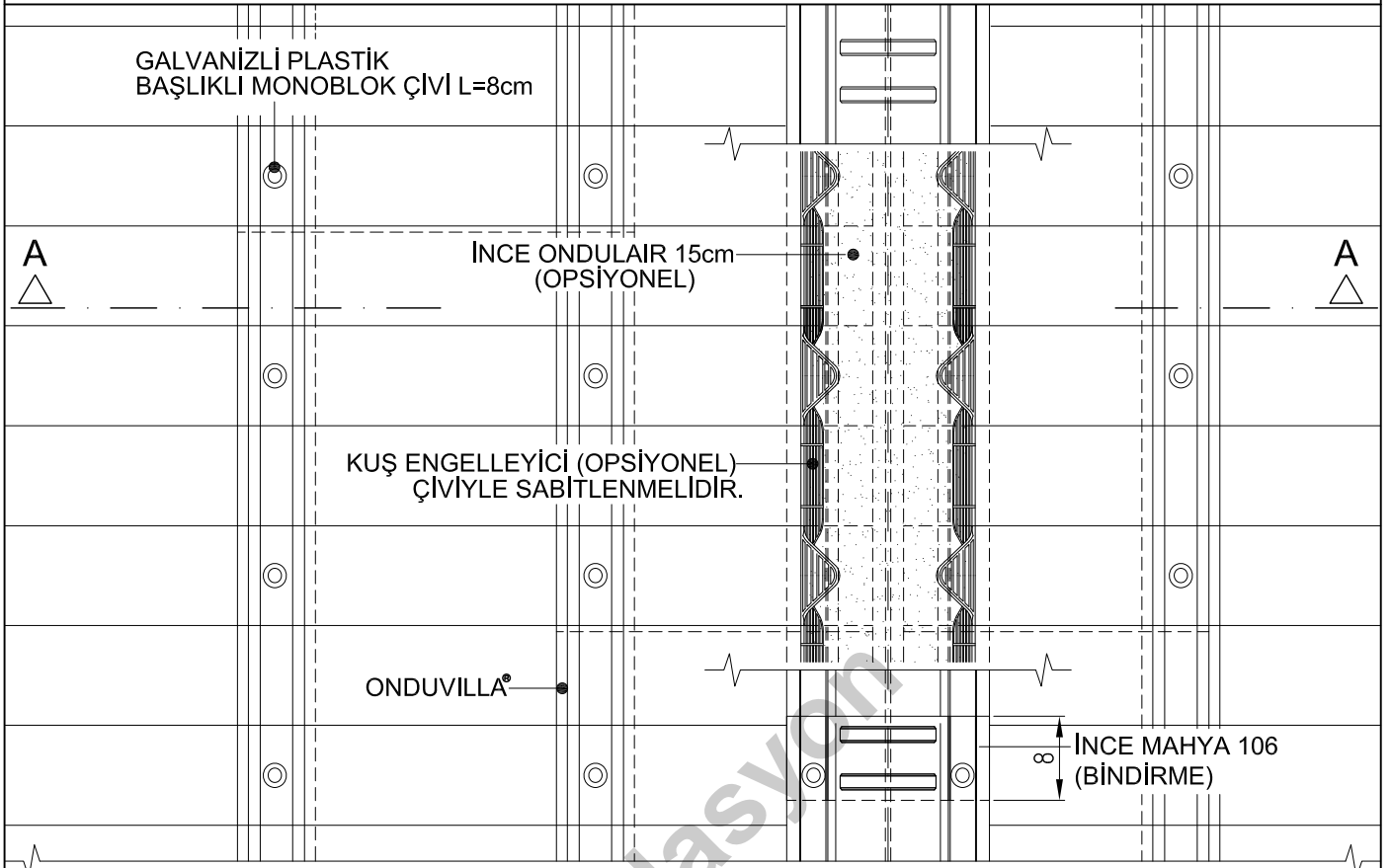


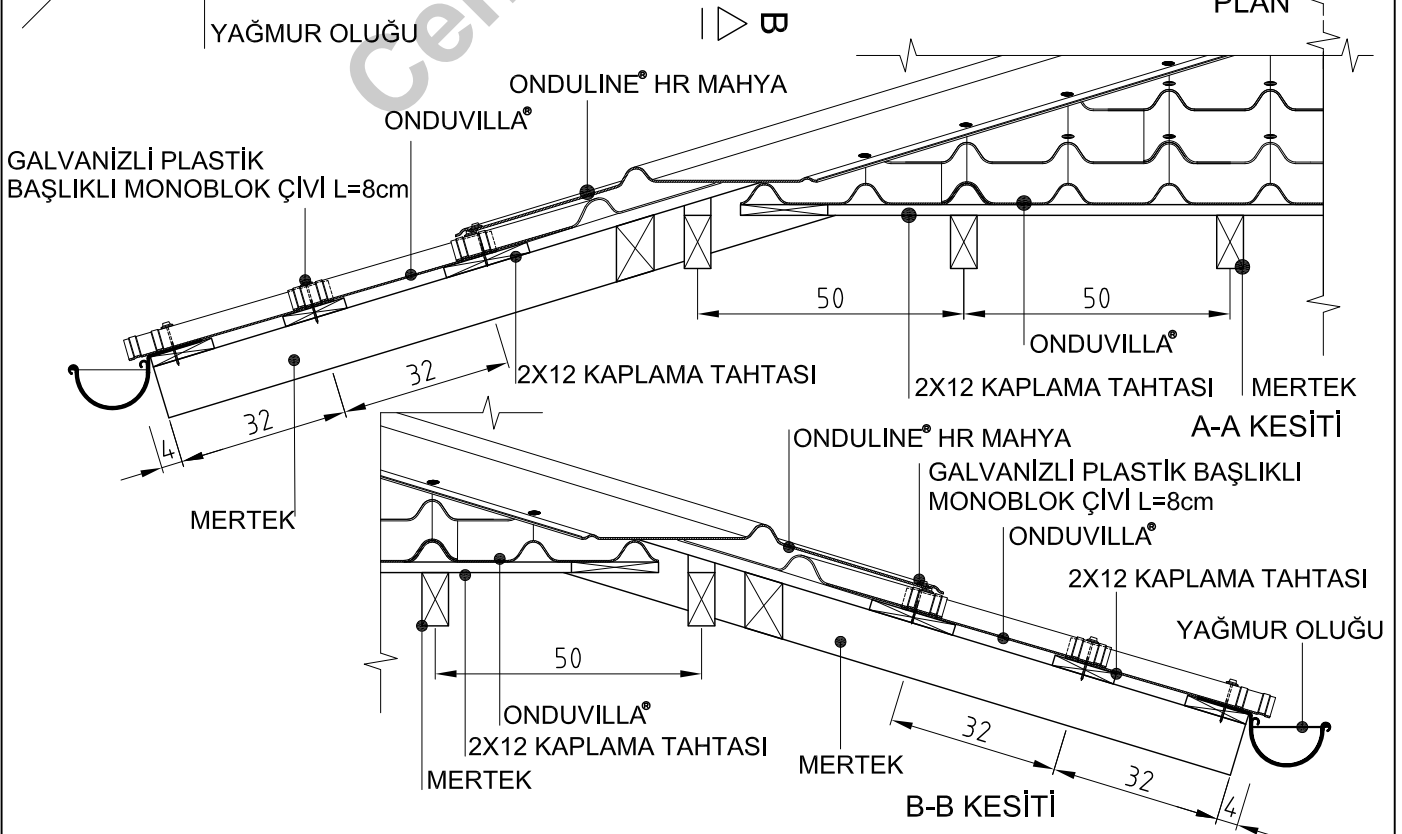
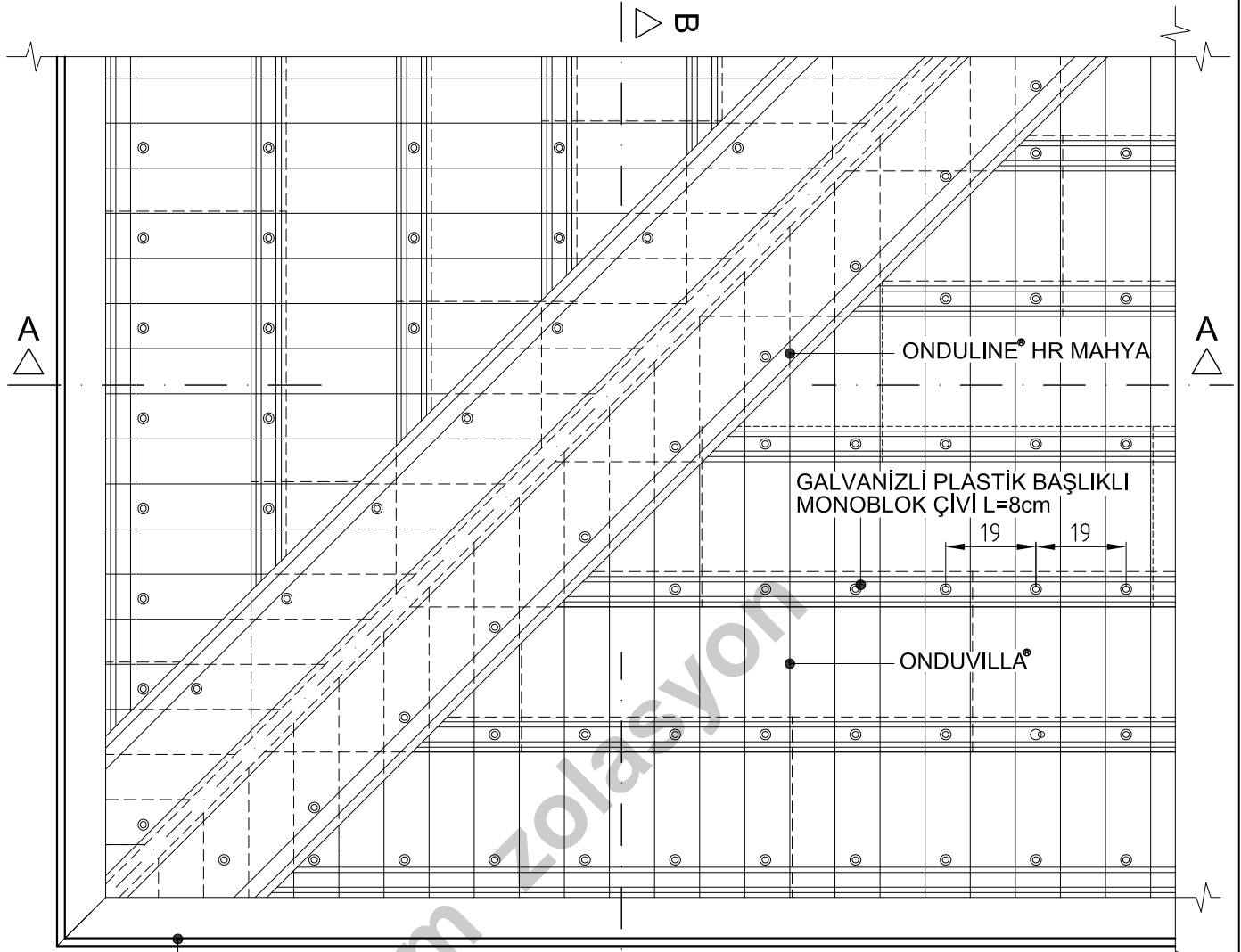


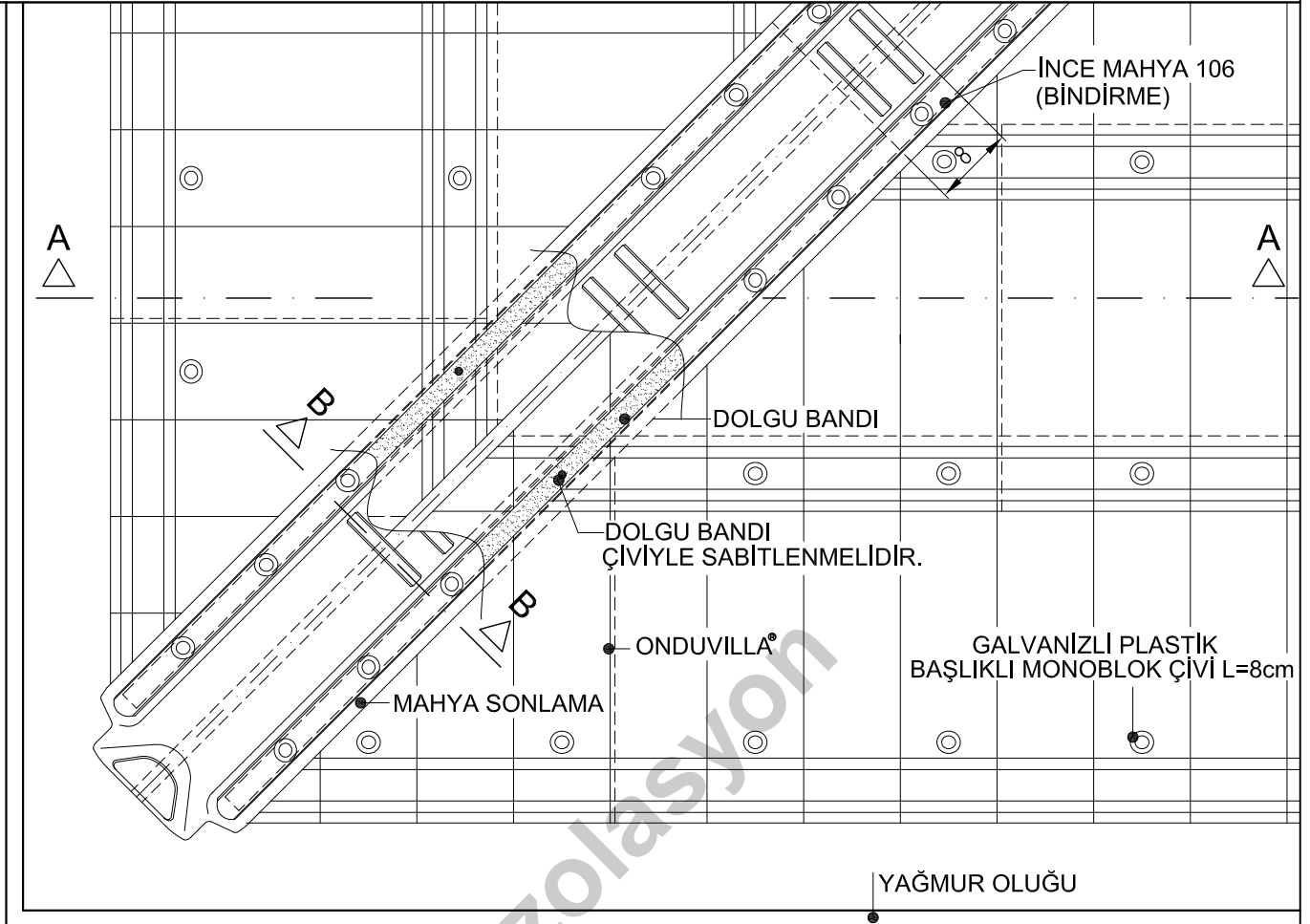




GENEL NOT: BİNİ DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.







PLAN

GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ L=8cm

İNCE MAHYA 106
MAHYA SONLAMA

YAĞMUR
DERESİ ETEĞİ
DOLGU BANDI

D1a

YAĞMUR
OLUĞU

2X12
AHŞAP
ALIN TAHTASI

5

4

9

27

27

OSB 1.1cm

MERTEK

DOLGU BANDI

ONDUVILLA®

MERTEK

A-A KESİTİ

GALVANİZLİ PLASTİK
BAŞLIKLİ MONOBLOK ÇİVİ L=8cm

DOLGU BANDI

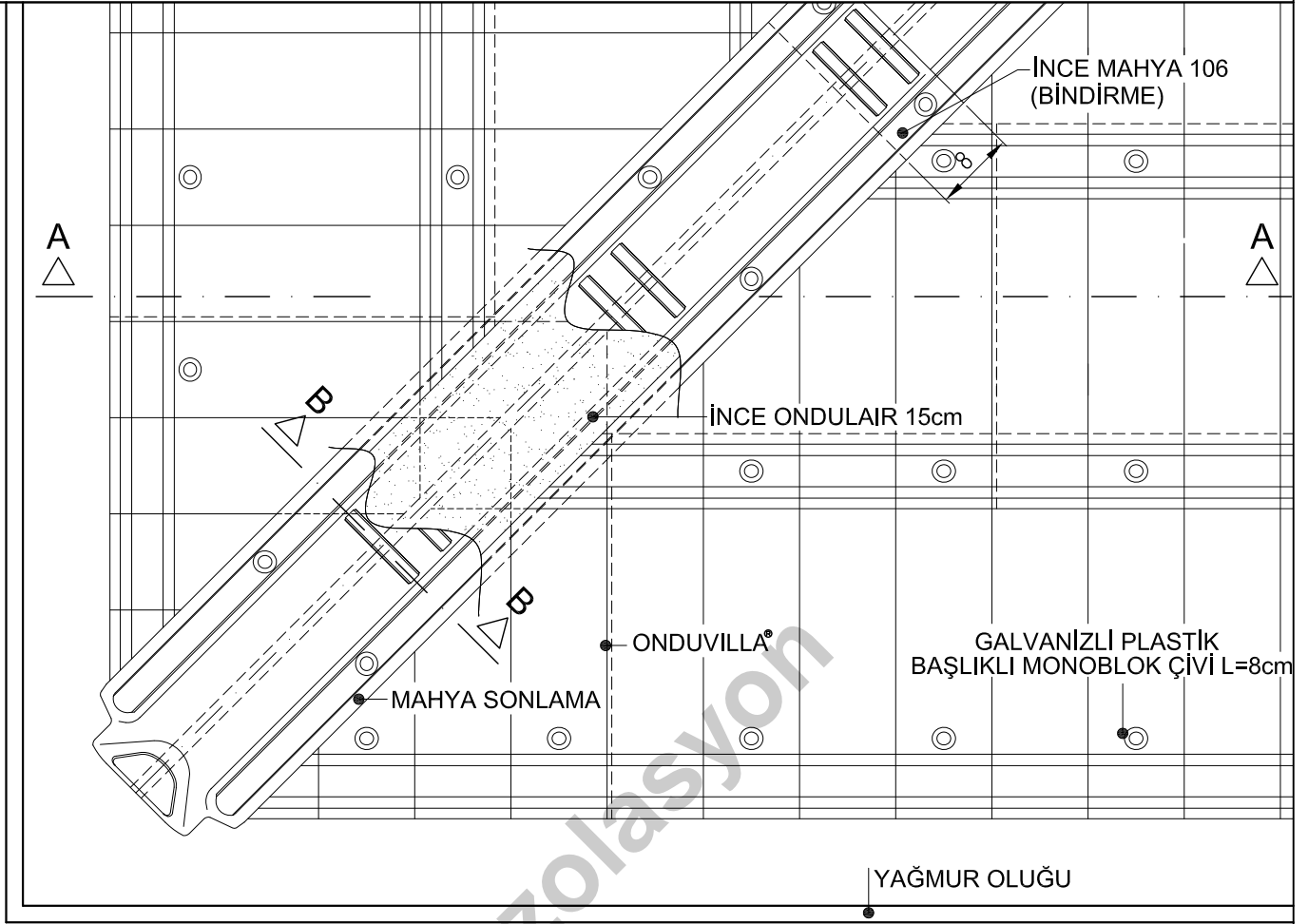
MAHYA SONLAMA

ONDUVILLA®

OSB 1.1cm

B-B KESİTİ

NOT: D1a İÇİN M609a PAFTASINA BAKINIZ.
GENEL NOT: BİNİ DETAYLARINDA
KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.



