Roadways are the Most Dangerous Public Utilities on the Face of the Earth



August 13, 2006

Philip Demosthenes Parametrix

Roadways are the Most Dangerous Public Facilities on the Face of the Earth

- In the US, about 800 people are killed each week
- 17,500 Crashes each day

•The leading cause of death of a child between the ages of 4 and 14 is a traffic crash.



Over their lifetime, Six out of every 10 children will be injured in a highway crash, many of them more than once.

And, If the average U.S. crash rate remains unchanged, one child of every 84 born today will die in crash.

AASHTO Strategic Highway Safety Plan

Intersection Crash Statistics (nationally)



- 27.3 % of all reported crashes
- Almost 25% of all traffic fatalities
- Almost 50% of all traffic injuries
- Traffic Signals Increase Crash Frequency

When access principles are applied to a specific Corridor

- Accidents reduced by 30 to 60 percent
- Capacity increased by 20 to 40 percent

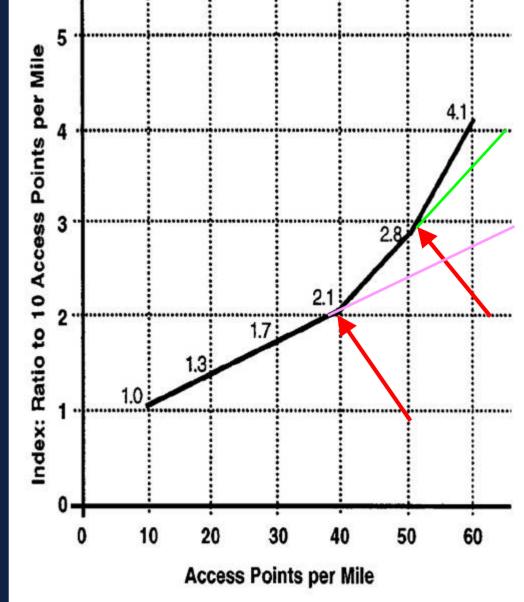


As the number of access points per mile increase, so does the frequency of total highway collisions.

The rate also increases

 $1 \operatorname{access} = 4\%/\operatorname{mile}$

NCHRP 420



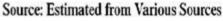


Figure 15. Composite accident rate indices.

About 40% of all crashes are preventable using improved roadway design and access management

Question: Is it agency negligence not to implement a known safety strategy? Most Access Programs have Two major elements:

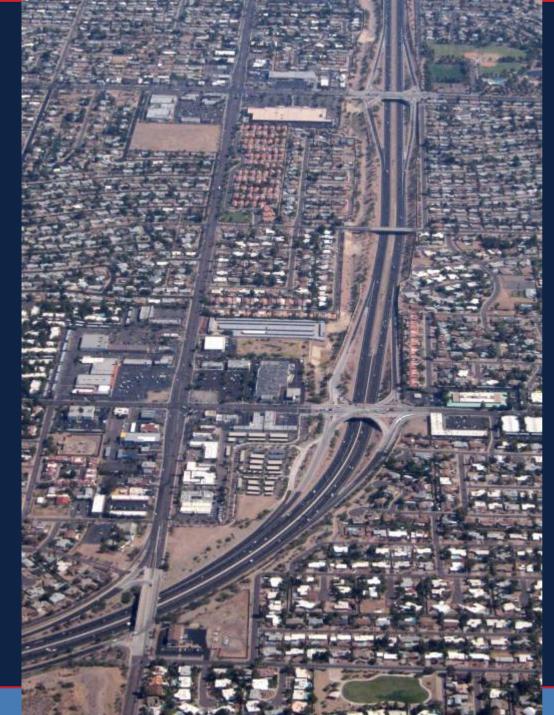
Access Standards
and Access Categories.



