

Corridor 62-211

Four Corners-Phoenix Corridor

Corridor Rationale

The corridor provides continued electrical energy transmission from the Four Corners Generating Station to Phoenix, Arizona. Input regarding alignment from the American Wind Energy Association, the Arizona Public Service Electric Company, and National Grid during the WWEC PEIS suggested following this route. Platts data indicate no planned transmission or pipeline projects within the corridor. Concerns identified after the 2009 corridor designation included a perception that the corridor was more aligned to serve coal-generated electricity; however in 2016, Unit 2 of the Cholla Power Plant was shut down and the future of the 3 remaining units is uncertain. In addition, there is currently a proposed wind energy project on the ASNf that crosses this energy corridor that would benefit from tying into the energy transmission grid at this location. The closure of the coal power plant unit and proposed wind energy project may alleviate the concern. Currently, there are no pending ROW applications for transmission lines within the corridor.

Corridor location:

Arizona (Coconino, Gila, Maricopa, and Navajo Co.)

USFS: Tonto and Apache-Sitgreaves National Forests

Regional Review Region(s): Region 2

Corridor width, length:

Width 3,500 ft

85.7 miles of designated corridor

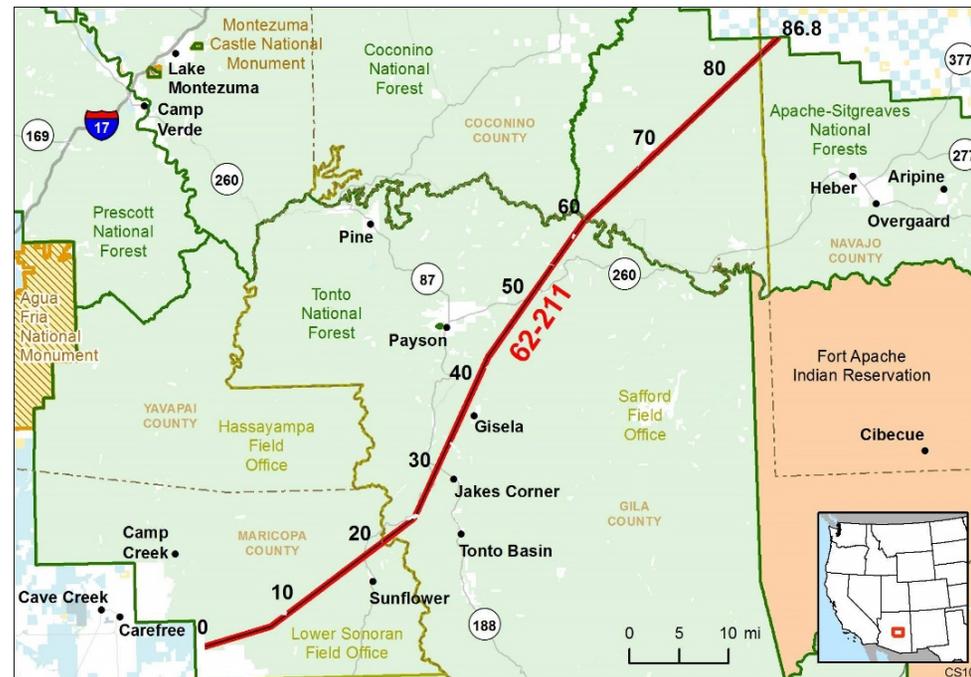
86.8 mile-posted route, including gaps

Sec 368 energy corridor restrictions: (N)

- corridor is multi-modal

Corridor of concern (Y)

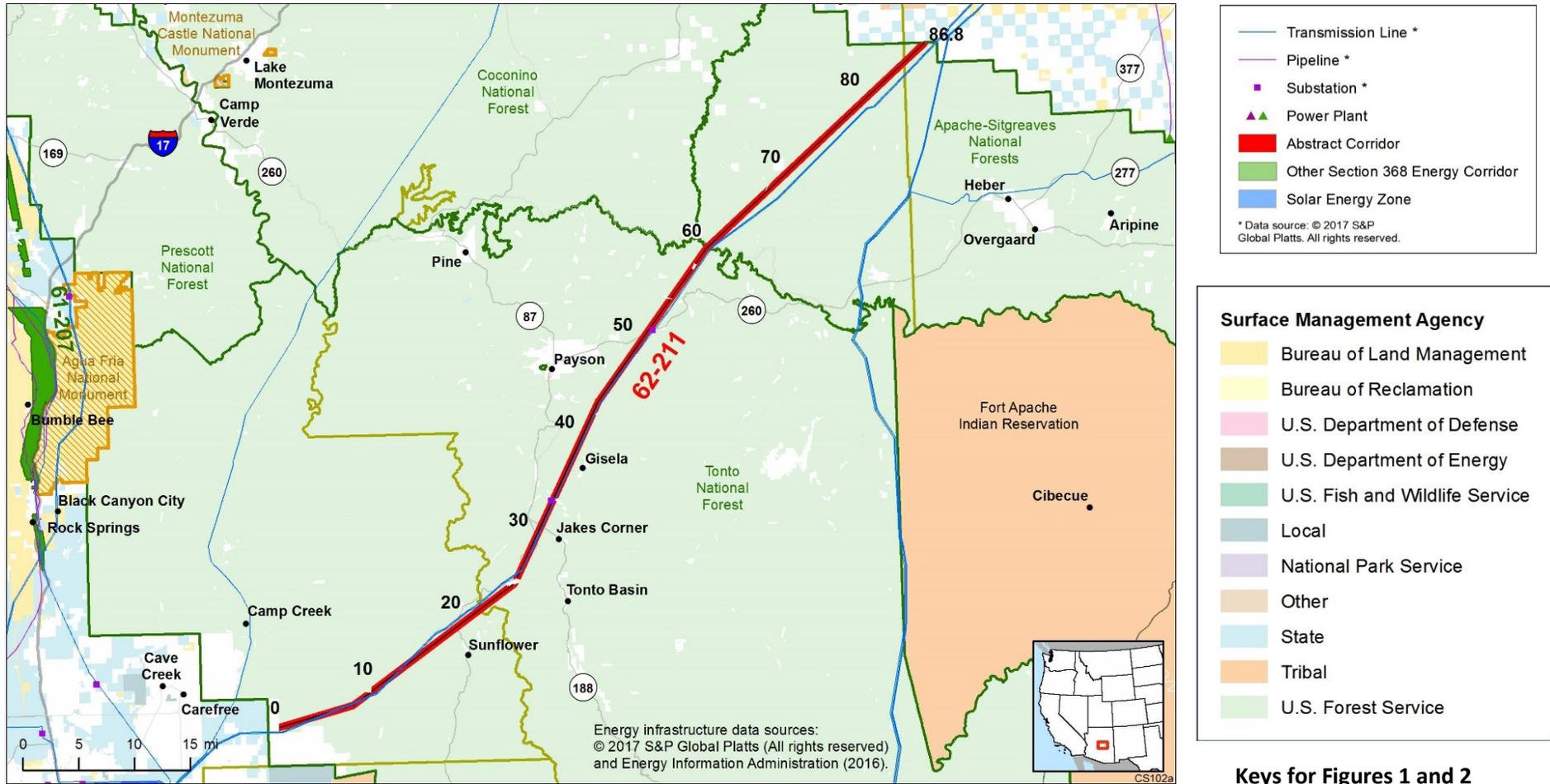
- Access to coal plants, impacts to citizen-proposed and designated Wilderness, National Historic Places, Wild and Scenic Rivers, and Mexican Spotted Owl critical habitat.



