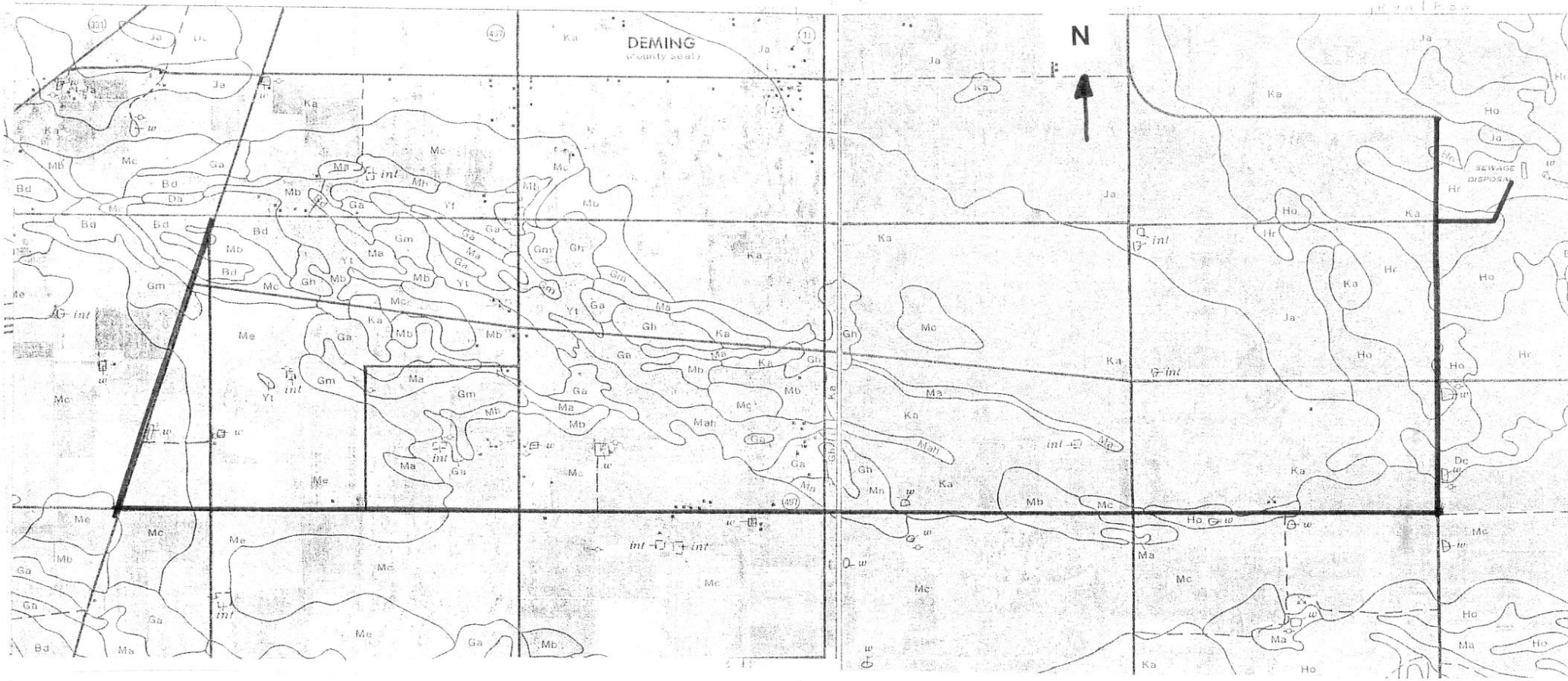
APPENDIX A Soil Survey Map



Project Area -

(Soil Survey of Luna County, USDA, Soil Conservation Service;
New Mexico State University, 1980)

APPENDIX B New Mexico Environment Department Correspondence

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

November 21, 2006

Randy Chulick
Environmental/Cultural Consultant
Gila Conglomerae
5203 Little Walnut Rd.
Silver City, NM 88061

Dear Mr. Chulick:

RE: WASTEWATER SYSTEM IMPROVEMENTS, CITY OF DEMING

This transmits New Mexico Environment Department (NMED) staff comments concerning the above-referenced project.

Surface Water Quality

The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) permit coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres (as of March 10, 2003), including expansions, of total land area. Because this project exceeds one acre, it requires appropriate NPDES permit coverage prior to beginning construction.

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters.

You should also be aware that EPA requires that all "operators" (see **Federal Register/Vol. 63, No. 128/Monday, July 6, 1998** pg 36509) obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications (probably the City of Deming in this case), the general contractor who has day-to-day operational control of those activities at the site, which are necessary to

ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

Ground Water Quality

It appears that the proposed project will provide significant benefits for the City of Deming. The letter notes that the project will involve the installation of 34,650 feet of new sanitary sewer lines. The installation of new sewer lines promises to reduce the likelihood of sewage spills due to line failures associated with aged wastewater lines, thereby enhancing the protection of ground water quality in the area.

Project implementation will likely involve the use of heavy equipment, thereby leading to the possibility of contaminant releases (e.g., fuel, hydraulic fluid, etc.) associated with equipment malfunctions. The GWQB advises all parties involved in the project to be aware of discharge notification requirements contained in 20.6.2.1203 NMAC. Compliance with the notification and response requirements will ensure the protection of ground water quality in the vicinity of the project.

Air Quality

The City of Deming is located in Luna County. While Luna County is currently considered to be in attainment with New Mexico and National Ambient Air Quality Standards; the New Mexico Environment Department Air Quality Bureau has recorded exceedances of the standard for particulate matter 10 micron and less is size (PM10) in the County. In response to the recorded exceedances of the standard for PM10, a Natural Events Action Plan (NEAP) for the County is currently being prepared.

To further ensure air quality standards are met, applicable local or county regulations requiring noise and/or dust control must be followed; if none are in effect, controlling construction-related air quality impacts during projects should be considered to reduce the impact of fugitive dust and/or noise on community members.

Potential exists for temporary increases in dust and emissions from earthmoving, construction equipment, and other vehicles; however the increases should not result in non-attainment of air quality standards. Dust control measures should be taken to minimize the release of particulates due to vehicular traffic and construction. Areas disturbed by the construction activities, within and adjacent to the project area should be reclaimed to avoid long-term problems with erosion and fugitive dust

All asphalt, concrete, quarrying, crushing and screening facilities contracted in conjunction with the proposed project must have current and proper air quality permits. For more information on air quality permitting and modeling requirements, please refer to 20.2.72 NMAC.

In the event that back-up electric generation is needed, please be advised that records should be kept of the hours of operation of the generator. An application for a construction permit must be submitted for stand by generators used 500 hours per year or more.

The project as proposed should have no long-term significant impacts to ambient air quality.

Petroleum Storage Tanks

The Petroleum Storage Tank Bureau knows of one former or current tank facility, which has not experienced a release, within the proposed project area for Wastewater System Improvements in the City of Deming. The site listed may not be affected by this project. Please check the local street address to see if this information applies. The contractors should remain alert for indications of soil or groundwater contamination in the vicinity of any of the listed sites.

If contaminated soil or water is encountered during construction, all monitoring, handling and disposal requirements must be met in order to protect workers, the public and the environment, from contaminants. You can contact the PST Bureau at 505 984-1741.

Tank Facility Name	Address	Leak Reported
City of Deming	Waste Water Plant	No

We appreciate the opportunity to comment on this project.

Sincerely,

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 2341ER

APPENDIX C Flood Plain Maps

FEMA MSC Viewer

Info

Scale: 5

GO

Help

Zoom Win

Pan

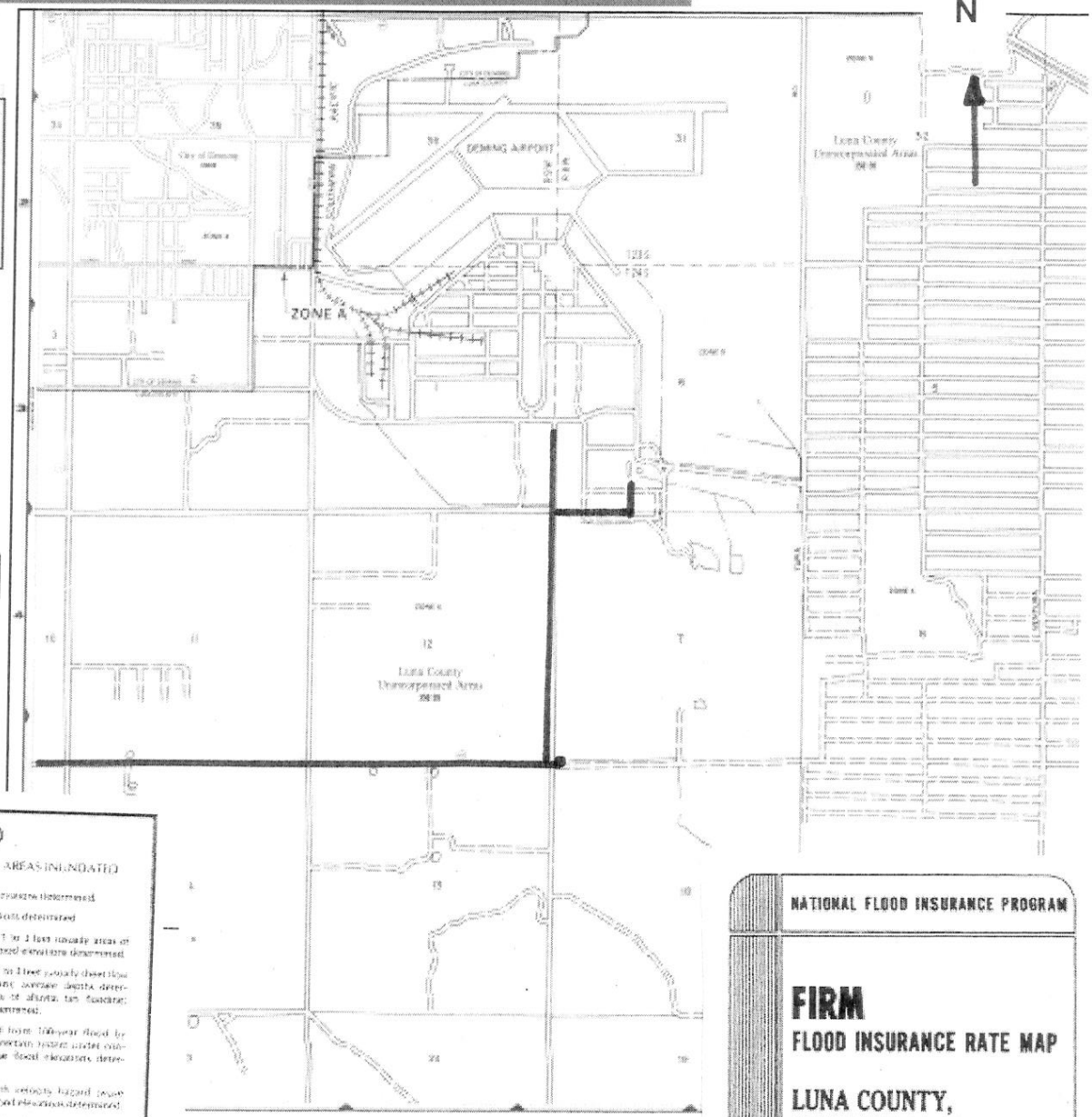
Zoom In

Zoom Out

1:1 Zoom In

MAX Zoom Out

Make a FIRMette



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A — No base flood elevations determined.

ZONE AE — Base flood elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 500-year flood plain.

ZONE D — Areas in which flood hazards are undetermined.

