

# Table of Contents

<b>Executive Summary</b> .....	<b>1</b>
<b>Introduction</b> .....	<b>2</b>
<b>Building Statistics</b> .....	<b>3</b>
Location.....	3
Project Team.....	3
Project Information.....	4
Architecture.....	4
Building Envelope.....	6
Construction.....	7
Electrical.....	7
Lighting.....	7
Fire Protection.....	8
Transportation.....	8
Special Systems.....	9
Mechanical.....	10
<b>Structural System</b> .....	<b>11</b>
Floor System.....	11
Framing Elements.....	12
Foundation.....	13
Lateral Shear Walls.....	14
<b>Problem Statement</b> .....	<b>16</b>
<b>Proposed Solution</b> .....	<b>17</b>
<b>Redesign of Floor System</b> .....	<b>18</b>
Suggested Loading.....	18
Investigation of Alternate Floor Systems.....	20
Design of Hollowcore Plank System.....	21
Design of 50 ksi Steel Frame.....	22
Lateral Analysis of Shear Walls.....	26
Design of Shear Walls.....	29
Parapet Design.....	30
<b>Final Design</b> .....	<b>31</b>
<b>Breadth Topics</b> .....	<b>32</b>
Impact on Mechanical System .....	32
Cost Analysis of Alternate Construction Sequence.....	34
<b>Conclusion</b> .....	<b>38</b>
<b>Credits</b> .....	<b>38</b>
<b>Appendices</b>	
<b>References</b>	