

Planning for the Future:

A Reuse Planning Report for the Avanti Superfund Site



April 2006

EPA Region 5
Superfund Redevelopment Initiative

funded by
United States Environmental Protection Agency

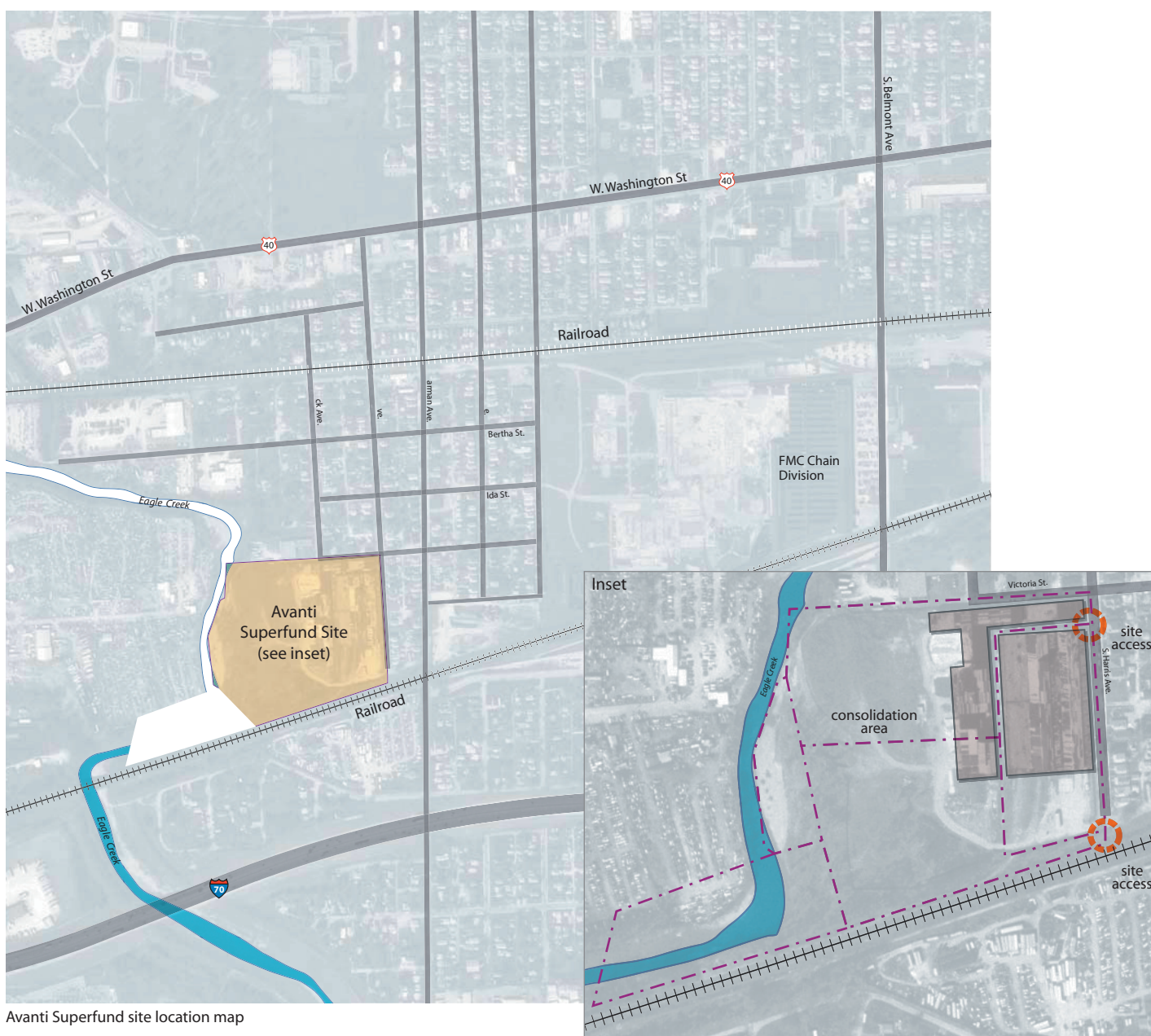
prepared for
City of Indianapolis, Indiana
Marion County, Indiana

prepared by
E²Inc.

Introduction

Funded by EPA's Superfund Redevelopment Initiative and EPA Region 5, environmental consulting company E² Inc. conducted a situation assessment in Indianapolis, Indiana in October 2005 to gather information and assess potential opportunities, challenges, and key considerations related to the future use of the Avanti Superfund Site.

Based on information gathering and meetings with officials from Marion County, the City of Indianapolis, EPA Region 5, Indiana Department of the Environment (IDEM) site staff, and PRP and site owner representatives, E² Inc. provided several project services designed to ensure that reuse planning activities at the site would be compatible with the site's remedy and ensure the remedy's protectiveness. Project activities included coordinating ongoing communication among three teams of project stakeholders, assisting the municipality with information needs, and providing analysis of the Conceptual Park Plan developed for the site in January 2005. From November 2005 to April 2006, project stakeholder teams worked to accomplish tasks related to the transfer of site ownership, site preparation, and long-term reuse planning.



Avanti Superfund site location map

Avanti Site History and Current Site Status

The 17.4-acre Avanti site is located at 502 South Harris Ave, in Indianapolis, Indiana. The site is bounded on the north by Victoria Street, on the east by South Harris Avenue, on the south by Conrail railroad tracks, and on the west by Eagle Creek. The site consists of five parcels, three of which are currently listed as county surplus property. The remaining two parcels are zoned for light industrial uses, and include portions of the Eagle Creek waterway.

Past industrial operations at the Avanti site have included a battery recycling operation, a lead smelter, and a lead oxide facility. Western Lead and Quemetco operated at the site during the 1960s and early 1970s, and the Oxide and Chemical Corporation operated at the site from 1974 until 1977. The lead smelting facility ceased operations in 1977, and several other businesses, including a recycling facility, have operated on the site since that time. The site is currently owned by the Avanti Development Corp., Inc. All five of the parcels that comprise the Avanti Superfund site have been tax delinquent since the Avanti Development Corp., Inc. purchased the site in 1993.

In January 1994, EPA signed an Action Memo for a fund-lead time-critical removal action at the site, and currently holds a lien on the site which, if perfected, would currently be valued at \$774,753. Several site PRPs, including Johnson Controls, conducted certain removal actions at the site. Removal action activities began in March 1994, and the scope of work was divided into Phase I and Phase II activities. Phase I addressed residential properties surrounding the site, and included removal of lead contaminated soils and complete restoration of 287 residential properties surrounding the Avanti site. Phase II activities addressed on-site contamination, and included on-site consolidation and capping of over 130,000 cubic yards of impacted industrial materials and residential soils, and decontamination of 105,000 square feet of industrial facility buildings.