River or other water

Flood boundary

Zone D boundary

Boundary dividing special flood hazard areas

513 — Base Flood Elevation line; elevation in feet*

(D) — (D) Cross section line

(EL 987) — Base Flood Elevation in feet where uniform within zone*

RM 7x — Elevation Reference Mark

•M1.5 — River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

Project Area -

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

LUNA COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 410 OF 850

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
UNINCORPORATED AREAS	350129	0410	B

PANEL LOCATION

MAP NUMBER
35029C0410 B

EFFECTIVE DATE:
SEPTEMBER 14, 1990

w.cgi?ROT=0&O_X=7485&O_Y=5175&O_Z

Intranetix Viewer [35029C0425B.tif]

FEMA MSC Viewer

Info

Scale

Help

Zoom Win

Pan

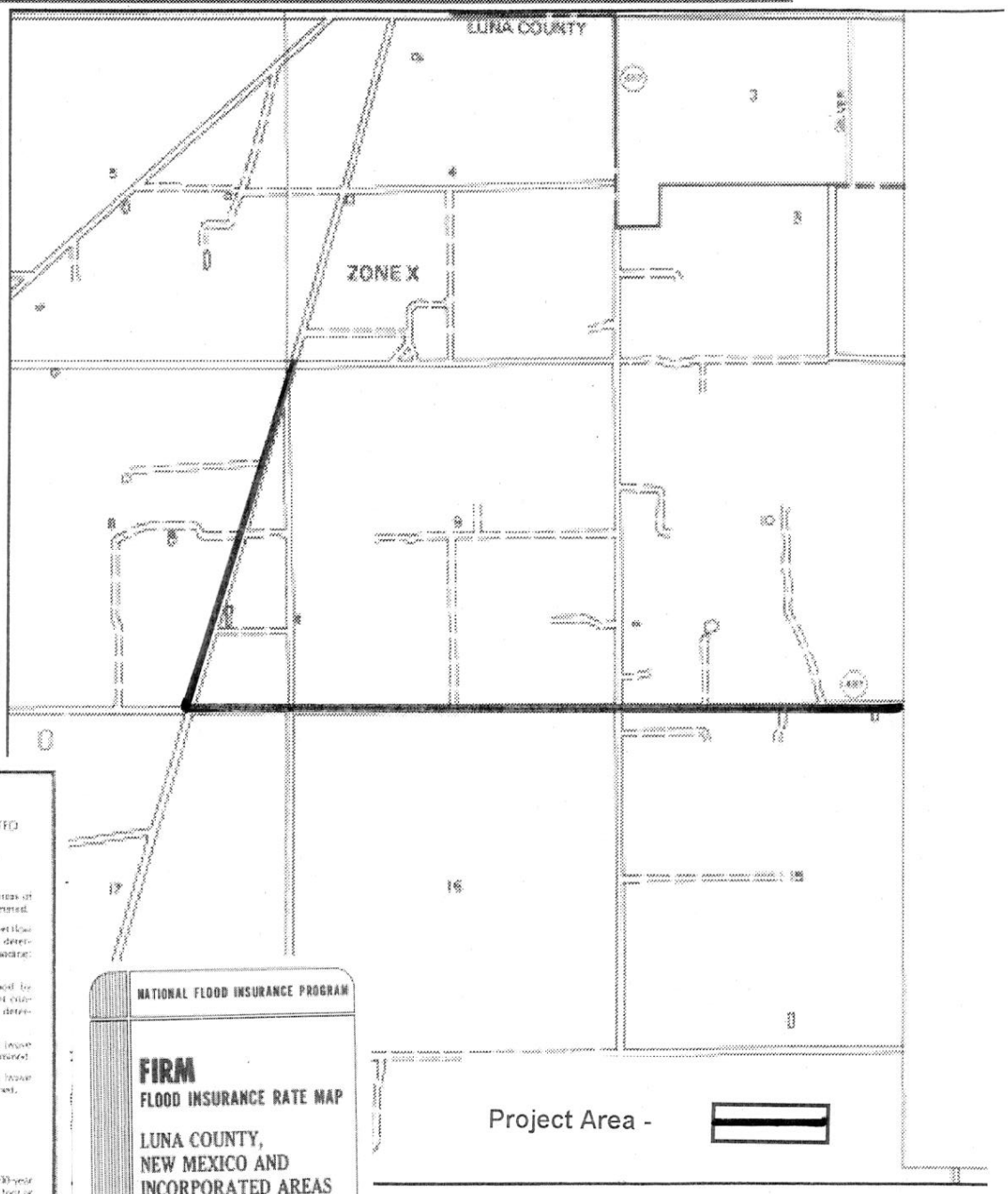
Zoom In

Zoom Out

1:1 Zoom In

MAX Zoom Out

Make a FIRMette



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A — No base flood elevations determined.

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ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 500-year floodplain.

ZONE D — Areas in which flood hazards are undetermined.

River or other water feature

Floodway boundary

Zone D boundary

Boundary dividing Special Flood Hazard Areas

513 — Base Flood Elevation line; elevation in feet*

(D) — (O) — Cross section line

EL 987 — Base Flood Elevation in feet within floodplain; Zone AE*

RM7x — Benchmark

•M1.5 — River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

LUNA COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 425 OF 850

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
UNINCORPORATED AREAS	350039	0425	B

PANEL LOCATION

MAP NUMBER
35029C0425 B

EFFECTIVE DATE:
SEPTEMBER 14, 1990

Federal Emergency Management Agency

APPENDIX D FEMA Correspondence

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

PUBLIC NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

WE WOULD REQUEST THAT THE LOCAL FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT.

REVIEWER: MITIGATION DIVISION DATE: 08/15/2006

GILA CONGLOMERATE

Rcvd FRC Mail Ctr
DHS, FEMA, Region 6

August 9, 2006

2006 AUG 14 PM 1:12

Federal Emergency Management Agency
Region 6
Federal Regional Center
800 North Loop 288
Denton, TX. 76201-3698

RE: REQUEST FOR CONSULTATION CONCERNING WASTEWATER SYSTEM IMPROVEMENTS, CITY OF DEMING, NEW MEXICO

Greetings:

Our company is in the process of conducting an environmental assessment for the above mentioned wastewater system improvements pursuant to the National Environmental Policy Act for use of public funding. The proposed project will be funded from several different sources including federal monies provided by the New Mexico Environment Department. The City of Deming proposes to improve its existing wastewater system by constructing approximately 34,650 linear feet of new sewer main including assorted appurtenances.

The proposed sewer main will be installed along Hermanas Grade, starting from Pear Street and going south along Lucca Street to Solana Road where it will run east to meet McCan Road, and then turn north to the existing wastewater treatment plant. The proposed sewer main is located within county right-of-way except at the intersection of Solano Road and New Mexico Hwy 11, and in the area between McCan Road and the wastewater treatment plant, which is currently vacant land and owned by the City of Deming. As much as it is practical, existing trenches will be used for the installation of sewer main.

The Area of Potential Effect (APE) is located on the Capitol Dome and Bowlin Ranch 7.5 minute USGS Quadrangle Maps in Sections 1, 4, 8 – 17, Township 24 S, Range 9 W ; and Sections 6, 7, and 18, Township 24 S, Range 8 W. Enclosed is a map depicting the project area from the Capitol Dome and Bowlin Ranch USGS Quadrangles.

Please notify us of any comments your agency may have regarding the proposed actions by The City of Deming. If you need more information or wish to discuss the project, please call me at (505) 642-7981. I may also be contacted by e-mail at gilaconglom@yahoo.com. Thank you for your time and assistance.

Sincerely,

Randy Chulick,
Environmental/Cultural Consultant

Enclosure: USGS Map of Project Site

5203 LITTLE WALNUT ROAD, SILVER CITY
NEW MEXICO, 88061

APPENDIX E National Park Service Correspondence

GILA CONGLOMERATE

August 9, 2006

Mr. Mike Snyder
National Park Service
Director's Office
12795 W. Alameda Parkway
P.O. Box 25287
Denver, Co. 80225-0287

RE: REQUEST FOR CONSULTATION CONCERNING WASTEWATER SYSTEM IMPROVEMENTS, CITY OF DEMING, NEW MEXICO

Dear Mr. Snyder,

Our company is in the process of conducting an environmental assessment for the above mentioned wastewater system improvements pursuant to the National Environmental Policy Act for use of public funding. The proposed project will be funded from several different sources including federal monies provided by the New Mexico Environment Department. The City of Deming proposes to improve its existing wastewater system by constructing approximately 34,650 linear feet of new sewer main including assorted appurtenances.

The proposed wastewater system improvements will be installed along Hermanas Grade, starting from Pear Street and going south along Lucca Street to Solana Road where it will run east to meet McCan Road, and then turn north to the existing wastewater treatment plant. The proposed sewer main is located within county right-of-way except at the intersection of Solano Road and New Mexico Hwy 11, and in the area between McCan Road and the wastewater treatment plant, which is currently vacant land and owned by the City of Deming. As much as it is practical, existing trenches will be used for the installation of water lines.

The Area of Potential Effect (APE) is located on the Capitol Dome and Bowlin Ranch 7.5 minute USGS Quadrangle Maps in Sections 1, 4, 8 – 17, Township 24 S, Range 9 W ; and Sections 6, 7, and 18, Township 24 S, Range 8 W. Enclosed is a map depicting the project area from the Capitol Dome and Bowlin Ranch USGS Quadrangles.

A preliminary review of available information resources by Gila Conglomerate has not identified any national parks or monuments within or adjacent to the APE. Please notify us of any comments your agency may have regarding the proposed actions by the City of Deming. If you need more information or wish to discuss the project, please call me at (505) 642-7981. I may also be contacted by e-mail at gilaconglom@yahoo.com. Thank you for your time and assistance.

Sincerely,

Randy Chulick,
Environmental/Cultural Consultant

Enclosure: USGS Maps of Project Site

The National Park Service reviewed this project, and determined that no parks will be affected; therefore, we have no comments.

Signed: Cheryl Eckhardt Date: 8/10/06

5203 LITTLE WALNUT ROAD, SILVER CITY
NEW MEXICO, 88061

APPENDIX F New Mexico Department of Game and Fish Correspondence

GOVERNOR
Bill Richardson

DIRECTOR AND SECRETARY
TO THE COMMISSION
Bruce C. Thompson, Ph.D.

Tod Stevenson, Deputy Director

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way
Post Office Box 25112
Santa Fe, NM 87504
Phone: (505) 476-8101
Fax: (505) 476-8128

Visit our website at www.wildlife.state.nm.us
For basic information or to order free publications: 1-800-862-9310.

STATE GAME COMMISSION

Leo V. Sims, II, Chairman
Hobbs, NM

Dr. Tom Arvas, Vice-Chairman
Albuquerque, NM

David Henderson, Commissioner
Santa Fe, NM

Alfredo Montoya, Commissioner
Alcalde, NM

Peter Pino, Commissioner
Zia Pueblo, NM

Terry Z. Riley, Ph.D., Commissioner
Tijeras, NM

M. H. "Dutch" Salmon, Commissioner
Silver City, NM

August 15, 2006

Randy Chulick
Gila Conglomerate
5203 Little Walnut Rd
Silver City, NM 88061

Re: Request for consultation concerning wastewater system improvements, city of Deming, NM
NMGF No. 11011

Dear Mr. Chulick,

In response to your letter dated August 9, 2006, regarding the above referenced project, the Department of Game and Fish (Department) does not anticipate significant impacts to wildlife or sensitive habitats. For your information, we have enclosed a list of sensitive, threatened and endangered species that occur in Luna County.

For more information on listed and other species of concern, contact the following sources:

1. BISON-M Species Accounts, Searches, and County lists: http://www.bison-m.org
2. Habitat Handbook Project Guidelines: http://wildlife.state.nm.us/conservation/habitat_handbook/index.htm
3. For custom, site-specific database searches on plants and wildlife. Go to Data then to Free On-Line Data and follow the directions go to: http://nmnhp.unm.edu
4. New Mexico State Forestry Division (505-827-5830) or http://nmrareplants.unm.edu/index.html for state-listed plants
5. For the most current listing of federally listed species **always** check the U.S. Fish and Wildlife Service at (505-346-2525) or http://www.fws.gov/ifw2es/NewMexico/index.cfm .

Thank you for the opportunity to review and comment on your project. If you have any questions, I can be contacted at (505) 476-8101 or janell.ward.@state.nm.us.

Sincerely,

Janell Ward

Janell Ward, Assistant Chief
Conservation Services Division

JW/ttd
xc: Wally Murphy, Acting Ecological Services Field Supervisor, USFWS
Luis Rios, SW Area Operations Chief, NMGF
Pat Mathis, SW Area Habitat Specialist, NMGF

NEW MEXICO WILDLIFE OF CONCERN
LUNA COUNTY

For complete up-dated information on federal-listed species, including plants, see the US Fish & Wildlife Service NM Ecological Services Field Office website at http://www.fws.gov/ifw2es/NewMexico/SBC.cfm. For information on state-listed plants, contact the NM Energy, Minerals and Natural Resources Department, Division of Forestry, or go to http://nmrareplants.unm.edu/. If your project is on Bureau of Land Management, contact the local BLM Field Office for information on species of particular concern. If your project is on a National Forest, contact the Forest Supervisor's office for species information.

