

**Appendix C:
Analysis of BLM Required Design Features for Greater Sage Grouse**

The Study team analyzed Required Design Features (RDFs) from the *Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment* (ARMPA) (Bureau of Land Management [BLM], 2015) to determine how they could be incorporated into the proposed US 395 Connector—the component of each Arterial Alternative that crosses BLM land. The table below discusses each RDF and explains why or how the Arterial Alternatives comply with the each RDF or why the RDF is not applicable (NA). For details on RDFs, please refer to https://eplanning.blm.gov/epl-front-office/projects/lup/21152/63238/68487/NVCA_Appendix_C_Required_Design_Features_.pdf.

RDF No.	RDF Description	RDF Compliance Rationale	Reason RDF is Not Being Implemented
RDF Gen 1	Locate new roads outside of Greater Sage Grouse (GRSG) habitat to the extent practical.	NA	NA—Not practicable because purpose and need of project is to provide more direct travel routes to address travel inefficiencies. Based on the alternatives analysis, this requires providing connections between US 395 and Pyramid Highway, which cannot be achieved without affecting BLM parcels.
RDF Gen 2	Avoid constructing roads within riparian areas and ephemeral drainages. Construct low water crossings at right angles to ephemeral drainages and stream crossings (note that such construction may require permitting under Sections 401 and 404 of the Clean Water Act).	There are no riparian areas or ephemeral drainages within the BLM parcels.	NA
RDF Gen 3	Limit construction of new roads where roads are already in existence and could be used or upgraded to meet the needs of the project or operation. Design roads to an appropriate standard, no higher than necessary, to accommodate intended purpose and level of use.	NA	NA—Not practicable due to lack of existing roads within BLM parcels in Study area.
RDF Gen 4	Coordinate road construction and use with right-of-way (ROW) holders to minimize disturbance to the extent possible.	The Washoe County Regional Transportation Commission (RTC)/Nevada Department of Transportation (NDOT) will coordinate construction activities with ROW holders as part of the public outreach during the construction phases.	NA
RDF Gen 5	During project construction and operation, establish and post speed limits in GRSG habitat to reduce vehicle/wildlife collisions or design roads to be driven at slower speeds.	During construction, speed limits on BLM land will be 25 miles per hour in construction zones unless conditions allow for greater speeds that will otherwise be posted. After construction, the US 395 Connector will operate at the speed limit that meets its function and purpose.	NA

RDF No.	RDF Description	RDF Compliance Rationale	Reason RDF is Not Being Implemented
RDF Gen 6	Newly constructed project roads that access valid existing rights would not be managed as public access roads. Proponents will restrict access by employing traffic control devices such as signage, gates, and fencing.	Where the US 395 Connector would cross BLM lands, fencing will be installed along the ROW to restrict access to BLM lands.	NA
RDF Gen 7	Require dust abatement practices when authorizing use on roads.	The following mitigation measures in the Final Environmental Impact Statement (Final EIS) comply with this RDF: <ul style="list-style-type: none"> • Prior to construction, the contractor shall obtain a Dust Control Permit from the Washoe County District Health Department, Air Quality Management Division. • An operational water truck shall be on site at all times. Apply water to control dust as needed to prevent dust impacts off site. 	NA
RDF Gen 8	The ARMPA does not include a RDF Gen 8	NA	NA
RDF Gen 9	Upon project completion, reclaim roads developed for project access on public lands unless, based on site-specific analysis, the route provides specific benefits for public access and does not contribute to resource conflicts.	The following Final EIS mitigation measures comply with this RDF: <ul style="list-style-type: none"> • Employ NDOT best management practices (BMPs) and revegetation guidelines to minimize habitat impacts associated with vegetation removal. • Revegetate all disturbed areas with native grass and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. 	NA
RDF Gen 10	Design or site permanent structures that create movement (e.g., pump jack/ windmill) to minimize impacts on GRSG habitat.	NA	NA—No moving structures are included in the Arterial Alternatives.
RDF Gen 11	Equip temporary and permanent aboveground facilities with structures or devices that discourage nesting and perching of raptors, corvids, and other predators.	NA	NA—No aboveground facilities (e.g. buildings, towers, oil/gas well pads, etc.) would be built on BLM parcels.

