

MEMO

TO: Thomas Hornseth, P.E.
County Engineer
Comal County
195 David Jonas Drive
New Braunfels, TX 78132

DATE: July 27, 2022

FROM: Jason Scheppers, P.E.

PROJECT NO.: 12357-01

cc: David Vollbrecht, P.E. and Robert Boyd, PE, Comal County Engineering

RE: Proposed Recommendation for Modifying the City of New Braunfels Regional Transportation Plan for the Segment Between FM 1863 and SH 46.

Introduction

Pape-Dawson Engineers, Inc. has been retained to conduct a feasibility study for a roadway “West Connector” from SH 46 to I-35, approximately seven miles west of downtown New Braunfels, Texas. See **Figure 1** below for general location map. Comal County has requested a thoroughfare recommendation for the Segment 2 section from FM 1863 to SH 46. This memo provides supporting documentation for the proposed recommendation.

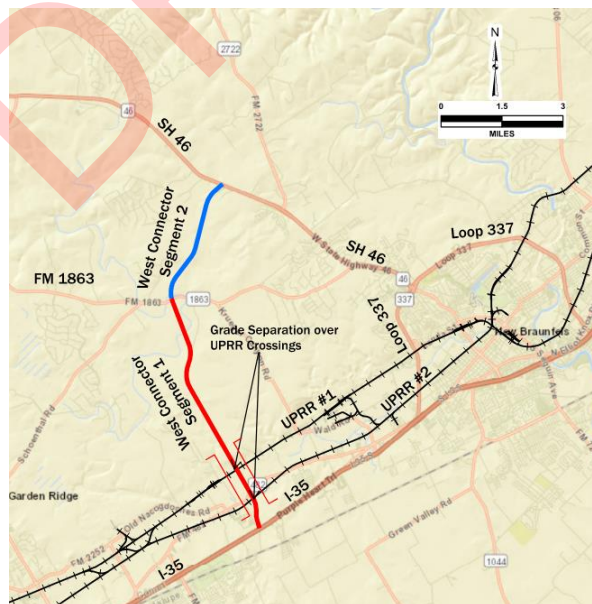


Figure 1 – Project Limit & West Connector

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West Connector Thoroughfare
FM 1863 to SH 46
July 2022
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West Connector Traffic Projection

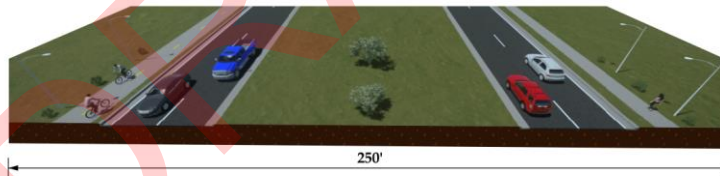
The Traffic Projection Methodology Memo (**Appendix A**) details the expected traffic on the West Connector. We divided the project into two segments, as shown in **Figure 1**, and project that in 2050, the design year, there will be 26,500 vehicles per day from I-35 to FM 1863 and 22,000 vehicles per day from FM 1863 to SH 46.

Facility Sizing for Design Year 2050

The traffic projections show 26,500 Annual Average Daily Traffic (AADT) in 2050. A 4-lane divided arterial roadway can accommodate that volume of traffic.¹

The City of New Braunfels shows in the Regional Transportation plan and in their Thoroughfare Plan a Parkway Arterial section in this location. This section is 200' or greater. Our recommendation is to follow the 200' or greater ROW. Two-hundred-foot ROW width should be used north of FM 1863 within the Master Development Plan of the Porter Tract (see **Appendix C**). Two hundred fifty feet ROW width should apply to the north of the Porter Tract to SH 46.

1. Recommended Section - 200-250 feet of West Connector ROW as a 4-lane divided roadway with bike and pedestrian facilities.



2. **Figure 2 – West connector 250 Feet ROW Typical Section**

Environmental Constraints

The Location of the thoroughfare is adjusted from the City of New Braunfels Regional Thoroughfare Map to be outside the FEMA floodplain and to the greatest extent possible to be outside the steep slopes in the area. The crossing of the tributary of the Dry Comal River is made as perpendicular as possible. Potential for Golden Check Warbler habitat and Karst features are equally as likely on any options. No other environmental constraints were identified to influence the proposed route.

¹ Simplified Highway Capacity Calculation Method for the Highway Performance Monitoring System, 2019, FHWA

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West Connector Thoroughfare
FM 1863 to SH 46
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Geometric Constraints

The design is such that.

- a 5-degree from a perpendicular angle is maintained with SH 46.
- All horizontal curves meet the 1200' minimum radius specified in the City of New Braunfels UDC. (Most curves are planned at 1500' or greater to allow future flexibility.)
- The thoroughfare location is consistent with the proposed ROW dedication made just north of FM 1863 through platting.
- The crossing of the Dry Comal Tributary allows collector access with only one bridge crossing by the collector road to the development and providing proper intersection sight distance with the West Connector.
- Number of parcels impacted was minimized with no acquisition from the New Braunfels ISD parcel.
- The location matches West Connectors' position relative to Comal County Maintenance Facility and existing subdivisions.

Conclusion and Recommendations

See Appendix B for the proposed location for the thoroughfare. Considering the traffic projections of 22,000 AADT, we recommend the West Connector be designated as 200 feet to 250 feet 4-lane divided Parkway.

END MEMO

Appendices

- A – Traffic Projection Report
- B – Recommended Revision to the City of New Braunfels Regional Transportation Plan.
- C – Porter Tract Master Development Plan

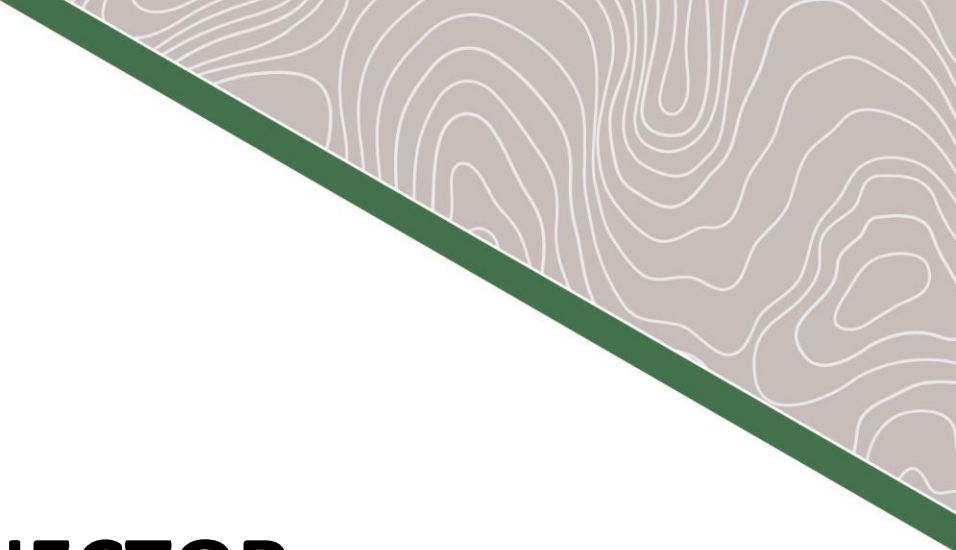
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APPENDICES

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APPENDIX A

Traffic Projection Report



WEST CONNECTOR

Comal County

Corridor Study

July 2022



Transportation | Water Resources | Land Development | Surveying | Environmental

WEST CONNECTOR

Comal County

Corridor Study

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Jason P. Scheppers 7/27/22
July 2022

WEST CONNECTOR

Comal County

Corridor Study

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July 2022

MEMO

TO: Thomas Hornseth, P.E.
County Engineer
Comal County
195 David Jonas Drive
New Braunfels, TX 78132

DATE: October 07, 2021

FROM: Jason Scheppers, P.E. 

PROJECT NO.: 12357-01

cc: David Vollbrecht, P.E. and Robert Boyd, PE, Comal County Engineering

RE: West Connector Traffic Projections Methodology.