Common Name	Scientific Name	NMGF	US FWS	critical habitat
Great Plains Narrowmouth Toad	Gastrophryne olivacea	E		
Chiricahua Leopard Frog	Rana chiricahuensis	s	T	
Reticulate Gila Monster	Heloderma suspectum suspectum	E		
Brown Pelican	Pelecanus occidentalis	E		
Neotropic Cormorant	Phalacrocorax brasilianus	T		
Bald Eagle	Haliaeetus leucocephalus	T	T	
Common Black-Hawk	Buteogallus anthracinus	T	SOC	
Aplomado Falcon	Falco femoralis	E	E	
Peregrine Falcon	Falco peregrinus	T	SOC	
Mountain Plover	Charadrius montanus	s	SOC	
Common Ground-Dove	Columbina passerina	E		
Yellow-billed Cuckoo	Coccyzus americanus	s	C	
Mexican Spotted Owl	Strix occidentalis lucida	s	T	Y
Burrowing Owl	Athene cunicularia		SOC	
Violet-crowned Hummingbird	Amazilia violiceps	T		
Lucifer Hummingbird	Calothorax lucifer	T		
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y
Loggerhead Shrike	Lanius ludovicianus	s		
Bell's Vireo	Vireo bellii	T	SOC	
Gray Vireo	Vireo vicinior	T		
Botteri's Sparrow	Aimophila botterii	s		
Baird's Sparrow	Ammodramus bairdii	T	SOC	
Varied Bunting	Passerina versicolor	T		
Long-legged Myotis Bat	Myotis volans interior	s		
Fringed Myotis Bat	Myotis thysanodes thysanodes	s		
Western Red Bat	Lasiurus blossevillii	s	SOC	
Pale Townsend's Big-eared Bat	Corynorhinus townsendii pallescens	s	SOC	
Desert Pocket Gopher	Geomys arenarius	s	SOC	
Western Spotted Skunk	Spilogale gracilis	s		
Hooded Skunk	Mephitis macroura milleri	s		
Cook's Peak Woodlandsnail	Ashmunella macromphala	T	SOC	
Fairy Shrimp	Streptocephalus moorei	s		

APPENDIX G US Fish and Wildlife Service Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

AUG 23 2006

Thank you for your recent request for information on threatened or endangered species or important wildlife habitats that may occur in your project area. The New Mexico Ecological Services Field Office has posted lists of the endangered, threatened, proposed, candidate and species of concern occurring in all New Mexico Counties on the Internet. Please refer to the following web page for species information in the county where your project occurs: http://ifw2es.fws.gov/NewMexico/SBC_intro.cfm. If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find New Mexico Listed and Sensitive Species Lists on the main page and click on the county of interest. Your project area may not necessarily include all or any of these species. This information should assist you in determining which species may or may not occur within your project area.

Under the Endangered Species Act, as amended (Act), it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with us further. Similarly, it is their responsibility to determine if a proposed action has no effect to endangered, threatened, or proposed species, or designated critical habitat. If your action area has suitable habitat for any of these species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts. Please keep in mind that the scope of federally listed species compliance also includes any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects.

Candidates and species of concern have no legal protection under the Act and are included on the web site for planning purposes only. We monitor the status of these species. If significant declines are detected, these species could potentially be listed as endangered or threatened. Therefore, actions that may contribute to their decline should be avoided. We recommend that candidates and species of concern be included in your surveys.

Also on the web site, we have included additional wildlife-related information that should be considered if your project is a specific type. These include communication towers, power line safety for raptors, road and highway improvements and/or construction, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. We recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands. These habitats should be conserved through avoidance, or mitigated to ensure no net loss of wetlands function and value.

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the U.S. Fish and Wildlife Service. To minimize the likelihood of adverse impacts to all birds protected under the MBTA, we recommend construction activities occur outside the general migratory bird nesting season of March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until nesting is complete.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding fish, wildlife, and plants of State concern.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area.

Sincerely,

Adam Zerrenner
Acting Field Supervisor

New Mexico Ecological Services Field Office

Listed and Sensitive Species in Luna County

Total number of species: 23

Print

Common Name	Scientific Name	Group	Status
Yellow-billed cuckoo	*Coccyzus americanus*	Bird	Candidate
Northern aplomado falcon	*Falco femoralis septentrionalis*	Bird	Endangered
Southwestern willow flycatcher	*Empidonax traillii extimus*	Bird	Endangered
Chiricahua leopard frog	*Rana chiricahuensis*	Amphibian	Threatened
Bald eagle	*Haliaeetus leucocephalus*	Bird	Threatened
Beautiful shiner [3]	*Cyprinella formosa*	Fish	Threatened

Species of Concern

Species of Concern are included for planning purposes only.

Common Name	Scientific Name	Group	Status
American peregrine falcon	*Falco peregrinus anatum*	Bird	Species of Concern
Arctic peregrine falcon	*Falco peregrinus tundrius*	Bird	Species of Concern
Baird's sparrow	*Ammodramus bairdii*	Bird	Species of Concern
Bell's vireo	*Vireo bellii*	Bird	Species of Concern
Common black hawk	*Buteogallus anthracinus*	Bird	Species of Concern
Mountain plover	*Charadrius montanus*	Bird	Species of Concern
Northern gray hawk	*Buteo nitidus maxima*	Bird	Species of Concern
Western burrowing owl	*Athene cunicularia hypugaea*	Bird	Species of Concern
Rio Grande sucker	*Catostomus plebeius*	Fish	Species of Concern
Desert pocket gopher	*Geomys arenarius*	Mammal	Species of Concern
Townsend's big-eared bat	*Corynorhinus townsendii*	Mammal	Species of Concern
White-sided jack rabbit	*Lepus callotis gaillardi*	Mammal	Species of Concern
Cook's Peak woodlandsnail	*Ashmunella macromphala*	Mollusc - Invertebrate	Species of Concern
Florida mountainsnail	*Oreohelix florida*	Mollusc - Invertebrate	Species of Concern
Shortneck snaggletooth (snail)	*Gastrocopta dalliana dalliana*	Mollusc -	Species of Concern

		Invertebrate	
Desert night-blooming cereus	*Cereus greggii var. greggii*	Plant	Species of Concern
Sand prickly pear	*Opuntia arenaria*	Plant	Species of Concern

Endangered	Any species which is in danger of extinction throughout all or a significant portion of its range.	**Threatened**	Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
Candidate	Candidate Species (taxa for which the Service has sufficient information to propose that they be added to list of endangered and threatened species, but the listing action has been precluded by other higher priority listing activities).	**Proposed**	Any species of fish, wildlife or plant that is proposed in the Federal Register to be listed under section 4 of the Act. This could be either proposed for endangered or threatened status.
Species of Concern	Taxa for which further biological research and field study are needed to resolve their conservation status OR are considered sensitive, rare, or declining on lists maintained by Natural Heritage Programs, State wildlife agencies, other Federal agencies, or professional/academic scientific societies. Species of Concern are included for planning purposes only.		

Foot Notes:

D Designated Critical Habitat.

P Proposed Critical Habitat.

1 Introduced population.

3 Extirpated in this county.

2 Survey should be conducted if project involves impacts to prairie dog towns or complexes of 200-acres or more for the Gunnison's prairie dog (*Cynomys gunnisoni*) and/or 80-acres or more for any subspecies of Black-tailed prairie dog (*Cynomys ludovicianus*). A complex consists of two or more neighboring prairie dog towns within 4.3 miles (7 kilometers) of each other.

APPENDIX H New Mexico Rare Plants

Home
About NMRPTC
Contacts
Rare Plant List
County List
Agency Status
Photo List
About the List
History of Changes
Species Considered, but dropped
Photographers and Authors
Sponsors
Discussion Group
Useful Literature
Links

Results of County Search

LUNA	
Scientific name	County-NM
Agastache cana	Dona Ana, Grant, Luna, Sierra
Atriplex griffithsii	Hidalgo, Luna
Escobaria orcuttii	Hidalgo, Luna
Opuntia arenaria	Dona Ana, Luna, Socorro
Peniocereus greggii var. greggii	Dona Ana, Grant, Hidalgo, Luna
Scrophularia macrantha	Grant, Luna
Silene wrightii	Catron, Grant, Luna, Sierra, Socorro
Sphaeralcea procera	Luna
Sphaeralcea wrightii	Luna

Photo credits in header *Peniocereus greggii var. greggii* © T. Todsen, *Lepidospartum burgessii* © M. Howard, *Argemone pleiacantha ssp. pinnatisecta* © R. Sivinski

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APPENDIX I New Mexico State Historic Preservation Office Correspondence

GILA CONGLOMERATE

078827

August 9, 2006

Ms. Lisa Meyer
New Mexico Historic Preservation Division
Bataan Memorial Building
407 Galisteo St. Suite 231
Santa Fe, NM 87501

RE: REQUEST FOR CONSULTATION CONCERNING WASTEWATER SYSTEM IMPROVEMENTS, CITY OF DEMING

Dear Ms. Meyer,

Our company is sub-contracted with Engineers Inc. to perform the environmental investigations for wastewater system improvements for the City of Deming. The project will be funded by several sources, including federal monies from the New Mexico Environment Department (NMED). The project involves the installation of approximately 34,650 linear feet of new sewer main and assorted appurtenances in in Sections 1, 4, 8 – 17, Township 24 S, Range 9 W ; and Sections 6, 7, and 18, Township 24 S, Range 8 W. Enclosed is a map showing the approximate location of the proposed sewer main from the USGS Capitol Dome and Bowlin Ranch USGS 7.5 minute quadrangle maps.

The proposed sewer main will be installed along Hermanas Grade, starting from Pear Street and going south along Lucca Street to Solana Road where it will run east to meet McCan Road, and then turn north to the existing wastewater treatment plant. The proposed sewer main is located within county right-of-way except at the intersection of Solano Road and New Mexico Hwy 11, and in the area between McCan Road and the wastewater treatment plant, which is presently vacant land and owned by the City of Deming. The installation of the sewer main will require a bore under State Hwy 11. I have enclosed several photos of the project area for your review as well as a copy of the letter notifying the New Mexico Department of Transportation (NMDOT) of the project.

The project is designed to connect area schools and residences in southern Deming to the wastewater treatment plant. The sewer main is proposed to be PVC and will vary in size from 8" in the western portion of the project area (Hermanas Grade) to 15" in the area of the wastewater treatment plant. The project will involve excavation and trenching activities. As much as it is practical, existing trenches will be used for the installation of the sewer main. It is likely that the project will require the installation of pumps in the vicinity of McCan Road.

5203 LITTLE WALNUT ROAD, SILVER CITY
NEW MEXICO, 88061

A consultation with indigenous tribes potentially affected by the proposed project has been initiated. Please refer to the enclosed letter to the Mescalero Apache Tribe for a sample of letters sent out to tribes. A consultation has also been initiated with the White Mountain Apache, Fort Sill Apache Tribe, Navajo Nation, and Hopi Tribe.

A Cultural Resources Survey of the project area will be prepared and submitted to your office upon completion. In addition, the Cultural Resources Survey and the environmental report will be sent to NMDOT, if requested by this agency.

Please notify us of any comments that your agency may have regarding the proposed actions by the City of Deming. If you need more information or have questions, please call me at (505) 642-7981. I may also be contacted by e-mail at gilaconglom@yahoo.com. Thank you for your time and assistance.

Sincerely,

Randy Chulick,
Environmental/Cultural Consultant

Enclosures:
USGS Map of Project Site
Photographs of project site
Consultation letter to Mescalero Apache
Consultation letter to NMDOT

Comments/Approval:

Rebecca Procter 8/31/2006
New Mexico Historic Preservation Division

We look forward to reviewing the cultural resource report. Thank you for notifying us of the proposed undertaking. Please note that tribal consultation is considered a government-to government activity, and should be conducted by the City of Deming.

Figure 1 –
Beginning of Project – Pear Street and Hermanas Grade Road.
View is to the southwest.

Figure 2 -
Intersection of Hermanas Grade Road (to the right) and Lucca Street (to the left).
View is to the southeast.

Figure 3 –
Intersection of Solana Road and Lucca Street
where sewer main will be routed east along Solana.
View is to the north.

