Appendix K

Preliminary Hydrology Study for Alexan Escondido

Preliminary Hydrology Study

For

Alexan Escondido

Prepared for
Trammell Crow Residential
5790 Fleet Street, Suite 140
Carlsbad, CA 92008
(760) 431-3366

Prepared by
Nasland Engineering
4740 Ruffner Street
San Diego, Ca. 92111
(858) 292-7770
N.E. Job No. 122-113.1

April 19, 2024

04/19/24

Daniel Quinones **R.C.E. 92310** **Date**

Table of Contents

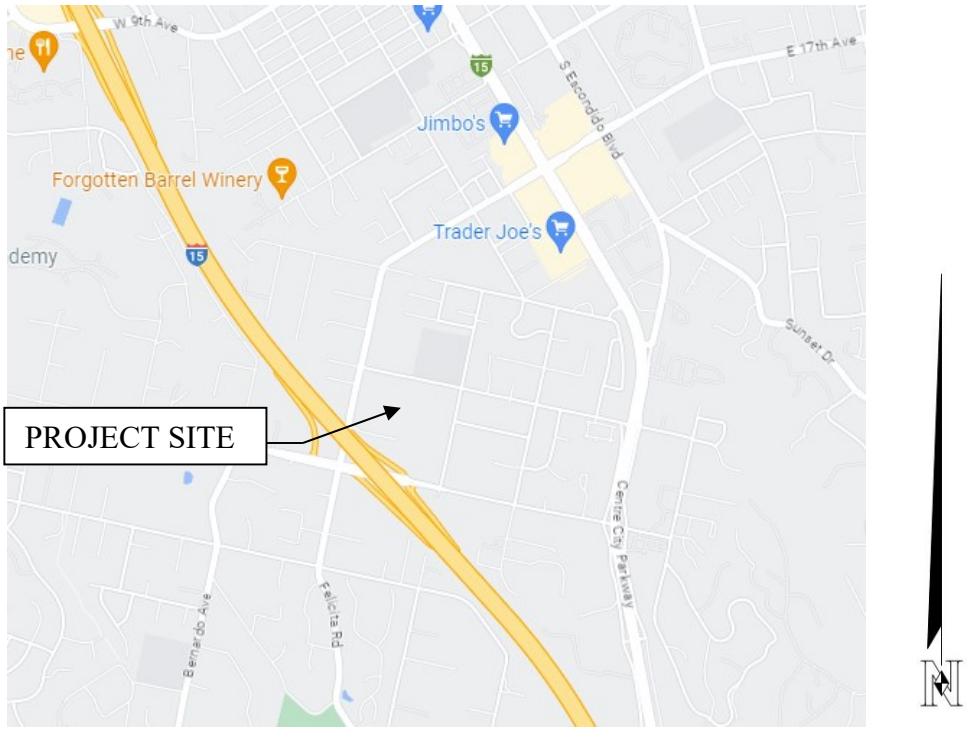
PURPOSE:

The purpose of this hydrology study is to show that the proposed Alexan project will not negatively impact existing hydrologic conditions. This report will calculate, analyze and compare storm water runoff for both the existing and proposed site conditions in order to ensure that the existing hydrologic regime is not negatively impacted by the project.

DESCRIPTION:

The Alexan project is located in the South east corner of Felicita Road and Brotherton Road, in the City of Escondido, California. The proposed project would construct multiple residential buildings consisting of a total of approximately 270 units in 3-4 story buildings. The project will do a lot split on the existing property and be confined to an area encompassing approximately 7.9 acres. The general direction of the storm water flow for this site is shown on the attached hydrology exhibits (Existing Conditions and Proposed Conditions Exhibits).

VICINITY MAP



Source: Google Maps

EXISTING DRAINAGE:

The existing site encompasses approximately 14.6 acres and consists of 3 buildings, a large surface parking lot, and large open vegetated areas. The site is currently used as a church, with separate buildings for worship activities.

The existing conditions on-site are considered to be two separate basins. Basin 1A is the westerly half of the site, and is calculated to be 7.93 acres. Storm water from Basin 1A generally flows to the southwest corner of the property. A large natural swale drains through the westerly side of the property, running north to south, where it discharges directly to a neighboring residential property. Ultimately, this runoff is collected by a headwall downstream of the residential property at Palm Terrace, where it is collected by a 54" rcp storm drain that discharges south of the I-15.

In addition to the 7.93 acres collected on-site, the natural swale also receives a tremendous amount of off-site run-on. A 42" and 48" rcp storm drain discharges directly onsite via a concrete headwall at Brotherton Road. Basin 1B is upstream of the site and is estimated to be 51.65 acres (0.08 square miles), which includes roadways and single-family residences. The City of Escondido Drainage Master Plan was utilized to assist in determining the basin boundaries and better understanding the contributing flow. Some excerpts from the Drainage Master Plan are included in **Appendix C**.

The other on-site basin, is considered to be Basin 2. This basin is roughly 6.7 acres and includes two buildings, an asphalt parking lot, basketball court, a baseball diamond, and natural vegetation. Basin 2 drains to the southeast of the property via surface flow, exiting onto adjacent property.

See **Appendix A – Existing Hydrologic Conditions Exhibit,** for further information.

PROPOSED DRAINAGE:

The proposed conditions on-site will maintain two separate basins, divided by the proposed lot split. The final location of the new property line is still be finalized but for planning purposes is located approximately in the middle of the site, providing a 7.9 acre parcel.

Basin 1 is the westerly half of the property, which is where the proposed project shall be located. This basin will include multi-story buildings, paved drive aisles, concrete walkways, a pool plaza, and landscaping. Post construction BMPs (Best Management Practices) shall be implemented throughout the site to treat pollutants. Rooftops, drive aisles, sidewalks, and other impervious surface will drain to the BMPs via surface flow and piped networks. Hydromodification sizing requirements will be provided during the final design. This is anticipated to reduce the flow rate and velocity of runoff leaving the site and entering the public system.

To address the run-on, a junction structure is proposed to be constructed where the existing headwall daylights two reinforce concrete pipes (42" and 48"). Flow will be

discharged through the site via a new 54" rcp within a proposed easement to the City of Escondido. This pipe shall drain north to south. Where it previously discharged to the neighboring property, dual 30" rcp storm drains shall convey the final flow within a new easement to the City and connect to the existing Caltrans 54" rcp via a new junction structure. Hydraflow cross sections have been included in **Appendix D**, which shall examine the capacity of proposed storm drain systems for planning purposes.

Basin 2 is the easterly half of the site. No development changes are anticipated at this time, so it is assumed that the drainage pattern will remain the same as in the existing conditions.

See **Appendix B – Proposed Hydrologic Conditions Exhibit,** for further information.

HYDROLOGY METHODOLOGY/DESIGN CRITERIA:

Storm water runoff for both the existing and proposed site conditions is calculated, analyzed and compared in order to ensure that the proposed conditions do not negatively affect the existing hydrologic regime. Runoff is calculated by utilizing methods outlined in the City of Escondido Design Standards and Standard Drawings. Topographical information has been obtained from Nasland. Hydrologic basin boundaries, landscape areas, and flow path characteristics such as change in elevation and length of flow are obtained from the Existing and Proposed Conditions Maps which are drafted in AutoCAD Civil 3D 2020 software. This information is utilized to determine the basin area, runoff coefficient and inlet time for each basin.

CALCULATIONS:

Calculations have been performed per Rational Method guidelines set forth in the City of Escondido Design Standards and Standard Drawings.

- Runoff Coefficients have been calculated per Figure 1 of the Design Standards. The existing conditions within the site was considered Rural – over ½ acre and therefore the coefficient used was 0.45. Existing off-site flow is categorized as single family, thus a runoff value of 0.55 was assumed. The proposed condition is considered Multi-Units and the coefficient is 0.70.
- Time of concentration was calculated using Figure 2, Runoff Time Chart of the City's Design Standards.
- The intensity values were calculated per Figure 1, Run-Off Intensity Duration Curve of the Design Standards.
- For hydrology calculations refer to the pages following. For attachments and references to the calculations see **Appendix C – Hydrology References**

Alexan - Existing & Proposed Time of Concentrations

Existing Site Conditions

Basin	Runoff Coefficient	[1] Urban Area Overland Flow T_i					[2] Gutter & Roadway Flow Tc					[2] Pipe Flow Tc					T_c	T_c
		High Point	Low Point	ΔE	Length	$T_{overland}$	High	Low	ΔE	Length	T_{gutter}	High	Low	ΔE	Length	T_{pipe}		
	(C)	(ft)	(ft)	(ft)	(mi)	(hrs)	(ft)	(ft)	(ft)	(mi)	(hrs)	(ft)	(ft)	(ft)	(mi)	(hrs)	(hrs)	(min)
1A	0.61	660.5	659.6	0.9	0.0178	0.026	659.6	633.0	26.6	0.1259	0.067						0.09	5.6
2	0.58	660.5	659.6	0.9	0.0178	0.026	659.6	641.7	17.9	0.1136	0.069						0.10	5.7
Offsite																		
1B	0.55	684.5	683.0	1.5	0.0189	0.023	683.0	646.0	37.0	0.3731	0.207	646.0	638.7	7.3	0.04	0.03	0.262	15.7

Proposed Site Conditions

Basin	Runoff Coefficient	[1] Urban Area Overland Flow T_i					[2] Gutter & Roadway Flow Tc					[2] Pipe Flow Tc					T_c	T_c
		High Point	Low Point	ΔE	Length	$T_{overland}$	High	Low	ΔE	Length	T_{gutter}	High	Low	ΔE	Length	T_{pipe}		
	(C)	(ft)	(ft)	(ft)	(mi)	(hrs)	(ft)	(ft)	(ft)	(mi)	(hrs)	(ft)	(ft)	(ft)	(ft)	(min)	(hrs)	(min)
1	0.70	653.0	652.5	0.5	0.0178	0.032	652.5	652.0	0.5	0.0047	0.007	648.0	631.3	16.8	0.1756	0.118	0.16	9.4
2	0.58	660.5	659.6	0.9	0.0178	0.026	659.6	641.7	17.9	0.1136	0.069						0.10	5.7

Alexan - Existing & Proposed Surface Runoff

Existing Site Conditions												
Basin	Basin Area	Basin Acreage (A)	[1]Runoff Coefficient	[2]Tc	[3]Intensity 2-year	Q_2	[3]Intensity 10-year	Q_{10}	[3]Intensity 50-year	Q_{50}	[3]Intensity 100-year	Q_{100}
	(sf)	(ac)	(C)	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
1A	345,640	7.93	0.61	5.6	2.30	11.05	3.20	15.37	4.00	19.21	4.20	20.17
2	290,582	6.67	0.58	5.7	2.30	8.88	3.20	12.35	4.00	15.44	4.20	16.21
Subtotal	636,222	14.61				19.93		27.72		34.65		36.39
1B (Offsite)	2,249,930	51.65	0.55	15.7	1.40	39.77	2.10	59.66	2.70	76.70	2.90	82.38
Subtotal	2,249,930	51.65				39.77		59.66		76.70		82.38
Total	2,886,152	66.26				59.70		87.38		111.36		118.77
Proposed Site Conditions												
Basin	Basin Area	Basin Acreage (A)	[1]Runoff Coefficient	[2]Tc	[3]Intensity 2-year	Q_2	[3]Intensity 10-year	Q_{10}	[3]Intensity 50-year	Q_{50}	[3]Intensity 100-year	Q_{100}
	(sf)	(ac)	(C)	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
1	345,019	7.92	0.70	9.4	1.85	10.26	2.65	14.69	3.30	18.30	3.55	19.68
2	291,203	6.69	0.58	5.7	2.30	8.90	3.20	12.38	4.00	15.47	4.20	16.25
Subtotal	636,222	14.61				19.15		27.07		33.77		35.93
1B (Offsite)	2,249,930	51.65	0.55	15.7	1.40	39.77	2.10	59.66	2.70	76.70	2.90	82.38
Subtotal	2,249,930	51.65				39.77		59.66		76.70		82.38
Total	2,886,152	66.26				58.93		86.73		110.47		118.31
					Change in Site Surface Runoff (CFS)	**-0.77**		**-0.65**		**-0.88**		**-0.46**

1. Runoff coefficients have been been determined by Figure 1 of the City of Escondidoo Public Works Standard Drawings, Run-Off Intensity Duration Curve

2. See Existing and Proposed Tc able for time of concentration calculations.

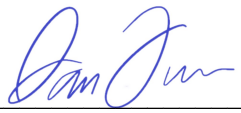
3. Intensity values have been calculated per Figure 1 of the City of Escondidoo Public Works Standard Drawings, Run-Off Intensity Duration Curve

CONCLUSION:

The Outfall Summary shows that the proposed Alexan decreases the peak runoff discharge in a potential 50-year or 100-year storm event. Existing peak discharge is 118.77 cubic feet per second and the proposed peak discharge is 118.31 cubic feet per second. In a responsible effort to minimize the negative impact on the environment, it is evident that the Alexan project should not be seen as a detrimental impact to existing hydrologic basin and drainage system.

ENGINEER OF WORK:

This report was prepared under the supervision of Daniel Quinones, PE, Project Manager for Nasland Engineering.

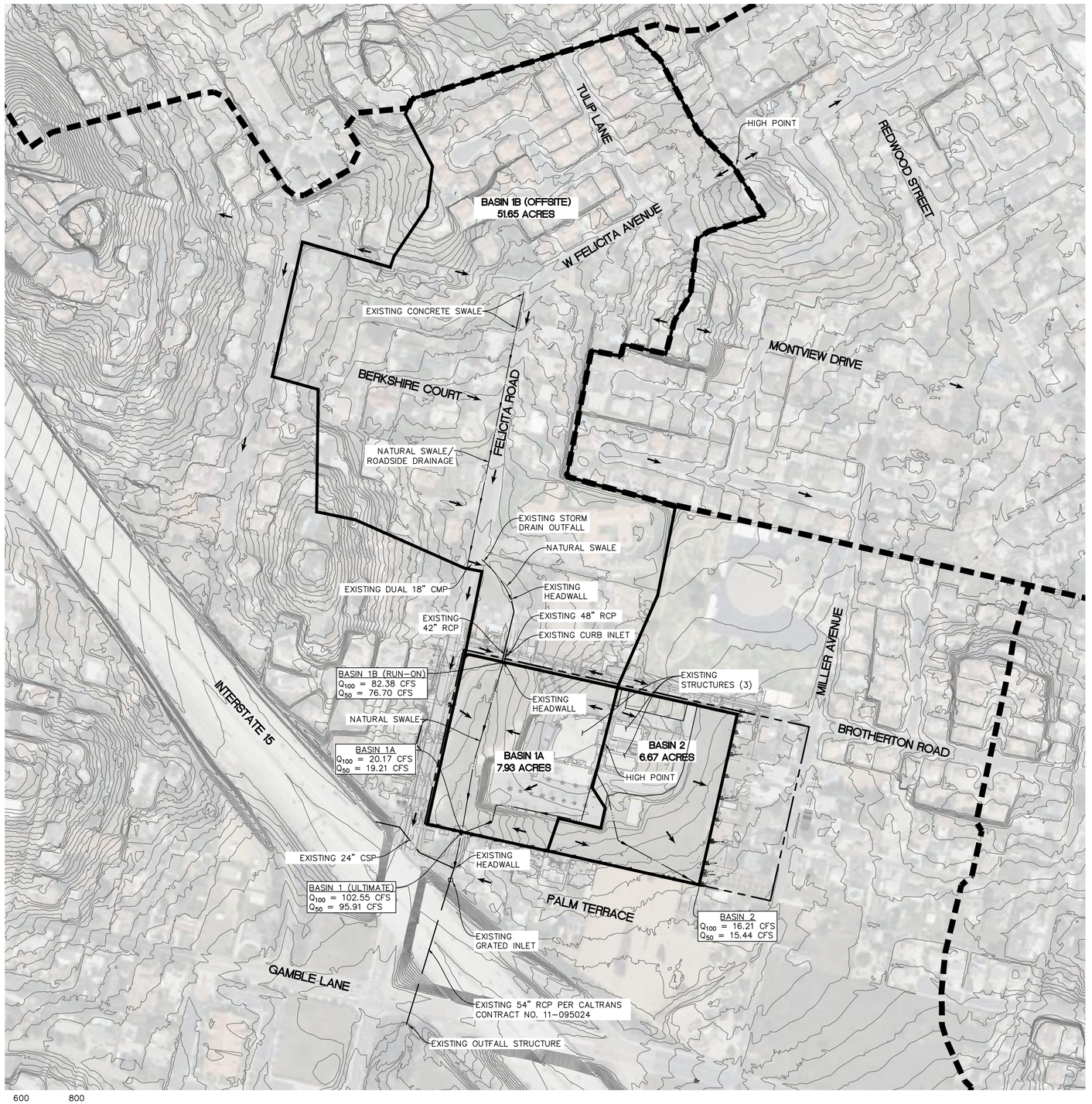


Daniel Quinones ● RCE 92130 ● Expires 06-30-25

APPENDIX

APPENDIX A

EXISTING HYDROLOGY CONDITIONS EXHIBIT



LEGEND

- BASIN LIMITS (PER CITY MASTER DRAINAGE PLAN)
- SUB BASIN LIMITS
- BASIN DRAINAGE FLOW

200 0 200 400 600 800

SCALE 1" = 200'

EXISTING HYDROLOGY CONDITIONS

Nasland
Civil Engineering
Surveying
Land Planning
T (858) 292-7770
4740 Ruffner Street
San Diego, CA 92111
nasland.com

APPENDIX B

PROPOSED HYDROLOGY CONDITIONS EXHIBIT

EXISTING 42" RCP

EXISTING 54" RCP

EXISTING RUN-ON
Q_{100} = 82.38 CFS
Q_{50} = 76.70 CFS

EXISTING CURB INLET IE=637.66

BROTHERTON RD

PROPOSED BIOFILTRATION BMP

PROPOSED JUNCTION STRUCTURE

PROPOSED MODULAR WETLAND SYSTEM

HP=653.00FS

PROPOSED 54" RCP

PROPOSED CLEANOUT

PROPOSED DETENTION VAULT

FELICITA RD

BASIN 1
7.92 AC

BASIN 2
6.68 ACRES

HP=660.50FS

NOTE:
ALL EXISTING RUN-ON FROM ADJACENT PROPERTY SHALL BE DESIGNED TO BE CAPTURED ON-SITE PRIOR TO FINAL GRADING PERMIT ISSUANCE. O RUN-ON WILL BE ALLOWED.

PROPOSED MODULAR WETLAND SYSTEM

PROPOSED CATCH BASIN

PROPOSED 54" RCP

PROPOSED CURB INLET

PROPOSED CURB INLET

PROPOSED BIOFILTRATION BMP

PROPOSED 20' EASEMENT

PROPOSED CATCH BASIN

PROPOSED CLEANOUT

PROPOSED MODULAR WETLAND SYSTEM

PROPOSED CLEANOUT

PROPOSED CLEANOUT

PROPOSED DETENTION VAULT

PROPOSED 54" RCP

PROPOSED CLEANOUT

PROPOSED BIOFILTRATION BMP

BASIN 2
Q_{100} = 16.25 CFS
Q_{50} = 15.47 CFS

PROPOSED DETENTION VAULT

BASIN 1
Q_{100} = 19.68 CFS
Q_{50} = 18.30 CFS

BASIN 1 + OFFSITE RUN-ON
Q_{100} = 102.06 CFS
Q_{50} = 95.00 CFS

PROPOSED CLEANOUT IE=631.25

PROPOSED 20' EASEMENT

PROPOSED DUAL 30" RCP

REMOVE EXISTING HEADWALL. INSTALL MODIFIED CLEANOUT IE=629.59

EXISTING 24" CSP PER 11-095024

EXISTING 54" RCP PER 11-095024

PALM TERRACE

LEGEND

BASIN LIMIT.....

PROPOSED ASPHALT.....

PROPOSED BIOFILTRATION BMP.....

