Site/Facility	Narrative/Description
NA-LA	Start Tours at NA-LA office, TA-3-1410, Badging and Security inbrief
	ROUTE: East on W. Jemez Road to Bikini Atoll – turn right
(L) Metropolis Center (Strategic Supercomputing Center)	The Metropolis Center was home to the world's first petascale computing platform, Roadrunner. The facility currently houses some of the world's most powerful supercomputers, including three petascale machines: Fire and Ice at 1.3 Petaflops each, and Trinity at 40 Petaflops. These platforms are used to run nuclear weapons modeling and simulation codes to support Stockpile Stewardship. The Laboratory will play a large part in the Department of Energy's Exescale Computing Initiative. Future platforms to support or realize this capability will be housed at the Metropolis Center.
	To support future capabilities, the NNSA is executing the Exescale Class Computing Cooling Equipment (EC3E) project that will expand the water cooling capacity to accommodate the next generation of Advanced Technology Platforms. This project is currently scheduled for completion in FY2019.
(R) SM-30	SM-30 is a warehouse facility that serves as the primary shipping and distribution facility for the Laboratory. Every piece of mail, equipment and supplies inbound to the Laboratory flow through this facility. Each year, the Laboratory receives over 2 million pieces of mail and over 200,000 packages. A majority of outbound off-site shipping also goes through this facility, over 120,000 items a year; but seven other locations ship specialty items, such as medical isotopes which are produced at the Laboratory.
	ROUTE: Turn left on Mercury Road
(L) NISC	The Global Security directorate is largely housed in the Nonproliferation and International Security Center (NISC). The NISC holds a Sensitive Compartmented Information Facility that supports a Field Intelligence Element and Nuclear Incident Response elements, as well as light laboratory space (electronics) and a small radiological facility for detector and sensor development.

Site/Facility	Narrative/Description
(R) Physics	The Physics Building houses light laboratory spaces and fabrication shops, as well as classified and
Building	unclassified office spaces for several divisions at the Laboratory.
(L) NSSB/Otowi	The NSSB and Otowi combined serve as the main headquarters for the laboratory. NSSB houses
	Laboratory's institutional leadership while Otowi houses support functions such as the badge office
	and CFO organization.
	ROUTE: Right on Paiarito Road
(L) TA-3- SM-39	The Main Shops provide large-scale machining and inspection services to support Research and
Main Shops	Development activities at the Laboratory.
(R) TA-3:	Occupational Medicine provides clinical services that are available for the physical, mental health and
Occupational	well-being of workers. The facility has medical providers on-hand to address work related injuries,
Health	illnesses and exposures.
(1) = 1 = 1	
(L) TA-3: Site	This complex houses the majority of the Safeguards and Security program leadership for the site. The
Safeguards and	complex includes physical security systems fabrication and testing, classified matter protection,
Security	program budget, communication, nuclear materials control and accountability, and technical security
Complex	programs.
	ROUTE: Left on Diamond Drive
(R) BSL Facility	The Biosafety Level 3 facility was constructed in the early 2000's and was originally planned for Level 3
	operations. Recent programmatic decisions from DOE/NNSA indicate the facility will only be used for
	BSL-2 activities. This facility is important for relocating current Bioscience operations housed in the
	Health Research Laboratory (HRL) Building, across the canyon which you will see in a few minutes.
	Relocating operations from HRL to the south side of Los Alamos Canyon has been an on-going
	initiative for several years and is nearly complete.

Site/Facility	Narrative/Description
(R) Sigma (SM-	Sigma is used to develop materials and components using engineering and metallurgical science in
66)	support of national security and focuses on prototype fabrication and materials research. Research
	and development activities include metallurgical and ceramics process development and
	characterization, and foundry and forging operations. Sigma capabilities have been applied to support
	a variety of weapons and non-proliferations activities, including materials characterization and process
	development to support life extension programs for the W76 and B61, investigations into Advanced
	Manufacturing techniques, as well as process development for low enriched uranium fuel elements to
	support reactor conversion programs.
(R) MSL Facility	The Materials Science Laboratory contains light laboratory space dedicated to microstructural
	investigations of non-radiological materials of interest to the weapons and energy security missions.
(R) CINT	The Center for Integrated Nanotechnologies is a Department of Energy-funded nanoscience research
	facility that provides users from around the world with access to state of the art expertise and
	instrumentation in a collaborative, multidisciplinary environment with a focus on nanoscience
	integration. The Center houses capabilities for synthesis and fabrication, characterization, and theory
	and simulation of nano-materials and structures. This facility is co-managed with Sandia National
	Laboratory (which hosts a sister-facility) as a National user facility.

