

Preliminary Drainage Study

FOR:

T21-00002
3710 Vista Way
Oceanside, CA 92056
Tentative Map

Prepared for:

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Project Site Address:

3710 Vista Way
Oceanside, CA 92056
APN: 165-493-47

Preparation Date:

March 2021

Revision Date:

November 2021



Engineer of Work: Bartolome J. Pastor
RCE, 38606



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1.1 INTRODUCTION

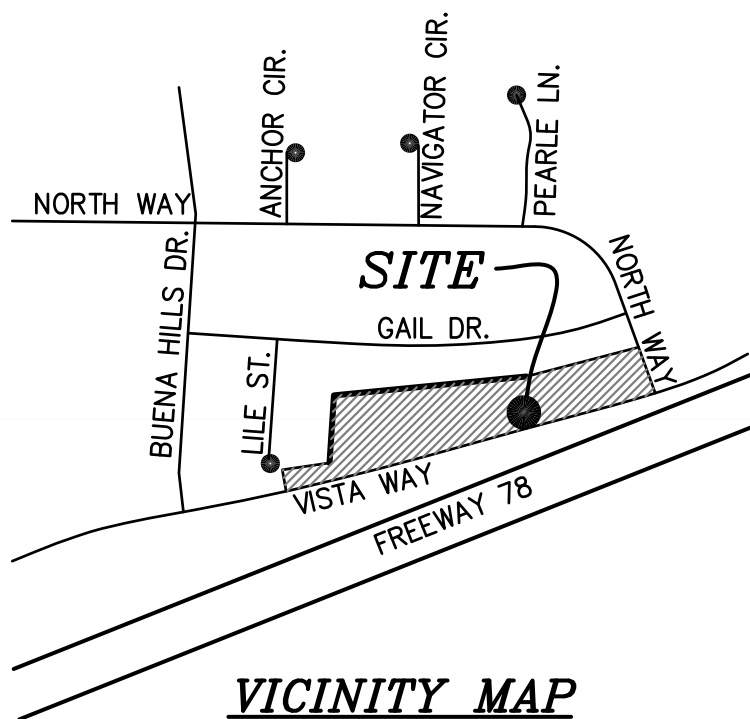
This section describes the project, Vista Way Homes (18 residential units). This project is proposed to be a “*Common Interest Development for Senior Housing*”. This project will include affordable housing (see attachment 1). CCR’s will be prepared for this project prior to occupancy. These CCR’s will cover the maintenance of drainage and storm water facilities for this site. The project is on 1.97-acre lot with no existing visible improvements other than some retaining walls. This site was previously a part of a residential development with homes and streets. These improvements have been removed from the site.

The drainage study is based on the County of San Diego Drainage Manual, January 2017. The Rational Method is used to calculate pre and post development runoff for this project. The 6-hour precipitation is as calculated in the Intensity-Duration Design Chart (see section 3.2). The Soil classification used in this study is “D”. The pre-development coefficient of runoff “C” values for this project are based on the previous residential single family development $C=0.55$. The post-development coefficient of runoff “C” values for this project are based on the County of San Diego’s Evaluation of Rational Method “C” Values see table 3.1b.

Due to the preliminary nature of this project no detention calculations have been included at this time. Once the City of Oceanside and other pertinent agencies have reviewed the project design, detention calculations and storage volumes can be calculated and added to this report.

1.2 PROJECT LOCATION

The project is located at 3710 Vista Way adjacent to 78 Freeway. The project is located along the north side of Vista Way, at the northwest corner of Vista Way and North Way. The 78 freeway runs parallel with Vista Way’s southerly right-of-way. Access to the site is from Vista Way. There are duplexes located adjacent to the westerly and northerly boundary of the site. These lots drain away from this site onto their frontage streets (Lile St. to the west and Gail dr. to the north).



VICINITY MAP
NOT TO SCALE



1.3 PROJECT DESCRIPTION VISTA WAY HOMES

The project site has been previously developed. The previous residential development that was on this site has been removed. The site now is vacante as shown on exhibit "A". All pre-development calculations are based on the previous residentian use. The existing storm drain facilities should have been designed to receive runoff from the previous development. We are using a coeffiecent of runoff of $C=0.55$ for the pre-development hydrology which corresponds to single family residential with soil type "D" that should have been used to design the existing storm drain system.

There is an existing manufactured slope along the north and west side of the project with several large existing trees. The remainder of the site is relatively flat. The site slopes west to east towards the southeast corner of the site (the northwest corner of Vista Way and North Way) where there is an existing cross-gutter that conveys runoff easterly across North Way. Both Vista Way and North Way are fully improved streets no new street dedications or improvements are proposed by this project. The only improvements proposed within the public right-of-way are utility connections, driveway cuts and private storm drain connections to the existing public storm drain facilities. No offsite drainage flows onto the site, except at the west side of the project where a small amount of slope within the public right-of-way flows onto the site. This offsite area does not include any hard scape. Since this site does not have any off-site drainage flowing onto it except as described and none of the improvements in the right-of-way proposed by this project will measurably increase runoff the watershed area is bounded by the project boundary and the right-of-way including the small offsite right-of-way area on the west side of the site.

Pre-Development see Exhibit A

The Pre-Development runoff sheet flows to the existing streets. This sheet flow goes into (3) three public storm drain facilities. The west portion of the site sheet flows to the Vista Way gutter where it is collected by an existing inlet (Existing Curb Inlet A) that then flows southerly under Vista Way and into the cal-trans right-of-way. A small area located at the northeast corner of the site sheet flows to North Way gutter and into an existing inlet (Existing Curb Inlet B) that then flows southerly under NorthAy into a clean out in vista way. From ther the runoff flows easterly to another claenout and a connecting pipe that crosses vista way south and into the cal-trans right-of-way.Vista Way and into the cal-trans right-of-way. The remainder of the site sheet flows to the Vista Way and curb return gutter at the southeast corner of the site where it enters the existing cross gutter which flows easterly across North Way.

Post-Development see Exhibit B

The Post-development drainage will also flow to the (3) three public drainage facilities descrbed in the pre-development discussion above. The proposed site improvements for

this project will collect the majority of the site runoff on-site where it will then be conveyed to the existing public storm drain facilities.

A portion of the site will continue to sheet flow into the existing gutters. The development of this site requires several retaining walls. Retaining walls will be installed parallel with both the Vista Way and North Way. To keep the footings on private property there is a minimum of 2 inch setback from the right-of-way to the face of wall (drainage basins A1, B1, C2 & D). Also there are landscaped areas that continue to sheet flow to the Vista Way within drainage basin A1. Areas A1, B1 and C2 also include site access areas. The on-site drainage that is collected and treated prior to entering the public storm drain facilities as follows:

Retaining walls along right-of ways are designed so that the surface drainage flows away from the tops of ways into the onsite drainage facilities. These walls subdrains will outlet to the existing right of way. The interior retaining walls will have weep holes at the base of the walls that will direct any surface runoff from behind walls onto the adjacent pads.

Area A: drainage basins A1-A5 are located at the west end of the site and are equivalent in area to P1. These areas all drain to the Existing Curb Inlet "A". Area A1 by the Vista Way gutter and areas A2-A5 through the on-site storm drain system which connects to the back of the existing inlet "A". Note no detention is required for Drainage Basin A; Pre-Q100=2.50 CFS, Post Q100=2.24 CFS a net reduction in runoff of 0.26 CFS.

Area B: drainage basins B1-B4 are located at the center of the site. These areas all drain to the Existing Vista Way gutter. Area B1 by the Vista Way gutter and areas B2-B4 through the on-site storm drain system which is pumped and outlets to D-25A curb outlet. Post Q100=2.55 CFS.

Area C: drainage basins C1-C2 are located at the East end of the site. These areas all drain to the Existing Vista Way gutter. Area C1 by the Vista Way gutter and areas C2 through the on-site storm drain system which is pumped and outlets to D-25A curb outlet. Post Q100=1.37 CFS.

Area D: drainage basin D are located at the East end of the site. This area drains to existing inlet "B" on North Way. Post Q100=0.00 CFS.

Post Development drainage basins B + C + D have equivalent area to Pre-development drainage basins P2 + P3. Pre-development Q100=2.55, Post-development Q100=3.92 CFS for a net increase in runoff of 1.11 CFS.

2. HYDRO-MODIFICATION

Hydro-Modification is required for this project. See this project's SWQMP for Hydro Modification.

3. PROCEDURE

In preparation of the pre-development hydrology our calculations are based on the rational method with coefficient of runoff $C=0.55$ for the previous single-family development. The total pre-development runoff is $Q=5.05$ CFS (100-year storm frequency). See Table 3.3a for a summary of 100, 50, 10, 5 & 2-year storm frequency runoff values

The post-development runoff coefficients are calculated using the County of San Diego's *Evaluation Ration Method "C" Values* method per table 3.2b. The initial time of concentration is based on urban areas overland time of flow curves. The total post-development runoff is $Q=6.12$ CFS (100-year storm frequency). See table 3.3b for a summary of 100, 50, 10, 5 & 2-year storm frequency runoff values.

For a comparison of pre to post development 100, 50, 10, 5 & 2-year storm frequency runoff values see table 3.3c.

3.1 Peak Flows (P6)

Using the Isopluvial Charts the Peak Flows used for this project are as follows:

Table 3.1a: Peak Flows Rainfall Event P24 (24 Hours)				
100 YR	50 YR	10 YR	5 YR	2 YR
5.00	4.50	3.25	2.50	2.00

Table 3.1b: Peak Flows Rainfall Event P6 (6 Hours)				
100 YR	50 YR	10 YR	5 YR	2 YR
2.80	2.50	1.80	1.40	1.10

Table 3.1c: Ratio P6/P24				
100 YR	50 YR	10 YR	5 YR	2 YR
56.0%	55.6%	55.4%	56.0%	55.0%
Adjusted P6				
2.80	2.50	1.80	1.40	1.10

3.2 Coefficient of Runoff "C" Values

Soil Type "D": Cp= 0.35

The Pre-Development "C" values for this site is based on the previous Residential Single family development and is C=0.55.

Table 3.3a shows the % impervios for the site per Exhibit "A"

Table 3.2a: Pre-Development "C" Values							
Drainage Basin	Area In AC	Area In SF	Impervious Area	% Imp.	Pervious Area	% Per.	"C" Value
P1	0.73	31,687	90	0%	31,597	100%	0.55
P2	1.23	53,626	9	0%	53,617	100%	0.55
P3	0.01	342	15	4%	327	96%	0.55
Total	1.97	85,655	113	0%	85,542	100%	0.55

The Post-development "C" Values for this site were determined using Equation below included in the County of San Diego "Evaluation of Rational Method "C" Values"

Equation 1: $C=0.90(\% \text{ impervious}) + C_p(1-\% \text{ impervious})$

To determine the % impervious for the various drainage basins for this site the See Table 3.3b.

Note: basins A1, B1, C2 & D drain directly to the adjacent streets and are untreated These areas are included in the HMP calculations for the site.

Minimus Area= 2,406 SF or 2.81%

Table 3.2b: Post-Development "C" Values							
Drainage Basin	Area In AC	Area In SF	Impervious Area	% Imp.	Pervious Area	% Per.	"C" Value
A1	0.05	2,003	320	16%	1,683	84%	0.44
A2	0.52	22,837	8,378	37%	14,459	63%	0.55
A3	0.06	2,818	1,605	57%	1,213	43%	0.66
A4	0.05	1,999	1,166	58%	833	42%	0.67
A5	0.05	2,030	1,218	60%	812	40%	0.68
A	0.73	31,687	12,687	40%	19,000	60%	0.57
B1	0.01	284	251	88%	33	12%	0.84
B2	0.40	17,430	6,799	39%	10,631	61%	0.56
B3	0.06	2,554	1,423	56%	1,131	44%	0.66
B4	0.23	10,000	1,281	13%	8,719	87%	0.42
B	0.69	30,268	9,754	32%	20,514	68%	0.53
C1	0.54	23,581	9,547	40%	14,034	60%	0.57
C2	0.00	115	54	47%	61	53%	0.61
C	0.54	23,696	9,601	41%	14,095	59%	0.57
D	0.00	4	0	0%	4	100%	0.35
B+C	1.24	53,964	19,355	36%	34,609	64%	0.55
Total	1.97	85,655	32,042	37%	53,613	63%	0.56

Table 3.2c: Post Compared to Pre Drainage			
	P1	A	P1-A=
	31,687	31,687	0
	P2	B+C	P2-B-C
	53,626	53,964	-338
	P3	D	P3-D
	342	4	338
Total	85,655	85,655	0

There is a 338 SF diversion of drainage
from basin P3(D) to Drainage
Basin P2(C)

3.3 Summary of Runoff

Table 3.3a: Pre-Development Runoff					
Drainage Basin	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
P1	2.50	2.23	1.60	1.25	0.98
P2	2.52	2.25	1.62	1.26	0.99
P3	0.03	0.03	0.02	0.02	0.01
Total	5.05	4.51	3.25	2.52	1.98

Table 3.3b: Post-Development Undetained Runoff					
Drainage Basin	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
A1	0.09	0.08	0.06	0.04	0.03
A2	1.44	1.28	0.92	0.72	0.56
A3	0.29	0.26	0.19	0.14	0.11
A4	0.21	0.19	0.13	0.10	0.08
A5	0.22	0.19	0.14	0.11	0.09
A	2.24	2.00	1.44	1.12	0.88
B1	0.04	0.03	0.02	0.02	0.01
B2	1.56	1.39	1.00	0.78	0.61
B3	0.28	0.25	0.18	0.14	0.11
B4	0.67	0.60	0.43	0.34	0.26
B	2.55	2.28	1.64	1.27	1.00
C1	1.37	1.22	0.88	0.68	0.54
C2	0.01	0.01	0.00	0.00	0.00
C	1.37	1.23	0.88	0.69	0.54
D	0.00	0.00	0.00	0.00	0.00
B+C+D	3.92	3.51	2.52	1.96	1.54
Total	6.16	5.50	3.96	3.08	2.42

Table: Comparison of Pre to Post Development Runoffs						
Drainage Basin	Area In SF	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
P1	31,687	2.50	2.23	1.60	1.25	0.98
A	31,687	2.24	2.00	1.44	1.12	0.88
Pre-Post	0	0.26	0.23	0.17	0.13	0.10
P2+P3	53,968	2.55	2.28	1.64	1.28	1.00
B+C+D	53,968	3.92	3.51	2.52	1.96	1.54
Pre-Post	0	-1.37	-1.23	-0.88	-0.68	-0.54
Total Pre-Post	0	-1.11	-1.00	-0.72	-0.56	-0.44

No Detention

Detention Required

4. CONCLUSION

Pre-Development Drainage Basi P3 will no longer flow to inlet "B". This will divert QA100=0.03 CFS to the cross-gutter. All other drainage patters are maintained it is our opinion that there is no impact on the downstream existing drainage facilities.

Table: Comparison of Pre to Post Development Runoffs						
Drainage Basin	Area In SF	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
P1	31,687	2.50	2.23	1.60	1.25	0.98
A	31,687	2.24	2.00	1.44	1.12	0.88
Pre-Post	0	0.26	0.23	0.17	0.13	0.10
P2+P3	53,968	2.55	2.28	1.64	1.28	1.00
B+C+D	53,968	3.92	3.51	2.52	1.96	1.54
Pre-Post	0	-1.37	-1.23	-0.88	-0.68	-0.54
Total Pre-Post	0	-1.11	-1.00	-0.72	-0.56	-0.44

No Detention

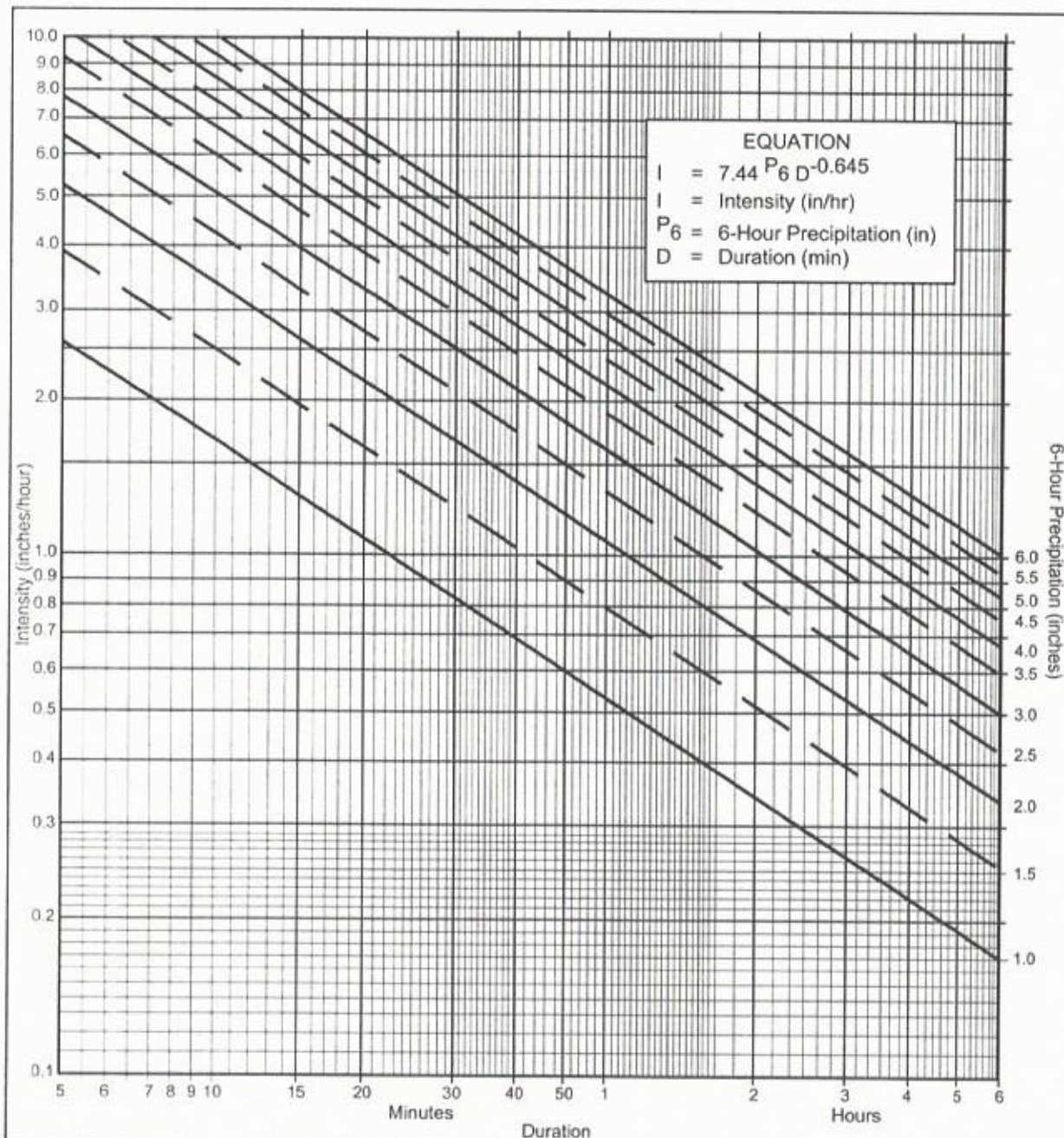
Detention Required

5. REFERENCES

This report has been prepared in accordance with current City of Oceanside regulations and procedures. The following have been used in preparation of this study:

- County of San Diego Drainage Design Manual, January 2017
- Handbook of Hydraulics (7th Edition), Baxter and King

The calculations are based on the Rational Method.



Directions for Application:

- (1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).
- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

- (a) Selected frequency 2 year
- (b) $P_6 = \underline{1.10}$ in., $P_{24} = \underline{2.00}$, $\frac{P_6}{P_{24}} = \underline{55.0} \%$ (2)
- (c) Adjusted $P_6^{(2)} = \underline{1.10}$ in.
- (d) $t_x = \underline{\quad}$ min.
- (e) $I = \underline{\quad}$ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE

3-1

County of San Diego Hydrology Manual



Rainfall Isopluvials

2 Year Rainfall Event - 6 Hours

----- Isopluvial (inches)

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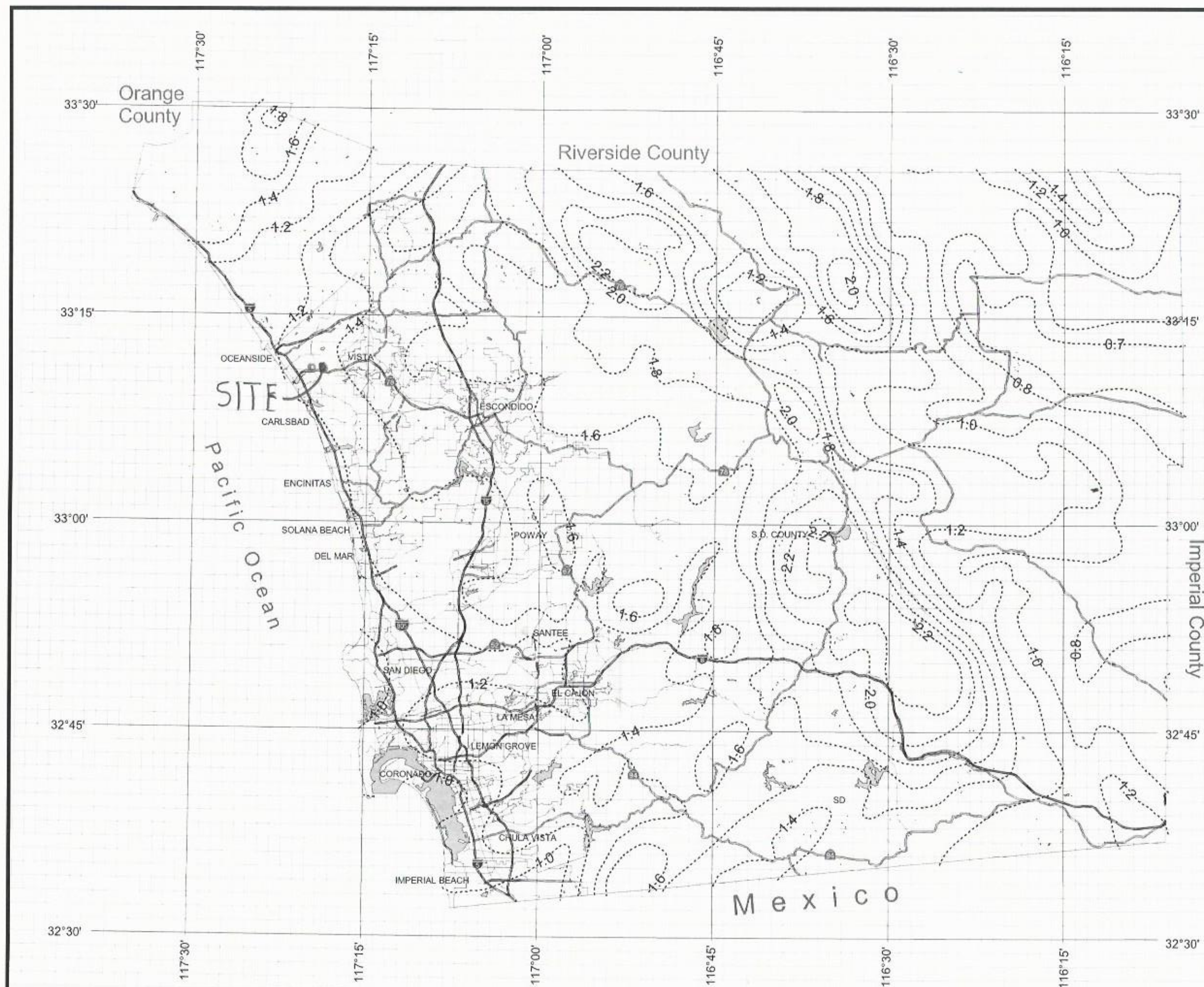


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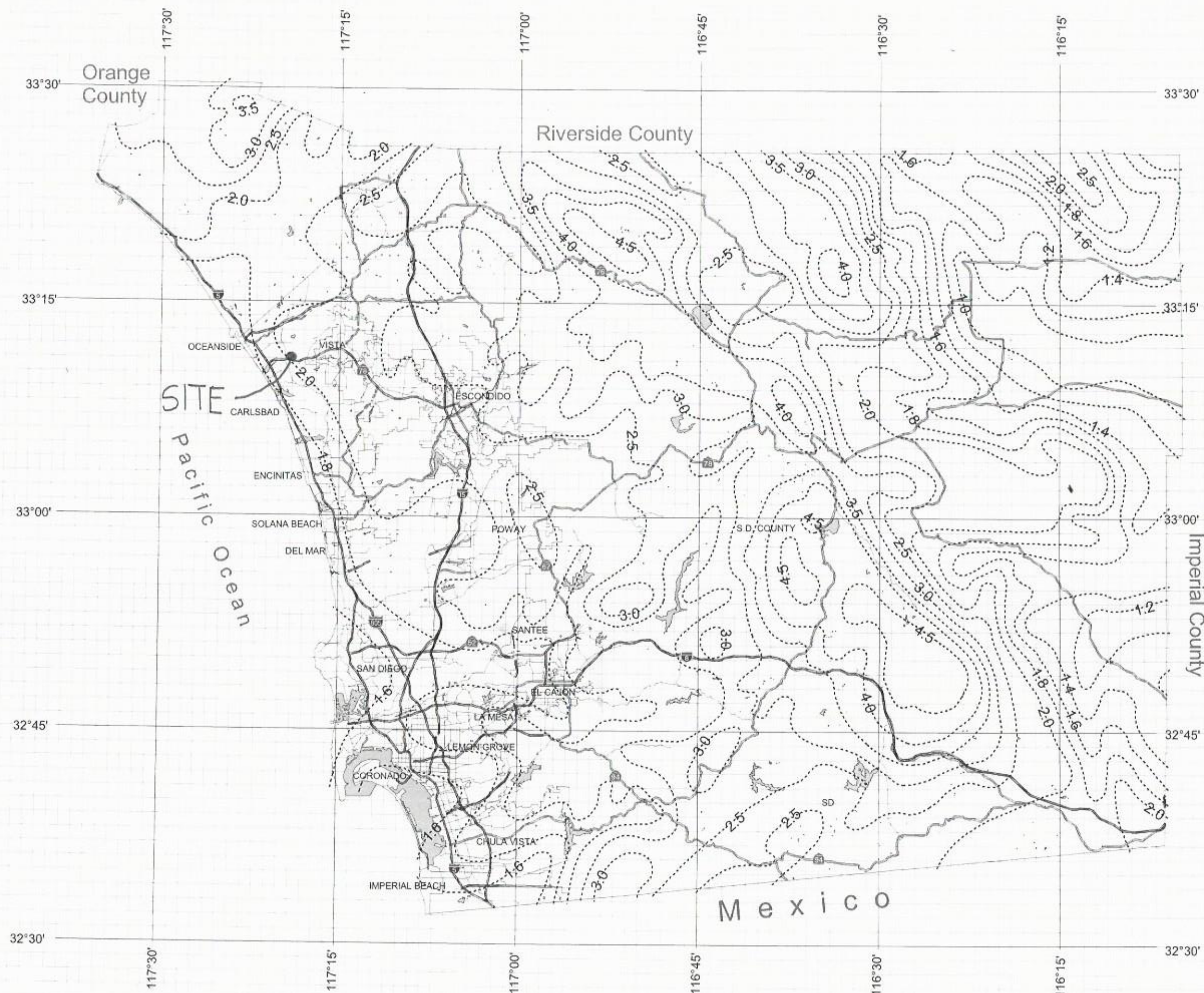
County of San Diego Hydrology Manual



