

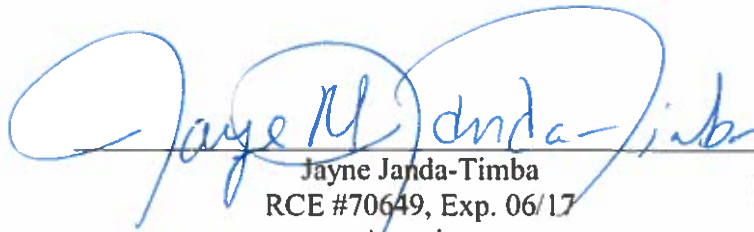
**SUMMARY OF FINDINGS FOR THE
ANNUAL DRAINAGE CHANNEL FIELD
ASSESSMENT AND MAINTENANCE PRIORITIZATION
PROJECT (PHASE 1)
FOR
THE CITY OF SAN DIEGO – MASTER STORM WATER
SYSTEM MAINTENANCE PROGRAM (MMP) MAP 104:
SOUTH CHOLLAS CREEK CHANNEL**

**Job Number 17204-D
August 4, 2015**

RICK
RICK ENGINEERING COMPANY
ENGINEERING COMPANY
RICK ENGINEERING CO

**SUMMARY OF FINDINGS FOR THE
ANNUAL DRAINAGE CHANNEL FIELD
ASSESSMENT AND MAINTENANCE PRIORITIZATION PROJECT (PHASE 1)
FOR
THE CITY OF SAN DIEGO – MASTER STORM WATER SYSTEM MAINTENANCE
PROGRAM (MMP) MAP 104: SOUTH CHOLLAS CREEK CHANNEL**

Job Number 17204-D



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RCE #70649, Exp. 06/17
Associate



Prepared For:
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August 4, 2015

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1.0 Executive Summary

This report and preliminary analyses concludes that the Channel Prioritization Score for the South Chollas Creek Channel (MMP Map 104) is **70.3 out of 100**. This score is at average and indicates that the channel is recommended for maintenance. If the channel is maintained to reflect the as-built condition, the hydraulic capacity of the channel will increase from the current 2549.9 cfs (100-year storm event) capacity to a 1904.3 cfs (100-year storm event) capacity. In addition to the hydraulic capacity, the analyses considered other factors including water quality, community input and aesthetics. The analyses concluded that these other factors are generally in good condition and the benefits of maintaining the channel are mainly to reduce the flood risk.

2.0 Introduction

This report summarizes the findings for the Annual Drainage Channel Field Assessment and Maintenance Prioritization Project (Phase 1) for the City of San Diego for Master Storm Water System Maintenance Program (MMP), dated October 2011, Map 104: South Chollas Creek Channel. Refer to Appendix A for the MMP Storm Water Facilities Key Map and Map 104.

Purpose

As part of the Master Storm Water System Maintenance Program (MMP), the City of San Diego performed site visits to drainage channels within the MMP and designated several drainage channels as maintenance priorities. The purpose of Phase 1 of this project is to perform a desktop analysis to evaluate the drainage channels identified by the City of San Diego and rank them in order of significance for the purposes of City of San Diego maintenance activities.

3.0 Desktop Channel Maintenance Prioritization Analysis

The desktop channel maintenance prioritization analysis is based on the following items which were reviewed and evaluated to determine the maintenance priority:

- City of San Diego Operations and Maintenance (O&M) Channel Maintenance Inspection Forms completed for the channel by the City of San Diego (Refer to Appendix B)
- Site photos taken by the City of San Diego (Refer to Appendix B)
- Available as-built plans (Refer to Appendix G)
- Hydraulic Analysis (Refer to Section 5.0 and Appendix D for detailed output)

Section 5.1 of the MMP discusses the Annual Maintenance Needs Determination Process. As part of the determination process, the MMP recommends that certain factors be evaluated including flood risk to life and property, water quality, community input and aesthetics. These four factors were utilized for this channel maintenance prioritization analysis. For the purposes of prioritizing the channel for maintenance activities, each main factor is weighted as shown in Table 1 below:

Table 1

Channel Prioritization Assessment Factors and Weighting	
Factor	Percent Weighted (%)
Flood Risk	75
Water Quality	10
Community Input	10
Aesthetics	5

As part of the channel prioritization analysis, each of the main factors has been divided into sub-factors. To determine the Flood Risk factor, a basic hydraulic analysis was performed for the channel. The hydraulic analysis is described in more detail in the Hydraulic Analysis section (Section 5.0) of this report. The remaining factors, Water Quality, Community Input and Aesthetics were assessed based on the site photos and the information provided on the (O&M) Channel Maintenance Inspection Form completed for the channel provided by the City of San Diego. These factors and sub-factors and how they relate to the Channel Prioritization Score are shown in more detail on the Channel Prioritization Assessment Sheet located in Appendix E.

4.0 Hydrologic Summary

Federal Emergency Management Agency (FEMA) Peak Discharges

A drainage study for the channel was not available at the authorship of this report. The drainage channel is a Federal Emergency Management Agency (FEMA) defined channel. Peak flow rates for the channel are based on the FEMA Flood Insurance Study (FIS) for San Diego County dated May 16, 2012 (2012 San Diego FIS). The 10-, 50-, and 100-year storm event peak discharges used for the analysis were taken directly from the 2012 San Diego FIS. Estimates of the 2-, 5-, and 25-year storm event peak discharges were extrapolated from the FEMA discharges using logarithmic plotting paper. Hydrologic support material including excerpts from the 2012 San Diego FIS and an excerpt of the Flood Insurance Rate Map (FIRMette) showing the channel are located in Appendix C. A summary of the peak discharges are provided in Table 2 below:

Table 2

Summary of Peak Discharges						
Drainage Area: 3.3 square miles						
Upstream of Confluence With Encanto Branch						
Frequency	2-yr²	5-yr²	10-yr³	25-yr²	50-yr³	100-yr³
Discharge (cfs)¹ at downstream point of channel assessment limit	540	1,250	2,000	3,000	3,900	5,300

1. cfs = cubic feet per second
2. Estimated based on extrapolation using logarithmic plotting paper
3. Peak Discharge also shown on available as-built plans

5.0 Hydraulic Analysis

A basic hydraulic analysis of the channel was performed to assess the Flood Risk factor. The channel assessment limits are shown on Map 104 located in Appendix A. Manning's equation was utilized to calculate the capacity of the channel under two conditions:

1. Post-Maintenance Conditions: based on the material and geometry as observed on a site visit conducted on July 20, 2015 along with City of San Diego's 1999 2-foot topography.
2. Current Conditions: based on the vegetation and sediment levels estimated from the site photos taken by the City of San Diego and information provided on the (O&M) Channel Maintenance Inspection Form prepared by the City of San Diego.