Site/Facility	Narrative/Description
(R) ESPC - Energy Savings Performance Contract	The Steam Plant was originally built in the 1950's. The boilers are dual fuel (natural gas and fuel oil) and provides heat to several of the buildings within TA-3. Electrical cogeneration is achieved via a natural gas fired Combustion Gas Turbine Generator (CGTG) commissioned in 2008. This unit is capable of producing up to 24MW of electrical power and is being utilized for backup power generation.
	NNSA is seeking, through use of the Energy Savings Performance Contract (ESPC), to enhance the CGTG for additional electrical power and to provide comfort heat (heating) for the TA-3 campus. In addition, this ESPC seeks to reduce its energy consumption from coal-fired power plants to further reduce greenhouse gas emissions. The project will be financed through guaranteed energy savings.
(R) Capital project – TA-03 Electrical Substation Project	The site to the east of the VAP is the location for the installation of a new TA-03 Electrical Substation, one of the Capital projects we discussed during the briefing. This project is a \$28.3M line item project designed to improve reliability of the LANL electrical distribution system with design approximately 90% complete. This project is scheduled to be complete in September 2018.
	switchgear and extend a new line across the canyon to the townsite.
	One unique aspect of this site is the Los Alamos Power Pool – a cooperative agreement established between DOE/NNSA and Los Alamos County which manages electrical power production and distribution on the mesa.
	ROUTE: Turn Right on W. Jemez Road, proceed through VAP's, turn west on Diamond Drive/E.
	Jemez Road and proceed north towards the townsite.

Site/Facility	Narrative/Description
(R) HRL/BSL	Biosciences research has been part Los Alamos framework since the inception of the Laboratory. LANL's robust applied bioscience research capabilities are very effectively coupled with multi- disciplinary science and engineering, high performance computing, and simulation. A significant portion of current bioscience research is conducted in the aged (60+ yr old) Health Research Laboratory that is located to the right. Those operations are being relocated to more modern laboratory facilities on the south side of Los Alamos Canyon such as the BSL-3 facility we passed earlier in the tour.
	There are a total of 31 BSL-2 laboratories totaling 11,394 square feet with an annual budget of ~\$14.4M.
	Programs sponsoring BSL-2 work include: Defense Threat Reduction Agency, Center for Disease Control, Department of Homeland Security, Office of Science, National Institutes of Health, California Dept. of Public Health, Laboratory Directed R & D, and the New Mexico Small Business Administration.
	HRL is the last remaining operational LANL facilities on the north (townsite) side of Los Alamos Canyon.
	ROUTE: After crossing Omega Bridge, turn right on Trinity heading East towards town. Continue through town towards Santa Fe on NM SR4
(R) Feynman Center for Innovation	The Feynman Center for Innovation houses the Intellectual Property and Technology Commercialization activities at the Laboratory. The Center is the focal point for commercial deployment of Laboratory developed technology, and manages the legal and contractual procedures for intellectual property transfer and deployment. The Center facilitates commercialization in New Mexico to accelerate and enhance our efforts to convert federal and state research investments into economic opportunity for New Mexicans.