40 0 40 80 120 160

SCALE 1" = 40'

PROPOSED HYDROLOGY CONDITIONS

Nasland
Civil Engineering
Surveying
Land Planning
T (858) 292-7770
4740 Ruffner Street
San Diego, CA 92111
nasland.com

APPENDIX C

REFERENCES

DRAINAGE - DESIGN STANDARDS

1. GENERAL

A. All drainage design and requirements shall be in accordance with the City adopted SUSMP, the latest Drainage Master Plan, Flood Insurance Rate Maps; the City's Floodplain Ordinance, and/or the requirements of the City Engineer.

B. All public and private drainage facilities shall be designed for a 50-year frequency storm, except that a 100-year frequency storm shall be used for all tributary areas over one square mile.

C. The use of underground storm drain systems, in addition to standard curb and gutter, shall be required:

(1) When the depth of flow in a public street exceeds 5 inches or more than 16 feet of roadway is flooded in a 50-year frequency storm.

(2) When existing drainage facilities discharge into the proposed development.

(3) When the depth-velocity product of flow in the street (expressed in feet and feet per second) exceeds six.

(4) To minimize the installation of cross gutters.

D. When the above conditions require an underground storm drain, the combined street and storm drain design shall be based on a 50-year frequency storm.

E. Permanent open drainage ditches will not be permitted in the right-of-way of a public street.

F. Open channels may be considered in lieu of underground systems when the design flow exceeds the capacity of a 48 inch diameter reinforced concrete pipe (R.C.P.)

G. The Developer shall be responsible for accepting all drainage flows tributary to his property, and providing permanent drainage facilities in conformance with these standards and the requirements of the City Engineer through the limits of the development to a point of satisfactory disposal as approved by the City Engineer.

H. Concentrated discharges into unimproved areas shall only be permitted into natural channels with "defined bed and banks". An energy dissipater shall be considered at these locations.

I. The type of drainage facility shall be selected on the basis of physical adaptability to the proposed land use. Environmental channels are encouraged in areas where substantial open space can be preserved. A low-flow pipe or swale shall be included in the design of the channel. Maximum design velocity shall be 6 F.P.S. in the channel.

J. Concentrated drainage over 10 C.F.S. shall not be discharged to city streets.

K. The minimum freeboard for open channels shall be based on the following formula:

$$1+0.025\ v\ d^{0.33}$$

v = normal velocity in feet per second
d = normal depth of flow in feet

L. Improved open channels shall be fenced on both sides. Access roads shall be provided to the channel bottom at approximately 1500 foot intervals, or at each street intersection. The maximum slope of access roads shall be 10%. The minimum channel bottom width shall be 8 feet.

2. HYDROLOGY

A. Off-site, use a copy print of the latest edition of the City's topographic maps. Show existing culverts, cross-gutters and drainage courses based on a field review. Indicate the direction of flow, clearly delineate each drainage basin showing the area and discharge and the point of concentration.

B. On site, use the Grading Plan. If grading is not proposed, then use a 100-scale plan or greater enlargement. Show all proposed and existing drainage facilities and drainage courses. Indicate the direction of flow. Clearly delineate each drainage basin showing the area, discharge and the point of concentration.

C. Use the charts in Figure No. 1 and No. 2 for finding the "T_c" and "I."

D. Use the "C" Factor shown in Figure No. 1.

E. Use the rational formula Q = CIA for watersheds less than 0.5 square mile. For watersheds in excess of 0.5 square mile, the method of analysis shall be approved by the City Engineer prior to submitting calculations.

3. HYDRAULICS

A. Street - Provide:

(1) Depth of gutter flow calculations.

(2) Inlet calculations.

(3) Show gutter flow Q, inlet Q, and bypass Q on a plan of the street.

B. Storm Drain pipes and Open Channels - Provide:

(1) Hydraulic loss calculations for: entrance, friction, junction, manholes, bends, angles, reduction, and enlargement.

(2) Analyze existing conditions upstream and downstream from proposed system, to be determined by the City Engineer on a case-by-case basis.

(3) Calculate critical depth and normal depth for open channel flow conditions.

(4) Show the hydraulic grade line (H.G.L.) plotted on a scale drawing of the pipe or channel profile.

(5) Design for a non-silting velocity of 4 F.P.S. in a 2-year frequency storm.

4. INLETS

A. Curb inlets at a sump condition should be designed for 2 C.F.S. per lineal foot of opening when headwater may rise to the top of curb.

B. Curb inlets on a continuous grade for 100% interception should be designed based on the following equation:

$$Q = 0.7\ L\ (a + y)^{3/2}$$

Where y = Depth of flow in approach gutter (feet)
a = Depth of depression of F.L. at inlet (feet)
L = Length of clear opening (feet)

Continuous grade inlets designed for partial interception should be based on Bureau of Public Roads Nomographs (now known as the Federal Highway Administration).

C. Six inches of freeboard shall be provided for street inlets from the hydraulic grade line to the flow line of gutter.

D. Grated inlets should be avoided when possible. When necessary, the design should be based on the Bureau of Public Roads Nomographs (now known as the Federal Highway Administration).

E. Inlets shall be provided at superelevated roadway sections, both at the curb and in the median, as needed to avoid concentrated flows across the roadway.

5. STORM DRAINS

A. Minimum pipe slope is 0.5%. A flatter slope may be approved based on topography.

B. Minimum storm drain size shall be 18 inches in diameter.

C. Provide cleanouts at 300 feet maximum spacing, at angle points exceeding 10%, and at breaks in grade. For pipes 48 inches in diameter and larger, a maximum spacing of 500 feet may be used.

D. The material for storm drains shall be reinforced concrete.

E. The pipe invert elevations, slope, length, material, and pipe profile shall be shown on the improvement plans.

F. When “lugging” of pipes is allowed by the City Engineer, the connecting pipe shall be no more than ⅔ the diameter of the larger pipe being lugged into.

G. An inlet structure including headwalls and wingwalls and a paved inlet apron shall be provided at all inlets. In addition, chain link fencing and a protective barrier shall be provided when necessary for public safety.

H. Access shall be available, or provided for maintenance of all drainage facilities.

I. The strength classification of any pipe shall be shown on the plans.

J. Special Design - For all drainage design not covered in these Standards, the current San Diego County Hydrology and Design and Procedure Manual shall be used.

K. The minimum horizontal radius for any storm drain shall be 22½ feet. A maximum deflection angle of 10 degrees per bend shall be used for horizontal curves, and not to exceed manufactures recommendations.

L. Where easements are necessary, the minimum width shall be 20 feet, surfaced and fenced on both sides. Easements with slopes over 10% shall be paved. All easements shall be accessible by City maintenance with standard maintenance equipment.

LIST OF REFERENCES

American Association of State Highway and Transportation Officials, "A Policy on Design of Urban Highways and Arterial Streets", Current Edition.

"American Water Works Association Standards," Current Edition.

California Department of Health Services, "California Waterworks Standards", Current Edition.

California Department of Transportation, "Highway Design Manual of Instructions", Current Edition.

City of Escondido, "Circulation Element of the General Plan", Current Edition.

City of Escondido, "Code of Ordinances", Current Edition.

County of San Diego, Flood Control Division, "Hydrology Manual", Current Edition.

County of San Diego, Flood Control Division, "Design and Procedure Manual", Current Edition.

County of San Diego, Flood Control Section, “Drainage Design Manual”, Current Edition

County of San Diego Department of Transportation, "Standard Special Provisions," Current Edition.

Masson and Associates (November 1995) *City of Escondido Drainage Master Plan*

County of San Diego Department of Public Works, "San Diego Regional Standard Drawings," Current Edition.

"Standard Specifications for Public Works Construction," 2012 Edition”.

U.S. Department of Transportation, Federal Highway Administration, "Drainage of Highway Pavements," Hydraulic Engineering Circular No. 12, March, 1969.

State of California, Department of Transportation, California Manual on Uniform Traffic Control Devices, Current Edition.

Atkins (June 2012) *City of Escondido 2012 Water Master Plan*

Atkins (June 2012) *City of Escondido 2012 Wastewater Master Plan*

City of Escondido (May 1999) *Recycled Water Service Rules & Regulations, Project Guidelines*

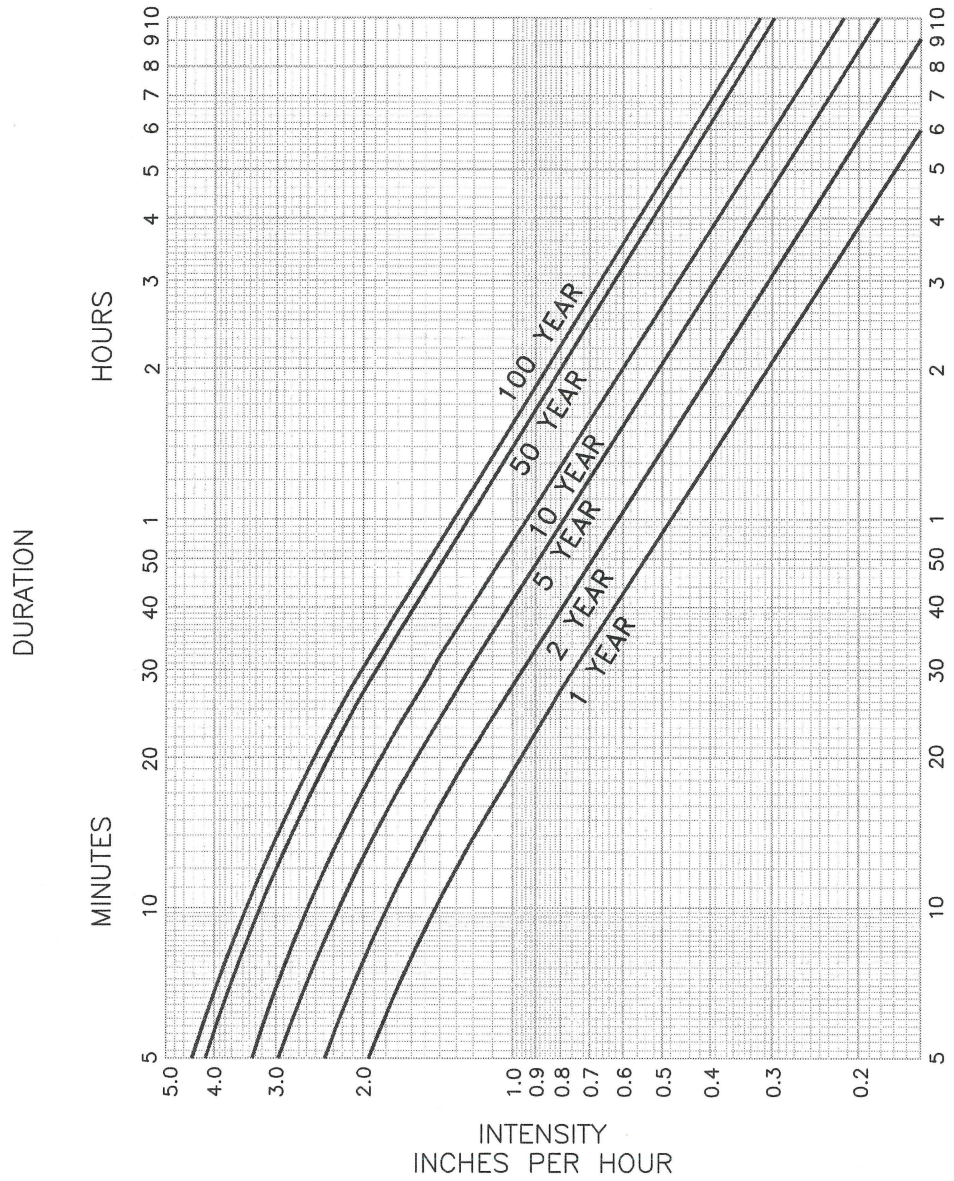
City of Escondido (March 2010) *City of Escondido SUSMP Standard Urban Stormwater Mitigation Plan Requirements for Development Projects*

Boyle Engineering Corporation (November 2005) *City of Escondido Wastewater Collection System Master Plan Update*

J. Powell & Associates (March 2000) *City of Escondido Water Master Plan*

American Public Works Association (1994) *Standard Plans for Public Works construction,* BNI

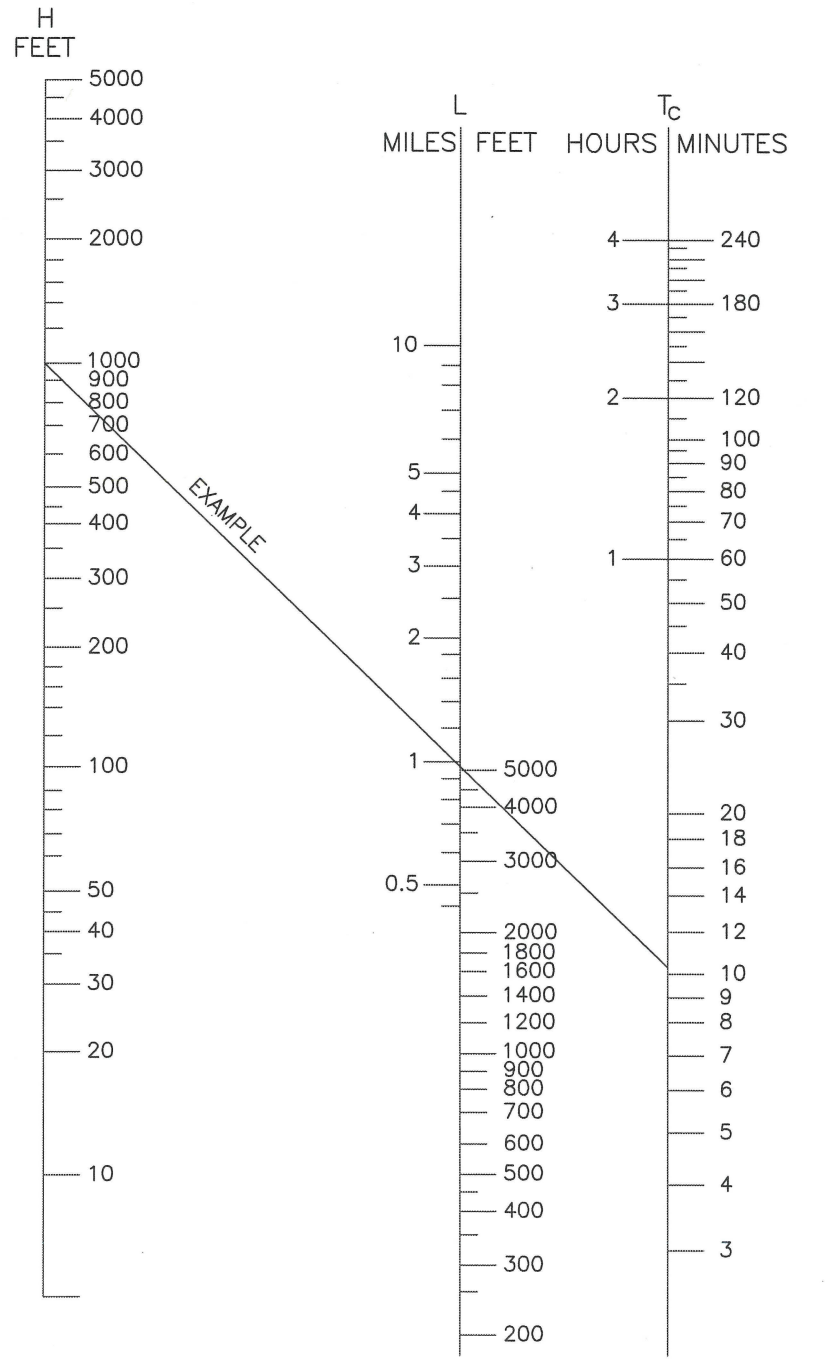
Figures



ESCONDIDO RUNOFF COEFFICIENTS

PARKS, GOLF COURSES, CEMETERIES	0.25
UNDEVELOPED LAND, OPEN SPACE	0.35
RURAL – OVER 1/2 ACRE LOTS	0.45
SINGLE FAMILY	0.55
MOBILE HOME	0.65
MULTIPLE UNITS	0.70
COMMERCIAL	0.85
INDUSTRIAL	0.95

APPROVED: Edward N. Domingue P. W. DIRECTOR/CITY ENGINEER	DATE: 04-02-2014	CITY OF ESCONDIDO DEPARTMENT OF PUBLIC WORKS	SCALE: NOT TO SCALE
REVISED	APPROVED	RUN-OFF INTENSITY DURATION CURVE	FIGURE NO. 1



$$Tc = \left(\frac{11.9\ L^3}{H}\right)^{.385}$$

NOTE:

THIS CHART SHALL BE USED FOR ALL BASINS WITHIN THE CITY OF ESCONDIDO LESS 0.5 SQUARE MILE. THE MINIMUM Tc TO BE USED IS 10 MINUTES

Tc = TIME OF CONCENTRATION (HOURS)
L = LENGTH OF DRAINAGE COURSE (MILES)
H = DIFFERENCE IN ELEVATION FROM FURTHER MOST POINT OF DESIGN (FEET)

APPROVED: Edward N. Domingue P. W. DIRECTOR/CITY ENGINEER	DATE: 04-02-2014	CITY OF ESCONDIDO DEPARTMENT OF PUBLIC WORKS	SCALE: NOT TO SCALE
REVISED	APPROVED	RUNOFF TIME CHART	FIGURE NO. 2

SEE TILE 19 (SHEET 12)

PARCEL LINE INFORMATION PROVIDED BY:
SAN DIEGO DATA PROCESSING CORPORATION
ACCORDING TO THE BASE MAP SUB LICENSE
AGREEMENT WITH THE CITY OF ESCONDIDO

TOPOGRAPHY COMPILED BY:
GEONEX NORTH AMERICAN OPERATIONS, INC.
DATED NOVEMBER, 1992

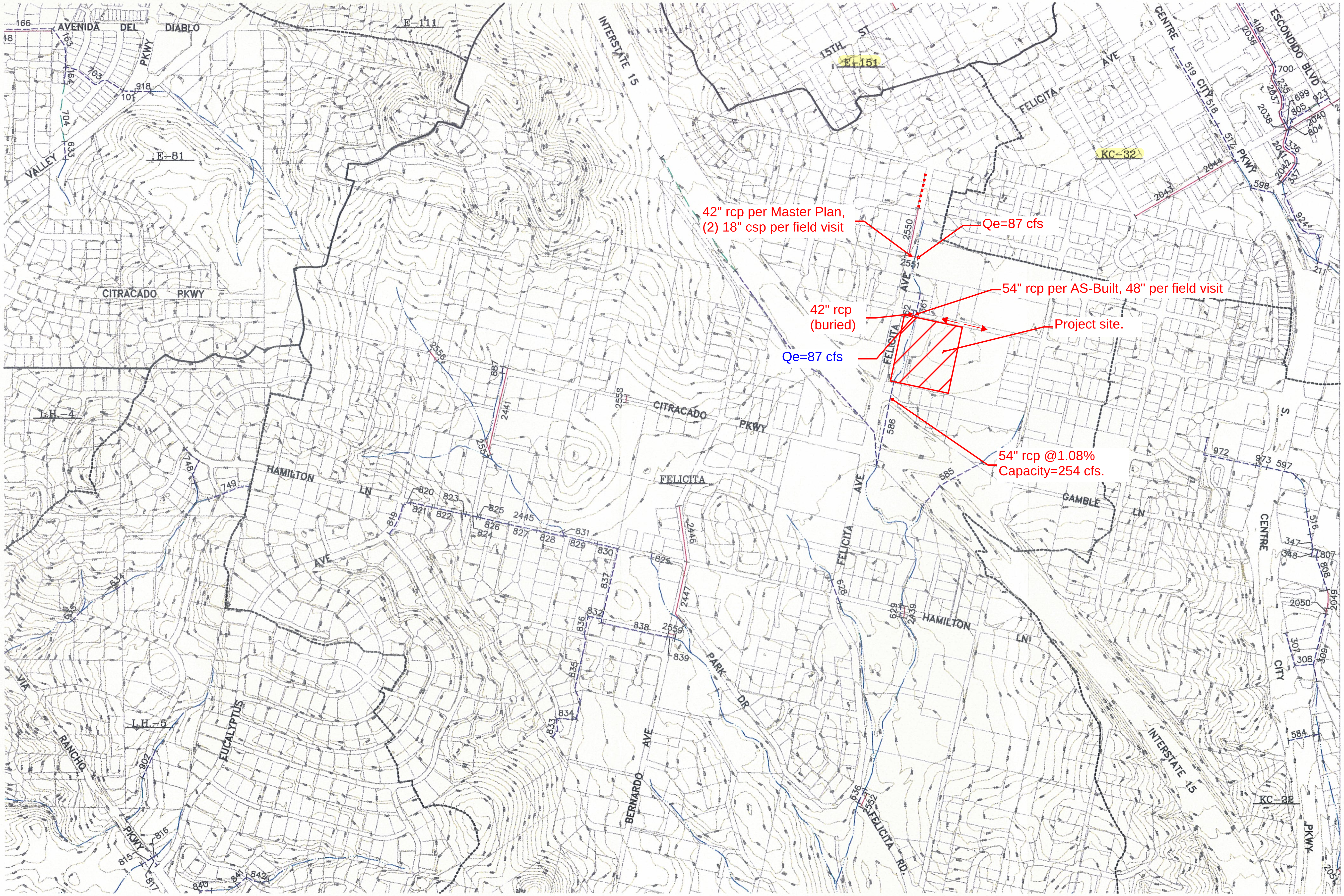
LEGEND
EXISTING CONTOUR ELEVATION
EXISTING NATURAL FLOW
EXISTING IMPROVED CHANNEL
EXISTING STORM DRAIN
PROPOSED FACILITY
EXISTING LAKES