Corridor history:

- Locally designated corridor prior to 2009 (Y)
- Existing infrastructure (Y)
 - Electric transmission:
 - two 345-kV lines within or immediately adjacent (MP 0 to MP 62) or parallel to the corridor (MP 62 to MP 87)
- Energy potential near corridor (Y)
 - 1 substation in corridor
 - REDA area within 5 mi (MP 87)
- Corridor changes since 2009 (N)

Figure 1. Corridor 62-211



Keys for Figures 1 and 2

Figure 2. Corridor 62-211 and nearby electric transmission lines and pipelines

Conflict Map Analysis

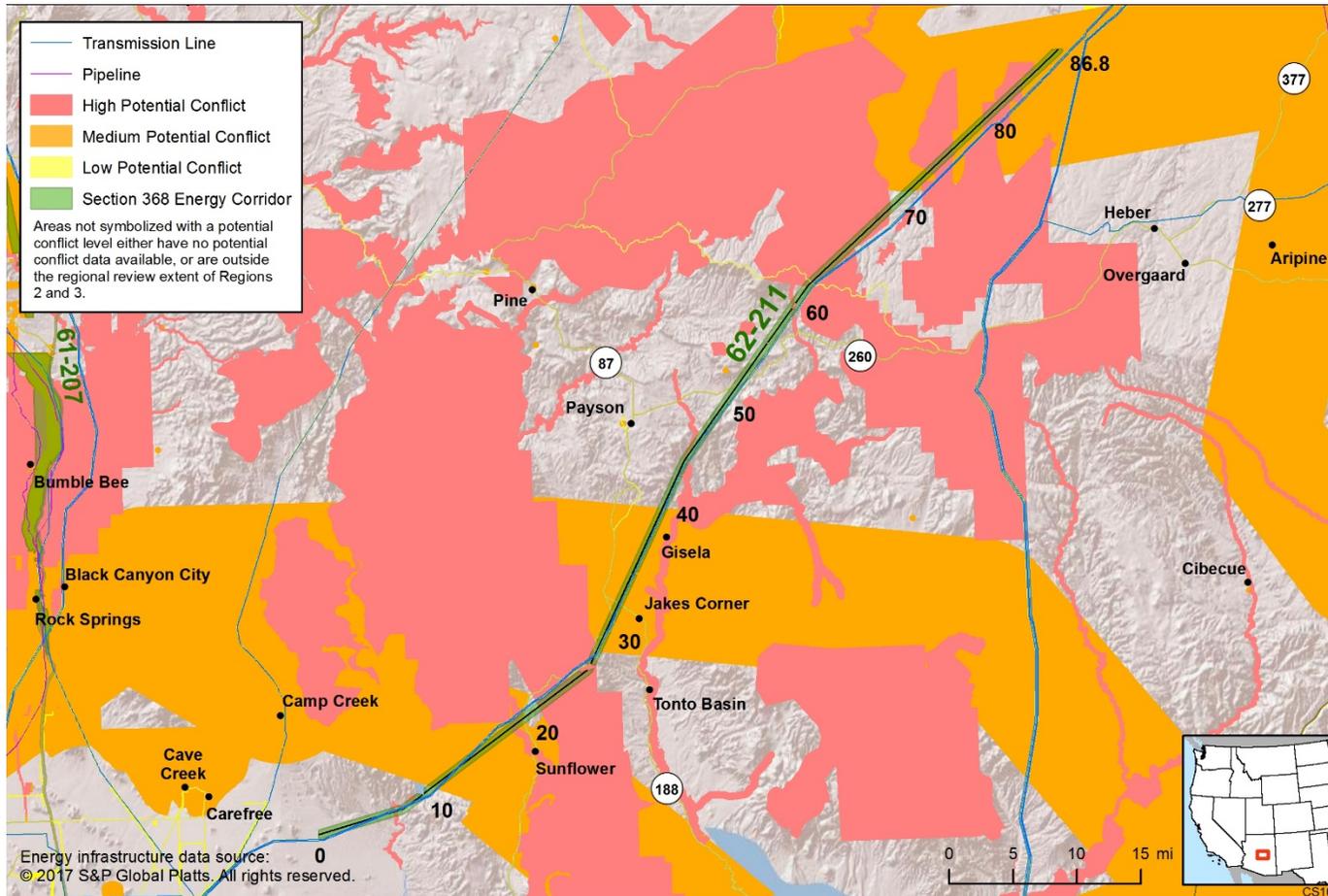


Figure 3. Map of Conflict Areas in Vicinity of Corridor 62-211

Figure 3 reflects a comprehensive resource conflict assessment developed to enable the Agencies and stakeholders to visualize a corridor’s proximity to environmentally sensitive areas and to evaluate options for routes with lower potential conflict. The potential conflict assessment (low, medium, high) shown in the figure is based on [criteria](#) found on the WWEC Information Center at www.corridoreis.anl.gov. To meet the intent of the Energy Policy Act and the Settlement Agreement siting principles, corridors may be located in areas where there is potentially high resource conflict; however, where feasible, opportunity for corridor revisions should be identified in areas with potentially lower conflict.

