

**Continuum of Transportation Related Service Options for Students with Disabilities**  
 Copyright 2009 by Dr. Ray Turner and White Buffalo Press  
 Least Restrictive Transportation Environment (LRTE) ←————→ Most Restrictive Transportation Environment

| Sub-Routes to School   | Parents Transport without District Reimbursement                |   |  |   |   |  |  |   |  | Parents Transport with District Reimbursement           |  |   |  | District Contracts for Commercial Service                    |  |  |
|--|---|---|--|---|---|--|--|---|--|---|--|---|--|--|--|--|
|  | Regular Route School Bus Service                                |   |  | Special Needs School Bus Route Service                                      |   |  |  |   |  | Public Transit Bus Mixed Use Service                    |  |   | Paratransit Bus Service                              |  | Commercial Accessible Bus and Taxi Service                   |  |
| No student transportation and those who walk or use their own means of transport<br> | RRDO Student uses regular route school bus with driver aide<br> | RRDTL Student uses regular route school bus with lift, driver and monitor<br> | RRDT Student uses regular route school bus with driver and monitor<br> | SNDA Student uses special needs bus with disabled ports and driver aide<br> | SNOT Student uses special needs bus with disabled ports and driver team<br> | SNOTL Student uses special needs lift bus with driver team<br> | SNOTNL Student uses special needs bus with driver team and nurse with special training<br> | SNOTA Student uses special needs bus with driver team and travel aide without peers<br> | SNOTP Student uses special needs bus with driver team and 1-on-1 paratransit attendant<br> | TDOL Student uses accessible public transit one way<br> | TRDOL Student uses both accessible public transit bus and public transit<br> | TTDOOL Student uses accessible public transit both ways<br> | PPDOOL Student uses paratransit with driver aide<br> | PPDTL Student uses paratransit with driver and attendant<br> | TAXI Student Rides to Accessible Taxi with a driver aide<br> | ORTB Student uses accessible bus for over the road bus service for out of town travel, taxi trips or extra-curricular activity<br> |
| SAFE ROUTING TO & FROM SCHOOL  | Assigned Bus Stop   | Assigned Bus Stop   | Assigned Bus Stop  | GATE-to-GATE PICK-UP & DROP OFF   |   |  | DOOR-to-DOOR PICK-UP & DROP OFF  |   | TRANSIT BUS STOP PICKUP and/or DROP OFF  |   |  | HOME PICK-UP & DROP OFF                                     |  | CURB-to-CURB PICK-UP & DROP OFF                              | CURB-to-CURB PICK-UP & DROP OFF                              |  |

# Students with Disabilities as Pedestrians and their Safe Routes to School

By Dr. Ray Turner

Copyright, 2009.

All rights reserved.

