MT. CARMEL
TOWNSHIP
DATA CENTER TEAM

WELCOME

Mt. Carmel Residents & Neighbors
Data Center Community Education Event

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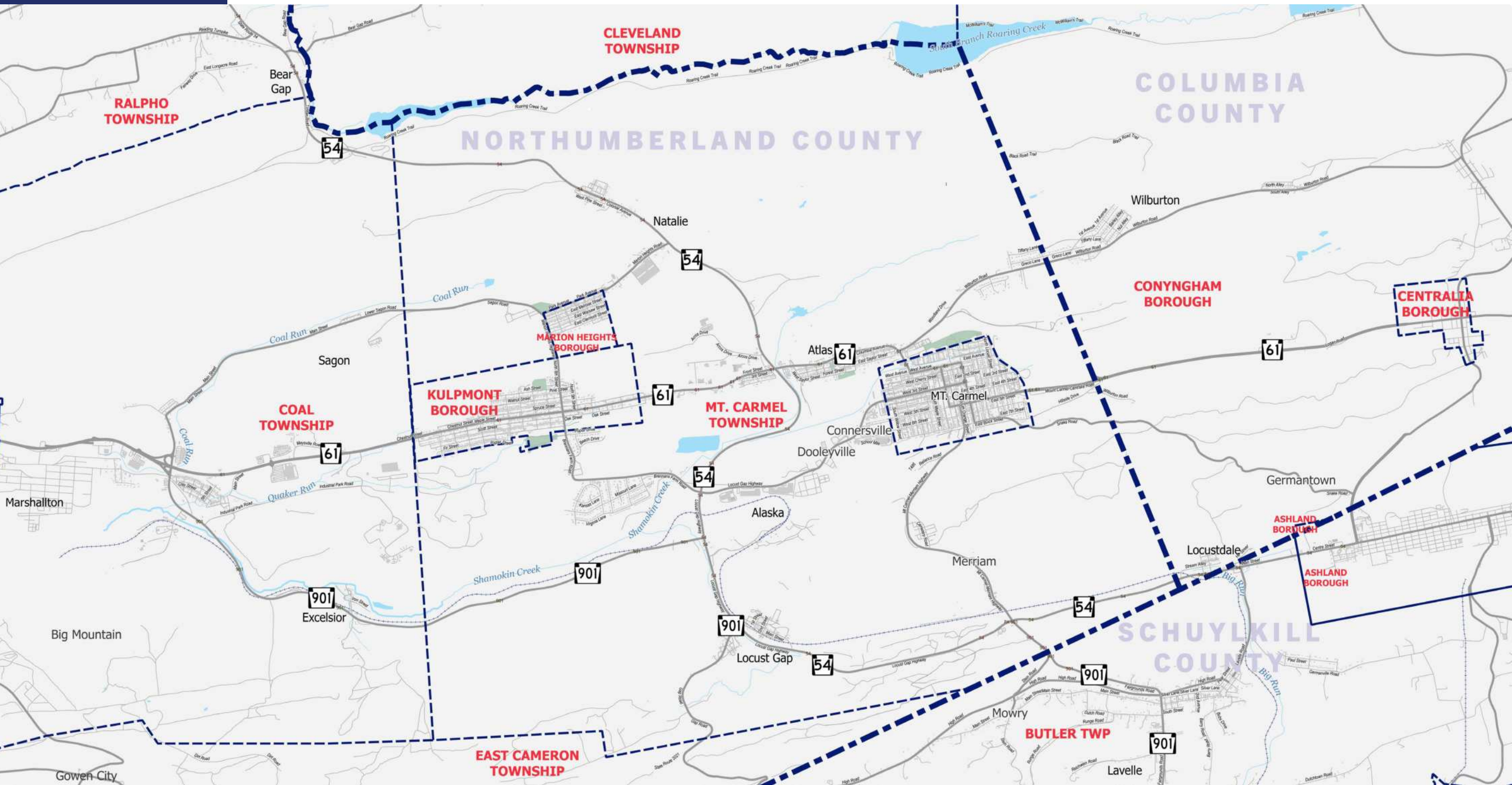
Where Do You Live

Please use a push pin to indicate on the map where you live. If you do not live in the project area, place the pin at the edge of the map on the route you would use to visit the area.