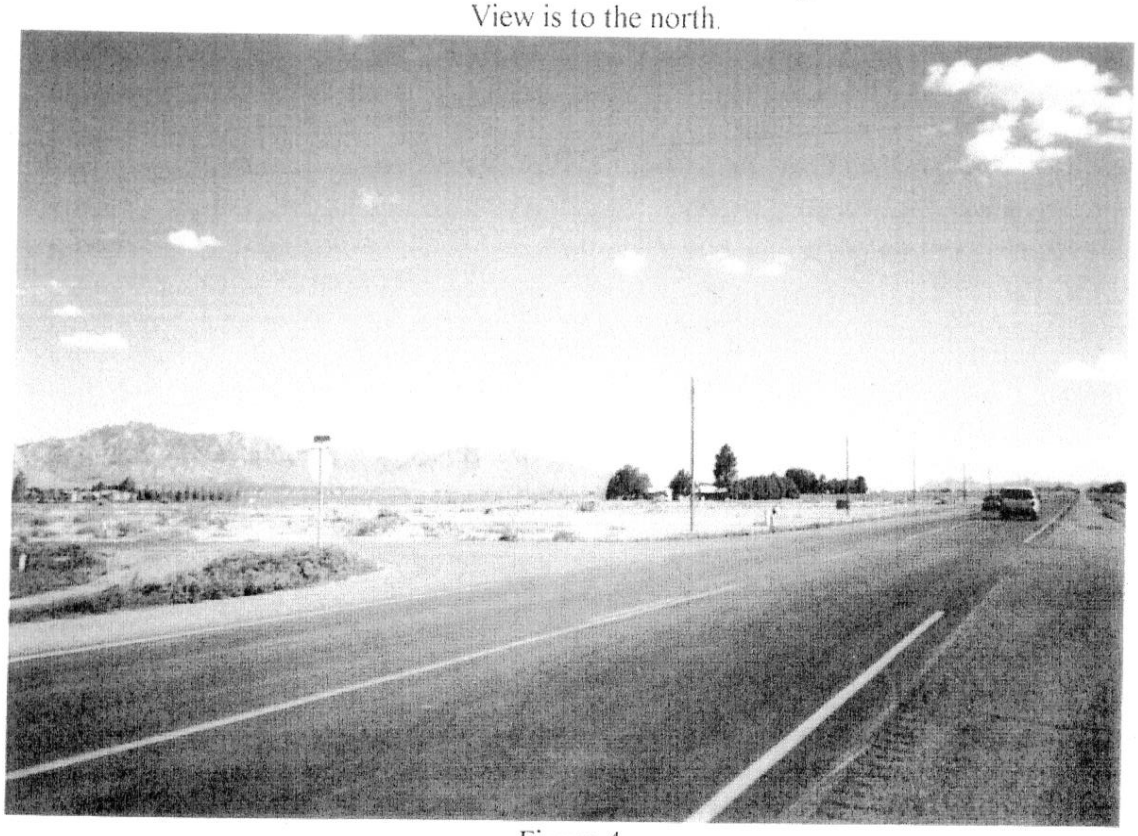


Figure 4 –
Intersection of New Mexico Highway 11 and Solana Road
where sewer main is proposed to be bored under the intersection along Solana.
View is to the southeast.

Figure 5 –
Intersection of McCan Road and Solana Road where sewer main is proposed to be routed north to the City of Deming's Wastewater Treatment Plant
View is to the north.

Figure 6 –
Proposed route of sewer main from McCan Street to Wastewater Treatment Plan, which can be seen in the background of photo.
View is to the northeast.

GILA CONGLOMERATE

August 9, 2006

President Mark Chino
Mescalero Apache Tribe
P.O. Box 227
Mescalero, NM 88340

RE: REQUEST FOR CONSULTATION CONCERNING WASTEWATER SYSTEM IMPROVEMENTS, CITY OF DEMING, NEW MEXICO

Dear President Chino:

Our company is in the process of conducting an environmental assessment for the above mentioned wastewater system improvements pursuant to the National Environmental Policy Act for use of public funding. The proposed project will be funded from several different sources including federal monies provided by the New Mexico Environment Department. The City of Deming proposes to improve its existing wastewater system by constructing approximately 34,650 linear feet of new sewer main including assorted appurtenances.

The Area of Potential Effect (APE) is located on the Capitol Dome and Bowlin Ranch 7.5 minute USGS Quadrangle Maps in Sections 1, 4, 8 – 17, Township 24 S, Range 9 W ; and Sections 6, 7, and 18, Township 24 S, Range 8 W. Enclosed is a map depicting the project area from the Capitol Dome and Bowlin Ranch USGS Quadrangles.

The proposed sewer main will be installed along Hermanas Grade, starting from Pear Street and going south along Lucca Street to Solana Road where it will run east to meet McCan Road, and then turn north to the existing wastewater treatment plant. The proposed sewer main is located within county right-of-way except at the intersection of Solano Road and New Mexico Hwy 11, and in the area between McCan Road and the wastewater treatment plant, which is currently vacant land and owned by the City of Deming.

Please provide us with any recommendations you may have to mitigate or avoid impacts, or with information regarding historic and cultural resources that could be affected by the proposed improvements. If you need more information please call me at (505) 642-7981. I may also be contacted by e-mail at gilaconglom@yahoo.com. Thank you for your time and assistance.

Sincerely,

Randy Chulick,
Environmental/Cultural Consultant

Enclosure: USGS Map of Project Site

5203 LITTLE WALNUT ROAD, SILVER CITY
NEW MEXICO, 88061

APPENDIX J Cultural Resources Survey

ARCHAEOLOGICAL SERVICES
Surveys • Monitoring • Consultation • Research

CULTURAL RESOURCES CLASS III INVENTORY OF THE PROPOSED DEMING WATER AND SEWER LINE PROJECT, LUNA COUNTY, NEW MEXICO

by

Laura Michalik
Principal Investigator

NMCRIS # 107871

Survey performed under State Blanket Permit 07-046

A REPORT PREPARED BY ARCHAEOLOGICAL SERVICES
AND SUBMITTED TO ENGINEERS, INC.
LAS CRUCES, NEW MEXICO
ON BEHALF OF THE CITY OF DEMING

ARCHAEOLOGICAL SERVICES
CULTURAL RESOURCES REPORT NUMBER 2109

October 16, 2007

P.O. Box 8262 • Las Cruces, New Mexico 88006 • (505) ~~382-0247~~ 649-1273

ABSTRACT

On October 7 and 8, 2007, a cultural resources class III inventory of a proposed water and sewer line project was conducted by Laura Michalik of Archaeological Services. The project is located within New Mexico Department of Transportation (NMDOT) right-of-way and on private land south of the City of Deming in Luna County, New Mexico. The area surveyed for the proposed project consists of a corridor of land measuring 35600 feet in length by 50 feet in width (40.86 acres). Seven additional areas, each measuring 200 by 200 feet (0.92 acres each), were surveyed at the major road intersections where the water and sewer lines will cross the roads. The total area surveyed for the proposed undertaking equals 47.30 acres. Of this total, 7.00 acres is located within the right-of-way of State Highways 497 and 11 on state highway right-of-way acquired from private sources. The remainder, 40.30 acres, is located on private land. The project is located in Sections 6, 7 and 18, T-24-S, R-8-W and Sections 8, 9, 10, 11, 12, 13, 14, 15, 16, and 17, T-24-S, R-9-W. The project was initiated at the request of Mr. John Gwynne of Engineers, Inc., 106 E. Idaho St., Las Cruces, NM 88001 (ph. 505-524-2007) on behalf of the City of Deming.

One historic site, LA 157723, was identified adjacent to the proposed project area. A portion of the Hermanas Grade parallels the western segment of the project corridor. Eleven isolated occurrences were identified within the proposed right-of-way.

The historic site, LA 157723, was identified adjacent to the proposed project area. The site consists of a livestock pen and loading chute. The pen is no longer in use. A few scattered artifacts, several pieces of aqua bottle glass and three cans, were associated with the pen. The artifacts appear to date to the period of 1920 to 1940. The site does not appear to be eligible to the National Register of Historic Places. The site is located outside of the proposed construction corridor and is separated from the construction corridor by the right-of-way fence. The site will not be impacted by the proposed undertaking.

The Hermanas Grade formerly consisted of a railroad grade that connected Deming and Hermanas. The grade has been bladed and converted into a paved county road. The construction corridor is located to the west of the road and will not impact the area that the Hermanas Grade occupied. Cultural resources clearance is recommended for the proposed undertaking.

MANAGEMENT SUMMARY

Location:	Section 9, T-24-S, R-9-W	NW ¼, NW ¼, NW ¼
	Section 8, T-24-S, R-9-W	E ½, E ½, NE ¼
		SW ¼, SE ¼, NE ¼
		W ½, NE ¼, SE ¼,
		NW ¼, SE ¼, SE ¼
		E ½, SW ¼, SE ¼
	Section 17, T-24-S, R-9-W	NE ¼, NW ¼, NE ¼
		N ½, NE ¼, NE ¼
	Section 8, T-24-S, R-9-W	SE ¼, SE ¼, SE ¼
	Section 9, T-24-S, R-9-W	SW ¼, SW ¼, SW ¼
	Section 16, T-24-S, R-9-W	N ½, N ½, N ½
	Section 9, T-24-S, R-9-W	SE ¼, SE ¼, SE ¼
	Section 10, T-24-S, R-9-W	SW ¼, SW ¼, SW ¼
	Section 15, T-24-S, R-9-W	N ½, N ½, N ½
	Section 10, T-24-S, R-9-W	SE ¼, SE ¼, SE ¼
	Section 11, T-24-S, R-9-W	SW ¼, SW ¼, SW ¼
	Section 14, T-24-S, R-9-W	N ½, N ½, N ½
	Section 11, T-24-S, R-9-W	SE ¼, SE ¼, SE ¼
	Section 12, T-24-S, R-9-W	SW ¼, SW ¼, SW ¼
	Section 13, T-24-S, R-9-W	N ½, N ½, N ½
	Section 18, T-24-S, R-8-W	NW ¼, NW ¼, NW ¼
	Section 12, T-24-S, R-8-W	SE ¼, SE ¼, SE ¼
	Section 7, T-24-S, R-8-W	W ½, W ½, W ½
	Section 6, T-24-S, R-8-W	S ½, S ½, SW ¼

Land Ownership: Private with the exception of the area located in Section 15, T-24-S, R-9-W that is located along State Highway 497 within state highway right-of-way acquired from private sources and the area located at the intersection of Sections 10,11, 14 and 15, T-24-S, R-9-W along State Highway 11 within state highway right-of-way acquired from private sources

U.S.G.S. Quad: Bowlin Ranch, NM 7.5' (1996) 32107-B7
Capitol Dome, NM 7.5' (1996) 32107-B6

Area Covered: 47.30 acres

Cultural Resources: One historic site, LA 157723
Segment of the Hermanas Grade
11 isolated occurrences

PROJECT LOCATION AND BACKGROUND

This project involves a 100% cultural resources inventory of a proposed water and sewer line project. The project is located within New Mexico Department of Transportation (NMDOT) right-of-way and on private land south of the city of Deming in Luna County, New Mexico. The area surveyed for the proposed project consists of a corridor of land measuring 35600 feet in length by 50 feet in width (40.86 acres). Seven additional areas, each measuring 200 by 200 feet (0.92 acres each), were surveyed at the major road intersections where the water and sewer lines will cross the roads. The total area surveyed for the proposed undertaking equals 47.30 acres. Of this total, 7.00 acres is located within the right-of-way of State Highways 497 and 11 on state highway right-of-way acquired from private sources. The remainder, 40.30 acres, is located on private land. The project is located in Sections 6, 7 and 18, T-24-S, R-8-W and Sections 8, 9, 10, 11, 12, 13, 14, 15, 16, and 17, T-24-S, R-9-W. The project area is located on the Bowlin Ranch, NM 7.5' (1996) and Capitol Dome, NM 7.5' (1996) U.S.G.S. topographic maps (Figure 1).

The undertaking calls for the installation of water and sewer lines. The majority of the line will be installed within the ditch along existing paved road right-of-way. The western portion of the project parallels the western side of the Hermanas Grade for approximately one mile. The line then turns east for approximately 4.3 miles, paralleling the south side of Solana Road (a one mile segment of this road is Highway 497). At McCann Road, the corridor turns north and parallels the east side of the road for one mile. The project then turns east again, crossing open fields to the existing sewage treatment plant. The depth of the trench will vary from three to fifteen feet. The width of the trench will be six feet to accommodate both lines. The trench will be excavated with the use of heavy equipment. Open trenches will be used to construct road crossings with the exception of the crossing at State Highway 11 which will be constructed by boring under the pavement.