White Buffalo Press

## Table of Contents

|  |           |
|--|-----------|
| <b>Chapter One: Students with Disabilities as Pedestrians and their Safe Routes to School</b>  | <b>6</b>  |
| <b>Introduction</b>  | <b>6</b>  |
| <b>Least Restrictive Transportation Environments as Mandated by The Individuals with Disabilities Education Improvement Act Of 2004</b>                                      | <b>7</b>  |
| <b>Best Practice Guidelines for Least Restrictive Transportation Environment Decision Makers and Transportation Supervisors</b>  | <b>9</b>  |
| <b>School District Boards of Education and their Responsibility For all Student Pedestrians</b>  | <b>10</b> |
| <b>School District Boards of Education and Their Responsibility For Pedestrians who are Students with Disabilities</b>   | <b>10</b> |
| <b>School District Responsibility While Transporting Students with Disabilities to Any School-Authorized or Sponsored Event</b>  | <b>11</b> |
| <b>How Does the Federal Highway Administration's (FHWA) "Safe Routes to School Program Effect Students with Disabilities and Their IEP or Section 504 Committees?</b>        | <b>11</b> |
| <b>Table 1.0 Student Pedestrian Safety Goals and Objectives Under the Following Authorities</b>  | <b>12</b> |
| <b>School District-wide Campus Walking Distance Policy</b>   | <b>13</b> |
| <b>Students with Disabilities Who Reside Outside the Campus Walking Distance (CWD) Boundary</b>  | <b>13</b> |
| <b>Are Students with Disabilities Eligible to Receive Regular or Special Needs Transportation?</b>   | <b>14</b> |
| <b>IEP Committee Determines Safe Routes to School with Campus Walking Distance Areas with Transportation Help</b>  | <b>16</b> |
| <b>School Campus Traffic Safety Committees and Safe Routes to Schools</b>  | <b>19</b> |
| <b>School Campus Traffic Safety Committee and Their Duty to Identify At Least Four Pedestrian Safe Routes to School</b>  | <b>19</b> |
| <b>Table 1.1 School Campus Traffic Safety Committee Performance Criteria</b>   | <b>20</b> |
| <b>Walking the Two Miles in the Other Persons Shoes? Mobility Aid Users As the Pedestrians Who Are Most At-Risk</b>  | <b>23</b> |
| <b>Table 1.2. Campus Administrators and Education Staff as IEP Committee LRTE Decision Makers</b>  | <b>23</b> |
| <b>School Campus Traffic Safety Committees Interface with IEP and 504 Committees and Safe Routes to School for All Pedestrians</b>   | <b>27</b> |
| <b>IEP Committee Reconvenes to Reconsider Student Transportation Eligibility Provided by the School District</b>   | <b>27</b> |
| <b>Federally Funded Safe Routes to Schools Programs, School District, Section 504 and IEP Committee Liability</b>  | <b>28</b> |
| <b>Is the IEP Committee Specifically, Individually and Severally, Liable For Students with Disabilities Injuries or Death While Using The Safe Routes to School Program?</b> | <b>28</b> |
| <b>Pedestrian Walkway Safety Is a Shared Responsibility Among Several Stakeholders</b>   | <b>30</b> |
| <b>The Student Pedestrians with Disabilities</b>   | <b>30</b> |
| <b>The Parents</b>   | <b>30</b> |
| <b>The School Faculty and Campus Administrator</b>   | <b>30</b> |
| <b>The School District</b>   | <b>30</b> |

|  |           |
|--|-----------|
| Local Traffic Authority or the Public Works Department   | 31        |
| What is the School District and Campus Responsibility to Minimize<br>The Risk of all Student Bicyclists during Their Daily Commute<br>between Home and School?                     | 31        |
| What is the Parent's Responsibility to Minimize the Risk of their Child?<br>As a Pedestrian during the Round Trip between home and School?   | 32        |
| School District Responsibility for Students with Disabilities and Their<br>Campus Walking Distance (CWD) Requirement   | 33        |
| <b>Chapter Two: Observing Student Pedestrians with Disabilities and Their Ability<br/>To Use Walkways Safely</b>   | <b>34</b> |
| Determining Risk Factors for Students with Disabilities Using Mobility<br>Aids to Commute between Home and School: A Case Study of a<br>Hypothetical Student Using a Power Scooter | 34        |
| Determining the Overall Distance the Student Using a Mobility Aid Must<br>Travel between Home and School on a Safe Route to School   | 39        |
| Table 1.3 Case Study of the Total Distance Travelled in One School<br>Year (175 Days) While at Risk  | 40        |
| Table 1.4 Observed Student with Disabilities Skills Needed to Safely<br>Use Sidewalks as a Pedestrian  | 42        |
| Observing the Walking Speed of Student Pedestrians Using Mobility<br>Aids and the Time Required to Traverse Crosswalks   | 44        |
| Table 1.5 Students Using Mobility Aids and the Time they Require<br>To Complete a Crosswalk  | 44        |
| Observing the Width of Each Crosswalk to be Used by the Student Using<br>A Mobility Aid  | 48        |
| <b>Chapter Three: Identifying Safe Pedestrian Routes to and from School</b>  | <b>50</b> |
| Pedestrian Collision and Fatality History Must be Used to Identify Safe<br>Pedestrian Routes to and from School  | 50        |
| Pedestrian Collision Overview  | 52        |
| Pedestrian Risks at Intersections  | 53        |
| Pedestrian Crossing Path Events  | 54        |
| Pedestrian Crash Scenarios   | 57        |
| Estimating Various Mobility Aid Users and Their Crash Scenario Risks   | 58        |
| Table 1.6 Pedestrian Crash Scenario and Mobility Aid Users   | 58        |
| Pedestrians and Problems with Traffic Control Device Placement and<br>Installation   | 62        |
| Students Using Mobility Aids and Their Estimated Route Walking<br>Speeds, Uphill Slope Restrictions and Expected Distances<br>before Exhaustion                                    | 65        |
| Table 1.7 Students with Disabilities as Pedestrians Using Various<br>Mobility Aids to and from School  | 65        |
| <b>Chapter Four: Analyzing Student Pedestrian Risk Factors to and from School</b>  | <b>69</b> |
| Completing the Walkway Characteristics and Assessment of<br>Potential Risks to Pedestrians with Disabilities   | 69        |
| Pedestrians with Disabilities and Their Walkway Risk Factors   | 70        |
| Table 1.8 Walkway Risk Factors for Pedestrians with Disabilities   | 70        |
| Pedestrian Intersection Crossing Risk Factors  | 77        |
| Table 1.9 Pedestrians with Disabilities and Their Intersection<br>Crossing Risk Factors  | 78        |
| Walkway Assessment and Adverse Weather Conditions Risks  | 87        |