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What is a Data Center?

The infrastructure that powers the digital services people rely on every day.

- Stores and processes digital information
- Supports cloud computing and artificial intelligence
- Enables online communication, streaming, banking, healthcare, and business applications
- Operates continuously to provide reliable and secure digital services
- Creates a foundation for economic growth and technological innovation

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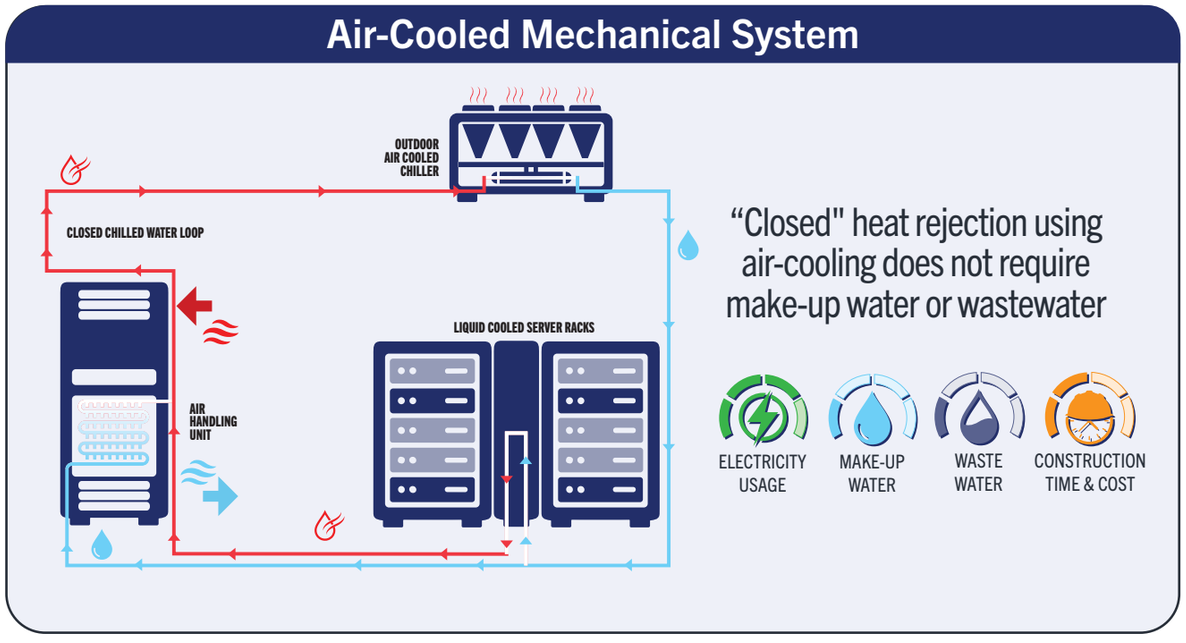
Data Center Water Use

- Data centers have traditionally utilized water-cooled mechanical systems that require a significant amount of make-up water and wastewater
- The market has shifted towards utilizing air-cooled systems to substantially decrease data center water use and wastewater

MARKET SHIFT TOWARDS AIR-COOLED SYSTEMS



1 Will the data center use water?
Data centers that utilize air-cooled mechanical systems require water for routine office space use, space humidification and normal maintenance. This water can be sourced from municipal water, wells or mine pool sources.

2 How much water could be used?
The required water use is comparable to a small office building or a small neighborhood of less than 20 homes.

3 Is enough water available?
Require utility capacity letter, permit/withdrawal limits, drought triggers, and protection of current customers first.

4 Will residents pay higher bills?
Data Center project owners to take on the financial responsibility to provide the water system upgrades. The subsequent water bills paid by the Data Center project are proportionally the same as any other business/administrative/institutional use and do not typically impact water bills amounts for the incumbent customers.

