

I-LAST Project Environmental Sustainability Rating System Scorecard

CATEGORY		ID	DESCRIPTION	Available Points	Project Points	
Planning	P-1 Context Sensitive Solutions	P-1a	Identify Stakeholders and develop Stakeholders Involvement Plan	2		
		P-1b	Engage Stakeholders to conduct Context Audit and develop project purpose	2		
		P-1c	Involve Stakeholders to develop and evaluate alternatives	2		
		P-1d	Employ Stakeholder involvement techniques to achieve consensus for Preferred Project Alternative	2		
	P-2 Land Use/ Community Planning	P-2a	Promote reduction in vehicle trips by accommodating increased use of public transit	2		
		P-2b	Accommodate multi-modal transportation uses (e.g. transit riders, pedestrians, and bicyclists)	2		
		P-2c	Increase transportation efficiencies for moving freight through features such as dedicated rail or intermodal facilities	2		
		P-2d	Partnerships that provide environmental or technological advancements while promoting environmental stewardship	2		
		P-2e	Project is consistent with regional plans and local managed growth-based Master or Comprehensive Plans	2		
		P-2f	Project is compatible with local efforts for Transit Oriented Design	1		
	Design	D-1 Alignment Selection	D-1a	Avoid impacts to high quality undeveloped lands		
D-1a-1				Avoid all impacts	2	
D-1a-2				Avoid significant impacts	1	
D-1b			Provide buffer between highway and high quality wetlands/water resources			
			D-1b-1	Provide 100 foot buffer to resources	2	
			D-1b-2	Avoid resource with less than 100 foot buffer	1	
D-1c			Avoid impacts to environmental resources, such as INAI sites and sites with threatened or endangered species			
			D-1c-1	Avoid all impacts	2	
			D-1c-2	Avoid significant impacts	1	
D-1d			Avoid impacts to socioeconomic resources			
			D-1d-1	Avoid all impacts	2	
			D-1d-2	Avoid significant impacts	1	
D-1e			Cross section minimizes overall construction "footprint" to eliminate R.O.W. takes	2		
D-1f			Minimize total earthwork by matching proposed vertical alignments as closely as possible to existing grades	1		
D-1g			Utilize brownfield locations	2		

CATEGORY		ID	DESCRIPTION	Available Points	Project Points		
Design	D-2 Context Sensitive Design	D-2a	Adjust highway features using design flexibility	2			
		D-2b	Incorporate locally produced or native materials				
			D-2b-1	Over 95% of materials sourced in US	1		
			D-2b-2	Over 60% of materials sourced in metro area	2		
		D-2c	Visual enhancements		2		
		D-2d	Items fit context of surroundings		1		
		D-2e	Bridge aesthetics		1		
		D-2f	Reduce urban "heat island" effect		1		
Environmental	E-1 Protect, Enhance or Restore Wildlife and its Habitat	E-1a	Avoid habitat fragmentation	3			
		E-1b	Minimize habitat fragmentation	2			
		E-1c	Mitigate habitat fragmentation	1			
		E-1d	Wetland restoration/mitigation	1 to 3			
		E-1e	Provide nesting locations	2			
		E-1f	Provide wildlife crossings	2			
		E-1g	Provide fish passage	2			
		E-1h	Provide mussel relocation prior to construction	2			
		E-1i	Provide right-of-way wildlife barriers	1			
		E-1j	Provide mowing markers	1			
		E-1k	Schedule construction to avoid wildlife disruption	1			
	E-2 Trees and Plant Communities	E-2a	Avoidance/protection of individual and contiguous stands of specimen trees and localized areas of established, desirable vegetation		2		
		E-2b	Designs which demonstrate an anticipated ultimate net increase in tree species				
			E-2b-1	Increase tree species through preservation and new planting	2		
			E-2b-2	Coordination with local stakeholders to create a plant palette in context with community	2		
		E-2b-3	Historic native plantings are re-established	1			
		E-2c	Re-establish/expand native vegetation in reclaimed work areas or abandoned old alignments		2		
		E-2d	Use of plant material in lieu of or enhance structural such as living snow fences, sight screens (viburnum, dogwood, etc.)		1		
		E-2e	Use of native species for plugs, seed mixes, perennial and other plantings		2		
		E-2f	Planting trees, shrubs and/or native plant material in highway right-of-way		2		
E-2g	Tree replacement ratios at greater than 1:1		2				
E-2h	Minimize potential salt splash impacts through use of berms or vegetative screening		2				