Interim Review not intended for permit, bidding or Construction issued by Jason P. Scheppers, PE 80675

Pape-Dawson Engineers, Inc. has been retained to conduct a feasibility study for a roadway "West Connector" from SH 46 to I-35, approximately seven miles west of downtown New Braunfels, Texas. This memo defines the procedures used to forecast traffic volumes for use in the operational analysis and pavement design. The following is a summary of the data used for historic growth rate projection and how it was applied to the future conditions to determine the future growth rates, daily volumes, and projected turning counts for the West corridor.

Study Area

The project is located in Comal County, Texas within the TxDOT San Antonio District and the Alamo Area Metropolitan Planning Organization (AAMPO) boundaries. The project is a new corridor 6 to 8 miles west of New Braunfels, Texas. The project connects SH 46 on the west side of New Braunfels to I-35 south of New Braunfels. The proposed connector is approximately eight miles in length. The Base Year, i.e. the proposed opening year, is 2030, the forecasted 20-year is 2050, and the pavement design forecasted 30-year is 2060. The project limits are shown in **Figure 1**.

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West Connector
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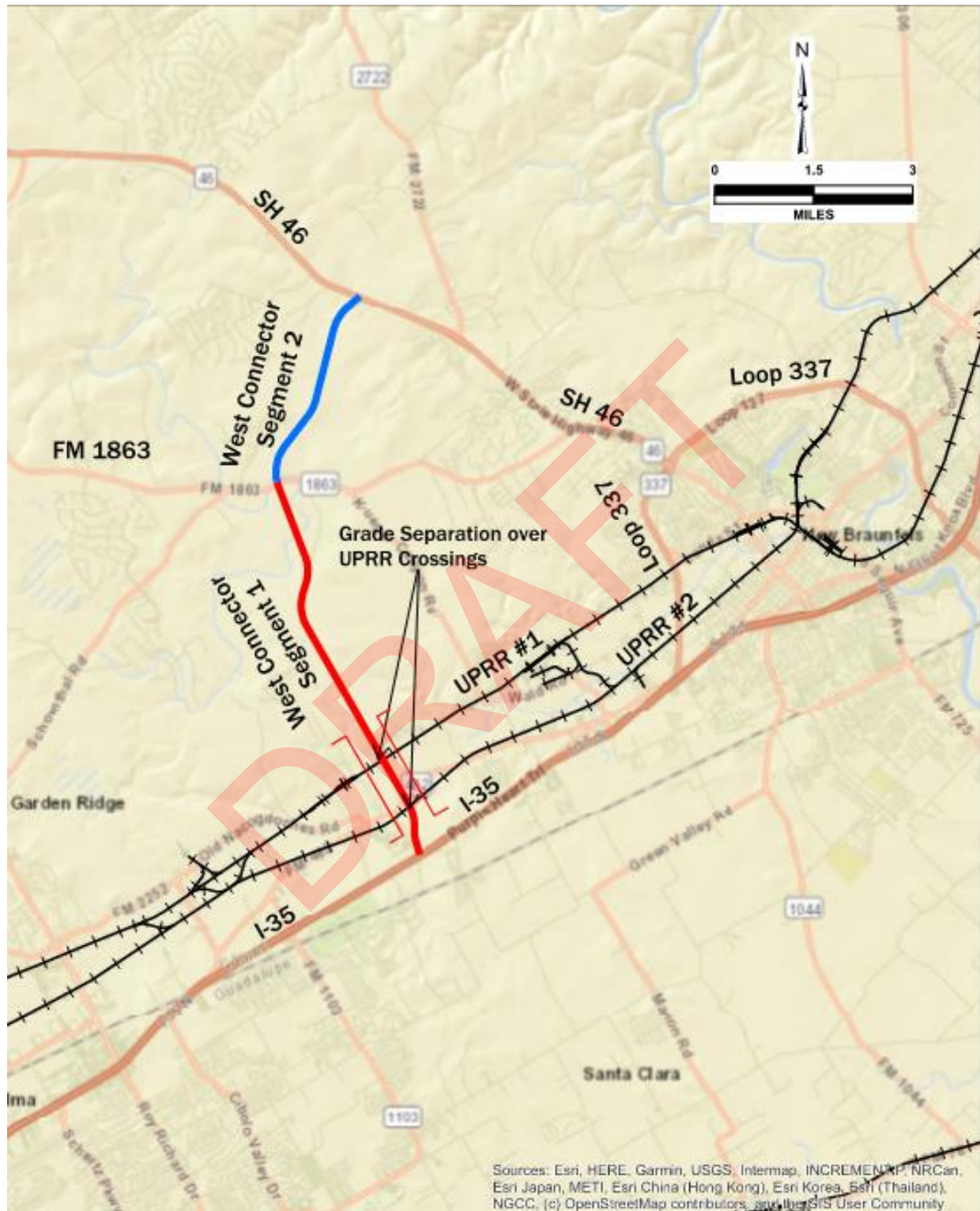


Figure 1 – Project Limit & West Connector

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Methodology

The following process will be used to develop the traffic projection growth rate:

1. Segment the Corridor
2. Historical Data and Growth Rate Calculations
3. Assessment of Travel Demand Model from AAMPO
4. Review of Demographic Data comparing known/planned developments versus AAMPO projections.
5. Review of Comal County, City of New Braunfels, and City of Schertz approved plats in project area.
6. Review of recent Traffic Impact Assessments (TIA) and past traffic studies in the corridor area.
7. Assess origin and destination trips to determine projected traffic moving to the new corridor.
8. Model traffic in AAMPO TransCAD Model to assess projected traffic volumes.
9. Summarize the comparisons of the available data.
10. Recommend Growth Rate
11. Recommend K and D factors
12. Forecast traffic volumes based on approved rates

Project Segmentation

Segment 1 is currently in a rural setting with projected traffic volumes above 26,500 AADT and a design speed of 55 mph. Segment 2 has the same design criteria but has a projected traffic volume of 22,000 AADT or more. See **Figure 1** for project segmentation. **Table 1** shows the West Connector segmentation locations and their lengths.

Table 1 – West Connector Segment

West Connector Segment	Limits	Length
Segment 1	I-35 to FM 1863	5.3 mile
Segment 2	FM 1863 to SH 46	2.7 mile

Data Sources of Existing and Projected Volumes for Study Area

Historic traffic data was obtained from the Statewide Traffic Analysis and Reporting System database (STARS II) based on the TxDOT Traffic Count Data System (TCDS). The existing Origin-Destination data was obtained from Streetlight Data and the growth rate projections were calculated from the AAMPO population projections for the years 2030 and 2050. The AAMPO TransCAD data was used to understand the traffic distribution on proposed West Connector for the design year.

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Historic Data

Relevant historic count data was obtained from the TCDS to calculate adjacent growth rates. Since the project is not an existing corridor there are not counts on the corridor. The historic rates for the study corridor have been taken from the following three stations:

- 46H43A – SH 46 West – East of Herbelin Rd
- 46H33 – FM 1863 – West of Word Ranch Road
- 46H31 – SH 46 – West of Loop 337

Relevant adjacent historic count data was obtained from the STARS II database in accordance with the Transportation Planning and Programming Corridor Analysis Standard Operations Procedure (SOP). See **Table 2** below for the TCDS count data for each of the three stations.

Table 2 – TCDS Data

Year	46H43A (SH 46 East of Herbelin Rd)	46H33(FM 1863 West of Word Ranch Rd)	46H31 (SH 46 West of Loop 337)	Average Annual Growth Rate
1999	5,300	2,100	17,400	2.9%
2000	4,700	2,000	18,400	
2001	5,000	2,100	21,000	
2002	4,900	2,100	22,000	
2003	4,700	2,000	18,100	
2004	4,500	2,200	22,000	
2005	4,480	2,220	23,510	
2006	4,700	2,800	26,000	
2007	5,600	2,500	26,000	
2008	4,200	2,700	25,000	
2009	5,300	2,900	22,000	
2010	5,100	3,200	20,000	
2011	5,800	3,100	25,000	
2012	6,000	3,300	24,000	
2013	5,997	3,646	24,120	
2014	7,309	4,126	27,172	
2015	7,050	4,093	30,855	
2016	7,717	4,378	30,320	
2017	9,334	4,395	34,958	
2018	9,334	5,159	33,720	
2019	11,754	5,876	39,812	

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Historic Count Growth Rates

Historic traffic growth on the adjacent corridors over the 20-year period is 2.9%. Recent growth from 2013 to 2019 has shown a growth rate of 7.0%, however, we assume a 4.0% growth rate for the surrounding roadways. This reflects the recent higher growth rate but recognizes that recent 7% growth was preceded by seven-year period with no growth. Therefore the 4.0% growth rate represents a balance between the 20-year trend and recent accelerated growth.