5 What happens to wastewater?
All wastewater from Data Center sites are pretreated prior to being conveyed to the downstream public sewer system the same way all other homes/businesses/facilities send wastewater flow downstream. This pretreatment will meet or exceed all regulatory requirements.

Define Demand → Submit to Aqua → Utility Review → Capacity Letter → Permits + Limits → Build

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PennDOT Highway Occupancy Permit

Review + Approval Process for Data Center Access

What is a HOP?

A Highway Occupancy Permit is required before construction that creates, alters, or occupies access within PennDOT right-of-way, including driveways, local road connections, utilities, drainage, sidewalks, curbs, and other work affecting a state highway.

Site Selection	Scoping/ Pre-App	Traffic/Access Study	Engineering Plans	EPS Submission	PennDOT Review	Revisions & Conditions	Permit & Build
Identify proposed access to state route, utility crossings, existing traffic volumes and crash data.	Meet with PennDOT District and municipality to confirm permit type, study scope, and design expectations.	Evaluate data center construction trips, employee/service trips, queues, sight distance, and turning movements.	Prepare driveway, drainage, grading, stormwater, MPT, signal/turn-lane, and utility plans.	Submit HOP application through PennDOT Electronic Permitting System (EPS) with completeness checklist.	PennDOT reviews safety, traffic operations, drainage, design standards, and right-of-way impacts.	Respond to comments; coordinate municipal land development, utilities, bonds, fees, and owner consent if needed.	Receive permit, give construction notice, implement traffic control, complete inspections, and close out permit.

Data Center Review Focus Areas

Traffic Operations

Construction trucking, peak employee shift changes, security gate queuing, service vehicles, and emergency access.

Driveway Design

Sight distance, turning templates for large vehicles, acceleration/ deceleration, turn lanes, signal warrants, and access spacing.

Drainage + Stormwater

Culverts, swales, inlets, stormwater discharge, erosion controls, and protection of PennDOT drainage facilities.

ROW & Utilities

Fiber, electric, water, sewer, gas, and duct-bank crossings within state highway right-of-way.

MPT/Work Zone Safety

Maintenance and protection of traffic during utility installation, driveway construction, and lane restrictions.

Local Coordination

Municipal land development approvals, emergency access, PennDOT District comments, and final construction inspections.

Traffic at Data Center Entrance

PennDOT reviews driveway geometry, turning movements, sight distance, queues, and work-zone controls before a new access point is constructed on a state highway.

Typical Submittal / Approval Package

- EPS HOP application + applicant checklist
- Site plan, access plan, grading and drainage plan
- Traffic impact study/assessment and turning exhibits
- Maintenance and Protection of Traffic (MPT) plan
- Utility crossing plans and right-of-way information
- Comment responses, fees, bonds, and permit conditions

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Site Improvement Construction Traffic

How construction traffic will be routed and managed to protect public safety and local roadways.

Maintenance of Traffic During Construction

Temporary Traffic Management

Temporary construction vehicles will be needed to deliver materials, move equipment, haul excavated material, place concrete, and support site and facility construction.

The focus is to safely manage temporary traffic, use designated construction access points, protect local roadways, and comply with PennDOT and municipal requirements.

- Traffic volumes will vary by construction phase and activity.
- Restricted loads over the PA maximum weight or width will require appropriate hauling permits.
- Roadway condition surveys and repair obligations will be documented.

What the Community Can Expect

Construction Vehicles

Material deliveries, excavation hauling, equipment mobilization, concrete placement, and construction support vehicles.

Approvals & Permits

Posting and bonding process, Excess Maintenance Agreement, condition survey, and overweight vehicle permits where required.

Safety & Operations

Construction signing, traffic control, designated access points, and safe/efficient operations during construction.

Roadway Protection

Comply with local restrictions, follow posted weight limits, document hauling routes, turning restrictions, and complete repairs/restoration as required.

Construction traffic will be temporary, planned, routed through designated access points, and managed with safety and driver protection as the priority.

