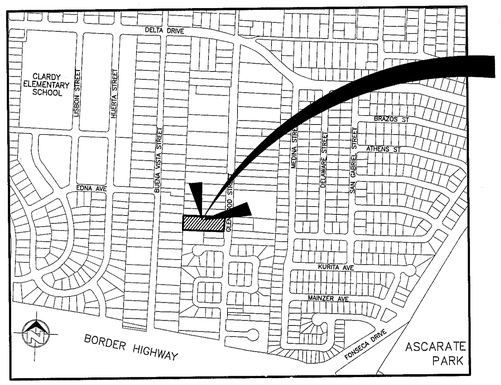
GLENWOOD CIRCLE PLACE UNIT 2 SUBDIVISION



LOCATION MAP
SC: 1" = 600'

LOT NO.	AREA	
	SQ. FT.	ACRES
1	6,300.00	0.145
2	6,050.00	0.139
3	5,489.18	0.126
4	5,810.00	0.133
5	5,724.46	0.131

REASON

THE REASON FOR THIS REPLAT IS TO DIVIDE EXISTING LOT AND CREATE 5 DUPLEXES DWELLING LOTS.

SCHOOL DISTRICT

EL PASO INDEPENDENT SCHOOL DISTRICT

LINE	BEARING	LENGTH
L1	S 00°03'00" E	01.00'

CURVE	DELTA	CHD BEARING	TANGENT	RADIUS	ARC LEN	CHD LEN
C1	89°54'00"	S 45°00'00" W	19.97	20.00	31.38	28.26
C2	38°49'17"	N 70°38'22" W	39.47	112.00	75.89	74.44
C3	51°16'43"	N 25°35'22" W	04.80	10.00	08.95	08.65
C4	44°35'30"	N 67°45'15" W	53.72	131.00	101.95	99.40

NOTES

1. RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

   INSTRUMENT No._____ DATE:_____

2. TAX CERTIFICATE FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

   INSTRUMENT No. 20180040712 DATE: 5/24/2018

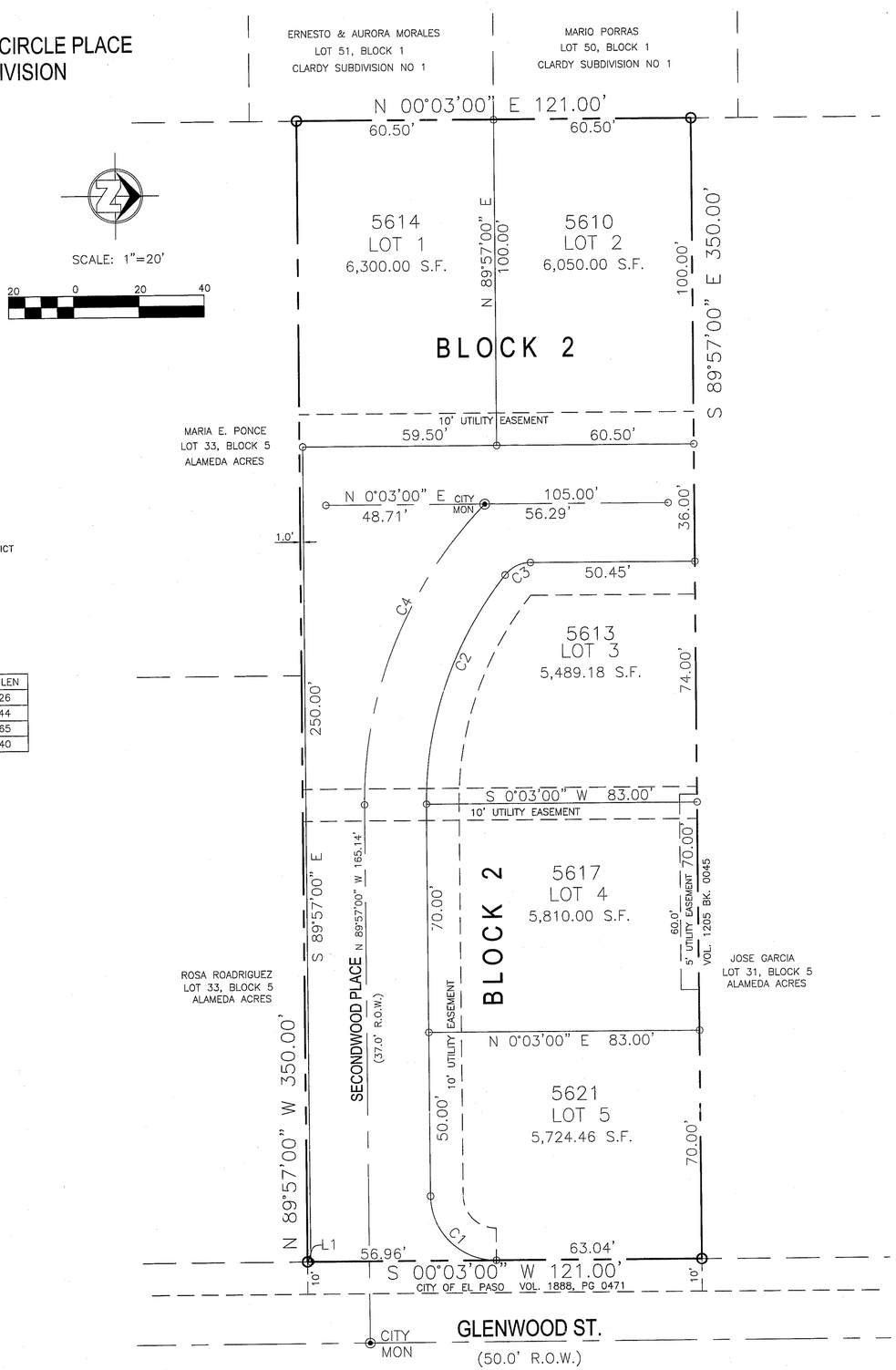
3. TIES SHOWN TO EXISTING CITY MONUMENTS ARE BASED ON RECORD INFORMATION ONLY.
4. WATER SUPPLY AND SEWER SEWAGE DISPOSAL IS PROVIDED BY EL PASO WATER UTILITIES.
5. THIS PROPERTY LIES IN ZONE "C", "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL FLOOD" PANEL NO. 480214–0040 B, MAP REVISED ON OCTOBER 15, 1982.
6. ROCKWALLS OR STRUCTURES THAT HINDER OR BLOCK ACCESS TO THE PRIVATE ACCESS AND UTILITY EASEMENT WILL BE PROHIBITED.
7. U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS TO THIS SUBDIVISION
8. VEHICULAR ACCESS TO LOT 5 ABUTTING GLENWOOD STREET & SECONDWOOD PLACE SHALL BE FROM OTHER DEDICATED STREETS, THE INSTRUMENT ASSURING RELEASE OF ACCESS IS FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION.

   INSTRUMENT No._____ DATE:_____

9. THE 1 FOOT ON THE SOUTH PROPERTY LINE ALONG SECONDWOOD PLACE OF GLENWOOD CIRCLE PLACE UNIT 2 IS PART OF LOT 1.
10. GLENWOOD CIRCLE PLACE UNIT TWO SUBDIVISION WILL BE SERVED BY EL WATER UTILITIES FOR WATER AND SEWER.

⊙ – PROPOSED CITY MONUMENT

DORADO ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E. YANDELL ST., EL PASO, TEXAS 79903 (915) 562–0002



SCALE: 1"=20'

20 0 20 40

DATE OF PREPARTION NOVEMBER 09, 2016

GLENWOOD CIRCLE PLACE UNIT 2 SUBDIVISION

BEING A PORTION OF LOT 32,
BLOCK 5, ALAMEDA ACRES
CITY OF EL PASO, TEXAS
COUNTY OF EL PASO, TEXAS
CONTAINING 0.972 ACRES

THE STATE OF TEXAS
COUNTY OF EL PASO

I ANVIA, LLC, PROPERTY OWNER OF THIS LAND, HEREBY PRESENT THIS PLAT AND DEDICATE TO THE USE OF THE PUBLIC THE STREET RIGHT–OF–WAY, UTILITY EASEMENTS, AS HEREON LAID DOWN AND DESIGNATED, INCLUDING EASEMENTS FOR OVERHANG OF SERVICE WIRES FOR POLE TYPE UTILITIES AND BURIED SERVICE WIRES, CONDUITS AND PIPES FOR UNDERGROUND UTILITIES, AND THE RIGHT TO INGRESS AND EGRESS FOR SERVICE AND CONSTRUCTION AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS

ANVIA, LLC — DATE 05-23-18
MARIO ORNELAS

ACKNOWLEDGEMENT

THE STATE OF TEXAS
COUNTY OF EL PASO

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 23rd DAY OF MAY, 2018 BY MARIO ORNELAS.

NOTARY PUBLIC IN AND FOR EL PASO, COUNTY, TEXAS

FERMIN DORADO JR.
Notary Public, State of Texas
No. 125388915
My Commission Expires
DECEMBER 20 2021

MY COMMISSION EXPIRES:
DECEMBER 20, 2021

CITY PLAN COMMISSION

THIS SUBDIVISION IS HEREBY APPROVED AS TO THE PLATTING AND AS TO THE CONDITIONS OF THE DEDICATION IN ACCORDANCE WITH CHAPTER 212 OF THE LOCAL GOVERNMENT CODE OF TEXAS THIS 26TH DAY OF JANUARY, 2017 A.D..

EXECUTIVE SECRETARY

CHAIRPERSON

PLANNING AND INSPECTIONS DIRECTOR

FILING

FILED AND RECORDED IN THE OFFICE OF THE COUNTY CLERK OF EL PASO COUNTY, TEXAS, THIS 24TH DAY OF MAY, 2018, A.D., INST. NO. 20180040711.

COUNTY CLERK FOR RECORDING PURPOSES ONLY

BY DEPUTY SUSIE CHAVEZ

THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION AND IN IS COMPLIANCE WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL LAND SURVEYING PROFESSIONAL AND TECHNICAL STANDARDS

FERMIN DORADO, R.P.L.S., No. 3190 01.23.18

SUBDIVISION IMPROVEMENT PLANS PREPARED BY AND UNDER THE SUPERVISION OF FERMIN DORADO, REGISTERED PROFESSIONAL ENGINEER NO. 37512

FERMIN DORADO, P.E. 05.23.18

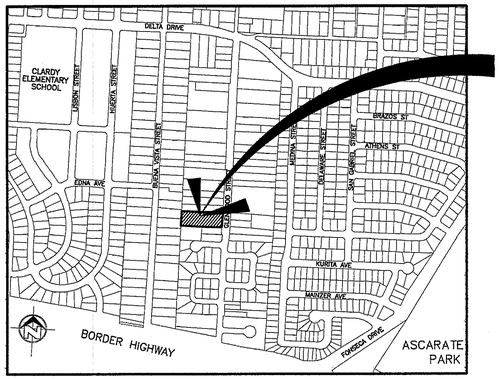
STATE OF TEXAS REGISTERED FERMIN DORADO 3190 PROFESSIONAL LAND SURVEYOR

STATE OF TEXAS FERMIN DORADO 37512 REGISTERED PROFESSIONAL ENGINEER

02–23–17
01–13–17

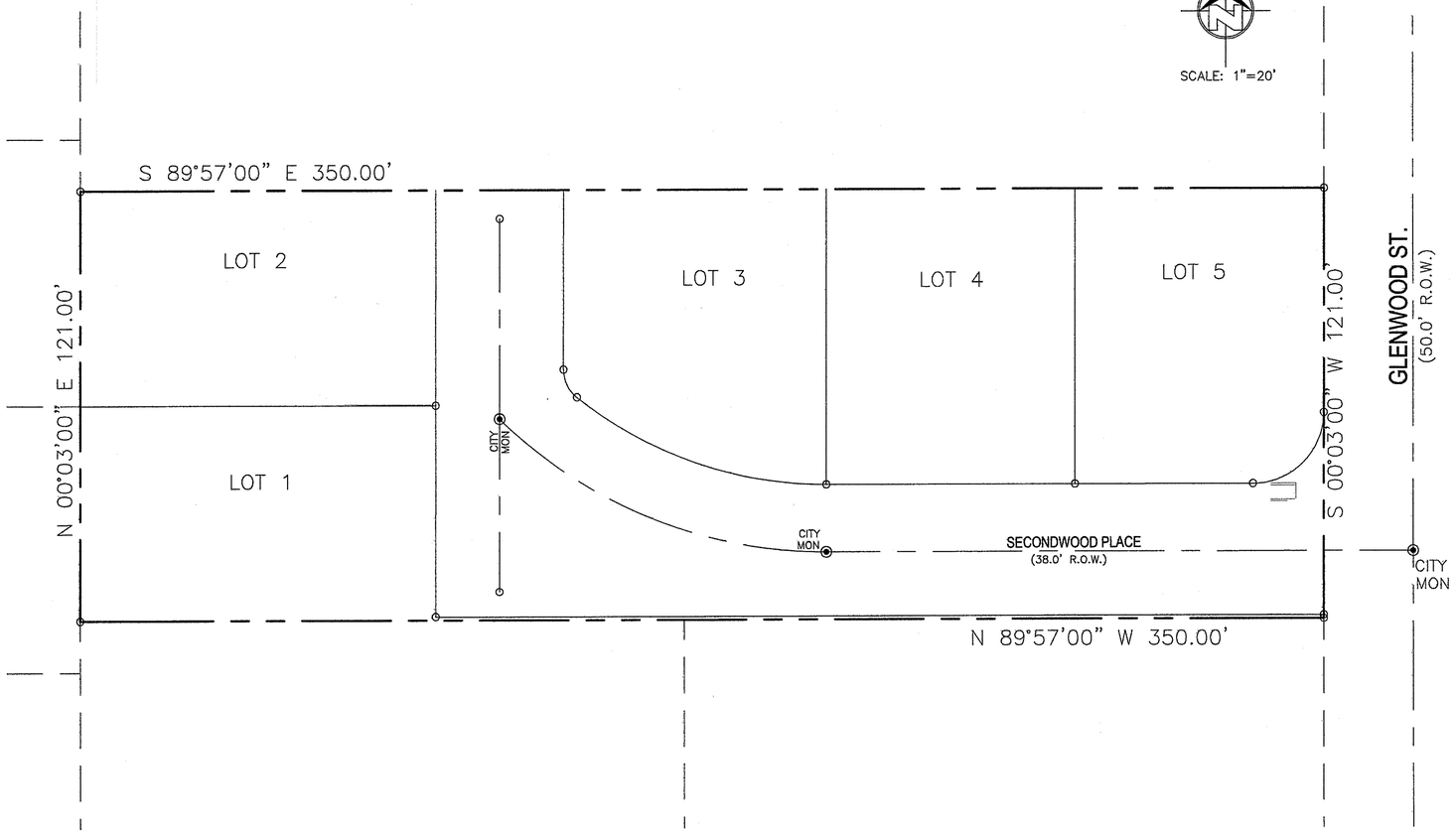
SHEET 2 OF 7

GLENWOOD CIRCLE PLACE UNIT 2 SUBDIVISION



LOCATION MAP
SC: 1" = 600'