CATEGORY		ID	DESCRIPTION	Available Points	Project Points	
Environmental	E-2 Trees and Plant Communities	E-2i	Removal of undesirable plant species, removal of invasive species	1		
		E-2j	Topsoil preservation	2		
	E-3 Noise Abatement	E-3a	Construction of noise barriers			
			E-3a-1	Specialized noise barrier construction	2	
			E-3a-2	Typical noise barrier	1	
		E-3b	Incorporate traffic system management techniques to reduce existing noise levels	2		
		E-3c	Provide a buffer zone for adjacent receptors	2		
		E-3d	Provide sound insulation to public or non-profit institutional structures	1		
		E-3e	Tining of pavement to reduce noise levels	1		
		E-3f	Provide plantings or sight screen to separate receptors from roadway	1		
Water Quality	W-1 Reduce impervious area	W-1a	Use of ditches	2		
		W-1b	Replacement of paved median	2		
		W-1c	Reduction of paved shoulder areas	2		
		W-1d	Shoulders constructed of permeable pavement	2		
		W-1e	Replacement of paved bike paths with permeable pavement or permeable material	2		
	W-2 Stormwater treatment	W-2a	Use of bioretention cells	2		
		W-2b	Use of constructed wetlands	2		
		W-2c	Use of bioswales	2		
		W-2d	Use of mechanical stormwater treatment systems	2		
		W-2e	Use of catch basins	1		
		W-2f	Use of infiltration trenches	1		
		W-2g	Use of rain gardens	1		
		W-2h	Use of sand filters	1		
		W-2i	Use of ditch checks	1		
		W-2j	Use of sediment traps and forebays	1		
	W-3 Construction practices to protect water quality	W-3a	Analysis of pollutants in stormwater	1		
		W-3b	Streambank restoration	2		
		W-3c	Practices to protect highly erodible soils			
			W-3c-1	Special provisions for soil erosion control at stream crossings	2	
			W-3c-2	Meet NPDES requirements	1	
W-3d	Implementation of erosion control practices	1				

CATEGORY		ID	DESCRIPTION	Available Points	Project Points		
Water Quality	W-3 Construction practices to protect water quality	W-3e	Staging construction to minimize soil exposure	1			
		W-3f	Provide stormwater detention	1			
		W-3g	Reduce use of fertilizers and herbicides	1			
		W-3h	Protection from materials entering waterway on bridge demolition and construction	1			
Transportation	T-1 Traffic Operations	T-1a	Special use lane: High Occupancy Vehicle, reversible	2			
		T-1b	Innovative intersection/interchange design	2			
		T-1c	Expansion of or connection to a Traffic Management Center (TMC)	2			
		T-1d	Installation of coordinated signal system				
			T-1d-1	Installation of closed-loop system	1		
			T-1d-2	Timing plans developed for weekend or special events	1		
			T-1d-3	Advanced logic system such as adaptive control	1		
			T-1d-4	Inclusion of transit vehicle priority	1		
		T-1e	Limiting or consolidating access points along highway	1			
	T-1f	Bus turnouts	1				
	T-2 Transit	T-2a	Provide new Park-and-Ride lots				
			T-2a-1	Evaluate demand and effectiveness of potential Park-and-Ride lots	1		
			T-2a-2	Construction of Park-and-Ride lots	1		
		T-2b	Operational improvements of an existing Park-and-Ride lot	1			
		T-2c	Provide bike accommodations at Park-and-Ride lots & transit stations	1			
		T-2d	Improved shading through vegetation at Park-and-Ride lots	1			
		T-2e	Provide new multi-modal connections	1			
		T-2f	Include bus stops with shelters or pads and pedestrian access	1			
		T-2g	Installation of a transit express system	3			
	T-3 Improve Bicycle & Pedestrian Facilities	T-3a	Assess Conditions –Perform bicycle and pedestrian Level of Service analysis within the roadway corridor	1			
		T-3b	Improved intersection designs for pedestrians	1 to 2			
		T-3c	Provide new or rehabilitate existing sidewalks or bikeways				
			T-3c-1	Provide new sidewalks or bikeways	2		
			T-3c-2	Rehabilitate sidewalks or bikeways	1		
T-3d		Sidewalk or bikeway widening					
		T-3d-1	Widen sidewalk or bikeway	1			
		T-3d-2	Provide parkway separation	1			