The West Connector will serve as a North-South route within a suburbanized area of Comal County in the Extraterritorial Jurisdictions of the City of New Braunfels and the City of Schertz. This corridor will serve an area that grew rapidly from 2013 to 2019 but still has significant capacity for additional growth development.

Figure 2 shows the Traffic Analysis Zones (TAZ's) in the vicinity of the proposed West Connector which are likely to have a direct traffic impact through development of the underlying land. **Figure 3** shows the location of the West Connector in the Extraterritorial Jurisdictions of the City of New Braunfels and the City of Schertz.

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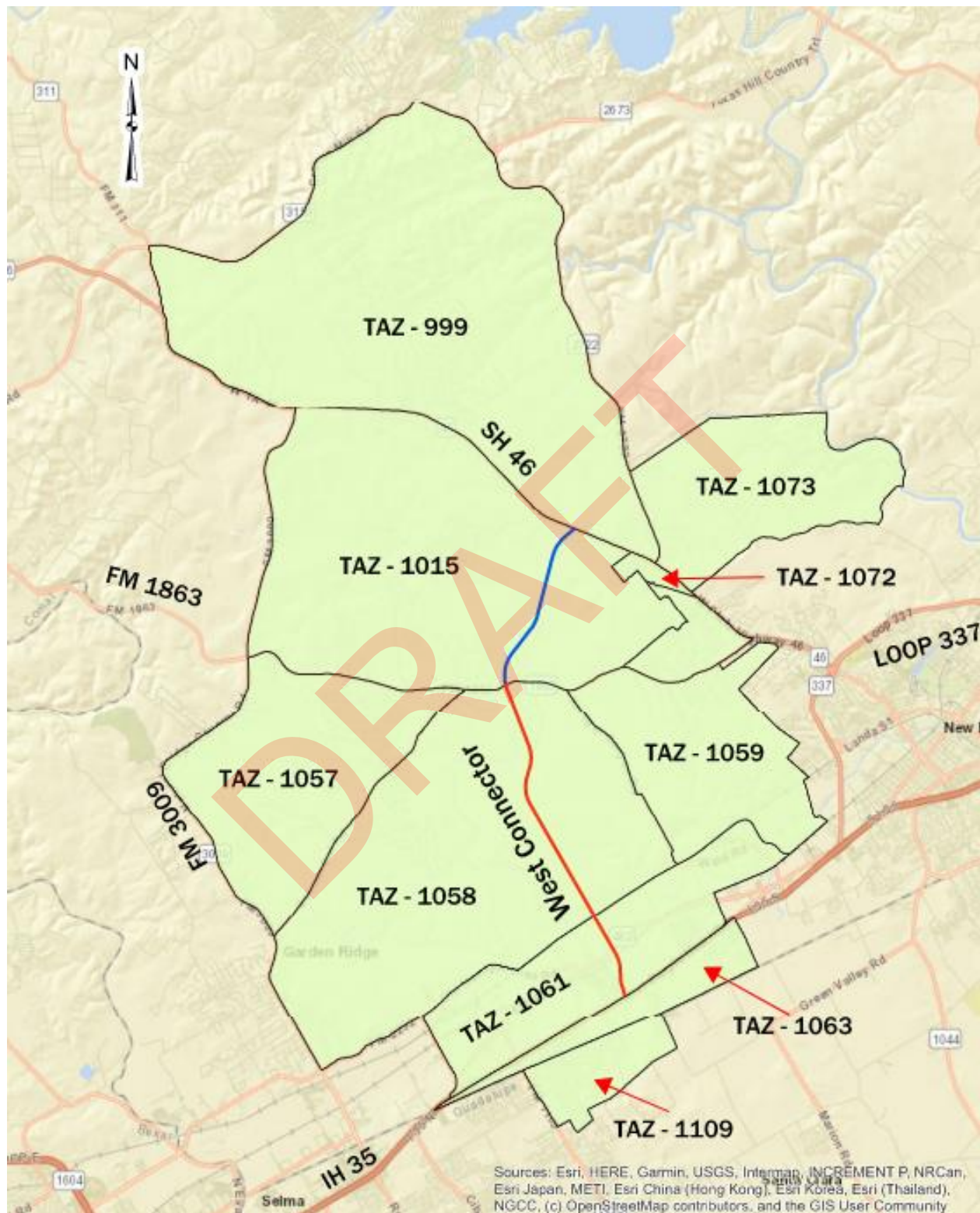


Figure 2 – Traffic Analysis Zone (TAZ) Alamo Area MPO

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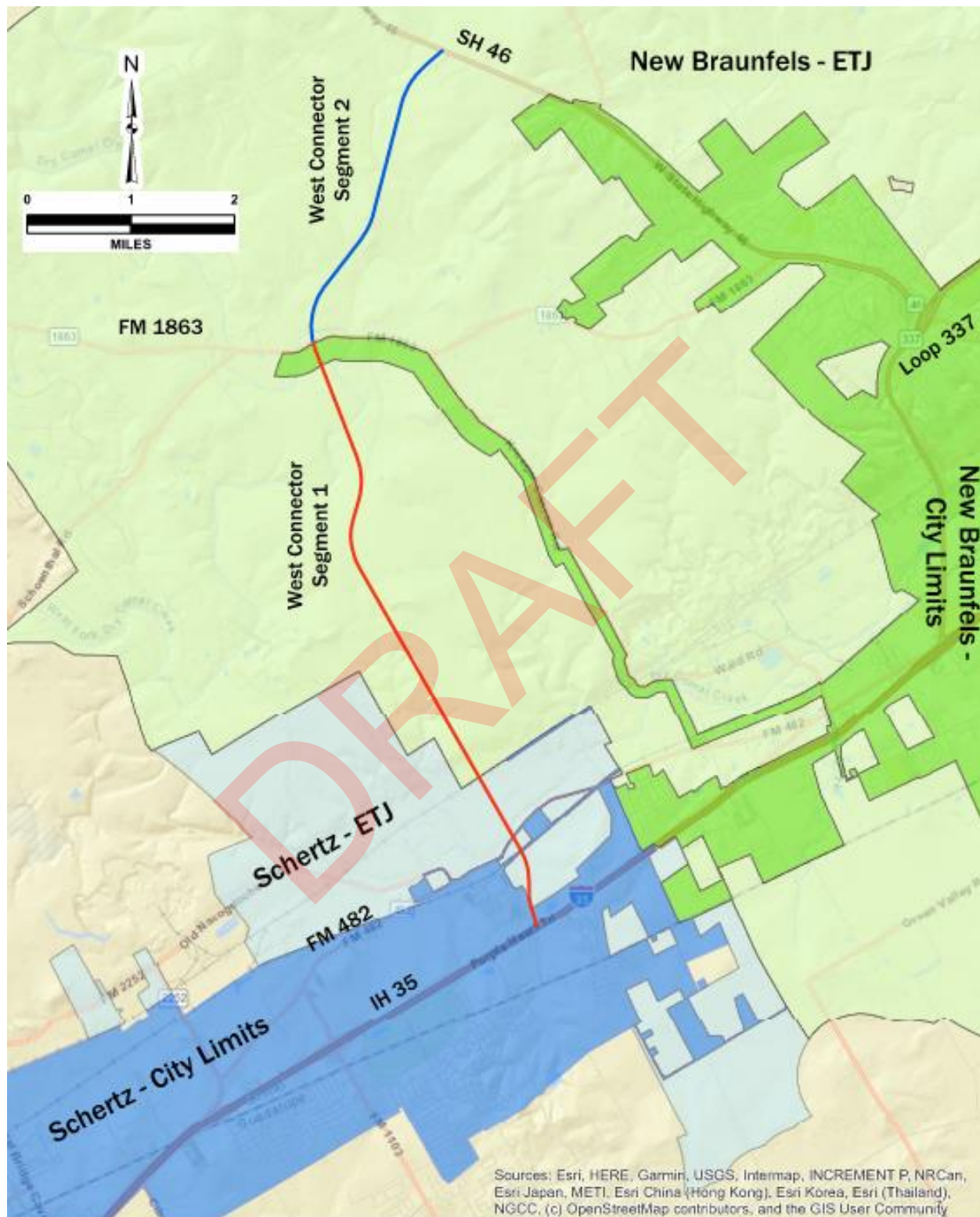


Figure 3 – City of New Braunfels & City of Schertz City Limits/ETJ

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Existing Conditions

Currently, in the study corridor the closest arterial roads connecting SH 46 with Loop 337 and FM 3009 are approximately nine miles apart. There are minor roads such as Kruger Canyon and Schoenthal Road that partially or circuitously connect SH 46 and I-35. **Figure 4** shows the map with the existing roadways in the study area.