SCALE: 1"=20'



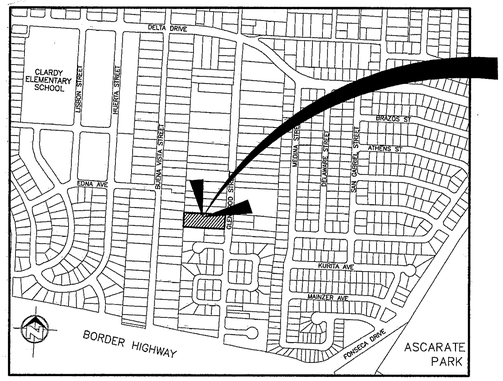
INDEX OF SHEETS

CITY DEVELOPMENT DEPARTMENT
Reviewed For Conformance For Condition Related To:
Sidewalks — Driveways
Grading & Drainage — Retaining Rock Walls
Wheelchair Ramps — On Site Ponding of Storm Waters
On Site Parking Layout
Contractor Must Call 24 Hours Prior To Construction for Inspections
By 8/8/2017 Date

STATE OF TEXAS
FERMIN DORADO
37312
REGISTERED
08/08/17

DORADO
ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E. YANDELL EL PASO, TEXAS 79903 (915)562-0002

02-23-17
01-13-17



LOCATION MAP
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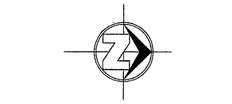
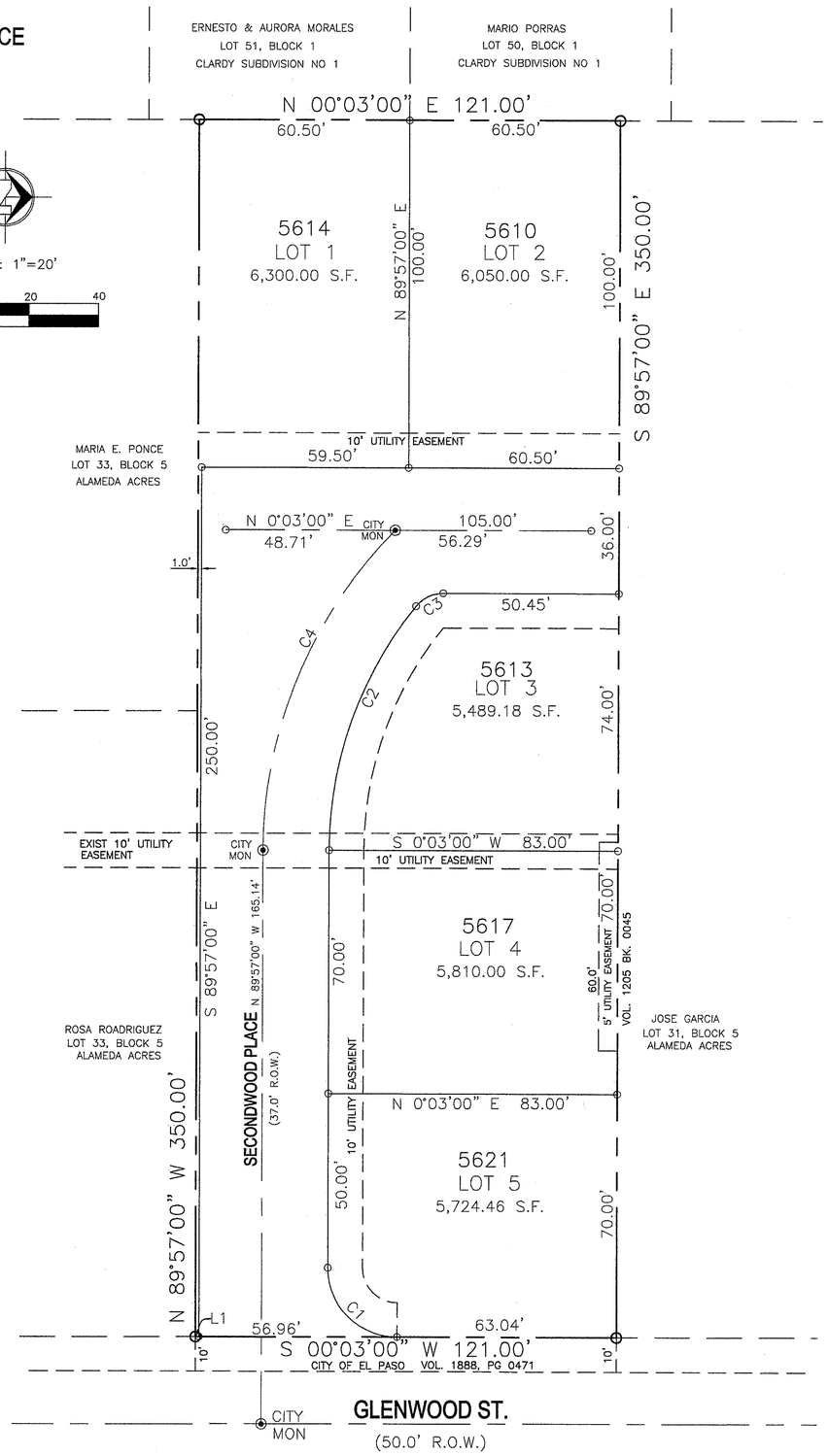
GLENWOOD CIRCLE PLACE UNIT 2 SUBDIVISION





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LINE	BEARING	LENGTH
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CURVE	DELTA	CHD BEARING	TANGENT	RADIUS	ARC LEN	CHD LEN
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DORADO ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E. YANDELL ST., EL PASO, TEXAS 79903 (915) 562–0002

DATE OF PREPARTION NOVEMBER 09, 2016

GLENWOOD CIRCLE PLACE UNIT 2 SUBDIVISION

BEING A PORTION OF LOT 32,
BLOCK 5, ALAMEDA ACRES
CITY OF EL PASO, TEXAS
COUNTY OF EL PASO, TEXAS
CONTAINING 0.972 ACRES

THE STATE OF TEXAS
COUNTY OF EL PASO

I ANVIA, LLC, PROPERTY OWNER OF THIS LAND, HEREBY PRESENT THIS PLAT AND DEDICATE TO THE USE OF THE PUBLIC THE STREET RIGHT–OF–WAY, UTILITY EASEMENTS, AS HEREON LAID DOWN AND DESIGNATED, INCLUDING EASEMENTS FOR OVERHANG OF SERVICE WIRES FOR POLE TYPE UTILITIES AND BURIED SERVICE WIRES, CONDUITS AND PIPES FOR UNDERGROUND UTILITIES, AND THE RIGHT TO INGRESS AND EGRESS FOR SERVICE AND CONSTRUCTION AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS

_____
ANVIA, LLC DATE
MARIO ORNELAS

ACKNOWLEDGEMENT

THE STATE OF TEXAS
COUNTY OF EL PASO

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____DAY OF _____,2017 BY _____.

_____
NOTARY PUBLIC IN AND FOR EL PASO, COUNTY, TEXAS

FERMIN DORADO JR.
Notary Public, State of Texas
No. 125358815
My Commission Expires
August 15, 2017

MY COMMISSION EXPIRES:

_____

CITY PLAN COMMISSION

THIS SUBDIVISION IS HEREBY APPROVED AS TO THE PLATTING AND AS TO THE CONDITIONS OF THE DEDICATION IN ACCORDANCE WITH CHAPTER 212 OF THE LOCAL GOVERNMENT CODE OF TEXAS THIS _____ DAY OF _____, 2017 A.D..

_____ _____
EXECUTIVE SECRETARY CHAIRPERSON

_____
PLANNING AND INSPECTIONS DIRECTOR

FILING

FILED AND RECORDED IN THE OFFICE OF THE COUNTY CLERK OF EL PASO COUNTY, TEXAS, THIS _____ DAY OF _____, 20_____, A.D., INST. NO. _____.

_____ _____
COUNTY CLERK BY DEPUTY

THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION AND IN IS COMPLIANCE WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL LAND SURVEYING PROFESSIONAL AND TECHNICAL STANDARDS

_____
FERMIN DORADO, R.P.L.S., No. 3190

SUBDIVISION IMPROVEMENT PLANS PREPARED BY AND UNDER THE SUPERVISION OF FERMIN DORADO, REGISTERED PROFESSIONAL ENGINEER NO. 37512

_____
FERMIN DORADO, P.E.

STATE OF TEXAS REGISTERED FERMIN DORADO 3190 PROFESSIONAL LAND SURVEYOR

STATE OF TEXAS FERMIN DORADO 37512 REGISTERED PROFESSIONAL ENGINEER

THE CITY OF EL PASO TEXAS

02–23–17
01–13–17

SHEET 2 OF 7

CLARDY SUBDIVISION NO. 1

JOSE GARCIA
LOT 31, BLOCK 5
ALAMEDA ACRES

MARIO PORRAS
LOT 50, BLOCK 1
CLARDY SUBDIVISION NO 1

ERNESTO & AURORA MORALES
LOT 51, BLOCK 1
CLARDY SUBDIVISION NO 1

S 89°57'00" E 350.00'

N 0°03'00" E 121.00'

N 89°57'00" E 100.0'

5610
LOT 2
6,050.00 S.F.
F.F. 97.00
F.G. 96.70

5614
LOT 1
6,300.00 S.F.
F.F. 97.00
F.G. 96.70

5613
LOT 3
5489.18 S.F.
F.F. 96.50
F.G. 96.15

5617
LOT 4
5810.00 S.F.
F.F. 96.50
F.G. 96.15

5621
LOT 5
5724.46 S.F.
F.F. 96.50
F.G. 96.15

PROPOSED ROCKWALL BY DEVELOPER

5' SWK BY DEV.

3" PKWY STA 0+00

20' DWY PROP

5' UTILITY EASEMENT PPO

PROPOSED 10' UTILITY

S 0°03'00" W 83.0'

N 0°03'00" E 83.0'

S 0°03'00" W 121.00'

62.97'

56.96'

C1 R=25

C2 R=120'

C3 R=18

C4 94.87P

1+07

CITY MON

N 0°03'00" E 49.84'

FLAT

2+00 SECONDWOOD PLACE 2+50

(38.0' R.O.W.)

N 89°57'00" E 93.87P

AREA TO BE PAVED

3.159 C.F.S.

PROPOSED CURB

PROPOSED CURB BY DEVELOPER

PROPOSED ROCKWALL BY DEVELOPER

N 89°57'00" W 350.00'

EXIST SIDEWALK

EXIST CURB

10' EXISTING DRIVEWAY TO BE REMOVED & MATCH EXISTING SIDEWALK & CURB & GUTTER

GLENWOOD ST. (50.0' R.O.W.)

EXISTING SIDEWALK TO BE REMOVED & REPLACED

REMOVE AND REPLACE EXISTING ASPHALT

EXIST INLET TOP 3692.71

MATCH EXIST SIDEWALK & CURB AND GUTTER

EXIST SWK

EXIST CURB

L1

MARIA E. PONCE
LOT 33, BLOCK 5
ALAMEDA ACRES

EXIST 10' UTILITY EASEMENT

ROSA ROADRIGUEZ
LOT 33, BLOCK 5
ALAMEDA ACRES

SCALE: 1"=20'

0+00 1+00 2+00 3+00 4+00

HORIZ: 1" = 20'
VERT.: 1" = 5'

STATIONS COINCIDE WITH PROPOSED CENTER LINE

3700.00
3695.00
3690.00

SLOPE = 0.77%

LEFT CURB ELEVATION

SLOPE = 0.72%

EXISTING GROUND

PROPOSED CENTERLINE

SLOPE = 0.61%

RIGHT CURB ELEVATION

STATIONS COINCIDE WITH PROPOSED CENTER LINE

01-13-17, 02-23-17, 04-13-17

DORADO ENGINEERING, INC.
TEXAS REGISTERED ENGINEERING FIRM F-8864

S:/drawings/MORNELAS/GLENWOOD/409 GLENWOOD.dwg

ENGINEERS SEAL

REFFERENCES -- BENCHMARKS

SCALE:

DATE	REVISIONS	BY

DATE 11/09/16.
DESIGN BY FD
DRAWN BY DE
CHKD. BY FD
APPD. BY FD

FERMIN DORADO 37512 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

THE CITY OF EL PASO TEXAS

DORADO
ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E YANDELL EL PASO, TEXAS 79903 (915)562-0002

PROJECT NAME
GLENWOOD CIRCLE PLACE
UNIT 2 SUBDIVISION

SHEET TITLE
PLAN AND PROFILE GLENWOOD CIRCLE U2

SHEET
3 OF 7

GLENWOOD CIRCLE PLACE
UNIT 2 SUBDIVISION

BEING A PORTION OF LOT 32,
BLOCK 5, ALAMEDA ACRES
CITY OF EL PASO, TEXAS
COUNTY OF EL PASO, TEXAS
CONTAINING 0.972 ACRES

NO INDIVIUAL GRADING PLAN PER LOT IS REQUIRED. THE FINAL OVERALL SUBDIVISION GRADING PLAN MEETS THE REQUIREMENTS FOR ALL LOT GRADING.