Rainfall Isopluvials

2 Year Rainfall Event - 24 Hours

..... Isopluvial (inches)



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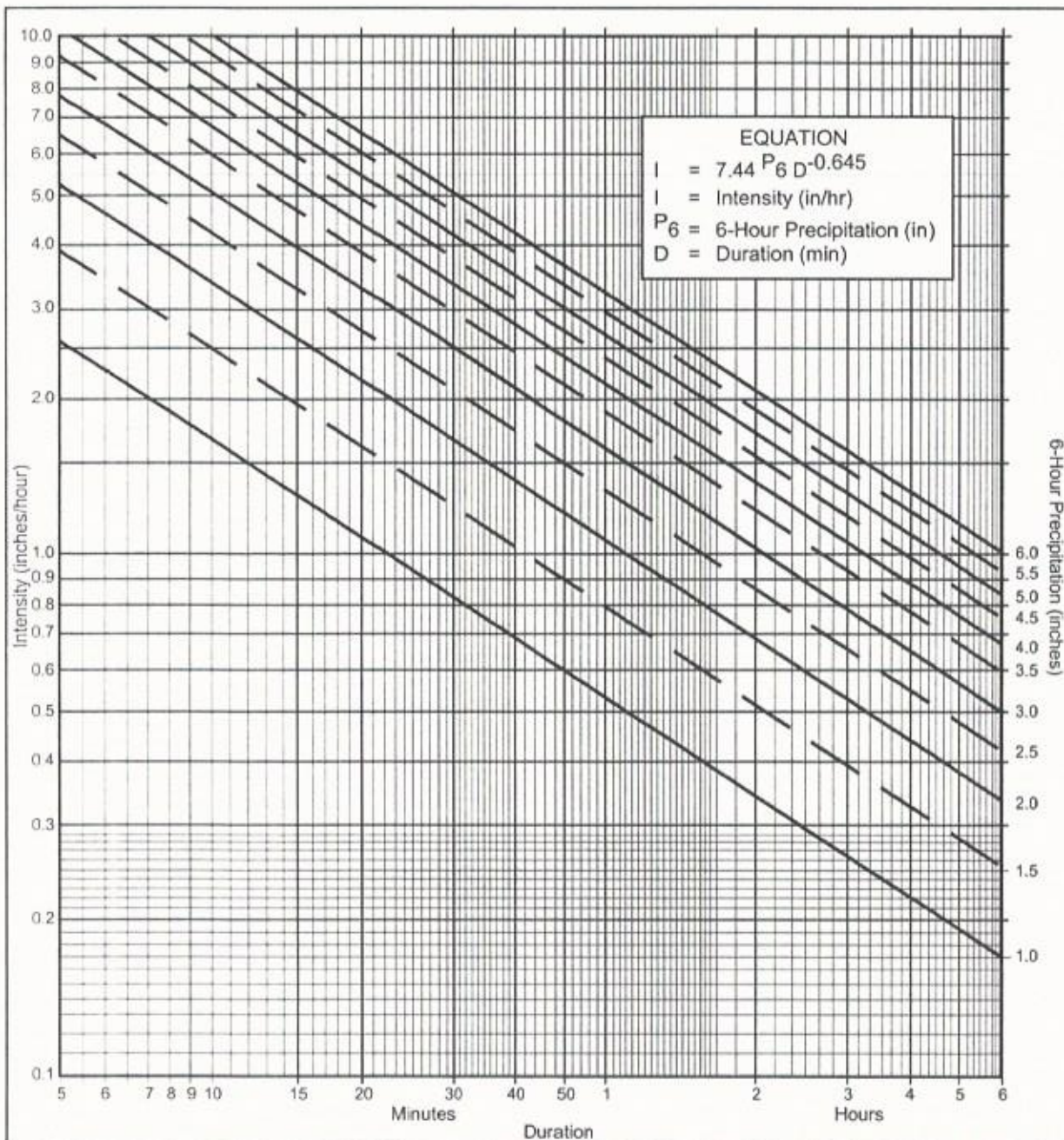


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Directions for Application:

- (1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).
- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

- (a) Selected frequency 5 year
- (b) $P_6 = 1.4$ in., $P_{24} = 2.5$, $\frac{P_6}{P_{24}} = 56\%$ ⁽²⁾
- (c) Adjusted $P_6^{(2)} = 1.4$ in.
- (d) $t_x =$ _____ min.
- (e) $I =$ _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P_6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration											
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE

3-1

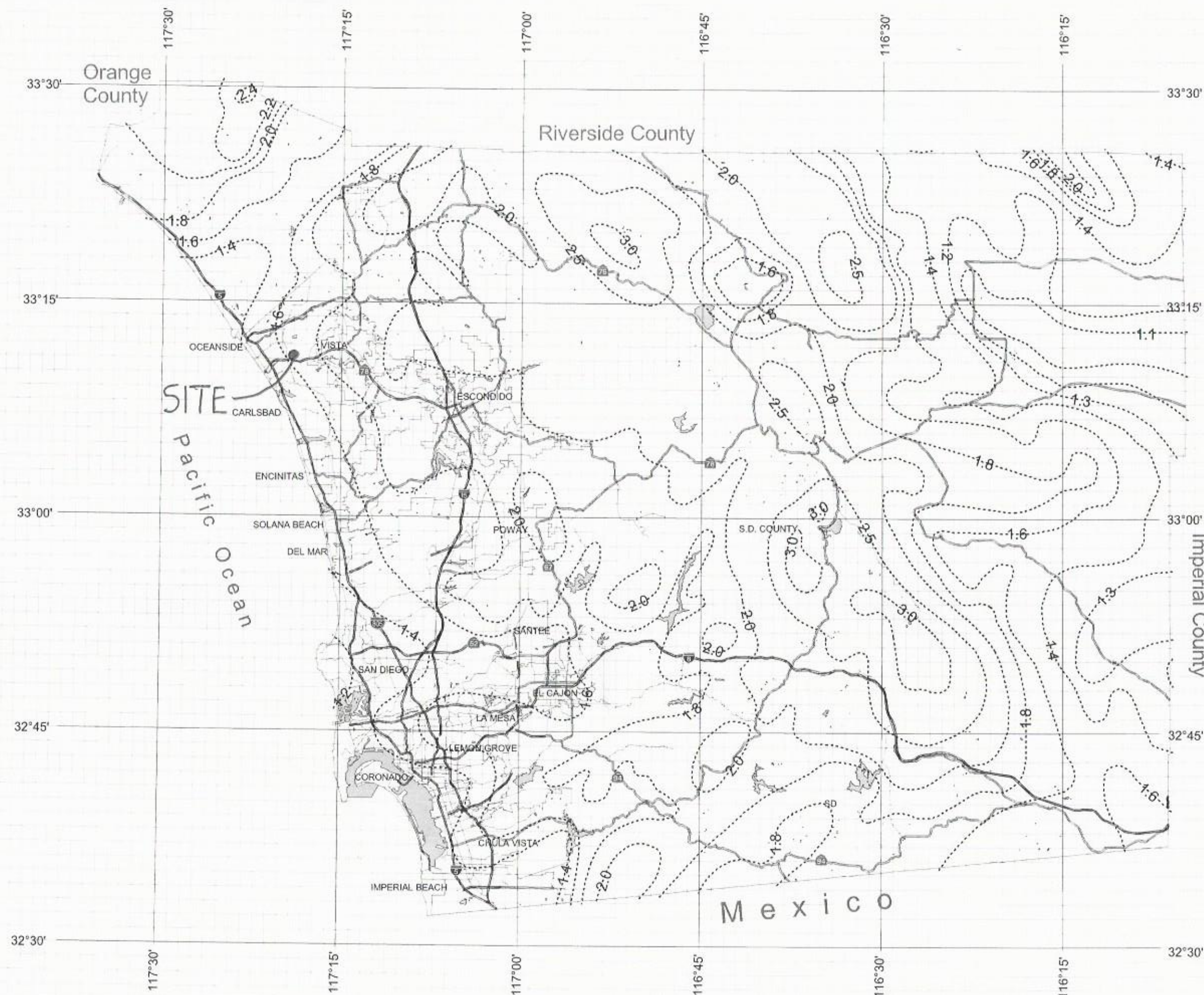
County of San Diego Hydrology Manual



Rainfall Isopluvials

5 Year Rainfall Event - 6 Hours

..... Isopluvial (inches)



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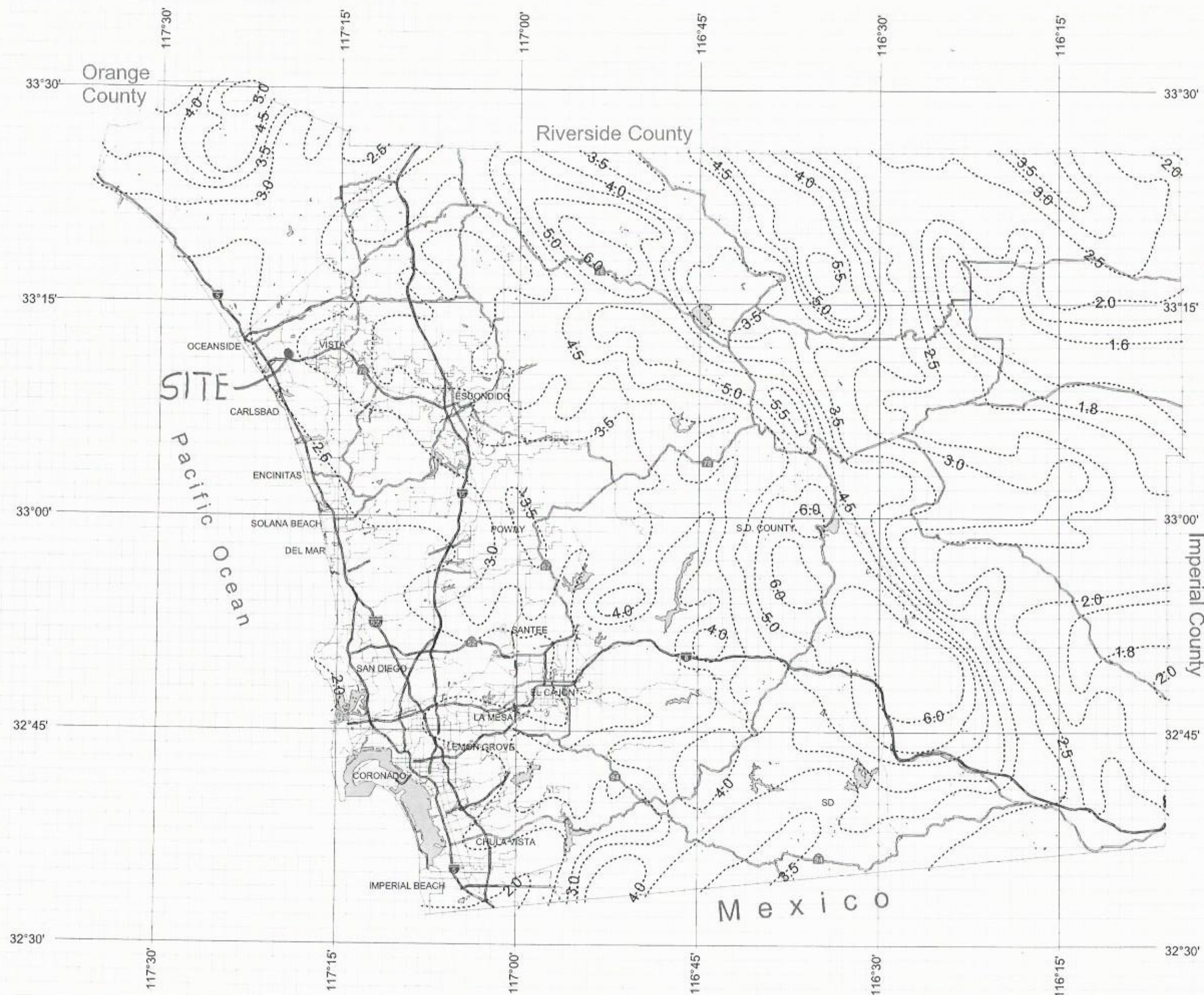
County of San Diego Hydrology Manual



Rainfall Isopluvials

5 Year Rainfall Event - 24 Hours

----- Isopluvial (inches)



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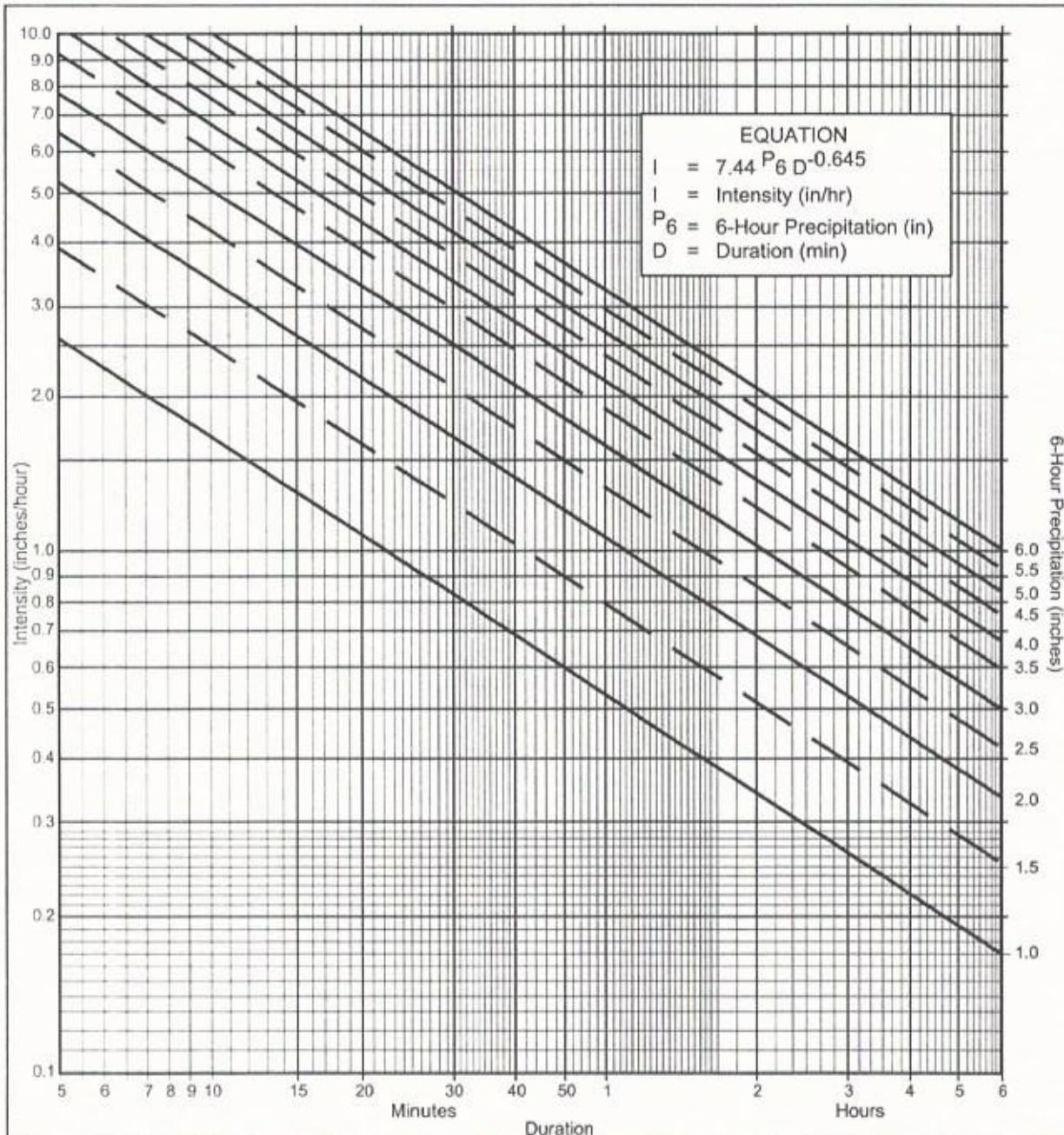


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3 0 3 Miles



Directions for Application:

- (1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).
- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

- (a) Selected frequency 10 year
- (b) $P_6 = 1.80$ in., $P_{24} = 3.25$, $\frac{P_6}{P_{24}} = 55.4\%$ ⁽²⁾
- (c) Adjusted $P_6^{(2)} = 1.80$ in.
- (d) $t_x =$ _____ min.
- (e) $I =$ _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P_6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration											
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE

3-1

10 Year Rainfall Event - 6 Hours

----- Isopluvial (inches)



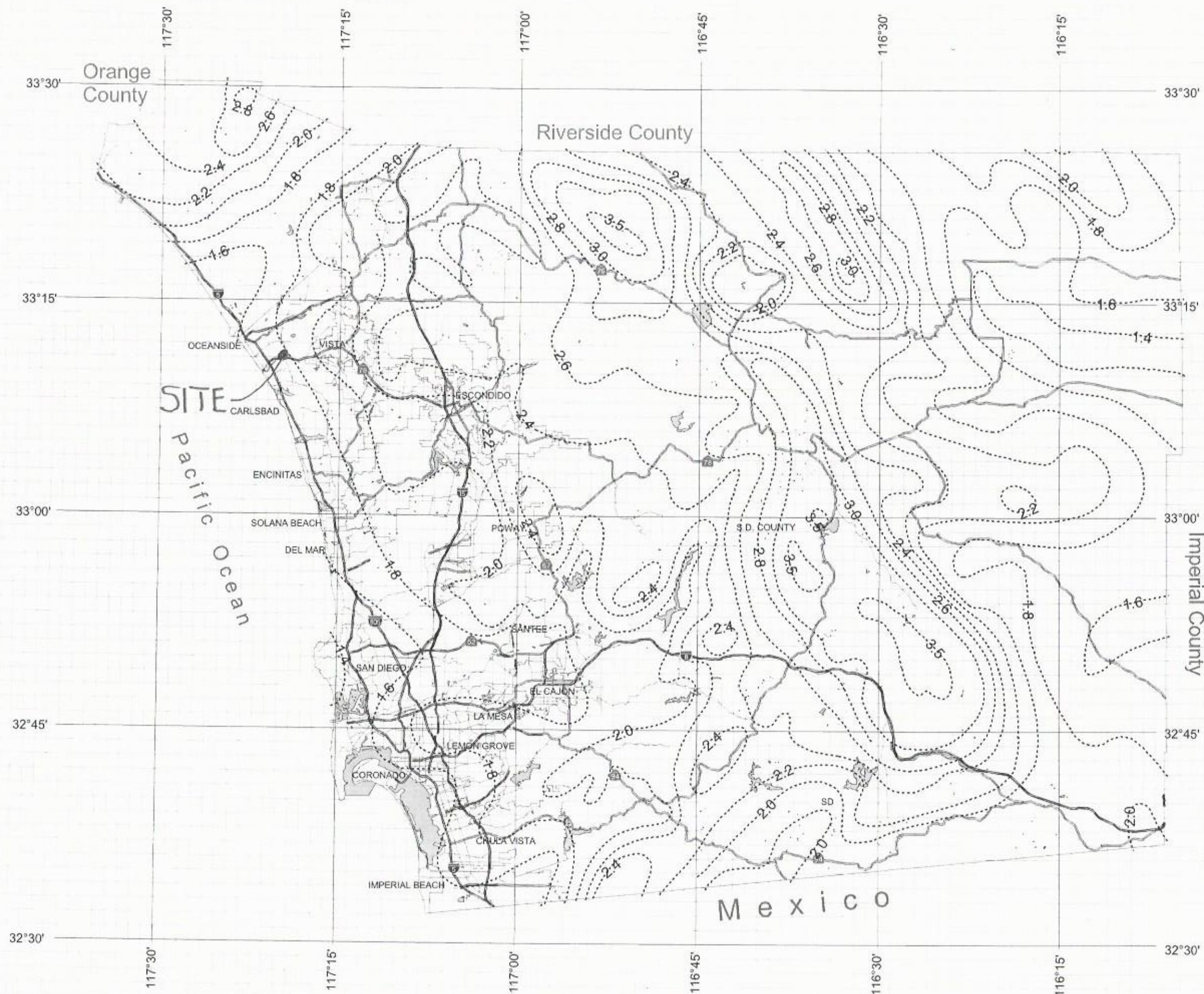
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3 0 3 Miles



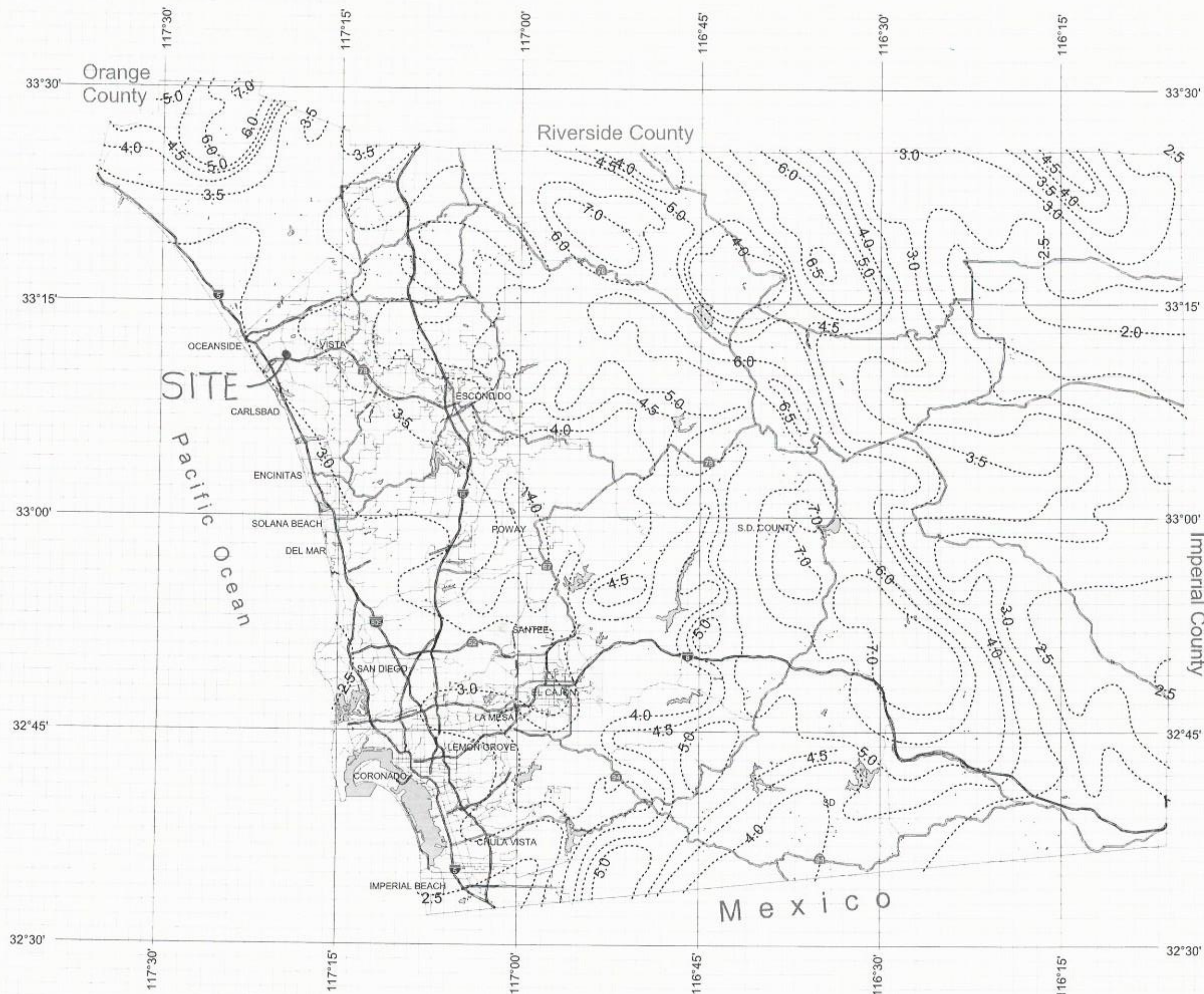
County of San Diego Hydrology Manual



Rainfall Isopluvials

10 Year Rainfall Event - 24 Hours

----- Isopluvial (inches)



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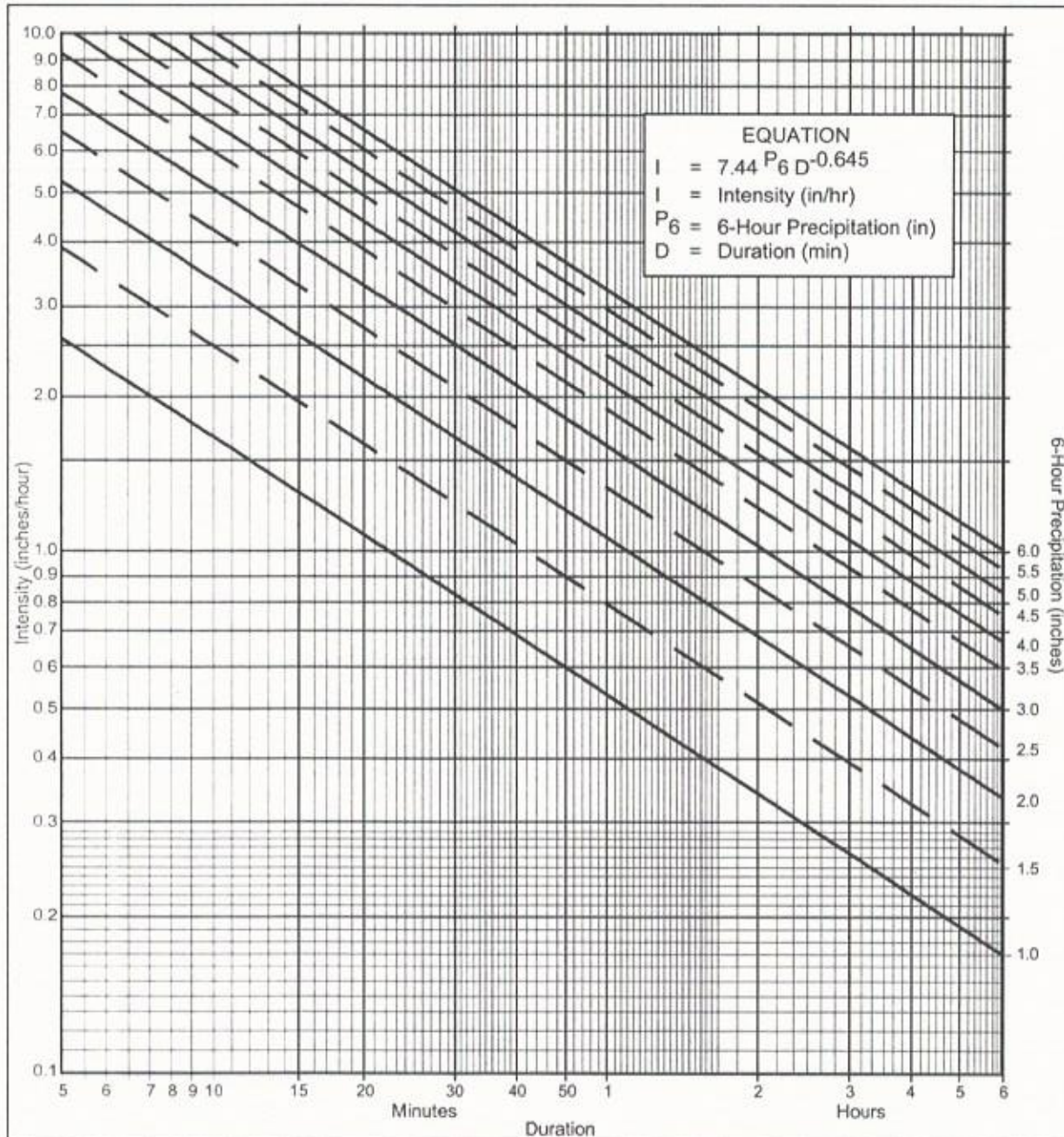