PLAN

GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ L=8cm

İNCE MAHYA 106

YAĞMUR DERESİ ETEĞİ

KUŞ ENGELLEYİCİ (OPSİYONEL)

D1b

YAĞMUR OLUĞU

2X12 AHŞAP ALIN TAHTASI

5

4

9

27

27

OSB 1.1cm

İNCE ONDULAIR 15cm

MERTEK

MERTEK

ONDUVILLA®

A-A KESİTİ

GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ L=8cm

İNCE ONDULAIR 15cm

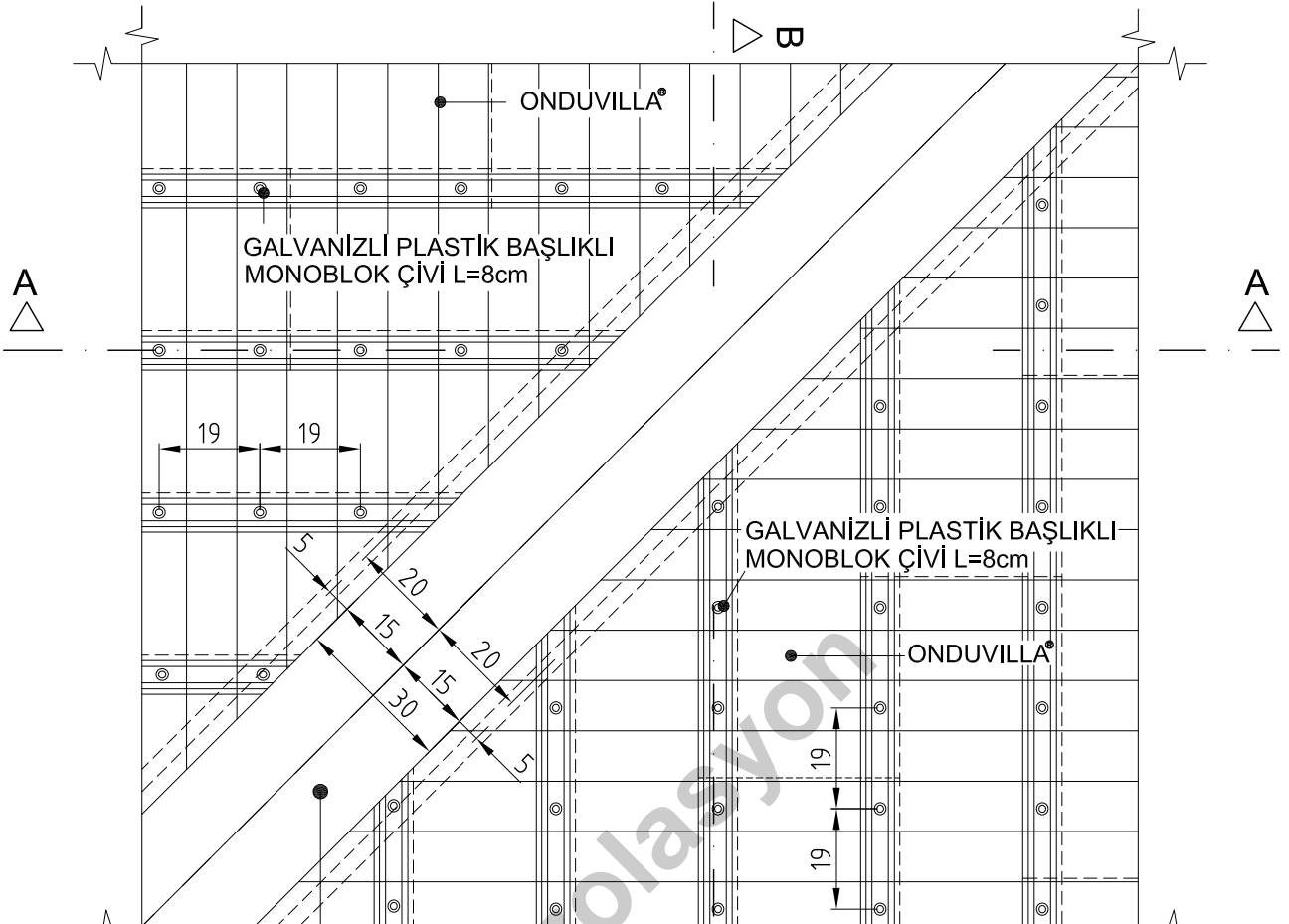
MAHYA SONLAMA

ONDUVILLA®

OSB 1.1cm

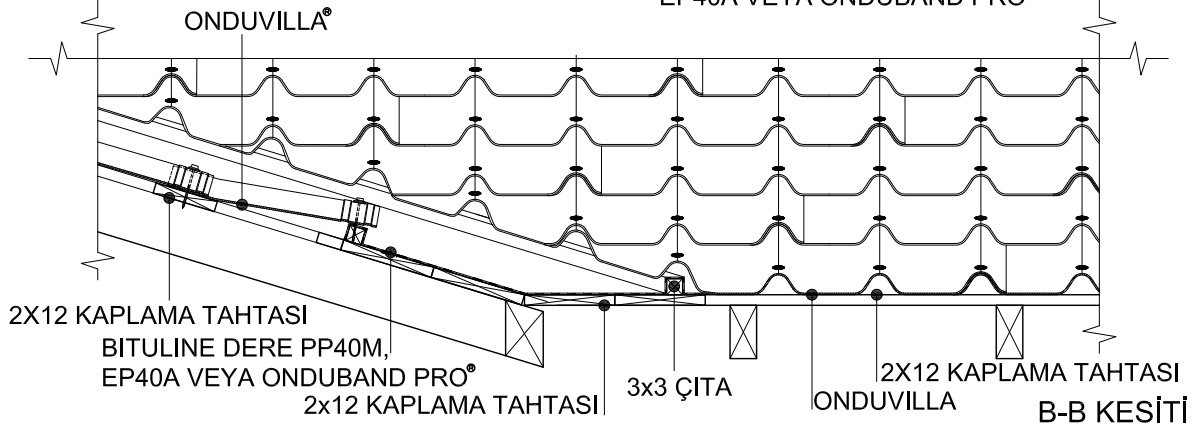
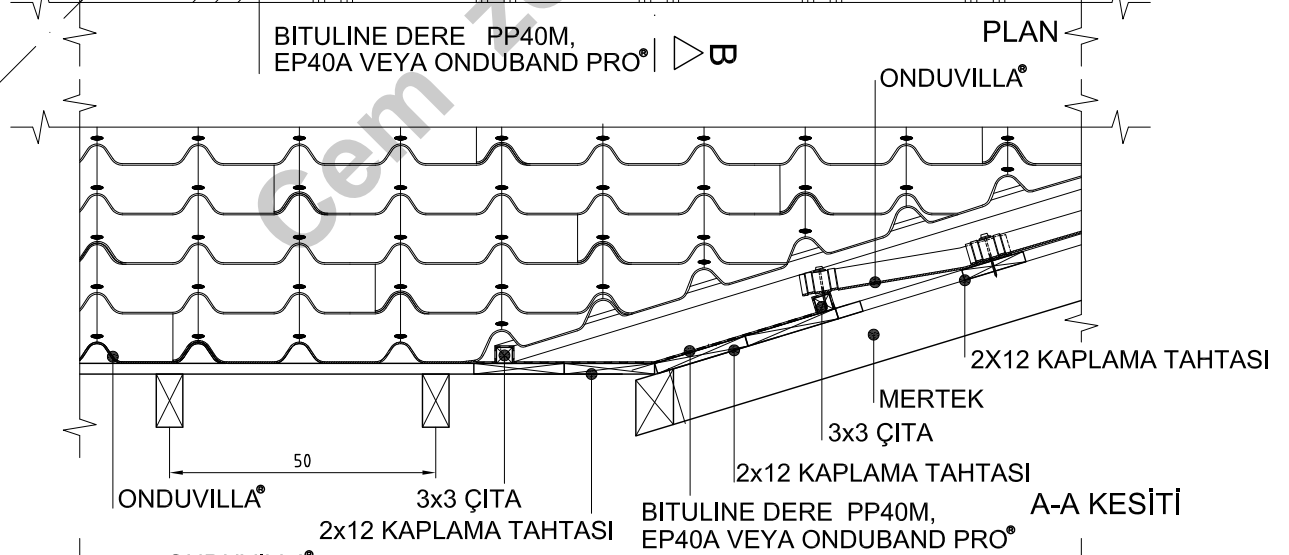
B-B KESİTİ

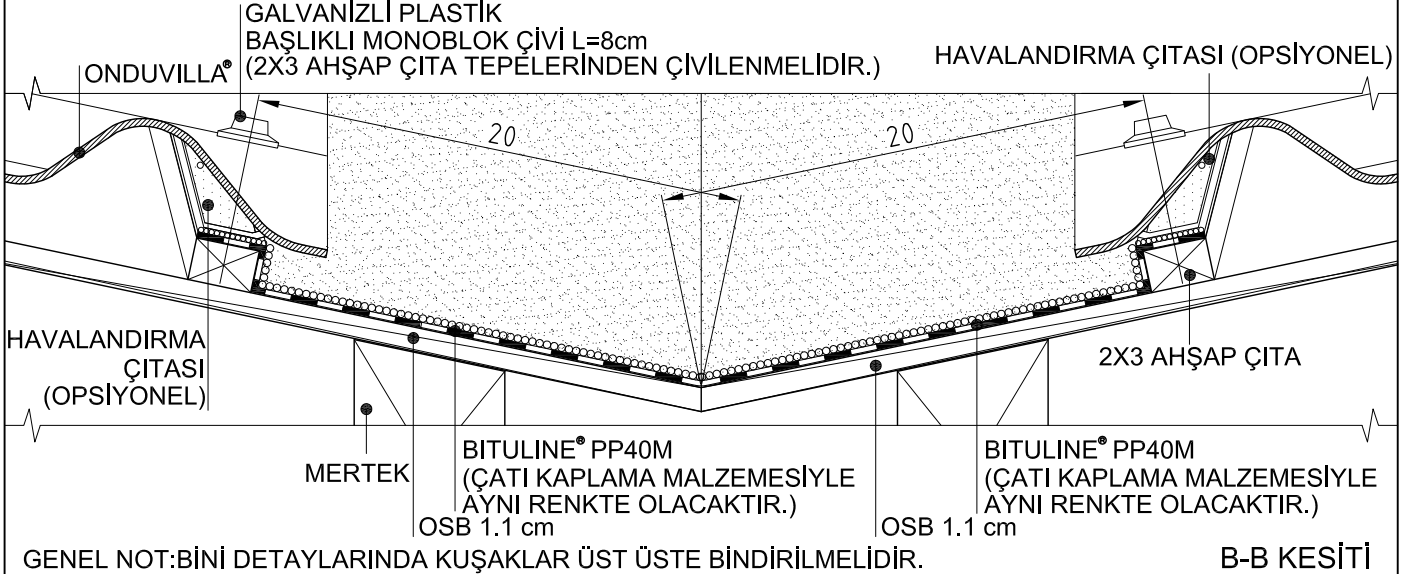
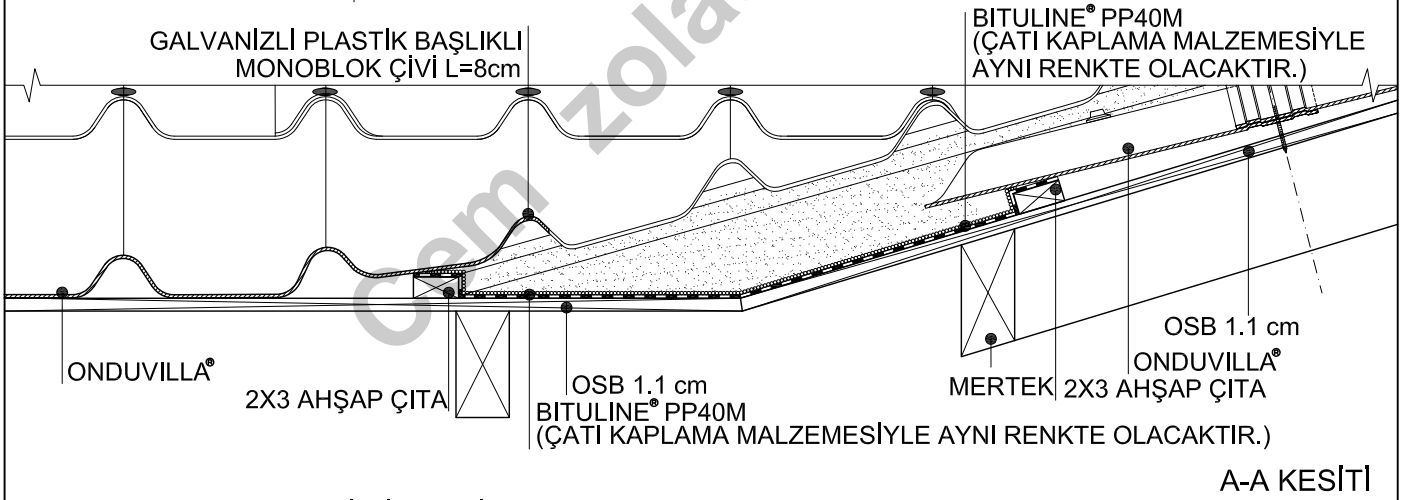
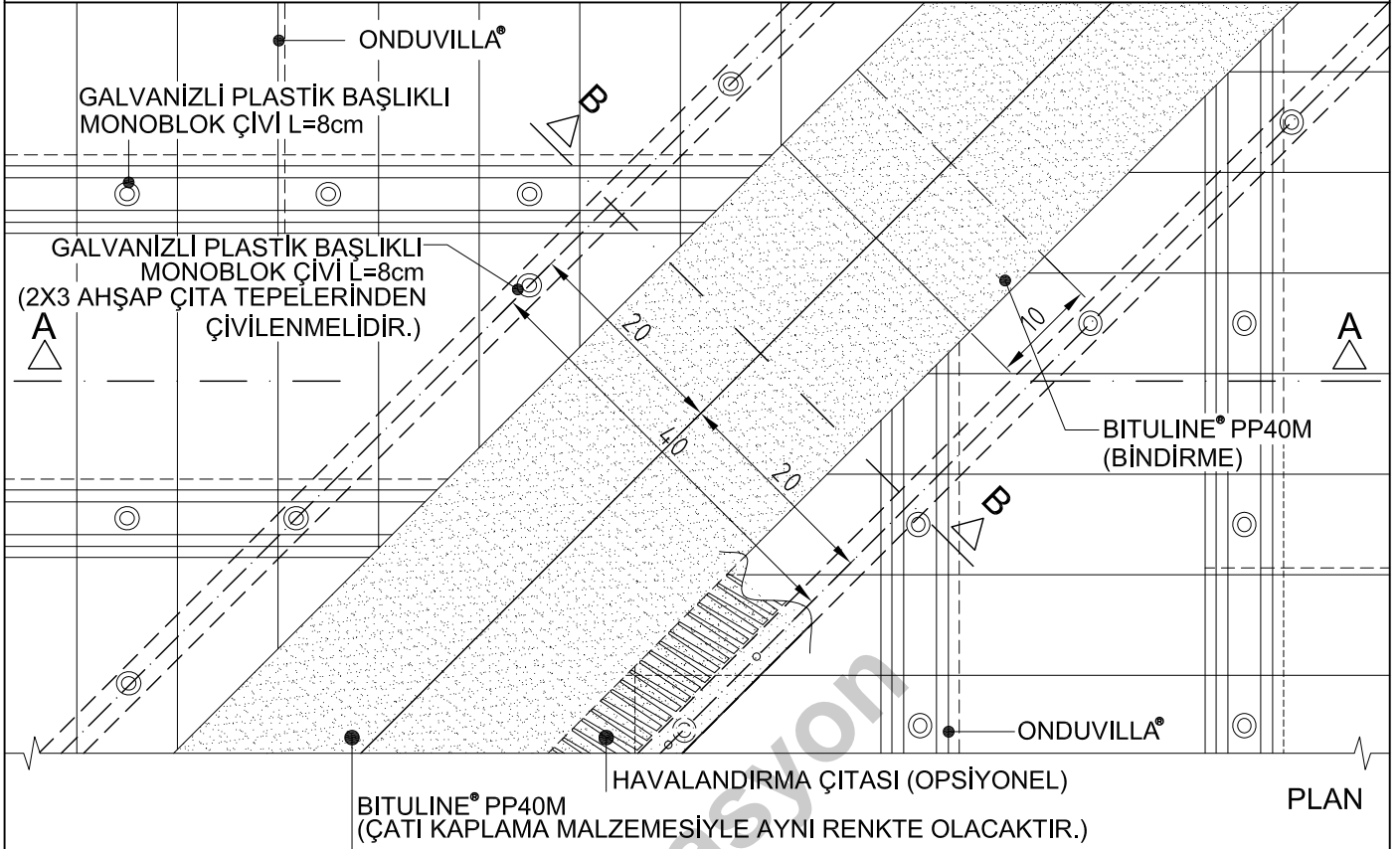
NOT: D1b İÇİN M609b PAFTASINA BAKINIZ.
GENEL NOT: BİNİ DETAYLARINDA
KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.



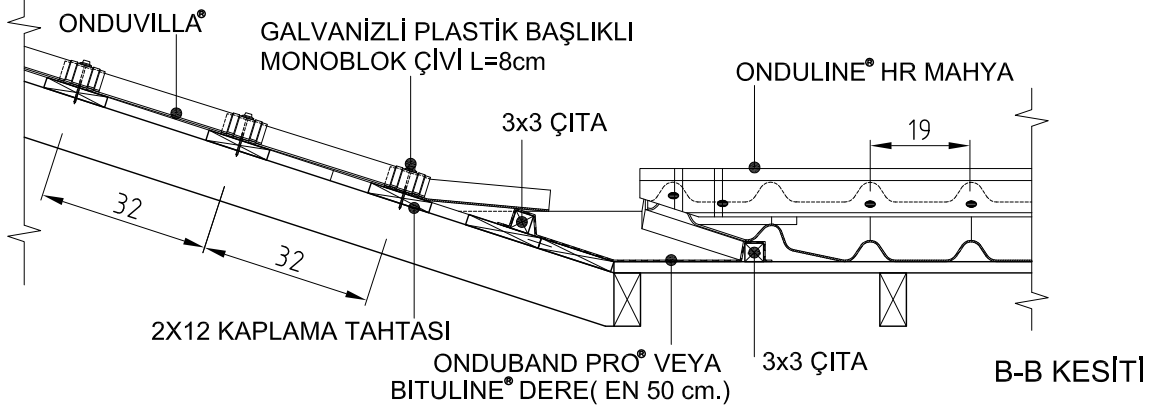
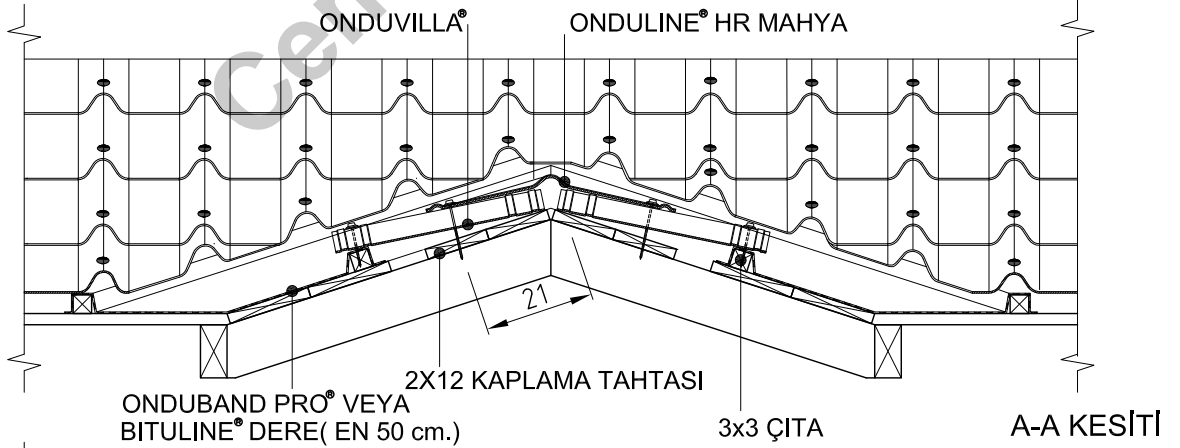
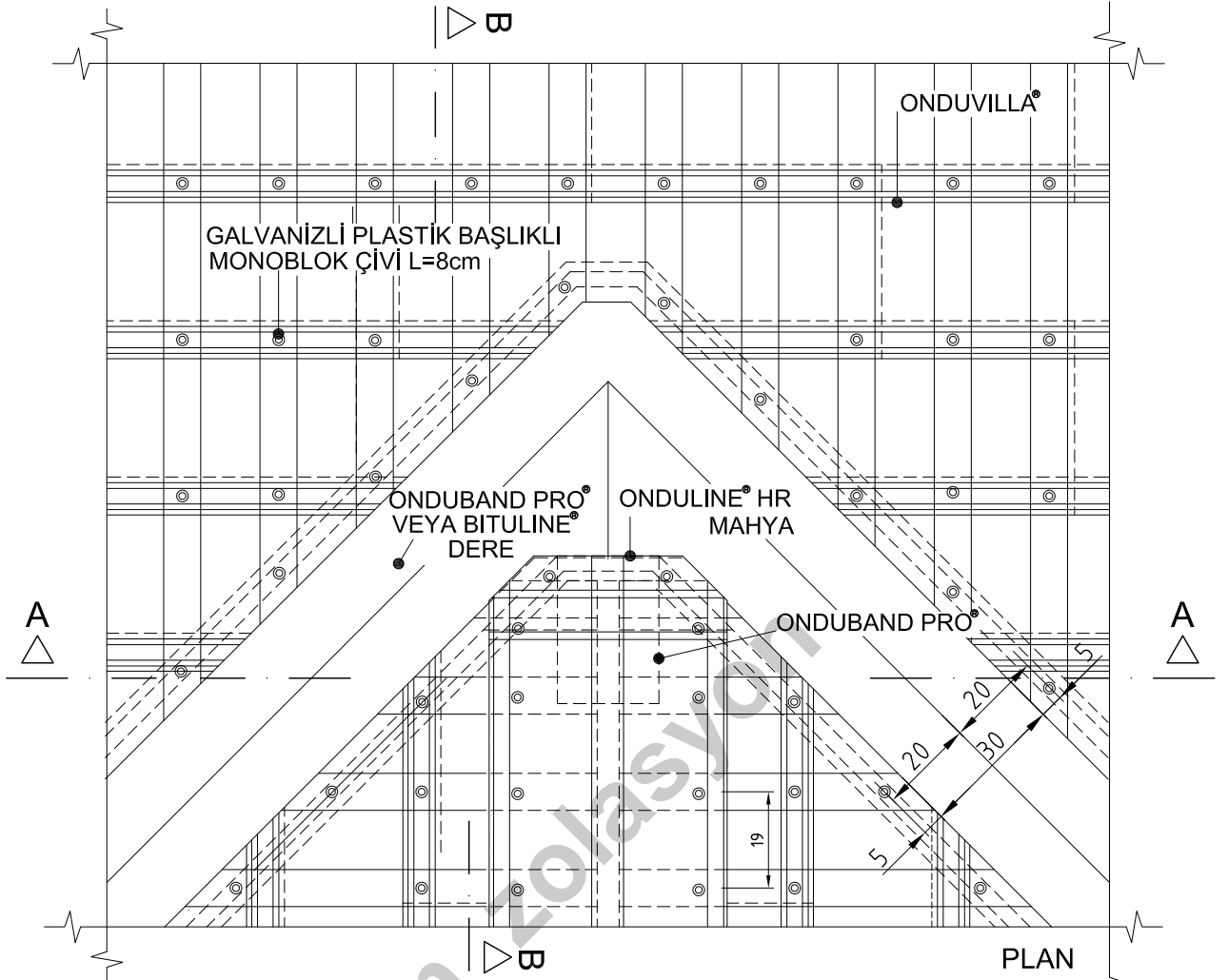
BITULINE DERE PP40M, EP40A VEYA ONDUBAND PRO®