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Figure 4 – Existing Roadways in the Study Area

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These minor roads currently have narrow pavement, and minimal ROW and clear zones, though they see significant traffic volumes. Trips west of New Braunfels will often use these roads to bypass Loop 337 in order to access I-35 from SH 46, and vice versa.

Traffic Projection

The traffic projections for the opening and design year were calculated to understand the traffic movements on West Connector. Pape-Dawson carried out two methods for this:

1. Traffic projections using Origin-Destination Matrix Data
2. Traffic projections using AAMPO TransCAD Model

Projected Traffic Volumes

The existing traffic data and the traffic behavior were obtained in the form of an Origin-Destination Matrix (O-D Matrix) from StreetLight Data. StreetLight Data is a platform that provides the vehicular movements from certain origin zones to destinations zones defined by the user. StreetLight uses big data sources such as location-based services (like Google Maps, Apple Directions and Waze) and GPS.

For the West Connector project, the origin and destination zones were defined on the following existing roadways:

SH 46 West, FM 2722, Hueco Springs Loop Rd, Kruger Canyon, I-35 South, FM 1103, SH 46 East, I-35 North, FM 1102, FM 306, FM 482, FM 1863, Schoenthal Rd, East#1, East#2, East#3, and East#4. The zone locations are shown in **Figure 5**.

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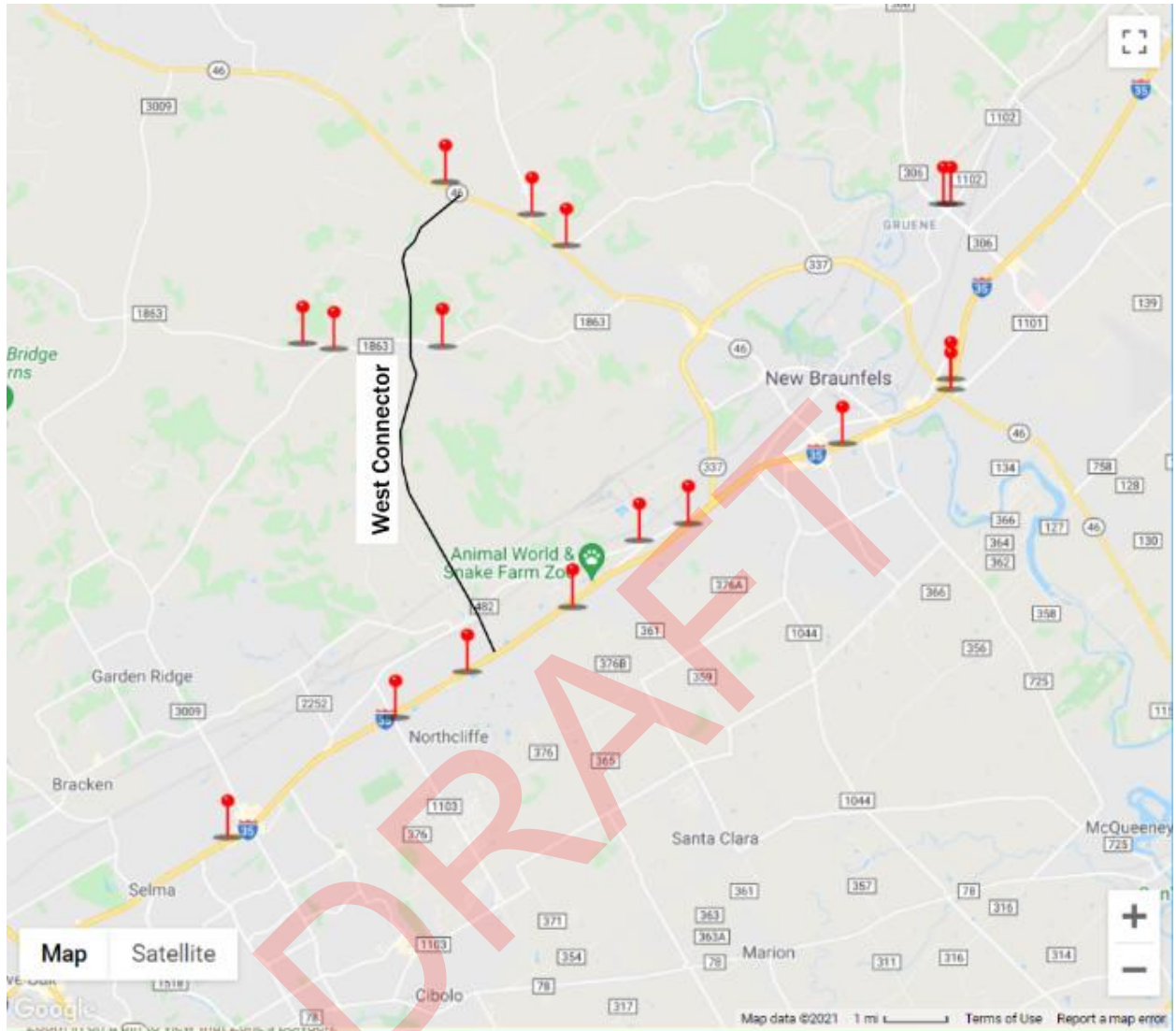


Figure 5 – Origin-Destination Zone Location

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O-D Matrix traffic data was obtained from the simulation on the StreetLight platform. The results obtained explains the traffic behavior on the existing roadways. Results were obtained for the time period from March 2019 - February 2020 to avoid the drastic change in traffic movements during COVID-19 traveling restrictions. StreetLight Data records the vehicular movements for GPS and map enabled vehicles.

The results were adjusted to Average Annual Daily Traffic (AADT) on the road studies. Historic traffic data for 2019 was obtained from the TxDOT count stations. An adjustment factor was created that scaled up the StreetLight monitored vehicles to match the measured TxDOT count station volumes. The adjustment factor was applied to the StreetLight 2019 O-D Matrix to create a 2019 AADT O-D Matrix. It has been observed from the results that the increase in congestion on SH 46 and Loop 337 causes the traffic to move to minor roadways like Kruger Canyon, Schoenthal Road, and Coyote Run to avoid the congestion and find faster access to I-35. **Appendix A** shows the O-D StreetLight Matrix and the 2019 AADT O-D Matrix.

Traffic Growth

Traffic volumes in the AADT O-D Matrix on existing roads were analyzed considering a 4.0% growth rate, grown from the base year (2019) to the opening year (2030) and the design year (2050). West Connector trips were assigned to all O-D routes where the West Connector would provide the fastest access.

AAMPO SAMM TransCAD Model (TransCAD) comparison with O-D Matrix Traffic Projection

As a secondary method, we compared the projections using AAMPO data and methods against the O-D Matrix assignment method. The TransCAD model was used to simulate the growth and the future conditions with the West Connector added into the model as a 4-lane arterial roadway with at grade connections to SH 46, FM 1863, FM 482, and I-35.

The TransCAD model takes into consideration additional parameters in determining the trip assignment from which the algorithm dictates how trips are assigned. With the available AAMPO data, the AADT for West Connector was obtained for the year 2045. The result was then grown to the design year of 2050. **Appendix B** shows the AAMPO 2050 population and employment data. TransCAD uses the gravity model to distribute trips along the West Connector which takes into consideration total trip ends and distance travelled.

