مهندس حسین احمدی
عمران (پایه یک)
شهرسازی
نظام مهندسی
پروانه اشتغال

FIELD
MTSP
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
DATE
PROJECT TITLE
SHEET TITLE
SCALE
DWG.NO

شهرداری محترم، آب و خدمات
برنامه‌ریزی آزادگویش
معاونت معماری و شهرسازی
شماره مرجع شناسایی:
۱۵
۴
تاریخ دریافت نقشه:
۹۹
شماره تائید نظر ثبت:
مسئول بررسی نقشه:

ثبت سیع نقشه معماری و سازه

60x60

Elev: 512
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V Scale 1:20

40x40

Elev: 512
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V Scale 1:20

40x40

Elev: 512
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Elev: 512
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50x50 50x50

Elev: 512
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V Scale 1:20

50x50 50x50

Elev: 512
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Elev: 512
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Elev: 512
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Elev: 512
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V Scale 1:20

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Elev: 512
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60x60 60x60

Elev: 512
H Scale 1:50
V Scale 1:20

Scale 1:20
Linear Dist. of Top Reinforcement: 7.5 cm
Linear Dist. of Bot. Reinforcement: 7.5 cm

FIELD
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Elev: 512
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V Scale 1:20

Elev: 512
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Elev: 512
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Elev: 512
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H Scale 1:50
V Scale 1:20

Elev: 512
H Scale 1:50
V Scale 1:20

Elev: 512
H Scale 1:50
V Scale 1:20

Scale 1:20
Clear Dist. of Top Rebars: 11.5 cm
Clear Dist. of Bot. Rebars: 7.1 cm

Elev: 512
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V Scale 1:20

Elev: 512
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V Scale 1:20

Elev: 512
H Scale 1:50
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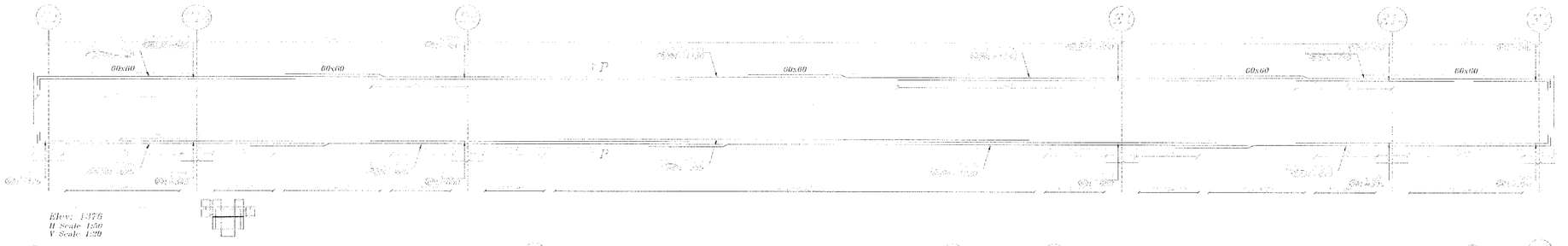

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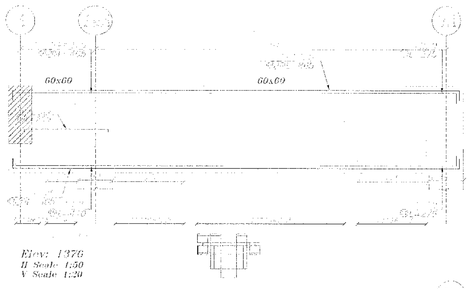

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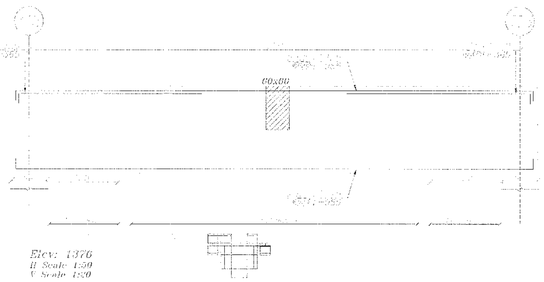

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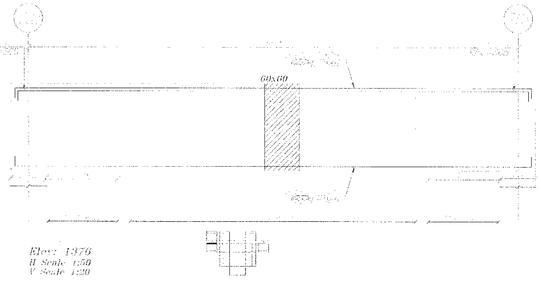

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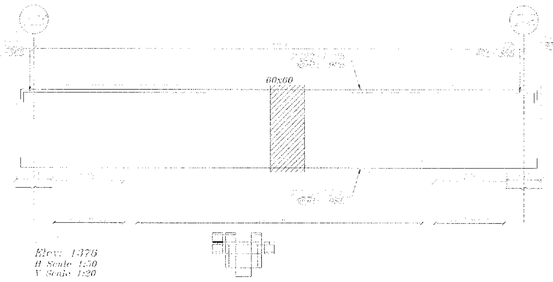

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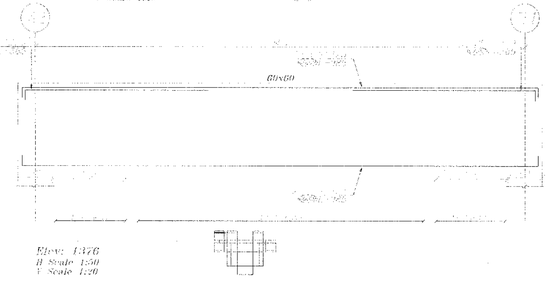

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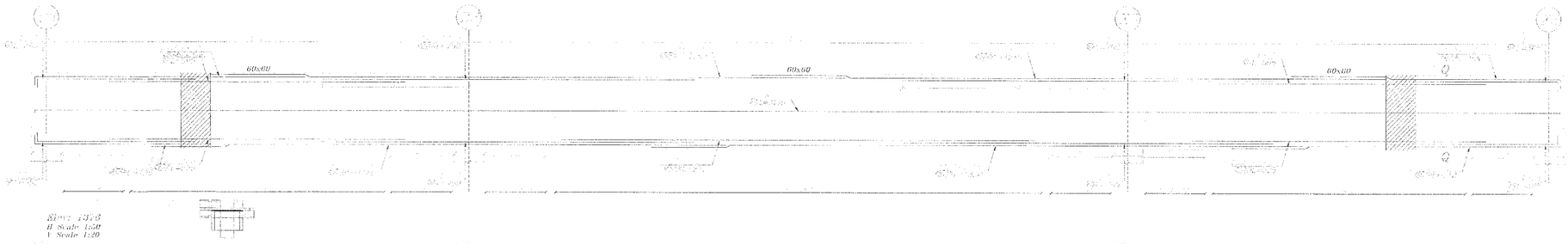

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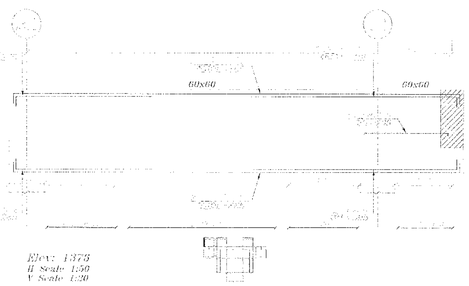

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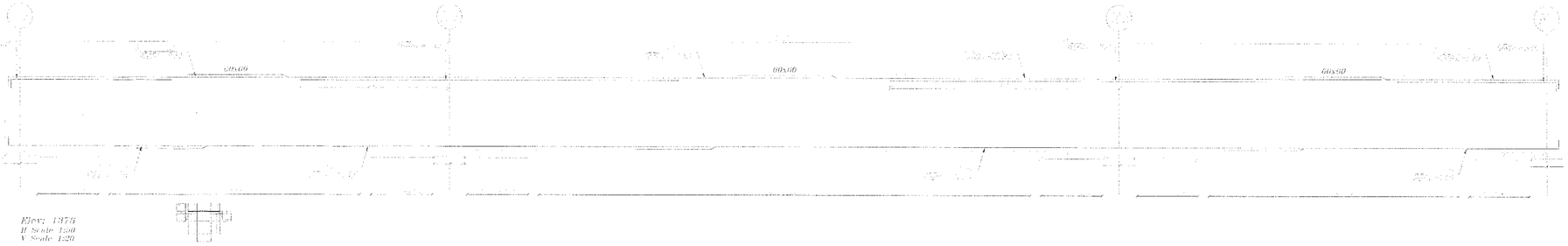

Elev: 1376
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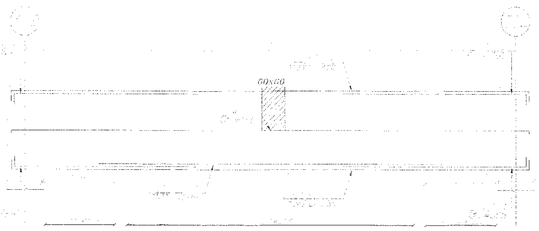
Scale 1:20
Clear Dist. of Top Rebars: 5.3 cm
Clear Dist. of Bot. Rebars: 5.7 cm



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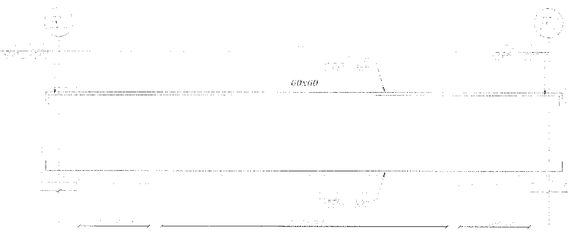

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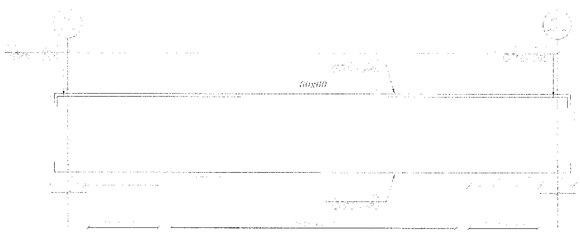

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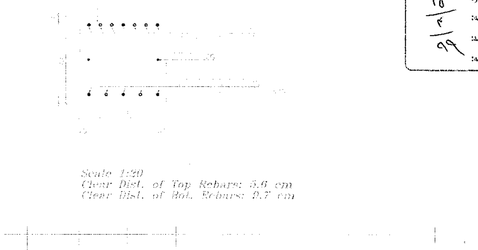
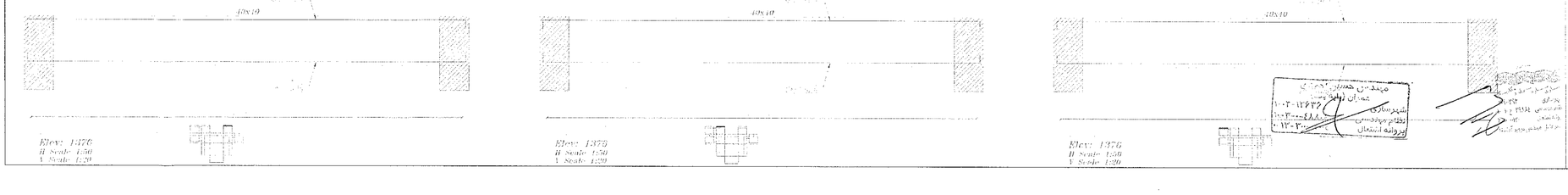


Scale 1:20
Clear Dist. of Top Rebars: 5.6 cm
Clear Dist. of Bot. Rebars: 5.7 cm



Elev: 1376
H Scale 1:50
V Scale 1:20

Elev: 1376
H Scale 1:50
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Elev: 1376
H Scale 1:50
V Scale 1:20

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DRAWN BY	PROJECT TITLE
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APPROVED BY	SHEET TITLE
DATE	SCALE DWG NO

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RESP

DESIGNED BY

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APPROVED BY

DATE

PROJECT TITLE

SHEET TITLE

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DWG.NO

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V Scale 1:20

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Elev: 512
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V Scale 1:20

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60x60 60x60 60x60

Elev: 512
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Elev: 512
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V Scale 1:20

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Elev: 512
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V Scale 1:20

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Elev: 512
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V Scale 1:20

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Elev: 512
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Elev: 512
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Elev: 512
H Scale 1:50
V Scale 1:20

60x60

Elev: 512
H Scale 1:50
V Scale 1:20

50x50 50x50

Elev: 512
H Scale 1:50
V Scale 1:20

Scale 1:20
Clear Dist. of Top Rebars: 9.0 cm
Clear Dist. of Bot. Rebars: 6.5 cm

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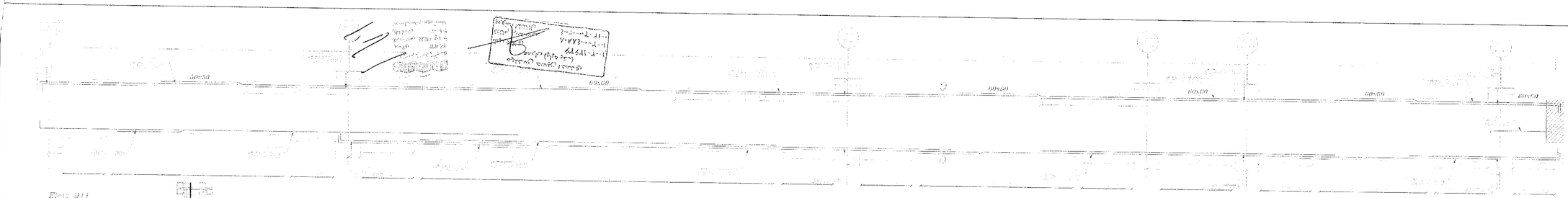
DWG.NO



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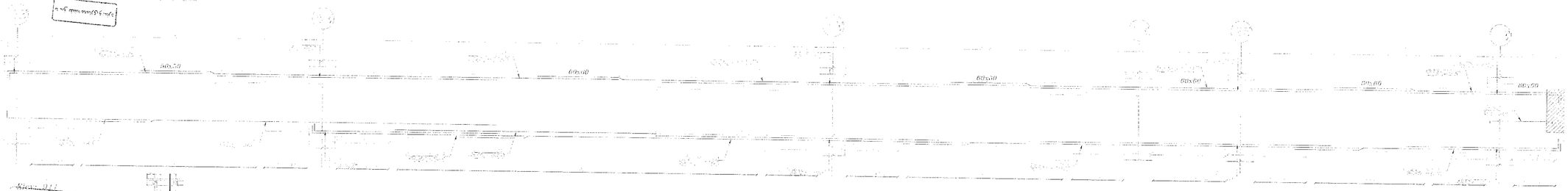

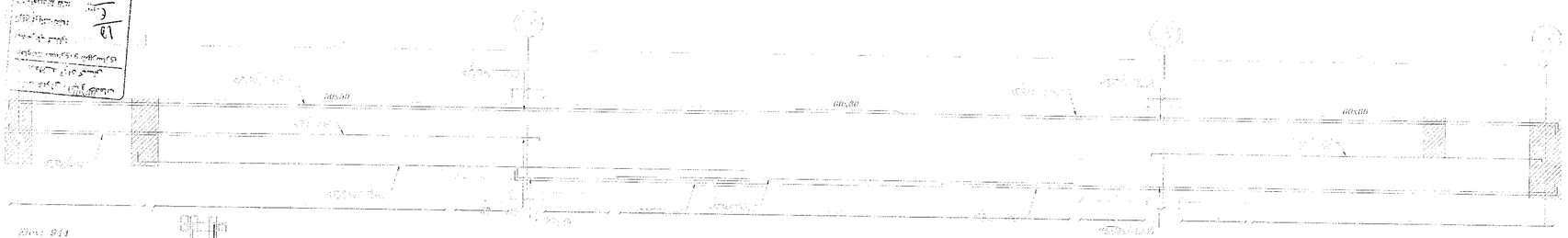

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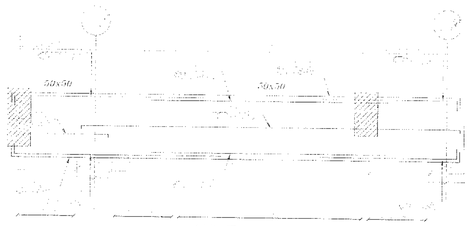