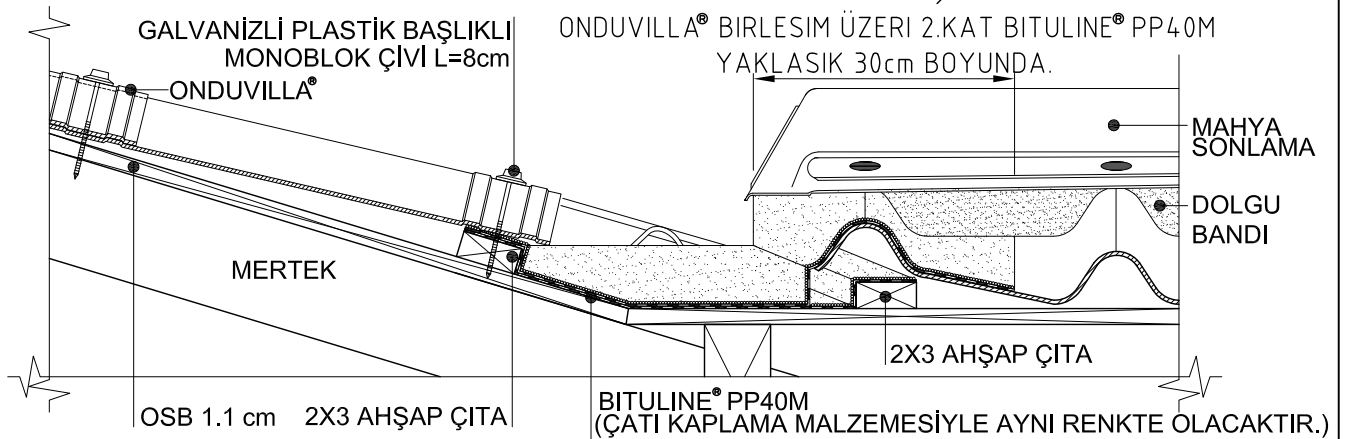
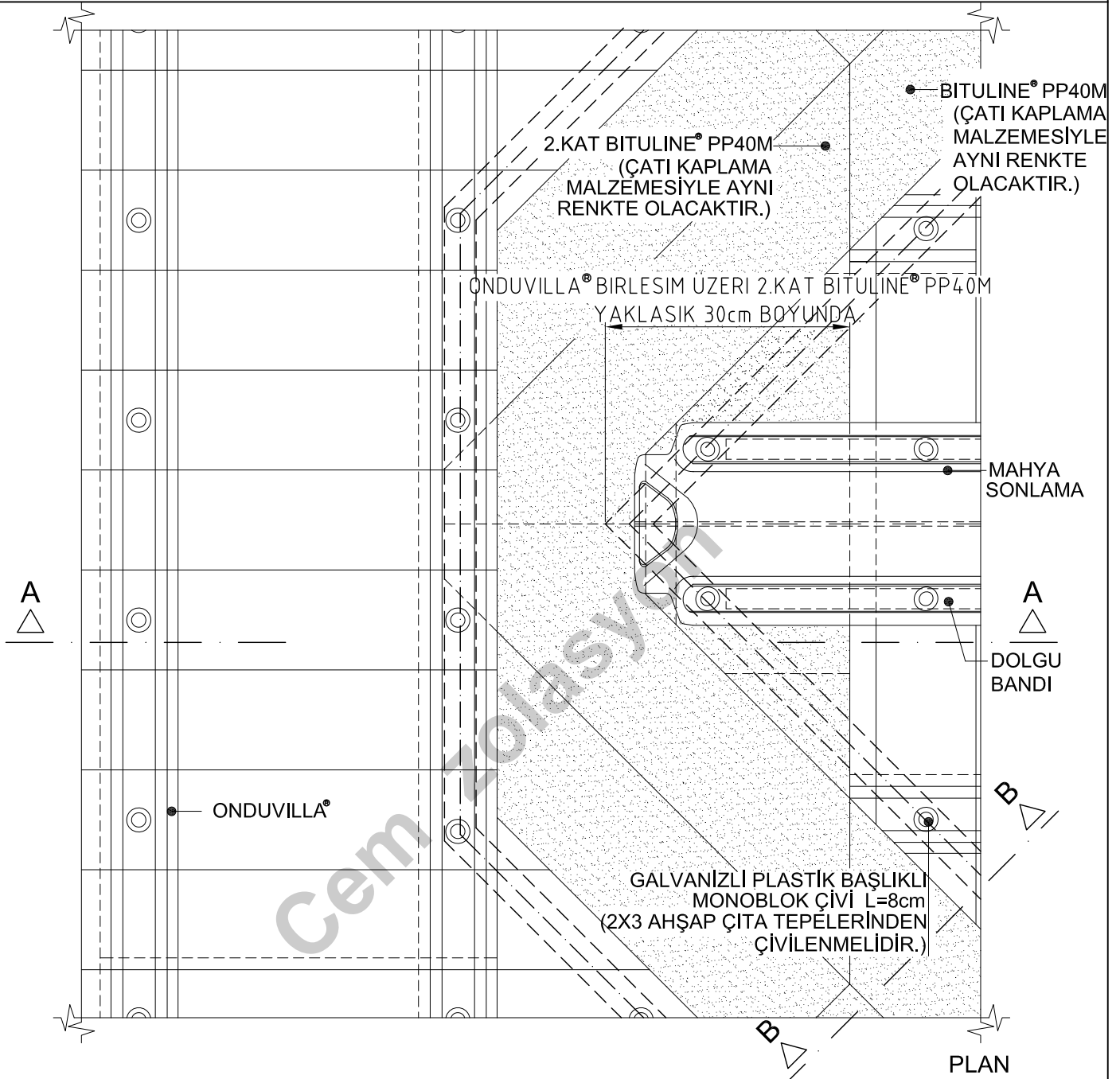
PLAN





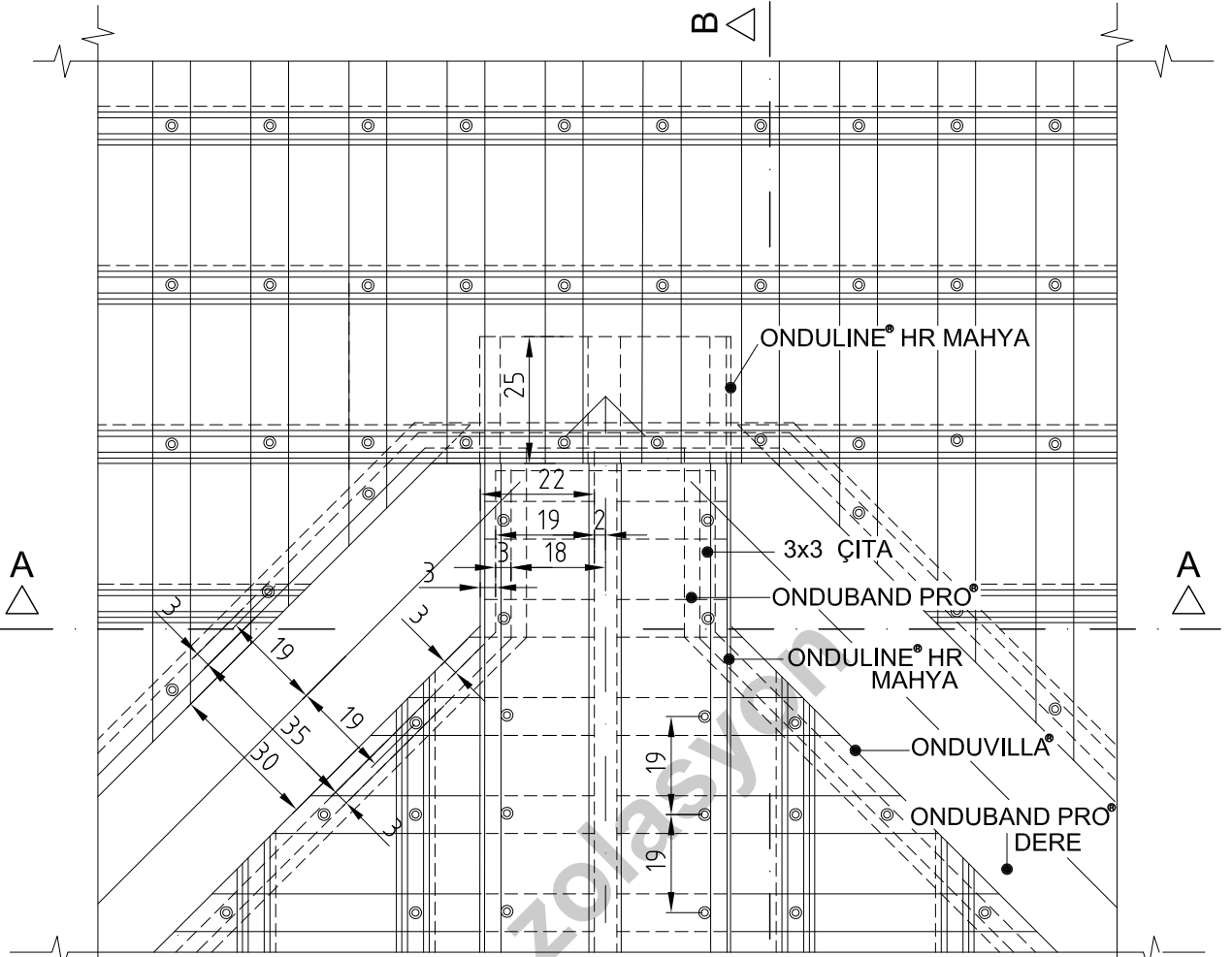
GENEL NOT: BİNİ DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.



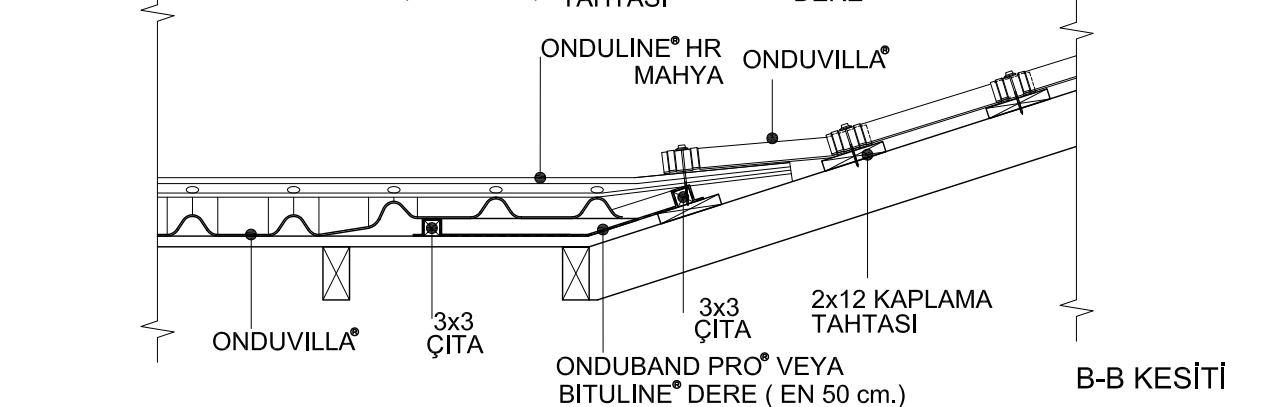
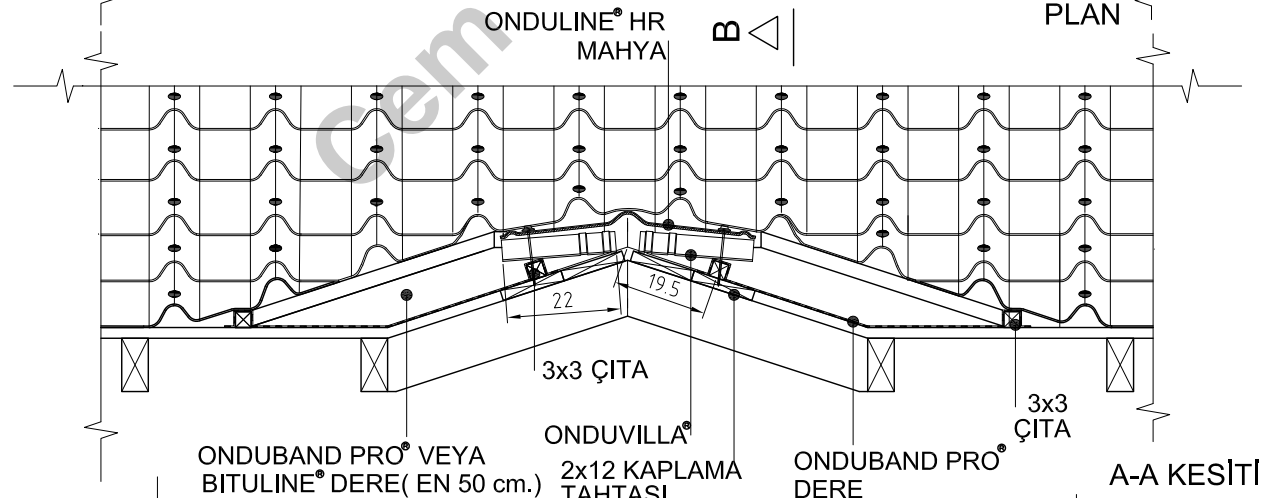


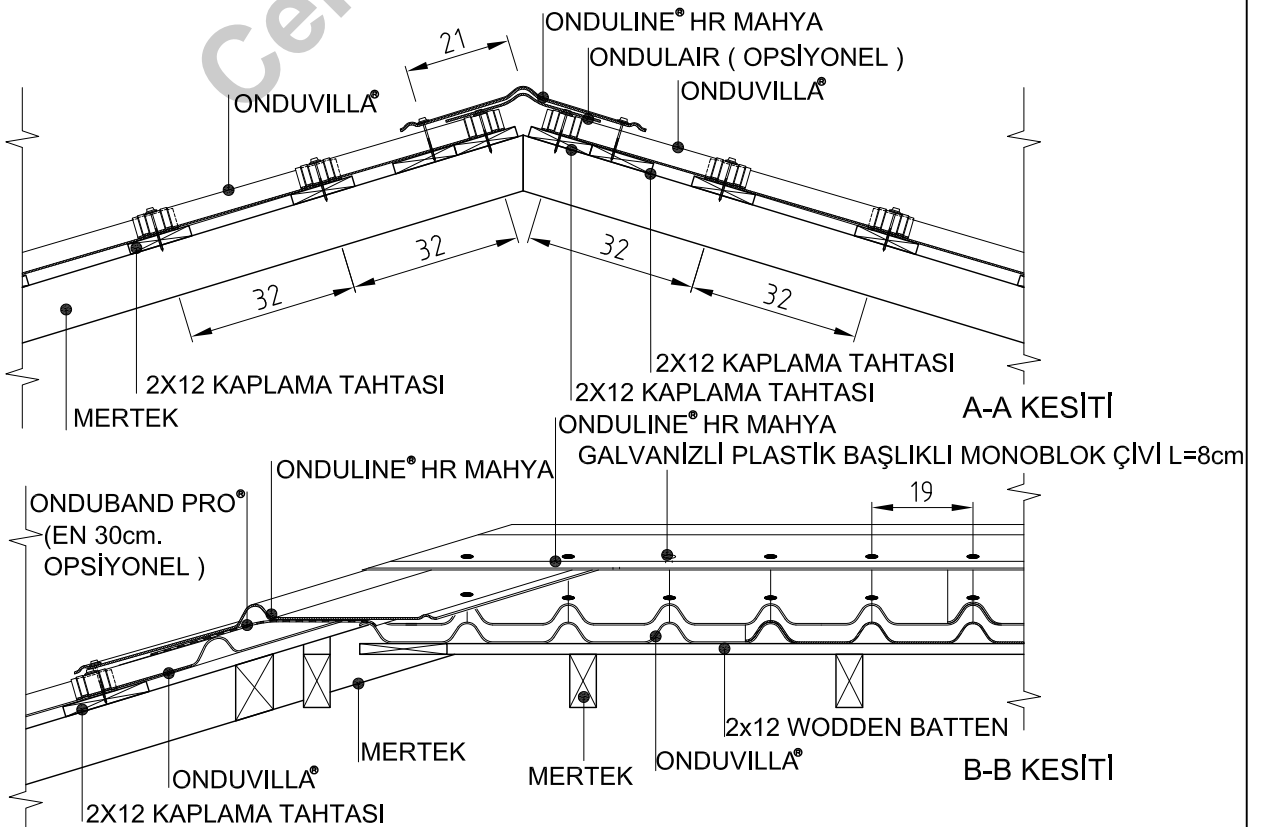
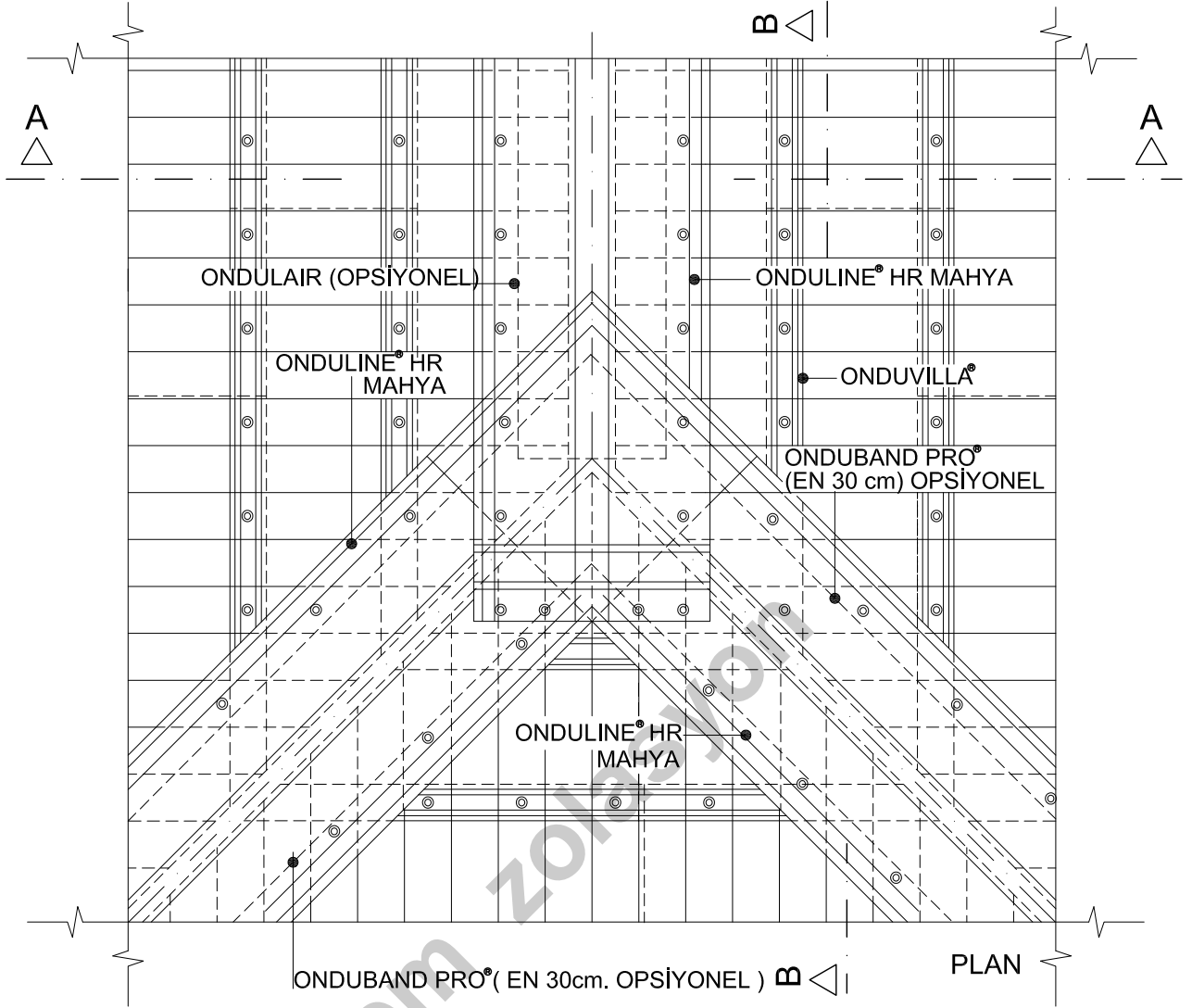
NOT : .B-B KESİTİ İÇİN M612a PAFTASINA BAKINIZ.