The results obtained for the existing roadway without the West Connector improvements in 2050 would over saturate SH 46 and Loop 337. With the construction of West Connector, traffic would be diverted to it, easing the congestion on SH 46 and Loop 337. However, even with the diversion, SH 46 and Loop 337 will reach capacity by 2050.

The 2050 TransCAD AADT for West Connector Segment 1 is 67% of the O-D Matrix method (26,500 versus 18,000) and 86% for Segment 2 (22,000 versus 19,000). The comparison shows that the projected AADT calculated with the O-D Matrix methods are similar in order of magnitude to the TransCAD AADT. The recommended growth rate of 4.0% on existing roadway drives the growth higher in the O-D Matrix

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method. Considering the potential for higher growth, especially with the 7% traffic growth that has occurred over the recent past, the O-D Matrix method is used for the traffic projections.

Figure 6 and **Table 3** shows the recommended growth rates and factors that will be used for the analysis along West Connector. Note that the growth rate 3.28% is shown in the base year of 2030 given there is no existing traffic on West Connector which is equivalent to 4.0% growth rate in the base year of 2019.

Table 3 – West Connector Recommended Values.

Recommended Values		
Segment 1 2030 AADT	16,000	
Segment 2 2030 AADT	13,750	
20 Year Growth Segment 1 (I-35 to FM 1863)	3.28%	
20 Year Growth Segment 2 (FM 1863 to SH 46)	3.28%	
Assumed Truck Percentage	ADT	4.0%
	DHV	3.0%
Assumed K Factor	9.0%	
Assumed D Factor	NB/SB	65%

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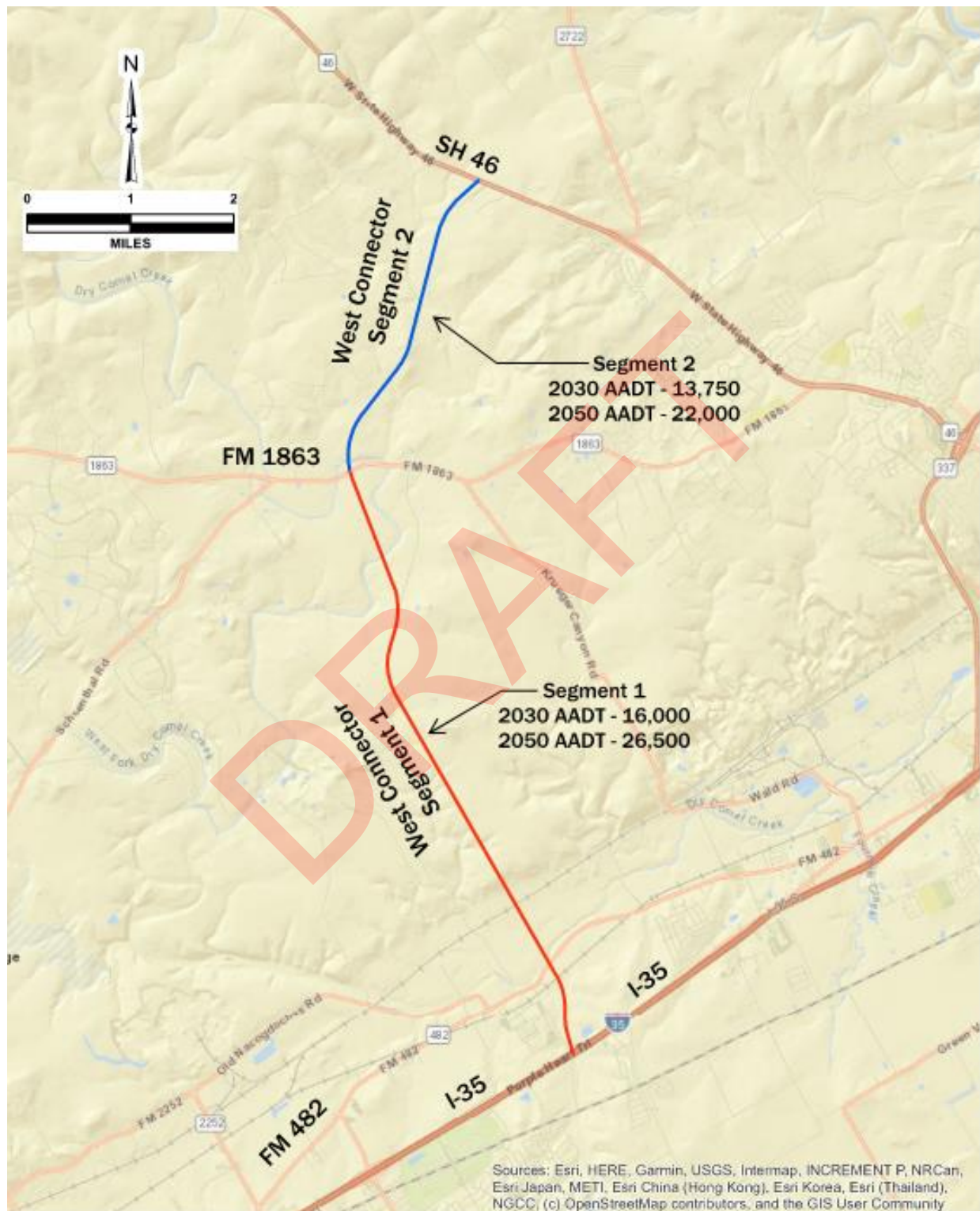


Figure 6 – Recommended Projected Year 2050 AADT

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Appendices

A_T – Streetlight and 2019 Adjusted O-D Matrix

B_T – Alamo Area MPO Population & Employment Data

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APPENDICES

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APPENDIX A_T
(for Appendix A of the Traffic
Projection report)
Traffic Projection Report

StreetLight O-D Matrix

	East#1	East#2	East#3	East#4	FM 1003	FM 1102	FM 1863	FM 2722	FM 306	FM 482	Hueco Springs Loop Rd	IH 35 North	IH 35 South	Kruger Canyon	Schoenthal Rd N	SH 46 East	SH 46 West
East#1	0	0	0	4	0	0	0	0	1	0	0	31	9	0	0	16	3
East#2	0	0	3	15	0	10	8	12	26	23	0	252	5	0	2	31	23
East#3	0	0	0	21	1	3	5	18	8	32	2	164	8	0	2	41	20
East#4	0	19	71	0	91	43	63	173	128	92	10	1582	1707	2	23	348	264
FM 1003	112	0	1	28	0	9	4	13	57	3	1	698	5049	0	0	84	16
FM 1102	0	5	2	93	9	0	16	8	453	7	1	186	241	8	9	106	65
FM 1863	0	28	9	60	5	17	0	17	6	11	24	353	56	352	194	123	22
FM 2722	0	12	16	135	11	8	13	0	6	15	158	118	269	24	127	175	122
FM 306	0	16	19	247	55	444	4	7	0	15	0	402	1196	0	1	510	22
FM 482	0	5	17	57	3	6	8	7	18	0	3	360	58	0	2	120	9
Hueco Springs Loop Rd	0	2	0	12	1	1	19	174	0	7	0	10	39	6	27	4	250
IH 35 North	1	199	200	2886	696	28	202	97	49	302	6	0	28779	1	78	3170	580
IH 35 South	832	3	17	899	4126	201	53	231	959	102	25	29377	0	3	11	1639	224
Kruger Canyon	0	0	0	0	0	2	296	22	0	0	5	11	8	0	72	2	26
Schoenthal Rd N	0	7	2	21	1	7	202	154	2	2	32	116	21	62	0	35	41
SH 46 East	2	37	76	983	102	92	115	197	379	126	5	2697	2048	3	35	0	497
SH 46 West	0	23	24	234	18	53	18	145	18	10	290	796	240	21	45	467	0