Visit the 368 Mapper for a full view of the Potential conflict map (<https://bogi.evs.anl.gov/section368/portal/>)

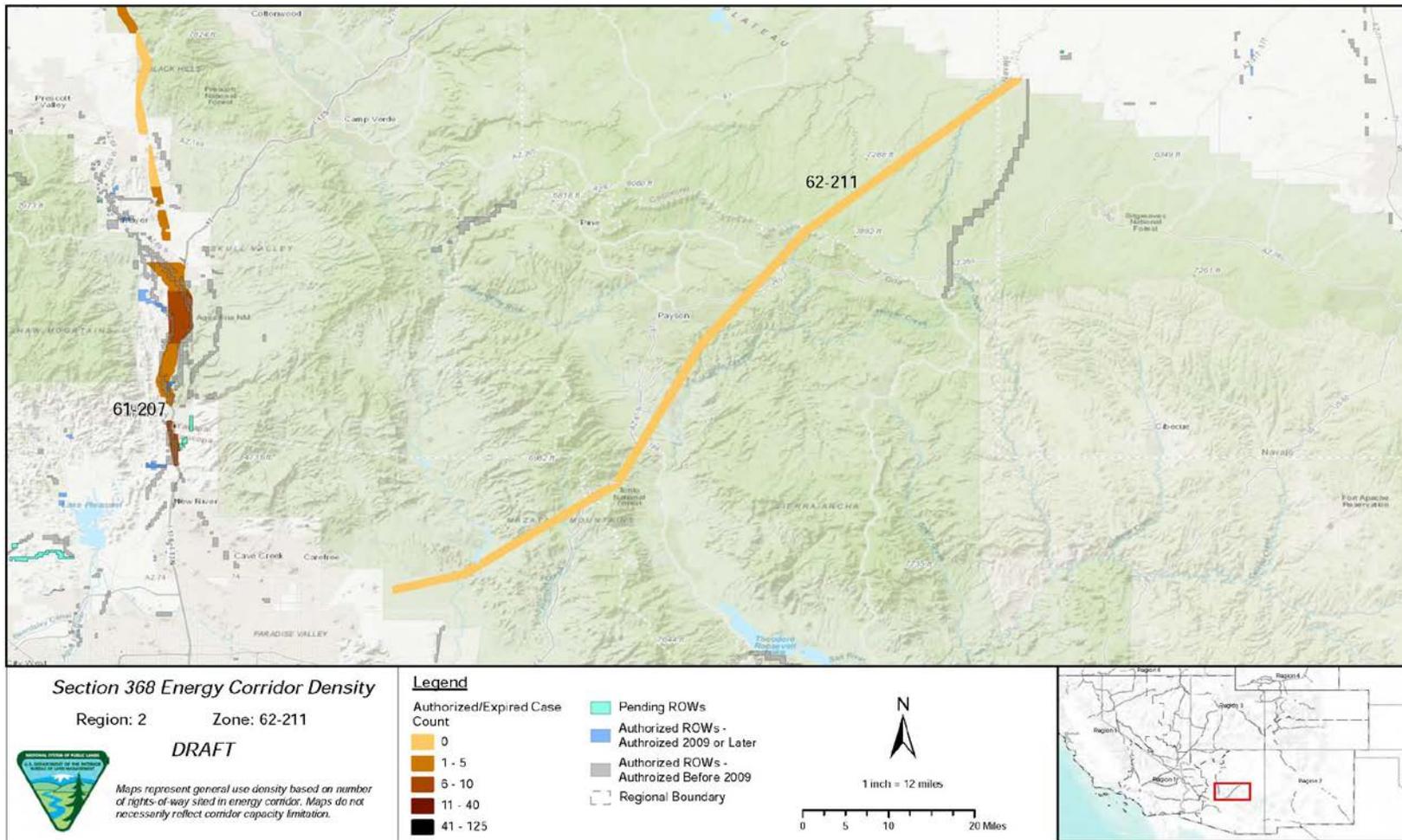


Figure 4. Corridor 62-211, Corridor Density Map

Figure 4 shows the density of energy use to assist in evaluating corridor utility. ROWs granted prior to the corridor designation (2009) are shown in grey; ROWs granted after corridor designation are shown in blue; and pending ROWs under current review for approval are shown in turquoise. Note the ROW density shown for the corridor is only a snapshot that does not fully illustrate remaining corridor capacity. Not all ROWs have GIS data at the time this abstract was developed. BLM and USFS are currently improving their ROW GIS databases and anticipate more complete data in the near future.

General Stakeholder Feedback on Corridor Utility

Stakeholders did not provide specific input on corridor utility.

Corridor Review Table

The table below captures details of the Agencies’ review of the energy corridor. Consideration of the general corridor siting principles of the 2012 Settlement Agreement framed each corridor review, to identify potential improvements to maximize corridor utility and minimize impacts on the environment. Initial Agency analysis is provided to facilitate further discussion during stakeholder workshops.

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
ENVIRONMENTAL RESOURCE ISSUES							
<i>Specially Designated Areas</i>							
62-211 .001	USFS	Tonto National Forest	Maricopa, AZ	Preliminary Arizona NST	MP 18	GIS Analysis: NST and corridor intersect.	There is an opportunity for the Agencies to consider adding an IOP for NSTs and NHTs as well as adding an IOP related to Visual Resources to ensure appropriate consideration occurs with proposed development within the energy corridor. (2)
62-211 .002	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	General George Crook NRT	MP 60 to MP 61	Agency Input: Cultural Resources database, Apache-Sitgreaves National Forests LMP, and misc. cultural resource reports. Specific management direction of the 200-ft NRT corridor and the historic trail is in the LMP. General George Crook Trail is a Congressionally designated NRT, a state-designated Arizona Historic Trail (the first listed), and an eligible NHT.	There is an opportunity to consider shifting the corridor less than one mile east near the existing 345-kV transmission line or have the corridor include the existing transmission line. This would avoid significant segments of the trail, which are within the first 2,500 ft north of the Mogollon Rim Escarpment of the corridor. In addition, cultural sites density is lower to the east. (2) There is also an opportunity for the Agencies to consider adding an IOP for NSTs and NHTs as well as adding an IOP related to Visual Resources to ensure appropriate consideration occurs with proposed development within the energy corridor. (2)

