

2474 McKinley Avenue  
Columbus, Ohio 43204

PID: 010-146234, 010-146253, 010-200913, 010-146278, 010-104705, 010-107406, 010-200912

# WestBend Development

## Type III Variance Request Package



E. P. Ferris and Associates Inc.

Attn. Chad Buckley

(614) 299-2999

[cbuckley@epferris.com](mailto:cbuckley@epferris.com)

September 22, 2023

Rob S. Priestas P.E., Administrator, DOSD

**City of Columbus**

Attn: Greg Fedner, P.E., Private Development Section Manager

Stormwater and Regulatory Management Section

111 N. Front Street

Columbus, Ohio 43215

Re: **WestBend Development -**  
Type III Variance Request

Project Name: WestBend Development

Property Address: 2474 McKinley Avenue, Columbus, Ohio 43204

PID: 010-146234, 010-146253, 010-200913, 010-146278

Site Disturbance: 43 Ac.

Total Site Area: 55 Ac.

Primary Contact: E.P. Ferris & Associates, Inc.

Attn: Chad Buckley, P.E.

(614) 299-2999

cbuckley@epferris.com

Dear Mr. Fedner,

On behalf of Westbend QOZB, LLC, E.P. Ferris and Associates, Inc. (EPF) is seeking approval of a Type III, Section 1.3 variance from the City of Columbus (COC) Stormwater Drainage Manual (SWDM). This variance is being requested for the purpose of completing site improvements related to a new mixed-use development throughout a former landfill / dumping site currently used as a junkyard located east of the intersection of McKinley Avenue and Fisher Road, south and west of Larrison Lake and west of the Scioto River. The proposed site will support a variety of multi-family and commercial uses as well as future park land centered around the existing Larrison Lake, providing recreational opportunities for the community and surrounding area.

The development is located on a former quarry turned to a landfill / dumping site and will require remediation through the Ohio Environmental Protection Agency (OEPA) Division of Materials and Waste Management (DMWM) Ohio Administrative Chapter (OAC) 513 Authorization (Rule 513). To adequately maximize the developable area of the site and fully remediate the existing landfill / dumping site and provide preferred development plans, an encroachment into the Stream Corridor Protection Zone (SCPZ) of the Scioto River is required. This conflicts with Section 1.3 of the COC SWDM. The areas in question are outlined in the attached exhibits (Appendix F) as

prepared by EPF. All encroachments outlined in this Type III variance request will be adequately mitigated within this project site with new protected and dedicated SCPZ areas. Additionally, WestBend QOZB, LLC plans to dedicate appropriate areas to the SCPZ of the Scioto River at a ratio of 1.67:1.

Our team respectfully requests approval of this variance for this project's preferred alternative. These will not only benefit the overall development of the area, but also ensure the proper remediate of the existing landfill / dumping site. Please find enclosed our technical request in support of the variances briefly mentioned above.

Sincerely,

**E. P. FERRIS & ASSOCIATES, INC.**



Chad Buckley, PE  
Project Manager

## **Table of Contents**

<b>Introduction</b> .....	4
<b>Project and Site Information</b> .....	4 - 5
<b>Section 1 – Reason Variances are Requested</b> .....	6
<b>Section 2 – Site Development Alternatives</b> .....	6 - 8
<b>Type III, SWDM Section 1.3 WestBend Development Variance</b>	
No Impact/Degradation Development Alternative Fully Complying with SWDM .....	6-7
Minimal Impact/Degradation Development Alternative Plan .....	7-8
Preferred Development Plan .....	8-10
<b>Section 3 – Demonstration of Adequate Mitigation</b> .....	9-11
Impact to SCPZ .....	9-11
<b>Section 4 – Executive Summary</b> .....	11

## **Appendices**

<b>Appendix A – Site Location Map</b>
<b>Appendix B – Existing Conditions Overview Map</b>
<b>Appendix C – ALTA Survey</b>
<b>Appendix D – Ohio Administrative Chapter 513 Authorization</b>
<b>Appendix E – WestBend Development Alternatives</b>
<b>Appendix F – Westbend Development Preferred Alternative SCPZ Encroachment Exhibit</b>
<b>Appendix G – WestBend Development Phase 1 Mass Excavation Plan</b>
<b>Appendix H – Geotechnical Report and Boring Logs</b>
<b>Appendix I – SCPZ Delineation Determination</b>
<b>Appendix J – FEMA FIRMette</b>
<b>Appendix K – SCPZ Mitigation Plan, Tree Survey, and Support Letter</b>



## **Introduction**

On behalf of Westbend QOZB, LLC, EPF is seeking approval of a Type III and variance from the COC SWDM Sections 1.3.

This variance is being sought to relieve the unique constructability hardship associated with redeveloping the existing landfill / dumping site. Approval of this variance will also ensure the proper remediation of the project site following the OEPA Rule 513. The approved Authorization can be found in Appendix D.

Type III, SWDM Section 1.3 WestBend Development Variance – Section 1.3.2 of the COC SWDM states that the SCPZ shall be kept in as natural state as possible so that it can perform its inherent ecological and hydraulic functions. As part of this policy, various activities are prohibited such as filling and construction that results in direct impacts to an existing stream. However, it is necessary to impact the SCPZ for the Scioto River in order to complete the OEPA's VAP and to properly remediate the existing solid waste conditions to allow for developable and recreational uses on the site.

In order to develop the project site's intended mixed-use and recreational areas and clean up an environmental nuisance, an OEPA Rule 513 authorization agreement is being acquired due to existing solid waste areas that result from a former landfill. To follow the plan outlined in this permit and the Rule 513 Authorization, all areas within the project site's Rule 513 boundary are to be capped to obtain a minimum clay cover of four (4) feet, including those found within the Scioto River's and Barbee Ditch SCPZ. This variance will allow necessary capping and grading to improve these former landfill areas in addition to adjacent areas either with deeper trash or without contaminated materials for future development. Capping of the solid waste in the SCPZ will improve the riparian area along the river and reduce the potential of pollution from the landfill entering the river and provide additional space for development required to meet economic viability. It will ultimately promote environmental safety and will accept the development plan's incorporation of newly dedicated SCPZ sections along the Scioto River, Barbee Ditch, and Larrison Lake. The current junkyard operations extend into the delineated SCPZ in a similar fashion as the landfill areas and will also be included with the improvements to the riparian areas. This project is committed to providing a preservation type easement along the Scioto River corridor at a 1.67:1 ratio providing more mitigated SCPZ area than the minimum required 1:1 ratio.

## **Project and Site Information**

The proposed project site is located in an industrial area east of the intersection of McKinley Road and Fisher Road in the west central portion of the COC. The project site consists of approximately 55 acres of land (including approximately 12.3 acres being Larrison Lake) previously used as an active quarry, then a landfill / dumping site and later a junkyard. The Franklin County Parcel Identification numbers for this site are 010-146234, 010-146253, 010-200913, and 010-146278.

The Scioto River borders the project site to the east, Larrison Lake borders the northwestern portion, Barbee Ditch borders the north, and McKinley Avenue borders the western half. There is also an approximate 5.21 acre tract southwest of the intersection of McKinley Avenue and Fisher Road, bordered by both roads and a railroad track to the west. The approximate latitude/longitude coordinates at the center of the site are 39.9754, -83.0663.

Much of the project site consists of flat ground that is currently used as an automobile junkyard, and consists of portions of asphalt pavement, gravel drives, vegetation, and tree cover. The northwestern portion of the project site consists of steep grades and tree cover that leads down to the edge of Larrison Lake. Along the southeastern portion of the project site, there is also tree cover and steep grades that make up the western bank of the Scioto River.

Investigation of the site's current conditions revealed that approximately 28.2 acres of the site contain solid waste. See Appendix H for the sites Geotechnical Report and Boring Logs. This area is located in the center of the project site, making up most of the developable area. However, a significant portion of the OEPA Rule 513 area overlaps with the existing SCPZ area for the Scioto River. The encroachment area in question for this variance request is located both within the OEPA Rule 513 area and the existing SCPZ. This encroachment will allow these areas to be properly mitigated following the OEPA's Rule 513 Authorization. Exhibit showing the SCPZ adjustment areas can be found in Appendix F.

The existing site generally flows from west to east, with the northern portion directed into Larrison Lake and the southern portion directed into the Scioto River. The site currently does not have any stormwater control practices in place. Approval of this variance will allow the project site to be fully developed and mitigated, with all required stormwater control practices for post-construction water quality and detention put in place per the COC SWDM.

Upon reviewing the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Panel 39049C0302K, the project site has been determined to include both Zone X and Zone AE. The western majority of the project site is located in Flood Zone X, and the eastern edges along Larrison Lake and the Scioto River are located in Flood Zone AE. The Designation Zone AE is described as the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be conveyed without substantial increases in flood heights. There will be areas of the 100-year floodplain that are filled during the development of this site, however these areas will be mitigated with compensatory cut into the 100 year floodplain at a different location on the project site per the requirements of the SWDM. Compensatory cut and fill is detailed within the Mass Excavation plan for Phase 1, see Appendix G, and the Storm and Grading CC Plan to be designed and reviewed.

## **Section 1 – Reason Variances are Requested**

### ***Type III, SWDM Section 1.3 WestBend Development Variance:***

The project site's existing conditions present an additional unusual design challenge that requires the development and design teams to obtain a variance from Section 1.3 of the SWDM and encroach upon the Scioto River's SCPZ on the eastern and northern side of the project site. Despite this section's restrictions from certain construction activities within a stream's SCPZ, this project site resides on a formerly active landfill / dumping area with areas of existing solid waste under less than two (2) feet of cover that currently overlap the Scioto's SCPZ. Due to this overlap and in accordance with the Rule 513 Authorization, the project's preferred plan incorporates capping this area and grading its surrounding sections in preparation for future development.

Filling within waste areas overlapping the SCPZ will not only adequately prepare the project site, but it will also help eliminate the local environment's direct exposure to waste and reduce potential contamination of surface and ground water. By granting this Type III variance, the project will be able to significantly improve conditions within the SCPZ and will mitigate these necessary encroachments by dedicating new SCPZ Conservation Easements directly adjacent to these areas on-site at a ratio of 1.67:1 in favor of the SCPZ area.

If full compliance with the SWDM was required, this project would not be permitted to complete the clean clay capping plan per its Rule 513 along the northern and eastern sides of this project site currently within the SCPZ. Additionally, if these landfill sections within the SCPZ were not capped, then development along the entire northern and eastern side of the project site would not be possible due to OEPA Solid Waste Regulations and the potential negative health impacts. These conditions would certainly deprive the development of the reasonable use of this land and the original intent to improve the site's poor environmental conditions.

For these various reasons, the WestBend Development is requesting this Type III Variance from SWDM Section 1.3 to encroach upon the Scioto River SCPZ. As previously explained, these encroachments will be mitigated at a ratio of 1.67:1 and the variance will grant the project's reasonable use of this land to adequately complete the Rule 513 and maximize its developable/recreational potential.

## **Section 2 – Site Development Alternatives**

### **Type III, SWDM Section 1.3 WestBend Development Variance**

#### ***No Impact/Degradation Development Alternative Fully Complying with SWDM:***

An alternative development plan for this project that fully complies with the SWDM would involve avoiding any encroachments to the SCPZ. This would significantly reduce all mixed-use

development proposed across the subject parcels in the project and would effectively diminish the remediation of the project site in the most critical areas, directly adjacent to the Scioto River, Barbee Ditch, and Larrison Lake, and only allow development of the western portion of the site, southwest of the intersection of McKinley Avenue and Fisher Road.

Restricting encroachment into the Scioto River and Barbee Ditch SCPZ would not allow capping of shallow landfill areas currently spread across the eastern edge of the project site, which would significantly limit any potential development due to OEPA Solid Waste Regulations. These regulations require strict waste management to protect public and environmental health and the isolation of contaminated materials to prevent their exposure when development is proposed. These conditions are why the project is following a Rule 513 Authorization through the OEPA to provide four (4) foot capping of solid waste areas prior to development. Per OAC 3745-27-11, the owner of a former solid waste landfill is required to close (cap) the entire footprint of the former landfill. Failing to properly cap all areas of solid waste would breach this plan, effectively preventing the team from developing the project site as previously stated. (See Appendix E).

Additionally, a lack of development across the project's eastern parcels would eliminate the opportunity to provide unique recreational opportunities at the areas around existing Larrison Lake, which is planned to public use park space as a part of the project.

This alternative would certainly introduce planning, programming, and constructability hardships to the redevelopment of this project site. It would also prevent efforts to contain contaminated materials within the Scioto River SCPZ to avoid their potential spread into the surrounding environment. Absence of landfill capping in this plan would allow rain and snowmelt to continue seeping through contaminants to the groundwater, runoff to carry contaminated material offsite or into the Scioto River, waste gas to be released, and surrounding residents/wildlife to potentially encounter hazardous material.

### ***Minimal Impact/Degradation Development Alternative Plan:***

The minimal impact plan alternative for this project involves impact to the SCPZ of the Scioto River and Barbee Ditch. These encroachments will allow our team to complete the OEPA's Rule 513 Authorization by capping existing shallow landfill areas within the SCPZ along with necessary grading to complete the cap. In this alternative no permanent encroachments would take place in the Barbee Ditch SCPZ. The minimum impact development site plan is shown in Appendix E.

Former landfill sections within the SCPZ are being capped not only for development of the eastern side, but to contain contaminated materials along the Scioto River's and Barbee Ditch's banks that can harm the environment. The SCPZ areas being encroached can be capped and mitigated with a vegetated zone. However, this would reduce the amount of developable area available onsite restricting feasible development.

Encroachments to the SCPZ for the minimal impact plan would amount to 1.778 acres of SCPZ encroached and mitigated.

In this plan, the development of the site would be limited to areas outside the current SCPZ reducing the number of residential units and available parking reducing the economic viability of the development. Amenity and recreation opportunities would be reduced as well.

***Preferred Development Plan:***

The preferred plan for this project involves encroaching upon the Scioto River and Barbee Ditch SCPZ. These preferred encroachments will allow our team to complete the OEPA's Rule 513 Authorization by capping existing shallow landfill areas within the Scioto River's SCPZ, complete grading adjacent to these areas in preparation for development and provide room for additional units and parking making the project economically viable. The overall preferred development site plan is shown in Appendix E.

Encroachments to the Scioto River and Barbee Ditch SCPZ in the preferred plan will amount to 1.777 acres of SCPZ encroachment, with only 0.411 acres permanently encroached upon. Total SCPZ Conservation Easement dedication to mitigate these encroachments will occur on the eastern edge of the project site directly adjacent to the Scioto River at a ratio of 1.67:1 and will result in 0.687 acres of SCPZ Conservation Easement including 0.276 acres of new area to be protected from future development.

While a greater portion of development encroachments into the SCPZ takes place along Barbee Ditch, a greater portion of the additional Conservation Easements will be granted along the Scioto River. The Scioto River corridor has a higher value riparian habitat than that of Barbee Ditch, and the Scioto River is more environmentally sensitive and contains a much greater species diversity than the ditch. The Scioto River ultimately carries runoff from Barbee Ditch, and protecting the Scioto River corridor through development restrictions and conservation easements helps control flooding and loss of high-quality riparian habitat.

The development encroachments into the Barbee Ditch SCPZ as proposed are more than 20 feet clear of the top of bank of the ditch and therefore will not directly impact the flow or performance of the stream.

The areas of permanent encroachment will provide additional developable area to increase the number of residential units to make the project economically feasible. Additional parking area to meet zoning requirements and area for amenities will also be provided.

The preferred plan allows for 18 additional units and accompanying parking compared to the minimal impact alternative which provide added value to the proposed development summarized as follows.

Fixed cost items: As part of the development budget some items are a fixed cost such as the cost of land acquisition and contributions to those costs are covered by the revenue generating portions of the development, in this case being rentable units. For instance, if \$1m was spent for land acquisition and 100 apartment units built, the per-unit allocation for the land would be \$10,000 per unit, and if 75 units were built, the per-unit land cost would be \$13,333. The more units, the more the cost is distributed and value increased. For the prosed WestBend Development the fixed cost items are the land acquisition, site work, which is the cost to remediate the landfill, and amenity and park contributions. The development is required to provide 10,000 square feet of business incubator space as a part of the amenities as well as public park area with access to the river as a part of the Development Agreement with the City. The estimated cost of each of these items provides a per unit break down of the value the additional units provide.

Fixed cost summary per unit lost:

- **Land Acquisition** - \$450,000 (Land value of \$25,000 per unit)
- **Amenity Contribution** - \$198,522 (Contribution towards community building and office incubator of \$11,029 per unit)
- **Park Contribution** - \$88,263 (Contribution towards park of \$4,902 per unit)
- **Site Work Contribution** - \$220,572 (Contribution towards site work of \$12,254 per unit)
  - **Total Contribution Loss** - \$957,357

Another component to the value gained from the additional 18 units is the real estate investment potential of the development. To finance a development project, the bank uses cap rate as the most common measure through which real estate investments are assessed for their profitability and return potential. The cap rate formula to establish the property's value is taking the net income divided by the cap rate. Current markets use a 5.75% - 5.25% Cap Rate. The per unit value for WestBend is approximated at \$275,000 assuming at 5.50% Cap Rate, the loss of 18 units would decrease the value by \$4.95M.

- **Loss of Value** - \$4,950,000 (5.50% cap rate)
  - **Total Project Impact** - **\$5,907,357**

The value gained from the additional units available within the project site due to encroachment into the current SCPZ justifies the landfill remediation required to allow any development to proceed.

As previously stated, former landfill sections within the Scioto River SCPZ are being capped not only for the preferred development, but to contain contaminated materials along the Scioto River and Barbee Ditch banks that can harm the environment.

There is a significant portion of the SCPZ along the eastern and northern edge of the project site that is currently junkyard and within the Rule 513 area. These areas will be remediated and improved with the rest of the site, ensuring all the Rule 513 area on site is remediated per the



Rule 513. As shown in Appendix F, 1.366 acres of this area will not be developed and will remain a part of the SCPZ. These areas within the SCPZ will be improved by a clean cap of clay being placed on top of the existing trash layer, stabilization of the clay cap after it has been placed and adjusting the adjacent land use from an active junkyard to a new development adhering to the standards of the CoC SWDM. These areas will also be remediated per the SCPZ Mitigation Plan in Appendix K returning these areas to a proper riparian corridor.

## **Section 3 – Demonstration of Adequate Mitigation**

### ***Impact to SCPZ:***

As previously discussed, this project's preferred alternative directly impacts the Scioto River and Barbee Ditch delineated SCPZ by proposing landfill capping along the eastern and northern edge of the project site. Landfill capping within the SCPZ is necessary to adhere to an active Rule 513 with the OEPA and to adequately improve this project's environment for future development. This disturbance will be accomplished while providing proper mitigation in accordance with the COC SWDM per part b) for Type III variances under Variance Applications.

Based on conceptual plans, approximately 1.777 acres of the Scioto River delineated SCPZ along the northern and eastern sides of the project site will be impacted for necessary landfill capping and development grading, with 0.411 acres permanently removed from the SCPZ. This encroachment will be mitigated at a ratio of approximately 1.67:1 in the location as depicted in Appendix F, by dedicating 0.687 acres of new SCPZ. This area dedicated to new SCPZ will remain onsite and directly west of the Scioto River on the site's eastern side. There will be approximately 1.366 acres of SCPZ that is encroached upon for remediation purposes then will be returned to the SCPZ. The entirety of the SCPZ including existing, remediated, and newly dedicated areas will be placed in a Conservation Easement.

Per part b) for Type III variances under Variance Applications in the COC SWDM, SCPZ mitigation work should be performed at a ratio of 1 to 1 on site and 1 to 1.5 for adjacent sites. All SCPZ mitigation for this variance request will take place onsite at a greater ration of 1.67.

All Conservation Easements placed over SCPZ and additional areas mitigated as described above will be granted to the City of Columbus.

While a greater portion of encroachment into the SCPZ takes place along Barbee Ditch, a greater portion of the additional Conservation Easements will be granted along the Scioto River. The Scioto River corridor has a higher value riparian habitat than that of Barbee Ditch, and the Scioto River is more environmentally sensitive and contains a much greater species diversity than the ditch. The Scioto River ultimately carries runoff from Barbee Ditch, and protecting the Scioto River corridor through development restrictions and conservation easements helps control flooding and loss of high-quality riparian habitat.

A portion of the SCPZ along the Scioto River, approximately 1.10 acres, is currently in use as a junkyard/auto-parts retailer. These areas consist of gravel and recycled asphalt roads along with bare landfill where scrapped vehicles are stored. Currently no provisions beyond the current vegetation and streambank of the river are in place to prevent erosion in the SCPZ or runoff of potentially hazardous chemicals from the landfill or scrapped vehicles. The capping of the landfill with clean clay and change in land use will prevent harmful runoff from trash or junkyard activities while providing a less erodible ground condition within the SCPZ. These areas will then be planted per the mitigation plan extending the vegetated zone along the river from approximately 40 to 80 feet. This area falls along an outer bend where the additional riparian width of the SCPZ can be beneficial against erosion during flooding events.

It is the intent when dedicating this new SCPZ to provide areas that will perform the same function as the disturbed SCPZ but in a more environmentally preferable location as shown on the SCPZ Mitigation Plan in Appendix K. The remediation of the areas within the current SCPZ will include the removal of non-native vegetation including the invasive Morrow's Honeysuckle, which is prominent in these areas, and planting new trees and native vegetation typical for the riparian corridor. New conservation easement areas will also be cleaned of non-native vegetation and repaired per the SCPZ Mitigation plan. All these actions will serve as improvements to the function of the SCPZ for the Scioto River and Barbee Ditch.

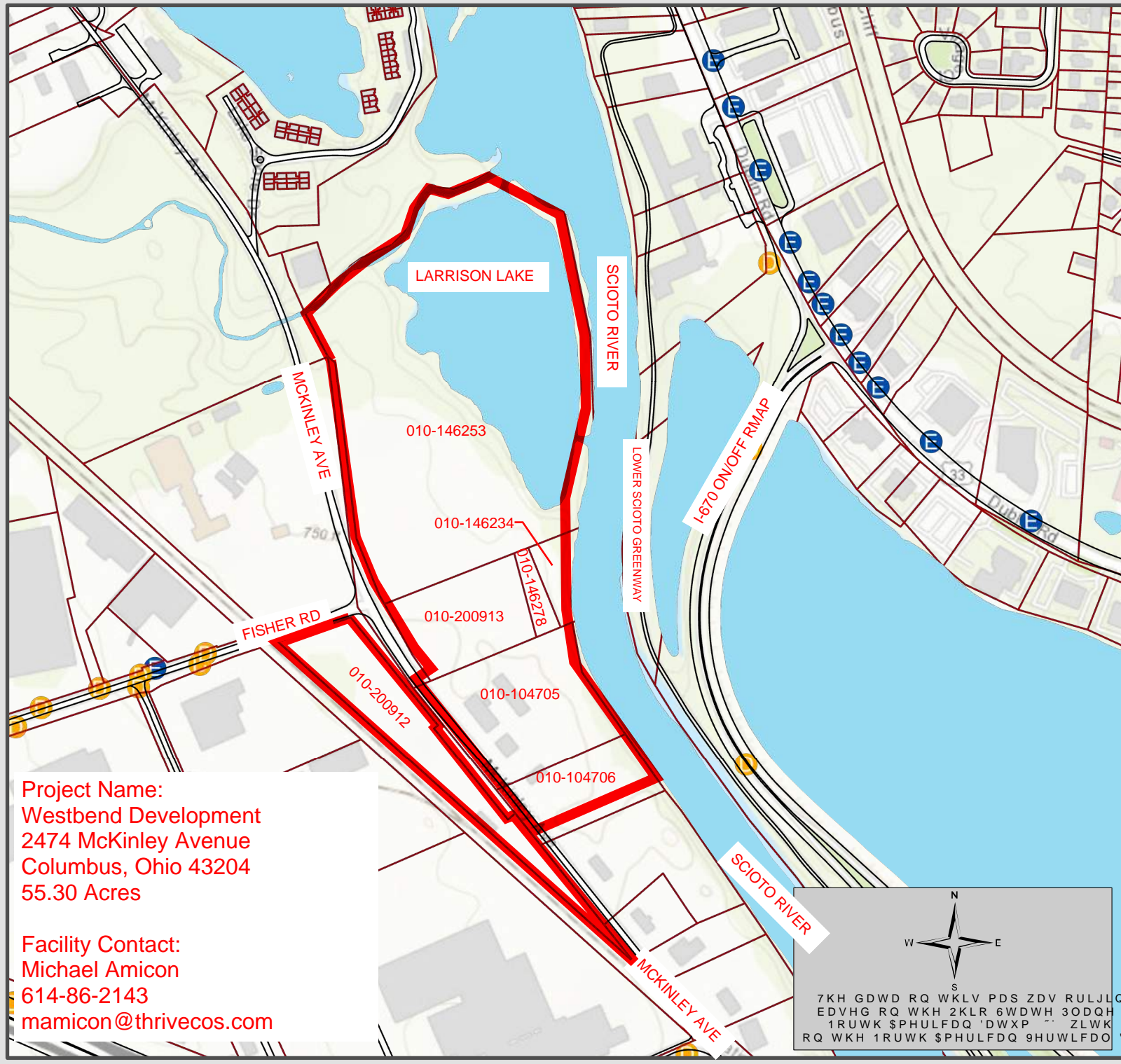
Matthew Kaminski from Central Ohio Wetland Consulting, LLC who preformed the steam delineation for the Scioto River and Barbee Ditch for the proposed development has reviewed the proposed mitigation plan and provided his findings which have been added to Appendix K.

## **Section 4 – Executive Summary**

Unique conditions of the WestBend Development present various unusual design and constructability challenges to be considered. However, by granting the Type III SWDM variance sought by this request, the COC will allow improvements to be completed through this project's preferred alternative plan. This plan will allow the proper remediation of the site per the OEPA's Rule 513 Authorization and improve the corridors of the Scioto River SCPZ by enhancing the environmental conditions and setting aside a 1.67:1 ratio of additional SCPZ acreage than the SWDM currently requires. Repurposing this brownfield site into an active mixed-use development with recreational opportunities is only possible with the approval of the requested variances.

The unusual design challenges that this site possesses warrants the request of the above-mentioned variances from the SWDM.

**APPENDIX A**  
**SITE LOCATION MAP**



**Project Name:**  
 Westbend Development  
 2474 McKinley Avenue  
 Columbus, Ohio 43204  
 55.30 Acres

**Facility Contact:**  
 Michael Amicon  
 614-86-2143  
[mamicon@thrivecos.com](mailto:mamicon@thrivecos.com)

7KH GDWD RQ WKLV PDS ZDV RULJQDDOI FRPSLOHG DW  
 EDVHG RQ WKH 2KLR 6WDWH 30DQH 6RXWK  
 1RUWK \$PHULFDQ 'DWXP ' ZLWK FRQRVLY EDVHG  
 RQ WKH 1RUWK \$PHULFDQ 9HUWLFDO 'DWXP '

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 (GJH RI 3DYHPPHW  
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 5DLOURDG & HQWHUOL  
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 %XLOGLQJ 8QGHU & RQ  
 & UHHNV 6WUHPY 'L  
 5LYHUV 3RQGV

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 ,QWHUPHGLDWH & RQW

\$\$\$UDLVDQ /HJHQ  
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- /RW 1XPEHUV
- 6LWH \$GGUHV
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- 6XEGLYLVLRQ %RXQGDU\
- & RQRPLQLXP %RXQGDU\
- & RXQW\ %RXQGDU\
- & LW\ RU 9LOODJH %RXQGDU\
- 7D[ 'LVWULFW %RXQGDU\
- 6FKRRO 'LVWULFW %RXQGDU\
- =LS & RGH %RXQGDU\

7KH LQIRUPDWLRQ RQ WKLV ZHE VLV  
 IURP WKH UHDO SURSHUW\ LQYHQWR  
 EY WKH )UDQNOLQ & RXQW \$XGLWRU  
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 LQIRUPDWLRQ VXRUFH VKRXOEH F  
 YHULLFDWLRQ RI WKH LQIRUPDWLRQ  
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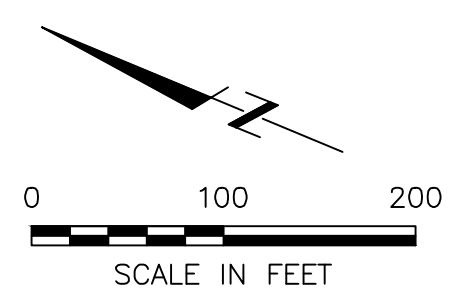
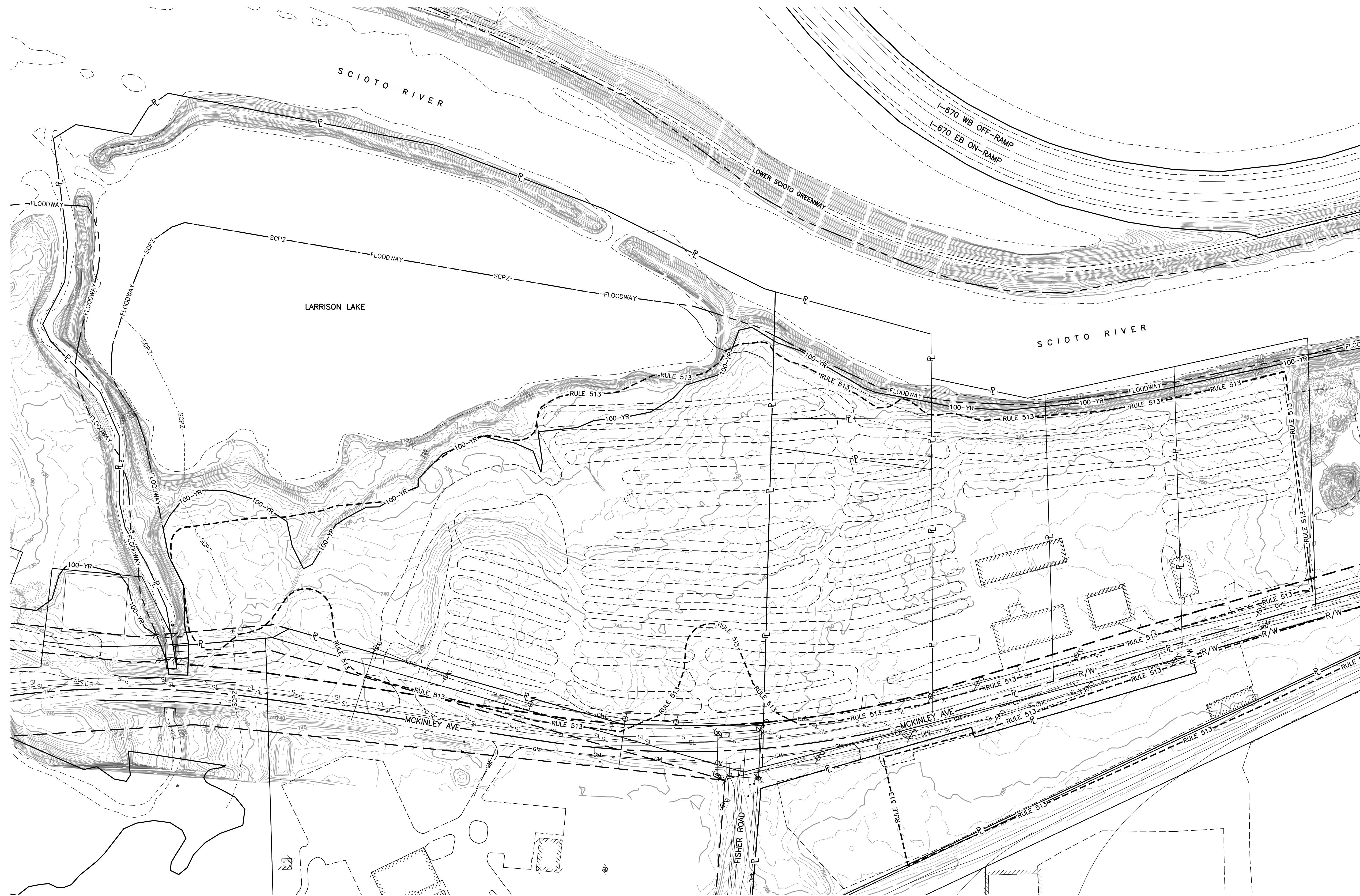


**APPENDIX B**

**EXISTING CONDITIONS OVERVIEW MAP**



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REVISIONS	DATE	BY	CHK.

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC  
Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
 2ND FLOOR  
 COLUMBUS, OHIO 43228  
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 www.EPFERRIS.com

CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 THRIVE COMPANIES

JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	5/17/2023

**EXISTING CONDITIONS**  
**OVERVIEW MAP**

SCALE:	
1" = 100'	
SHEET NO.	OF
1	1



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REVISIONS	DATE	BY	CHK.

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC  
 Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
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CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 THRIVE COMPANIES

JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	5/17/2023

**EXISTING CONDITIONS**  
**OVERVIEW MAP**

SCALE:	
1" = 100'	
SHEET NO.	OF
1	1



**APPENDIX C**  
**ALTA SURVEY**



POSTED ADDRESS:  
2474 McKinley Ave  
GRANTOR / CURRENT OWNER:  
PAINE-MCKINLEY PROPERTIES II LLC  
RECORDED DEED  
Paine-McKinley Properties II, LLC Who acquired said interest in Instrument 201011170154929, filed November 17, 2010 in the Franklin County records. (As to Parcels I-II)  
Paine-McKinley Avenue, LLC Who acquired said interest in Instrument 201011170154930, filed November 17, 2010 in the Franklin County records. (As to Parcels III-VI)  
Paine-McKinley Avenue, LLC Who acquired said interest in Instrument 200212300334742, filed December 30, 2002 in the Franklin County records. (As to Parcel VII)

FLOOD ZONE:  
Said described property is located within an area having a Zone Designation "X" and "AE" by the Secretary of Housing and Urban Development, on Flood Insurance Rate Map No. 39049C0302K with a date of identification of June 17, 2008, for Community Number 390181, in Franklin County, State of Ohio, which is the current Flood Insurance Rate Map for the community in which said property is situated.

- NOTES:
1. This property has direct access to McKinley Ave.
  2. There is no observed evidence of current earthmoving, work, building construction or building additions.
  3. There is no observed evidence of recent street or sidewalk construction or repairs.
  4. By field observation only, the property appears to have access to water service, electric service, gas service, sanitary sewer, telephone service, and storm water drainage.
  5. Due to heavy brush and over grown vegetation not all the improvements on the subject property have been shown.

SURVEYOR NOTE:  
This survey has been completed using the provided documentation in Title Commitment Number 346808 issued by Stewart Title Company effective date January 25, 2019.

The property described hereon is the same as the property described in Stewart Title Company Commitment Number 346808 with an effective date of January 25, 2019 and that all easements, covenants and restrictions referenced in said title commitment or apparent from a physical inspection of the site or otherwise known to me have been plotted hereon or otherwise noted as to their effect on the subject property.

The legal description provided in Commitment No. 346808 for Parcel III does not mathematically close.

RESPONSE TO SCHEDULE B - SECTION II  
(Stewart Title Company Commitment Number 346808 Effective Date January 25, 2019 @ 6:00am

10. Easement granted to the City of Columbus, Ohio, as more fully set forth in the document recorded as Deed Book 2443 Page 520. (As to Parcels I-II)
11. Easement contained in the Deed of record in Deed Book 466 Page 128. (As to Parcels III, IV and V)
12. Easement granted to The Columbus, Railway, Power & Light Company, as more fully set forth in the document recorded as Deed Book 968 Page 236. (As to Parcel V)
13. Easement granted to The Ohio Bell Telephone Company, as more fully set forth in the document recorded as Deed Book 1033 Page 227. (As to Parcel V)
14. Easement granted to The Columbus Railway, Power & Light Company, as more fully set forth in the document recorded as Deed Book 1033 Page 422. (As to Parcels III-IV)
15. Easement granted to The Ohio Bell Telephone Company, as more fully set forth in the document recorded as Deed Book 1033 Page 232. (As to Parcels III-IV)
16. Easement granted to The Columbus Railway, Power & Light Company, as more fully set forth in the document recorded as Deed Book 1048 Page 599. (As to Parcels III-IV)
17. Easement granted to Columbus and Southern Ohio Electric Company, as more fully set forth in the document recorded as Deed Book 1356 Page 533. (As to Parcels III-IV)
18. Easement granted to the City of Columbus, Ohio, as more fully set forth in the document recorded as Deed Book 1809 Page 451. (As to Parcels III-IV)
19. Right of Entry Easement, as more fully set forth in the document recorded as Deed Book 2544 Page 368. (As to Parcels III-IV)
20. Right of Entry Easement, as more fully set forth in the document recorded as Deed Book 2544 Page 371. (As to Parcels III-IV)
21. Easement as more fully set forth in the document recorded as Deed Book 2879 Page 394. (As to Parcels III-IV)
22. Easement granted to Columbus and Southern Ohio Electric Company, as more fully set forth in the document recorded as Deed Book 2564 Page 80. (As to Parcels VI-VII)
23. Easement granted to The Ohio Bell Telephone Company, as more fully set forth in the document recorded as Deed Book 3126 Page 148. (As to Parcels III-IV)
24. Easement granted to the City of Columbus, Ohio, as more fully set forth in the document recorded as Deed Book 3251 Page 630. (As to Parcels III-IV)
25. Agreement between Adjoining Owners Fixing Common Line by and between Joseph B. Ridolfo and Lula Ridolfo and Robert Lyman Dye and Eva Delie Dye Butts, Trustees of record in Miscellaneous Record 143 Page 244. (As to Parcels III-IV)
26. Agreement between Adjoining Owners Fixing Common Line by and between Joseph B. Ridolfo and Lula Ridolfo and the City of Columbus, Ohio of record in Miscellaneous Record 143 Page 247. (As to Parcels III-IV)
27. Lease by and between Ace Outdoor Advertising, as Lessee and Buckeye Auto Parts of Columbus, Inc., as Lessor of record in Instrument 200010230214444; as assigned to Infinity Outdoor, Inc. of record in Instrument 200010230214446. (As to Parcel VI)
28. Lease by and between Ace Outdoor Advertising, as Lessee and Buckeye Auto Parts of Columbus, Inc., as Lessor of record in Instrument 200010230214442; as assigned to Infinity Outdoor, Inc. of record in Instrument 200010230214445. (As to Parcel V)
29. Easement as more fully set forth in the document recorded as Deed Book 645 Page 371. (As to Parcel V)
30. Easement granted to the City of Columbus, as more fully set forth in the document recorded as Deed Book 941 Page 78. (As to Parcels III-IV)
31. Terms, provisions, options, rights of first refusal, covenants, conditions, restrictions, easements, charges, assessments and liens provided in the Covenants, Conditions and Restrictions of record in Instrument 200308280272775; Acknowledgment and Waiver of Reciprocal Right of First Refusal for Limited Purpose of record in Instrument 201008260109709. (As to Parcels III-IV)

EXISTING UTILITIES:  
All existing utilities have been shown as field located by O.U.P.S. (Ref: No A917202090).