In the absence of As-Builts for this channel, a site visit on July 20, 2015 along with City of San Diego 1999 topography was used to obtain the geometry of the channel. This channel is entirely earthen and was measured in the field to have a bottom width of 20 feet. It was measured on the 1999 topography that the channel side slopes are approximately 2.5:1 on one side and 1.5:1 on the other side. The channel has an overall slope of approximately 0.01. These channel properties were used for hydraulic calculations of the Post-Maintenance Conditions.

Culvert crossings that may exist within the channel reach were not analyzed as part of this hydraulic analysis. Existing culverts may be inefficient or undersized, however the culvert hydraulics were not considered as part of this analysis.

The multiple storm event peak discharges previously calculated in Section 4.0 were evaluated under each condition to assess the capacity of the channel and evaluate the benefit of performing maintenance activities on the channel. See the table below for a summary of the hydraulic results and Appendix D for detailed hydraulic output.

Table 3

Summary of Hydraulic Analysis Results			
CURRENT CHANNEL CAPACITY		AS-BUILT CHANNEL CAPACITY	
Current Condition (cfs)	Equivalent Storm Event (year)	As-built Condition (cfs)	Equivalent Storm Event (year)
1904.3	100	2549.9	100

cfs = cubic feet per second

6.0 Other Channel Prioritization Factors

Sections 4.0 and 5.0 above discuss the determination process for the Flood Risk factor. For more information on the assessment of the Water Quality, Community Input, and Aesthetics factors please refer to the Channel Prioritization Assessment Sheet in Attachment E. The Channel Prioritization Assessment Sheet lists and describes the sub-factors that are considered in the determination of the four main channel assessment factors.

7.0 Summary of Findings and Recommendations

A summary of the Channel Assessment is shown in the table below:

Table 4

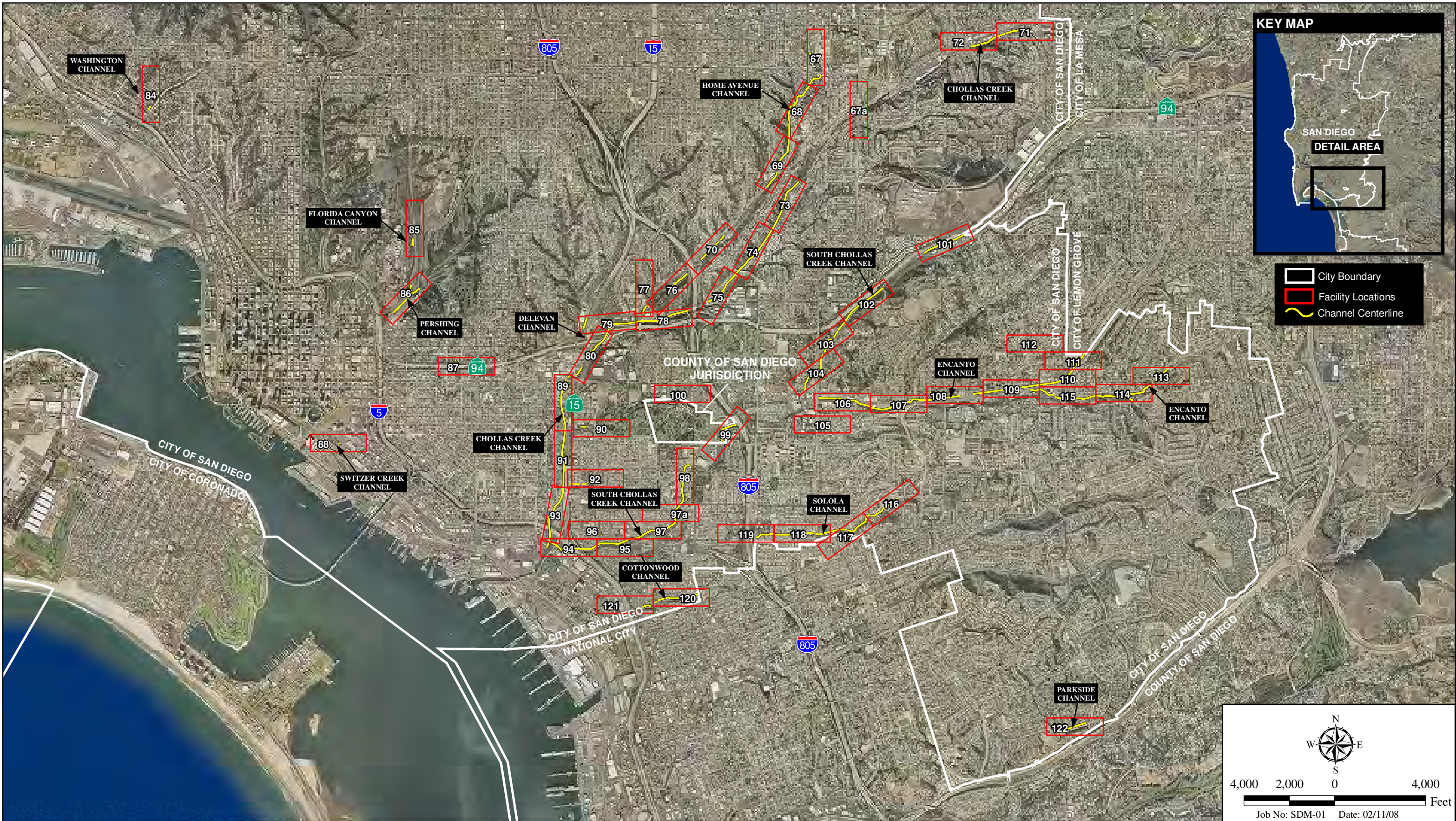
Channel Prioritization Assessment Scoring Summary		
Factor	Percent Weighted (%)	Weighted Factor Score/Maximum
Flood Risk	75	56.3/75
Water Quality	10	4/10
Community Input	10	5/10
Aesthetics	5	5/5
Overall Channel		70.3/100

Based on the evaluation of the four weighted channel prioritization factors described in Section 3.0 of this report, the Channel Prioritization Score for MMP Map 104: South Chollas Creek Channel is **70.3**. Refer to the Channel Prioritization Assessment Sheet located in Appendix E for details on the evaluation of the weighted factors and resulting score for this channel.