Contaminated soil was placed in a six-acre consolidation area in the center of the site. The consolidation area cap consists of 18 inches of clean soil and six inches of topsoil. Contaminated soils remaining outside of the consolidation area were covered with 24 inches of clean soil. Battery casings, construction debris, scrap, and soil disposed of on the vacant western portion of the site during industrial operations created a steep drop-off to the creek along the site's western boundary. During removal action activities, contaminated debris in this area was removed and soil was disposed of in the on-site consolidation area.



View of the consolidation area and warehouse buildings

Additional work included the removal of underground storage tanks, installation of monitoring wells, and construction of a gravel road from the main site entrance to the site's consolidation area. The consolidation area was fenced and planted with prairie grass in June 1999. Site PRP Johnson Controls is responsible for operations and maintenance activities at the site, which include cutting grass and quarterly inspections to ensure the integrity of the site's remedy for 30 years.

The main site entrance is a gated gravel road located at the intersection of Victoria Street and South Harris Avenue, at the site's southeastern corner. Infrastructure remaining on-site includes two large dilapidated warehouse buildings, which are located on the northwestern portion of the site. One business, a decking company, also operates in a third warehouse in this area. A second, paved site entrance, the only active entrance at the time of completion of this report, extends between the decking company warehouse and the northern edges of the dilapidated warehouses. The fenced remediation consolidation area is located just west of the site's warehouse buildings. The site is also surrounded by a perimeter fence.



View of the site entrance and gated gravel road at the intersection of Vandalia Ave. and South Harris Ave.

West Indianapolis Community Description

The Avanti site is located in a low to moderate income neighborhood in West Indianapolis. Existing land uses in Wayne Township near the Avanti site include a blend of residential, industrial, highway commercial, and recreational land uses. Single-family detached homes are situated on small lots along narrow streets. The neighborhood immediately adjacent to the site is described as a working class community of approximately 10,000 residents, according to the 2005 Conceptual Park Plan for the Avanti site completed by Vandewalle & Associates.

West Indianapolis is connected to downtown Indianapolis via the Washington Street corridor. Washington Street includes a blend of civic, service-related, and retail establishments that serve the needs of local residents. Significant local economic sectors include industrial, manufacturing, trade, and service sectors. Major manufacturing operations in the area include FMC Chain Division, Eli Lilly Industrial Center, Chevrolet Motor Division plant, Reilly Tar and Chemical, Olin Brass, Detroit Diesel Allison Plant 8, and a number of smaller plants. Many scrap and salvage yards are located in the area surrounding the Avanti site, including a junkyard that is situated on the opposite bank of Eagle Creek.

Local recreational facilities include Max Bahr Park, Rhodius Park, and area schools, which provide recreational trails, ball fields, tennis courts, basketball courts, playgrounds, picnic pavilions, a swimming pool, and a family center. Soccer fields located on the city-owned Central State property along Washington Street, approximately ½ mile from the Avanti site, are being replaced by new commercial development. The neighborhood adjacent to the site has limited access to existing parks and recreational facilities. Neighborhood residents have indicated significant interest in the remediation of the Avanti site, as well as interest in future use opportunities, such as recreational land uses, that could address community needs and provide a community-wide amenity.



West Indianapolis neighborhood street



Washington Street Business District



Golf soccer fields on Washington Street

Team Stakeholders, Responsibilities, and Updates

The Avanti site reuse planning process to date has included organizing project stakeholders into three overlapping teams to plan for the steps necessary to facilitate the transfer of the site from the site's current owners to Marion County, to prepare the site for future uses, and to develop long-term site reuse plans. Each of these teams, their goals, and progress to date are described in this section of the report.

Project Stakeholders

Avanti Development Corp., Inc.: Paul Jerry Roland

City of Indianapolis Brownfields Program: Christopher Harrell

E² Inc.: Alisa Hefner, Melissa Taylor, and James Wilkinson

Health and Hospital, Inc.: Tom Dewell

City of Indianapolis Parks Department (Indy Parks): Don Colvin and Paul Smith

Johnson Controls: Dennis Reis

Marion County Treasurer's Office: Cindy Land and Heather Tolin

Marion County Treasurer's Office Counsel Representative: Doug DeGlopper

Office of Corporation Counsel: Tavonna Harris and Stephanie Roth

Project Resource Members

EPA Region 5: Tom Bloom, Kevin Chow, and Ken Rhame

Indiana Department of Environmental Management (IDEM): Resa Ramsey, Andrea Robertson, and Deborah Wright

Site Transfer and Acquisition Team

Goals

The Site Transfer and Acquisition Team has worked to outline the best approach by which Marion County could acquire the Avanti Superfund site. The actions agreed upon by the group to achieve this goal are described below:

- Action #1: - Marion County and Indy Parks will work with EPA and IDEM to address the municipality's liability concerns. This action includes understanding site ownership options and liability implications, understanding the implications of "owner" status under Superfund, understanding Bona Fide Prospective Purchaser requirements and whether the municipality qualifies for these protections, clarifying the status of existing EPA liens on the site, and identifying appropriate tools to address site liability concerns.
- Action #2: Marion County and Indy Parks will work with EPA and IDEM to review existing site documents to determine the need for additional sampling at the site and to clarify responsibility for additional sampling, as necessary.
- Action #3: - Marion County and Indy Parks will work with EPA and IDEM to identify and implement appropriate site engineering controls and institutional controls before Marion County takes ownership of the site's five parcels.
- Action #4: Marion County will address junkyard encroachment on site parcel #9015279.

Progress to Date

After reviewing relevant federal and state regulations, EPA Site Attorney Kevin Chow and representatives from the Marion County Treasurer's Office determined that one option for Marion County to obtain liability protection is by taking ownership of the Avanti site parcels through "involuntary acquisition" under CERCLA. The Indiana State Code provides liability protections for government entities that acquire property through tax delinquency. At the federal level, CERCLA states that the term "owner or operator" does not include a unit of state or local government which acquires ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function as sovereign. Mr. Chow further determined that another option is for the municipality to qualify as a "bona fide prospective purchaser" (BFPP) under CERCLA; all BFPPs, whether municipal or private, receive liability protection but must conduct "all-appropriate inquiries" (AAI) in order to receive the protection. However, in cases where a municipality takes ownership of a site by "involuntary acquisition" (including tax delinquency), there is no requirement for AAI. Under either of these options, liability protections are conditioned upon the municipality's compliance with a number of other statutory duties with respect to the site, such as duties of due care, access, implementation of institutional controls, and providing notice of any hazardous substance releases.

