

Lansing Marketplace

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Introduction

- Former location of Lansing City Market
- Redeveloped into 13,352 square foot, five-story, multi-unit residential apartment units
- Future phases of development to include: mixed-use, office and hotel



Background

- Former industrial property dating back to the 1880's
- Specific uses include: Lansing Iron and Engine Works, streetcar storage and repair, chemical storage warehouse, gasoline station, foundry, galvanizing plant, auto repair facility, and sheet metal works
- Development hindered by buried contaminated fill and debris, obsolete buildings, and chlorinated compounds in soil and groundwater

Partnerships

- City of Lansing
Brownfield
Redevelopment
Authority
- Lansing Economic
Area Partnership
(LEAP)
- Michigan Economic
Development
Corporation (MEDC)
- Department of
Environmental Quality
(DEQ)
- Gillespie Group



Financing

- \$1 million Clean Michigan Initiative Brownfield Redevelopment Grant
- \$1.9 million Michigan Brownfield Tax (MBT) Credits for phase one
- \$ 1.6 million future MBT Credit on future phases
- \$ 11.3 million Private Investment
- \$1.6 million City Market Relocation
- \$6.7 million Brownfield Tax Increment Financing (TIF) for site preparation, infrastructure, and lead and asbestos abatement

Grant Funded Activities

- Site Investigation and preparation of a Baseline Environmental Assessment (BEA)
- Transportation and disposal of 23,377 tons of contaminated soil
- Pumping and disposal of 67,400 gallons of contaminated groundwater
- Design and installation of a 432 square feet of GeoSeal Vapor Barrier with vent risers and wind turbines
- Completion of Documentation of Due Care Compliance

Challenges

- Ownership / Liability
- Lansing City Council Brownfield Plan Approval
- Existing business relocation (City Market)
- Environmental Conditions – onsite and offsite

Soil and Groundwater Issues

- Contaminants of Concern: Volatile Organic Compounds (VOCs), Polynuclear Aromatic Hydrocarbons (PAHs), and metals
- Pathways of Concern: Drinking Water, Drinking Water Protection, Direct Contact, and Volatilization to Indoor Air

Pathway Evaluation

- Drinking Water/Drinking Water Protection was addressed by municipal water services provided to the site
- Direct Contact was addressed by excavation and a direct contact barrier consisting of a parking lot and engineered landscaping
- Volatilization to Indoor Air was addressed using a vapor mitigation system

VI Pathway

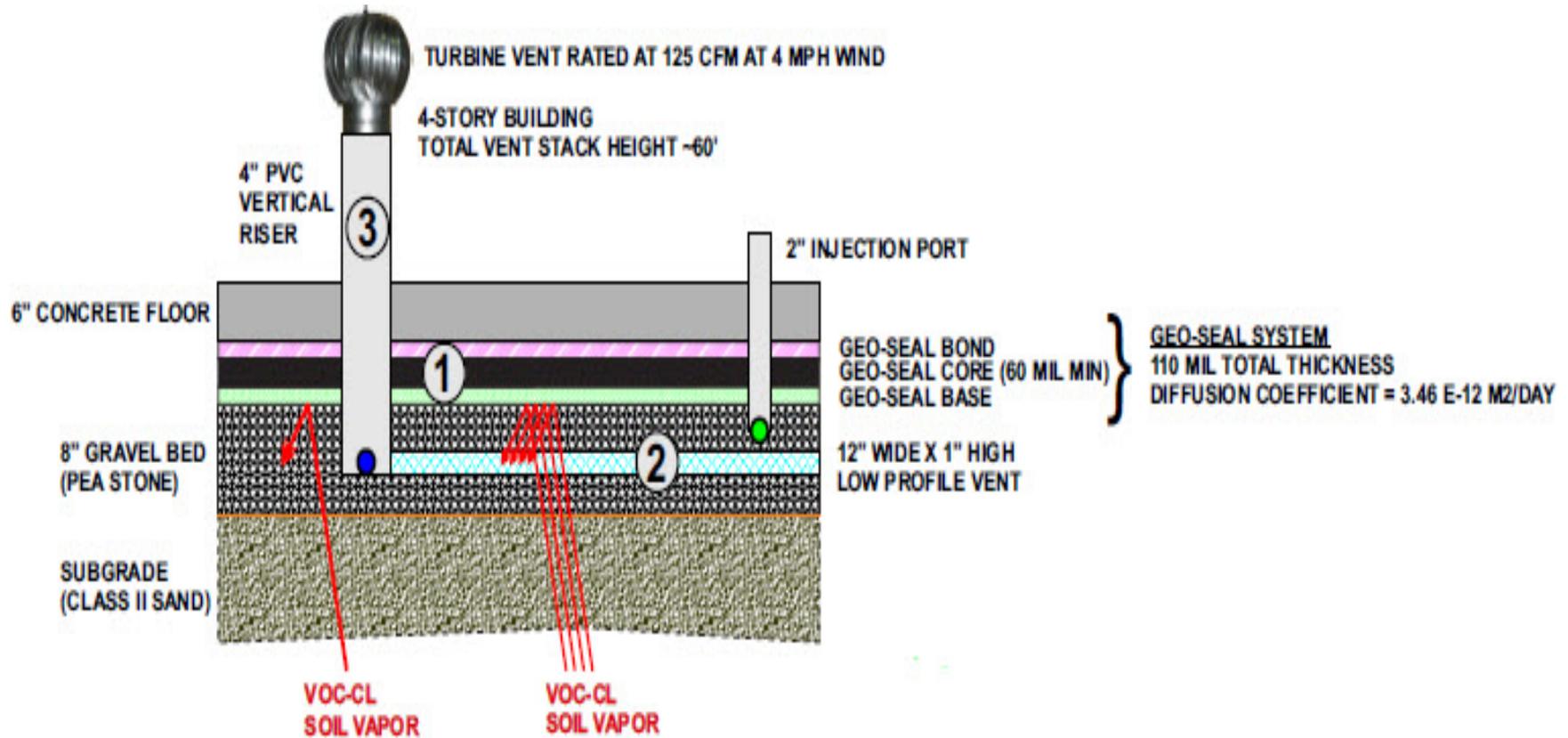
- Site Conditions
 - Chlorinated VOC impacts vertically at least 20 feet below grade in a saturated sand layer
 - New City Market located approximately 25 feet west of the development site
 - Contamination extended horizontally beneath the City Market parking lot and under the building