Access Relationship Between Functional Classes



Source: Virgil Stover



Freeways

Rural Expressway

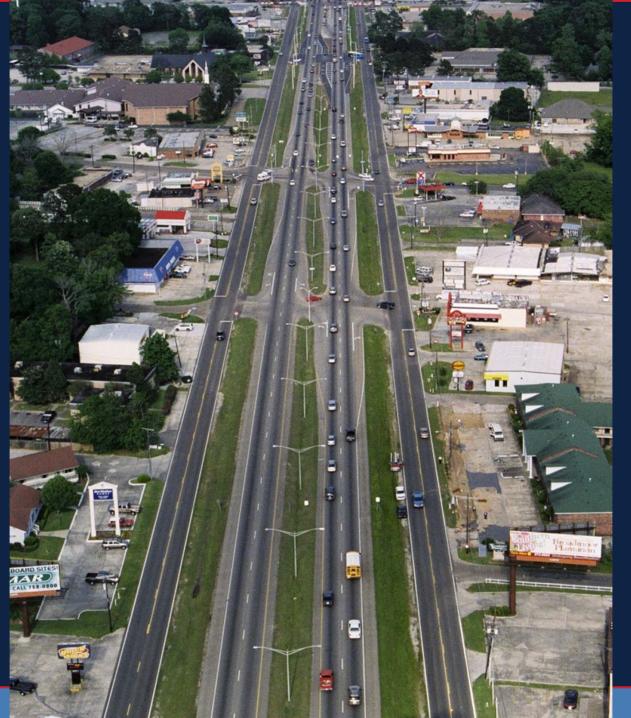




Urban Expressway



Parametrix



Urban Arterial











Rural Principal





Urban Mixed

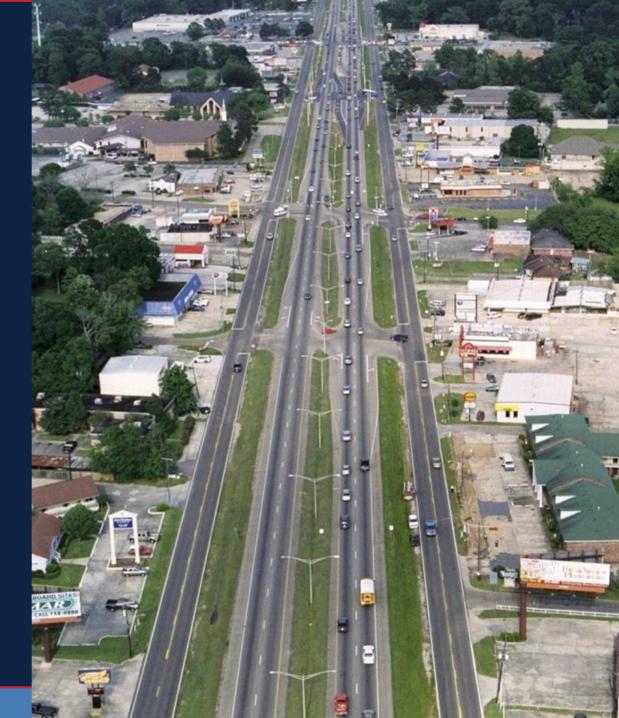


Urban Secondary





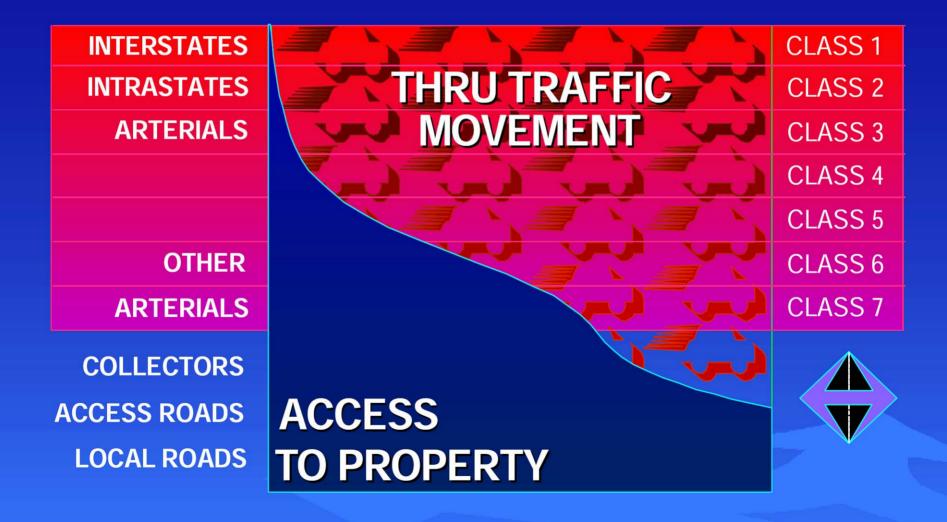
Service & Frontage Roads



Access Classification System

- Establish an access decision hierarchy of agency's system that is aligned with the adopted transportation plan.
- Ensure that each access decision is consistent with meeting the functional purpose of the roadway.
- Access category is the functional guidance on day to day access decisions impacting the performance of the roadway.

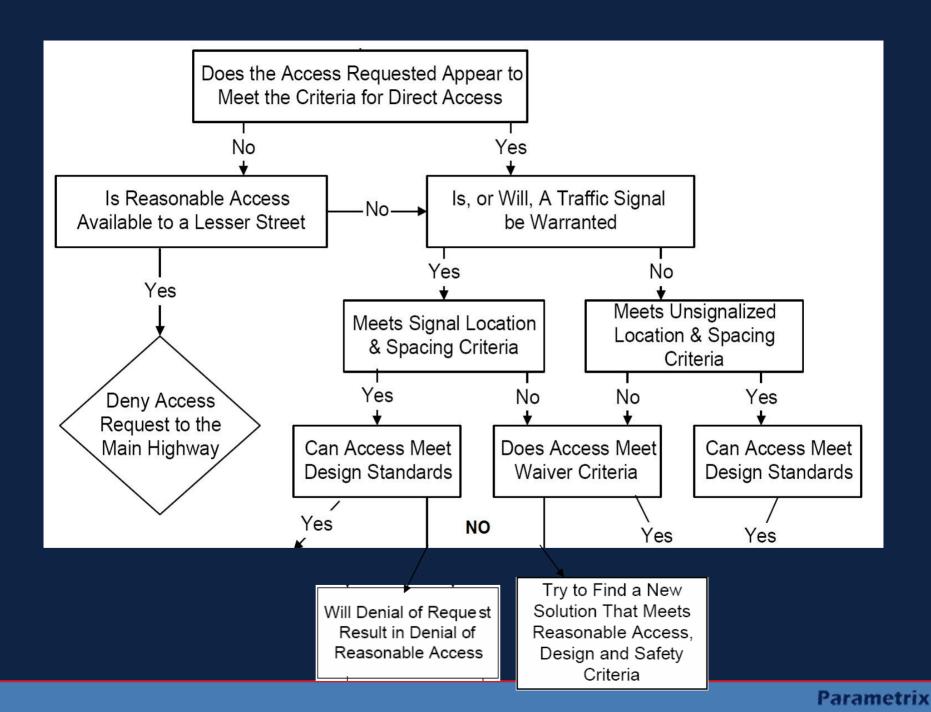




Access Classifications

- The category assignment guides the decision to determine if access will be granted
- To some degree, the access related improvements required. (turn lanes)
- Determines the type of access that may be granted. (Signal, restricted turns, field approaches, temporary, emergency, other limitations)

-2-



Why another classification system:

- Over 70 years of highway planning and budgeting, several federal and state classification systems have evolved.
- Distinguishes between various levels of hierarchies capacity, regional purpose, and funding priorities.