|   |     |
|---|-----|
| Pedestrian Risk Factors at Construction Danger Zones (CDZs)   | 89  |
| Table 2.0 Construction Danger Zones along Pedestrian Walkways   | 90  |
| Individual Student Pedestrian with a Disability and the Total Walkway<br>Route Risk Exposure  | 96  |
| Table 2.1 Student Pedestrian with a Disability One- or Two-way<br>Block Risk Exposure   | 97  |
| Table 2.2 Observed Pedestrian Intersection and Crosswalk Risks  | 98  |
| Overview of Pedestrians with Disabilities Using Mobility Aids and Their<br>Safe Routes to School—the Total Pedestrian Risk Calculator | 104 |
| Table 2.3 Overview of Pedestrians with Disabilities Using Mobility<br>Aids and Their Safe Routes to School—Overall Risk<br>Calculator | 104 |
| What the Research on Risk Factors for Child Pedestrian Injuries<br>Suggests   | 105 |
| Summary   |     |
| References  | 109 |
| Subject Index   | 111 |
| Glossary  | 121 |
| Appendices USDOT/NHTSA Nonmotorist Assessment Form  | 133 |
| Duplicating Tables for Individual Student Analysis:   |     |
| Table 1.1 COMMITTEE.pdf   |     |
| Table 1.2 LRTE DECISION MAKERS.pdf  |     |
| Table 1.4 SKILLS NEEDED.pdf   |     |
| Table 1.5 CROSSWALK.pdf   |     |
| Table 1.8 WALKWAYS.pdf  |     |
| Table 1.9 INTERSECTIONS.pdf   |     |
| Table 2.0 CONSTRUCTION.pdf  |     |

|   |                                 |
|---|---------------------------------|
| What is on the CD                                   | Filename:                       |
| Full Text   | FULL TEXT.pdf                   |
| Duplicating Tables for Individual Student Analysis: |                                 |
| Table 1.1   | COMMITTEE.doc & .pdf            |
| Table 1.2   | LRTE DECISION MAKERS.doc & .pdf |
| Table 1.4   | SKILLS NEEDED.doc & .pdf        |
| Table 1.5   | CROSSWALK.doc & .pdf            |
| Table 1.8   | WALKWAYS.doc & .pdf             |
| Table 1.9   | INTERSECTIONS.doc & .pdf        |
| Table 2.0   | CONSTRUCTION.doc & .pdf         |