LEGEND
MAJOR BASIN BOUNDARY
MINOR BASIN BOUNDARY
GENERAL PLAN BOUNDARY
BASIN DESIGNATION
EXIST. / PROP. DESILT BASIN
FACILITY IDENTIFIER — 2056

SCALE IN FEET: 400 200 0 400 800 1200

N

SEE TILE 11 (SHEET 5)



SEE TILE 13 (SHEET 7)

SEE TILE 9 (SHEET 3)

MASSON & ASSOCIATES, INC.
PLANNING • ENGINEERING • SURVEYING
200 E. WASHINGTON AVE. • SUITE 200 • ESCONDIDO • CA 92025-1815
TEL (619) 741-3570 • FAX (619) 741-1786

Date	App'd	REVISIONS	By	Date

Checked By	Drawn by	Designed By	SCALE
DWM-END	DAM	JAW-LBR-END	Horizontal 1" = 400'
Plans Prepared Under Supervision Of: For Masson & Assoc. Inc.			DATE: 02-06-95
EDWARD N. DOMINGUE R.C.E. 34131 DATE:			Drawn By: DAM

Submitted ____________ Approved ____________
By ____________ Asst. City Engineer By ____________ Asst. Director of Public Works

CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS
DRAINAGE MASTER PLAN FOR THE CITY OF ESCONDIDO:
EXISTING / PROPOSED STORM DRAINS TILE 12

Drawing No. D-1114
Sheet 6 of 33

TABLE 3.1

EXISTING FACILITIES

GEOMETRY: 1 = TRAP. OPEN CHANNEL, 2 = IRREGULAR CHANNEL, 3 = BOX CHANNEL, 4 = PIPE, 5 = RECT. OPEN CHANNEL
MATERIALS: 1 = R.C.P., 2 = C.I.P.P., 3 = R.C.B., 4 = C.M.P.A., 5 = C.M.P., 6 = NAT. CHNL., 7 = CONC. CHNL., 8 = SPIRAL RIBBED
Qc= EXISTING CAPACITY

ID #	SYSTEM	GEOMETRY	WIDTH (IN)	HEIGHT (IN)	RATIO	MATERIAL	DRAWING NO.	LENGTH (FEET)	SLOPE	Qc (CFS)
137	E-92	4	48			1	P-1772	103	1.60%	182
138	E-92	4	48			2	P-1775	182	9.26%	379
139	E-92	4	48			2	P-1775	155	5.79%	300
140	E-92	4	42			1	P-1800	277	5.31%	232
141	E-92	4	36			1	P-1800	298	1.90%	92
142	E-92	4	36			1	P-1800	96	1.50%	82
143	E-92	4	36			1	P-1800	193	7.11%	178
144	E-92	4	36			1	P-1800	364	1.90%	92
145	NOT USED									
146	NOT USED									
147	E-211	3	36	24		3	D-1000	70	0.23%	28
148	E-211	4	58	36		4	D-1000	609	0.32%	88
149	E-81	4	54			5	D-1002-2	163	1.02%	199
150	E-81	4	48			5	D-1002-2	350	3.29%	261
151	E-81	4	49	33	2	4	D-1002-2	124	1.04%	222
152	E-81	4	48			5	D-1002-2	96	1.02%	145
153	E-81	4	49	33		4	D-1002-2	227	2.43%	170
154	E-102	4	25	16	2	4	D-1004-2	110	0.17%	14
155	E-102	4	25	16	2	4	D-1004-3	450	0.17%	14
156	E-81	4	71	47		4	P-1004-A	70	1.00%	564
157	R-66	2	84	40	1.5	6	P-1007-11	1180	0.50%	141
158	R-66	4	76	52		4	P-1007-11	325	0.40%	230
159	R-66	4	54			1	P-1007-3	276	0.85%	181
160	R-66	4	48			1	P-1007-3	358	2.66%	234
161	NOT USED									
162	FEL	4	42			1	P-1154	41	1.17%	109
163	E-81	4	72			1	P-1165	337	0.30%	232
164	E-81	4	54			1	P-1165	125	1.00%	197
165	E-81	4	48			1	P-1165	386	0.86%	133
166	E-81	4	48			1	P-1165	568	1.14%	153
167	KC21	3	72	36	2	3	P-1168	60	2.00%	630
168	NOT USED									
169	E-202	4	48			1	P-1175	123	0.50%	102
170	E-202	4	48			1	P-1175	349	0.50%	102

TABLE 3.1

EXISTING FACILITIES

GEOMETRY: 1 = TRAP. OPEN CHANNEL, 2 = IRREGULAR CHANNEL, 3 = BOX CHANNEL, 4 = PIPE, 5 = RECT. OPEN CHANNEL
MATERIALS: 1 = R.C.P., 2 = C.I.P.P., 3 = R.C.B., 4 = C.M.P.A., 5 = C.M.P., 6 = NAT. CHNL., 7 = CONC. CHNL., 8 = SPIRAL RIBBED
Qc= EXISTING CAPACITY

ID #	SYSTEM	GEOMETRY	WIDTH (IN)	HEIGHT (IN)	RATIO	MATERIAL	DRAWING NO.	LENGTH (FEET)	SLOPE	Qc (CFS)
341	R-42	4	36			1	P-1764	60	1.00%	67
342	S.M.	4	36			1	P-1771	100	0.74%	57
343	NOT USED									
344	NOT USED									
345	E-92	4	54			2	P-1772	312	1.64%	252
346	E-92	4	54			2	P-1772	142	1.00%	170
347	KC-22	4	48			1	P-1667	131	1.00%	144
348	KC-22	4	45			1	P-1667	70	0.50%	86
349	KC-11	4	36			1	P-1667	90	0.40%	42
350	KC-11	4	50	31	2	4	P-1667	150	0.37%	133
351	KC-11	4	50	31	2	4	P-1667	60	2.57%	349
352	L.H.	4	48		2	1	P-1667-7/2098	220	2.83%	483
353	E-193	4	54			2	P-1669	612	0.50%	121
354	E-193	4	42		2	1	P-1669	68	0.50%	142
355	NOT USED									
356	E-236	4	36			1	P-1681	150	0.31%	37
357	E-111	4	36			1	P-1684-11	53	0.73%	57
358	E-111	4	36			1	P-1684-11	459	0.73%	57
359	NOT USED									
360	NOT USED									
361	FEL	4	54			1	P-1688	240	0.50%	139
362	R-71	5	120	48		7	P-1692	262	0.50%	425
363	R-71	4	10	3		3	P-1692	79	0.50%	342
364	E-202	4	36			1	P-1903	130	0.50%	47
365	E-193	4	36			1	P-1909	152	2.50%	105
366	E-231	4	36			1	P-1915-4	127	0.35%	39
367	S.M.	4	36			1	P-1917-4	278	2.15%	98
368	R-42	4	84			1	P-1927-3	455	0.60%	495
369	E-193	4	60			1	D-1002-2	318	0.43%	171
370	E-193	3	60	36	2	3	D-1002-2	95	0.43%	229
371	E-193	4	48		2	1	D-1002-2	327	0.43%	188
372	E-193	4	45		2	1	D-1002-2	1207	0.42%	157
373	E-193	4	45			1	D-1002-6	469	1.05%	124
374	E-193	4	42			1	D-1002-6	424	1.00%	101

TABLE 3.1

EXISTING FACILITIES

GEOMETRY: 1 = TRAP. OPEN CHANNEL, 2 = IRREGULAR CHANNEL, 3 = BOX CHANNEL, 4 = PIPE, 5 = RECT. OPEN CHANNEL
MATERIALS: 1 = R.C.P., 2 = C.I.P.P., 3 = R.C.B., 4 = C.M.P.A., 5 = C.M.P., 6 = NAT. CHNL., 7 = CONC. CHNL., 8 = SPIRAL RIBBED
Qc= EXISTING CAPACITY

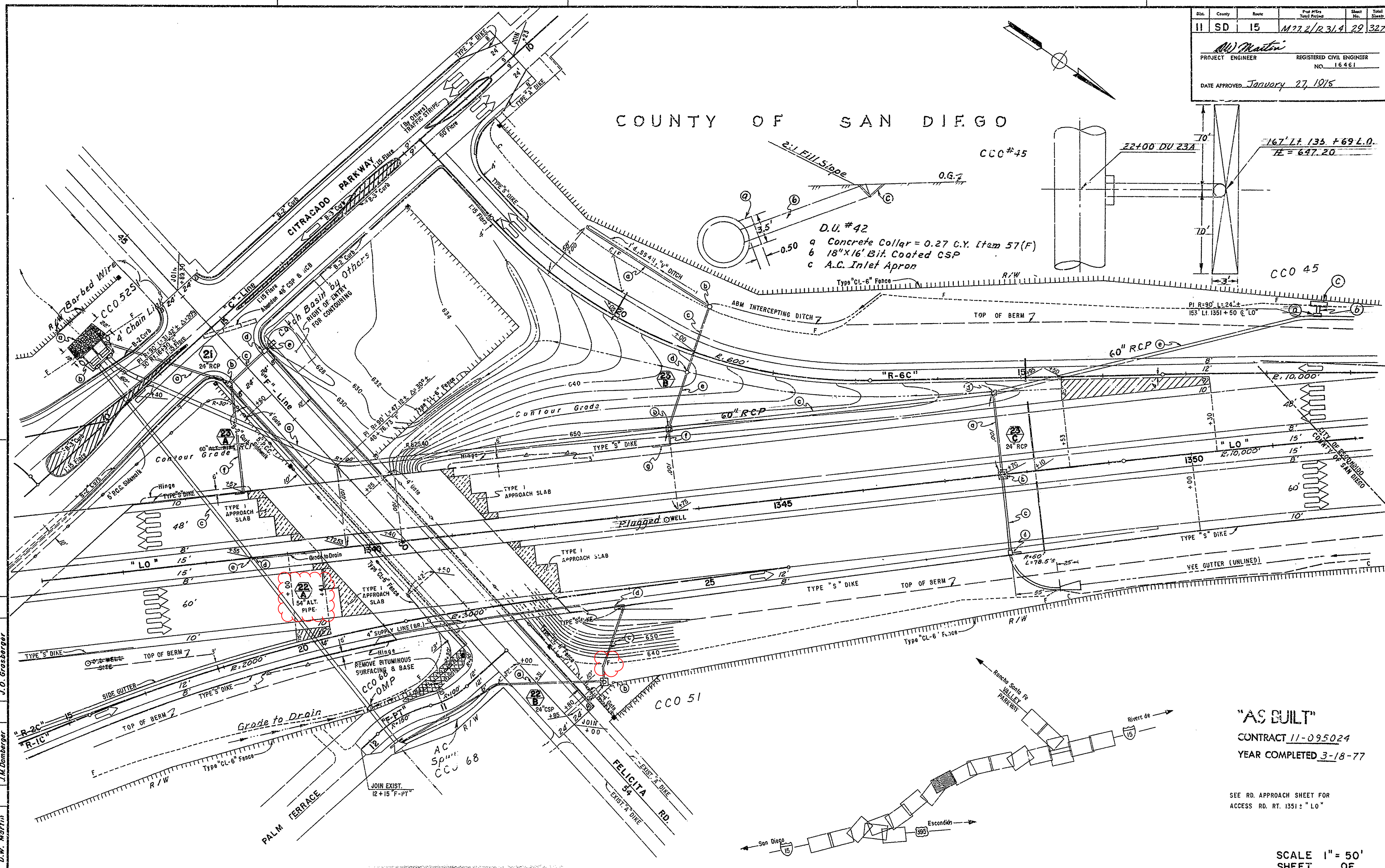
ID #	SYSTEM	GEOMETRY	WIDTH (IN)	HEIGHT (IN)	RATIO	MATERIAL	DRAWING NO.	LENGTH (FEET)	SLOPE	Qc (CFS)
579	E-151	4	48			1	D-1037	473	0.50%	102
580	E-151	4	39			1	D-1037	373	0.60%	64
581	E-151	4	36			1	D-1037	501	0.70%	56
582	NOT USED									
583	KC-22	4	48			1	11-095024-11	975	1.65%	184
584	KC-22	4	36			1	11-095024-13	290	0.92%	64
585	FEL	4	48			1	11-095024-24	670	0.54%	106
586	FEL	4	54			1	11-095024-29	780	1.08%	204
587	FEL	4	60			1	11-095024-30	2300	1.30%	297
588	FEL	2	24	24	VARIES	7	11-095024-31	1200	3.47%	87
589	E-111	4	36			1	11-095024-35	549	2.57%	107
590	E-131	4	36			1	11-095024-41	936	2.10%	97
591	E-131	1	12	24	1.5	7	11-095024-41	505	5.15%	91
592	E-132	4	48			1	11-095024-49	1500	0.50%	102
593	R-31	4	42			1	P-1551	192	1.00%	101
594	R-5	3	144	96	3	3	P-1602-5	61	1.15%	7155
595	R-5	4	156	61	4	4	P-1602-5	63	0.54%	2504
596	R-62	4	36			1	P-1602-6	200	2.36%	102
597	KC-22	3	6	36		3	P-1608-21	295	0.83%	203
598	KC-32	4	48			5	P-1608-13	200	0.40%	49
599	E-102	4	72	44		4	P-1012-10	699	0.50%	200
600	E-102	4	36			1	P-1555-8	32	0.50%	47
601	E-102	1	6		2	6	P-1555-8	260	1.00%	199
602	E-102	4	36			1	P-1555-8	108	2.00%	94
603	E-102	4	54			1	11-095034-2	240	1.04%	201
604	E-102	4	42			1	6411V13C5	1130	3.03%	175
605	KC-22	4	36			1	11-095024-8	500	2.08%	96
606	E-102	4	58	36		4	D-1100-5	290	0.69%	65
607	E-102	4	58	36		4	D-1100-5	222	0.40%	49
608	E-102	3	120	42	2	3	D-1062	67	0.30%	594
609	E-102	4	48			1	P-1070	65	2.50%	227
610	E-102	4	43	27		4	P-1182-3	160	0.50%	51
611	E-102	4	50	31		4	P-1182-4	224	0.23%	52
612	E-102	3	102	48	3	3	P-1012-17	60	0.50%	1136

TABLE 6.4

PROPOSED FACILITIES- EXISTING DEVELOPMENT

GEOMETRY: 1= TRAP. OPEN CHANNEL, 2= IRREGULAR CHANNEL, 3= BOX CHANNEL, 4= PIPE, 5= RECT. OPEN CHANNEL
MATERIALS: 1= R.C.P., 2= C.I.P.P., 3= R.C.B., 4= C.M.P.A., 5= C.M.P., 6= NATURAL CHANNEL, 7= CONC. CHANNEL, 8= SPIRAL RIBBED
Qe= EXISTING DEVELOPMENT FLOW * R=REPLACE, P=PARALLEL, N= NEW **NO I.D. ~EXIST < 36"

ID #	SYSTEM	GEOMETRY	WIDTH (in)	HEIGHT (in)	RATIO	MAT'L	EXISTING REF. ID #	R/P/N *	LENGTH (ft)	COST/ UNIT	Qe (cfs)	FREQ	FROM NODE	TO NODE	COST ESTIMATE
2427	E 221	3	102	72	2	3	432	R	1080	$439	1044	100	427	428	$948,240
2428	LH 11 A	< 36"					**		140	$0	77	50	104	106	$0
2429	LH 11 A	4	51		1	1	**	R	140	$139	271	50	212	214	$19,460
2430	LH 12 A	< 36"						N	100	$0	89	50	104	106	$0
2431	LH 8	4	45		1	1		N	100	$116	155	50	112	114	$11,600
2432	R 12	4	36		1	1	450	R	40	$95	76	50	218	220	$3,800
2433	R 12	4	36		1	1	449	P	253	$95	76	50	222	224	$24,035
2434	R 12	4	57	36	1	4	448	P	128	$161	110	50	224	226	$20,608
2435	R 12	4	63	40	1	4	447	P	750	$180	117	50	226	228	$135,000
2436	R 12	4	63	40	1	4	446	P	253	$180	131	50	228	230	$45,540
2437	R 12	4	27		1	1	443	P	100	$83	145	50	234	236	$8,300
2438	R 12	4	27		1	1	443	P	944	$83	154	50	236	238	$78,352
2439	FEL	4	54		2	1	629	P	70	$152	457	100	416	418	$21,280
2556	FEL	< 36"								$0	39	100	125	126	$0
2441	FEL	< 36"							700	$0	74	100	137	129	$0
2557	FEL	4	51		1	1		N	50	$139	175	100	129	129	$6,950
2558	FEL	< 36"							60	$0	47	100	304	306	$0
2559	FEL	4	36		1	1	839	P	74	$95	381	100	130	132	$7,030
2446	FEL	4	36		1	1		N	500	$95	64	100	307	309	$47,500
2447	FEL	4	36		1	1	*	P	600	$95	94	100	309	314	$57,000
2550	FEL	4	42		1	1		N	400	$106	77	100	504	506	$42,400
2551	FEL	4	42		1	1	**	R	68	$106	87	100	506	508	$7,208
2552	FEL	4	60		2	5	636	P	140	$150	585	100	422	424	$50,400
2553	FEL	4	36		1	5	913	P	120	$95	1071	100	138	140	$11,400
2554	FEL	4	36		1	5	631	P	100	$95	84	100	904	906	$9,500
2555	FEL	4	93		2	5	630	P	132	$366	1427	100	146	148	$96,624
2448	E 81	4	54		1	1	165/166	P	923	$152		50	SFP-57		$140,296
2450	E 61	4	36		1	1		N	200	$95	56	50	206	208	$19,000
2451	E 61	4	39		1	1		N	100	$101	79	50	210	212	$10,100