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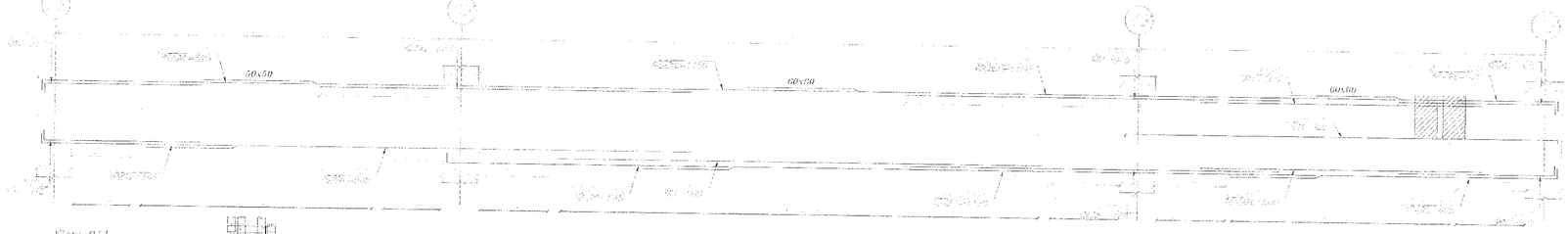

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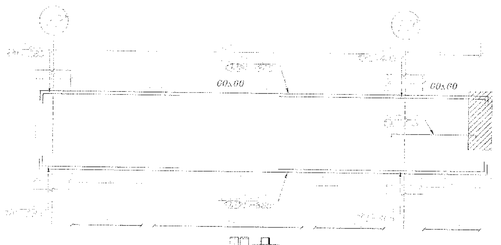

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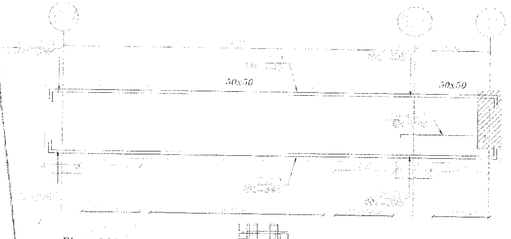

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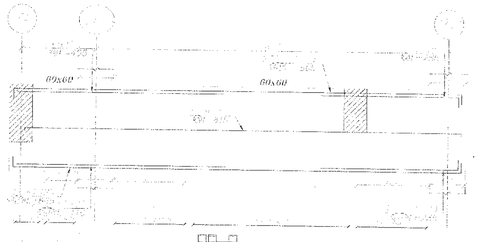

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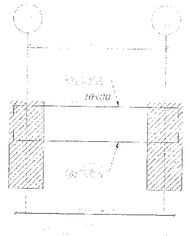

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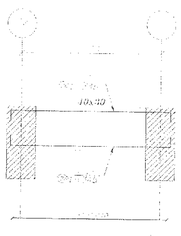

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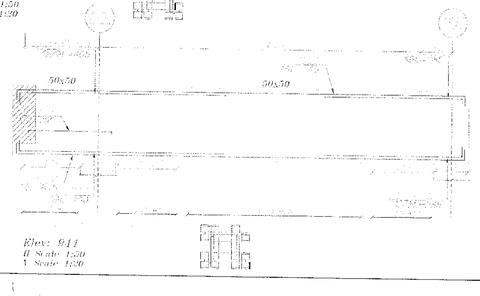

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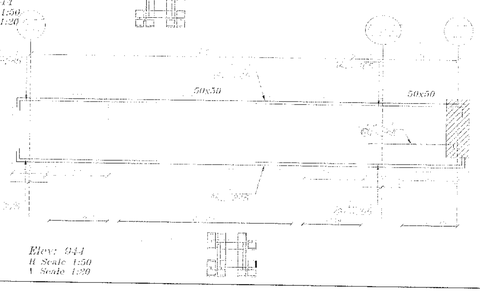

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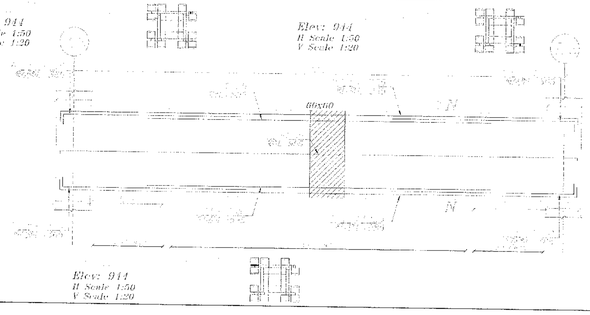
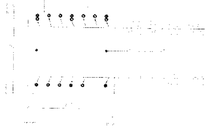
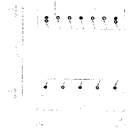


Scale 1:20
Clear Dist. of Top Rebars: 5.0 cm
Clear Dist. of Bot. Rebars: 5.7 cm



Scale 1:20
Clear Dist. of Top Rebars: 5.0 cm
Clear Dist. of Bot. Rebars: 9.9 cm



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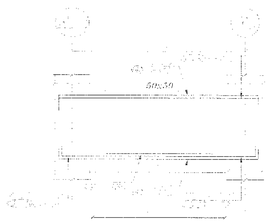

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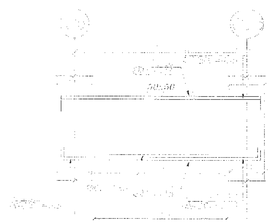

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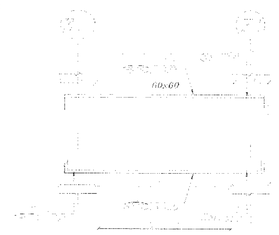

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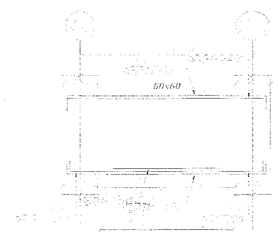

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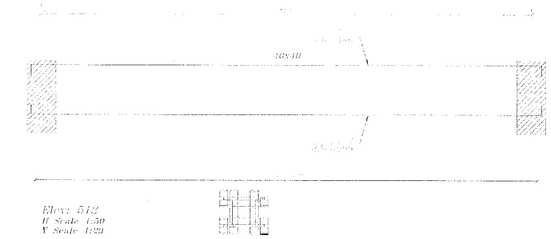

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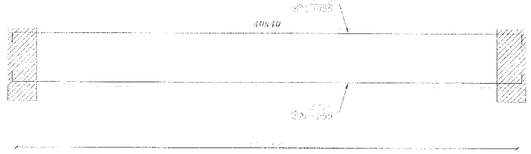

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Elev: 512
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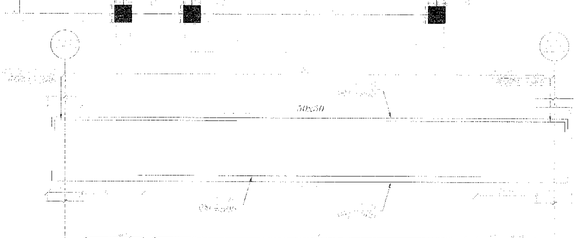

Elev: 512
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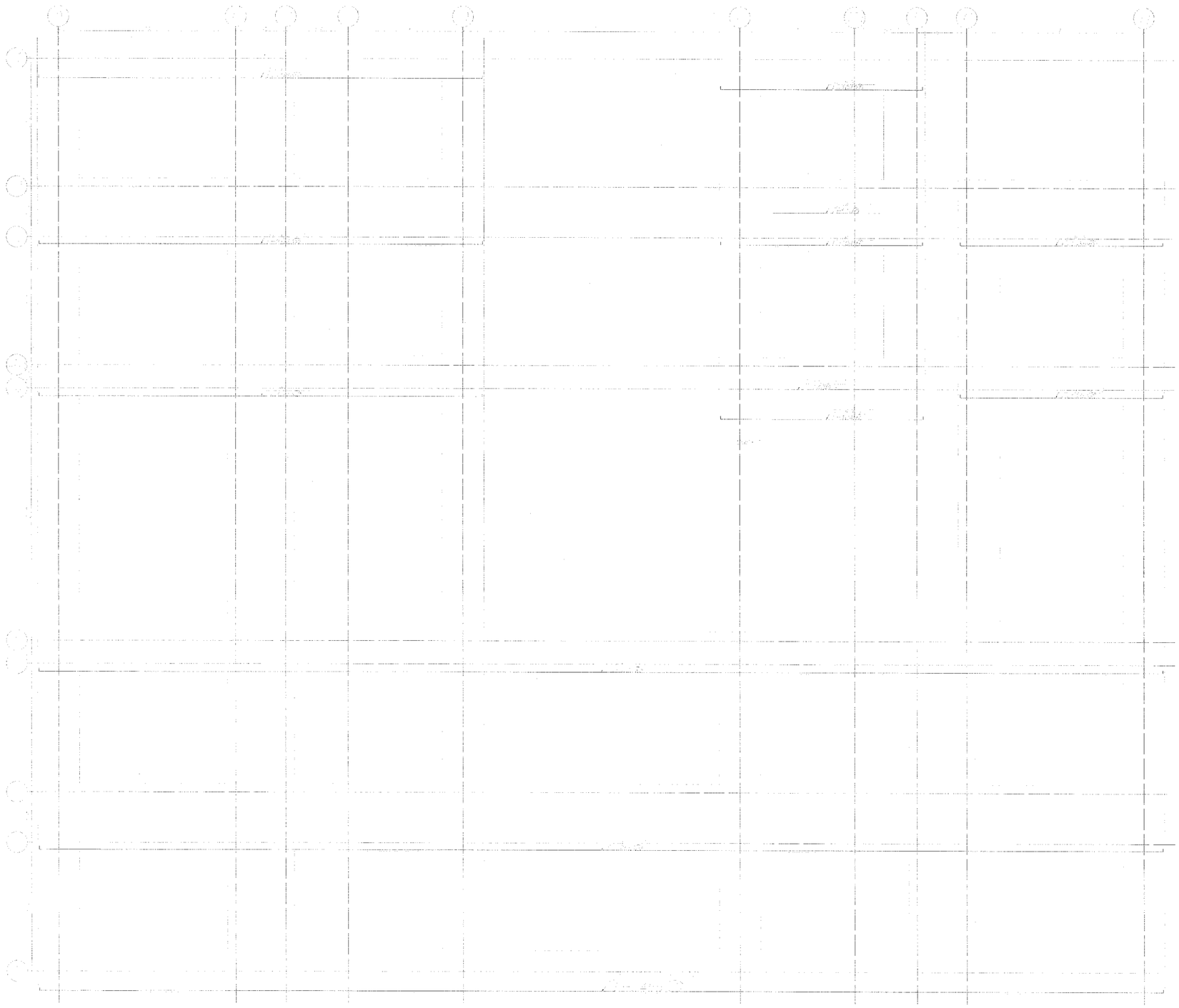
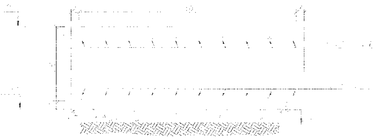
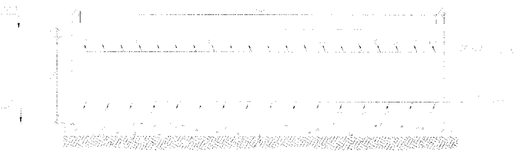
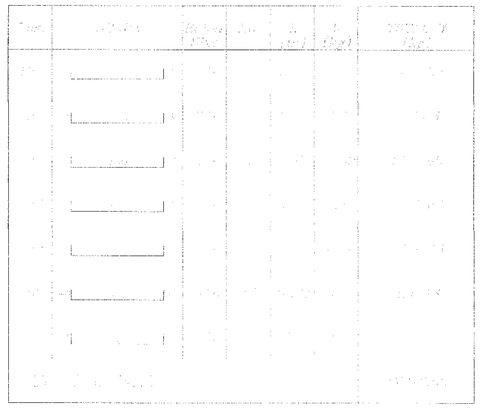
APPROVED BY	SHEET TITLE
DATE	SCALE DWG NO







Foundation-1 Rebars Schedule



Foundation-1 Rebars Cutting Layout

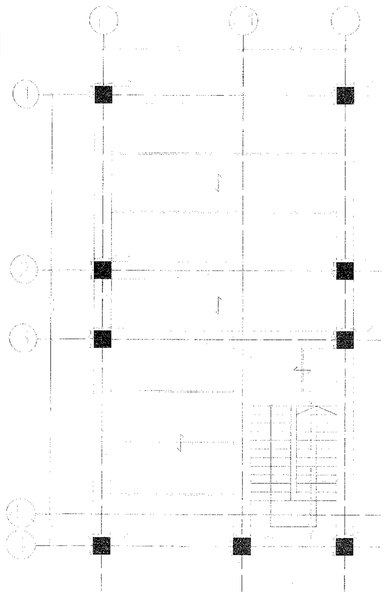
For ⌀16 *Unit: m*

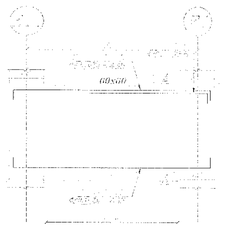
Pos	
200	

Foundation-1 Rebars Size Schedule

FIELD
RESP.
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
DATE

PROJECT TITLE
SHEET TITLE
SCALE
DWG.NO





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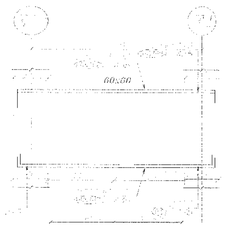
V Scale 1:20



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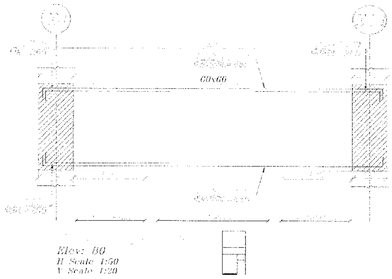

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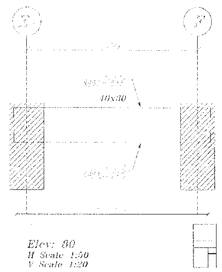

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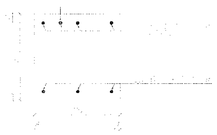
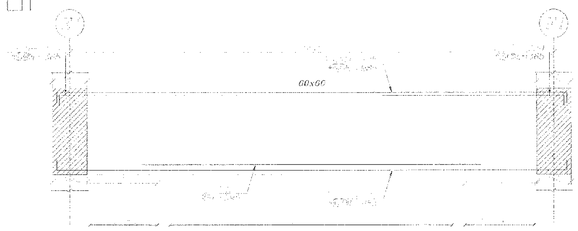


Scale 1:20
Clear Dist. of Top Rebars: 9.6 cm
Clear Dist. of Bot. Rebars: 21.8 cm



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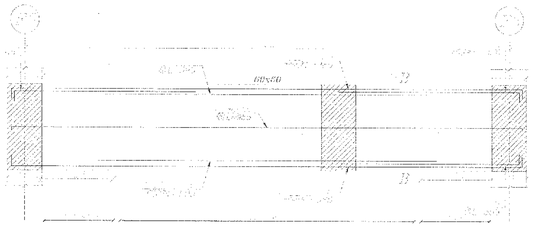

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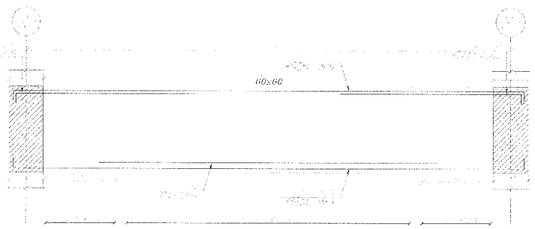