Once construction is complete, long-term operational traffic is minimal – limited to site staff and routine deliveries.

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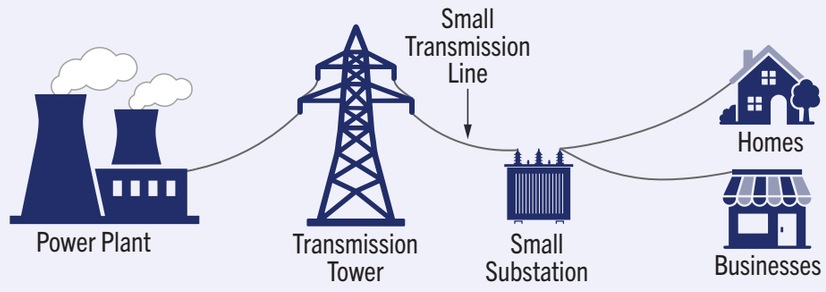
Power and Electricity

How the data center can strengthen the local electric grid without passing the cost to the residents

The developer will fund the project-specific electrical infrastructure and upgrade costs, meaning residents would not be responsible for those expenses.

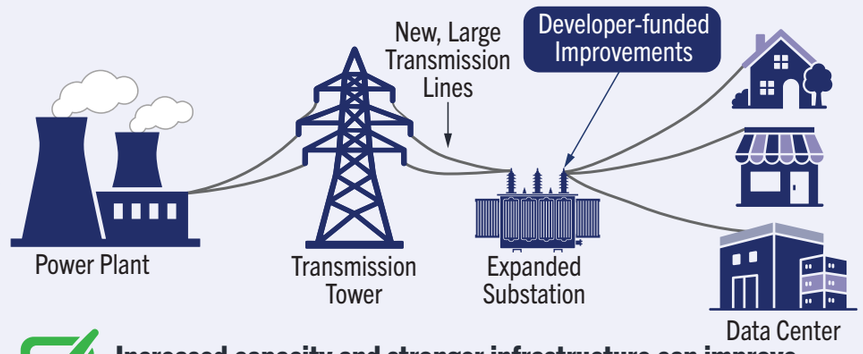
New transmission and substation upgrades can improve the electric system serving Mount Carmel

Before: Limited Capacity



Limited transmission capacity can lead to congestion, delays, and increased risk of outages.

After: More Capacity, More Reliability



Increased capacity and stronger infrastructure can improve reliability and support current and future growth.

Policy Details

- Pennsylvania utilities follow a "cost causation" principle—the customer creating the need for new infrastructure is responsible for the associated costs.
- Project-specific electrical facilities are funded by the customer requesting service, not existing residential customers.

Will my lights stay on?

Yes. New transmission and substation improvements can improve reliability by increasing system capacity and providing a more robust electric network.

Will my electric bill increase?

No. The developer will pay for transmission improvements that typically benefit all users of the electric system.

Does the community benefit?

Yes. The upgraded electric system can also support future homes, businesses, and economic development in Mount Carmel.

Key Message

The project requires improvements to the electric system. Those improvements are designed to support the data center while also strengthening the local electric grid that serves the community.

Think of it like widening a highway

When traffic increases, communities often build a wider road instead of asking everyone to share the same lanes. Electric transmission upgrades work in a similar way—they increase the system's ability to deliver power safely and reliably.