RDF No.	RDF Description	RDF Compliance Rationale	Reason RDF is Not Being Implemented
RDF Gen 12	Control the spread and effects of nonnative, invasive plant species (e.g., by washing vehicles and equipment, minimize unnecessary surface disturbance; Evangelista et al. 2011). All projects would be required to have a noxious weed management plan in place prior to construction and operations.	The following Final EIS mitigation measure complies with this RDF: <ul style="list-style-type: none"> • Implement project Integrated Weed Management Plan. 	NA
RDF Gen 13	Implement project site-cleaning practices to preclude the accumulation of debris, solid waste, putrescible wastes, and other potential anthropogenic subsidies for predators of GRSG.	The following Final EIS mitigation measure complies with this RDF: <ul style="list-style-type: none"> • Include non-structural BMPs when possible, such as litter and debris control, and landscaping and vegetative practices. During construction, garbage or trash produced from construction activities will be removed promptly and properly to help avoid attracting wildlife. 	NA
RDF Gen 14	Locate project related temporary housing sites outside of GRSG habitat.	NA	NA—No temporary housing would be built as part of this project.
RDF Gen 15	When interim reclamation is required, irrigate site to establish seedlings more quickly if the site requires it.	NA	Irrigating temporarily disturbed areas is not feasible given site limitations and logistics. NDOT and RTC will use native species for revegetation and implement other BMPs to promote interim revegetation.
RDF Gen 16	Utilize mulching techniques to expedite reclamation and to protect soils if the site requires it.	The following Final EIS mitigation measure complies with this RDF: <ul style="list-style-type: none"> • Revegetate all disturbed areas with native grass and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. 	NA
RDF Gen 17	Restore disturbed areas at final reclamation to the pre-disturbance landforms and desired plant community.	The following Final EIS mitigation measures comply with this RDF: <ul style="list-style-type: none"> • Employ NDOT BMPs and revegetation guidelines to minimize habitat impacts associated with vegetation removal. • Revegetate all disturbed areas with native grass and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. 	NA

RDF No.	RDF Description	RDF Compliance Rationale	Reason RDF is Not Being Implemented
RDF Gen 18	When authorizing ground-disturbing activities, require the use of vegetation and soil reclamation standards suitable for the site type prior to construction.	<p>The following Final EIS mitigation measures comply with this RDF:</p> <ul style="list-style-type: none"> • Employ NDOT BMPs and revegetation guidelines to minimize habitat impacts associated with vegetation removal. • Revegetate all disturbed areas with native grass and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. • Use erosion control blankets, where feasible, on steep, newly seeded slopes to control erosion and to promote the establishment of vegetation. Slopes should be roughened at all times and concrete washout contained. 	NA
RDF Gen 19	Instruct all construction employees to avoid harassment and disturbance of wildlife, especially during the GRSG breeding (e.g., courtship and nesting) season. In addition, pets shall not be permitted on site during construction (BLM 2005b).	Prior to working on the project, the contractor's employees and sub-contractors will participate in a training to outline safety and environmental compliance measures.	NA
RDF Gen 20	To reduce predator perching in GRSG habitat, limit the construction of vertical facilities and fences to the minimum number and amount needed and install anti-perch devices where applicable.	The only vertical elements would be fencing along the ROW and light poles at interchanges.	NA—Not required because greater sage-grouse are not known to occur in the area and the species is unlikely to occur in the future due to proximity of urban development and human activity.
RDF Gen 21	Outfit all reservoirs, pits, tanks, troughs or similar features with appropriate type and number of wildlife escape ramps (BLM 1990; Taylor and Tuttle 2007).	NA	NA—No reservoirs, pits, tanks, troughs, or similar features would be placed on BLM land for this project.
RDF Gen 22	Load and unload all equipment on existing roads to minimize disturbance to vegetation and soil.	NA	NA—No existing roads exist on BLM land within the Study Area. Temporary access roads would be used for construction, and construction equipment and personnel would be required to use access roads to access the construction site.

RDF No.	RDF Description	RDF Compliance Rationale	Reason RDF is Not Being Implemented
RDF LR-LUA 1	Where new ROWs associated with valid existing rights are required, co-locate new ROWs within existing ROWs or where it best minimizes impacts in GRSG habitat. Use existing roads or realignments of existing roads to access valid existing rights that are not yet developed.	NA	NA—There are no existing ROWs or rights on these BLM parcels.
RDF LR-LUA 2	Do not issue ROWs to counties on newly constructed energy/mining development roads, unless for a temporary use consistent with all other terms and conditions included in this document.	NA	NA—The proposed Arterial Alternatives are not energy/mining development roads.
RDF LR-LUA 3	Where necessary, fit transmission towers with anti-perch devices (Lammers and Collopy 2007) in GRSG habitat.	NA	NA—No transmission towers would be built as part of this project.

NA = Not Applicable.