Site/Facility	Narrative/Description
(L) Bradbury	Bradbury Science Museum is owned by DOE and operated by the M&O. It tells the story of the lab
Science	from the Manhattan Project to today.
Museum	
MAPR	 The Manhattan Project National Park Service Visitor Center is located at Ashley Pond which was at the center of TA-1 during Project Y and is part of the Town Site Historic District. The Historic District also includes Fuller Lodge and the Bathtub Row Houses out beyond the pond. Legislation creating the Manhattan Project National Historical Park was signed by the President on December 19, 2014. A Memorandum of Agreement between the Department of Interior and Department of Energy was signed on November 10, 2015 for the MAPR. DOE roles and responsibilities include: Enhanced public access Management, including operation, maintenance, security, and mission Historic preservation Interpretation support to the National Park Service
(L) Leased Facilities	There are a 28 leased facilities housing 5% of the current lab workforce. These facilities are located in the Los Alamos townsite, White Rock, and across TA-3 at the research park. Current LANL organizations using these leased facilities include Legal, Acquisition Services Management, prime contracts, and various elements across the science, technology, and engineering directorate.

Site/Facility	Narrative/Description
(R) Technical	Technical Area 21 was formally used by LANL as the primary Plutonium processing area from the
Area 21	1950s until operations were relocated to the current Plutonium Facility at Technical Area 55 in the late 1970s. Several facilities remained in operation at TA-21 for several years however the site has principally been a cleanup site under both NNSA and DOE EM programs. There are a few remaining facilities and four Material Disposal Areas located at TA-21, two of which contain hazard category 2 quantities of nuclear materials. This material is waste and is contained in large below ground tanks
	and shafts. DOE's Office of Environmental Management will maintain significant responsibilities at TA-21 with respect to executing legacy cleanup activities pursuant to the 2016 Order on Consent. Given these on- going responsibilities at TA-21, EM-LA and NA-LA are currently conducting discussions regarding the transfer of facilities at TA-21. It is anticipated that these discussions will not be concluded until after a new EM cleanup contractor is on board.

Site/Facility	Narrative/Description
Regional	One aspect that is unique to LANL is the number of key stakeholders, given the history and relative
Stakeholders	remote location of the Lab. LANL was one of the original Atomic Energy Cities; the townsite was
And Issues	created during the original Manhattan Project in the 1940s. After WWII, the lab started expansion
	south of Los Alamos Canyon, which is to our right. Over the years, Los Alamos County was developed
	and there is a very close relationship between the County and the Laboratory. LA County
	operates/maintains the water system, is partners with NNSA in the LA Power Pool, operates the Los
	Alamos Fire Department that provides service for LANL, and provides solid waste services for the lab.
	Los Alamos Pueblo Project/Accord Pueblos: NNSA maintains accord relationships in accordance with
	4 local native American pueblos – San Ildefonso, Santa Clara, Jemez, and Cochiti. San Ildefonso pueblo
	lands abut portions of the eastern and northern boundaries of LANL.
Land Conveyance and Transfer	The NNSA Los Alamos Field Office owns the Land Conveyance and Transfer Project and Los Alamos National Security, LLC (LANS) personnel provide technical and project management support. Public Law (PL) 105-119 authorized the project in November 1997. The 10 original tracts located at Los Alamos National Laboratory identified for conveyance or transfer in an Environmental Impact Statement have been subdivided into 34 tracts to date. Fifteen tracts were conveyed to the County of Los Alamos, three tracts were conveyed to the Los Alamos County School Board, and three tracts were transferred to the Bureau of Indian Affairs to be held in trust for the Pueblo de San Ildefonso. Additional tracts, which may be subdivided, will be conveyed or transferred by September 2022 in accordance with PL 105-119.
	ROUTE: Proceed past Airport on NM 4 to SR 502 – turn right towards White Rock/Truck Route

