APPENDIX G

PARAMETRIC DATA REPORT

The following is a listing of the possible factors that can be used as decision conditions in the Decision Trees

PAVEMENT INDICES

INDEX CODES

1. Surface Distress Index (SDI)

2. Pavement Condition Index (PCI)

DEFINITION OF BITUMINOUS PAVEMENT DISTRESS

DISTRESS TYPE	DESCRIPTION
1. Patching (PAT)	**Road repairs – May be hot or cold mix patching, spray patching, rubberized crack sealing, concrete patches or temporary granular repairs.**
2. Rippling and Shoving (RIP)	**Regular transverse undulation in pavement surface consisting of alternate peaks and valleys – wash board effect.**
3. Raveling and Streaking (RAV)	**Progressive loss of pavement material from surface downwards. Loss of coarse aggregate or similar size hardened asphalt pieces. Looks like light and dark area in bituminous pavement or streak lines on surface treated pavements.**
4. Flushing and Bleeding (FLU)	**The presence of free asphalt cement migrating upwards to the surface. Most likely to occur in the wheel tracks.**
5. Distortion, Frost Heave Depression (DIS)	**Any deviation or surface distortion such as dishing, bumps, dips, tenting, or slippage.**
6. Excessive Crown (EXC)	**A steep downward angle from the centerline of roadway to edge. Can also appear as a longitudinal dip from outer wheel path to edge of pavement.**
7. Progressive Edge Cracking (EDG)	**Cracks running parallel to and originating from the edge of pavement; cracking is either a fairly continuous straight crack, or cracks consisting of crescent shape waves, or progressive alligator cracks originating at pavement edge.**
DISTRESS TYPES	**DESCRIPTION**
8. Alligator Cracking (ALG)	**Crack forming a network of multi-sided (polygon) blocks. Block size can range from 2”**

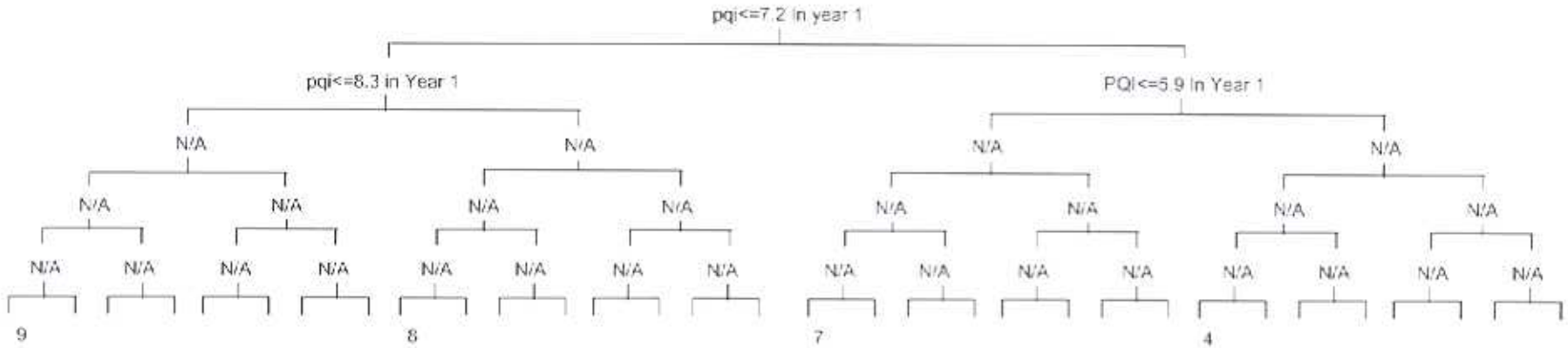
	to 4" to about 20". Alligatoring may or may not be accompanied by distortion or dispersions. Can occur anywhere on surface.
9. Potholes (POT)	**Bowl shaped depression (hole) in pavement. Can be related to other surface defects such as raveling, cracking, alligator cracking.**
10. Map Cracking (MAP)	**Cracking running randomly along the pavement surface, sometimes in a serpentine manner. Appears to have a combination of traverse and longitudinal cracks to form a map.**
11. Longitudinal & Meandering Cracking (LON)	**Cracks running approximately parallel to the direction of travel. Situated at or near the center of wheel tracks, centerline, midline or pavement edge.**
12. Transverse Cracking (TRN)	**Cracks that follow a course approximately at right angles to the centerline of the pavement. Usually regularly spaced along length of road.**
13. Wheel Track Rutting (RUT)	**Longitudinal depression left in wheel paths after repeated load applications.**
14. Type 1 Cracks	**Type 1 cracks consist of alligator cracks which generally form in the wheel paths, and progressive edge cracking which starts at pavement edge and migrates to the road centerline.**
15. Type 2 Cracks	**Type 2 cracks are generally categorized as non-load associated cracks. The following cracks are included in this category: Map Cracking, Longitudinal & Meandering, Transverse.**
16. Type 1 Defects	**Distresses that occur at the surface of the pavement and are usually caused by poor material properties, aging and vehicle wear are classified as surface defects. The following distresses are included in this category: Course Aggregate Loss, Ravelling & Streaking, Flushing & Bleeding.**
DISTRESS TYPES	**DESCRIPTION**
17. Type 2 Defects	**These distresses occur at the surface of the pavement and can be the result of surface and/or base problems. The**