ROCKWALL GENERAL NOTES

STONE

- STONE FOR ROCKWALLS SHALL CONSIST OF QUARRIED LIMESTONE AS NEARLY UNIFORM IN SECTION AS IS PRACTICABLE.
- FIELD STONE OR SALVAGED STONE FROM ROCKWALL SHALL BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
- THE STONE SHALL BE DENSE, RESISTANT TO THE ACTION OF AIR AND WATER, CLEAN OF OLD MORTAR AND RIVER ROCK WILL NOT. BE ALLOWED.

MORTAR

- MORTAR FOR THE ROCKWALL SHALL CONSIST BY VOLUME OF ONE (1) PART PORTLAND CEMENT, THREE AND ONE HALF (3 1/2) PART OF CLEAN, HARD, DURABLE SAND AND ONE QUARTER (1/4) PART (MORTAR) LIME THOROUGHLY MIXED WITH WATER.
- MORTAR SHALL HAVE A CONSISTENCY SUCH THAT IT CAN BE EASILY HANDLED AND SPREAD BY TROWEL
- MORTAR SHALL BE TYPE S, ASTM SPECIFICATION C270-73. COMPRESSIVE STRENGTH=1800 p.s.i. (28 DAYS)

CONCRETE

- CONCRETE FOR ROCKWALL FOUNDATION SHALL HAVE A COMPRESSIVE STRENGTH = 3000 p.s.i. (28 DAYS)

FOUNDATION WORK

- PRIOR TO PLACING THE CONCRETE FOUNDATION, THE EXCAVATION FOR THE ROCKWALLS SHALL BE MADE TO THE PROPER SECTION, AND COMPACTED TO 95% AS PER ASTM #1557
- THE EXCAVATION AREA FOR ROCKWALL SHALL BE MOIST WHEN THE CONCRETE IS PLACED.
- REINFORCING STEEL SHALL BE PLACED CONTINUOUSLY AS SHOWN ON THE PLANS AND PROPERLY SUPPORT THROUGHOUT THE PLACEMENT OF CONCRETE.
- THE SURFACE OF THE CONCRETE SHALL NOT BE TROWELED.
- THE CONCRETE SHALL BE BE CURED TO A MINIMUM OF 48 HOURS BEFORE MORE THAN 300 POUNDS PER SQUARE FOOT OF STONE AND MORTAR IS PLACED ON THE FOUNDATION. CONTRACTOR SHALL EMBED THE FIRST FOUR INCHES OF THE FIRST LAYER INTO THE FRESH CONCRETE OF THE FOOTING.

STONE WORK

- STONE, AS FAR AS PRACTICABLE, SHALL BE SELECTED AS TO SIZE AND SHAPE IN ORDER TO SECURE FAIRLY LARGE, FLAT -SURFACE STONE WHICH MAY BE ERECTED WITH TRUE AND EVEN SURFACE FACES AND A MINIMUM OF EXPOSED MORTAR.
- ALL STONE SHALL BE THOROUGHLY CLEANED, WATER SOAKED (24 HOUR MINIMUM), HAND PLACED AND EMBEDDEDE IN MONRTAR SO THAT NO STONE SHALL TOUCH EACH OTHER OR THE CONCRETE FOUNDATION BUT SHALL BE FIRMLY BOUND TOGETHER WITH MORTAR.
- THE FINISHED SURFACE SHALL PRESENT A NEAT, CLEAN AND WORKMANLIKE AND TRUE TO LINE OF TYPICAL SECTIONS AS SHOWN IN THE PLANS.
- THE INTERIOR OF THE ROCKWALL SHALL BE COMPLETELY FILLED WITH SPALLS AND PIECES OF THE SPECIFIED STONE, COMPLETELY EMBEDDED AND SURROUNDED BY MORTAR WITH NO VOIDS.
- THE SPACING BETWEEN STONES SHALL BE NO MORE THAN 1 INCH.

ERECTION

- THE ERECTION OF THE ROCKWALL SHALL NOT BE MORE THAN THREE FEET IN HEIGHT FOR EVERY 24 HOUR PERIOD TO ALLOW TIME FOR THE LOWER PORTION TO BECOME SUFFICIENTLY SET. ALL STONE SHALL BE THOROUGHLY WET BEFORE BEING PLACED IN FRESH MORTAR.
- THE LAST LAYER OF ROCK PRIOR TO BREAK OF CONSTRUCTION PHASE SHALL NOT HAVE ANY MORTAR ON TOP.
- FRESH MORTAR MUST BE USED FOR CONTINUATION

EXCAVATION, BACKFILL AND COMPACTION

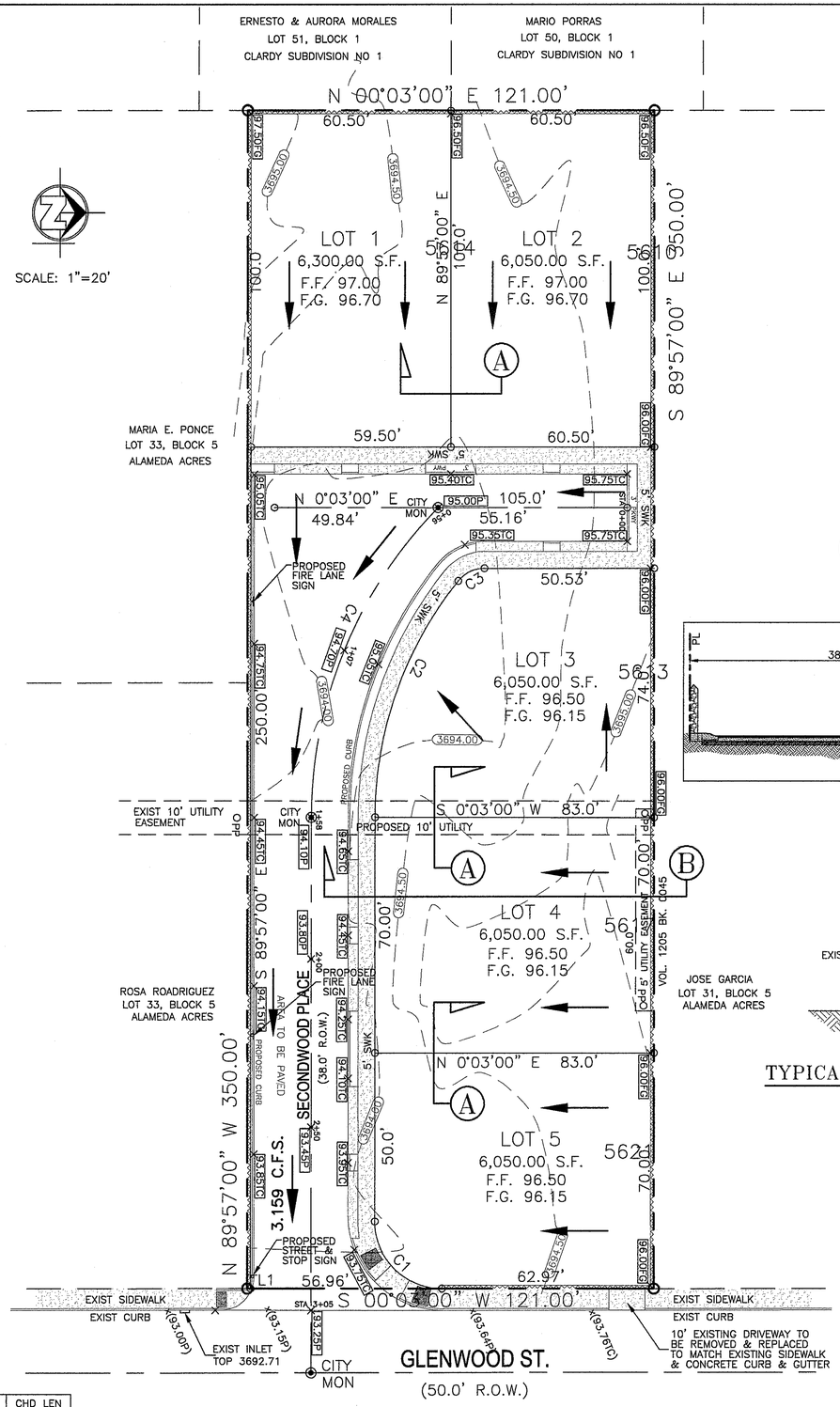
- CONTRACTOR SHALL PROVIDE ALL FILL MATERIAL NECESSARY FOR BACKFILLING AS PER ASTM D-422
- FILL MATERIAL SHALL BE COMPACTED ON 12 INCH LAYERS AFTER COMPACTION TO A DENSITY OF 95% AS PER ASTM 1557.

SITE

- SHALL BE KEPT CLEAN OF ALL DEBRIS AT ALL TIMES. EXCESS CONSTRUCTION MATERIAL AND DEBRIS SHALL BE DISPOSED OFF THE SITE AT A LEGAL LOCATION

NOTES:

1. IMPROVEMENTS SHALL COMPLY WITH TAS.
2. 5'X5' LANDING SHALL BE PLACED WITHIN 200 FT. ALONG THE ACCESSIBLE ROUTE.
3. DEVELOPER SHALL COMPLY WITH SECTION 13.08.170, EXCESSIVE PAVING CUTS, OF EL PASO MUNICIPAL CODE.
4. TYPICAL LOCATION OF NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NECBU'S), SIGNAGE, FIRE HYDRANTS, LIGHT POLES, SHALL NOT BE PLACED IN THE SIDEWALK.
5. RETAINING WALL WILL BE REQUIRED WHERE THERE IS A GRADE DIFFERENCE OF 2 OR MORE FEET BETWEEN LOT AND STREET. RETAINING WALL DESIGN AT TIME OF BUILDING PERMIT.
6. COMPACTION ON FILL WILL BE 95%
   COMPACTION ON CUTS WILL BE 85%



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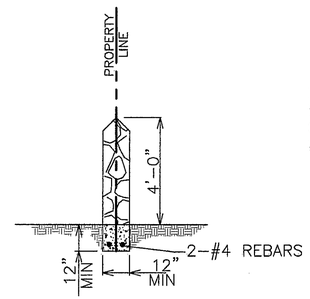
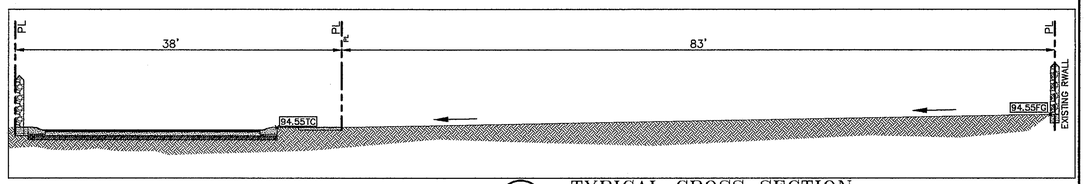
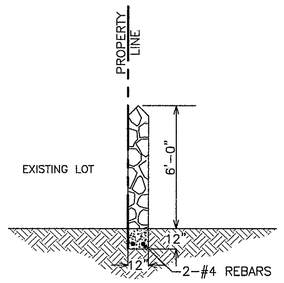
C3	N 41°01'12" E	S 24°32'24" W	4.56	10.00	8.55	8.29
C4	N 44°56'59" E	S 67°30'39" W	53.91	130.00	102.22	99.60