Dist. | County | Route | Post Miles Total Project | Sheet No. | Total Sheets
11 | SD | 15 | M27.2/R31.4 | 29 | 327
D.W. Martin
PROJECT ENGINEER
REGISTERED CIVIL ENGINEER NO. 16461
DATE APPROVED January 27, 1976
COUNTY OF SAN DIEGO
CCO #45
22+00 DU 23A
167' Lt. 135 +69 LO.
FL = 647.20
2:1 Fill Slope
O.G.
D.U. #42
a Concrete Collar = 0.27 C.Y. Item 57(F)
b 18"X16' Bit. Coated CSP
c A.C. Inlet Apron
CCO 45
CITRACADO PARKWAY
"C"-Line
"F"-Line
Catch Basin by others
RIGHT OF ENTRY FOR CONTOURING
Barbed Wire
CCO 52S
4' Chain Link
Contour Grade
"R-6C"
60" RCP
24" RCP
ABM INTERCEPTING DITCH
TOP OF BERM
"LO"
1345
1350
Plugged WELL
TYPE 1 APPROACH SLAB
TYPE "S" DIKE
54" ALT. PIPE
VEE GUTTER (UNLINED)
4" SUPPLY LINE
REMOVE BITUMINOUS SURFACING & BASE
CCO 68 OMP
SIDE GUTTER
"R-2C"
"R-1C"
Grade to Drain
Type "CL-6" Fence
R/W
CCO 51
24" CSP
AC Spur CCO 68
JOIN EXIST. 12+15 "F-PT"
PALM TERRACE
FELICITA RD.
CITY OF ESCONDIDO
COUNTY OF SAN DIEGO
Rancho Santa Fe
VALLEY PARKWAY
Escondido
San Diego
"AS BUILT"
CONTRACT 11-095024
YEAR COMPLETED 3-18-77
SEE RD. APPROACH SHEET FOR ACCESS RD. RT. 1351± "LO"
SCALE 1" = 50'
SHEET OF
Project Engineer D.W. Martin
Design Engineer J.M. Domberger
Approval Recommended by J.O. Grosbarger

FORM HD 92 PF

29

AS BUILT PLANS

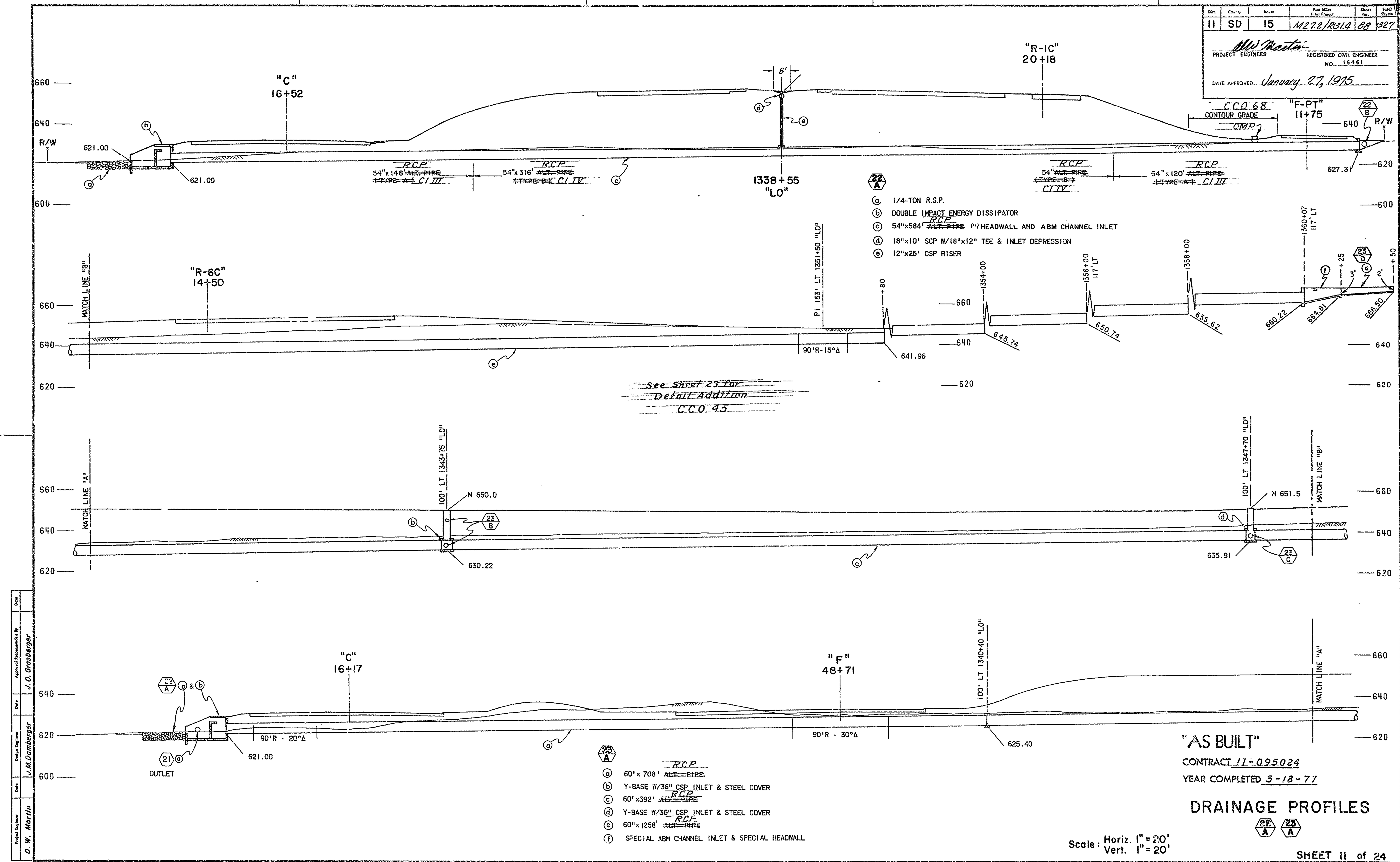
Contract No. 11-095024

Date Completed

Document No.

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE	SIGNATURE	TITLE
5-4-79	Joseph M. Costa	Supervisor of Microfilm



Dist. 11 | County SD | Route 15 | Post Miles M27.2/R31.4 | Sheet No. 88 | Total Sheets 327
PROJECT ENGINEER
REGISTERED CIVIL ENGINEER NO. 15461
DATE APPROVED January 27, 1975
"C" 16+52
"R-1C" 20+18
CCO 68
CONTOUR GRADE
OMP
"F-PT" 11+75
R/W
621.00
621.00
8'
1338+55 "LO"
54"x148' RCP C/III
54"x316' RCP C/IV
54" RCP C/IV
54"x120' RCP C/III
627.31
22 A
ⓐ 1/4-TON R.S.P.
ⓑ DOUBLE IMPACT ENERGY DISSIPATOR
ⓒ 54"x584' RCP W/HEADWALL AND ABM CHANNEL INLET
ⓓ 18"x10' SCP W/18"x12" TEE & INLET DEPRESSION
ⓔ 12"x25' CSP RISER
"R-6C" 14+50
MATCH LINE "B"
PI 153' LT 1351+50 "LO"
+80
1354+00
1356+00 117' LT
1358+00
1360+07 117' LT
+25
+50
23 D
90'R-15°Δ
641.96
645.74
650.74
655.62
660.22
663.81
666.50
See Sheet 23 for Detail Addition CCO 45
MATCH LINE "A"
100' LT 1343+75 "LO"
M 650.0
23 B
630.22
100' LT 1347+70 "LO"
M 651.5
MATCH LINE "B"
635.91
23 C
"C" 16+17
"F" 48+71
100' LT 1340+40 "LO"
MATCH LINE "A"
22 A ⓐ & ⓑ
21 ⓐ OUTLET
621.00
90'R - 20°Δ
90'R - 30°Δ
625.40
23 A
ⓐ 60"x708' RCP
ⓑ Y-BASE W/36" CSP INLET & STEEL COVER
ⓒ 60"x392' RCP
ⓓ Y-BASE W/36" CSP INLET & STEEL COVER
ⓔ 60"x1258' RCP
ⓕ SPECIAL ABM CHANNEL INLET & SPECIAL HEADWALL
"AS BUILT"
CONTRACT 11-095024
YEAR COMPLETED 3-18-77
DRAINAGE PROFILES
22 A 23 A
Scale: Horiz. 1" = 20' Vert. 1" = 20'
SHEET 11 of 24
Project Engineer D. W. Martin
Design Engineer J. M. Dornberger
Approval Recommended By J. O. Grasberger

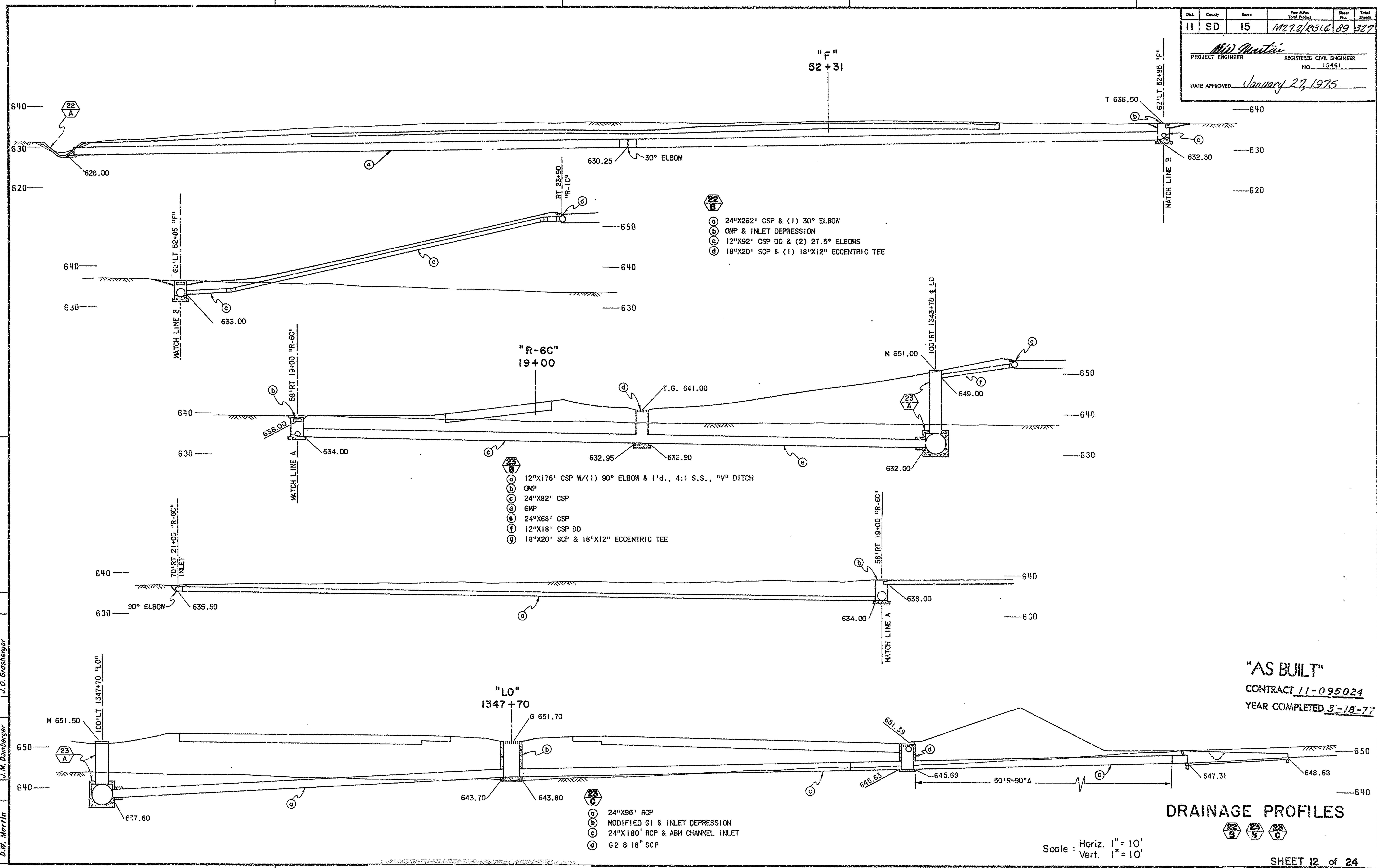
FORM HD 92 PF

88

AS BUILT PLANS
Contract No. 11-095024
Date Completed
Document No.

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 5-4-79 SIGNATURE Joseph m. Costa TITLE Supervisor of Microfilm



Dist. 11 | County SD | Route 15 | Post Miles Total Project M27.2/R31.6 | Sheet No. 89 | Total Sheets 327
PROJECT ENGINEER
REGISTERED CIVIL ENGINEER NO. 15461
DATE APPROVED January 27, 1975
"F" 52+31
62'LT 52+95 "F"
T 636.50
628.00
630.25
30° ELBOW
632.50
MATCH LINE B
22 A
22 B
(a) 24"X262' CSP & (1) 30° ELBOW
(b) OMP & INLET DEPRESSION
(c) 12"X92' CSP DD & (2) 27.5° ELBOWS
(d) 18"X20' SCP & (1) 18"X12" ECCENTRIC TEE
RT 23+90 "R-1C"
62'LT 52+95 "F"
MATCH LINE 3
633.00
"R-6C" 19+00
58'RT 19+00 "R-6C"
100'RT 1343+75 ₵ LO
M 651.00
T.G. 641.00
649.00
638.00
634.00
632.95
632.90
632.00
MATCH LINE A
23 A
23 B
(a) 12"X176' CSP W/(1) 90° ELBOW & 1'd., 4:1 S.S., "V" DITCH
(b) OMP
(c) 24"X82' CSP
(d) GMP
(e) 24"X68' CSP
(f) 12"X18' CSP DD
(g) 18"X20' SCP & 18"X12" ECCENTRIC TEE
70'RT 21+00 "R-6C" INLET
58'RT 19+00 "R-6C"
90° ELBOW
635.50
638.00
634.00
MATCH LINE A
"AS BUILT"
CONTRACT 11-095024
YEAR COMPLETED 3-18-77
"LO" 1347+70
100'LT 1347+70 "LO"
M 651.50
G 651.70
651.39
645.63
645.69
50'R-90°Δ
647.31
648.63
637.60
643.70
643.80
23 C
(a) 24"X96' RCP
(b) MODIFIED GI & INLET DEPRESSION
(c) 24"X180' RCP & ABM CHANNEL INLET
(d) G2 & 18" SCP
DRAINAGE PROFILES
Scale: Horiz. 1" = 10' Vert. 1" = 10'
SHEET 12 of 24
Project Engineer D.W. Mertin
Design Engineer J.M. Damberger
Approval Recommended by J.O. Grasberger

89

FORM HD 92 PF

AS BUILT PLANS
Contract No. 11-095024
Date Completed
Document No.

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 5-4-79 | SIGNATURE Joseph M. Costa | TITLE Supervisor of Blueprints

PLANS FOR THE IMPROVEMENT OF BROTHERTON ROAD
FELICITA AVE. TO 284' WESTERLY OF MILLER AVE.

WORK TO BE DONE:

LEGEND	DESCRIPTION	QUANTITIES		CITY PORTION	
	P.M. SURFACING AND BASE	22,394	S.F.	4257	S.F.
	P.M. TRANSITION	3,051	S.F.	625	S.F.
	THE CONSTRUCTION OF 6" TYPE "G" CURB & GUTTER & TRANSITIONS	879	L.F.	82	L.F.
	THE CONSTRUCTION OF 4" P.C.C. SIDEWALK	4,461	S.F.	410	S.F.
	THE CONSTRUCTION OF 6" P.C.C. DRIVEWAY	870	S.F.		
	THE CONSTRUCTION OF 2"X6" REDWD. HEADER	906	L.F.		
	7,000 LUMIN STREET LIGHT	2	EA.		
	TYPE "L" PADDLES	10	EA.	3	EA.
	THE CONSTRUCTION OF 6" P.M.A.C. BERM	282	L.F.		
	TYPE "B" INLET (L=8')	1	EA.		
	THE CONSTRUCTION OF GRAVITY TYPE HEADWALL	2	EA.		
	THE CONSTRUCTION OF 42" R.C.P. (1350-D)	41	L.F.		
W	THE RELOCATION OF 6" WATER LINE	250	L.F.		
1"AIR VAC	1" AIR & VACUUM & AIR RELEASE VALVE ASSEMBLY	1	EA.		
2"BOD	2" BLOW-OFF ASSEMBLY	1	EA.		
	THE PLANTING OF PARKWAY TREES	15	EA.		
	THE CONSTRUCTION OF FIRE HYDRANT	2	EA.		
	20,000 LUMIN STREET LIGHT	1	EA.		
	REMOVE EXIST. CURB & GUTTER			82	L.F.
	REMOVE EXIST. SIDEWALK			410	S.F.

STANDARD DRAWINGS

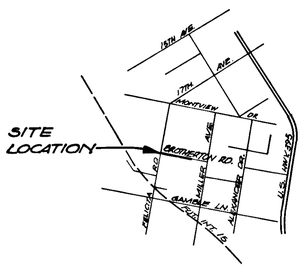
REFER TO THE CITY OF ESCONDIDO STANDARD DRAWINGS NO. 4, 5, 15, 19, 25, 26, 27, 28, D-2, D-32, G-2, G-5, G-7, G-9, W-4, W-6.

GENERAL NOTES:

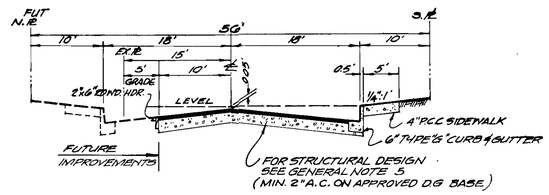
1. ALL STATIONING REFERS TO THE CENTERLINE OF THE STREET
2. ALL CURB DATA REFERS TO THE FACE OF CURB.
3. ALL WORK TO BE DONE IN ACCORDANCE WITH THE STANDARD PLANS AND SPECIFICATIONS OF THE CITY OF ESCONDIDO, AS ADOPTED MAY 26, 1976 BY ORDINANCE NO. 76-17 AND AMENDMENTS THERETO.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES WHETHER SHOWN HEREON OR NOT AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.
5. STRUCTURAL SECTION TO BE DETERMINED AFTER ROUGH GRADING IS COMPLETED ACCORDING TO THE PROVISIONS OF SEC. 3.41 OF THE TECHNICAL STANDARDS OF THE CITY OF ESCONDIDO RESOLUTION NO. 3411.
6. ALL UNDERGROUND UTILITIES TO BE INSTALLED BEFORE CONSTRUCTION OF CURBS AND GUTTERS OR CONCRETE CROSS GUTTERS OR SURFACING OF STREETS
7. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND COORDINATE HIS WORK WITH COMPANY REPRESENTATIVE.
8. PARKWAY TREES, MINIMUM SIZE 6' TALL FROM 15 GALLON CONTAINER SHALL BE PLANTED PER PLANTING SPECIFICATIONS OF THE PARKS AND RECREATION DEPT. OF THE CITY OF ESCONDIDO.
9. NEED FOR SEPARATE ENCROACHMENT PERMIT IS WAIVED SINCE SIGNED PLANS ACT AS PERMIT BUT THE GENERAL PROVISIONS OF AN ENCROACHMENT PERMIT ARE APPLICABLE.
10. NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE THEREFORE.
11. LOCATION AND ELEVATION OF EXISTING IMPROVEMENTS TO BE JOINED BY NEW WORK SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK.
12. WHEN REQUIRED BY THE ENGINEER, CLEANUP AND DUST CONTROL SHALL BE DONE IN ACCORDANCE WITH SECTION 7-8.1 OF THE STANDARD SPECIFICATIONS.
13. UNLESS OTHERWISE SHOWN, WATER SERVICES SHALL BE RUN NORMAL TO THE MAIN.
14. 3/4" AND 1" SERVICES USE JAMES JONES SERVICE SADDLES, SOLID BRASS OR EQUAL.
15. ALL BEDDING FOR UNDERGROUND CONDUIT IN SECTION 306 OF THE STANDARD SPECIFICATIONS SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 90 %.
16. STRUCTURE BACKFILL FOR UNDERGROUND CONDUIT IN THE STANDARD SPECIFICATIONS SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 90 %.
17. SATISFACTORY FINANCIAL ARRANGEMENT SHALL BE MADE WITH ALL UTILITY COMPANIES FOR ANY NECESSARY RELOCATION OF FACILITIES.