Vapor Intrusion

- Vapor System Design
 - Horizontal, perforated, sub-grade vent piping installed in pea gravel layer
 - A minimum 110-mil thickness GEO-Seal multi-layer system
 - Passive ventilation system to provide a preferential pathway for vapor phase diffusion

Vapor Intrusion System Design



Vapor Intrusion

- Post-Installation Testing
 - Smoke Testing: failed.
 - Helium Testing: confirmed.



Vapor Intrusion



- Smoke Testing
 - Smoke introduced into injection ports installed beneath the barrier
 - Evidence of smoke was not observed at vent risers located on roof
 - Why Not?

Vapor Intrusion

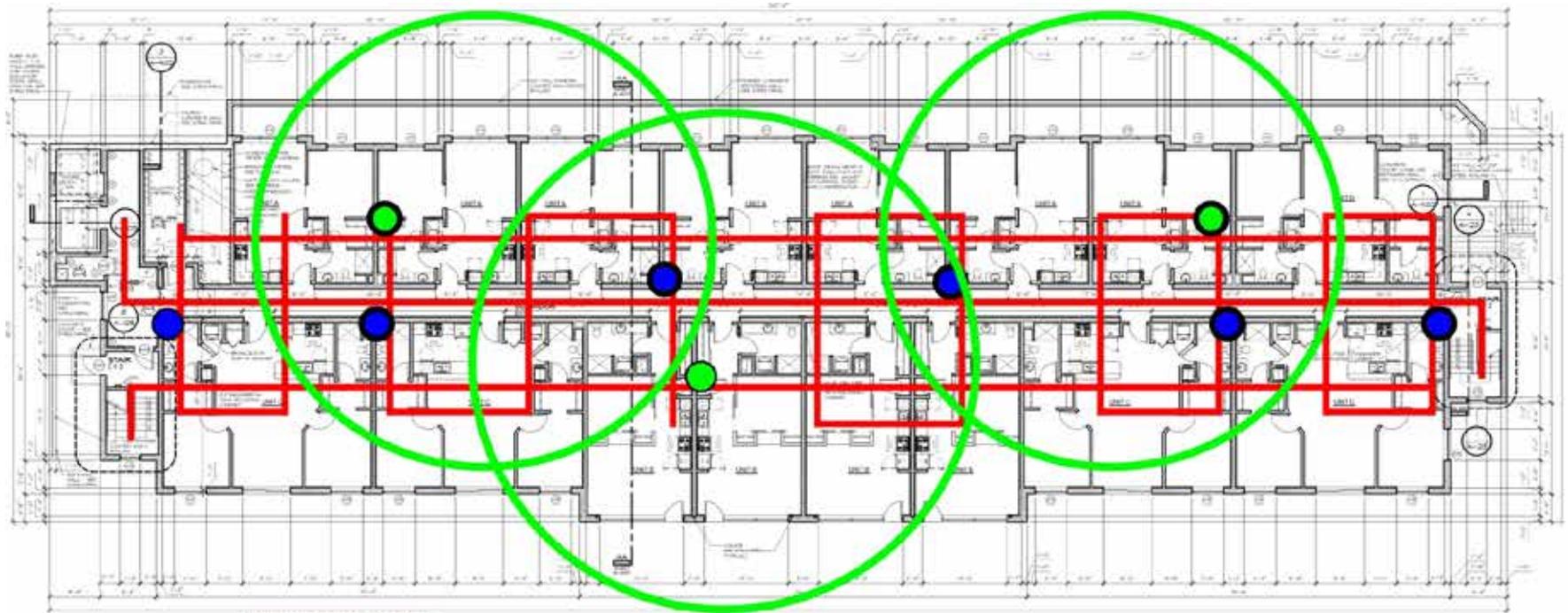
- Why Not?
 - Because smoke was not a gas but a vaporized liquid, it was impeded by the pea stone aggregate base