Adjusted O-D Matrix

	East#1	East#2	East#3	East#4	FM 1003	FM 1102	FM 1863	FM 2722	FM 306	FM 482	Hueco Springs Loop Rd	IH 35 North	IH 35 South	Kruger Canyon	Schoenthal Rd N	SH 46 East	SH 46 West
East#1	0	0	0	8	0	0	0	0	2	0	0	62	18	0	0	32	6
East#2	0	0	6	30	0	20	16	24	52	46	0	504	10	0	4	62	46
East#3	0	0	0	42	2	6	10	36	16	64	4	328	16	0	4	82	40
East#4	0	76	284	0	364	172	252	692	512	368	40	6328	6828	8	92	1392	1056
FM 1003	224	0	2	56	0	18	8	26	114	6	2	1396	10098	0	0	168	32
FM 1102	0	10	4	186	18	0	32	16	906	14	2	372	482	16	18	212	130
FM 1863	0	56	18	120	10	34	0	34	12	22	48	706	112	704	388	246	44
FM 2722	0	24	32	270	22	16	26	0	12	30	316	236	538	48	254	350	244
FM 306	0	32	38	494	110	888	8	14	0	30	0	804	2392	0	2	1020	44
FM 482	0	10	34	114	6	12	16	14	36	0	6	720	116	0	4	240	18
Hueco Springs Loop Rd	0	4	0	24	2	2	38	348	0	14	0	20	78	12	54	8	500
IH 35 North	2	398	400	5772	1392	56	404	194	98	604	12	0	57558	2	156	6340	1160
IH 35 South	1664	6	34	1798	8252	402	106	462	1918	204	50	58754	0	6	22	3278	448
Kruger Canyon	0	0	0	0	0	4	592	44	0	0	10	22	16	0	144	4	52
Schoenthal Rd N	0	14	4	42	2	14	404	308	4	4	64	232	42	124	0	70	82
SH 46 East	4	74	152	1966	204	184	230	394	758	252	10	5394	4096	6	70	0	994
SH 46 West	0	46	48	468	36	106	36	290	36	20	580	1592	480	42	90	934	0

APPENDIX B_T
(for Appendix B of the Traffic
Projection Report)
Recommended Revision to
the City of New Braunfels
Regional Transportation Plan

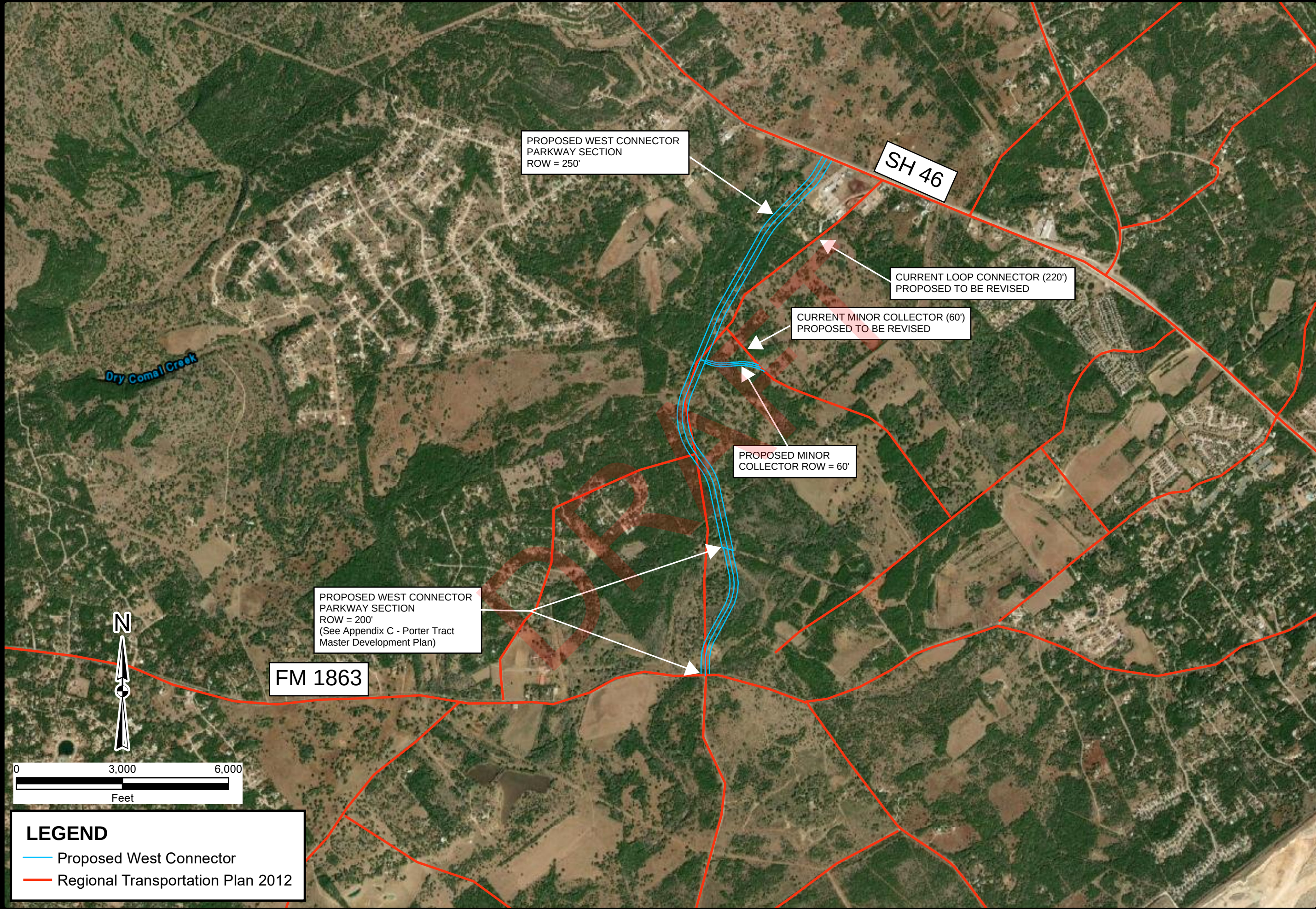
COUNTY	Traffic Analysis Zone (TAZ)	2020 Population (Census)	2020 Total Employment (Census)	2030 Population (Projected)	2030 Total Employment (Projected)	2050 Population (Projected)	2050 Total Employment (Projected)
Comal County	999	1400	338	2156	514	10001	3193
Comal County	1015	1089	253	1738	676	3895	2453
Comal County	1057	1722	180	2415	587	4661	2352
Comal County	1058	1304	697	2978	1512	8348	4891
Comal County	1059	798	206	2478	883	5537	2446
Comal County	1061	572	1534	1413	2098	4053	4201
Comal County	1063	1710	567	1908	704	2524	1209
Guadalupe County	1109	5774	123	7054	451	8878	1097
Comal County	1072	1262	696	1996	932	3384	1459
Comal County	1073	995	141	1713	385	5273	1271

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APPENDIX B
Recommended Revision to
the City of New Braunfels
Regional Transportation Plan

Aerial Imagery Provided by Google © UNLESS OTHERWISE NOTED Imagery ©2022, CAPCOG Digital Globe, Texas Orthomage Program, USDA Farm Service Agency

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LEGEND

Proposed West Connector

Regional Transportation Plan 2012

PAPE-DAWSON

ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1002800

PRELIMINARY WEST CONNECTOR

COMAL COUNTY

JOB NO. _____

DATE Jul 2022

DESIGNER HS

DRAWN HS

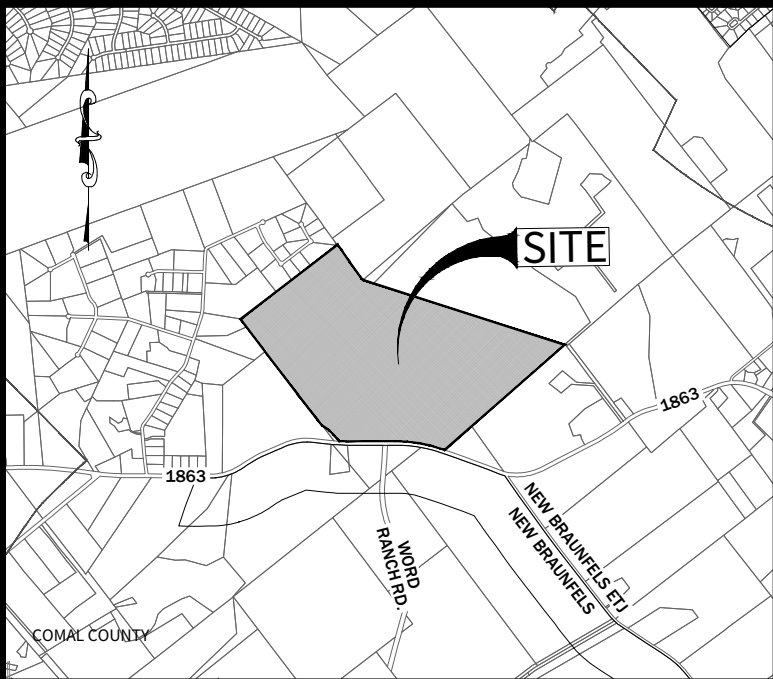
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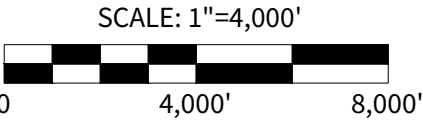
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APPENDIX C
Porter Tract Master
Development Plan