Marion County anticipates taking ownership of the Avanti parcels when all five of the parcels that comprise the site are eligible for involuntary acquisition. Three of the site's parcels have been through two tax sales and are currently eligible for involuntary acquisition by the county. The remaining two parcels were included in an expedited second tax sale on March 29, 2006. Following a mandatory 90-day redemption period, all five parcels will be eligible for involuntary acquisition by Marion County between July and August 2006. Through the consolidated Unigov system of government under which Marion County and the City of Indianapolis operate, the Marion County Treasurer's Office can take ownership of the Avanti parcels and sign a separate resolution with Indy Parks, stating that future uses at the site will be limited to parks. Such a resolution would allow Indy Parks to use the site without any additional legal transfer of property.

Indy Parks representatives have determined that the junkyard adjacent to Avanti parcel #9015279 is encroaching on the parcel, which is located on the west bank of Eagle Creek. Marion County representative Cindy Land stated that the parcel in question could be removed from parcels that will be dedicated to the consolidated park area, to expedite reuse of the Avanti site. Marion County representatives anticipate addressing the encroachment issue following the March 29th expedited tax sale.

The team also discussed the status of the existing \$774,753 EPA lien on the site, as well as the potential for EPA to perfect a windfall lien at the site in the future. EPA staff have indicated that, at the appropriate time, EPA could issue a site status comfort letter. The letter would acknowledge that the municipalities have taken the actions necessary to ensure that the Avanti site's remedy is protective, the site is available for reuse, and that beyond long-term operations and maintenance, EPA anticipates no further interest in the site. EPA staff further stated that EPA could issue a second comfort letter to assure the future owners that EPA will not perfect a windfall lien at the site as long as the site is reused for public purposes. EPA may also remove the current lien.

Team members have determined that soil conditions at the site must be confirmed prior to the site's future use. EPA and IDEM representatives have identified several areas of the site where it is unclear whether soil contamination exceeds action levels. Areas in question include the western portion of the site, adjacent to the western boundary of the consolidation area, and the southeastern portion of the site, adjacent to the southern limits of the warehouse buildings. A Data Gap Team led by EPA Region 5 Superfund Redevelopment Coordinator Tom Bloom, and including IDEM's Resa Ramsey, Indianapolis Brownfields coordinator Chris Harrell, and current site RPM Ken Rhame or former RPM Sonya Vega, will address remaining questions related to the condition of exposed site soils, the condition of soils beneath concrete building pads, and the building demolition process.

A Legal Team led by EPA Site Attorney Kevin Chow, and including Marion County Treasurer's Office Independent Counsel Doug DeGlopper, and representatives from the City and County's Office of Corporation Counsel Stephanie Roth and Tavonna Harris, will address the development of institutional controls as well as other legal issues related to the site.

Site Preparation Team

Goals

The Site Preparation Team has worked to ensure that site conditions will be as optimal as possible for the site's future reuse following its acquisition by Marion County. The actions agreed upon by the group to achieve this goal are described below:

- Action #1: The representative from PRP Johnson Controls will meet with company staff and other site PRPs to determine whether funds are available to assist with the removal of existing buildings on site.
- Action #2: Team members will confirm available site preparation funding resources and the cost of building demolition and building pad retention for Marion County and Indy Parks.
- Action #3: Team members will determine potential timeframes for building demolition and clarify the order in which site ownership transfer and building demolition should take place.
- Action #4: EPA will clarify future operations and maintenance responsibilities for the municipality based on the transfer of site ownership and building demolition.

Progress to Date

Johnson Controls representative Dennis Reis has stated that Johnson Controls will make funding available for site preparation. Specific funding amounts will depend on the resources provided by other responsible parties. The Site Preparation Team has identified a list of actions that could be supported by PRP funding, including building demolition, bore sampling through concrete slabs, sampling soil cells on the site, conducting additional site preparation work, and assisting with costs related to site reuse plans. The Data Gap Team will finalize this list, develop cost estimates, and follow up with Mr. Reis, who will use this list to pursue further discussions with the site's PRPs. Following transfer of site ownership and building demolition, Marion County and Indy Parks will take full responsibility for future operations and maintenance at the Avanti site.

Marion County and Indy Parks representatives anticipate that the demolition of existing warehouse buildings will occur shortly after the site is acquired. Based on demolition cost estimates provided by Marion County's Health and Hospital, Inc., the cost of removing both buildings and concrete slabs is estimated at \$293,600, and the cost of removing buildings alone is estimated at \$115,800. These cost estimates do not include the occupied northernmost warehouse building on the site. If Marion County and Indy Parks determine that the building will not be retained for future use, the demolition cost estimates will need to be revised to include this additional structure. The team noted the importance of updating local residents on the status of the site's acquisition and Marion County and Indy Park's interest in working with local community members to identify potential recreational reuse opportunities for the site prior to demolition of warehouse buildings at the site.

Site Long-Term Reuse Planning Team

Goals

The Site Long-Term Reuse Planning Team worked to develop a long-term site reuse strategy and community involvement approach that will lead to a community-based reuse plan for the Avanti Superfund site. The actions agreed upon by the group to achieve this goal are described below:

- Action #1: Based on the Conceptual Park Plan for the site that was completed by Vandewalle & Associates in January 2005, as well as site information and community feedback, the team will develop a site reuse strategy that can be phased in over time, as resources become available.
- Action #2: The team will design an effective community involvement strategy that will be implemented at the appropriate time to ensure that surrounding neighborhoods can inform the mix of recreational uses that will be located at the site.
- Action #3: The team, led by Indy Parks resource specialists, will conduct research to identify resources and partnership opportunities that can support the development of a park and recreational facilities at the site.

Progress to Date

Site reuse plans will be developed through a community-based planning process. Indy Parks will organize a Community Involvement Team beginning in June 2006. The team will be led by Indy Parks' Resource Development Coordinator Don Colvin, with assistance from Cindy Land at the Marion County Treasurer's Office. EPA and IDEM staff will also be involved as resource members to provide site and remedy information to the community. The Community Involvement Team will develop a community involvement strategy and engage community stakeholders in the reuse planning process.

To support the reuse planning process, the project's consultant team presented a draft analysis of the Conceptual Park Plan (CPP) for the site that was completed by Vandewalle & Associates in January 2005. The site analysis evaluates the 2005 CPP based on available site and remedy information as of February 2006. The site analysis also outlines potential site reuse opportunities and limitations, and is designed to help inform ongoing site reuse discussions. The analysis is included in Appendix A of this report.

