

## **ITEM # 6.0**

### **PRELIMINARY & FINAL PLAT APPROVAL:**

Sendero Phase IA Subdivision  
Being a resubdivision of 16.473-acres of land out of  
the south end of Porcion 52  
PUD (R-1)  
Developer: Rhodes Development, Inc.  
Engineer: Melden & Hunt, Inc.

### **REVIEW DATA**

#### **PLAT DATA**

The proposed subdivision is part of a master plan located approximately 397' west of S. Inspiration Road and along the south side of Mile One South Road — see **vicinity map**. The developer is proposing (111) One Hundred Eleven Single Family Residential lots — see plat for actual dimensions, square footages, and land uses.

#### **WATER**

The developer connected to an existing 12" water line located along the south R.O.W. of Mile One South Rd. and extended an 8" water line through the subdivision providing a 2" water service to each lot. There are 5 fire hydrants via direction of the Fire Marshal's office. – see **utility plan**

#### **SEWER**

The developer is proposing to connect to an existing manhole within the R.O.W. at the southern access of the development and extend a 12" line west along the north side of the Perezville Ditch. An 8" Sanitary Sewer line will run through the subdivision and collect from each lot through a 4" front and center stub out service. The Capital Sewer Recovery Fee are required at \$200.00/Lot which equates to \$22,200.00 (\$200 x 111 Lots).

#### **STREETS & STORM DRAINAGE**

The proposed internal street is a 32' Back-to-Back within a 50' Right of Way, access will be from Mile One South Rd. and/or Inspiration Rd. The storm drainage system will consist of multiple curb inlets ranging in size from 24" to 42" RCP. Surface and street runoff will be caught by said inlets and conveyed via storm lines into the Perezville Drain (owned by H.C.D.D. No. 1) adjacent to south side of this property and ultimately have an outfall into the Mission Pilot Channel system of the H.C.D.D No.1 via 5'x5' box culvert under the United Main Canal. The development is included in Drainage Basins 26 & 32 of the Bentsen Palms Master Drainage Study. The required detention of 278,000 cubic feet (6.336 ac-ft) shall be provided within the Perezville Drain Ditch widening. The City Engineer has reviewed and approved the drainage report.

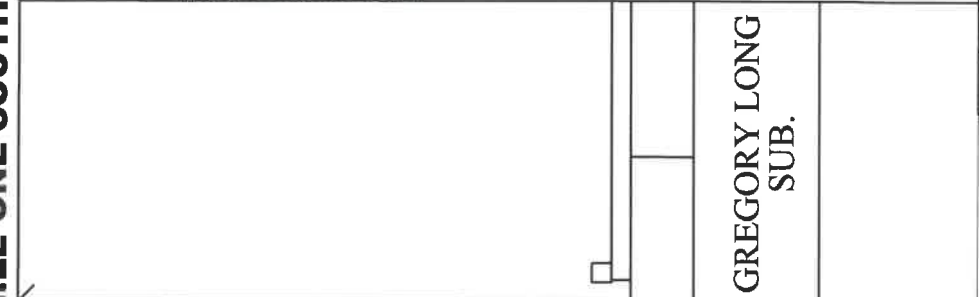
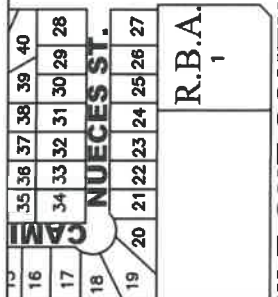
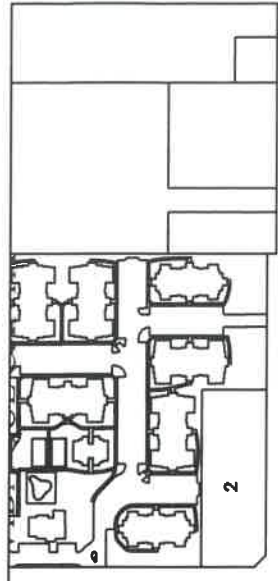
#### **OTHER COMMENTS**