3 0 3 Miles

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Directions for Application:

- (1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).
- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

- (a) Selected frequency 50 year
- (b) $P_6 = 2.5$ in., $P_{24} = 4.5$, $\frac{P_6}{P_{24}} = 55.6\%$ ⁽²⁾
- (c) Adjusted $P_6^{(2)} = 2.5$ in.
- (d) $t_x =$ _____ min.
- (e) $I =$ _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P_6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration											
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE

3-1

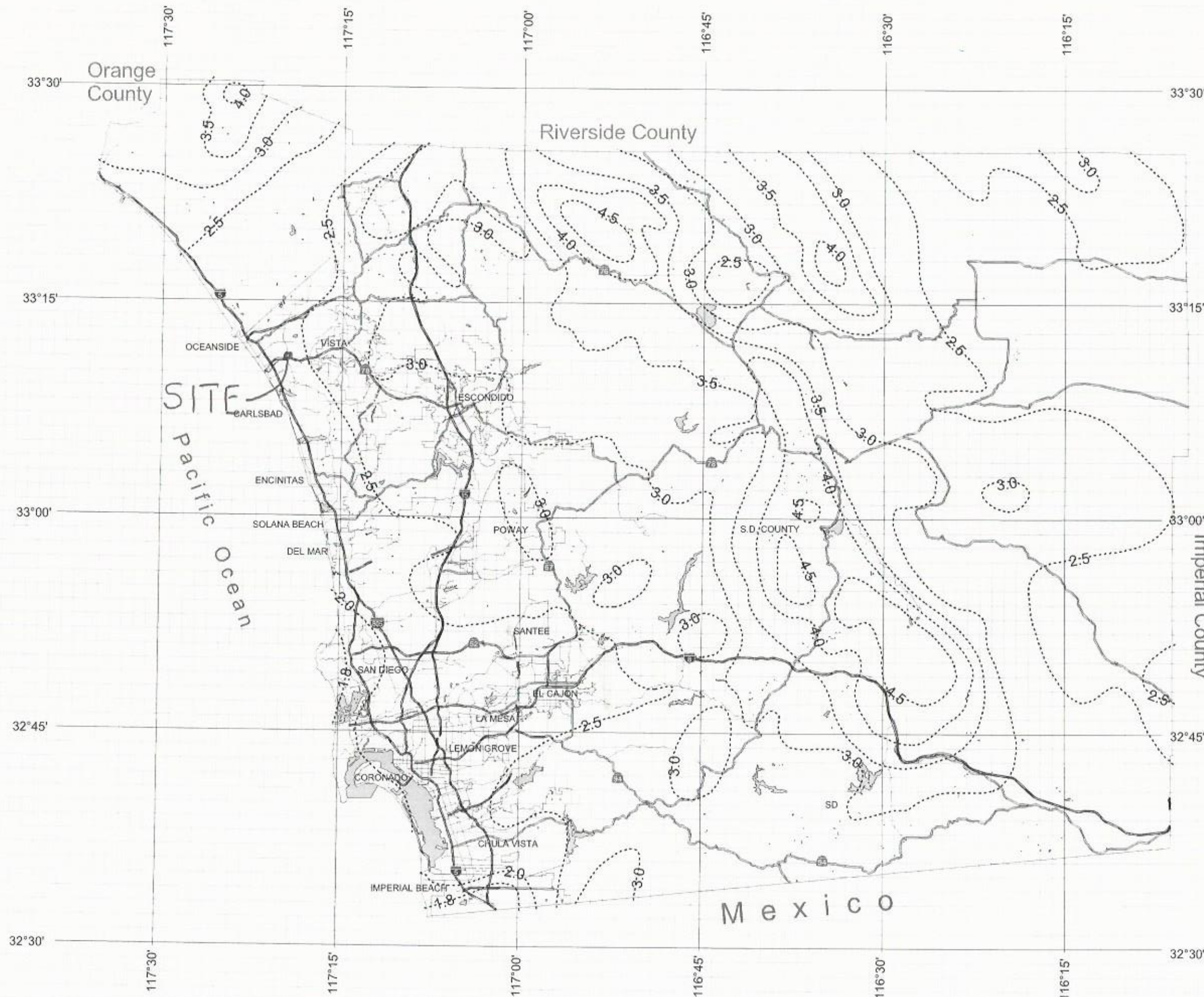
County of San Diego Hydrology Manual



Rainfall Isopluvials

50 Year Rainfall Event - 6 Hours

..... Isopluvial (inches)



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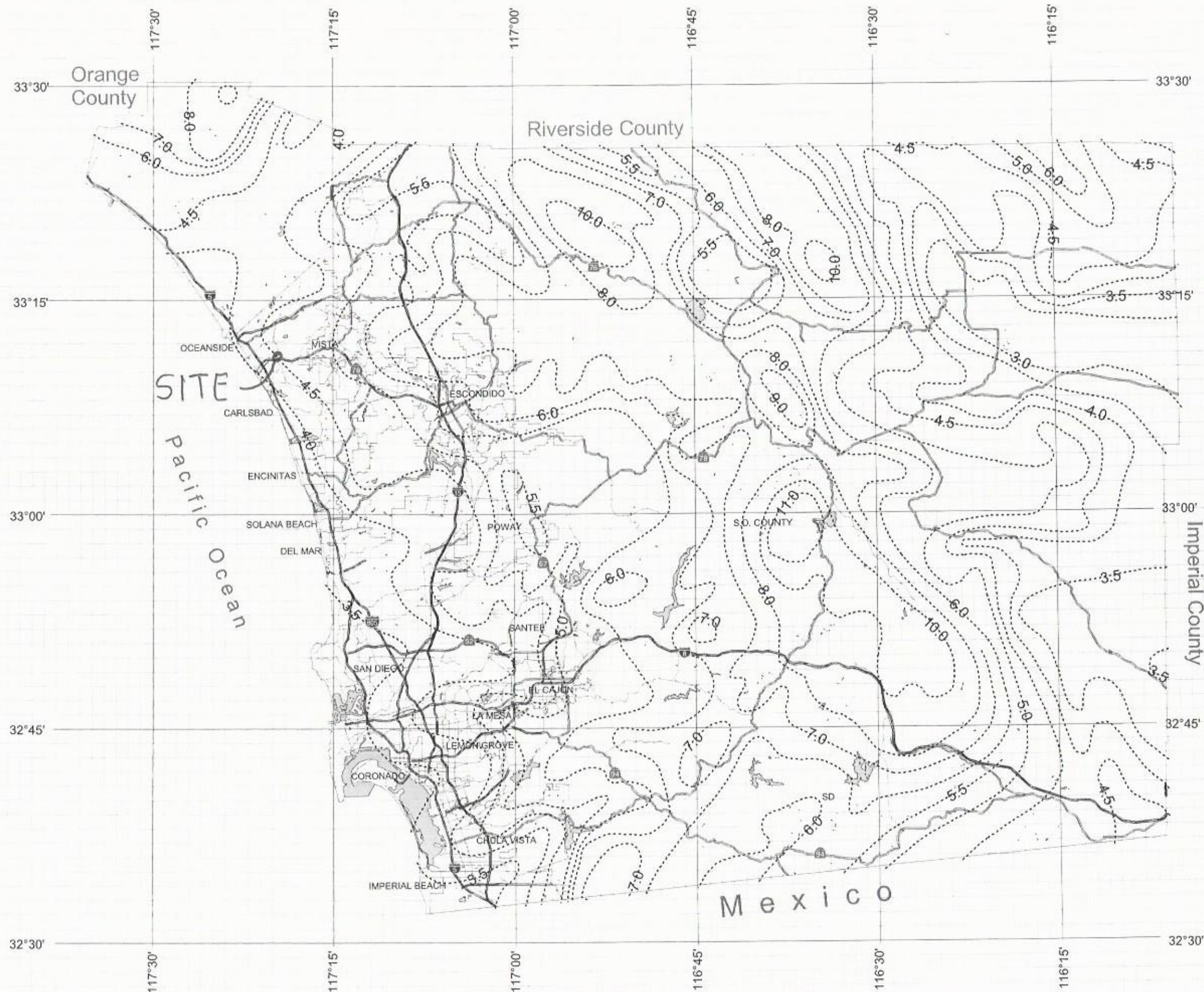
County of San Diego Hydrology Manual



Rainfall Isopluvials

50 Year Rainfall Event - 24 Hours

----- Isopluvial (inches)



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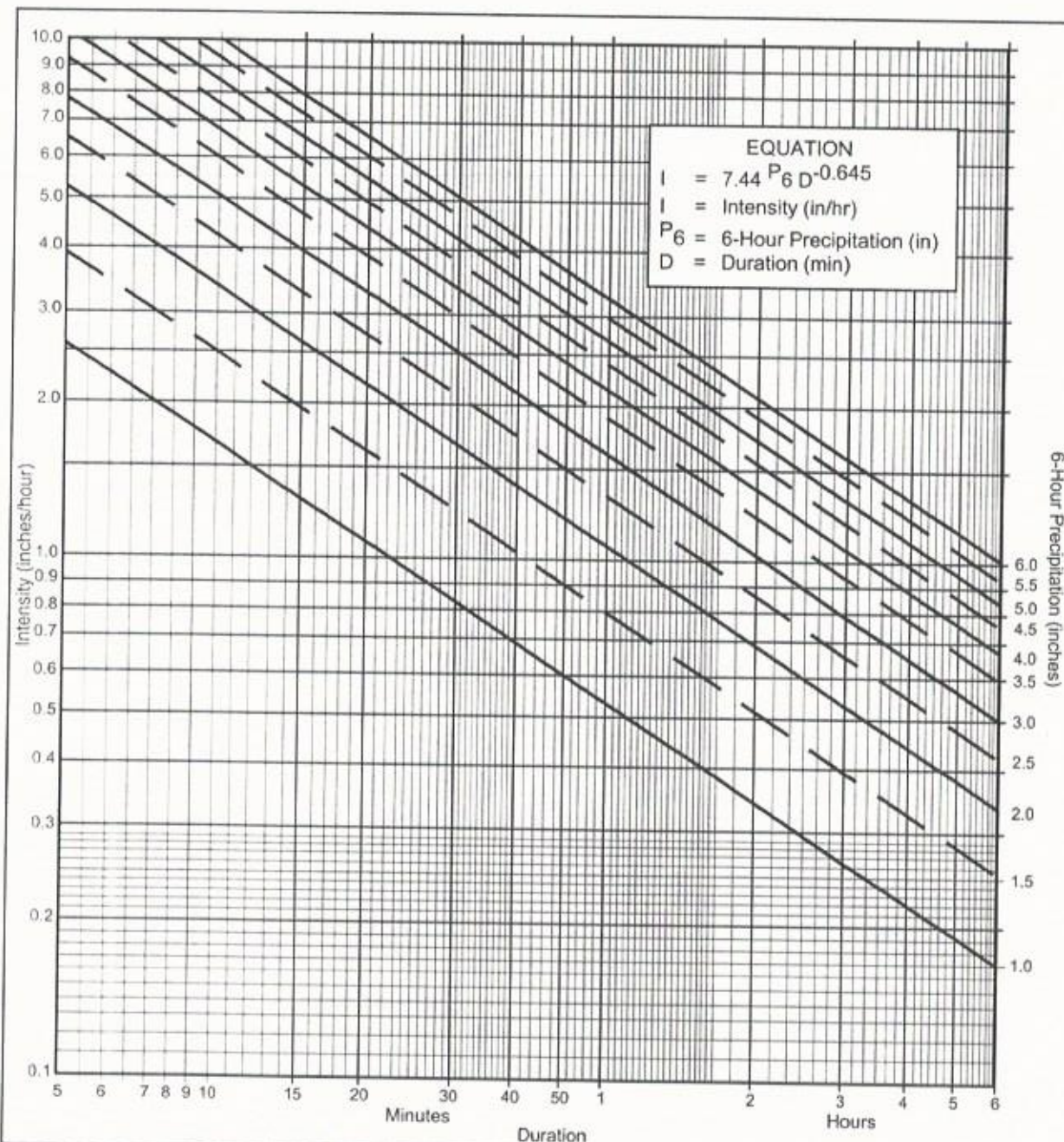


3 0 3 Miles

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- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

- (a) Selected frequency 100 year
- (b) $P_6 = \underline{2.8}$ in., $P_{24} = \underline{5.0}$, $\frac{P_6}{P_{24}} = \underline{56} \%^{(2)}$
- (c) Adjusted $P_6^{(2)} = \underline{2.8}$ in.
- (d) $t_x = \underline{\hspace{2cm}}$ min.
- (e) $I = \underline{\hspace{2cm}}$ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE

3-1

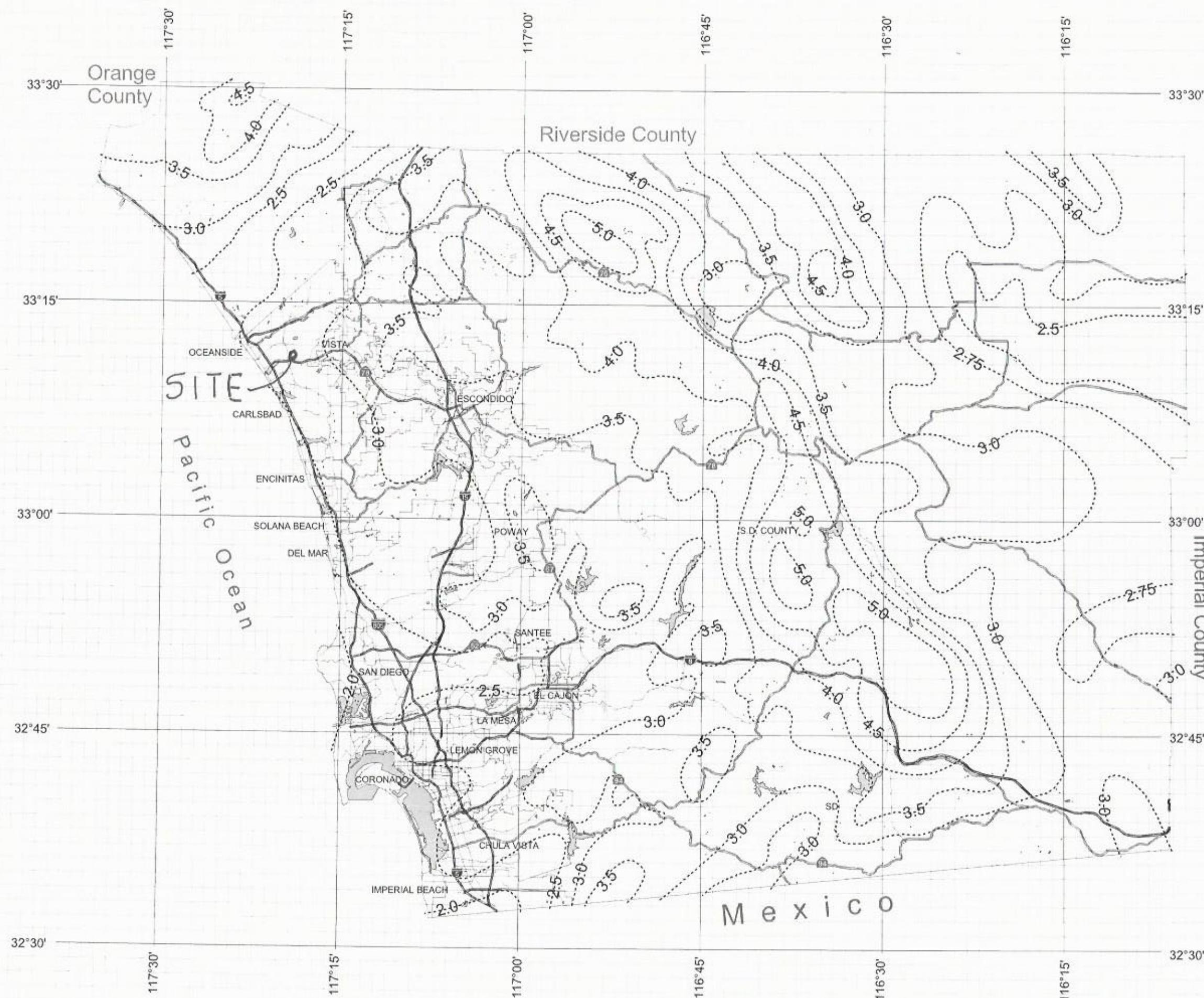
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Rainfall Isopluvials

100 Year Rainfall Event - 6 Hours

----- Isopluvial (inches)



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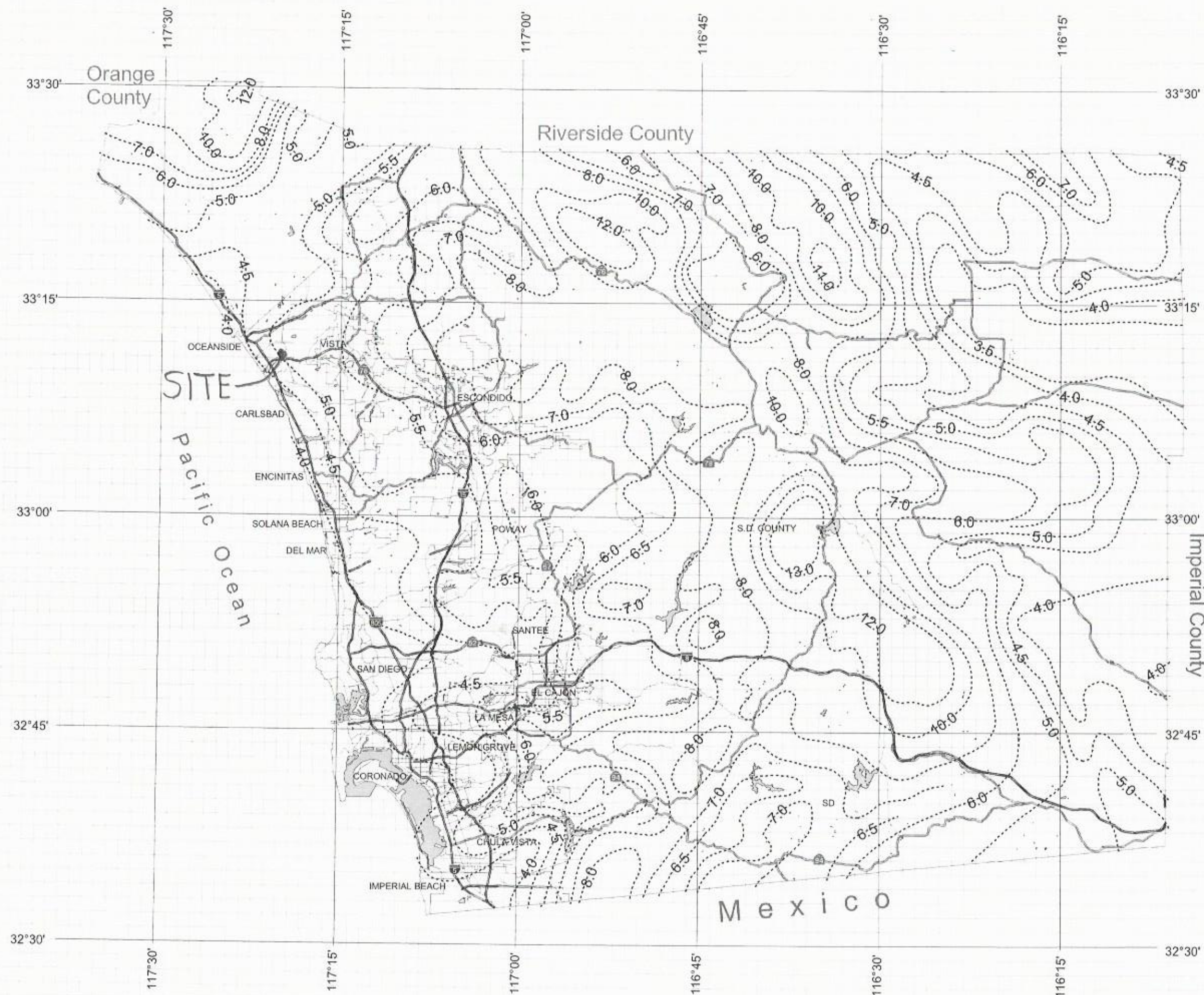
County of San Diego Hydrology Manual



Rainfall Isopluvials

100 Year Rainfall Event - 24 Hours

..... Isopluvial (inches)



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APPENDIX 1
Hydrology Calculations

PRE-DEVELOPMENT HYDROLOGY

P6 = 2.80

[illegible]

P6 = 1.80

[illegible]

P6 = 1.40

[illegible]

P6 = 1.10

[illegible]

POST-DEVELOPMENT HYDROLOGY

Project Name: TPM for 3710 Vista Way

Page 1 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ SF	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0	Dist. Travel =	325.00								
							Elev. Node 2	194.7										
							Elev. Delta	22.30										
1	2	A1	2,003	OS				6.86%			325.00	11.31	11.31	4.36	0.44	0.02	0.09	
Node 2 is Existing B Inlet																		
							Elev. Node 3	206.0	Dist. Travel =	210.00								
							Elev. Node 4	198.2										
							Elev. Delta	7.80										
3	4	A2	22,837	OS				3.71%			210.00	9.24	9.24	4.97	0.55	0.29	1.44	B Inlet
4	5				1.00	0.013	1.44	1.00%	0.44	4.29	36.21	0.14	9.38	4.92				Area Drain
							Elev. Node 6	201.4	Dist. Travel =	60.00								
							Elev. Node 5	200.7										
							Elev. Delta	0.70										
6	5	A3	2,818	RES				1.17%			60.00	5.78	5.78	6.72	0.66	0.04	0.29	Area Drain
															QA2+QA3=		1.72	
4	5				1.00	0.013	1.72	1.00%	0.49	4.50	6.86	0.03	9.40	4.91				C/O
5	7				1.00	0.013	1.72	1.00%	0.49	4.50	33.75	0.13	9.53	4.87				Area Drain
							Elev. Node 9	201.40	Dist. Travel =	60.00								
							Elev. Node 8	200.70										
							Elev. Delta	0.70										
9	8	A4	1,999	RES				1.17%			60.00	5.68	5.68	6.79	0.67	0.03	0.21	Area Drain
															QA2+QA3+QA4=		1.93	

Project Name: TPM for 3710 Vista Way

Page 2 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q		
Fr	To	No.	SQ FT	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks	
8	10				1.00	0.013	1.93	1.00%	0.53	4.63	33.75	0.12	9.65	4.83				Area Drain	
							Elev. Node 11	199.15	Dist. Travel =		60.00								
							Elev. Node 10	198.45											
							Elev. Delta	0.70											
11	10	A5	2,030	RES				1.17%			60.00	5.56	5.56	6.89	0.68	0.03	0.22	Area Drain	
													QA2+QA3+QA4+QA5=				2.15		
10	12				1.00	0.013	2.15	1.00%	0.56	4.75	5.50	0.02	9.67	4.82				Modular Wetland	
12	13				1.00	0.013	2.15	1.00%	0.56	4.75	2.00	0.01	9.68	4.82				C/O	
13	2				1.00	0.013	2.15	1.40%	0.51	5.39	12.89	0.04	9.72	4.81				Ex. B Inlet	
										Post Development Runoff for Drainage Basin A=								2.24	
										Pre Development Runoff for Drainage Basin P1=								2.50	
													Net Reduction in Runoff=				(0.26)		
															No Detention Required				
WATERSHED AREA B																			
							Elev. Node 2	194.70	Dist. Travel =		220.00								
							Elev. Node 14	191.30											
							Elev. Delta	3.40											
2	14	B1	284.00	RES				1.55%			220.00	6.10	6.10	6.49	0.84	0.01	0.04		
Node 14 is @ the Beginning of watershed C																			
							Elev. Node 15	210.50	Dist. Travel =		115.00								
							Elev. Node 16	194.70											
							Elev. Delta	15.80											
15	16	B4	10,000	RES				13.74%			115.00	5.48	5.48	6.95	0.42	0.10	0.67	B Inlet	

Page 3 of 20 Pages

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

EXHIBIT B

P6 = 2.80

[illegible]

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

[illegible]

Project Name: TPM for 3710 Vista Way

Page 5 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ SF	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0	Dist. Travel =	325.00								
							Elev. Node 2	194.7										
							Elev. Delta	22.30										
1	2	A1	2,003	OS				6.86%			325.00	11.31	11.31	3.89	0.44	0.02	0.08	
Node 2 is Existing B Inlet																		
							Elev. Node 3	206.0	Dist. Travel =	210.00								
							Elev. Node 4	198.2										
							Elev. Delta	7.80										
3	4	A2	22,837	OS				3.71%			210.00	9.24	9.24	4.43	0.55	0.29	1.28	B Inlet
4	5				1.00	0.013	1.28	1.00%	0.42	4.17	36.21	0.14	9.38	4.92				Area Drain
							Elev. Node 6	201.4	Dist. Travel =	60.00								
							Elev. Node 5	200.7										
							Elev. Delta	0.70										
6	5	A3	2,818	RES				1.17%			60.00	5.78	5.78	6.00	0.66	0.04	0.26	Area Drain
															QA2+QA3=		1.54	
4	5				1.00	0.013	1.54	1.00%	0.46	4.37	6.86	0.03	9.41	4.91				C/O
5	7				1.00	0.013	1.54	1.00%	0.46	4.37	33.75	0.13	9.54	4.86				Area Drain
							Elev. Node 9	201.40	Dist. Travel =	60.00								
							Elev. Node 8	200.70										
							Elev. Delta	0.70										
9	8	A4	1,999	RES				1.17%			60.00	5.68	5.68	6.06	0.67	0.03	0.19	Area Drain
															QA2+QA3+QA4=		1.73	

Project Name: TPM for 3710 Vista Way

Page 6 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ FT	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
8	10				1.00	0.013	1.73	1.00%	0.49	4.50	33.75	0.12	9.66	4.82				Area Drain
							Elev. Node 11	199.15	Dist. Travel =		60.00							
							Elev. Node 10	198.45										
							Elev. Delta	0.70										
11	10	A5	2,030	RES				1.17%			60.00	5.56	5.56	6.15	0.68	0.03	0.19	Area Drain
													QA2+QA3+QA4+QA5=				1.92	
10	12				1.00	0.013	1.92	1.00%	0.52	4.62	5.50	0.02	9.68	4.82				Modular Wetland
12	13				1.00	0.013	1.92	1.00%	0.52	4.62	2.00	0.01	9.69	4.81				C/O
13	2				1.00	0.013	1.92	1.40%	0.47	5.24	12.89	0.04	9.73	4.80				Ex. B Inlet
										Post Development Runoff for Drainage Basin A=							2.00	
										Pre Development Runoff for Drainage Basin P1=							2.23	
													Net Reduction in Runoff=			(0.23)		
															No Detention Required			
WATERSHED AREA B																		
							Elev. Node 2	194.70	Dist. Travel =		220.00							
							Elev. Node 14	191.30										
							Elev. Delta	3.40										
2	14	B1	284.00	RES				1.55%			220.00	6.10	6.10	5.80	0.84	0.01	0.03	
Node 14 is @ the Beginning of watershed C																		
							Elev. Node 15	210.50	Dist. Travel =		115.00							
							Elev. Node 16	194.70										
							Elev. Delta	15.80										
15	16	B4	10,000	RES				13.74%			115.00	5.48	5.48	6.21	0.42	0.10	0.60	B Inlet