While reuse assistance opportunities will be explored further by the team, resources may be available through the U.S. Soccer Foundation, which offers a program that supports municipalities seeking to develop soccer fields on former Superfund sites. The foundation has set aside funding for Superfund redevelopment projects, and is currently interested in identifying candidate sites for implementation. The project's consultant team will be able to link Marion County and Indy Parks with the U.S. Soccer Foundation at an appropriate time determined by the County and City.

Avanti Superfund Site Reuse Planning Next Steps

The Avanti Superfund site reuse planning teams have made significant progress to date. Team members have determined that Marion County will take ownership of the Avanti site parcels through involuntary acquisition in July or August 2006. EPA has further indicated that, at the appropriate time, EPA could issue both a site status comfort letter and a second comfort letter to assure the future owners that EPA will not perfect a windfall lien at the site as long as the site is reused for public purposes. PRP Johnson Controls has stated a willingness to provide funding to support the preparation of the Avanti site for future uses, and stakeholders have determined that community involvement will play a key role in planning for the site's reuse. Next steps that the Avanti site teams will need to address in order to facilitate the site's reuse are described below:

Site Transfer and Acquisition Team

- Marion County will take action to ensure that the junkyard encroachment on site parcel #9015279 will be addressed.

Data Gap Team

- EPA and IDEM will confirm current soil conditions at the site, determine where additional soil sampling is required, and how sampling will be conducted.
- Team members will determine where bore sampling through concrete pads will take place and who will be responsible to conduct those tests.
- Team members will determine how debris on the steep slopes of the western side of the site will be addressed.
- - Health and Hospital, Inc. will update building demolition cost estimates to include the northernmost warehouse building as necessary.

Legal Team

- Team members will hold at least two conference calls and finalize a comprehensive list of items to be addressed during the first call. Team members will:
 - clarify additional actions necessary in order for the City of Indianapolis Brownfields Program to issue a site status letter that supports site reuse;
 - determine an acceptable approach to confirm soil conditions on the site;
 - identify and address any remaining liability concerns related to site acquisition and reuse;
 - develop appropriate institutional controls for the site;
 - confirm the Unigov relationship between Marion County and the City of Indianapolis to ensure appropriate legal actions are taken. (Additional site transfer could nullify the protections afforded to the municipality due to involuntary acquisition); and
 - draft comfort letters for both the EPA lien and the windfall lien.

Site Long-Term Reuse Planning Team

- Team members will develop a reuse planning timeframe for next steps, including site acquisition, building demolition, community involvement, and anticipated reuse.
- Indy Parks will establish a Community Involvement Team.
- Community Involvement Team Members will develop a strategy to engage the community in identifying the site's future uses.
- Team members will identify resource and partnership opportunities for the site's reuse.

Timeline for Project Next Steps

<i>Action</i>	<i>Timeframe for Completion</i>
Marion County to hold an expedited second tax sale for remaining parcels	March 29, 2006 (COMPLETE)
Legal Team to hold 1-2 discussions to address legal issues	April-May 2006
Data Gap Team to identify data gaps	May-June 2006
Indy Parks to establish a Community Involvement Team	June 2006
Community Involvement Team to inform the community of intended site reuse	Late July-early August 2006
Marion County and Indy Parks to coordinate demolition of warehouse buildings on the site	Early September 2006

To date, project stakeholders have built a strong foundation for the future use of the Avanti Superfund site. As this report outlines, there are also a series of important steps that Marion County and Indy Parks, site PRPs, and EPA and IDEM will need to take to enable the site's reuse. In addition, as the project moves forward, it will be critically important for Marion County and Indy Parks to implement a broad and comprehensive community outreach and involvement process to ensure that local residents can help inform the development of a recreational reuse plan for the Avanti site. Such a process would engage residents and identify the full range of the community's reuse concerns, preferences, and priorities for the site. The process could be committee-based and could include a series of community meetings to identify reuse interests and to build consensus support among local resident stakeholders for the reuse planning process.

Future planning efforts will also need to take site's surroundings into account and integrate the site with the larger area. For instance, linking the site to the planned Eagle Creek Trail could expand the site's recreational scope from a neighborhood amenity to a local and regional recreational asset.

APPENDIX A

Introduction

PRP Johnson Controls sponsored a reuse planning process for the Avanti Superfund site that was completed by Vandewalle & Associates in January 2005. The Conceptual Park Plan (CPP) for the site included play fields, basketball courts, a tot lot, and building space for Indy Parks. Since the conceptual plan was drafted, additional site information and reuse considerations have emerged. This site analysis evaluates the 2005 CPP based on available site and remedy information as of February 2006. The site analysis also outlines potential site reuse opportunities and limitations and is designed to help inform ongoing site reuse discussions. The analysis is an initial review.

The site analysis divides the site into character areas based on key characteristics, such as similar land uses, existing conditions, or future use limitations:

- *Existing Building Area* – consists of existing warehouses and concrete pad area
- *Existing North Access* – paved access road enters site near the intersection of Harris Avenue and Victoria Street
- *Southeastern Corner* – open area south of existing buildings
- *Existing South Access* – a graveled entrance drive at the intersection of Harris Avenue and Vandalia Avenue
- *Containment Cell* – onsite consolidation area of contaminated soil centrally located within the site
- *Woodland Bluff* – a wooded bluff with steep topography that separates the site's upland area from the Eagle Creek floodplain
- *Eagle Creek* – local waterway that originates from the Eagle Creek reservoir, located north of the site, and joins the White River south of the site.
- *Eagle Creek Trail* – a proposed 16-mile trail planned alongside Eagle Creek

Key General Findings:

- The CPP proposes a variety of recreational opportunities for a range of age groups that could serve as a multi-use community amenity. The plan also includes building space for park facility needs and the opportunity to connect the site with the planned Eagle Creek Trail. However, the CPP does not appear to comprehensively incorporate the implications of remedy restrictions and site characteristics for future uses at the site. The Plan also does not take community needs and priorities into account.
- Review of site information and remedy considerations indicates that there are both significant potential future use opportunities and restrictions that will need to be taken into account.
 - o - The Avanti site is located in a low-income neighborhood in West Indianapolis that has limited access to parks and recreational facilities. The site's reuse could provide needed recreational opportunities for local residents. Located along the planned Eagle Creek Trail, the site could also provide recreational opportunities to the larger region.
 - o - Several reuse restrictions exist and will likely need to be considered in order to ensure the protectiveness of the site's remedy. It is likely that the site's concrete building pads will be retained and will therefore need to be incorporated into reuse plans for the site. The steep side slopes of the site's containment cell will likely need to be protected in order to prevent the cap's erosion.

- Future planning efforts will need to take site’s surroundings into account and integrate the site with the larger area. These efforts will also likely need to include local stakeholders as part of a community outreach and involvement process to identify local needs and priorities for the site’s future uses.