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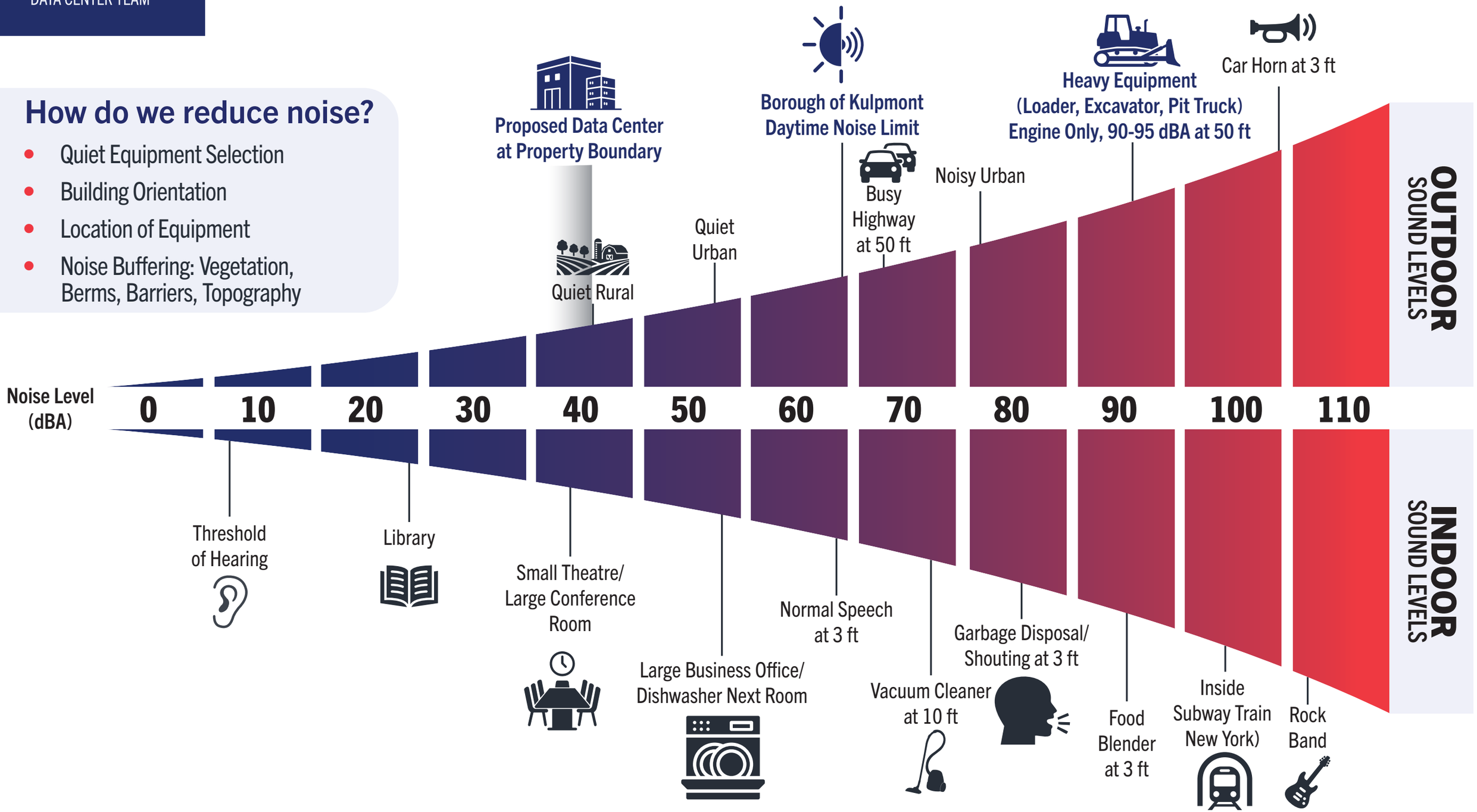
Common Noise Levels

How do we reduce noise?

- Quiet Equipment Selection
- Building Orientation
- Location of Equipment
- Noise Buffering: Vegetation, Berms, Barriers, Topography