LOCATION MAP



OWNER:

MICHAEL PORTER & RHONDA VOLLBRECHT
2631 MELBOURNE AVE.
NEW BRAUNFELS, TX 78132

DEVELOPER:

HK REAL ESTATE DEVELOPMENT
CONTACT PERSON: MR. PAUL KUO
24607 FAIRWAY SPRINGS
SAN ANTONIO, TEXAS 78260
TEL: 210.363.4672

CIVIL ENGINEER/DESIGNER:

M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: JEFFREY MCKINNIE, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112
WWW.CUDEENGINEERS.COM

LEGAL DESCRIPTION:

349.7 ACRES OF LAND, BEING ALL OF THAT CERTAIN 295.558 ACRES OF LAND CONVEYED TO VOLLBRECHT RHONDA & MICHAEL PORTER, AS LOCATED IN THE PHILLIP ENGELBACH SURVEY NO. 388, ABSTRACT NO. 139, COMAL COUNTY, TEXAS; AND ALL OF THAT CERTAIN 50.54 ACRES OF LAND CONVEYED TO VOLLBRECHT RHONDA & MICHAEL PORTER, AS LOCATED IN THE S.A. & M.G.R.R. COMPANY SURVEY NO. 586, ABSTRACT NO. 582, COMAL COUNTY, TEXAS.

NOTES:

- THE COORDINATES SHOWN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD83 (93).
- SEWER SERVICE WILL BE PROVIDED BY OSSF.
- WATER SERVICE WILL BE PROVIDED BY A SINGLE PROPOSED PRIVATE WATER SYSTEM.
- ELECTRIC SERVICES WILL BE PROVIDED BY NEW BRAUNFELS UTILITIES (NBU).
- THE PROPERTY IS WITHIN THE NEW BRAUNFELS INDEPENDENT SCHOOL DISTRICT BOUNDARY.
- A PORTION OF THIS SUBDIVISION IS LOCATED WITHIN THE LIMITS OF THE 1% ANNUAL CHANCE EFFECTIVE FLOODPLAIN AS DEFINED BY THE COMAL COUNTY TEXAS, FLOOD INSURANCE RATE MAP NUMBER 48091C0430F, EFFECTIVE DATE SEPTEMBER 2, 2009, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS SUBDIVISION IS SUBJECT TO THE 2010 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS MASTER PLAN IS APPROVED FOR 1 DWELLING UNIT PER BUILDABLE LOT WITH A TOTAL DWELLING COUNT SHOWN ON THE LAND USE AND DENSITY TABLE. AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
- MINIMUM RESIDENTIAL LOT SIZE IS 43,560SF (1 ACRE).
- BLOCK WILL MEET BLOCK LENGTH REQUIREMENTS PER UDC SEC. 118-44(b).
- THIS SUBDIVISION IS SUBJECT TO SECTION 118-50 OF THE CITY OF NEW BRAUNFELS SUBDIVISION PLATTING ORDINANCE; REGARDING OFF-STREET BIKEWAYS AND TRAILS AS SHOWN IN THE NEW BRAUNFELS HIKE AND BIKE TRAIL PLAN. SPECIFIC LOCATION, ALIGNMENT, AND WIDTH TO BE DETERMINED BY PLANNING COMMISSION AT THE TIME OF PLAT APPROVAL.
- THIS SUBDIVISION IS SUBJECT TO DEVELOPMENT AGREEMENT BETWEEN DEVELOPER AND THE CITY OF NEW BRAUNFELS.
- THIS SUBDIVISION IS WITHIN THE BOUNDARIES OF COMAL COUNTY MUNICIPAL UTILITY DISTRICT NO 4

DRAINAGE NOTE:

- THE FLOODPLAIN LIMITS ON THIS MASTER PLAN ARE ESTIMATED AND SUBJECT TO CHANGE. APPROVAL OF SUBDIVISION PLATS ASSOCIATED WITH THIS MASTER PLAN IS SUBJECT TO THE REVIEW AND APPROVAL OF A STORM WATER MANAGEMENT PLAN IN ACCORDANCE WITH ARTICLE III, SEC. 118-22 (f) OF THE CITY OF NEW BRAUNFELS CODE OF ORDINANCES.
- THIS SITE IS LOCATED NEAR MULTIPLE UNSTUDIED FLOODPLAIN ZONE A HAZARD AREAS. THEREFORE, A DETAILED FLOODPLAIN ANALYSIS WILL BE REQUIRED WITH THE PLAT TO ESTABLISH THE 1% ANNUAL CHANCE (100-YEAR) ULTIMATE FLOODPLAIN BOUNDARIES AND TO DETERMINE THE BASE FLOOD ELEVATIONS. AT THE PLAT, ALL PERTINENT DATA AND MODELS FOR THE DETAILED STUDY WILL BE REQUIRED.

TXDOT NOTES:

- FOR RESIDENTIAL DEVELOPMENT DIRECTLY ADJACENT TO STATE RIGHT-OF-WAY, THE DEVELOPER SHALL BE RESPONSIBLE FOR ADEQUATE SETBACK AND/OR SOUND ABATEMENT MEASURES FOR FUTURE NOISE MITIGATION.
- THE OWNER/DEVELOPER IS RESPONSIBLE FOR PREVENTING ANY ADVERSE IMPACT TO THE EXISTING DRAINAGE SYSTEM WITHIN THE HIGHWAY RIGHT-OF-WAY. OUTFALLS FOR WATER QUALITY AND/OR DETENTION PONDS TREATING IMPERVIOUS COVER RELATED TO THE DEVELOPMENT AND STRUCTURES FOR REDUCTION OF DISCHARGE VELOCITY WILL NOT ENCRoACH BY STRUCTURE OR GRADING INTO STATE ROW OR INTO AREAS OF ROW RESERVATION OR DEDICATION. FOR PROJECTS IN THE EDWARDS AQUIFER RECHARGE, TRANSITION OR CONTRIBUTING ZONES, PLACEMENT OF PERMANENT STRUCTURAL BEST MANAGEMENT PRACTICE DEVICES OR VEGETATIVE FILTER STRIPS WITHIN STATE ROW OR INTO AREAS OF ROW RESERVATION OR DEDICATION WILL NOT BE ALLOWED. NO NEW EASEMENTS OF ANY TYPE SHOULD BE LOCATED IN AREAS OF ROW RESERVATION OR DEDICATION.
- MAXIMUM ACCESS POINTS TO STATE HIGHWAY FROM THIS PROPERTY WILL BE REGULATED AS DIRECTED BY TXDOTS, "ACCESS MANAGEMENT MANUAL". THE PROPERTY IS ELIGIBLE FOR MAXIMUM COMBINED TOTAL OF 1 (ONE) ACCESS POINT, BASED ON AN OVERALL PLATTED HIGHWAY FRONTAGE OF APPROXIMATELY 2,234 FEET, WHERE TOPOGRAPHY OR OTHER EXISTING CONDITIONS MAKE IT INAPPROPRIATE OR NOT FEASIBLE TO CONFORM TO THE CONNECTION SPACING INTERVALS, THE LOCATION OF REASONABLE ACCESS WILL BE DETERMINED WITH CONSIDERATION GIVEN TO TOPOGRAPHY, ESTABLISHED PROPERTY OWNERSHIP LIMITS, UNIQUE PHYSICAL LIMITATIONS, AND/OR PHYSICAL DESIGN CONSTRAINTS. THE SELECTED LOCATION SHOULD SERVE AS MANY PROPERTIES AND INTERESTS AS POSSIBLE TO REDUCE THE NEED FOR ADDITIONAL DIRECT ACCESS TO THE HIGHWAY. IN SELECTING LOCATIONS FOR FULL MOVEMENT INTERSECTIONS, PREFERENCE WILL BE GIVEN TO PUBLIC ROADWAYS THAT ARE ON LOCAL THOROUGHFARE PLANS.
- IF SIDEWALKS ARE REQUIRED BY APPROPRIATE CITY ORDINANCE, A SIDEWALK PERMIT MUST BE APPROVED BY TXDOT PRIOR TO CONSTRUCTION WITHIN STATE RIGHT-OF-WAY. LOCATIONS OF SIDEWALKS WITHIN STATE RIGHT OF WAY SHALL BE AS DIRECTED BY TXDOT.
- ANY TRAFFIC CONTROL, MEASURES (LEFT-TURN LANE, RIGHT-TURN LANE SIGNAL, ETC.) FOR ANY ACCESS FRONTING A STATE MAINTAINED ROADWAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER.