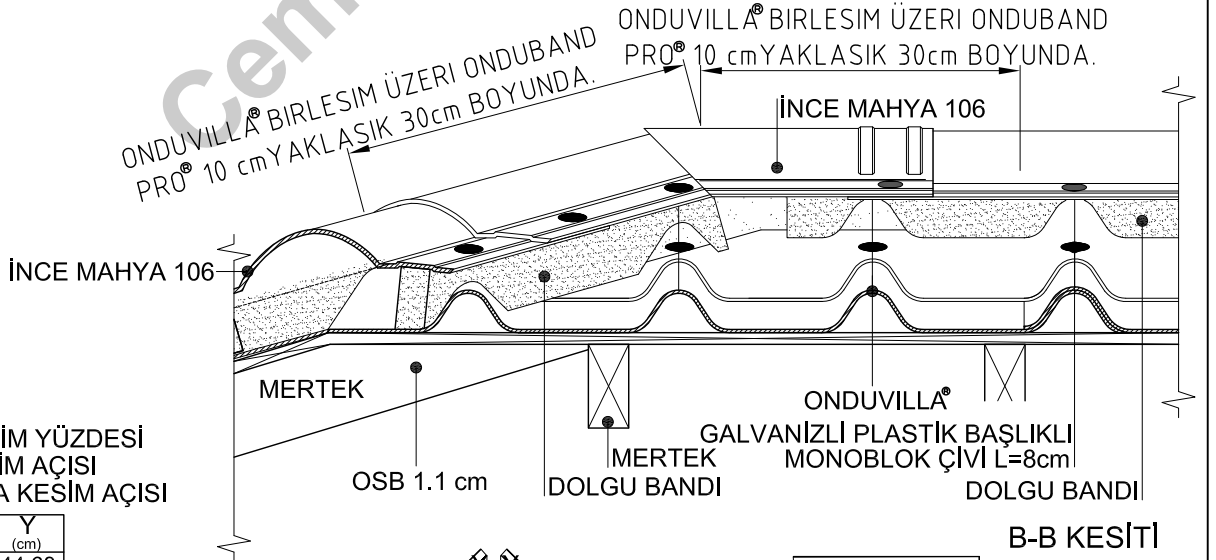
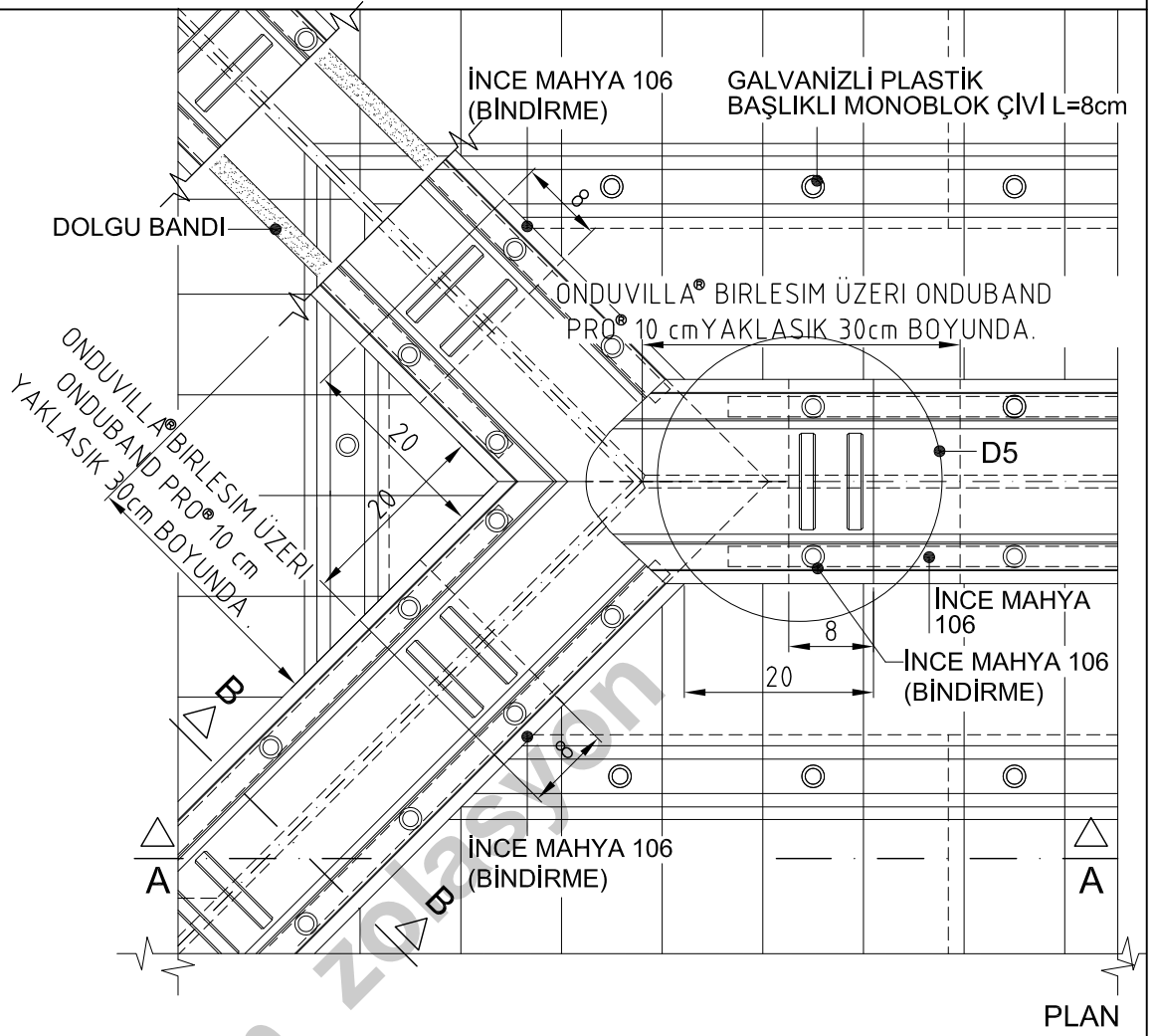
EĞİK DERELERİN BİRLEŞTİĞİ KISIM,MAHYADAKİ ONDUVILLANIN ÜSTÜNE BİNECEK ŞEKİLDE,EN AZ 30 cm ENİNDE VE YEKPARE OLARAK 2.KAT BITULINE® PP40M İLE KAPLANMALIDIR.2.KAT BITULINE® PP40M KAPLANIRKEN 1.KAT BITULINE® PP40M ÜZERİNDEKİ MİNERALLER TEL FIRÇA İLE TEMİZLENMELİDİR.



ONDULINE® HR MAHYA PLAN

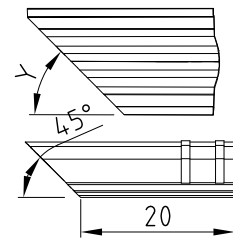
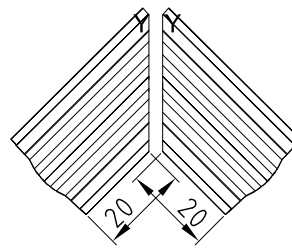






%:ÇATININ EĞİM YÜZDESİ
X:ÇATININ EĞİM AÇISI
Y:EĞİK MAHYA KESİM AÇISI

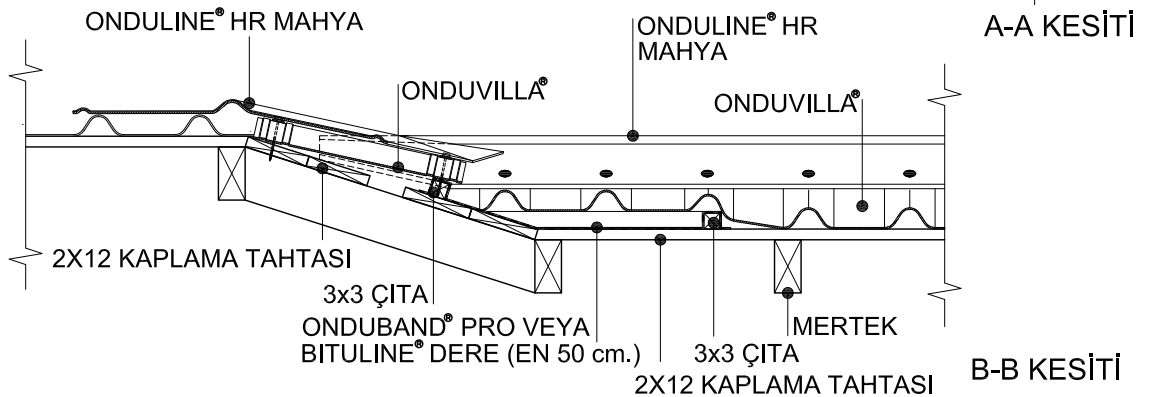
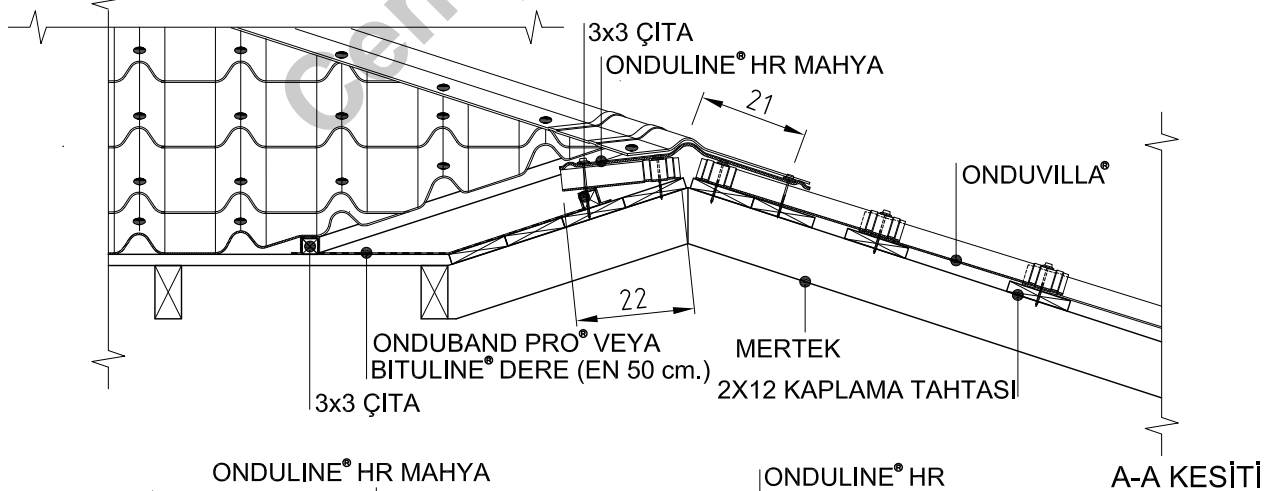
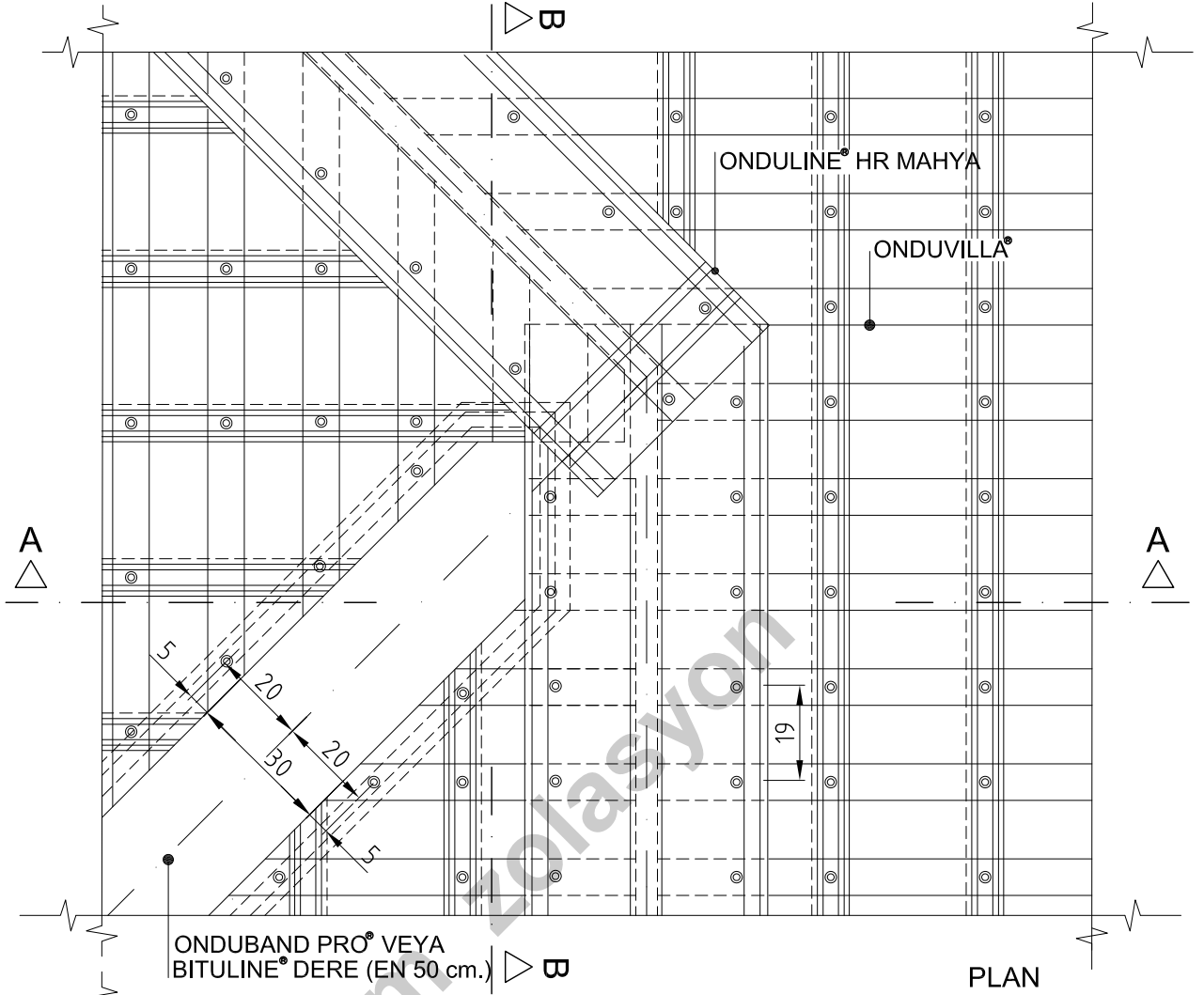
(%)	X (cm)	Y (cm)
%15	8,53	44,68
%20	11,30	44,43
%25	14,03	44,13
%30	16,69	43,76
%35	19,29	43,34
%40	21,80	42,87
%45	24,22	42,36
%50	26,56	41,81
%55	28,81	41,22
%60	30,96	40,61

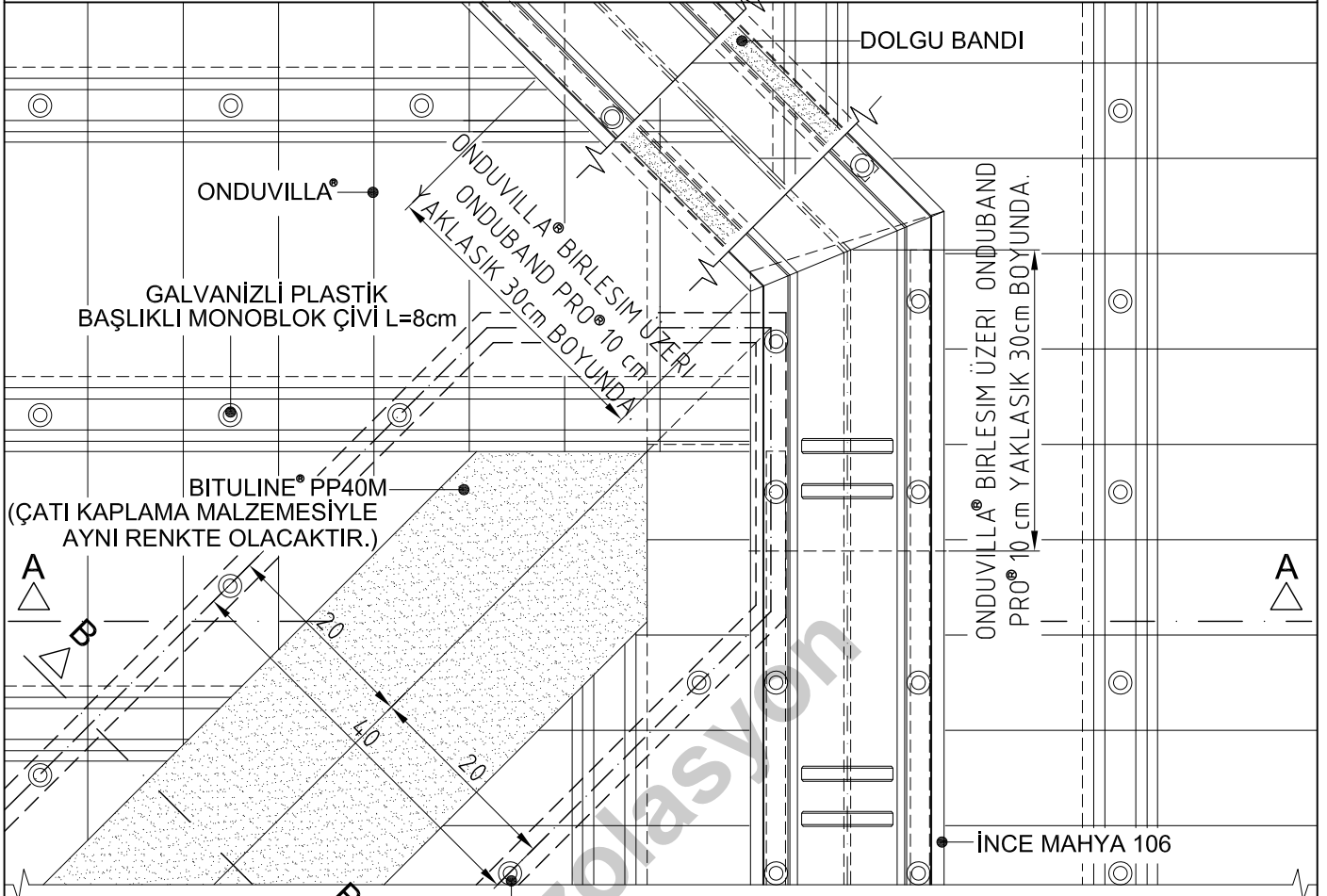


ONDUVILLA MAHYA KESİM DETAYLARI

GENEL NOT:BİNİ DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.