CORRIDOR 62-211 REVIEW TABLE

ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
62-211 .003	USFS	Tonto National Forest	Maricopa and Gila, AZ	Mazatzal Wilderness, Hellsgate Wilderness	MP 15 to MP 19 (near), MP 39 to MP 42 (near), MP 42 to MP 43 (adjacent), and MP 43 to MP 48 (near)	<p>Settlement Agreement</p> <p>RFI: reroute to avoid designated Wilderness.</p> <p>GIS Analysis: Mazatzal Wilderness as close as 530 ft from corridor, Hellsgate Wilderness is adjacent to the corridor abuts the corridor between MP 42 and MP 43.</p>	<p>Although the corridor does not intersect designated wilderness, there is an opportunity to consider shifting the corridor at this location so the energy corridor is further to the northwest to improve the distance between the corridor and the wilderness while also providing additional capacity in the corridor. (2)</p>
62-211 .004	USFS	Apache-Sitgreaves National Forests	Coconino and Navajo, AZ	Chevelon Creek Eligible WSR	MP 79 to MP 87	<p>Settlement Agreement</p> <p>RFI: re-route to avoid WSRs.</p> <p>GIS Analysis: eligible WSR intersects or is adjacent to corridor.</p> <p>Agency Input. the corridor intersects Eligible WSR segment on Apache-Sitgreaves National Forests. Plan direction is that these areas are not suitable for energy corridor use. Further, USFS policy (FSH 1909.12_84.3) requires that eligible WSR corridors be protected to “maintain free flow and outstandingly remarkable values unless a determination of ineligibility or non-suitability is made.” ORVs for these three segments of Chevelon Creek are scenery, fish, and vegetation. In order to proceed with authorizing the granting of ROWs or placement of energy infrastructure in the corridor</p>	<p>There is an opportunity to consider revising the corridor to the east along existing infrastructure to avoid eligible scenic, recreational, and wild segments of Chevelon Creek. (2)</p>

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						across these eligible WSR segments, a plan amendment would be required, and the project would need to be compliant with policy on protection of free-flow and ORVs of eligible WSR corridors.	
Ecology							
62-211 .005	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa, Gila, and Coconino, AZ	Mexican Spotted Owl PACs and designated critical habitat (ESA-listed: threatened)	MP 20 to MP 27, MP 60 to MP 69, MP 72, MP 73 to MP 76, and MP 79 to MP 84	<p>Settlement Agreement</p> <p>RFI: reroute to avoid critical habitat or designate as upgrade only. Consult closely with state fish and game Agencies and WGA to implement the full mitigation hierarchy of avoidance, minimization, and compensation for CHAT resources at "Very High" risk. Consult with USFWS to avoid adverse modification to Mexican Spotted Owl (within 1.2 mi) of its designated critical habitat.</p> <p>GIS Analysis: critical habitat, PACs, and corridor intersect.</p> <p>Comment on abstract: 25 mi of the corridor passes through Mexican Spotted Owl critical habitat. Reroute to avoid critical habitat. Consult with USFWS to avoid adverse modification to Mexican Spotted Owl (within 1.2 mi) designated critical habitat.</p>	Protection of ESA-listed species habitat is important. The preferred methodology to mitigate undue degradation of resources is to collocate future energy infrastructure across public land with existing infrastructure to the extent feasible. As such, there is an opportunity to consider revising the corridor to the east along existing infrastructure between MP 60 and MP 87 to best meet the siting principles based on the settlement agreement. (2)
62-211 .006	USFS	Tonto National Forest	Gila, AZ	Narrow-headed Gartersnake proposed critical	MP 43 to MP 45 and MP 57 to MP 58	GIS Analysis: proposed critical habitat and corridor intersect.	Protection of ESA-listed species habitat is important. The preferred methodology to mitigate undue degradation of resources is to collocate

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
				habitat (ESA-listed: threatened)			future energy infrastructure across public land with existing infrastructure to the extent feasible. As such, the current location appears to best meet the siting principles based on the settlement agreement. (1)
62-211 .007	USFS	Tonto National Forest	Gila, AZ	Northern Mexican Gartersnake proposed critical habitat (ESA-listed: threatened)	MP 57 to MP 58	GIS Analysis: proposed critical habitat and corridor intersect.	
62-211 .008	USFS	Tonto National Forest	Gila, AZ	Southwestern Willow Flycatcher critical habitat(ESA-listed: endangered)	MP 33 to MP 37	RFI: reroute to avoid critical habitat. Consult closely with state fish and game Agencies and WGA to implement the full mitigation hierarchy of avoidance, minimization, and compensation for CHAT resources at "Very High" risk. Consult with USFWS to avoid adverse modification to Southwestern Willow Flycatcher (within 1.2 mi) designated critical habitat. GIS Analysis: critical habitat as close as under 1 mi east of corridor. Comment on abstract: Reroute to avoid critical habitat. Consult with USFWS to avoid adverse modification to Southwestern Willow Flycatcher (within 1.2 mi) designated critical habitat.	
62-211 .009	USFS	Tonto National Forest	Gila, AZ	Western Yellow-billed Cuckoo proposed critical habitat (ESA-listed: threatened)	MP 6 to MP 8	GIS Analysis: proposed critical habitat and corridor intersect.	
62-211 .010	USFS	Tonto National Forest,	Maricopa and Coconino, AZ	Regional Forester’s Sensitive Species: Northern Goshawk,	Not specified.	Agency Input: Northern Goshawk Post-fledgling Areas intersect corridor. Habitat for	

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
		Apache-Sitgreaves National Forests		Bald Eagle, Common Blackhawk, Allen's Lappet-browed Bat, and Arizona Sneezeweed. Other sensitive species such as Bebb's Willow and bat species may also be present		<p>other sensitive species also present.</p> <p>A sensitive species is a sensitive plant or animal species for which population viability is a concern as evidenced by: (1) a significant or predicted downward trend in population numbers or density, or (2) a significant current or predicted downward trend in habitat capability that would reduce a species' existing distribution (USFS Manual 2670.32). Sensitive species are designated by the regional forester and that status is periodically reviewed.</p>	by corridor-level planning because alternate routes could still require siting through the current range of these species. Further analysis to determine the presence of all species occurring within the area will be considered outside of corridor-level planning. (3)
62-211 .011	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa and Coconino, AZ	Aquatic ESA-listed species	MP 6 to MP 9; MP 18 to MP 19; MP 43 to MP 45; MP 57 to MP 58; MP 80 to MP 83, MP 84, and MP 85 to MP 87	Agency Input: aquatic ESA listed species may be present in the corridor.	Protection of ESA-listed species habitat is important. The preferred methodology to mitigate undue degradation of resources is to collocate future energy infrastructure across public land with existing infrastructure to the extent feasible. As such, there is an opportunity to consider revising the corridor to the east along existing infrastructure between MP 60 and MP 87 to best meet the siting principles based on the settlement agreement.
62-211 .012	USFS			New Mexico Meadow Jumping Mouse (ESA-listed: endangered)	Not specified.	Agency Input: there is an historic record (1975) of New Mexico Meadow Jumping Mouse in the corridor.	This corridor location within the current range where these two species may occur is not easily resolved or avoided by corridor-level planning.
62-211 .013	USFS			Chiricahua Leopard Frog (ESA-listed: threatened)	Not specified.	Agency Input: There is a historic record (1969) of Chiricahua Leopard Frog in the corridor.	Further analysis to determine the presence of these two species occurring within the area will be