Why another classification system:

- Access Categories differ significantly from traditional classifications
- Focus is on access characteristics, roadside development, access controls, traffic operations, and design elements.
- Access Categories' do align strongly with current functional planning systems.

 Access Category systems is the pragmatic recognition of road side reality.

•Classification standard determines *IF* access or signal allowed, and where.

US 40, I-70 business, US 287, NHS



To Create a Access Classification System

- Define access management categories
- Establish standards for each category
- Create process and assign category to each segment of highway
- Adopt assignment schedule by Rule or Ordinance.

Assignment factors and basis

- adopted administrative and functional classifications
- existing and projected traffic volumes
- current and future highway capacity and levels of service
- current and predicted levels of highway safety

Assignment factors and basis

- adopted state and local transportation plans and needs
- the character of lands adjoining the highway
- adopted local land use plans and zoning
- the availability of vehicular access from local streets and roads rather than a state highway
- providing for population and business growth and needs.

Match the category standards to your efforts to protect the transportation plan



Source: Virgil Stover

Key Category Access Factors

- Intersection Spacing
- Traffic Signal Spacing
- Allowing direct access or require to obtain alternative access
- Proof of access necessity
- Turn Restrictions (median)
- Scope of access improvement, such as requiring auxiliary lanes, (decel and accel)

Slicing the Key Elements for Levels of Performance

- Allow, or Not, private direct access
- Signal spacing: 1/4, 1/2, 1 mile.
- If driveway, key design elements effecting performance
 - Auxiliary lanes
 - driveway spacing,
 - type
 - Turn restrictions (medians)

How Safety has Impacted Categories

- Proof of necessity every access point granted is dangerous.
- This drives most of the program
- Why think of how to allow access when access = hazard.
- So even lower categories beg proof of necessity for access.
- Should Access ever be a given?

Colorado since 1998

Table of access categories, with approximate descriptions								
F-W Interstate System, Freeway Facilities								
E-X Expressway, Major Bypass								
Rural Non-Rural								
R-A Regional Highway	NR-A Regional Highway							
	NR-B Arterial							
R-B Rural Highway	NR-C Arterial							
F-R Frontage Roads (both urban and rural)								

Category Descriptions

Fully described in Text within the ruleSamples are in the AMM appendix

3.8 CATEGORY R-A - Regional Highway

Functional Characteristics and Category Assignment Criteria

(1) This category is appropriate for use on highways that have the capacity for medium to high speeck and restavey medium to high trans volumes over medium and long distances in an efficient and after manner. They provide for interregional, indra-regional, and intercity fravel neecs. Direct access service to abutting land is subcortinate to providing service to through ratif movements. This category is normally assigned to National Highway System routes, significant regional routes in rural areas, and other routes of regional or state significance.

Access Granting Criteria including Category Related Access Location, Operation and Design Criteria

(2) When application is made, one access shall be granted per parcel of land if reasonable access cannot be obtained from the local sittered rom as greatern. Reasonable local access will be edemnined to consultation with the appropriate local authority. A determination of reasonable access from a local sittered or road sittered from ad local sittered or road induced outper local authority. A determination of reasonable access from a local sittered or road sittered or road sittered or road sittered in road sittered or road sittered or road and the direct access to the highway should not be derived if the alternable local access would oreade a significant orbit operational or actest problem at the alternable location access most oreade a significant orbit operational roads and the direct access to the state highway would not be as solutions.

(3) (a) The standard for the spacing of all intersecting public ways and other accesses that will be full movement, or are or may become signalized, is one-hard mile intervals, and based upon section lines where feasible. Exceptions to this one-hard mile interval, and based upon section lines documents that there are no other reasonable alternatives to achieve a one-hard mile interval, there is a occumented necessity for the intersection at the proposed location, and a signal study acceptable to the Department is comprised to accordance with section 2.3(5).

(b) Where it is not feasible to meet one-half mile spacing and where signal progression analysis includates good progression, a fay servent efficiency to tetler), or does not degrade the existing signal progression, a full movement may be allowed. Spacing to nearby intersections shall be sufficient to accommodate the 20% part left than wherkle storage quieue thor obth turning movements. The access location must also meet other Code access spacing, design and near requirements. If 20% year projections for the access innotate that the access quicues worklews where the sith an 2 project of the second that the access spacing code access spacing to easy the sith that access that the access innotate that the access volumes would be sith an 2 project of those on the direct of the sith and access that are or outlid be signalized, the intersection location does not need to be on one-that mile seconds. not design the sith access in accession the direct one across is the sith are or outlid be signalized. It is intersection location does not hered to be on one-that mile seconds not design the sith accession to the sith accession acrossing the sith accession accession the sith accession accession to be on one-that mile social accession accession accession acrossion the sith accession a

(c) Where topography or other existing conditions make one-haf mile intervals inappropriate or not feasible, location of the access shall be determined with consideration given to topography, established property ownerships, unique physical illimitations and or unavoldable or pre-existing historical and use patterns and physical design constraints with every attern to acchive a spacing or one-haf mile. The final location should serve as many properties and interests as possible to reduce the need for axiditonal direct access to the state inplyway, in selecting locations for the movement intersections, preference shall be given to public ways that meet or may be reasonably expected to meet signal warrains in the foreseable future.