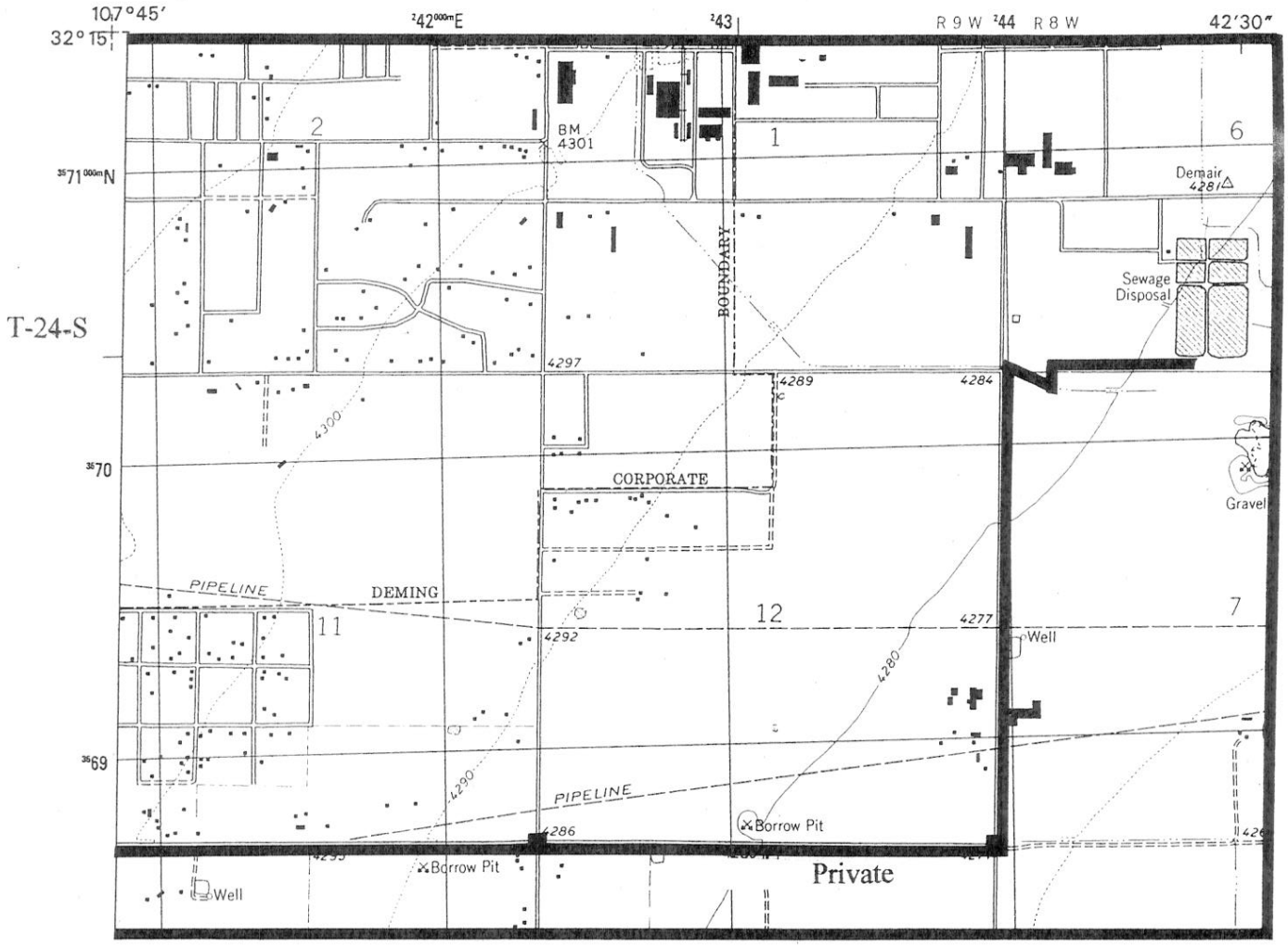
RECORDS SEARCH

A record search of the Laboratory of Anthropology site files was conducted on October 5, 2007. Their records indicate ten previously recorded sites within a one mile radius of the project area. They consist of the following:

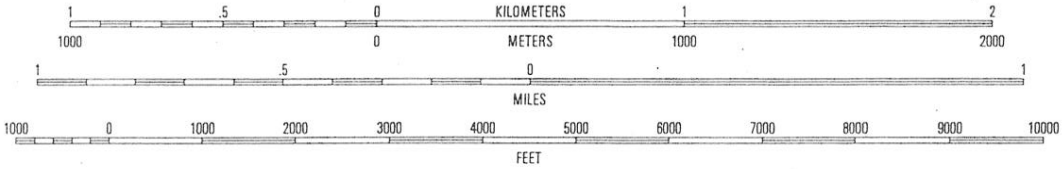
LA 55772	Mogollon artifact scatter (Ackerly, et. al. 1989)
LA 128652	Archaic and Mogollon artifact scatter (Wase, et. al. 2000)
LA 128653	Mogollon artifact scatter (Wase, et. al. 2000)
LA 129557	Historic trash scatter (Kearns, et. al. 2001)
LA 129558	Mogollon artifact scatter and historic trash scatter (Kearns, et. al. 2001)
LA 129559	Lithic scatter (Kearns, et. al. 2001)
LA 129560	Archaic and Mogollon artifact scatter (Kearns, et. al. 2001)
LA 129561	Mogollon artifact scatter and historic trash scatter (Kearns, et. al. 2001)
LA 129785	Utility line (Kearns, et. al. 2001)
LA 130263	Historic features and trash scatter (Wase, et. al. 2001)

CAPITOL DOME, NM

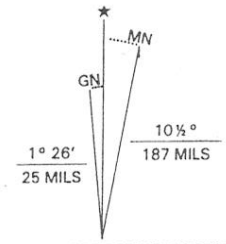
1996



SCALE 1:24 000



CONTOUR INTERVAL 40 FEET



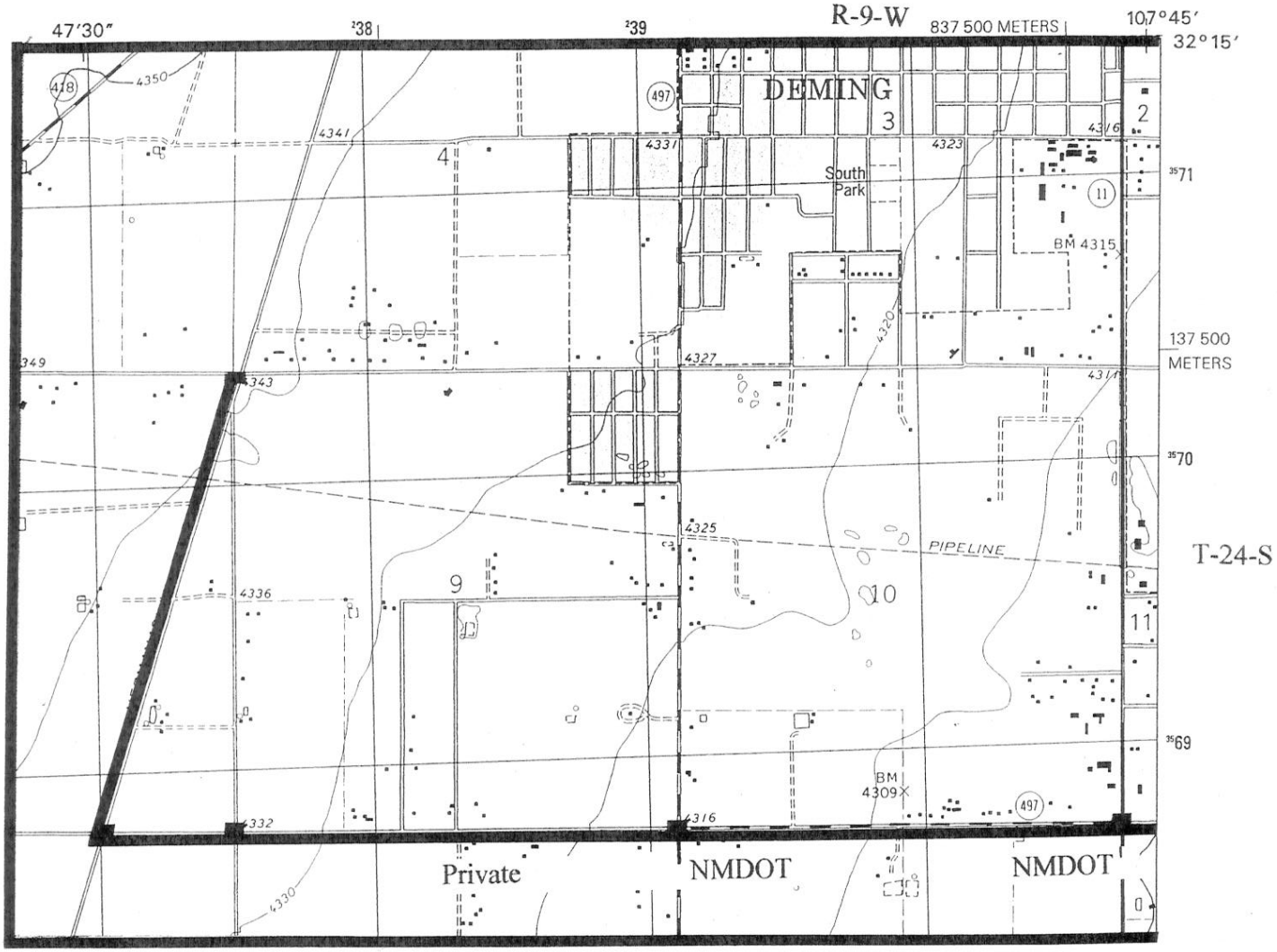
UTM GRID AND 2003 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

Figure 1. Project location

BOWLIN RANCH, NM

1996



SCALE 1:24 000

KILOMETERS

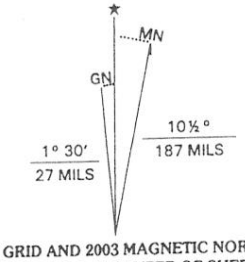
METERS

MILES

FEET

CONTOUR INTERVAL 10 FEET

QUADRANGLE LOCATION



UTM GRID AND 2003 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Figure 1. Project location

Eight additional surveys have been conducted within the vicinity of the current undertaking. No sites were recorded within a one mile radius of the proposed project during these surveys. They include the following:

NMCRIS 18226	Fiber optic line survey by Human Systems Research (HSR)
NMCRIS 23924	Telephone cable ROW survey by HSR
NMCRIS 27971	Highway project survey by NM State Highway Department
NMCRIS 45980	Gas pipeline survey by Archaeological Services by Laura Michalik (ASLM)
NMCRIS 71107	Subdivision survey by ASLM
NMCRIS 72462	Pipeline survey by SWCA, Inc. Environmental Consultants
NMCRIS 89385	Drip irrigation system survey by US Natural Resource Conservation Service
NMCRIS 90520	Drip irrigation system by US Natural Resource Conservation Service

Additional properties located in Deming that are listed on the State and/or National Register include:

584	Deming Armory
42	Deming Main Post Office
1392	East Pine Street, 118
1393	East Spruce Street, 113
1394	East Spruce Street, 112-120
1499	US Customs House
292	Luna County Courthouse and Courthouse Park
769	Mahoney Building
1384	Silver Avenue Historic District
1385	North Silver Street, 105-107
1386	North Silver Street, 116
1387	North Silver Street, 114
1388	South Gold Avenue, 100
1389	South Gold Avenue, 110
1390	South Gold Avenue, 200
1391	South Gold Avenue, 202
35	Fort Cummings

The previously recorded sites are located outside of the project area. The National and State Register properties are also located outside of the surveyed area.

ENVIRONMENTAL SETTING

The project area is located in a physiographic province known as the Mexican Highland Section of the Basin and Range Province (Hawley 1986). The Basin and Range Province includes much of central and southwestern New Mexico and is composed predominantly of valley fill that forms broad upland plains between mountain ranges (Cox 1973). The Mexican Highland Section

consists of two large areas of basin-and-range structure separated by the valley of the Rio Grande. Block-faulted mountains run down the center of the section forming its eastern boundary.

Specifically, the project area is located on a broad flat plain in an area once dominated by low mesquite coppice dunes south of the City of Deming. Slopes within the project area average 1-3%. The Mimbres River, located approximately five miles to the north, is the nearest named drainage. The elevation of the project area averages 4300 feet above mean sea level. Vegetation in the undisturbed portions of the project area is dominated by mesquite, grasses, snakeweed, russian thistle and forbs. Soils consist of Dona Ana sandy clay loam and Dona Ana-Pintura complex, eroded (Neher and Buchanan 1980). Both soils are composed of deep, well-drained soils formed in old alluvial sediments derived from mixed sources. Wind erosion hazards are severe and water erosion hazards are moderate.

Approximately 95% of the project area shows evidence of previous ground disturbing activity. The majority of this disturbance is related to blading and the clearing of vegetation related to construction of the roads. The project is located in an area heavily impacted by residential and agricultural development.

SITE DEFINITION

Sites are defined for the purpose of this study, as the location of purposeful prehistoric or historic activity as reflected in the presence of structures or features, as well as the presence of artifactual material of a suitable number or density. Isolated occurrences generally reflect less intensive activities, i.e., the accidental loss or discard of a few artifacts.

CULTURE HISTORY

The record of occupation in southern New Mexico begins around the end of the Pleistocene about 10,000 B.C. and continues through historic times. During this period, a number of different subsistence-settlement strategies were maintained.

Paleoindian Period

The Paleoindian period (10,000-5,000 B.C.) represents the earliest occupation of the region. It is characterized by an economic focus on the highly mobile hunting of large game species supplemented with wild plant foods. Identified primarily based on a set of distinctive lanceolate points, it is represented predominantly by hunting related sites. These sites generally consist of Clovis and Folsom artifacts found in conjunction with the remains of extinct species such as mastodon or bison. While it is recognized that additional sites probably exist which represent other areas of Paleoindian economy, these sites will be extremely difficult to identify since most depend on the presence of hunting-related implements for categorization (Sebastian and Larralde 1989).