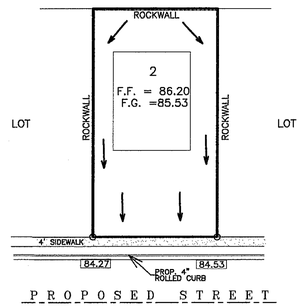
A ROCKWALL BETWEEN LOTS



B TYPICAL CROSS SECTION



TYPICAL PERIMETER ROCKWALL



TYPICAL LOT GRADING

LEGEND

- ~~~~ – PROPOSED ROCKWALL
- 75.08 – PROPOSED TOP OF CB. GRADE
- (75.08) – EXIST.TOP OF CB. GRADE
- FF – FINISHED FLOOR
- FG – FINISHED GROUND

DRAINAGE CALCULATIONS

Q_{100}= AIC TC = 10 Min
A = 0.972 AC
I = 5.0
C = .65
Q_{100}= 0.972x 5.0 x .65 = 3.159 C.F.S

BENCHMARK:

CITY MONUMENT LOCATED AT GLENWOOD AND FLOWER ELEV.= 3683.31

FLOOD ZONE:

PROPERTY IS LOCATED IN FLOOD ZONE "C" WHICH IS NOT WITHIN THE 100 YEAR FLOOD PLAIN AS PER FIRM 480214 PANEL NUMBER 40B DATED OCT. 15, 1982

DATE OF PREPARATION APRIL 20, 2015

04-13-17
02-23-17
01-13-17

DORADO ENGINEERING, INC.
TEXAS REGISTERED ENGINEERING FIRM F-884

S:/drawings/MORNELAS/GLENWOOD/409 GLENWOOD.dwg

ENGINEERS SEAL | REFERENCES - - BENCHMARKS | SCALE:

DATE	REVISIONS	BY

DATE 11/09/16
DESIGN BY FD
DRAWN BY DE
CHKD. BY FD
APPD. BY FD

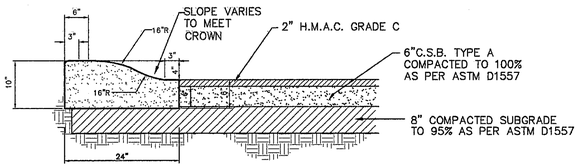
FERMIN DORADO 37512 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

DORADO
ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E YANDELL EL PASO, TEXAS 79903 (915)562-0002

PROJECT NAME
GLENWOOD CIRCLE PLACE
UNIT 2 SUBDIVISION

SHEET TITLE
LOT GRADING & DRAINAGE PLAN

SHEET
4 OF 7



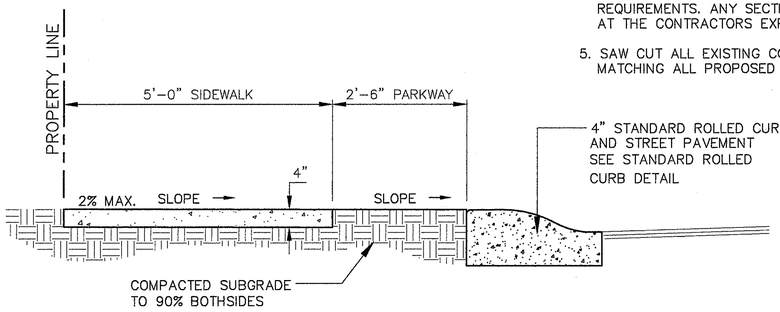
4" ROLLED CURB AND ASPHALT

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

4" ROLLED CURB WITH DRIVEWAY

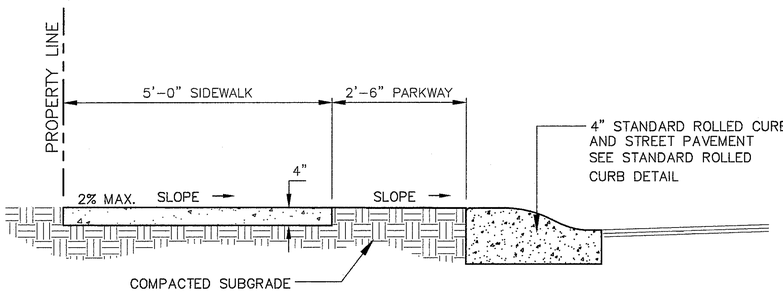
NOTES:

1. ALL CONCRETE TO BE 3000 P.S.I. MIN. @ 28 DAYS
2. DUMMY JOINT REQUIRED AT 18' O.C. FOR HEADERS & GUTTER AND 5' O.C. FOR SIDEWALKS.
3. EXPANSION JOINTS REQUIRED AT CURB RETURNS. JOINTS SHALL BE PACKED WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
4. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS
5. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.



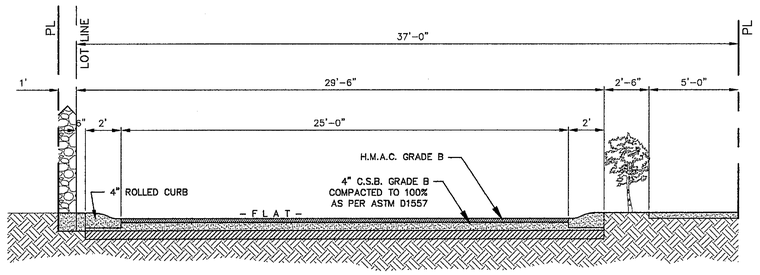
TYPICAL DRIVEWAY DETAIL

Sc. 3/4"=1'



4" ROLLED CURB WITH SIDEWALK SECTION

Sc. 3/4"=1'



STREET SECTION
SECONDWOOD STREET

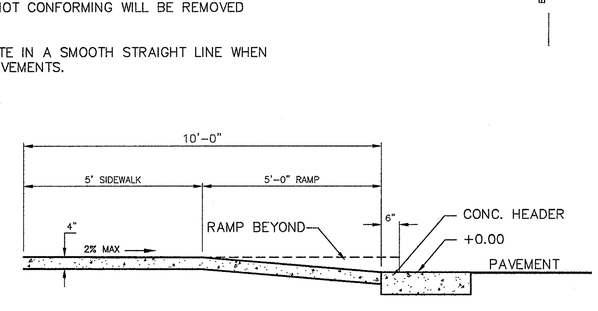
Sc.: 1/4"=1'-0"

GENERAL NOTES:

1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
2. LANDINGS SHALL BE 5' X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
3. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED.
4. ALL CONCRETE SIDEWALK SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PANS.
5. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOMED SURFACED. REFER TO TRUNCATED DOME DETAIL.

NOTES:

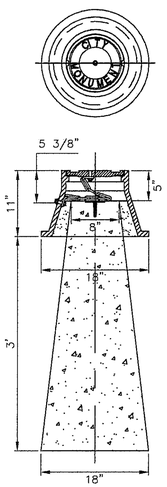
1. ALL CONCRETE SHALL BE 3,000 P.S.I. MIN. AT 28 DAYS.
2. CONCRETE SLABS SHALL BE A MIN. 4" THICK.
3. DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 IN, A NOMINAL HEIGHT OF 0.2 IN AND A CENTER TO CENTER NOMINAL SPACING OF 2.35 IN, AND SHALL NOT BE STAGGERED. THE SURFACE SHALL HAVE A COLOR CONTRAST VISUALLY WITH ADJOINING SURFACES.
4. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE
5. SAW CUT ALL EXISTING CONCRETE IN A SMOOTH STRAIGHT LINE WHEN MATCHING ALL PROPOSED IMPROVEMENTS.



SECTION A - A

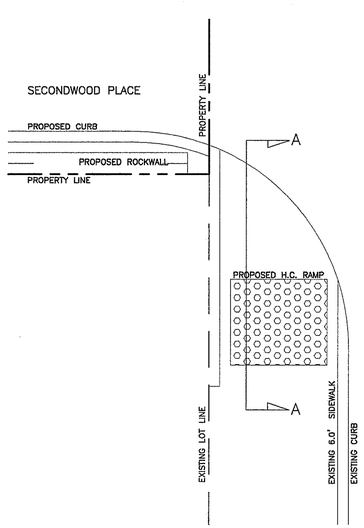
WHEEL CHAIR RAMP DETAIL SCALE: 1/2"=1'-0"

NO FORMS REQUIRED, CONCRETE TO BE POURED IN PLACE. 3000 P.S.I. CONCRETE.

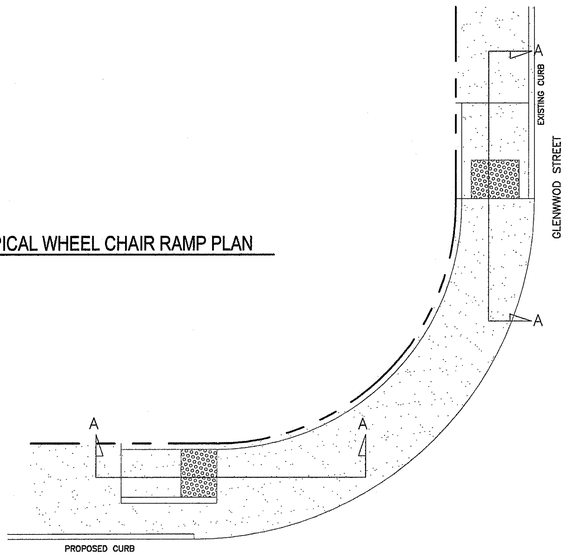


SECTION VIEW

SCALE: 1" = 1'



TYPICAL WHEEL CHAIR RAMP PLAN

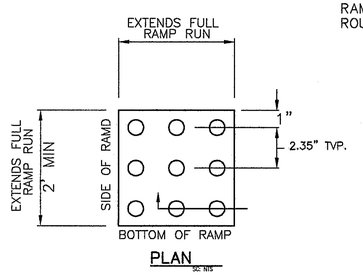


NOTES:

PROVIDE RAMPS AS NOTED ON PLANS.

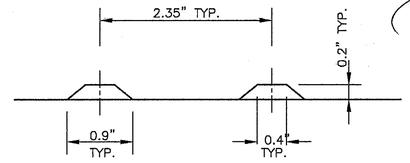
REMOVE EXIST. CURB FOR INSTALLATION OF NEW HANDICAPPED RAMP.

RAMP TEXTURE SHALL BE ROUGH IN SURFACE OF RAMP.



PLAN

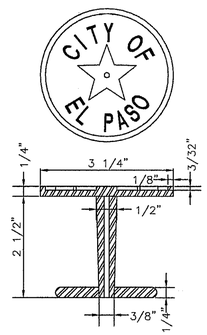
SC: NTS



SECTION

SC: NTS

TRUNCATED DOME

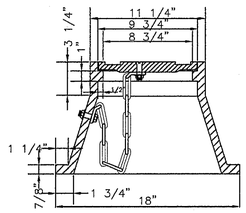


CITY MONUMENT

SCALE: 1" = 1'

OUTSIDE RADIUS OF STARS = 3/4" INSIDE

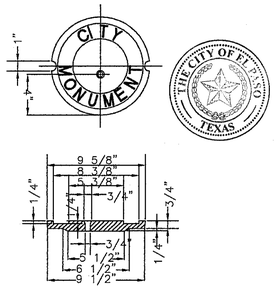
INSIDE RADIUS OF STARS = 3/16"



MONUMENT BOX

SCALE: 3" = 1'

EMBOSS STAR, RING AND LETTERS TO HEIGHT OF 3/32"



BOX COVER

SCALE: 3" = 1'

CITY SURVEY MONUMENT

DATE OF PREPARATION APRIL 20, 2015

04-13-17
02-23-17
01-13-17

DORADO ENGINEERING, INC.
TEXAS REGISTERED ENGINEERING FIRM F-884

DORADO
ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E YANDELL EL PASO, TEXAS 79903 (915)562-0002

S:/drawings/MORNELAS/GLENWOOD/409 GLENWOOD.dwg

ENGINEERS SEAL	REFERENCES – BENCHMARKS	SCALE:

DATE	REVISIONS	BY

DATE 11/09/16
DESIGN BY FD
DRAWN BY DE
CHKD. BY FD
APPD. BY FD

PROJECT NAME

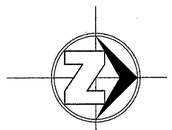
GLENWOOD CIRCLE PLACE
UNIT 2 SUBDIVISION

SHEET TITLE

DETAILS

SHEET

5 OF 7



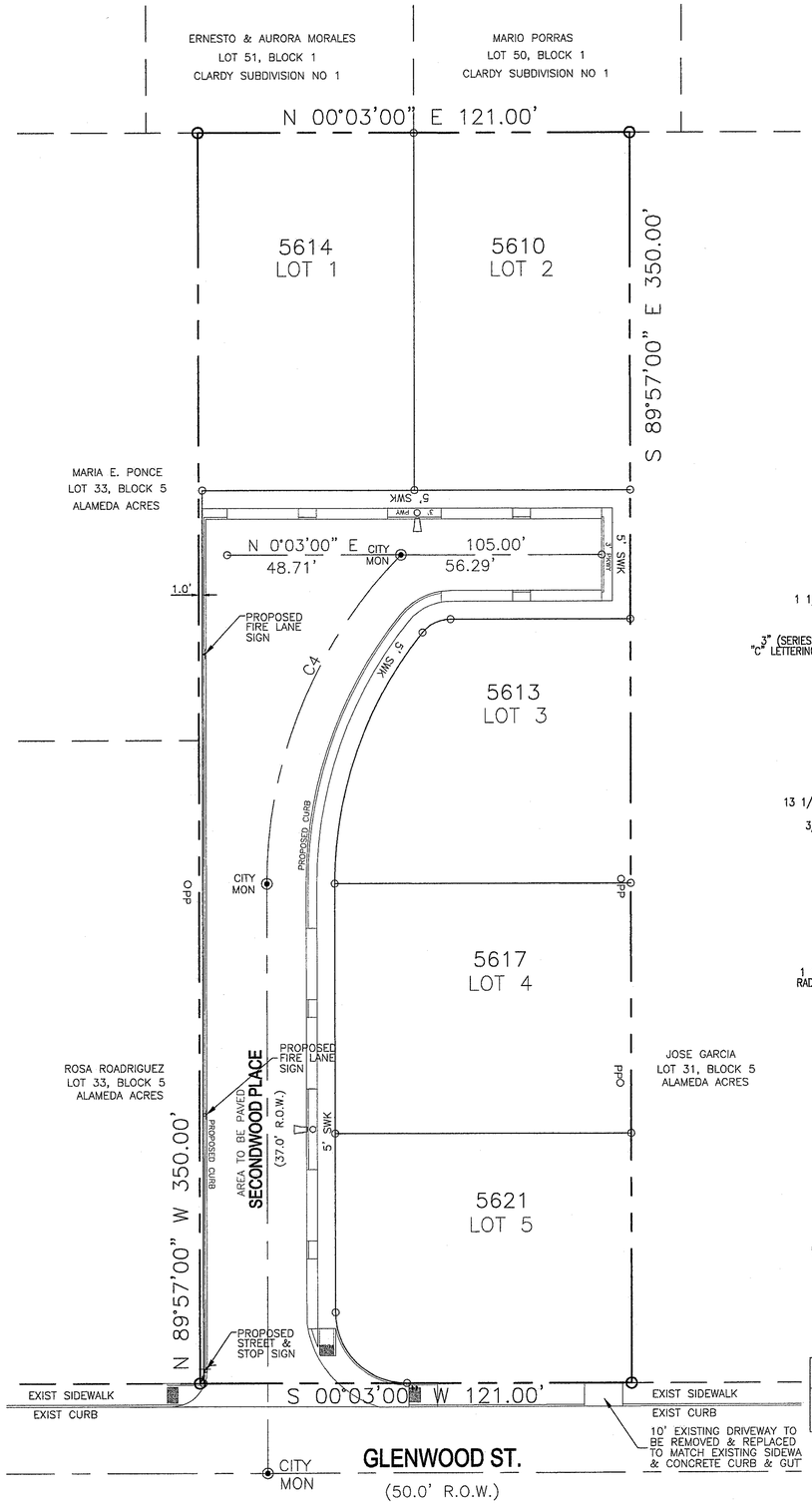
SCALE: 1"=30'

LEGEND

PROPOSED STREET LIGHT

TRAFFIC SIGN

INSTALL TRAFFIC CONTROL DEVICE AS SHOWN



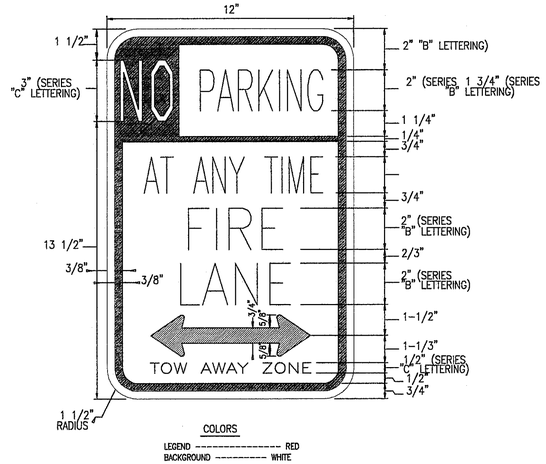
ITEM NO.	DESCRIPTION	STOCK/DSU NO.	QTY.	C/U CODE	MACRO CODE
1	PHOTOCELL, 240V – SEE NOTE 1	21–225	1		
2	LUMINAIRE–HPS,CUT OFF, 240V 100W	21–335	1		
	OR 150W	21–340	1		
3	LAMP–HPS, 100W –9,500 LUMEN	21–085	1		
	OR 150W– 16,000 LUMEN	21–090	1		L100WCSL OR L1500WCSL
4	LUMINAIRE SUPPORT –6' X 1 1/4"	21–200	1		
5	MACHINE BOLT, 5/8" X 10"	02–460	2		
6	SQUARE GALV. WASER, 2 1/4" X 2 1/4"	02–760	1		
7	COIL SPRING WASHER, 5/8"	02–786	1		
8	LAG BOLT, 3/8" X 3"	02–343	2		
9	CLEVIS SECONDARY	07–550	1		
10	INSULATOR, SPOOL 3"	06–150	1		
11	CABLE, #10.2 CONDUCTOR, 600V UF	13–600	8'		
12	H– TAP CONNECTOR	04–951	2		
13	# 6 DUPLEX	11–206	AS REQ	L6D	
14	POLE, 35 FT. – CLASS 4	09–035	1	L354	
15	COPPER CABLE, #12, 19 STRAND, 600 V	13–665			

NOTES:

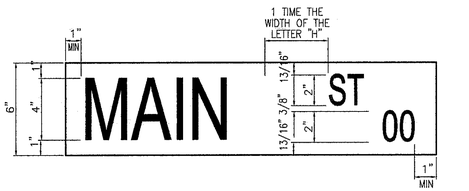
1. MOUNT SO THAT CONTROL FACES NORTH
2. ITEM 17 SHALL NOT BE SPLICED INSIDE ITEM 14

DESIGN NOTES

1. INSTALLATION SHALL COMPLY WITH ALL LOCAL CODE REQUIREMENTS. AND THE CITY OF EL PASO SUBDIVISION STANDARDS
2. FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING CODE INTERPRETATION, CALL THE EL PASO ELECTRIC CO. DISTRIBUTION DEVELOPMENT DEPARTMENT.

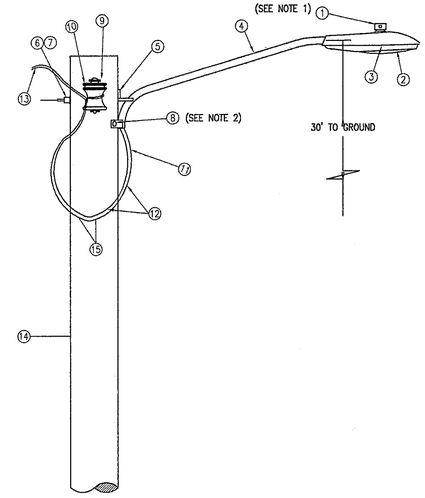


FIRE LANE SIGNAGE

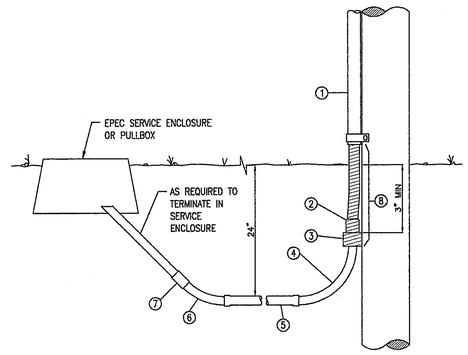


SIGN CLASS	SIGN LENGTH	PRIMARY LETTERS SIZE & SERIES	SUFFIX & BLOCK NUMBER SIZE & SERIES
6" LOCAL STREETS	24" 30" 36"	4" B,C,D SERIES 4" B,C,D SERIES 4" A,B,C,D SERIES	2" C SERIES 2" C SERIES 2" C SERIES

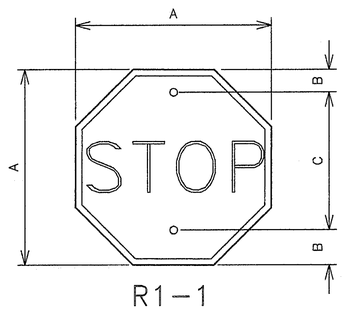
6" STREET NAME SIGN



RESIDENTIAL STREET LIGHT WOOD POLE