(4) If a restrictive median exists, left turns at unsignalized intersections should be restricted, unless the restriction of these movements would cause a safety or operations problem, or cause an out-ofdirection movement of greater than one mile. If a traversable median exists, left turns will be permitted unless an operational or safety problem is locatified.

Auxillary Lane Requirements

(5) Auxiliary turn lares shall be installed according to the orbirla below.
 (a) A left turn deceleration lane with taper and storage length is required for any access with a

(a) A retruin decentation and with table and sublage length is required for any access with a projected peak hour left ingress furning volume greater than 10 vph. The taper length will be included within the required deceleration length.

(b) A right turn deceieration lane and taper length is required for any access with a projected peak hour right ingress turning volume greater than 25 vph. The taper length will be included within the required deceieration length.

(c) A right turn acceleration lane and taper length is required for any access with a projected peak hour right turning volume greater than 50 vpn when the posted speed on the highway is greater than 40 mph. The taper length will be induced within the required acceleration inspin. A right turn acceleration inspin size be required at a signalized intersection if a free-right turn is needed to maintain an approprise level of ervice in the intersection. If a free-right turn is needed to

(d) Right tum deceleration and acceleration lanes are generally not required on roadways with three or more travel lanes in the direction of the right tum except as provided in subsection 3.5.
(e) A left tum acceleration lane may be required if it would be a benefit to the safety and

(e) A text turn acceleration tane may be required if it would be a benefit to the safety and operation of the roadway or as determined by subsection 3.5. A left turn acceleration tane is generally not required where; the posted speed is less than 45 mph, or the intersection is signalized, or the acceleration lane would interfere with the left turn ingress movements to any other access.

(b) No additional access rights shall accrue upon the splitting or dividing of existing parcies of lead or configuous parcels under or previously under the same ownership or controlling interest. All access to newly created properties shall be provided internally from any existing access or a new access determined by Code design elarations for by permit application and consistent with this subsection.

(7) When an existing access meets the warrants for a traffic signal as defined in the NUTC.D. and the location does not meet the requirements of subsection 3.8(3), the access shall be reconstructed to eliminate or reduce the traffic movements that cause the traffic signal warrant to be met, and the access orought into conformance with appropriate design orienta. A raised median may be required. Closure may be required 13 alternative reasonable access is available.

(8) With the exception of frontage roads, any new rural highway location or newly designated state highway shall be considered no less than an access category R-A highway until the Commission has specifically assigned an access category.

(9) Where frontage and service roads are present, unless otherwise specifically categorized, a category R-A shall be assumed to all al-grade rural roadway sections within Department right-of-way between frontage and service roads and the main roadway.

3.9 CATEGORY R-B - Rural Highway

Functional Characteristics and Category Assignment Criteria

(1) This category is appropriate for use on highways that have the capacity for moderate to high travel speeds and low traffic volumes providing for local rural travel needs. Speed limits vary based on roadway design, location, and travel speeds. There is a reasonable balance between safety, direct access and mobility needs within this category. This category may be assigned to low volume minor arterials, secondary collectors and local highway sections that do not normally provide for significant regional, state or interstate travel demands. These highways typically provide for rural transportation needs including, fam to marker, fam to fam, and num induce high beed rural motage roads.

Access Granting Criteria including Category Related Access Location, Operation and Design Standards

(2) When application is made, one access shall be granted to each parcel, unless the Department or issuing authority establishes that the access would create a significant safety or operational problem on the highway, or the access does not meet acceptable design standards.

(3) Turning movements shall not be restricted if the access meets sight distance requirements, and axultary lare design requirements are met, no restrictive median is present, and 125-year projectional traffic signal volume works. The oright turn movements may be restricted only. If in the determination of the Department or the issuing authority, one or both movements restricted only in place.

(4) Left turns shall be prohibited if a non-traversable median is already established and the proposed opening in the median does not provide the general public any significant benefits to highway traffic operations and safety or would be counter to the purpose of the median.

(5) Additional access may be granted if the size or trip generation potential of the parcel requires additional access to maintain good reaway traffic operations and iand use design, unless the Department or issuing authority establishes that the access would create a significant safety or operational proteins, or the access does not meet acceptative design standards including spacing, Ary additional access must not interfere with the location, planning, and operation of the general street system and access to nearby properties. Where the property abutics or has primary access to a tester function road or an internal street system or by way of decidated rights-of-way or easements, any access to the state hirdway shall be considered as an additional access.

(6) The recommended spacing of all intersecting public ways and other significant accesses that will be full movement is one-harf mile intervals, and based upon section lines where feasible. Where topography or other existing conditions make one-half mile intervals inapprograde or not feasible, inceation of the access shall be determined with consideration given to topography, established property ownerships, unique physical eleminate with one attempt to achieve a spacing of one-half mile intervals and based on pre-existing historical line and use patterns and physical degin constraints with a reasonable attempt to achieve a spacing of one-half mile. The final location should serve as many properties and interests as possible to reduce the need for additional idea to public devices that meet or may be reasonably expected to meet signal warrants in the foreseeable fulure.

Category Text

- Quality of the textual descriptions is critical for success
- Test Test Test the language
- Test the standards
- Avoid unintended consequences
- How will a judge/jury interpret?