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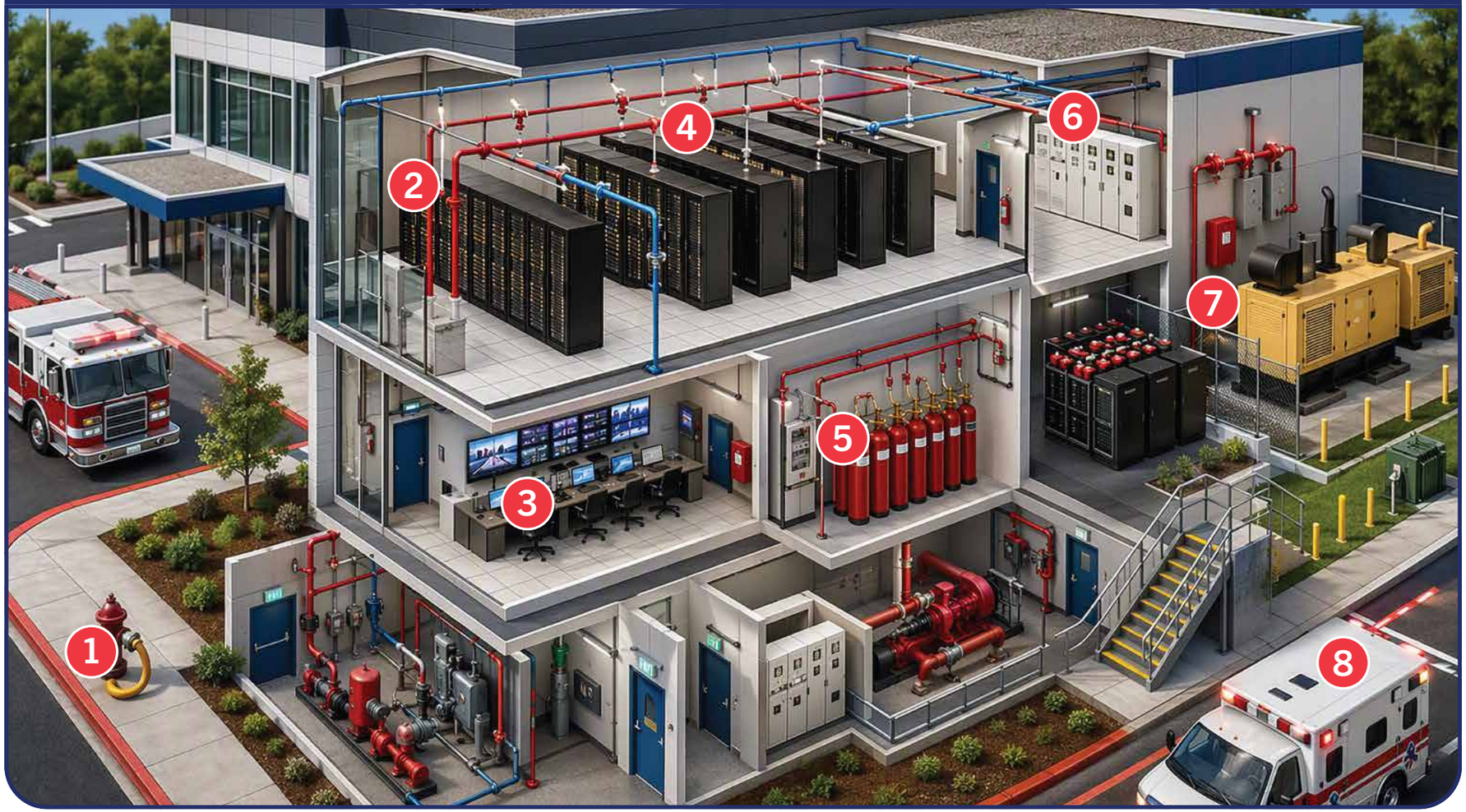
How Safety Is Integrated Into Data Center Design

Safety is integrated as a campus-wide system: prevent, detect, contain, suppress, notify and respond. Each layer is planned with the building layout, equipment rooms, emergency access and operations program.