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
							considered outside of corridor-level planning. (3)
62-211 .014	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa and Coconino, AZ	Roundtail Chub	MP 6 to 8	Comment on abstract: corridor intersects Roundtail Chub habitat at the Verde River according to the Arizona Heritage Data Management System.	The preferred methodology to mitigate undue degradation of resources is to collocate future energy infrastructure across public land with existing infrastructure to the extent feasible. As such, the energy corridor appears to be located in the location that best meets the siting principles in the settlement agreement. (1)
62-211 .015	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa, Gila, and Coconino, AZ	Special Status Species	MP 60 to MP 66	Comment on abstract: approximately 6 mi of the corridor pass through the Mogollon Rim Snowmelt Draws IBA. The IBA serves as significant breeding habitat for many species designated as Birds of Conservation Concern by the USFWS including Olive-sided Flycatcher, Red-faced Warbler, Virginia's Warbler, and Grace's Warbler. Reroute to avoid breeding habitat within the designated IBA region. Consult with USFWS to ensure corridor does not disturb breeding habitat for Birds of Conservation Concern.	The IBA cannot be readily avoided by improving corridor placement. This corridor location within the current range where these species may occur is not easily resolved or avoided by corridor-level planning. Further analysis to determine the presence of all species occurring within the area will be considered outside of corridor-level planning. (3)
62-211 .016	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa, Gila, Coconino, and Navajo, AZ	Riparian and upland wildlife habitat	Entire corridor	Comment on abstract: the entire length of corridor on the Apache-Sitgreaves National Forests runs parallel to, but is offset to the west of an existing energy corridor. This alignment would have greater impacts to riparian and upland wildlife habitat than would occur if the corridor followed the existing	There is an opportunity to realign the corridor to the east along existing infrastructure between MP 60 and MP 87. (2)

CORRIDOR 62-211 REVIEW TABLE

ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						corridor. Recommend that corridor 62-211 be shifted to the east, to be roughly centered on the existing energy corridor.	
62-211 .017	USFS	Tonto National Forest	Maricopa, AZ	Birds and aquatic species	MP 9	<p>Comment on abstract: corridor crosses various creeks and Bartlett Lake. Several species are dependent on the Verde River. Limit project activities during the breeding season for birds, generally May through late August, depending on species in the local area. Raptors breed in early February through May. Conduct avian surveys to determine bird species that may be utilizing the area and develop a plan to avoid disturbance during nesting season.</p> <p>Comment on abstract: be aware aquatic species breed at different times throughout the year. Review the biology of each species to determine a timeframe and actions (e.g. limiting sediment input into the river during construction) that would minimize impact to the species.</p>	Bird nesting and brood rearing habitat is considered for responsible energy development during an application review; however, since bird nesting and brood rearing locations vary on an annual basis, the resource impacts cannot be accurately determined during corridor-level planning across vast landscapes. (3)
62-211 .018	USFS	Tonto National Forest	Maricopa, AZ	Beaver Turkey Ridge Wildlife Quiet Area	MP 60 to MP 62	Comment on abstract: corridor would impact the Beaver Turkey Ridge Wildlife Quiet Area. Although an existing energy corridor currently impacts the southeast portion of this quiet area, Corridor 62-211 would have a significantly greater impact. To reduce this impact,	There is an opportunity to realign portions of the corridor to the east along existing infrastructure through the Beaver Turkey Ridge Wildlife Quiet Area. (2)

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						Corridor 62-211 should be shifted to the east to align with the existing energy corridor.	
62-211 .019	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Timbered stands	MP 67 to MP 71	Agency Input: corridor is in mostly timbered stands and near the headwaters of Hart Canyon.	There is an opportunity to move the corridor east, closer to existing infrastructure. (2)
62-211 .020	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Riparian and wetland resources	Not specified.	Agency Input: at least eight segments of the corridor intersect streams and Potential Natural Vegetation Types/riparian.	Not generally a consideration for corridor-level planning but would be addressed during the ROW application process. There is a potential for negative impacts on riparian and wetland areas from altered conditions (e.g., reduced shade and temperature increases). Utilizing the existing ROW east of the designated corridor would reduce this potential impact. (2)
62-211 .021	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Karst features and groundwater/surface water flow, water quality and quantity, and cave dependent biota. Potentially a recreation issue as well.	MP 60 to 87	<p>Agency Input: corridor intersects streams and Karst features. Potential impacts have not been evaluated; sufficient surveys do not exist.</p> <p>Potential degradation of water quality from altered conditions. Sediment input from bare soils and steep slopes, as well as unmaintained access roads.</p> <p>Increased temperature from removal of trees and altered or destroyed riparian/wetlands.</p> <p>Increased localized slope runoff and erosion. Increased evapotranspiration in stream reaches denuded of vegetation.</p>	These issues are not considered during corridor-level planning and would be addressed during the ROW application process. Nevertheless, there is an opportunity to consider revising the corridor (shifting it to the east) and using existing ROWs to reduce these potential impacts. (2)

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
						Agency Input: if the corridor was placed at the existing Cholla corridor, the amount of impacts with the removal of less vegetation may reduce issues with sedimentation.	
62-211 .022	USFS	Tonto National Forest	Maricopa, AZ	Riparian areas/erosion	MP 9	Comment on abstract: corridor crosses various creeks and Bartlett Lake. Riparian areas are impacted by transmission line maintenance roads. The roads increase sediment flow into aquatic systems and OHV use within stream channels and associated riparian areas. Please ensure roads are constructed in a way to limit erosion.	Not a corridor-level planning issue. An existing IOP requires the applicant to prepare an access road siting and management plan. (1)
Air Quality							
62-211 .023	USFS	Tonto National Forest	Maricopa, AZ	Mazatzal Wilderness USFS Class I Area	MP 14 to MP 20	GIS Analysis: Class I area as close as 0.1 mi north of corridor.	The corridor and Class I Area do not intersect. Nevertheless, the concern related to air quality is acknowledged and the adherence to existing IOP regarding compliance with air quality standards would be required to ensure this issue is considered at the appropriate time. (3)
Lands with Wilderness Characteristics							
62-111 .024	USFS	Tonto National Forest	Gila, AZ	Citizens' proposed wilderness, USFS Roadless Areas and USFS potential wilderness areas	Not specified.	Settlement Agreement RFI: corridor and the Hellsgate Additions and two units of the Mazatzal Additions citizens' proposed wilderness areas intersect. Consider visual impacts to nearby citizens' proposed wilderness, Wilderness, and IRA. Reroute to avoid impacts or designate it as upgrade-only.	There is a potential opportunity to re-route and/or adjust the width of portions of the energy corridor during future land use planning to better align the corridor with the existing 345kV electrical transmission line as well as avoid lands wilderness characteristics.