Sample Categories									
Freeway (access rights)									
Major Regional (access rights)									
Rural A Urban A									
Rural B Urban B									
Rural C Urban C									
Service, Frontage and other Access roads									

FDOT CLASSIFICATION SYSTEM & STANDARDS

	Class Medians Connec		ction	Median Opening		Signal		
Class 1 is freeway			>45mph	≤ 45mph	Directional	Full		
Well planned		GENERALL	Y DEVE	LOPIN	g or u	NDEVE	OPED	
with system of service	2	Restrictive w/ Service Roads	1320	660	1320	2640	2640	
roads								
Essentially the same	3	Restrictive	660	440	1320	2640	2640	
except for medians	4	Non-Restrictive	660	440			2640	
		GENERALLY	DEVE	LOPED				
Essentially the same	5	Restrictive	440	245	660	2640/ 1320	2640/ 1320	
except for medians	6	Non-Restrictive	440	245			1320	
The Urban/ Suburban Strip	7	Both Median Types	125		330	660	1320	

WSDOT class table

	F	Permits Allow	ed	Minimum	Access Limitations		
Highway Classification & Definition	Non- Conforming	Variance	Conforming	Access Spacing			
Class 1* Mobility is primary function	Yes	No	No	1320'	1 access only to contiguous parcels under same ownership.		
					Private direct access not allowed unless no other reasonable access exists. (Must use county road system if possible.)*		
Class 2* Mobility Favored over Access	Yes	Yes	No	660'	1 access only to contiguous parcels under same ownership unless frontage > 1320'.		
					Private direct access not allowed unless no other reasonable access exists. (Must use county road system if possible.)*		
Class 3 Balance between Mobility and Access in areas with less than Maximum Buildout	Yes	Yes	Yes	330'	1 access only to contiguous parcels under same ownership. Joint access for subdivisions preferred, but private direct access allowed with reason.		
Class 4 Balance between Mobility and Access in areas nearing Maximum Buildout	Yes	Yes	Yes	250'	1 access only to contiguous parcels under same ownership.		
Class 5 Access needs may have priority over Mobility needs	Yes	Yes	Yes	125'	More than 1 connection per ownership allowed with reason.		

New Jersey

SUBCHAPTER 3. ACCESS STANDARDS

16:47-3.1 Access levels for access classifications

(a) There are hereby established the following access levels (AL) for the State highway system:

1. AL 1 - fully controlled access: Access is prohibited on interstates, toll roads, freeways, and limited access highways, except at grade-separated interchanges. Figures C-5 and C-6 of Appendix C, Access Levels Diagrams, illustrate such access.

2. AL 2 - access via street intersections or grade-separated interchanges and nonconforming lot access points, where the Department determines that alternative access is not available. The designs set forth in Figures C-7 through C-9 of Appendix C, Access Levels Diagrams, illustrate such access. For AL 2, the location standards set forth in N.J.A.C. 16:47-3.3, 3.4, and 3.5 are applicable.

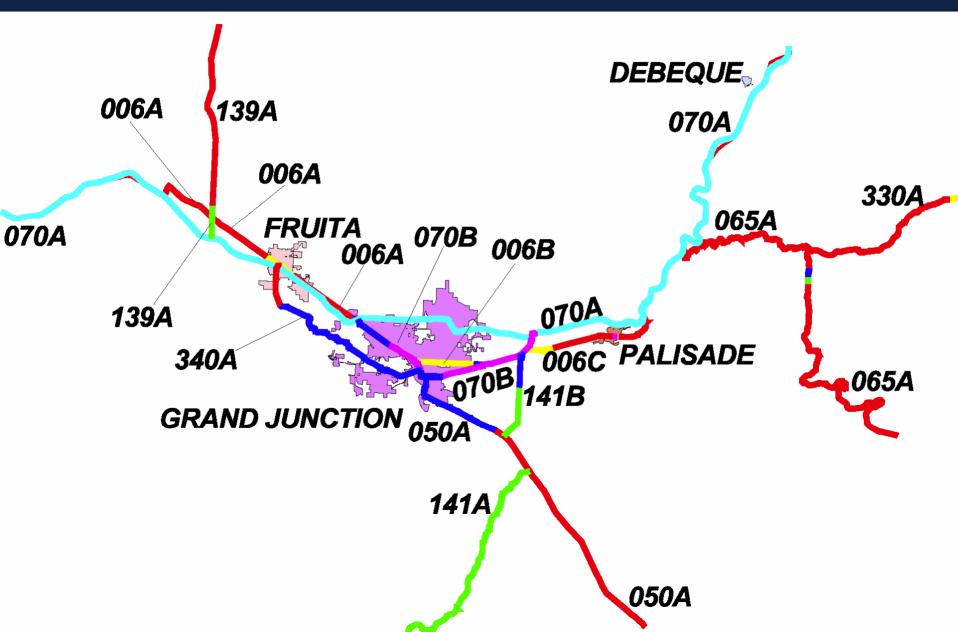
3. AL 3 - right-turn access to and from an access point and left-turn access via a signalized jughandle: Figures C-10 through C-13 of Appendix C, Access Levels Diagrams, illustrate such access. The jughandle may or may not be at access point. For AL 3, the location standards set forth in N.J.A.C. 16:47-3.4 and 3.5 are applicable.

4. AL 4 - right-turn access to and from an access point, left-turn ingress via a left-turn lane, and left turn egress from an access point: Figures C-14 through C-18 of Appendix C, Access Levels Diagrams, illustrate such access. The left-turn lane may or may not be at the access point for a divided highway and will be at the access point for and undivided highway. For AL 4, the location standards set forth in N.J.A.C. 16:47-3.4 are applicable if the highway is divided or if the traffic volumes at the intersection with the State highway meet the criteria for warrants set forth in Part 4C of the "Manual on Uniform Traffic Control Devices for Streets and Highways" (U.S. Department of Transportation, Federal Highway Administration 1988 edition or superseding edition). The location standards set forth in N.J.A.C. 16:47-3.3, 3.4, and 3.5 are applicable in all other cases.