RESIDENTIAL STREET LIGHT WOOD POLE



STOP SIGN

3/8" HOLE DIA.

A	B	C
24	3	18
30	3	24
36	3	30

S:/drawings/MORNELAS/GLENWOOD/409 GLENWOOD.dwg

SCALE:

REFERENCES – – BENCHMARKS

ENGINEERS SEAL

DORADO ENGINEERING, INC.
TEXAS REGISTERED ENGINEERING FIRM F-884

FERMIN DORADO 37512 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

DATE	REVISIONS	BY

DATE 11/09/16
DESIGN BY FD
DRAWN BY DE
CHKD. BY FD
APPD. BY FD

DORADO
ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E YANDELL EL PASO, TEXAS 79903 (915)562–0002

PROJECT NAME
GLENWOOD CIRCLE PLACE
UNIT 2 SUBDIVISION

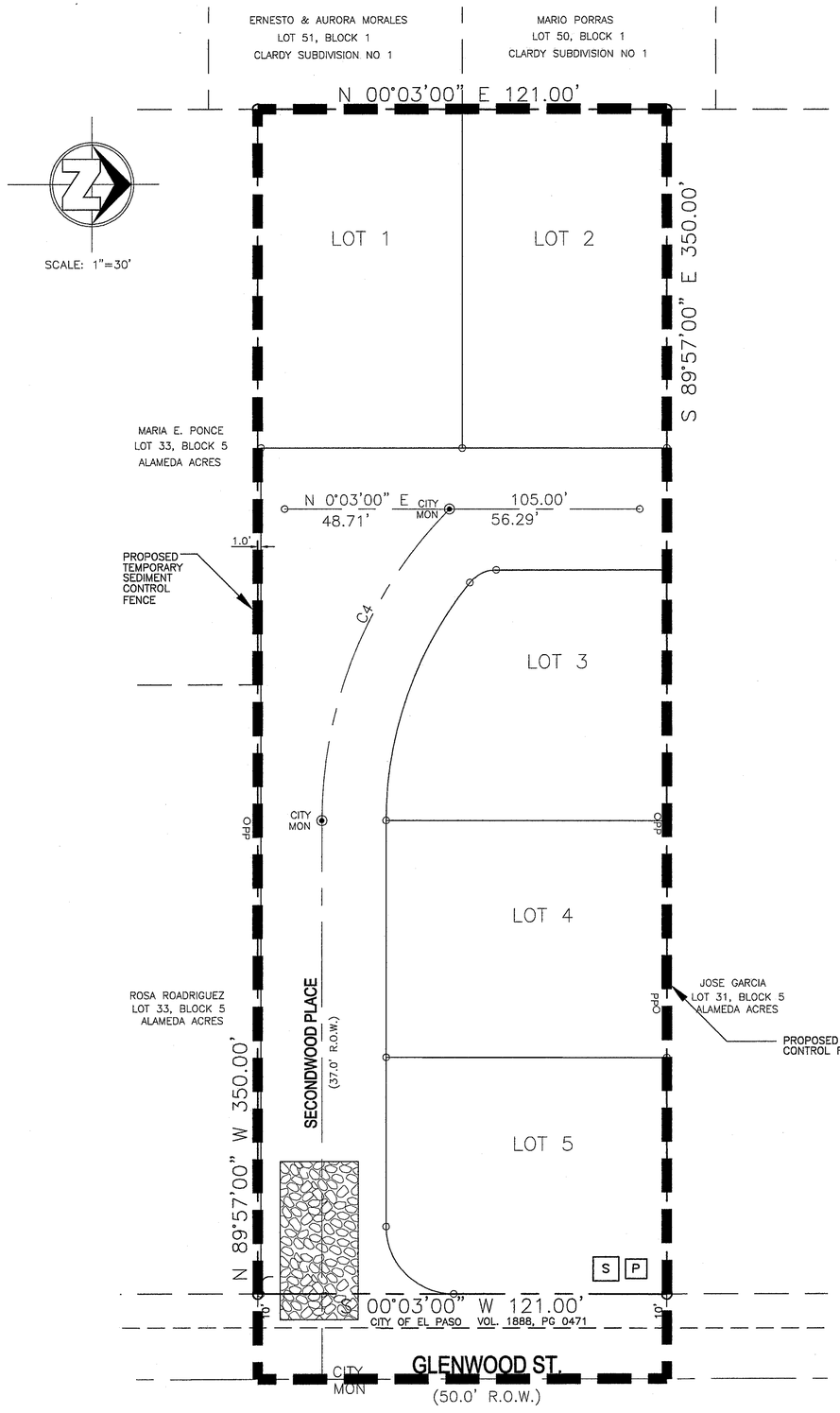
THE CITY OF EL PASO TEXAS

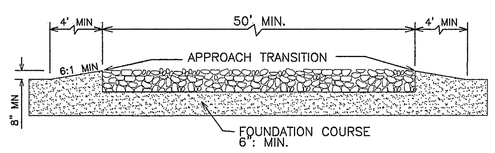
STATE OF TEXAS FERMIN DORADO 37512 REGISTERED PROFESSIONAL ENGINEER
04/03/17

SHEET TITLE
ILLUMINATION PLAN

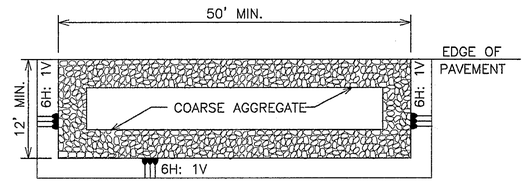
SHEET
6 OF 7

02–23–17
01–13–17

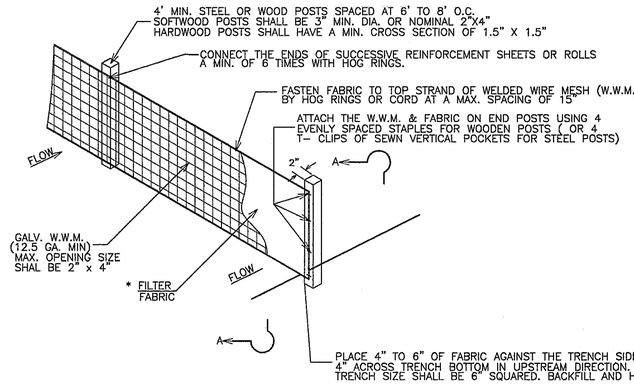




PROFILE

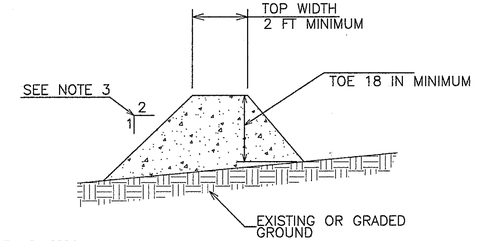


PLAN

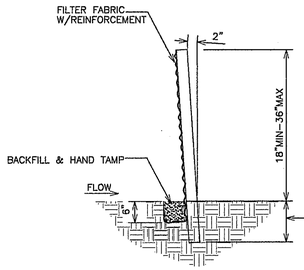


* FILTER FABRIC AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY (TYPE GTF– 180 OR APPROVED EQUAL)

TEMPORARY SEDIMENT CONTROL FENCE



TYPICAL BERM CONSTRUCTION
SCALE: N.T.S



SECTION

GENERAL NOTES

1. SOIL USED IN BERM CONSTRUCTION SHALL BE MACHINE COMPACTED
2. SIDE SLOPES WITHIN THE SAFETY CLEAR ZONE OF A ROADWAY SHALL BE 6:1 OR FLATTER.
3. THE ENGINEER RESERVES THE RIGHT TO MODIFY THE DIMENSIONS SHOWN FOR THE BERM DEPENDENT ON RUNOFF VOLUME CHARACTERISTICS.

BERM USAGE GUIDELINES

A BERM MAY BE USED TO INTERCEPT RUNOFF AND DIVERT IT AROUND UNSTABILIZED AREAS OR TO DIVERT SEDIMENT LADEN RUNOFF TO AN EROSION CONTROL DEVICE (SEDIMENT BASIN OR TRAP, ROCK FILTER DAM, ETC.).

THE DRAINAGE AREA CONTRIBUTING RUNOFF TO A BERM SHOULD NOT EXCEED 5 ACRES. THE SPACING OF BERMS SHOULD BE AS FOLLOWS:

SLOPE OF DISTURBED AREAS ABOVE BERMS	GREATER THAN 10%	5 – 10%	LESS THAN 5%
	100'	200'	300'

INTERCEPTED RUNOFF FLOWING ALONG A BERM SHOULD OUTLET TO A STABILIZED AREA (VEGETATION, ROCK, ETC.).

SEDIMENT CONTROL FENCE USAGE GUIDELINES

1. A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2–YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.
2. SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 0.22 CFS/FT. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES.
3. SEDIMENT CONTROL FENCES AT RIGHT–OF–WAY SHALL BE PLACED SO AS NOT TO BLOCK ANY EXISTING DRIVEWAYS.

LEGEND

- PROPOSED TEMPORARY SEDIMENT CONTROL FENCE
- PROPOSED TEMPORARY STABILIZED CONSTRUCTION ENTRANCE /EXIT (TYE 1)
- S — STAGING AREA
- P — PORTABLE TOILETS
- FLOW

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543–5720
EL PASO ENERGY CORPORATION	(915) 496–5244
EL PASO WATER UTILITIES	(915) 594–5500
MCI SURVEILLANCE	(800) MCI–WORK
TIME WARNER COMMUNICATIONS	(915) 772–1123
TEXAS GAS SERVICE	(915) 680–7200
SBC	(800) 545–6005
AT&T	(800) 852–3786
U.S. SPRINT TELECOMM	(800) 521–0579

WARNING ! BEFORE YOU DIG
CALL
1–800–DIG–TESS
1–800–344–8377
FOR FIELD LOCATING EXISTING UTILITIES

GENERAL NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

GENERAL NOTES:

1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN FIFTY (50) FEET.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 2–INCH TO 3–INCH.
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COARSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. THE GUIDELINES SHOWN HEREIN ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

SWPPP GENERAL NOTES:

1. PLACEMENT OF SILT FENCE SHALL BE ADJUSTED AS NECESSARY TO PREVENT THE BLOCKING OF DRIVEWAYS OR DRIVING LANES.
2. THE SWPPP MANUAL IDENTIFIES THE DUTIES AND RESPONSIBILITIES OF THE GENERAL CONTRACTOR IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. THIS ITEM SHALL BE SUBSIDIARY TO THE SWPPP BEST MANAGEMENT PRACTICES (COMPLETE IN PLACE) ITEMS. THE CONTRACTOR SHALL MAINTAIN THIS MANUAL AT THE CONSTRUCTION SITE AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL COMPLETE AND SUBMIT ALL NECESSARY REGULATORY FORMS AND APPLICATIONS, AS PROVIDED IN THE SWPPP MANUAL, INCLUDING, BUT NOT LIMITED TO: NOI, NOT SDPCP, AND ANY OTHER FORM REQUIRED BY THE CITY OF EL PASO AND TCEQ.
4. ALLOWABLE STORM WATER AND NON– STORMWATER DISCHARGE SHALL COMPLY WITH 15.20.080 (GENERAL PROHIBITION) AND 15.20.0900 (SPECIFIC PROHIBITIONS AND REQUIREMENTS) OF THE CITY OF EL PASO STORM DRAIN POLLUTION CONTROL PLAN ORDINANCE. NON–STORMWATER DISCHARGES MAY CONSIST OF , BUT ARE NOT LIMITED TO, THE DISCHARGE RESULTING FROM FIRE FIGHTING, LAWN WATERING, LANDSCAPE IRRIGATION, NATURAL SPRING, AND/OR AGRICULTURAL STORM WATER RUNOFF.
5. REFER TO GRADING & DRAINAGE PLAN SHEET 4, FOR DETAILED INFORMATION ON WATERSHED AREAS. DRAINAGE PATTERNS AND RUNOFF QUANTITIES (Q).
6. THE FOLLOWING HAVE BEEN IDENTIFIED AS POTENTIAL CONTAMINATION SOURCES: CLEARED AND GRADED AREAS: CONSTRUCTION SITE ENTRANCE AND ASPHALT PARKING AREA CONSTRUCTION: ASPHALT LOADING/UNLOADING AREAS: CONCRETE LOADING/UNLOADING AREAS: AND, ALL UNDISTURBED AREAS.
7. THE FOLLOWING 15 A LIST OF POTENTIAL CONSTRUCTION SITE STORM WATER POLLUTANTS: ASPHALT: CONCRETE: GLUE/ADHESIVE PAINTS: CURING COMPOUNDS: WASTEWATER FROM CONSTRUCTION EQUIPMENT WASHING: HYDRAULIC OIL/FLUIDS: GASOLINE: DIESEL FUEL: KEROSENE: ANTIFREEZE / COOLANT: AND EROSION.

02–23–17
01–13–17

DORADO ENGINEERING, INC.
TEXAS REGISTERED ENGINEERING FIRM F–884

ENGINEERS SEAL

REFERENCES – – BENCHMARKS

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SCALE:

DATE	REVISIONS	BY

DATE 11/09/16
DESIGN BY FD
DRAWN BY DE
CHKD. BY FD
APPD. BY FD

FERMIN DORADO 37512 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

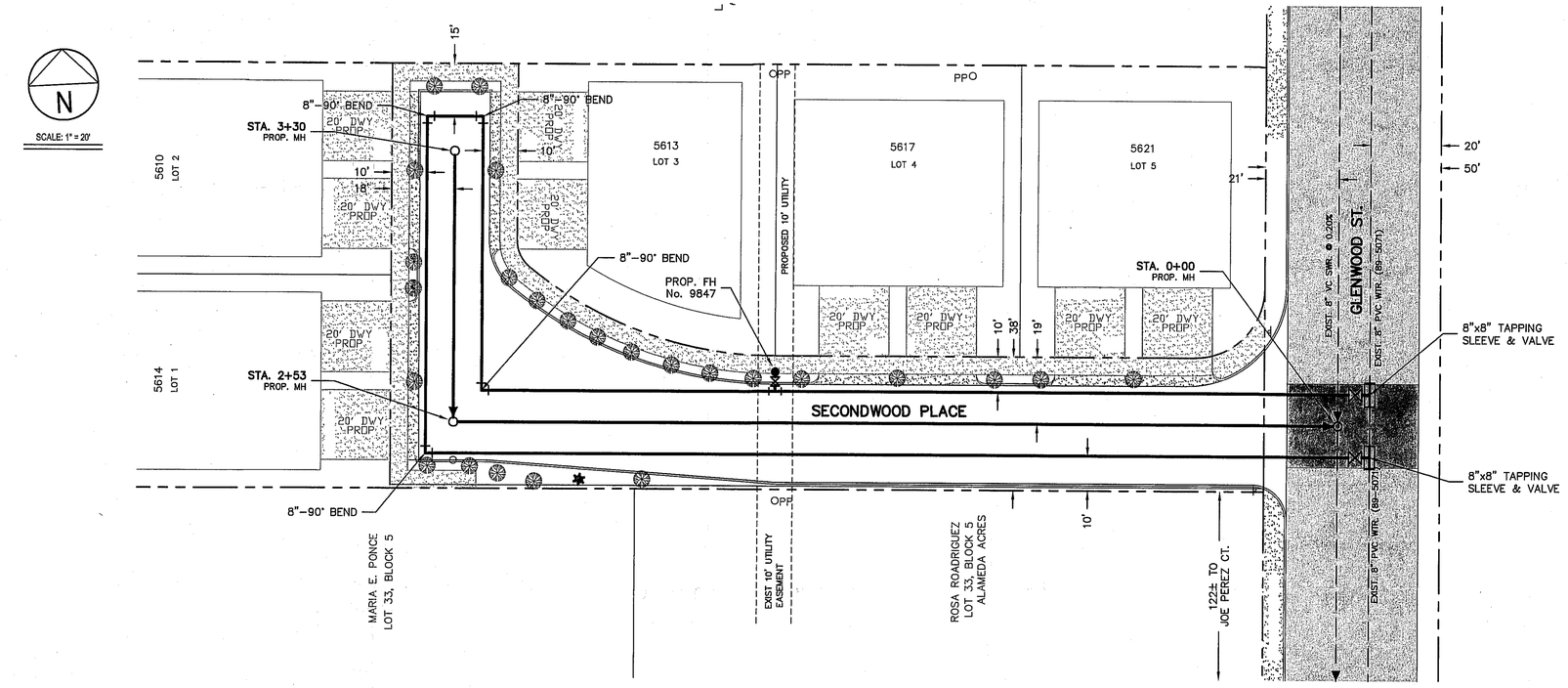
THE CITY OF EL PASO TEXAS

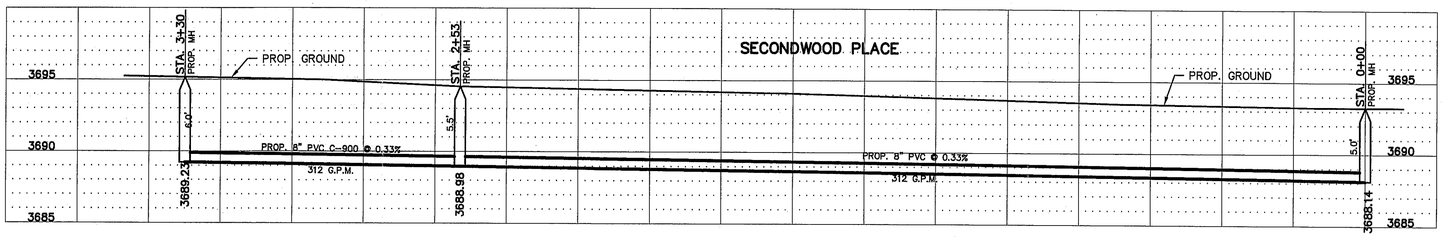
DORADO
ENGINEERING, INC.
ENGINEERS SURVEYORS PLANNERS
2717 E YANDELL EL PASO, TEXAS 79903 (915)562–0002

PROJECT NAME
GLENWOOD CIRCLE PLACE
UNIT 2 SUBDIVISION

SHEET TITLE
DRAINAGE PLAN & SWP3

SHEET
7 OF 7





PROPOSED WATER MAIN TOTALS

STREET NAMES	LENGTH, SIZE AND TYPE OF PIPE
SECONDWOOD PLACE	715 FT. OF 8" P.V.C. C-900 (CLASS 235)

WATER NOTES:

1.) CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2.) INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.
3.) PROVIDE ADEQUATE CONCRETE THRUST BLOCKING AT THE FOLLOWING: TAPPING SLEEVES, TEES, BENDS, PLUGS AND ALL FITTINGS.