	following distresses are included in this category: Potholes, Patching.
18. Deformation & Distortion (DEF) & (DIST)	**Movements in the pavement surface can manifest as deformations such as rutting, corrugations, shoving, etc., and/or distortion such as frost heaves, settlements, slippage, etc. The following distresses rated by the PMSL surveys are included in this category: Rippling & Shoving, Wheel Track Rutting, Distortions and Excessive Crown.**

Rehabilitation Decision Trees Report

Left Branch = False/No
Right Branch = True/Yes
Empty Nodes traverse Left Branch

FUNCTIONAL CLASSIFICATION: Major
PAVEMENT TYPE: Flexible Hot Mix
MINIMUM ACCEPTABLE PAVEMENT QUALITY INDEX (PQI): 8.9



City of Costa Mesa

PMA

Rehabilitation Alternatives Definition Report

Code	Short description	Long description	Cost / ft^2	Base Year	EGT (in)	Rehabilitation Benefit Level	Basic PQI	Thick. Factor
8	**OVERLAY**	**2"ARHM OVERLAY (MPH)THIN [8]**	$ 7.95	2007	4.0	BENEFIT LEVEL 2 Edge Mill - OVERLAY	9.8	.170
		'Pre-Rehabilitation' Pavement Type: Flexible Hot Mix	'Post-Rehabilitation' Pavement Type: Flexible Hot Mix					
9	SS	**SLURRY SEAL Type II-LATEX (MPH)[9]**	$ 1.90	2007	0.0	BENEFIT LEVEL 1 Surface Treatment	9.2	.041
		'Pre-Rehabilitation' Pavement Type: Flexible Hot Mix	'Post-Rehabilitation' Pavement Type: Flexible Hot Mix					

City of Costa Mesa

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Rehabilitation Alternatives Definition Report

Code	Short description	Long description	Cost / ft^2	Base Year	EGT (in)	Rehabilitation Benefit Level	Basic PQI	Thick. Factor
4	**RECON**	**2'ARHM/14"ACBC (MAJ) [4]**	$ 20.30	2007	32.0	BENEFIT LEVEL 5 Reconstruction	10	.583
5	**RECON**	**2"AC/RLA/7"AC (Res) [5]** 'Pre-Rehabilitation' Pavement Type: Flexible Hot Mix	$ 12.50	2007	18.0	BENEFIT LEVEL 5 Reconstruction 'Post-Rehabilitation' Pavement Type: Flexible Hot Mix	10	.583
6	**OVERLAY**	**2"AC/RLA OVERLAY (RES)[6]** 'Pre-Rehabilitation' Pavement Type: Flexible Hot Mix	$ 7.40	2007	4.0	BENEFIT LEVEL 2 Edge Mill - OVERLAY 'Post-Rehabilitation' Pavement Type: Flexible Hot Mix	9.8	.170
7	**OVERLAY**	**2.5"ARHM OVERLAY (MPH) THICK [7]** 'Pre-Rehabilitation' Pavement Type: Flexible Hot Mix	$ 8.60	2007	5.0	BENEFIT LEVEL 3 Full Mill - OVERLAY 'Post-Rehabilitation' Pavement Type: Flexible Hot Mix	9.9	.208