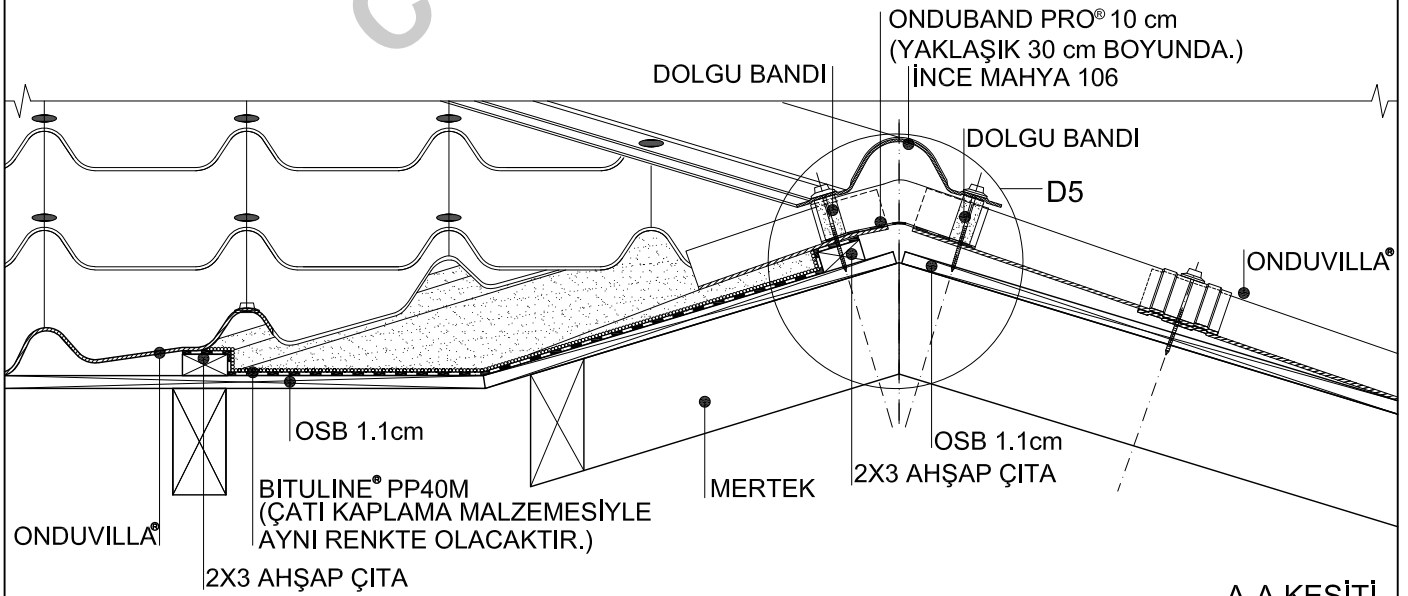
NOT : B-B KESİTİ İÇİN M611a veya M611b PAFTASINA BAKINIZ.D5 DETAYI İÇİN M623 PAFTASINA BAKINIZ.





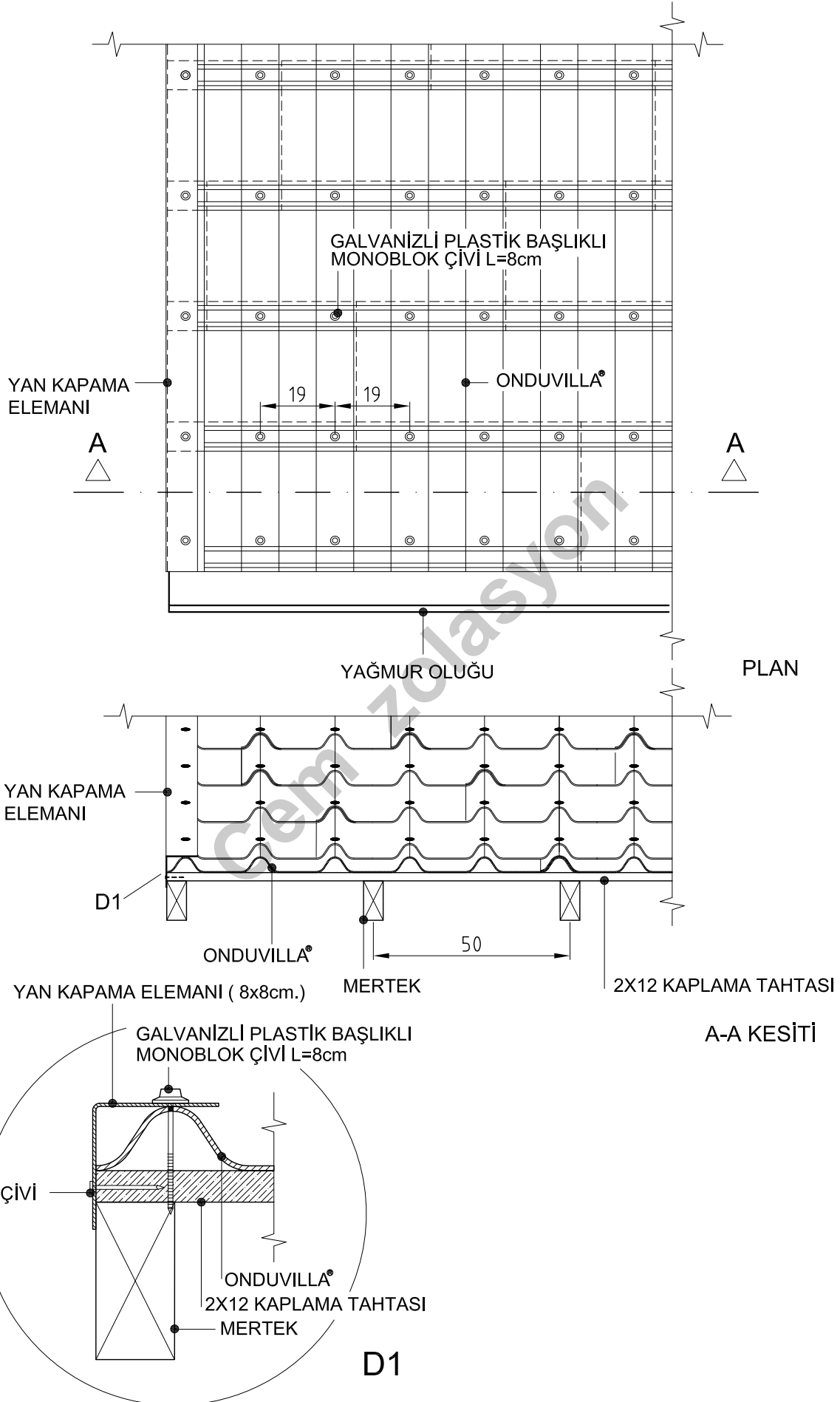
GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ L=8cm
(2X3 AHŞAP ÇITA TEPELERİNDEN ÇİVİLENMELİDİR.)

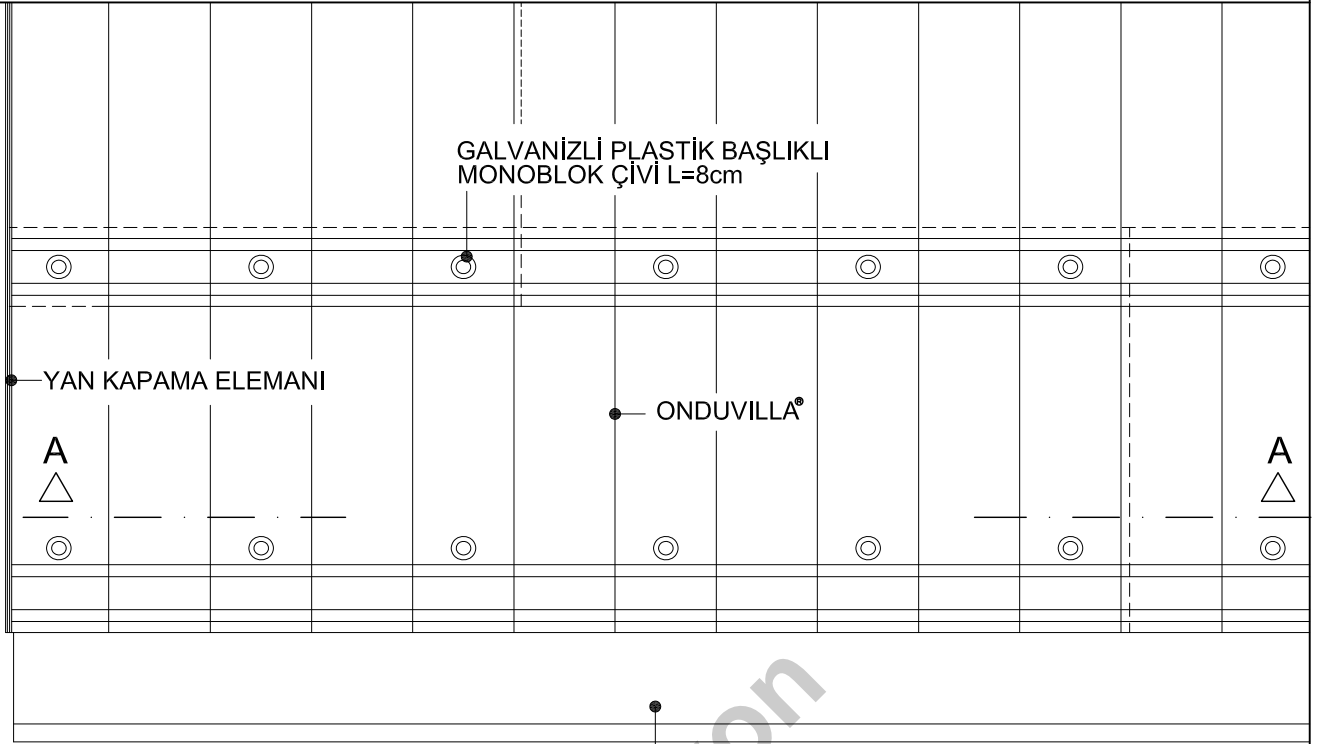
PLAN



GENEL NOT: BİNİ DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.

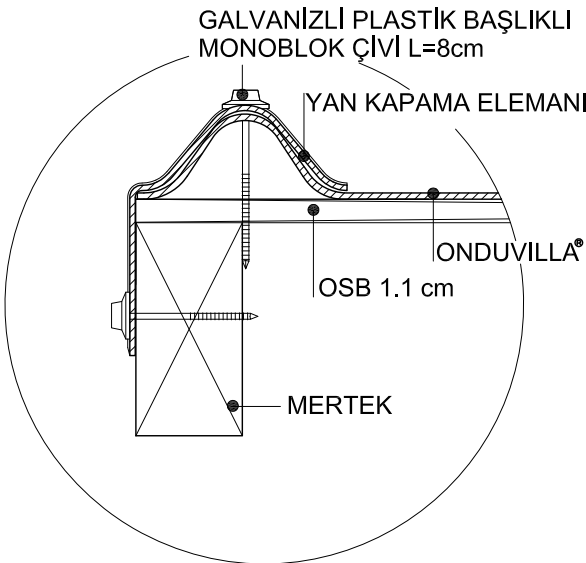
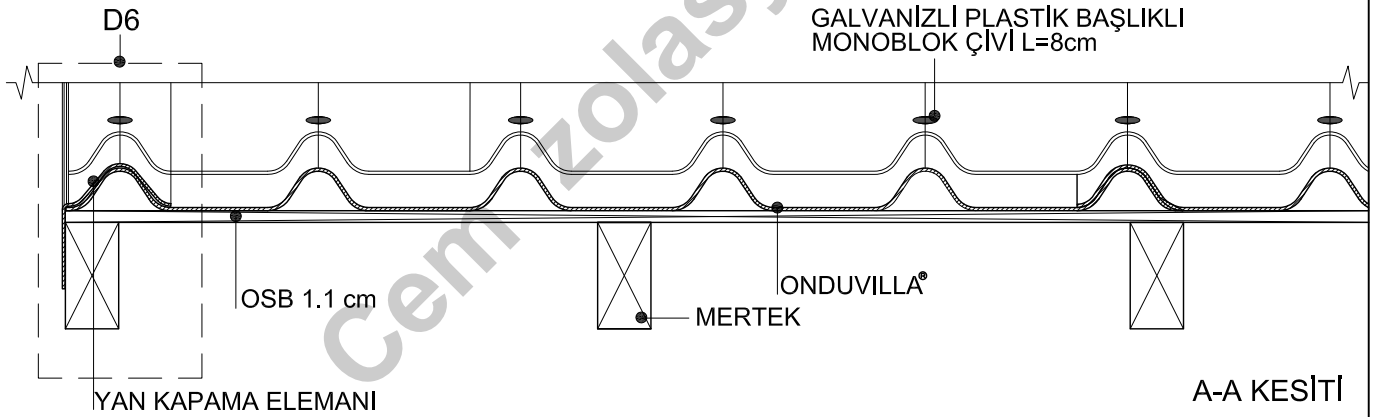
NOT : .B-B KESİTİ İÇİN M612a PAFTASINA BAKINIZ.D5 DETAYI İÇİN M623 PAFTASINA BAKINIZ