Supplemental Environmental Projects	Supplemental Environmental Projects: On January 22, 2016 NNSA signed a Settlement Agreement with NMED in response to alleged violations related to the radiological release at WIPP. In lieu of paying significant fines and penalties, NMED required NNSA to implement a total of five Supplemental Environmental Projects (or SEPs) that will benefit communities in Northern New Mexico. The Settlement Agreement has been modified to include successful execution of the SEPs as an enforceable condition. A brief summary of the SEP projects appear below:
	Supplemental Environmental Projects Road improvements Project - \$12 million
	Upgrade DOE-owned routes at LANL used for transporting TRU waste to WIPP.
	Triennial Review Project - \$2.5 million Independent, external triennial reviews of environmental regulatory compliance and operations
	Watershed Enhancement Project - \$7.5 million Watershed-scale surface water management to improve water quality Design and install engineering structures in LANL canyons
	Surface Water Sampling Project - \$2.5 million Increased sampling and monitoring capabilities for storm water runoff in and around LANL Results of sampling and monitoring shared with the public and NMED
	Potable Water Line Replacement Project - \$10 million Replace aging potable water lines and install metering equipment at LANL
	The Gabion baskets/Weir to the right is an example of some of the containment structures installed around the LANL boundary to control off-site migration of any contamination or other hazardous materials. These baskets/Weir are also an example of the type of structures that will be constructed in fulfillment of the Watershed Enhancement SEP.

Site/Facility	Narrative/Description
	ROUTE: Turn right on Truck Route heading east towards TA-72/53
(R) Laboratory	All commercial delivery vehicles destined for the Laboratory are required to undergo a security
Commercial	inspected prior to delivery.
Shipping Truck	
Inspection	The station is operated by LANL Protective Force Contactors – Centerra and K-9. Inspections are
Station (TA-72)	conducted for prohibited articles and explosives.
(R) Live Fire	The Live Fire Range has six separate live fire ranges that are used for Protective Force training and
Range (TA-72)	qualification on approximately 21 acres of land. This range is supplemented by a 20 lane indoor range
	at TA-16 which you will see later on the tour. Both facilities are authorized to fire various types of
	firearms.
	ROUTE: Turn off of Truck route into LANCE, TA-53, Las Mesita Road. Proceed to Guard station to
	inspect badges. Proceed to Operations Center and turnaround, travelling back to East Jemes Road.

Site/Facility	Narrative/Description
LANSCE	The Los Alamos Neutron Science Center (LANSCE) Facility is a national user facility for defense and civilian research in nuclear science, condensed-matter science, and radiography. The facility hosts scientists from universities, industry, LANL, and international research facilities. LANSCE supports NNSA and DOE by:
	 Supporting the NNSA Stockpile Stewardship Program and the DOE Office of Science through leading edge research and experimentation utilizing intense sources of neutrons and protons powered by the LANSCE Accelerator Operating an Isotope Production Facility (IPF) to provide medical radioisotopes.
	 Operating a national user program at the Lujan Center for Neutron Scattering and for basic and applied nuclear science and materials properties characterization. Operating the Proton Radiography (pRAD) capability using protons generated by the LANSCE beam
	line to interrogate materials under dynamic loading.
	conceived to explore the dynamic performance of materials in extreme radiation fields. The Deputy Secretary of Energy approved Mission Need (CD-0) in March of 2016, with an approved cost range of \$1.9B to 3.7B. The NNSA is conducting an Analysis of Alternatives for the project, and the project is working towards achieving CD-1 in 2021.
	ROUTE: After existing TA-53 – turn right on East Jemez Road, proceed through VAP and turn Right on Diamond Drive
(R) LDCC	Los Alamos Data and Communications Center (LDCC) is the primary data center for unclassified and classified institutional computer and storage services. It is the telecommunications hub for the Laboratory, and houses the Laboratory's Voice over Internet Protocol system and the Laboratory's phone system.

Site/Facility	Narrative/Description
(R) CMR	The Chemistry and Metallurgy Research (CMR) Facility is a hazard category 2 facility that became operational in 1953. Current programmatic missions include analytical chemistry, materials characterization and support of major experimental programs at LANL and within the DOE complex. One major ongoing activity is the project to decontaminate experimental chambers from past weapons experiments – six of ten total chambers have been cleaned out over the past three years. Due to its age and seismic fragility, actions are underway to move all activities out and to de-inventory the facility as part of the CMR Replacement (CMRR) project.
	Route: Turn Left at the end of Diamond on Pajarito Road and head east towards White Rock

LOOP 2 – Pajarito Corridor

Site/Facility	Narrative/Description
(R) TA-59/64	To our right is the Protective Force Special Response Team (SRT) Headquarters. This facility houses personnel, equipment, and tactical vehicles for the LANL PF Special Response Team. The Protective Force Headquarters are also located here. This is the main center for Protective Force operations and houses senior leadership as well as the main Protective Force unit and support services.
(L) Radiochemistry Facility (TA-48)	At the end of this road on our left is the Radiochemistry facility. This facility provides laboratory space to perform research on radionuclide transport in geochemical and environmental systems, ultra-low- level measurements using isotopic tracers, development of radiation detectors, and reexamination of archived data and samples of nuclear process parameters. The facility also contains hot-cells to provide chemical separation and distribution of activated materials for medical isotope production.