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

[illegible]

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

[illegible]

Project Name: TPM for 3710 Vista Way

Page 9 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ SF	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0	Dist. Travel =	325.00								
							Elev. Node 2	194.7										
							Elev. Delta	22.30										
1	2	A1	2,003	OS				6.86%			325.00	11.31	11.31	2.80	0.44	0.02	0.06	
Node 2 is Existing B Inlet																		
							Elev. Node 3	206.0	Dist. Travel =	210.00								
							Elev. Node 4	198.2										
							Elev. Delta	7.80										
3	4	A2	22,837	OS				3.71%			210.00	9.24	9.24	3.19	0.55	0.29	0.92	B Inlet
4	5				1.00	0.013	0.92	1.00%	0.35	3.81	36.21	0.16	9.40	4.91				Area Drain
							Elev. Node 6	201.4	Dist. Travel =	60.00								
							Elev. Node 5	200.7										
							Elev. Delta	0.70										
6	5	A3	2,818	RES				1.17%			60.00	5.78	5.78	4.32	0.66	0.04	0.19	Area Drain
															QA2+QA3=		1.11	
4	5				1.00	0.013	1.11	1.00%	0.38	4.00	6.86	0.03	9.43	4.90				C/O
5	7				1.00	0.013	1.11	1.00%	0.38	4.00	33.75	0.14	9.57	4.85				Area Drain
							Elev. Node 9	201.40	Dist. Travel =	60.00								
							Elev. Node 8	200.70										
							Elev. Delta	0.70										
9	8	A4	1,999	RES				1.17%			60.00	5.68	5.68	4.37	0.67	0.03	0.13	Area Drain
															QA2+QA3+QA4=		1.24	

Project Name: TPM for 3710 Vista Way

Page 10 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q		
Fr	To	No.	SQ FT	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks	
8	10				1.00	0.013	1.73	1.00%	0.49	4.50	33.75	0.12	9.69	4.81				Area Drain	
							Elev. Node 11	199.15	Dist. Travel =		60.00								
							Elev. Node 10	198.45											
							Elev. Delta	0.70											
11	10	A5	2,030	RES				1.17%			60.00	5.56	5.56	4.43	0.68	0.03	0.14	Area Drain	
													QA2+QA3+QA4+QA5=				1.38		
10	12				1.00	0.013	1.38	1.00%	0.43	4.25	5.50	0.02	9.71	4.81				Modular Wetland	
12	13				1.00	0.013	1.38	1.00%	0.43	4.25	2.00	0.01	9.72	4.80				C/O	
13	2				1.00	0.013	1.38	1.40%	0.39	4.80	12.89	0.04	9.76	4.79				Ex. B Inlet	
										Post Development Runoff for Drainage Basin A=								1.44	
										Pre Development Runoff for Drainage Basin P1=								1.60	
													Net Reduction in Runoff=				(0.17)		
															No Detention Required				
WATERSHED AREA B																			
							Elev. Node 2	194.70	Dist. Travel =		220.00								
							Elev. Node 14	191.30											
							Elev. Delta	3.40											
2	14	B1	284.00	RES				1.55%			220.00	6.10	6.10	4.17	0.84	0.01	0.02		
Node 14 is @ the Beginning of watershed C																			
							Elev. Node 15	210.50	Dist. Travel =		115.00								
							Elev. Node 16	194.70											
							Elev. Delta	15.80											
15	16	B4	10,000	RES				13.74%			115.00	5.48	5.48	4.47	0.42	0.10	0.43	B Inlet	

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

[illegible]

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

[illegible]

Project Name: TPM for 3710 Vista Way

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Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ SF	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0	Dist. Travel =	325.00								
							Elev. Node 2	194.7										
							Elev. Delta	22.30										
1	2	A1	2,003	OS				6.86%			325.00	11.31	11.31	2.18	0.44	0.02	0.04	
Node 2 is Existing B Inlet																		
							Elev. Node 3	206.0	Dist. Travel =	210.00								
							Elev. Node 4	198.2										
							Elev. Delta	7.80										
3	4	A2	22,837	OS				3.71%			210.00	9.24	9.24	2.48	0.55	0.29	0.72	B Inlet
4	5				1.00	0.013	0.72	1.00%	0.31	3.55	36.21	0.17	9.41	4.91				Area Drain
							Elev. Node 6	201.4	Dist. Travel =	60.00								
							Elev. Node 5	200.7										
							Elev. Delta	0.70										
6	5	A3	2,818	RES				1.17%			60.00	5.78	5.78	3.36	0.66	0.04	0.14	Area Drain
															QA2+QA3=		0.86	
4	5				1.00	0.013	0.86	1.00%	0.34	3.74	6.86	0.03	9.44	4.90				C/O
5	7				1.00	0.013	0.86	1.00%	0.34	3.74	33.75	0.15	9.59	4.85				Area Drain
							Elev. Node 9	201.40	Dist. Travel =	60.00								
							Elev. Node 8	200.70										
							Elev. Delta	0.70										
9	8	A4	1,999	RES				1.17%			60.00	5.68	5.68	3.40	0.67	0.03	0.10	Area Drain
															QA2+QA3+QA4=		0.97	

Project Name: TPM for 3710 Vista Way

Page 14 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ FT	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
8	10				1.00	0.013	0.97	1.00%	0.36	3.86	33.75	0.15	9.73	4.80				Area Drain
							Elev. Node 11	199.15	Dist. Travel =	60.00								
							Elev. Node 10	198.45										
							Elev. Delta	0.70										
11	10	A5	2,030	RES				1.17%			60.00	5.56	5.56	3.44	0.68	0.03	0.11	Area Drain
													QA2+QA3+QA4+QA5=				1.08	
10	12				1.00	0.013	1.08	1.00%	0.38	3.98	5.50	0.02	9.76	4.79				Modular Wetland
12	13				1.00	0.013	1.08	1.00%	0.38	3.98	2.00	0.01	9.77	4.79				C/O
13	2				1.00	0.013	1.08	1.40%	0.35	4.49	12.89	0.05	9.81	4.78				Ex. B Inlet
											Post Development Runoff for Drainage Basin A=						1.12	
																		Pre Development Runoff for Drainage Basin P1=
																		1.25
																		Net Reduction in Runoff=
																		(0.13)
																		No Detention Required
WATERSHED AREA B																		
							Elev. Node 2	194.70	Dist. Travel =	220.00								
							Elev. Node 14	191.30										
							Elev. Delta	3.40										
2	14	B1	284.00	RES				1.55%			220.00	6.10	6.10	3.25	0.84	0.01	0.02	
Node 14 is @ the Beginning of watershed C																		
							Elev. Node 15	210.50	Dist. Travel =	115.00								
							Elev. Node 16	194.70										
							Elev. Delta	15.80										
15	16	B4	10,000	RES				13.74%			115.00	5.48	5.48	3.48	0.42	0.10	0.34	B Inlet

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

[illegible]

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

[illegible]

Project Name: TPM for 3710 Vista Way

Page 17 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ SF	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0	Dist. Travel =		325.00							
							Elev. Node 2	194.7										
							Elev. Delta	22.30										
1	2	A1	2,003	OS				6.86%			325.00	11.31	11.31	1.71	0.44	0.02	0.03	
Node 2 is Existing B Inlet																		
							Elev. Node 3	206.0	Dist. Travel =		210.00							
							Elev. Node 4	198.2										
							Elev. Delta	7.80										
3	4	A2	22,837	OS				3.71%			210.00	9.24	9.24	1.95	0.55	0.29	0.56	B Inlet
4	5				1.00	0.013	0.56	1.00%	0.27	3.31	36.21	0.18	9.42	4.90				Area Drain
							Elev. Node 6	201.4	Dist. Travel =		60.00							
							Elev. Node 5	200.7										
							Elev. Delta	0.70										
6	5	A3	2,818	RES				1.17%			60.00	5.78	5.78	2.64	0.66	0.04	0.11	Area Drain
															QA2+QA3=		0.68	
4	5				1.00	0.013	0.68	1.00%	0.30	3.49	6.86	0.03	9.45	4.89				C/O
5	7				1.00	0.013	0.68	1.00%	0.30	3.49	33.75	0.16	9.61	4.84				Area Drain
							Elev. Node 9	201.40	Dist. Travel =		60.00							
							Elev. Node 8	200.70										
							Elev. Delta	0.70										
9	8	A4	1,999	RES				1.17%			60.00	5.68	5.68	2.67	0.67	0.03	0.08	Area Drain
															QA2+QA3+QA4=		0.76	

Project Name: TPM for 3710 Vista Way

Page 18 of 20 Pages

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		Σ	Q	
Fr	To	No.	SQ FT	Use	Size	n	Runoff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
8	10				1.00	0.013	0.76	1.00%	0.31	3.61	33.75	0.16	9.77	4.79				Area Drain
							Elev. Node 11	199.15	Dist. Travel =	60.00								
							Elev. Node 10	198.45										
							Elev. Delta	0.70										
11	10	A5	2,030	RES				1.17%			60.00	5.56	5.56	2.71	0.68	0.03	0.09	Area Drain
													QA2+QA3+QA4+QA5=				0.85	
10	12				1.00	0.013	0.85	1.00%	0.33	3.72	5.50	0.02	9.80	4.78				Modular Wetland
12	13				1.00	0.013	0.85	1.00%	0.33	3.72	2.00	0.01	9.80	4.78				C/O
13	2				1.00	0.013	0.85	1.40%	0.31	4.20	12.89	0.05	9.86	4.76				Ex. B Inlet
											Post Development Runoff for Drainage Basin A=						0.88	
																		Pre Development Runoff for Drainage Basin P1=
																		0.98
																		Net Reduction in Runoff=
																		(0.10)
																		No Detention Required
WATERSHED AREA B																		
							Elev. Node 2	194.70	Dist. Travel =	220.00								
							Elev. Node 14	191.30										
							Elev. Delta	3.40										
2	14	B1	284.00	RES				1.55%			220.00	6.10	6.10	2.55	0.84	0.01	0.01	
Node 14 is @ the Beginning of watershed C																		
							Elev. Node 15	210.50	Dist. Travel =	115.00								
							Elev. Node 16	194.70										
							Elev. Delta	15.80										
15	16	B4	10,000	RES				13.74%			115.00	5.48	5.48	2.73	0.42	0.10	0.26	B Inlet

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

[illegible]

Location: Oceanside Job #499-01

*INTENSITY-DURATION DESIGN CHART Date: November 3, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

[illegible]

APPENDIX 2

Inlets

HYDROLOGY & HYDRAULICS CALCULATION OF INLETS

Page 1 of 20 Pages

Project Name: TM for 3710 Vista Way

T21-00002

Date: November 3, 2021

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Job No. 499-01

* INTENSITY-DURATION DESIGN CHART

Soil Classification: "D"

Appendix I-1

Frequency = 100 Yr. Storm

P6=

2.80

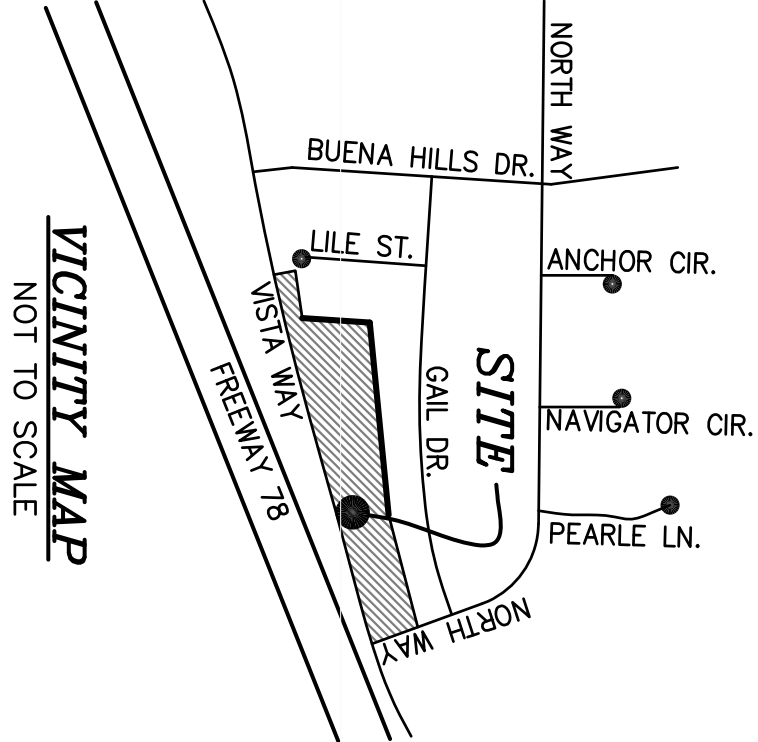
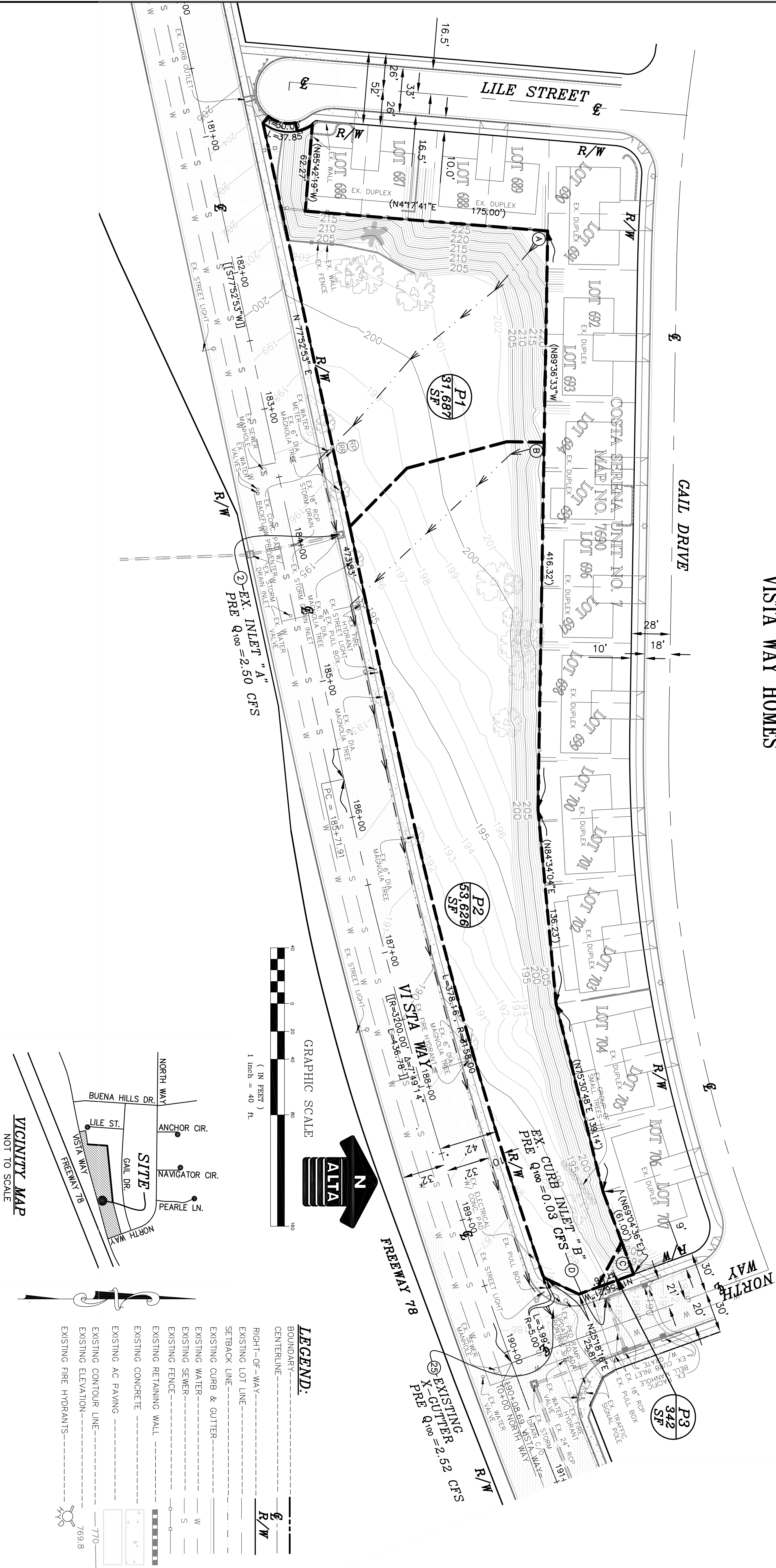
Coef. =

Sag	Grade
Cu	a
3.00	0.33

Reach	Drainage Area				Inlet	Design		Sf		Dist			Opening		
Fr	To	No.	AC.	use	Size	n	Q	So	y	Travel	TC	* I	C	L	Remarks
3		Private Street "A" Curb Inlet													
					Use	St. X Slope =		2.0%							Table 3-2
	4	A2	0.52	St	6' B-1	0.017	1.44	1.45%	0.26	325.00	9.24	4.97	0.55	4.56	On Grade
				Effective do = (y+a) - .26				do =	0.33						
3		Private Street "A" Curb Inlet													
					Ex.	St. X Slope =		2.0%							Table 3-2
	20	B2	0.40	St	5' B	0.017	1.56	2.00%	0.25	260.00	5.55	6.90	0.56	2.83	SAG
				Effective do = (y+a) - .26				do =	0.32						
15		Private Street "A" Curb Inlet													
					Ex.	St. X Slope =		2.5%							Table 3-2
	16	B4	0.23	St	5' B	0.017	0.67	0.50%	0.25	115.00	5.48	6.95	0.42	1.24	SAG
				Effective do = (y+a) - .26				do =	0.32						

EXHIBIT A
Pre-Development Drainage Map

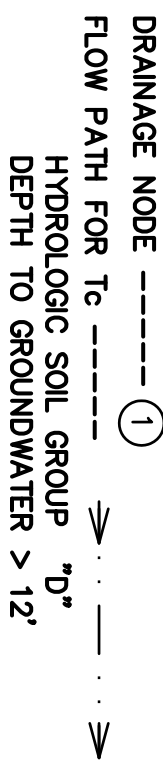
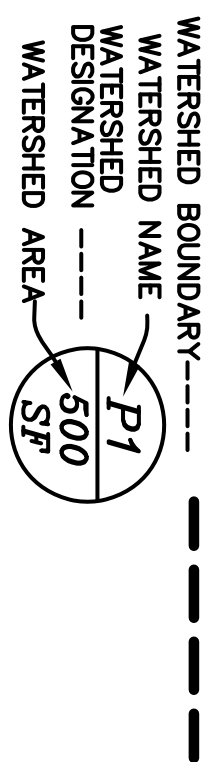
VISTA WAY HOMES



- LEGEND:**
- BOUNDARY-----
 - CENTERLINE-----
 - RIGHT-OF-WAY-----
 - EXISTING LOT LINE-----
 - SETBACK LINE-----
 - EXISTING CURB & GUTTER-----
 - EXISTING WATER-----
 - EXISTING SEWER-----
 - EXISTING FENCE-----
 - EXISTING RETAINING WALL-----
 - EXISTING CONCRETE-----
 - EXISTING AC PAVING-----
 - EXISTING CONTOUR LINE-----
 - EXISTING ELEVATION-----
 - EXISTING FIRE HYDRANTS-----

EXHIBIT "A"
PRE-DEVELOPMENT
DRAINAGE AREA MAP
FOR TENTATIVE MAP

POST DAM LEGEND:
100 YEAR FREQUENCY



General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT

- EXISTING GROSS SUBDIVISION AREA: 1.97 AC
- PROPOSED GROSS SUBDIVISION AREA: 1.97 AC
- ASSESSOR'S PARCEL NUMBER: 165-483-47
- SITE ADDRESS: 3710 VISTA WAY OCEANSIDE, CA 92056
- PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY CLERK OF SAN DIEGO COUNTY, CALIFORNIA, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
- BENCH MARK: DESCRIPTION: CI MONUMENT 3.5" BRASS DISC LOCATION: JNT VISTA WAY AND BUENA HILLS ELEVATION: 206.90 DATE OF SURVEY: MAY 88 CITY OF OCEANSIDE #1020
- SOURCE OF TOPOGRAPHY: SURVEYED ON: 02/20/2020
- TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
- FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073007665 dated 2/16/12

ENGINEER OF WORK

BARTOLOME J. PASTORE, RCE 38606
DATED: NOVEMBER 3, 2021



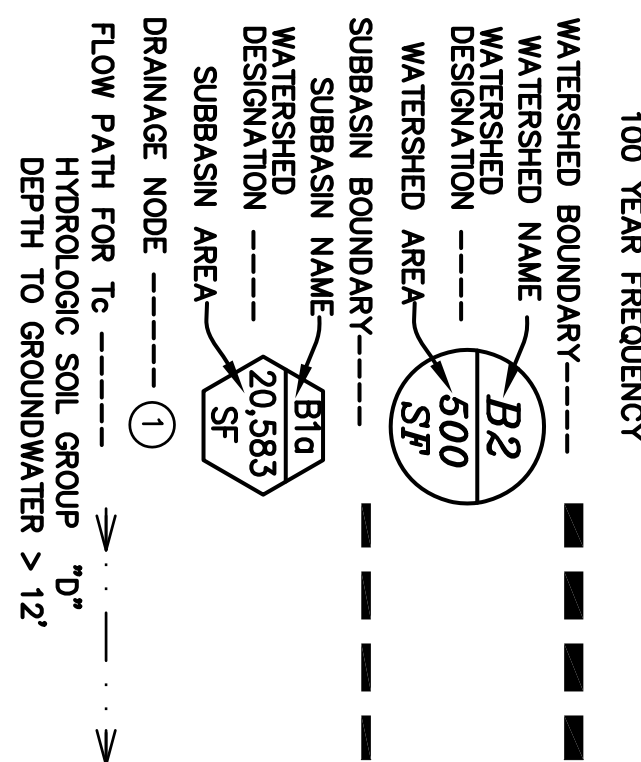
EXHIBIT B
Post-Development Drainage Map

VISTA WAY HOMES

EXHIBIT "B"

POST-DEVELOPMENT
DRAINAGE AREA MAP
FOR TENTATIVE MAP

POST DAM LEGEND:



General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCES WILL BE PREPARED FOR THIS PROJECT TO DETERMINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT

- EXISTING GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED PUBLIC STREET DEDICATION: 0 AC
- PROPOSED PRIVATE STREET AREA: 0 AC
- TOTAL NUMBER OF EXISTING LOTS: 1
- TOTAL NUMBER OF PROPOSED LOTS: 1
- TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
- PROPOSED PARKING:

- ATTACHED GARAGE SPACE PER UNIT=20
- ATTACHED STANDARD PARKING SPACES (18'x10')=25
- ATTACHED STANDARD PARKING SPACES=2
- TOTAL PARKING SPACES PROPOSED=27
- PARKING SPACES PER UNIT=2.35
- ASSESSOR'S PARCEL NUMBER: 165-483-47
- SITE ADDRESS: 3710 VISTA WAY OCEANSIDE, CA 92056

- PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7 IN THE CITY OF OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA, ARE BEING OFFERED TO MAP THEREOF NO. 7690 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0169407 OF OFFICIAL RECORDS.
- EXISTING GENERAL PLAN LAND USE: RESIDENTIAL.
- PROPOSED GENERAL PLAN LAND USE: RESIDENTIAL.
- EXISTING ZONING: RM-A
- PROPOSED ZONING: RM-A
- PROPOSED DENSITY: 10.15 DU/AC
- STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
- BENCH MARK: DESCRIPTION: CL. MONUMENT 3.5" BRASS DISC STAMPED LS-4506 LOCATION: INT VISTA WAY AND BUENA HILLS RECORD C/O OCEANSIDE RECORD NO. 60 DATE OF RECORDING: MAY 08 CITY OF OCEANSIDE #1020

- SOURCE OF TOPOGRAPHY: ALTA CONSULTANTS
- TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
- TOPOGRAPHIC CONTOUR SURVEYED ON: 02/20/2020
- MAXIMUM SLOPE GRADIENT: 2:1
- AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22,598 SF OR 26% OF SITE
- AREA/PERCENT OF SITE IN OPEN SPACE: 0
- AREA/PERCENT OF SITE IN LANDSCAPING: 38,050 SF OR 44% OF SITE
- ON-SITE GRADING FOR THIS PROJECT: (6% SHRINKAGE FOR CUT) CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y. NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
- GRADED AREA: 1.63 AC=82% OF SITE
- FOR PROPOSED FENCING SEE LANDSCAPE PLANS FOR THIS PROJECT.
- FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C07665 DATED: 5/10/21
- SOLAR ACCESS: ALL LOTS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING ALLOWED BY THIS SUBDIVISION.