Notes:

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Rehabilitation Alternatives Definition Report

Code	Short description	Long description	Cost / ft^2	Base Year	EGT (in)	Rehabilitation Benefit Level	Basic PQI	Thick. Factor
1	RECON	**2"ARHM/10"ACBC (Col) [1]** 'Pre-Rehabilitation' Pavement Type Flexible Hot Mix	$ 16.20	2007	24.0	BENEFIT LEVEL 5 Reconstruction 'Post-Rehabilitation' Pavement Type Flexible Hot Mix	10	.583
2	RECON	**2"ARHM/11"AC (Sec) [2]** 'Pre-Rehabilitation' Pavement Type Flexible Hot Mix	$ 17.00	2007	26.0	BENEFIT LEVEL 5 Reconstruction 'Post-Rehabilitation' Pavement Type Flexible Hot Mix	10	.583
3	RECON	**2"ARHM/12"AC (Prim) [3]** 'Pre-Rehabilitation' Pavement Type Flexible Hot Mix Gravel Unknown/Undefined	$ 18.00	2007	28.0	BENEFIT LEVEL 5 Reconstruction 'Post-Rehabilitation' Pavement Type Flexible Hot Mix Rigid PCC Gravel Unknown/Undefined	10	.583
4	RECON	**2'ARHM/14"ACBC (MAJ) [4]** 'Pre-Rehabilitation' Pavement Type Flexible Hot Mix	$ 20.30	2007	32.0	BENEFIT LEVEL 5 Reconstruction 'Post-Rehabilitation' Pavement Type Flexible Hot Mix	10	.583

City of Costa Mesa

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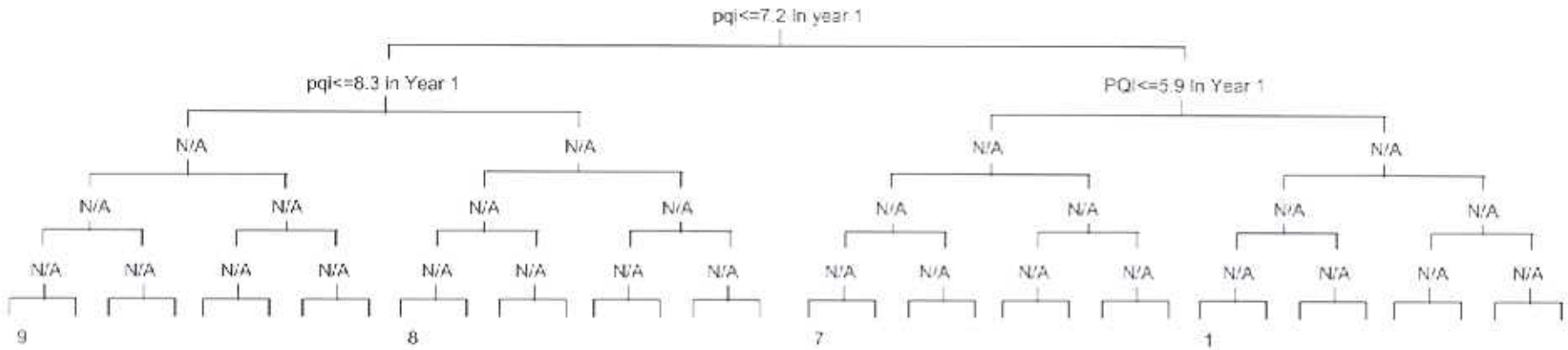
Rehabilitation Decision Trees Report

Left Branch = False/No
Right Branch = True/Yes
Empty Nodes traverse Left Branch

FUNCTIONAL CLASSIFICATION: Collector
PAVEMENT TYPE: Flexible Hot Mix
MINIMUM ACCEPTABLE PAVEMENT QUALITY INDEX (PQI): 8.9