5. AL 5 - access to and from an access point: Figures C-19 through C-23 of Appendix C, Access Levels Diagrams, illustrate such access. Meeting traffic signal warrants is not required for the installation of a left-turn lane. For AL 5, the location standards set forth in N.J.A.C. 16:47-3.4 are applicable if the traffic volumes at the intersection of the access point with the State highway meet the criteria for warrants set forth in Part 4C of the "Manual on Uniform Traffic Control Devices for Streets and Highways" (U.S. Department of Transportation, Federal Highway Administration 1988 edition or superseding edition). The location standards set forth in N.J.A.C. 16:47-3.5 are applicable in all other cases.

6. AL 6 - access to and from the State highway and an access point, provided that there is an edge clearance of at least 12 feet (3.6 meters), the access point is at least 24 feet (7.2 meters) from the nearest access points, suitable sight lines exist and the access does not otherwise create a dangerous condition. The Department will include frontage roads and service roads that parallel State highways in this classification: The design set forth in Figure C-24 of Appendix C, access level diagrams, illustrates such access. For AL 6, the location standards set forth in N.J.A.C. 16:4-3.4 and 3.5 are applicable.

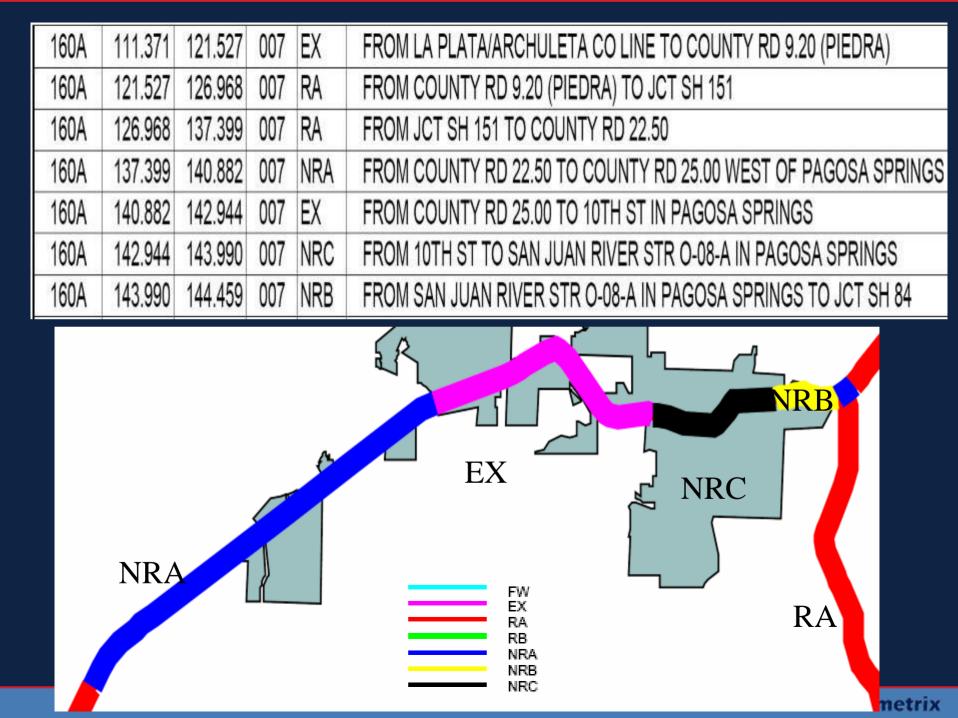
Grand Junction Area



STATE HIGHWAY ACCESS CATEGORY ASSIGMENT SCHEDULE SECTION TWO, ACCESS CATEGORY ASSIGNMENTS

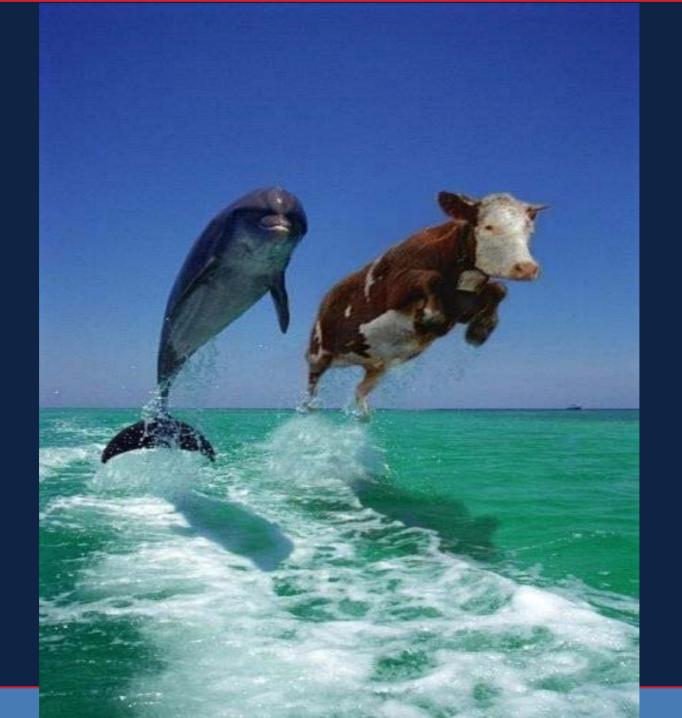
Revised January 18, 2001

	Nevised balldary 10, 2001								
Highway	Beg_MP	End_MP	со	CAT	PHYSICAL DESCRIPTION OF THE CATEGORY SEGMENT				
001A	0.000	9.157		RB	FROM JCT SH 287 (COLLEGE AVE) IN FORT COLLINS TO 2ND ST IN WELLINGTON				
001A	9.157	9.405		NRA	FROM 2ND ST TO 1ST ST IN WELLINGTON				
001A	9.405	9.960		NRB	FROM 1ST ST IN WELLINGTON TO I-25 INTERCHANGE, END SH 1A				
002A	0.000	2.146			FROM JCT SH 285 (HAMPDEN AVE), ALONG COLO BLVD, TO I-25 INTERCHANGE IN DENVER				
002A	2.146	4.468		NRB	FROM I-25 INTERCHANGE TO JCT SH 83 (LEETSDALE DR)				
002A	4.468	6.000			FROM JCT SH 83 (LEETSDALE DR), ALONG COLO BLVD TO JCT SH 40 (COLFAX AVE) IN DENVER				
002A	6.000	8.310		_	FROM JCT SH 40 (COLFAX AVE) TO JCT SH 33 (40TH AVE) IN DENVER				
002A	8.310	8.579			FROM JCT SH 33 (40TH AVE) TO SMITH RD INTERCHANGE IN DENVER				
002A	8.579			NRB	FROM SMITH RD INTERCHANGE TO I-70 INTERCHANGE IN DENVER				
002A	8.774	9.478		NRB	FROM I-70 INTERCHANGE TO SH 6 INTERCHANGE (VASQUEZ BLVD)				
002A	9.587	9.842			FROM JCT SH 6 (VASQUEZ BLVD) TO JCT SH 6 (VASQUEZ BLVD) AT ADAMS/DENVER CO LINE, END SH 2A				
002B	11.001			NRC	FROM JCT SH 6 (VASQUEZ BLVD) IN COMMERCE CITY TO SH 6 INTERCHANGE (VASQUEZ BLVD)				
002B	11.209	13.345			FROM SH 6 INTERCHANGE (VASQUEZ BLVD) TO QUEBEC ST, END SH 2B				