CATEGORY		ID	DESCRIPTION	Available Points	Project Points	
Transportation	T-3 Improve Bicycle & Pedestrian Facilities	T-3e	Designated space for cyclists (shared lanes)	1		
		T-3f	Striped bike lanes within roadway	2		
		T-3g	Restore or pave shoulders for bicycling	2		
		T-3h	Create parallel bike routes	1		
		T-3i	Align the roadway to facilitate the development of future multi-use paths and facilities	1		
		T-3j	Provide new grade-separated (bridge or underpass) bike/pedestrian crossing structure	3		
		T-3k	Install bikeway signs	1		
		T-3l	Install bicycle racks	1		
Lighting	L-1 Reduced Electrical Consumption	L-1a	Use of alternative energy source to power street lighting, warning signs, and remote Intelligent Transportation Systems (ITS) components	2		
		L-1b	Retrofit existing street lighting with high efficiency types	2		
		L-1c	Replace signs with retro reflective signs to eliminate sign lighting	2		
		L-1d	Retrofit existing sign lighting with high efficiency types	1		
		L-1e	Use of high efficiency street lighting on new installations	2		
		L-1f	Use of alternative energy source for bus stops	2		
		L-1g	Use of high efficiency (such as LED) traffic signals	1		
	L-2 Stray Light Reduction	L-2a	Retrofit existing roadway lighting fixtures using cut off or full cut off fixtures	2		
		L-2b	New roadway lighting using cut off or full cut off fixtures	2		
	Materials	M-1 Materials	M-1a	Reuse of top soil	1	
M-1b			Balance cuts and fills			
			M-1b-1	Balance cuts and fills for the project	1	
			M-1b-2	Balance cuts and fills per stage	1	
M-1c			Reuse spoils within project corridor to minimize material in and out of site	2		
M-1d			Allow rubblization of concrete shoulder and concrete pavements	1		
M-1e			Allow flexibility in design with the use of recycled or salvaged non-hazardous material			
			M-1e-1	Allow the processing of demolished concrete to reclaim scrap metals to create useable aggregate.	1	
			M-1e-2	Allow the use of milled HMA pavements for capping stone.	1	
			M-1e-3	Allow the use of recycled crushed pavements for temporary aggregate for areas like driveways or access roads	1	
M-1e-4	Allow the use of recycled crushed pavements for shoulder stone	1				

CATEGORY		ID	DESCRIPTION	Available Points	Project Points	
Materials	M-1 Materials	M-1e	M-1e-5	Allow the use of recycled crushed pavements as aggregate for subgrade, subbase, or base lifts	1	
			M-1e-6	Allow reclaiming subbase granular material	1	
			M-1e-7	Provide for optional reuse of reclaimed scrap materials for various items (sheeting, guard rail, etc.)	1	
	M-1f	Allow locally produced byproducts to be reused in the construction of embankments, hot mix asphalt and Portland cement concrete mixtures				
		M-1f-1	Allow the use of fly ash, ground granulated blast furnace slag cement, and microsilica in concrete mixtures	1		
		M-1f-2	Allow the use of ternary concrete mixtures in the construction of concrete pavements, shoulders and various structural items			
		M-1f-3	Allow the use of foundry sand or bottom ash as part of a material in the construction of embankments	1		
		M-1f-4	Allow the use of slag aggregate in the production of HMA mixtures (SMA Designs and "F" Mix).	1		
		M-1f-5	Allow the use of Recycled Asphalt Shingles (RAS) in the production of Stone Matrix Asphalt Mixtures (SMA)	1		
		M-1f-6	Obtain and implement a project specific use for the innovative reuse of waste materials other than the ones listed above.	1		
	M-1g	Allow the use of recycled asphalt pavement (RAP) in the construction of new hot mix asphalt pavements				
		M-1g-1	Allow the use of recycled asphalt pavement (RAP) in hot mix asphalt (HMA)	1		
		M-1g-2	Allow the use of fractionated recycled asphalt pavement (FRAP) at a higher percentage in the manufacturing of hot mix asphalt.	1		
	M-1h	Allow inclusion of environmentally acceptable and permitted sites in the contract documents for the disposal of surplus excavated material to an off-site location			1 to 2	
	M-1i	Allow the salvage / moving of buildings			2	
	M-1j	Soil stabilization with geosynthetics			1	
	M-1k	Soil stabilization with cementitious and recycled materials			2	
	M-1l	Consider locally available materials (such as local seed stock and plants) in developing specifications for the project			1	
	M-1m	Extended pavement life; design and rehabilitation strategies				
		M-1m-1	Specify the use of perpetual HMA pavement design	3		
		M-1m-2	Specify the use of 30 year design life concrete pavement	2		
		M-1m-3	Specify the use of 40 year design life concrete pavement	3		
		M-1m-4	Specify the use of pulverization of HMA pavement for a base	1		