Site/Facility	Narrative/Description
(L) TA-55 Approach - NMSSUP	Approaching on your left is TA-55, one of the major Technical Areas for LANL and home of the Plutonium Facility. The large fenced enclosure is the Perimeter Intrusion Detection and Delay System surrounding the Plutonium Facility. A significant upgrade to this security perimeter was completed in 2014 as part of the \$250M Nuclear Materials Safeguards & Security Upgrade Project which features state of the art barriers, detection, and surveillance features.
(L) RLUOB	The Radiological Laboratory/Utility/Office Building (RLUOB) houses offices and training space to support the TA-55 complex. The RLUOB also contains radiological laboratory space to provide analytical chemistry support for production activities carried out in the plutonium facility. RLUOB is a key factor in the CMR Replacement project as it can accommodate some of the lower hazard analytical chemistry capabilities currently performed in CMR. The NNSA is pursuing a strategy to elevate the hazard category of the facility to above radiological but well below Hazard Category 3 upper limits to expand the sample capacity for analytical chemistry operations. Additionally, the Radiological Equipment Installation sub-project of the CMRR Project, or REI, is installing additional analytical chemistry laboratory equipment to support this increased throughput.
	ROUTE: At TA-55 turn right onto Pecos Drive and proceed to the end of the road at TA-35, returning to Pajarito Road.
(R) MDA-C	MDA C has been recently downgraded to a less than Hazard Category 3 nuclear facility. Historically, MDA C was used for the disposal of solids and liquids including uncontaminated classified wastes, hazardous chemicals, and radionuclides. The site consists of 7 pits and 108 shafts, with depths ranging from 10 to 25 feet below the original ground surface.

Site/Facility	Narrative/Description
(R) WCRRF	Waste Characterization Reduction and Repackaging Facility (WCRRF) is a Hazard Category 2 limited life facility configured for transuranic waste processing and repackaging activities. Currently, the WCRRF mission is to treat the remediated nitrate salt drums currently stored in Area G that have similar constituents to the drum that resulted in the radiological release at the Waste Isolation Pilot Plant in southern New Mexico. After treatment of the 60 RNS drums, the final planned campaign for the facility will be to treat 29 drums containing nitrate salt wastes that were not previously remediated with organic absorbents, but are similar in nature to the RNS waste parent drums.
(R) TA-50 RLWTF	Radioactive Liquid Waste Treatment Facility (RLWTF) is a hazard category 3 facility used for transuranic and low level liquid waste collection, storage, treatment, and discharge to the environment. Secondary activities consist of collecting, packaging, and disposing of radioactive materials removed from radioactive wastewaters, which take the form of process sludge and evaporator bottoms.
	The existing RLW treatment capability at LANL built in 1963 is being replaced by two Capital Line Item projects:
	• The LLW subproject includes the construction of a structure to house the LLW treatment process to treat the liquid waste and transfer to a zero liquid discharge retention pond for evaporation. This is the new facility that you can see under construction.
	 Transuranic Liquid Waste Project - a "like-for-like" replacement of the capability currently provided in RLWTF to treat transuranic liquid waste. This project is nearing design completion.