No Park Fees – Mike Rhodes dedication of park land still stratifies the park Dedication Ord.  
Installation of Street Lighting as per City Standards

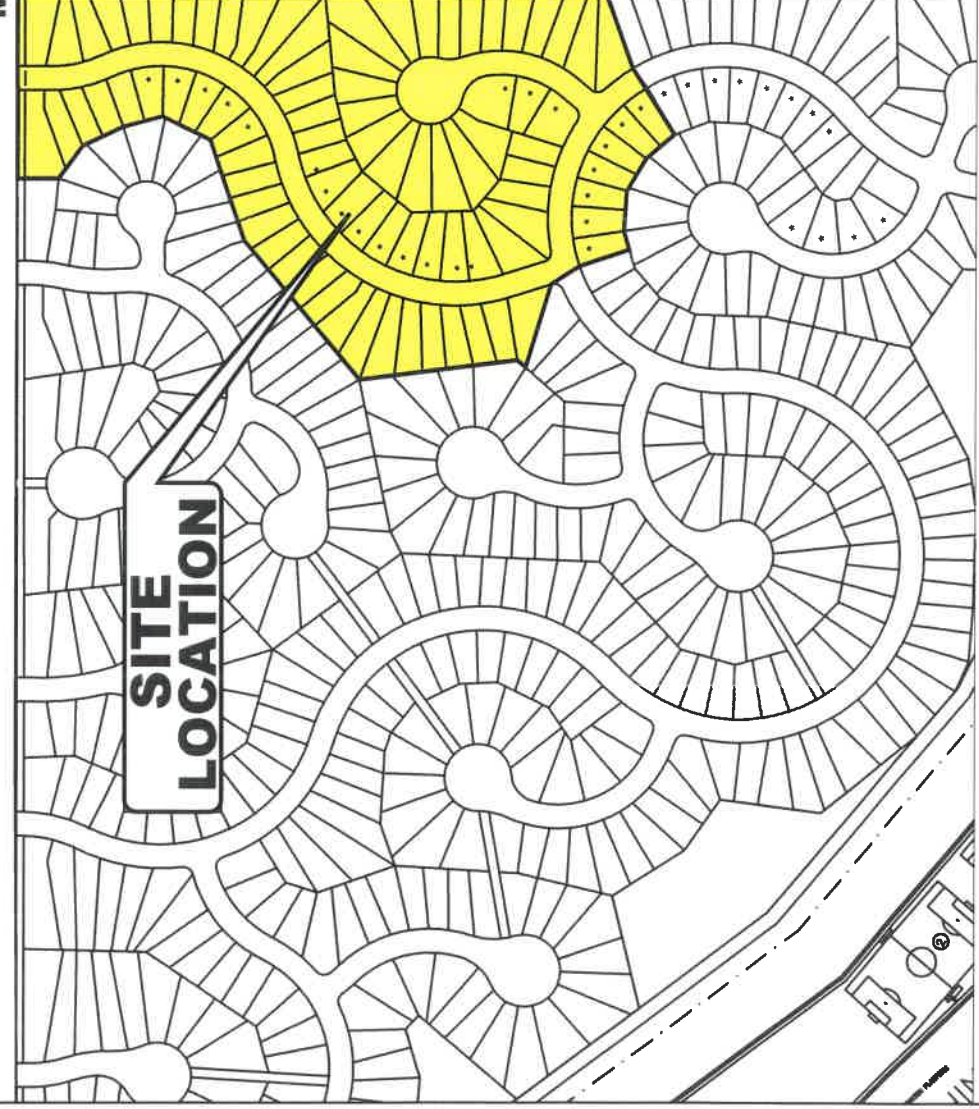
#### **RECOMMENDATION**

Staff recommends approval subject to:

1. Payment of Capital Sewer Recovery Fees
2. Provide Water District Exclusion
3. Comply with all other format findings



182	210	194	219	238	270	289	317	353	372	411	430	467	422	484	504	54	63	83	94	27				
193	220	237	271	238	272	288	316	354	371	412	429	468	423	87	91	92	93	86	88	89	90	91	92	26
192	221	236	272	237	273	287	315	355	370	413	428	469	424	88	90	91	92	87	89	90	91	92	25	
191	222	235	273	236	274	286	314	356	369	414	427	470	425	89	91	92	93	88	90	91	92	24		
189	224	234	274	235	275	285	313	357	368	415	426	471	427	90	92	93	94	89	91	92	93	23		
188	225	232	276	233	276	284	312	358	367	416	425	472	428	91	93	94	95	90	92	93	94	22		
187	226	231	277	232	276	283	311	359	366	417	424	473	429	92	94	95	96	91	93	94	95	21		
186	227	230	278	231	277	282	310	360	365	418	423	474	430	93	95	96	97	92	94	95	96	20		
185	228	229	279	230	278	281	309	361	364	419	422	475	431	94	96	97	98	93	95	96	97	19		
						280	308	362	363	420	421	476	432	95	97	98	99	94	96	97	98	18		
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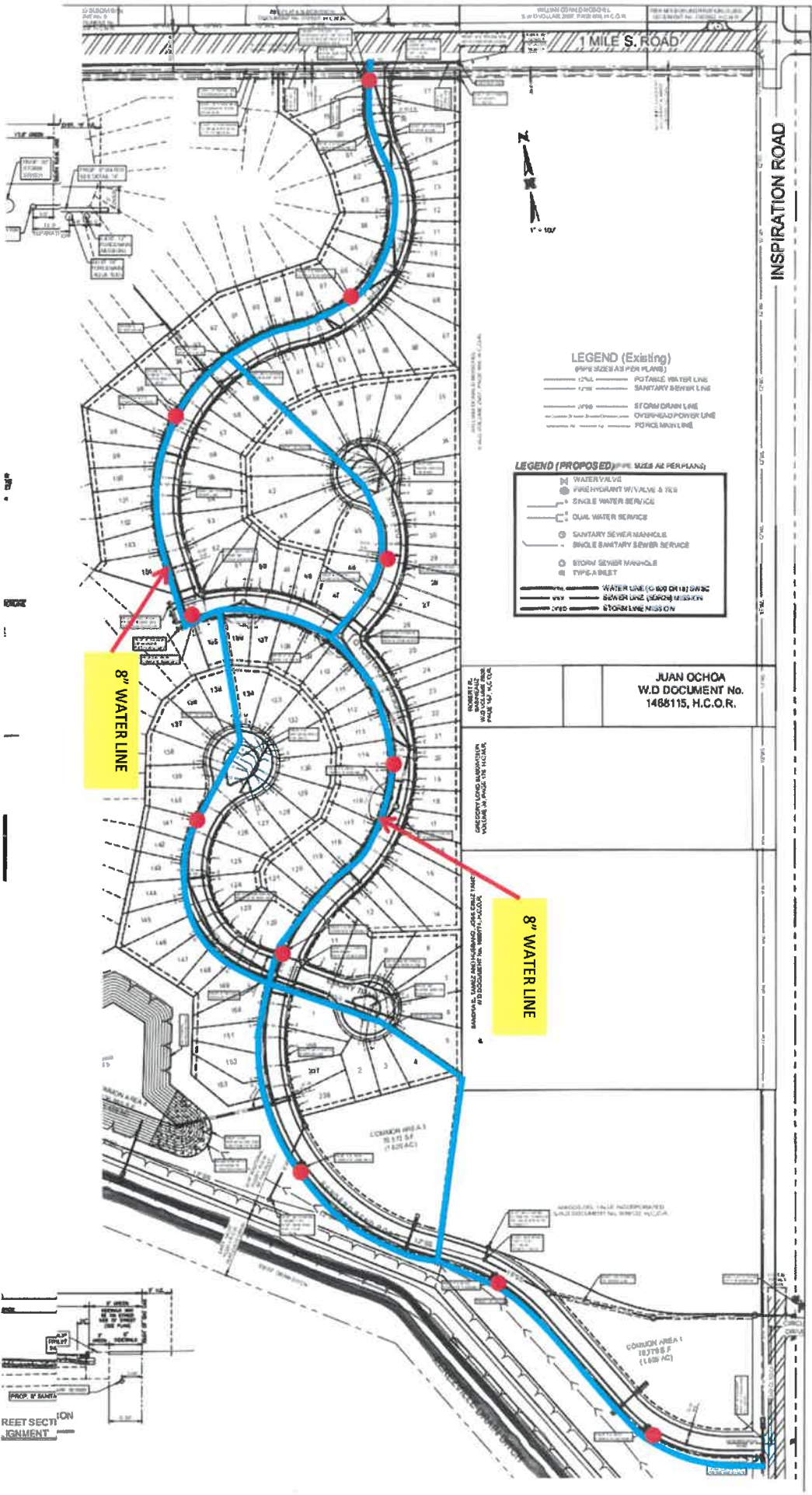
**CITY OF MISSION**  
 HIDALGO COUNTY, TEXAS