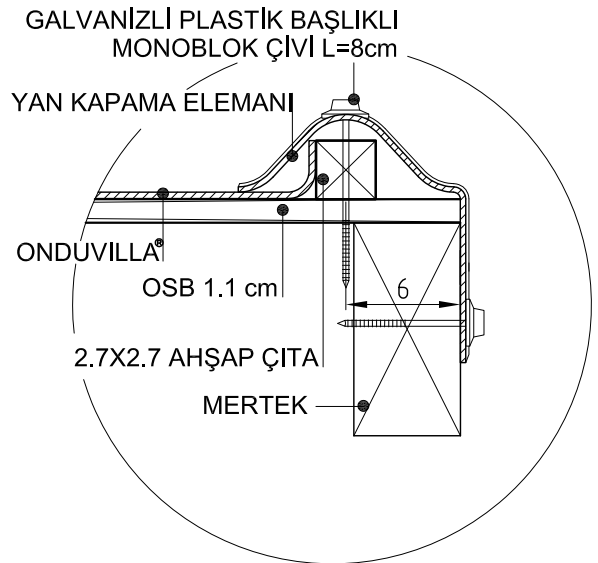


YAĞMUR OLUĞU

PLAN

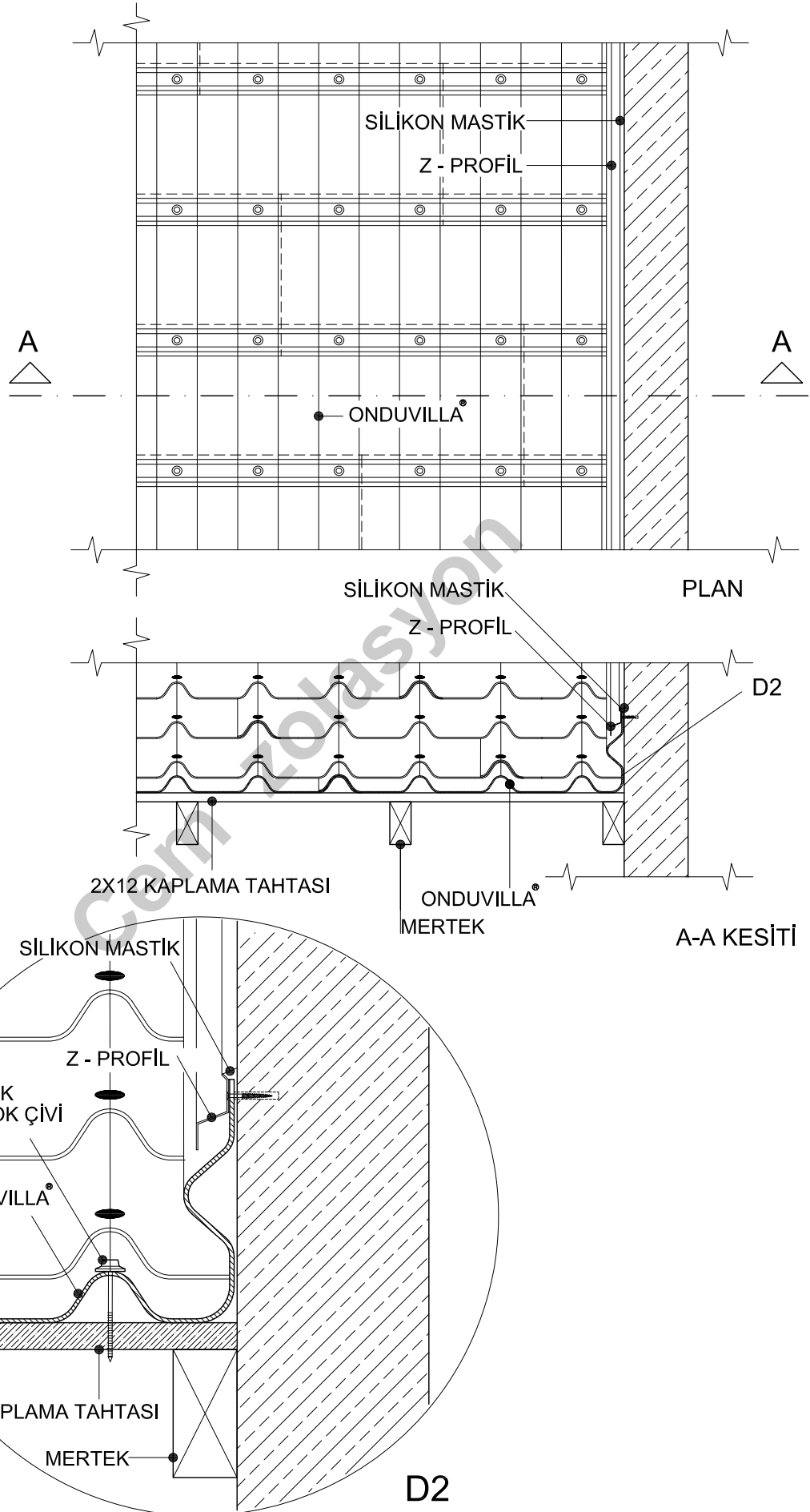


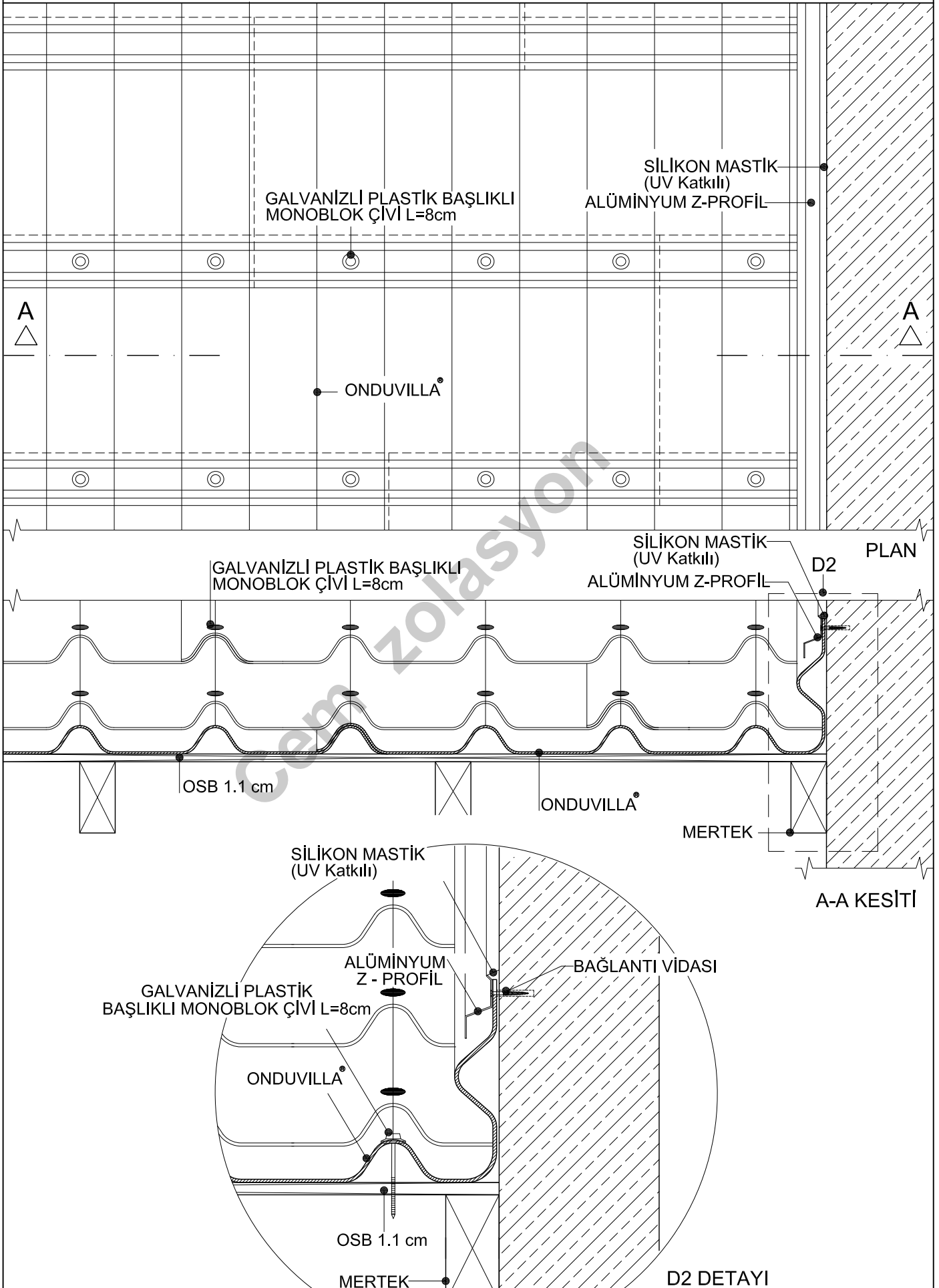
D6 DETAYI İÇİN ALTERNATİF 1

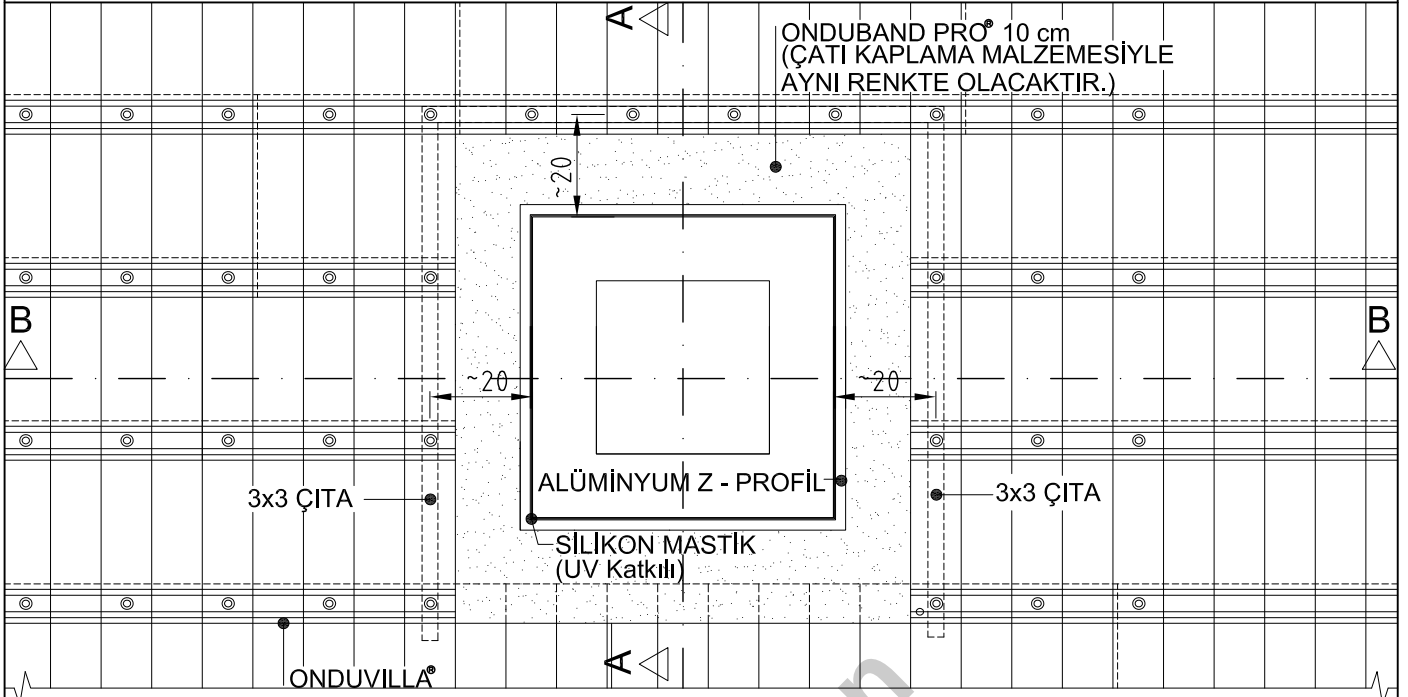


D6 DETAYI İÇİN ALTERNATİF 2

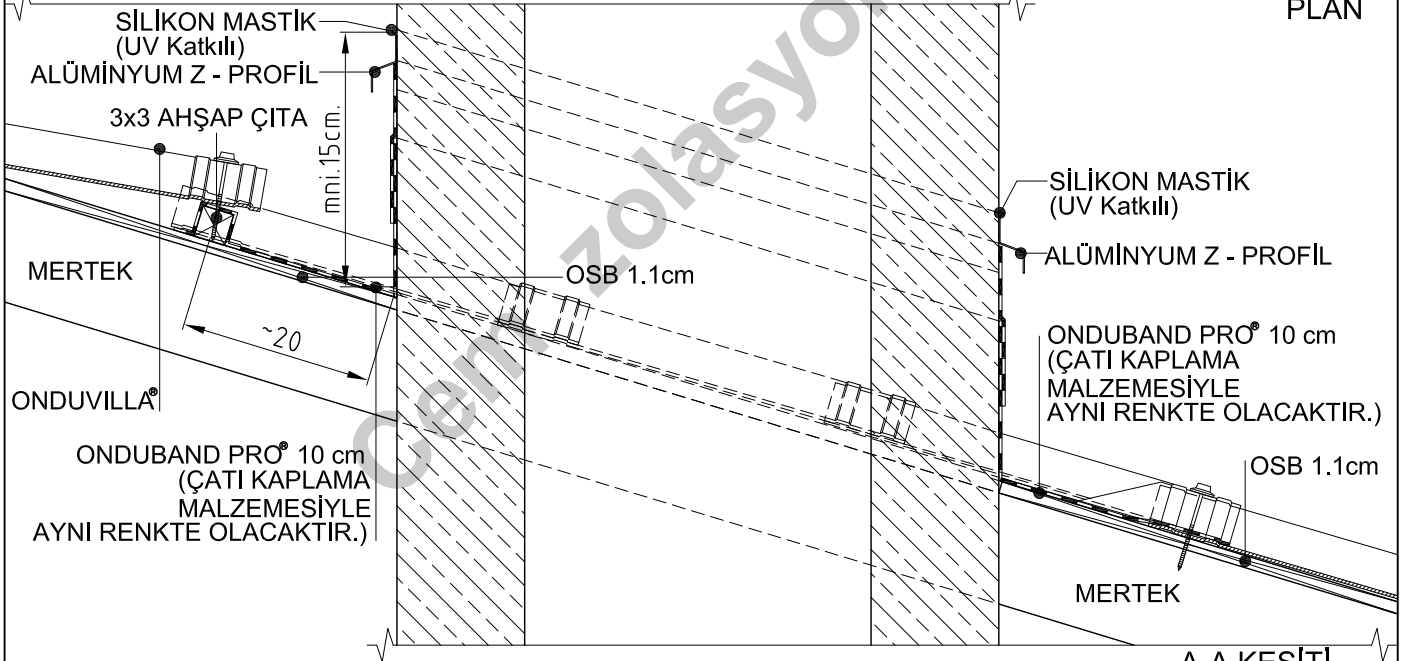
GENEL NOT: BİNA DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.



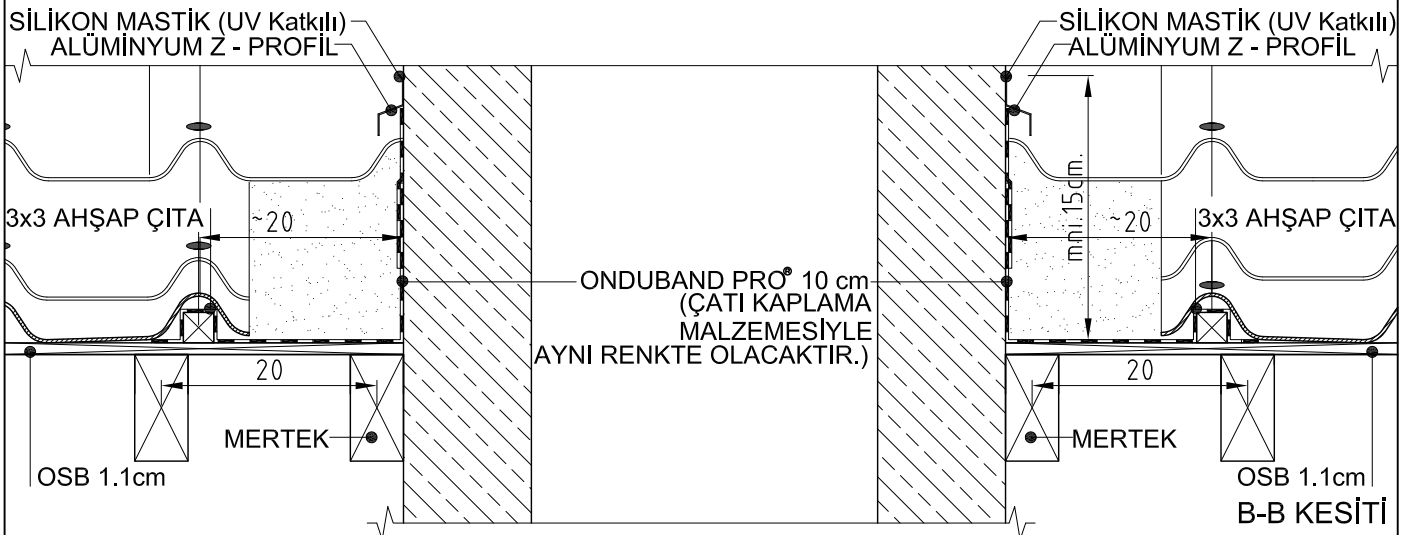




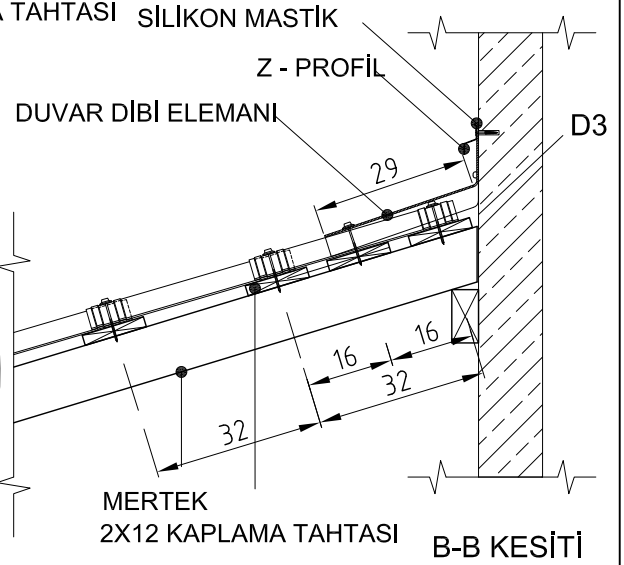
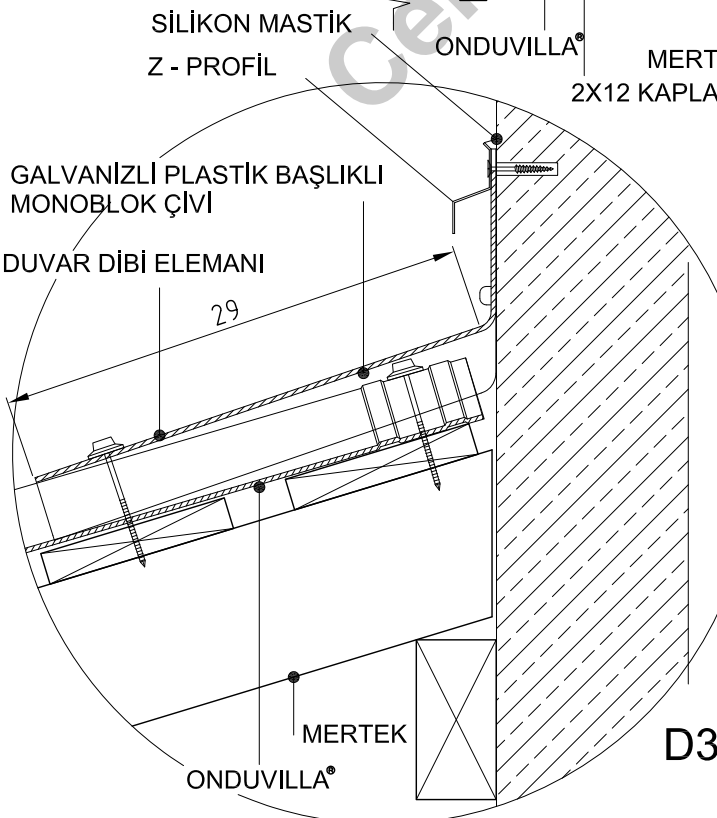
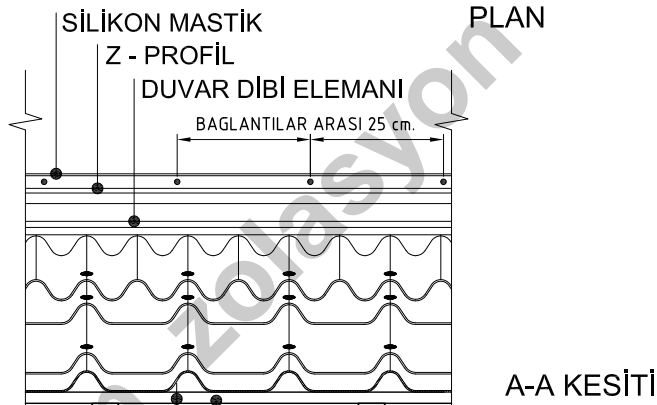
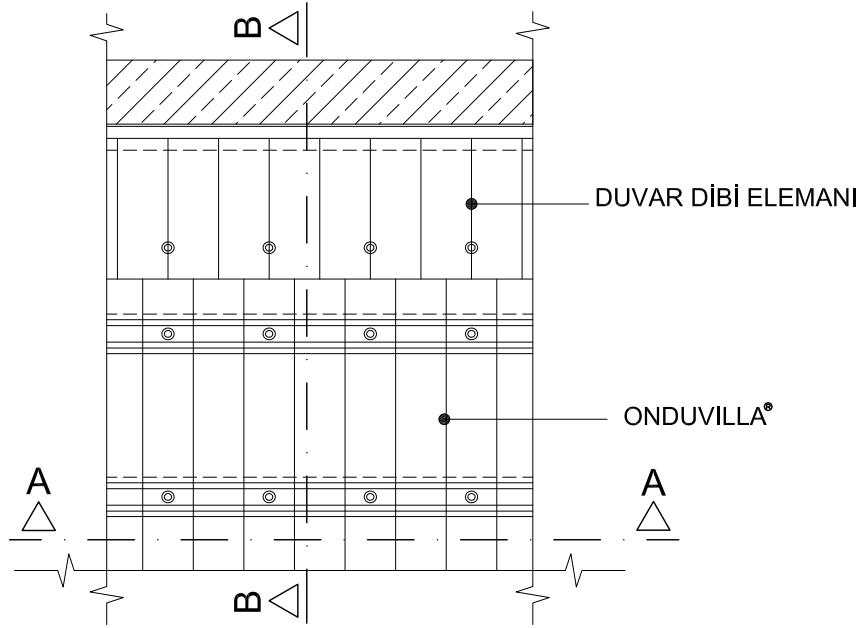
PLAN