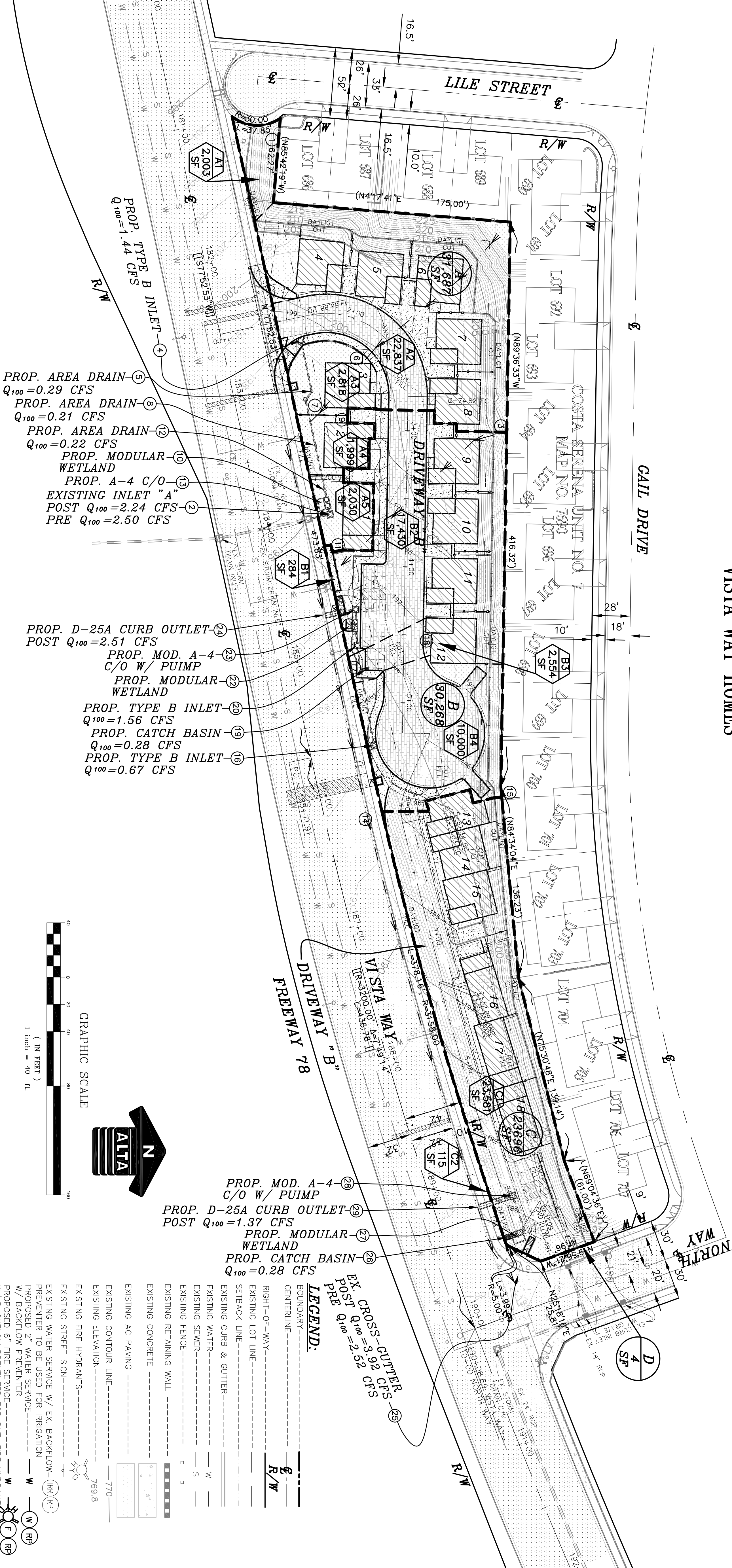
ENGINEER OF WORK

DATE: NOVEMBER 3, 2021

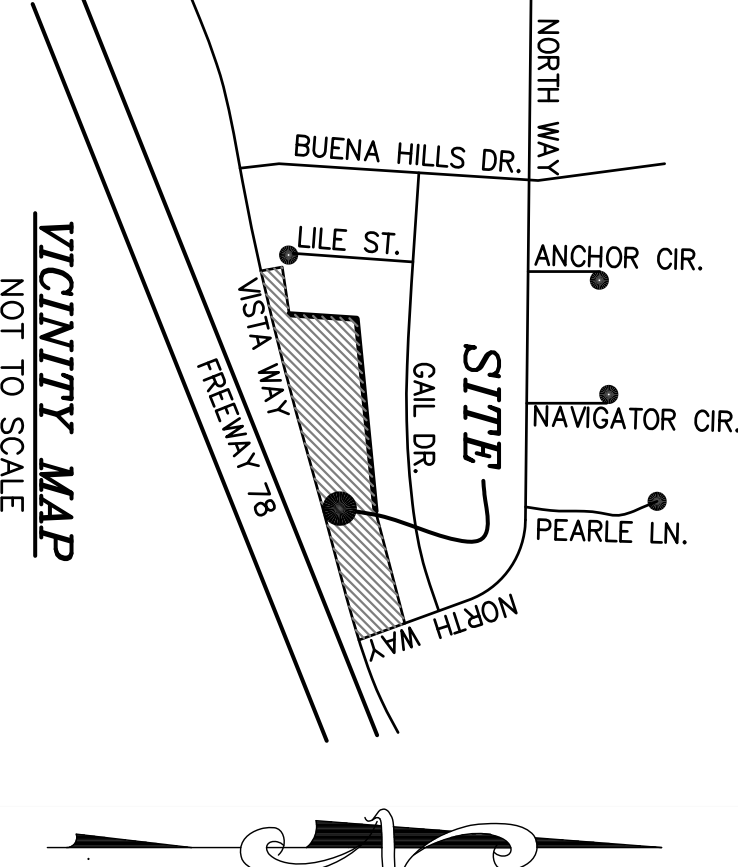
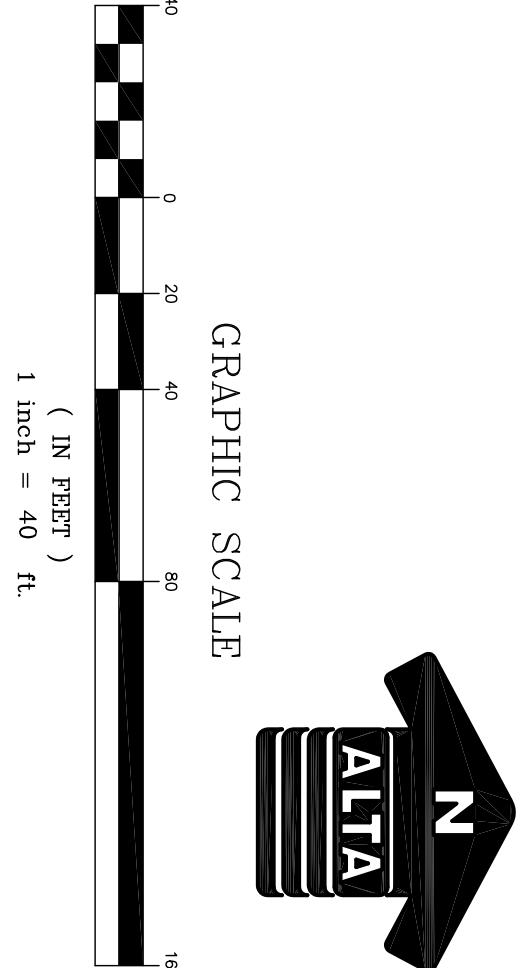


ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1288 E. Main St., Ste. 100, Escondido, CA 92025
760.940.9100 FAX (760) 740-8818
JOB NO. 486-001, DATE NOVEMBER 3, 2021

Date: 11/03/2021 SHEET 1 OF 1



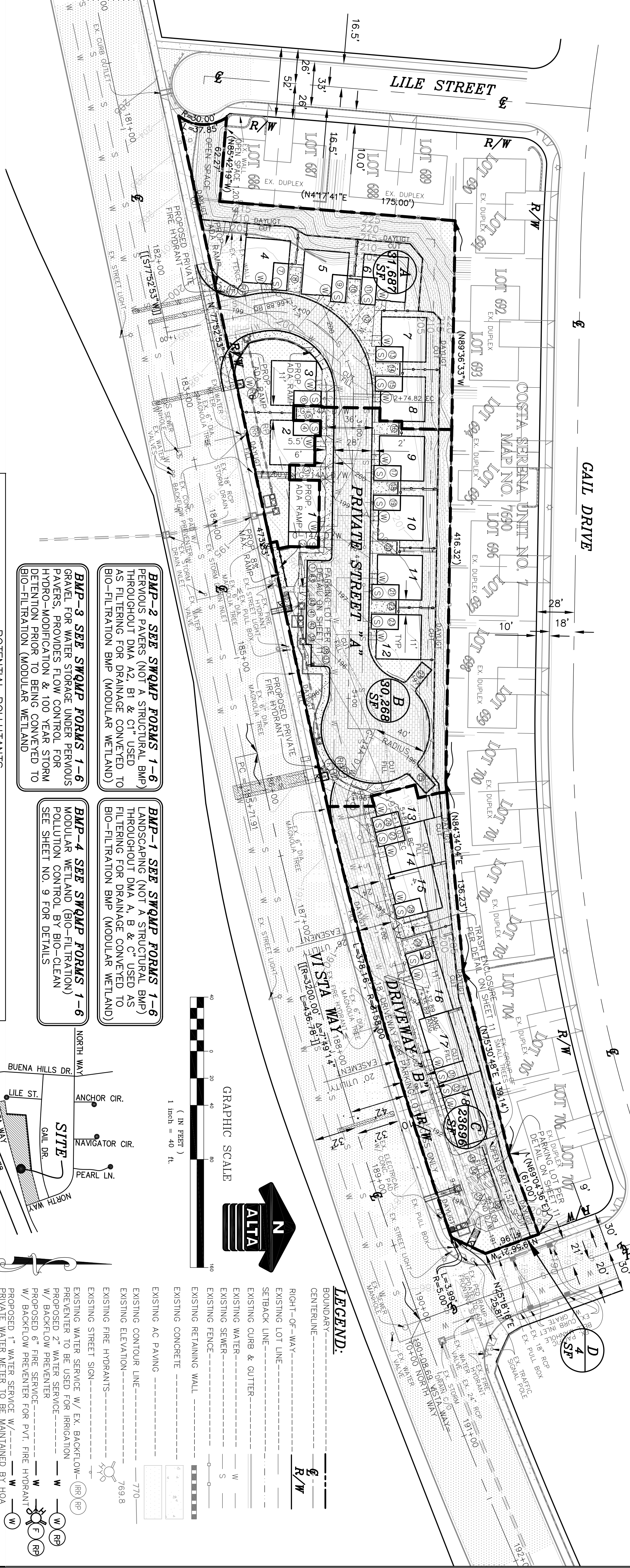
- PROP. AREA DRAIN-⑥
 $Q_{100}=0.29$ CFS
- PROP. AREA DRAIN-⑦
 $Q_{100}=0.21$ CFS
- PROP. AREA DRAIN-⑮
 $Q_{100}=0.22$ CFS
- PROP. MODULAR WETLAND
- PROP. A-4 C/O-⑬
- EXISTING INLET "A"
POST $Q_{100}=2.24$ CFS
- PRE $Q_{100}=2.50$ CFS
- PROP. D-25A CURB OUTLET-⑮
POST $Q_{100}=2.51$ CFS
- PROP. MOD. A-4-⑮
C/O W/ PUIMP
- PROP. MODULAR WETLAND
- PROP. TYPE B INLET-⑮
 $Q_{100}=1.56$ CFS
- PROP. CATCH BASIN-⑨
 $Q_{100}=0.28$ CFS
- PROP. TYPE B INLET-⑨
 $Q_{100}=0.67$ CFS



- LEGEND:
- BOUNDARY-----
- CENTERLINE-----
- RIGHT-OF-WAY-----
- EXISTING LOT LINE-----
- SETBACK LINE-----
- EXISTING CURB & GUTTER-----
- EXISTING WATER-----
- EXISTING SEWER-----
- EXISTING FENCE-----
- EXISTING RETAINING WALL-----
- EXISTING CONTOUR LINE-----
- EXISTING ELEVATION-----
- EXISTING FIRE HYDRANTS-----
- EXISTING STREET SIGN-----
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IRRIGATION-----
- PROPOSED 2" WATER SERVICE-----
- W/ BACKFLOW PREVENTER-----
- PROPOSED 6" FIRE SERVICE-----
- W/ BACKFLOW PREVENTER FOR PVT. FIRE HYDRANT-----
- PROPOSED 1" WATER SERVICE W/-----
- PRIVATE WATER METER TO BE MAINTAINED BY HOA-----
- PROPOSED PRIVATE 4" SEWER LATERAL-----
- 6" SEWER LATERAL W/ SEWER MH-----
- PARKING SPACE NUMBER-----
- PROPOSED G-2 CURB & GUTTER-----
- PROPOSED G-1 OUTER-----
- PROPOSED ROUTED CURB-----
- PROPOSED FENCE-----
- SEE LANDSCAPE PLANS FOR DETAILS-----
- PROPOSED LANDSCAPING-----
- PROPOSED AC PAVING-----
- PROPOSED CONCRETE-----
- PROPOSED PAVEMENT-----
- TRENCH RESURFACING M_3A-----
- 2:1 SLOPE-----
- DAYLIGHT LINE-----
- DIRECTION OF FLOW-----
- (PVT) PROPOSED STORM DRAIN-----
- CURB OUTLET PER D-25A-----
- (PVT) PROPRIETARY TREATMENT UNIT-----
- PER DETAIL ON SHEET NO. 10 OF TM-----
- (PVT) MODIFIED TYPE A CLEANOUT-----
- W/SUMP PUMP-----
- (PVT) 3636 OR 1818 BROOKS BOX-----
- W/ TRAFFIC GRADE PER DETAILS ON SHEET 11 OF TM-----
- (PVT) 2424 BROOKS BOX W/-----
- PARKWAY GRADE PER DETAILS ON SHEET 11 OF TM-----
- AREA DRAIN PER DETAIL ON SHEET 10 OF TM-----

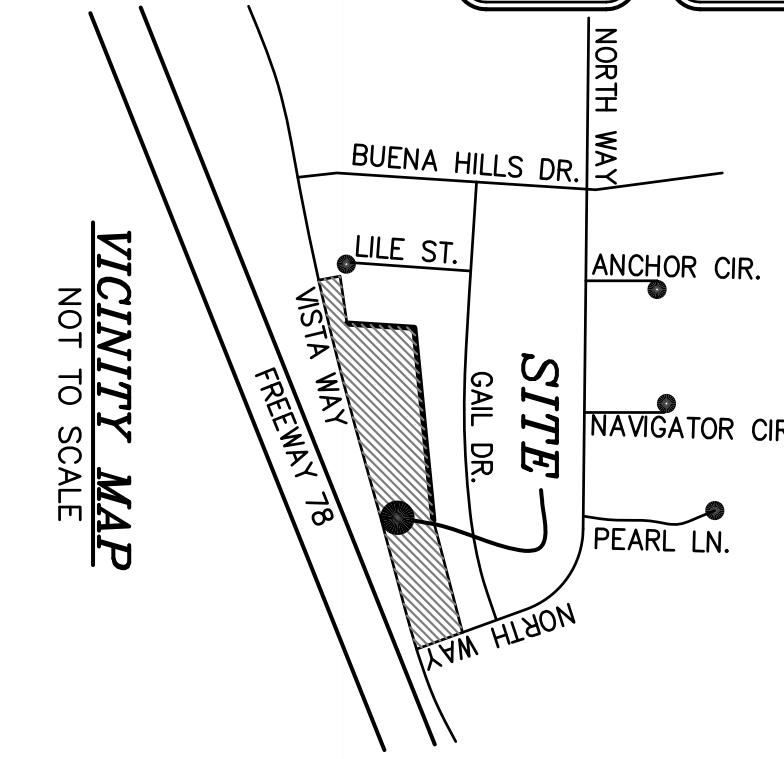
EXHIBIT C
Post-Development DMA Map

VISTA WAY HOMES
DMA PLAN



POTENTIAL POLLUTANTS			
POLLUTANT	POTENTIAL SOURCE	SOURCE CONTROLS	
SEDIMENT	DURING GRADING OPERATIONS	CONST. BMP'S PERMANENT LANDSCAPING AND HARDSCAPE	
NUTRIENTS	FERTILIZER	TO BE APPLIED ONLY AS NEEDED	
TRASH & DEBRIS	GENERAL TRASH	REMOVE & DISPOSE IN A PROPER MANOR	
OXYGEN DEMANDING SUBSTANCES	GENERAL	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS	
BACTERIA & VIRUSES	GENERAL	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS	
PESTICIDES	LANDSCAPING	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS	

VICINITY MAP
NOT TO SCALE



- REQUIRED NOTES FOR THIS EXHIBIT:**
1. THE UNDERLYING HYDROLOGIC SOIL GROUP IS "D".
 2. THE GROUNDWATER IN THIS AREA IS DEEP ENOUGH NOT TO IMPACT SITE DEVELOPMENT.
 3. THERE ARE NO NATURAL HYDROLOGIC FEATURES ON THIS SITE.
 4. THERE ARE NO CRITICAL COARSE SEDIMENT FIELD AREAS ON THE PROJECT.
 5. THE EXISTING AND PROPOSED IMPERVIOUS AREAS ARE INDICATED ON THE EXHIBIT.
 6. THE EXISTING AND PROPOSED SITE DRAINAGE NETWORK AND CONNECTIONS TO OFFSITE ARE SHOWN.
 7. THESE USING PROPOSED DRAINAGE NETWORKS AND CONNECTIONS TO OFFSITE ARE SHOWN.
 8. THE EXISTING AND PROPOSED DRAINAGE NETWORKS AND CONNECTIONS TO OFFSITE ARE SHOWN.
 9. THE PROPOSED GRADING IS SHOWN ON THIS EXHIBIT, INCLUDING PROPOSED RETAINING WALLS.
 10. THE PROPOSED IMPERVIOUS FEATURES ON THIS PROJECT ARE SHOWN ON THIS EXHIBIT.
 11. DRAINAGE MANAGEMENT AREAS ARE SHOWN AND IDENTIFIED. MANULIST AREAS ARE INDICATED.
 12. THERE ARE NO POLLUTANT SOURCE AREAS REQUIRING SOURCE CONTROLS ON THIS PROJECT.
 13. THE STRUCTURAL (PERMANENT) BMPs ARE SHOWN AND IDENTIFIED ON THIS EXHIBIT.

AREA A LOW IMPACT DEVELOPMENT DESIGN			
DMA NAME	DMA POST PROJECT AREA SF	% OF A2 DRAINAGE RUNOFF FACTOR	% OF A2 SOIL TYPE
ASPHALT	0	0%	0%
BUILDINGS	9,053	29%	1.0
CONCRETE	2,868	9%	1.0
LANDSCAPING	15,558	49%	0.1
WALLS	374	1%	1.0
PAVERS	3,802	12%	0.2
TREATMENT	32	0%	0.1
TOTAL DMA AREA	31,687	100%	3
TOTAL DMA AREA			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL
TOTAL DMA AREA			14,614

AREA B LOW IMPACT DEVELOPMENT DESIGN			
DMA NAME	DMA POST PROJECT AREA SF	% OF B1 DRAINAGE RUNOFF FACTOR	% OF B1 SOIL TYPE
ASPHALT	0	0%	0%
BUILDINGS	4,544	15%	1.0
CONCRETE	4,866	10%	1.0
LANDSCAPING	8,143	27%	0.1
WALLS	344	1%	1.0
PAVERS	12,334	41%	0.2
TREATMENT	32	0%	0.1
TOTAL DMA AREA	30,268	100%	3
TOTAL DMA AREA			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL
TOTAL DMA AREA			13,038

AREA C LOW IMPACT DEVELOPMENT DESIGN			
DMA NAME	DMA POST PROJECT AREA SF	% OF A1 DRAINAGE RUNOFF FACTOR	% OF A1 SOIL TYPE
ASPHALT	0	0%	0%
BUILDINGS	6,620	28%	1.0
CONCRETE	2,332	10%	1.0
LANDSCAPING	6,841	29%	0.1
WALLS	537	2%	1.0
PAVERS	7,222	30%	0.2
TREATMENT	32	0%	0.1
TOTAL DMA AREA	23,696	100%	3
TOTAL DMA AREA			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL
TOTAL DMA AREA			11,753

AREA D LOW IMPACT DEVELOPMENT DESIGN			
DMA NAME	DMA POST PROJECT AREA SF	% OF A1 DRAINAGE RUNOFF FACTOR	% OF A1 SOIL TYPE
ASPHALT	0	0%	0%
BUILDINGS	0	0%	0%
CONCRETE	0	0%	0%
LANDSCAPING	4	100%	0
WALLS	0	0%	0
PAVERS	0	0%	0
TREATMENT	0	0%	0
TOTAL DMA AREA	4	100%	0
TOTAL DMA AREA			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL
TOTAL DMA AREA			0

General Notes

- THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT
- EXISTING GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED PUBLIC STREET DEDICATION: 0 AC
- PROPOSED PRIVATE STREET AREA: 0 AC
- TOTAL NUMBER OF EXISTING LOTS: 1
- TOTAL NUMBER OF PROPOSED LOTS: 1
- TOTAL NUMBER OF PROPOSED UNITS: 18
- 7 UNITS 1, 13-16 ARE 1,069 SF 11 UNITS 2-12 ARE 1,069 SF
- PROPOSED PARKING:
- 1 ATTACHED GARAGE SPACE PER UNIT=18
- UNATTACHED SATURATED PARKING SPACES (16 X9)=19
- UNATTACHED UNSATURATED PARKING SPACES (16 X9)=2
- TOTAL PARKING SPACES PER UNIT=23
- ASSASSOR'S PARCEL NUMBER: 165-493-42
10. SITE ADDRESS: 3710 VISTA WAY 92056
11. PORTIONS OF LOTS 684, 686, 706 THROUGH 720 LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917, 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949, 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999, 1001, 1003, 1005, 1007, 1009, 1011, 1013, 1015, 1017, 1019, 1021, 1023, 1025, 1027, 1029, 1031, 1033, 1035, 1037, 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3363, 3365, 3367, 3369, 3371, 3373, 3375, 3377, 3379, 3381, 3383, 3385, 3387, 3389, 3391, 3393, 3395, 3397, 3399, 3401, 3403, 3405, 3407, 3409, 3411, 3413, 3415, 3417, 3419, 3421, 3423, 3425, 3427, 3429, 3431, 3433, 3435, 3437, 3439, 3441, 3443, 3445, 3447, 3449, 3451, 3453, 3455, 3457, 3459, 3461, 3463, 3465, 3467, 3469, 3471, 3473, 3475, 3477, 3479, 3481, 3483, 3485, 3487, 3489, 3491, 3493, 3495, 3497, 3499, 3501, 3503, 3505, 3507, 3509, 3511, 3513, 3515, 3517, 3519, 3521, 3523, 3525, 3527, 3529, 3531, 3533, 3535, 3537, 3539, 3541, 3543, 3545, 3547, 3549, 3551, 3553, 3555, 3557, 3559, 3561, 3563, 3565, 3567, 3569, 3571, 3573, 3575, 3577, 3579, 3581, 3583, 3585, 3587, 3589, 3591, 3593, 3595, 3597, 3599, 3601, 3603, 3605, 3607, 3609, 3611, 3613, 3615, 3617, 3619, 3621, 3623, 3625, 3627, 3629, 3631, 3633, 3635, 3637, 3639, 3641, 3643, 3645, 3647, 3649, 3651, 3653, 3655, 3657, 3659, 3661, 3663, 3665, 3667, 3669, 3671, 3673, 3675, 3677, 3679, 3681, 3683, 3685, 3687, 3689, 3691, 3693, 3695, 3697, 3699, 3701, 3703, 3705, 3707, 3709, 3711, 3713, 3715, 3717, 3719, 3721, 3723, 3725, 3727, 3729, 3731, 3733, 3735, 3737, 3739, 3741, 3743, 3745, 3747, 3749, 3751, 3753, 375

ATTACHMENT 1
Scope of Work

ALTA CONSULTANTS

PLANNING ♦ ENGINEERING ♦ SURVEYING

1283 E. Main Street, Suite 109, El Cajon, CA. 92021 Tel. (858) 581-6101 Fax. (619) 749-8806

State License R.C.E. 38606 and L.S. 5335

November 3, 2021
APN: 165-493-47-00

Job No. 499-01

Letter of Description & Justification for 3710 Vista Way **Applications for TM21-00002 And D21-00005**

This project is a common interest development for 12 detached one-story units of senior housing & (2) two Triplexes for a total of 18 units with (1) one attached garage for each unit, (1) one assigned parking space for each unit, for (2) two parking spaces per unit. In addition, this project proposes 7 additional guest parking spaces (2) of which are van accessible ADA spaces, (2) are compact spaces and (3) are standard parking spaces. The total parking spaces proposed for this site is 43 for a parking density 2.43 spaces per unit. No off-site parking is included in this parking count. This development requires 300 SF of open space per unit of which 50% must be common usable open space. The common usable open space required for this project is 2,700 SF. This project proposes 2,724 SF of common usable open space. CCR's will be prepared for this project prior to occupancy. This project includes affordable housing. The project address is 3710 Vista Way adjacent to 78 Freeway. The project is located along the north side of Vista Way, at the northwest corner of Vista Way and North Way. The 78 freeway runs parallel with Vista Way's southerly right-of-way. Access to the site is from Vista Way. The project is on 1.97-acre lot with no existing visible improvements other than some retaining walls. This site was previously part of a residential development with homes and streets. These improvements have been removed from the site. There is an existing manufactured slope along the north and west side of the project with several large existing trees. The remainder of the site is relatively flat. The site slopes west to east towards the southeast corner of the site (the northwest corner of Vista Way and North Way) where there is an existing cross-gutter that conveys runoff easterly across North Way. Both Vista Way and North Way are fully improved streets no new street dedications or improvements are proposed by this project.

This project will comply with the current State of California MS-4 permit. This project has minimalist areas adjacent to the street right-of-ways that will sheet flow into the existing curb and gutter. The roof gutters will discharge into landscaped areas then sheet flow into a paver private street and driveway that will collect the storm runoff into a gravel layer under pavers for flow control hydro-modification. The storm runoff will be routed to modular wetland for pollution control. There will be storm water flow and pollution control compliance for this project.

The only improvements proposed within the public right-of-way are utility connections, Private Street "A" cross-gutter and curb returns and private storm drain connections to the existing public storm drain facilities. No offsite drainage flows onto the site, except at the west side of the project where a small amount of slope within the public right of way flows onto the site. There is one

existing water service located on Vista Way this project proposes that this existing water service be reserved for irrigation purposes. This project proposes (2) new water services on Vista Way. Each service to supply water to half the proposed units (9 units each). The units will be individually metered by on-site private water meters. There are (2) two proposed private sewer mains which connect to the existing sewer in Vista Way with proposed manholes. Each service to supply sewer to half the proposed units (9 units each). Electrical, phone, cable and gas connections are proposed to be undergrounded and site improvements will be designed by others at a later date.

Proposed site access is from Private Street "A" from Vista Way. This driveway design directly provides access to the 12 single family units and has a 40 foot radius cul-de-sac at its east end to provide an emergency vehicle turn-a-round. At the east end of the cul-de-sac proposed Private driveway "B" provides access to the two triplexs (units 13-18) trash enclosure and a parking lot.

This development requires several deviations from standards including the following:

- 1) 2-car garages: Article 31 of the zoning Ordinance requires that all single-family homes have 2-car garages. This site is a common interest development. Although 12 of the units are proposed as detached units, they are a part of a larger condominium type development. This site has a covenant that restricts development to single story construction. Also, this site with its shape and terrain is restricted in the type of development that is possible. The single-family units are proposed to be separated by 11' minimum. One detached parking space will be located within the space between units. These detached spaces will be assigned to the adjacent units. All units will have (1) one garage parking space and (1) one detached parking space for a total of (2) two parking spaces.
- 2) Retaining Walls: the zoning Ordinance restricts the height of walls to 6 feet. A C-4 retaining wall maximum height of 5.33 feet is proposed along the street right of way of Vista Way and North Way. An up to 15-foot high retaining wall is proposed behind the proposed units on the west and north side of the site. These walls are needed to provide rear yard space.
- 3) Setbacks: 1050(AA), 1050(DD) and 1050(L). The setbacks required for this site are 20' from Vista Way, 15' rear and 15' from North Way; the garages from the private street setback is 20'. Several of the units encroach into the setbacks. The reason for this is the shape of the lot. The site is left over from the construction of Freeway 78 and Vista Way. The lot is long and shallow stretching along Vista Way. Access to Vista Way is limited due to the traffic and the separation needed from North Way.
- 4) Private Road: Engineering Design manual Section 3.4, B1 requires that the minimum centerline radius be 100' and the minimum vertical curve length be 100'. Due to the previously described site restrictions this development proposes a centerline radius of 60' for Private Street "a" and a minimum vertical curve length of 50'.
- 5) Rear Yard: 1050(T) requires a minimum rear yard of 15'. Due to previously described site restrictions this development is requesting that this requirement be waived.

This site's design provides several benefits to the community. This is an infill project that removes a vacant site from the community eliminating the adverse possibilities that can happen on vacant sites such as trash and vagrancy. Detached one-story independent single-family senior housing. Affordable senior housing that is not in a multi-unit building. The proposed units will be sized at approximately 1,100 SF providing an easily maintained compact unit with individual rear yards.

In addition once these units are occupied there will be an increase in the City of Oceanside's tax base along with the positive impact for local Oceanside businesses with the residences that this project will provide

For the developer the benefits include the economic return for selling the units once the project is completed and the knowledge that this development greatly benefits the Oceanside community.