The section below recaps text that accompanies the two site analysis maps and provides additional details for each of the character areas.

Specific Analysis Findings

Existing Buildings Area

Based on EPA information, the large warehouse buildings located at the site will likely be removed. It has not been determined whether the office/warehouse building currently in use by a decking company will also be demolished or retained for use by Indy Parks. EPA expects that the concrete pads associated with the demolished buildings will likely remain in place due to potential contamination located below the pads. These pads will need to be incorporated as part of the site’s reuse unless bore tests are conducted and do not identify any contamination of concern.

Conceptual Park Plan

The Conceptual Reuse Plan does not consider retaining usable existing buildings or address the location of the concrete pads. Some of the hard surface areas proposed in the CPP overlap the concrete pad area, including a pavilion, paved outdoor plaza area with a fountain, basketball courts, and a parking area. However, a majority of the area is designed as an “open green” that would require either pad removal or engineered soil cover for planting. The CPP also locates a significant number of shade trees within the concrete pad area. Tree planting would likely not be feasible in this area due to insufficient space for tree roots.

The Existing Buildings Area likely will not be able to accommodate all proposed uses outlined in the Conceptual Park Plan.

Potential Future Use Opportunities

- The preservation of one well-maintained warehouse building on the site could provide additional storage and office capacity or could serve as a community center.
- The area’s concrete pads could be reused/adapted for new building foundations, hard court/paved surface athletics, parking, outdoor market space, an outdoor theater, and picnic shelters. These hard surface areas could also potentially support recreational activities such as a skate or bike park, basketball or tennis courts, mini track circuit, playgrounds, or exercise stations.

Key Future Use Considerations

- It may be possible to cover the concrete pads with soil and expand the future use opportunities for this area. Feasibility and costs would need to be evaluated to determine if this is a viable option.
- Some of the concrete pads are in fair to poor condition and would need to be repaired before being reused. It is unknown at this time whether the condition of the concrete pads would limit reuse opportunities. The location and size of these pads also shapes the reuse plan by designating certain uses in these areas.

- New features may require new or modified infrastructure. It may need to be determined if new construction will disturb potentially contaminated soil below the surface.
- Consolidating parking and access drives within the concrete pad area could reduce the need for additional paved areas.

Existing North Access

The site's existing north access point, located just south of the Victoria Street and Harris Avenue intersection, is a paved road that extends between two buildings and provides access to the interior of the site's built area.

Conceptual Park Plan

The CPP does not reuse this existing access point but proposes several other access points to the site: along Victoria Street, along Harris Avenue, and the south entrance at Harris Avenue and Vandalia Street. The CPP proposes a road through the site that connects all three access points and creates traffic flow options within the site. The multiple site access options outlined in the CPP may help to alleviate traffic congestion along surrounding narrow neighborhood streets.

Potential Future Use Opportunities

- The existing paved drive could be reused to provide easy access to the site's concrete pad areas. This option could prove most relevant if the concrete pads were reused as parking areas.

Key Future Use Considerations

- Traffic requirements would need to be considered to ensure safe and adequate drive lanes, turning areas, and sight lines for exiting the site. Emergency vehicles and buses also require larger turning areas than standard vehicles.

Southeastern Corner

This open area is located between the south access point and the existing buildings area. Unlike other portions of the site land uses in this part of the site are not restricted by the site's remedy. The area is covered with a mix of vegetation, primarily early succession species.

Conceptual Park Plan

The CPP's proposed uses for this area appear to be consistent with the site's existing conditions and remedy. One of the site's three proposed access roads is located in this area and extends from Harris Avenue to a parking area near the center of the site. Shade trees line the road and are scattered in the proposed "open green." The CPP proposes a trail that originates from the access road, weaves through the site, and wraps both sides of a proposed junior practice field that would be partially located within this area.

The Southeastern Corner likely will be able to accommodate the land uses proposed for this area in the CPP.

Potential Future Use Opportunities

- If the site's south entrance becomes a permanent access point as proposed in the CPP, this area could become an entrance corridor for the site and provide site cohesiveness by blending elements from the Existing Buildings and the Containment Cell areas.

- This area may be able to accommodate several different uses, such as tree planting and recreational uses that may not be allowed in other areas. Recreational activities could also be suitable in this area and could include a small athletic field such as a junior (little league) field or possibly a dog park.
- Environmental education initiatives could also be located within this area. For example, demonstration areas for Indy Parks-initiated programs such as composting, low water requiring plants, or wildlife plants could be housed in this area.

Key Future Use Considerations

- Safety may be a concern because this area is located in close proximity to a potential access and road intersection.
- Reusing areas already paved such as the concrete pads could minimize the extent of paved areas.
- Existing vegetation in this area may be obscuring concrete pads and other debris items. Further investigation of this area may be needed to determine appropriate uses within this area.
- As with any area adjacent to the site's southern boundary, the area's proximity to an active railroad may be a safety consideration that needs to be taken into account. The area's existing fence has been breached several times.

Existing South Access

The site's existing south access point is located at the intersection of Harris Avenue and Vandalia Street. A gravel drive enters the site from this access point along the southern boundary and terminates near the containment cell.

Conceptual Park Plan

The CPP proposes reusing this access point as one of three proposed site access points. The entrance would provide access to the interior of the site and proposed parking areas.

The Existing South Access can likely accommodate the uses proposed by the CPP.

Potential Future Use Opportunities

- Located at the intersection of two dead end streets, the reuse of this site access point could help alleviate traffic on neighborhood streets by distributing it onto two different streets: Harris Avenue and Vandalia Street.
- In consideration of neighborhood traffic patterns, the southern access point could be combined with another site access point to create a one-way loop through the site. A separate site entrance and exit could help alleviate traffic by distributing it throughout the area.

Key Future Use Considerations

- IDEM has reported that the southern access gate has been damaged several times by vehicles running into it; the safety of this intersection as a potential access point would need to be considered as part of the site's future use. Traffic calming devices like speed bumps, rumble strips, and signage could help inform drivers. Trail design and safety measures like bollards or raised planters could provide a safe yet aesthetic division between traffic and pedestrians.

- Consolidating parking and access drives within the concrete pad area could reduce the need for additional paved areas.

Containment Cell

A containment cell was constructed in the center of the site to encapsulate the site's contaminated soils. A two-foot clay cover caps these soils, creating a rectangular mound raised approximately five feet above the site's surrounding topography. The containment cell area is fenced and covered with prairie grass.

Conceptual Park Plan

The uses proposed by the CPP for this area do not correspond with the containment cell's location, steep side slopes, or land use restrictions. The proposed Park Building straddles the north end of the raised cell. The soccer fields do not align with the top, level area of the cap. Access to soccer fields will also need to be considered as the proposed trails pass through steep slopes and would require steps.