LEGEND:

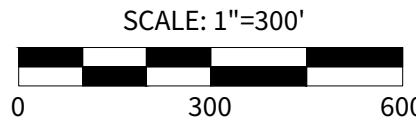
- MDP LIMITS
- UNIT LIMITS
- EXISTING 100 YEAR FLOODPLAIN (CORRECTED EFFECTIVE)
- OPEN SPACE
- FLOODPLAIN
- DRAINAGE/DETENTION
- UTILITY
- ROW DEDICATION/MAJOR THOROUGHFARES
- ELEV.
- EXISTING CONTOUR ELEVATION
- REAR LOT LINES

Ac.
CONC.
ESMT.
NO.
N.T.S.
R.O.W.
VOL.

= ACRES
= CONCRETE
= EASEMENT
= NUMBER
= NOT TO SCALE
= RIGHT-OF-WAY
= VOLUME

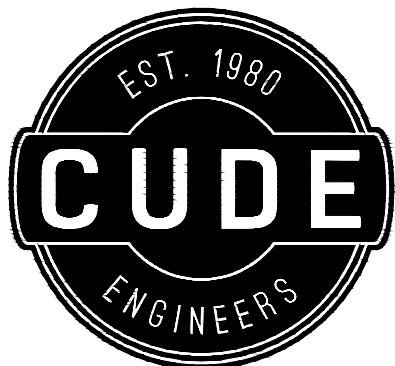
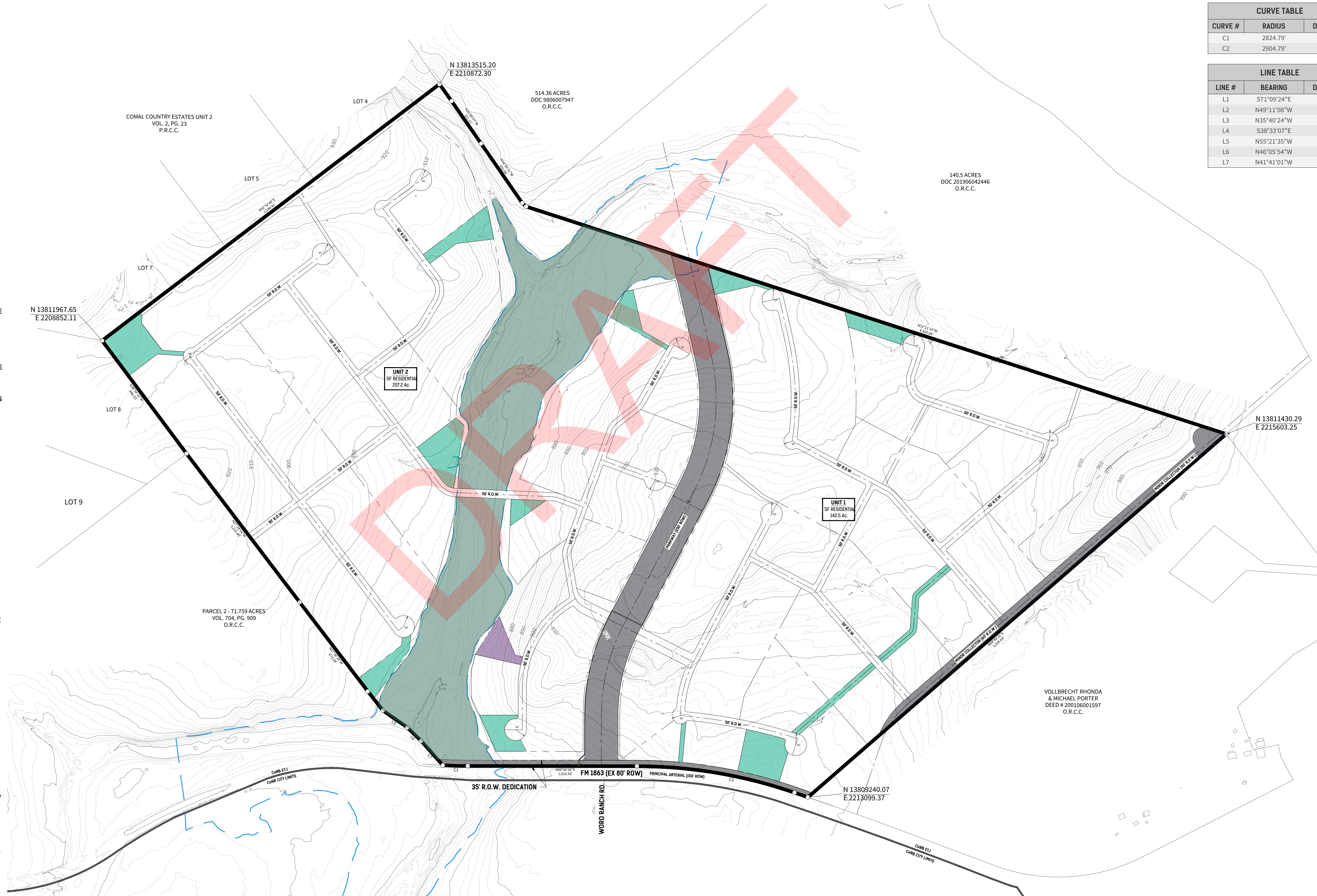
LAND USE TABLE				
LAND USE	UNIT 1	UNIT 2	TOTAL	% OF TOTAL SITE
SINGLE FAMILY RESIDENTIAL	127.8	138.5	266.3	76.15%
OPEN SPACE	1.3	15.1	16.4	4.69%
DRAINAGE/DETENTION	4.4	6.9	11.3	3.23%
ROW DEDICATION FOR MAJOR THOROUGHFARES	9.0	11.2	20.2	5.78%
FLOODPLAIN	0	34.70	34.7	9.92%
UTILITY	0.0	0.8	0.8	0.23%
	142.5	207.2	349.7	100.00%

DENSITY TABLE			
UNIT	GROSS Ac.	LOTS	LOTS/ACRE
1	142.5	121	0.8
2	207.2	127	0.6
-			
TOTAL	349.7	248.0	0.7



CURVE TABLE		
CURVE #	RADIUS	DISTANCE
C1	2824.79'	149.98'
C2	2904.79'	963.26'

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S71°09'24"E	85.47'
L2	N49°11'08"W	31.19'
L3	N35°40'24"W	124.85'
L4	S38°33'07"E	105.05'
L5	N55°21'35"W	178.85'
L6	N46°05'54"W	115.40'
L7	N41°41'01"W	196.27'



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

PORTER TRACT

MASTER PLAN

DATE

05/02/2022

PROJECT NO.

03050.001.0

DRAWN BY

WZK

CHECKED BY

JAM

REVISIONS

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CUDE ENGINEERS

TBPE No. 455
TBPLS No. 10048500

MDP NO.

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