ATTACHMENT 2
TM Plans

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT

- EXISTING GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED PUBLIC STREET DEDICATION: 0 AC
- PROPOSED PRIVATE STREET AREA: 0 AC
- TOTAL NUMBER OF EXISTING LOTS: 1
- TOTAL NUMBER OF PROPOSED LOTS: 1
- TOTAL NUMBER OF PROPOSED UNITS: 18
- 7 UNITS 1, 13-18 ARE 1,069 SF, 11 UNITS 2-12 ARE 1,069 SF
- PROPOSED PARKING:
 - 1 ATTACHED GARAGE SPACE PER UNIT=18
 - UNATTACHED STANDARD PARKING SPACES (18'x30')=19
 - UNATTACHED COMPACT PARKING SPACES (16'x8')=2
 - VAN ACCESSIBLE HANDICAPPED PARKING SPACES=2
 - TOTAL PARKING SPACES PROPOSED=43
 - PARKING SPACES PER UNIT=2.39
- ASSESSOR'S PARCEL NUMBER: 165-493-47
- SITE ADDRESS: 3710 VISTA WAY OCEANSIDE, CA 92056
- PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 726 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7 ARE THE CITY OF OCEANSIDE TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
- STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
- BENCH MARK DESCRIPTION: CL. MONUMENT 3.5" BRASS DISC STAMPED LS-4506
- LOCATION: INT VISTA WAY AND BUENA HILLS RECORD: CITY OF OCEANSIDE ELEVATION: 206.80 DATUM: NAV 88 CITY OF OCEANSIDE #1020
- SOURCE OF TOPOGRAPHY: ALTA CONSULTANTS SURVEYED ON: 02/20/2020
- TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
- MAXIMUM SLOPE GRADIENT: 2:1
- CUTSITE GRADING FOR THIS PROJECT: (6% SHRINKAGE FOR CUT) CUT= 3.00D C.Y. FILL= 4.00D C.Y. IMPROVE= 1.00D C.Y. NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE, NO ALLOWANCE MADE FOR SHRINKAGE OR BUILDING OF MATERIAL.
- GRADED AREA: 1.83 AC=82% OF SITE
- FEPA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100- YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06072C0786G

DMA LEGEND:

DMA AREA ----- B

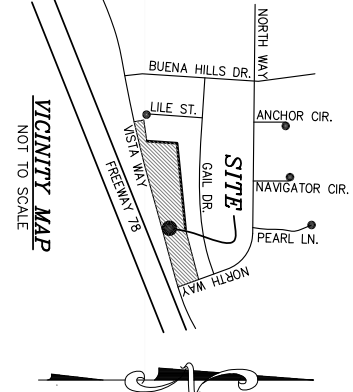
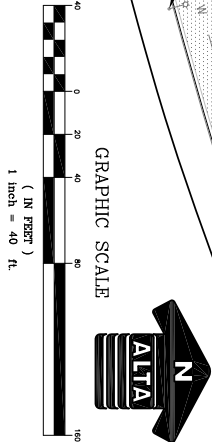
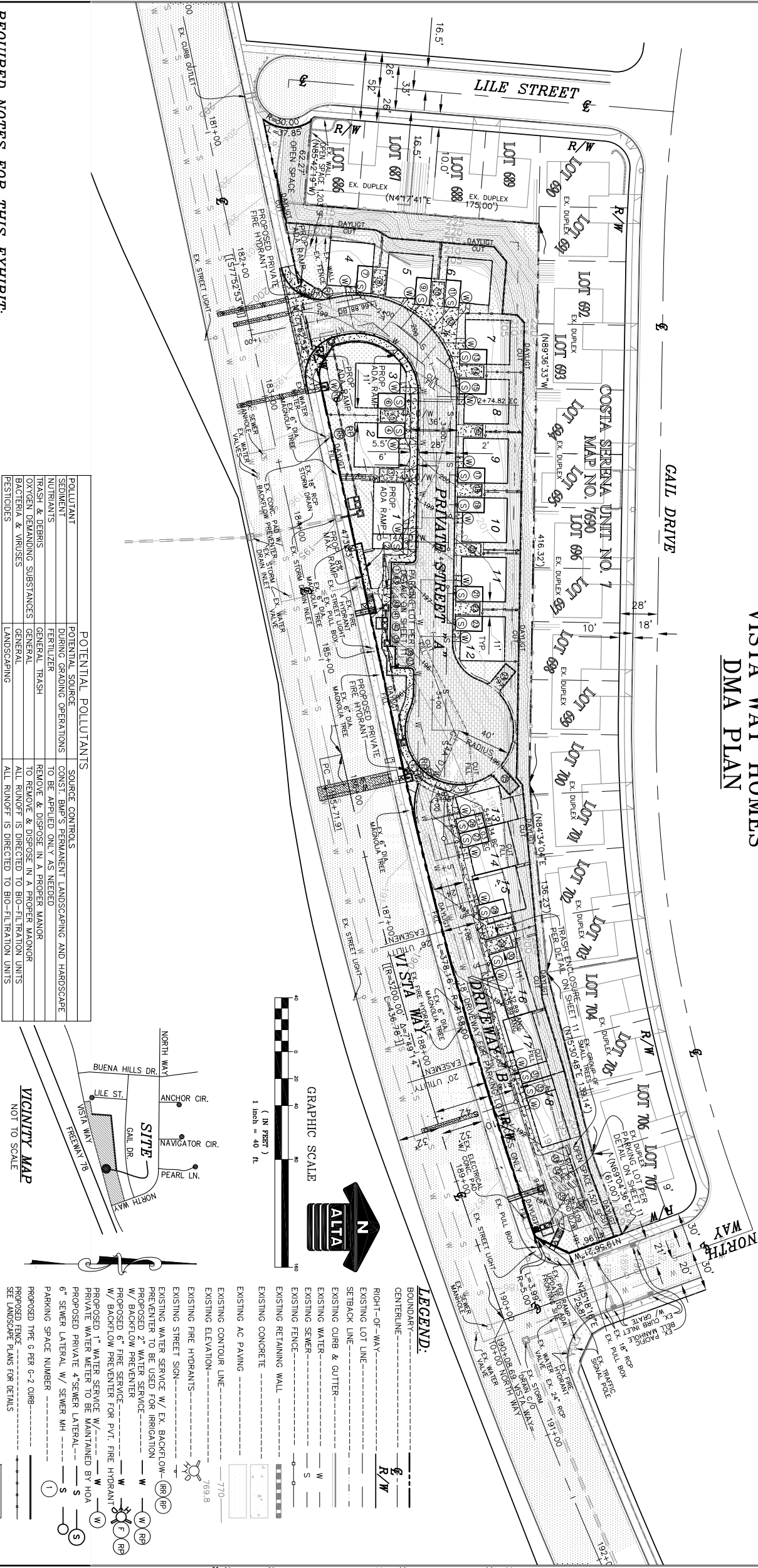
WATERSHED DESIGNATION ----- 500

WATERSHED AREA ----- SP

HYDROLOGIC SOIL GROUP "D"

DEPTH TO GROUNDWATER > 12

VISTA WAY HOMES
DMA PLAN



POTENTIAL POLLUTANTS	
POLLUTANT	POTENTIAL SOURCE
SEDIMENT	CONSTR. BMP'S PERMANENT LANDSCAPING AND HARDSCAPE
NUTRIENTS	DURING GRADING OPERATIONS
TRASH & DEBRIS	FERTILIZER
OXYGEN DEMANDING SUBSTANCES	GENERAL TRASH
GENERAL	GENERAL
BACTERIA & VIRUSES	GENERAL
PESTICIDES	LANDSCAPING

REQUIRED NOTES FOR THIS EXHIBIT.

- THE UNDERLYING HYDROLOGIC SOIL GROUP IS "D".
- THERE ARE NO NATURAL HYDROLOGIC FEATURES ON THIS SITE.
- THERE ARE NO CRITICAL COURSE SEDIMENT YIELD AREAS ON THE PROJECT.
- THERE ARE NO TOPOGRAPHY AND PROPOSED IMPEROVUS AREAS ARE INDICATED ON THE EXHIBIT.
- THE EXISTING AND PROPOSED SITE DRAINAGE NETWORK AND CONNECTIONS TO OFFSITE ARE SHOWN.
- THERE IS NO PROPOSED DEMOLITION ON THIS SITE, OTHER THAN CLEARING & GRUBBING REMOVAL OF EXISTING TREES AND REMOVAL OF EXISTING PUBLIC IMPROVEMENTS AS NEEDED TO PROVIDE ACCESS AND UTILITIES FOR THIS SITE.
- THE PROPOSED GRADING IS SHOWN ON THIS EXHIBIT, INCLUDING PROPOSED RETAINING WALLS.
- THE PROPOSED IMPEROVUS FEATURES ON THIS PROJECT ARE SHOWN ON THIS EXHIBIT.
- THE DESIGN FEATURES AND SURFACE TREATMENTS USED TO MAINTAIN IMPEROVUSNESS ARE SHOWN ON THIS EXHIBIT.
- DRAINAGE MANAGEMENT AREAS ARE SHOWN AND IDENTIFIED. MINIMALIST AREAS ARE INDICATED.
- THERE ARE NO POLLUTANT SOURCE AREAS REQUIRING SOURCE CONTROLS ON THIS PROJECT.
- THE STRUCTURAL (PERMANENT) BMPs ARE SHOWN AND IDENTIFIED ON THIS EXHIBIT.

AREA A LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF A2	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A2 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	9,053	29%	1.0	9,053	29%
CONCRETE	2,868	9%	1.0	2,868	9%
LANDSCAPING	15,558	49%	0.1	1,556	5%
WALLS	374	1%	1.0	374	1%
PAVERS	3,802	12%	0.2	760	2%
TREATMENT	32	0%	0.1	3	0%
TOTAL DMA AREA	31,687	100%	SE SWAMP FOR SITE SPECIFIC FACTOR	3	0%
TOTAL DMA AREA			POLLUTION CONTROL & FLOW CONTROL		
				14,514	0.04
				585	MINIMUM AREA

AREA B LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF B1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF B1 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	4,544	15%	1.0	4,544	15%
CONCRETE	4,866	10%	1.0	4,866	10%
LANDSCAPING	8,143	27%	0.1	814	3%
WALLS	344	1%	1.0	344	1%
PAVERS	12,334	41%	0.2	2,468	8%
TREATMENT	32	0%	0.1	3	0%
TOTAL DMA AREA	30,268	100%	SE SWAMP FOR SITE SPECIFIC FACTOR	3	0%
TOTAL DMA AREA			POLLUTION CONTROL & FLOW CONTROL		
				13,038	0.04
				522	MINIMUM AREA

AREA C LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF A1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A1 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	6,620	28%	1.0	6,620	28%
CONCRETE	2,332	10%	1.0	2,444	10%
LANDSCAPING	6,841	29%	0.1	684	3%
WALLS	537	2%	1.0	537	2%
PAVERS	7,222	30%	0.2	1,221	6%
TREATMENT	32	0%	0.1	3	0%
TOTAL DMA AREA	23,596	100%	SE SWAMP FOR SITE SPECIFIC FACTOR	3	0%
TOTAL DMA AREA			POLLUTION CONTROL & FLOW CONTROL		
				11,753	0.04
				469	MINIMUM AREA

AREA D LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF A1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A1 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	0	0%	1.0	0	0%
CONCRETE	0	0%	1.0	0	0%
LANDSCAPING	4	100%	0.1	0	0%
WALLS	0	0%	1.0	0	0%
PAVERS	0	0%	0.2	0	0%
TREATMENT	0	0%	0.1	0	0%
TOTAL DMA AREA	4	100%	SE SWAMP FOR SITE SPECIFIC FACTOR	0	0%
TOTAL DMA AREA			POLLUTION CONTROL & FLOW CONTROL		
				0	0.04
				0	MINIMUM AREA

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: OCTOBER 29, 2021

ALTA CONSULTANTS

PLANNING ENGINEERING SURVEYING

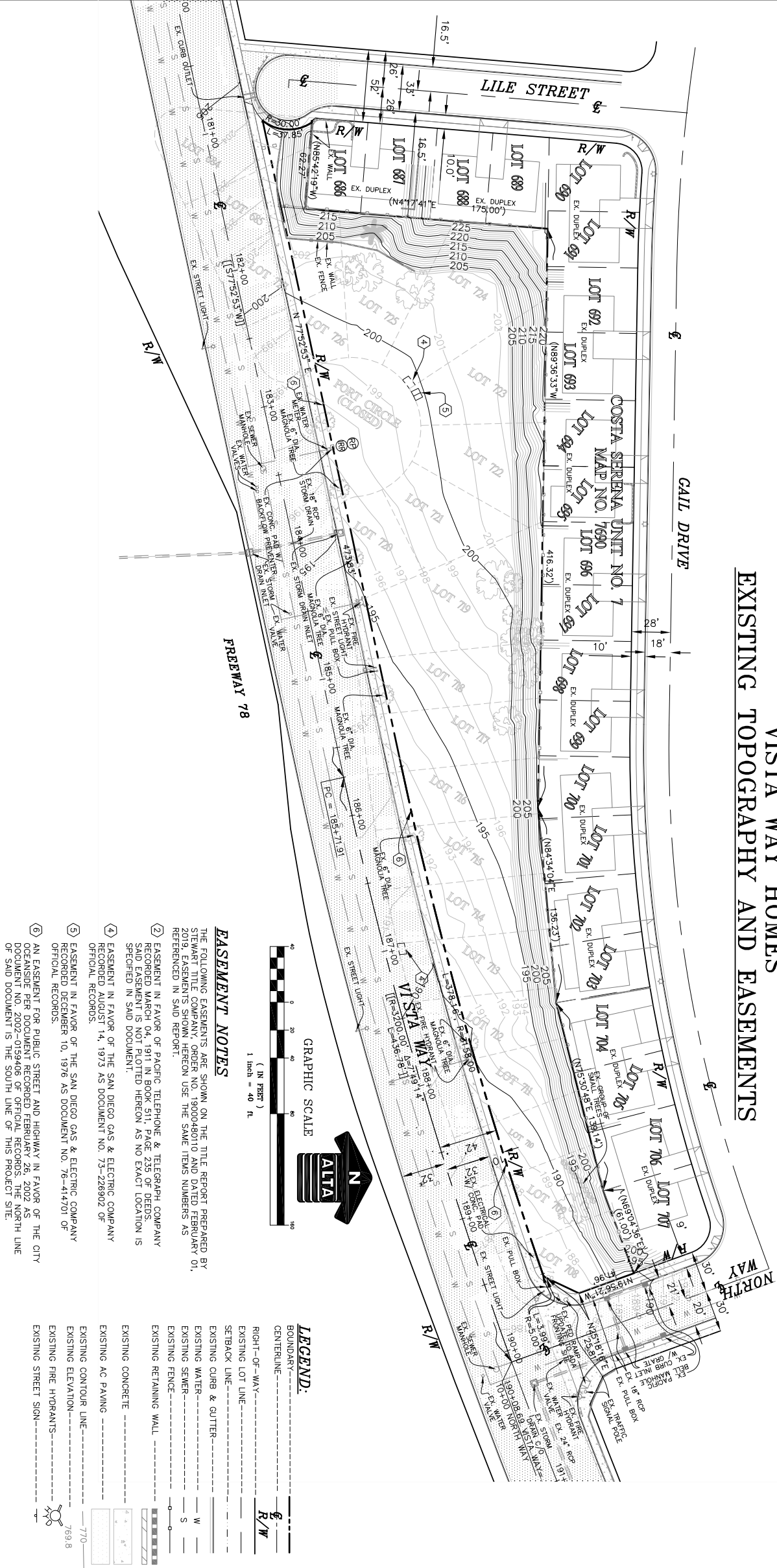
1000 S. Main, Job No. 1468-01, DATE OCTOBER 29, 2021

Date: 10/29/2021 SHEET 14 OF 14

General Notes

- THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS PART OF THIS PROJECT.
- EXISTING GROSS SUBDIVISION AREA: 1.97 AC
 - PROPOSED GROSS SUBDIVISION AREA: 1.97 AC
 - ASSESSOR'S PARCEL NUMBER: 165-493-47
 - SITE ADDRESS: 3710 VISTA WAY OCEANSIDE, CA 92056
 - PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
 - BENCH MARK DESCRIPTION: CL. MONUMENT 3.5" BRASS DISC STAMPED LS-4506
 - LOCATION: INT VISTA WAY AND BUENA HILLS RECORD: CITY OF OCEANSIDE ELEVATION: 206.80 DATUM: NAV 88 CITY OF OCEANSIDE #1020
 - SOURCE OF TOPOGRAPHY: ALTA CONSULTANTS SURVEYED ON: 02/20/2020
 - TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
 - FRIA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 196075C070692 DATED: 5/16/12

VISTA WAY HOMES
EXISTING TOPOGRAPHY AND EASEMENTS



ENGINEER OF WORK

Bartholome J. Pastor
BARTHOLOME J. PASTOR, RCE 38606
DATED: NOVEMBER 3, 2021



General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS PART OF THIS PROJECT

1. EXISTING GROSS SUBDIVISION AREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AREA: 1.97 AC
3. TOTAL NUMBER OF EXISTING LOTS: 1
4. TOTAL NUMBER OF PROPOSED LOTS: 1
5. TOTAL NUMBER OF PROPOSED UNITS: 18
6. TOTAL NUMBER OF PROPOSED UNITS: 18
7. TOTAL NUMBER OF PROPOSED UNITS: 18
8. PROPOSED PARKING:
1. ATTACHED GARAGE SPACE PER UNIT = 18
UNATTACHED STANDARD PARKING SPACES (14 x 20) = 21
UNATTACHED COMPACT PARKING SPACES (14 x 8) = 2
VAN ACCESSIBLE HANDICAPPED PARKING SPACES = 2
TOTAL PARKING SPACES = 21 + 2 + 2 = 25
PARKING SPACES PER UNIT = 25/18
PARKING SPACES PER UNIT = 2.59
9. ASSESSOR'S PARCEL NUMBER: 166-493-47
10. SITE ADDRESS: 3710 VISTA WAY
COSTA MESA, CA 92626

FIRE NOTES:

17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
27. FOR PROPOSED FENCING SEE LANDSCAPE PLANS FOR THIS PROJECT

WATER AND SEWER NOTES:

1. THE WEIR AND SEWER FOR THIS SITE IS PRIVATE AND WILL BE MAINTAINED BY THE HOA.
2. PRIVATE WATER METERS WILL BE INSTALLED FOR EACH UNIT.
3. TWO 2" WATER METERS & SERVICES ARE PROPOSED FOR THIS PROJECT AND BILLED TO THE HOA. UNITS 1-10 TO BE SERVED BY THE WESTSIDE WATER METER, UNITS 11-18 TO BE SERVED BY THE EASTSIDE WATER METER.
4. TWO 6" SEWER SERVICES ARE PROPOSED FOR THIS PROJECT. UNITS 1-10 TO BE SERVED BY THE WESTSIDE SEWER SERVICE, UNITS 11-16 TO BE SERVED BY THE EASTSIDE SEWER SERVICE.
5. EACH UNIT WILL HAVE A 4" SEWER LATERAL WITH CLEANOUT THAT CONNECTS TO THE 6" SEWER SERVICE.

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

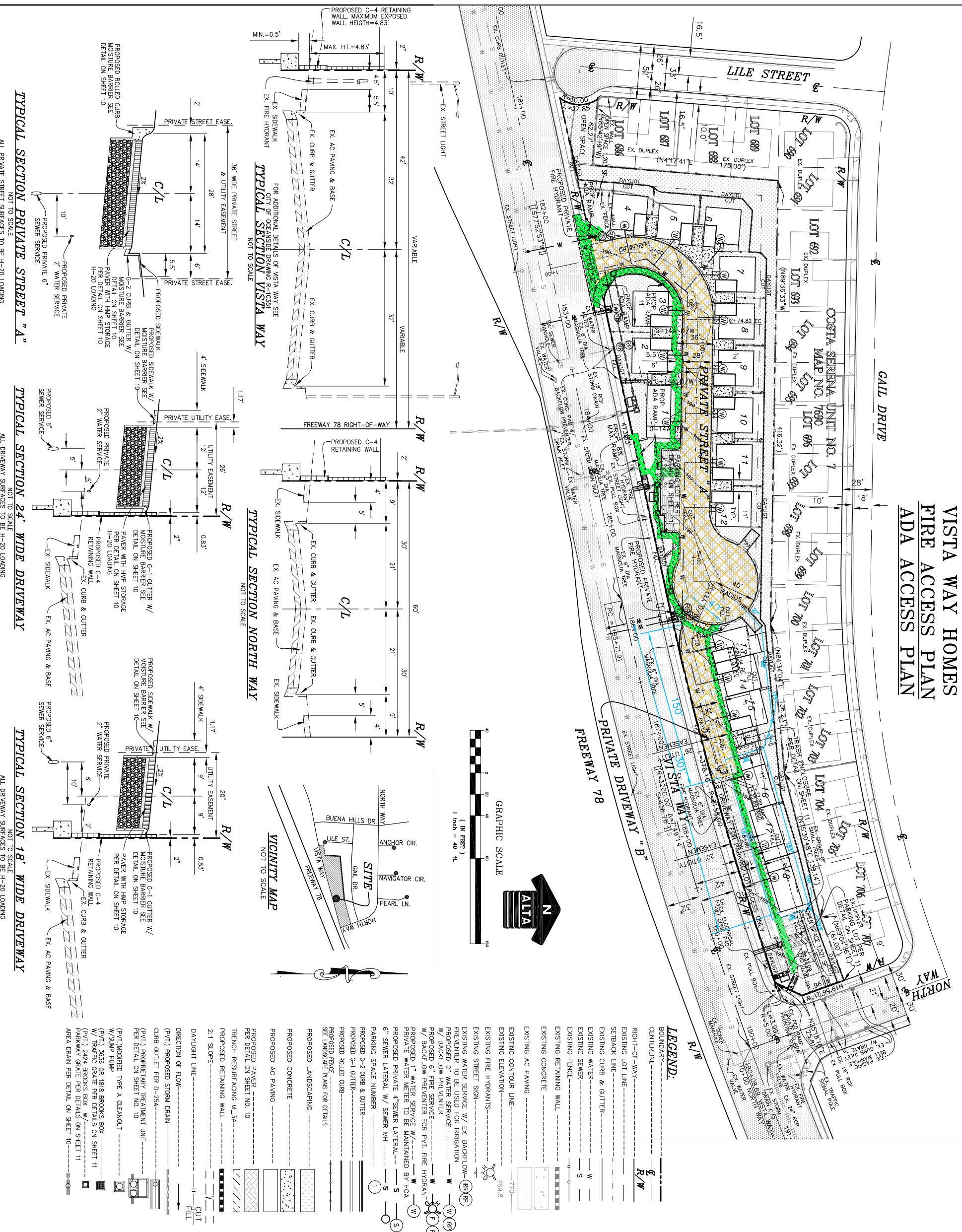
DATED: _____ NOVEMBER 3 _____, 2022.

**ALTA CONSULTANTS**

PLANNING ENGINEERING SURVEYING
1293 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8618 Fax (619) 749-8618
JOB NO. 489-01, DATE NOVEMBER 3, 2021

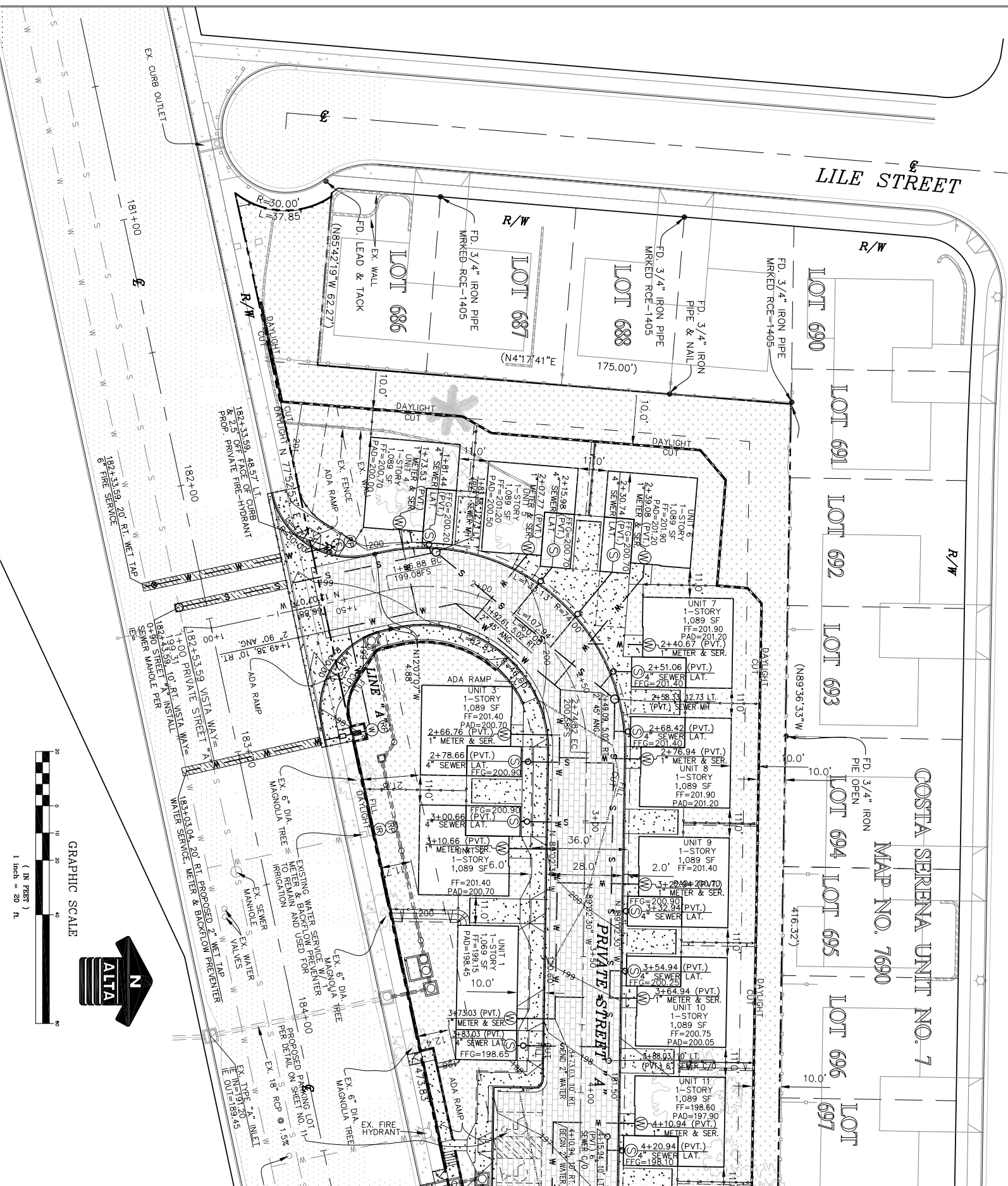
Date: 11/03/2021

SHEET 3 OF 14



CONCEPT SEWER & WATER PLAN

GAIL DRIVE



MATCH LINE SEE SHEET NO. 5

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCRs WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED

- ## General Notes
- THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SEMI-DETACHED HOUSING. CCRs WILL BE PREPARED FOR THIS PROJECT TO DEFINE MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS PART OF THIS PROJECT
1. EXISTING GROSS SUBDIVISION AREA: 1.87 AC
 2. PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
 3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
 4. PROPOSED PRIVATE STREET AREA: 0 AC
 5. TOTAL NUMBER OF EXISTING LOTS: 1
 6. TOTAL NUMBER OF PROPOSED LOTS: 1
 7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 18
7 UNITS 1, 13-18 ARE 1,069 SF; 11 UNITS 2-12 ARE 1,069 SF
 8. PROPOSED PARKING:
 - 1. ATTACHED GARAGE SPACE PER UNIT: 18
 - 2. UNATTACHED STALLED PARKING SPACES (18'x24')=19
 - 3. UNATTACHED COMPACT PARKING SPACES (16'x8')=2
 - 4. VAN ACCESSIBLE HANDICAPPED PARKING SPACES=2
 - 5. TOTAL PARKING SPACES PROPOSED=43
 - 6. PARKING SPACES PER UNIT=2.39
 9. ASSESSOR'S PARCEL NUMBER: 165-493-47
 10. SITE ADDRESS: 3710 VISTA WAY, CA 92066
 11. PORTIONS OF LOTS 664, 665, 708 THROUGH 720, LOTS 721 THROUGH 726 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE

BOUNDARY-----
CENTERLINE-----
RIGHT-OF-WAY-----
 $\frac{R}{W}$

- EXISTING LOT LINE-----
SEBACK LINE-----
EXISTING CURB & GUTTER-----
EXISTING WATER-----
EXISTING FENCE-----
EXISTING RETAINING WALL-----
EXISTING CONCRETE-----
EXISTING AC PAVING-----
EXISTING CONTOUR LINE-----
EXISTING ELEVATION-----
EXISTING FIRE HYDRANTS-----
EXISTING STREET SIGN-----
EXISTING WATER SERVICE W/ EX BACKFLOW PREVENTER TO BE USED FOR IRRIGATION-----
PROPOSED 2" WATER SERVICE-----
PROPOSED 6" FIRE SERVICE-----
W/ BACKFLOW PREVENTER FOR PVT. FIRE HYDRANT-----
PROPOSED 1" WATER SERVICE W/-----
PRIVATE WATER METER TO BE MAINTAINED BY HOA-----
PROPOSED PRIVATE 4" SEWER LATERAL-----
6" SEWER LATERAL W/ SEWER MH-----
PARKING SPACE NUMBER-----
PROPOSED G-2 CURB & GUTTER-----
PROPOSED G-1 GUTTER-----
PROPOSED ROLLED CURB-----
PROPOSED LANDSCAPING PLANS FOR DETAILS-----
PROPOSED FENCE-----
PROPOSED CONCRETE-----
PROPOSED AC PAVING-----
PROPOSED PAVER-----
PER DETAIL ON SHEET NO. 10-----
TRENCH RESURFACING W. 3A-----
PROPOSED RETAINING WALL-----
DAYLIGHT LINE-----
DIRECTION OF FLOW-----
CURB OUTLET PER D-25-----
PROPOSED STORM DRAIN-----
PROPRIETARY TREATMENT UNIT-----
PER DETAIL ON SHEET NO. 10-----
W/SLUMP PUMP-----
W/SLUMP PUMP-----
W/ TRAFFIC GRATE PER DETAILS ON SHEET 11-----
W/ TRAFFIC GRATE PER DETAILS ON SHEET 11-----
AREA DRAIN PER DETAIL ON SHEET 10-----
15. PROPOSED ZONING: RM-A
16. PROPOSED DENSITY: 10.15 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK DESCRIPTION: CL. MONUMENT 3.5" BRASS DISC LOCATION: INT. VISTA WAY AND BUENA HILLS RECORD: CITY OF OCEANSIDE ELEVATION: 206.80 DATUM: NAV 86 CITY OF OCEANSIDE #1020
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
20. TOPOGRAPHIC CONTOUR INTERVAL: 1. FOOT
21. MAXIMUM SLOPE GRADIENT: 2:1
22. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22.58% SF OR 28%
23. AREA/PERCENT OF SITE IN OPEN SPACE: 0
24. AREA/PERCENT OF SITE IN LANDSCAPING: 37.99% OR 44%
27. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G DATED: 5/16/12
- ENGINEER OF WORK
BARTOLOME J. PASTOR, RCE 38606
NOVEMBER 3, 2021
- REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. 38606
Exp. 9/12/2021
BARTOLOME J. PASTOR, RCE 38606

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606
DATED: NOVEMBER 3, 2011



ALTA CONSULTANTS

1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8618 Fax (619) 740-8618
JOB NO. 499-01, DATE NOVEMBER 3, 2021

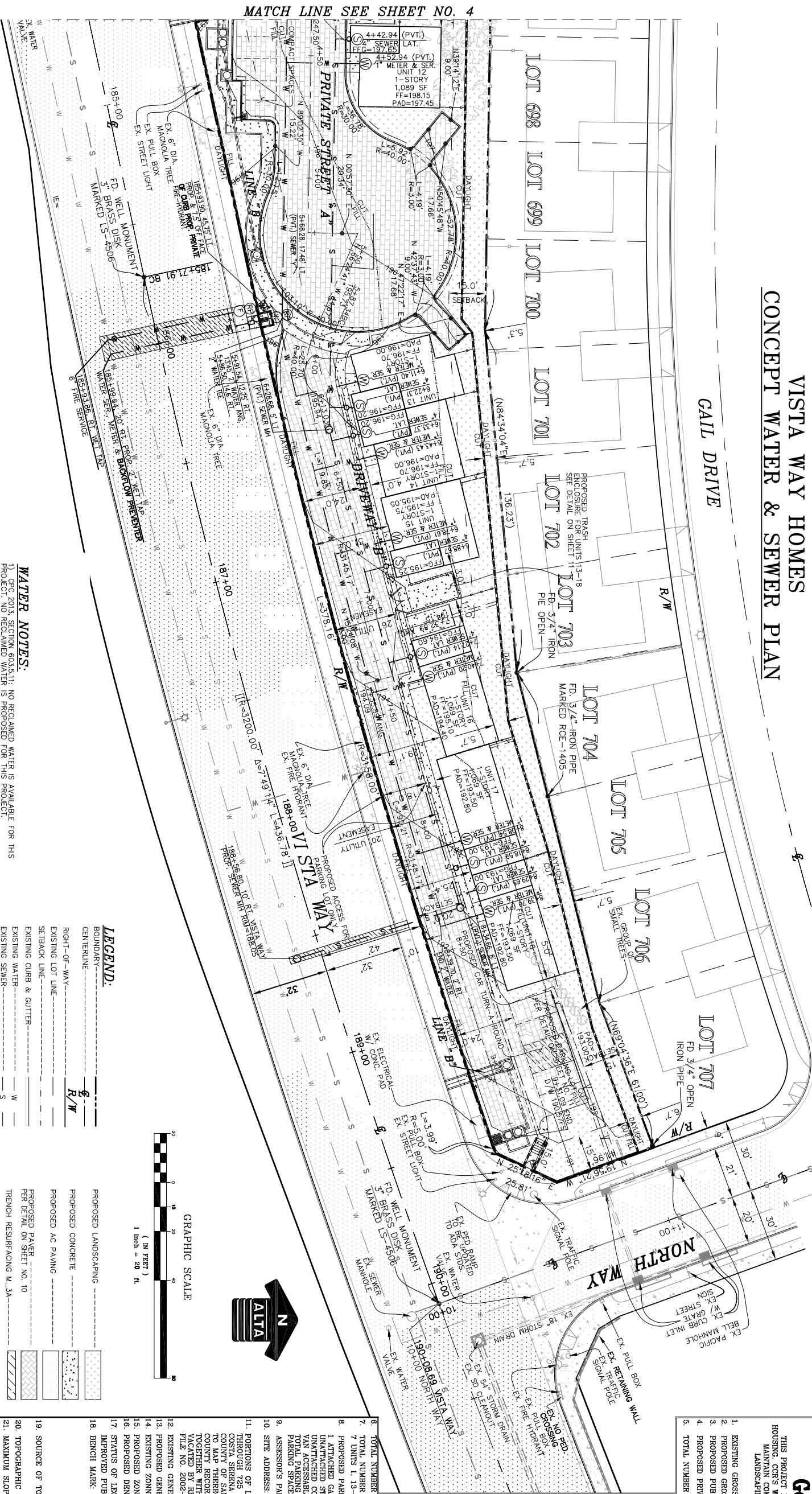
Date: 11/03/2021

SHEET 4 OF 14

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CDR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS PART OF THIS PROJECT.

- EXISTING GROSS SUBDIVISION AREA: 1.97 AC
- PROPOSED GROSS SUBDIVISION AREA: 1.97 AC
- PROPOSED PUBLIC STREET DEDICATION: 9 AC
- PROPOSED PRIVATE STREET AREA: 9 AC
- TOTAL NUMBER OF EXISTING LOTS: 1



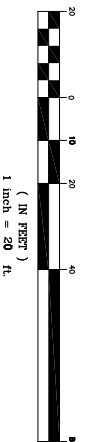
WATER NOTES:

- CPC 2013, SECTION 603.5.11: NO RECLAIMED WATER IS AVAILABLE FOR THIS PROJECT. NO RECLAIMED WATER IS PROPOSED FOR THIS PROJECT.
- CPC 2013, SECTION 603.5.11: NO RECLAIMED WATER IS AVAILABLE FOR THIS PROJECT. THERE ARE NO CONNECTIONS TO NON-POTABLE WATER.
- CPC 2013, SECTION 601.2: IDENTIFICATION OF POTABLE AND NON-POTABLE WATER SYSTEM (NO NON-POTABLE WATER SYSTEM IN THIS PROJECT) EACH SYSTEM SHALL BE COLOR COATED AS FOLLOWS:
 - NON-POTABLE WATER: GREEN BACKGROUND WITH WHITE LETTERING WITH THE WORDS 'CAUTION: NON-POTABLE WATER. DO NOT DRINK.' A UNIVERSAL POISON SYMBOL OF SKULL AND CROSSBONES SHALL BE PROVIDED [HOD 1 & 2]
 - 601.2.2 MINIMUM LENGTH OF COLOR FIELD AND SIZE OF LETTERS, SEE TABLE 1. RECLAIMED WATER: PURPLE IN COLOR (PANTONE #512) AND SHALL BE IMPRINTED IN NORMAL 1/2 INCH HIGH, BLACK, UPPER CASE LETTERS, WITH THE WORDS 'CAUTION: RECLAIMED WATER. DO NOT DRINK.' A UNIVERSAL POISON SYMBOL OF SKULL AND CROSSBONES SHALL BE PROVIDED [HOD 1 & 2]
- CPC 2013, SECTION 611.1: WATER TREATMENT UNITS, REVERSE OSMOSIS DRINKING WATER TREATMENT UNITS SHALL MEET THE REQUIREMENTS OF THE PROPOSED WATER TREATMENT UNITS. REVERSE OSMOSIS DRINKING WATER TREATMENT UNITS SHALL BE PROVIDED FOR EACH UNIT. FROM REVERSE OSMOSIS OR OTHER TYPES OF WATER TREATMENT UNITS SHALL ENTER THE DRAINAGE SYSTEM THROUGH AN AIRGAP.
- CPC 2013, SECTION 603.2: APPROVAL OF BACKFLOW DEVICES OR ASSEMBLIES, BEFORE ANY DEVICE OR ASSEMBLY IS INSTALLED FOR THE PREVENTION OF BACKFLOW, IT SHALL FIRST BE APPROVED BY THE AUTHORITY HAVING JURISDICTION. DEVICES OR ASSEMBLIES SHALL BE TESTED FOR CONFORMING, RECOGNIZED STANDARDS OR OTHER STANDARDS ADOPTED BY THE AUTHORITY HAVING JURISDICTION. THE TESTING OF BACKFLOW DEVICES OR ASSEMBLIES SHALL BE PERFORMED BY A CERTIFIED BACKFLOW ASSEMBLY CHECKER (CPC SECTION 603.2).
- COPIES OF TESTING OF BACKFLOW DEVICES OR ASSEMBLIES SHALL BE PROVIDED.
- SEWAGE WATER METER SHALL BE INSTALLED FOR EACH PROPOSED UNIT.
- SEWAGE WATER METER SHALL BE INSTALLED FOR EACH PROPOSED UNIT.
- THE HOA FOR THIS PROJECT.

LEGEND:

- BOUNDARY-----
- CENTERLINE-----
- RIGHT-OF-WAY-----
- EXISTING LOT LINE-----
- SETBACK LINE-----
- EXISTING CURB & GUTTER-----
- EXISTING WATER-----
- EXISTING SEWER-----
- EXISTING FENCE-----
- EXISTING RETAINING WALL-----
- EXISTING AC PAVING-----
- EXISTING CONTOUR LINE-----
- EXISTING ELEVATION-----
- EXISTING FIRE HYDRANTS-----
- EXISTING STREET SIGN-----
- EXISTING WATER SERVICE W/ EX. BACKFLOW-----
- PREVENTER TO BE USED FOR IRRIGATION-----
- PROPOSED 2" WATER SERVICE-----
- PROPOSED 6" FIRE SERVICE-----
- PROPOSED 1" WATER SERVICE W/-----
- PRIVATE WATER METER TO BE MAINTAINED BY HOA-----
- 6" SEWER LATERAL W/ SEWER MH-----
- PARKING SPACE NUMBER-----
- PROPOSED G-2 CURB & GUTTER-----
- PROPOSED G-1 GUTTER-----
- PROPOSED ROLLED CURB-----
- PROPOSED FENCE-----
- SEE LANDSCAPE PLANS FOR DETAILS

GRAPHIC SCALE



- PROPOSED LANDSCAPING-----
- PROPOSED CONCRETE-----
- PROPOSED AC PAVING-----
- PROPOSED PAVEMENT-----
- PER DETAIL ON SHEET NO. 10
- TRENCH RESURFACING M. 3A-----
- PROPOSED RETAINING WALL-----
- 2:1 SLOPE-----
- DAYLIGHT LINE-----
- DIRECTION OF FLOW-----
- (PVT) PROPOSED STORM DRAIN-----
- CURB OUTLET PER D-25-----
- (PVT) PROPRIETARY TREATMENT UNIT-----
- PER DETAIL ON SHEET NO. 10
- (PVT) MODIFIED TYPE A CLEANOUT-----
- (PVT) 36" OR 48" BROOKS BOX-----
- (PVT) 24" BROOKS BOX-----
- PARKWAY GRADE PER DETAIL ON SHEET 11
- AREA DRAIN PER DETAIL ON SHEET 10-----
24. AREA/PERCENT OF SITE IN LANDSCAPING: 37.99% OR 44%
25. ON-SITE GRADING FOR THIS PROJECT: (6% SHRINKAGE FOR CUT) CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y. NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BUILDING OF MATERIAL.
26. GRADED AREA: 1.83 AC= 82% OF SITE
27. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS FOR THIS PROJECT.
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODPLAIN OR FLOODPLAIN PER FEMA MAP 06073C0766G DATED: 5/16/12

ENGINEER OF WORK

DATE: 11/03/2021



ALTA CONSULTANTS

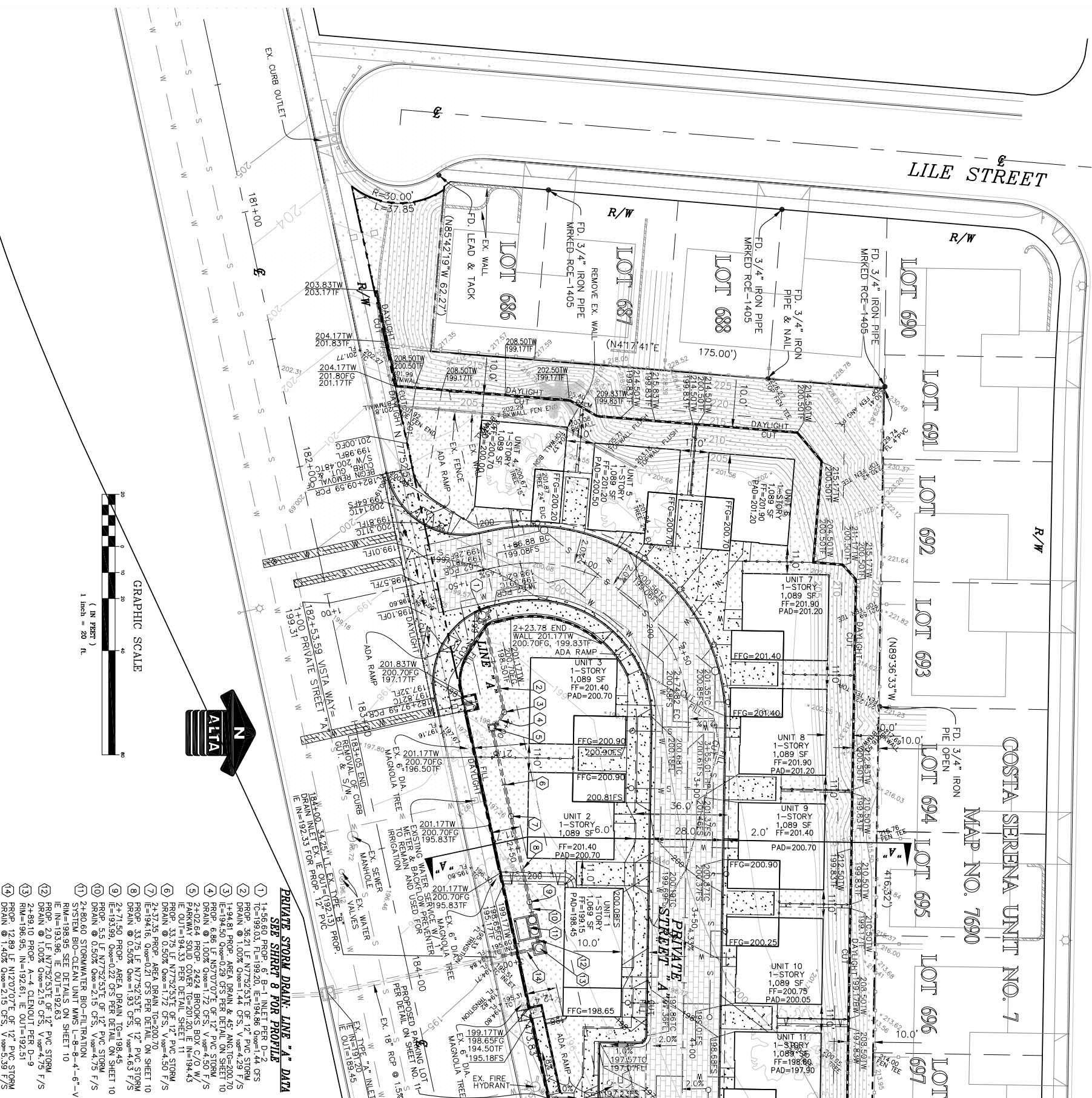
PLANNING ENGINEERING SURVEYING
1000 E. Main Street, Suite 200, San Jose, CA 95126
TEL: 408-261-4000 FAX: 408-261-4001
WWW.ALTA-CONSULTANTS.COM

Date: 11/03/2021

SHEET 5 OF 14

VISTA WAY HOMES CONCEPT GRADING PLAN

GAIL DRIVE



MATCH LINE SEE SHEET NO. 7

LEGEND:

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCRs WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT

- [illegible]

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: _____ NOVEMBER 3 _____, 2021



ALTA CONSULTANTS

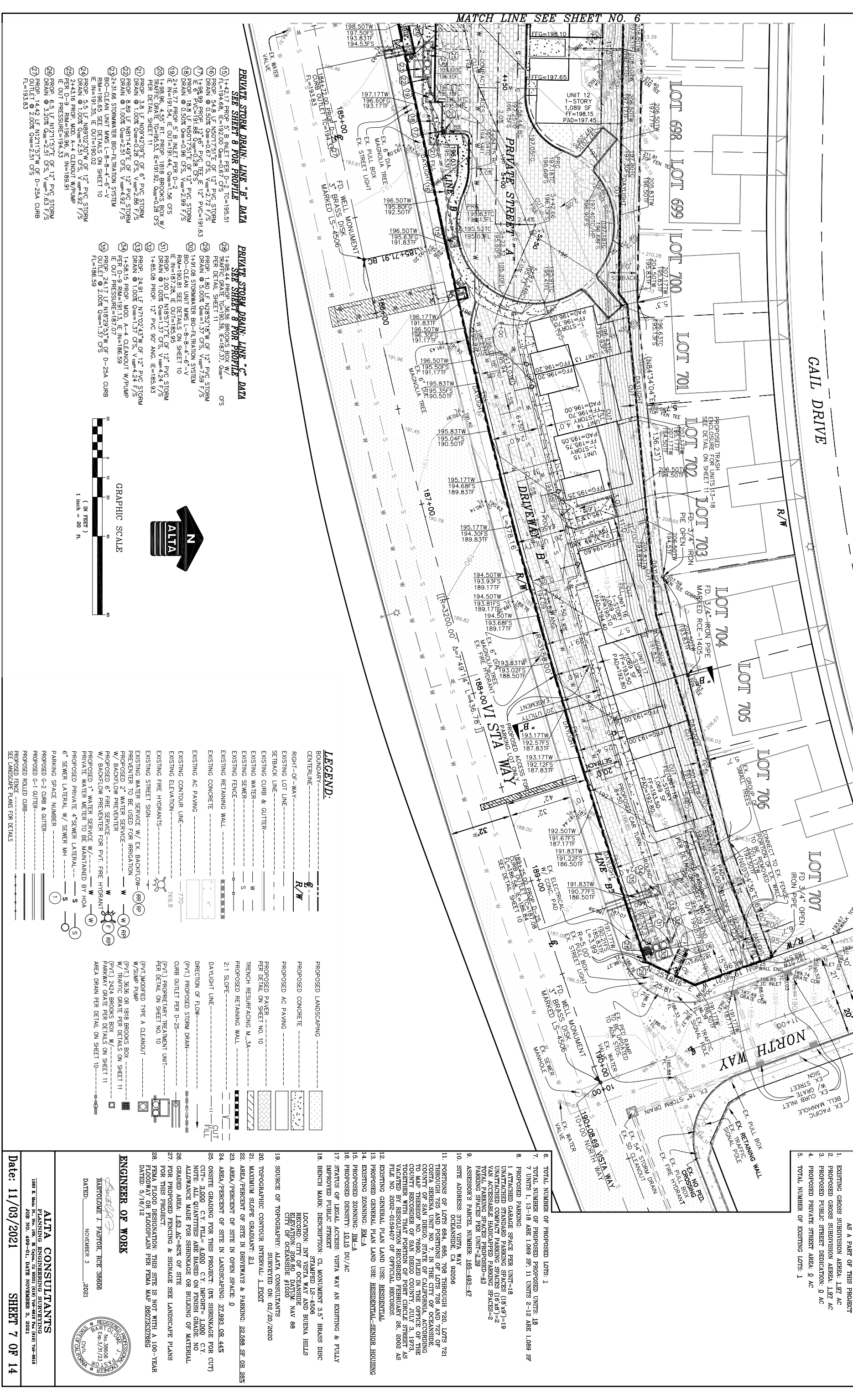
1283 E. Main St., Ste. 108, El Cajon, CA 92021 (619) 749-8618 Fax (619) 749-8611
JOB NO. 498-01 DATE NOVEMBER 3, 2021

Date: 11/03/2021

SHEET 6 OF 14

TENTATIVE MAP T21-000002

VISTA WAY HOMES
CONCEPT GRADING PLAN



General Notes

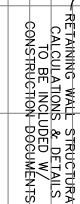
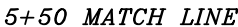
- THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT
- EXISTING GROSS SUBDIVISION AREA: 1.87 AC
 - PROPOSED GROSS SUBDIVISION AREA: 1.97 AC
 - PROPOSED PUBLIC STREET DEDICATION: 9 AC
 - PROPOSED PRIVATE STREET AREA: 9 AC
 - TOTAL NUMBER OF EXISTING LOTS: 1

- TOTAL NUMBER OF PROPOSED LOTS: 1
 - TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 18
 - 7 UNITS 1, 13-18 ARE 1,089 SF, 11 UNITS 2-12 ARE 1,089 SF
 - PROPOSED PARKING:
 - ATTACHED GARAGE SPACE PER UNIT=18
 - UNATTACHED STANDARD PARKING SPACES (18x30)=19
 - UNATTACHED COMPACT PARKING SPACES (16x30)=2
 - AN ACCESSIBLE HANDICAPPED PARKING SPACES=2
 - PARKING SPACES PER UNIT=2.38
 - ASSESSOR'S PARCEL NUMBER: 166-483-47
 - SITE ADDRESS: 3710 VISTA WAY
 - PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 722 AND PORTIONS OF LOTS 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000
 - EXISTING GENERAL PLAN LAND USE: RESIDENTIAL-SENIOR HOUSING
 - EXISTING ZONING: RM-A
 - PROPOSED ZONING: RM-A
 - PROPOSED DENSITY: 10 DU/AC
 - STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
 - BENCH MARK DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
 - LOCATION: INT VISTA WAY AND BUENA HILLS RECORD: CITY OF OCEANSIDE
 - FILE NO. OCEANSIDE #1020
 - SOURCE OF TOPOGRAPHY: ALTA CONSULTANTS
 - STRIPPED ON: 02/20/2020
 - TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
 - MAXIMUM SLOPE GRADIENT: 2:1
 - AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22.88% SF OR 26%
 - AREA/PERCENT OF SITE IN OPEN SPACE: 0
 - AREA/PERCENT OF SITE IN LANDSCAPING: 37.99% OR 44%
 - ON-SITE GRADING FOR THIS PROJECT (8% SHRINKAGE FOR CUT) CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y. NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BUILDING OF MATERIAL.
 - GRADED AREA: 1.83 AC=82% OF SITE
 - FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS
 - FOR THIS PROJECT:
 - FLOOD FLOOD DISSEMINATION: THIS SITE IS NOT WITH A 100-YEAR DATED 5/6/12
- ENGINEER OF WORK
BARTOLOME J. PASTOR, RCE 38606
DATE: 11/03/2021
- ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1000 E. Main, Job No. 408-01, DATE NOVEMBER 3, 2021
- DATE: 11/03/2021 SHEET 7 OF 14

AS PART OF THIS PROJECT

1. EXISTING GROSS SUBDIVISION AREA: 1.87 AC
2. PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 18
8. PROPOSED PARKING:
 1. ATTACHED GARAGE SPACE PER UNIT=18
 - UNATTACHED STANDARD PARKING SPACES (18*3)=19
 - UNATTACHED COMPACT PARKING SPACES (16*8)=2
 - VAN ACCESSIBLE HANDICAPPED PARKING SPACES=2
 - TOTAL PARKING SPACES PROPOSED=43
 - PARKING SPACES PER UNIT=2.39
9. ASSESSOR'S PARCEL NUMBER: 165-483-47
10. SITE ADDRESS: 3710 VISTA WAY
OCEANSIDE, CA 92056
11. PORTIONS OF LOTS 684, 686, 708 THROUGH 720, LOTS 721 THROUGH 724 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE PLAT OF THE SAN DIEGO COUNTY RECORDS OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
12. EXISTING GENERAL PLAN LAND USE: RESIDENTIAL.
13. EXISTING GENERAL PLAN LAND USE: RESIDENTIAL.
14. EXISTING ZONING: 12RM-A
15. PROPOSED ZONING: RM-A
16. PROPOSED DENSITY: 10.6 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK DESCRIPTION: CL. MONUMENT 3.5" BRASS DISC STAMPED 15-4506
LOCATION: INT VISTA WAY AND BUENA HILLS
RECORD: CITY OF OCEANSIDE
ELEVATION: 206.80 DATUM: NAV 88
CITY OF OCEANSIDE #1020
19. SOURCE OF TOPOGRAPHIC ALTA CONSULTANTS
SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT

CONCEPT PROFILES AND SECTIONS



ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: NOVEMBER 3, 2021



ALTA CONSULTANTS

1203 E. Main St., Ste. 106, El Cajon, CA 92021 (619) 749-8618 Fax (619) 749-8611
JOB NO. 499-01, DATE NOVEMBER 3, 2021

Date: 11/03/2021

SHEET 8 OF 14

TENTATIVE MAP T21-000002

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCRs WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS PART OF THIS PROJECT