EXISTING ON-SITE PARKING:  
Regular parking spaces 8  
Handicap parking spaces 0  
Total Spaces Available 8

APPARENT ENCROACHMENTS:  
Appears existing fence encroaches. Ownership unknown.

- Existing sanitary sewer appears to encroach outside of existing easement.
- Existing waterline appears to encroach easement not provided.
- Existing Billboard appears to encroach. Easement not provided.

ZONING  
Not provided.

- Legend
- Gas Marker Post
  - Electrical Transformer
  - Air Conditioning Unit
  - Ex. Telephone Pedestal
  - Ex. Valve, W- Water, GV- Gas
  - Property Line
  - Right-of-Way
  - Ex. Fire Hydrant
  - Ex. Electric/Telephone Pole w/ Light
  - Ex. Drop Pole / Traffic Signal Pole
  - Ex. Ground Light
  - Ex. Utility Pole
  - Ex. Light Pole
  - Ex. Storm Sewer
  - Ex. Sanitary Sewer
  - Ex. Overhead Electric
  - Ex. Underground Electric
  - Ex. Catch Basin (CB)
  - Ex. Manhole (MH)
  - Ex. Parking Count
  - Iron Pin Found (IPF)
  - Iron Pin Set (IP Set) or
  - MAG Nail Set w/ Brass Survey marker
  - Pony Spike Set
  - Ex. Street Sign
  - Ex. Mailbox
  - Yard Drain (YD)
  - Ex. Underground Telephone
  - Ex. Gas Line
  - Ex. Water Line
  - Ex. Fiber Optic
  - Ex. Fence
  - Property Line
  - Right-of-Way
  - Deed bearing and distance
  - Measured bearing and distance
  - Point of Commencement
  - Point of Beginning

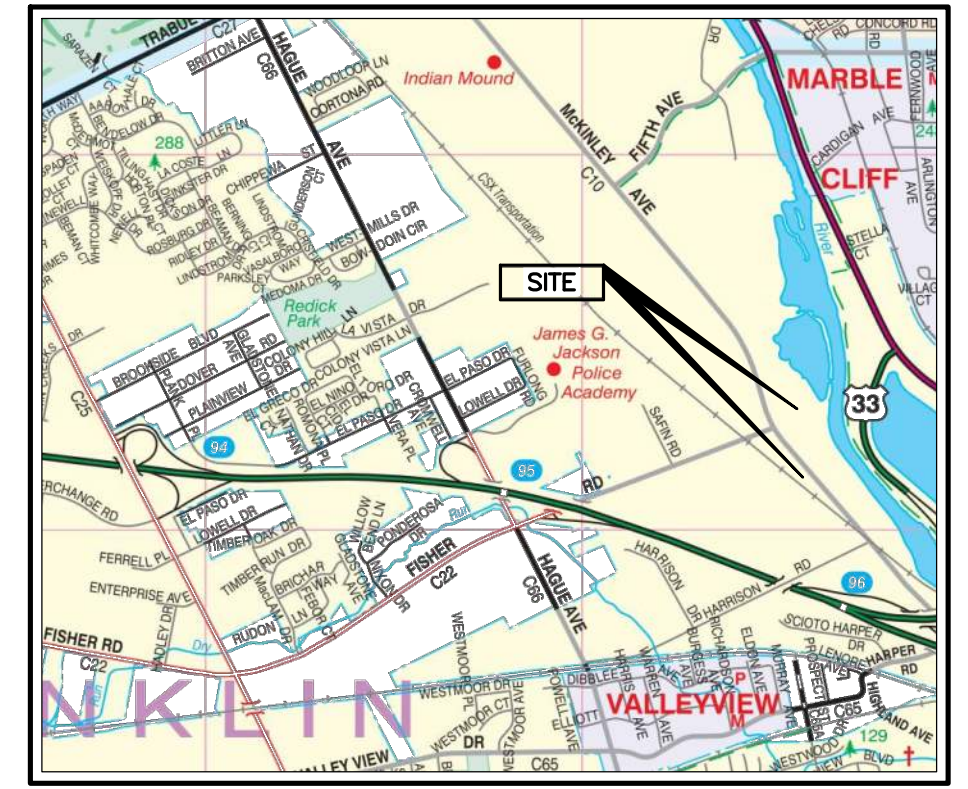
**E. P. FERRIS**  
AND ASSOCIATES  
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880 KING AVENUE  
COLUMBUS, OHIO 43212  
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(614) 299-2992 (Fax)  
www.EPFERRIS.com  
Consulting Civil Engineers and Surveyors

# ALTA / NSPS LAND TITLE SURVEY

## 2474 McKinley Ave

Part of that 9.46 acre tract of land conveyed to Harry A. Coleman, Robert J. and Bette L. Huston and Harry Barr, by deed of record as shown in Deed Book 3329, page 501, also being a portion of an original 32.5+ acre tract of land deeded to the City of Columbus by Louis Golden through Deed Volume 941, Page 78

### City of Columbus Franklin County, Ohio



Location Map  
Not To Scale

#### PROPERTY DESCRIPTION

PARCEL I: (010-104705)  
TRACT I:  
Situating in the State of Ohio, County of Franklin, City of Columbus, and being a part of that 9.46 acre tract of land conveyed to Harry A. Coleman, Robert J. and Bette L. Huston and Harry Barr, by deed of record as shown in Deed Book 3329, page 501, in the office of the Recorder of Franklin County, Ohio, and being more particularly described as follows:  
Being the Northern one-third (1/3) of the above 9.46 acre tract and being bounded as follows:  
Beginning at the Northwesterly corner of said 9.46 acre tract, thence N. 67° 56' 11" E. a distance of 659.52 feet to a point in the Northeastly corner of said 9.46 acre tract;  
thence S. 10° 1' E. with the Easterly line of said 9.46 acre tract a distance of 191.56 feet to a point; thence continuing with the Easterly line of said 9.46 acre tract, S. 34° E. a distance of 34.56 feet to a point; thence S. 66° 30' W. parallel to the Southerly line of said 9.46 acre tract, a distance of 559.66 feet to a point in the Westerly line of said 9.46 acre tract;  
thence N. 38° W. with the Westerly line of said 9.46 acre tract, a distance of 244.56 feet to the place of beginning and containing 3.19 acres of land, more or less.

TRACT II:  
Situating in the County of Franklin, in the State of Ohio and in the City of Columbus, and bounded and described as follows:  
Being a part of the 9.46 acre tract of land conveyed to Harry A. Coleman, Robert J. Huston and Bette L. Huston and Harry Barr by deed of record in Deed Book 3329, Page 501, the Recorder's Office, Franklin County, Ohio and being particularly described as follows:  
Beginning for reference at the southwesterly corner of said 9.46 acre tract, thence N. 38° W a distance of 270.01 feet to the true place of beginning;  
Thence continuing N. 38° W a distance of 260.77 feet to a point;  
Thence N. 66° 30' E. crossing said 9.46 acres, a distance of 559.66 feet to a point in the easterly line of said 9.46 acre tract;  
Thence S. 34° E. with the easterly line of said 9.46 acre tract a distance of 256.76 feet to a point; thence S. 66° 30' W. parallel to the southerly line of the 9.46 acre tract a distance of 541.16 feet to the place of beginning and containing 3.19 acres of land, more or less.

PARCEL II: (010-104706-00)  
Situating in the County of Franklin, in the State of Ohio, and in the City of Columbus, and bounded and described as follows:  
Being a part of the 9.46 acre tract of land conveyed to Harry A. Coleman, Robert J. and Bette A. Huston and Harry Barr, by deed of record as shown in Deed Book 3329, Page 501, in the office of the Recorder of Franklin County, Ohio, and being more particularly described as follows:  
Beginning at the Southwesterly Corner of the said 9.46 acre tract, thence N. 38° W a distance of 270.01 feet to a point;  
thence N. 66° 30' E. crossing the said 9.46 acre tract, a distance of 541.16 feet to a point in the Easterly line of said 9.46 acre tract;  
thence S. 34° E. with the Easterly line of said 9.46 acre tract, a distance of 265.86 feet to the Southeastly corner of said 9.46 acre tract;  
thence S. 66° 30' W. with the Southerly line of said 9.46 acre tract a distance of 522 feet to the place of beginning and containing 3.19 acres of land, more or less.

PARCEL III: (010-146234-00)  
Situating in the County of Franklin, in the City of Columbus and in the State of Ohio, and bounded and described as follows:  
Beginning at a stone in the center of the stone quarry pike where the north line of the original survey intersects the same; thence S. 49 deg. E. 49.20 poles to a corner of the Macon Trabeu heirs' 8.40 acre tract held in common for stone quarry purposes; thence S. 6 1/2 deg. E. 28 poles to a large boulder; thence N. 66 deg. E. 16 poles to the west bank of the Scioto River; thence up the river with its meanders thereof N. 1 3/4 deg. W. 21.21 poles, N. 9 1/2 deg. E. 21.21 poles, thence N. 3 1/2 deg. E. 21.27 poles, thence N. 6 deg. W. 32.12 poles to the mouth of a large run; thence up the run and with the meanders thereof N. 60 deg. W. 6 poles, thence N. 47 deg. W. 9.72 poles, thence S. 74 1/2 deg. W. 7.36 poles, thence S. 45 deg. W. 9.46 poles, thence S. 78 1/2 deg. W. 10.84 poles, thence S. 2 1/2 deg. W. 9.72 poles, thence S. 52 1/2 deg. W. 9.06 poles, thence S. 64 3/4 deg. W. 7.20 poles, thence S. 42 1/2 deg. W. 13.32 poles to a stone in the center of the Trabeu Free Pike, thence with the center of said Free Pike, S. 33 1/2 deg. E. 10.24 poles to the place of beginning. Said premises being Lots 7 and 8 of John P. Trabeu's Heirs Subdivision as same is shown in Plat Book 5, Page 265, Recorder's Office, Franklin County, Ohio.

PARCEL IV: (010-146278-00)  
Situating in the County of Franklin, in the City of Columbus and in the State of Ohio, and bounded and described as follows:  
Beginning at a point on the line between the 21.64 acre tract owned by John Dye, as described in Deed Book 200, Page 414, and the above mentioned 31 acre tract, more or less, owned by the City of Columbus, said point beginning being 811.8 feet southeasterly, measured along said line from the intersection of said line with the center line of McKinley Avenue (Stone Quarry Road); thence with the continuation of said line and a bearing of S. 49 deg. E. a distance of 69.2 feet to a point; thence S. 13 deg. 45' E. a distance of 384.00 feet to a point; thence S. 66 deg. W. a distance of 99.8 feet to a point; thence N. 6 deg. 30' W. a distance of 462.00 feet, more or less, to the place of beginning, and containing 0.68 of an acre.

PARCEL V: (010-146253-00)  
Situating in the County of Franklin, State of Ohio, and City of Columbus, and bounded and described as follows:  
Commencing at a found spike at the intersection of the centerline of Fisher Road with the centerline (old location) of McKinley Avenue; thence North 8 degrees 39 minutes West along the centerline (old location) of said McKinley Avenue, the centerline, (old location) of said McKinley Avenue, is shown on Sheets 2 and 3 of Right of Way Plan of McKinley Avenue, County Road 10, 1962, in the office of the County Engineer of Franklin County, Ohio; thence 507.92 feet to a found spike; thence North 81 degrees 21 minutes East along a line perpendicular to the centerline (old location) of said McKinley Avenue, a distance of 25.0 feet to a found iron pin in the easterly right of way line of said McKinley Avenue (old location) and the true point of beginning of this description; thence North 8 degrees 39 minutes West along the Easterly right of way line of said McKinley Avenue (old location) and along a line 25 feet (measured at right angles) easterly to the centerline (old location) of said McKinley Avenue a distance of 433.59 feet to a point; thence South 52 degrees 05 minutes East, a distance of 597.1 feet to a found iron pin; thence South 81 degrees 21 minutes West, a distance of 410.5 feet to the place of beginning, containing 2.043 acres.

PARCEL VI: (010-200913-00)  
Being situated in the State of Ohio, County of Franklin, City of Columbus and being a portion of an original 32.5+/- acre tract of land deeded to the City of Columbus by Louis Golden through Deed Volume 941, Page 78 as shown of record in the Franklin County Recorder's Office, said portion being herein designated as Parcel "A" and also being a part of Survey 530 in the Virginia Military District, being bounded and described as follows:  
Beginning for reference at a railroad spike (found) N. 8° 33' 21" W. (by this survey) along the old centerline of McKinley Avenue a distance of 507.92 feet from the intersection of Fisher Road and McKinley Avenue (formerly known as the Stone Quarry Road),  
thence N. 81° 26' 39" E. with a line being at a right angle to the aforementioned McKinley Avenue a distance of 25.00 feet to a 1" diameter pipe (found), said pipe being the southwest corner of a 2.043 acre tract of land as recorded in Deed Volume 2966, Page 268 in the Franklin County Recorder's Office, said pipe also being the true place of beginning of the herein described Parcel "A",  
thence N. 81° 26' 39" E. a distance of 410.50 feet to a point, said point being the southeast corner of the above mentioned 2.043 acre tract of land,  
thence S. 51° 59' 20" E. along the westerly line of a certain 21.64 acre tract of land being recorded in O.R. 0369614 in the Franklin County Recorder's Office a distance of 227.59 feet to a point,  
thence S. 16° 29' 00" E. along the westerly line of the above mentioned 21.64 acre tract, a distance of 539.97 feet to a point in the north line of a certain 3.19 acre tract of land being of record in Deed Volume 3506, Page 342,  
thence S. 65° 31' 00" W. along the north line of the above mentioned 3.19 acre tract a distance of 439.30 feet to a 3/4" re-bar (found) said re-bar being in the easterly right of way, 40.00 feet from and at a right angle to the old centerline of McKinley Avenue,  
thence N. 36° 50' 03" W. along the easterly right of way of McKinley Avenue a distance of 120.87 feet to a 3/4" re-bar (found),  
thence N. 31° 59' 55" W. a distance of 252.08 feet to an angle point in the easterly right of way of McKinley Avenue N. 65° 18' 30" E. a distance of 90.00 feet from the intersection of Fisher Road and McKinley Avenue,  
thence N. 23° 50' 00" W. a distance of 233.23 feet to a 1/2" re-bar (found), said re-bar being in the easterly right of way, 25.00 feet from and at a right angle to, the older centerline of McKinley Avenue,  
thence N. 8° 33' 21" W. along the easterly right of way of McKinley Avenue a distance of 257.92 feet to the true place of beginning, containing 9.246 acres of land, more or less.

The basis of bearings for this description are based upon a certain plan prepared by the Franklin County Engineer's Office (establishing, altering, widening and relocating McKinley Avenue Section "C" Part, County Road No. 10, Franklin Township, Franklin County, Ohio), being on file in Road Record Book 19, Page 194 and 195, and right of way portion of said plan also being on file in the City Engineer's Office Map Section (being known as ROW-38) and the bearing shown as S 40° 44' E on McKinley Avenue was used as the basis.  
This description was prepared by Donald E. Tobias, Registered Surveyor #5977 (State of Ohio) for the City of Columbus based upon a survey conducted in 1984 by the City of Columbus.

PARCEL VII: (010-200912-00)  
Being situated in the State of Ohio, County of Franklin, City of Columbus and being a portion of an original 32.5+/- acre tract of land deeded to the City of Columbus by Louis Golden through Deed Volume 941, Page 78 as shown of record in the Franklin County Recorder's Office, said portion being herein designated as Parcel "B" and also being a part of Survey 530 in the Virginia Military District, being bounded and described as follows:

Beginning for reference at a railroad spike (found) N. 8° 33' 21" W. (by this survey) along the old centerline of McKinley Avenue a distance of 507.92 feet from the intersection of Fisher Road and McKinley Avenue (formerly known as the Stone Quarry Road),  
thence S. 8° 33' 21" E. a distance of 507.92 feet to the above mentioned road intersection,  
thence S. 69° 58' 30" W. along the centerline of Fisher Road a distance of 29.53 feet to a point,  
thence S. 20° 01' 30" E. a distance of 35.00 feet to a point, said point being the most northeasterly corner and the true place of beginning of the herein described parcel "A",  
thence S. 40° 44' 00" E. with line parallel to and 40.00 feet from the old centerline of McKinley Avenue, a distance of 527.70 feet to a point,  
thence S. 49° 16' 00" W. a distance of 20.00 feet to a point,  
thence S. 40° 44' 00" E. a distance of 450.00 feet to a point,  
thence N. 49° 16' 00" E. a distance of 35.00 feet to a point,  
thence S. 40° 44' 00" E. along the original west line of McKinley Avenue, said west line being formerly described in the above mentioned description of the original 32.5+/- acre tract a distance of 748.49 feet to a point in the easterly right of way of the present Conrail Railroad (formerly known as the Toledo and Ohio Central Railway), said point being at a right angle from the centerline of the mainline tract a distance of 33.0 feet, said point being the most southerly corner of the herein described tract of land,  
thence N. 49° 46' 47" W. along the easterly line of the above mentioned Conrail Railroad right of way a distance of 1853.77 feet to a point, said point being 35.00 feet south of and at a right angle to the centerline of Fisher Road, said point being the most northwesterly corner of the herein described tract of land, thence N. 69° 58' 30" E. along the southerly right of way of Fisher Road a distance of 295.57 feet to the true place of beginning, containing 5.214 acres, more or less.

The basis of bearings for this description are based upon a certain plan prepared by the Franklin County Engineer's Office (establishing, altering, widening and relocating McKinley Avenue Section "C" Part, County Road No. 10, Franklin Township, Franklin County, Ohio), being on file in Road Record Book 19, Pages 194 and 195, and right of way portion of said plan also being on file in the City Engineer's Office Map Section (being known as ROW-38) and the bearing shown as S 40° 44' E on McKinley Avenue was used as the basis.  
This description was prepared by Donald E. Tobias, Registered Surveyor #5977 (State of Ohio) for the City of Columbus based upon a survey conducted in 1984 by the City of Columbus.

We hereby certify that the foregoing Boundary Survey was prepared from actual field measurements in accordance with Chapter 4733-37 Ohio Administrative Code.

All iron pins set are 5/8" rebar, 30" in length with yellow plastic cap and all Mag Nails set are with brass survey marker with "EP FERRIS SURVEYOR 8230" inscribed on top.

**CERTIFICATION**  
To Riverbend Commercial Title Services LP., SB Columbus LLC, JHI Realty, LLC, an Indiana limited liability company, First American Title Insurance Company that:  
The undersigned certifies that this map or plot and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1,2,3,4,7(a),7(b),8,9,11,13,14, and 16 of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion, as a land surveyor registered in the State of Ohio, the Relative Positional Accuracy of this survey does not exceed that which is specified therein.



**PRELIMINARY**  
BY: Matthew Lee Sloat, P.E., P.S.  
Registered Surveyor No. 8342

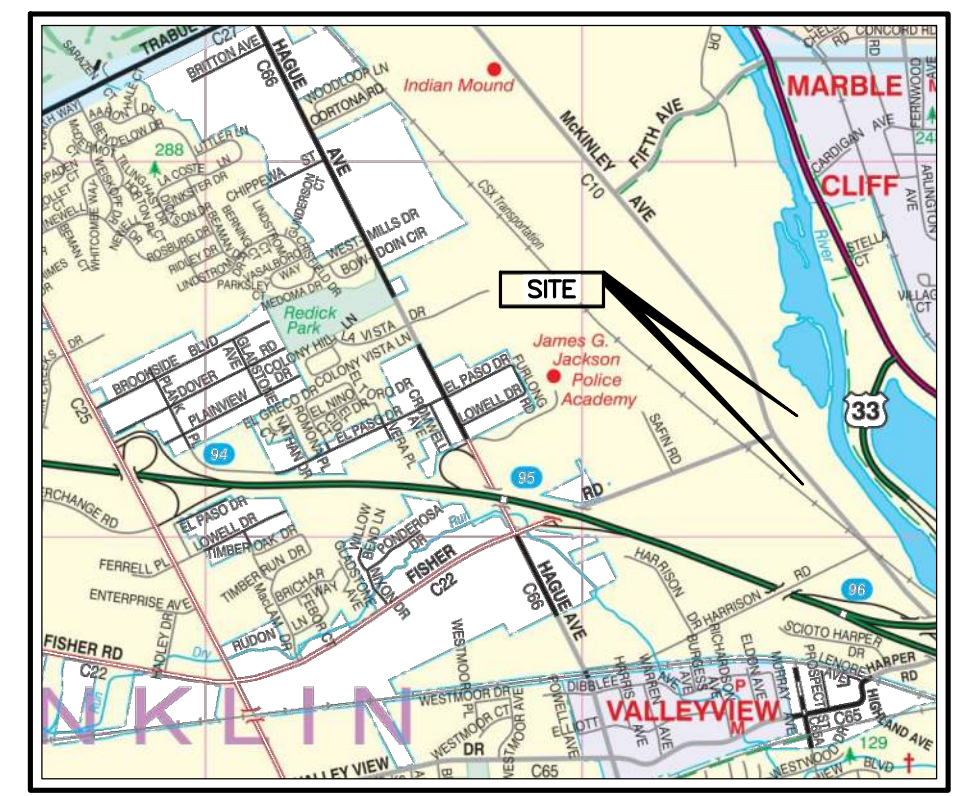


# ALTA / NSPS LAND TITLE SURVEY

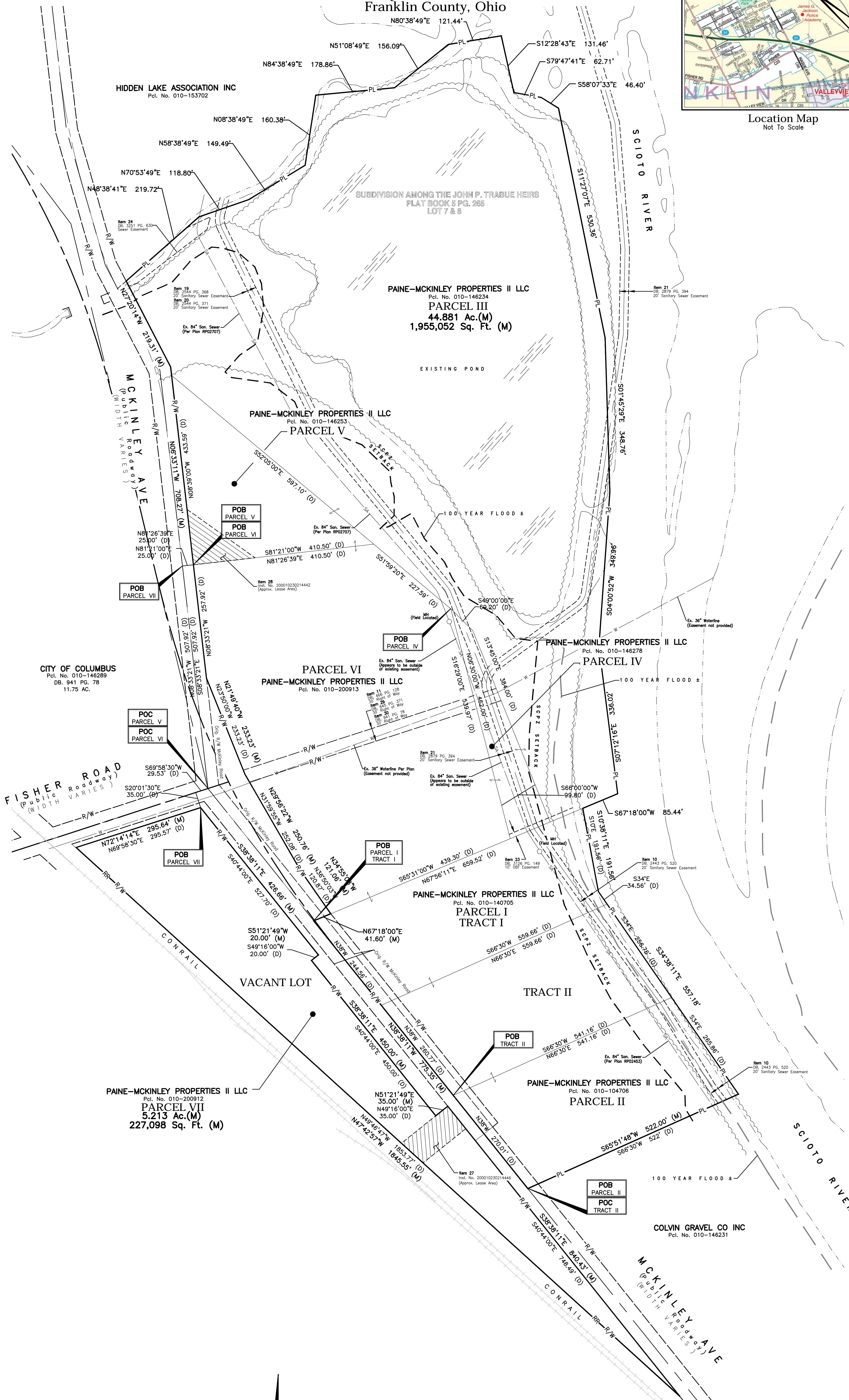
## 2474 McKinley Ave

Part of that 9.46 acre tract of land conveyed to Harry A. Coleman, Robert J. and Bette L. Huston and Harry Barr, by deed of record as shown in Deed Book 3329, page 501, also being a portion of an original 32.5+ acre tract of land deeded to the City of Columbus by Louis Golden through Deed Volume 941, Page 78

City of Columbus  
Franklin County, Ohio



Location Map  
Not To Scale



HIDDEN LAKE ASSOCIATION INC  
Pcl. No. 010-153702

SUBDIVISION AMONG THE JOHN P. TRABUE HEIRS  
PLAT BOOK 5 PG. 265  
LOT 7 & 8

PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-146234  
PARCEL III  
44.881 Ac.(M)  
1,955,052 Sq. Ft. (M)

PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-146253  
PARCEL V

PARCEL VI  
PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-200913

PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-146278  
PARCEL IV

CITY OF COLUMBUS  
Pcl. No. 010-146289  
DB. 941 PG. 78  
11.75 AC.

POC  
PARCEL V  
PARCEL VI

POB  
PARCEL I  
TRACT I

PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-140705  
PARCEL I  
TRACT I

VACANT LOT

TRACT II

PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-200912  
PARCEL VII  
5.213 Ac.(M)  
227,098 Sq. Ft. (M)

PAINE-MCKINLEY PROPERTIES II LLC  
Pcl. No. 010-104706  
PARCEL II

POB  
PARCEL II  
POC  
TRACT II

COLVIN GRAVEL CO INC  
Pcl. No. 010-146231

**E. P. FERRIS**  
AND  
ASSOCIATES  
INC

880 KING AVENUE  
COLUMBUS, OHIO 43212  
(614) 299-2999  
(614) 299-2992 (Fax)  
www.EPFERRIS.com

Scale: 1" = 100'

**PRELIMINARY**

DRWN BY CRK CHK BY MLS DATE 08-23-19

708763

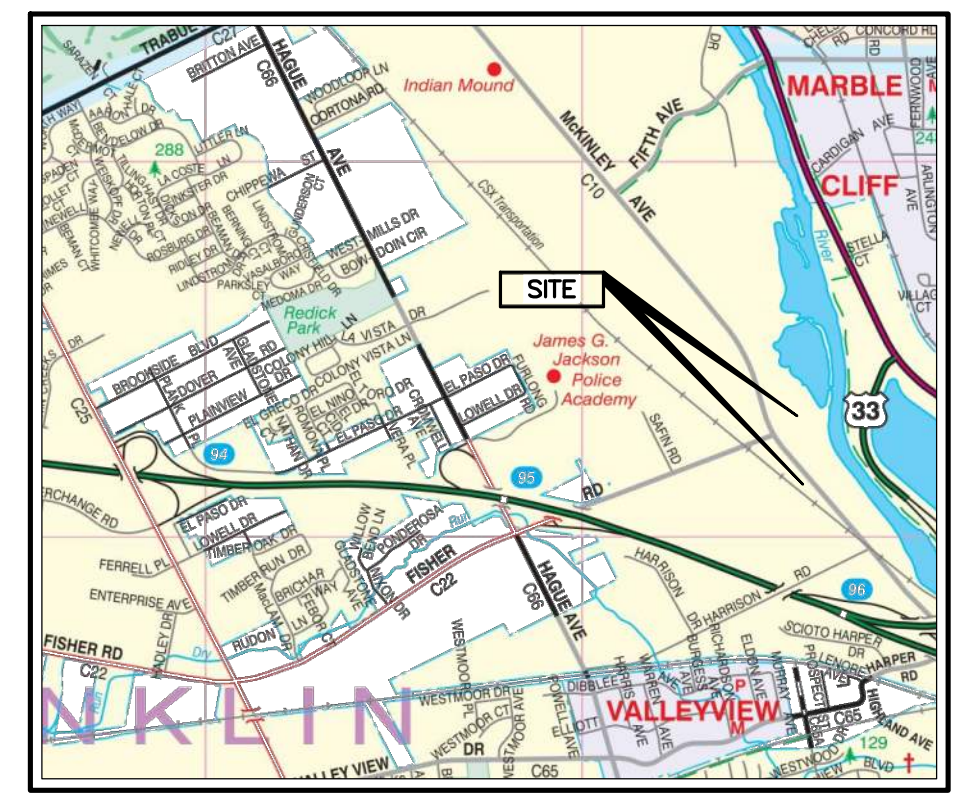


# ALTA / NSPS LAND TITLE SURVEY

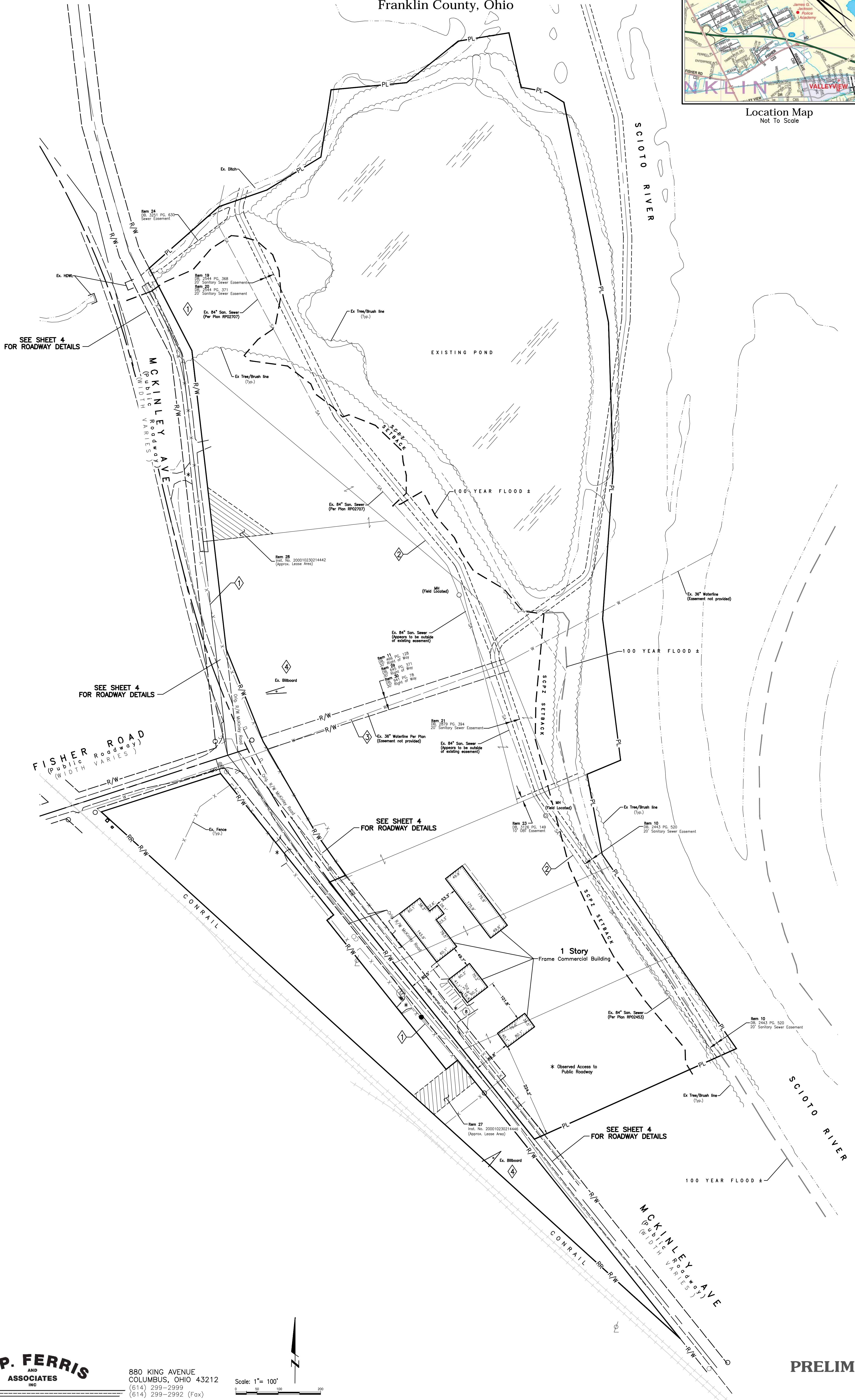
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City of Columbus  
Franklin County, Ohio



Location Map  
Not To Scale



**E. P. FERRIS**  
AND  
ASSOCIATES  
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(614) 299-2999  
(614) 299-2992 (Fax)  
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Scale: 1" = 100'

**PRELIMINARY**

DRWN BY CRK CHK BY MLS DATE 08-23-19

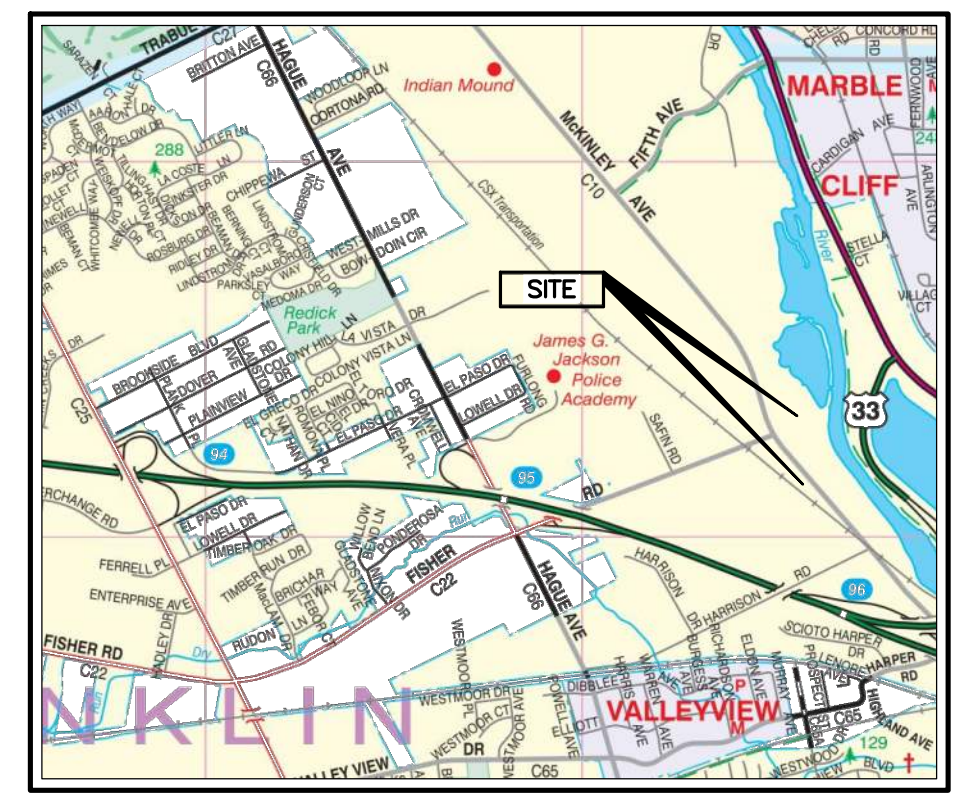


# ALTA / NSPS LAND TITLE SURVEY

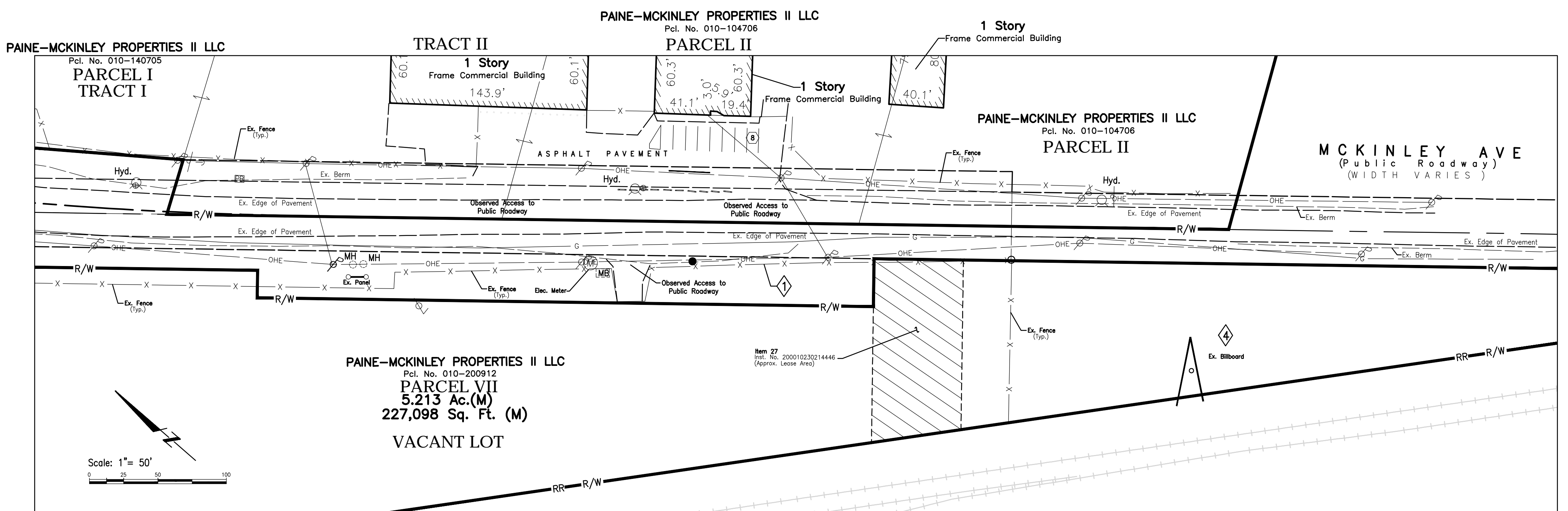
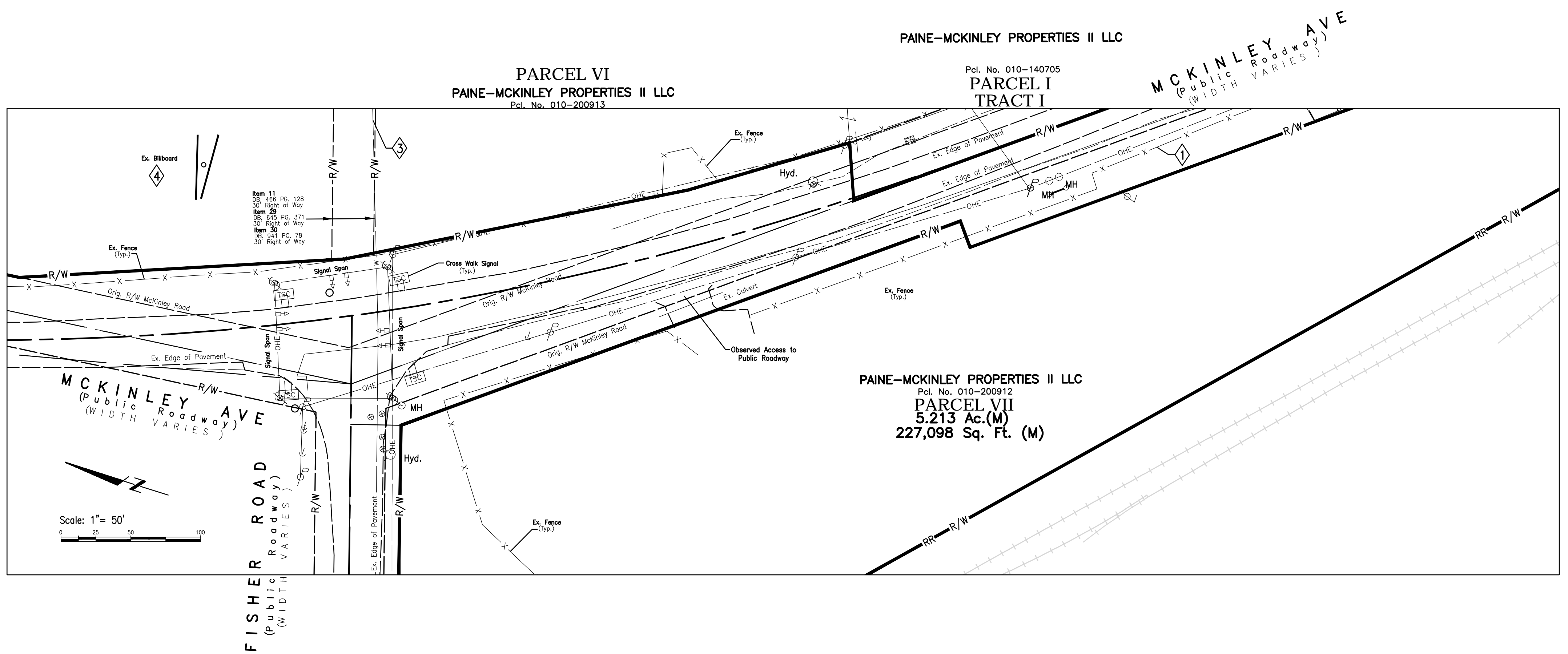
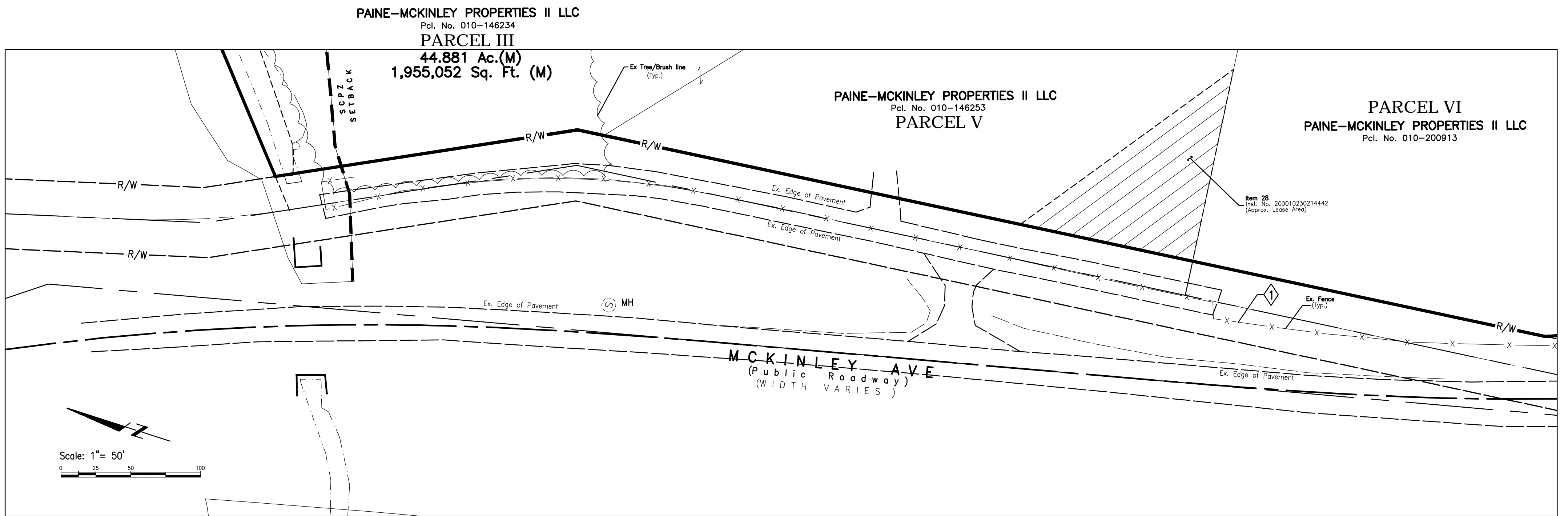
## 2474 McKinley Ave