The Paleoindian presence is represented in southern New Mexico primarily by isolated artifacts although a few excavated sites have been radiocarbon dated to this period. Paleoindian sites

tend to be limited in lower elevation settings to specific landforms, in particular, ridges overlooking water sources, playa edges, and the eroded slopes of major topographic features. A number of cave sites have also been identified. One shift in locational patterning over time has been suggested by Campbell (1976) and Broilo (1971). They note that at the beginning of this period, when the climate was cooler and displayed less seasonal variability, sites were located on the open steppe and near playas. As dryness increased, however, and herds became more aggregated, Paleoindian sites shift to canyon locations and other locations near permanent water sources.

Although Paleoindian sites have not been found within the vicinity of the current project area, they have been identified in the surrounding region. A number of isolated finds have also been recorded in Luna County.

Archaic

Around 6000 B.C., there was a shift from big game hunting to an emphasis on plant gathering and the hunting of smaller game species. This shift occurred in response to drier climatic conditions which necessitated a broader subsistence base. Sites were located increasingly in environmental zones offering a wide variety of resources. Patterns of seasonal rounds were instituted in order to take advantage of available plants. In most regions, the Archaic period lasted until approximately A.D. 400.

Although sites assigned to this era have been found in the entire region surrounding the project area, categorization of sites as Archaic has long been recognized as problematical. Archaic sites are defined primarily by a series of apparently long-lived point styles and by the lack of ceramics at any given site. As at the Paleo sites, this again puts the archaeologist at a disadvantage as they try to rely solely on the presence of a particular point style for temporal identification. In addition, these two determinants are being questioned in recent studies as "Archaic-style" points have been found in rock shelters in conjunction with carbon samples dating well past A.D. 400 (Newton and Upham 1985). As a result of these excavations, aceramic sites with "Archaic-style" points can no longer be definitively assigned to this era.

Archaic materials are represented by both isolates and sites in the surrounding region. Dates of this period have also been reported as components of other sites. Archaic sites in most of southern New Mexico, primarily take the form of open-air scatters.

Mogollon Period

Unlike the end of the Paleoindian period, there is no climatic event that marks the end of the Archaic and the beginning of the next period. Rather, cultural events mark the transition, most notably, the advent of agriculture with its concomitant increase in sedentism, as well as the introduction of ceramics and the bow and arrow. It is during this period that one sees the greatest divergence in adaptive systems across the region.

The culture history of the Jornada Mogollon was originally established by Lehmer (1948). He established three phases: the Mesilla, the Dona Ana and the El Paso. These are distinguished primarily by their ceramics, both by rim forms and by decoration. Architecturally, there was a

change as small pithouse villages were replaced by larger pueblos. These pueblos appear to have been abandoned in large part in A.D. 1350.

The Mimbres Mogollon is divided into a multi-phased sequence defined in Stuart and Gauthier (1981) as follows: Early Mogollon (A.D. 250-550), Georgetown (A.D. 550-650), San Francisco (A.D. 650-850), Three-circle (A.D. 850-1000), Classic Mimbres (A.D. 975-1150), Animas (A.D. 1150-1375) and Salado (A.D. 1300-1450). These phases are distinguished by a variety of characteristics that represent changes in ceramic technology and changes in settlement-subsistence practices, as well as sociocultural adaptations. In general, changes are tied to increased sedentism and population growth as the people became more dependent on cultigens and floodplain agriculture. Early sites which were located on high knolls or mesas, that were small in size with only a few pithouses, were gradually relocated closer to the drainages, primarily on the first terraces, and became more structured in their layouts as a shift was made to surface structures. Communal structures increase in size and burials seem to reflect a greater emphasis on social standing, which in itself is a reflection of sociocultural adaptations. This culminates with the building of massive compounds enclosing pueblo-style rooms in the Salado Phase which are abruptly abandoned in A.D. 1450.

When the Spanish arrived, the area appears to have been largely inhabited by mobile hunter-gatherer groups although occupied pueblos were found along the Rio Grande. Many of these pueblos, particularly those of the Piro were abandoned during the Spanish era.

Mogollon sites are found throughout southwestern New Mexico but are concentrated primarily along the rivers and drainages. These sites range in size from small artifact scatters to large habitation sites with evidence of both surface and subsurface scatters.

Historic

Like most of southern New Mexico, there was very little historic development of this area until the early 1800s due to the aggressive Apache occupation of the region. It was not until the mid-1800s, when the United States government established a number of military forts and posts in southwestern New Mexico, that these groups could be subdued to allow settlement. The area around Deming, Lordsburg and Animas saw very little development until the construction of the railroad in the late 1800s. The majority of the communities in the area were established in the 1880s as railroad settlements along the Southern Pacific Railroad (Julyan 1996). Agriculture and ranching, as well as mining, have played significant roles in the economic development of the area.

Two histories of Deming have been written. One was published by the Luna County Historical Society in 1978 and the second was complied and published in 1982 for the centennial celebration. They summarize the history of Deming as follows.

Deming became the county seat for Luna County in 1901 after splitting from Grant County. It prospered as a cattle shipping center and had two smelters to process the ore from nearby mines. The town saw tremendous growth during World War I when 30,000 military personnel were stationed at Camp Cody. A large number of commercial and residential structures were built to accommodate the increased population.

After the war, a drought severely impacted the economy of the area. This was followed by the Great Depression. The WPA improved the economy of the area in the late 1930s bringing employment opportunities to the local populace. A number of structures, including the Post Office and City Hall were constructed during this period.

During World War II, the area was once again the host to a military installation. An Army Air Force base that specialized in bombadeer training was established on the southeast side of town. Only a few thousand military personnel were brought into the area, as opposed to the 30,000 brought in during World War I, but it was enough to spark a small economic revival. After the war, the base was given to the city for use as a civic airfield and industrial park.

After the war, the economy of the area stabilized, seeing little growth. The construction of the interstate highway system in the 1960s and 70s led to the development of commercial services such as gas stations and restaurants to assist travelers.

SURVEY METHODS AND RESULTS

The boundaries of the project area were clearly defined by the existing streets and property boundaries. The weather was clear and the general lack of vegetation made ground visibility good. Ground visibility is estimated to be 85%. The survey of the water and sewer line corridor was conducted by walking a straight transect along the centerline of the proposed right-of-way. This allowed coverage of a corridor measuring 50 feet (15 meters) in width. The 200 by 200 foot parcels at the road intersections were surveyed by walking straight transects spaced 15 meters apart. No artifacts were collected and no subsurface testing was conducted.

One historic site, LA 157723, was identified adjacent to the proposed project area. A portion of the Hermanas Grade parallels the western segment of the project corridor. Eleven isolated occurrences were identified within the proposed right-of-way. The locations of the cultural resources are depicted on Figures 2 and 3.

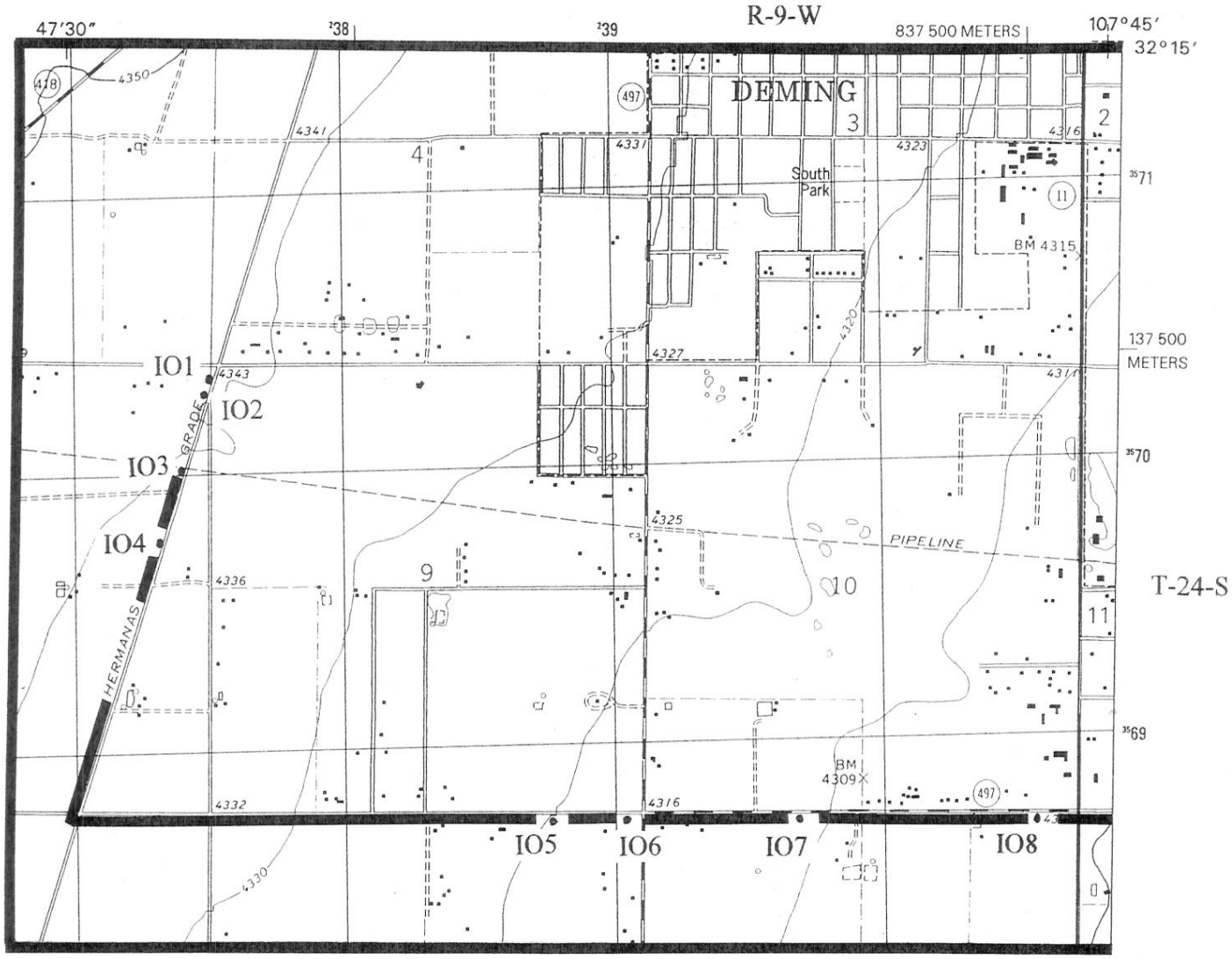
LA 157723

One historic site, LA 157723, was identified adjacent to the proposed right-of-way corridor. The site consists of a livestock pen and loading chute. The site measures 30 by 30 meters (900 square meters). The site is located on a broad flat plain with low mesquite coppice dunes. Figure 3 depicts the location of the site.

The pen measures 15 meters north-south by 7 meters east-west. It is constructed predominately of old railroad ties and milled lumber. The western side of the pen has plywood or corrugated metal sheeting nailed on to assist in enclosing the livestock. Barbed wire was used on the eastern side to contain the animals. The loading chute extends off the northern end of the pen. It is approximately 3 meters in length and 2 meters wide. The western side is enclosed with sheet metal.