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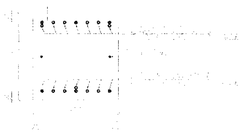
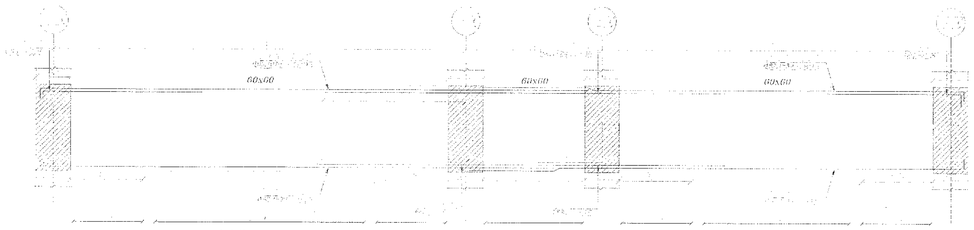


Scale 1:20
Clear Dist. of Top Rebars: 8.6 cm
Clear Dist. of Bot. Rebars: 5.7 cm



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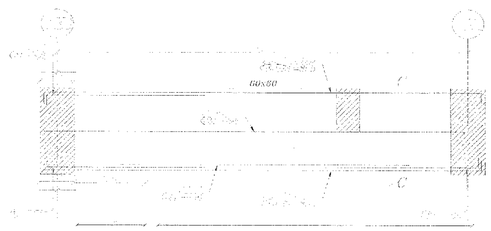

Elev: 80
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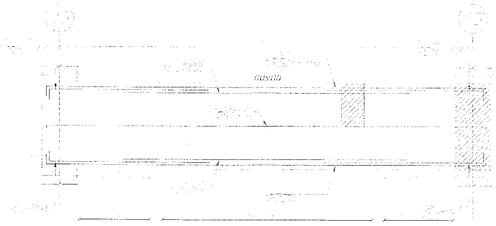
V Scale 1:20



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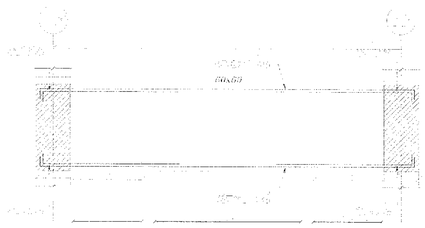

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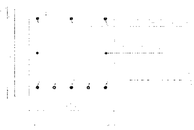
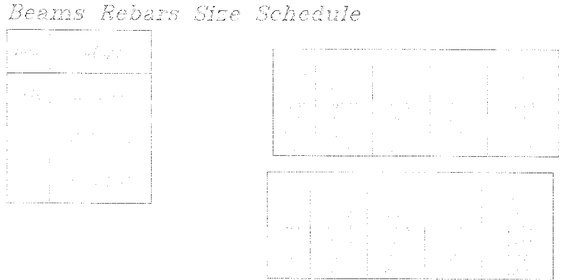
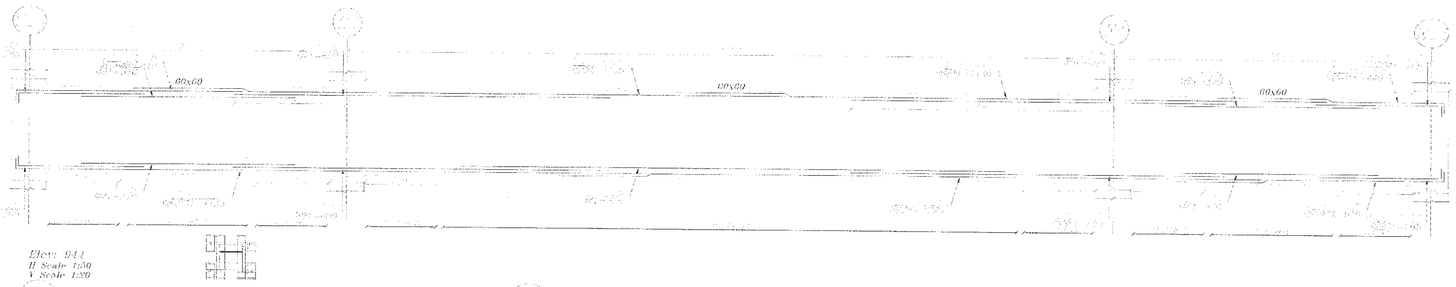


Scale 1:20
Clear Dist. of Top Rebars: 21.8 cm
Clear Dist. of Bot. Rebars: 9.6 cm

Beams Rebars Size Schedule



| | | |



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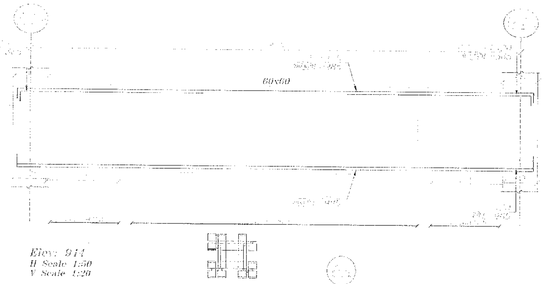

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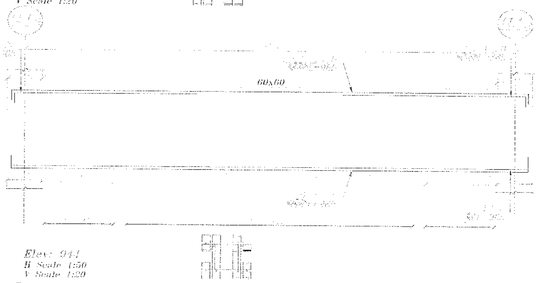

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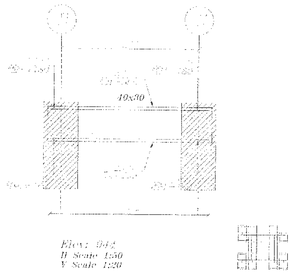

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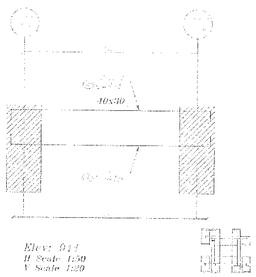

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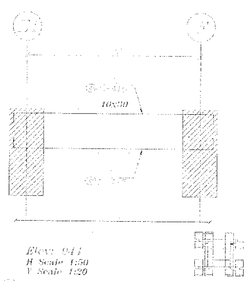

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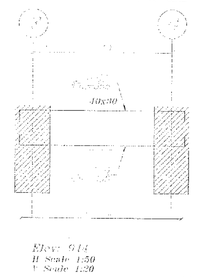

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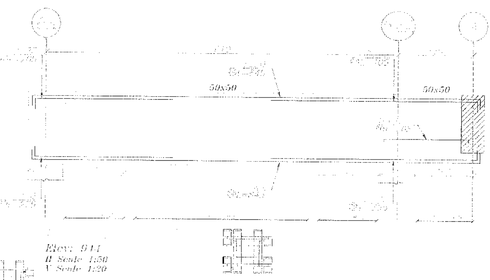

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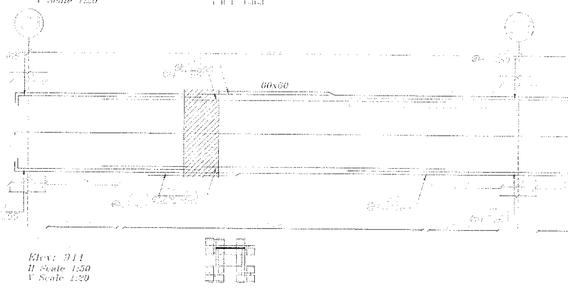

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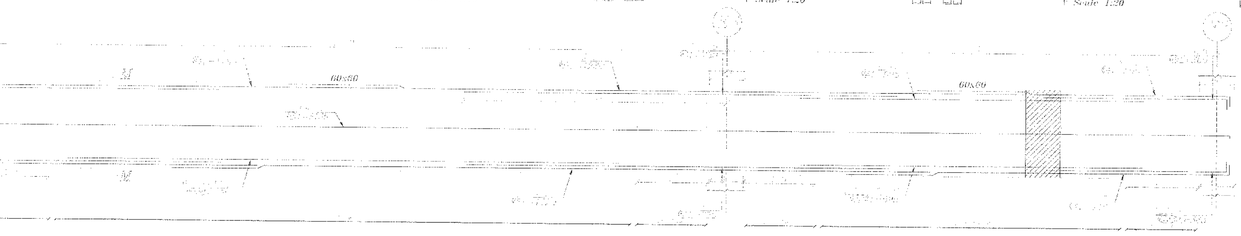

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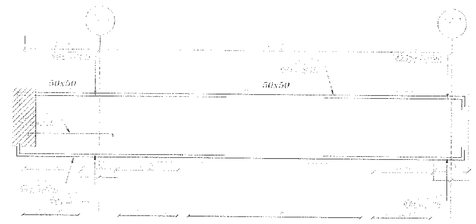

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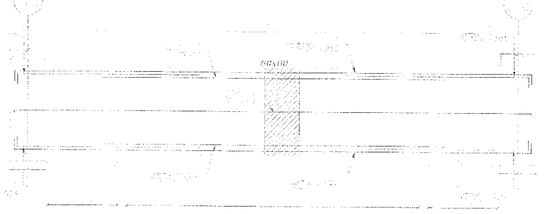

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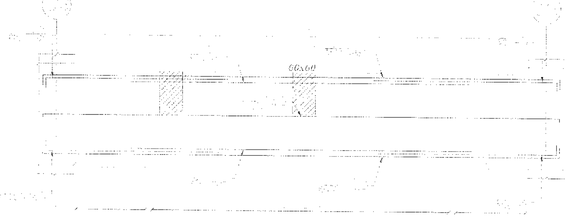

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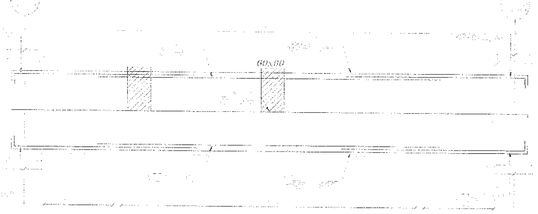

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Elev: 944
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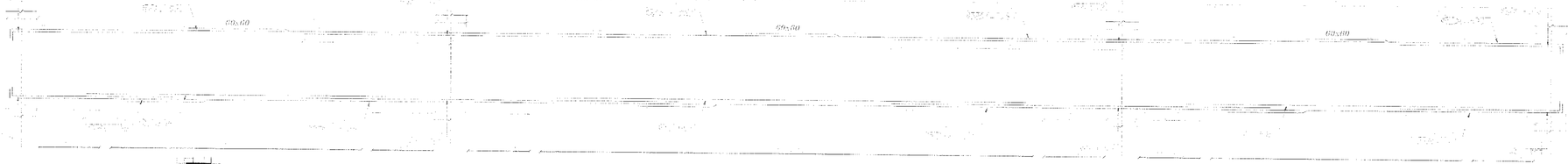

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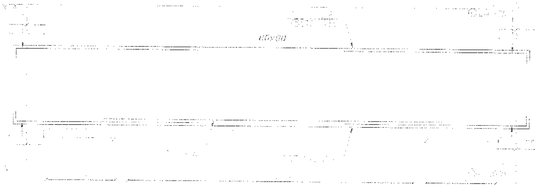
V Scale 1:20

Elev: 944
H Scale 1:50
V Scale 1:20



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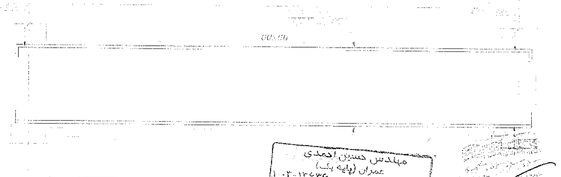

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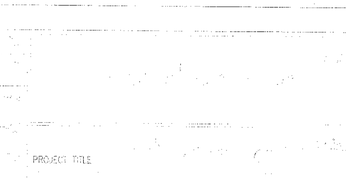


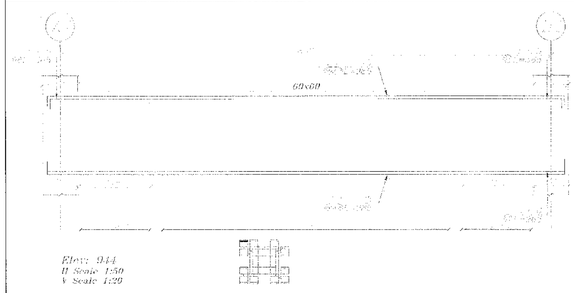
Scale 1:20
Clear Dist. of Top Rebars: 5.4 cm
Clear Dist. of Bot. Rebars: 5.5 cm

مهندس حسین احمدی
عمران (پایه یک)
۱۰۳-۱۲۴۲۲
۱۰۳-۰۰-۴۸۸۰۸
۱۰۳-۲۰۰-۲۰۰۲
نظام مهندسی ساختمان
پروانه اشتغال

شرکت عمران و آب و خدمات
مشاور: شرکت مهندسی و شهرسازی
۱۵
۴
۹۹

نظام مهندسی معماری و شهرسازی

FIELD
RESP
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
DATE
PROJECT TITLE
SHEET TITLE
SCALE
DWG NO



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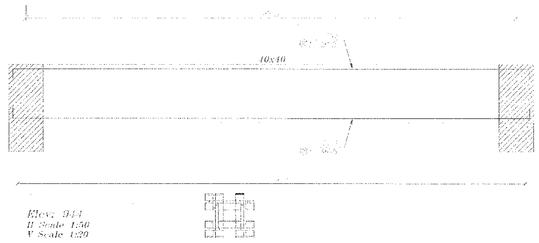

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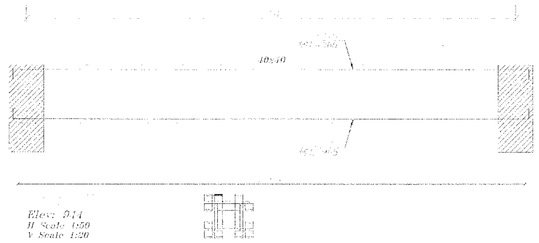

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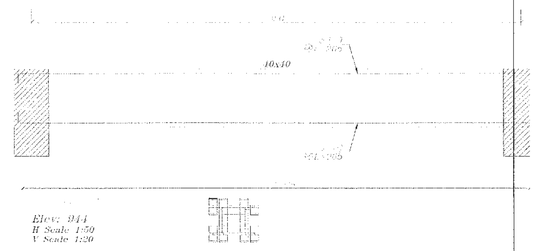

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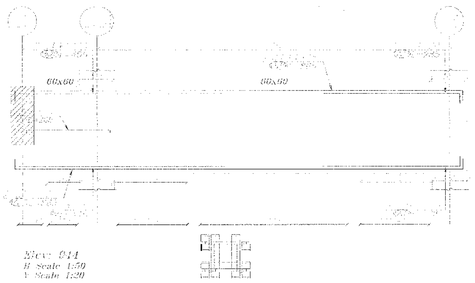

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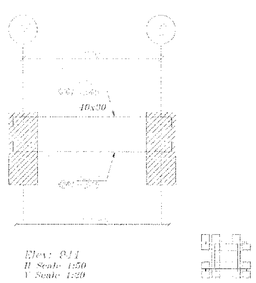

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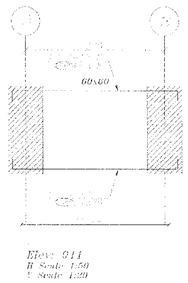

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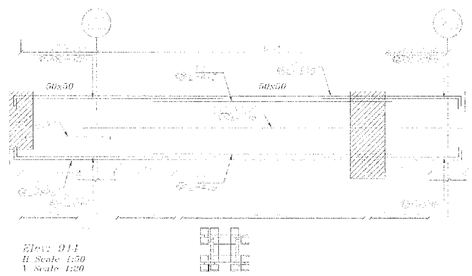

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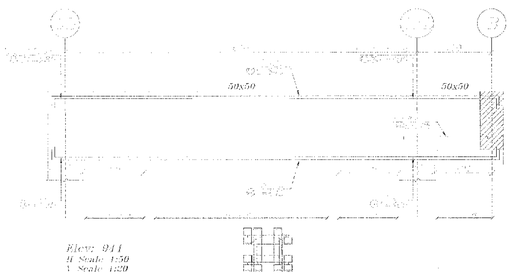