The Containment Cell Area likely will not be able to accommodate all proposed uses outlined in the Conceptual Park Plan.

Potential Future Use Opportunities

- The top of the containment cell is gently sloped to the south and could be reused for recreational purposes.
- Established prairie grasses cover the containment cell and may provide a unique wildlife habitat area within the surrounding neighborhood. The containment cell prairie is also adjacent to the woodland bluff; these two ecosystems offer habitat diversity that could also be beneficial for wildlife.
- The change in topography between the containment cell and the more level eastern portion of the site could serve to delineate different uses on the site. Topographical variety can also provide experiential and visual interest.

Key Future Use Considerations

- During construction of the containment cell, side slopes of twenty percent and greater were created in some areas. Slopes greater than twenty percent restrict some uses and may require extensive grading or trail switchbacks to provide access.
- Site limitations such as usable area and steep slopes will need to inform the reuse plans for the containment cell. A majority of the side slopes around the containment cell are steep and could limit universal access to the top of the containment cell to its southern end. These steep slopes also confine level play areas to the top of the cell and could inform design decisions such as field size, access, and sideline clearance for players and spectators.
- End uses planned for the containment cell will need to ensure the protectiveness of the site's remedy. Institutional controls and restrictions would need to be considered in the reuse plans and may inform activities such as digging for goal posts, grading for proper drainage, planting selection for low rooting plants, and planning trail layout.

Woodland Bluff

A wooded bluff with steep topography separates the site's upland area from the Eagle Creek corridor and flood plain. The bluff also provides flood protection to the remainder of the site.

Conceptual Park Plan

The CPP proposes the retention of woodland vegetation along the bluff and the creation of a prairie border at the top of the bluff that separates this area from adjacent athletic fields. Two trails are proposed through the bluff, which would provide access from the upland portions of the site to the Eagle Creek floodplain. These trails appear to cross some of the steepest sections of the bluff; extensive grading may be required to create these trails and associated runoff and erosion may be an additional concern.

The Woodland Bluff Area likely will not be able to accommodate all proposed uses outlined in the Conceptual Park Plan.

Potential Future Use Opportunities

- The woodland bluff creates a natural separation between the upland areas and the Eagle Creek floodplain and could help distinguish upland active recreation from passive recreation along the Eagle Creek floodplain.
- A variety of plants including large hardwood trees grow on the woodland bluff. Preserving this woodland could retain this area as wildlife habitat and prevent soil erosion on the bluff's steep slopes.
- While the remainder of the site is open, the tree canopy along the bluff provides natural shade.
- A trail through the woodland bluff would allow a connection between the site and the planned Eagle Creek Trail.

Key Future Use Considerations

- Existing vegetation, steep slopes, and intermittent flooding may restrict some future uses within this area.
- Trails through the woodland bluff should address the area's steep slopes and prevent soil erosion. Trail layouts that respond to natural slopes and minimal tree removal will also help reduce soil erosion. Because of the area's steep slopes, special consideration may be needed to make this area universally accessible. Trail design could also be coordinated with the planned Eagle Creek Trail to ensure a link opportunity.
- Any issues regarding potentially remaining contamination will need to be addressed. In addition, debris embedded in the face of the bluff will likely need to be removed before recreational activities can take place.

Eagle Creek

Eagle Creek, an important local waterway originates from the Eagle Creek reservoir to the north. Approximately two miles downstream from the site, Eagle Creek joins the White River.

Conceptual Park Plan

The CPP proposes minimal changes to the Eagle Creek corridor and floodplain. Site runoff into Eagle Creek appears to be mitigated by maintaining the existing vegetated riparian buffer and proposing passive recreation like hiking and wildlife viewing within this area.

The Eagle Creek Area likely will be able to accommodate all proposed uses outlined in the Conceptual Park Plan.

Potential Future Use Opportunities

- Located on the banks of Eagle Creek, the site could provide recreational access to this major waterway.

Key Future Use Considerations

- This area is prone to flooding and future uses within this area would need to be able to withstand flooding.
- Upland uses could be designed to be low impact and minimize run-off into Eagle Creek.
- Views from the site's border along Eagle Creek are negatively impacted by the auto salvage yard located across the creek. The junkyard encroaches on part of the site and will likely need to be addressed.
- Portions of the site are located on the opposite side of Eagle Creek. Access strategies for the portion of the site across Eagle Creek may need to be considered.

Eagle Creek Trail

The Eagle Creek trail, a proposed 16-mile trail planned along the east levee of the site, will extend from Eagle Creek Park and reservoir to the White River. Eagle Creek joins the White River approximately 2.5 miles south of the Avanti site. To date, 1.8 miles of the northernmost section of the trail have been completed by Indy Parks.

Conceptual Park Plan

The CPP appears to propose continuing trail access offsite, though it does not directly refer to the planned Eagle Creek Trail. The proposed trail network appears to continue offsite to the north along the top of the bluff and to the south along the eastern bank of Eagle Creek. Coordination with the planned Eagle Creek Trail may better inform the layout of an onsite trail network at the site.