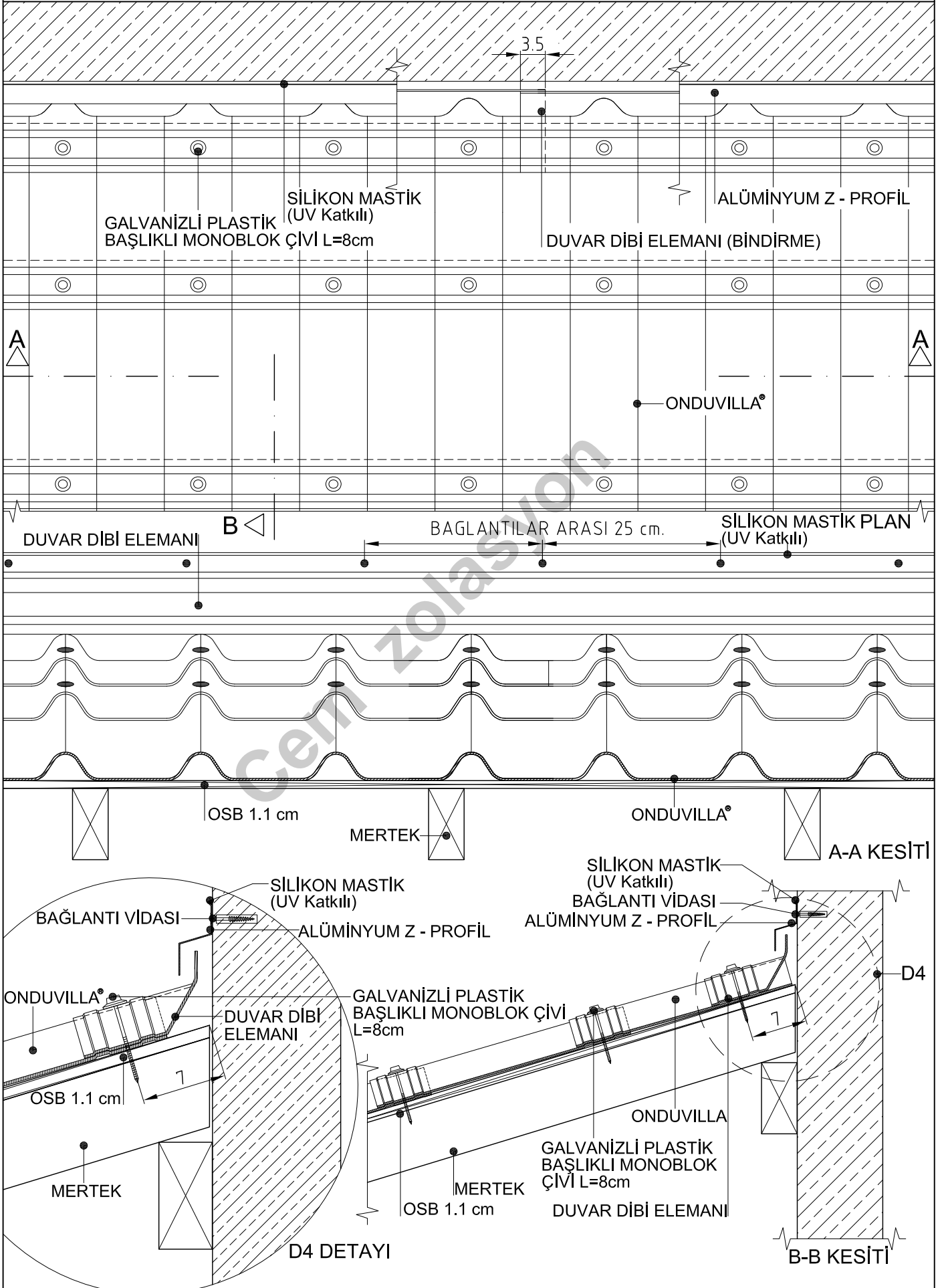


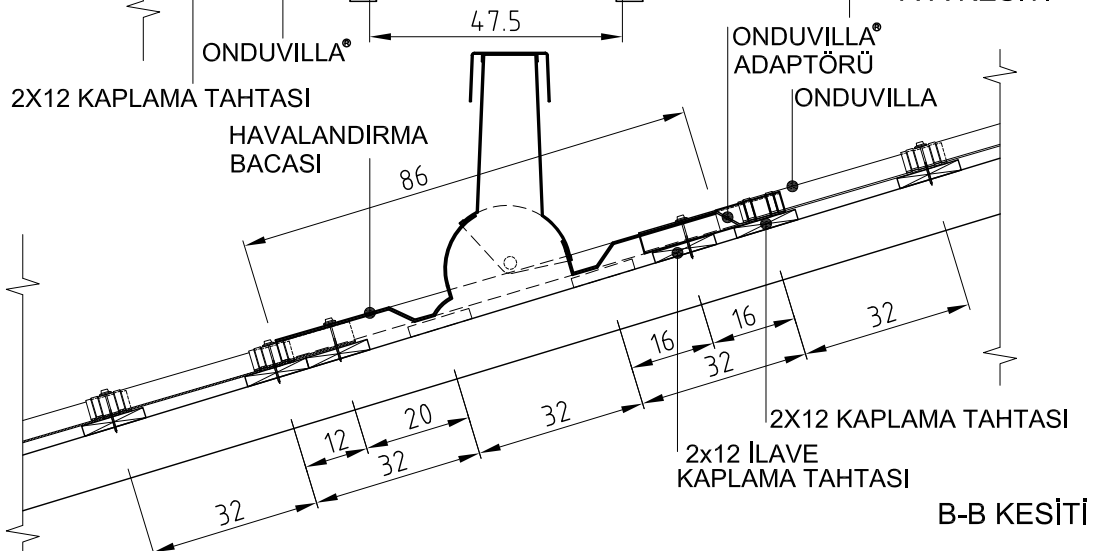
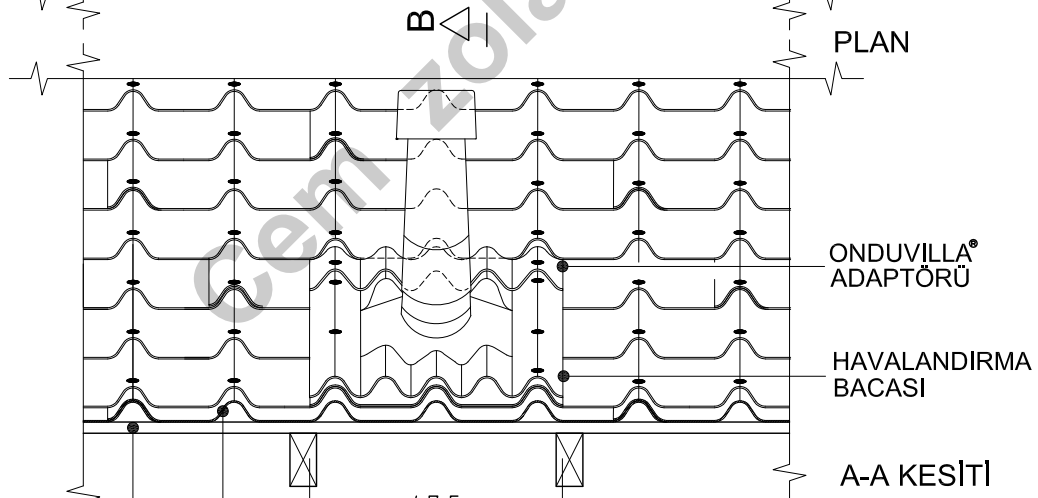
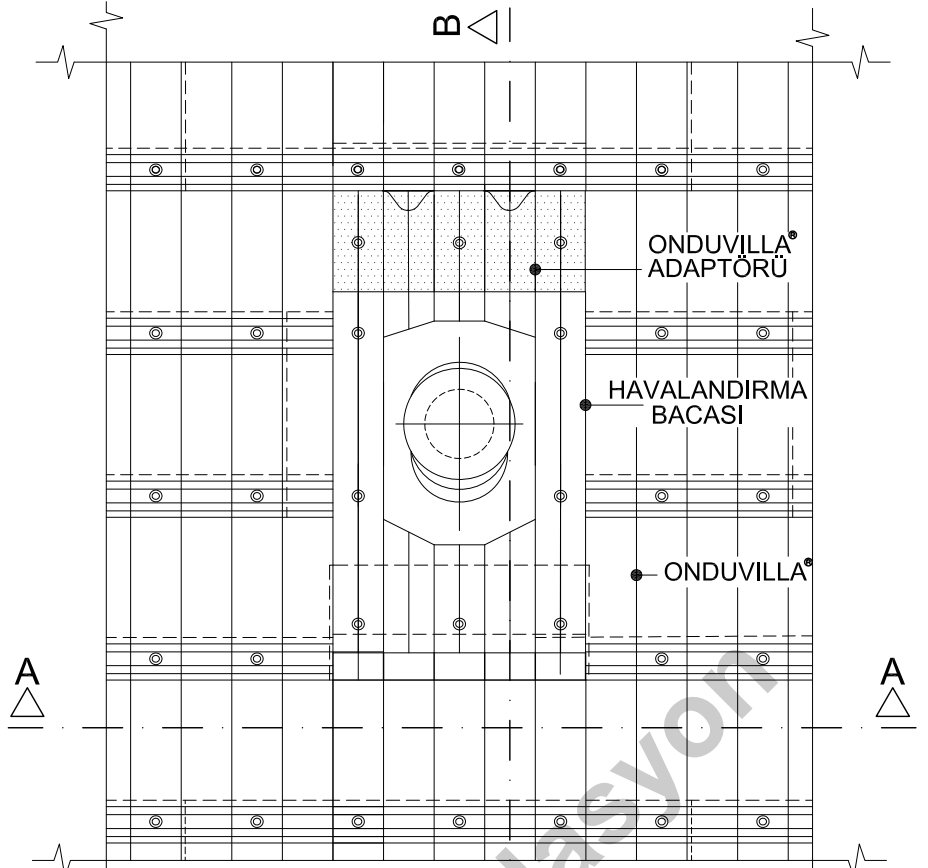
A-A KESİTİ

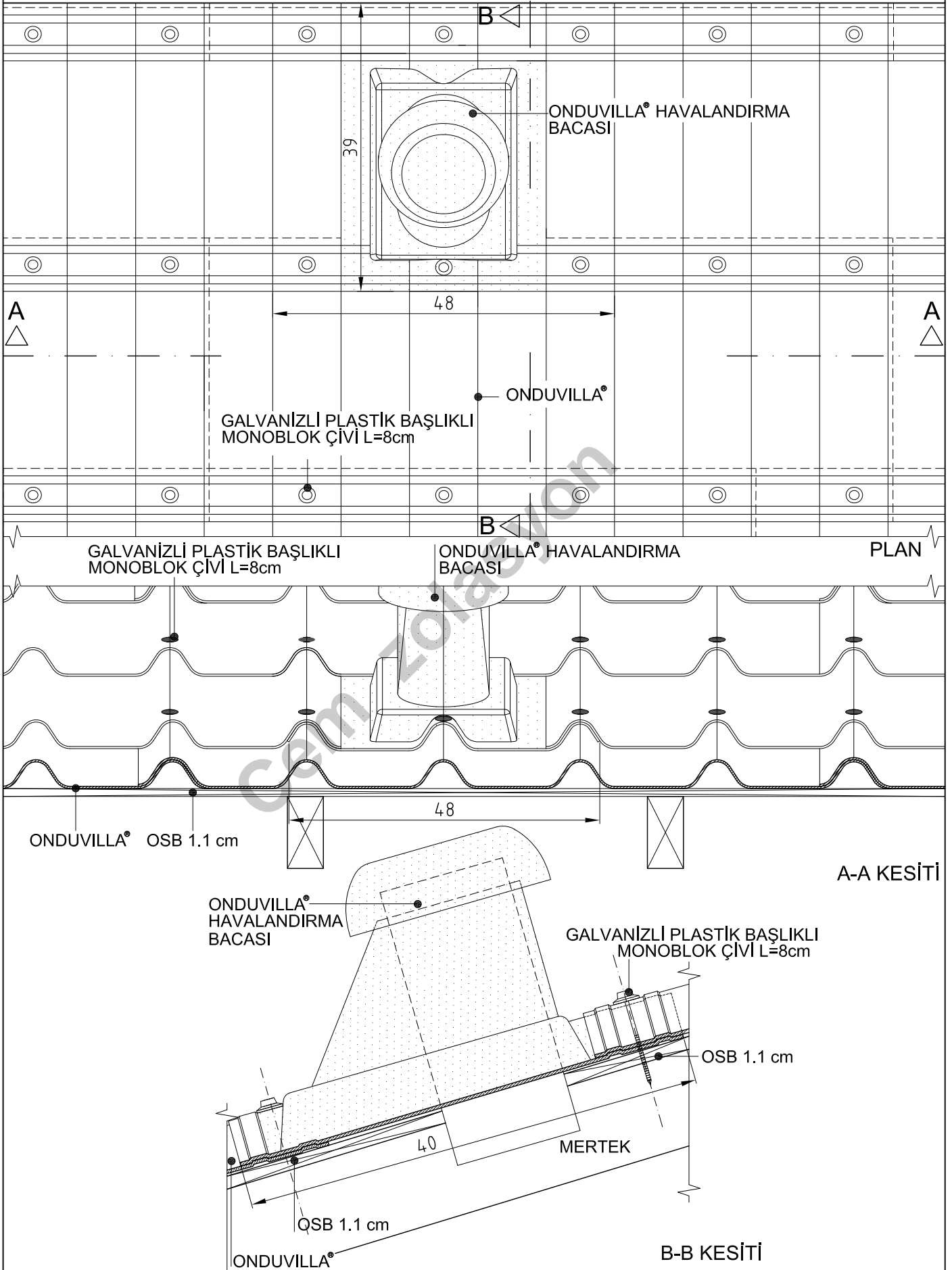


B-B KESİTİ

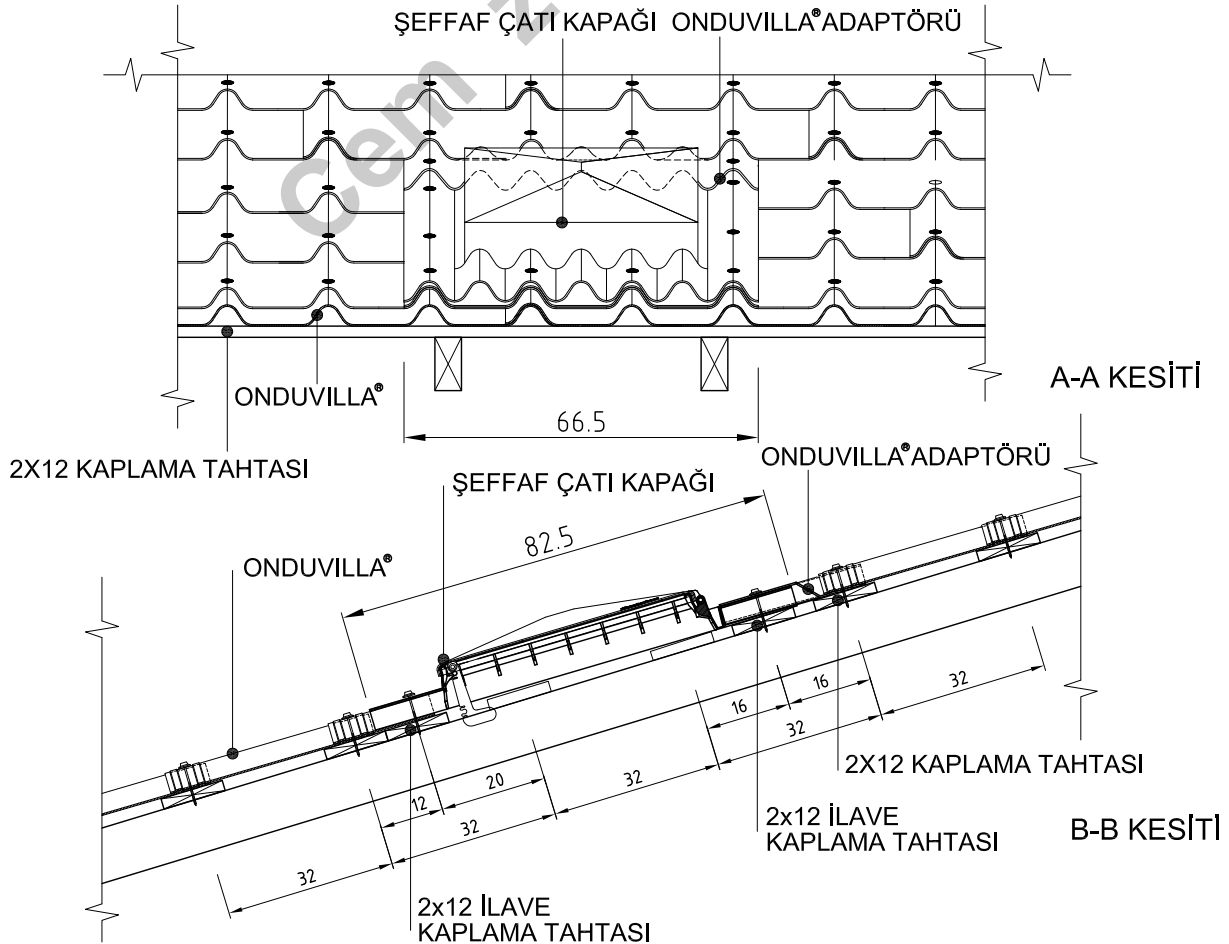
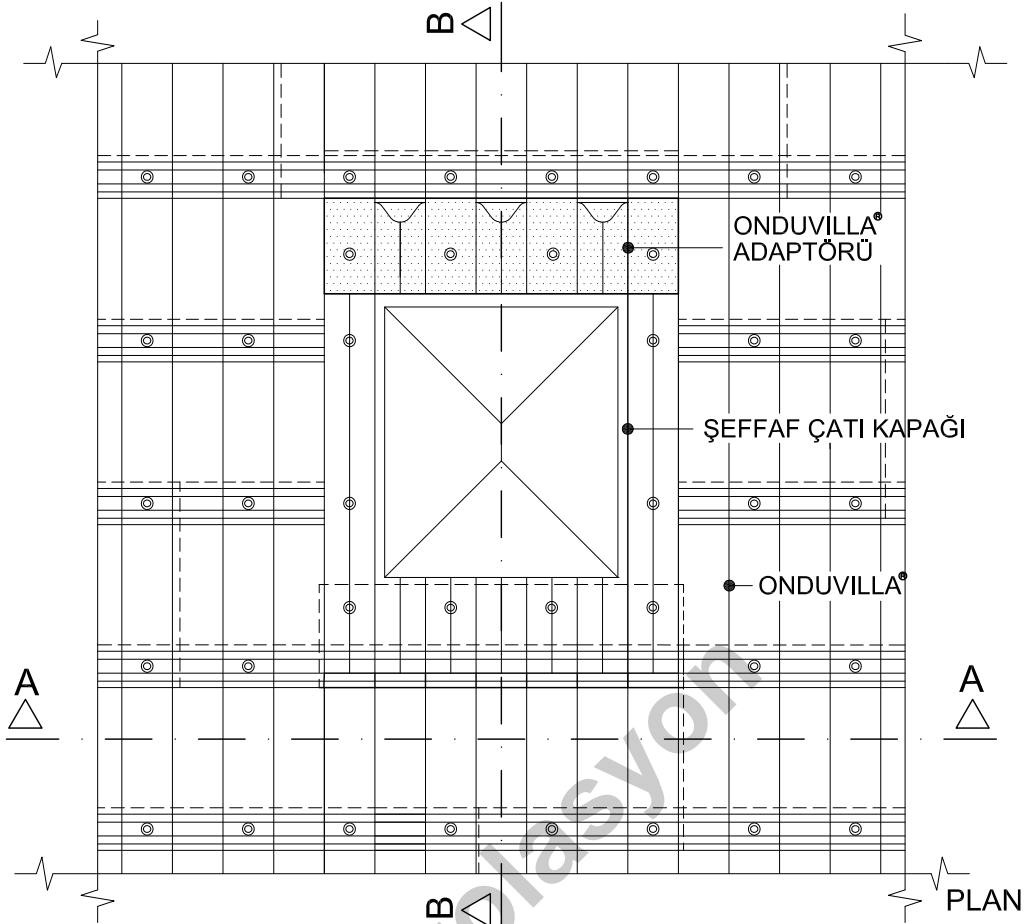


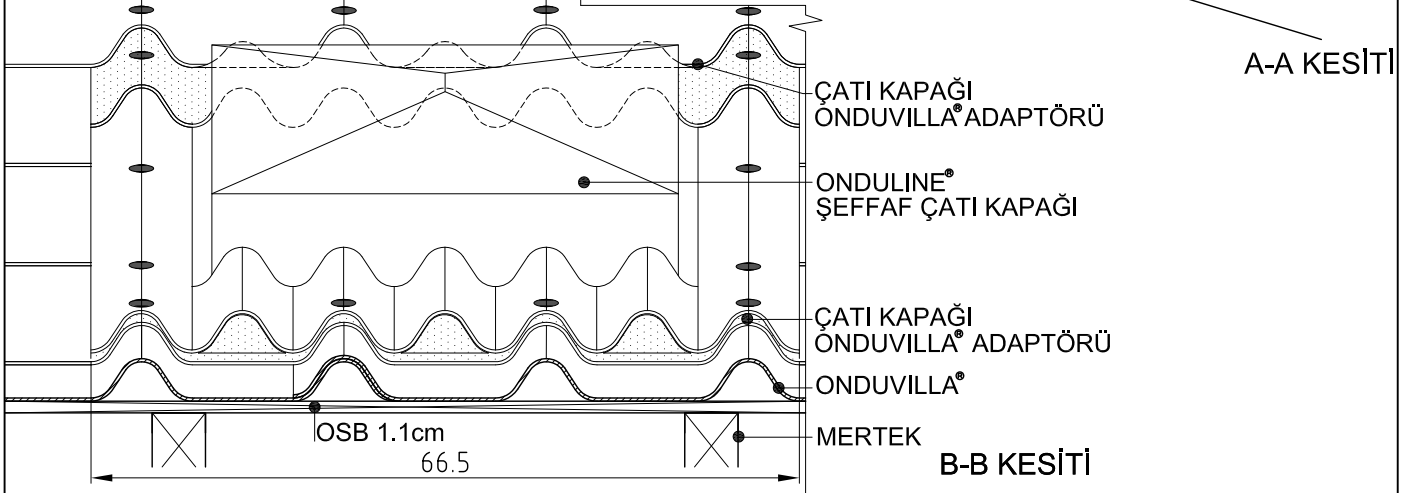
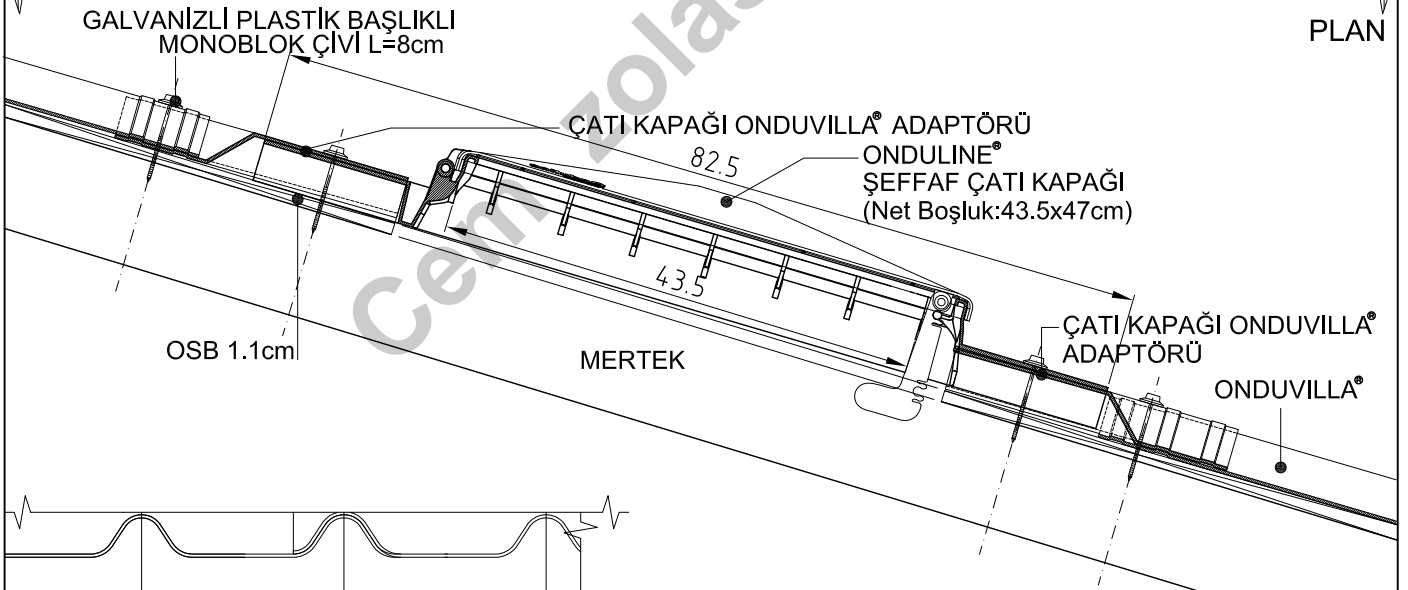
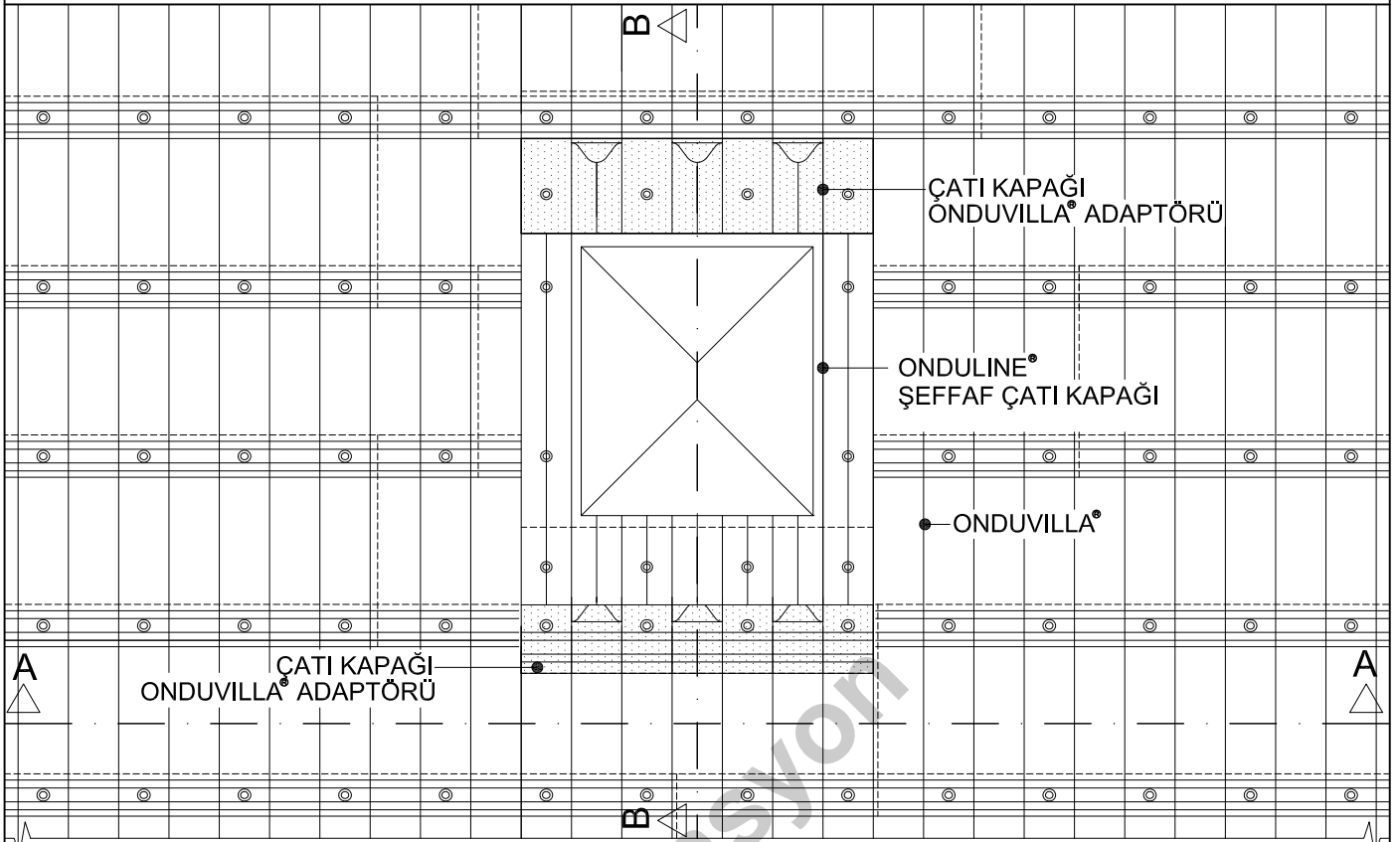