4.) ALL VALVES ON P.V.C. WATER MAINS SHALL BE ANCHORED IN CONCRETE.
5.) P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.
6.) CITY PAVING CUT PERMIT REQUIRED BEFORE EXCAVATION.
7.) SEPARATION DISTANCES BETWEEN WATER & SEWER MAINS SHALL COMPLY WITH TCEQ STANDARDS.
8.) CONSTRUCTION OF PUBLIC WATER & SANITARY SEWER MAINS, INCLUDING MATERIALS & TESTING SHALL COMPLY WITH EPWU STANDARD SPECIFICATION FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS & RELATED APPURTENANCES.

SEWER NOTES:

1.) CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2.) INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF (5') FEET AS PER O.S.H.A. STANDARDS.
3.) PROVIDE MANHOLE ADAPTER WHERE P.V.C. PIPE CONNECTS TO MANHOLE.
4.) P.V.C. PIPE SHALL BE PLACED WITH SELECT BEDDING MATERIAL ALL AROUND.
5.) CITY PAVING CUT PERMIT REQUIRED BEFORE EXCAVATION.
6.) SEPARATION DISTANCES BETWEEN WATER & SEWER MAINS SHALL COMPLY WITH TCEQ STANDARDS.
7.) CONSTRUCTION OF PUBLIC WATER & SANITARY SEWER MAINS, INCLUDING MATERIALS & TESTING SHALL COMPLY WITH EPWU STANDARD SPECIFICATION FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS & RELATED APPURTENANCES.

THE CITY OF EL PASO TEXAS

FINAL PRINT 07/05/2017

ENGINEER'S SEAL

STATE OF TEXAS
ADRIANA L. CASTILLO
108516
LICENSED PROFESSIONAL ENGINEER
5/4/17

REVISIONS	DATE	REVISED BY

el paso WATER

GLENWOOD CIRCLE PLACE UNIT 2 WATER AND SANITARY SEWER IMPROVEMENTS

SCALE	DRAWN BY	JOB NO.	DATE
HOR. 1" = 20'	M.M.	17-5079/17-9042	05/15/2017
VERT. 1" = 5'	CHECKED BY E.C.	DESIGNED BY A.L.C.	SHT. 1 OF 4

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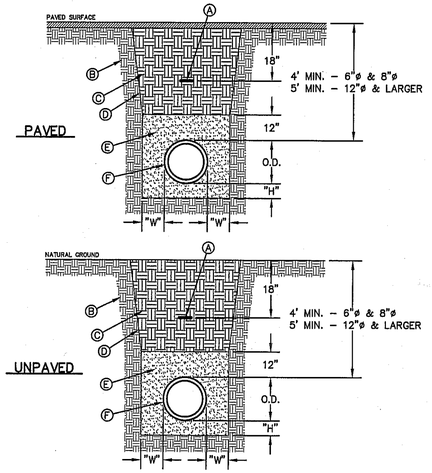


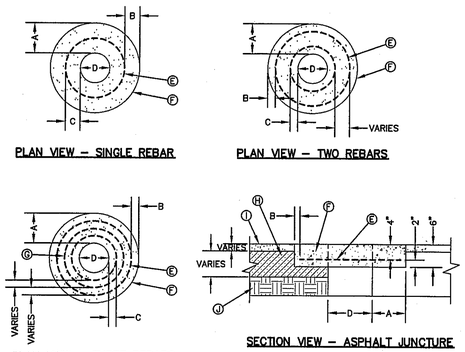
EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS
N.T.S.

GENERAL NOTES:
1. BEDDING FOR PRESSURE AND GRAVITY PIPE IN DRY CONDITIONS.
2. PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
3. IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1-SACK) IF REQUIRED IN SPECS.

CONSTRUCTION KEY NOTES:
A. APPROVED MARKING TAPE.
B. UNDISTURBED STABLE MATERIAL.
C. NATIVE MATERIAL BACKFILL.
PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
(*SEE NOTE #3 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
D. SLOPE TRENCH IN SANDY SOIL CONDITIONS.
E. USE CLASS II OR CLASS III SAND PER ASTM D-2487. NATIVE MATERIAL OR IMPORTED SELECT MATERIAL MEETING OR EXCEEDING THIS REQUIREMENT MAY BE USED. COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR (OR 90% D-698 STANDARD PROCTOR).
F. APPROVED PIPE.
G. TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" – 30"	4"
GREATER THAN 30"	6"

PIPE DIAMETER	"W"
6" – 30"	8"
GREATER THAN 30"	12"

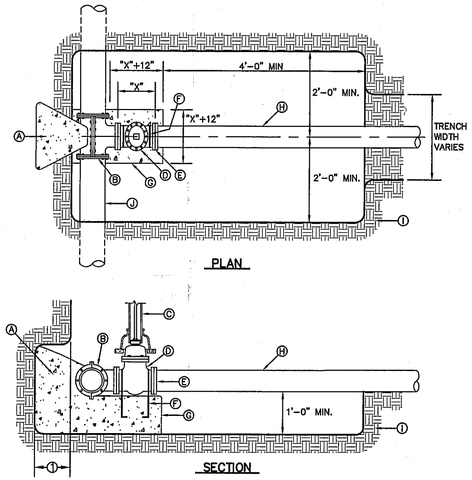


"D" DIAMETER OF PENETRATION	NUMBER OF #3 REINFORCING STEEL BARS	"A" MINIMUM CONCRETE HORIZONTAL DIMENSION FROM PENETRATION	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE COLLAR TO CENTER OF NEAREST REBAR	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR
0" TO 6"	1	6"	1½"	4½"
6.1" TO 18"	2	6"	1½"	1½"
18.1" AND OVER	3	9"	1½"	1½"

CONCRETE COLLAR INSTALLATION IN PAVED AREAS
N.T.S.

GENERAL NOTES:
1. THE CONCRETE COLLAR SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
2. TOPS OF CONCRETE COLLAR SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. ANY DISTURBED SUBGRADE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 95% DENSITY ± 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
4. ANY DISTURBED BASE COARSE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 100% DENSITY ± 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
5. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
6. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
7. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

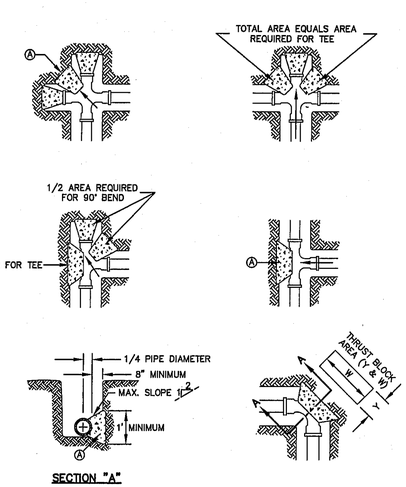
CONSTRUCTION KEY NOTES:
E. #3 REINFORCING STEEL TYP.
F. CONCRETE COLLAR.
G. #3 REINFORCING STEEL EQUALLY SPACED.
H. COMPACTED BASE COARSE.
I. PAVEMENT.
J. COMPACTED SUBGRADE.



TAPPING SLEEVE AND VALVE INSTALLATION
N.T.S.

GENERAL NOTES:
1. THRUST BLOCKING SHALL EXTEND TO UNDISTURBED EARTH.
2. TAPPING SLEEVE SHALL BE 18" MINIMUM FROM ANY BELL, COUPLING, VALVE OR FITTING LOCATED ALONG EXISTING WATER LINE TO BE TAPPED.
3. REPLACE EXCAVATED MATERIAL WITH CEMENT STABILIZED BACKFILL PRIOR TO PAVING.
4. JOINTS AND BOLTS SHALL BE CLEAR OF CONCRETE.
5. INSTALL PERMANENT THRUST BLOCKING UNDER VALVE BEFORE TAP IS MADE. JOINTS AND BOLTS TO BE CLEAR OF CONCRETE.

CONSTRUCTION KEY NOTES:
A. CONCRETE THRUST BLOCKING, PER DETAIL 270.
B. TAPPING SLEEVE.
C. RISER INSTALLATION, PER DETAIL 260.
D. TAPPING VALVE.
E. VALVE ENDS FOR TYPE OF PIPE INSTALLED.
F. 2–#5 REBAR HAIRPINS, PAINT UNEMBEDDED PORTION OF BARS WITH 2–COATS OF COAL TAR EPOXY, THEN COVER WITH 2" MINIMUM OF CEMENT MORTAR.
G. CONCRETE VALVE SUPPORT, PER DETAIL 271.
H. NEW WATER LINE TO BE INSTALLED.
I. UNDISTURBED EARTH.
J. EXISTING WATER MAIN TO BE TAPPED.

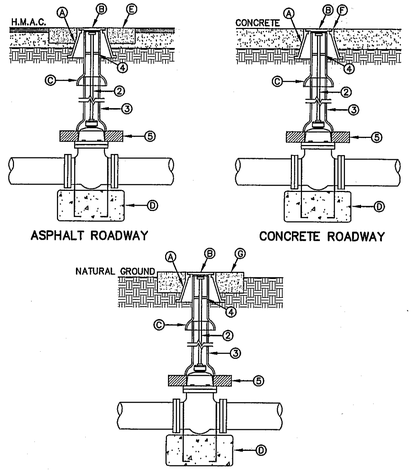


N.T.S.

GENERAL NOTES:
1. TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
2. AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
4. THRUST BLOCK IS TO EXTEND TO UNDISTURBED SOIL.
5. SIZE MAY BE DECREASED FOR LESSER DEGREE BENDS AS DETERMINED BY ENGINEER.
6. KEEP CONCRETE CLEAR OF M.J. OR BELL AND SPIGOT JOINTS.
7. BLOCK IN A SIMILAR MANNER AT TEES, HYDRANTS, PLUG OR OTHER LOCATIONS AS REQUIRED.
8. WHEN NECESSARY ADDITIONAL THRUST RESTRAINT METHODS MAY BE USED, SUCH AS MECHANICAL JOINT RESTRAINTS, TIE-RODS (INSTALLED PER MANUFACTURERS' RECOMMENDATIONS) OR OTHER APPROVED METHODS.

CONSTRUCTION KEY NOTES:
A. LENGTH "Y & W" AS REQUIRED TO OBTAIN BEARING AREA AGAINST UNDISTURBED SOIL.
B. ADDITIONAL EXCAVATION IF NECESSARY TO OBTAIN REQUIRED BEARING AREA.
C. MINIMUM THRUST BLOCK AREA REQUIREMENTS FOR (Y & W) AS FOLLOWS:

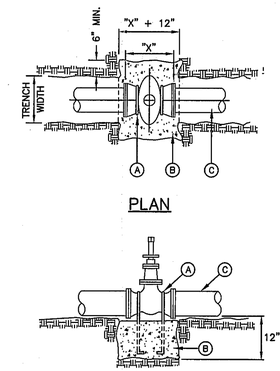
PIPE SIZE	WATER PIPE	
	TEE, DEAD END 90° BEND	45° AND 22 1/2° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET



GATE VALVE INSTALLATION
N.T.S.

GENERAL NOTES:
1. VALVE TYPE AND VALVE ENDS SHALL BE AS SHOWN ON THE PLANS.
2. ALL BURIED VALVES 5' AND DEEPER SHALL BE PROVIDED WITH SOLID STEEL EXTENSION STEM OPERATOR WITH 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