It is recommended that this drainage channel be maintained to increase the current capacity of the channel from a 1904.3 cfs (100-year storm event) back to a 2549.9 cfs (100-year storm event) capacity. It is important to note that although maintenance will not reduce the frequency of flooding, it will reduce the overall effect of flooding.

A summary of the channel including an aerial map, channel prioritization score, and other pertinent information is shown on the exhibit titled “Channel Maintenance Prioritization Summary Sheet” located in Appendix F.

Appendix A
Master Storm Water System Maintenance Program (MMP),
dated October 2011, Storm Water Facilities
Key Map and Map 104: South Chollas Creek Channel

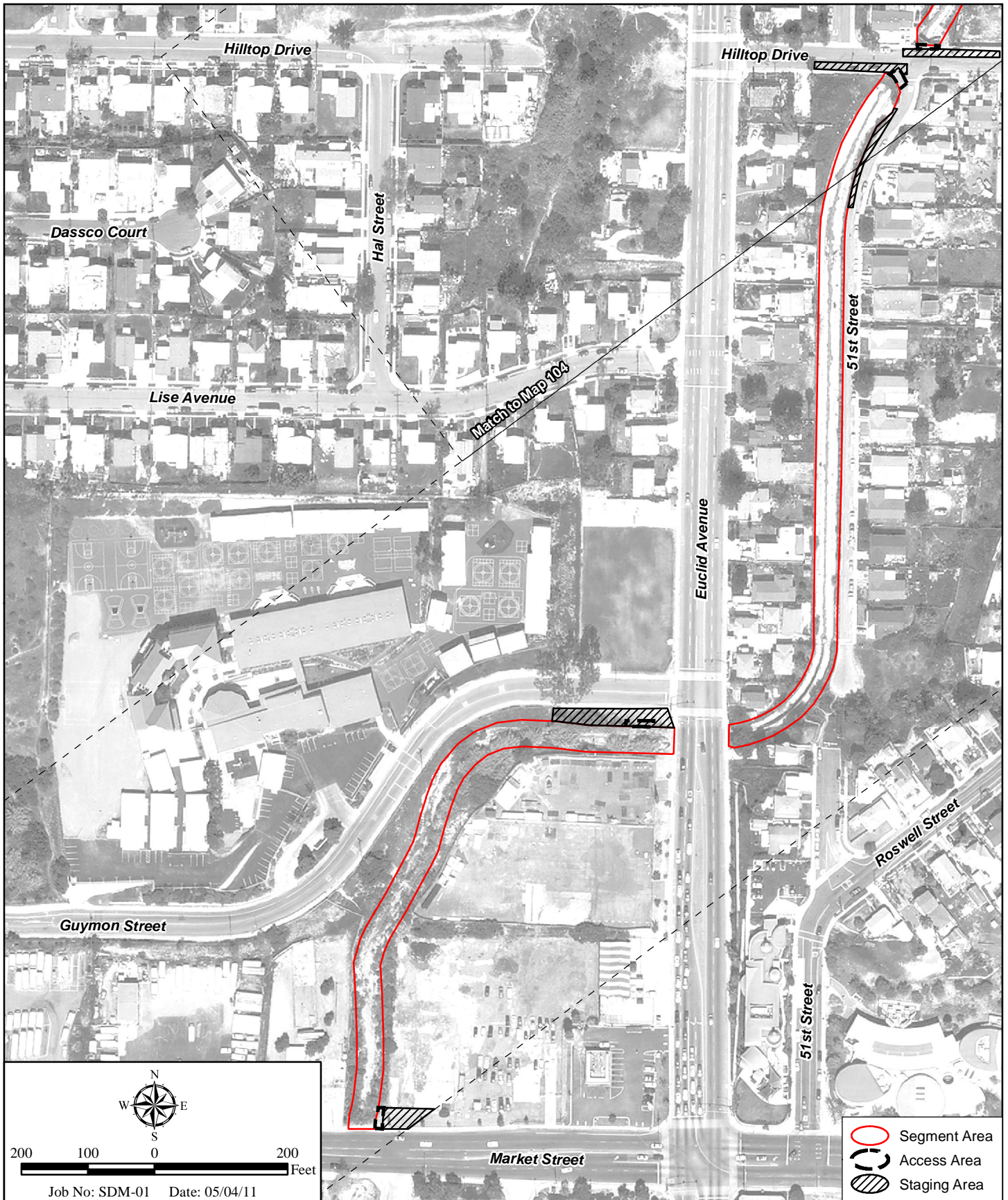


I:\ArcGIS\SDM-01\Map\ENV\MSMP\Fig2d_CentralSD.mxd-NM

Stormwater Facilities - Central San Diego Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 2d



E:\ArcGIS\SDM-01 StormDrainMaintenance\Map\ENV\MasterPlan\Map104.mxd -RK

Access and Staging Areas

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Appendix B
City of San Diego Operations and Maintenance (O&M)
Channel Maintenance Inspection Forms completed
for the channel and Site photos taken by the City of San Diego

Operations and Maintenance

Channel Maintenance Inspection Form

Date: *5/9/15* Time: *11:00*

Channel Map No.: *104*

Inspector: *Jorge, Jacques*

Pueblo San Diego
Watershed: *South creek channel*

Weather: *Good*

Initial Inspection

Follow Up Inspection

Item	Condition	Comments
A. Channel Condition 1= Poor Condition/Needs Immediate Attention 2= Moderate Condition 3= Good Condition		
1. Structure Condition	1 2 (3) N/A	
2. Erosion	1 2 (3) N/A	
3. Trash/Debris	1 (2) 3 N/A	Type of trash and source: <i>rock & Veg.</i>
4. Water Conveyance/ Volume	1 2 (3) N/A	
5. Standing Water	Y (N)	
A. Ponding	Y (N)	
B. Noticeable odors	Y (N)	
C. Algae	Y (N)	
6. Vegetation	1 (2) 3 N/A	Approx. Coverage/Density of Vegetation: <i>2%</i>
A. Invasive (Arundo)	(1) 2 (3) N/A	<i>CK: Pictures (map 104)</i>
B. Native	1 (2) 3 N/A	
7. Sediment	1 (2) 3 N/A	Approx. Depth/Coverage of Sediment: <i>5%</i>
8. Transients/ encampments	Y (N)	