002C	12.895	17.000		NRA	FROM QUEBEC ST TO JCT SH 44 (104TH AVE)				
002C	17.000	18.999		NRA	FROM JCT SH 44 (104TH AVE) TO I-76 INTERCHANGE IN COMMERCE CITY, END SH 2C				
002D	0.000	1.000			FROM I-76 INTERCHANGE TO JCT SH 22 (124TH AVE)				
002D	1.000	4.092			FROM JCT SH 22 (124TH AVE) TO BROMLEY LANE IN BRIGHTON				
002D	4.092	4.999		NRC	FROM BROMLEY LANE TO JCT SH 7 (BRIDGE ST) IN BRIGHTON, END SH 2D				
003A	0.000	2.194		NRB	FROM JCT SH 160 IN DURANGO TO 2ND ST, END SH 3A				
005A	0.000	14.894			FROM JCT SH 103 (ECHO LAKE) TO SUMMIT OF MT EVANS, END SH 5A				
006A	11.212				FROM I-70 INTERCHANGE (MACK) TO JCT SH 139 (LOMA)				
006A	15.449				FROM JCT SH 139 (LOMA) TO K.00 RD				
006A	19.210				FROM K.00 RD TO JCT SH 340 (ASPEN ST) IN FRUITA				
006A	19.955	21.261			FROM SH 340 (ASPEN ST) TO PINE ST IN FRUITA				
006A	21.261	25.772			FROM PINE ST IN FRUITA TO PERSIGO WASH STR H-02-D				
006A	25.772				FROM PERSIGO WASH STR H-02-D TO I-70 INTERCHANGE, END SH 6A				
006B	30.270	30.407			FROM I-70 GRAND JUNCTION BUS LOOP INTERCHANGE TO THE RAMP ON IN GRAND JUNCTION				
006B	30.407				FROM THE RAMP ON TO MORNING GLORY LANE IN GRAND JUNCTION				
006B	33.753				FROM MORNING GLORY LANE TO JCT I-70 GRAND JUNCTION BUS LOOP, END SH 6B				
006C	37.496	39.229			FROM JCT I-70 GRAND JCT BUS LOOP TO 34.00 RD				
006C	39.229	42.894			FROM 34.00 RD TO 333 FEET WEST FROM IOWA AVE IN PALISADE				
006C	42.894	43.212			FROM 333 FEET WEST FROM IOWA AVE TO MAIN ST IN PALISADE				
006C	43.212	43.257		NRB	FROM MAIN ST TO COLORADO RIVER STR H-03-E IN PALISADE				
006C	43.257	45.824			FROM COLORADO RIVER STR H-03-E TO I-70 INTERCHANGE, END SH 6C				
006D	92.001	92.151		NRB	FROM JCT SH 13 IN RIFLE TO 6732 FEET WEST OF COUNTY RD 210				
006D	92.151	98.659		RA	FROM 6732 FEET WEST OF COUNTY RD 210 TO FIRST ST IN SILT				
006D	98.659			NRB	FROM FIRST ST IN SILT TO JCT I-70 SILT BUS SPUR				
006D		105.000			FROM JCT I-70 SILT BUS SPUR TO 4219 FEET WEST FROM ELK CREEK STR F-06-A				
006D		105.799			FROM 4219 FEET WEST FROM ELK CREEK STR F-06-A TO ELK CREEK STR F-06-A IN NEW CASTLE				
006D		107.000		NRB	FROM ELK CREEK STR F-06-A IN NEW CASTLE TO 554 FEET WEST OF COUNTY RD 240				
006D		107.105			FROM MILEPOINT 107 TO COUNTY RD 240				
006D		110.799		1.0.1	FROM COUNTY RD 240 TO I-70 INTERCHANGE, END SH 6D				
006E		142.608		NRB	FROM I-70 INTERCHANGE IN GYPSUM TO VALLEY RD				
006E		148.930			FROM VALLEY RD TO 1130 FEET WEST OF FIFTH ST				
006E	148.930	149.666	037	NRB	FROM 1130 FEET WEST OF FIFTH ST TO JCT I-70 EAGLE BUS SPUR				



Washington DOT Access Classification. "This shows the speed limit, managed access (M/A) class, if a highway is limited access (L/A), where WSDOT has planned for limited access and other information."