CLEARED BY: S.D.G & E. CO. 1-19-76

PACIFIC TELCO. 1-19-76



VICINITY MAP
NO SCALE



TYPICAL STREET SECTION
NO SCALE.

Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this Project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this Project, excepting for liability arising from the sole negligence of the Owner or the Engineer.

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT

William Young
MANAGER

NESTE, BRUDIN & STONE
INCORPORATED / Civil Engineers
SAN BERNARDINO HEMET ESCONDIDO
W.O. E75005-002

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS	Drawing No.
Contractor						ESCONDIDO B.M. NO. 282	Horizontal AS NOTED		D.W.M.	J.E.L.	D.W.M.	July 29 1977	8/18/77	PLANS FOR THE IMPROVEMENT OF BROTHERTON ROAD	P-115-1
Inspector						ON DRAIN STRUCTURE S.W. CORNER ROAN & MOUNTVIEW DR.	Vertical AS NOTED	FILM EJ 03/05/92	Plans Prepared Under Supervision Of			By	By		Sheet 1 of 2
Date Completed						ELEVATION = 676.81		Traffic	Date 11-26-75			City Engineer	Director Of Public Works		
									R.C.E. No. 17706						

Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this Project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this Project, excepting for liability arising from the sole negligence of the Owner or the Engineer.

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT

Willie Young
MANAGER

NESTE, BRUDIN & STONE
INCORPORATED / Civil Engineers
SAN BERNARDINO HEMET ESCONDIDO
W.O. E75005-002

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd
Contractor		9-29-77	G.A.M.	△ RELOCATE STREET LIGHT	
Inspector					
Date Completed					

BENCH MARK
ESCONDIDO B.M. NO 282
□ ON DRAIN STRUCTURE SW. CORNER ROHN & MOUNTVIEW DR.
ELEVATION = 676.81

SCALE
Horizontal 1" = 40'
Vertical 1" = 4'

Office
FILMED 03/05/92
Traffic

Designed By	Drawn By	Checked By
D.W.M.	JEL PSB.	DWM

Plans Prepared Under Supervision Of
Douglas W. Messer
FOR: NESTE BRUDIN & STONE
Date 11-26-75
R.C.E. No. 17706

Submitted July 29, 1977 Approved 8/18/77
By [signature] City Engineer
By [signature] Director Of Public Works

CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS

PLANS FOR THE IMPROVEMENT OF
BROTHERTON ROAD

Drawing No. P-1154
Sheet 2 of 2

TYPE OF WORK	QTY	LEGEND	STD DWG
STREET IMPROVEMENTS:			
PREPARE SUBGRADE & PLACE 4" AC OVR APPROVED CL2 BASE	9836 SF		
PREPARE SUBGRADE & PLACE 2" AC OVR NATIVE	2250 SF		
OVERLAY FOR SMOOTH JOIN	10 CY		
6" AC BERM	253 LF		G-5
8" TYPE '6' CURB	253 LF		G-2
ALLEY TYPE DRIVEWAY	880 SF		ESC. #3
CONCRETE SIDEWALK	1383 SF		G-7.1
CURB OUTLET TYPE 'A'	2 EA		D-25
EUCALYPTUS SIDEROXYLON	8 EA		ESC. #7
GUARD POST	2 EA		M-9.1
18" CMP ASPHALT DIPPED	16 LF		D-60.1
RELOCATE FIRE HYDRANT*	1 EA		RDDWD W-11
STREET LIGHT (200 W)	1 EA		ESC. #6
DRAINAGE IMPROVEMENTS:			
54" RCP, D-1350	219 LF		D-60.1
MODIFIED HEADWALL	2 EA		D-30
CONCRETE INLET STRUCTURE	202 SF		

INSTALL NEW J-3765 HYDRANTS

FOR PRIVATE WATER LINE EXTENSION SEE SHEET 4

1 & 2 AS-BUILT ON PLAN

PLANS REVISED TO

AS-BUILT

CONDITIONS

John Wong 5-1-86

RCE 21684 DATE

23. ALL WATER AND SEWER LINES INCLUDING SERVICES AND LATERALS SHALL BE PROVIDED WITH A 6" WIDE STRIP OF POLYETHYLENE NON-METALLIC DETECTION TAPE OVER THE PIPE. A BLUE COLOR SHALL BE USED FOR WATER AND RED COLOR FOR SEWER. IN ADDITION, A #10 BARE SOFT COPPER WIRE SHALL BE INSTALLED OVER ALL A.C. WATER MAINS.

24. ALL ABANDONED SEWER LATERALS SHALL BE CAPPED AT THE PROPERTY LINE. ALL ABANDONED WATER SERVICES SHALL BE SHUT OFF AT THE MAIN.

25. FIRE HYDRANT MARKERS ARE REQUIRED PER M-19. LOCATIONS FOR AREAS OUTSIDE OF THE PUBLIC RIGHTS-OF-WAY SHALL BE DETERMINED BY THE FIRE DEPARTMENT.

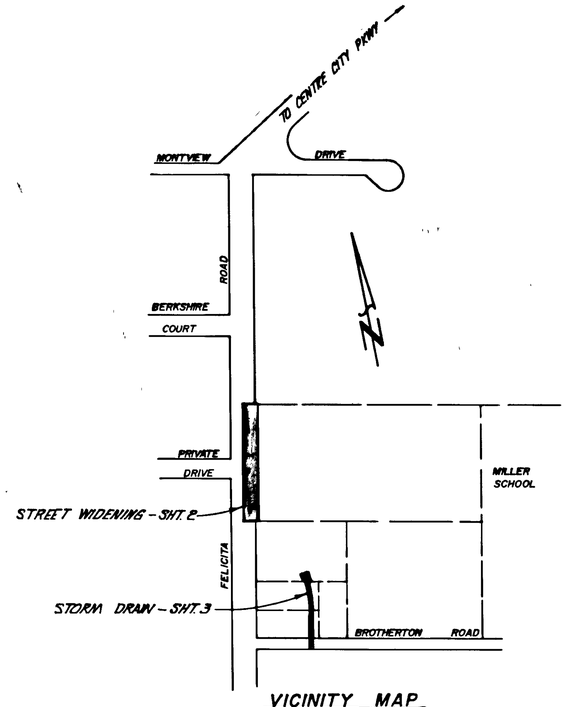
ENGINEER'S NOTES

26. THE PROPERTY LINES SHOWN HEREON ARE FOR DESIGN PURPOSES ONLY AND ARE NOT BASED UPON A FIELD SURVEY. IT SHALL BE THE DEVELOPERS RESPONSIBILITY TO HAVE SAID PROPERTY LINES AND/OR LIMITS OF CONSTRUCTION DETERMINED PRIOR TO START OF WORK.

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT

27. ALL WATERLINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL STANDARD SPECIFICAATIONS FOR CONSTRUCTION OF WATER TRANSMISSION FACILITIES FOR THE RINCON DEL DIABLO MUNICIPAL WATER DISTRICT.

WHERE THE PLANS CALL FOR A.C. PAVEMENT ON NATIVE MATERIAL, THE CONTRACTOR SHALL STERILIZE THE COMPACTED NATIVE SOIL WITH POLYBORCHLORATE OR MONORCHLORATE SOIL STERILANT TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO PAVING.



VICINITY MAP
scale: 1" = 200'

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT
APPROVED: John Wong DATE 10/1/84

REVIEWED BY SUPT OF UTILITIES
DATE

GENERAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS OF THE CITY OF ESCONDIDO EFFECTIVE MAY 20, 1983, BY ORDINANCE NO. 83-21 AND THE STANDARD DRAWINGS OF THE CITY OF ESCONDIDO EFFECTIVE JULY 1, 1982, BY RESOLUTION NO.82-100 AND APRIL 7, 1983 BY RESOLUTION NO. 83-74 ALONG WITH ANY AMENDMENTS THERETO.
2. ALL CONTRACTORS WORKING IN THE PUBLIC RIGHT-OF-WAY SHALL OBTAIN A SEPARATE ENCROACHMENT PERMIT FROM THE DIRECTOR OF PUBLIC WORKS. INSPECTION OF ALL WORK IS REQUIRED. CONTACT THE ENGINEERING FIELD OFFICE AT (741-4664) TO ARRANGE FOR ENCROACHMENT PERMITS AND INSPECTION. TWENTY-FOUR HOUR ADVANCE NOTICE IS REQUIRED FOR INSPECTION. NO WORK SHALL BE PERFORMED IN THE PUBLIC RIGHT-OF-WAY ON SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE EXPRESS PERMISSION OF THE CITY ENGINEER.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.
4. NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE THEREFOR.
5. LOCATION AND ELEVATION OF ALL EXISTING IMPROVEMENTS WITHIN THE AREA OF WORK SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
6. ALL TEMPORARY PAVING PLACED BY ANY CONTRACTOR, SUBCONTRACTOR, OR UTILITY COMPANY SHALL REMAIN IN THE PUBLIC RIGHT-OF-WAY FOR NOT MORE THAN 30 CALENDAR DAYS ON RESIDENTIAL STREETS AND 72 HOURS ON ARTERIALS, MAJOR ROADS, COLLECTORS AND LOCAL COLLECTORS, PRIOR TO PLACEMENT OF PERMANENT PAVEMENT. ALL TEMPORARY PAVING PLACED IN THE PUBLIC RIGHT-OF-WAY SHALL BE MAINTAINED CONTINUOUSLY IN ACCORDANCE WITH THE CITY OF ESCONDIDO STANDARD DRAWING NO. 1.
7. THE ADDRESS OF EACH LOT SHALL EITHER BE PAINTED ON THE CURB, OR, WHERE CURBS ARE NOT AVAILABLE, POSTED IN SUCH MANNER THAT THE ADDRESS IS VISIBLE FROM THE STREET. IN BOTH CASES, THE ADDRESS SHALL BE POSTED IN A MANNER AND LOCATION APPROVED BY THE CITY ENGINEER.
8. WHERE THE PLANS CALL FOR A.C. PAVEMENT ON NATIVE MATERIAL, THE CONTRACTOR SHALL STERILIZE THE COMPACTED NATIVE SOIL WITH POLYBORCHLORATE OR MONBORCHLORATE SOIL STERILANT TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO PAVING.

STREET NOTES

9. ALL STATIONING REFERS TO THE CENTERLINE OF THE STREET.
10. ALL CURB DATA REFERS TO THE FACE OF THE CURB.
11. STRUCTURAL SECTION TO BE DETERMINED AFTER ROUGH GRADING IS COMPLETED, ACCORDING TO FIGURE NO. 3 OF THE ESCONDIDO DESIGN STANDARDS.

PREPARE SUBGRADE & PLACE
4" AC OVR APPROVED CL2 BASE

FOR PRIVATE WATER LINE EXTENSION SEE SHEET 4.

UTILITY NOTES

12. ALL UNDERGROUND UTILITIES TO BE INSTALLED BEFORE CONSTRUCTION OF CURBS, GUTTERS, SIDEWALKS OR SURFACING OF STREETS.
13. UNLESS OTHERWISE SHOWN, SEWER LATERALS AND WATER SERVICES SHALL BE RUN NORMAL TO THE MAIN.
14. ALL WATER MAINS TO HAVE 36" MINIMUM COVER TO FINISH GRADE.
15. A FEE IS CHARGED FOR SHUTTING DOWN AND TAPPING A LIVE WATER MAIN. CONTACT A CITY WATER DEPARTMENT REPRESENTATIVE AT 741-4668 FOR DETERMINATION OF THE FEE AMOUNT. SCHEDULE ALL SHUTDOWNS THROUGH A PUBLIC WORKS INSPECTOR. THIS IS ONLY APPLICABLE TO THE CITY OF ESCONDIDO WATER MAINS AND ESCONDIDO MUTUAL WATER MAINS.
16. ALL V.C.P. SEWER SHALL BE SOCKET AND SPIGOT TYPE. ALL P.V.C. SEWER TO CONFORM WITH CITY POLICY ON P.V.C. SEWER PIPE.
17. THE CONTRACTOR SHALL CONSTRUCT SEWER LATERAL CLEANOUTS IMMEDIATELY BEHIND RIGHT-OF-WAY LINES ON ALL SEWER LATERALS. THE CAP WILL TERMINATE WITHIN 10 INCHES OF FININISHED GRADE. THE CAP WILL BE CONTAINED WITHIN AN ENCLOSURE COVERED WITH A CAST-IRON LID MARKED SEWER IF IN DRIVEWAYS OR WALKWAYS.
18. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CONTACT THE UTILITY AGENCIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS, AND BEAR THE COST OF RELOCATIONS IF NEEDED. SEE OWNER'S LETTER REGHARDING UTILITY RELOCATION DATED 9-4-84.
19. THRUST BLOCKS ARE REQUIRED PER W-17 AND W-18 AS DIRECTED BY THE ENGINEER.
20. AN ADEQUATE WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIALS ACCUMULATES.
21. ACCESS TO THE SITE SHALL BE MAINTAINED FOR THE USE OF HEAVY FIRE FIGHTING EQUIPMENT.
22. VERIFICATION OF A SAN DIEGO COUNTY EXPLOSIVE PERMIT AND A POLICY OF CERTIFICATE OF PUBLIC LIABILITY INSURANCE SHALL BE FILED WITH FIRE DEPARTMENT PRIOR TO ANY BLASTING WITHIN THE CITY OF ESCONDIDO.

WO

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	BENCH MARK	SCALE	Office MOW	Designed By JOW	Drawn By JOW	Checked By
Contractor	ESCONDIDO DWG S-1019					#284 SPIKE IN ROOT OF TREE SE CORNER OF FELICITA RD & MONTVIEW DR ELEV 665.52 MSL	Horizontal	FILMED 04/02/85	Plans Prepared Under Supervision Of John Wong	Date 6-7-84	RCE No 21684
Inspector	ESCONDIDO DWG P-1154						Vertical	Traffic			
Date Completed	RINCON DWG P-164										

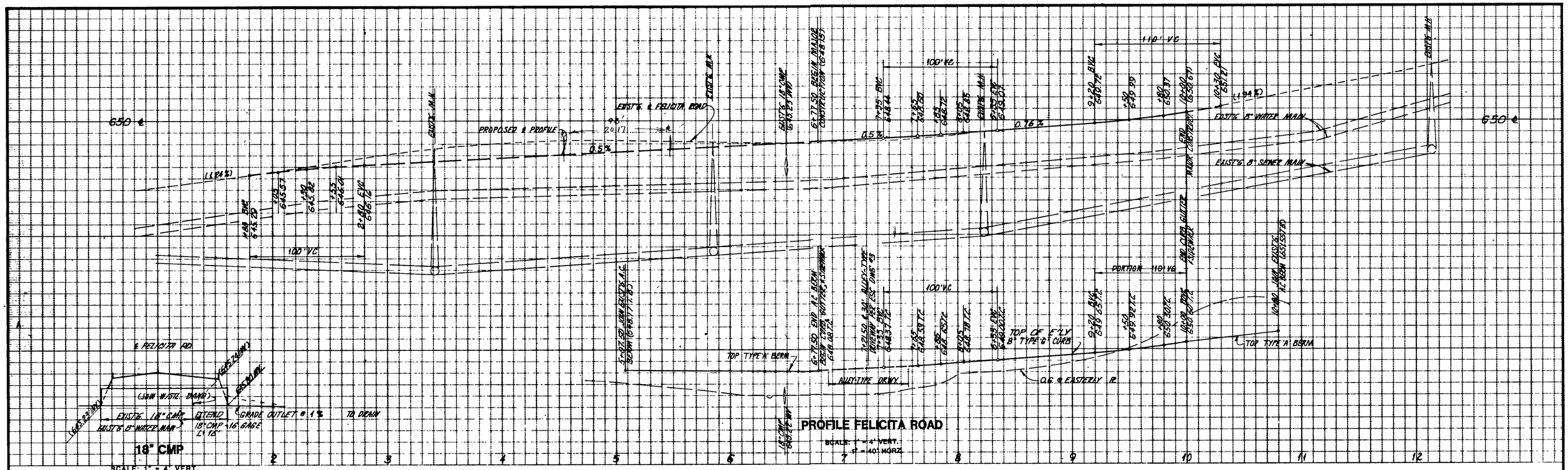
Submitted 10/2/84 By Ronald W. Culver City Engineer

Approved 10/2/84 By Dennis W. Miller Director Of Public Works

CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS

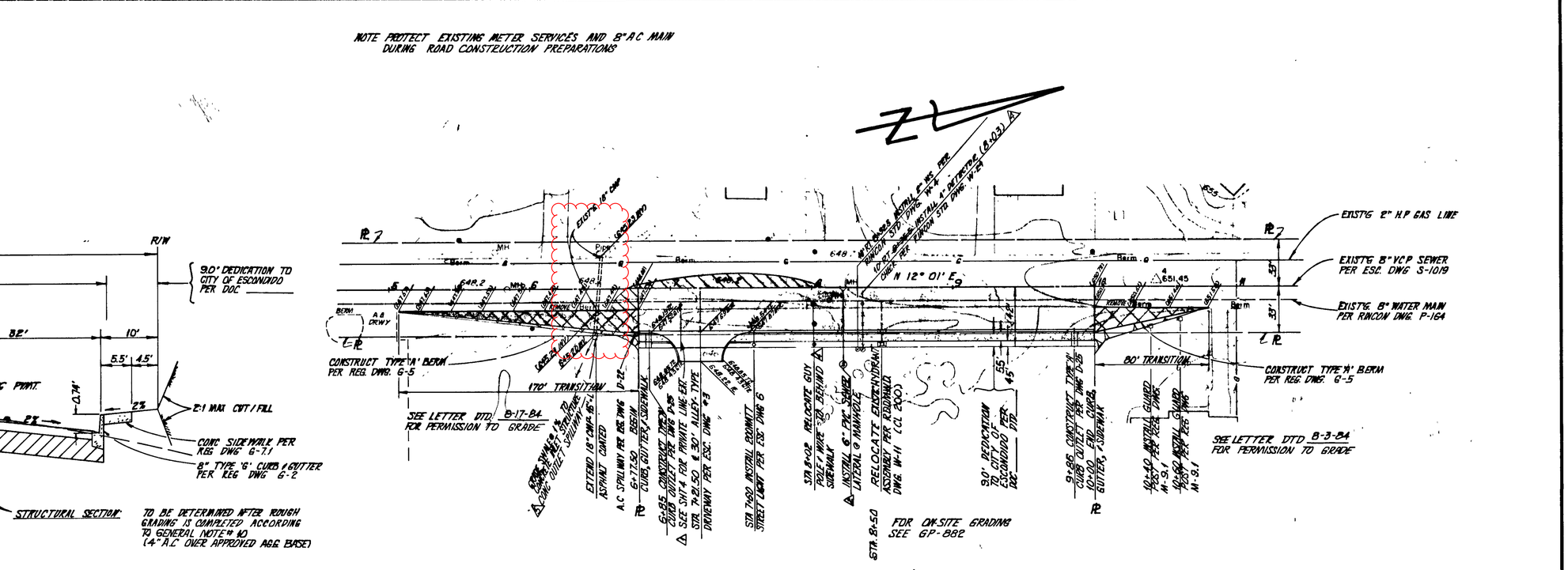
FELICITA ROAD WIDENING AND CULVERT AT BROTHERTON ROAD