B. Culverts and Outfalls

1= Poor Condition/Needs Immediate Attention

2= Moderate Condition

3= Good Condition

Item	Condition	Comments
1. Structure Condition	1 2/3 N/A	
2. Trash/Debris/Sediment	1 2 3 N/A	270
3. Clogging	1 2 3 N/A	

C. See Map Attached

-Identify Key Issues on Map

-Inspect and take photographs from vantage points identified on Map

Other Comments: *See Pictures
for
Graffiti
&
Rain Gutter*

D. To Be Completed by Management

Follow Up Actions

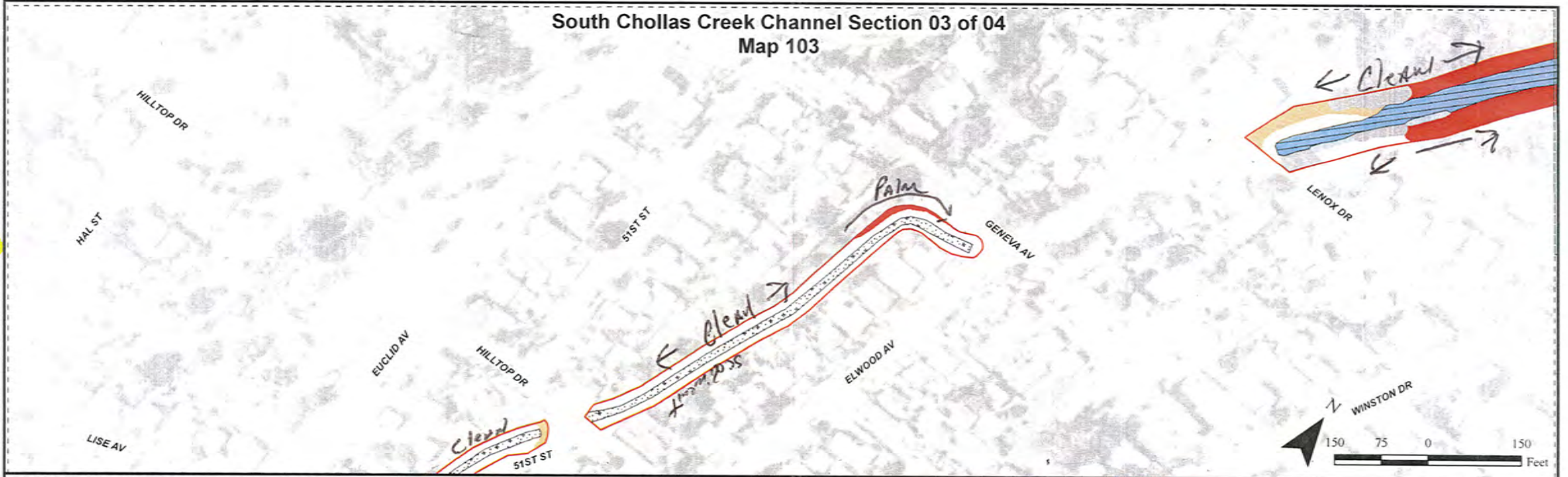
- 1.
- 2.
- 3.

E. Infrastructure Failure Issues

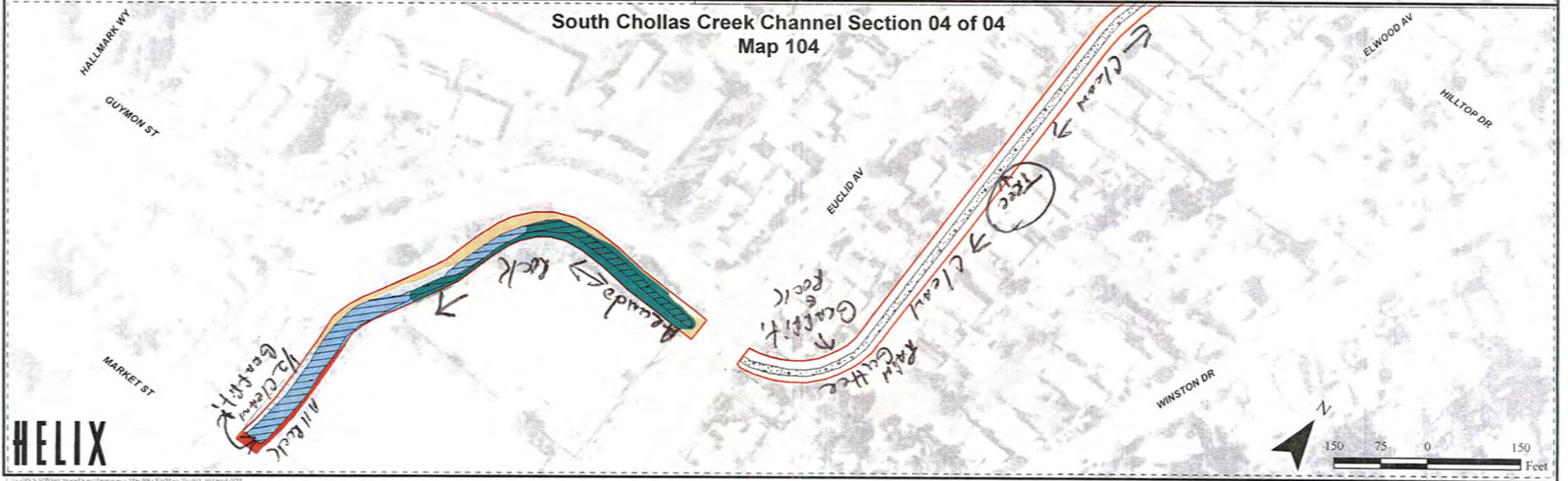
Item	Condition	Comments
1. Broken Concrete/Gunite?	Y <input checked="" type="radio"/> N N/A	
2. Broken/Missing Trash Fence?	Y N <input checked="" type="radio"/> N/A	
3. Broken/Missing Poles/Supports?	Y N <input checked="" type="radio"/> N/A	
4. Exposed Rebar?	Y <input checked="" type="radio"/> N N/A	
5. <u>Rock</u> /Debris Accumulation?	<input checked="" type="radio"/> Y N N/A	Rock
6. Potential Flooding/Litigation?	Y <input checked="" type="radio"/> N N/A	
7. Slope Failure?	Y <input checked="" type="radio"/> N N/A	

Other Comments/Observations:

South Chollas Creek Channel Section 03 of 04
Map 103

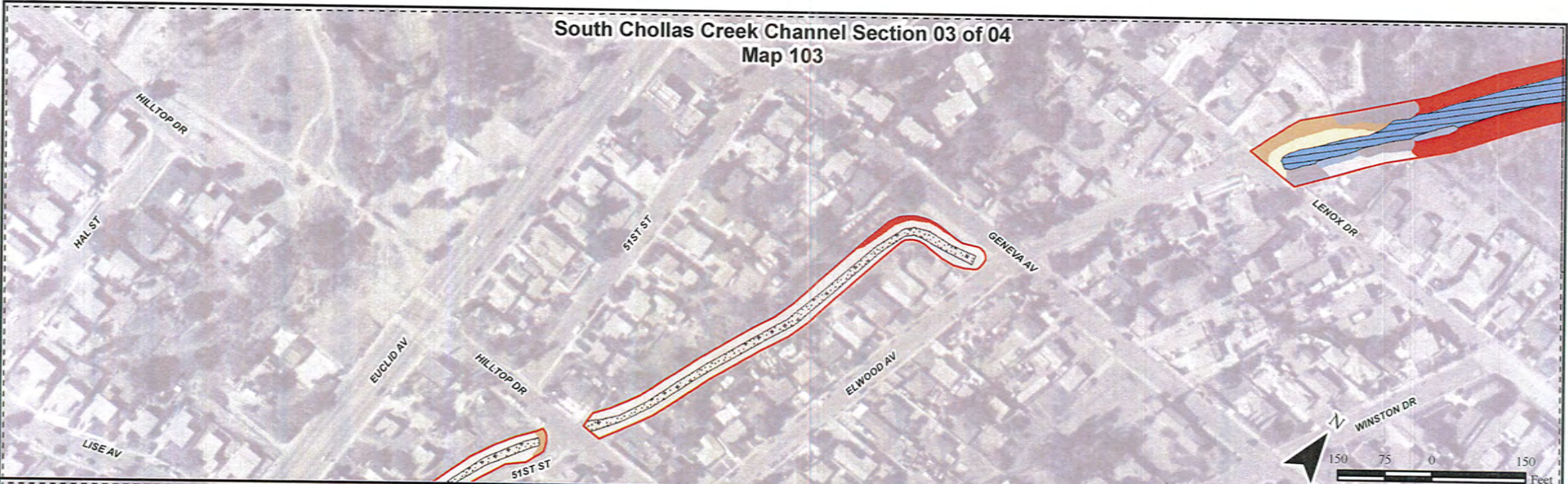


South Chollas Creek Channel Section 04 of 04
Map 104

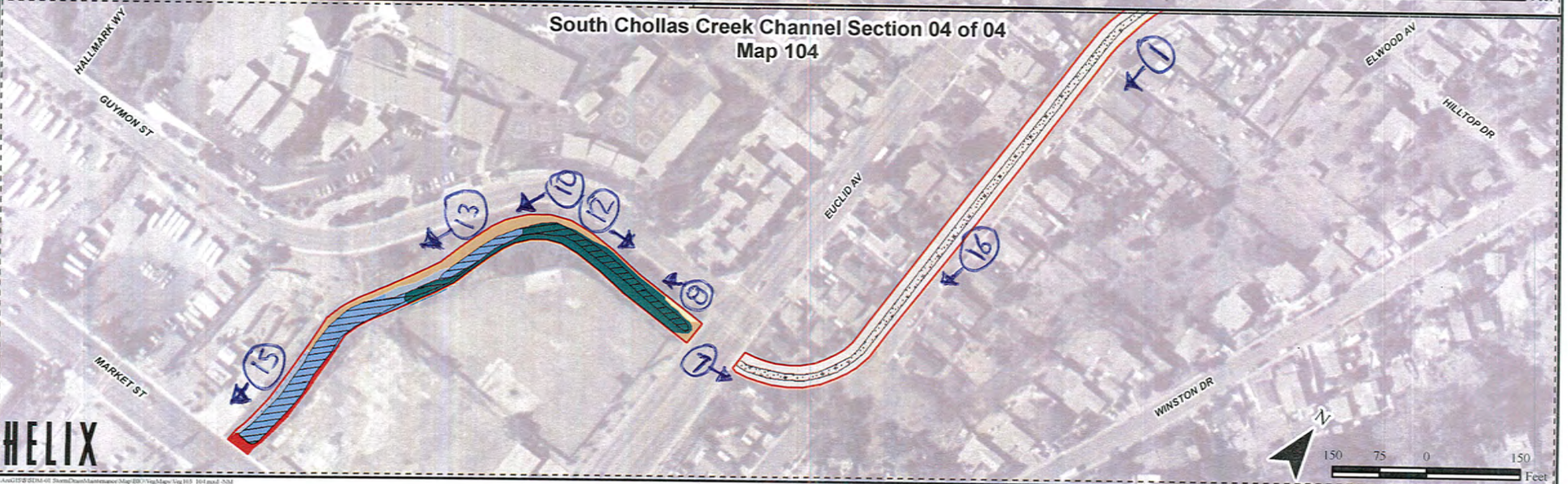


HELIX

South Chollas Creek Channel Section 03 of 04
Map 103



South Chollas Creek Channel Section 04 of 04
Map 104



HELIX

Vegetation/Wetland Delineation - Maps 103 & 104

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM



South Chollas Channel.12 (5-9-2015).JPG



South Chollas Channel.13 (5-9-2015).JPG



South Chollas Channel.15 (5-9-2015).JPG



South Chollas Creek.16 (5-9-2015).jpg



South Chollas Channel.1 (5-9-2015).JPG



South Chollas Channel.7 (5-9-2015).JPG



South Chollas Channel.8 (5-9-2015).JPG



South Chollas Channel.10 (5-9-2015).JPG

Appendix C
Hydrologic Support Material

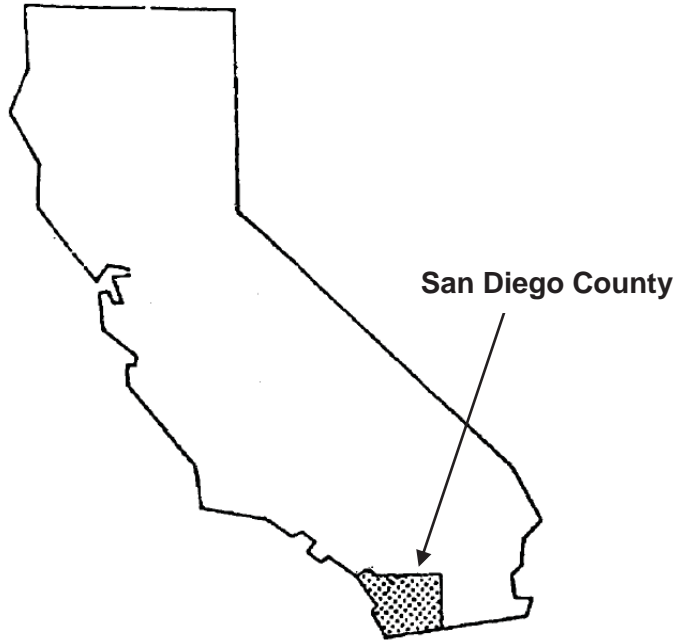
FLOOD INSURANCE STUDY



SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS

VOLUME 1 OF 11

Community Name	Community Number
SAN DIEGO COUNTY, UNINCORPORATED AREAS	060284
CARLSBAD, CITY OF	060285
CHULA VISTA, CITY OF	065021
CORONADO, CITY OF	060287
DEL MAR, CITY OF	060288
EL CAJON, CITY OF	060289
ENCINITAS, CITY OF	060726
ESCONDIDO, CITY OF	060290
IMPERIAL BEACH, CITY OF	060291
LA MESA, CITY OF	060292
LEMON GROVE, CITY OF	060723
NATIONAL CITY, CITY OF	060293
OCEANSIDE, CITY OF	060294
POWAY, CITY OF	060702
SAN DIEGO, CITY OF	060295
SAN MARCOS, CITY OF	060296
SANTEE, CITY OF	060703
SOLANA BEACH, CITY OF	060725
VISTA, CITY OF	060297



REVISED
May 16, 2012



Federal Emergency Management Agency
FLOOD INSURANCE STUDY NUMBER
06073CV001C

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TABLES