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
			Maricopa, AZ		MP 4 to MP 8	Comment on abstract: corridor intersects with USFS wilderness-quality lands. USFS Roadless Areas and USFS potential wilderness areas. 829 acres overlap.	
					MP 5 to MP 8	USFS Roadless Areas and USFS potential wilderness areas. 596 acres overlap.	
					MP 9 to MP 14	USFS Roadless Areas and USFS potential wilderness areas. 1,367 acres overlap.	
					MP 10 to MP 12	1,201 acres overlap (Mazatzal Additions-citizen).	
					MP 10 to MP 20	USFS Roadless Areas and USFS potential wilderness areas. 3,243 acres overlap.	
			Gila, AZ		MP 21 to MP 30	USFS Roadless Areas and USFS potential wilderness areas. 967 acres overlap.	
					MP 26	USFS Roadless Areas and USFS potential wilderness areas. 25 acres overlap.	
					MP 27 to MP 30	11,037 acres overlap (Mazatzal Additions-citizen).	
					MP 28 to MP 30	294 acres overlap (Mazatzal Additions-citizen)	

CORRIDOR 62-211 REVIEW TABLE

ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
					<p>MP 28 to MP 30</p> <p>MP 36</p> <p>MP 36 to MP 49</p> <p>MP 41 to MP 49</p> <p>MP 57 to MP 60</p> <p>MP 58 to MP 60</p>	<p>USFS Roadless Areas and USFS potential wilderness areas. 298 acres overlap.</p> <p>USFS Roadless Areas and USFS potential wilderness areas. 198 acres overlap.</p> <p>USFS Roadless Areas and USFS potential wilderness areas. 1,454 acres overlap.</p> <p>USFS Roadless Areas and USFS potential wilderness areas. 1,045 acres overlap.</p> <p>USFS Roadless Areas and USFS potential wilderness areas. 639 acres overlap.</p> <p>USFS Roadless Areas and USFS potential wilderness areas. 56 acres overlap.</p> <p>The abstracts dismiss all intersections with Citizens' Proposed Wilderness. This approach is wholly inappropriate and inadequate; the Agencies must address conflicts with proposed wilderness.</p> <p>USFS Roadless Areas and potential wilderness areas are inappropriate for transmission and other energy infrastructure. Of the national forests that are revising their forest plans, there</p>	

CORRIDOR 62-211 REVIEW TABLE

ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						is significant overlap between the Tonto National Forest's potential wilderness areas and Corridor 62-211. These potential wilderness areas merit special consideration in the forest plan revision to adjust or delete corridors if management decisions are made to protect wilderness character.	
Visual Resources							
62-211 .025	USFS	Apache-Sitgreaves National Forests	Coconino and Navajo, AZ	USFS Scenery Management System	Not specified.	Agency Input: Forest Plan direction for Scenic Resources provides for the protection of scenic resources associated with both WSR corridors and areas classified as primitive and semi-primitive ROS classes.	There is an opportunity to consider revising the corridor to better align with existing infrastructure. (2)
62-211 .026	USFS	Apache-Sitgreaves National Forests	Maricopa, AZ	Scenic Integrity Objective-High	MP 60 to MP 64, MP 67 to MP 68, MP 72 to MP 73, MP 80 to MP 83, MP 83 to MP 87	GIS Analysis: high SIO intersects corridor	There is an opportunity to consider revising the corridor to the east along existing infrastructure to better avoid high SIO areas. (2)
62-211 .027	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa, Gila, and Coconino, AZ	Scenic Integrity Objective-Medium	MP 2 to MP 6, MP 12, MP 13 to MP 18, MP 20 to MP 26, MP 35 to MP 40, MP 53 to MP 54, MP 60 to MP 87	GIS Analysis: medium SIO intersects corridor.	Future development within the corridor could be limited. Landscape character appears slightly altered. Noticeable deviations must remain visually subordinate to the landscape character being viewed. There is an opportunity to consider an IOP related to Visual Resources. (2)
62-211 .028	USFS	Tonto National Forest	Maricopa and Gila, AZ	Scenic Integrity Objective-Maximum Modification	MP 0 to MP 6, MP 27 to MP 29, MP 32 to MP 35, and MP 37 to MP 49	GIS Analysis: Maximum modification SIO intersects corridor.	The existing corridor location best meets the siting principles. (1)
62-211 .029	USFS	Tonto National Forest	Maricopa and Gila, AZ	Scenic Integrity Objective-Partial Retention	MP 6 to MP 14, MP 17 to MP 36, MP 42, and MP 45 to MP 58	GIS Analysis: partial retention SIO intersects corridor.	Development allows for moderate change to the characteristic landscape. The corridor meets the siting principles

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
							to the degree possible at these locations. (1)
62-211 .030	USFS	Tonto National Forest	Maricopa and Gila, AZ	Scenic Integrity Objective-Retention	MP 6 to MP 10, MP 18 to MP 21, MP 27, MP 49 to MP 52, MP 57 to MP 60	GIS Analysis: retention SIO intersects corridor.	Future development within the corridor could be limited. There is a conflict between the corridor designation and the SIO that needs to be resolved. There is an opportunity to revise the corridor or revise the ACEC boundary or management prescriptions. (2)
62-211 .031	USFS	Apache-Sitgreaves National Forests	Gila and Coconino, AZ	Scenic Integrity Objective-Very High	MP 60 to MP 62	GIS Analysis: very high SIO intersects corridor.	Future development within the corridor could be limited. Landscape character appears intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape. There is a conflict between the corridor designation and the SIO that needs to be resolved. There is an opportunity to revise the corridor or revise the ACEC boundary or management prescriptions. (2)
62-211 .032	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Recreation Opportunity Spectrum-Rural	MP 69 to MP 70	GIS Analysis: ROS intersects corridor. Agency Input: for rural, the compatible VQOs are modification, partial retention and retention.	Development allows for moderate change to the characteristic landscape. The corridor meets the siting principles. (1)
62-211 .033	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Recreation Opportunity Spectrum-Roaded Modified	MP 60 to MP 62	GIS Analysis: ROS intersects corridor.	The existing corridor location best meets the siting principles. (1)
62-211 .034	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Recreation Opportunity Spectrum-Roaded Natural	MP 60 to MP 61, MP 63 to MP 79	GIS Analysis: ROS intersects corridor. Agency Input: for roaded natural, the compatible VQOs	In roaded natural areas, resource modifications and utilization practices can be evident but are harmonious with the natural environment. Development allows for moderate change to the characteristic landscape.