3. 8" DIA. MINIMUM VITRIFIED CLAY OR SDR 35 P.V.C. PIPE, PIPE SHALL NOT REST ON VALVE BODY.
4. ¼" THICK STEEL TRASH RING VALVE BOX INSIDE DIAMETER MINUS ¾".
5. MINIMUM 2½" CONCRETE OR BRICK ALL AROUND.
6. CLEAN BONNET BOX OF ALL DEBRIS AND SOIL.
7. COAT BURIED PIPE AND BONNET BOX PER SPECIFICATIONS, VALVE SHALL BE WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH SPECIFICATIONS.

CONSTRUCTION KEY NOTES:
A. BONNET BOX (SEE DETAIL 268).
B. BONNET BOX COVER (SEE DETAILS 269–1 & 269–2)
C. FINAL EXTENSION TO BONNET BOX SHALL BE WITH BELL AND SPIGOT ENDS (CLAY OR SDR 35 P.V.C. SPOOL).
D. CONCRETE VALVE ANCHOR (SEE DETAIL 271).
E. CONCRETE COLLAR (SEE DET 184–1) FLUSH WITH TOP OF H.M.A.C.
F. BONNET BOX FLUSH WITH TOP OF CONCRETE, CONCRETE COLLAR NOT NEEDED.
G. CONCRETE APRON (SEE DETAIL 184–2) FLUSH WITH BONNET BOX AND 2" ABOVE NATURAL GROUND.



VALVE ANCHOR
N.T.S.

GENERAL NOTES:
1. THE ENGINEER SHALL PROVIDE DESIGN FOR ALL VALVES GREATER THAN 12".
2. COMPLY WITH REQUIREMENTS OF AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.

CONSTRUCTION KEY NOTES:
A. TWO No. 5 REBAR HAIR PINS. PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF COAL TAR EPOXY.
B. CONCRETE VALVE SUPPORT, 2500 PSI. CONCRETE.
C. APPROVED PIPE.

THE CITY OF EL PASO TEXAS

FINAL PRINT 07/05/2017

ENGINEER'S SEAL	REVISIONS	DATE	REVISED BY
STATE OF TEXAS ADRIANA L. CASTILLO 108518 LICENSED PROFESSIONAL ENGINEER			

el paso WATER

GLENWOOD CIRCLE PLACE UNIT 2 WATER AND SANITARY SEWER IMPROVEMENTS

SCALE	DRAWN BY	JOB NO.	DATE
HOR. 1" = 20'	M.M.	17-5079/17-9042	05/15/2017
VERT. 1" = 5'	CHECKED BY E.C.	DESIGNED BY A.L.C.	SHT 2 OF 4

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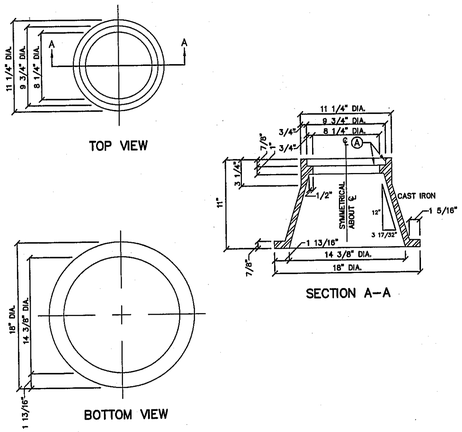
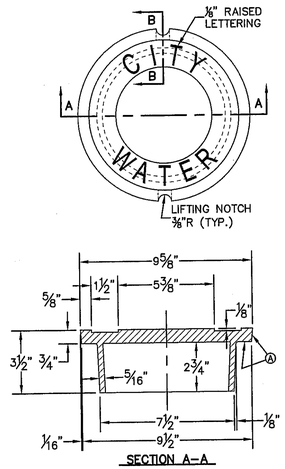


BONNET BOX
N.T.S.

GENERAL NOTES:
1. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
2. WEIGHT OF BONNET BOX IS 95 POUNDS.

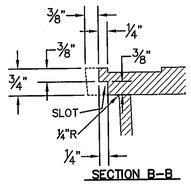
CONSTRUCTION KEY NOTES:
A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

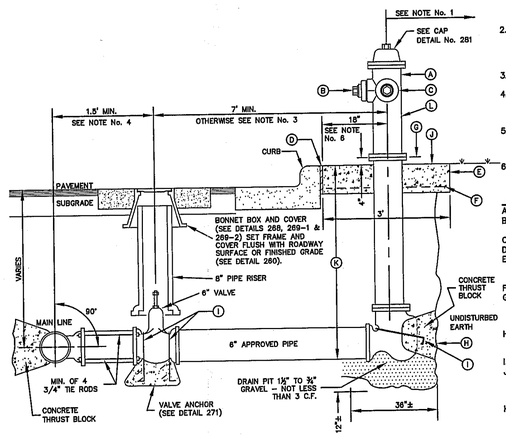


BONNET BOX COVER
(FLIP RESISTANT)
N.T.S.

GENERAL NOTES:
1. CASTINGS TO SMOOTH AND VOID OF AIR HOLES.
2. WEIGHT OF COVER IS 18 POUNDS.

CONSTRUCTION KEY NOTES:
A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

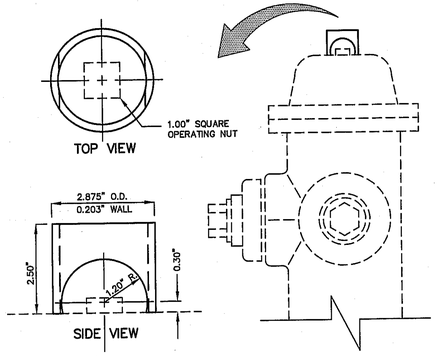




GENERAL NOTES:
1. NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 5 FT. IN ALL DIRECTIONS OF FIRE HYDRANT (PER EL PASO MUNICIPAL CODE, TITLE 12). FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
2. FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL No. 282 FOR SPECIAL CASES.
3. WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL No. 282.
4. VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS, WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED MECHANICAL ENDS WITH ¾" DIAMETER TIE RODS.
5. COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
6. WHEN INSTALLATION IS WITHIN TxDOT RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

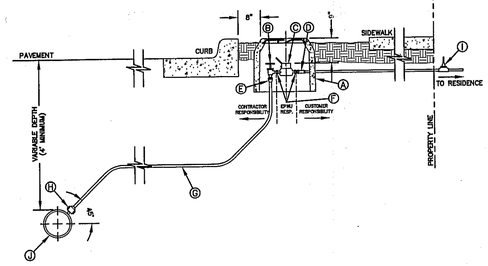
CONSTRUCTION KEY NOTES:
A. FIRE HYDRANT PER SPEC'S.
B. PUMPER NOZZLE 4" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
C. HOSE NOZZLE 2½".
D. ½" PREMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
E. 3'x3'x6" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
F. #10, 6/6 WWF.
G. CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYDRANT TO CONTROLLED ELEVATION.
H. CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH, F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
I. 2"x1/4" STEEL ANCHOR PINS.
J. TOP OF SLAB SHALL BE AT CURB LEVEL 4" BELOW THE BREAK LINE OF THE HYDRANT. UNDER SPECIAL CONDITIONS THE ENGINEER MAY ALLOW VARIATIONS TO THIS CONSTRUCTION.
K. MAXIMUM OF ONE (1) SPOOL EXTENSION ALLOWED TO MAINTAIN THE CONTROLLED ELEVATION LINE TO TOP OF SLAB. ADDITIONAL ADJUSTMENT MUST ME MADE WITH OFFSETS & FITTINGS AS NEEDED.
L. REQUIRED - DAVIDSON ANTI TERRORISM CORROSION RESISTANT VALVE KIT (DATV).

FIRE HYDRANT INSTALLATION
N.T.S.



FIRE HYDRANT CAP
N.T.S.

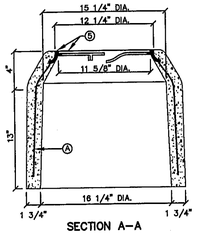
GENERAL NOTES:
1. STEEL CAPS TO BE MACHINED FROM STEEL PIPE:
   NOMINAL SIZE = 2 1/2" DIA.
   OUTSIDE DIA. = 2.875"
   WALL THICKNESS = 0.203
   LBS/FT. = 5.79
2. CAPS ARE TO BE TACK WELDED OR BRAZED ON FIRE HYDRANT BONNET OR WEATHER CAP.
3. THE CAPS OVER THE OPERATING NUT WILL PREVENT ACCESS TO THE UNAUTHORIZED USE OF HYDRANT WATER.



SERVICE LINE ¾" AND 1"
INSTALLATION BY CONTRACTOR
N.T.S.

GENERAL NOTES:
1. DETAIL SHOWN FOR A 3/4" SERVICE, 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
2. WHERE NO CURB EXISTS, METER IS TO BE SET NEAR PROPERTY LINE OR AT DESIGNATED LOCATION.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY PIPE, FITTINGS, AND METER BOXES REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE PRIVATE OWNER TO HAVE A CERTIFIED PLUMBER INSTALL A BACKFLOW PREVENTER AND EXTEND SERVICE LINE ON DISCHARGE SIDE OF METER.
4. NO SPLICING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
5. THE EPWU WILL FURNISH AND INSTALL THE METER.

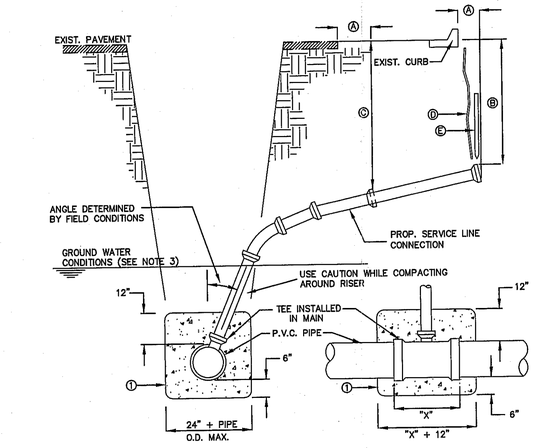
CONSTRUCTION KEY NOTES:
A. METER BOX TYPE "A" (SEE DETAILS 291 & 292) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
B. 3/4" ANGLE SERVICE VALVE.
C. WATER METER (CENTER INSIDE METER BOX).
D. WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
E. END FLARE OF SERVICE LINE.
F. INLET AND OUTLET COUPLING.
G. 3/4" COPPER SERVICE LINE (SEE NOTE 4).
H. 5/8" X 3/4" CORPORATION STOP
I. PRESSURE REGULATOR SOMETIMES LOCATED NEAR THE RESIDENCE.
J. WATER MAIN



GENERAL NOTES:
1. INSTALL TO GRADE MATCHING TOP OF CURB.
2. ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
3. METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
4. WHERE NO CURBING EXIST, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
5. METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
6. WHERE IT IS NECESSARY TO INSTALL A TYPE "A" BOX FOR 3/4" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI. MINIMUM.
7. METER BOX SHALL BE SINGLE UNIT CONSTRUCTION; CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

CONSTRUCTION KEY NOTES:
A. 3/16", 9 GAUGE BLACK ANNEALED WIRE
B. LUG-STOP C. CAST IRON RING

METER BOX TYPE "A" FOR
¾" SERVICE INSTALLATION
N.T.S.



SEWER SERVICE RISER
AND SERVICE LINE CONNECTION