Part of that 9.46 acre tract of land conveyed to Harry A. Coleman, Robert J. and Bette L. Huston and Harry Barr, by deed of record as shown in Deed Book 3329, page 501, also being a portion of an original 32.5+ acre tract of land deeded to the City of Columbus by Louis Golden through Deed Volume 941, Page 78

City of Columbus  
Franklin County, Ohio



Location Map  
Not To Scale





**APPENDIX D**

**OHIO ADMINISTRATIVE CHAPTER 513 AUTHORIZATION**



Mike DeWine, Governor  
Jon Husted, Lt. Governor  
Anne M. Vogel, Director

April 4, 2023

Mr. Joseph M. Reidy  
Thrive Companies  
842 N. 4<sup>th</sup> Street #200  
Columbus, OH 43215

**Re: Huston Landfill – Buckeye Auto Parts  
Director's Authorization  
Approval  
Municipal Solid Waste Landfills  
Franklin County  
MSWL023769**

**Subject: Huston Landfill – Buckeye Auto Parts, Franklin County  
Ohio Administrative Code (OAC) Chapter 513 Authorization**

Dear Mr. Reidy:

On February 22, 2023, the Ohio Environmental Protection Agency (Ohio EPA), Division of Materials and Waste Management (DMWM), Central District Office (CDO) received a revised application titled, *OAC 3745-513-300 Request – Former McKinley Ave Landfill (Application)*, dated February 21, 2023. The Application was submitted by Thrive Companies (Thrive), for the closed Huston Landfill (Facility) located at 2474 McKinley Avenue, Columbus, Ohio.

OAC Rule 3745-513-20(A) requires authorization from the director of Ohio EPA (director) before engaging in filling, grading, excavating, building, drilling, or mining on land where a solid waste facility was operated (Chapter 513 activities). The Facility operated as a solid waste landfill from the 1950s to the early 1970s. This authorization is being requested to clear and grade the property, provide a protective soil cover over waste of a minimum thickness of two (2) feet, and ultimately construct a mixed-use development, to be called WestBend, that consists of office, retail, restaurant, and multi-family residential buildings. Construction will also include the installation of utility trenches below the soil cap and the completion of soil improvements and utilization of deep foundation elements to support the structures.

Based upon a review of the Application submitted in accordance with the requirements of OAC Rule 3745-513-300, I have determined, pursuant to OAC Rule 3745-513-20(A), that the proposed activities, if conducted in accordance with the Application as submitted on January 28, 2022 and as revised through February 22, 2023, and the following conditions, will not result in violation of applicable laws and regulations, will not create a nuisance, and are unlikely to adversely affect public safety or health or the environment. Therefore, Thrive is hereby authorized to perform the activities outlined in this letter in accordance with the plans, specifications, and information submitted as part of the Application.

As part of this approval, Thrive is subject to the following conditions:

### **CONDITIONS**

General Conditions:

1. This approval grants authorization to perform activities at the Facility in accordance with the Application as submitted on January 28, 2022 and last revised on February 22, 2023. All activities shall be conducted in strict accordance with the plans, specifications, and other information submitted as part of the Application. There may be no deviation from the approved plans without prior written authorization from Ohio EPA. Any future activities at the Facility may require additional Ohio EPA approval.
2. Not later than 72 hours prior to the start of the activities associated with this authorization, Thrive shall submit written notification, which specifies the anticipated date of commencement, to Ohio EPA, DMWM, CDO and Columbus Public Health.
3. Access shall be allowed at the Facility to the director or a representative authorized by the director at any time to make inspections, conduct tests, or examine records and reports pertaining to the authorized activities.
4. All on-site activities shall be accomplished in compliance with all applicable state and federal laws and regulations pertaining to environmental protection, including but not limited to the control of air pollution, leachate, surface water run-on and run-off, and protection of ground water.

Operational Conditions:

5. For the purposes of erosion control, Thrive shall use best management practices and standards as specified in the National Resources Conservation manual titled Rainwater and Land Development prepared by the Ohio Department of Natural Resources, Division of Soil & Water Conservation.

ORC Chapter 6111

6. Any liquids, semi-solids, industrial wastes, and other wastes regulated by ORC Chapter 6111 that are removed during intrusive activities shall be collected and securely stored until these materials are properly characterized and disposed of in accordance with ORC Chapter 6111 and the regulations promulgated thereunder.

OAC Rule 3745-513-20(D)(1)

7. This authorization shall terminate 3 years from the date of this letter if Thrive has not begun the activities authorized herein.

OAC Rule 3745-513-20(E)



8. The director may revoke this authorization if Thrive violates, or is likely to violate, any applicable law or if continued implementation of the approved plans may cause a threat to human health or safety or the environment.

OAC Rule 3745-513-350(B)

9. Any person engaging in Chapter 513 activities shall perform activities in a manner that prevents migration of leachate, explosive gas, or toxic gas from the facility.

OAC Rule 3745-513-350(C)

10. No boring or excavation shall occur within the limits of waste placement unless any excavated waste is replaced within previously existing horizontal limits of waste placement or is treated or disposed of at a licensed, permitted treatment or disposal facility, in accordance with ORC Chapter 3734 and the regulations promulgated thereunder.

11. If boring or excavation occurs outside the limits of waste placement at the Facility, Thrive shall not use material consisting of solid waste or hazardous waste to backfill the bored or excavated areas.

12. Any solid and/or hazardous waste to be removed from the Facility shall be collected and securely stored until these materials are properly characterized and disposed of in accordance with Ohio Revised Code (ORC) Chapters 3734. and 6111. and the regulations promulgated thereunder.

OAC Rule 3745-513-350(D)

13. Prior to any disposal of waste or contaminated soil from the Facility, Thrive shall submit copies of sample analysis results, the treatment or disposal method selected, and a letter of acceptance from the treatment or disposal facility, to Ohio EPA, DMWM, CDO, pursuant to OAC Rule 3745-513-350(D).

OAC Rule 3745-513-350(E)

14. Upon completion of Chapter 513 activities at the Facility, Thrive shall restore the facility cap to the conditions specified in the provisions of Chapter 3734. of the Revised Code and pursuant to OAC Rule 3745-513-350(E).

OAC Rule 3745-513-370

15. Not later than 60 days after completing the activities authorized through this approval, Thrive shall submit to Ohio EPA, DMWM, CDO, a certification report in accordance with OAC Rule 3745-513-370.

Special Conditions:

16. Upon completion of construction activities, Thrive shall submit to Ohio EPA, DMWM, CDO an explosive gas management plan as per OAC Rule 3745-27-12 that accounts for explosive gas pathways, if any, and any potential migration toward occupied structures occurring within one thousand feet of the Facility.

### END OF CONDITIONS

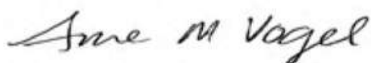
Nothing in this letter shall be construed to authorize any waiver from the requirements of any applicable federal or state laws or regulations except as specified herein. This authorization shall not be interpreted to release Thrive from responsibility under ORC Chapters 3704, 3714, 3734, or 6111; under the Federal Clean Water Act, the Resource Conservation and Recovery Act, the Toxic Substances Control Act, or the Comprehensive Environmental Response, Compensation, and Liability Act; or from other applicable requirements for remedying conditions resulting from any release of contaminants to the environment.

You are hereby notified that this action of the director of Environmental Protection (director) is final and may be appealed to the Environmental Review Appeals Commission pursuant to Ohio Revised Code Section 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Treasurer, State of Ohio." The Commission, in its discretion, may reduce the fee if by affidavit it is demonstrated that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
30 East Broad Street, 4<sup>th</sup> Floor  
Columbus, Ohio 43215

If you have any questions regarding this authorization, please contact Jessica Hirashima of Ohio EPA, DMWM, CDO at (614) 728-3889.

Sincerely,



Anne M. Vogel  
Director

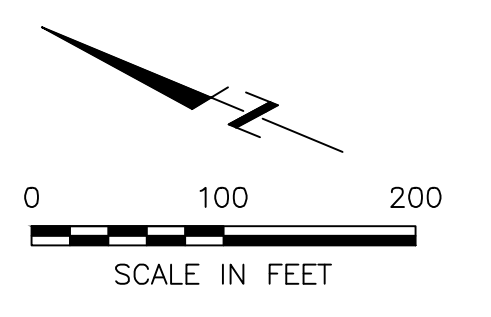
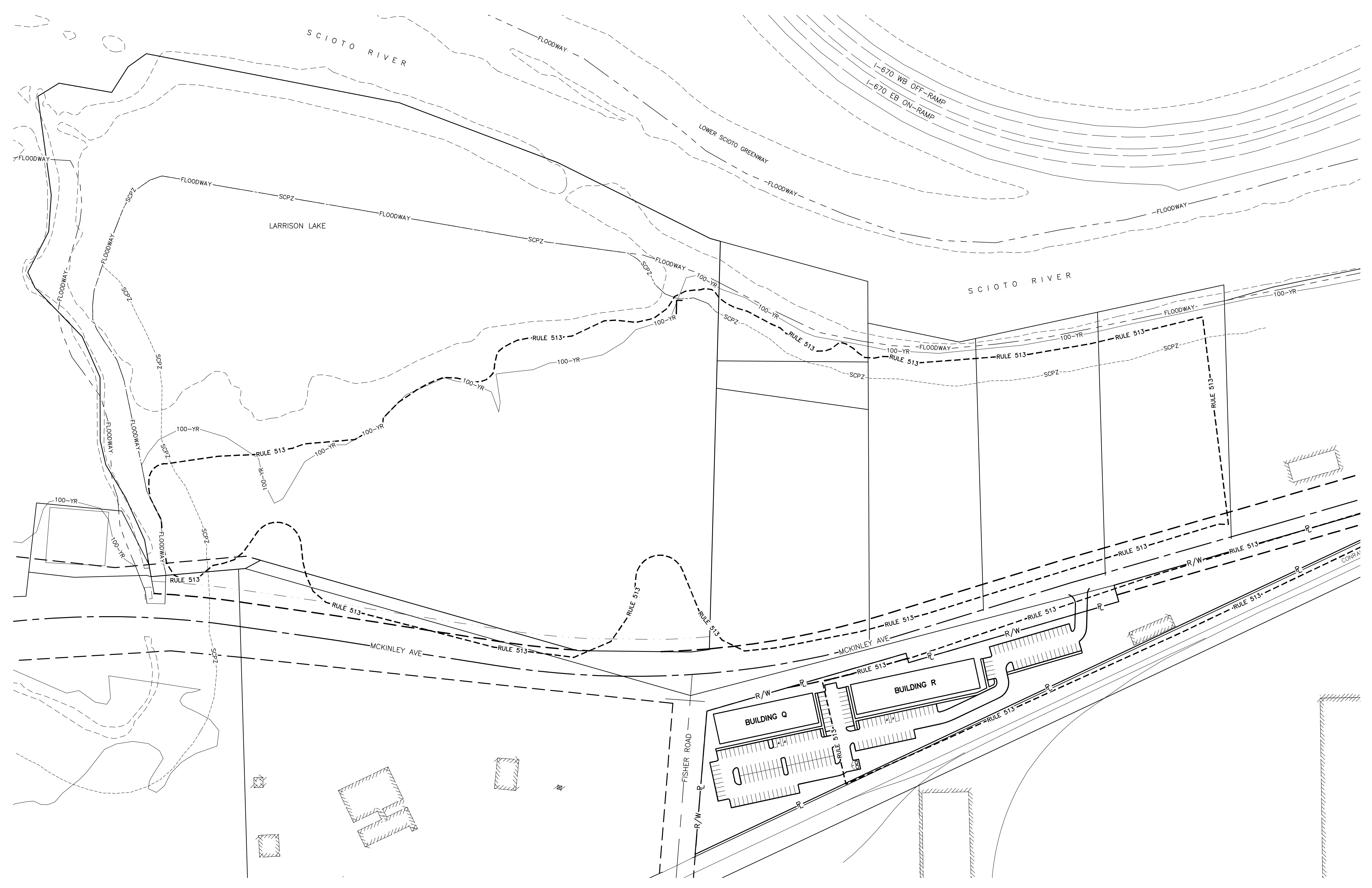
ec: Constance Livchak, DMWM, CDO  
Jeremy Carroll, DMWM, CO  
Sarah Badenhop, Columbus Public Health

**APPENDIX E**

**WESTBEND DEVELOPMENT ALTERNATIVES**



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REVISIONS	DATE	BY	CHK.

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC  
 Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
 2ND FLOOR  
 COLUMBUS, OHIO 43228  
 (614) 299-2999  
 (614) 299-2992 (Fax)  
 www.EPFERRIS.com

CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 THRIVE COMPANIES

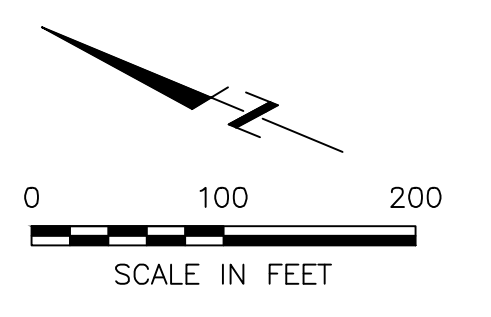
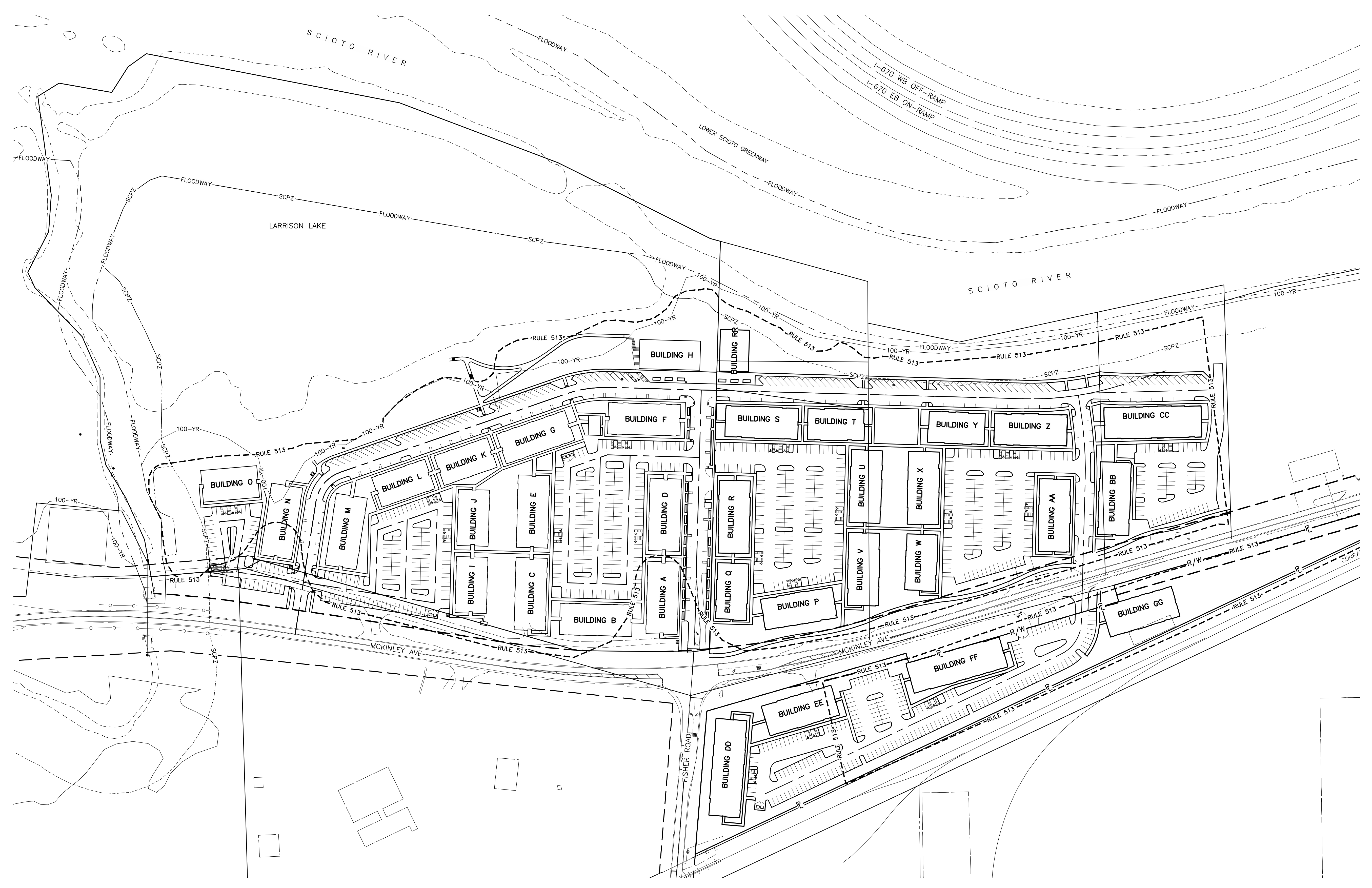
JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	8/17/2023

**NO IMPACT ALTERNATIVE**

SCALE:	
1" = 100'	
SHEET NO.	OF
1	1



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REVISIONS	DATE	BY	CHK.

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC  
 Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
 2ND FLOOR  
 COLUMBUS, OHIO 43228  
 (614) 299-2999  
 (614) 299-2992 (Fax)  
 www.EPFERRIS.com

CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 THRIVE COMPANIES

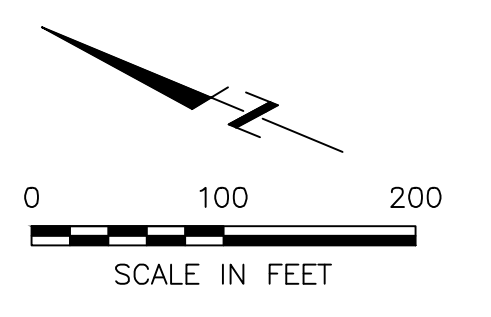
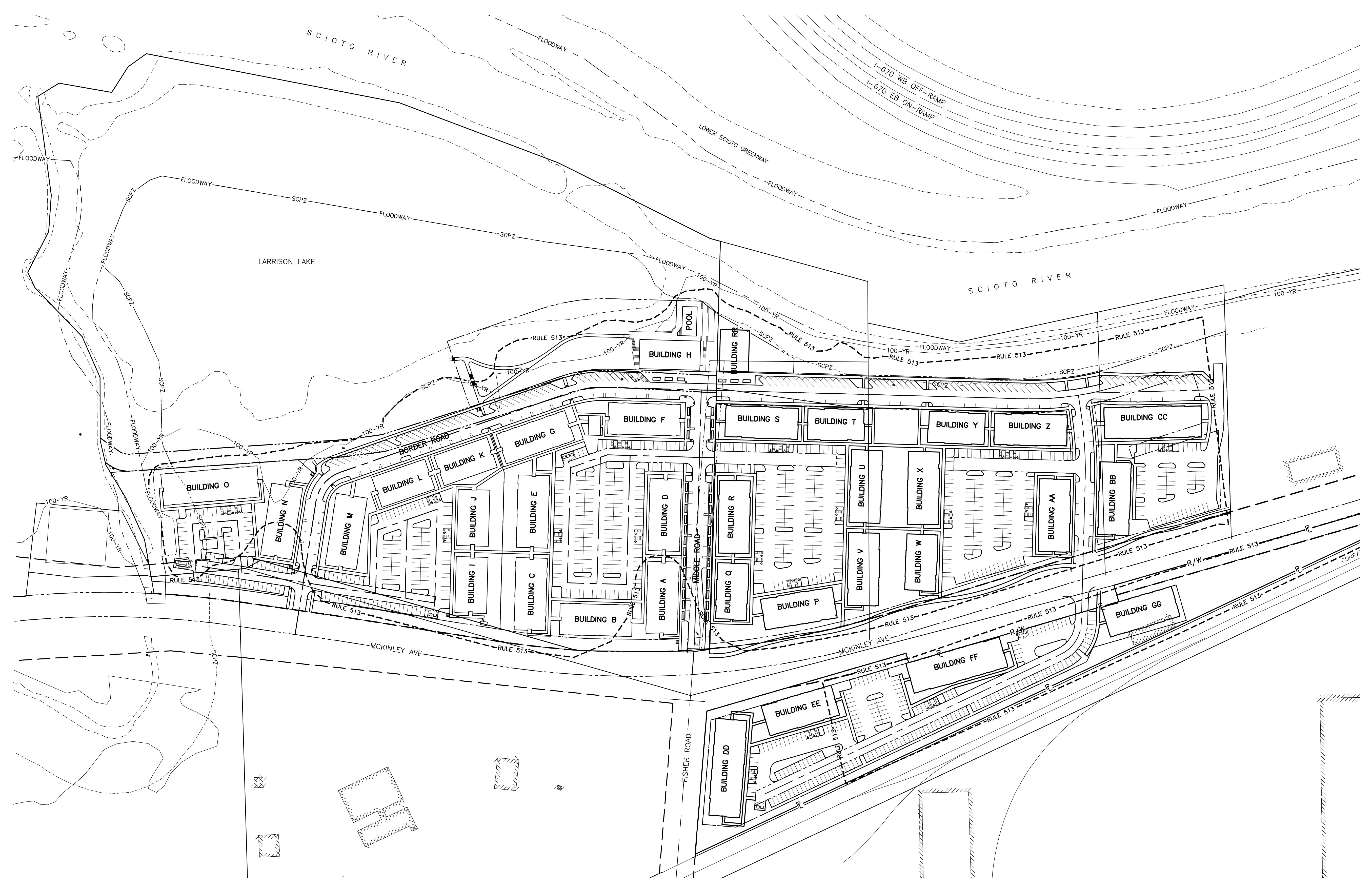
JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	9/12/2023

**MINIMAL IMPACT ALTERNATIVE**

SCALE:	
1" = 100'	
SHEET NO.	OF
1	1



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REVISIONS	DATE	BY	CHK.

**E. P. FERRIS**  
 AND ASSOCIATES  
 INC  
 Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
 2ND FLOOR  
 COLUMBUS, OHIO 43228  
 (614) 299-2999  
 (614) 299-2992 (Fax)  
 www.EPFERRIS.com

CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 THRIVE COMPANIES

JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	9/12/2023

**PREFERRED ALTERNATIVE**

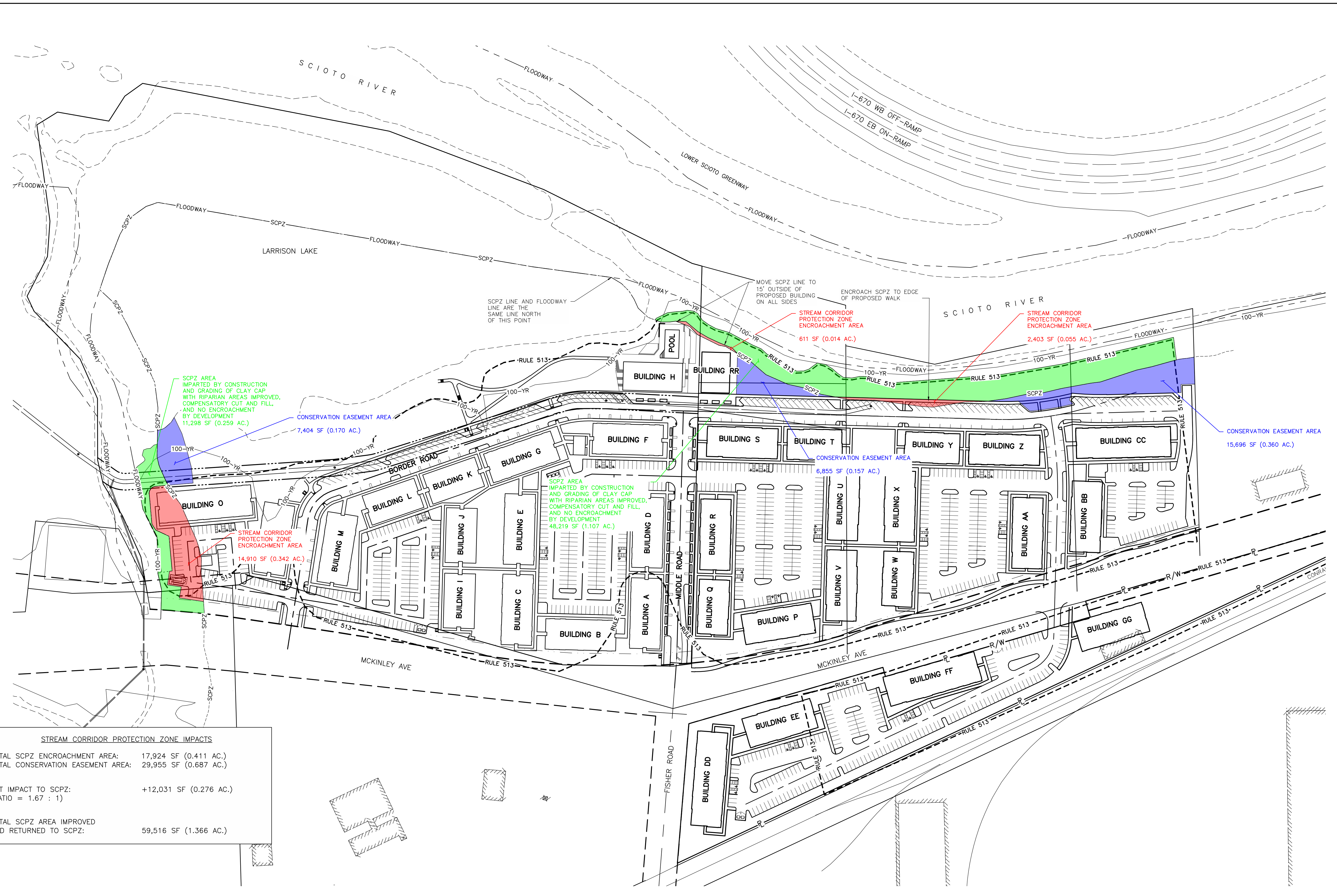
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SHEET NO.	OF
1	1

**APPENDIX F**

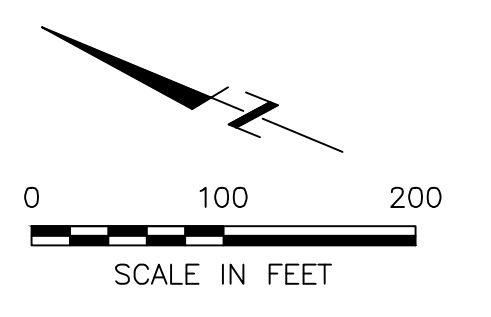
**PREFERRED ALTERNATIVE SCPZ ENCROACHMENT EXHIBIT**



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STREAM CORRIDOR PROTECTION ZONE IMPACTS	
TOTAL SCPZ ENCROACHMENT AREA:	17,924 SF (0.411 AC.)
TOTAL CONSERVATION EASEMENT AREA:	29,955 SF (0.687 AC.)
NET IMPACT TO SCPZ: (RATIO = 1.67 : 1)	+12,031 SF (0.276 AC.)
TOTAL SCPZ AREA IMPROVED AND RETURNED TO SCPZ:	59,516 SF (1.366 AC.)



REVISIONS	DATE	BY	CHK.

**E. P. FERRIS**  
 AND ASSOCIATES  
 INC.  
 Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
 2ND FLOOR  
 COLUMBUS, OHIO 43228  
 (614) 299-2999  
 (614) 299-2992 (Fax)  
 www.EPFERRIS.com

CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 THRIVE COMPANIES

JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	9/21/2023

**PREFERRED ALTERNATIVE  
 SCPZ ENCROACHMENT EXHIBIT**

SCALE:	
1" = 100'	
SHEET NO.	OF
1	1

**APPENDIX G**

**WESTBEND DEVELOPMENT PHASE 1 MASS EXCAVATION PLAN**



**OWNER/DEVELOPER INFORMATION:**  
 WESTBEND QOZB, LLC  
 842 N 4TH STREET SUITE #200  
 COLUMBUS, OHIO 43215  
 CONTACT: MICHAEL AMICON  
 PH: (614) 286-2143  
 EMAIL: mamicon@thrivecos.com

**ZONING INFORMATION:**  
 EXISTING ZONING: M, MANUFACTURING, Z67-005  
 PROPOSED REZONING: Z22-XXXX  
 PROPOSED VARIANCE: CV22-XXX  
 PARCEL ID NUMBERS: 010-146234, 010-146253,  
 010-200913, 010-146278, 010-104705,  
 010-104706, 010-200912

**CIVIL ENGINEER INFORMATION:**  
 E.P. FERRIS & ASSOCIATES  
 2130 QUARRY TRAILS DRIVE, 2ND FLOOR  
 COLUMBUS, OHIO 43228  
 CONTACT: CHAD BUCKLEY  
 PH: (614) 299-2999  
 FAX: (614) 299-2992  
 EMAIL: cbuckley@epferris.com

PARCEL INFORMATION						
NO.	OWNER	ADDRESS	PARCEL ID.	ACREAGE (DEED)	ZONING	HEIGHT DISTRICT
1	WESTBEND QOZB LLC	2610 MCKINLEY AVE	010-146253	29.86	M, MANUFACTURING (Z67-005)	H-35
2	PAINE-MCKINLEY AVENUE LLC	MCKINLEY AVE	010-200913	3.75	M, MANUFACTURING (Z67-005)	H-35
3	PAINE-MCKINLEY AVENUE LLC	MCKINLEY AVE	010-146278	0.59	M, MANUFACTURING (Z67-005)	H-35
4	PAINE-MCKINLEY AVENUE LLC	MCKINLEY AVE	010-146234	1.54	M, MANUFACTURING (Z67-005)	H-35
5	HIDDEN LAKE ASSOCIATION INC	MCKINLEY AVE	010-153702	16.96	M, MANUFACTURING (ANNEX1424)	H-35
6	CITY OF COLUMBUS	MCKINLEY AVE	010-153709	64.61	M, MANUFACTURING (ANNEX5599)	H-35
7	CITY OF COLUMBUS	2609 MCKINLEY AVE	010-146289	15.22	M, MANUFACTURING (Z67-005)	H-35
8	PAINE-MCKINLEY AVENUE LLC	MCKINLEY AVE	010-200912	5.18	M, MANUFACTURING (Z67-005)	H-35
9	HIDDEN LAKES CONDOMINIUM PHASE 5	MCKINLEY AVE	010-153702	0.89	M, MANUFACTURING (Z67-005)	H-35

HORIZONTAL CONTROL			
ID	NORTHING	EASTING	DESCRIPTION
HC #1	721321.39	1808985.85	MAG NAIL WITH ORANGE FLASHER SET IN THE PAVEMENT OF A SERVICE DRIVE TO LAKE SHORE DR ON THE EAST SIDE OF MCKINLEY AVE
HC #2	720784.82	1809192.13	IRON PIN SET ON THE EAST SIDE OF MCKINLEY AVE APPROXIMATELY 895' NORTH OF THE INTERSECTION OF MCKINLEY AVE AND FISHER RD
HC #3	720331.13	1809254.77	MAG NAIL WITH ORANGE FLASHER SET IN THE SOUTH EDGE OF PAVEMENT OF THE ENTRANCE DRIVE TO 2609 MCKINLEY AVE ON THE WEST SIDE OF MCKINLEY AVE APPROXIMATELY 450' NORTH OF THE INTERSECTION OF MCKINLEY AVE AND FISHER RD
HC #4	718854.16	1810254.6	IRON PIN SET ON THE EAST SIDE OF MCKINLEY AVE IN FRONT OF 2290 MCKINLEY AVE APPROXIMATELY 1,355 FEET SOUTHEAST OF THE INTERSECTION OF MCKINLEY AVE AND FISHER RD

OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83 (2011 ADJUSTMENT) AS DETERMINED BY ODOT RTN OBSERVATIONS ALONG WITH RTK CORRECTIONS.

BENCHMARKS		
ID	ELEVATION	DESCRIPTION
SOURCE BM	732.30	BRASS DISK IN THE SOUTHWEST CORNER OF THE CONCRETE BASE OF A FLAG POLE ON THE EAST SIDE OF DUBLIN ROAD AT #1328, 915 FEET SOUTHWEST OF STELLA COURT, ON THE WEST SIDE OF THE FRONT PARKING AREA, 135 FEET NORTHWEST OF THE CENTERLINE OF THE DRIVEWAY, 73 FEET WEST OF A BUILDING, 45 FEET NORTHEAST OF THE CURB.
BM #1	752.87	CHISELED SQUARE ON THE SOUTHWEST CORNER OF A CONCRETE PAD FOR "FISHER RD" STREET SIGN AND TRAFFIC SIGNAL POLE ON THE NORTHWEST CORNER OF THE INTERSECTION OF MCKINLEY AVE. AND FISHER RD.
BM #2	745.95	BENCH TIE SET IN THE EAST FACE OF A TELEPHONE AND POWER POLE ON THE WEST SIDE OF MCKINLEY AVE, ACROSS THE STREET FROM A SERVICE ENTRANCE TO LAKE SHORE DR.
BM #3	747.57	CHISELED X ON THE EAST BOLT OF A FIRE HYDRANT ON THE WEST SIDE OF MCKINLEY AVENUE, APPROXIMATELY 625' NORTH OF THE INTERSECTION OF MCKINLEY AVE. AND FISHER RD.