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						are modification, partial retention and retention.	The corridor meets the siting principles. (1)
62-211 .035	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Recreation Opportunity Spectrum-Semi-Primitive Motorized	MP 79 to MP 81 and MP 82 to MP 86	GIS Analysis: ROS intersects corridor. Agency Input: for semi-primitive motorized, the compatible VQOs are retention and partial retention.	Future development within the corridor could be limited to retain semi-primitive visual quality objectives. There may be an opportunity to consider shifting the corridor to avoid or minimize intersecting semi-primitive, non-motorized areas. (2)
62-211 .036	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Recreation Opportunity Spectrum-Semi-Primitive Non-Motorized	MP 60 to MP 64, MP 70 to MP 72, MP 72 to MP 73, MP 79 to MP 81, and MP 82 to MP 87	GIS Analysis: ROS intersects corridor. Agency Input: for semi-primitive, non-motorized, the compatible VQO is retention.	
Cultural and Tribal Resources							
62-211 .037	USFS	Tonto National Forest	Maricopa, AZ	Sunflower Ranger Station	MP 18 (near)	Settlement Agreement RFI: reroute to avoid National Historic Place. GIS Analysis: NRHP site – Sunflower Ranger Station 1,100 ft southeast of corridor. Agency Input: include why sites were listed on the NRHP. What will the measures be to mitigate the effects of constructing an energy corridor just north of Sunflower Ranger Station, as it is likely that the corridor will be visible from the NRHP site?	Existing IOPs specific to cultural resources would be followed in connection with any proposed energy project that may potentially affect listed properties. Section 106 process would be followed to identify any possible impact of development during the ROW application process. (1).
62-211 .038	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Gila and Coconino, AZ	Bear Canyon Crossing	MP 24 to MP 67	Agency Input: Bear Canyon Crossing. The Cholla line (to the south) has better access than Corridor 62-211; accessibility to some parts of the corridor will require new roads, which could potentially affect hydrological,	The corridor encompasses or closely parallels the Cholla line between MP 24 and MP 67. There is an existing IOP requiring the applicant to prepare an access road siting and management plan that incorporates relevant Agency standards regarding road design,

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						cultural and other resources, depending on placement. Following along the existing powerline corridor is still the best option for placement of the corridor.	construction, maintenance, and decommissioning. (1)
62-211 .039	USFS	Tonto National Forest	Gila, AZ	Diamond Point Lookout Cabin	MP 51 (near)	GIS Analysis: NRHP Site – Diamond Point Lookout Cabin slightly over 1 mi west of corridor	Existing IOPs specific to cultural resources would be followed in connection with any proposed energy project that may potentially affect listed properties. Section 106 process would be followed to identify any possible impact of development during the ROW application process. (1)
62-211 .040	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Gila, Coconino and Navajo, AZ	Cultural resource site density	MP 60 to MP 87	Agency Input: an eligible National Register District is located within and adjacent to the corridor. Documents and site records indicate site density is known or expected to be high.	There may be an opportunity to consider shifting the corridor to the existing power line ROW that runs parallel to the corridor. If the existing ROW is not wide enough, there is an opportunity to consider shifting the designated energy corridor further to the east, rather than the west, where there are potentially fewer conflicts with cultural resources. (2)
62-211 .041	USFS	Apache-Sitgreaves National Forests	Coconino and Navajo, AZ	Traditional Cultural Properties	MP 60 to MP 87 MP 61 to MP 87	Agency Input: Forest Plan and ethnographic literature indicate there are known traditional cultural properties in the area. Agency Input: Agencies did not take into consideration, and utilize, the existing powerline corridor but instead digitized the corridor to the west of the existing corridor where there are significant cultural resources and traditional cultural properties, and other resources of concern.	There may be an opportunity to consider shifting the corridor to the centerline of the existing ROW to minimize impacts on traditional cultural properties. (2) The potential for cultural resources is a concern for the Agencies that cannot be resolved during corridor-level planning. Surveys will occur as part of the ROW application process. Existing IOPs specific to cultural resources and tribal consultation would be followed in connection with any proposed energy project in the corridor. (3)

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						If the existing ROW parallel to the corridor is not wide enough, there is an opportunity to consider shifting Corridor 62-211 further to the east, rather than the west, where there are potentially fewer conflicts with cultural resources.	
62-211 .042	USFS	Apache-Sitgreaves National Forests	Coconino and Navajo, AZ	Unrecorded cultural resources likely to be present	MP 60 to MP 87 MP 83 to MP 85	Agency Input: according to Apache-Sitgreaves National Forests survey records, most of the corridor has not received adequate cultural resource survey. Cultural resources survey and consultation under Section 106 of the National Historic Preservation Act will be required. Agency Input: suggest re-routing the corridor to the existing Cholla line to avoid Chevelon Canyon.	There may be an opportunity to consider shifting the corridor to the existing power line ROW that this one runs parallel to, as the existing ROW has been surveyed and most sites in the existing corridor have been mitigated. It would cost less for site mitigation and infrastructure development and there would be fewer sites affected by project activities. If the existing ROW is not wide enough, there is an opportunity to consider shifting the designated energy corridor further to the east, rather than the west, where there are potentially fewer conflicts with cultural resources. (2)
Land Use Concerns							
Corridor pinched by BLM or USFS authorized use							
62-211 .043	USFS	Tonto National Forest	Maricopa, AZ	Existing transmission line	MP 9 to MP 15	GIS Analysis: transmission line within corridor crosses entire width of corridor multiple times. Existing line uses entire width of corridor crossing side to side, additional projects would need to cross this line multiple times to stay within the corridor.	There may be an opportunity to consider shifting or widening the corridor to the existing power line ROW that runs parallel to and within the corridor. (2)
62-211 .044	USFS	Tonto National Forest	Maricopa, AZ	Bartlett Dam, Bartlett Reservoir	MP 9	GIS Analysis: dam located in corridor.	Existing lines are on the very north edge of the reservoir. There is an opportunity to consider shifting the