Vapor Intrusion

- Helium Testing
 - Helium gas injected into 3 ports on ground level of building
 - Movement of helium gas was accelerated beneath the vapor barrier
 - Helium detector used to measure concentrations at each of 6 vent risers on the roof of the building



Vapor Intrusion



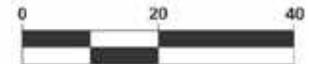
MINIMUM DISTANCE HELIUM DETECTED IN VENT RISER AT ROOF LEVEL FROM INJECTION PORT USED TO FIELD VERIFY COMMUNICATION IN THE GRAVEL BED, SUBSLAB VENTS, AND VENT RISERS THAT EXHAUST TO THE BUILDING ROOF

LEGEND

● 2" INJECTION PORT

● 4" VENT RISER

— 12" WIDE X 1" HIGH LOW PROFILE VENT



GRAPHIC SCALE: 1" = 20'

Placemaking through Brownfields

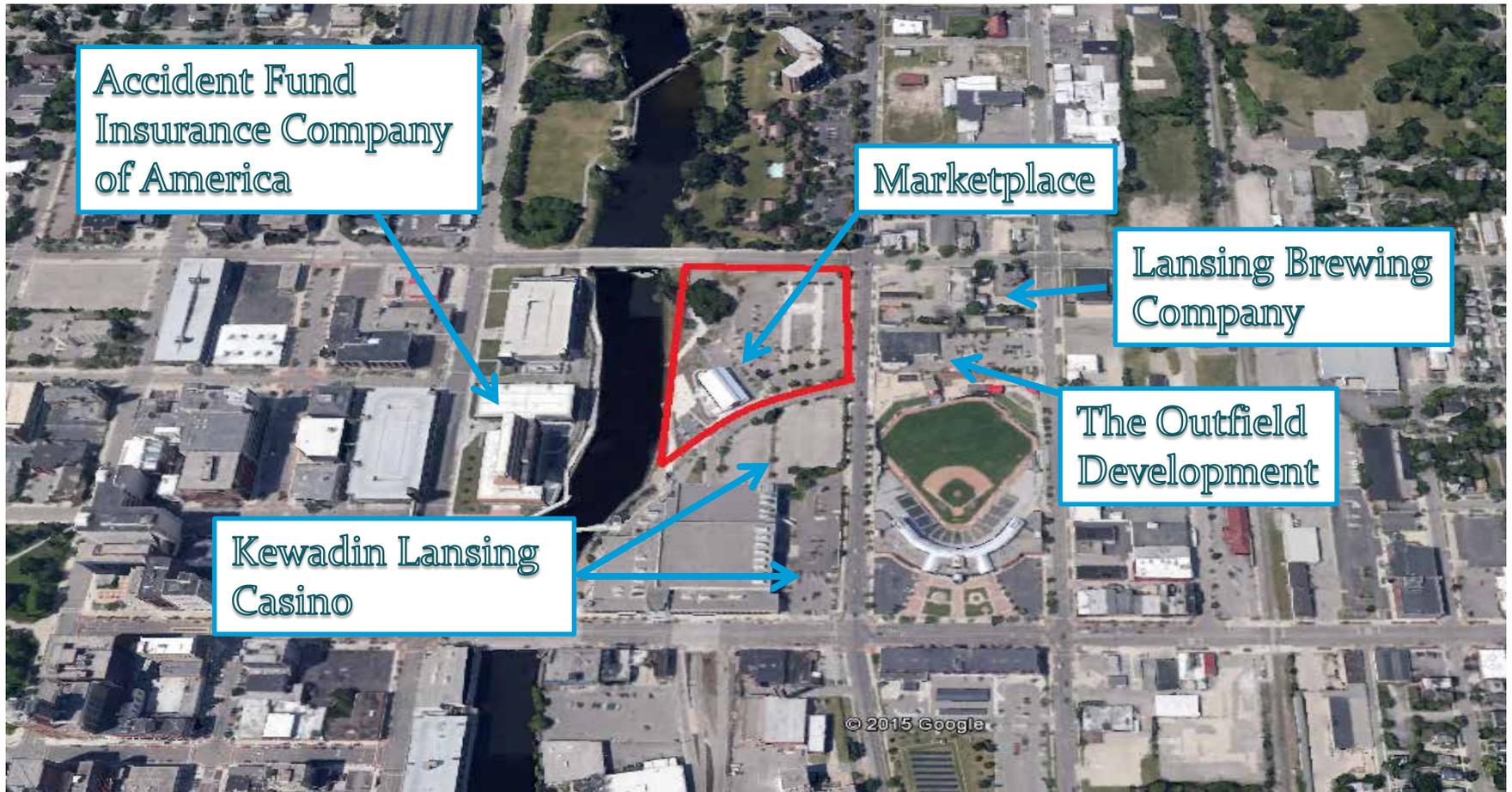
- Importance of the Grand River
- Marketplace Apartments
- Lansing City Market
- Accident Fund Redevelopment
- The Outfield Development
- Lansing Brewing Company
- Kewadin Lansing Casino
- SkyVue on Michigan
- Red Cedar Development