1201 E. 8th Street  
 MISSION, TX 78572

PH: (956) 580-8672  
 FAX: (956) 580-8680

No.





**LEGEND (Existing)**  
 (PIPE SIZES AS PER PLANS)

- 12" — POTABLE WATER LINE
- 12" — SANITARY SEWER LINE
- 18" — STORM DRAIN LINE
- 12" — OVERHEAD POWER LINE
- 12" — FENCE LINE

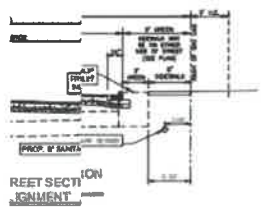
**LEGEND (PROPOSED)** (PIPE SIZES AS PER PLANS)

- WATER VALVE
- WATER VALVE & YEL
- SINGLE WATER SERVICE
- DUAL WATER SERVICE
- SANITARY SEWER MANHOLE
- SINGLE SANITARY SEWER SERVICE
- STORM SEWER MANHOLE
- TYPE-A BILET
- WATER LINE (6" OR 8" OR 12" DWAC)
- SEWER LINE (12" OR 18" SEWERS)
- STORM LINE (18" OR 24" STORM)

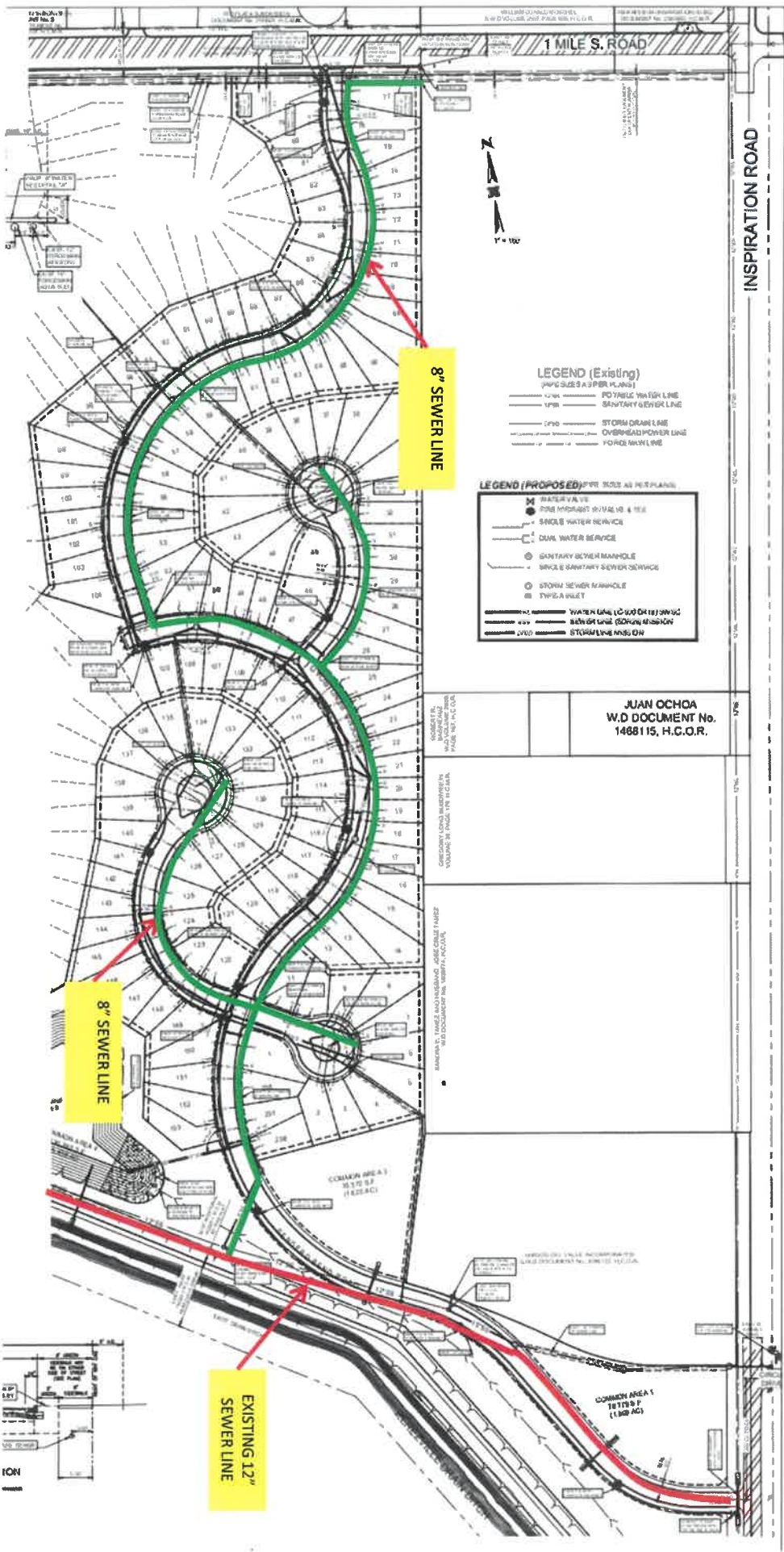
JUAN OCHOA  
 W.D DOCUMENT No.  
 1466115, H.C.O.R.