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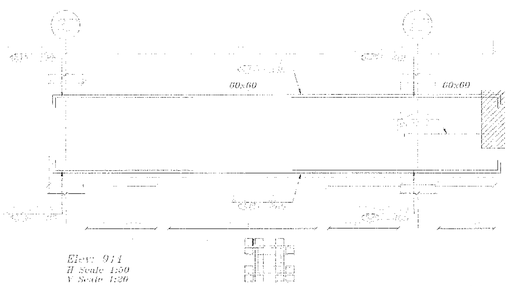

Elev: 944
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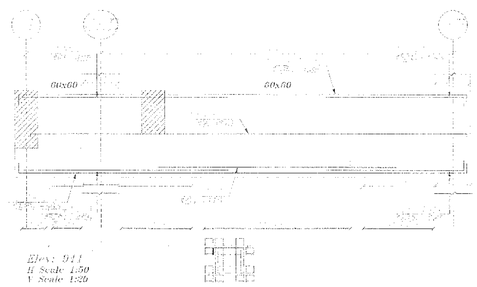

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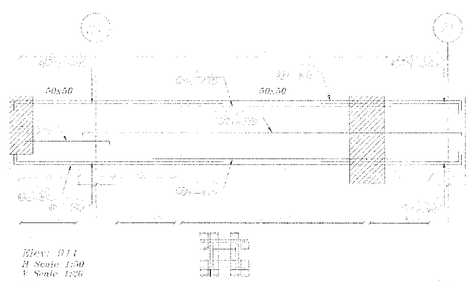

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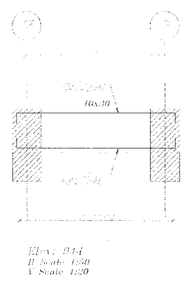

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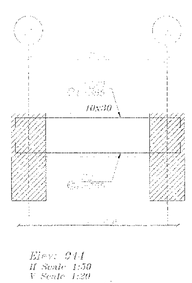

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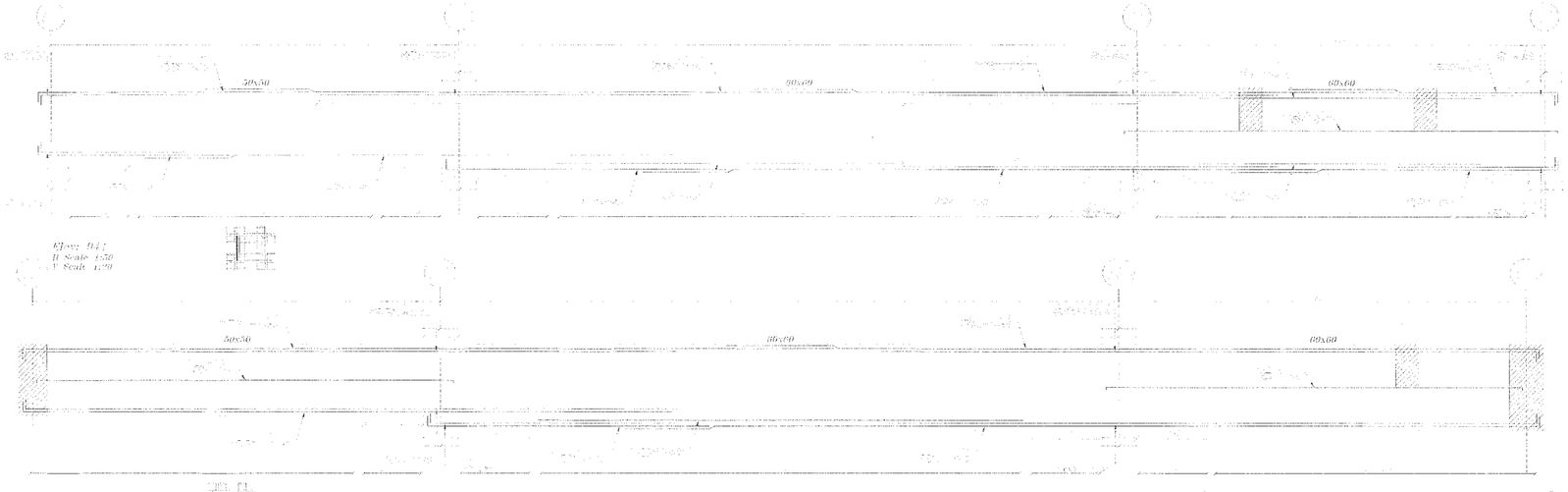

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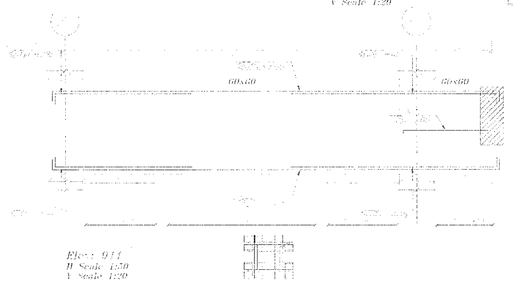

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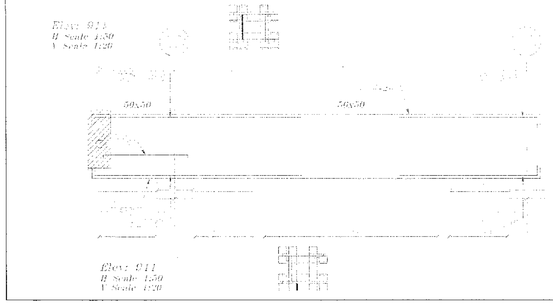

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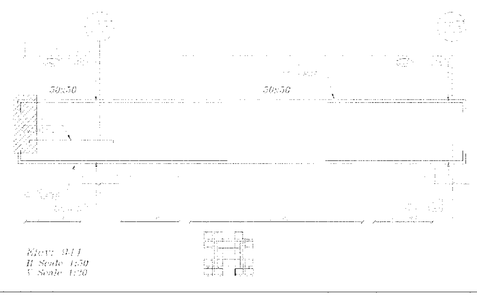

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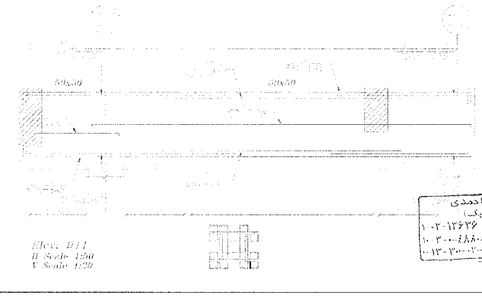

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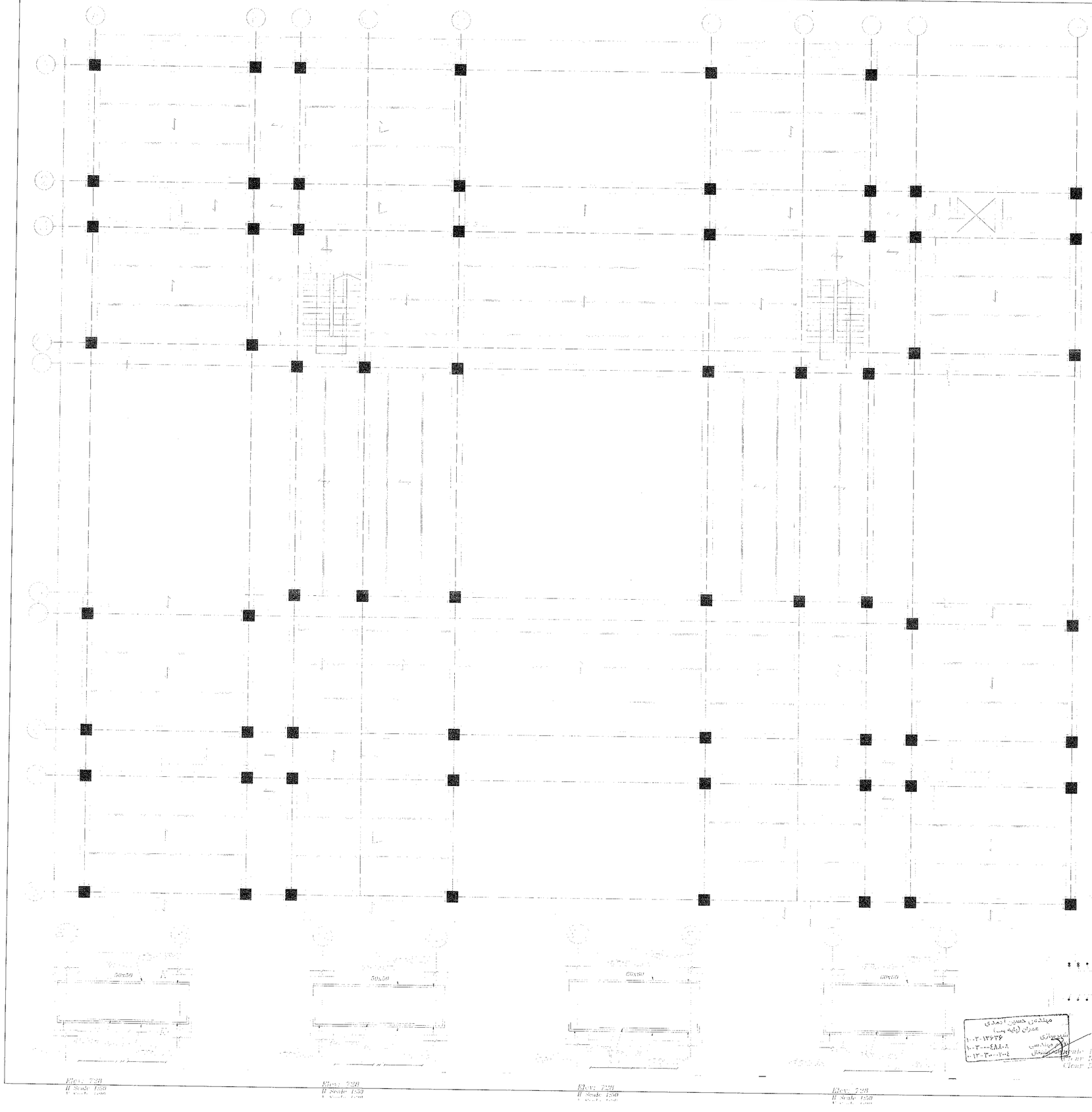
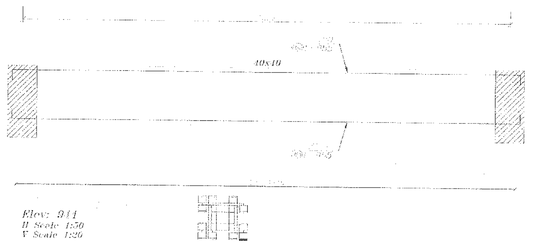
DRAWN BY	PROJECT TITLE
CHECKED BY	
APPROVED BY	SHEET TITLE
DATE	SCALE DRG.NO





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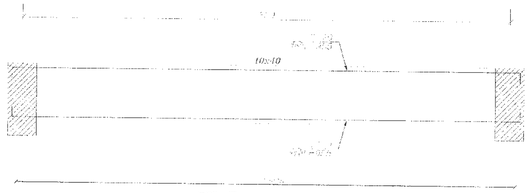

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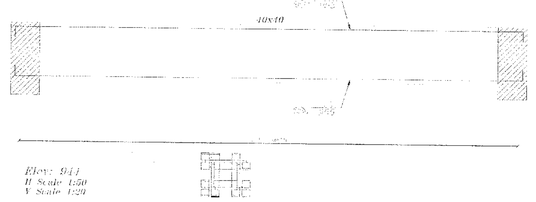

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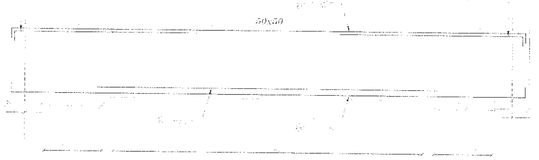

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Elev: 728
H Scale 1:50
V Scale 1:20