Site/Facility	Narrative/Description
(R) TA-35	The National High Magnetic Field Laboratory (TA-35-125) operates the Pulsed Field Generator at LANL
National High	as an international user program for research in high magnetic fields. This User Program is funded by
Magnetic	the National Science Foundation, and access to all NHMFL magnets is open to all scientists via a
Resonance Lab	competitive proposal process. The pulsed field generator at Los Alamos in 2012 demonstrated the
	highest non-destructive magnetic field of over 100.8 Tesla
	TA-35 also houses Global Security elements as well as light laboratory space dedicated to sensor and
	detector development (TA-35-2 and 27).
Target Fab	TA-35 houses the Target Fabrication Building that contains chemical and electronics laboratories as well
Facility	as being classified as a Radiological Facility, and supports Directed Stockpile Work and Global Security
	programs.

Site/Facility	Narrative/Description
(R) TA-55	The Plutonium Facility is a hazard category 2 nuclear facility that is the center of excellence for
	Plutonium sustainment and other critical National mission assignments. The Plutonium Facility is
	chartered to safely and efficiently perform basic special nuclear material (SNM) research and
	development (R&D), technology demonstration, and manufacturing of components containing
	plutonium for space and defense. The Plutonium Facility supports a variety of applied and basic
	research activities involving plutonium, including:
	1. Development of manufacturing capabilities to produce plutonium pit weapon assemblies
	2. Preparation of ultrapure plutonium metal, alloys, and compounds
	3. Small-scale preparation of specific alloys (casting and machining materials into specific shapes)
	 Preparation and analysis of small plutonium samples to support pit manufacturing and surveillance activities
	5. Disassembly and conversion of plutonium pit weapon assemblies for disposal
	6. Determination of high-temperature thermodynamic and physical properties of plutonium
	7. Reclamation of plutonium scrap from numerous feed sources
	8. Preparation of nuclear materials for radioisotope heat sources for space and military applications.
	TA-55 also is undergoing replacement, modification, and upgrading of existing infrastructure and assets through a capital line item project (TA-55 Reinvestment Phases I/II and III). The project recapitalizes and revitalizes aging and obsolete facility and safety systems to enable continuing support of NNSA's program missions.
	The CMR Replacement Project is also installing equipment in the Plutonium Facility to replace the higher hazard analytical chemistry capabilities currently performed at CMR. This additional equipment will increase analytical chemistry capacity to support future pit manufacturing capacity requirements.
	ROUTE: After returning to Pajarito from Pecos Drive/TA-35 Loop, turn left on Pajarito Road and head east towards TA-54.

Site/Facility	Narrative/Description
(L) TA-63 TWF	The Transuranic Waste Facility (TWF) is a brand new \$100M Hazard Category 2 nuclear facility for storage, characterization, and intra-site shipping of transuranic (TRU) waste. TWF is scheduled to receive its first shipment of waste in September of this year. The facility is part of a comprehensive, long-term strategy to consolidate hazardous and radioactive waste operations into a smaller area that can operate safely, securely, and effectively for the foreseeable future.
(R) TA-66 IAEA Training Center	LANL has maintained a 50 year commitment to training all International Atomic Energy Agency (IAEA) nuclear safeguards inspectors. LANL implements an extensive training program to teach methods of nondestructive assay measurement and analysis and provides as many as 30 courses annually presented by experts in the field. Theses training activities are carried out at TA-66, which includes a small radiological laboratory to enable detector training with active materials.
TA-46	TA-46 comprises offices and support activities for mostly DOE-EM program activities and is in the process of being transferred to DOE-EM responsibility. There are other ancillary laboratory facilities where small-scale work supporting weapons, energy security research and development, and basic science activities are carried out.
Area G	Up ahead you can see the domes on the footprint of Area G. Area G is a hazard category 2 Waste Storage and Disposal Facility managed by DOE's Office of Environmental Management. Area G has served as LANLs waste storage and disposal area for several decades. The site, located here on Mesita del Buey, consists of multiple domes containing above-ground transuranic and low level waste, as well as a number of inactive below-ground storage areas including 32 pits, 194 shafts, and 4 trenches with depths ranging from 10 to 65 feet below the original ground surface.