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						Agency Input: impacts on recreation and safety considerations for the public.	designated energy corridor to the east to be ensure that new infrastructure does not cross over the dam. (2)
Military and Civilian Aviation							
62-211 .045	USFS	Tonto National Forest	Maricopa, AZ	Civilian Aviation - Bartlett Dam Heliport	MP 9	GIS Analysis: Heliport in corridor.	Coordination with private heliport owner would be required for any project-specific use. There is an opportunity to consider shifting the designated energy corridor to the east to be further away from the heliport. (2)
62-211 .046	USFS	Tonto National Forest	Maricopa and Gila, AZ	MTR – VR	MP 10 to MP 19 and MP 27 to MP 39	GIS Analysis: VR and corridor intersect.	The concern related to MTRs is noted and the adherence to existing IOP regarding coordination with DoD would be required to ensure this potential conflict is considered at the appropriate time. In addition, there is an opportunity to consider a revision to the existing IOP to include height restrictions for corridors in the vicinity of DoD training routes. (2)There
62-211 .047	USFS	Apache-Sitgreaves National Forests	Coconino and Navajo, AZ	MTR – IR	MP 70 to MP 87	GIS Analysis: IR and corridor intersect.	
Public Access and Recreation							
62-211 .049	USFS			Recreation associated with Wilderness Areas	Not specified.	RFI: the existing wilderness areas north and south of the corridor (Four Peaks, Superstitions, Mazatzal) have high value as popular recreation areas used as a wilderness escape for the burgeoning Phoenix metro region – therefore the highest and best use of lands in this region includes preservation in a natural state. Reroute to avoid impacts or designate it as upgrade-only.	Wilderness Areas do not intersect the corridor. Wilderness Areas are an important resource that are carefully considered during corridor planning. The corridor’s current location best meets the siting principles. (1)
62-211 .050	USFS	Apache-Sitgreaves	Coconino, AZ	Mogollon Rim	MP 60 to MP 64	Agency Input: the Mogollon Rim is the only location where the	Location of the corridor in close proximity to the existing transmission

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
		National Forests				Cholla and Corridor 62-211 meet. It is highly visible from the south. The face of the Mogollon Rim is considered a natural wonder for its majesty on top of the Rim, within this area is the General George Crook NRT (also a State Historic Trail and eligible NHT), the Rim Road, a popular recreational scenic drive, and several other unique resources. The Crook Trail was mitigated under the Cholla powerline. What will the mitigation measures be for these unique resources?	lines meets the siting principles to the degree possible at that location. There is an opportunity to consider a new IOP related to NHTs and Visual Resources. (2)
62-211 .051	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Chevelon Crossing	MP 80 to MP 83	Agency Input: suggest re-routing the corridor to the existing Cholla line to avoid Chevelon Crossing, a popular recreation area that has a popular campground and trailhead and many unique resources.	There is an opportunity to move the corridor east along existing infrastructure. (2)
Other noted land use concerns							
62-211 .052	USFS	Tonto NF, Apache-Sitgreaves National Forests	Gila and Coconino, AZ	Steep ridge	MP 60 and MP 61	Agency Input: note the placement of the centerline of the corridor in relation to a steep ridge. Assume that the corridor is as wide as it is to allow 'wiggle room' to work around barriers and sensitive and non-renewal resources, but the Cholla corridor is probably the better location for the Section 368 energy corridor.	There is an opportunity to move the corridor slightly east along existing infrastructure. (2)
62-211 .053	USFS	Apache-Sitgreaves National Forests	Coconino, AZ	Vincent Ranch property	MP 67 to MP 68	Comment on abstract: corridor would impact the Arizona Department of Fish and Game's Vincent Ranch property located	There is an opportunity to move the corridor east, closer to the existing infrastructure. This would also place the corridor closer to the edge of the

CORRIDOR 62-211 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1,2}
						between MP 67 and 68. Shifting the corridor to the east would exclude the Vincent Ranch parcel from impacts associated with Corridor 62-211.	high conflict area that it currently intersects. (2)
62-211 .054	USFS	Tonto National Forest	Maricopa, AZ	Tonto Village	MP 50 to MP 57	Agency Input: along this corridor is a popular Herkimer diamond collecting area for the public as well as right over Tonto Village, which is located to the north and partially within the corridor. Issues include health and safety issues and displacing people. Additionally, the Control Road is a very popular public road, especially in the spring and summer. Again, more potential health and safety issues. It would be better to place the corridor over the existing powerline corridor to the east.	There is an opportunity to move the corridor east of the existing infrastructure or at a minimum site new infrastructure as close as feasible to the eastern side of the corridor. (2)
62-211 .055	USFS	Tonto National Forest, Apache-Sitgreaves National Forests	Maricopa, Gila, and Coconino, AZ	Intermittent stream crossings: West Chevelon Canyon	MP 75 to MP 85	GIS Analysis: streams and corridor intersect. Agency Input: Chevelon Canyon is not an intermittent stream. Mitigation for constructing the corridor over Chevelon Canyon would be cost-prohibitive. Other impacts include managing the timber and other resources as well as wildlife risk.	There is an opportunity to re-align the corridor to the east along existing infrastructure. This alignment would allow the corridor to cross Chevelon Canyon once as opposed to multiple times at the corridor's current location. (2)

¹ Projects proposed in the corridor would be reviewed during their ROW application review process and would adhere to Federal laws, regulations, and policy.

² (1) = confirm existing corridor best meets siting principles; (2) = identify opportunities to improve corridor placement or IOPs; (3) = acknowledge concern not easily resolved or avoided by corridor-level planning.

Abstract Acronyms and Abbreviations

BLM = Bureau of Land Management; CHAT = Crucial Habitat Assessment Tool; DoD = Department of Defense; ESA = Endangered Species Act; GIS = geographic information system; IBA = important bird area; IOP = Interagency Operating Procedures; IR = Instrument Route; LMP = Land Management Plan; MP = milepost; MTR = Military Training Route; NRT = National Recreation Trail; NRHP = National Register of Historic Places; NST = National Scenic Trail; OHV = off highway vehicle; ORV = outstanding remarkable value; PAC = Primary Activity Area; PEIS = Programmatic Environmental Impact Statement; REDA = Renewable Energy Development Area; RFI = Request for Information; ROD = Record of Decision; ROS = recreation opportunity spectrum; ROW = right-of-way; SIO = scenic integrity objective; USFS = U.S. Forest Service; USFWS = U.S. Fish and Wildlife Service; VQO = visual quality objective; VR = Visual Route; WGA = Western Governors' Association; WSR = Wild and Scenic River; WWEC = West-wide Energy Corridor.