TABLE 13 - FLOODWAY DATA

TABLE 8: SUMMARY OF PEAK DISCHARGES

Flooding Source and Location	Drainage Area (sq. miles)	Peak Discharges (cubic feet per second)			
		10% Annual- Chance	2% Annual- Chance	1% Annual- Chance	0.2% Annual- Chance
0.3 Mile Above Mouth	7.1	1,200 ¹	3,400	5,200 ¹	10,400
At Oak Shadows Drive	4.3	700	2,100	3,200	6,500
South Las Chollas Creek					
Above Confluence with Las Chollas Creek	10.9	2,000	3,900	5,300	9,500
Above Confluence with Encanto Branch	3.3	730	1,400	1,900	3,400
At Kelton Road	2.6	580	1,100	1,500	2,700
South Tributary to Santa Maria Creek					
At Mouth	9.3	700	3,400	5,800	15,000
Spring Valley Creek					
Below Confluence with Casa de Oro Creek	7.1	1,300	2,600	3,600	9,300
Steele Canyon Creek					
At Mouth	2.7	--	--	2,980	--
Stevenson Creek					

¹Flow Partially Controlled by Turner Dam
 -- Data Not Available

South LAS Chollas above
confluence with Encanto 3.3 sq mi

EXCEEDENCE PER HUNDRED YEARS (ie. there is a 1% chance a 100-yr storm will occur in a year)

100-YR FLOOD
 10^3

25yr = 1150 cfs

5yr = 470 cfs

2yr = 200 cfs

DISCHARGE IN C.F.S.

2

10'

Exceedence Interval in Years



RICK ENGINEERING COMPANY

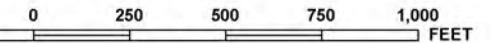
5420 Friars Road
San Diego
California 92110-2496

619 291 0707

EXCEEDENCE INTERVAL IN YEARS



MAP SCALE 1" = 500'



Approximate Channel Reach (Map 104)

NFIP PANEL 1904G

FIRM
FLOOD INSURANCE RATE MAP
SAN DIEGO COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 1904 OF 2375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

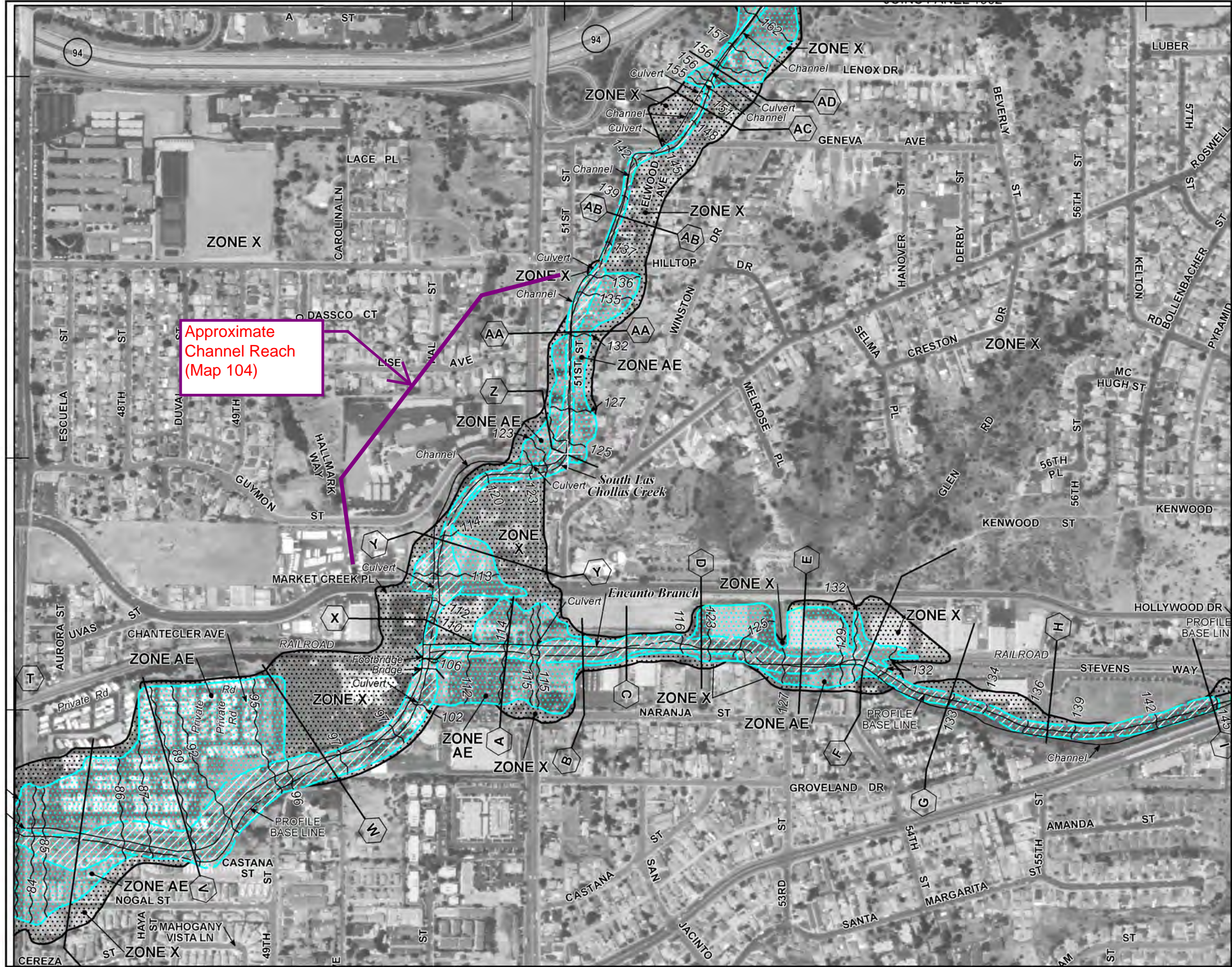
COMMUNITY	NUMBER	PANEL	SUFFIX
NATIONAL CITY, CITY OF	060293	1904	G
SAN DIEGO, CITY OF	060295	1904	G