Elev: 728
H Scale 1:50
V Scale 1:20

Elev: 728
H Scale 1:50
V Scale 1:20

Elev: 728
H Scale 1:50
V Scale 1:20

Scale: 1:20
Clear Dist. of Top Rebars: 7.5 cm
Clear Dist. of Bot. Rebars: 7.5 cm

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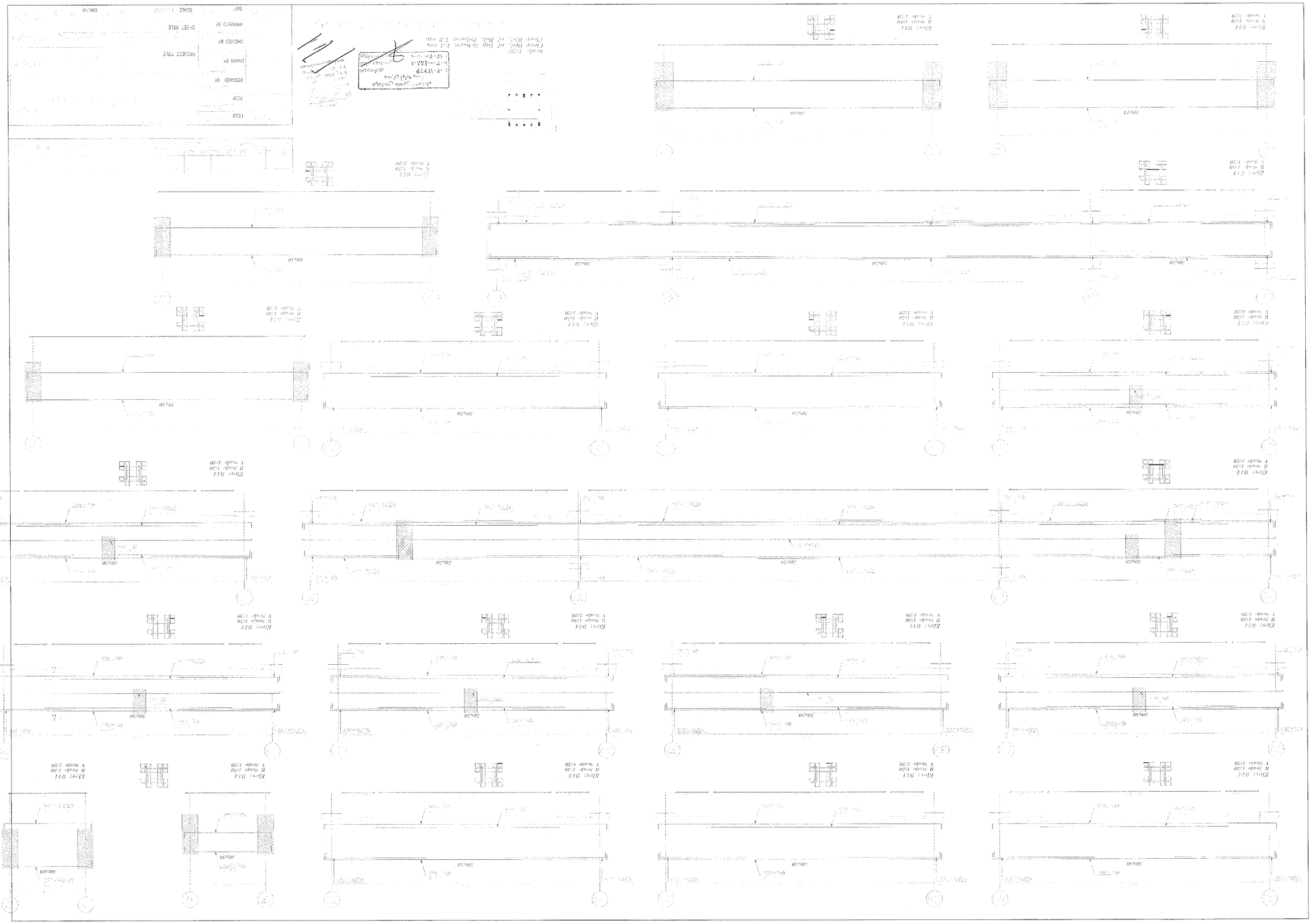
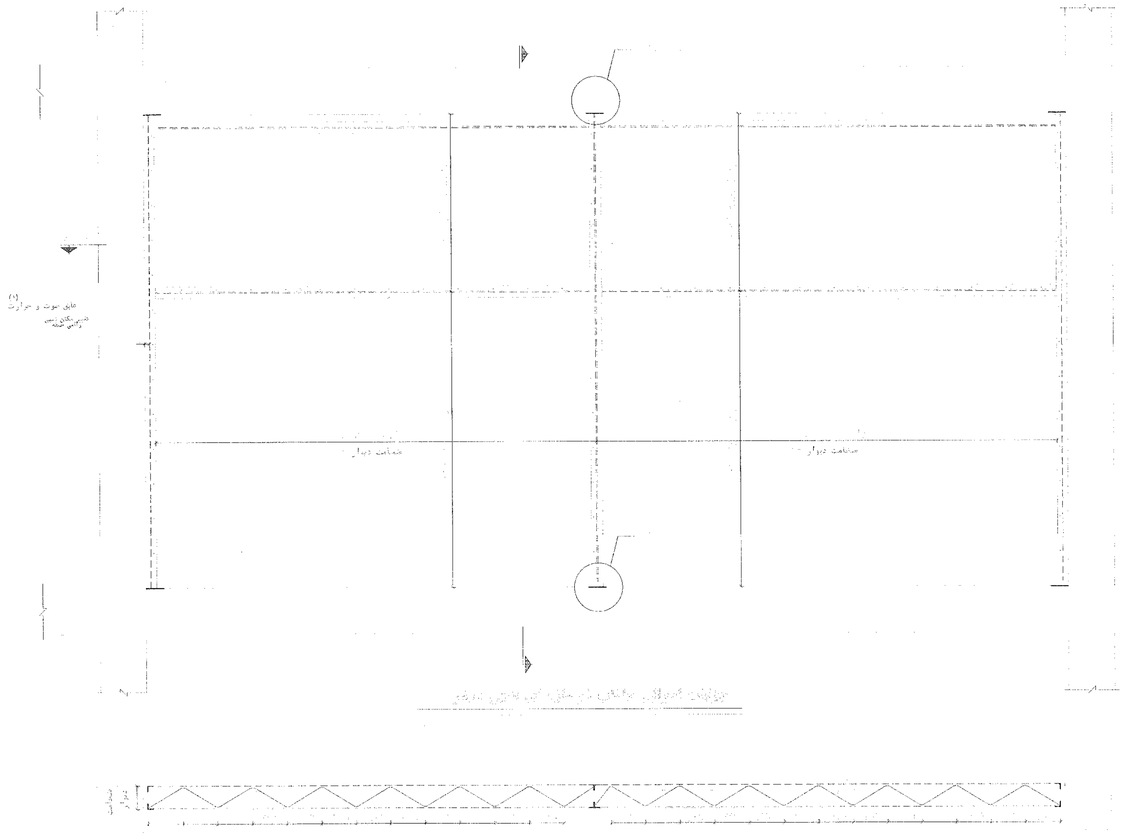
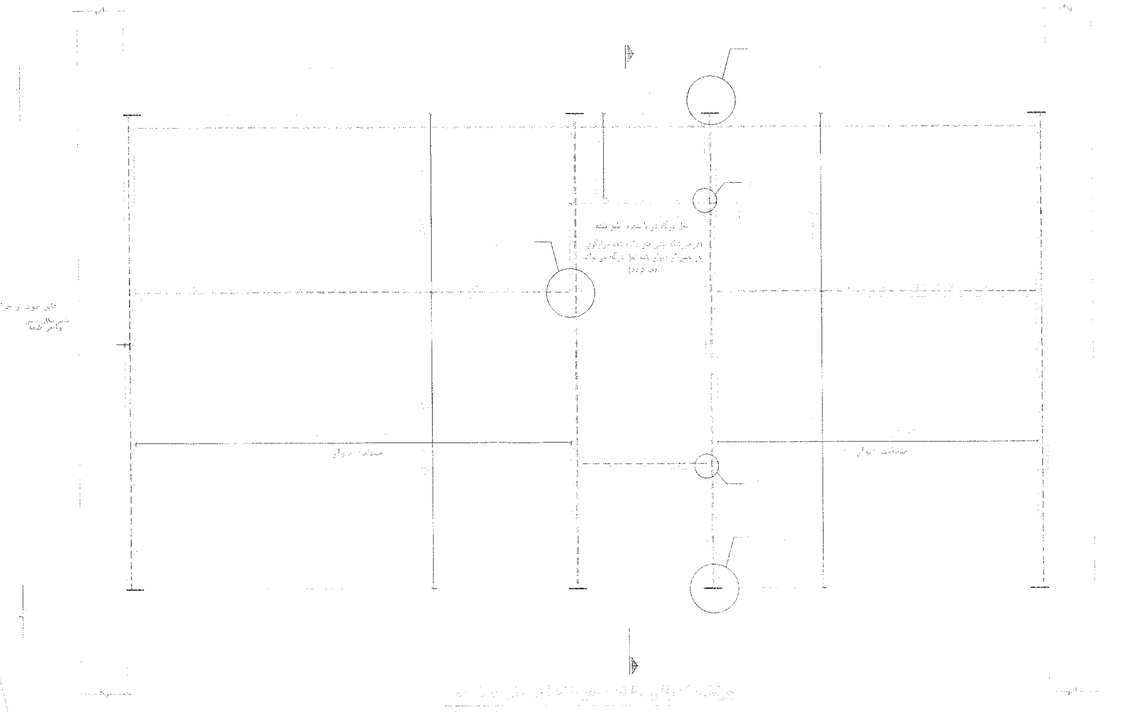
RESP	
DESIGNED BY	
DRAWN BY	
CHECKED BY	PROJECT TITLE
APPROVED BY	SHEET TITLE
DATE	SCALE DWG NO





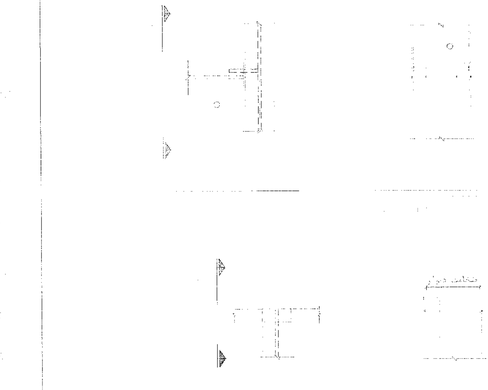


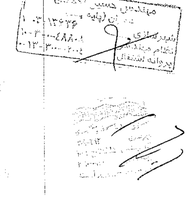
Beams Rebars Schedule

Mark	Sketch	Weight (kg)	No.	L (cm)	B (cm)	Total Weight (kg)

Beams Rebars Schedule

Mark	Sketch	Weight (kg)	No.	L (cm)	B (cm)	Total Weight (kg)





FIELD	
RESP	
DESIGNED BY	
DRAWN BY	PROJECT TITLE
CHECKED BY	
APPROVED BY	SHEET TITLE
DATE	SCALE DWG NO

Foundation-2 Rebars Cutting Layout

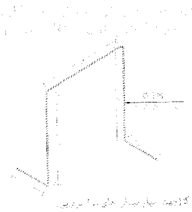
For ø25 — Unit: m

Cutting Pattern	Pos		
5 3 9			
8 5 3			
8 5 2			
2 4			
7			
5			

Foundation-2 Rebars Cutting Layout

For ø20 — Unit: m

Cutting Pattern	Pos		
6			



مهندسان مشاور ... و خدمات
سازمان ... کیفیتی
نظارت عملیات اجرایی ... شهرسازی
۱۵ / ۴ / ۹۲

با سمت حسب محماری و شماره

مهندسان مشاور ...
شماره پروانه :
۱۰۰۲-۱۳۲۳۶
۱۰۰۳-۰۰۰۴۸۸۰۸
۱۰۱۲-۳۰۰۰۰۰۸

FIELD	
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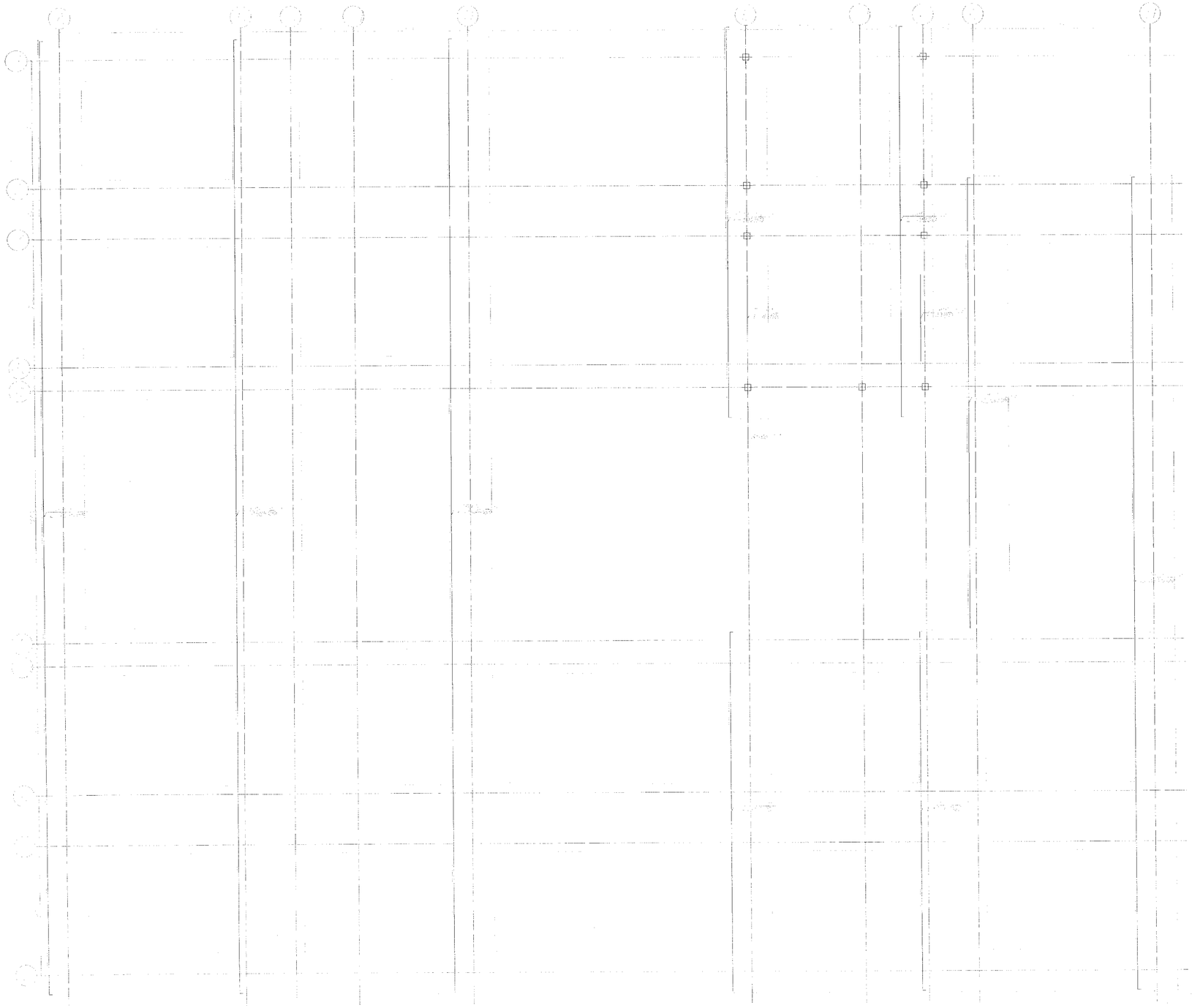
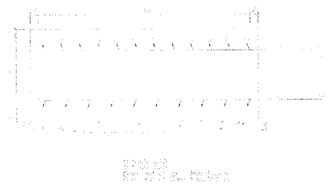
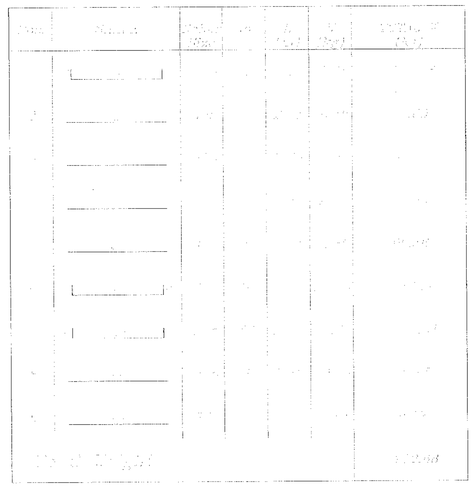
DESIGNED BY	
DRAWN BY	PROJECT TITLE
CHECKED BY	
APPROVED BY	SHEET TITLE
DATE	SCALE

DWG NO

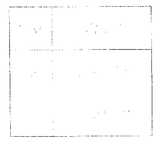


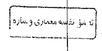


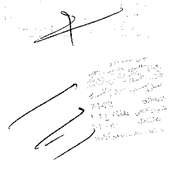
Foundation-2 Rebars Schedule



Foundation-2 Rebars Size Schedule







FIELD

RESP.

DESIGNED BY

DRAWN BY

CHECKED BY

APPROVED BY

DATE

PROJECT TITLE

SHEET TITLE

SCALE

DWG NO

Beams Rebars Schedule

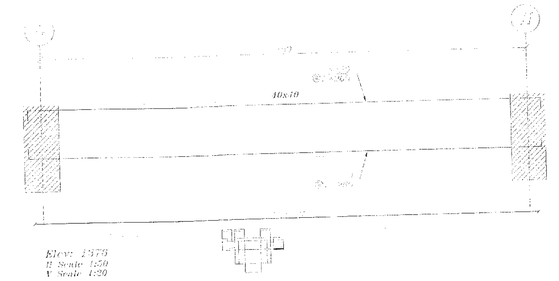
Beams Rebars Schedule

Beams Rebars Schedule

Beams Rebars Schedule

مهاجرین حسین احمدی
تهران (واحد پنج)
مهندس
نظام مهندسی
پروانه اشتغال

HEAD
RESP
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
DATE
PROJECT TITLE
SHEET TITLE
SCALE
DWG NO



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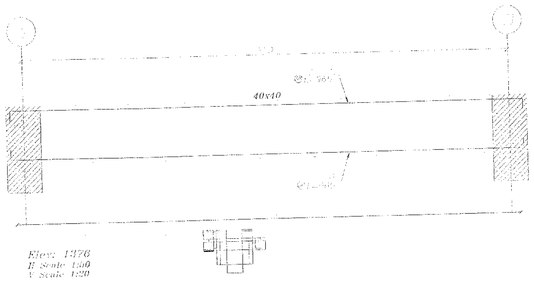

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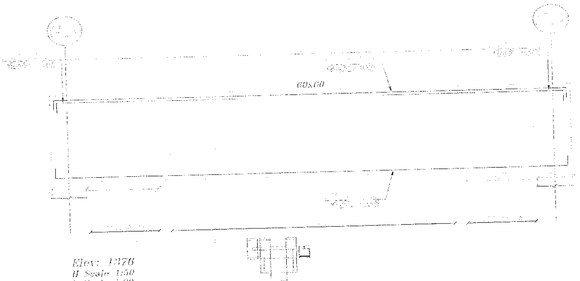

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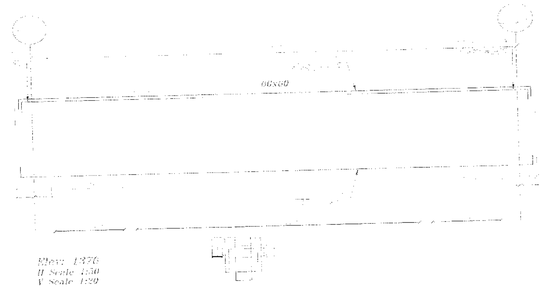

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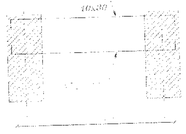

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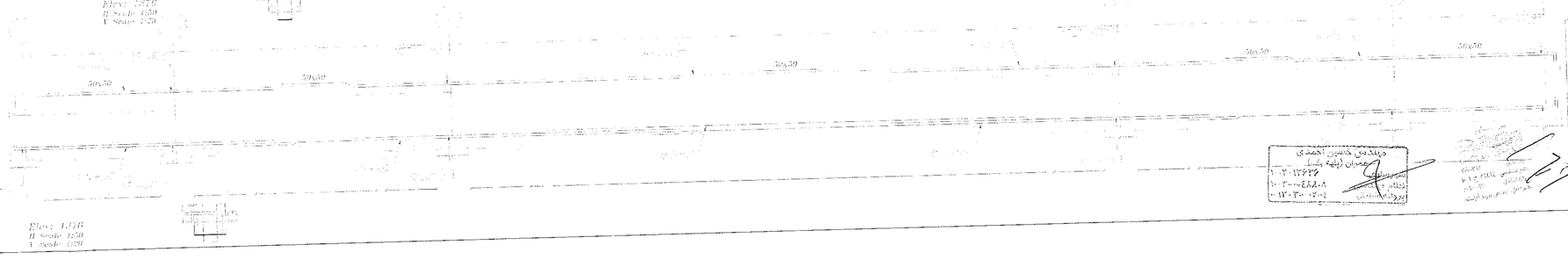

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V Scale 1:20

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وزارت آب و خدمات
شرکت ... آب و فاضلاب
مدیریت ... و شهرسازی
شماره ...
تاریخ ...
با مهر نقشه معتبر و سازه

۸ عدد پلیت مطابق با مشخصات در چهارگوشه آسانسور قبل از بتن ریزی قرار گیرد.

