

# NEXCIV

## ENGINEERING

NEXCIV Engineering delivers civil design solutions  
rooted in experience, precision, reliability,  
responsiveness, and compliance — licensed in TX, NM,  
and CO.

NEXT GENERATION ENGINEERING—NOW

CORE  
SERVICES



Next Generation Engineering — Now.

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## NEXCIV CORE SERVICES

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At NEXCIV, we provide a full spectrum of civil engineering services built on experience, precision, and reliability. Our expertise spans roadway and transportation design, including intersections and traffic control—comprehensive drainage, stormwater, and flood recovery solutions, as well as water, and utility networks for both municipal and private developments. We deliver site development and grading for commercial, institutional, and industrial facilities, supported by structural capabilities in bridge foundations, retaining systems, and specialty civil structures. Our team integrates advanced CAD, GIS, and machine control technologies to streamline design and construction, while ensuring compliance with regulatory standards, permitting, and accessibility requirements. From concept through bidding, construction, and project management, NEXCIV offers unique, unwavering, and innovative solutions that empower clients to build with confidence.



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## I. Roadway & Transportation Design

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### 1. Roadway & Corridor Design

- ✓ Rural & Urban Reconstructions
- ✓ Centerline Geometry
- ✓ Plan & Profile Production
- ✓ Typical Sections
- ✓ Cross Sections
- ✓ Earthwork Balancing
- ✓ Medians
- ✓ Code-Set Styling
- ✓ 3D surfaces

### 2. Intersection & Access

- ✓ Turn lanes (acceleration/deceleration), storage, tapers, driveway, alley
- ✓ County Road Tie-Ins
- ✓ Design Vehicle Turning Analysis.

### 3. Traffic Engineering

- ✓ Traffic Counts (volume/speed/gap/classification)
- ✓ TraxPro processing
- ✓ Safety Audit Reports
- ✓ Signing & Striping per MUTCD
- ✓ Traffic Control Plans.

### 4. Pedestrian / Bike & ADA

- ✓ Sidewalks
- ✓ Ramps
- ✓ Detectable Warnings
- ✓ Bicycle Facilities
- ✓ ADA Compliant Details (PROWAG)

### 5. Structures on Corridors

- ✓ Low Water Crossings (Over-top-able Roadway Slabs)

- ✓ Culverts/CBCs with headwalls/wingwalls/guardrail, gabion/wall tie-ins.

## 6. Pavement/Section Design

- ✓ ROGFC, HMA, base, subgrade prep
- ✓ Slope and Ditch Criteria
- ✓ Typical Section Schedules
- ✓ Structural Number

## 7. ROW/Property Mapping

- ✓ Ownership Exhibits
- ✓ Shapefile creation for corridor alternatives

## II. Drainage, Stormwater & Flood Recovery

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### 1. Hydrology and Hydraulics (H&H)

- ✓ Watershed delineation (Pre & Post)
- ✓ Hydrologic Soil Group (HSG) and Land Use Coefficients
- ✓ Time of Concentration, NOAA IDF
- ✓ Multi-method peak flow checks (Rational, SSA, Hydraflow, regression equations)
- ✓ Capacity checks; culvert/CBC sizing/extension/replacement decisions
- ✓ Trunk Storm Systems Modeling and Capacity Analysis

### 2. Detention, Containment and Site Drainage

- ✓ Industrial Ponds (single/multi-cell) with sumps; interior slopes; freeboard; leak detection systems (dual liners, geonet, anchor trenches); stockpile/ditch systems; riprap rundowns

### 3. Erosion and Blanket Stabilization

- ✓ Sheet Pile Wall Design (cantilever design), riprap, erosion control details, SWPPP plans.

### 4. FEMA Disaster Response

- ✓ Post-disaster inspection, documentation, and design of recovery works for roads/bridges/low-water crossings.

## III. Water & Sewer Utility Design

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### 1. Waterline Desing

- ✓ Pressure Pipe Networks (PVC & DI), appurtenances, hydrant spacing, conflict avoidance, trenching details, plan & profile sheets.

### 2. System Modeling

- ✓ Transmission & Distribution
- ✓ Hydrants & Junctions

### 3. Utility Relocations & Crossings

- ✓ Utility Crossing Plans
- ✓ Boring Recommendations
- ✓ Tie-Ins

### 4. Private Site Utilities

- ✓ Water, Sewer, Gas, Electric Layout and Design

## IV. Site Development & Civil Facilities

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### 1. Civil Site & Grading

- ✓ Pad, parking, access roads, grading for drainage
- ✓ Earthwork Quantities (Cut/Fill Reports)
- ✓ Stockpile Volumes
- ✓ Tie-In Details

### 2. Pads & Foundations (Site Elements)

- ✓ Electrical equipment pads (footing/foundation plans), treatment facility pads, loading/unloading areas

### 3. Institutional & Commercial Sites

- ✓ Hospitals
- ✓ Schools
- ✓ Federal Facilities (BLM)
- ✓ Parking/ADA, retention/detention facilities
- ✓ Construction Administration Support

## V. Structural (Civil) Design

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### 1. Bridge Foundations

- ✓ Drilled Shafts per AASHTO LRFD
- ✓ SHAFT & L-Pile Analyses
- ✓ Service and Strength Limit State Checks
- ✓ Iterative Geometry Optimization
- ✓ Preliminary Foundation Reports

### 2. Retaining Structures

- ✓ Gravity Walls
- ✓ MSE Walls
- ✓ Wall Schedules
- ✓ Inspection Support

### 3. Sheet Piles

- ✓ Cantilever Sheet Pile Design with selection by Moment/Section Modules

### 4. Specialty Components

- ✓ H-20 Traffic Rated Septic Tank Analysis (slabs/walls/rebar)
- ✓ Stair & Railing Design per NAAMM/AISC/ADA/OSHA/IBC
- ✓ Silo Foundations
- ✓ Helipad Mat Sizing via Terzaghi bearing capacity & settlement checks

## VI. Civil 3D AutoCAD

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### 1. Civil 3D Production

- ✓ Points and Existing Surface Creation
- ✓ Horizontal & Vertical Alignments
- ✓ Assemblies & Subassemblies
- ✓ Corridors
- ✓ Intersections
- ✓ Roundabouts
- ✓ Code Sets
- ✓ Volume Reports



- ✓ Plan & Profile
- ✓ Cross Sections
- ✓ Summary of Quantities
- ✓ 3D Design Surfaces
- ✓ Sheet Production

## VII. Permitting & Compliance

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### 1. Regulatory Coordination

- ✓ NMED Permitting (waterline, municipal/state standards)

## VIII. Bidding & Construction Services

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### 1. Pre-Bid & Bid

- ✓ Scope of work, unit price bid forms, construction cost estimates, addenda/Q&A, pre-bid conference

### 2. During Construction

- ✓ Submittal Review
- ✓ RFI Responses
- ✓ Construction Administration Advice
- ✓ Punchlist Inspections

## IX. On-Call Engineering & Program Management

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### 1. On-Call Municipal Support

- ✓ Roadway
- ✓ Drainage
- ✓ Utility Design
- ✓ Cost Estimates
- ✓ ADA Plans
- ✓ Facility Improvements
- ✓ Multi-Stakeholder Coordination