BOWLIN RANCH, NM

1996



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METERS 1000 0 1000 2000

MILES 1 .5 0 1

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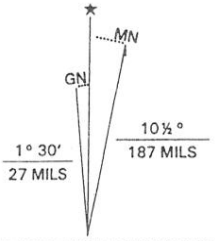
CONTOUR INTERVAL 10 FEET



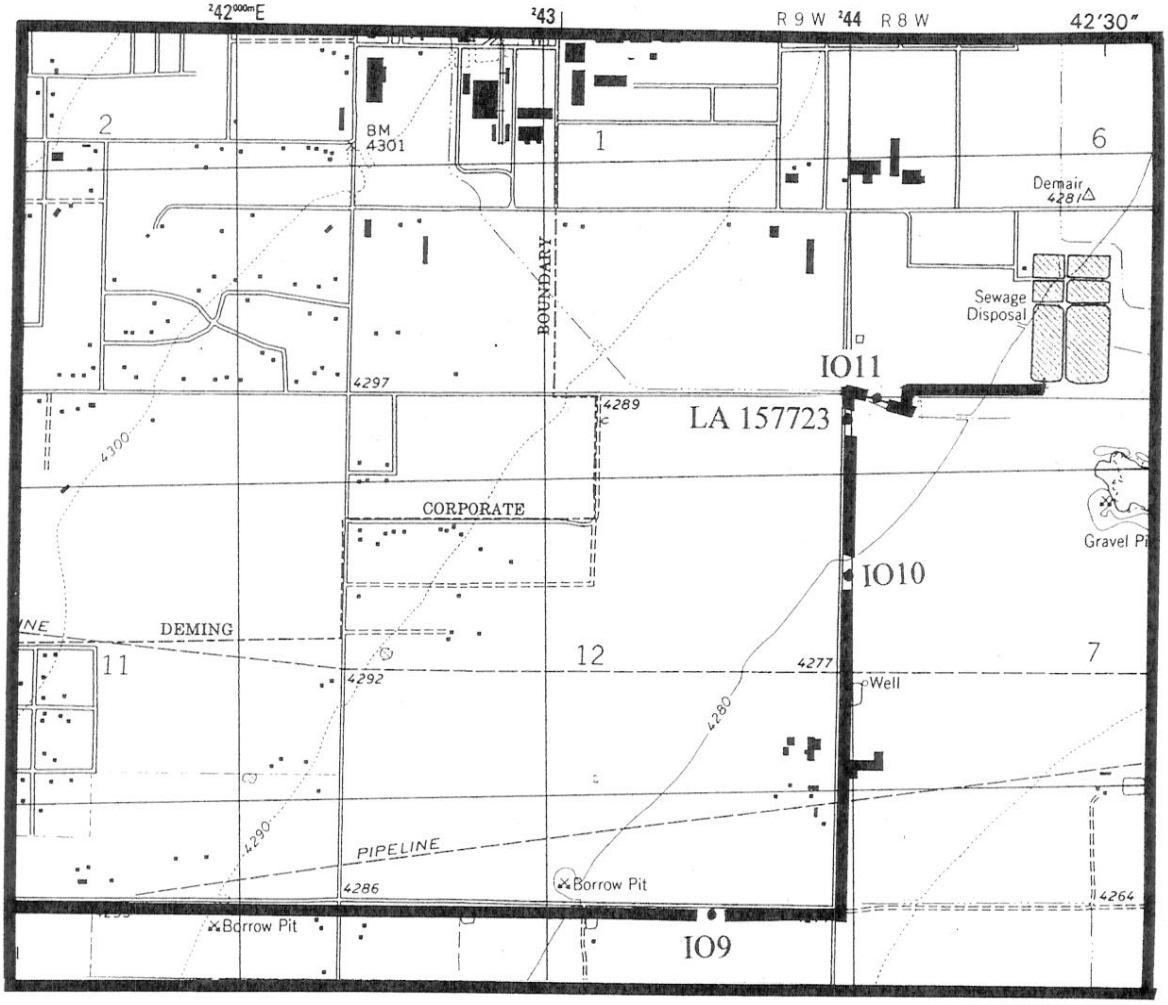
UTM GRID AND 2003 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

Figure 2. Location of cultural resources

CAPITOL DOME, NM

1996



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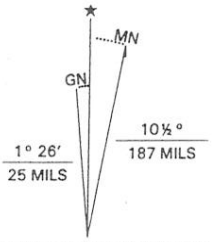
CONTOUR INTERVAL 40 FEET



UTM GRID AND 2003 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

Figure 3. Location of cultural resources

Only five artifacts were found in association with the pen. They consist of two fragments of aqua bottle glass and three cans, including one solder-dot milk can and two sanitary seam cans.

The artifacts appear to date to the period of 1920 to 1940. The site does not appear to be eligible to the National Register of Historic Places. The site is located outside of the proposed construction corridor and is separated from the construction corridor by the right-of-way fence. The site will not be impacted by the proposed undertaking.

Hermanas Grade

The Hermanas Grade was part of the El Paso and Southwestern Railroad system. The railroad was constructed largely to connect the mining operations in southeastern Arizona and southwestern New Mexico with Deming and El Paso. Construction on the Hermanas Grade began in 1901 and trains began operating in 1902 between Deming and Hermanas while construction continued to the east (Myrick 1990). The El Paso and Southwestern Railroad was purchased by the Southern Pacific Company in 1924.

The Hermanas Grade has been bladed down and converted to a paved county road. The construction corridor is located to the west of the road and will not impact the area that the Hermanas Grade occupied. Cultural resources clearance is recommended for the proposed undertaking.

Hermanas Grade (Facing southwest)

Isolated Occurrences

Eleven isolated occurrences were identified within the surveyed corridor. The majority of these consisted of historic artifacts. Table 1 details the descriptions of the isolated occurrences. The locations are depicted on Figures 2 and 3.

RECOMMENDATIONS

One historic site, LA 157723, was identified adjacent to the proposed project area. A portion of the Hermanas Grade parallels the western segment of the project corridor. Eleven isolated occurrences were also identified within the proposed right-of-way.

The historic site, LA 157723, was identified adjacent to the proposed project area. The site consists of a livestock pen and loading chute. The pen is no longer in use. A few scattered artifacts, several pieces of aqua bottle glass and three cans, were associated with the pen. The artifacts appear to date to the period of 1920 to 1940. The site does not appear to be eligible to the National Register of Historic Places. The site is located outside of the proposed construction corridor and is separated from the construction corridor by the right-of-way fence. The site will not be impacted by the proposed undertaking.

The Hermanas Grade formerly consisted of a railroad grade that connected Deming and Hermanas. The grade has been bladed and converted into a paved county road. The construction corridor is located to the west of the road and will not impact the area that the Hermanas Grade occupied. Cultural resources clearance is recommended for the proposed undertaking.

Table 1. Isolated Occurrences

IO#	Item	UTM	T	R	Sec.	1/4,1/4,1/4	Elev.	Topography	Vegetation
1	Heavily corroded sanitary seam can	Zone 13 3570350N 237510E	24S	9W	8	NE,NE,NE	4340	Plain	Mesquite, creosote Saltbush, grasses
2	Solder dot milk can, heavily corroded	Zone 13 3570290N 237480E	24S	9W	8	NE,NE,NE	4340	Plain	Mesquite, creosote Grasses
3	2 pieces patinated aqua bottle glass	Zone 13 3570010N 237400E	24S	9W	8	SE,NE,NE	4340	Plain	Mesquite, saltbush Grasses
4	4 pieces patinated brown bottle glass	Zone 13 3569750N 237300E	24S	9W	8	SE,SE,NE	4340	Plain	Mesquite, saltbush Grasses
5	Heavily corroded solder dot milk can	Zone 13 3568740N 237740E	24S	9W	16	NW,NE,NE	4320	Plain	Mesquite, creosote Saltbush, grasses
6	6 pieces patinated brown bottle glass	Zone 13 3568740N 238040E	24S	9W	16	NE,NE,NE	4320	Plain	Mesquite, creosote Grasses
7	1 piece patinated aqua bottle glass solder dot milk can	Zone 13 3568710N 238680E	24S	9W	15	NW,NE,NW	4310	Plain	Mesquite, saltbush Grasses
8	4 pieces patinated clear bottle glass	Zone 13 3568690N 240560E	24S	9W	15	NE,NE,NE	4305	Plain	Mesquite, saltbush Grasses

9	Heavily corroded sanitary seam can	Zone 13 3568610N 243530E	24S	9W	13	NW,NE,NE	4275	Plain	Mesquite, creosote Saltbush, grasses
10	Solder dot milk can, heavily corroded	Zone 13 3569680N 243990E	24S	8W	7	NW,NW,NW	4280	Plain	Mesquite, creosote Grasses
11	2 pieces patinated clear bottle glass	Zone 13 3570240N 244070E	24S	8W	7	NW,NW,NW	4285	Plain	Mesquite, saltbush Grasses

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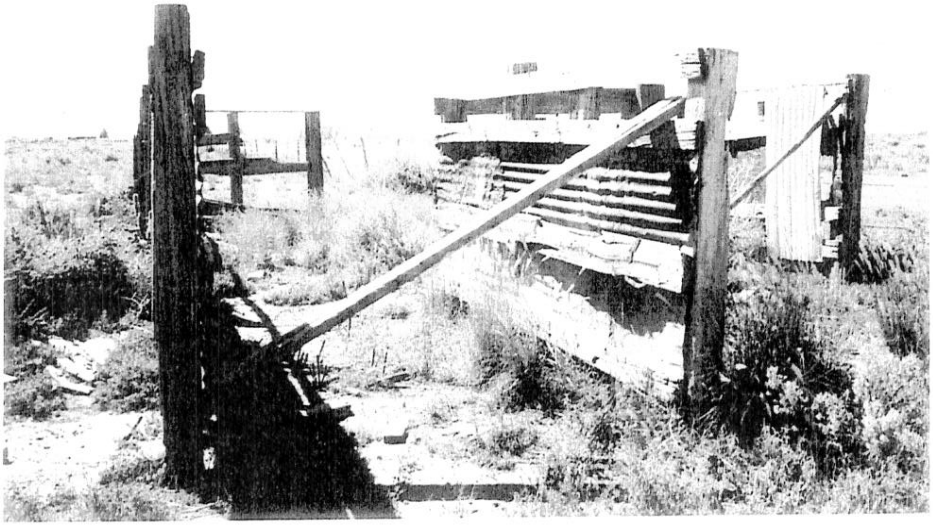
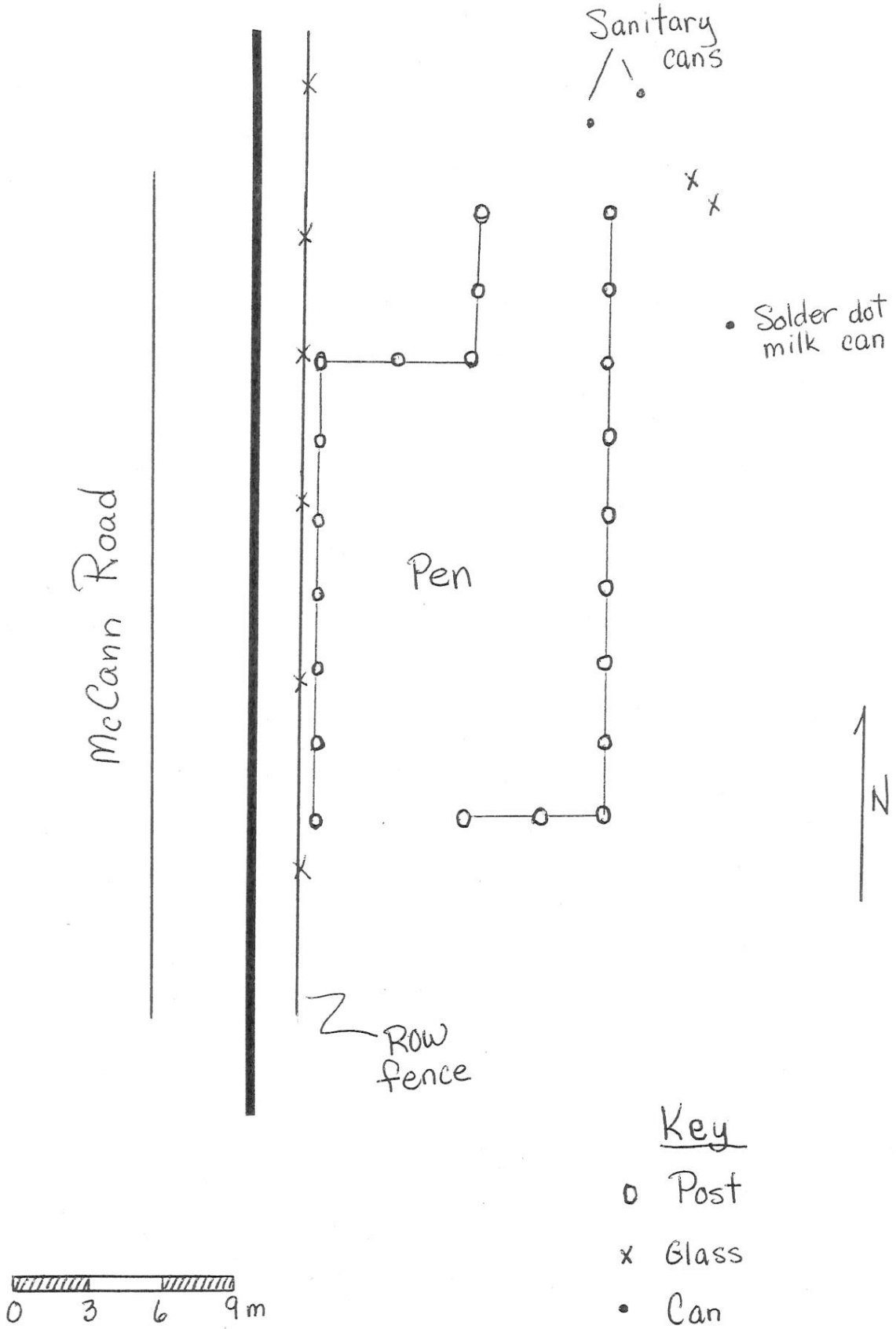
Site 157723 Loading chute (facing south)



Site 157723 Livestock pen (facing west)

LA 157723
08 Oct 2007



APPENDIX K Hopi Tribal Correspondence

THE HOPI TRIBE

Ivan L. Sidney
CHAIRMAN

Todd Honyaoma, Sr.
VICE CHAIRMAN

August 23, 2006

Randy Chulick, Environmental/ Cultural Consultant
Gila Conglomerate
5203 Little Walnut Road
Silver City, New Mexico 88061

Dear Mr. Chulick,

Thank you for your correspondence on behalf of the City of Deming dated August 9, 2006, regarding wastewater system improvements in Deming, New Mexico. As you know from our previous letters, the Hopi Tribe claims ancestral and cultural affiliation to prehistoric cultural groups in New Mexico, and therefore we appreciate your continuing solicitation of our input and efforts to address our concerns.