ارماتورهای تقویتی که در لایه دوم قرار میگیرند
باید ۲سانتیمتر با لایه اول فاصله داشته باشند

Stair Rebars Size Schedule

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DESIGNED BY
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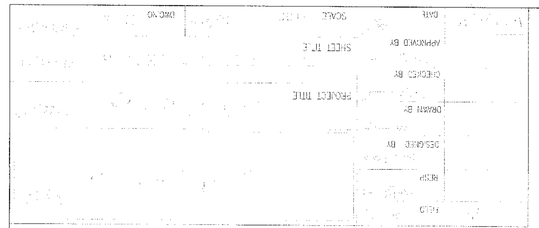
CHECKED BY
APPROVED BY
DATE
PROJECT TITLE
SHEET TITLE
SCALE
DWG NO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APPROVED BY
DATE
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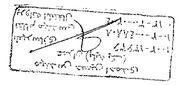
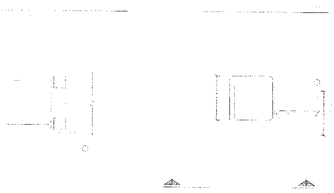
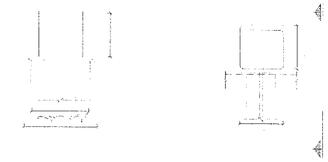
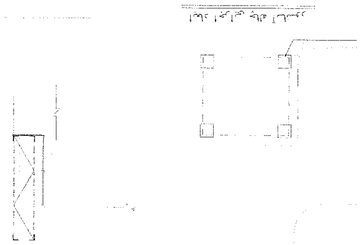
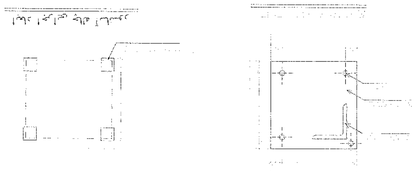
DWG NO
PROJECT TITLE
SHEET TITLE

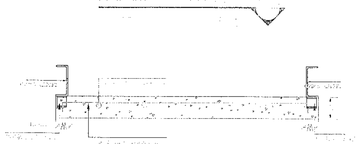


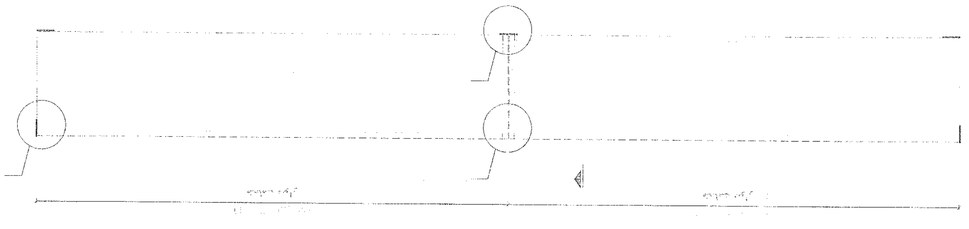


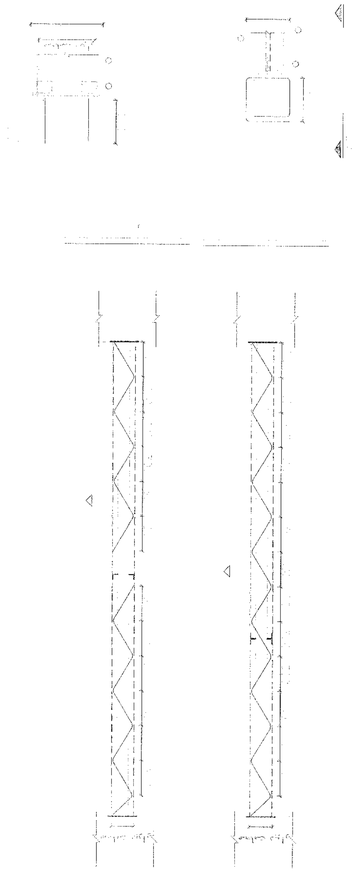


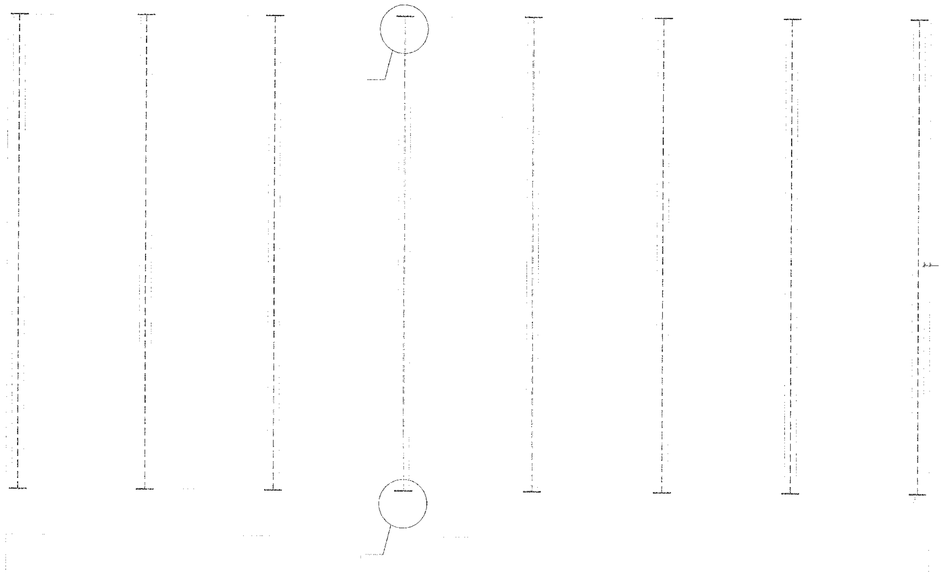


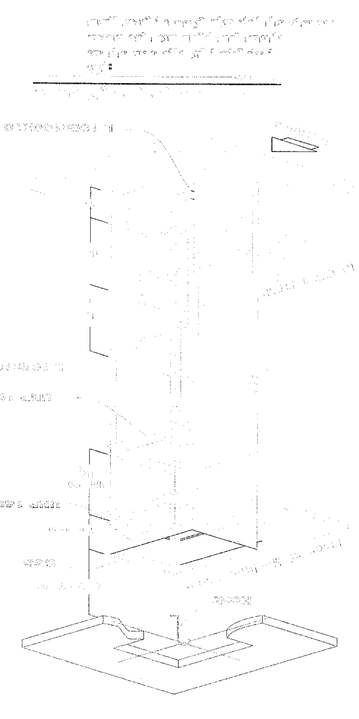


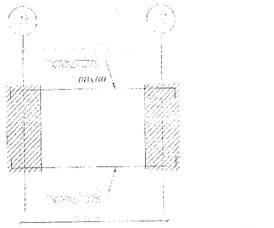












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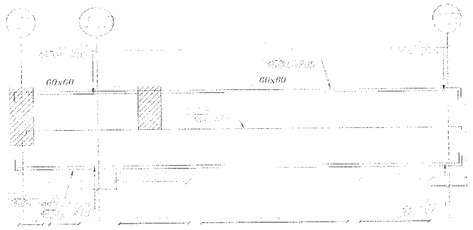

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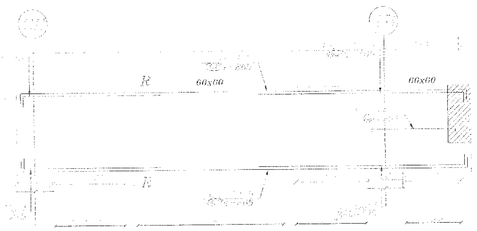
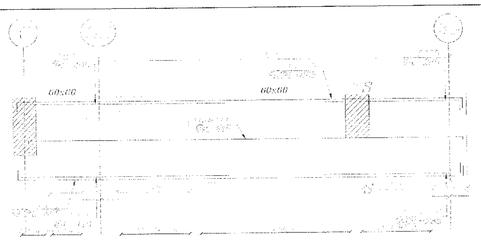
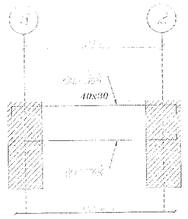
V Scale 1:20