Importance of the Grand River



Redeveloping Lansing



Marketplace Apartments

- 80 Apartments
- Attracting Young Professionals
- \$9 million Investment



Lansing City Market

- Diverse Vendors
- Local Walkable Grocery Option
- \$1.6 million investment



Accident Fund Headquarters

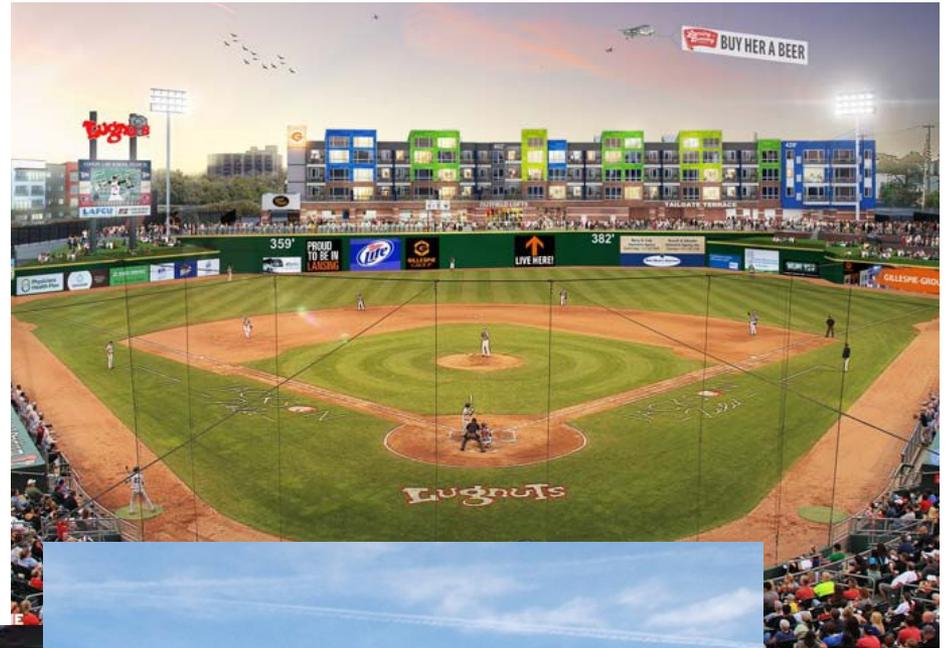


- National Headquarters
- Over 500 Downtown Professionals
- \$182 million investment



The Outfield

- 82 Apartments
- \$8.5 million in private investment
- \$13.5 million in Cooley Law School Stadium Improvements



Lansing Brewing Company



Kewadin Lansing Casino

- Enhance the Lansing Center
- Lansing Promise



- \$200 million Investment
- 1,500 jobs

SkyVue on Michigan

- \$80 million investment
- 359 units



- 9-story, 667,000 SF
- 6-story Parking Structure



Red Cedar Development



Stronger Together



- Mayor Bernero & Lansing City Council
- Lansing Brownfield Redevelopment Authority (LBRA)
- Michigan Economic Development Corporation (MEDC)
- Michigan Department of Environmental Quality (MDEQ)

Contact Information

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