As you also know from our previous letters, the Hopi Cultural Preservation Office supports the identification and avoidance of archaeological sites and Traditional Cultural Properties. We are not aware of any Hopi Traditional Cultural Properties in this project area. However, federally funded ground disturbing activities require compliance with the National Historic Preservation Act.

Therefore, if the State Historic Preservation Office requests a cultural resources survey of the area of potential effect for this proposal, and if prehistoric cultural resources are identified and will be affected by project activities, please provide us with copies of the survey report and any testing or data recovery plans for review and comment.

We also recommend that if any cultural features or deposits are encountered during project activities, these activities must be discontinued in the immediate area of the remains and the State Historic Preservation Office must be consulted to evaluate their nature and significance. If any Native American human remains or funerary objects are discovered during construction they shall be immediately reported as required by law.

Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully,

for Ivan L. Sidney, Sr., Chairman/CEO
The Hopi Tribe

xc: New Mexico State Historic Preservation Office

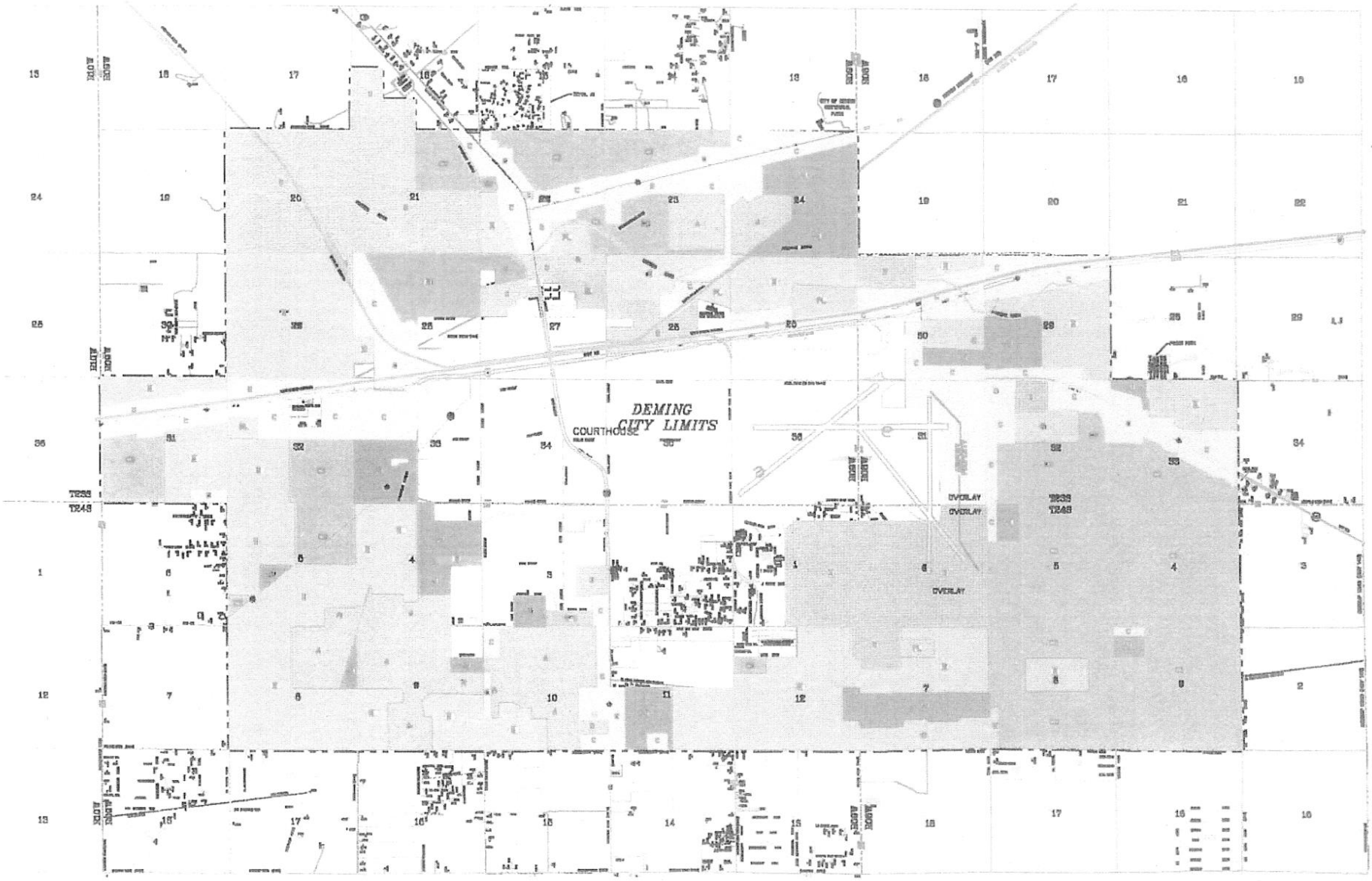
P.O. BOX 123 — KYKOTSMOVI, AZ. — 86039 — (928) 734-3000

APPENDIX L Deming / Luna County ETZ Map

-STATE OF NEW MEXICO-

EXTRA-TERRITORIAL-ZONE

LUNA COUNTY



ETZ
ZONING MA

SCALE: 1"=8000'

OCTOBER, 2001

ZONING DISTRICTS

- INDUSTRIAL
- COMMERCIAL
- RURAL AGRICULTURE
- PUBLIC-LAND USE
- COUNTRY DWELLING
- SINGLE FAMIL DWELLING
- SINGLE FAMIL DWELLING
- MULTIPLE DWELLING
- DWELLING
- HEIGHT RESTRICTED (OVERLAY ZON

FILING AND RECORDING

STATE OF NEW MEXIC

COUNTY OF LUNA

FILED FOR RECORD THIS ____ DAY

AT ____ O'CLOCK ____ M.

SLIDE #____

RECEPTION #____

COUNTY CLERK

COUNTY MAKES NO WARRANTY WITH RESPECT TO THE ACCURACY
TENESS OR USEFULNESS OF THIS MAP. LUNA COUNTY ASSUMES NO
T FOR DIRECT, INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES
NG FROM THE USE OR MISUSE OF THIS MAP OR ANY OF THE
ITION CONTAINED HEREON.

ED BOUNDARIES OF THIS ETZ MAP ARE GOVERNED BY THE ETZ
& REGULATIONS MANUAL RECORDED AT THE LUNA COUNTY CLERK'S

NING ISSUES ARE TO BE ADDRESSED TO THE ETZ COMMISION FOR

The Geographic Control for this map is based on the Public Land Survey System
and the Geographic Coordinate data base provided by the Bureau of Land Management.
Road Center lines were digitized from aerial photography acquired
in October of 1996 at a one foot pixel resolution.

THIS MAP BASED ON THE NM STATE PLANE
COORDINATE SYSTEM, WEST ZONE NAD 83.

EXTRA-TERRITORIAL ZONING
COMMISSION & AUTHORITY
CITY OF DEMING & LUNA COUNTY

DEMING-LUNA COUNTY
EXTRA-TERRITORIAL ZONING AUTHORITY

CHAIRMAN: _____

ATTESTED BY: _____ DATE: _____
SECRETARY OF THE AUTHORITY

PREPARED BY:
LUNA COUNTY PLANNING
GIS MAPPING DIVISION

DATE: October 25, 2001

APPENDIX M Natural Resources Conservation Service Correspondence

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
6200 Jefferson NE
Albuquerque, New Mexico 87109
Phone: (505) 761-4400 **Fax**: (505) 761-4462
Web site: www.nm.nrcs.usda.gov

August 16, 2006

Mr. Randy Chulickp
Environmental/Cultural Consultant
Gila Conglomerate
5203 Little Walnut Road
Silver City, New Mexico 88061

RE: Request for Consultation Concerning Wastewater System Improvements, City of Deming, New Mexico.

Dear Mr. Chulick:

We have received your request for consultation on the above referenced project. The Natural Resources Conservation Service has no objection to the proposed action.

Thank you for the opportunity to comment.

Sincerely,

DENNIS L. ALEXANDER
State Conservationist

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer

APPENDIX N Draft Consultation Letter

GILA CONGLOMERATE

August 9, 2006

Mr. Jim Mace
United States Army Corps of Engineers - Albuquerque District
El Paso Field Office
P.O. Box 6096
Fort Bliss, TX 79906-0096

RE: REQUEST FOR CONSULTATION CONCERNING WASTEWATER SYSTEM IMPROVEMENTS, CITY OF DEMING, NEW MEXICO

Dear Mr. Mace,

Our company is in the process of performing an environmental assessment for the above mentioned wastewater system improvements, in Deming, pursuant to the National Environmental Policy Act for use of public funding. The proposed project will be funded from several different sources including federal monies provided by the New Mexico Environment Department. The City of Deming proposes to improve its existing wastewater system by constructing approximately 34,650 linear feet of new sewer main.

The proposed sewer main is located within county right-of-way except at the intersection of Solano Road and New Mexico Hwy 11, and in the area between McCan Road and the wastewater treatment plant, which is currently vacant land and owned by the City of Deming. As much as it is practical, existing trenches will be used for the installation of sewer lines.

The Area of Potential Effect (APE) is located on the Capitol Dome and Bowlin Ranch 7.5 minute USGS Quadrangle Maps in Sections 1, 4, 8 – 17, Township 24 S, Range 9 W ; and Sections 6, 7, and 18, Township 24 S, Range 8 W. Enclosed is a map depicting the project area from the Capitol Dome and Bowlin Ranch USGS Quadrangles.

Based on our review of the project area, there are no waters of the United States located in the APE. Please notify us of any comments your agency may have regarding the proposed actions by the City of Deming. If you need more information or wish to discuss the project, please call me at (505) 642-7981. I may also be contacted by e-mail at gilaconglom@yahoo.com. Thank you for your time and assistance.

Sincerely,

Randy Chulick,
Environmental/Cultural Consultant

Enclosure: USGS Map of Project Site

5203 LITTLE WALNUT ROAD, SILVER CITY
NEW MEXICO, 88061

APPENDIX O Draft EA Review Letter

GILA CONGLOMERATE

January 10, 2008

Mr. Jannell Ward
New Mexico Game and Fish
P.O. Box 25112
Santa Fe, NM 87504

RE: City of Deming, South Side Sewer and Water Improvements
Environmental Assessment

Dear Mr. Ward,

This letter is to inform you that an environmental assessment has been completed for the City of Deming South Side Sewer and Water Improvements project. The proposed project will be funded from several different sources including federal monies provided by the New Mexico Environment Department. Your agency was initially contacted by letter in August, 2006, for comments regarding the proposed action. Since that time, the scope of the project has been altered slightly and includes the installation of a water main in addition to a sewer main.

The sewer main will be approximately seven (7.0) miles in length, and will run from the intersection of Dona Ana Road and Hermanas Grade Street south to Solana Road, continuing east along Solana Road to McCann Road where it will turn north to the existing wastewater treatment plant. The water main will be approximately 5.7 miles in length and will run from the intersection of Solana Road and Lucca Road east along Solana to McCann Road where it will continue north to J Street. The proposed project also includes the construction of a lift station at the intersection of McCann Road and Solana Road.

The Area of Potential Effect (APE) is located in Sections 8 – 17, Township 24 S, Range 9 W, and Sections 6, 7, and 18, Township 24 S, Range 8 W. Enclosed is a map depicting the project area from the Capitol Dome and Bowlin Ranch USGS quadrangles.

Environmental investigations performed by Gila Conglomerate have found that impacts to the environment from the proposed action would be non-significant and short-term. The proposed project would not result in any moderate or significant, short-term, long-term, or cumulative adverse effects. Therefore, construction of the proposed project would not significantly alter the quality of the human environment and is recommended for implementation.

In compliance with NEPA, the environmental report is available for public review, and will be sent to you upon request. We may be contacted in writing, by telephone at (575) 642-7981, or by e-mail at gilaconglom@yahoo.com.

Sincerely,

Randy Chulick,
Environmental Consultant

Enclosures: USGS maps of Project Area

5203 LITTLE WALNUT ROAD, SILVER CITY
NEW MEXICO, 88061