Notice to User: The Map Number shown below should be used when placing map orders, the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06073C1904G
MAP REVISED
MAY 16, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Appendix D
Hydraulic Analysis Output

Hydraulic Analysis Report

Project Data

Project Title: Project - South Chollas

Designer: Rick Engineering Company

J-17204-D

Project Date: Tuesday, July 21, 2015

Project Units: U.S. Customary Units

Channel Analysis: As-Built_SChollas_D/S_Euclid_

Notes: In the absence of As-Builts for this channel, a site visit on July 20, 2015 along with City of San Diego 1999 topography was used to obtain the geometry of the channel. This channel is entirely earthen and was measured in the field to have a bottom width of 20 feet. It was measured on the 1999 topography that the channel side slopes are approximately 2.5:1 on one side and 1.5:1 on the other side. The channel has an overall slope of approximately 0.01. Pursuant to Table 1-104.14A of the City of San Diego Drainage Design Manual, dated April 1984, the roughness coefficient used for the channel side slopes and channel bottom is 0.03. This roughness coefficient is based on some weeds, little or no brush.

Input Parameters

Channel Type: Trapezoidal

Side Slope 1 (Z1): 2.5000 (ft/ft)

Side Slope 2 (Z2): 1.5000 (ft/ft)

Channel Width: 20.0000 (ft)

Longitudinal Slope: 0.0100 (ft/ft)

Manning's n: 0.0300

Depth: 6.0000 (ft)

Result Parameters

Flow: 2431.3043 (cfs)

Area of Flow: 192.0000 (ft²)

Wetted Perimeter: 46.9721 (ft)

Hydraulic Radius: 4.0875 (ft)

Average Velocity: 12.6630 (ft/s)

Top Width: 44.0000 (ft)

Froude Number: 1.0683

Critical Depth: 6.2268 (ft)

Critical Velocity: 12.0312 (ft/s)

Critical Slope: 0.0087 (ft/ft)

Critical Top Width: 44.9073 (ft)

Calculated Max Shear Stress: 3.7440 (lb/ft²)

Calculated Avg Shear Stress: 2.5506 (lb/ft²)

Channel Analysis: Current_Condition_SChollas_D/S_Euclid_

Notes: In the absence of As-Builts for this channel, a site visit on July 20, 2015 along with City of San Diego 1999 topography was used to obtain the geometry of the channel. This channel is entirely earthen and was measured in the field to have a bottom width of 20 feet. It was measured on the 1999 topography that the channel side slopes are approximately 2.5:1 on one side and 1.5:1 on the other side. The channel has an overall slope of approximately 0.01. There is heavy brush in the side slopes of the channel and cobbles along the bottom. Pursuant to Table 1-104.14A of the City of San Diego Drainage Design Manual, dated April 1984, the roughness coefficients used for the channel side slopes and channel bottom is $n=0.06$ and $n=0.04$, respectively. The roughness coefficient on the side slopes is based on some weeds, heavy brush on banks. The roughness coefficient used on the bottom of the channel is based on unlined rock channels.

Input Parameters

Channel Type: Custom Cross Section

Station (ft)	Elevation (ft)	Manning's n
0.00	6.00	0.0600
15.00	0.00	0.0400
35.00	0.00	0.0600
44.00	6.00	-----

Cross Section Data

Longitudinal Slope: 0.0100 (ft/ft)

Depth: 6.0000 (ft)

Result Parameters

Flow: 1815.6836 (cfs)

Area of Flow: 192.0000 (ft²)

Wetted Perimeter: 46.9721 (ft)

Hydraulic Radius: 4.0875 (ft)

Average Velocity: 9.4567 (ft/s)

Top Width: 44.0000 (ft)

Froude Number: 0.7978

Critical Depth: 5.2832 (ft)

Critical Velocity: 11.2435 (ft/s)

Critical Slope: 0.0160 (ft/ft)

Critical Top Width: 41.1326 (ft)

Calculated Max Shear Stress: 0.0000 (lb/ft²)

Calculated Avg Shear Stress: 0.0000 (lb/ft²)

Composite Manning's n Equation: Lotter method

Manning's n: 0.0402

CITY OF SAN DIEGO



**DRAINAGE DESIGN
MANUAL**

APRIL • 1984

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TABLE 1-104.14A

DESIGN VALUES FOR MANNINGS ROUGHNESS COEFFICIENT (n)

<u>TYPE OF CHANNEL</u>	<u>N VALUE</u>
Unlined Channels:	
Clay Loam;	0.023
Sand	0.020
Gravel	0.030
Rock	0.040
Lined Channels:	
Portland Cement Concrete	0.015
Air Blown Mortar	0.018
Asphalt Concrete	0.018
Grass Lined Channels: (Shallow depths)	
2 inch length	0.050
4 - 6 inch length	0.060
6 - 12 inch length	0.120
12 - 24 inch + length	0.200
Pavement and Gutters:	
Concrete	0.015
Asphalt Concrete	0.018
Natural Streams: (Less than 100 feet wide at flood stage)	
1. Regular section	
a. Some grass and weeds, little or no brush	0.030
b. Dense growth of weeds, depth of flow substantially greater than weed height	0.040
c. Some weeds, light brush on bank	0.040
d. Some weeds, heavy brush on banks	0.060
e. With trees in channel, branches submerged at flood stage, increase above values by	0.015