Where The Safety Elements Are Found In The Building



1 Emergency Access
Fire lanes, hydrants, entrances and responder staging.

2 Building Separation
Fire-rated walls, compartmentation and egress routes.

3 Monitoring / Alarm Control
Fire alarm panel, security/operations monitoring and notifications.

4 Early Detection
Aspirating smoke detection and spot detection in high-airflow spaces.

5 Self-Contained Zones
Cylinder room, nozzles and discharge piping for sensitive equipment zones.

6 Pre-Action Sprinklers
Dry piping with controlled water release after detection/activation logic.

7 Electrical Equipment
Generators, electrical rooms, UPS/battery areas and fuel systems.

8 Operations + Response
Testing, maintenance, training and firefighter coordination.

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Community Vision Board

What data center investment could help support for Mt. Carmel Township

Revitalized streetscape, storefronts, sidewalks & lighting

Recreation centers, ball fields & trails

Safer roads, sidewalks & pedestrian connections

Career training, STEM labs & local workforce pathways

BY THE NUMBERS:

- **$1.974B** total economic activity
- **2,218** direct jobs created
- **1,027** indirect jobs
- **1,404** induced jobs
- **$17.2M** tax impact shown

High-Paying Local Career Pathways

$398.0M in direct employee compensation
Estimated $179,460 per direct employee, including benefits

- Construction trades, equipment operators, electricians, HVAC technicians and site inspectors
- Data center operations technicians, facility engineers, security and building services
- Apprenticeships, internships, community college and trade-school partnerships
- Opportunities to keep young residents working locally instead of leaving the region

A stronger tax base can create long-term opportunities to invest in the community.

New Roads & Sidewalks

Road resurfacing, turn lanes, drainage upgrades, crosswalks, ADA ramps, lighting and safer pedestrian routes.

Stronger Schools

Recurring school tax revenue could support higher teacher pay, classroom technology, STEM and career/technical programs.

Parks & Recreation

Ball fields, playgrounds, walking trails, recreation center upgrades, youth programs and senior activity spaces.

Main Street Business

Spending by workers can support restaurants, shops, service businesses, suppliers and local contractors.

Public Safety

Tax base can help fund fire, EMS, police, emergency communications, training and equipment replacement.

Utilities & Broadband

Water, sewer, fiber, electric reliability and broadband improvements can strengthen community infrastructure.

Housing & Quality of Life

Improved neighborhoods, beautification, blight removal, gateway signs, trails and family amenities.

Tax Relief Potential

A stronger commercial tax base can help reduce pressure on residents while supporting long-term township priorities.

Examples shown are potential community improvements and would depend on final approvals, local priorities, budgets and public decision-making.

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Economic Impact of Building a Single Data Center Building

Total Economic Output & Construction:

$1.974 BILLION

in Economic Activity comprised of:

- Direct Impact: **$1.476 Billion**
- Indirect Impact: **$261 Million**
- Induced Impact: **$237 Million**

Economic Value of Construction & Operations is equivalent to 41% of Northumberland County's Total Economic Output in 2024

Estimated Tax Impacts Of Construction & Employment:

Mount Carmel Township
$4.7 MILLION
(One-time $2.1 Million Tax Credit)

Includes an estimated **$2.6 Million** in property tax revenue which would continue on an annual basis

Mount Carmel Area School District
$13.6 MILLION
(One-time $3.1 Million Tax Credit)

Includes an estimated **$10.5 Million** in property tax revenue which would continue on an annual basis

Northumberland County
$4.9 MILLION

Commonwealth of Pennsylvania
$39 MILLION

IMPLAN | **Source:** Estimates generated via IMPLAN, based on Construction Cost Estimates (May 4-11, 2026).

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Data Center Investments Create Jobs and Fuel Local Economies

Direct Jobs:

JOBS CREATED TO BUILD & OPERATE THE DATA CENTER

$398,044,000

Estimated in employee compensation ($179,460 per employee*)

2,218
Jobs Created

- Construction Industry: **2,122**
- **Data Center Operations (Sustained Jobs): 55**
- **Building Services & Maintenance (Sustained Jobs): 41**

*Total Compensation including benefits

Indirect Jobs:

JOBS CREATED TO FULFILL PURCHASES NECESSARY TO BUILD THE DATA CENTER

$63,328,708

Estimated in employee compensation ($61,664 per employee)

1,027
Jobs Created

- Truck Drivers
- Employment Services
- Wholesale Machinery Sales
- Warehousing & Storage

Induced Jobs:

JOBS CREATED BY SPENDING BY EMPLOYEES WORKING ON THE SITE

$58,627,886

Estimated in employee compensation ($41,757 per employee)

1,404
Jobs Created

- Restaurants (All Types)
- Nursing & Community Care
- Retail - Motor Vehicle & Parts
- Retail - General Merchandise

IMPLAN | **Source:** Estimates generated via IMPLAN, based on Construction Cost Estimates (May 4-11, 2026).