Left Branch = False/No
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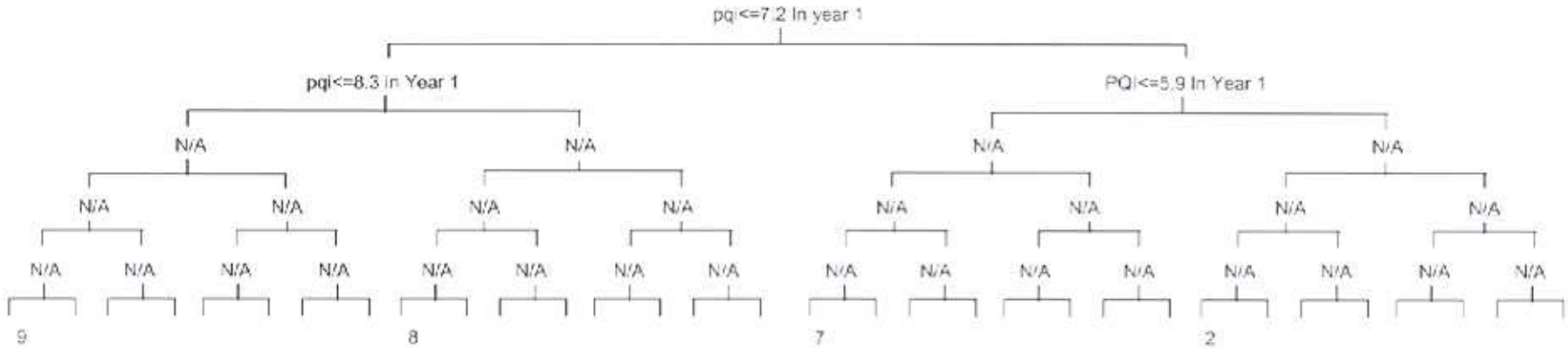
Empty Nodes traverse Left Branch

FUNCTIONAL CLASSIFICATION: Secondary
PAVEMENT TYPE: Flexible Hot Mix
MINIMUM ACCEPTABLE PAVEMENT QUALITY INDEX (PQI): 5.9



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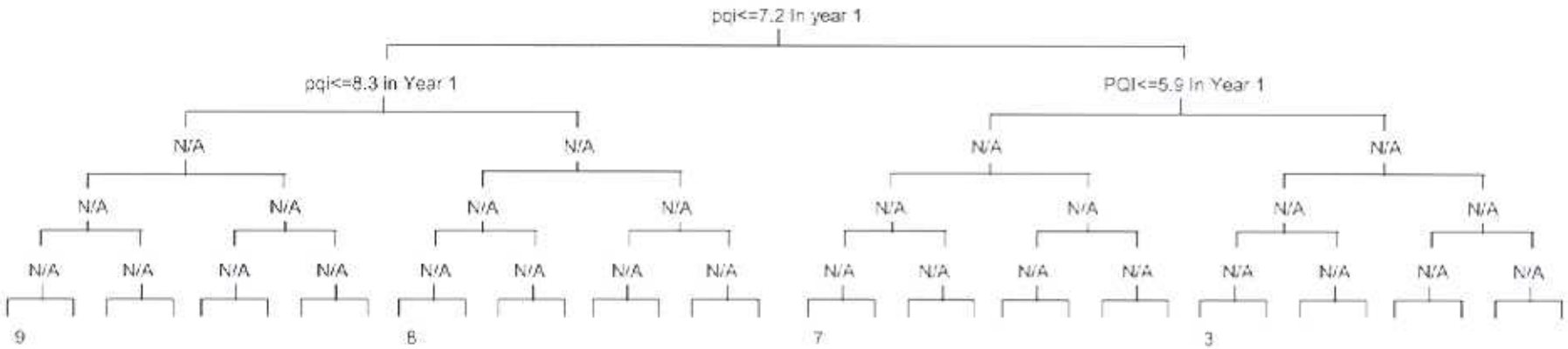
Rehabilitation Decision Trees Report

Left Branch = False/No
Right Branch = True/Yes
Empty Nodes traverse Left Branch

FUNCTIONAL CLASSIFICATION: Primary
PAVEMENT TYPE: Flexible Hot Mix
MINIMUM ACCEPTABLE PAVEMENT QUALITY INDEX (PQI): 8.9