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			M-1m-5	Specify the use of various pavement preservation processes such as chip seal, seal coat, micro resurfacing, etc	1	
Materials	M-1 Materials	M-1m	M-1m-6	Selecting hot-in-place or cold-in-place recycling of hot mix asphalt	2	
Innovation	I-1 Innovation	I-1a	Use of Experimental Feature(s) to improve the sustainability of a project		1 to 3	

I-LAST Category	ID	Description	Points Awarded	Maximum Points Possible
Environmental	E-1: Protect, Enhance or Restore Wildlife Habitat	E-1k: Land Reclamation		1
		E-1l: Certified Wildlife Habitats		1
	E-2: Trees and Plant Communities	E-2l: Wetland Management		1
		E-2m: Greenspace Management		1
	E-4: Reduce Energy Performance	E-4a: Paved stockpile reduce aggregate moisture content		1
		E-4b: Reduced material/exit gas temperatures		1
		E-4c: Insulating dryer shells		1
		E-4d: Bag house captures fine particulate matter from entering atmosphere		1
		E-4e: HMA production using variable frequency drives on large motors.		1
		E-4f: Use of Warm-mix asphalt reduces fuel consumption, production of emissions, and production of green house gases.		1
		E-4g: High Albedo: higher reflectivity reduces the amount of artificial light necessary to light a highway, lowers the urban heat island, ultimately lower energy costs, safer		1
		E-5: Lower Emissions/Reduce Petroleum Consumption	E-5a: Emissions control devises capture emissions – burn in front	
	E-5b: Enclosed load area (silo)			1
	E-5c: Use of diesel retrofit technology			1
	E-5d: No idling policies			1
	E-5e: Efficient use of backhauls			1
	E-5f: On-site disposal of excess earth by reducing realignment and/or constructing landscaped earth berms.			1
	E-5g: Smooth Pavement: Better fuel economy, less noise, safer			1

Water Quality	E-6: Maximize Trucking Efficiency	E-5h: Alternate fuels: natural gas, ethanol, bio diesel, etc. have all been talked about as fuel sources for trucks and equipment	2
		E-6a: Heavy truck route concept	2
		E-6b: Close proximity to the job	1
		E-6c: Recycling Concrete Onsite	1
	W-1: Reduce Impervious Area	W-1f.i: Porous base courses	2
		W-1f.ii: Recycle process water	2
		W-1g: Permeable Pavement Maintenance	1
	W-2: Stormwater Treatment	W-2k: Use of mechanical treatment system to treat the whole flow	3
		W-2l: Use of permanent inlet protection devices	1
		W-2m: Method of demolition	3
W-3: Construction Practices to Protect Water Quality	W-3l: Design includes required erosion and sediment control practices	3	
	W-3j: certified professionals for erosion and sediment control	1	
	W-3k: Temporary SWPPP devices that are reuseable	2	
	W-3l: Use of nonchemical sediment or erosion control practice	2	
Materials and Resource	M-1 Materials	M-1e: Use of Fractionalized Recycled Asphalt Pavement	3
		M-1f: Use of Recycled Asphalt Shingles	2
		M-1g: Use of Recycled Slag as an aggregate	2
		M-1h: Use of Ground Tire Rubber	3
		M-1i: Use of Recycled Glass	3
		M-1m.i: Use of Recycled Steel generated from demolition	1
		M-1m.ii: Use of Recycled Steel to produce reinforcement bar	1
		Release agents	1
		M-1n: Recycling concrete pavement as a base	1
		M-1o: Recycling concrete materials into PCC	1

Innovation		M-1p.i: Reduce cement in PCC with metakaolin		1
		M-1p.11: Reduce cement in PCC with slag		1
		M-1p.iii: Reduce cement in PCC with micro silica		1
		M-1p.iv: Reduce cement in PCC with greater clinker replacement		1
		M-1p.v: Reduce cement in PCC with limestone dust or fillers		1
		M-1q: Replace Fine Aggregate in concrete with limestone screenings		1
		M-1r: Reuse concrete forms		1
	I-1: Innovation	I-1a: Pipe material with recycled content		1
		I-1b: Use of recycled tree material for plant mulch		1
		I-1c: Use of recycled materials for erosion blankets or hydro-mulch		1
		I-1d.i: Soil stabilization with geosynthetics		1
		I-1d.ii: Soil stabilization with cement stabilization		1
		I-1d.iii: Soil stabilization with fly-ash		2
		I-1d.iv: Soil stabilization with mineral filler bag house fines		1
		I-1e: Hot-in-place asphalt		1
		I-1g: Longer pavement life cycle		2
		I-1h: Cement Stabilization		1