TABLE 1-104.14A (Continued)

2.	Irregular section, with pools, slight channel meander increase all values listed in 1. Regular Section, by	0.015
----	--	-------

Flood Plains: (adjacent to natural streams)

1.	Pasture, no brush	
	a. Short grass	0.030
	b. High grass	0.040
2.	Cultivated areas	
	a. No crop	0.040
	b. Mature row crops	0.040
	c. Mature field crops	0.050
3.	Heavy weeds, scattered brush	0.050
4.	Light brush and trees	0.060
5.	Medium to dense brush	0.090
6.	Dense willows	0.170
7.	Cleared land with tree stumps, 100-150 per acre	0.060
8.	Heavy stand of timer, little undergrowth	
	a. Flood depth below branches	0.110
	b. Flood depth reaches branches	0.140

Appendix E
Channel Prioritization Assessment Sheet

Channel Prioritization Assessment Sheet for South Chollas Creek Channel Downstream of Euclid Ave. MMP Map 104

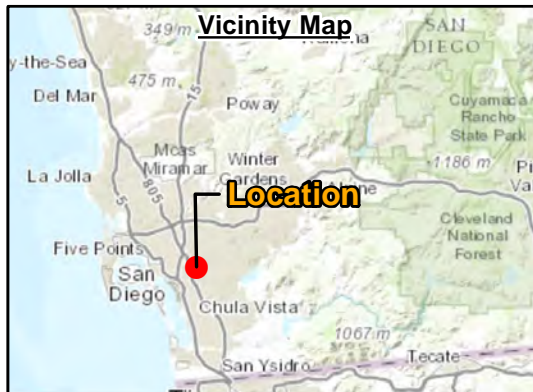
Total Channel Score: 70.3 /100

Flood Hazard (75% of total weight)			Score	factor weight	Weighted Points
Δ capacity			Sum of sub-factor a-c scores:	0	25%
a. Risk of flooding	Current Channel Normal depth capacity ¹ :	1904.3 cfs 100 -yr. storm event	2-yr.=score of 5; 5-yr.=score of 4; 10-yr.=score of 3; 25-yr.=score of 2; 50-yr.=score of 1; 100-yr.=score of 0	(out of 15)	0
b. Increase in storm event capacity	Channel As-Built normal depth capacity ¹ :	2549.9 cfs 100 -yr. storm event	1 point given for every level increase in -year storm event capacity, post-maintenance		
c. Net percent increase in channel capacity post-maintenance		34%	Less than 100% = score of 0; 100%-199% = score of 1; 200%-299% = score of 2; 300%-399% = score of 3; 400%-500%= score of 4; Over 500% = score of 5		
Consequence of flooding adjacent areas					
Surrounding area land use: (area within 100 feet of the channel or area in which more than 10,000 ft ² is impacted from flooding.)		Residential	Residential = score of 4; Commercial = score of 4; Roads = score of 2; Agriculture = score of 1; Other = score of 1	0 1 2 3 4	50%
Is there open space surrounding the channel?		No	If yes, subtract land use score by 1		
Clogging Potential					
Are there trees/large debris that have potential to flow D/S and clog culverts/the channel?		Yes		0 1 2 3 4	25%
Total Weighted Flood Hazard Points					56.3
Water Quality/Channel Condition (10% of total weight)					
Trash/Debris				0 1 2 3 4	20%
Type of trash and Source:		None			
Standing water				0 1 2 3 4	15%
Ponding?		No			
Noticeable odors?		No			
Algae?		No			
Sediment				0 1 2 3 4	35%
Approx. sediment coverage: (Based on information provided on City of San Diego O&M Channel Maintenance Inspection Form)		5%			
Rock/debris Accumulation?		Yes			
Transients/encampments				0 1 2 3 4	10%
Culverts and Outfalls				0 1 2 3 4	10%
Culvert structure condition		Good			
Infrastructure Issues				0 1 2 3 4	10%
Broken concrete/gunite?		No			
Broken or missing trash fence/fence poles/supports?		No			
Slope failure?		Yes			
Total Weighted Water Quality Points					4.0
Community Input (10% of total weight)					
Community Complaints Received				YES NO	50%
Community Outreach Input				0 1 2 3 4	50%
Total Weighted Community Input Points					5.0
Aesthetics (5% of total weight)					
Aesthetics				0 1 2 3 4	100%
Are the aesthetics of the channel compromised?		Yes			
Total Weighted Aesthetics Points					5.0

1. See appendix D for geometry parameters

Scoring Legend	
0	Factor is in good condition and does not need attention
1	Factor is in good condition, but will eventually need attention
2	Factor needs attention
3	Factor is in bad condition and needs attention
4	Factor is in severe condition and needs immediate attention

Appendix F
Channel Maintenance Prioritization Summary Sheet



W:\17204-D_ChannelRanking\GIS\17204_Channel_Prioritization\Reports\ASerial\17204-01\2015

Legend

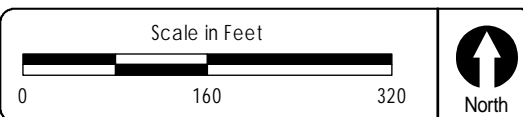
- Photo Location
- Channel Survey
- City Storm Drain Structure
- City Storm Drain

Photos:



Assessment Results

- **Channel Prioritization Score:**
70.3 out of 100
 - **Flood Hazard Score:**
56.3 out of 75
 - **Water Quality Score:**
4 out of 10
 - **Community Input Score:**
5 out of 10
 - **Aesthetics Score:**
5 out of 5
- **Capacity Prior to Maintenance:**
100-year storm event
- **Capacity After Maintenance (As-built Capacity):**
100-year storm event
- **Clogging Potential:** *MEDIUM*
- **Approximate Vegetation Coverage:** *MEDIUM*
- **Surrounding Area:** *Commercial*
- **Infrastructure Failures:**
Slope failure
- **Site Evaluation Date:**
May 9, 2015
- **Notes/Comments:**
One of the side slopes has failed and blocked part of the culvert entrance at the downstream end of the channel.



Channel: South Chollas Creek

MMP Map # 104

Channel Maintenance Prioritization Summary Sheet

Appendix G
Available As-built plans

No Available As-built Plans

Appendix H
Compact Disc
PDF Version of Full Report