ALL BENCHMARKS AND ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD88), REFERENCED BY DIFFERENTIAL LEVELING FROM A FRANKLIN COUNTY ENGINEER'S OFFICE BENCHMARK. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, PROPERTY CORNERS, REFERENCE POINTS, AND STAKES. ANY BENCHMARK, PROPERTY CORNER, OR SURVEY MARKER DAMAGED OR DISTURBED BY THE CONTRACTOR SHALL BE RESET BY AN OHIO REGISTERED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

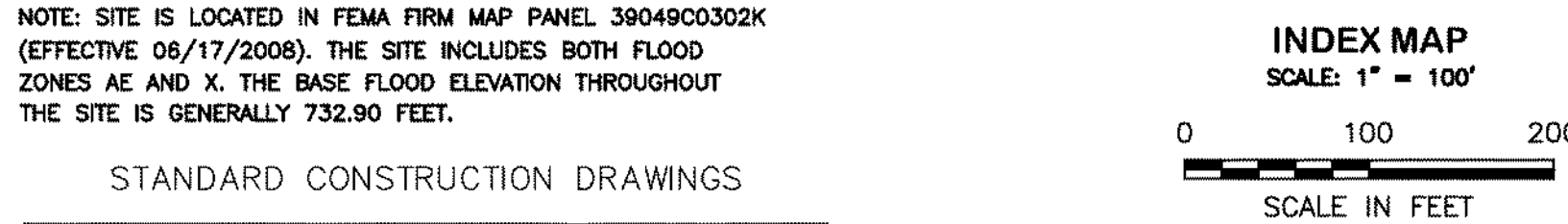
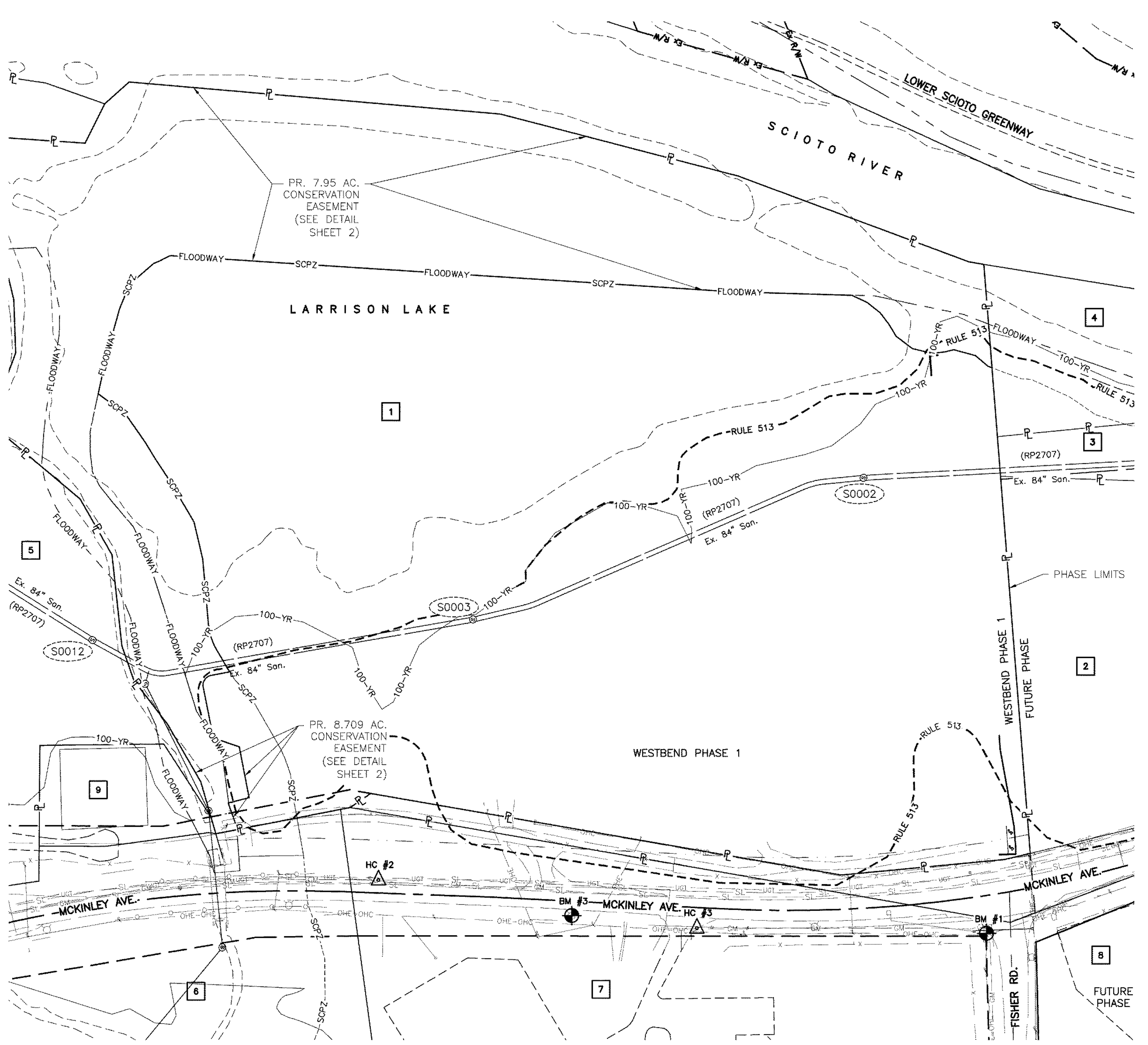
EASEMENT REFERENCE			REVISIONS		
CITY NO.	COUNTY RECORDER	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE
	VOL. PAGE				

PLAN PREPARED BY:		
STATE OF OHIO	CHAD J. BUCKLEY	REGISTERED ENGINEER
BY: <i>Chad Buckley</i>		06/01/2023
		DATE

APPROVALS:	
MDT <i>James Young</i>	9/18/2023
CITY ENGINEER/ADMINISTRATOR, DIVISION OF DESIGN AND CONSTRUCTION	DATE
<i>Chad Holzapfel for Kristian Fenner</i>	9/13/2023
ADMINISTRATOR, DIVISION OF POWER	DATE
<i>Mr. Robert S. Pristas/CF</i>	9/18/2023
ADMINISTRATOR, DIVISION OF SEWERAGE & DRAINAGE	DATE
<i>Joe Clouse for John G. Newsome</i>	9/13/2023
ADMINISTRATOR, DIVISION OF WATER	DATE

PROJECT TITLE:	
PRIVATE STORM SEWER IMPROVEMENTS FOR WESTBEND DEVELOPMENT PHASE 1 MASS GRADE AND FILL 2474 MCKINLEY AVE	
DIVISION USE ONLY	OWNER
	CONTRACTOR
	INSPECTOR
AGREEMENT	COMPLETED
RPD CKD	CLD CON. DR.

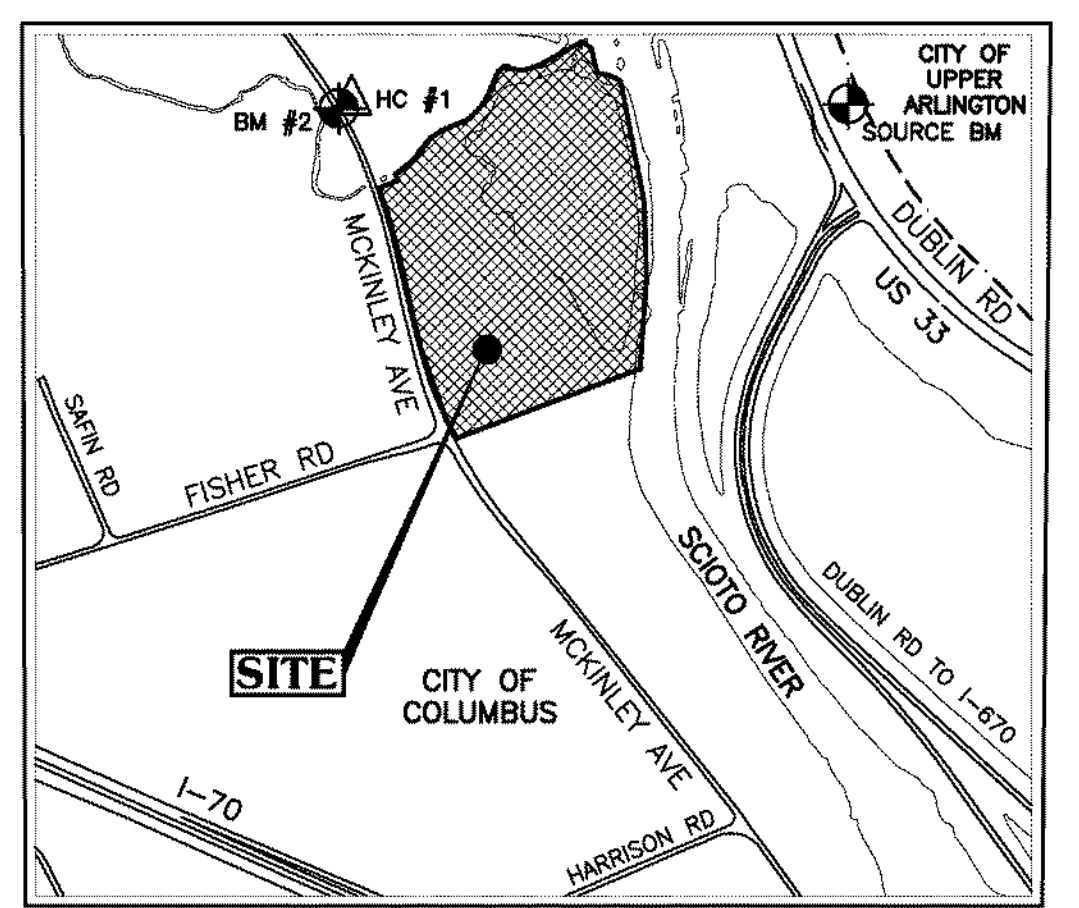
CITY OF COLUMBUS	
DEPARTMENT OF PUBLIC UTILITIES	
DIVISION OF SEWERAGE AND DRAINAGE	
DIVISION USE ONLY	
SCALE: 1" = 100'	SHEET: 1/8
CONTRACT DRAWING NO. CC-19850	RECORD PLAN NO.



STANDARD CONSTRUCTION DRAWINGS	
SEWERAGE AND DRAINAGE	DESIGN & CONSTRUCTION
	2230 (04/30/18)

THE STANDARD CONSTRUCTION DRAWINGS LISTED ABOVE SHALL BE CONSIDERED A PART OF THESE PLANS.

**FLOODPLAIN NOTE:**  
 COMPENSATORY FLOODPLAIN CUT AND FILL WILL TAKE PLACE ON THIS SITE. SEE SHEET 7 FOR INFORMATION ON COMPENSATORY FLOODPLAIN CUT AND FILL.  
 CUT: 1,097.00 C.Y.  
 FILL: 1,047.65 C.Y.  
 NET: 49.35 C.Y. CUT



LOCATION MAP  
NOT TO SCALE

**PROJECT DESCRIPTION**  
 MASS EXCAVATION PLAN REQUIRED FOR REMEDIATION OF EXISTING LANDFILL PER OHIO ENVIRONMENTAL PROTECTION AGENCY RULE 513 AUTHORIZATION, INCLUDING COMPENSATORY CUT AND FILL WITHIN THE 100-YEAR FLOODPLAIN.

SITE DATA TABLE		
DESCRIPTION	QUANTITY	UNIT
TOTAL SITE AREA (PRIVATE)	13.27	AC.
TOTAL DISTURBED AREA (ON-SITE)	13.27	AC.
DISTURBED IMPERVIOUS AREA	3.84	AC.
TOTAL DISTURBED AREA (R/W)	0.00	AC.
TOTAL DISTURBED AREA (OFF-SITE)	0.00	AC.
TOTAL DISTURBED AREA	13.27	AC.
PRE-DEVELOPED IMPERVIOUS AREA	3.84	AC.
POST-DEVELOPED IMPERVIOUS AREA	0.00	AC.

SHEET INDEX

TITLE SHEET.....	1
GENERAL NOTES & ESTIMATE OF QUANTITIES .....	2
SWPPP NOTES .....	3
SWPPP DETAILS .....	4
SWPPP EXISTING CONDITIONS .....	5
SWPPP AND GRADING PLAN .....	6
100 YEAR CUT AND FILL DETAILS .....	7
100 YEAR FLOODPLAIN ADJUSTMENT .....	8

**OHIO Utilities Protection SERVICE**  
 Call Before You Dig  
 800-362-2764 or 8-1-1  
 www.oups.org

DRAWING: MCKINLEY QOZB PRODUCTION BENCHMARKS CALCULATION PLAN (06/01/23) 16 OF 16 PAGES. THE DWS, LINES, AND STAKES ARE THE PROPERTY OF E.P. FERRIS & ASSOCIATES INC. © 2023



**GENERAL NOTES**

**SPECIFICATIONS**

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMSC), 2018 EDITION, REVISION 07/01/2022, INCLUDING ALL REVISIONS AND SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS NOTED OTHERWISE.

**NOTIFICATIONS**

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING DIVISIONS AT LEAST 24-HOURS IN ADVANCE OF ANTICIPATED START OF CONSTRUCTION:

DIVISION OF SEWERAGE AND DRAINAGE (614) 645-7102

DIVISION OF DESIGN AND CONSTRUCTION, CONSTRUCTION SECTION (614) 645-0433

INSPECTION FOR THIS PROJECT SHALL BE PROVIDED BY REPRESENTATIVES OF THE CITY OF COLUMBUS.

THE DEVELOPER SHALL DEPOSIT WITH THE CITY OF COLUMBUS THE TOTAL ESTIMATED COST OF CONSTRUCTION INSPECTION.

**UTILITY OWNERSHIP**

THE IDENTITY AND LOCATION OF EXISTING UNDERGROUND UTILITIES LOCATED IN AND AROUND THE CONSTRUCTION AREA HAVE BEEN SHOWN AND LABELED ON THE PLANS BY USING INFORMATION PROVIDED BY THE RESPECTIVE UTILITY OWNERS. THE CITY OF COLUMBUS OR THE CONSULTING ENGINEER WILL NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF LOCATION OR DEPTH OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLAN.

THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL CALL, TOLL FREE, THE OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES.

SUPPORT AND PROTECTION OF ALL UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS FOR REPAIR AND RESTORATION OF EXISTING UTILITIES DAMAGE BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CITY OF COLUMBUS UTILITIES WILL ONLY LOCATE AND MARK MAIN LINE FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS AND LINES. COSTS ASSOCIATED WITH THE ABOVE WORK AND RESPONSIBILITIES SHALL BE INCLUDED IN THE PRICE BID OF VARIOUS ITEMS.

PRIOR TO EXCAVATION, THE CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (OUPS) BY CALLING (800) 362-2764. A 48-HOUR NOTICE SHALL BE GIVEN TO THE OWNERS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE.

WHERE PLANS PROVIDE FOR A PROPOSED SEWER TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES, BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED SEWER. THESE LOCATIONS ARE NOTED THUS: EXPOSE. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CMSC ITEM 901.

**CITY OF COLUMBUS CONTACTS**

**CITY OF COLUMBUS**  
DEPARTMENT OF PUBLIC SERVICE  
TRAFFIC MANAGEMENT  
1820 EAST 17TH AVENUE  
COLUMBUS, OHIO 43219  
OFFICE: (614) 645-7393

**CITY OF COLUMBUS**  
DEPARTMENT OF TECHNOLOGY  
1355 MCKINLEY AVENUE  
BUILDING C  
COLUMBUS, OHIO 43222  
CONTRACTOR LINE: (614) 645-7756

**CITY OF COLUMBUS**  
SUPPORT SERVICES DIVISION - COMMUNICATIONS  
4211 GROVES ROAD  
COLUMBUS, OHIO 43232  
TELEPHONE: (614) 724-7047  
RADIO ROOM: (614) 724-4006

**COMMENCEMENT OF WORK**

CONSTRUCTION OF THIS PROJECT MAY NOT BEGIN UNTIL THE EASEMENTS INDICATED HAVE BEEN RECORDED BY THE CITY.

THE DEVELOPER/OWNER SHALL, PRIOR TO ANY CONSTRUCTION OPERATION, DEPOSIT WITH THE CITY THE TOTAL ESTIMATED COSTS FOR INSPECTION AND WHERE REQUIRED A REPAVING GUARANTEE.

**MODIFICATIONS**

ANY MODIFICATION TO THE WORK AS SHOWN ON THESE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE.

**DEFLECTION TESTING**

ALL PLASTIC SEWER LINES SHALL BE DEFLECTION TESTED AFTER INSTALLATION IN CONFORMANCE WITH THE REQUIREMENTS OF ITEM 901 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT VERSION (2018).

**CERTIFICATION OF PIPE AND STRUCTURES**

ALL CONCRETE PIPE, STORM AND SANITARY SEWER STRUCTURES WILL BE STAMPED OR HAVE SUCH IDENTIFICATION NOTING THAT SAID PIPE, STORM AND SANITARY STRUCTURES HAVE BEEN INSPECTED BY THE CITY OF COLUMBUS AND MEETS THEIR SPECIFICATIONS. PIPE AND STRUCTURES WITHOUT PROPER IDENTIFICATION WILL NOT BE PERMITTED FOR INSTALLATION.

**EROSION CONTROL**

EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AS PART OF THIS PROJECT. EROSION AND SEDIMENT CONTROL MEASURES SPECIFIC TO THIS SITE MAY BE FOUND ON SHEET NUMBERS 3-6 OF THIS PLAN. LAND-DISTURBING ACTIVITIES MUST COMPLY WITH ALL PROVISIONS OF THE DIVISION OF SEWERAGE AND DRAINAGE EROSION AND SEDIMENT CONTROL REGULATION. ALL LAND-DISTURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION BY THE CITY OF COLUMBUS AND/OR THE OHIO EPA.

IT IS THE RESPONSIBILITY OF THE SITE OWNER TO NOTIFY THE CITY OF COLUMBUS TWO WORKING DAYS PRIOR TO COMMENCEMENT OF INITIAL SITE LAND DISTURBANCE ON ANY SITE OF ONE OR MORE ACRES. THIS INCLUDES SITE CLEARING, GRUBBING AND ANY EARTH MOVING. PRIMARY EROSION AND SEDIMENT CONTROL PRACTICES ARE MANDATED BY REGULATION TO BE IN PLACE FROM THE BEGINNING OF THE CONSTRUCTION ACTIVITY. PLEASE CONTACT THE STORMWATER AND REGULATORY MANAGEMENT SECTION AT (614) 645-6311. DETAILS OF THIS REQUIREMENT MAY BE FOUND IN THE REGULATION FOR CONTROL OF STORMWATER POLLUTION FROM LAND DISTURBANCE. FAILURE TO COMPLY MAY RESULT IN ENFORCEMENT ACTION.

**GRADE CHECKS**

THE CONTRACTOR SHALL ENSURE THERE IS A SURVEYOR'S LEVEL AND ROD ON THE PROJECT FOR USE IN PERFORMING GRADE CHECKS WHENEVER SEWER LINE STRUCTURES OR PIPE ARE BEING INSTALLED. THE CONTRACTOR SHALL MAKE THIS EQUIPMENT AVAILABLE FOR USE AND ASSIST THE CITY INSPECTOR IN PERFORMING GRADE CHECKS WHEN REQUESTED BY THE INSPECTOR. THE INSPECTOR WILL MAKE ALL REASONABLE ATTEMPTS TO CONFINE REQUESTS FOR ASSISTANCE IN PERFORMING GRADE CHECKS TO TIMES CONVENIENT TO THE CONTRACTOR.

THESE CHECKS WILL BE PERFORMED TO ENSURE THE FOLLOWING:

1. PROPER PLACEMENT OF EACH STRUCTURE.
2. PROPER INSTALLATION OF INITIAL RUNS OF PIPE FROM A STRUCTURE.
3. GRADE, AFTER AN OVERNIGHT OR LONGER SHUTDOWN.
4. GRADE, AT ANY OTHER TIME THE INSPECTOR HAS REASON TO QUESTION GRADE OF INSTALLATION.

GRADE CHECKS PERFORMED BY THE CITY INSPECTOR IN NO WAY RELIEVE THE CONTRACTOR OF THE ULTIMATE RESPONSIBILITY TO ENSURE CONSTRUCTION TO THE PLAN GRADE.

**PONDING / DETENTION AREAS**

THE PONDING OR DETENTION AREAS SHOWN ON THE PLANS ARE A PART OF THE STORM SEWER FACILITIES. THE DEVELOPER/OWNER WILL ASSUME THE RESPONSIBILITY TO MAINTAIN THE PONDING OR DETENTION AREAS SO AS NOT TO REDUCE THE WATER STORAGE AREAS. IF THE OWNER DOES NOT MAINTAIN THE PONDING AND DETENTION AREAS, THE PLAN WILL BECOME VOID AND THE CITY WILL PLUG THE SEWER AT THE OUTLET.

**AS-BUILTS**

AS A CONDITION OF FINAL ACCEPTANCE, THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR PROVIDING ASBUILT SURVEYS TO VERIFY THE FINAL GRADES AND ELEVATIONS OF STORMWATER CONTROL FACILITIES. AT THE COMPLETION OF CONSTRUCTION, THE OWNER/DEVELOPER SHALL FIELD SURVEY THE STORMWATER DETENTION FACILITY TO VERIFY THAT THE FACILITIES ARE CONSTRUCTED ACCORDING TO APPROVED PLANS. SHOULD A DISCREPANCY BETWEEN THE PLANS AND CONSTRUCTED GRADES EXIST, THE DESIGN STORAGE OF THE DETENTION FACILITY SHALL BE RESTORED BY THE OWNER/DEVELOPER AS DIRECTED BY THE CITY OF COLUMBUS.

**END TREATMENT**

IMMEDIATELY AFTER PLACEMENT OF ANY CONDUITS, THE CONTRACTOR SHALL CONSTRUCT THE END TREATMENTS REQUIRED BY THE PLANS AT BOTH OUTLET AND INLET ENDS. THIS SHALL INCLUDE HEADWALLS, CONCRETE, RIP RAP, ROCK CHANNEL PROTECTION, SODDING, POUNDING BOTTOMS, MUDDING LIFT HOLES, ETC.

**PERMITS**

THE CONTRACTOR IS TO OBTAIN ALL NECESSARY PERMITS. AN ORIGINAL PERMIT, WITH RED SIGNATURES, SHALL BE KEPT ONSITE AT ALL TIMES.

WHEN OCCUPYING OR EXCAVATING WITHIN PUBLIC RIGHT-OF-WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICE - PERMIT OFFICE BETWEEN THE HOURS OF 7:30 AM AND 4:00 PM MONDAY THROUGH FRIDAY. PHONE: (614) 645-7497; FAX: (614) 645-1876; EMAIL: COLSPERMITS@COLUMBUS.GOV.

**WATER**

**FIRE HYDRANT PERMIT**

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (614-645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANY TIME IN WHICH THE HYDRANT IS IN USE. PERMITS MAY BE OBTAINED BY ACCESSING HTTP://PORTAL.COLUMBUS.GOV/PERMITS/. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

**PERMITS**

THE CONTRACTOR IS TO OBTAIN ALL NECESSARY PERMITS. AN ORIGINAL PERMIT, WITH RED SIGNATURES, SHALL BE KEPT ONSITE AT ALL TIMES.

WHEN OCCUPYING OR EXCAVATING WITHIN PUBLIC RIGHT-OF-WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICE - PERMIT OFFICE BETWEEN THE HOURS OF 7:30 AM AND 4:00 PM MONDAY THROUGH FRIDAY. PHONE: (614) 645-7497; FAX: (614) 645-1876; EMAIL: COLSPERMITS@COLUMBUS.GOV.

**AGGREGATE CERTIFICATION NOTE**  
CONTRACTOR TO PROVIDE AGGREGATE SIEVE ANALYSIS FROM THE SUPPLIER TO COLUMBUS INSPECTOR FOR REVIEW. AGGREGATE PROVIDED MUST MEET CITY OF COLUMBUS SPECIFICATION ITEM 703.

**MISCELLANEOUS NOTES**

**SUB-GRADE NOTE:**

CONTRACTOR IS RESPONSIBLE FOR REVIEWING GEOTECHNICAL REPORT SPECIFIC TO THE PROJECT SITE AND FOLLOWING THE SITE PREPARATION RECOMMENDATIONS, INCLUDING THE REMOVAL AND MITIGATION OF UNSUITABLE MATERIAL. IF A GEOTECHNICAL REPORT WAS NOT PREPARED FOR THE PROJECT SITE, CONTRACTOR SHALL TAKE ALL RISKS ASSOCIATED WITH SUBSURFACE FINDINGS.

**UTILITY NOTE:**

UTILITIES SHOWN IN THIS PLAN SET ARE AS TAKEN FROM OUPS MARKINGS, EXISTING RECORD MAPS AND OTHER INFORMATION MADE AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE TO INCLUDE IN THE BASE BID ALLOWANCES TO DETERMINE EXISTING UTILITY LOCATIONS AND EXACT ROUTING.

**SANITARY SEWER CAPOFF NOTE**

SEWER CAPOFF PERMIT IS REQUIRED PRIOR TO ISSUANCE OF DEMOLITION PERMIT. OBTAIN A CAPOFF PERMIT FROM SEWER PERMIT OFFICE, 111 N. FRONT STREET, 1ST FLOOR, (614) 645-7490.

**SANITARY NOTE**

PRIOR TO DEMOLITION PERMIT, A PERMIT FOR SANITARY LATERALS TO BE CAPPED OFF MUST BE OBTAINED FROM 111 N. FRONT STREET, 1ST FLOOR, (614) 645-7490.

CONNECTIONS TO SANITARY CANNOT BE MADE UNTIL PERMIT IS OBTAINED FROM SEWER PERMIT OFFICE AT 111 N. FRONT STREET, 1ST FLOOR, (614) 645-7490.

**SIDEWALK**

PROPOSED PUBLIC SIDEWALK TO BE INSTALLED PER CITY OF COLUMBUS STD. DRAWING 2300.

**FOR THE DIVISION OF POWER**

THE DIVISION OF POWER (DOP) MAY HAVE OVERHEAD AND UNDERGROUND PRIMARY, SECONDARY, AND STREET LIGHTING AT THIS WORK LOCATION. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OPUS AT 811 OR 1-800-362-2764 FORTY-EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S ELECTRICAL FACILITIES IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. DOP SHALL MAKE ALL FINAL CONNECTIONS TO DOP'S EXISTING ELECTRICAL SYSTEM AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS" (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1000.08 OF THE CMSC MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING STREET LIGHT LOCKOUT/TAGOUT (LOTO) PROCEDURE. MIS-1, COPIES OF WHICH ARE AVAILABLE FROM DOP.

IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, THE DOP DISPATCH OFFICE SHOULD BE CONTACTED IMMEDIATELY AT (614) 645-7627. DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

**PAVEMENT CUTTING, SAWING, AND EXCAVATION OPERATIONS NOTE**

ALL PUBLIC AGENCIES AND PRIVATE CONTRACTORS PERFORMING PAVEMENT-CUTTING OPERATIONS ON CITY OF COLUMBUS STREETS AND ROADWAYS SHALL PROTECT THE ENVIRONMENT FROM DISCHARGES CREATED BY THEIR PAVEMENT CUTTING OPERATIONS. NOTE THAT COLUMBUS CITY CODE 1145 PROHIBITS NON-STORMWATER DISCHARGE INTO THE CITY OF COLUMBUS SEWER SYSTEM, CURB INLETS AND ANY PART OF ITS MS4 (MUNICIPAL SEPARATE STORM SEWER SYSTEM).

THE REQUIREMENT INCLUDES BUT IS NOT LIMITED TO WET OR DRY SAW-CUTTING, JACK HAMMERING, EXCAVATION EQUIPMENT USE, ETC. THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR WORK CREWS SHALL RECOVER AND DISPOSE OF DEBRIS, POLLUTED WATERS, OR OTHER SUCH DISCHARGES RESULTING FROM THEIR PAVEMENT CUTTING OPERATIONS AND PROTECT ALL STORM SEWER INLETS FROM RECEIVING ANY DISCHARGES FROM THE CONSTRUCTION OPERATIONS. THE AGENCY OR CONTRACTOR RESPONSIBLE FOR EACH PAVEMENT CUTTING ACTIVITY SHALL BE SOLELY LIABLE FOR NOTICE OF VIOLATIONS (NOV/S) AND FINES ISSUED BY CITY OF COLUMBUS AND/OR STATE OF OHIO AUTHORITIES.

EQUIPMENT, MATERIALS AND METHODS SHALL BE PROVIDED BY THE RESPONSIBLE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR TO WORK CREWS PERFORMING THE PAVEMENT CUTTING ACTIVITY AND MADE AVAILABLE TO

WORK CREWS FOR USE IN CLEANING UP DISCHARGES RESULTING FROM SUCH CUTTING ACTIVITIES AND PREVENTING RUNOFF. ALL WORK CREWS SHALL BE TRAINED TO EXERCISE AND EMPLOY EQUIPMENT, MATERIALS, AND ENVIRONMENTAL PROTECTIVE MEASURES TO PREVENT POLLUTED DISCHARGES FROM ENTERING THE CITY OF COLUMBUS STORM SEWER SYSTEM AND WATERS OF THE STATE OF OHIO.

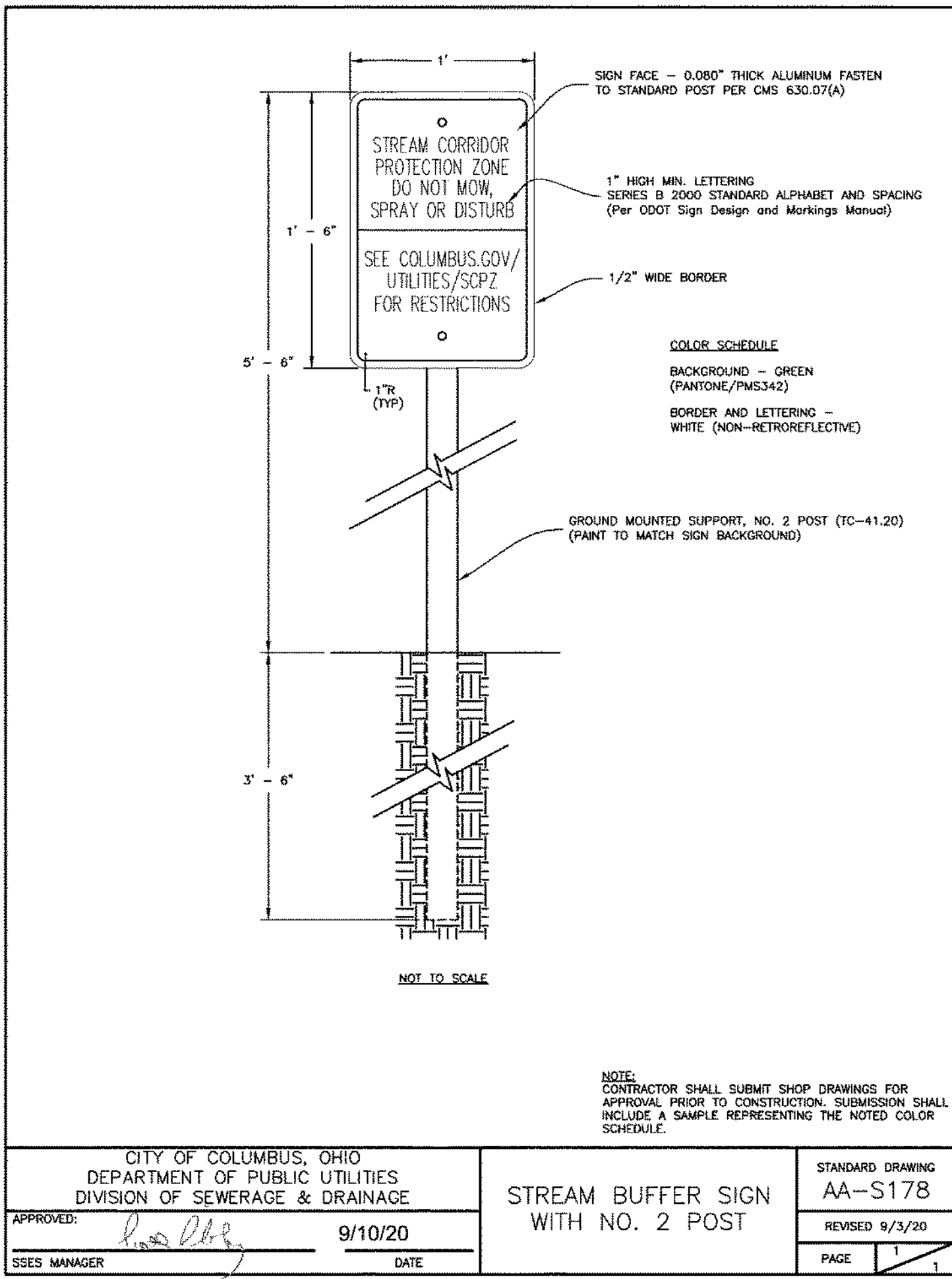
THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE INLET PROTECTION IS ADEQUATE. THE MOST STRINGENT PROJECT PLANS, NOTES AND/OR DRAWINGS INCLUDING STORMWATER POLLUTION PREVENTION PLAN (SWP3) OR SPILL PREVENTION/REMEDATION PLAN SHALL APPLY TO ALL PAVEMENT CUTTING, SAWING OR EXCAVATION OPERATIONS.

**PUBLIC TREE PRESERVATION NOTE**

ALL PUBLIC TREES AND THE GROUND BELOW THEIR RESPECTIVE DRIP LINES, WHETHER SHOWN OR NOT SHOWN ON THE PLANS, ARE TO BE PRESERVED UNLESS APPROVAL TO REMOVE OR PRUNE IS GIVEN IN WRITING BY COLUMBUS RECREATION & PARKS (CRPD)/CITY FORESTER OR IF THE PUBLIC TREE REMOVAL HAS BEEN DESIGNATED ON THE APPROVED FINAL SITE COMPLIANCE PLAN. TREES APPROVED FOR REMOVAL BY EITHER OF THE CRPD/CITY FORESTER SHALL BE PAID FOR UNDER CMSC ITEM 201, CLEARING AND GRUBBING, UNLESS OTHERWISE PROVIDED FOR BY UNIT PRICE BID UNDER ITEM 201. THE CONTRACTOR SHALL PROTECT TREES NEAR OR ADJACENT TO THE WORK AREA TO AVOID DAMAGE TO ALL TREES THAT ARE TO REMAIN. ALL TREES REMOVED SHALL INCLUDE STUMP REMOVAL TO EIGHTEEN (18) INCHES BELOW GRADE, ALL CLEARING AND GRUBBING DONE ON CRPD PROPERTY, RIGHT-OF-WAY, OR ANY CITY OF COLUMBUS PROPERTY SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. HEAVY EQUIPMENT WILL NOT BE ALLOWED TO COMPACT THE SOIL OVER THE ROOT ZONE OF EXISTING PUBLIC TREES. RESTRICTED EQUIPMENT ACCESS ROUTES SHALL BE COORDINATED WITH CRPD INSPECTOR, KEITH MAY, AT (614) 645-3014 OR KAMAY@COLUMBUS.GOV BEFORE WORK BEGINS. TEMPORARY PAVING MATERIALS, SUCH AS PLYWOOD, LUMBER OR RUBBER MATTING, SPREAD OVER THE ROOT ZONE OF PUBLIC TREES MAY BE REQUIRED TO PREVENT COMPACTION. IF A PUBLIC TREE NEEDS TO BE REMOVED, THE CONTRACTOR SHALL PROVIDE A TREE MITIGATION PLAN TO THE CITY FORESTRY SECTION [(614) 724-1276] AND REFER TO THE CRPD TREE MITIGATION PLAN GUIDANCE, ANSI A300 AND/OR CITY OF COLUMBUS EXECUTIVE ORDER 2015-01 FOR TREE REPLACEMENT STANDARDS.

**PUBLIC TREE PROTECTION NOTE**

A TREE PROTECTION PLAN WITH A DRAWING OF ANY WORK LOCATED WITHIN THE DRIP LINE OF A PUBLIC TREE SHALL BE INCLUDED IN THE APPROVED FINAL SITE COMPLIANCE PLAN (FSCP). REFER TO CRPD STANDARD DRAWING FOR TREE PROTECTION. CONSTRUCTION MATERIALS, EXCAVATION DEBRIS, FUEL, EQUIPMENT OR VEHICLES ARE NOT TO BE STOCKPILED, STORED, DUMPED, OR PARKED WITHIN THE DRIPLINE OF PUBLIC TREES. ALL TREES MUST BE PROTECTED AGAINST INJURY OR DAMAGE TO BRANCHES, TRUNKS, OR ROOTS FROM CONSTRUCTION AND EXCAVATION, AS DESCRIBED IN THE "BEST MANAGEMENT PRACTICES - MANAGING TREES DURING CONSTRUCTION" A COMPANION PUBLICATION TO ANSI A300 PART 5. IF THERE IS A QUESTION WHETHER A TREE OR NOT NEEDS TO BE PROTECTED, THE CONTRACTOR MUST CONTACT THE CITY FORESTRY SECTION AT (614) 724-1276. FAILURE TO CONTACT THE CITY FORESTRY REPRESENTATIVE IN ADVANCE OF CONSTRUCTION WILL RESULT IN THE CONTRACTOR REIMBURSING CITY FORESTRY FOR THE COST OF ANY AND ALL DAMAGE AS DETERMINED BY THE CURRENT ANSI A300/CITY OF COLUMBUS EXECUTIVE ORDER 2015-01 FOR TREE PROTECTION AND REPLACEMENT.