Drawing No P-1688 Sheet 1 of 4

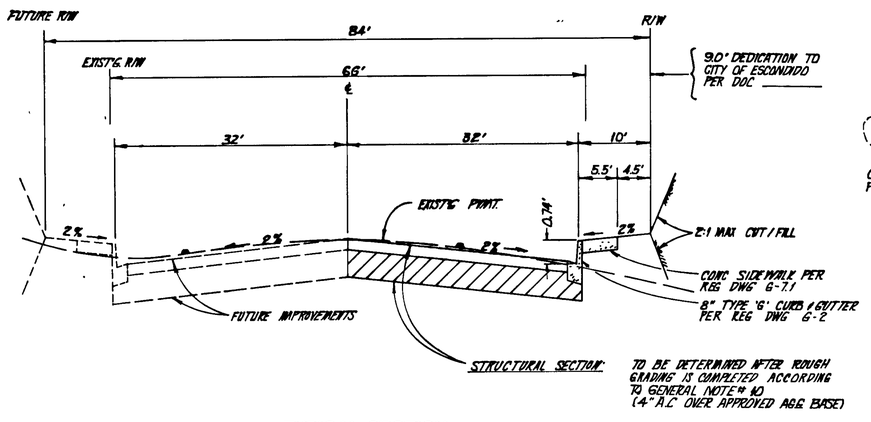


18" CMP

SCALE: 1" = 4' VERT.
1" = 20' HORZ



NOTE PROTECT EXISTING METER SERVICES AND 8" A.C. MAIN DURING ROAD CONSTRUCTION PREPARATIONS



TYPICAL SECTION

SCALE: NONE

PLAN FELICITA ROAD

SCALE: 1" = 40'

△△ AS-BUILT ON PLAN JOW 5/9/86

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT
APPROVED ____ DATE 10/1/84

PROPERTY DEVELOPMENT ENGINEERS INC.
(619) 743-8808

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	Appd	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By
Contractor	ESCONDIDO DWG. S-1019			REALIGN WATER EXTENSION △		ESC #281 SPIKE IN ROOT OF TREE @ S.E. CORNER OF FELICITA RD @ MONTVIEW DR. ELEV 685.52 MSL	Horizontal 1"=40'		JOW	JOW	
Inspector				CHANGE SEWER LATERAL SIZE △			Vertical 1"=4'	FILMED 04/02/92	Plans Prepared Under Supervision Of		
Date Completed				4" DETECTOR CHECK MOVED TO 6+03 △				Traffic	Date 5-12-84		
				CONC. OUTLET SPILLWAY ADDED △					R.C.E. No 21684		

Submitted 10/2/84 By Ronald W. Allen City Engineer
Approved 10/2/84 By Dale W. Wilt Director Of Public Works

CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS
1980 FELICITA ROAD:
322' TO 645' NORTH OF BROTHERTON ROAD

Drawing No P-1688
Sheet 2 of 4

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	BENCH MARK	SCALE	Office
Contractor	ESCONDIDO DWG. S-1019	8-6-86	JOW	1 6" C/L FENCE WITH GATE		#281 SPIKE IN ROOT OF TREE SE CORNER OF FELICITA RD & MONTVIEW DR ELEV. 665.52 MSL	Horizontal 1" = 40'	FILMED 04/02/87
Inspector	ESCONDIDO DWG. P-1154	8-5-86	JOW	2 WALL REINFORCEMENT			Vertical 1" = 4'	Traffic
Date Completed								

Designed By: JOW — Drawn By: JOW — Checked By:

Plans Prepared Under Supervision Of — Date 6-5-84 — R.C.E. No. 21684

Submitted 10/2/84 By City Engineer

Approved 10/2/84 By Director Of Public Works

CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS

PUBLIC STORM DRAIN-BROTHERTON ROAD TO 160' NORTH 180' EAST OF FELICITA ROAD

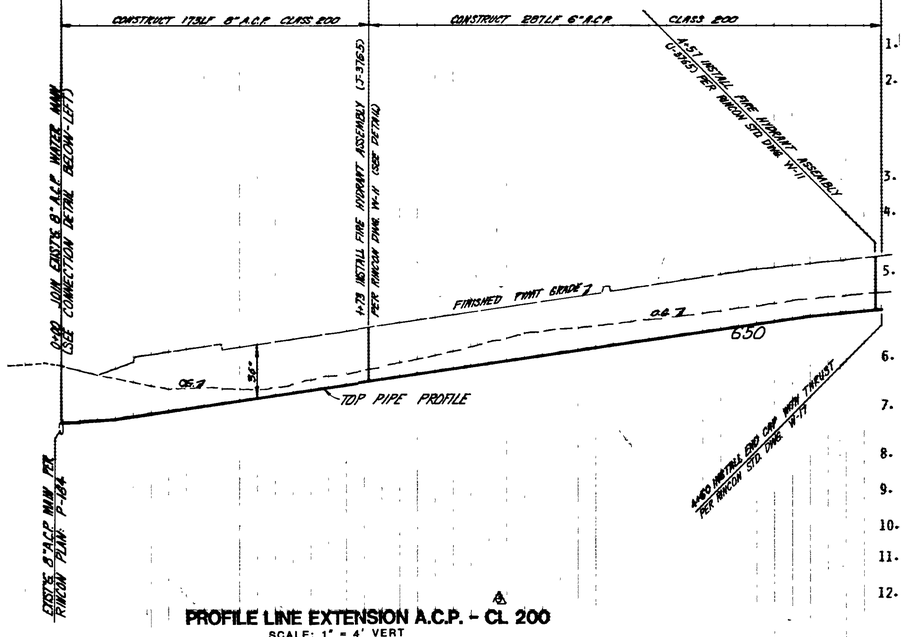
Drawing No. P-1688

Sheet 3 of 4

PROPERTY DEVELOPMENT ENGINEERS INC. (619) 743-8808

TYPE OF WORK	QTY	LEGEND	STD DWG
8" ACP MAIN CL 200	173 LF		
6" ACP MAIN CL 200	207 LF		
6" FIRE HYDRANT (J-3765)	2 EA		W-11
8" GATE VALVE	1 EA		W-18
6" END CAP WITH THRUST BLOCK	1 EA		W-17
2" WATER SERVICE	1 EA		W-4, 12
6" PRE-FAB CML&C 12 GA WSP	20 LF		SEE SHEET 3 OF 4
1" AIR & VACUUM ASSEMBLY	1 EA		W-6
2" BLOW-OFF ASSEMBLY	1 EA		W-8
4" GATE VALVE	1 EA		W-18
CATHODIC TEST STATION	2 EA		W-28
4" DETECTOR CHECK	1 EA		W-24

650



PROFILE LINE EXTENSION A.C.P. - CL 200
SCALE: 1" = 4' VERT
1" = 40' HORZ

0 1 2 3 4

RINCON NOTES

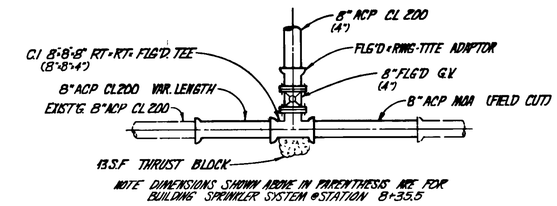
1. ALL WATERLINES SHALL BE CLASS 200 AND HAVE A MINIMUM COVER OF 36 INCHES.
2. THE CONTRACTOR SHALL UNCOVER LOCATION OF CONNECTIONS PRIOR TO BEGINNING INSTALLATION TO INSURE CONFORMANCE WITH LINES AND GRADES SHOWN ON THESE PLANS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DISTRICT ENGINEER AND THE PROJECT ENGINEER PRIOR TO PROCEEDING. CONTRACTOR SHALL NOTIFY RINCON DEL DIABLO MUNICIPAL WATER DISTRICT AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION @ 745-5522.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ANY EXISTING METER BOXES TO NEW FINISHED GRADE.
4. CONTRACTOR SHALL SUBMIT HIS METHOD OF CONNECTION TO EXISTING WATERMAIN FOR APPROVAL TO RINCON DEL DIABLE MUNICIPAL WATER DISTRICT. CONNECTION SHALL BE COMPLETED WITHIN TWO HOURS AND AT A TIME SPECIFIED BY THE DISTRICT SUPERINTENDENT.
5. NEW LINE SHALL BE TESTED AND CHORINATED IN ACCORDANCE WITH RINCON DEL DIABLE MUNICIPAL WATER DISTRICT REQUIREMENTS. CONTRACTOR TO CALL RINCON DEL DIABLE MUNICIPAL WATER DISTRICT OFFICE AND SCHEDULE FOR PRESSURE CHLORINE AND BACTERIA TESTS. (NO BACTERIA TEST WILL BE TAKEN UNTIL ALL DISTRICT OFFICE REQUIREMENTS HAVE BEEN SATISFIED.)
6. ENGINEER TO TURN OVER ORIGINAL "AS-BUILT" DRAWINGS TO RINCON DEL DIABLO MUNICIPAL WATER DISTRICT NO LATER THAN 30 DAYS AFTER WORK IS COMPLETED.
7. ALL WORK ON WATERMAINS TO BE DONE IN ACCORDANCE WITH THE STANDARD PLANS AND SPECIFICATIONS OF THE RINCON DEL DIABLE MUNICIPAL WATER DISTRICT.
8. ALL SERVICE SADDLES SHALL BE DOUBLE STRAP SOLID BRASS JAMES JONES OR EQUAL (DWG. W-3).
9. CONTRACTOR TO MAKE APPLICATION FOR FIELD INSPECTION AND PAY FEES PRIOR TO STARTING WATER LINE CONSTRUCTION.
10. ALL CHANGES TO BE REVIEWED, APPROVED, AND INITIALED BY THE DISTRICT.
11. ALL WORK ON WATERLINES TO BE BUILT AS SHOWN ON THE IMPROVEMENT PLANS AS FILED WITH THE DISTRICT.
12. WATERLINE MAINTAINANCE BOND TO BE RELEASED ON _____ BY RINCON DEL DIABLO MUNICIPAL WATER DISTRICT.

APPROVED GARY ARANT

NOTE: PROTECT EXISTING METER SERVICES AND 8" A.C. MAIN DURING ROAD CONSTRUCTION PREPARATIONS

FOR GRADING IMPROVEMENTS TO NORTHERTLY HALF OF LOT 2 IN BLOCK 2 OF MAP 1205 SEE GP- 882

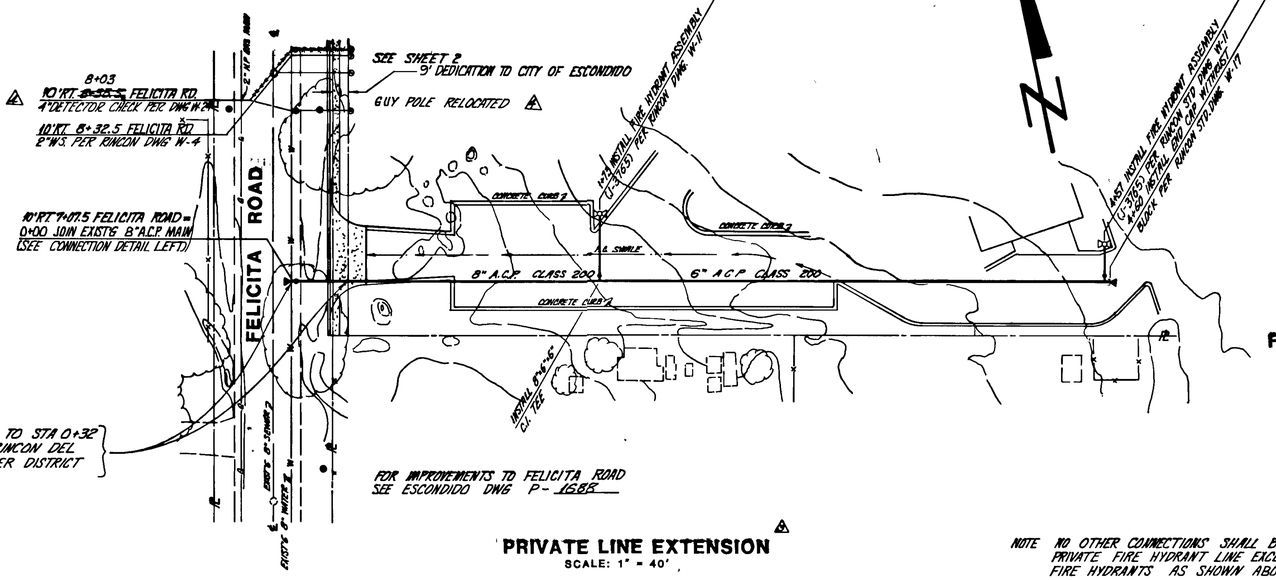
REMOVE SECTION ACP WATER MAIN AND INSTALL TEE WITH ASSOCIATED FITTINGS.



NOTE DIMENSIONS SHOWN ABOVE IN PARENTHESIS ARE FOR BUILDING SPRINKLER SYSTEM @ STATION 8+35.5

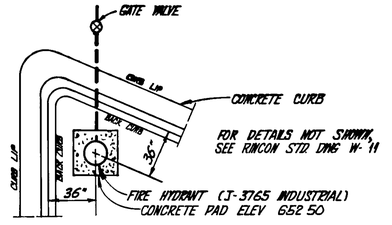
CONNECTION DETAIL
NOT TO SCALE

32 FEET FROM STA 0+00 TO STA 0+32 SHALL BE DEDICATED TO RINCON DEL DIABLO MUNICIPAL WATER DISTRICT UPON COMPLETION



FOR IMPROVEMENTS TO FELICITA ROAD SEE ESCONDIDO DWG P- 1685

PRIVATE LINE EXTENSION
SCALE: 1" = 40'



FIRE HYDRANT LOCATION
NOT TO SCALE

NOTE NO OTHER CONNECTIONS SHALL BE MADE TO THE PRIVATE FIRE HYDRANT LINE EXCEPT THE TWO FIRE HYDRANTS AS SHOWN ABOVE

⚠ AS-BUILT ON PLAN JOW 5/9/86

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT
APPROVED: Gary D Arant DATE 10/1/84

W.O.

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd
Contractor	RINCON DWG P-164			REALIGN/SITE EXTENSION-W/E HYDRANTS ⚠	11/1/85
Inspector	ESCONDIDO DWG S-1019			4" DETECTOR CHECK MOVED TO 8+03 ⚠	4-3-86
Date Completed					

BENCH MARK: ESC #281 SPIKE IN ROOT OF TREE @ S.E. CORNER OF FELICITA ROAD & MONTVIEW DR ELEV. 665.52 MSL

SCALE: Horizontal 1"=40' Vertical 1"=4'

Office _____ FILMED 06/02/92 Traffic _____

Designed By	Drawn By	Checked By
JOW	JOW	

Plans Prepared Under Supervision Of
John Wong Date JUN 25, 1984 RCE No 21684

Submitted 10/2/84 By Ronald W. Altman
Approved 10/2/84 By Dennis Wilson

CITY OF ESCONDIDO DEPT OF PUBLIC WORKS
PRIVATE WATER LINE EXTENSION AT 1980 FELICITA ROAD

Drawing No. P-1688
Sheet 4 of 4

PROPERTY DEVELOPMENT ENGINEERS INC.
PHONE: (619) 743-8808

CITY OF ESCONDIDO TRACT NO. 861

GENERAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS OF THE CITY OF ESCONDIDO EFFECTIVE MAY 17, 2000 BY ORDINANCE NO. 2000-17 AND THE STANDARD DRAWINGS OF THE CITY OF ESCONDIDO EFFECTIVE JUNE 23, 1999 BY RESOLUTION NO. 99-123, ALONG WITH ANY AMENDMENTS THERETO.
2. ALL CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY SHALL OBTAIN A SEPARATE ENCROACHMENT PERMIT FROM THE DIRECTOR OF PUBLIC WORKS. INSPECTION OF ALL WORK IS REQUIRED. CONTACT THE ENGINEERING FIELD OFFICE AT (760) 839-4664 TO ARRANGE FOR ENCROACHMENT PERMITS AND INSPECTION. TWENTY-FOUR HOUR ADVANCE NOTICE IS REQUIRED FOR INSPECTION. NO WORK SHALL BE PERFORMED IN THE PUBLIC RIGHT OF WAY ON SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE EXPRESS PERMISSION OF THE CITY ENGINEER.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.
4. NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE THEREFOR.
5. LOCATION AND ELEVATION OF ALL EXISTING IMPROVEMENTS WITHIN THE AREA OF WORK SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
6. A PERMIT SHALL BE OBTAINED FROM THE COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY WORK WITHIN THE COUNTY STREET RIGHT OF WAY.

STREET NOTES

7. ALL STATIONING REFERS TO THE CENTERLINE OF THE STREET.
8. ALL CURB DATA REFERS TO THE FACE OF CURB.
9. STRUCTURAL SECTION TO BE DETERMINED AFTER ROUGH GRADING IS COMPLETED, ACCORDING TO FIGURE 3 OF THE ESCONDIDO DESIGN STANDARDS.
10. THE ADDRESS OF EACH LOT SHALL EITHER BE PAINTED ON THE CURB OR, WHERE CURBS ARE NOT AVAILABLE, POSTED IN SUCH MANNER THAT THE ADDRESS IS VISIBLE FROM THE STREET. IN BOTH CASES, THE ADDRESS SHALL BE PLACED IN A MANNER AND LOCATION APPROVED BY THE CITY ENGINEER.
11. WHERE THE PLANS CALL FOR A.C. PAVEMENT ON NATIVE MATERIAL, THE CONTRACTOR SHALL STERILIZE THE COMPACTED NATIVE SOIL WITH AN E.P.A. REGISTERED AND APPROVED SOIL STERILANT TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO PAVING.

UTILITY NOTES

12. ALL TEMPORARY PAVING PLACED BY ANY CONTRACTOR, SUBCONTRACTOR OR UTILITY COMPANY SHALL REMAIN IN THE PUBLIC RIGHT OF WAY FOR NOT MORE THAN 30 CALENDAR DAYS ON RESIDENTIAL STREETS AND 72 HOURS ON ARTERIALS, MAJOR ROADS, COLLECTORS AND LOCAL COLLECTORS, PRIOR TO PLACEMENT OF PERMANENT PAVEMENT. ALL TEMPORARY PAVING PLACED IN THE PUBLIC RIGHT OF WAY SHALL BE MAINTAINED CONTINUOUSLY IN ACCORDANCE WITH CITY OF ESCONDIDO STANDARD DRAWING NO. G-1-E.
13. ALL UNDERGROUND UTILITIES TO BE INSTALLED BEFORE CONSTRUCTION OF CURBS, GUTTERS, SIDEWALKS OR SURFACING OF STREETS.
14. UNLESS OTHERWISE SHOWN, SEWER LATERALS AND WATER SERVICES SHALL BE RUN NORMAL TO THE MAIN.
15. ALL WATERLINES SHALL HAVE 36" MINIMUM COVER TO FINISHED GRADE.
16. A FEE IS CHARGED FOR SHUTTING DOWN OR TAPPING A LIVE WATERLINE. CONTACT THE PUBLIC WORKS INSPECTOR AT (760) 839-4664 FOR A DETERMINATION OF THE FEE AMOUNT. SCHEDULE ALL SHUTDOWNS THROUGH A PUBLIC WORKS INSPECTOR. THIS IS ONLY APPLICABLE TO THE CITY OF ESCONDIDO WATERLINES.
17. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CONTACT THE UTILITY COMPANIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS AND BEAR THE COST OF RELOCATIONS, IF NEEDED. SEE OWNER'S LETTER REGARDING UTILITY COORDINATION DATED MARCH 6, 2005.
18. THRUST BLOCKS ARE REQUIRED PER STANDARD DRAWINGS W-17 AND W-18 AS DIRECTED BY THE ENGINEER.
19. ALL REQUIRED WATERLINES AND FIRE HYDRANTS SHALL BE INSTALLED AND IN SERVICE PRIOR TO THE ACCUMULATION OF ANY COMBUSTIBLE MATERIAL ON THE JOB SITE.
20. ACCESS TO THE SITE SHALL BE MAINTAINED FOR THE USE OF HEAVY FIRE FIGHTING EQUIPMENT.
21. VERIFICATION OF A SAN DIEGO COUNTY EXPLOSIVE PERMIT AND A POLICY OF CERTIFICATE OF PUBLIC LIABILITY INSURANCE SHALL BE FILED WITH THE FIRE DEPARTMENT PRIOR TO ANY BLASTING WITHIN THE CITY OF ESCONDIDO.
22. ALL WATER AND SEWER LINES INCLUDING SERVICES AND LATERALS SHALL BE PROVIDED WITH A 6-INCH WIDE STRIP OF POLYETHYLENE NONMETALLIC DETECTION TAPE ONE FOOT OVER THE PIPE. A BLUE COLOR SHALL BE USED FOR WATER AND RED OR GREEN COLOR FOR SEWER. IN ADDITION, A #10 BARE COPPER WIRE SHALL BE INSTALLED OVER ALL NONMETALLIC WATERLINES. A "W" SHALL BE STAMPED IN THE CURB FACE AT THE WATER SERVICE LOCATION AND AN "S" SHALL BE STAMPED IN THE CURB AT THE SEWER LATERAL LOCATION.
23. ALL ABANDONED SEWER LATERALS SHALL BE CAPPED AT THE PROPERTY LINE. ALL ABANDONED WATER SERVICES SHALL BE SHUT OFF AND DISCONNECTED AT THE MAIN.
24. FIRE HYDRANTS MARKERS ARE REQUIRED PER STANDARD DRAWING M-19. LOCATIONS FOR AREAS OUTSIDE OF THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE FIRE DEPARTMENT.
25. THE CONTRACTOR SHALL CONSTRUCT SEWER LATERAL CLEANOUTS IMMEDIATELY BEHIND THE RIGHT OF WAY LINE ON ALL SEWER LATERALS. THE CLEANOUT SHALL BE CONTAINED WITHIN AN ENCLOSURE COVERED WITH A CAST-IRON LID MARKED "SEWER" IF LOCATED IN DRIVEWAYS OR WALKWAYS.