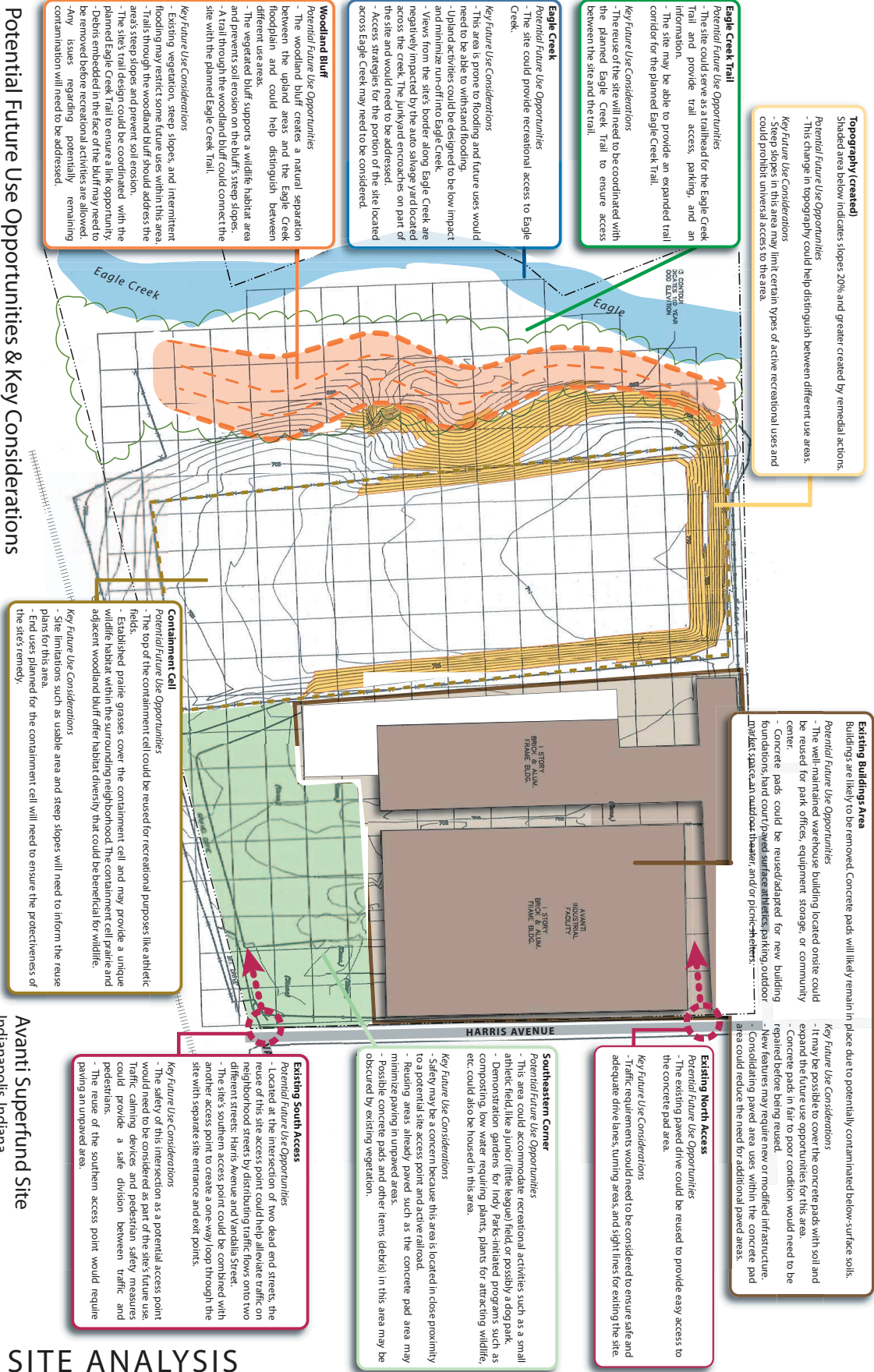
The Eagle Creek Trail area likely will be able to accommodate all proposed uses outlined in the Conceptual Park Plan.

Potential Future Use Opportunities

- Linking the site to the planned Eagle Creek Trail expands the recreational scope of the site from a neighborhood amenity to a local or even regional recreational asset. The site could serve as a trailhead for the Eagle Creek Trail and could provide trail access, parking, and information.
- The site may be able to provide an expanded trail corridor for the planned Eagle Creek Trail.

Key Future Use Considerations

- Future uses at the site could be coordinated with the planned Eagle Creek Trail to ensure access between the site and the trail.



Topography (created)
Shaded area below indicates slopes 20% and greater created by remedial actions.

Potential Future Use Opportunities
- This change in topography could help distinguish between different use areas.

Key Future Use Considerations
- Steep slopes in this area may limit certain types of active recreational uses and could prohibit universal access to the area.

Eagle Creek Trail
Potential Future Use Opportunities
- The site could serve as a trailhead for the Eagle Creek Trail and provide trail access, parking, and an information.
- The site may be able to provide an expanded trail corridor for the planned Eagle Creek Trail.

Key Future Use Considerations
- The reuse of the site will need to be coordinated with the planned Eagle Creek Trail to ensure access between the site and the trail.

Eagle Creek
Potential Future Use Opportunities
- The site could provide recreational access to Eagle Creek.

Key Future Use Considerations
- This area is prone to flooding and future uses would need to be able to withstand flooding.
- Upland activities could be designed to be low impact and minimize run-off into Eagle Creek.
- Views from the site border along Eagle Creek are negatively impacted by the auto salvage yard located across the creek. The junkyard encroaches on part of the site and would need to be addressed.
- Access strategies for the portion of the site located across Eagle Creek may need to be considered.

Woodland Bluff
Potential Future Use Opportunities
- The woodland bluff creates a natural separation between the upland areas and the Eagle Creek floodplain and could help distinguish between different use areas.
- The vegetated bluff supports a wildlife habitat area and prevents soil erosion on the bluff's steep slopes.
- A trail through the woodland bluff could connect the site with the planned Eagle Creek Trail.

Key Future Use Considerations
- Existing vegetation, steep slopes, and intermittent flooding may restrict some future uses within this area.
- Trails through the woodland bluff should address the area's steep slopes and prevent soil erosion.
- The site's trail design could be coordinated with the planned Eagle Creek Trail to ensure a link opportunity.
- Debris embedded in the face of the bluff may need to be removed before recreational activities are allowed.
- Any issues regarding potentially remaining contamination will need to be addressed.

Existing Buildings Area
Potential Future Use Opportunities
- The well-maintained warehouse building located onsite could be reused for park offices, equipment storage, or community center.
- Concrete pads could be reused/adapted for new building foundations, hard court/paved surfaces, athletic parking, outdoor public space, an outdoor theater, and/or picnic shelters.

Existing North Access
Potential Future Use Opportunities
- The existing paved drive could be reused to provide easy access to the concrete pad area.

Key Future Use Considerations
- Traffic requirements would need to be considered to ensure safe and adequate drive lanes, turning areas, and sight lines for exiting the site.

Southeastern Corner
Potential Future Use Opportunities
- This area could accommodate recreational activities such as a small athletic field, like a junior (little league) field or possibly a dog park.
- Demonstration gardens for Indy Parks-initiated programs such as composting, low water requiring plants, plants for attracting wildlife, etc. could also be housed in this area.

Key Future Use Considerations
- Safety may be a concern because this area is located in close proximity to a potential site access point and active railroad.
- Reusing areas already paved such as the concrete pad area may minimize paving in unpaved areas.
- Possible concrete pads and other items (debris) in this area may be obscured by existing vegetation.

Existing South Access
Potential Future Use Opportunities
- Located at the intersection of two dead end streets, the reuse of this site access point could help alleviate traffic on neighborhood streets by distributing traffic flows onto two different streets: Harris Avenue and Vandalia Street.
- The site's southern access point could be combined with another access point to create a one-way loop through the site with separate site entrance and exit points.