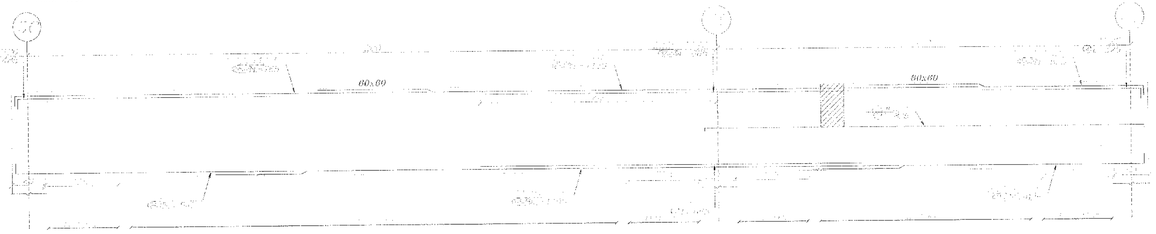
Elev: 1376
H Scale 1:50
V Scale 1:20



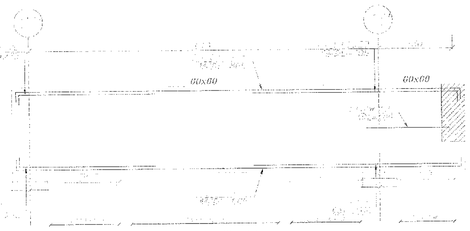
Elev: 1376
H Scale 1:50
V Scale 1:20



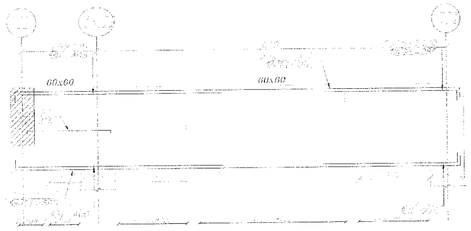
Elev: 1376
H Scale 1:50
V Scale 1:20



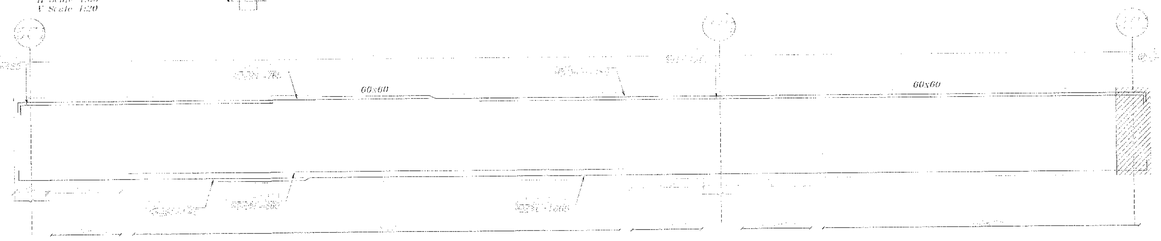
Elev: 1376
H Scale 1:50
V Scale 1:20



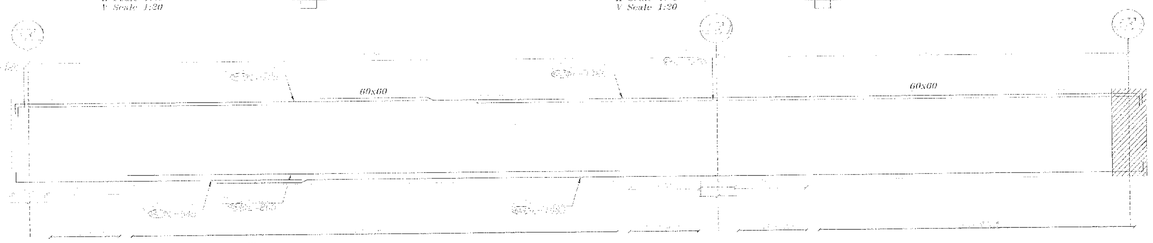
Elev: 1376
H Scale 1:50
V Scale 1:20



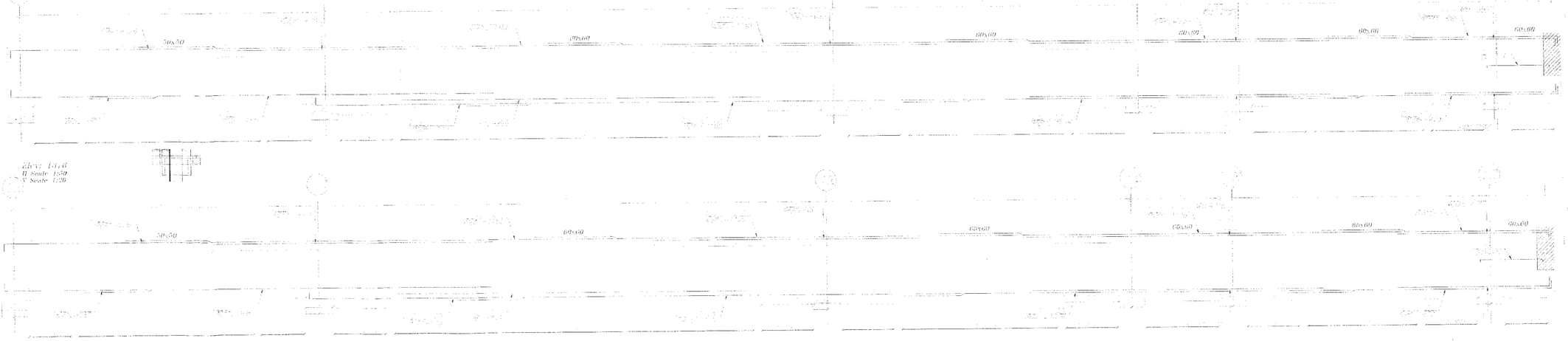
Elev: 1376
H Scale 1:50
V Scale 1:20



Elev: 1376
H Scale 1:50
V Scale 1:20



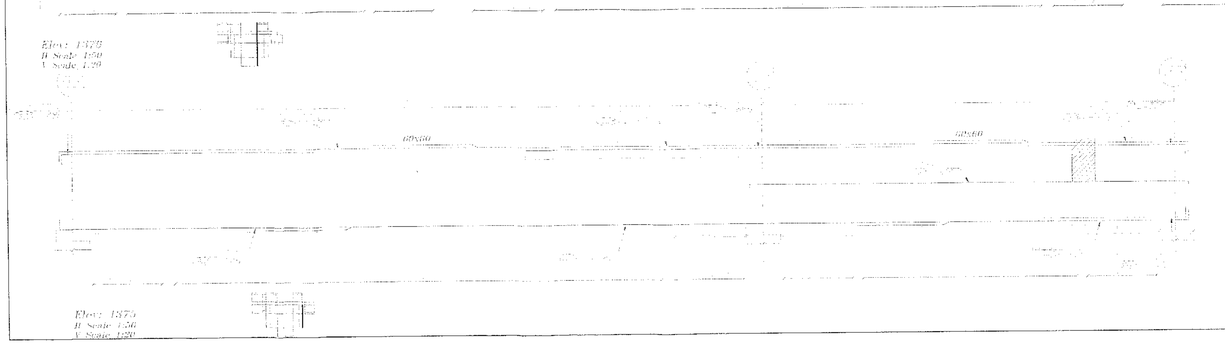
Elev: 1376
H Scale 1:50
V Scale 1:20



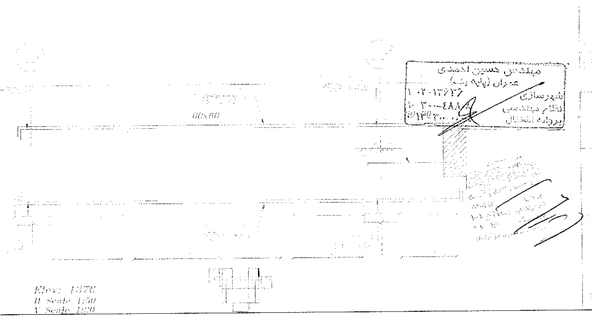
Elev: 1376
H Scale 1:50
V Scale 1:20

Scale 1:20
Clear Dist. of Top Rebars 9.5 cm
Clear Dist. of Bot. Rebars 9.5 cm

Scale 1:20
Clear Dist. of Top Rebars 7.6 cm
Clear Dist. of Bot. Rebars 7.6 cm



Elev: 1376
H Scale 1:50
V Scale 1:20



Elev: 1376
H Scale 1:50
V Scale 1:20

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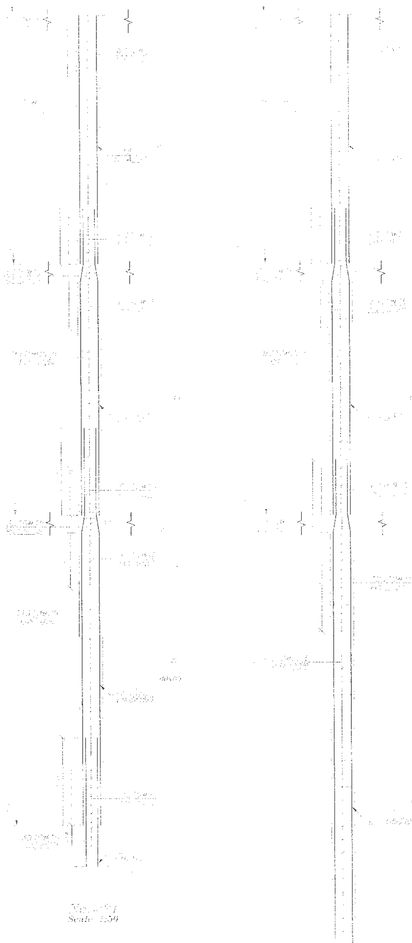
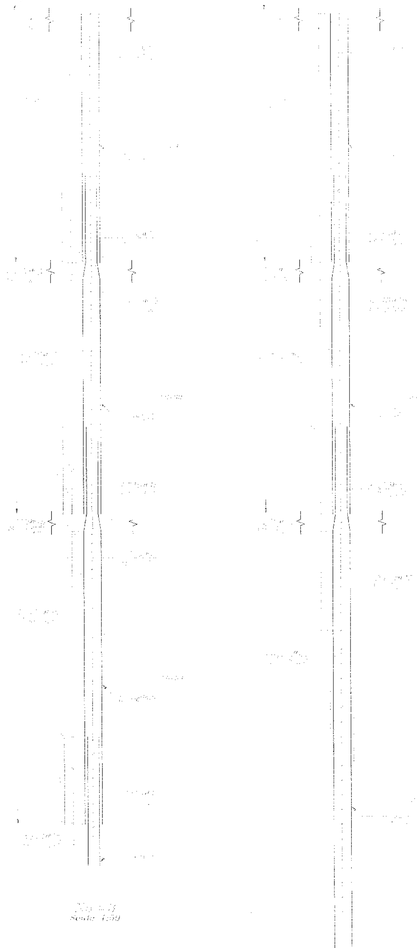
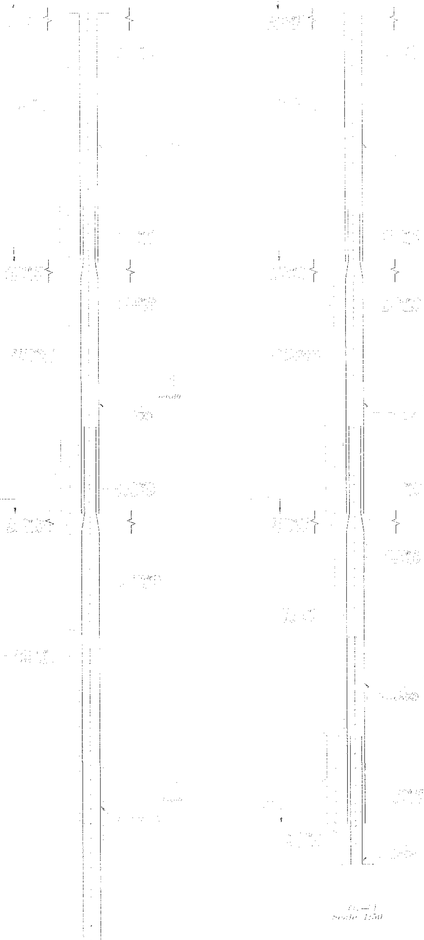
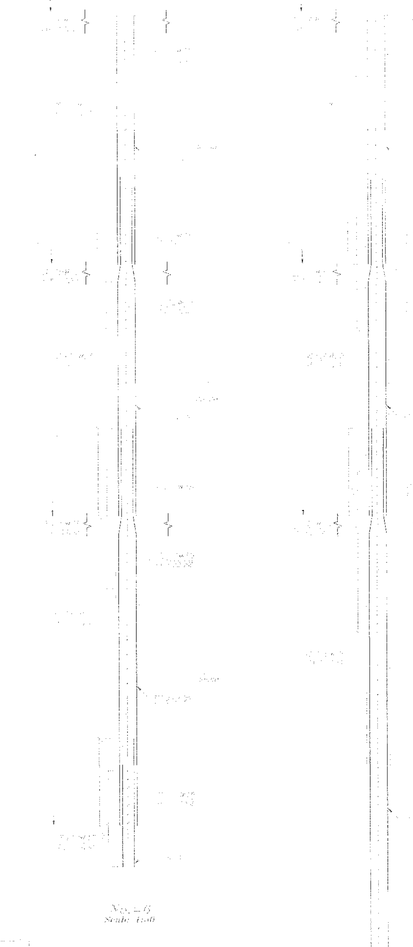
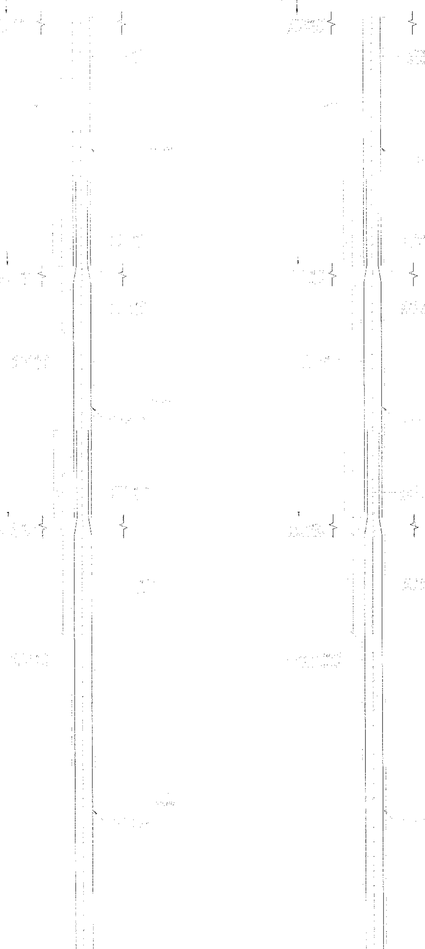
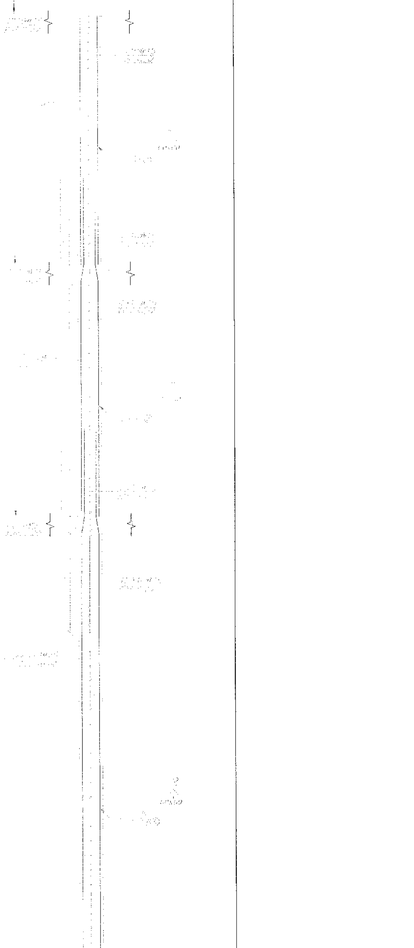


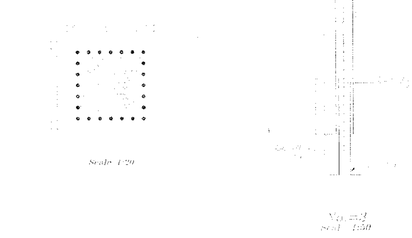


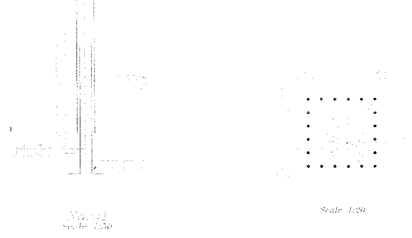


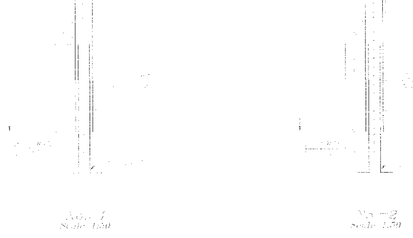


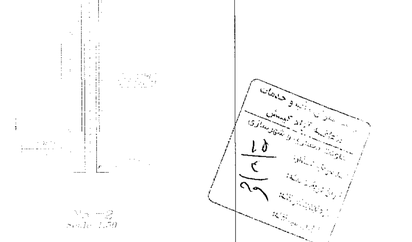












Columns Rebars Cutting Layout

For ⌀20 — Unit: m

Pos									
8									
7									
1									
9									
1									

Columns Rebars Cutting Layout

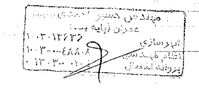
For ⌀25 — Unit: m

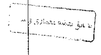
Pos									
6									
2									
4									
2									
3									
5									
3									

Columns Rebars Cutting Layout

For 10 — Unit: m

Pos									
S1	S2								
S1	S2								
S2									
S2									





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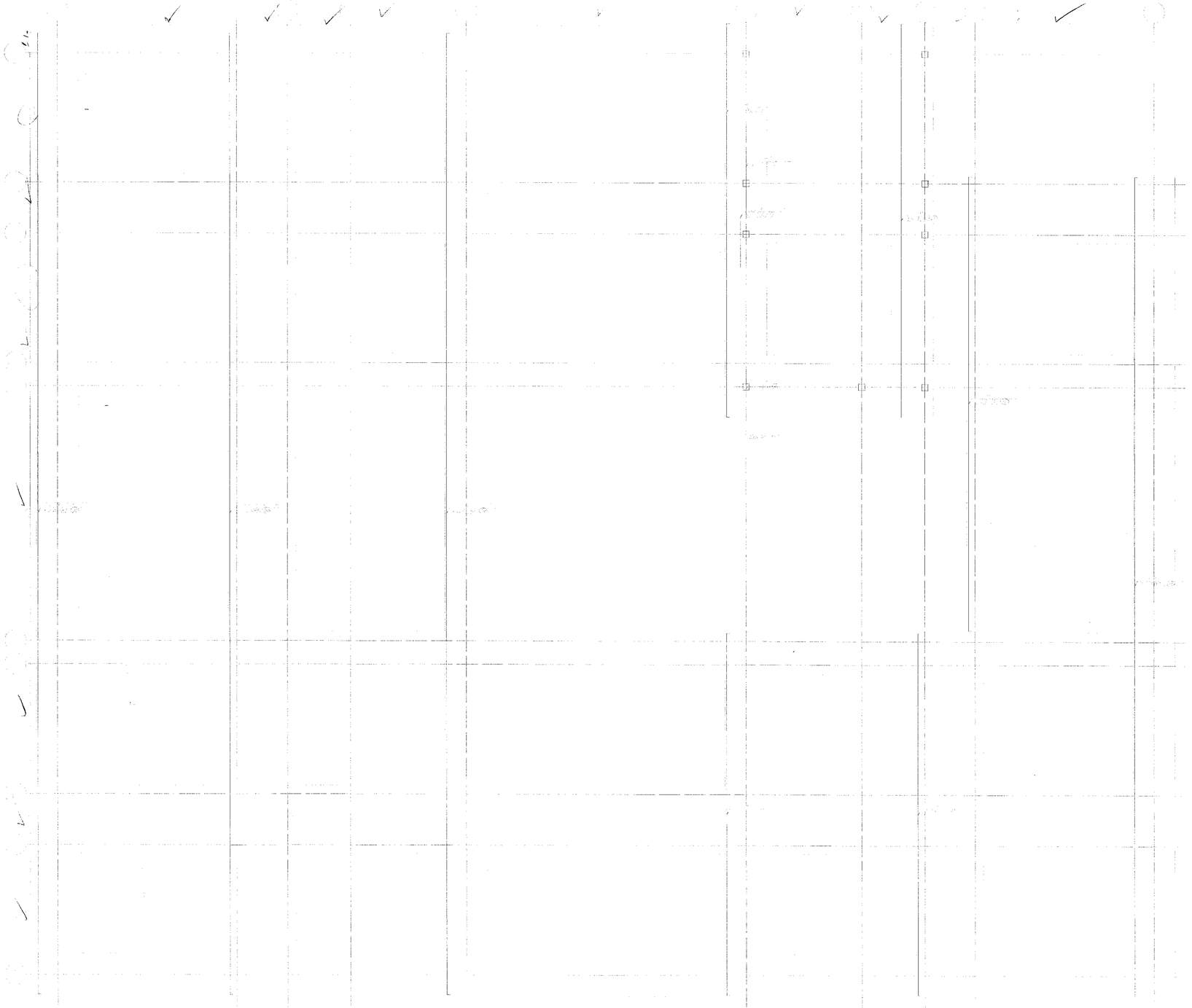
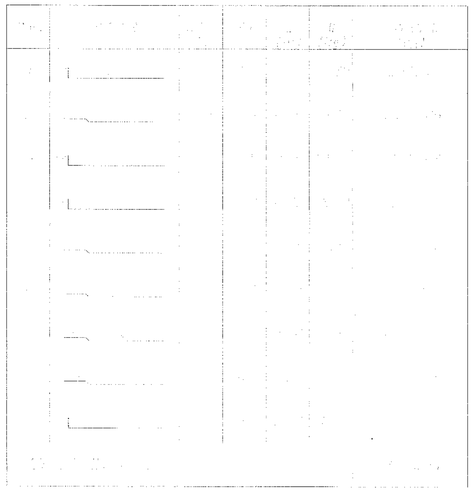
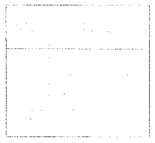