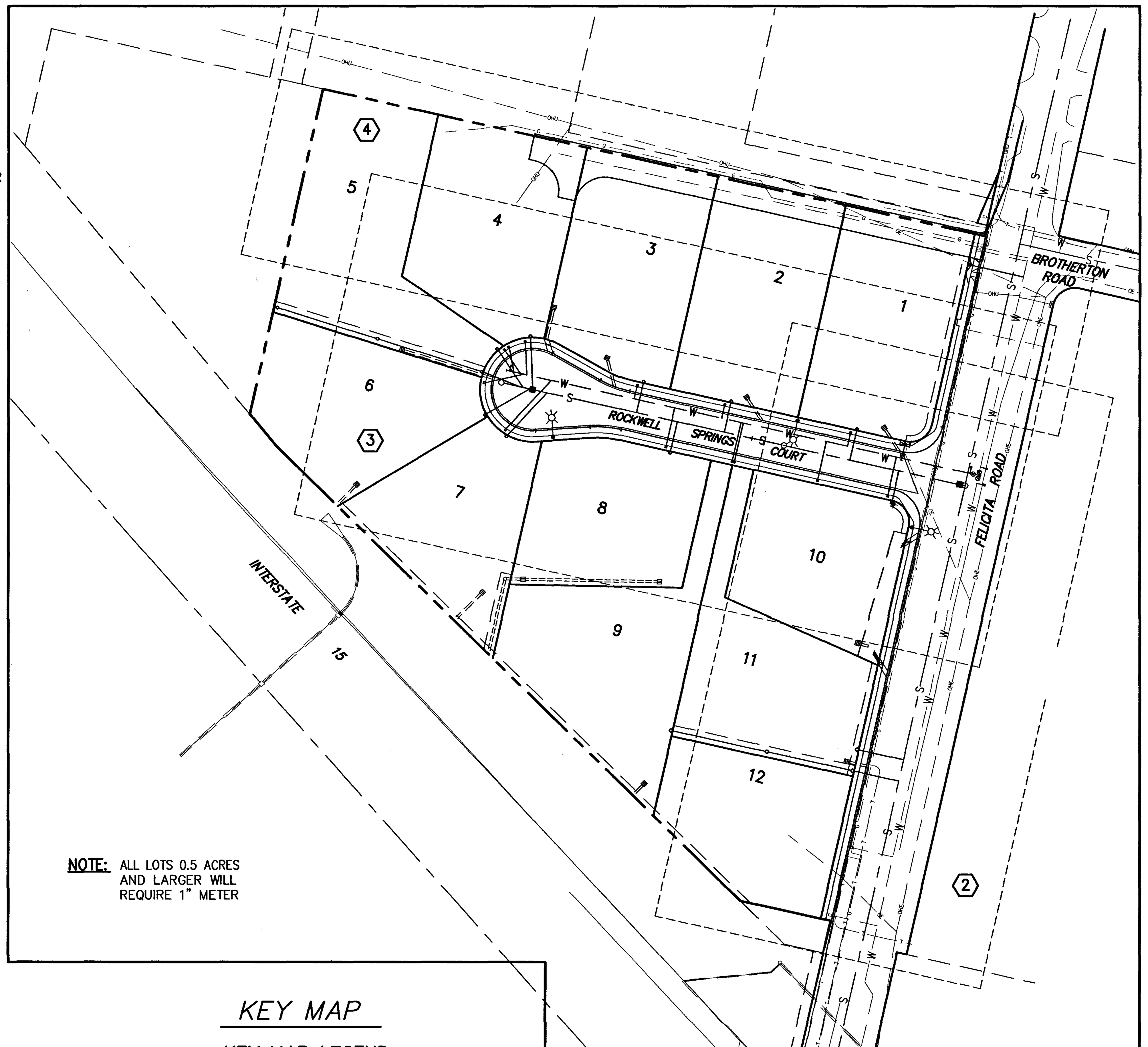
IMPORTANT NOTICE

SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIGALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIGALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-227-2600 TWO WORKING DAYS BEFORE YOU DIG.

JP ENGINEERING, INC.
CIVIL ENGINEERING ■ LAND PLANNING ■ SURVEYING
4849 RONSON COURT, SUITE 105
SAN DIEGO, CA 92111
(858) 569-7377 FAX (858) 569-0830

ENGINEER OF WORK: J.H. Palacios 8-9-05
J.H. PALACIOS, R.C.E. 32031 DATE
FILE CODE: 708-04

REGISTERED PROFESSIONAL ENGINEER JORGE H. PALACIOS No. 32031 12/31/05 CIVIL STATE OF CALIFORNIA



KEY MAP

KEY MAP LEGEND

- INDICATES PROJECT BOUNDARY
- INDICATES SEWER MAIN
- INDICATES WATER MAIN
- INDICATES STORM DRAIN
- INDICATES FIRE HYDRANT
- INDICATES STREET LIGHT
- INDICATES STREET NAME SIGN
- INDICATES CITY/COUNTY BOUNDARIES
- (2) INDICATES SHEET NUMBER

FOR SEWER AND WATER LATERALS TABLE SEE SHEET 2 AND 3 FOR TYPICAL STREET SECTIONS SEE SHEET 2 AND 3

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF ESCONDIDO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

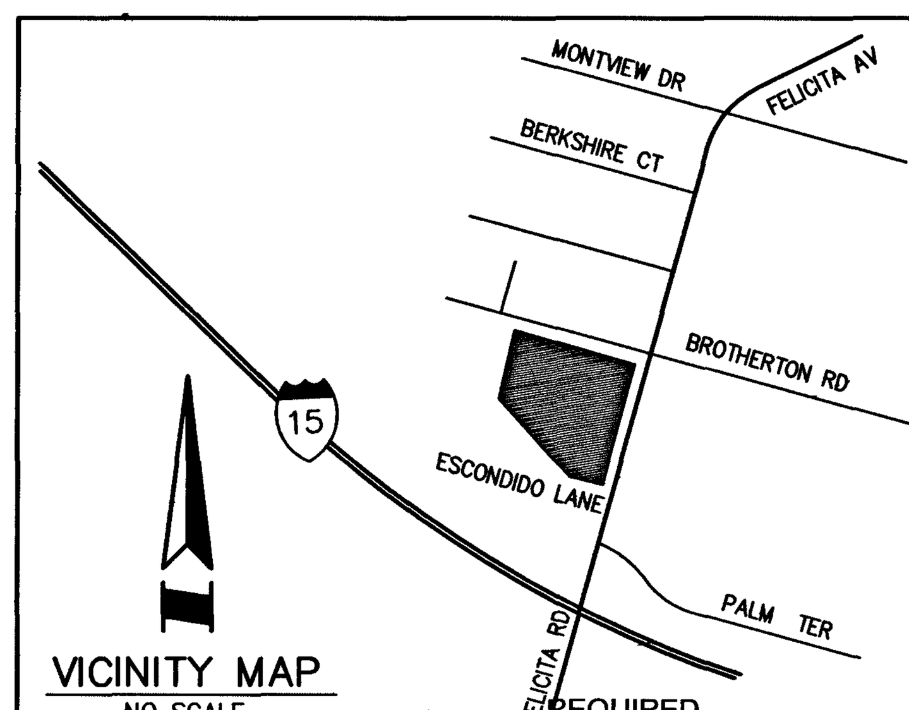
J.H. Palacios 8-9-05
JORGE H. PALACIOS, RCE 32031 EXP. 12-4-06 DATE

REGISTERED PROFESSIONAL ENGINEER JORGE H. PALACIOS No. 32031 12/31/05 CIVIL STATE OF CALIFORNIA

RECORD PLAN
J.H. Palacios 7-10-07
JORGE H. PALACIOS, RCE 32031

Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property, that this requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.



VICINITY MAP
NO SCALE

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT

STANDARD NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE THE PROTECTION OF ALL RINCON DEL DIABLO MUNICIPAL WATER DISTRICT (DISTRICT) WATER LINES AND APPURTENANCES.
2. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (1-800-227-2600) 48 HOURS IN ADVANCE OF ANY WORK ON OR AROUND DISTRICT FACILITIES.
3. ALL WATER LINES AND APPURTENANCES SHALL CONFORM TO THE CURRENT DISTRICT "GENERAL STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WATER TRANSMISSION FACILITIES".
4. THE LOCAL FIRE AGENCY WILL BE ACTIVELY MONITORING ON SITE COMBUSTIBLES, AND WILL REQUIRE THE APPROPRIATE FIRE FLOW PRIOR TO ON SITE STORAGE OF LUMBER. FIRE FLOW WILL NOT BE AVAILABLE UNTIL CURB, GUTTER AND SUB-BASE HAVE BEEN INSTALLED, AND THE WATER LINES HAVE BEEN TESTED.
5. THE PROJECT ENGINEER WILL SUPPLY THE DISTRICT WITH A COMPLETE SET OF "AS-BUILT" MYLARS NO LATER THAN 30 DAYS AFTER ACCEPTANCE OF THE MAINS BY THE DISTRICT INSPECTOR.
6. THE CONTRACTOR WILL NOTIFY THE DISTRICT ENGINEERING DEPARTMENT 48 HOURS IN ADVANCE TO SCHEDULE FOR ALL INSPECTIONS AND TESTS.
7. SHUT-DOWN(S) OF THE DISTRICT FACILITIES MUST BE COORDINATED WITH THE ENGINEERING DEPARTMENT, AND ARE CONTINGENT ON WEATHER/FLOW CONDITIONS.
8. ALL PROPOSED CHANGES/DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS WILL BE REVIEWED, APPROVED AND INITIALED BY THE DISTRICT PRIOR TO CONSTRUCTION.
9. SIGNATURE OF THESE PLANS DOES NOT PRECLUDE THE DISTRICT FROM SUBSEQUENT CHANGES DEEMED NECESSARY BY THE DISTRICT'S ENGINEERING DEPARTMENT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION OF EXISTING WATER SERVICES AND APPURTENANCES AND THE ADJUSTMENT OF METER BOXES. THE RELOCATION OF SAID FACILITIES MUST CONFORM TO THE CURRENT DISTRICT SPECIFICATIONS AND DRAWINGS.
11. THE CONTRACTOR SHALL SUBMIT THE METHOD OF CONNECTION(S) TO THE EXISTING DISTRICT FACILITIES, AND DESCRIBE ANY AND ALL METHODS TO MAINTAIN WATER SERVICE TO EXISTING CUSTOMERS DURING SAID CONSTRUCTION. THE DISTRICT SHALL APPROVE ALL METHODS.
12. ALL MATERIAL AND EQUIPMENT SHALL BE APPROVED BY THE DISTRICT INSPECTOR AND SHALL BE ON THE JOB SITE TWENTY-FOUR (24) HOURS PRIOR TO ANY SHUTDOWN.
13. THE DISTRICT FACILITIES MUST BE ACCESSIBLE AT ALL TIMES. IF A PERMANENT OR TEMPORARY SECURITY GATE IS INSTALLED, A KEYED ACCESS APPROVED BY THE DISTRICT MUST BE PROVIDED.
14. ALL VALVES LESS THAN 14" IN SIZE SHALL BE RESILIENT SEAL GATE VALVES. ALL VALVES 14" AND LARGER SHALL BE PRESSURE TESTED PRIOR TO INSTALLATION.
15. CATHODIC PROTECTION TEST STATIONS WILL BE REQUIRED ON ALL METALLIC PIPELINES AT INTERVALS OF NOT MORE THAN 480 FEET. THE DISTANCE BETWEEN THE TEST STATIONS MAY VARY AS DIRECTED BY THE ENGINEERING DEPARTMENT. CATHODIC PROTECTION FOR ALL METALLIC PIPES MAY BE REQUIRED AS PART OF THE DISTRICT'S CORROSION CONTROL PROGRAM. ALL REQUIRED CORROSION CONTROL EQUIPMENT MUST BE INSTALLED PER CURRENT DISTRICT SPECIFICATIONS.
16. CAPITAL FACILITIES FEES SHALL BE PAID AT THE TIME PERMANENT WATER SERVICE IS REQUESTED. THE METER(S) WILL NOT BE INSTALLED, AND SERVICE WILL NOT BE RENDERED UNTIL THE CAPITAL FACILITIES AND METER FEES HAVE BEEN PAID AND THE WATER FACILITIES HAVE BEEN COMPLETED AND ACCEPTED BY THE DISTRICT'S INSPECTOR.
17. WHERE SYSTEMS HAVE PUMPS, CONNECTIONS FOR PUMPING EQUIPMENT, AUXILIARY AIR TANKS, OR ARE OTHERWISE CAPABLE OF CREATING BACKPRESSURE OR BACKSIPHONAGE, AN APPROVED BACKFLOW PREVENTER SHALL BE INSTALLED AND TESTED PRIOR TO THE INITIATION OF SERVICE.

CONSTRUCTION NOTES

1. PRIOR TO WORK ON PRIVATE DRIVEWAYS, CONTRACTOR TO COORDINATE WORK WITH PROPERTY OWNERS.
2. CONTRACTOR TO VERIFY LAYOUT AND DIMENSIONS ON SITE. FIELD ADJUSTMENTS MAY BE NECESSARY TO PROVIDE A SMOOTH TRANSITION TO EXISTING DRIVEWAYS.
3. CONTRACTOR TO VERIFY TOP OF EXISTING DRIVEWAY ELEVATIONS PRIOR TO FORMING OF CONCRETE OR AC DRIVEWAYS.
4. IF ANY EXISTING LANDSCAPE, IRRIGATION, MAIL BOXES AND/OR OTHER PRIVATE APPURTENANCES ARE DAMAGED OR REMOVED DURING CONSTRUCTION, IT SHALL BE REPAIRED AND/OR REPLACED IN KIND BY CONTRACTOR.
5. ALL CONNECTIONS TO EXISTING WATER MAINS TO BE DONE AND COORDINATED WITH RINCON'S FORCES AT CONTRACTOR'S EXPENSE.
6. PRIOR TO REMOVAL OR RELOCATION OF UTILITIES, CONTRACTOR TO VERIFY AND COORDINATE REMOVALS AND SHUTOFFS WITH NEW UTILITY PLANS AND UTILITY COMPANIES.
7. LOCATE WATER SERVICES OUT OF DRIVEWAYS.
8. EXISTING FIRE HYDRANTS ADJACENT TO NEW CURBS AND AC BERMS TO BE ADJUSTED (TOP OF FLANGE) TO NEW ELEVATIONS, IF NECESSARY.
9. ALL EXISTING WATER MAIN VALVES WITHIN NEW PAVEMENT AND OVERLAY SECTIONS WILL BE ADJUSTED TO GRADE.
10. ANY EXISTING WATER SERVICES AND/OR WATER METERS THAT NEED TO BE RELOCATED OR RESET SHALL BE IN ACCORDANCE WITH RINCON'S STANDARDS.

LEGEND

ITEM	SYMBOL
EXISTING WATER MAIN	W
EXISTING WATER SERVICE AND METER	W
EXISTING FIRE HYDRANT	
EXISTING SEWER MAIN	S
EXISTING GAS MAIN	G
EXISTING INLET AND STORM DRAIN	
EXISTING STREET LIGHT	
EXISTING OVERHEAD UTILITIES	OHU
EXISTING OVERHEAD ELECTRICAL	OHE
EXISTING OVERHEAD TELEPHONE	OHT
EXISTING UNDERGROUND TELEPHONE	T

SEWER AGENCY	WATER DISTRICT
CITY OF ESCONDIDO	RINCON DEL DIABLO MUNICIPAL WATER DISTRICT
REVIEWED BY: (signature) 9/7/05 UTILITIES MANAGER DATE	By: (signature) DATE 8/10/05 DISTRICT MANAGER
	By: (signature) DATE 8/10/05 DISTRICT ENGINEER-R.C.E. 31557
	REVIEWED BY: (signature) DATE 8/10/05

WORK TO BE DONE

THE IMPROVEMENT WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS. CURRENT AT THE TIME OF CONSTRUCTION. AS DIRECTED BY THE CITY ENGINEER.

1. CITY OF ESCONDIDO STANDARDS.
2. CITY OF ESCONDIDO GRADING ORDINANCE.
3. THIS SET OF PLANS.
4. THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK).
5. THE SAN DIEGO AREA REGIONAL STANDARDS DRAWINGS AND AS MAY BE MODIFIED BY THE CITY OF ESCONDIDO STANDARDS.
6. SOILS REPORT AND RECOMMENDATIONS BY CHRISTIAN WHEELER ENGINEERING, DATED MAY 27, 2004.
7. RINCON DEL DIABLO MUNICIPAL WATER DISTRICT GENERAL STANDARD SPECIFICATIONS OF WATER TRANSMISSION FACILITIES.

LEGEND

DESCRIPTION	DWG. NO.	QUANTITY	SYMBOL
STREET IMPROVEMENTS (PUBLIC)			
A.C. PAVING AND BASE (SEE STREET NOTE NO. 9)		36,500 S.F.	
A.C. OVERLAY		10,300 S.F.	
6" TYPE 'G' CURB AND GUTTER	G-2, G-10	1,592 L.F.	
6" TYPE 'A' A.C. DIKE	G-5	107 L.F.	
CONCRETE SIDEWALK	G-7	7,960 S.F.	
CONCRETE DRIVEWAY	G-14A	2,160 S.F.	
PEDESTRIAN RAMP (TYPE 'A')	G-27	2 EA.	
PEDESTRIAN RAMP (TYPE 'B')	G-27	1 EA.	
CONCRETE GUTTER	G-12	1,080 S.F.	
STREET NAME AND STOP SIGN		1 EA.	
"NOT A THROUGH STREET" SIGN		1 EA.	
STREET SURVEY MONUMENT	M-10	2 EA.	
STREET LIGHT (135W)	E-1-E	2 EA.	
STREET LIGHT (180W)	E-1-E	1 EA.	
THE PLANTING OF PARKWAY TREES (SEE LANDSCAPE PLANS FOR LOCATION)	L-1-E	34 EA.	
STREET IMPROVEMENTS (PRIVATE)			
AC PAVING AND BASE (SEE STREET NOTE NO. 9)		10,600 S.F.	
TYPE "A" A.C. DIKE	G-5	503 S.F.	
STORM DRAIN IMPROVEMENTS			
CURB OUTLET TYPE 'A'	D-25	3 EA.	
HEADWALL TYPE 'B'	D-32	2 EA.	
10" H.D.P.E. (SMOOTH FLOW) OR EQUAL STORM DRAIN	G-2-E	25 L.F.	
BIO-SWALE CHANNEL		1650 S.F.	
SIDEWALK UNDERDRAIN PIPE	D-27	4 EA.	
SEWER IMPROVEMENTS			
8" P.V.C. SEWER MAIN	G-2-E	435 L.F.	S
SEWER MANHOLE	S-1-E	3 EA.	M.H.
4" P.V.C. SEWER LATERAL	S-2-E	12 EA.	S
SEWER CLEANOUT	S-3	15 EA.	C.O.
WATER IMPROVEMENTS (RINCON)			
10" D.I.P. (OR C.M.L. & C)	W-16	454 L.F.	W
10" GATE VALVE	W-17	1 EA.	
8" GATE VALVE	W-17	2 EA.	
1" WATER SERVICE	W-3	11 EA.	W
2" WATER SERVICE (IRRIGATION)	W-4	1 EA.	2" W.S. W
6" FIRE HYDRANT ASSEMBLY	W-14	1 EA.	
2" BLOW-OFF ASSEMBLY	W-11	3 EA.	
1" AIR AND VACUUM VALVE	W-9	2 EA.	
8" WATER CONNECTION		1 EA.	
THRUST BLOCKS	W-18, W-19	3 EA.	