8" WATER LINE

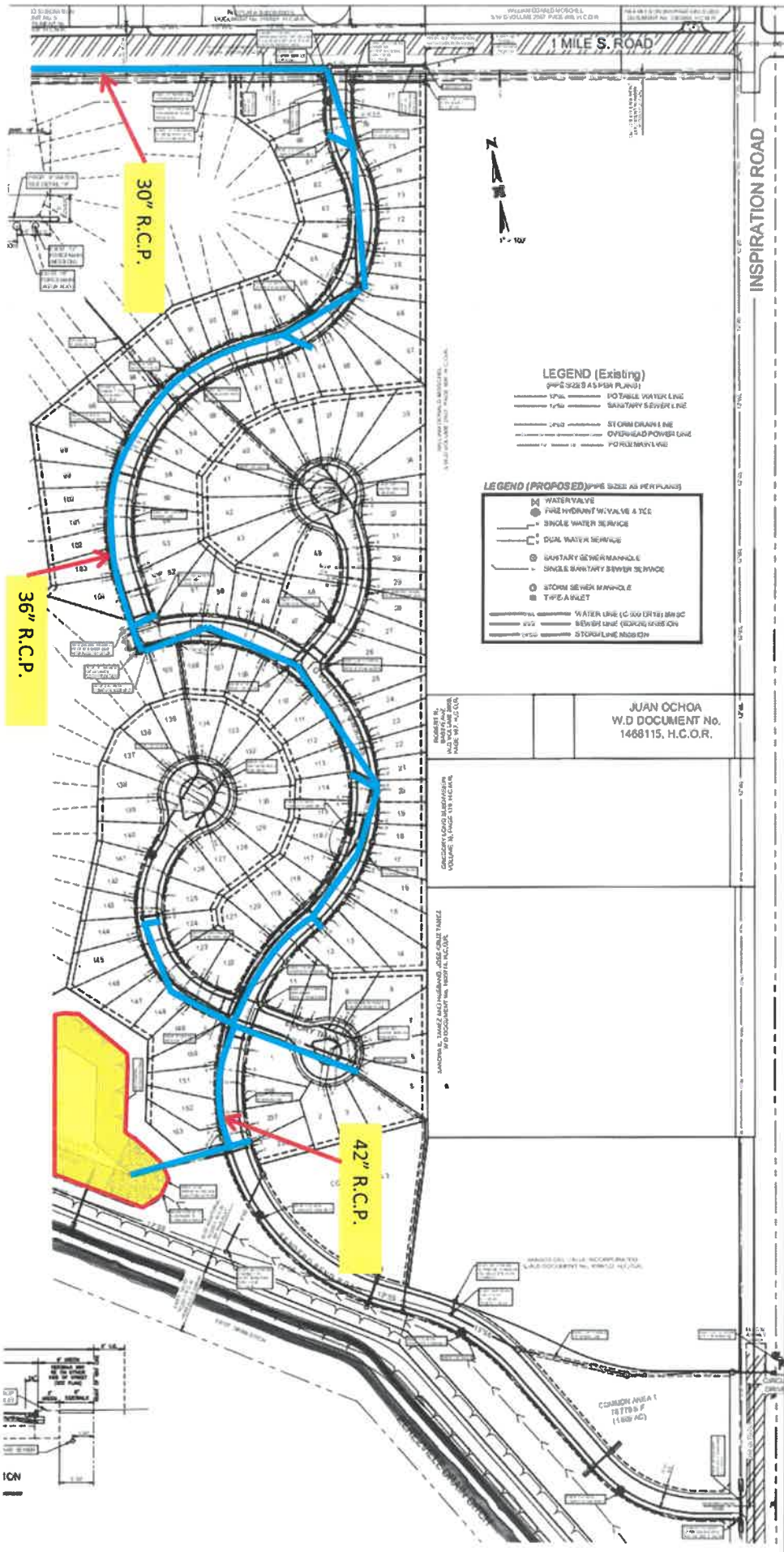
8" WATER LINE



REET SECTI  
 GNMENT



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**LEGEND (Existing)**

- PIPE SIZES AS PER PLANS
- 12" P.C. POTABLE WATER LINE
  - 12" S.S. SANITARY SEWER LINE
  - 12" S.D. STORM DRAIN LINE
  - 12" O.P. OVERHEAD POWER LINE
  - 12" P.C. POTABLE WATER LINE

**LEGEND (PROPOSED) PIPE SIZES AS PER PLANS**

- WATER VALVE
- FIRE HYDRANT VALVE & TEE
- SINGLE WATER SERVICE
- DUAL WATER SERVICE
- SANITARY SEWER MANHOLE
- SINGLE SANITARY SEWER SERVICE
- STORM SEWER MANHOLE
- TIPE AWLET
- WATER LINE (C 100 URB) 8" S.C.
- SEWER LINE (C 100 URB) 8" S.C.
- STORM LINE 8" S.C.

JUAN OCHOA  
W.D. DOCUMENT No.  
1468115, H.C.O.R.

ICN



TBPELS Firm # F-1435  
TBPELS # 10090800

# MELDEN & HUNT INC.

CONSULTANTS • ENGINEERS • SURVEYORS

FRED L. KURTH • ALLAN F. BOOE • KELLEY A. HELLER-VELA • ROBERTO N. TAMEZ • MAHIO A. REYNA • RUBEN JAMES DE JESUS

## DRAINAGE STATEMENT

### SENDERO (Master) Job # 20133

Date: March 02, 2021; REVISED April 01, 2021; April 9, 2021; May 27, 2021

**SENDERO (Master)** is a resubdivision of 126.756 acres of land out of the south end of Porcion 52, in the City of Mission, County of Hidalgo, Texas. The tract is currently vacant with a proposed land use of 50 residential lots. This property is located mostly in Zone "B" and partially in Zone "AH" on FEMA's Flood Insurance Rate Map, Community Panel No. 480334 0400 C Map Revised: November 16, 1982. Zone "B" is defined as areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot, or where the contributing drainage area is less than one (1) square mile; or areas protected by levees from the base flood (medium shading). Zone "AH" is defined as areas of 100-year shallow flooding where depths are between one(1) and three(3) feet; base flood elevation has been determined to be , but no flood hazard factors are determined. According to FEMA's Flood Insurance Rate Map the BFE is elevation 113 (see attached). *LOMR-F will be submitted upon completion of site grading.*