SR	Spur or	Begin				Dian Title	Speed	Current	M/A Class	Established L /A	Diammod L /A	L/A	Modification
SR	Couplet	MP	Begin Eq	End MP	End Eq	Plan Title	Limit	Access	M/A Class	Established L/A	Planned L/A	Acquired	Date
2		0		.33		SR 5, Everett: Pacific Ave to Snohomish River		L/A		Full L/A		Yes - All	9/3/2003
2		.33		2.6		Jct. SR 5 to Jct. SR 204 Vic.	55	L/A		Full L/A		Yes - All	5/28/2003
2		2.6		3.73		Cavalero's Corner to Fobes Hill	55-60	L/A		Full L/A		Yes - All	5/28/2003
2		3.73		9.27		Fobes Hill to Westwick Road	60			Full L/A		Yes - All	9/3/2003
2		9.27		14.08		Snohomish to Monroe	45-60	M/A		Full L/A		1	12/31/2003
2		14.08		14.41		No information	45	L/A		Full L/A		Yes - All	9/19/2003
2		14.41		15.21		Snohomish to Monroe	35-45	M/A		Full L/A			12/31/2003
2		14.92		15.08		Snohomish to Monroe	35	L/A on LT		Full L/A			12/31/2003
2		15.21		16.12		Monroe to Sultan	35-55	???		Full L/A		1	12/31/2003
2		16.12		21.57		Monroe to Sultan	35-55	M/A	Class 2 M/A		Modified L/A		12/31/2003
2		21.57		22.85		Sultan River Bridge & Approaches	35	M/A	Class 2 M/A		Modified L/A		12/31/2003
2		22.85		25.2		Sultan To Startup	35-50	M/A	Class 2 M/A		Modified L/A		12/31/2003
2		25.2		26.15		Sultan To Startup	35-50	M/A	Class 3 M/A		Modified L/A		12/31/2003
2		26.15		26.98		Wallace River Bridge Vicinity	35-50	M/A	Class 3 M/A		Modified L/A		12/31/2003
2		26.98		28.57		Startup to Goldbar	40-50	M/A	Class 3 M/A		Modified L/A	1	12/31/2003
2		28.57		28.72		Index to Goldbar	40	M/A	Class 3 M/A		Modified L/A		12/31/2003
2		28.72		30.11		Index to Goldbar	40-55	M/A	Class 1 M/A		Modified L/A		12/31/2003
2		30.11		30.38		Skykomish River Bridge Vicinity	55	M/A	Class 1 M/A		Modified L/A	1	12/31/2003
2		30.38		35.49		Index to Goldbar	55-60	M/A	Class 1 M/A		Modified L/A		12/31/2003
2		35.49		36.93		Index - East - Section A	60	M/A	Class 1 M/A		Modified L/A	1	12/31/2003
2		36.93		39.72		Index - East - Section B	60	M/A	Class 1 M/A		Modified L/A	1	12/31/2003
2		39.72		42.74		Money Creek to Halford	60	M/A	Class 1 M/A		Modified L/A		12/31/2003
2		42.74		43.33		B.N.R.R. Overcrossing	60	M/A	Class 1 M/A		Modified L/A		12/31/2003
2		43.35		45.58		Money Creek to Halford	60	M/A	Class 1 M/A		Modified L/A		12/31/2003
2		45.58		50.31		Stevens Pass Auto Camp to Money Cr. Park	60	M/A	Class 1 M/A		Modified L/A	1	12/31/2003
2		50.31		54.04		Stevens Pass Auto Camp - Easterly	60	M/A	Class 1 M/A		Modified L/A		12/31/2003
2		54.04		56.69		Forest Boundary - West	60	L/A		Modified L/A		Yes - All	9/3/2003
5		139.5		140.44		Pierce Co. Line to Jct. SSH No. 5-A	60	L/A		Full L/A		Yes - All	12/31/2003
5		140.44		140.99		Pierce Co. Line to Jct. SR 516 Rest Area	60	L/A		Full L/A		Yes - All	12/31/2003
5		140.99		149.35		Pierce Co. Line to Jct SSH No. 5-A	60	L/A		Full L/A		Yes - All	12/31/2003
5		149.35		153.25		Jct. SSH No. 5-A to So. 126th St.	60	L/A		Full L/A		Yes - All	12/31/2003
5		153.25		156.47		So. 178th St. to So. 126th St.	60	L/A		Full L/A		Yes - All	12/31/2003
5		156.47		158.4		So. 126th St. to Norfolk St.	60	L/A		Full L/A		Yes - All	12/31/2003
5		158.4		163.55		Seattle Freeway: Norfolk St. to Bayview St.	60	L/A		Full L/A		Yes - All	12/31/2003
5		163.55		163.9		Seattle Freeway Bayview St to Plum St.	60	L/A		Full L/A		Yes - All	12/31/2003
5		163.9		164.82		Seattle Freeway Plum St. to Jackson St.	60	L/A		Full L/A		Yes - All	12/31/2003



PARAMETRIX

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