NOTE: QUANTITIES SHOWN ABOVE ARE FOR PERMIT PURPOSES ONLY, AND ARE NOT TO BE USED FOR FINAL PAY QUANTITIES.

LEGAL DESCRIPTION

PORTION OF LOT 5 IN BLOCK 1 OF HOMELAND ACRES ADDITION TO ESCONDIDO, IN THE CITY OF ESCONDIDO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF No. 1025, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, SEPTEMBER 1, 1909.

ASSESSOR'S PARCEL NO.: 236-334-24, 25, 34

SITE
2031 FELICITA ROAD
ESCONDIDO, CA 92025

OWNER
FELICITA DEVELOPMENT COMPANY, LLC
2533 S. HIGHWAY 101, SUITE 240
CARDIFF BY THE SEA, CA 92007 TELEPHONE: (760) 633-1050

REFERENCE DRAWINGS
W-1063, S-1019, P-2181, P-1154
11-SD-15-M27.2/

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE
Contractor SHORELINE COMMUN.	W-1063, S-1019, P-2181, P-1154	5/22/07	JP ENG	RECORD PLAN	H.N.	7/12/07	BM NO. 568 AT SOUTHEAST CORNER OF BROTHERTON ROAD AND FELICITA AVENUE, CHISELED □ ON NORTHWEST CORNER OF 2'X2' CONCRETE BASE FOR CONCRETE STREET LIGHT. ELEV. 645.86	Horizontal 1"= 80'
Inspector RAY MILLER	11-SD-15-M27.2/							Vertical N/A
Date Completed MAY, 2007								

Office / Filmed / Traffic

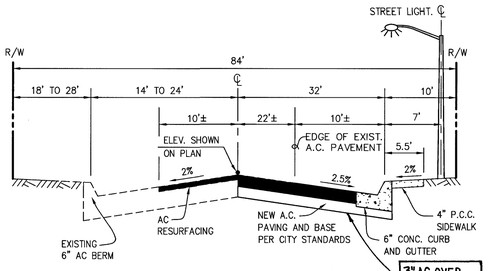
Designed By	Drawn By	Checked By
JL	JL	JHP

Plans Prepared Under Supervision Of
J.H. Palacios Date 8-9-05
JORGE H. PALACIOS R.C.E. No. 32031

Submitted 9/12/05 Approved 9/12/05
By H. N. By (signature)
Ass't City Engineer Deputy Director of Public Works

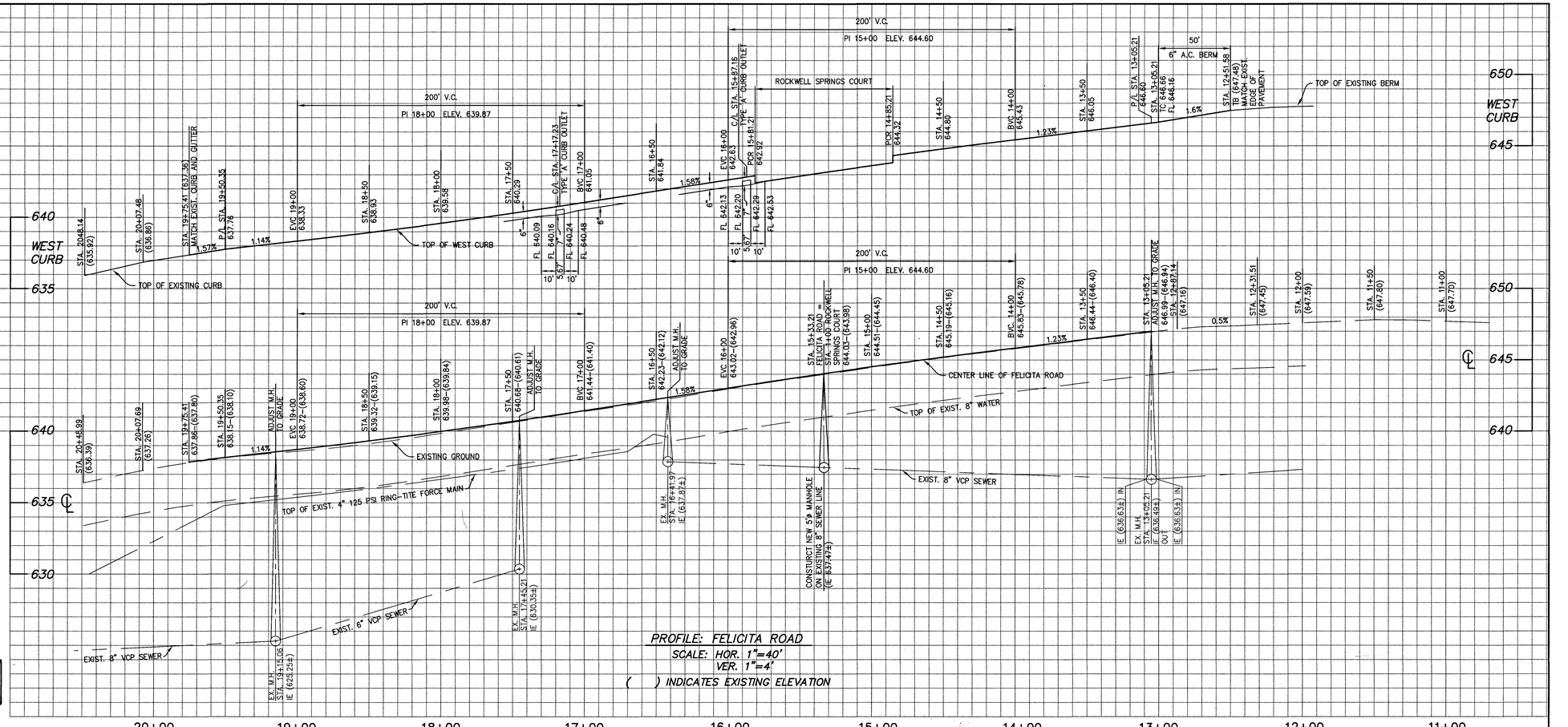
CITY OF ESCONDIDO DEPT OF PUBLIC WORKS
IMPROVEMENT PLAN FOR: ESCONDIDO TRACT NO. 861
FELICITA RD FROM I-15 TO BROTHERTON RD

Drawing No. P-2430
Sheet 1 of 5



TYPICAL SECTION–FELICITA ROAD (PUBLIC)
NO SCALE

3" AC OVER 22" CAB
T.I.= 8.0
R= 45



PROFILE: FELICITA ROAD
SCALE: HOR. 1"=40'
VER. 1"=4'
( ) INDICATES EXISTING ELEVATION

SEWER LATERAL TABLE

LOT NO.	CURB ELEV.	INV. AT CURB	LGTH. (FT.)	INV. MAIN	DROP TO MAIN (FT.)	SLOPE %	DEPTH BELOW T.C. AT P/L (FT.)	REMARKS STATION	INSTALL BACKWATER VALVE IN ACCORD. W/ SEC. 710 OF UBPC
	A	B	C	D	E	F	G		
9	639.43	633.45	42'	628.37	1.2	9.70	5.98	18+11.21	NO
11	639.70	634.20	42'	628.97	1.2	10.08	5.5	17+91.21	NO

CURB DATA

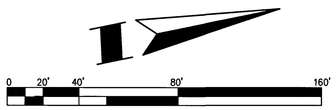
NO	DELTA/BRG.	RADIUS	LENGTH	REMARKS
1	N13°50'41"E	–	57.51'	6" AC BERM
2	N22°53'45"E	–	49.43'	"
3	N12°35'58"E	–	185.00'	6" TYPE "G" C&G
4	N12°35'58"E	–	369.14'	"
5	N13°27'06"E	–	25.06'	"

CENTER LINE DATA

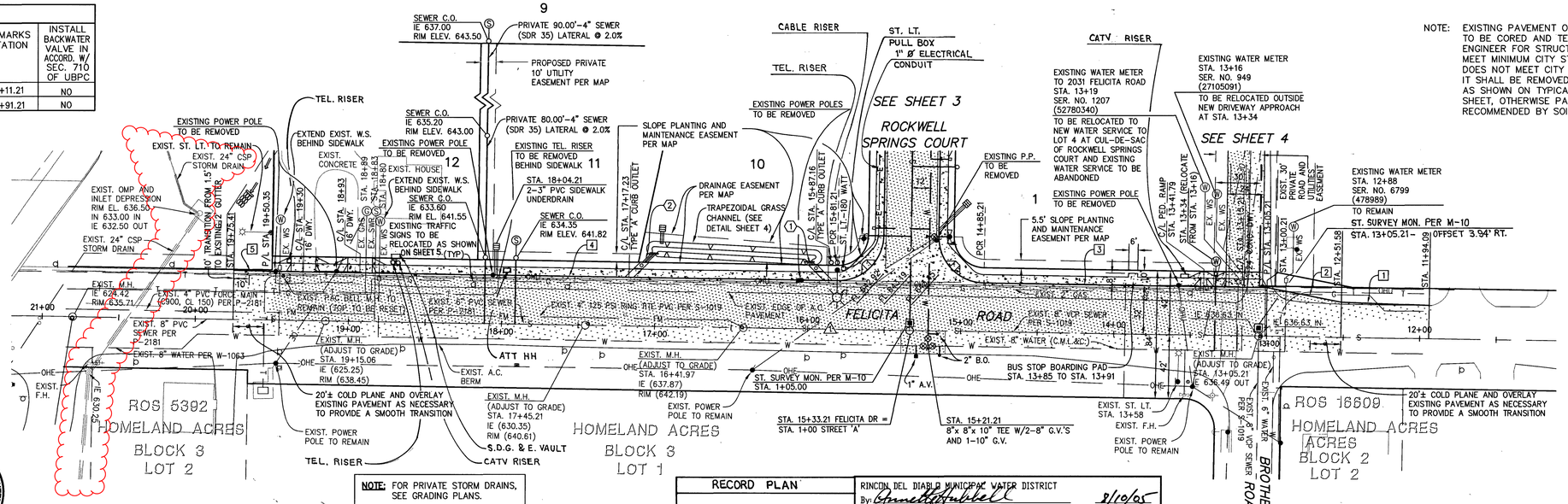
NO	DELTA/BRG.	RADIUS	LENGTH	REMARKS
1	N12°35'58"E	–	680.20	CROWN LINE

PUBLIC STORM DRAIN DATA

NO.	DELTA/BRG.	RADIUS	LENGTH	REMARKS
1	N57°25'11"E	– – –	3.70'	(2) 10" H.D.P.E. @ 2.0%
2	S32°13'15"E	– – –	9.00'	(2) 10" H.D.P.E. @ 2.0%



SCALE: 1"=40'



NOTE: FOR PRIVATE STORM DRAINS, SEE GRADING PLANS.

NOTE: EXISTING PAVEMENT ON FELICITA ROAD TO BE CORED AND TESTED BY SOILS ENGINEER FOR STRUCTURAL QUALITY TO MEET MINIMUM CITY STANDARDS. IF IT DOES NOT MEET CITY STANDARDS, THEN IT SHALL BE REMOVED AND REPLACED AS SHOWN ON TYPICAL SECTION ON THIS SHEET, OTHERWISE PAVE AND OVERLAY AS RECOMMENDED BY SOILS ENGINEER.

NOTE: ARRANGEMENTS HAVE BEEN MADE TO UNDERGROUND EXISTING OVERHEAD UTILITIES ALONG DEVELOPMENT FRONTAGE.

JP ENGINEERING, INC.
CIVIL ENGINEERING ■ LAND PLANNING ■ SURVEYING
4849 RONSON COURT, SUITE 105
SAN DIEGO, CA 92111
(858) 569-7377 FAX (858) 569-0830

ENGINEER OF WORK: J.H. PALACIOS, R.C.E. 32031 — 8-9-05 DATE

FILE CODE: 708-04

REGISTERED PROFESSIONAL ENGINEER JORGE H. PALACIOS No. 32031 12/31/06 CIVIL STATE OF CALIFORNIA

RECORD PLAN
JORGE H. PALACIOS, RCE 32031 — 7-10-07

RINCON DEL DIABLO MUNICIPAL WATER DISTRICT
By: General Manager — 8/10/05 Date
By: District Engineer — 8/10/05 Date
Reviewed By: — 8/10/05 Date

CONSTRUCTION RECORD	REFERENCES
Contractor SHORELINE COMMUN.	W-1063, S-1019, P-2181, P-1154
Inspector RAY MILLER	11-SD-15-M27.2/
Date Completed MAY, 2007	

Date	By	REVISIONS	App'd	Date
5/22/07	JP ENG.	RECORD PLAN	H.N.	7/12/07

BENCH MARK
BM NO. 568 AT SOUTHEAST CORNER OF BROTHERTON ROAD AND FELICITA AVENUE, CHISELED □ ON NORTHWEST CORNER OF 2'X2' CONCRETE BASE FOR CONCRETE STREET LIGHT. ELEV. 645.86

SCALE: Horizontal 1"= 40' Vertical 1"= 4'
Office — Filmed — Traffic

Designed By JL — Drawn By JL — Checked By JHP
Plans Prepared Under Supervision Of
JORGE H. PALACIOS — Date 8-9-05 — R.C.E. No. 32031

Submitted 9/12/05 — By Ass't City Engineer
Approved 9/12/05 — By Deputy Ass't Director Of Public Works

CITY OF ESCONDIDO DEPT OF PUBLIC WORKS
IMPROVEMENT PLAN FOR: ESCONDIDO TRACT NO. 861
FELICITA RD FROM I-15 TO BROTHERTON RD

Drawing No. P-2430
Sheet 2 of 5

APPENDIX D

HYDRAFLOW CROSS SECTIONS

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, May 9 2023

PROPOSED 54 INCH RCP

Circular

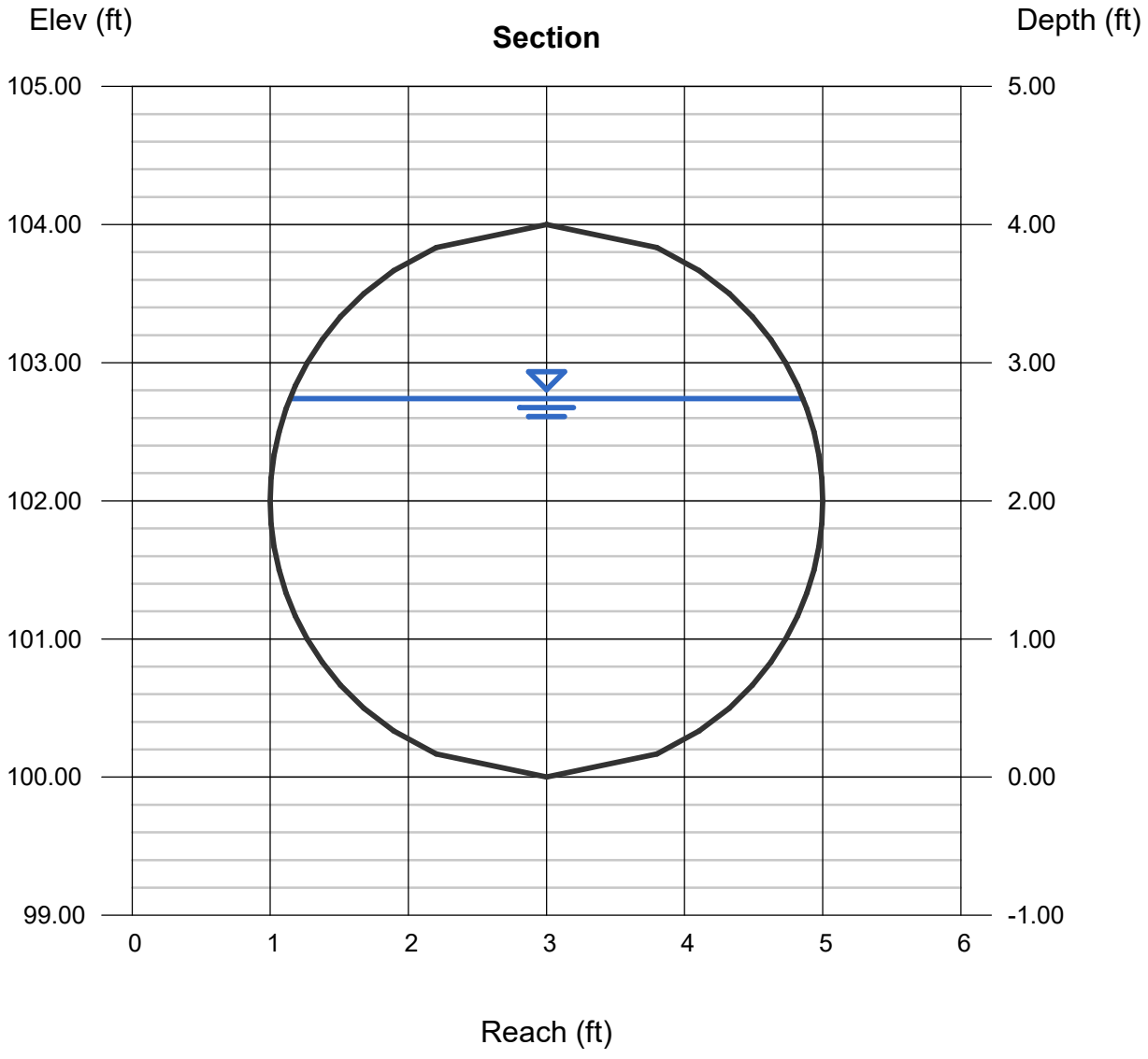
Diameter (ft)	= 4.00
Invert Elev (ft)	= 100.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 82.38

Highlighted

Depth (ft)	= 2.74
Q (cfs)	= 82.38
Area (sqft)	= 9.18
Velocity (ft/s)	= 8.98
Wetted Perim (ft)	= 7.80
Crit Depth, Yc (ft)	= 2.75
Top Width (ft)	= 3.72
EGL (ft)	= 3.99



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, May 9 2023

PROPOSED 30 INCH RCP

Circular

Diameter (ft)	= 2.50
Invert Elev (ft)	= 100.00
Slope (%)	= 1.50
N-Value	= 0.013

Calculations

Compute by:	Q vs Depth
No. Increments	= 25

Highlighted

Depth (ft)	= 2.30
Q (cfs) (Capacity)	= 53.92
Area (sqft)	= 4.73
Velocity (ft/s)	= 11.41
Wetted Perim (ft)	= 6.43
Crit Depth, Yc (ft)	= 2.35
Top Width (ft)	= 1.35
EGL (ft)	= 4.32

Note: Dual 30" storm drains are proposed on downstream property