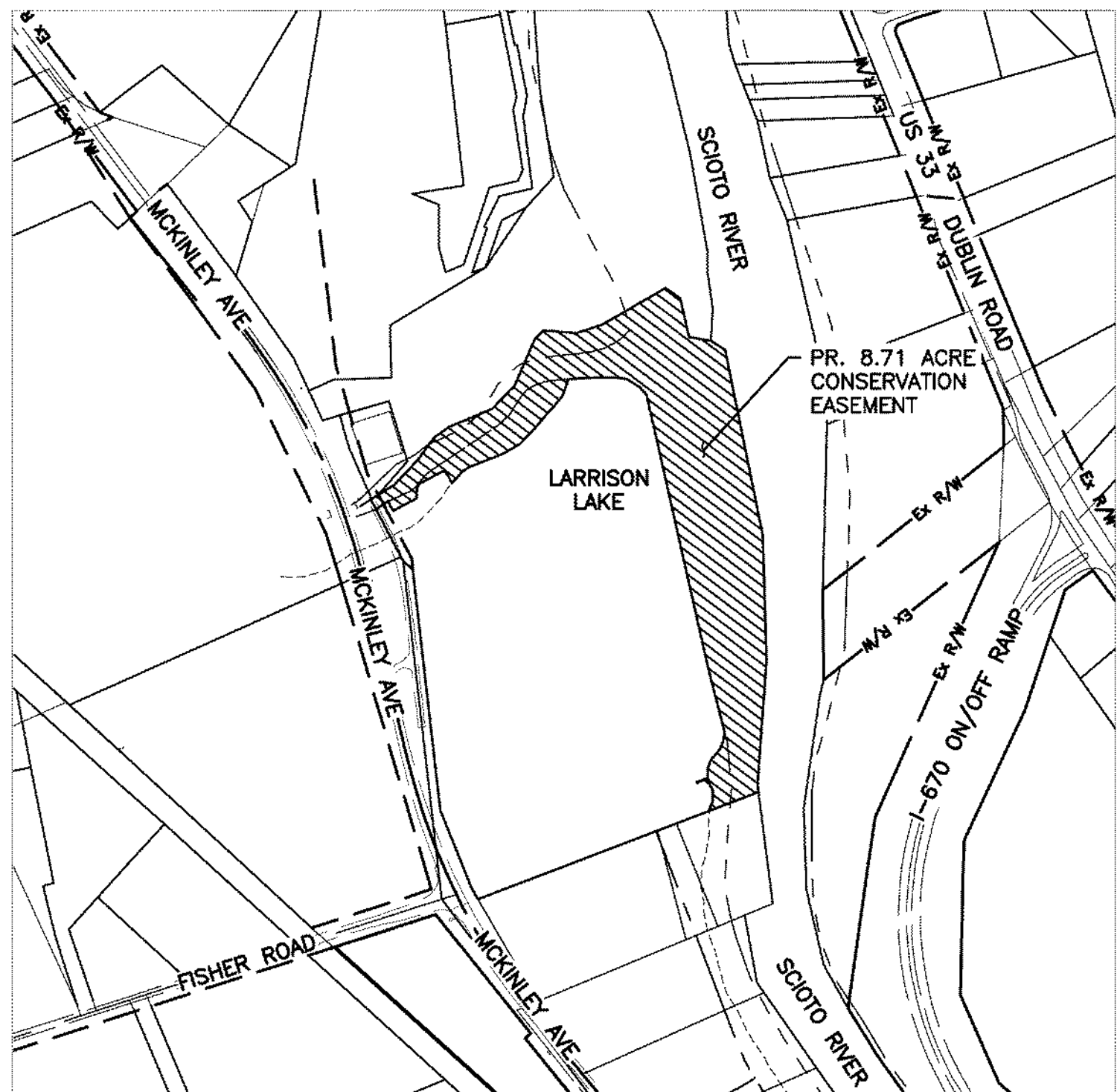


ESTIMATE OF QUANTITIES				
ITEM	QUANTITY	UNIT	DESCRIPTION	
IMPROVEMENTS OUTSIDE R/W				
203	1,200	C.Y.	EXCAVATION	
203	7,500	C.Y.	EMBANKMENT	
207	1	EA	CONCRETE WASHOUT AREA	
207	64,227	S.Y.	TEMPORARY SEEDING AND MULCHING	
207	4,447	L.F.	SILT FENCE (SWPPP EXISTING CONDITIONS)	
207	5,979	L.F.	SILT FENCE	
207	2,352	L.F.	POLLUTION PREVENTION FENCE, AS PER PLAN	
207	1	EA	STABILIZED CONSTRUCTION ENTRANCE	
616	15	MGAL	WATER	
616	15	TONS	CALCIUM CHLORIDE	
671	4,336	S.Y.	EROSION CONTROL MAT, TYPE C	
SPEC	5	EA	STREAM CORRIDOR PROTECTION ZONE SIGN, COMPLETE	

**NOTE:**

THE QUANTITIES HAVE BEEN ESTABLISHED AS A MEANS FOR THE ENGINEER TO ESTIMATE A PRELIMINARY COST AND FOR THE CITY OF COLUMBUS TO ESTABLISH INSPECTION FEES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE REQUIRED BID QUANTITIES NECESSARY FOR THE COMPLETION OF THE PLAN IMPROVEMENTS.

THE SPECIFIC PRODUCTS SPECIFIED IN THESE DOCUMENTS CAN BE SUBSTITUTED WITH AN EQUIVALENT ALTERNATIVE PRODUCT IF APPROVED BY THE ENGINEER OF RECORD AND THE CITY OF COLUMBUS. IT IS THE CONTRACTORS RESPONSIBILITY TO PAY ALL FEES ASSOCIATED WITH REVISIONS TO THE PLANS, ENGINEERING DRAWING OR CALCULATION CHANGES, AND JURISDICTIONAL REVIEW (LOCAL, STATE, AND/OR FEDERAL) IF THE PLANS HAVE BEEN SIGNED BY THE CITY OF COLUMBUS OR ARE SUBSTANTIALLY COMPLETE/REVIEWED.



**FULL SITE CONSERVATION EASEMENT DETAIL**

SCALE: 1" = 400'

EASEMENT REFERENCE				REVISIONS			PLAN PREPARED BY:		PROJECT TITLE:				CITY OF COLUMBUS	
CITY NO.	COUNTY RECORDER		GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE			PRIVATE STORM SEWER IMPROVEMENTS FOR WESTBEND DEVELOPMENT PHASE 1 MASS GRADE AND FILL 2474 MCKINLEY AVE				DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY	
	VOL.	PAGE							DIVISION USE ONLY				OWNER	
									CONTRACTOR					
									INSPECTOR					
									AGREEMENT		COMPLETED			
									RPD	CKD	CLD	CON. DR.	CONTRACT DRAWING NO. CC-19850	RECORD PLAN NO.

**GENERAL NOTES**



**EROSION AND SEDIMENT CONTROL**

EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AS PART OF THIS PROJECT. EROSION AND SEDIMENT CONTROL MEASURES SPECIFIC TO THIS SITE MAY BE FOUND ON SHEET NO(S), 2-X OF THIS PLAN. LAND-DISTURBING ACTIVITIES MUST COMPLY WITH ALL PROVISIONS OF THE DIVISION OF SEWERAGE AND DRAINAGE EROSION AND SEDIMENT CONTROL REGULATION. ALL LAND-DISTURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION BY THE CITY OF COLUMBUS AND/OR THE OHIO EPA.

ALL EROSION SEDIMENTATION CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATIONS AT THE DISCRETION OF THE CITY OF COLUMBUS, PROJECT ENGINEER AND/OR THE OHIO EPA.

IT IS THE RESPONSIBILITY OF THE SITE OWNER TO NOTIFY THE CITY OF COLUMBUS TWO WORKING DAYS PRIOR TO COMMENCEMENT OF INITIAL SITE LAND DISTURBANCE ON ANY SITE OF ONE OR MORE ACRES. THIS INCLUDES SITE CLEARING, GRUBBING, AND ANY EARTH MOVING, PRIMARY EROSION AND SEDIMENT CONTROL PRACTICES ARE MANDATED BY REGULATION TO BE IN PLACE FROM THE BEGINNING OF THE CONSTRUCTION ACTIVITY. PLEASE CONTACT THE STORMWATER AND REGULATION MANAGEMENT SECTION AT (614) 645-6311. DETAILS OF THIS REQUIREMENT MAY BE FOUND IN THE REGULATION FOR CONTROL OF STORMWATER POLLUTION FROM LAND DISTURBANCE. FAILURE TO COMPLY MAY RESULT IN ENFORCEMENT ACTION.

THE NPDES PERMIT HOLDER SHALL PROVIDE QUALIFIED PERSONNEL TO CONDUCT SITE INSPECTIONS ENSURING PROPER FUNCTIONALITY OF THE EROSION AND SEDIMENTATION CONTROLS. ALL EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSPECTED ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A 1/2" STORM EVENT OR GREATER THAT OCCURS OVER A 24 HOUR PERIOD. RECORDS OF THE SITE INSPECTIONS SHALL BE KEPT BY THE CONTRACTOR AND MADE AVAILABLE TO JURISDICTIONAL AGENCIES IF REQUIRED.

THIS PLAN MUST BE POSTED ON SITE. A COPY OF THE SWPPP PLAN AND THE APPROVED EPA STORMWATER PERMIT (WITH THE SITE-SPECIFIC NOI NUMBER) SHALL BE KEPT ON SITE AT ALL TIMES.

**EROSION/SEDIMENT/DUST CONTROL CONSTRUCTION PRACTICES**  
UTILIZE EROSION AND SEDIMENT CONTROL PRACTICES PER THE SOIL CONSERVATION SERVICE STANDARDS AND THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL. EROSION CONTROL DEVICES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL THE CONSTRUCTION AREA HAS BEEN PERMANENTLY STABILIZED. THE CONTRACTOR SHALL CONSULT THE SOIL CONSERVATION SERVICE AND THE ENGINEER CONCERNING PROPER EROSION AND SEDIMENT PRACTICES.

STOCKPILED TOPSOIL AND EXCAVATED MATERIAL IS TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING, OR COVERED WITH ANCHORED STRAW MULCH.

FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.

REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED TO PERMIT ACTUAL CONSTRUCTION. PROTECT THE REMAINING TO PRESERVE THEIR AESTHETIC AND EROSION CONTROL VALUE.

BACKFILL TRENCHES IMMEDIATELY AFTER COMPACTION. SEED AND MULCH TRENCHES WITHIN TWO WEEKS AFTER TRENCHES ARE OPENED.

SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER THE STORM DRAIN SYSTEM, WATERWAYS (NATURAL OR MAN-MADE), OR ADJACENT PRIVATE PROPERTY. CONSTRUCTION OCCURRING NEAR STORM DRAIN INLETS OR WATERWAYS (NATURAL OR MAN-MADE) SHALL REQUIRE EROSION CONTROL MEASURES, SUCH AS SILT FENCE AND STRAW BALE BARRIERS, TO PREVENT SILT FROM ENTERING THE STORM DRAIN, WATERWAYS (NATURAL OR MAN-MADE) OR ADJACENT PRIVATE PROPERTY.

ALL EROSION/SEDIMENT/DUST CONTROL PRACTICES SHALL BE PERFORMED AS RECOMMENDED BY THE SOIL CONSERVATION SERVICE PUBLICATION "ODNR'S RAINWATER AND LAND DEVELOPMENT MANUAL".

**STABILIZATION OF DENUDED AREAS**  
DENUDED AREAS SHALL HAVE SOIL STABILIZATION APPLIED WITHIN SEVEN DAYS OF DISTURBANCE IF THEY ARE TO REMAIN SUBSTANTIALLY UNWORKED FOR MORE THAN 14 DAYS. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION SHALL ALSO BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE, BUT WHICH WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS.

**SEDIMENT CONTROLS**  
STORM WATER RUNOFF FROM DENUDED AREAS SHALL PASS THROUGH A SEDIMENT BASIN OR OTHER SUITABLE SEDIMENT TRAPPING FACILITY. THESE CONTROLS SHALL BE SELECTED AND LOCATED AS DIRECTED BY THE ENGINEER.

**CONSTRUCTION ACCESS ROUTES**  
MEASURES SHALL BE TAKEN TO PREVENT SOIL TRANSPORT ONTO SURFACES WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, OR ONTO PUBLIC ROADS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT OFF-SITE TRACKING OF SEDIMENTS BY VEHICLES, EQUIPMENT, AND WORKERS IS MINIMIZED.

**SLOUGHING AND DUMPING**  
NO SOIL, ROCK, DEBRIS OR ANY OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER RESOURCE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO A WATER RESOURCE UNLESS SUCH DUMPING OR PLACING IS AUTHORIZED BY THE ENGINEER. UNSTABLE SOILS PRONE TO SLIPPING OR LAND SLIDING SHALL NOT BE GRADED, EXCAVATED, FILLED OR HAVE LOADS IMPOSED UPON THEM UNLESS THE WORK IS DONE IN ACCORDANCE WITH A QUALIFIED PROFESSIONAL ENGINEER'S RECOMMENDATIONS TO CORRECT, ELIMINATE OR ADEQUATELY ADDRESS THE PROBLEMS.

**ESTABLISHMENT OF PERMANENT VEGETATION**  
PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL GROUND COVER IS ACHIEVED WHICH, IN THE OPINION OF THE ENGINEER, IS MATURE ENOUGH TO CONTROL SOIL EROSION SATISFACTORILY AND TO SURVIVE ADVERSE WEATHER CONDITIONS.

**SEEDING AND MULCHING:**  
1. TEMPORARY SEEDING SHALL CONSIST OF ANNUAL RYE-GRASS AS PER ITEM 207. SEED AND MULCHING SHALL BE APPLIED IN ACCORDANCE WITH ITEM 659.

1. PERMANENT SEEDING AND MULCHING SHALL BE TREATED IN ACCORDANCE WITH ITEM 659.

**TIMING OF SEDIMENT-TRAPPING PRACTICES**  
SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL THROUGHOUT EARTH-DISTURBING ACTIVITY. SETTLING FACILITIES, PERIMETER CONTROLS AND OTHER PRACTICES INTENDED TO TRAP SEDIMENT SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING OR CONSTRUCTION AND WITHIN SEVEN DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RE-STABILIZED. THESE CONTROLS SHALL BE SELECTED AND LOCATED AS DIRECTED BY THE ENGINEER.

NOTE: LOCATIONS SHOWN FOR SEDIMENT FILTERING BARRIERS ARE SUGGESTED LOCATIONS; THE FINAL AND MOST APPROPRIATE LOCATION FOR THESE DEVICES SHALL BE APPROVED BY THE ENGINEER, BASED ON SITE CONDITIONS AND OBSERVED TOPOGRAPHY. PROPER IMPLEMENTATION, INSTALLATION, MAINTENANCE, AND REPAIR OF SEDIMENT FILTERING BARRIERS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

**OUTFLOWS FROM DEWATERING OPERATIONS**  
ALL WATER PRODUCED FROM CLEANING AND DEWATERING OPERATIONS, WHETHER SPECIFICALLY FROM TRENCH DEWATERING OPERATIONS OR FROM MORE EXTENSIVE DEWATERING OPERATIONS, SHALL BE DISCHARGED IN SUCH A MANNER AS TO ELIMINATE EROSION FROM SUCH A DISCHARGE BY DIVERTING THE WATER THROUGH ONE OR MORE FILTER FENCES. PRIOR TO PUMPING, THE ENGINEER SHALL APPROVE THE INSTALLATION OF THE FILTER FENCE.

**ADDITIONAL CONTROLS**  
THE CONTRACTOR SHALL ENSURE THAT NO SEDIMENTS ARE TRACKED OFF-SITE BY CONSTRUCTION EQUIPMENT, VEHICLES, AND WORKERS. THE CONTRACTOR SHALL ALSO ENSURE THAT NO OTHER SOLID (OTHER THAN SEDIMENT) OR LIQUID WASTE IS DISCHARGED INTO ANY STORM WATER FLOW.

**PROHIBITED CONSTRUCTION ACTIVITIES**  
THE CONTRACTOR SHALL NOT USE CONSTRUCTION PROCEEDINGS, ACTIVITIES, OR OPERATIONS THAT MAY UNNECESSARILY IMPACT THE NATURAL ENVIRONMENT OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS INCLUDE BUT ARE NOT LIMITED TO:

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
- PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM DRAINS.
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF A STREAM.
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
- DISPOSAL OF TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
- STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED BY THE ENGINEER FOR SAID PURPOSES.

**MAINTENANCE AND INSPECTION**  
ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND CONSTRUCTED TO MINIMIZE MAINTENANCE REQUIREMENTS. THEY SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND INSPECTION OF ALL EROSION/SEDIMENT CONTROL DEVICES REQUIRED BY THE ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. INSPECTION SHALL BE PERFORMED AS PRESCRIBED IN THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (N.P.D.E.S.) GENERAL PERMIT. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR, IN THE PRESENCE OF THE ENGINEER ONCE EVERY 7 CALENDAR DAYS AND/OR WITHIN 24 HOURS AFTER ANY RAIN EVENT OF GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD. THESE INSPECTIONS SHALL IDENTIFY AREAS CONTRIBUTING TO STORM WATER DISCHARGES ASSOCIATED WITH THE PROJECT; EVALUATE THE ADEQUACY, IMPLEMENTATION, AND MAINTENANCE OF EXISTING AND PROPOSED EROSION/ SEDIMENTATION MEASURES; AND DETERMINE WHETHER ADDITIONAL MEASURES ARE REQUIRED.

ACCEPTABLE INSPECTION REPORTS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER, IF REQUESTED, WITHIN 48 HOURS OF INSPECTION COMPLETION. THE REPORT SHALL CONTAIN THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PLAN, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE PLAN, AND IDENTIFICATION OF ANY INCIDENTS OF NON-COMPLIANCE.

**POLLUTION PREVENTION PLAN AVAILABILITY AND UPDATES**  
THE OWNER SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE POLLUTION PREVENTION PLAN ON-SITE. THE OWNER SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM ALL UPDATES AND AMENDMENTS TO THE POLLUTION PREVENTION PLAN.

**NOTE**  
STREET CLEANING, AS NEEDED, IS REQUIRED THROUGH THE DURATION OF THIS CONSTRUCTION PROJECT. THIS INCLUDES SWEEPING, POWER CLEANING AND MANUAL (IF NECESSARY) REMOVAL OF DIRT OR MUD IN THE STREET GUTTERS.

THIS PLAN MUST BE POSTED ON-SITE. A COPY OF THE SWPPP AND THE APPROVED EPA STORMWATER PERMIT (WITH THE SITE-SPECIFIC NOI NUMBER) SHALL BE KEPT ON-SITE AT ALL TIMES.

ALL EROSION AND SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATION AT THE DISCRETION OF THE CITY OF COLUMBUS AND/OR THE OHIO EPA.

DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO THE CITY'S SEWER SYSTEM OR A RECEIVING STREAM IS A VIOLATION OF OHIO EPA AND CITY OF COLUMBUS REGULATIONS. THE CONTRACTOR WILL BE HELD LIABLE FOR THE VIOLATION AND SUBSEQUENT FINES.

THE USE OF STRAW WATTLES HAS PROVEN TO BE A VERSATILE AND EFFECTIVE ESC BMP, ESPECIALLY IN RESIDENTIAL SETTINGS. STRAW WATTLES MAY BE SUBSTITUTED FOR SILT FENCE.

STRAW WATTLES OR COMPOST ROLLS HAVE TO BE A MINIMUM OF 12 INCHES IN DIAMETER NOW (OEPA).

THE USE OF COMPOST FILTER SOCKS AND COMPOST BLANKETS ARE GAINING WIDER ACCEPTANCE NATIONWIDE, THEY ARE NOW APPROVED FOR USE ON ALL COLUMBUS SWPPP PLANS AND CONSTRUCTION SITES.

ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.

THE EXACT LOCATION OF THE CONCRETE WASHOUT(S) MAY BE FIELD LOCATED BY THE ON-SITE PROJECT ENGINEER/CONTACT.

THE USE OF PORTABLE CONCRETE WASHOUT UNITS IS APPROVED (AND ENCOURAGED) FOR ALL CONSTRUCTION AREAS IN THE CITY OF COLUMBUS.

**EROSION AND SEDIMENTATION CONTROL NARRATIVE**

OEPA NOTICE OF INTENT PERMIT NUMBER: 4CC08870\*AG

PLAN DESIGNER: E.P. FERRIS & ASSOCIATES  
2130 QUARRY TRAILS DRIVE, 2ND FLOOR  
COLUMBUS, OH 43215  
PHONE: 614-299-2999 FAX: 614-299-2992 EMAIL: cbuckley@epferris.com

OWNER/DEVELOPER: WESTBEND QOZB, LLC  
842 NORTH FOURTH STREET, SUITE #200  
COLUMBUS, OH 43215  
CONTACT: MICHAEL AMICON  
PH: 614-286-2143

PROJECT DESCRIPTION: THE EXISTING SITE CONSISTS OF A FORMER JUNK YARD BORDERED ON THE WEST BY MCKINLEY AVENUE, THE EAST BY THE SGIOTO RIVER, AND THE NORTH BY LARRISON LAKE. CONSTRUCTION ACTIVITIES WILL INCLUDE THE CONSTRUCTION OF MULTI-FAMILY BUILDINGS, ROADWAYS, AND DRIVEWAYS. THE OVERALL DISTURBED AREA CONSISTS OF APPROXIMATELY 13.27 AC.

SITE DRAINS TO: THE SITE GENERALLY DRAINS TO THE WEST AND NORTH TO LARRISON LAKE AND ULTIMATELY THE SGIOTO RIVER, WHICH IS THE NEAREST WATER COURSE.

EXISTING SITE CONDITIONS: THE SITE SLOPES GENERALLY FROM THE SOUTH TO THE NORTH AND THE WEST TO THE EAST, TOWARDS LARRISON LAKE AND THE SGIOTO RIVER.

ADJACENT AREAS: THE EXISTING ADJACENT DEVELOPMENTS HAVE BEEN TAKEN INTO ACCOUNT FOR THE STORM SYSTEM AND FLOOD ROUTING FOLLOWING EXISTING DRAINAGE PATH.

CRITICAL AREAS: SGIOTO RIVER

EROSION CONTROL MEASURES: EROSION AND SITE RUN-OFF WILL BE CONTROLLED THROUGH THE USE OF FILTER FABRIC FENCE PLACED AT LOW LYING AREAS AROUND THE SITE AS WELL AS EROSION CONTROL MATTING ON SLOPES 4:1 OR GREATER.

SEDIMENT CONTROL MEASURES: SEDIMENT WILL BE CONTROLLED THROUGH THE USE OF TEMPORARY SEDIMENT BASINS LOCATED THROUGHOUT THE SITE.

PERMANENT STABILIZATION: ALL DISTURBED AREAS ARE TO BE SEEDDED. SEE SHEET 2 FOR SEEDING NOTES.

MAINTENANCE: ALL EROSION CONTROL DEVICES WILL BE INSPECTED BY THE CONSTRUCTION SUPERINTENDENT DAILY AND AFTER SIGNIFICANT RAINFALLS. ANY DAMAGED DEVICES WILL BE REPAIRED AND/OR REPLACED IMMEDIATELY OR AS NECESSARY.

CONSTRUCTION SEQUENCE:  
1. INSTALL ROCK CONSTRUCTION ENTRANCE.  
2. INSTALL PERIMETER POLLUTION PREVENTION FENCE ALONG THE EDGES OF THE SITE AS PER SWPPP EXISTING CONDITIONS.  
3. INSTALL INTERMITTENT SILT FENCE, STRAW WATTLES, FILTER SOCKS, DIVERSION SWALES, AND DITCH CHECK DAMS THROUGHOUT THE SITE AS PER THE SWPPP AND GRADING PLAN AS GRADING OPERATIONS TAKE PLACE.  
4. CLEAR & GRUB AS NECESSARY FOR THE INSTALLATION OF EROSION & SEDIMENT CONTROL DEVICES.  
5. BEGIN MASS EXCAVATION ACTIVITIES.  
6. PERMANENTLY STABILIZE/SEED & MULCH OR SOD DISTURBED AREAS PER SPECIFICATION.  
7. NOTICE OF INTENT (NOI) TO STAY OPEN THROUGH FINAL CONSTRUCTION.

SITE CONTACT: WESTBEND QOZB, LLC  
842 NORTH FOURTH STREET, SUITE #200  
COLUMBUS, OH 43215  
CONTACT: MICHAEL AMICON  
PH: 614-286-2143  
EMAIL: m.amicon@thrvacos.com

NOTE: THIS PLAN MUST BE POSTED ON-SITE. A COPY OF THE SWPPP PLAN AND THE APPROVED EPA STORMWATER PERMIT (WITH THE SITE-SPECIFIC NOI NUMBER) SHALL BE KEPT ON-SITE AT ALL TIMES.

**PERMANENT STABILIZATION**

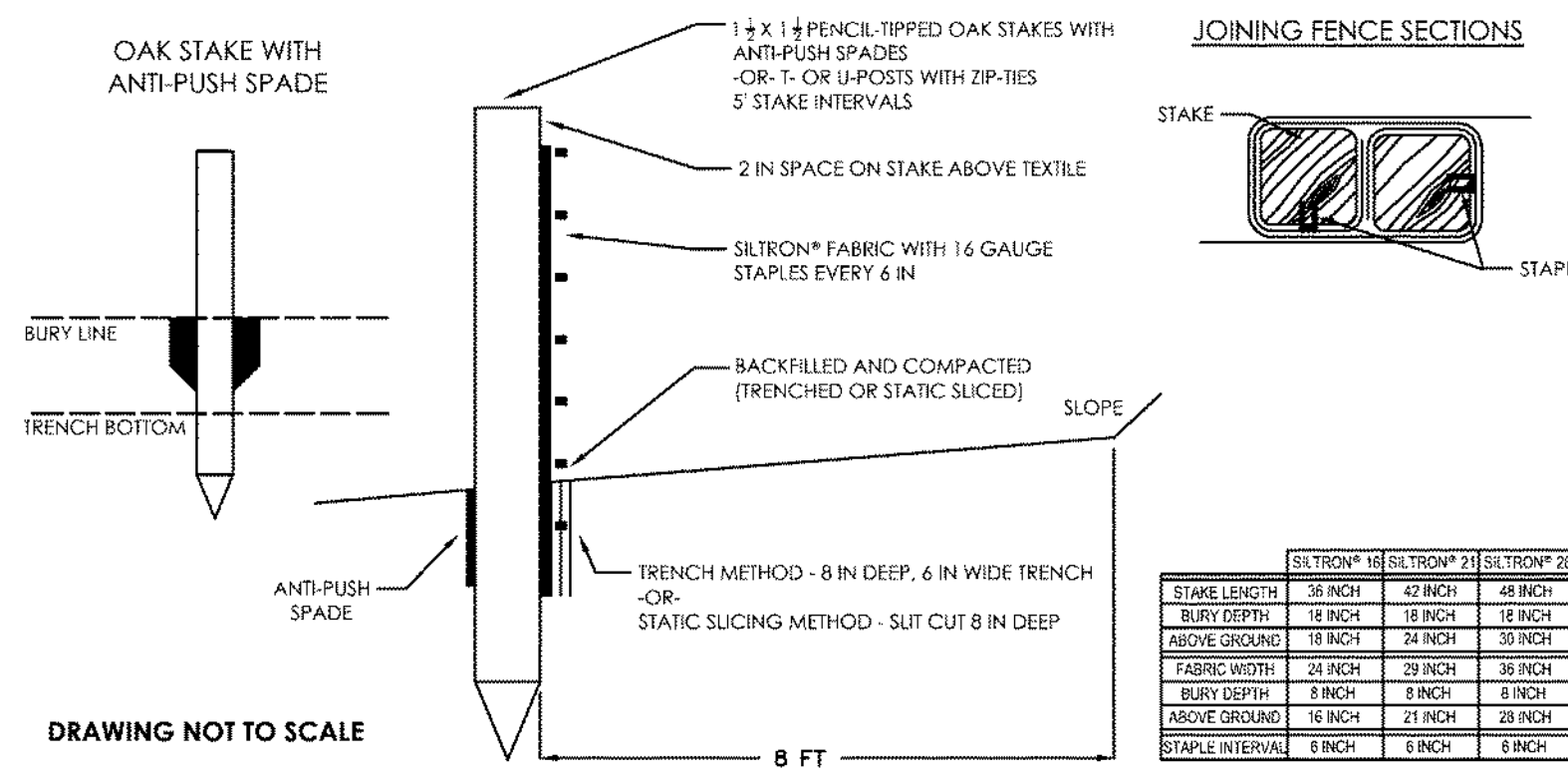
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE	WITHIN TWO DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA

**TEMPORARY STABILIZATION**

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED.

**STANDARD CONSTRUCTION DETAIL**  
**SILTRON® POLLUTION PREVENTION FENCE**



WOOD STAKES SHALL BE A 1 1/2 IN X 1 1/4 IN PENCIL-TIPPED OAK STAKE AND **MUST** INCLUDE INTEGRATED ANTI-PUSH SPADE -OR- EQUIVALENT STEEL (U OR T) STAKE. STAKES PLACED AT 3 FT INTERVALS.  
FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF FENCE SHALL BE EXTENDED AT LEAST 8 FT UP SLOPE AT 45 DEGREES TO MAIN FENCE ALIGNMENT.  
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.  
ANY SECTION OF FENCE WHICH HAS BEEN COMPROMISED THROUGH PHYSICAL DAMAGE OR IS BLUNDED WITH SEDIMENT OR HYDROCARBONS SHALL BE IMMEDIATELY REPLACED WITH SILTRON, ROCK FILTER OUTLET CONFIGURATION, OR FILTER SOCK (COMPOST OR SWITCHGRASS).  
IF UNDERCUTTING OCCURS, FILL MUST BE ADDED TO TRENCH AND AREA RE-COMPACTED.  
FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

PARAMETERS	REGULATORY MINIMUMS	EXAMPLE (Siltron®)
Fabric Construction Type	3-layer needle-punched composite	3-layer needle-punched composite
Hydrocarbon Retention	5 oz per square foot	5 oz per square foot
Fabric Width		
16 inch above ground, 8 inch bury	24 inches	24 inches (Siltron®16)
21 inch above ground, 8 inch bury	29 inches	29 inches (Siltron®21)
28 inch above ground, 8 inch bury	36 inches	36 inches (Siltron®28)
Fabric Thickness (ASTM 5199)	7.50 mm (0.295 inch)	7.89 mm (0.311 inch)
Fabric Weight, oz/yd <sup>2</sup>	30 oz/yd <sup>2</sup>	33.7 oz/yd <sup>2</sup>
Grab Tensile (ASTM D 4632)		
MD	300 lbs	405 lbs
TD	200 lbs	210 lbs
Elongation (ASTM D 4632)		
MD	25% at failure (300 lbs)	21% at failure (405 lbs)
TD	25% at failure (200 lbs)	8.7% at failure (210 lbs)
Puncture Strength (ASTM D 4833)	200 lbs	224 lbs
Trapezoidal Tear (ASTM D 4533)		
MD	125 lbs	142 lbs
TD	125 lbs	135 lbs
Mullen Burst Strength (ASTM D 3786, modified)	700 lbs	759 lbs
Apparent Opening Size (ASTM D 4751)	.120 mm (non-woven composite)	.142 mm (non-woven composite)
Permittivity (ASTM D 4491)	45 gpm/ft <sup>2</sup>	46.2 gpm/ft <sup>2</sup>
UV Stability (ASTM D 4355)	100%	100%
Filtering Efficiency and Flow rate (ASTM 5141)		
Clear Water Rate, gpm/ft <sup>2</sup>	15 gpm/ft <sup>2</sup>	17.8 gpm/ft <sup>2</sup>
Silty Clay Rate	1.5 gpm/ft <sup>2</sup>	1.51 gpm/ft <sup>2</sup>
Filtering Efficiency and Flow rate (ASTM 5141)	98.0%	97.9%

Slope %	Siltron 16	Siltron 21	Siltron 28	Siltron 36
2	700	1000	1300	1750
5	375	500	650	875
10	240	300	400	550
15	200	250	350	475
20	140	200	250	335
25	100	150	180	245
30	75	100	125	175
35	60	85	100	135
40	50	75	90	120
45	45	60	80	110
50	40	50	60	80

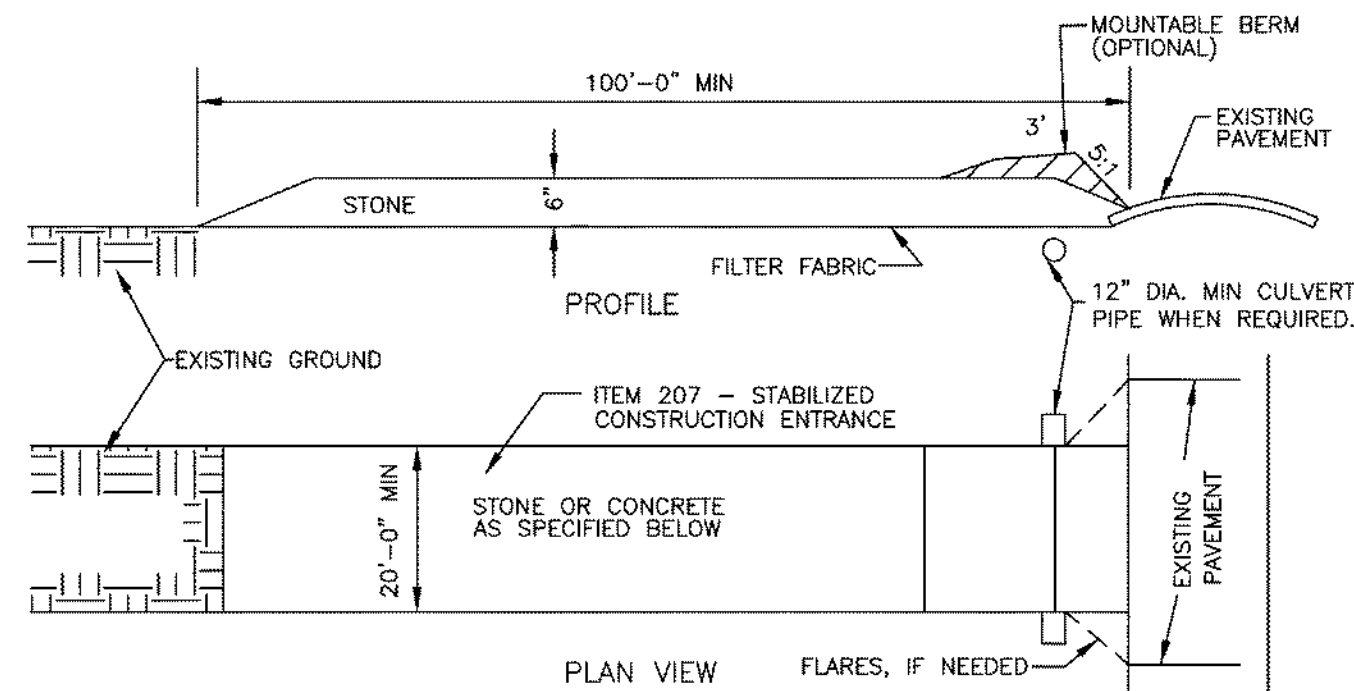
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EASEMENT REFERENCE				REVISIONS			PLAN PREPARED BY:
CITY NO.	COUNTY RECORDER	GRANTOR		NO.	DESCRIPTION	APPROVAL/DATE	
	VOL.	PAGE					

PROJECT TITLE:					
PRIVATE STORM SEWER IMPROVEMENTS FOR <b>WESTBEND DEVELOPMENT PHASE 1</b> MASS GRADE AND FILL 2474 MCKINLEY AVE					
DIVISION USE ONLY			OWNER		
			CONTRACTOR		
			INSPECTOR		
AGREEMENT		COMPLETED			
RPD	CKD	CLD	CON. DR.		
CONTRACT DRAWING NO. CC-19850			RECORD PLAN NO.		

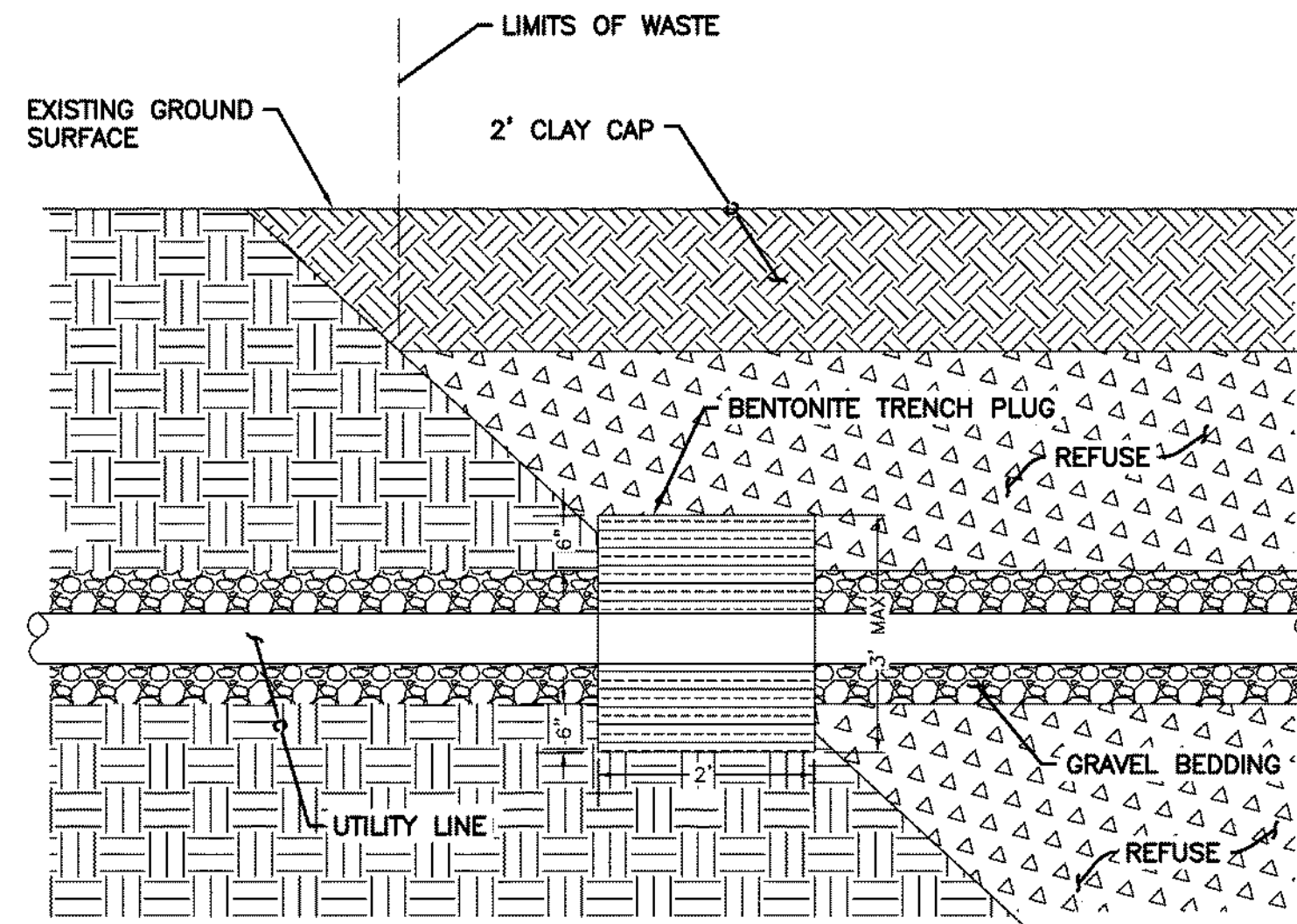
**SWPPP NOTES**





**STABILIZED CONSTRUCTION ENTRANCE**

- STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - A MINIMUM OF 100', BUT MAY BE LONGER AS DETERMINED BY THE CITY OF COLUMBUS.
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TWENTY (20) FEET MINIMUM BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. MAY BE WIDER AS DETERMINED BY THE CITY OF COLUMBUS.
- FLARES OR RADII SHALL BE INSTALLED AT THE ENTRANCE IF THE PUBLIC ROADWAY SPEEDS AND/OR TRAFFIC CONDITIONS WARRANT IT, OR IF DIRECTED BY C.O.C. PERSONNEL.
- FILTER FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE PERMITTED.
- CULVERT PIPE - 12" MINIMUM PIPE IS REQUIRED IF A STORM DITCH OR SWALE EXISTS AT THE PROPOSED ENTRANCE. THE CULVERT PIPE INVERTS SHALL MATCH THE EXISTING DITCH AT BOTH SIDES OF THE ENTRANCE.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PROTECT THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
- MAINTENANCE OF TRAFFIC SIGNAGE SHALL BE A 48" x 48" CONSTRUCTION ENTRANCE AHEAD, 200' (ADEQUATE SIGHT DISTANCE SHALL BE CONSIDERED) BEFORE THE ENTRANCE ON BOTH SIDES OF THE ROAD OR AS APPROVED BY THE C.O.C. TEMPORARY TRAFFIC CONTROL COORDINATOR. YOU SHALL CALL THE TTCC @ (614) 645-6269 OR 645-5845 BEFORE STARTING THE ENTRANCE WORK.