N.T.S.

GENERAL NOTES:
1. IN GROUNDWATER CONDITIONS ONLY, P.V.C. SADDLES OR TEES ARE TO BE ENCASED WITH CLASS B CONCRETE.
2. UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE ADEQUACY OF THE DEPTH ON THE LATERAL.
3. WHEN GROUND WATER IS ENCOUNTERED SERVICE RISER SHALL BE EXTENDED ABOVE ANTICIPATED WATER TABLE LEVEL.

CONSTRUCTION KEY NOTES:
A. CONTRACTOR TO INSTALL SEWER SERVICE LINE FROM THE MAIN TO A LOCATION 6" BEHIND THE CURB OR 18" BEYOND THE EDGE OF PAYMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
B. 18" FOR STANDARD SUBDIVISION, 3.5' FOR SUBDIVISIONS WITH ON-SITE PONDING OR FLAT TERRAIN.
C. RISERS OR LATERALS EXTENDING BEYOND EXISTING PAVING SHALL BE INSTALLED TO 3.5' MINIMUM TOP OF GROUND OR PAVEMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
D. PLASTIC METALLIC MARKING TAPE RISING TO WITHIN 6" OF GROUND SURFACE OR METALLIC DISK.
E. WOODEN STAKE (1"x2"x36") VERTICALLY PLACED AT PLUGGED END OF PROPOSED SERVICE LINE.

FINAL PRINT 07/05/2017

ENGINEER'S SEAL	REVISIONS	DATE	REVISED BY
STATE OF TEXAS · ADRIANA L. CASTILLO · 108518 · LICENSED PROFESSIONAL ENGINEER · 7/6/17			

el paso WATER

GLENWOOD CIRCLE PLACE UNIT 2 WATER AND SANITARY SEWER IMPROVEMENTS

SCALE	DRAWN BY	JOB NO.	DATE
HOR. 1" = 20'	M.M.	17-5079/17-9042	05/15/2017
VERT. 1" = 5'	CHECKED BY E.C.	DESIGNED BY A.L.C.	SHT 3 OF 4

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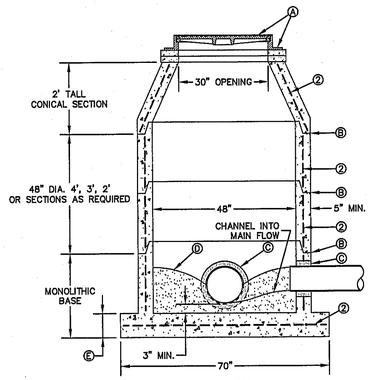
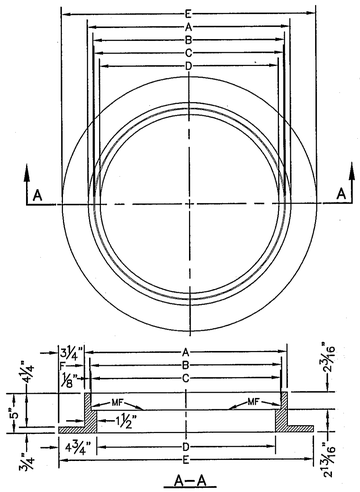


SECTION

MANHOLE TYPE "A"
N.T.S.

GENERAL NOTES:
1. MANHOLE TYPE "A" SHALL BE USED FOR LINES 21" AND SMALLER.
2. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" ⌀ OPENINGS OR KNOCKOUTS, OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
3. CEMENT SHALL BE TYPE I-II, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
4. THE BASE & RISER SHALL BE INTEGRALLY CAST. CONCRETE SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4000psi.
5. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
6. THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.
7. MANHOLES BELOW GROUNDWATER TO BE EXTERNALLY AND INTERNALLY COATED WITH BITUMINOUS COATING.

CONSTRUCTION KEY NOTES:
A. MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
B. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEK OR APPROVED EQUAL.
C. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE AND SHALL HAVE FLEXIBLE PIPE TO MANHOLE CONNECTORS (COMPRESSION TYPE ASTM-923), "KOR-N-SEAL" OR APPROVED EQUAL.
D. GROUT AS REQUIRED.
E. CONCRETE BASE SHALL BE 8" FOR MH's UP TO 12' DEEP AND 12" FOR DEPTHS GREATER THAN 12'.



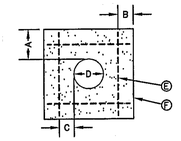
A-A

SEWER MANHOLE RING
N.T.S.

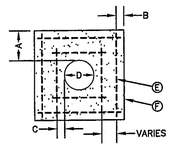
GENERAL NOTES:
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
4. AS-CAST DIMENSIONS MAY VARY ⅛"±/ PER FOOT (AASHTO M306-07).
5. WEIGHT MAY VARY 5%± (AASHTO M306-07).

MANHOLE RING	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	33"	25½"
B	31¾"	24⅛"
C	31½"	23⅞"
D	30"	22½"
E	39½"	32"
F	⅝"	1⅛"
WEIGHT	205 lbs.	170 lbs.

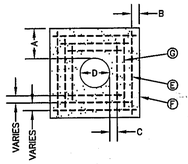
*OBSOLETE -DO NOT USE (FOR REFERENCE ONLY)



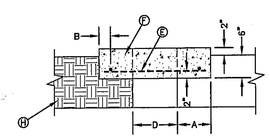
PLAN VIEW - SINGLE REBAR



PLAN VIEW - TWO REBARS



PLAN VIEW - THREE REBARS



SECTION VIEW

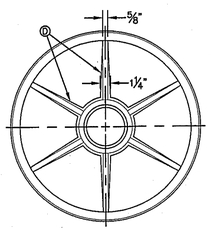
"D" DIAMETER OF PENETRATION	NUMBER OF #3 REINFORCING STEEL BARS	"A" MINIMUM CONCRETE HORIZONTAL DIMENSION FROM PENETRATION	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR
0" TO 6"	1	4"	1½"	4½"
6.1" TO 18"	2	6"	1½"	1½"
18.1" AND OVER	3	8"	1½"	1½"

GENERAL NOTES:
1. THE CONCRETE APRON SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
2. TOPS OF CONCRETE APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
4. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
5. NO. 3 REBARS SPACED EQUALLY MAY BE LAP TIED OR SQUARE HOOPS.

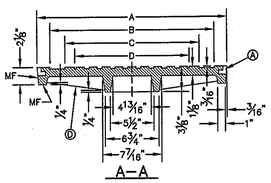
CONSTRUCTION KEY NOTES:
E. #3 REINFORCING STEEL TYP.
F. CONCRETE APRON.
G. #3 REINFORCING STEEL EQUALLY SPACED.
H. COMPACTED BACKFILL.

CONCRETE APRON
INSTALLATION IN NON PAVED AREAS
N.T.S.

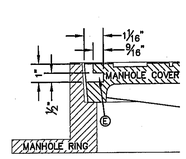
TOP VIEW



BOTTOM VIEW



A-A



LIFTING NOTCH

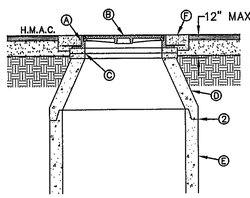
MANHOLE COVER	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	31⅜"	23⅞"
B	28⅛"	20⅝"
C	24⅜"	16⅞"
D	21⅞"	14⅜"
WEIGHT	200 lbs.	165 lbs.

*OBSOLETE -DO NOT USE (FOR REFERENCE ONLY)

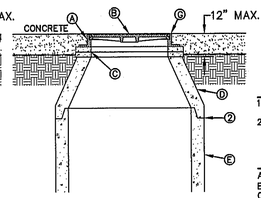
GENERAL NOTES:
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
4. AS-CAST DIMENSIONS MAY VARY ⅛"±/ PER FOOT (AASHTO M306-07).
5. WEIGHT MAY VARY 5%± (AASHTO M306-07).

CONSTRUCTION KEY NOTES:
A. LIFTING NOTCH.
B. ¾" RAISED LETTERING.
C. 1" SQUARES (⅜" TALL) WITH ⅝" SPACE BETWEEN.
D. REINFORCING RIBS.
E. SLOT.

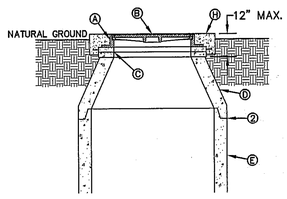
SEWER MANHOLE COVER
N.T.S.



ASPHALT ROADWAY



CONCRETE ROADWAY

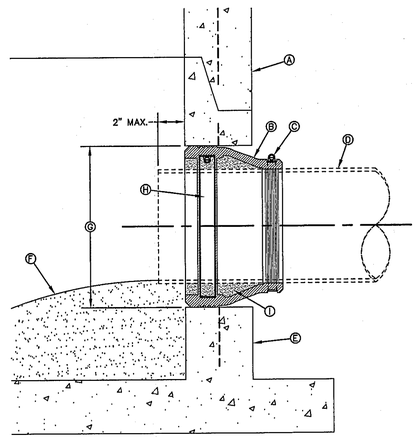


UNPAVED AREAS

MANHOLE RING AND COVER INSTALLATION
N.T.S.

GENERAL NOTES:
1. MANHOLE TYPE SHALL BE AS SHOWN ON THE PLANS.
2. SEAL JOINTS PER SPECIFICATIONS.

CONSTRUCTION KEY NOTES:
A. MANHOLE RING (SEE DETAIL 377).
B. MANHOLE COVER (SEE DETAIL 378).
C. CONCRETE ADJUSTMENT RINGS AS REQUIRED.
D. MANHOLE CONE SECTION.
E. MANHOLE BARREL SECTION.
F. CONCRETE COLLAR (SEE DETAIL 184-1) FLUSH WITH TOP OF H.M.A.C.
G. MANHOLE RING FLUSH WITH TOP OF CONCRETE, CONCRETE COLLAR NOT NEEDED.
H. CONCRETE APRON (SEE DETAIL 184-2) FLUSH WITH MANHOLE RING AND 2" ABOVE NATURAL GROUND.



SECTION

PIPE CONNECTION TO MANHOLE
N.T.S.

GENERAL NOTES:
1. MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

CONSTRUCTION KEY NOTES:
A. PRECAST MANHOLE BARREL.
B. FLEXIBLE CONNECTOR.
C. PIPE CLAMP SS 316.
D. APPROVED PIPE.
E. PRECAST MANHOLE BASE.
F. GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
G. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
H. EXPANSION BAND SS 316.
I. FILL SPACE WITH GROUT.

THE CITY OF EL PASO TEXAS

FINAL PRINT 07/05/2017

ENGINEER'S SEAL

STATE OF TEXAS
ADRIANA L. CASTILLO
106518
LICENSED PROFESSIONAL ENGINEER
7/6/17

REVISIONS	DATE	REVISED BY

el paso WATER

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VERT. 1" = 5'	CHECKED BY E.C.	DESIGNED BY A.L.C.	SHT 4 OF 4

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