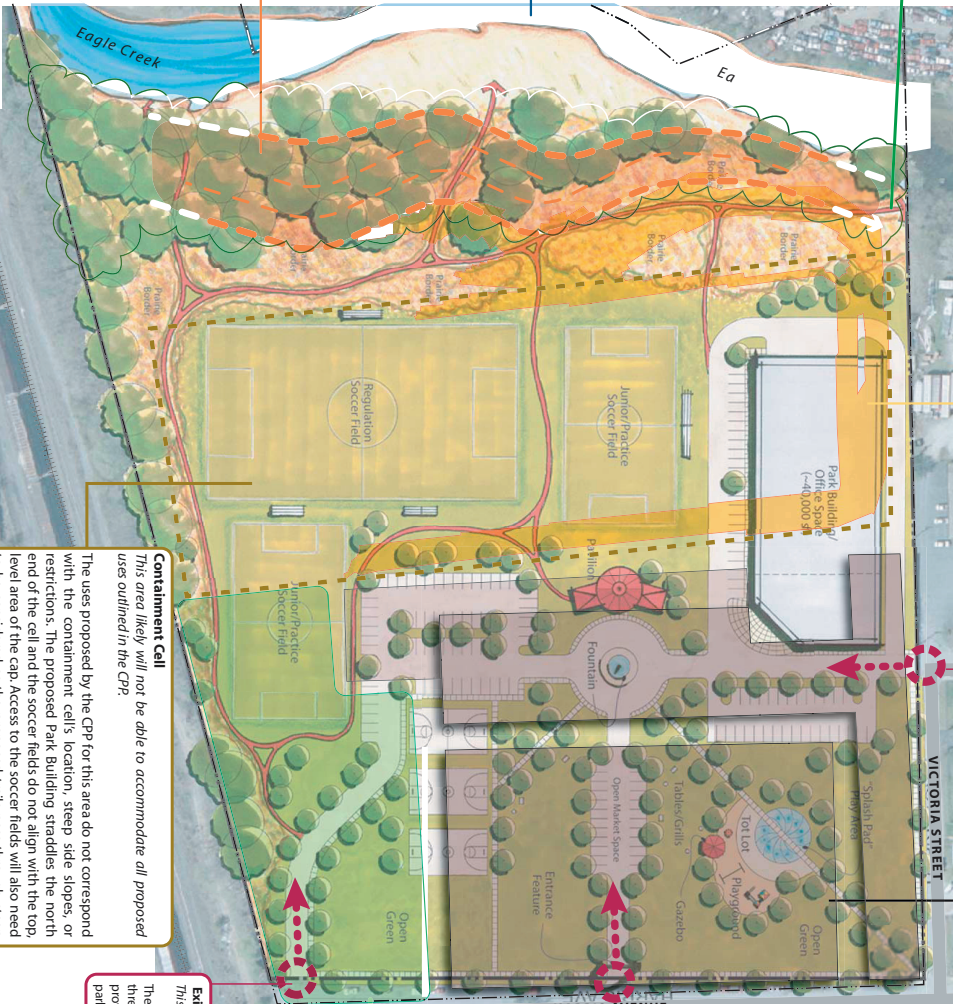
Key Future Use Considerations
- The safety of this intersection as a potential access point would need to be considered as part of the site's future use.
- Traffic calming devices and pedestrian safety measures could provide a safe diversion between traffic and pedestrians.
- The reuse of the southern access point would require paving an unpaved area.

Potential Future Use Opportunities & Key Considerations

**Avanti Superfund Site
Indianapolis, Indiana**

SITE ANALYSIS

Review of the 2005 Conceptual Park Plan (CPP) for the Avanti Site



Topography (created)
The CPP does not appear to address the steep topography near the containment cell. The shaded area below indicates slopes 20% and greater.

Eagle Creek Trail
This area likely will be able to accommodate all proposed uses outlined in the CPP.
The CPP appears to propose continuing trail access offsite though it does not directly refer the planned Eagle Creek Trail. The proposed trail network appears to continue offsite to the north along the top of the bluff and to the south along the eastern bank of Eagle Creek. Coordination with the planned Eagle Creek Trail may better inform the layout of an onsite trail network.

Eagle Creek
This area likely will be able to accommodate all proposed uses outlined in the CPP.
The CPP proposes minimal changes to the Eagle Creek corridor and floodplain. Site runoff into Eagle Creek appears to be mitigated by maintaining the existing vegetated riparian buffer and proposing only passive recreation like hiking and wildlife viewing within this area.

Woodland Bluff
This area likely will not be able to accommodate all proposed uses outlined in the CPP.
The CPP proposes the retention of woodland vegetation along the bluff and the creation of a prairie border at the top of the bluff that separates this area from the adjacent athletic fields. Two trails are proposed through the bluff, which would provide access from the upland portions of the site to the Eagle Creek floodplain. These trails appear to cross some of the steepest sections of the bluff; extensive grading may be required to create these trails and the associated runoff and erosion may be an additional concern.

Existing Buildings Area
This area likely will not be able to accommodate all proposed uses outlined in the CPP.
The CPP does not consider retaining usable existing buildings or address the location of the concrete pads. Some of the hard surface areas proposed in the CPP overlap the concrete pad area however a majority of the area is designed as an "open green" that would require either pad removal or engineered soil cover for planting. The CPP also locates a significant number of shade trees within the concrete pad area, which would likely not be feasible due to insufficient space for tree roots.

Access
Three site access points proposed in the CPP include the reuse of the site's south access and two new access points located along Victoria Street and along Harris Avenue.
A drive through the site would connect all three access points and create traffic flow options within the site.
Three opportunities to access site may alleviate traffic congestion along adjacent neighborhood streets.

Southwest Corner
This area likely will be able to accommodate the land uses proposed for this area in the CPP.
The CPP's proposed uses for this area appear to be consistent with the site's existing conditions and remedy. One of the site's three proposed access roads is located in this area and extends from Harris Avenue to a parking area near the center of the site. Shade trees, lawn, and are scattered in the proposed "open green". The CPP proposes a trail that "crosses" from the access road, crosses through the site, and wraps both sides of a proposed Junior practice field that would be partially located within this area.

Existing South Access
This area can likely accommodate the uses proposed by the CPP.
The CPP proposes reusing this existing access as one of the three proposed site access points. The entrance would provide access to the interior of the site and proposed parking areas.

Containment Cell
This area likely will not be able to accommodate all proposed uses outlined in the CPP.
The uses proposed by the CPP for this area do not correspond with the containment cell's location, steep side slopes, or restrictions. The proposed Park Building straddles the north end of the cell and the soccer fields do not align with the top, level area of the cap. Access to the soccer fields will also need to be considered as the proposed trails pass through steep slopes.

Avanti Superfund Site
Indianapolis, Indiana

SITE ANALYSIS

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