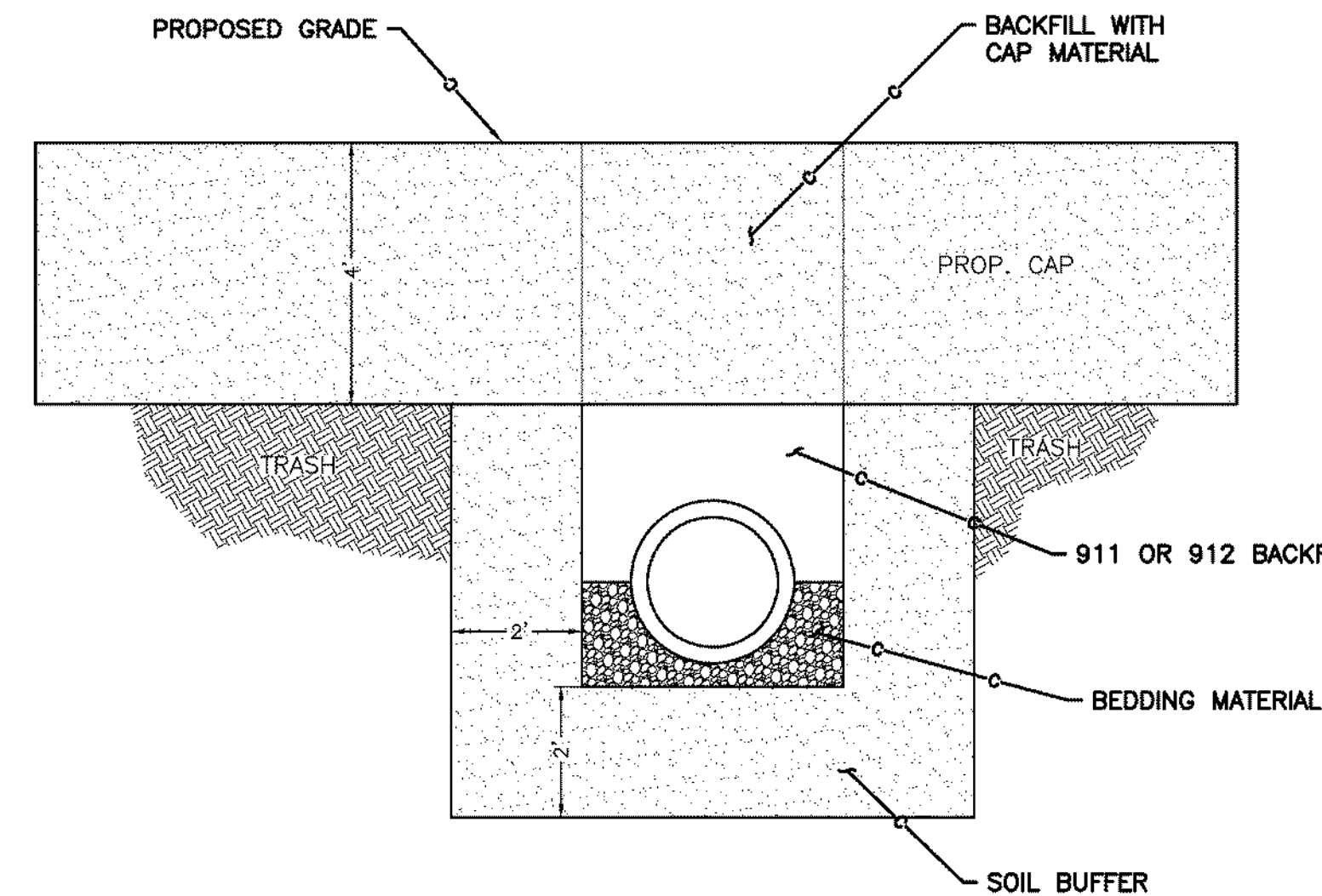


**NOTES:**

- BENTONITE PLUG TO BE KEED INTO SURROUNDING MATERIAL A MINIMUM OF 6 INCHES.
- HYDRATE BENTONITE CHIPS IN 6 IN. MAX. LIFTS AND PER MANUFACTURER'S RECOMMENDATIONS.
- WHERE UTILITIES ARE TWO PER TRENCH, BENTONITE PLUG TO BE EXTENDED TO ENCOMPASS BOTH.

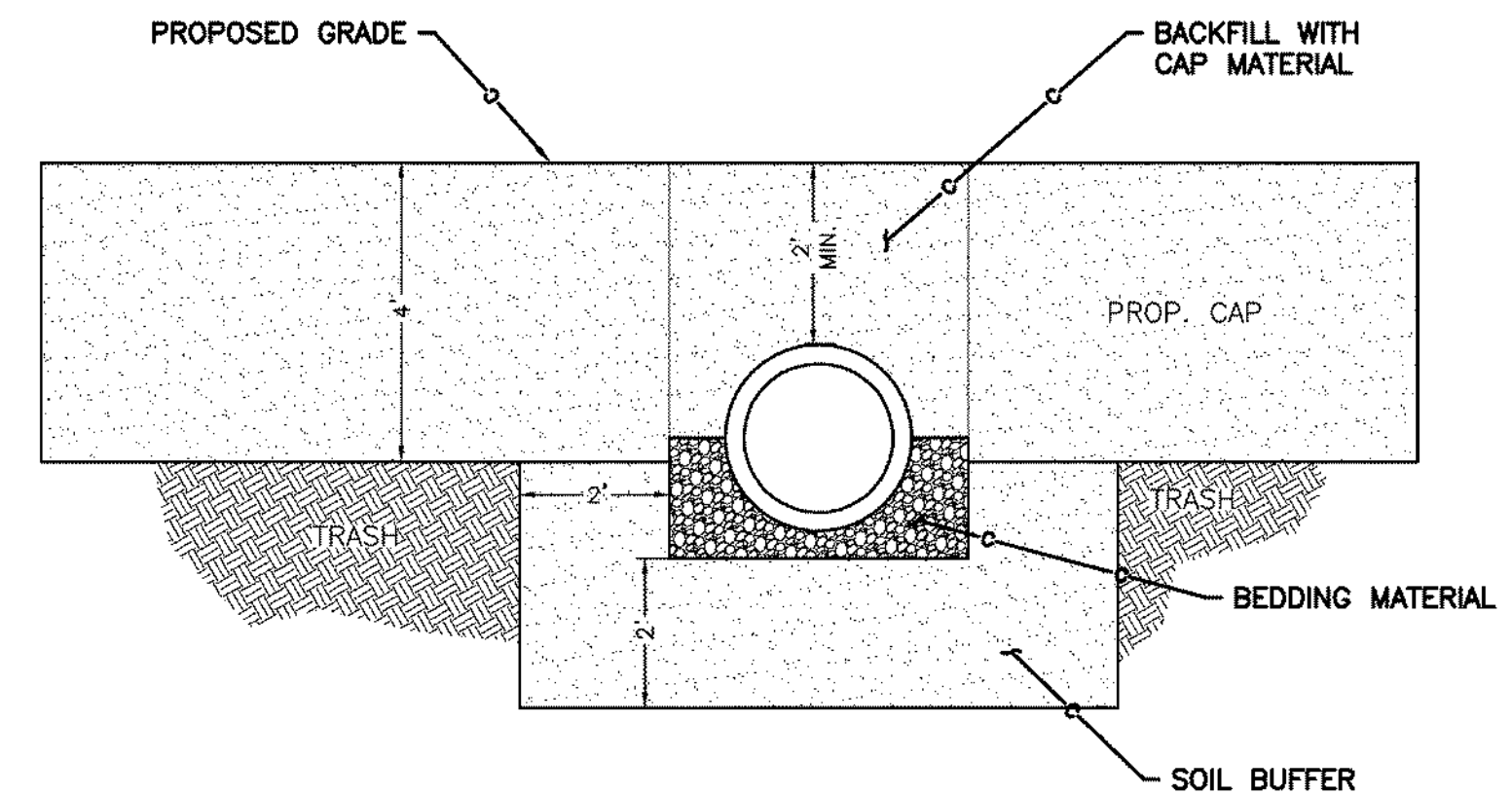
**BENTONITE TRENCH PLUG**

N.T.S.



**UTILITY BELOW CAP**

N.T.S.



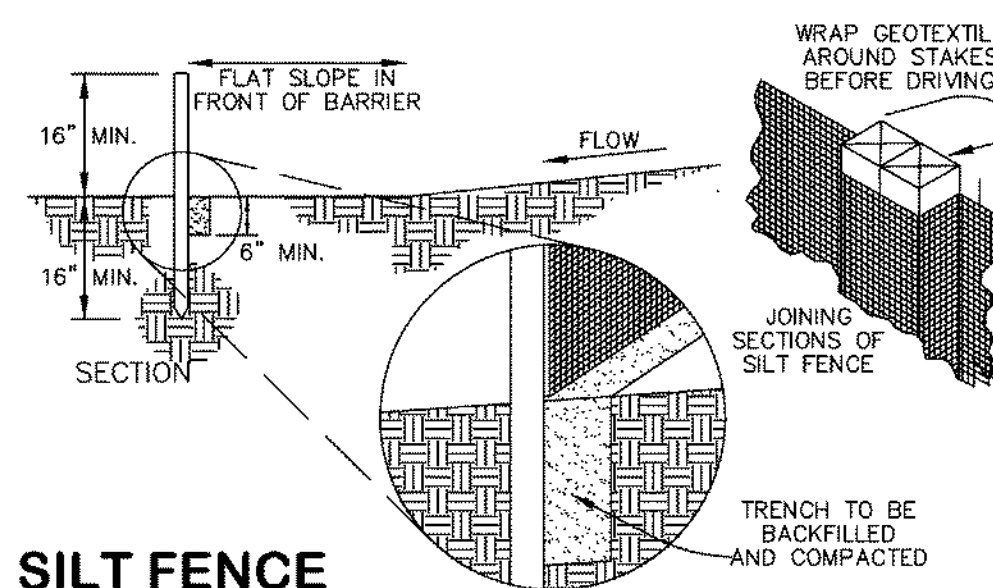
**UTILITY IN CAP**

N.T.S.

**AS PER PLAN: UTILITY IN CAP**

SOME OF THE UTILITY LINES MAY BE INSTALLED BELOW THE EXISTING SOIL CAP LAYER. WHERE THIS OCCURS, THE TRENCHES WILL BE OVER EXCAVATED AND A MINIMUM OF 2 FEET OF CLEAN, COMPACTED FILL PLACED PRIOR TO THE INSTALLATION OF THE UTILITY LINE.

BENTONITE TRENCH PLUGS WILL BE INSTALLED WHERE UTILITY TRENCHES ENTER THE SITE AND ARE EXCAVATED BELOW THE SOIL CAP.



**SILT FENCE**

N.T.S.

- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS THAT MAY CARRY CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
- ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
- SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
- WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 8 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE PLACED BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
- SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAP PRIOR TO DRIVING INTO THE GROUND, SEE DETAIL.
- MAINTENANCE: SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC, FLOWS AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING OPTIONS SHALL BE PERFORMED:

- THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED,
- ACCUMULATED SEDIMENT SHALL BE REMOVED, OR
- OTHER PRACTICES SHALL BE INSTALLED.

SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE.

SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

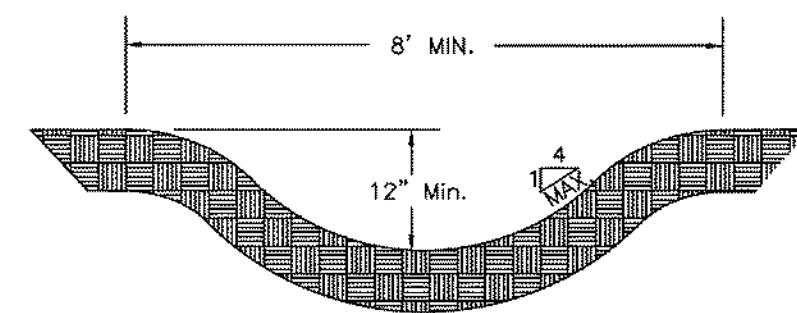
**CRITERIA FOR SILT FENCE MATERIALS:**

- FENCE POST: THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS SHALL BE 2-BY-2-INCH NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. POSTS SHALL BE FREE OF KNOTS, SPLITS, AND OTHER VISIBLE IMPERFECTIONS THAT WOULD WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FEET. POSTS SHALL BE DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ABSOLUTELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
- SILT FENCE FABRIC: SEE CHART BELOW.

NOTES: THE USE OF STRAW WATTLES HAS PROVEN TO BE A VERSATILE AND EFFECTIVE ESC BMP, ESPECIALLY IN RESIDENTIAL SETTINGS. STRAW WATTLES MAY BE SUBSTITUTED FOR SILT FENCE. THE USE OF COMPOST FILLER SOCKS AND COMPOST BLANKETS ARE GAINING WIDER ACCEPTANCE NATIONWIDE. THEY ARE NOW APPROVED FOR USE ON CITY OF POWELL PLANS AND CONSTRUCTION SITES.

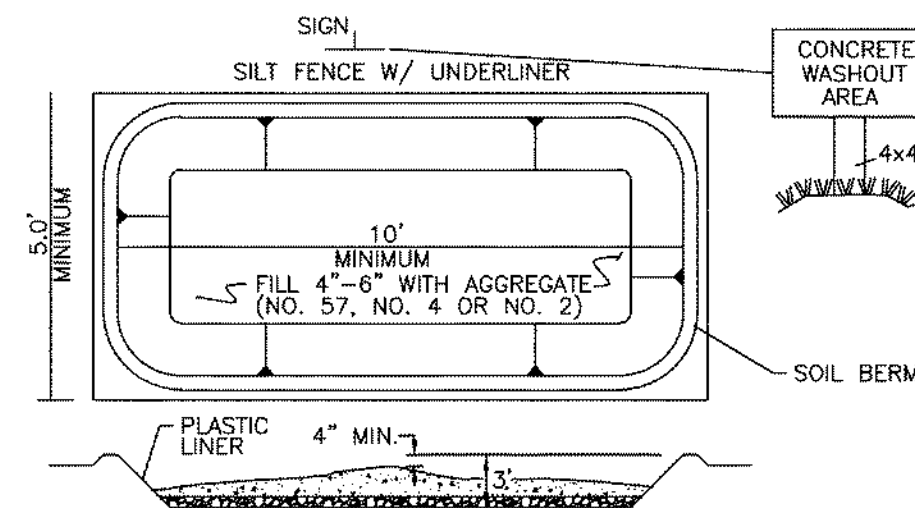
STRAW WATTLES OR COMPOST ROLLS HAVE A MINIMUM DIAMETER OF 12" (OEPA).

FABRIC PROPERTIES	VALUES	TEST METHOD
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	0.84 mm	ASTM D 4751
Minimum Permittivity	1X10 <sup>-2</sup> sec <sup>-1</sup>	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355



**CUT SWALE DETAIL**

N.T.S.



**CONCRETE WASHOUT AREA**

N.T.S.

NOTE: THE USE OF PORTABLE CONCRETE WASHOUT UNITS IS APPROVED (AND ENCOURAGED) FOR ALL CONSTRUCTION AREAS IN THE CITY OF COLUMBUS.

**EASEMENT REFERENCE**

CITY NO.	COUNTY RECORDER		GRANTOR
	VOL.	PAGE	

**REVISIONS**

NO.	DESCRIPTION	APPROVAL/DATE

**PLAN PREPARED BY:**

--

**PROJECT TITLE:**

PRIVATE STORM SEWER IMPROVEMENTS FOR WESTBEND DEVELOPMENT PHASE 1 MASS GRADE AND FILL 2474 MCKINLEY AVE

CITY OF COLUMBUS DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY

**DIVISION USE ONLY**

**OWNER**

**CONTRACTOR**

**INSPECTOR**

**AGREEMENT**

**COMPLETED**

**RPD CKD CLD CON. DR.**

SCALE: NONE

SHEET: 4/8

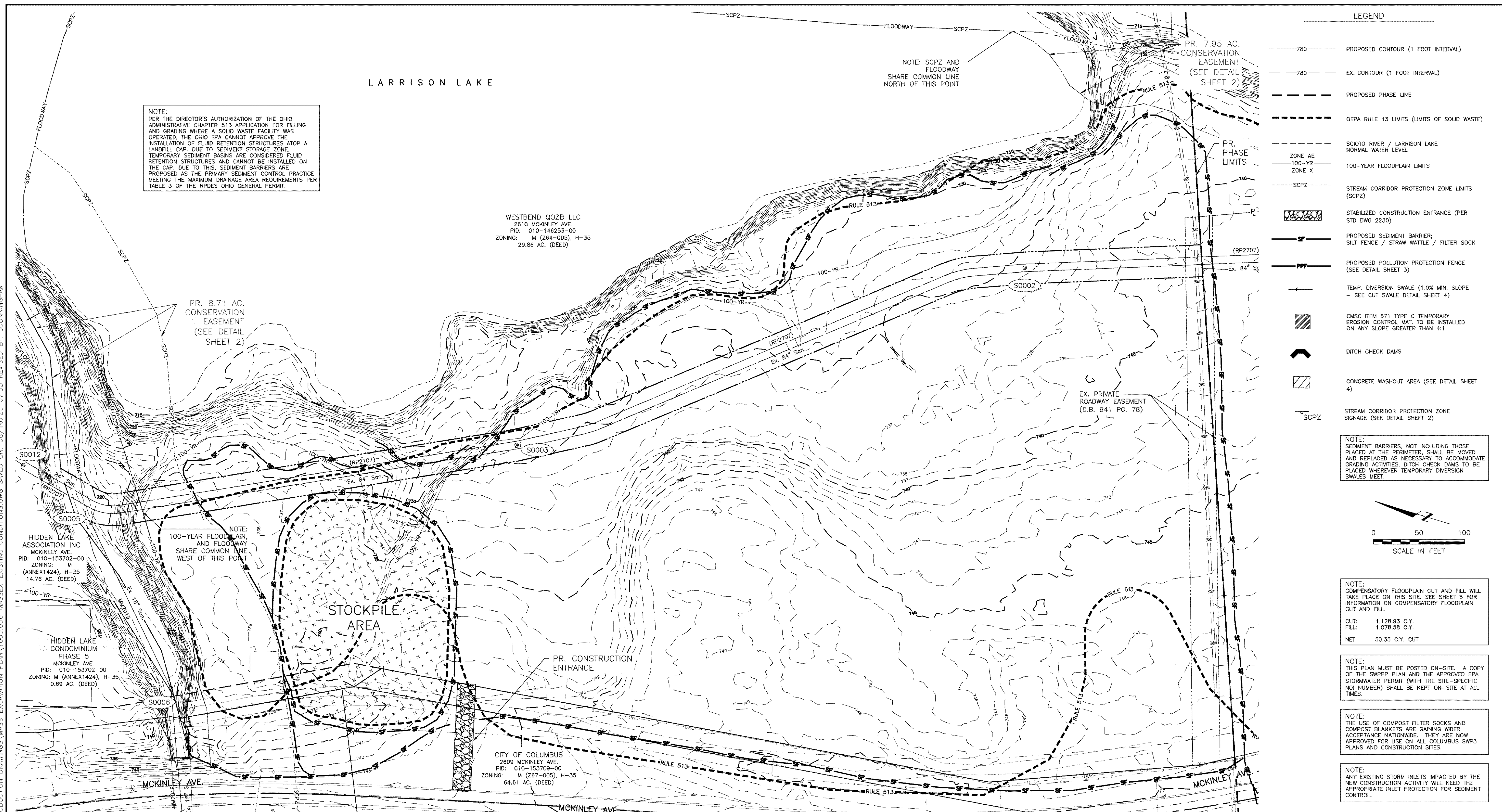
CONTRACT DRAWING NO. CC-19850

RECORD PLAN NO.

**SWPPP DETAILS**



DRAWING: M:\1005036\_MCKINLEY\DWG\PRODUCTION\_DRAWINGS\MASSEX\_EXISTING\_CONDITIONS.DWG, SAVED ON: 08/16/23 07:35 REVISED BY: JCUNNINGHAM



NOTE:  
PER THE DIRECTOR'S AUTHORIZATION OF THE OHIO ADMINISTRATIVE CHAPTER 513 APPLICATION FOR FILLING AND GRADING WHERE A SOLID WASTE FACILITY WAS OPERATED, THE OHIO EPA CANNOT APPROVE THE INSTALLATION OF FLUID RETENTION STRUCTURES ATOP A LANDFILL CAP. DUE TO SEDIMENT STORAGE ZONE. TEMPORARY SEDIMENT BASINS ARE CONSIDERED FLUID RETENTION STRUCTURES AND CANNOT BE INSTALLED ON THE CAP. DUE TO THIS, SEDIMENT BARRIERS ARE PROPOSED AS THE PRIMARY SEDIMENT CONTROL PRACTICE MEETING THE MAXIMUM DRAINAGE AREA REQUIREMENTS PER TABLE 3 OF THE NPDES OHIO GENERAL PERMIT.

WESTBEND QOZB LLC  
2610 MCKINLEY AVE.  
PID: 010-146253-00  
ZONING: M (Z64-005), H-35  
29.86 AC. (DEED)

PR. 8.71 AC. CONSERVATION EASEMENT (SEE DETAIL SHEET 2)

NOTE:  
100-YEAR FLOODPLAIN, AND FLOODWAY SHARE COMMON LINE WEST OF THIS POINT

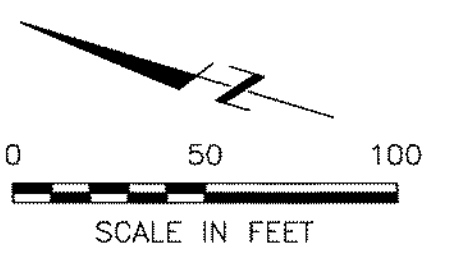
HIDDEN LAKE ASSOCIATION INC  
MCKINLEY AVE.  
PID: 010-153702-00  
ZONING: M (ANNEX1424), H-35  
14.76 AC. (DEED)

HIDDEN LAKE CONDOMINIUM PHASE 5  
MCKINLEY AVE.  
PID: 010-153702-00  
ZONING: M (ANNEX1424), H-35  
0.69 AC. (DEED)

CITY OF COLUMBUS  
2609 MCKINLEY AVE.  
PID: 010-153709-00  
ZONING: M (Z67-005), H-35  
64.61 AC. (DEED)

- LEGEND**
- 780 — PROPOSED CONTOUR (1 FOOT INTERVAL)
  - 780 — EX. CONTOUR (1 FOOT INTERVAL)
  - - - - - PROPOSED PHASE LINE
  - - - - - OEPA RULE 13 LIMITS (LIMITS OF SOLID WASTE)
  - - - - - SCIOTO RIVER / LARRISON LAKE NORMAL WATER LEVEL
  - - - - - ZONE AE 100-YR ZONE X 100-YEAR FLOODPLAIN LIMITS
  - - - - - SCPZ STREAM CORRIDOR PROTECTION ZONE LIMITS (SCPZ)
  - [Symbol] STABILIZED CONSTRUCTION ENTRANCE (PER STD DWG 2230)
  - [Symbol] PROPOSED SEDIMENT BARRIER; SILT FENCE / STRAW WATTLE / FILTER SOCK
  - [Symbol] PROPOSED POLLUTION PROTECTION FENCE (SEE DETAIL SHEET 3)
  - [Symbol] TEMP. DIVERSION SWALE (1.0% MIN. SLOPE - SEE CUT SWALE DETAIL SHEET 4)
  - [Symbol] OMS ITEM 671 TYPE C TEMPORARY EROSION CONTROL MAT. TO BE INSTALLED ON ANY SLOPE GREATER THAN 4:1
  - [Symbol] DITCH CHECK DAMS
  - [Symbol] CONCRETE WASHOUT AREA (SEE DETAIL SHEET 4)
  - [Symbol] SCPZ STREAM CORRIDOR PROTECTION ZONE SIGNAGE (SEE DETAIL SHEET 2)

NOTE:  
SEDIMENT BARRIERS, NOT INCLUDING THOSE PLACED AT THE PERIMETER, SHALL BE MOVED AND REPLACED AS NECESSARY TO ACCOMMODATE GRADING ACTIVITIES. DITCH CHECK DAMS TO BE PLACED WHEREVER TEMPORARY DIVERSION SWALES MEET.



NOTE:  
COMPENSATORY FLOODPLAIN CUT AND FILL WILL TAKE PLACE ON THIS SITE. SEE SHEET 8 FOR INFORMATION ON COMPENSATORY FLOODPLAIN CUT AND FILL.

CUT: 1,128.93 C.Y.  
FILL: 1,078.58 C.Y.  
NET: 50.35 C.Y. CUT

NOTE:  
THIS PLAN MUST BE POSTED ON-SITE. A COPY OF THE SWPPP PLAN AND THE APPROVED EPA STORMWATER PERMIT (WITH THE SITE-SPECIFIC NOI NUMBER) SHALL BE KEPT ON-SITE AT ALL TIMES.

NOTE:  
THE USE OF COMPOST FILTER SOCKS AND COMPOST BLANKETS ARE GAINING WIDER ACCEPTANCE NATIONWIDE. THEY ARE NOW APPROVED FOR USE ON ALL COLUMBUS SWP3 PLANS AND CONSTRUCTION SITES.

NOTE:  
ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.

EASEMENT REFERENCE			REVISIONS			
CITY NO.	COUNTY RECORDER VOL.	PAGE	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE

PLAN PREPARED BY:		
NO.	DESCRIPTION	APPROVAL/DATE

PROJECT TITLE:  
**PRIVATE STORM SEWER IMPROVEMENTS FOR WESTBEND DEVELOPMENT PHASE 1 MASS GRADE AND FILL 2474 MCKINLEY AVE**

SWPPP EXISTING CONDITIONS

DIVISION USE ONLY		OWNER	
CONTRACTOR		INSPECTOR	
AGREEMENT	COMPLETED	RPD	CKD
CLD	CON. DR.		

CITY OF COLUMBUS DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY	
SCALE: 1" = 50'	SHEET: 5/8
CONTRACT DRAWING NO. CC-19850	RECORD PLAN NO.





NOTE:  
PER THE DIRECTOR'S AUTHORIZATION OF THE OHIO ADMINISTRATIVE CHAPTER 513 APPLICATION FOR FILLING AND GRADING WHERE A SOLID WASTE FACILITY WAS OPERATED, THE OHIO EPA CANNOT APPROVE THE INSTALLATION OF FLUID RETENTION STRUCTURES ATOP A LANDFILL CAP. DUE TO SEDIMENT STORAGE ZONE. TEMPORARY SEDIMENT BASINS ARE CONSIDERED FLUID RETENTION STRUCTURES AND CANNOT BE INSTALLED ON THE CAP. DUE TO THIS, SEDIMENT BARRIERS ARE PROPOSED AS THE PRIMARY SEDIMENT CONTROL PRACTICE MEETING THE MAXIMUM DRAINAGE AREA REQUIREMENTS PER TABLE 3 OF THE NPDES OHIO GENERAL PERMIT.

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ZONING: M (Z64-005), H-35  
29.86 AC. (DEED)

PR. 8.71 AC. CONSERVATION EASEMENT (SEE DETAIL SHEET 2)

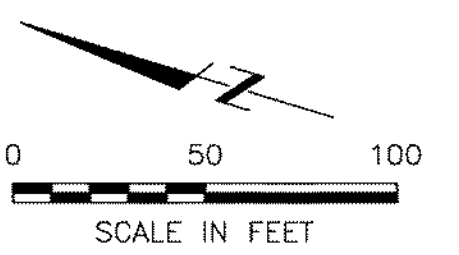
HIDDEN LAKE ASSOCIATION INC  
MCKINLEY AVE.  
PID: 010-153702-00  
ZONING: M (ANNEX1424), H-35  
14.76 AC. (DEED)

HIDDEN LAKE CONDOMINIUM PHASE 5  
MCKINLEY AVE.  
PID: 010-153702-00  
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0.69 AC. (DEED)

CITY OF COLUMBUS  
2609 MCKINLEY AVE.  
PID: 010-153709-00  
ZONING: M (Z67-005), H-35  
64.61 AC. (DEED)

- LEGEND
- 780 — PROPOSED CONTOUR (1 FOOT INTERVAL)
  - 780 — EX. CONTOUR (1 FOOT INTERVAL)
  - - - - - PROPOSED PHASE LINE
  - - - - - OEPA RULE 13 LIMITS (LIMITS OF SOLID WASTE)
  - - - - - SCIOTO RIVER / LARRISON LAKE NORMAL WATER LEVEL
  - - - - - ZONE AE 100-YR 100-YEAR FLOODPLAIN LIMITS
  - - - - - ZONE X
  - - - - - SCPZ STREAM CORRIDOR PROTECTION ZONE LIMITS (SCPZ)
  - STABILIZED CONSTRUCTION ENTRANCE (PER STD DWG 2230)
  - PROPOSED SEDIMENT BARRIER; SILT FENCE / STRAW WATTLE / FILTER SOCK
  - PROPOSED POLLUTION PROTECTION FENCE (SEE DETAIL SHEET 3)
  - TEMP. DIVERSION SWALE (1.0% MIN. SLOPE - SEE CUT SWALE DETAIL SHEET 4)
  - CMS ITEM 671 TYPE C TEMPORARY EROSION CONTROL MAT. TO BE INSTALLED ON ANY SLOPE GREATER THAN 4:1
  - DITCH CHECK DAMS
  - CONCRETE WASHOUT AREA (SEE DETAIL SHEET 4)
  - SCPZ STREAM CORRIDOR PROTECTION ZONE SIGNAGE (SEE DETAIL SHEET 2)

NOTE:  
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NOTE:  
COMPENSATORY FLOODPLAIN CUT AND FILL WILL TAKE PLACE ON THIS SITE. SEE SHEET 8 FOR INFORMATION ON COMPENSATORY FLOODPLAIN CUT AND FILL.

CUT: 1,128.93 C.Y.  
FILL: 1,078.58 C.Y.  
NET: 50.35 C.Y. CUT

NOTE:  
THIS PLAN MUST BE POSTED ON-SITE. A COPY OF THE SWPPP PLAN AND THE APPROVED EPA STORMWATER PERMIT (WITH THE SITE-SPECIFIC NO. NUMBER) SHALL BE KEPT ON-SITE AT ALL TIMES.

NOTE:  
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NOTE:  
ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.

EASEMENT REFERENCE			
CITY NO.	COUNTY RECORDER VOL.	PAGE	GRANTOR

REVISIONS		
NO.	DESCRIPTION	APPROVAL/DATE

PLAN PREPARED BY:

PROJECT TITLE:  
PRIVATE STORM SEWER IMPROVEMENTS FOR  
**WESTBEND DEVELOPMENT PHASE 1**  
MASS GRADE AND FILL  
2474 MCKINLEY AVE

SWPPP AND GRADING PLAN

DIVISION USE ONLY				OWNER	
CONTRACTOR				INSPECTOR	
AGREEMENT		COMPLETED			
RPD	CKD	CLD	CON. DR.		

CITY OF COLUMBUS  
DEPARTMENT OF PUBLIC UTILITIES  
DIVISION OF SEWERAGE AND DRAINAGE  
DIVISION USE ONLY

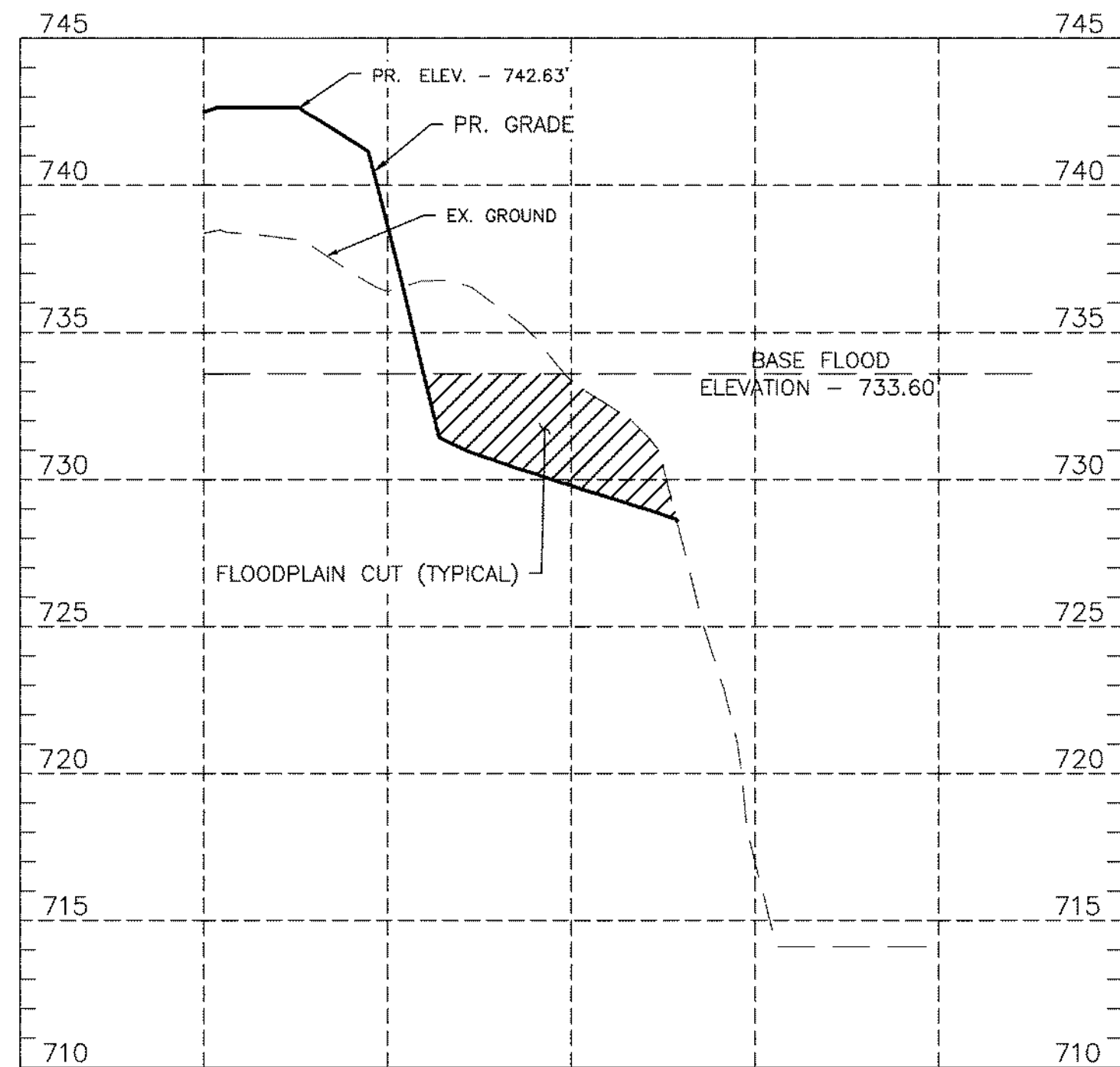
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SHEET: 6/8

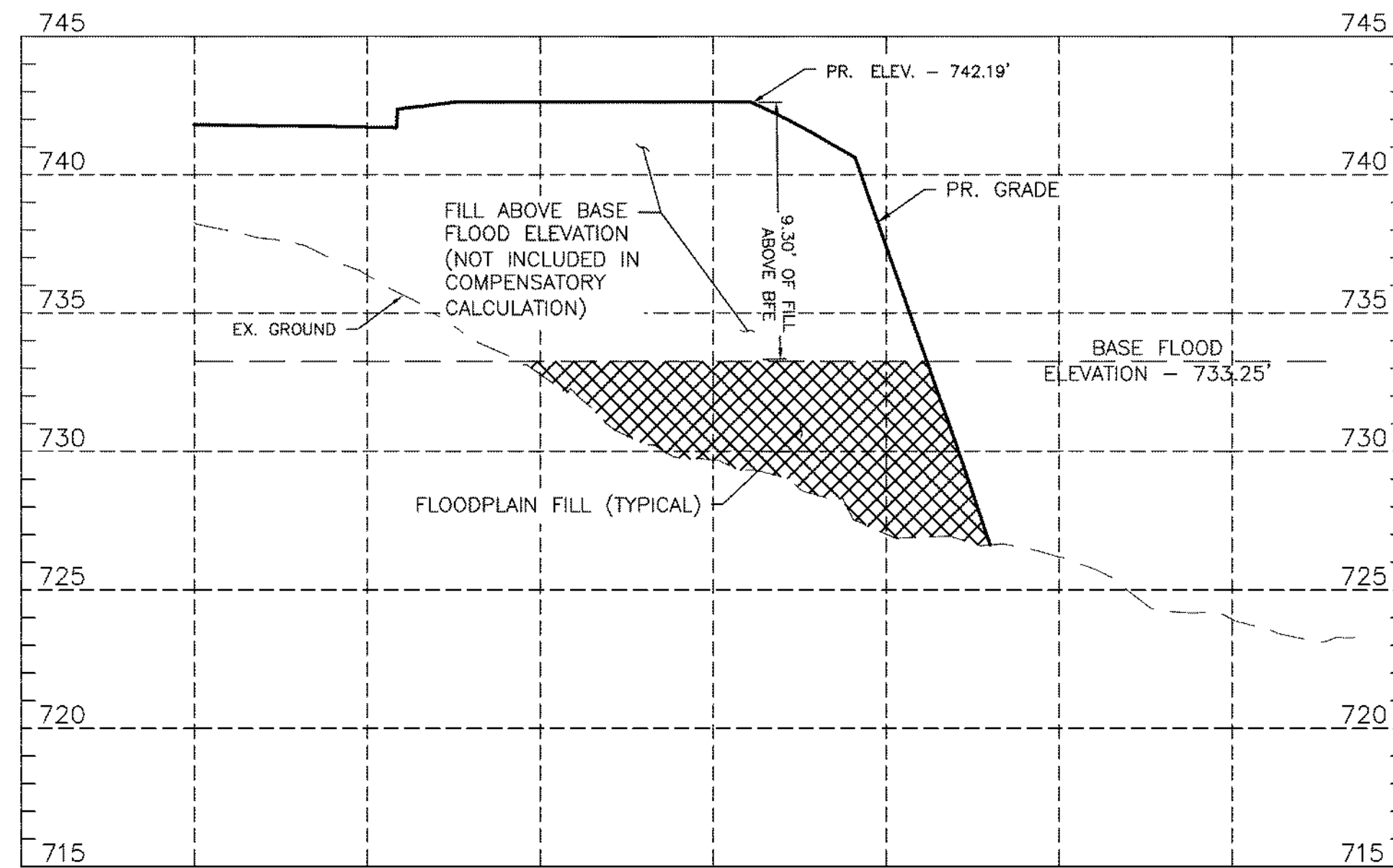
CONTRACT DRAWING NO. CC-19850

RECORD PLAN NO.