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Clean Air Commitment

Data Center Power Generation • Fuel Cell Clean Power • Tier 4 Final Backup Equipment

Fuel Cells: Clean Primary Power

- Fuel cells generate electricity electrochemically – no combustion in the stack
- Dramatically lower NOx, SOx, and particulate emissions vs. traditional combustion
- Quiet, modular, on-site generation right-sized to the data center load
- Supports a resilient, low-carbon 24/7 power supply

Tier 4 Final — Backup Generation

- All standby/emergency generators meet EPA Tier 4 Final where applicable
- Ultra-low sulfur diesel with modern aftertreatment (DPF + SCR)
- Runs only for testing, maintenance, and grid outage events
- Runtime, fuel use, and emissions logged for agency review

Why Tier 4 Is Better for the Community

- Sharp reductions in NOx and particulate matter vs. older engine tiers
- Cleaner air near homes, schools, and public spaces around the site
- Ultra-low sulfur diesel for the lowest practical local impact
- Facility designed as an efficient electric load, not a combustion plant

EPA Tier 4 Rule Benefits — Backup Generators

~90%
NOx reduction

UP TO 95%
Particulate Matter Reduction

Long-Term Operations: Clean & Monitored

- Fuel cells produce power electrochemically — no combustion in the stack, no visible plume
- Efficient all-electric data center load with modern cooling systems
- Tier 4 Final backup engines used only for testing and outages, under permit limits
- Air permit conditions define emission limits, monitoring, recordkeeping, and reporting

Estimate Potential Emissions → **Liaise With PA Department of Environmental Protection** → **Determine Permit Category** → **Complete Required Reviews** → **Permit Decision**

Applies Clean Air Act / EPA standards, state air quality rules, permit thresholds, emissions modeling as required, and enforceable monitoring, recordkeeping, and reporting.

Cleaner Construction • Lower Community Impacts • Transparent Agency Review • Monitored Long-Term Operations

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Building Strong Foundations

Geotechnical Improvements for Abandoned Mine Land (AML) Data Center Development

Transforming Abandoned Mine Land

A targeted geotechnical and environmental improvement program converts mined land into a stable, clean, build-ready platform for mission-critical data center infrastructure.

Improved Safety
Reduces unstable ground, subsidence hazards, and construction risk.

Site Clean up
Removes or manages impacted material and improves environmental conditions.

Long-Term Performance
Increases bearing capacity and limits settlement for critical assets.

De-Risk Development
Validates ground conditions before vertical construction begins.

1. Site Soil Clean Up

Characterize, excavate, segregate, remove or cap impacted material; backfill with approved clean material.

RESULT: cleaner, safer, build-ready site

2. Dynamic Compaction

Use repeated energy transfer to densify loose fill, collapse void-prone zones, and improve settlement performance.

RESULT: denser soils, reduced settlement

3. Grouting

Drill and inject grout to fill mine voids, stabilize fractures, and strengthen bearing zones below future infrastructure.

RESULT: stronger ground, reduced void risk

Before: Legacy Mine Land Challenges

Unstable ground • Unknown voids • Impacted soils/water • Limited bearing capacity

After: Transformed & Build-Ready

Clean remediated site • Verified performance • High bearing capacity • Data center ready

Why It Matters

Safer Construction & Operations
Ground improvement lowers geotechnical uncertainty and field hazards.

Cleaner Environment
Soil clean up supports healthier site conditions and community confidence.

Reliable Critical Infrastructure
Engineered foundations support resilient, high-performance facilities.

A stable, clean site built for high-performance data centers.