The soils in this area are (20) Harlingen clay saline with "D" rating, (28) Hidalgo sandy clay loam with "B" rating, (29) Hidalgo sandy clay loam with "B" rating, (44) Olmito silty clay with "C" rating, (56) Reynosa clay loam saline with "C" rating, (64) Runn silty clay with "C" rating and (65) Runn silty clay saline with "C" rating. For the purpose of this report we will use rating "B" in Hydrologic Group Soils. Hidalgo Sandy clay loam has moderate infiltration rate when thoroughly wet. This soil consist chiefly of moderate fine texture to moderate coarse texture and has a moderate rate of water transmission (See excerpts from "Soil Survey of Hidalgo County, Texas).

Storm runoff on this tract is by surface flow, with a southerly direction. The volume of storm runoff is 26.01 c.f.s. based on the 10-year storm frequency, as per attached calculations. Proposed runoff after development is 154.97 c.f.s., during the 100-year storm frequency, as per the attached calculations, which is an increase of 128.96 c.f.s.

In accordance with the City of Mission's drainage policy, the proposed storm drainage system for this subdivision will consist of multiple curb inlets placed at strategic locations interconnected with storm pipes ranging in size from 24" to 42", refer to Flow Rate Determination Tables for sizing and design slope. Surface runoff from the lots and the proposed streets will be caught by said inlets and conveyed via said storm lines into the Perezville Drain (owned by H.C.D.D. No. 1) adjacent to south side of this property. This development is included in Drainage Basins 26 & 32 of the Bentsen Palms Master Drainage Study (see attached Drainage Area Map). Said Perezville Drain has an ultimate outfall into the Mission Pilot Channel system of the H.C.D.D. No. 1 via a 5'x5' box culvert under the United Main Canal. In accordance with the City's drainage policy, the difference between pre and post development storm runoff shall not increase during the 10-100 year rainfall event.





TBPELS Firm # F-1435  
TBPELS # 10096900

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Therefore, as per attached calculations, and in accordance to the Approved Master Drainage Plan for the development, the required detention of 649,228 cubic feet (14.904 ac-ft) shall be provided within the Perezville Drain ditch widening (see widening detail) and will increase detention capacity from 1,747,500 c.f. to 2,903,180 c.f. for an additional 1,155,680 c.f. The overall master plan has been developed in accordance with City and County requirements.

Detention requirements for each Phase will be pro-rated accordingly by acreage as follows:


- Phase 1 (54.320 acres) = 278,220 c.f.
- Phase 2 (24.474 acres) = 125,353 c.f.
- Phase 3 (27.996 acres) = 143,392 c.f.
- Phase 4 (19.966 acres) = 102,263 c.f.

For a total of 649,228 c.f. for entire 126.756 acre development.

*The Perezville ditch widening will be excavated in its entirety before or in conjunction with Phase 1.*

By:   
Mario A. Reyna, P.E.

5-27-71  
Date

<input type="checkbox"/> REJECTED	
<input checked="" type="checkbox"/> APPROVED FOR SUBMITTAL	
<input type="checkbox"/> TO H.C. PLANNING DEPT.	
<input checked="" type="checkbox"/> TO CITY	
<input checked="" type="checkbox"/> DISCHARGE PERMIT REQUIRED	
<input checked="" type="checkbox"/> DISTRICT FACILITY	
<input type="checkbox"/> CITY FACILITY	
<input type="checkbox"/> OTHER	
<i>Hector Garcia</i>	
H.C.D.D. NO. 1	<i>6/10/21</i> DATE