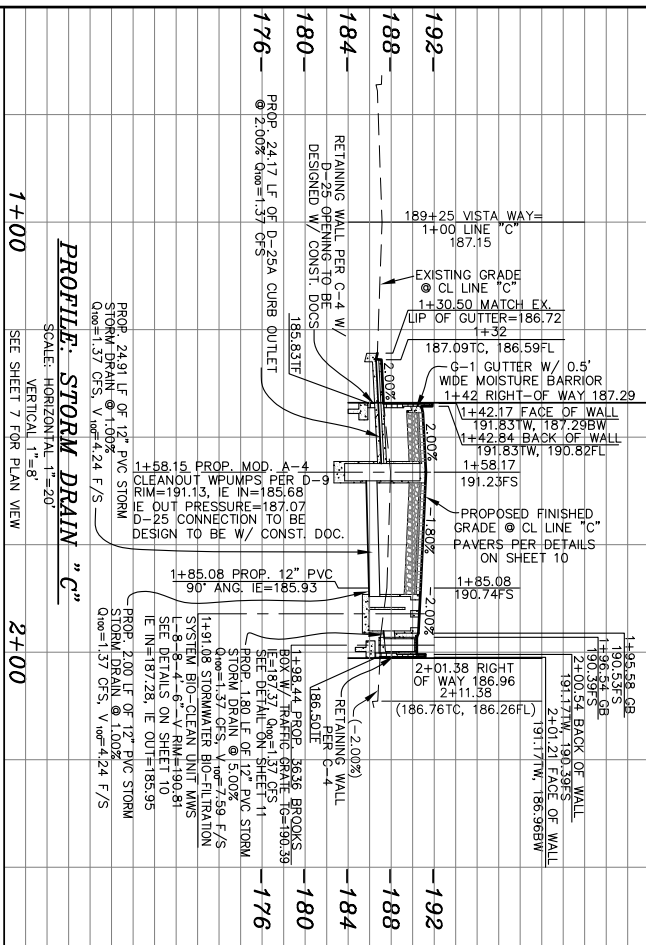
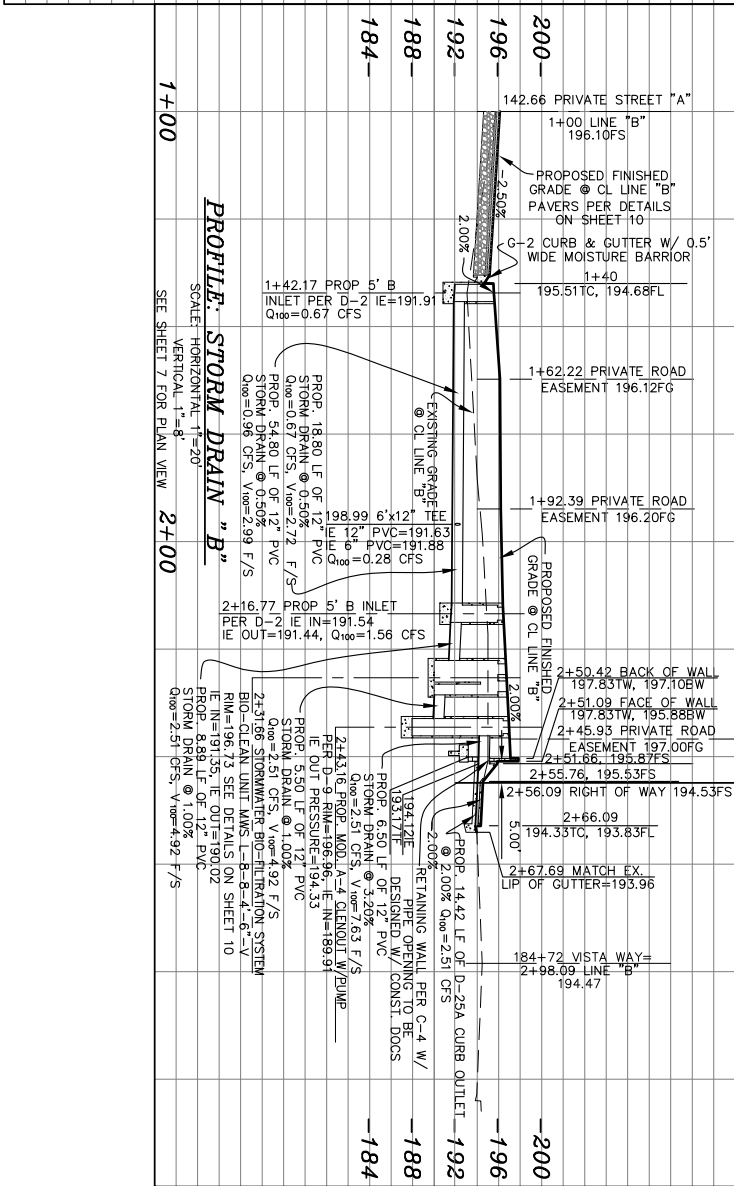
1. EXISTING GROSS SUBDIVISION AREA: 1.87 AC
2. PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED LOTS: 1
7 UNITS 1, 13-18 ARE 1,089 SF; 11 UNITS 2-12 ARE 1,089 SF
8. PROPOSED PARKING:
1 ATTACHED GARAGE SPACE PER UNIT=18
UNATTACHED STANDARD PARKING SPACES (18 x2)=19
UNATTACHED COMPACT PARKING SPACES (16x18) =2
AN ACCESSIBLE MULTI-PURPOSE PARKING SPACES=2
TOTAL PARKING SPACES=23
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: VISTA WAY
OCEANSIDE, CA 92056
11. THROUGH LOTS AND PORTIONS OF LOTS 726 AND 727 OF COSTA SEBENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA, BEING THE TRACT TO MAP THEREOF RECORDED AT PLAT 10,000 OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
12. EXISTING GENERAL PLAN LAND USE: RESIDENTIAL.
13. PROPOSED GENERAL PLAN LAND USE: RESIDENTIAL-SENIOR HOUSING
14. EXISTING ZONING: 12RM-A
15. PROPOSED ZONING: RM-A
16. PROPOSED SETBACK: 10.15 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK DESCRIPTION: CL MOUNTMENT 3.5" BRASS DISC STAMPED US-4506
LOCATION: INT VISTA WAY AND BUENA HILLS
ELEVATION: 206.60 DATUM: MAY 88
CITY OF OCEANSIDE #1020
19. SOURCE OF TOPOGRAPHY: ALTAZY CONSULTANTS SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT

Paul A J
BARTOLOME J. PASTOR, RCE 38606
DATED: _____, NOVEMBER 3, 20____



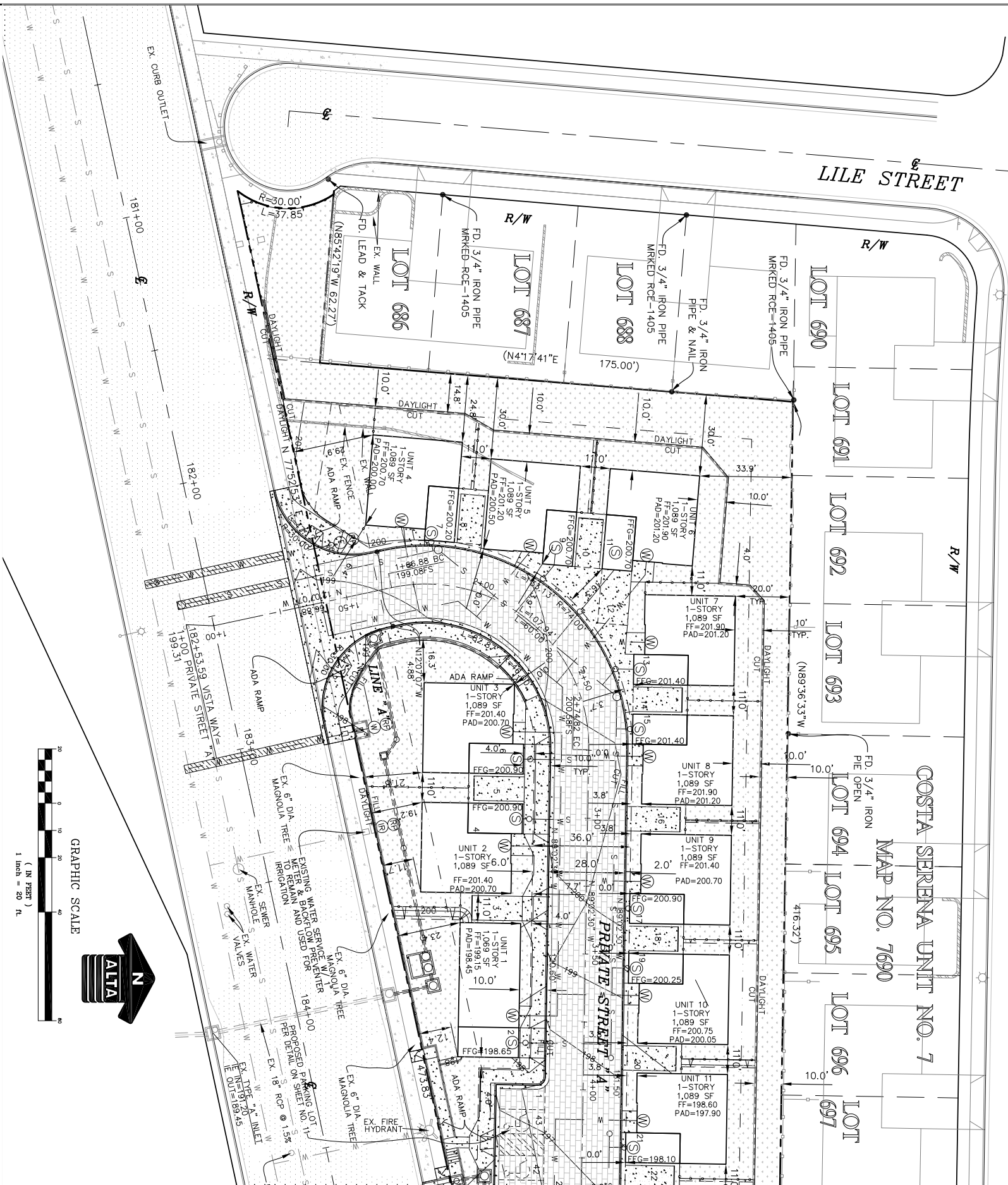
ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1203 E. Main St., Ste. 100, El Caim, CA 92021 (919) 749-8618 Fax (919) 749-8618
JOB NO. 499-01, DATE NOVEMBER 3, 2021

Date: 11/03/2021 SHEET 9 OF 14



VISTA WAY HOMES
SETBACK EXHIBIT

GAIL DRIVE



MATCH LINE SEE SHEET NO. 13

- LEGEND:**
- BOUNDARY-----
- CENTERLINE-----
- RIGHT-OF-WAY-----
- EXISTING LOT LINE-----
- SETBACK LINE-----
- EXISTING CURB & GUTTER-----
- EXISTING WATER-----
- EXISTING FENCE-----
- EXISTING RETAINING WALL-----
- EXISTING CONCRETE-----
- EXISTING AC PAVING-----
- EXISTING CONTOUR LINE-----
- EXISTING ELEVATION-----
- EXISTING FIRE HYDRANTS-----
- EXISTING STREET SIGN-----
- EXISTING WATER SERVICE W/ EX BACKFLOW PREVENTER TO BE USED FOR IRRIGATION-----
- EXISTING 2" WATER SERVICE-----
- PROPOSED 6" FIRE SERVICE-----
- PROPOSED 1" WATER SERVICE W/ BACKFLOW PREVENTER FOR PVT. FIRE HYDRANT-----
- PROPOSED PRIVATE 4" SEWER LATERAL-----
- PROPOSED 6" SEWER LATERAL W/ SEWER MANHOLE-----
- PARKING SPACE NUMBER-----
- PROPOSED 6" CURB & GUTTER-----
- PROPOSED 6" GUTTER-----
- PROPOSED ROLLED CURB-----
- PROPOSED FENCE-----
- PROPOSED LANDSCAPING PLANS FOR DETAILS-----
- PROPOSED CONCRETE-----
- PROPOSED AC PAVING-----
- PROPOSED PAVEMENT-----
- TRENCH RESURFACING W. 3A-----
- 2-1 SLOPE-----
- DAYLIGHT LINE-----
- DIRECTION OF FLOW-----
- (PVT.) PROPOSED STORM DRAIN-----
- CURB OUTLET PER 0-25-----
- (PVT.) PROPRIETARY TREATMENT UNIT-----
- PER DETAIL ON SHEET NO. 10-----
- (PVT.) MODIFIED TYPE A CLEANOUT-----
- W/ SUMP PUMP-----
- (PVT.) 36x36 OR 18x18 BROOKS BOX-----
- W/ TRAFFIC GRATE PER DETAILS ON SHEET 11-----
- (PVT.) 24x24 BROOKS BOX W/ TRAFFIC GRATE PER DETAILS ON SHEET 11-----
- AREA DRAIN PER DETAIL ON SHEET 10-----

General Notes

- THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCFS WILL BE PREPARED FOR THIS PROJECT TO DEMONSTRATE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS PART OF THIS PROJECT.
1. EXISTING GROSS SUBDIVISION AREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AREA: 1.97 AC
3. PROPOSED PUBLIC STREET DEDICATION: 9 AC
4. PROPOSED PRIVATE STREET AREA: 9 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED UNITS: 18
8. TOTAL LOTS: 1, 13-18 ARE 1,089 SF; 11 UNITS 2-12 ARE 1,089 SF
9. ATTACHED GARAGE SPACE PER UNIT=18
10. UNATTACHED STANDARD PARKING SPACES (18'x9')=19
11. UNATTACHED COMPACT PARKING SPACES (16'x8')=2
12. VAN ACCESSIBLE HANDICAPPED PARKING SPACES=2
13. STANDARD HANDICAPPED PARKING SPACES=2
14. PARKING SPACES PER UNIT=238
15. ASSESSOR'S PARCEL NUMBER: 165-493-47
16. SITE ADDRESS: 3710 VISTA WAY OCEANSIDE, CA 92056
17. PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA, ARE BEING OFFERED TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
18. EXISTING GENERAL PLAN LAND USE: RESIDENTIAL
19. PROPOSED GENERAL PLAN LAND USE: RESIDENTIAL, SENIOR HOUSING
20. EXISTING ZONING: RM-A
21. PROPOSED ZONING: RM-A
22. PROPOSED DENSITY: 10.15 DU/AC
23. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
24. BENCH MARK: DESCRIPTION: CL MOUNTAIN 3.5" BRASS DISC STAMPED LS-4506
25. RECORD: CITY OF OCEANSIDE
26. ELEVATION: 206.80 DATUM: NAV 88
27. CITY OF OCEANSIDE #1082
28. SOURCE OF TOPOGRAPHY: ALTA CONSULTANTS
29. SURVEYED ON: 02/20/2020
30. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
31. MAXIMUM SLOPE GRADIENT: 2:1
32. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22.46% SF OR 2.65%
33. AREA/PERCENT OF SITE IN OPEN SPACE: 9
34. AREA/PERCENT OF SITE IN LANDSCAPING: 37.99% OR 4.4%
35. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS
36. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOOD ZONE
37. FLOODPLAIN PER FEMA MAP 06072C070865 DATED: 5/16/12

ENGINEER OF WORK

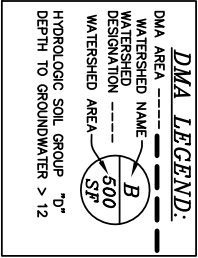
BARBARA J. PASTOR, RCE 38606
DATED: NOVEMBER 3, 2021



General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT

- EXISTING GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED GROSS SUBDIVISION AREA: 1.87 AC
- PROPOSED PUBLIC STREET DEDICATION: 0 AC
- PROPOSED PRIVATE STREET AREA: 0 AC
- TOTAL NUMBER OF EXISTING LOTS: 1
- TOTAL NUMBER OF PROPOSED LOTS: 1
- TOTAL NUMBER OF PROPOSED UNITS: 18
- 7 UNITS 1, 13-18 ARE 1,069 SF, 11 UNITS 2-12 ARE 1,069 SF
- PROPOSED PARKING:
 - 1 ATTACHED GARAGE SPACE PER UNIT=18
 - UNATTACHED STANDARD PARKING SPACES (16'x30')=19
 - UNATTACHED COMPACT PARKING SPACES (16'x8')=2
 - VAN ACCESSIBLE HANDICAPPED PARKING SPACES=2
 - TOTAL PARKING SPACES PROPOSED=43
- ASSESSOR'S PARCEL NUMBER: 165-493-47
- SITE ADDRESS: 3710 VISTA WAY OCEANSIDE, CA 92056
- PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 726 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7 ARE THE CITY OF OCEANSIDE TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
- STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
- BENCH MARK DESCRIPTION: CL. MONUMENT 3.5" BRASS DISC STAMPED LS-4506
- LOCATION: INT VISTA WAY AND BUENA HILLS RECORD: CITY OF OCEANSIDE ELEVATION: 206.80 DATUM: NAV 88 CITY OF OCEANSIDE #1020
- SOURCE OF TOPOGRAPHY: ALTA CONSULTANTS SURVEYED ON: 02/20/2020
- 20 TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
- 21 MAXIMUM SLOPE GRADIENT: 2:1
- 25 ON-SITE GRADING FOR THIS PROJECT: (6% SHRINKAGE FOR CUT) CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPROVE= 1,000 C.Y. NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BUILDING OF MATERIAL.
- 26 GRADED AREA: 1.83 AC=82% OF SITE
- 27 FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06072C0786G

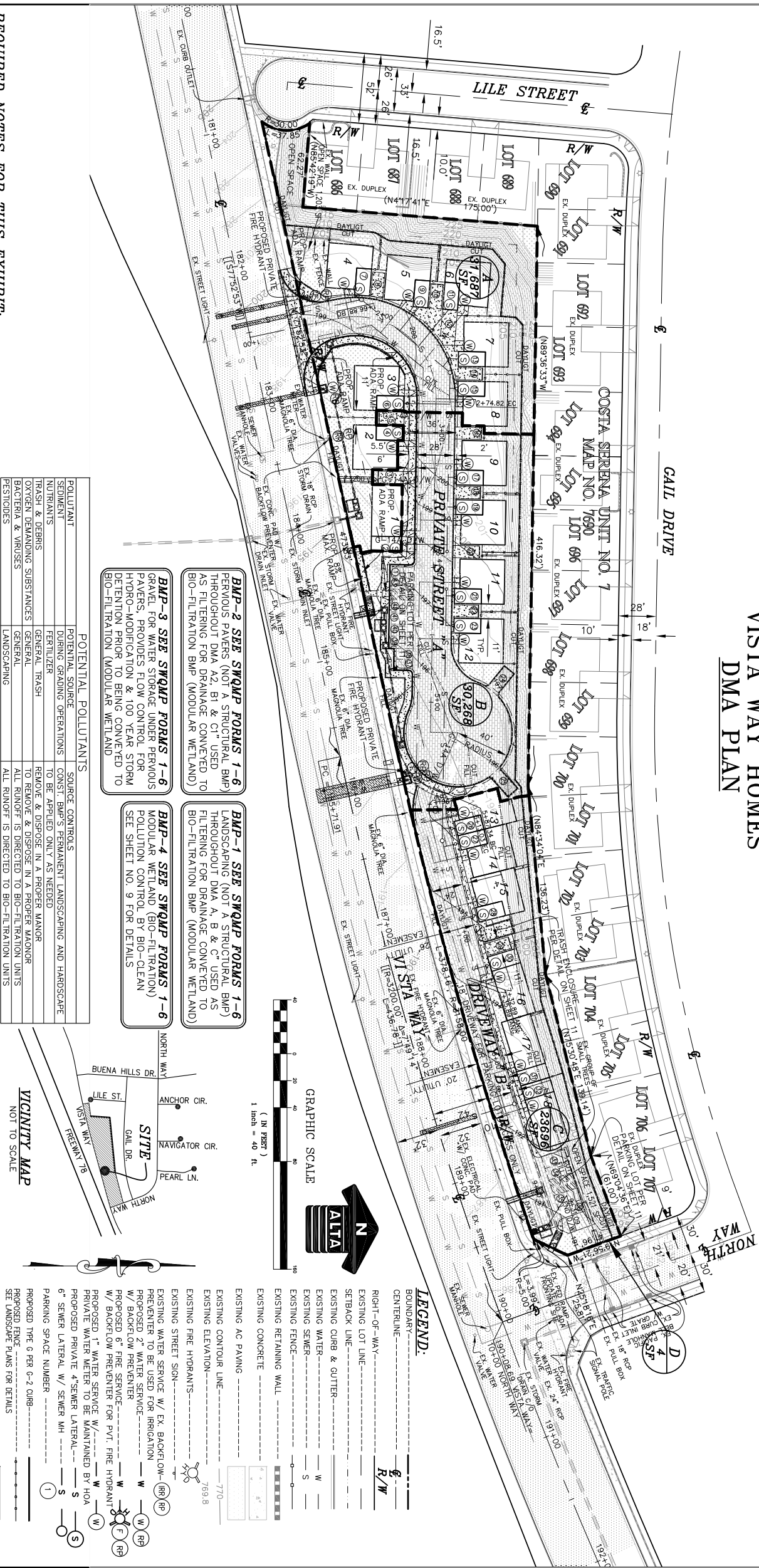


ENGINEER OF WORK

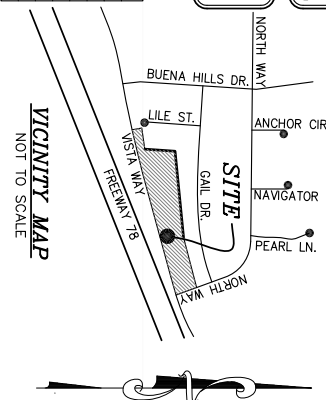
BARTOLOME J. PASTOR, RCE 38606
DATED: OCTOBER 29, 2021



VISTA WAY HOMES
DMA PLAN



POTENTIAL POLLUTANTS			
POLLUTANT	POTENTIAL SOURCE	SOURCE CONTROLS	
SEDIMENT	DURING GRADING OPERATIONS	CONST. BMP'S PERMANENT LANDSCAPING AND HARDSCAPE TO BE APPLIED ONLY AS NEEDED	
NUTRIENTS	FERTILIZER	REMOVE & DISPOSE IN A PROPER MANNER	
TRASH & DEBRIS	GENERAL TRASH	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS	
OXYGEN DEMANDING SUBSTANCES	GENERAL	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS	
BACTERIA & VIRUSES	GENERAL	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS	
PESTICIDES	LANDSCAPING		



REQUIRED NOTES FOR THIS EXHIBIT.

- THE UNDERLYING HYDROLOGIC SOIL GROUP IS "D".
- THERE ARE NO NATURAL HYDROLOGIC FEATURES ON THIS SITE.
- THERE ARE NO CRITICAL COURSE SEDIMENT YIELD AREAS ON THE PROJECT.
- THERE ARE NO TOPOGRAPHY AND PROPOSED IMPEROUS AREAS ARE INDICATED ON THE EXHIBIT.
- THE EXISTING AND PROPOSED SITE DRAINAGE NETWORK AND CONNECTIONS TO OFFSITE ARE SHOWN.
- THERE IS NO PROPOSED DEMOLITION ON THIS SITE, OTHER THAN CLEARING & GRUBBING REMOVAL OF EXISTING REMAINS AND REMOVAL OF EXISTING PUBLIC IMPROVEMENTS AS NEEDED TO PROVIDE ACCESS AND UTILITIES FOR THIS SITE.
- THE PROPOSED GRADING IS SHOWN ON THIS EXHIBIT, INCLUDING PROPOSED RETAINING WALLS.
- THE PROPOSED IMPEROUS FEATURES ON THIS PROJECT ARE SHOWN ON THIS EXHIBIT.
- THE DESIGN FEATURES AND SURFACE TREATMENTS USED TO MAINTAIN IMPEROUSNESS ARE SHOWN ON THIS EXHIBIT.
- DRAINAGE MANAGEMENT AREAS ARE SHOWN AND IDENTIFIED. MINIMALIST AREAS ARE INDICATED.
- THERE ARE NO POLLUTANT SOURCE AREAS REQUIRING SOURCE CONTROLS ON THIS PROJECT.
- THE STRUCTURAL (PERMANENT) BMPs ARE SHOWN AND IDENTIFIED ON THIS EXHIBIT.

AREA A LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF A2	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A2 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	9,053	29%	1.0	9,053	29%
CONCRETE	2,868	9%	1.0	2,868	9%
LANDSCAPING	15,558	49%	0.1	1,556	5%
WALLS	374	1%	1.0	374	1%
PAVERS	3,802	12%	0.2	760	2%
TREATMENT	32	0%	0.1	3	0%
TOTAL DMA AREA	31,687	100%			
			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL	SIZING FACTOR	MINIMUM AREA
				3	489
				11,753	0.04
				585	0.04
				522	0.04
				13,036	0.04

AREA B LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF B1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF B1 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	4,544	15%	1.0	4,544	15%
CONCRETE	4,866	10%	1.0	4,866	10%
LANDSCAPING	8,143	27%	0.1	814	3%
WALLS	344	1%	1.0	344	1%
PAVERS	12,334	41%	0.2	2,468	8%
TREATMENT	32	0%	0.1	3	0%
TOTAL DMA AREA	30,268	100%			
			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL	SIZING FACTOR	MINIMUM AREA
				3	489
				11,753	0.04
				585	0.04
				522	0.04
				13,036	0.04

AREA C LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF A1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A1 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	6,620	28%	1.0	6,620	28%
CONCRETE	2,332	10%	1.0	2,444	10%
LANDSCAPING	6,841	29%	0.1	684	3%
WALLS	537	2%	1.0	537	2%
PAVERS	7,222	30%	0.2	1,221	6%
TREATMENT	32	0%	0.1	3	0%
TOTAL DMA AREA	23,586	100%			
			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL	SIZING FACTOR	MINIMUM AREA
				3	489
				11,753	0.04
				585	0.04
				522	0.04
				13,036	0.04

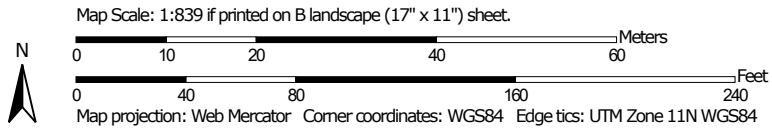
AREA D LOW IMPACT DEVELOPMENT DESIGN					
DMA NAME	DMA POST PROJECT AREA SF	% OF A1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A1 SOIL TYPE "D"
ASPHALT	0	0%	1.0	0	0%
BUILDINGS	0	0%	1.0	0	0%
CONCRETE	0	0%	1.0	0	0%
LANDSCAPING	4	100%	0.1	0	0%
WALLS	0	0%	1.0	0	0%
PAVERS	0	0%	0.2	0	0%
TREATMENT	0	0%	0.1	0	0%
TOTAL DMA AREA	4	100%			
			SE SWAMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL	SIZING FACTOR	MINIMUM AREA
				3	489
				11,753	0.04
				585	0.04
				522	0.04
				13,036	0.04

ATTACHMENT 3
Soils Plat

Soil Map—San Diego County Area, California
(3710 Vista Way)



Soil Map may not be valid at this scale.



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California

Survey Area Data: Version 16, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 24, 2020—Feb 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LeE3	Las Flores loamy fine sand, 9 to 30 percent slopes, severely eroded	2.0	100.0%
Totals for Area of Interest		2.0	100.0%