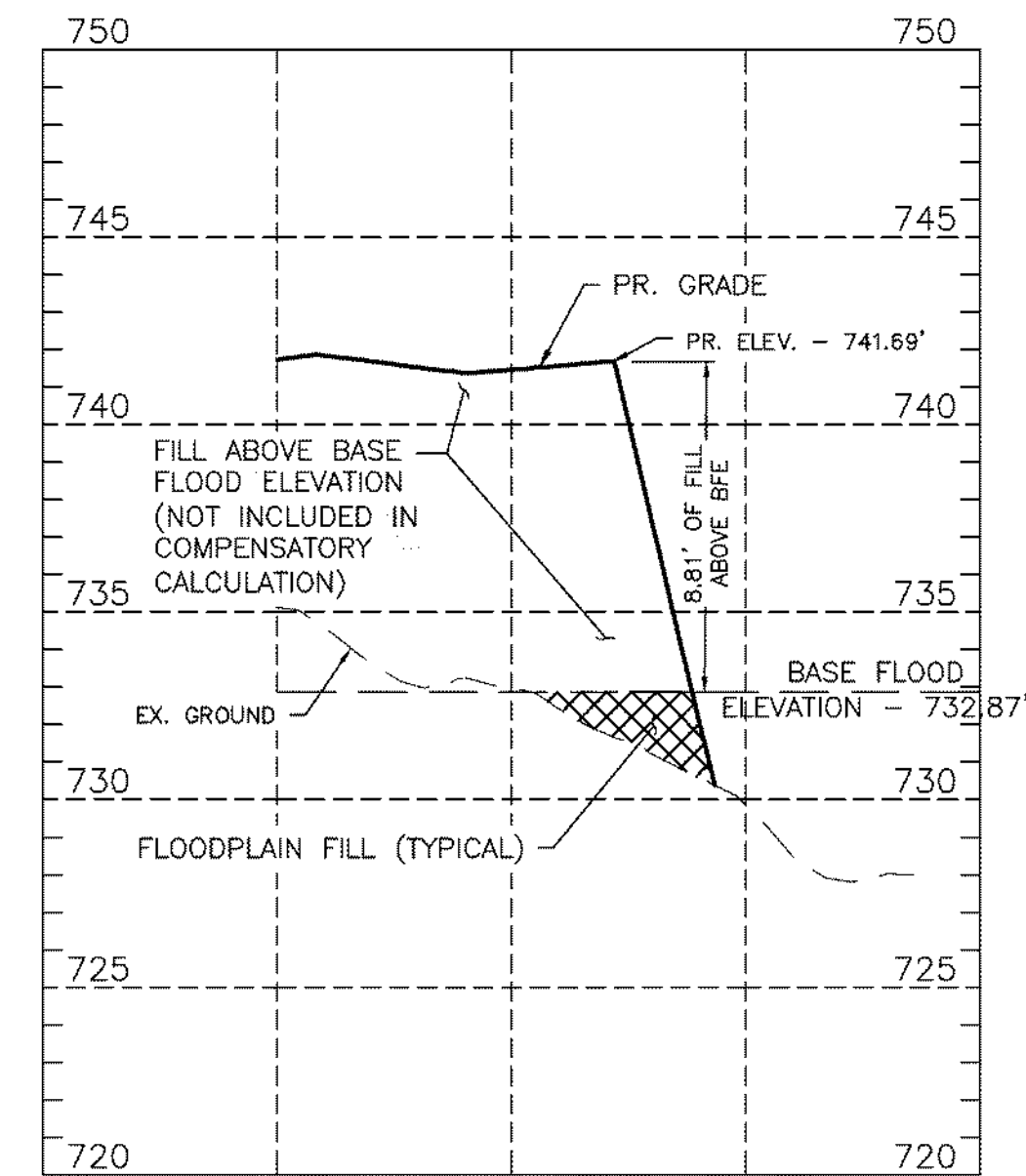




**CROSS SECTION A-A**  
 HORIZ. SCALE: 1" = 40'  
 VERT. SCALE = 1" = 5'



**CROSS SECTION B-B**  
 HORIZ. SCALE: 1" = 40'  
 VERT. SCALE = 1" = 5'

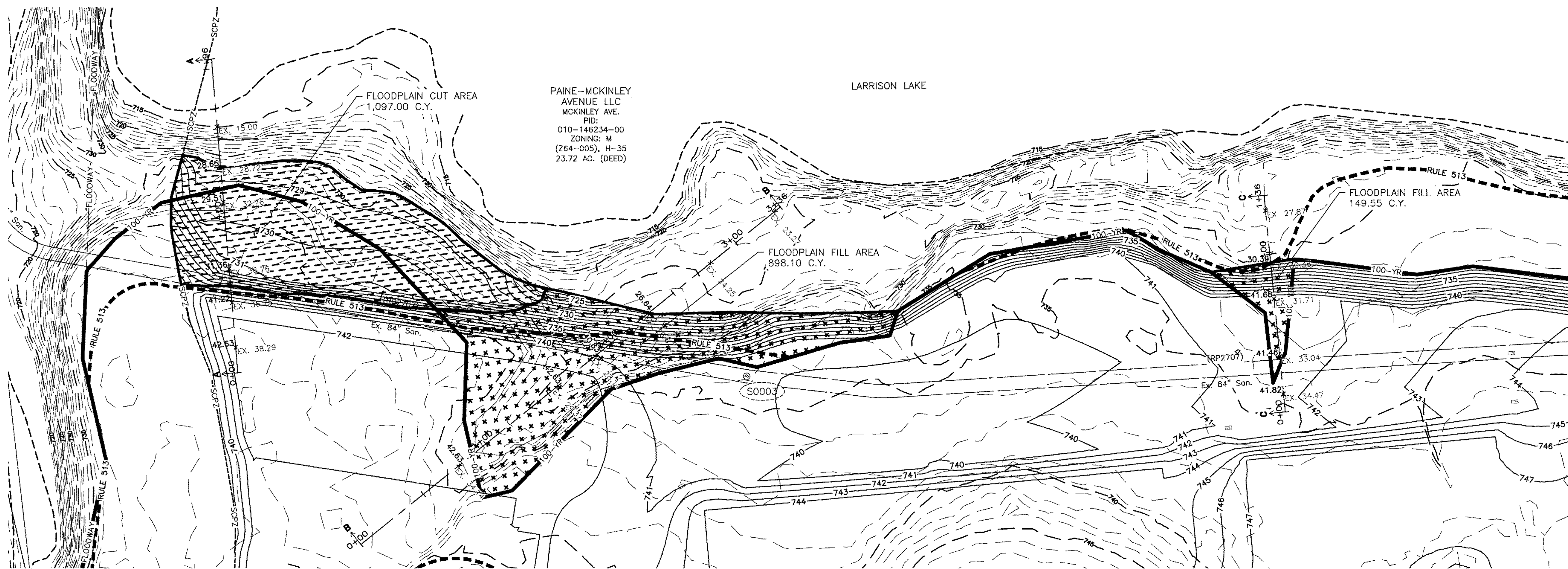


**CROSS SECTION C-C**  
 HORIZ. SCALE: 1" = 40'  
 VERT. SCALE = 1" = 5'

- LEGEND**
- 780— PROPOSED CONTOUR (1 FOOT INTERVAL)
  - - -780- - - EX. CONTOUR (1 FOOT INTERVAL)
  - — — — — OEPA RULE 13 LIMITS
  - - - - - FLOODWAY
  - - - - - SCIOTO RIVER / LARRISON LAKE NORMAL WATER LEVEL
  - 100-YR— 100-YEAR FLOODPLAIN LIMITS
  - - - - - SCPZ - - - - - STREAM CORRIDOR PROTECTION ZONE LIMITS (SCPZ)
  - \*\*\*\*\* AREAS OF 100-YEAR FLOODPLAIN FILL (AREAS REMOVED FROM 100-YEAR FLOODPLAIN)
  - ▨ AREAS OF 100-YEAR FLOODPLAIN CUT (AREAS ADDED TO 100-YEAR FLOODPLAIN)

NOTE:  
 COMPENSATORY FLOODPLAIN CUT AND FILL WILL TAKE PLACE ON THIS SITE AS SHOWN ON THIS SHEET.

CUT: 1,097.00 C.Y.  
 FILL: 1,047.65 C.Y.  
 NET: 49.35 C.Y. CUT



NOTES FOR MASS GRADING PLANS GOING TO FEMA:  
 UPON COMPLETION OF THE FILL IN CONJUNCTION WITH THIS MASS GRADING PLAN, AN APPLICATION FOR A LETTER OF MAP REVISION (LOMR) WILL BE SUBMITTED TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). PRIOR TO THE EFFECTIVE DATE OF THE LOMR, A BUILDING CONSTRUCTED WITHIN THE DESIGNATED FILL AREA WILL BE ELEVATED AND/OR DRY FLOOD PROOFED IN ACCORDANCE WITH THE REQUIREMENTS OF C.C. CHAPTER 1150, FLOODPLAIN MANAGEMENT, OF THE COLUMBUS WATER, SEWER AND ELECTRICITY CODE.

FILLING MAY BE ALLOWED IN THE FLOODWAY FRINGE ONLY IF ASSOCIATED WITH A GRADE AND FILL PLAN. THE GRADE AND FILL PLAN SHALL BE FULLY DETAILED AND SUBMITTED AS PART OF AN APPLICATION FOR A CERTIFICATE OF ZONING CLEARANCE. FILL SHALL NOT BE PLACED UNTIL AFTER THE CERTIFICATE OF ZONING CLEARANCE HAS BEEN ISSUED FOR GRADING AND FILLING.

REGARDLESS OF ANY DETERMINATION ISSUED BY FEMA TO REMOVE AN AREA FILLED AS PERMITTED AND APPROVED FROM THE DESIGNATED SPECIAL FLOOD HAZARD AREA (SFHA), DEVELOPMENT WITHIN THAT AREA OF FILL SHALL BE CONSTRUCTED WITH THE LOWEST FLOOR LEVEL, EXCLUDING A BASEMENT OR CRAWL SPACE, AT OR ABOVE THE FLOOD PROTECTION ELEVATION.

THE LOWEST GRADE ADJACENT TO A BUILDING OR STRUCTURE TO BE CONSTRUCTED WITHIN THE DESIGNATED FILL AREA SHALL BE AT OR ABOVE THE FLOOD PROTECTION ELEVATION, WITH THAT GRADE ELEVATION TO EXTEND AT LEAST TWENTY (20) FEET FROM THE PROPOSED BUILDING TOWARDS THE FLOODWAY OR FLOODING SOURCE.

IN ADDITION, A RESIDENTIAL DWELLING WITHIN THE DESIGNATED FILL AREA MUST HAVE A MEANS OF INGRESS AND EGRESS AT OR ABOVE THE BASE FLOOD ELEVATION THAT EXTENDS CONTINUOUSLY FROM THE DWELLING TO A LOCATION OUTSIDE THE SPECIAL FLOOD HAZARD AREA WITHIN THE SUBJECT SITE.

REASONABLY SAFE FROM FLOODING: ALL STRUCTURES ASSOCIATED WITH FUTURE DEVELOPMENT WITHIN THE AREA OF THE FLOODPLAIN FILL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD OF BEING "REASONABLY SAFE FROM FLOODING", AS OUTLINED IN TECHNICAL BULLETIN 10-01 DATED MAY 2001, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) OR SUCCESSOR DOCUMENTS.

NOTE: ALL FILL WITHIN THE 100 YEAR FLOODPLAIN SHALL BE AT LEAST 1.5 FEET ABOVE THE BASE FLOOD ELEVATION.

EASEMENT REFERENCE			REVISIONS			
CITY NO.	COUNTY RECORDER VOL.	PAGE	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE

PLAN PREPARED BY:		

100 YEAR CUT AND FILL

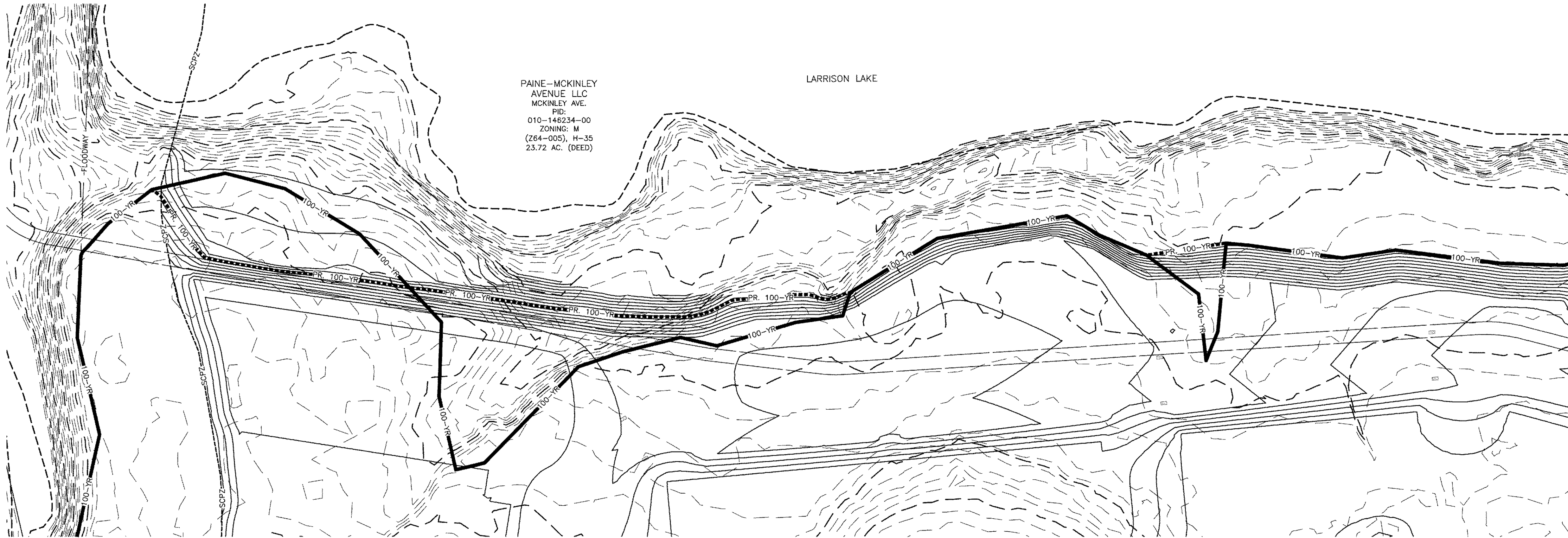
PROJECT TITLE:			
PRIVATE STORM SEWER IMPROVEMENTS FOR WESTBEND DEVELOPMENT PHASE 1 MASS GRADE AND FILL 2474 MCKINLEY AVE			
DIVISION USE ONLY		OWNER	
		CONTRACTOR	
		INSPECTOR	
AGREEMENT	COMPLETED		
RPD	CKD	CLD	CON. DR.

CITY OF COLUMBUS DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY	
SCALE: AS SHOWN	SHEET: 7/8
CONTRACT DRAWING NO. CC-19850	RECORD PLAN NO.



LEGEND

- 780—— PROPOSED CONTOUR (1 FOOT INTERVAL)
- - - -780- - - - EX. CONTOUR (1 FOOT INTERVAL)
- OEPA RULE 13 LIMITS
- - - - - FLOODWAY
- - - - - SCIOTO RIVER / LARRISON LAKE NORMAL WATER LEVEL
- 100-YR ——— EXISTING 100-YEAR FLOODPLAIN LIMITS
- PR. 100-YR ——— PROPOSED 100-YEAR FLOODPLAIN LIMITS
- SCPZ ——— STREAM CORRIDOR PROTECTION ZONE LIMITS (SCPZ)



Paine-Mckinley Avenue LLC  
 Mckinley Ave.  
 PID: 010-146234-00  
 Zoning: M  
 (264-005), H-35  
 23.72 AC. (Deed)

LARRISON LAKE

DRAWING: M:\1005036\_MCKINLEY\DWG\PRODUCTION DRAWINGS\MASS EXCAVATION\PLAN\1005036\_MASSEY\_100YRCUTFILL.DWG, SAVED: DN: 05/31/23, 09:22, REVISED BY: JCUNNINGHAM

EASEMENT REFERENCE			GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE
CITY NO.	COUNTY RECORDER VOL.	PAGE				

REVISIONS		
NO.	DESCRIPTION	APPROVAL/DATE

PLAN PREPARED BY:

100 YEAR FLOODPLAIN ADJUSTMENT

PROJECT TITLE: PRIVATE STORM SEWER IMPROVEMENTS FOR WESTBEND DEVELOPMENT PHASE 1 MASS GRADE AND FILL 2474 MCKINLEY AVE			
DIVISION USE ONLY		OWNER	
		CONTRACTOR	
		INSPECTOR	
		AGREEMENT	COMPLETED
		RPD	CKD
		CLD	CON. DR.

CITY OF COLUMBUS DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY	
SCALE: AS SHOWN	SHEET: 8/8
CONTRACT DRAWING NO. CC-19850	RECORD PLAN NO.

**APPENDIX H**

**GEOTECHNICAL REPORT AND BORING LOGS**



GEOTECHNICAL  
CONSULTANTS INC.

**MAIN OFFICE**  
720 Greencrest Drive  
Westerville, OH 43081  
614.895.1400 **phone**  
614.895.1171 **fax**

**YOUNGSTOWN OFFICE**  
8433 South Avenue  
Building 1, Suite 1  
Boardman, OH 44514  
330.965.1400 **phone**  
330.965.1410 **fax**

**DAYTON OFFICE**  
2380 Bellbrook Avenue  
Xenia, OH 45385  
937.736.2053 **phone**

[www.gci2000.com](http://www.gci2000.com)

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Westerville, OH 43081 614.895.1171 fax

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8433 South Avenue 330.965.1400 phone  
Bldg 1, Suite 1 330.965.1410 fax  
Boardman, OH 44514

[www.gci2000.com](http://www.gci2000.com)

January 6, 2020

Mr. Joseph M. Reidy  
McKinley Avenue Acquisitions, LLC  
842 North 4th Street, Suite 200  
Columbus, Ohio 43215

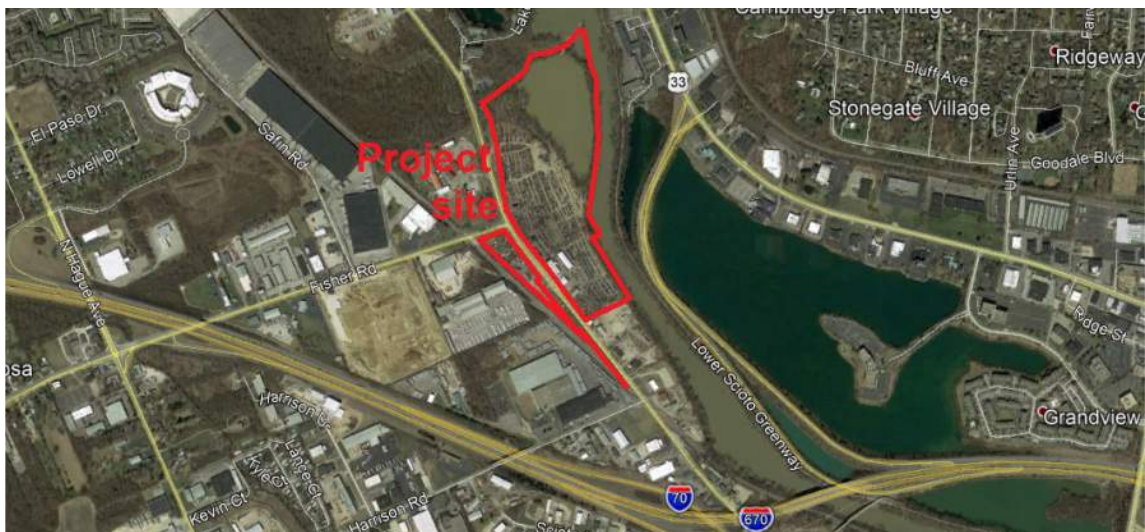
**Reference: Preliminary Geotechnical Assessment  
Buckeye Auto Parts  
2474 McKinley Avenue - Columbus, Ohio  
GCI Project 19-G-22606-A**

Dear Mr. Reidy:

As you authorized, GCI performed a series of test borings at the site as part of an environmental assessment of the subsurface conditions at the site. This report discusses the findings of the 16 test borings that were performed as part of the environmental study and provides a preliminary geotechnical assessment of the impact of the encountered subsurface conditions on the proposed mixed-use development.

### **SITE AND PROJECT DESCRIPTION**

The project site is located due west of the Scioto River, straddling McKinley Avenue. A majority of the site is east of McKinley Avenue, with the Scioto River along its east boundary. A small segment of the site is located west of McKinley Avenue, with existing railroad tracks along its southwest boundary. Houses, a quarry, and a landfill have historically occupied parts of the property. The Buckeye Auto Parts salvage yard has occupied the property since the 1970s. An aerial image of the site is shown below. The photographs on the following pages show the site conditions near the time of the borings.



**Site Aerial (obtained from Google Earth, dated March 2018)**





**Photo 1 (Taken from north-central portion of site, facing southeast)**



**Photo 2 (Taken from far northern end of site, facing east)**



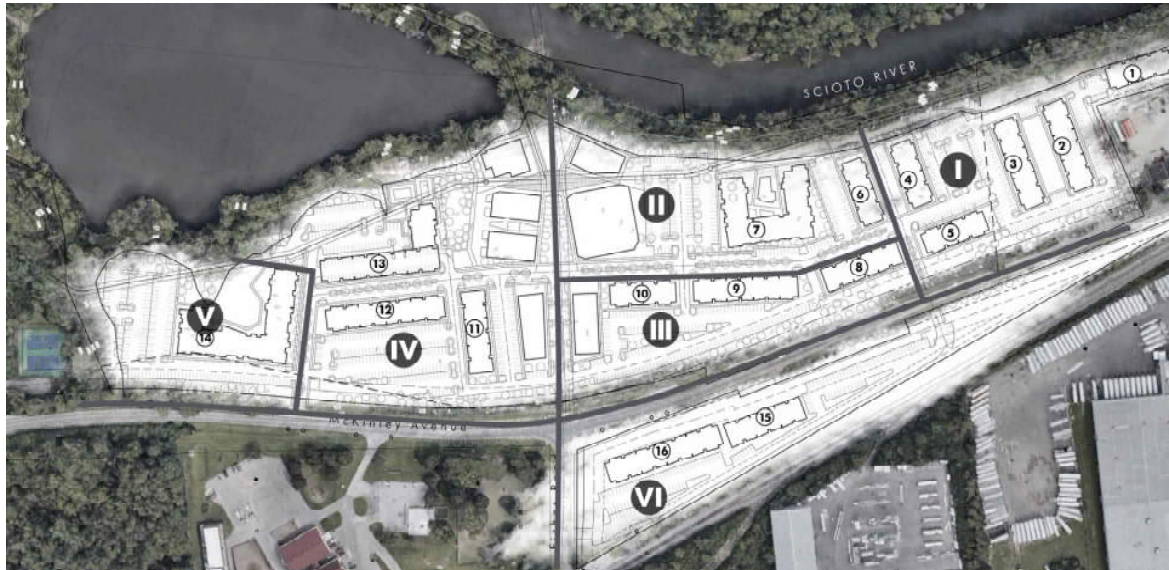
**Photo 3 (Taken from eastern-central part of site, facing west)**



**Photo 4 (Taken from southern part of site, facing northwest)**



We were provided with the Conceptual Master Plan, prepared by POD design, and dated December 19, 2019. The plan displays a layout of the proposed buildings and pavement areas. The layout also divides site into six zones as show on the image below.



**Conceptual Master Plan (prepared by POD design)**

A Site Data sheet is included within the Conceptual Master Plan and describes each zone as follows:

- Zone I: Five 3-story residential buildings;
- Zone II: One 3-story residential building, one 4-story residential building, one 1-story office building, and one 2-story office building;
- Zone III: Three 3-story residential buildings and one 1-story office building;
- Zone IV: Two 4-story residential buildings, one 5-story residential building, and four 1-story office buildings;
- Zone V: One 4-story residential building;
- Zone VI: Two 4-story residential buildings.

### **SUBSURFACE CONDITIONS**

On November 11, 12, 13, 15, and 18, 2019, Envirocore (drilling contractor) performed sixteen (16) standard penetration test borings at the site. GCI representative Andy Shipley was on-site during drilling operations, noting auger spoil constituents and subsurface strata changes. Soil samples retrieved from the borings were classified by a GCI engineer in our laboratory. Attached to this report are two boring location plans (one over a site aerial and one over the site plan) and logs of the test boings. We summarize the subsurface findings below. Refer to the individual boring logs for more detailed information at specific boring locations.

Each of our borings encountered fill of variable constituents. In general, the encountered fills contained a soil-based matrix. This matrix consisted of sands, gravels, silts, and

clays, with sands being the most frequently observed component in our borings. Intermixed within the soil-based matrix were various components as described below:

- Wood was noted within many of our borings; in particular, borings DB-1, DB-8, and DB-12 contained depth ranges over which wood was the primary component.
- Cloth, glass, and metal were noted in some borings in relatively small quantities (significantly less than the observed wood).
- Cinders of an ash-like consistency were noted in many of our borings; the cinders were typically mixed with sands and other fines, giving the materials a dark gray color.
- Concrete fragments and brick fragments.

If we deemed appropriate, some fills were classified under the Unified Soil Classification System; these included Silty Sand with Gravel (SM), Silt (ML), Lean Clay (CL), Lean Clay with Sand (CL), Sandy Lean Clay (CL), and Sandy Lean Clay with Gravel (CL). A majority of the fill materials were noted as "mixes", which we deemed as not fitting into a classification. On the logs, "mix" components are listed from highest quantity to lowest quantity constituents as noted in the split spoon samples.

Standard penetration testing N-values varied within the fills. Loose to dense granular fills and soft to hard cohesive fills were noted. N-values were random between borings and at various depth ranges within borings.

We noted moist, very moist, and wet (saturated) materials within our borings; these are noted as such on our logs. Groundwater seepage was encountered during drilling at respective depths of 23.5', 23', 8', 13', 20', and 18', in borings DB-1, DB-2, DB-8, DB-9, DB-11, and DB-12. Wet materials were noted below seepage levels. Practical implications with regards to moisture condition are discussed in the Geotechnical Evaluation section of this report. Note that soil moisture conditions and groundwater observations fluctuate due to changes in precipitation, climate, stabilization time, and other factors that may differ from the time the measurements were made.

Borings DB-1 to 6, DB-10, and DB-16 terminated within the fill at a depth of 25' below existing grade. Borings DB-7 and DB-11 encountered sampler refusal in fill and were terminated at respective depths of 7.1' and 24.4'. Borings DB-8, DB-9, and DB-12 to 15 encountered sampler refusal on what may be limestone bedrock at respective depths of 15', 10', 22', 14', 5.5', and 13.7'. The borings are summarized in the table on the following page.



Boring	Groundwater Level During Drilling (ft)	Groundwater Level at Drilling Completion (ft)	Bottom of Boring Depth (ft)	Notes
DB-1	23.5	24	25	-
DB-2	23	24.5	25	-
DB-3	-	-	25	-
DB-4	-	-	25	-
DB-5	-	-	21.3	Sampler refusal in fill at 21.3'
DB-6	-	-	25	-
DB-7	-	-	7.1	Sampler refusal in fill at 7.1'
DB-8	8	13	15.2	Possible Bedrock at 15'
DB-9	13	13	25	Possible Bedrock at 10'
DB-10	-	-	10.2	-
DB-11	20	23.5	24.4	Sampler refusal in fill at 24.4'
DB-12	18	18	22.2	Possible Bedrock at 22'
DB-13	-	-	15.1	Possible Bedrock at 14'
DB-14	-	-	5.9	Possible Bedrock at 5.5'
DB-15	-	-	13.7	Possible Bedrock at 13.7'
DB-16	-	-	25	-

No borings penetrated through the fill. As such, the fill depths and natural soils are not known. Additional "geotechnical" specific borings are recommended to evaluate fill depths and natural soils as they may impact foundation / site preparation approaches for the project.

### **ADDITIONAL BORINGS**

This study consisted of 16 standard penetration test borings and is considered to be limited in scope considering the size of the property, the newness and potential fluidity of development plans, and the varying nature of the existing fills. Additional geotechnical specific borings will need to be performed to better characterize the fill conditions and fill depths, assess the natural soils, and presence of bedrock. This information is need to better assess appropriate foundation approaches.

### **PRELIMINARY GEOTECHNICAL EVALUATION**

The fill poses geotechnical challenges for development, particularly with regards to settlement of structures and pavements. In our opinion, multiple foundation approaches may need to be utilized, depending upon the proposed development feature and the geotechnical conditions encountered. We discuss four foundation approaches in the following subsections. These approaches should be considered preliminary because the project scope has not been finalized and the depth of fill and natural soil has not been determined.

#### **Approach 1 – Deep Dynamic Compaction**

Based on the borings, ground improvement using deep dynamic compaction (DDC) is a viable approach for areas of the site although the high concentration of wood may be an

issue and will need further evaluation. A DDC specialty contractor should be consulted regarding attainable bearing capacities. Based on our experience with DDC in similar fill conditions, a 3,000 pounds per square foot (psf) bearing capacity will likely be the maximum achievable capacity under this approach. High building loads may preclude the use of DDC.

Based on our experience with DDC, the upper  $\pm$  20 feet of material exhibits the most “improvement” (i.e., densification) from the process. DDC will be challenging in areas of the site exhibiting excessive moisture contents and significant wood content. Materials shown on our boring logs as “very moist” or “wet” may be difficult to “densify” due to the development of excess pore pressures, especially those with higher amounts of fine-grained materials.

#### Comments:

- Within favorable fill conditions (i.e., “normal” moisture content and minor wood content), DDC should be feasible for single-story commercial structures or light-weight residential structures (2- to 3-story wood-framed). Additional compactive effort should be applied along wall lines and at column locations for heavier and more settlement sensitive structures to reduce settlement potential. The other foundation approaches presented in this report would need to be utilized if the fill conditions are unfavorable to DDC (i.e., too wet to respond to DDC or too much deleterious materials, such as wood).
- A pre- and post-DDC boring plan will need to be implemented prior to starting any DDC activities to help assess the “improvement” of fills under the procedure.
- DDC will have a tendency to loosen the materials between the craters. GCI should be consulted prior to site activities to provide recommendations for remediation of DDC areas.
- The project team should anticipate challenges with DDC performed in late fall, winter, and early spring due to the upper level soils generally having higher moisture contents.
- As a minimum, the area to be compacted should be the building limits plus at least 20 feet outside the building perimeter. We also recommend DDC where sanitary lines are constructed. The DDC contractor should determine whether additional drops are needed.
- We recommend DDC be performed at the lowest possible elevation (i.e., before any new fill placement is performed).
- The DDC process could lower the densified area by 1 to 2 feet. Therefore, additional fill will be needed to complete site grading.

#### **Approach 2 – Geopiers**

This approach would consist of modifying the existing fills using geopiers. Temporary casing may be needed to install geopier elements through loose/soft zones of fills and below groundwater seepage. Obstructions in the fill (brick, concrete, metal, tanks, etc.) could be a problem during installation and will have to be dealt with on a case-by-case basis; this could include removing the obstruction. We anticipate that groundwater will be encountered during geopier installation; the specialty contractor will need to plan accordingly. Once the geopiers are installed, a shallow foundation system would be

used. Additional geotechnical specific borings will need to be performed to aid the geopier designer with pier spacing, size, depth, and bearing capacities.

Slab settlement could also be an issue with the geopiers option unless geopiers are installed below the entire building footprint to provide slab support. This will need to be further assessed in final design phases.

### **Approach 3 – Driven Piles**

Based on the preliminary borings, this approach would involve driving piles through the fill to bear on bedrock. Shallow rock depths and/or excessively loose in-place materials may preclude this approach due to lateral support concerns. Additional borings will need to be performed to assess bedrock depths at building areas; rock coring will need to be performed as well.

Piles driven to refusal on bedrock would eliminate structure settlement concerns related to the existing fill. However, there is a potential for large obstructions within the fill, such as cobbles, boulders, metal, etc. Additional piles and pile cap/grade beam redesign would be needed if obstructions prevent piles from being installed to bedrock at the design locations. Slab constructed on fill could settle. This will need to be addressed in final design.

### **Approach 4 – Drilled Shafts**

Shafts bearing on bedrock would eliminate structure settlement concerns related to the existing fill. The shafts should be designed to gain their support through end bearing, mostly likely on limestone bedrock. Additional borings with rock coring will need to be performed to attain approximate fill depths at proposed building areas and assess rock quality and hardness. We anticipate drilled shafts bearing in limestone bedrock can be designed for a preliminary end bearing capacity in the range of 20,000 to 40,000 psf. A negative skin friction value would need to be used for the depth of the fill, which can be provided after additional borings are performed. Note that groundwater seepage will be an issue with the construction of drilled shafts and will need to be addressed by the contractor.

### **Comments**

In our opinion, portions of the site should respond well to DDC. However, the success of the DDC will depend largely on fill composition and moisture levels in the fill. Provided the site is prepared as recommended, we feel that total and differential settlement for light-weight structures should be within tolerable limits. However, settlement of footings supported on fill modified using DDC may vary due to variations in the fill, which presents risk.

Heavier and/or settlement sensitive buildings could settle more than desired under DDC-improved ground. If a particular tenant has a very strict settlement criterion, then the structure will need to be supported on deep foundations. There is still a risk of settlement associated with the existing fills if geopiers are used; however, we would consider the risk to be lower with geopier-improved ground in comparison to DDC-improved materials. Obstructions in the fill could present problems with pile installations as well as augering activities for geopiers or drilled shafts.



## **ADDITIONAL PRELIMINARY RECOMMENDATIONS**

### **Site Preparation**

Proposed development areas should be completely stripped of existing trees, vegetation, buildings, utilities, and scrap metal / auto parts, to expose the existing fill materials. This stripping process should be performed prior to any foundation or ground modification procedures. If a geopier or deep foundation approach is chosen, the earthwork contractor should proof-roll the exposed subgrade using a fully-loaded, tandem-axle dump truck (or equivalent) to identify potential soft, yielding subgrade areas. Soft spots

identified during the proof-roll should be undercut to firm, stable conditions, or otherwise stabilized.

### **Subgrade Stabilization**

The stabilization of soft subgrades by disking, aerating/drying, and re-compaction may be feasible during traditionally drier times of the year. During wet seasons, partial undercutting and replacing of wet soils with structural fill, drying with soil additives such as lime, or use of geosynthetics may be needed to create a stable subgrade before placing controlled fills. The use of soil additives, such as lime and fly ash, or installation of geosynthetics should be reviewed by GCI prior to use in the field. Fewer problems with soft subgrades are expected if work is performed during traditionally drier times of the year (i.e., late spring, summer, and early fall). Traditionally wetter seasons (i.e., late fall, winter, and early spring) will contribute to more problems associated with soft, very moist subgrades.

### **New Fill Placement**

Structural fill can be placed to design grade once subgrades are brought to firm and stable conditions. Non-organic site soils can be used as structural fill provided proper moisture control is maintained (if unsuitable items are found within the fill, they should be removed). Imported fill materials should be reviewed by our office prior to placement. Depending on the time of year of earthwork, the fill may require drying to achieve proper compaction.

### **Foundations and Floor Slabs**

After additional borings are performed and ground improvement / deep foundation approaches are further assessed, recommendations can be provided.

### **Seismic Factor**

Based on our preliminary borings, and provided the site is prepared as recommended, we would estimate the site as a Site Class D – stiff soil profile.

### **Pavements**

Provided the site is prepared as described herein, conventional aggregate base and flexible asphalt wearing course pavements should be feasible. A specific pavement design is beyond the scope of work of this report; GCI can provide one if requested. Properly compacted, it is our opinion the site materials would have a preliminary CBR value of at least 3 (no actual testing has been performed during this subsurface exploration; this is based on our observation of the on-site materials and experience with similar project sites).

## **ENVIRONMENTAL**

This report deals with geotechnical considerations for land development. There are environmental issues which are beyond the scope of this report. GCI has been providing environmental consulting to the project. Items such as the location and thickness of a clay cap, installation of a methane extraction system, the need for a vapor barrier below the floor slabs, etc., are environmental items that should be considered for the project. It is critical that these and other pertinent environmental considerations be coordinated with geotechnical aspects of site preparation.

## **CONSTRUCTION MATERIAL ENGINEERING AND TESTING**

GCI provides construction materials engineering and testing (CoMET) services. For project continuity throughout construction, we recommend that GCI be retained to observe, test, and document the following:

- DDC, geopier and deep foundation installation,
- earthwork procedures (stripping, cut and fill earthwork, etc.),
- foundation and slab preparation (proof-rolling, excavations, etc.)
- concrete placement (footings, grade beams, slabs) and compressive strength testing, and
- structural steel (welds, bolts, etc.).

The purpose of this work is to assess that the intent of our recommendations is being followed and to make timely changes to our recommendations (as needed) in the event site conditions vary from those encountered in our borings. Please contact our field department to initiate these services.

## **FINAL**

In the event that any changes in the nature or design of the project are planned, conclusions and recommendations contained in this report shall not be considered valid unless changes are reviewed and conclusions of this report are modified or verified in writing.

The preliminary recommendations contained in this report are the opinion of Geotechnical Consultants, Inc. based on the subsurface conditions found in the borings and available development information. The nature and extent of variations between borings might not become evident until construction. Due to the nature of this site (i.e., random fill placed many years ago), abrupt variations in fill components and density should be anticipated. Depending on the encountered conditions, it may be necessary to re-evaluate the recommendations of this report.

This letter report has been prepared for the exclusive use of McKinley Avenue Acquisitions, LLC, and their consultants for specific application to the proposed development at 2474 McKinley Avenue in Columbus, Ohio in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

It has been a pleasure to be of service to you on this project. If you have any questions or need for additional service, please contact GCI.

Respectfully submitted,  
**Geotechnical Consultants, Inc.**



Jeffrey M. Holko, P.E.  
Project Manager



David W. Caprio, P.E.  
Principal

Attachments: General Notes for Soil Sampling and Classifications  
General Site Location Map  
Boring Location Plan  
Borings Logs

Distribution: Mr. Joseph Reidy – McKinley Avenue Acquisitions - pdf copy via email  
GCI File





**GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS**

**BORINGS, SAMPLING AND GROUNDWATER OBSERVATIONS:**

Drilling and sampling were conducted in accordance with procedures generally recognized and accepted as standard methods of exploration of subsurface conditions. The borings were drilled using a truck-mounted drill rig using auger boring methods with standard penetration testing performed in each boring at intervals ranging from 1.5 to 5.0 feet. The stratification lines on the logs represent the approximate boundary between soil types at that specific location and the transition may be gradual.