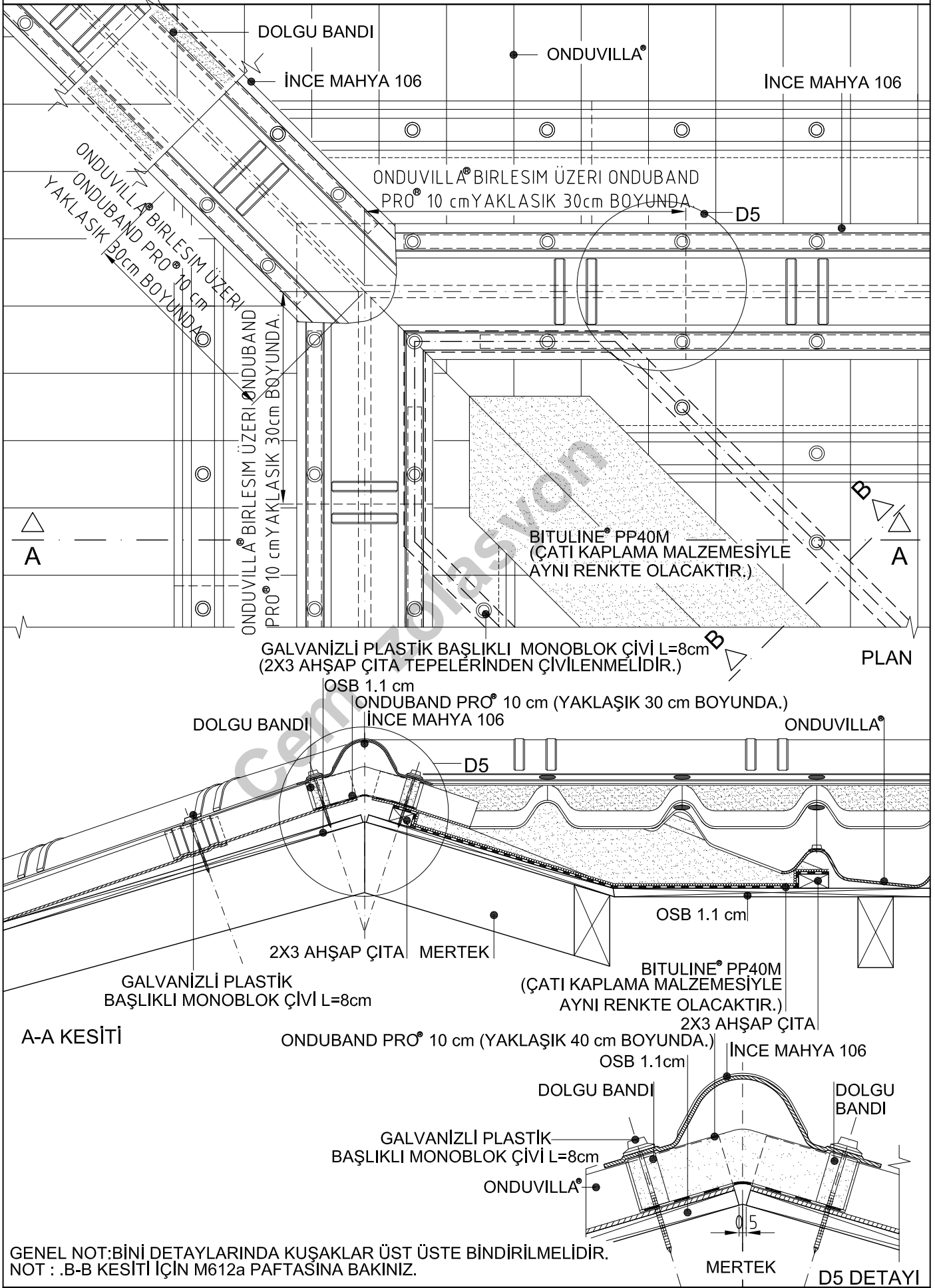


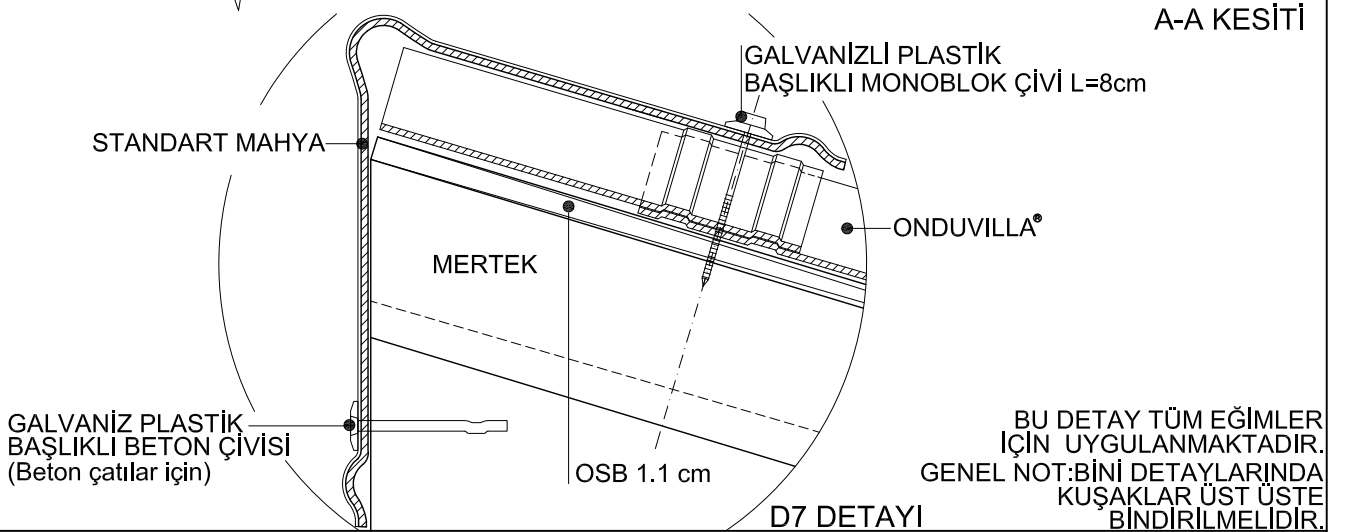
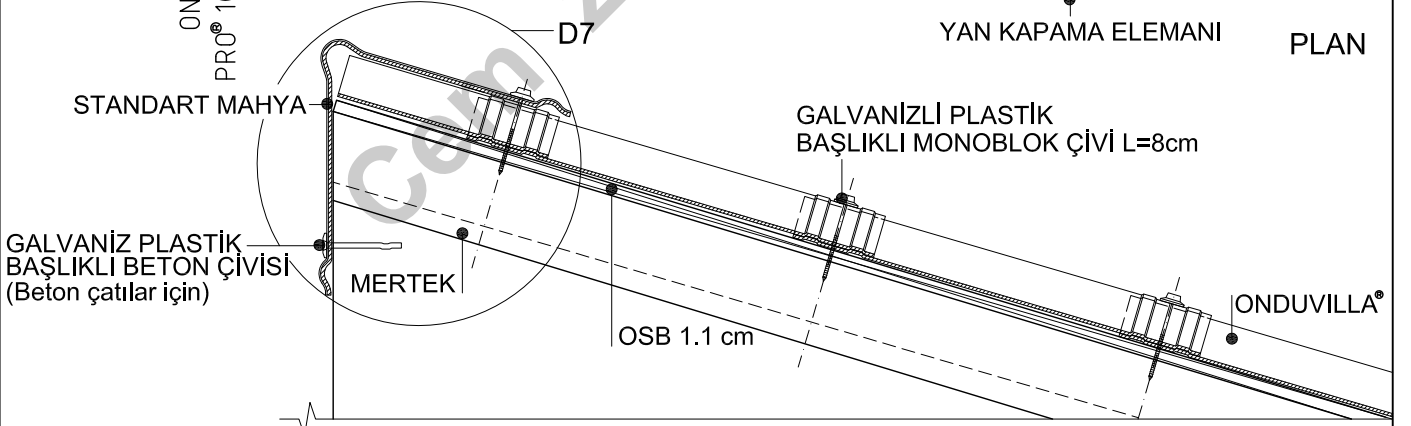
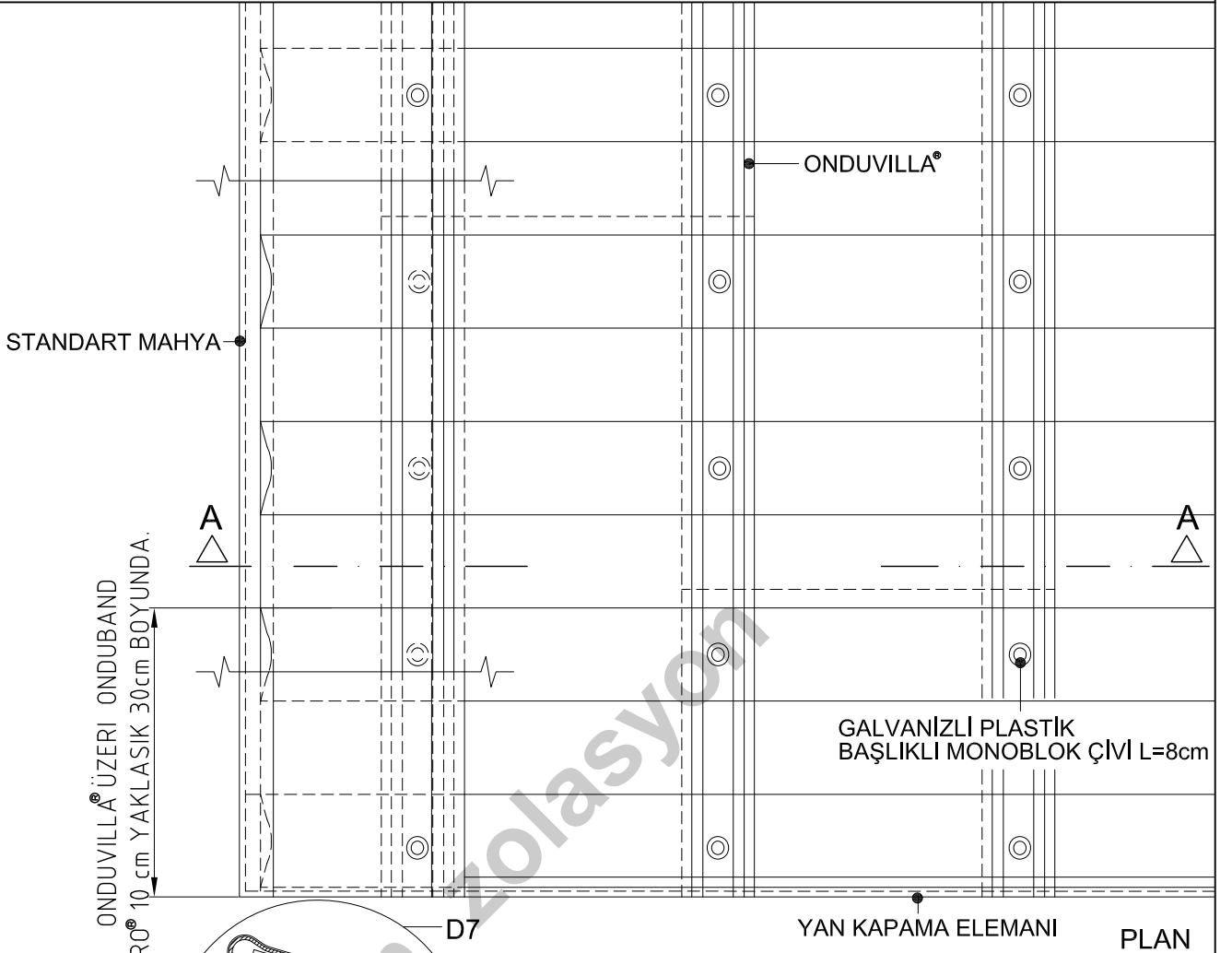


GENEL NOT: BİNİ DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.



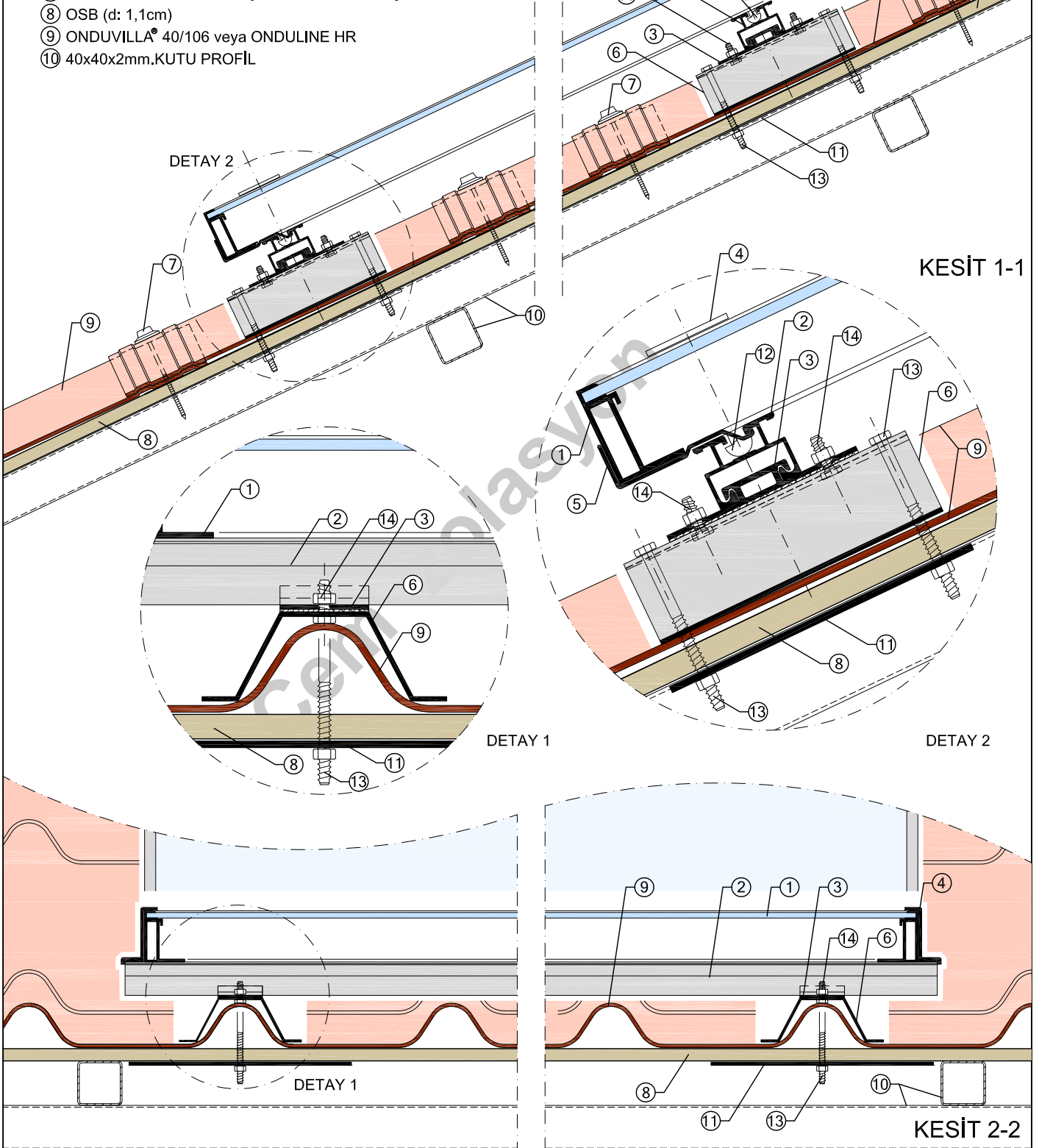






BU DETAY TÜM EĞİMLER İÇİN UYGULANMAKTADIR.
GENEL NOT: BİNİ DETAYLARINDA KUŞAKLAR ÜST ÜSTE BİNDİRİLMELİDİR.

- | | |
|---|--------------------------|
| ① ONDUSOLAR PANEL | ⑪ DEMİR FLANŞ (15X20 cm) |
| ② ALÜMİNYUM RAY 30 x 40 mm | ⑫ ÖZEL PROFİLLİ SOMUN |
| ③ RAY BAĞLANTI ELEMANI | ⑬ ÇİVATA M6 X 80 |
| ④ ALÜMİNYUM PANEL TUTUCU | ⑭ ÇİVATA M6 X 20 |
| ⑤ ALÜMİNYUM PANEL TAŞIYICI | |
| ⑥ ONDULINE® UYUMLU BAĞLANTI - OMEGA 2 | |
| ⑦ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ | |
| ⑧ OSB (d: 1,1cm) | |
| ⑨ ONDUVILLA® 40/106 veya ONDULINE HR | |
| ⑩ 40x40x2mm.KUTU PROFİLİ | |



NOT:Broşürde gösterilen detaylar OSB üzerine yapılacak uygulamaları içermektedir. Betonarme döşeme,çelik aşık,mertek gibi alt yapılarda bu prensipler dikkate alınarak rijit bağlantılar yapılmalıdır.