Columns Rebars Schedule

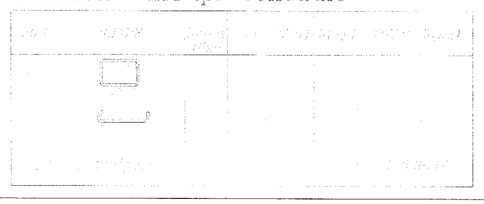


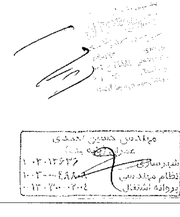
Columns Rebars Size Schedule



Columns Bar Size Schedule

Columns Stirrups Schedule





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مقادیرحداقل ضخامت پوشش بتن روی میلگردها (میلیمتر)

نوع قطعه	نوع شرایط محیطی			
	متوسط	شدید	بسیار شدید	فوق العاده شدید
تیرها وستونها				
دال ها دیوارها و تیرچه ها				
پوسته ها و صفحات پلیسه ای				
شالوده ها				
قطر میلگرها	چهار سوم بزرگترین اندازه اسمی سنگدانه ها			

شرایط	نوع سیمان انتخابی	حداقل مقدار مواد سیمانی Kg/m^3	حداکثر نسبت آب به مواد سیمانی	حداقل رده بتن (مقاومت مشخصه)
متوسط - A	سیمان پرتلند نوع(۱)و (۲)و یا به همراه مواد جایگزین سیمان *	۳۰۰	۰٫۵	$C_{۳۰}$
شدید - B	سیمان پرتلند نوع(۱)و (۲)و یا به همراه مواد جایگزین سیمان	۳۲۵	۰٫۴۵	$C_{۳۰}$
شدید - C	سیمان پرتلند نوع(۱)و (۲)و یا به همراه مواد جایگزین سیمان	۳۵۰	۰٫۴۵	$C_{۳۵}$
خیلی شدید - D	سیمان پرتلند نوع(۲) به همراه مواد جایگزین سیمان	۳۵۰	۰٫۴	$C_{۳۵}$
فوق العاده شدید - E	سیمان پرتلند نوع(۲) به همراه مواد جایگزین سیمان	۳۷۵	۰٫۴	$C_{۴۰}$

شرح / دمای مجاور سطح بتن (درجه سلسیوس)				
نوع قالب بندی	۳۴ و بالاتر	۱۶	۸	۰
قالبهای فلزی (ساعت)	۹	۱۲	۱۸	۳۰
دالها قالبهای زیرین (شبانه روز)	۳	۴	۶	۱۰
دالها پایه های اطمینان (شبانه روز)	۷	۱۰	۱۵	۲۵
تیرها قالبهای زیرین (شبانه روز)	۷	۱۰	۱۵	۲۵
تیرها پایه های اطمینان (شبانه روز)	۱۰	۱۴	۲۱	۳۶

mm

mm

No.	d mm			
1	Ø8	30.0 cm	40.0 cm	30.0 cm
2	Ø10	40.0 cm	50.0 cm	40.0 cm
3	Ø12	50.0 cm	60.0 cm	50.0 cm
4	Ø14	55.0 cm	70.0 cm	55.0 cm
5	Ø16	65.0 cm	80.0 cm	65.0 cm
6	Ø18	70.0 cm	90.0 cm	70.0 cm
7	Ø20	80.0 cm	100.0 cm	80.0 cm
8	Ø22	110.0 cm	140.0 cm	110.0 cm
9	Ø25	120.0 cm	160.0 cm	120.0 cm
10	Ø28	135.0 cm	175.0 cm	135.0 cm
11	Ø32	155.0 cm	200.0 cm	155.0 cm

No.	d mm	cm	
1	Ø8	15.0 cm	20.0 cm
2	Ø10	15.0 cm	20.0 cm
3	Ø12	15.0 cm	20.0 cm
4	Ø14	20.0 cm	25.0 cm
5	Ø16	25.0 cm	30.0 cm
6	Ø18	25.0 cm	30.0 cm
7	Ø20	30.0 cm	35.0 cm
8	Ø22	35.0 cm	40.0 cm
9	Ø25	35.0 cm	40.0 cm
10	Ø28	40.0 cm	45.0 cm
11	Ø32	45.0 cm	50.0 cm

(Overlap)

No.	d			
1	Ø8	40.0 cm	55.0 cm	40.0 cm
2	Ø10	50.0 cm	65.0 cm	50.0 cm
3	Ø12	60.0 cm	80.0 cm	60.0 cm
4	Ø14	70.0 cm	90.0 cm	70.0 cm
5	Ø16	80.0 cm	105.0 cm	80.0 cm
6	Ø18	90.0 cm	120.0 cm	90.0 cm
7	Ø20	100.0 cm	130.0 cm	100.0 cm
8	Ø22	140.0 cm	180.0 cm	140.0 cm
9	Ø25	160.0 cm	205.0 cm	160.0 cm
10	Ø28	175.0 cm	230.0 cm	175.0 cm
11	Ø32	200.0 cm	265.0 cm	200.0 cm

f_c=300 Kg/cm^2
400 Kg/m^3

f_c=300 Kg/cm^2
400 Kg/m^3

مهندس حسین ...
تهران (پایه ...
نظام مهندسی ...

... و خدمات ...
... سیمای ...
... شهرداری ...
۱۵
۲
۹۱

... به بنو نقشه معماری و سازه

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No.	d mm	L 90°	L 180°	D
1	Ø6	30.0 cm	40.0 cm	24 cm
2	Ø10	40.0 cm	45.0 cm	32 cm
3	Ø12	45.0 cm	55.0 cm	43 cm
4	Ø14	50.0 cm	65.0 cm	56 cm
5	Ø16	55.0 cm	75.0 cm	64 cm
6	Ø18	65.0 cm	80.0 cm	72 cm
7	Ø20	75.0 cm	90.0 cm	80 cm
8	Ø22	90.0 cm	110.0 cm	96 cm
9	Ø25	110.0 cm	140.0 cm	120 cm
10	Ø28	130.0 cm	180.0 cm	144 cm
11	Ø32	140.0 cm	200.0 cm	192 cm

No.	d mm	L 90°	L 180°	D
1	Ø6	10.0 cm	15.0 cm	9.6 cm
2	Ø10	15.0 cm	25.0 cm	16 cm
3	Ø12	15.0 cm	30.0 cm	19.2 cm
4	Ø14	20.0 cm	35.0 cm	22.4 cm
5	Ø16	20.0 cm	40.0 cm	25.6 cm
6	Ø18	25.0 cm	45.0 cm	28.8 cm
7	Ø20	30.0 cm	50.0 cm	32 cm
8	Ø22	30.0 cm	55.0 cm	35.2 cm
9	Ø25	35.0 cm	65.0 cm	40 cm
10	Ø28	40.0 cm	75.0 cm	44.8 cm
11	Ø32	45.0 cm	85.0 cm	51.2 cm

No.	d	No.	d
1	Ø6	7	Ø20
2	Ø10	8	Ø22
3	Ø12	9	Ø25
4	Ø14	10	Ø28
5	Ø16	11	Ø32
6	Ø18		

No.	d mm	L 90°	L 180°	D
1	Ø6	6.0 cm	6.0 cm	2.4 cm
2	Ø8	8.0 cm	8.0 cm	3.2 cm
3	Ø10	8.0 cm	8.0 cm	4.0 cm
4	Ø12	10.0 cm	10.0 cm	4.8 cm
5	Ø14	10.0 cm	10.0 cm	5.6 cm
6	Ø16	10.0 cm	10.0 cm	6.4 cm

No.	d mm	L 90°	L 180°	D
1	Ø8	10.0 cm	15.0 cm	6.4 cm
2	Ø10	15.0 cm	20.0 cm	8.0 cm
3	Ø12	15.0 cm	25.0 cm	9.6 cm
4	Ø14	20.0 cm	30.0 cm	11.2 cm
5	Ø16	20.0 cm	35.0 cm	12.8 cm
6	Ø18	25.0 cm	40.0 cm	14.4 cm
7	Ø20	30.0 cm	45.0 cm	16.0 cm
8	Ø22	30.0 cm	50.0 cm	17.6 cm
9	Ø25	35.0 cm	55.0 cm	20.0 cm
10	Ø28	40.0 cm	65.0 cm	22.4 cm
11	Ø32	45.0 cm	75.0 cm	25.6 cm

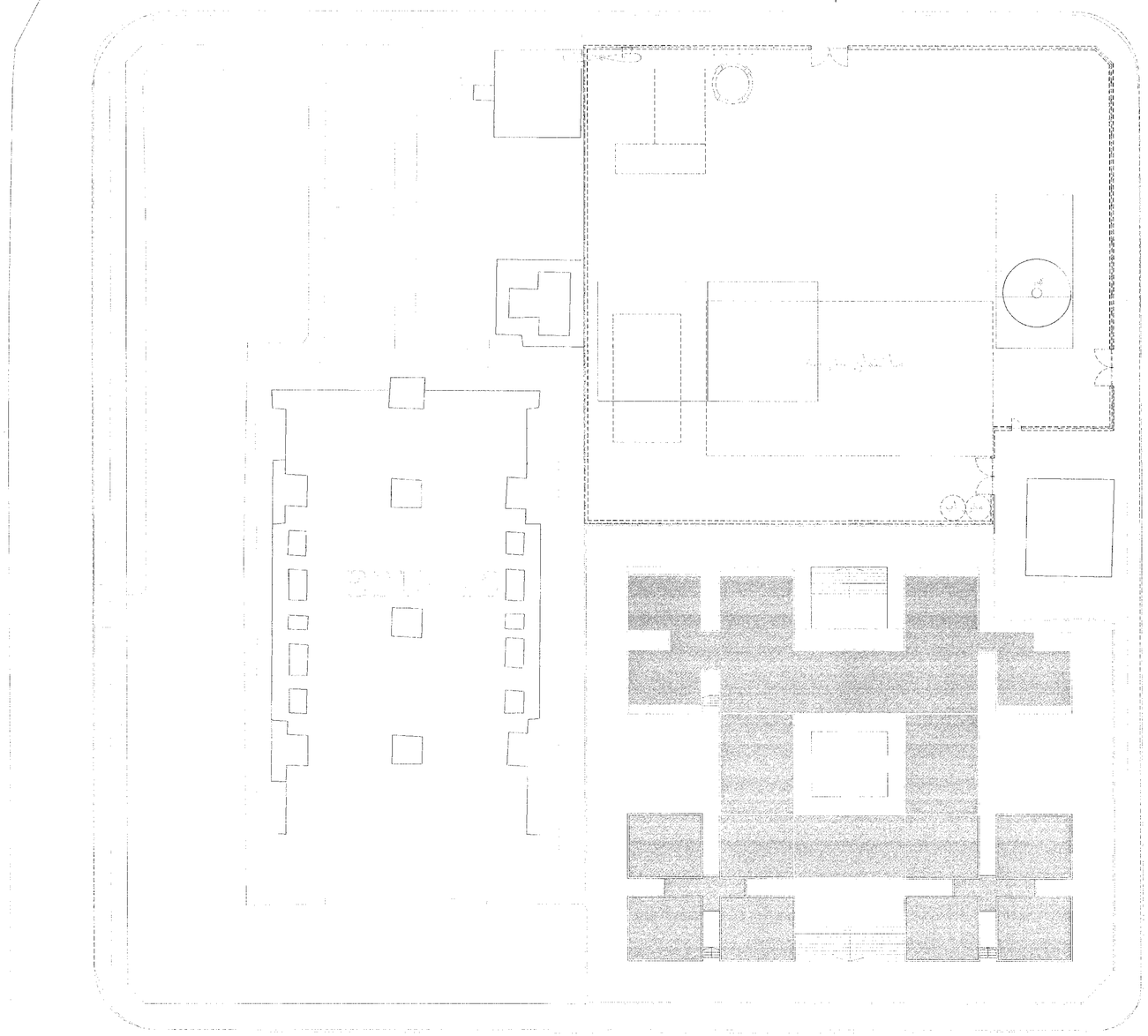
No.	d mm	L 90°	L 180°	D
1	Ø8	30.0 cm	40.0 cm	19.2 cm
2	Ø10	40.0 cm	45.0 cm	24.0 cm
3	Ø12	45.0 cm	55.0 cm	28.8 cm
4	Ø14	50.0 cm	65.0 cm	33.6 cm
5	Ø16	55.0 cm	75.0 cm	38.4 cm
6	Ø18	65.0 cm	80.0 cm	43.2 cm
7	Ø20	75.0 cm	90.0 cm	48.0 cm
8	Ø22	90.0 cm	110.0 cm	52.8 cm
9	Ø25	110.0 cm	140.0 cm	60.0 cm
10	Ø28	130.0 cm	180.0 cm	67.2 cm
11	Ø32	140.0 cm	200.0 cm	76.8 cm

No.	d mm	L 90°	L 180°	D
1	Ø8	40.0 cm	55.0 cm	25.6 cm
2	Ø10	45.0 cm	60.0 cm	32.0 cm
3	Ø12	55.0 cm	70.0 cm	38.4 cm
4	Ø14	60.0 cm	80.0 cm	44.8 cm
5	Ø16	75.0 cm	95.0 cm	51.2 cm
6	Ø18	80.0 cm	105.0 cm	57.6 cm
7	Ø20	90.0 cm	120.0 cm	64.0 cm
8	Ø22	110.0 cm	135.0 cm	70.4 cm
9	Ø25	140.0 cm	155.0 cm	80.0 cm
10	Ø28	160.0 cm	210.0 cm	89.6 cm
11	Ø32	175.0 cm	255.0 cm	102.4 cm

No.	d mm	L 90°	L 180°	D
1	Ø8	40.0 cm	55.0 cm	25.6 cm
2	Ø10	50.0 cm	63.0 cm	32.0 cm
3	Ø12	55.0 cm	70.0 cm	38.4 cm
4	Ø14	65.0 cm	90.0 cm	44.8 cm
5	Ø16	75.0 cm	95.0 cm	51.2 cm
6	Ø18	85.0 cm	105.0 cm	57.6 cm
7	Ø20	95.0 cm	120.0 cm	64.0 cm
8	Ø22	130.0 cm	165.0 cm	70.4 cm
9	Ø25	145.0 cm	155.0 cm	80.0 cm
10	Ø28	165.0 cm	210.0 cm	89.6 cm
11	Ø32	200.0 cm	255.0 cm	102.4 cm

No.	d mm	L 90°	L 180°	D
1	Ø8	30.0 cm	40.0 cm	19.2 cm
2	Ø10	40.0 cm	45.0 cm	24.0 cm
3	Ø12	45.0 cm	55.0 cm	28.8 cm
4	Ø14	50.0 cm	65.0 cm	33.6 cm
5	Ø16	55.0 cm	75.0 cm	38.4 cm
6	Ø18	65.0 cm	80.0 cm	43.2 cm
7	Ø20	75.0 cm	90.0 cm	48.0 cm
8	Ø22	90.0 cm	110.0 cm	52.8 cm
9	Ø25	110.0 cm	140.0 cm	60.0 cm
10	Ø28	130.0 cm	180.0 cm	67.2 cm
11	Ø32	140.0 cm	200.0 cm	76.8 cm

No.	d mm	L 90°	L 180°	D
1	Ø8	10.0 cm	15.0 cm	6.4 cm
2	Ø10	15.0 cm	20.0 cm	8.0 cm
3	Ø12	15.0 cm	25.0 cm	9.6 cm
4	Ø14	20.0 cm	30.0 cm	11.2 cm
5	Ø16	20.0 cm	35.0 cm	12.8 cm
6	Ø18	25.0 cm	40.0 cm	14.4 cm
7	Ø20	30.0 cm	45.0 cm	16.0 cm
8	Ø22	30.0 cm	50.0 cm	17.6 cm
9	Ø25	35.0 cm	55.0 cm	20.0 cm
10	Ø28	40.0 cm	65.0 cm	22.4 cm
11	Ø32	45.0 cm	75.0 cm	25.6



165.04			109.67	28.45		
179.8	187.79		157.46	229.66	39.82	487.63
1100.09			32.03	275.85	22.09	926.37
351.85		268.45	156.82	211.4	68.46	249.8
3529.29	187.79	726.09	370.77	93.17	121.12	1072.8

N

97/02/	1:100	
96/11/	8.01-D	
96/11/	EXCHAS STUDIO(Pvt) Ltd/ English school - Part IV 13 of 15	

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