Site/Facility	Narrative/Description
RANT	The Radioactive Assay Nondestructive Testing (RANT) Facility is a Hazard Category 2 nuclear facility that is used for loading TRUPACT 2 containers primarily for shipment to WIPP. The facility is currently in cold standby while necessary seismic upgrades are being developed and implemented and corresponding safety basis changes are being performed. The RANT is expected to be an enduring NNSA facility on site as the preferred location for loading transuranic waste leaving Area G and TWF for offsite disposal.
Pajarito Site (TA-18)	To our right is Technical Area 18 which in the past had been used for conducting criticality experiments. The TA-18 facility has been slated for closure, and all operations and associated equipment have been relocated to the Nevada Test Site or elsewhere at LANL. The majority of the properties at TA-18 are scheduled for decontamination and decommissioning and eventual demolition during the next few years. However, the six most significant properties located here will be preserved as part of the Manhattan Project National Historical Park.
	Route: At the end of Pajarito Road – turn left on NM 4 towards White Rock, turn into Los Alamos Visitor Center for comfort break (15-20 minutes). After break, proceed back on NM 4 towards Bandolier National Monument and TA-33/39
Fire Station	The newest Los Alamos County Fire Station is located next to the White Rock visitor center. The Los Alamos Fire Department provides full fire protection services to the Laboratory through a cooperative agreement with the National Nuclear Security Administration. The LAFD operates six stations around the County, including 2 on the site and 4 in close proximity to Lab facilities.

LOOP 3 - NM 04 - TA-33/39/16/EOC

(R) TA-39: Ancho Canyon	Technical Area 39 (Ancho Canyon site) is home to two outdoor, high explosive testing facilities along with facilities for conducting advance diagnostics on large high explosive experiments. In addition to the firing sites, TA-39 houses high explosive experimental assembly facilities, an administrative/access control building and has light mechanical and electrical fabrication areas. Ancho Canyon is primarily dedicated to Global Security work.
(L) TA-33	Technical Area 33 is approximately a 2000 acre site on the extreme southeast boundary of the laboratory that is operated by the global security directorate and supports Strategic Partnership Projects (SPP). This facility has light mechanical and electrical fabrication facilities as well as several test facilities that can be configured for testing of components and systems in realistic environments. These include underground bunkers, open air testing areas and specialty radio frequency testing facilities.

(L) National Park Service Boundary – Bandelier National Monument	To the left is the entrance to Bandelier National Monument operated by the National Park Service. NNSA and LANL maintain frequent interface with the NPS where there is a Memorandum of understanding for NPS staff to assist in patrolling some of the more remote technical areas in the Southeast part of the laboratory which we just passed through. There are also interfaces for communications capabilities between LANL, NPS and Los Alamos County given the topography and terrain on the mesas in/around the Laboratory.
	As we continue west, you can see the burn scars to the south and the west in the mountains. This region has been extremely susceptible to wildland fires over the many decades. In the mid 1970's the La Mesa fire started on Bandelier property as a result of lighting and burned across NM 4 that we are on an into portions of LANL Fire Sites to your right.
	The most notorious Wildland Fire here at the site was the Cerro Grande fire that was started by a NPS controlled burn in the mountains directly in front of us to the west. The Control burn got away from fire crews and a back-burn was initiated on the east side of the Jemez mountains here near TA-16 when the winds shifted and the fire then started burning towards LANL and the townsite. This event in early May 2000 resulted in evacuation of the entire Los Alamos and White Rock communities for over 5 days and significant damage to residential areas and portions of the Laboratory. In the aftermath of Cerro Grande, significant funding was allocated to LANL by Congress to replace damaged equipment/facilities, mitigate effects from the wildfire and improve fire department and emergency response capabilities, including the construction of a new EOC which will be seen later in the tour.
	Almost exactly a decade later, the Las Conchas wildland fire event started after strong winds knocked over a power pole on the west side of the Jemez mountain range, starting a wildfire that burned all the way to Cochiti Pueblo to our South. The winds shifted and commenced to burn north onto Bandelier and LANL property. This event was eerily similar to the Cerro Grande event, however the improved fire department and emergency management/response capabilities resulted in significantly lower levels of fire damage.

	As a result of these wildland fire experiences, LANL collaborated with the USFS and NPS in the construction of the Interagency Fire Coordination Center which we are approaching. LANL also maintains a robust wildland fire prevention program around the lab.
TA-49, Interagency Fire Coordination Center	Located at TA-49, the Hazardous Devices Team Facility supports the LANL Emergency Response Program. Training activities along with the Robot Rodeo and HAZMAT Challenge are hosted by LANL at TA-49. Additionally, TA-49 is the location of the Interagency Fire Center (IFC), a state-of-the-art facility on DOE property leased to the Park Service, which houses US Forest Service, National Park Service, and LANL staff. The IFC employs a computer-projection system called a "SimTable," which includes variables such as roads and buildings, gas and power lines, thickness of the forest, wind strength and direction, and the angle of sunlight, allows operators to start a simulated fire (or map a real fire) and plan mitigation efforts such as water drops, dozer lines, and fire breaks.
DARHT	The Dual Axis Radiographic Hydrodynamic Test Facility, supports a critical component of LANL's primary mission: to ensure the safety, security, and effectiveness of nuclear weapons in our nation's stockpile. The main purpose of DARHT is to supply real-world verification for computer codes. DARHT is one of the world's most powerful x-ray machine that consists of two linear induction accelerators that are oriented at two right angles to one another. This orientation allows scientists to use multiple x-ray pulses to produce multiple-view radiographic images of a full-scale non-nuclear weapon mockup as it implodes. The results of which are x-ray images of a material's behavior as it implodes at speeds greater than 10,000 miles an hour.
General Entry on LANL Explosive Areas	LANL performs energetic materials research, development, and applications to address multiple evolving mission needs. Personnel at these explosive area facilities provide expertise that spans comprehensive explosives development, characterization, storage, testing, modeling, and simulation. Activities include characterizing shock and detonation physics properties of materials, determining explosive lethality and vulnerabilities, and developing techniques and technologies to defeat explosive threats. Many unique LANL specialties contribute to these capabilities including mechanical properties and thermal response testing, production of detonators, powder production, pressing, and casting of high explosives, open-air

	and confined firing with a wide variety of diagnostics, and the use of unique Dual-Axis Radiographic Hydrodynamic Test Facility.
	ROUTE: At intersection of NM 4 and West Jemez Road, turn right towards Los Alamos. Proceed towards TA-16 and EOC.
WETF	Weapons Engineering Tritium Facility (WETF) is a hazard category 2 facility designed to conduct research and development of gas transfer systems used in the current weapon stockpile. Some of the important work done here has been used to extend maintenance life cycles of stockpile systems. In addition to its R&D mission, WETF has a cleanup mission as well. Over the years, WETF had accumulated a large inventory of tritium as other facilities here at LANL and across the DOE complex closed down. WETF operations personnel are currently working to process this material so that it can be loaded into approved shipping containers for offsite transfer or disposal.
TA-16 Main entrance	On our right is the Indoor Firing Range which is a state of the art 20 lane firing facility for Protective Force training and qualification requirements.
	The building just past the range is the LANL Center for Emergency Planning and Analysis (CEPA). The facility provides the Laboratory's Protective Force and Security & Safeguards with capabilities that:
	• Trains and tests emergency planners and first responders in the latest tactics and best practices associated with high risk operations;
	• Employs cutting edge simulation and modeling for the deployment of unmanned aerial systems in security and emergency response operations; and
	• Supports DOE and other Government entities with training for pre-incident and post-incident response to nuclear events and other major natural and man-made disasters.
	With the capability to replicate LANL laboratories and facilities. The Center also functions as a center for simulation modeling and analysis for vulnerability identification, hazard identification, and mitigation exploration.

EOC	The Laboratory has extensive, dedicated onsite emergency facilities, equipment, and materials. As
	previously mentioned, after the Cerro Grande Fire, Congressional funding supported construction of the
	Emergency Operations Center (EOC). The Laboratory EOC and alternate EOC are dedicated areas for
	conducting, evaluating, coordinating, and managing the site-level ERO. In support of an incident
	response, the EOC provides a central location for interagency and interjurisdictional coordination and
	executive decision-making. Additional responsibilities are to provide and prioritize resources, manage
	information, and track and authorize expenditures.