Water levels were measured at drill locations under conditions stated on the logs. This data has been reviewed and interpretations made in the text of the report. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time the measurements were made.

The Standard Penetration Test (ASTM-D-1586) is performed by driving a 2.0 inch O.D. split barrel sampler a distance of 18 inches utilizing a 140 pound hammer free falling 30 inches. The number of blows required to drive the sampler each 6 inches of penetration are recorded. The summation of the blows required to drive the sampler for the final 12 inches of penetration is termed the Standard Penetration Resistance (N). Soil density/consistency in terms of the N-value is as follows:

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-10	Loose	0-4	Soft
10-30	Medium Dense	4-8	Medium Stiff
30-50	Dense	8-15	Stiff
50 +	Very Dense	15-30	Very Stiff
		30 +	Hard

**SOIL MOISTURE TERMS**

Soil Samples obtained during the drilling process are visually characterized for moisture content as follows:

MOISTURE CONTENT	DESCRIPTION
Damp	Soil moisture is much drier than the Atterberg plastic limit (where soils are cohesive) and generally more than 3% below Standard Proctor "optimum" moisture conditions. Soils of this moisture generally require added moisture to achieve proper compaction.
Moist	Soil moisture is near the Atterberg plastic limit (cohesive soils) and generally within $\pm 3\%$ of the Standard Proctor "optimum" moisture content. Little to no moisture conditioning is anticipated to be required to achieve proper compaction and stable subgrades.
Very Moist	Soil moisture conditions are above the Atterberg plastic limit (cohesive soils) and generally greater than 3% above Standard Proctor "optimum" moisture conditions. Drying of the soils to near "optimum" conditions is anticipated to achieve proper compaction and stable subgrades.
Wet	Soils are saturated. Significant drying of soils is anticipated to achieve proper compaction and stable subgrades.

**SOIL CLASSIFICATION PROCEDURE:**

Soil samples obtained during the drilling process are preserved in plastic bags and visually classified in the laboratory. Select soil samples may be subjected to laboratory testing to determine natural moisture content, gradation, Atterberg limits and unit weight. Soil classifications on logs may be adjusted based on results of laboratory testing.

Soils are classified in accordance with the ASTM version of the Unified Soil Classification System. ASTM D-2487 "Classification of Soils for Engineering Purposes (Unified Soil Classification System) describes a system for classifying soils based on laboratory testing. ASTM D-2488 "Description and Identification of Soil (Visual-Manual Procedure) describes a system for classifying soils based on visual examination and manual tests.

Soil classifications are based on the following tables (see reverse side):

## GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS

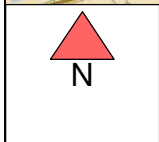
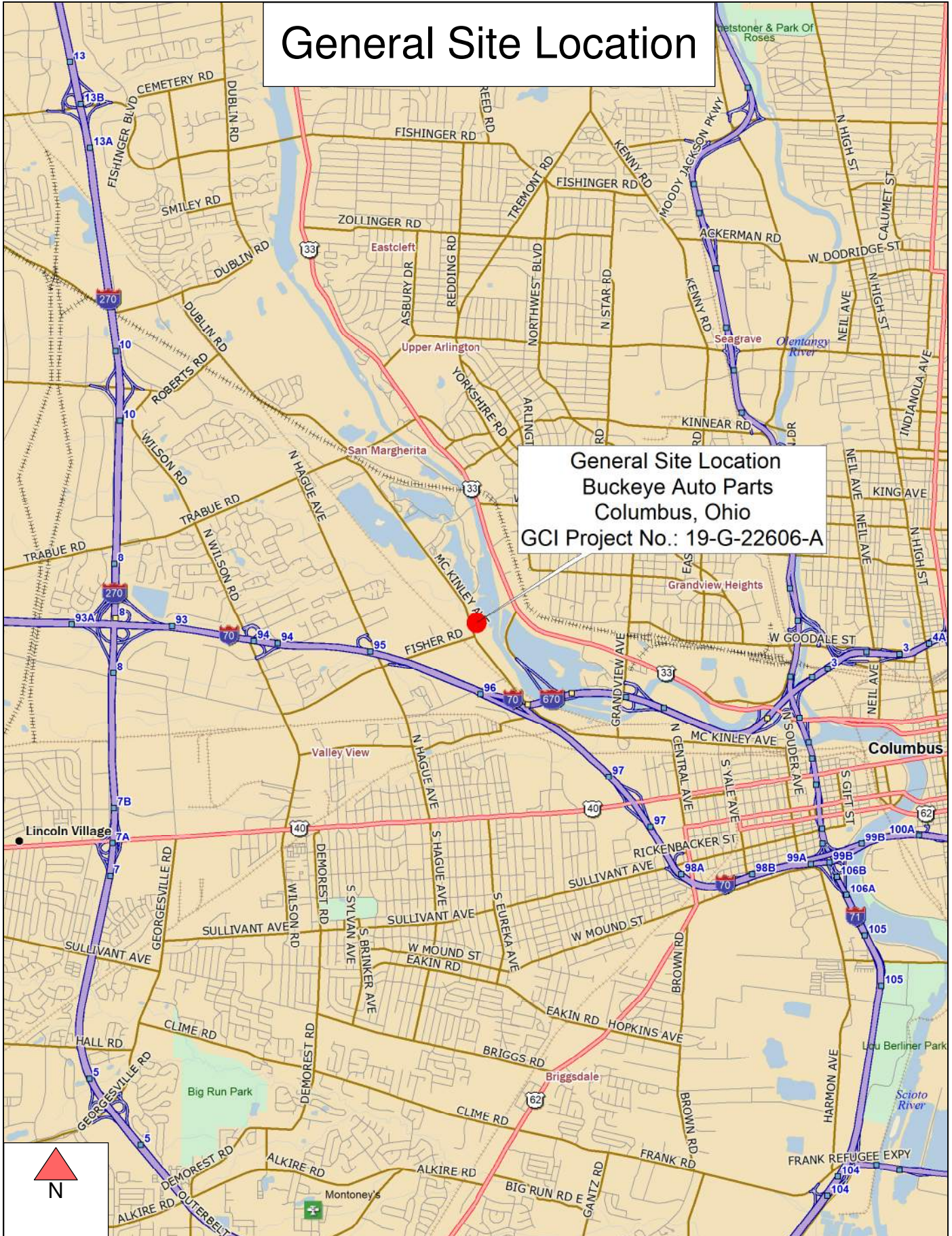
PARTICLE SIZE DEFINITION		CONSTITUENT MODIFIERS	
Boulders:	>12"		
Cobbles:	3" to 12"	Trace	Less than 5%
Gravel:	Coarse: 3/4" to 3"	Few	5-10%
	Fine: No. 4 (3/16") to 3/4"	Little	15-25%
Sand:	Coarse No. 10 (2.0mm) to No. 4 (4.75mm)	Some	30-45%
	Medium No. 40 (0.425mm) to No. 10 (2.0mm)	Mostly	50-100%
	Fine No. 200 (0.074mm) to No. 40 (0.425mm)		
Silt & Clay	<0.074mm; classification based on overall plasticity; in general clay particles <0.005mm.		

ASTM/UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART		
<b>COARSE-GRAINED SOILS</b> (more than 50% of materials is larger than No. 200 sieve size)		
<b>GRAVELS</b> More than 50% of coarse fraction larger than No. 4 sieve size	<i>Clean Gravel (less than 5% fines)</i>	
	GW	Well-graded gravel, gravel-sand mixtures, little or no fines
	GP	Poorly-graded gravels, gravel sand mixtures, little or no fines
	<i>Gravels with fines (more than 12% fines)</i>	
	GM	Silty gravels, gravel-sand-silt mixtures
	GC	Clayey gravels, gravel-sand-clay mixtures
<b>SANDS</b> More than 50% of coarse fraction smaller than No. 4 sieve size	<i>Clean Sands (Less than 5% fines)</i>	
	SW	Well-graded sands, gravelly sands, little or no fines
	SP	Poorly-graded sands, gravelly sands, little or no fines
	<i>Sands with fines (More than 12% fines)</i>	
	SM	Silty sands, sand-silt mixtures
	SC	Clayey sands, sand-clay mixtures
Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:		
Less than 5 percent .....GW, GP, SW, SP		
Greater than 12 percent .....GM, GC, SM, SC		
5 to 12 percent .....Borderline cases requiring dual symbols: SP-SM, GP-GM, etc.		
<b>FINE-GRAINED SOILS</b> (50% or more of material is smaller than No. 200 sieve size)		
<b>SILTS AND CLAYS</b> Liquid Limit less than 50%	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
	CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	CL-ML	Inorganic silty clay of slight plasticity, P.I. between 4 and 7
	OL	Organic silts and organic silty clays of low plasticity
<b>SILTS AND CLAYS</b> Liquid Limit 50% or greater	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
	CH	Inorganic clays of high plasticity, fat clays
	OH	Organic clays or medium to high plasticity, organic silts
<b>HIGHLY ORGANIC SOILS</b>	PT	Peat and other highly organic soils



# General Site Location

General Site Location  
 Buckeye Auto Parts  
 Columbus, Ohio  
 GCI Project No.: 19-G-22606-A

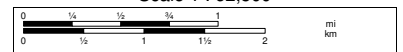


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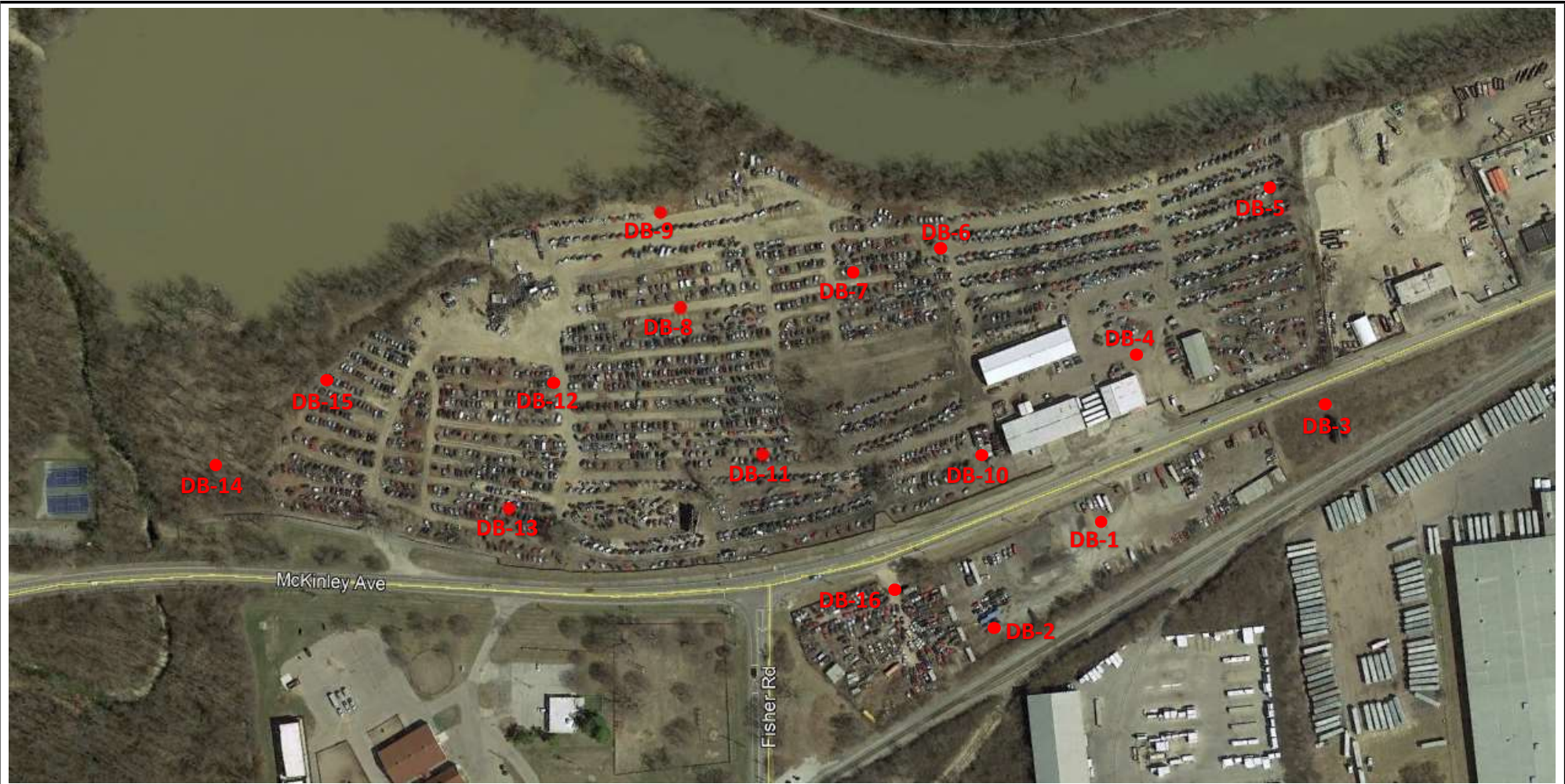
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1" = 5,208.3 ft

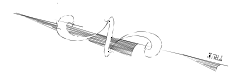
Data Zoom 11-6





McKinley Ave

Fisher Rd



● Boring Location

**BORING LOCATION PLAN - Aerial**

2474 McKinley Avenue

Columbus, Ohio

Aerial image obtained from Google Earth, dated March 2018

Project No.: 19-G-22606-A

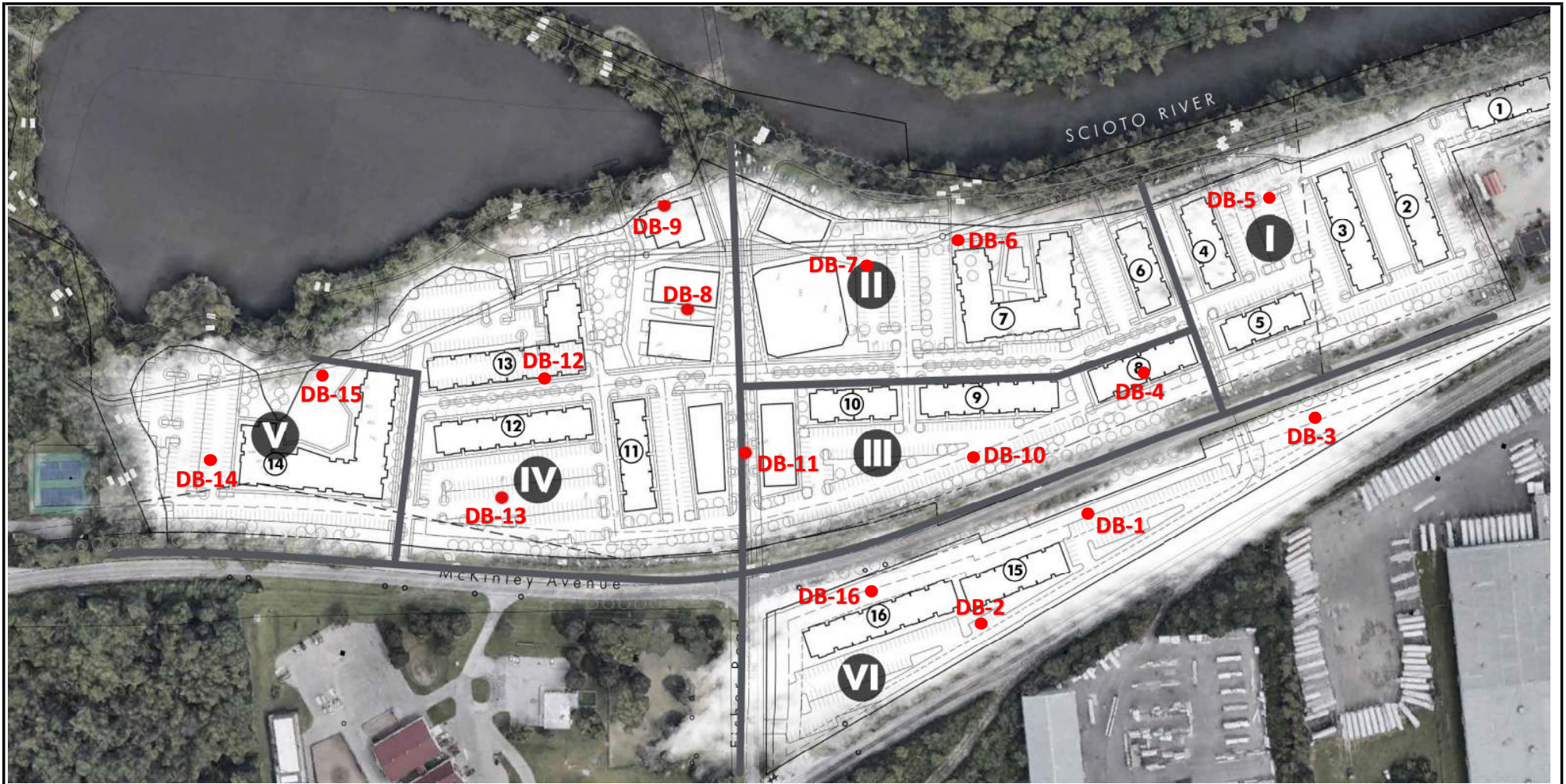
Date: 01/06/2020

Drawn By: Jeffrey Holko

Scale: Not to Scale







**BORING LOCATION PLAN - Conceptual Master Plan**

2474 McKinley Avenue

Columbus, Ohio

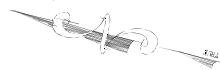
Plan Prepared by POD design, dated December 19, 2019

Project No.: 19-G-22606-A

Date: 01/06/2020

Drawn By: Jeffrey Holko

Scale: Not to Scale



● Boring Location





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-1  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/11/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler				
<u>24.0</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace            Less than 5% Few                5 to 10% Little             15 to 25% Some              30 to 45% Mostly            50 to 100%			<b>Cohesionless Density</b> 0 - 10            Loose 10 - 30        Medium Dense 30 - 50           Dense 50 +             Very Dense		<b>Cohesive Consistency</b> 0 - 4            Soft 4 - 8            Medium Stiff 8 - 15          Stiff 15 - 30        Very Stiff 30 +            Hard		
LOCATION OF BORING                      See Boring Location Plan											
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness		
				0-6	6-12	12-18					
		0.0-2.0	SS	11	33	6	Moist	1.5	FILL: Dark Gray Silty Sand with Gravel; contains cinders and brick		
				7							
		2.0-4.0	SS	7	8	2	Moist	2.5	FILL: Light Gray Silty Sand with Gravel; contains concrete		
				3							
5		4.0-6.0	SS	6	7	6	Very Moist	6.0	FILL: Dark brown mix of clay/silt fines, sand, wood, gravel, and cinders Low recovery for 4' - 6' depth sample		
				1							
		6.0-8.0	SS	3	2	4	Very Moist	8.5	FILL: Mostly wood with brick fragments, sand, and gravel Low recovery for 6' - 8' depth sample		
				9							
		8.0-10.0	SS	3	6	8	Moist	10.0	FILL: Brown mix of clay/silt fines, sand, gravel, glass, cinders, and wood		
				9							
10		10.0-12.0	SS	8	5	7	Very Moist	18.5	FILL: Mostly wood with sand, clay/silt fines, and gravel		
				13							
		13.5-15.0	SS	7	6	4	Moist	23.5	FILL: Dark brown mix of clay/silt fines, sand, wood, gravel, and brick		
15								25.0	Water Seepage at 23.5' FILL: Dark gray mix of sand, clay/silt fines, gravel, and wood		
		18.5-20.0	SS	3	1	3	Very Moist	25.0	FILL: Dark gray mix of sand, clay/silt fines, gravel, and wood		
20								25.0	FILL: Dark gray mix of sand, clay/silt fines, gravel, and wood		
		23.5-25.0	SS	5	6	3	Wet	25.0	FILL: Dark gray mix of sand, clay/silt fines, gravel, and wood		
25								25.0	FILL: Dark gray mix of sand, clay/silt fines, gravel, and wood		
								BOTTOM OF BORING: 25'			

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-2  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/11/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler					
<u>24.5</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace      Less than 5% Few         5 to 10% Little      15 to 25% Some       30 to 45% Mostly     50 to 100%			<b>Cohesionless Density</b> 0 - 10      Loose 10 - 30     Medium Dense 30 - 50     Dense 50 +         Very Dense			<b>Cohesive Consistency</b> 0 - 4         Soft 4 - 8         Medium Stiff 8 - 15       Stiff 15 - 30      Very Stiff 30 +         Hard		
LOCATION OF BORING      See Boring Location Plan												
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness			
				0-6	6-12	12-18						
		0.0-2.0	SS	12	9	2	Moist	0.6	Topsoil			
				1				1.5	FILL: Gray mix of silty sand, gravel, and concrete			
		2.0-4.0	SS	4	2	3	Moist	4.0	FILL: Brown mix of sand, clay/silt fines, gravel, concrete, brick, and cinders			
				4					FILL: Brown mix of clay/silt fines, sand, and wood			
5		4.0-6.0	SS	4	4	3	Moist	6.0	FILL: Brown mix of silty sand, gravel, concrete, wood, and cloth			
				1					FILL: Brown mix of silty sand, gravel, concrete, wood, and cloth			
		6.0-8.0	SS	7	1	1	Moist	10.0	FILL: Brown mix of clay/silt fines, sand, gravel, concrete, cloth, cinders, and glass			
				1					FILL: Brown mix of clay/silt fines, sand, gravel, concrete, cloth, cinders, and glass			
10		8.0-10.0	SS	3	1	2	Very Moist	10.0	FILL: Brown mix of clay/silt fines, sand, gravel, concrete, cloth, cinders, and glass			
				3					FILL: Brown mix of clay/silt fines, sand, gravel, concrete, cloth, cinders, and glass			
		10.0-12.0	SS	2	3	7	Very Moist	18.0	FILL: Dark gray mix of clay/silt fines, cinders, sand, cloth, and glass			
				10					FILL: Dark gray mix of clay/silt fines, cinders, sand, cloth, and glass			
15		13.5-15.0	SS	3	1	1	Very Moist	23.0	<b>Water Seepage at 23'</b>			
									FILL: Mix of brown sandy lean clay, wood, and cloth			
		18.5-20.0	SS	3	2	2	Very Moist	28.0	FILL: Mix of dark gray sand, wood, and glass			
									FILL: Mix of dark gray sand, wood, and glass			
20		23.5-25.0	SS	6	2	2	Wet	30.0	FILL: Mix of dark gray sand, wood, and glass			
									FILL: Mix of dark gray sand, wood, and glass			
25		28.5-30.0	SS	5	5	4	Wet	30.0	FILL: Mix of dark gray sand, wood, and glass			
									FILL: Mix of dark gray sand, wood, and glass			
30								30.0	FILL: Mix of dark gray sand, wood, and glass			
									FILL: Mix of dark gray sand, wood, and glass			
BOTTOM OF BORING: 30'												

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-3  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/11/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler				
<b>None</b> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace	Less than 5%		<b>Cohesionless Density</b>		<b>Cohesive Consistency</b>		
				Few	5 to 10%		0 - 10	Loose	0 - 4	Soft	
				Little	15 to 25%		10 - 30	Medium Dense	4 - 8	Medium Stiff	
				Some	30 to 45%		30 - 50	Dense	8 - 15	Stiff	
				Mostly	50 to 100%		50 +	Very Dense	15 - 30	Very Stiff	
									30 +	Hard	
<b>LOCATION OF BORING</b> <b>See Boring Location Plan</b>											
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness		
				0-6	6-12	12-18					
5		0.0-2.0	SS	5	9	10	Moist	0.2	Topsoil		
				9					FILL: Brown mix of sand, gravel, concrete, and clay/silt fines		
		2.0-4.0	SS	5	9	9	Moist	3.0	Mostly clay noted from a 2' - 3' depth		
				3				4.0	FILL: Gray mix of lean clay and cinders		
		4.0-6.0	SS	5	9	6	Moist	6.0	FILL: Brown mix of sand, clay/silt fines, cinders, gravel, and glass		
10				6					FILL: Dark gray mix of clay/silt fines, sand, gravel, cinders, concrete, wood, cloth, and glass		
		6.0-8.0	SS	6	2	2	Moist				
				2							
		8.0-10.0	SS	6	2	2	Very Moist				
				2							
15											
		13.5-15.0	SS	8	6	3	Very Moist	13.5	FILL: Dark brown mix of sand, gravel, concrete, clay/silt fines, wood, and cloth		
		18.5-20.0	SS	10	10	10	Very Moist		Very low recovery for 18.5' - 20' depth sample		
20											
		23.5-25.0	SS	8	4	8	Moist	23.5	FILL: Light Brown Silt (similar to limestone tailings); contains sand and gravel		
								25.0			
25									BOTTOM OF BORING: 25'		

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-4  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/12/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler					
<b>None</b> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace	Less than 5%		<b>Cohesionless Density</b>			<b>Cohesive Consistency</b>		
				Few	5 to 10%		0 - 10	Loose		0 - 4	Soft	
				Little	15 to 25%		10 - 30	Medium Dense		4 - 8	Medium Stiff	
				Some	30 to 45%		30 - 50	Dense		8 - 15	Stiff	
				Mostly	50 to 100%		50 +	Very Dense		15 - 30	Very Stiff	
										30 +	Hard	
LOCATION OF BORING												
See Boring Location Plan												
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness			
				0-6	6-12	12-18						
5		0.0-2.0	SS	26	13	14	Moist	0.6	FILL: Gray Silty Sand with Gravel; contains concrete			
				6					FILL: Dark brown mix of clay, sand, gravel, wood, brick, and glass			
		2.0-4.0	SS	8	6	6	Moist	3.0	FILL: Brown mix of sand, gravel, concrete, wood, and clay/silt fines			
				4					FILL: Brown mix of sand, gravel, concrete, wood, and clay/silt fines			
		4.0-6.0	SS	6	36	29	Moist	5.0	FILL: Light Brown Silty Sand with Gravel			
				4				6.0	FILL: Brown mix of gravel, sand, brick, clay/silt fines, cinders, and glass			
		6.0-8.0	SS	12	6	4	Moist	8.0	FILL: Brown Sandy Lean Clay; contains wood			
				8				9.0	FILL: Gray Sandy Lean Clay; contains wood, cinders, and brick			
10		8.0-10.0	SS	5	5	6			FILL: Gray Sandy Lean Clay; contains wood, cinders, and brick			
				19								
								13.0	FILL: Gray mix of clay, sand, brick, concrete, and wood			
		13.5-15.0	SS	3	4	5	Moist					
15												
		18.5-20.0	SS	5	4	5	Very Moist					
20												
		23.5-25.0	SS	1	0	0	Very Moist	23.0	FILL: Gray mix of wood, clay/silt fines, and sand			
								25.0	<b>Possible void; spoon dropped with no hammer from 24'-25'</b>			
25									BOTTOM OF BORING: 25'			

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-5  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/12/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler					
<b>None</b> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace	Less than 5%		<b>Cohesionless Density</b>		<b>Cohesive Consistency</b>			
				Few	5 to 10%		0 - 10	Loose	0 - 4	Soft		
				Little	15 to 25%		10 - 30	Medium Dense	4 - 8	Medium Stiff		
				Some	30 to 45%		30 - 50	Dense	8 - 15	Stiff		
				Mostly	50 to 100%		50 +	Very Dense	15 - 30	Very Stiff		
									30 +	Hard		
<b>LOCATION OF BORING See Boring Location Plan</b>												
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness			
				0-6	6-12	12-18						
5		0.0-2.0	SS	10	8	3	Moist	2.0	FILL: Gray mix of sand, clay/silt fines, gravel, concrete, glass, brick, and cinders			
		2.0-4.0	SS	3	3	4	Very Moist		FILL: Brown mix of clay/silt fines, sand, gravel, and cloth			
		4.0-6.0	SS	5	4	2	Very Moist		6.0	FILL: Gray mix of clay/silt fines, sand, and gravel Low recovery at 4' - 6' depth sample		
		6.0-8.0	SS	4	0	0	Very Moist			FILL: Dark brown mix of clay/silt fines, sand, gravel, brick, cinders, and glass Low recovery at 6' - 8' depth sample <b>Possible void(s) in 6.5'-8' depth range</b>		
10		8.0-10.0	SS	2	1	1	Very Moist	9.0	FILL: Gray Lean Clay; contains cinders, gravel, and glass			
		13.5-15.0	SS	2	1	2	Very Moist		Odor at 13.5' - 15' depth sample interval			
20								18.5				
		1.0-2.25	18.5-20.0	SS	4	4	3		Very Moist	FILL: Gray Lean Clay		
		21.0-21.3	SS	50/4"						21.3	FILL: Sample contained concrete fragments and fines	
							BOTTOM OF BORING: 21.3'					
25												

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB- 6  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/12/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler					
<b>None</b> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace	Less than 5%		<b>Cohesionless Density</b> 0 - 10      Loose 10 - 30    Medium Dense 30 - 50    Dense 50 +        Very Dense			<b>Cohesive Consistency</b> 0 - 4      Soft 4 - 8      Medium Stiff 8 - 15     Stiff 15 - 30    Very Stiff 30 +        Hard		
				Few	5 to 10%							
				Little	15 to 25%							
				Some	30 to 45%							
				Mostly	50 to 100%							
<b>LOCATION OF BORING</b> <b>See Boring Location Plan</b>												
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness			
				0-6	6-12	12-18						
5	4.5+	0.0-2.0	SS	6	4	8	Moist	5.0	FILL: Brown Sandy Lean Clay with Gravel; contains brick and cinders			
		2.0-4.0	SS	6	8	4	Moist					
5		4.0-6.0	SS	3	5	6	Moist	8.0	FILL: Brown mix of sandy lean clay and fine sand Dark Gray Sandy Lean Clay with Gravel noted at 7' - 7.5' depth Gray mix of sand and gravel noted at 7.5' - 8' depth			
	4.0	6.0-8.0	SS	8	5	26	Moist					
10		8.0-10.0	SS	4	1	1	Moist	13.5	FILL: Dark gray mix of sand, gravel, and clay/silt fines Wood pieces noted at 9' - 10' depth interval			
15		13.5-15.0	SS	4	4	4	Very Moist	23.0	FILL: Mix of dark gray sand, cinders, clay/silt fines, gravel, concrete, and wood			
20		18.5-20.0	SS	8	3	4	Very Moist	25.0	Very low recovery for 18.5' - 20' depth sample			
25		23.5-25.0	SS	5	1	4	Very Moist		FILL: Dark gray mix of sand, cinders, clay/silt fines, wood, and gravel			
BOTTOM OF BORING: 25'												

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-7  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/12/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler				
<b>None</b> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace	Less than 5%		<b>Cohesionless Density</b>		<b>Cohesive Consistency</b>		
				Few	5 to 10%		0 - 10	Loose	0 - 4	Soft	
				Little	15 to 25%		10 - 30	Medium Dense	4 - 8	Medium Stiff	
				Some	30 to 45%		30 - 50	Dense	8 - 15	Stiff	
				Mostly	50 to 100%		50 +	Very Dense	15 - 30	Very Stiff	
									30 +	Hard	
LOCATION OF BORING <b>See Boring Location Plan</b>											
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness		
				From	To	12-18					
		0.0-2.0	SS	10	10	7	Moist	0.2	Topsoil		
				6					FILL: Dark brown mix of silty sand and concrete fragments		
		2.0-4.0	SS	6	3	3	Moist				
				3				3.0	FILL: Dark gray mix of sand, clay/silt fines, cinders, concrete fragments, and gravel (odor noted)		
		4.0-6.0	SS	3	1	1	Moist	4.0	Sample from 4' - 6' depth contains metal (odor noted)		
				1							
		6.0-7.1	SS	6	29	50/1"	Very Moist	6.0	FILL Dark brown mix of clay/silt fines, sand, and wood (odor noted)		
								7.1			
BOTTOM OF BORING: 7.1'											

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB- 8  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/13/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler				
<u>13.0</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace            Less than 5% Few                5 to 10% Little             15 to 25% Some              30 to 45% Mostly            50 to 100%			<b>Cohesionless Density</b> 0 - 10            Loose 10 - 30         Medium Dense 30 - 50           Dense 50 +              Very Dense		<b>Cohesive Consistency</b> 0 - 4             Soft 4 - 8             Medium Stiff 8 - 15            Stiff 15 - 30          Very Stiff 30 +              Hard		
LOCATION OF BORING                      See Boring Location Plan											
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness		
				0-6	6-12	12-18					
		0.0-2.0	SS	6	19	18	Moist	0.2	Topsoil		
				14				1.0	FILL: Gray mix of concrete fragments, sand, and clay/silt fines		
								2.0	FILL: Light gray mix of sand and gravel		
	3.75-4.25	2.0-4.0	SS	6	8	8	Moist		FILL: Brown, Olive, and Gray Sandy Lean Clay with Gravel		
				8							
		4.0-6.0	SS	3	6	7	Very Moist	5.0			
				9				6.0	FILL: Dark gray mix of clay, sand, cinders, and gravel		
	1.0-2.0	6.0-8.0	SS	3	3	4	Very Moist		FILL: Mostly wood with sand and clay/silt fines		
				4							
		8.0-10.0	SS	3	3	3	Wet		<b>Water Seepage at 8'</b> Low recovery for 8' - 10' depth sample		
				4							
		13.5-14.3	SS	37	50/3"		Wet	13.5	FILL: Mix of limestone fragments and fines		
		15.0-15.2	SS	50/2"				15.0			
								15.2	Possible Limestone Bedrock		
									BOTTOM OF BORING: 15.2'		

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-9  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/13/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler					
<u>13.0</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace      Less than 5% Few         5 to 10% Little       15 to 25% Some        30 to 45% Mostly      50 to 100%			<b>Cohesionless Density</b> 0 - 10      Loose 10 - 30     Medium Dense 30 - 50     Dense 50 +         Very Dense		<b>Cohesive Consistency</b> 0 - 4         Soft 4 - 8         Medium Stiff 8 - 15        Stiff 15 - 30       Very Stiff 30 +         Hard			
LOCATION OF BORING      See Boring Location Plan												
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness			
				0-6	6-12	12-18						
5		0.0-2.0	SS	12	7	7	Moist	1.5	FILL: Brown mix of sand, clay/silt fines, gravel, and cinders			
				6			Moist		FILL: Dark brown mix of sand, clay/silt fines, gravel, concrete, and cinders			
		2.0-4.0	SS	6	6	8	Moist		5.0			
				10			Moist					
		4.0-6.0	SS	9	16	3	Moist		6.0	FILL: Brown mix of sandy lean clay, sand, and gravel		
				5			Moist			FILL: Gray mix of sand, cinders, clay/silt fines, gravel, wood, and brick		
		6.0-8.0	SS	4	4	6	Moist		8.0	FILL: Brown mix of clay, sand, gravel, brick, and cinders		
				3			Very Moist					
10		8.0-10.0	SS	2	3	2	Very Moist	13.5	Water Seepage at 13'			
				2			Wet		FILL: Mix of sand, cinders, wood, and gravel			
15		13.5-15.0	SS	1	2	1	Wet	18.5	FILL: Olive Lean Clay with Sand			
20		0.75-1.5	SS	1	2	3	Very Moist	23.5	FILL: Mix of limestone fragments and fine sand			
25		23.5-25.0	SS	5	8	17	Wet	25.0	BOTTOM OF BORING: 25'			

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-10  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/15/2019

<b>GROUND WATER OBSERVATION</b>  <u>None</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS	<b>Proportions Used</b> Trace            Less than 5% Few                5 to 10% Little              15 to 25% Some               30 to 45% Mostly             50 to 100%	<b>140 lb Wt. x 30" fall on 2" O.D. Sampler</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;"><b>Cohesionless Density</b></td> <td><b>Cohesive Consistency</b></td> </tr> <tr> <td style="border-right: 1px solid black;">0 - 10            Loose</td> <td>0 - 4            Soft</td> </tr> <tr> <td style="border-right: 1px solid black;">10 - 30        Medium Dense</td> <td>4 - 8            Medium Stiff</td> </tr> <tr> <td style="border-right: 1px solid black;">30 - 50        Dense</td> <td>8 - 15          Stiff</td> </tr> <tr> <td style="border-right: 1px solid black;">50 +            Very Dense</td> <td>15 - 30        Very Stiff</td> </tr> <tr> <td></td> <td>30 +            Hard</td> </tr> </table>	<b>Cohesionless Density</b>	<b>Cohesive Consistency</b>	0 - 10            Loose	0 - 4            Soft	10 - 30        Medium Dense	4 - 8            Medium Stiff	30 - 50        Dense	8 - 15          Stiff	50 +            Very Dense	15 - 30        Very Stiff		30 +            Hard
<b>Cohesionless Density</b>	<b>Cohesive Consistency</b>													
0 - 10            Loose	0 - 4            Soft													
10 - 30        Medium Dense	4 - 8            Medium Stiff													
30 - 50        Dense	8 - 15          Stiff													
50 +            Very Dense	15 - 30        Very Stiff													
	30 +            Hard													

**LOCATION OF BORING                      See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
				0-6	6-12	12-18			
		0.0-2.0	SS	47	18	16	Moist	2.0	FILL: Dark gray mix of concrete fragments, gravel, and sand
				16					
		2.0-4.0	SS	10	8	7	Moist	9.0	FILL: Brown mix of sand, gravel, cinders, brick, and clay/silt fines
				7					
		4.0-6.0	SS	4	3	2	Moist	10.2	No recovery for 4' - 6' depth sample
				1					
5		6.0-8.0	SS	4	8	7	Moist		
				6					
		8.0-9.4	SS	3	2	50/5"	Moist		
10		10.0-10.2	SS	50/2"					Possible Limestone Bedrock
									BOTTOM OF BORING: 10.2'
15									

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-11  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. \_\_\_\_\_ SURF. ELEV. \_\_\_\_\_  
 NO. 19-G-22606-A DATE DRILLED 11/15/2019

GROUND WATER OBSERVATION				Proportions Used			140 lb Wt. x 30" fall on 2" O.D. Sampler					
<u>23.5</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS				Trace            Less than 5% Few                5 to 10% Little             15 to 25% Some              30 to 45% Mostly            50 to 100%			<b>Cohesionless Density</b> 0 - 10            Loose 10 - 30         Medium Dense 30 - 50           Dense 50 +              Very Dense			<b>Cohesive Consistency</b> 0 - 4             Soft 4 - 8             Medium Stiff 8 - 15            Stiff 15 - 30          Very Stiff 30 +              Hard		
LOCATION OF BORING                      See Boring Location Plan												
DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION			
				0-6	6-12	12-18			Remarks include color, type of soil, etc. Rock-color, type, condition, hardness			
5		0.0-2.0	SS	21	17	8	Moist	8.0	FILL: Brown and gray mix of sand, cinders, concrete fragments, glass, and gravel			
				5								
		2.0-4.0	SS	8	4	2	Moist					
				2								
		4.0-6.0	SS	1	2	1	Moist					
10				1				13.5	FILL: Brown mix of sand, clay/silt fines, gravel, and cinders Low recovery for 8' - 10' depth sample			
		6.0-8.0	SS	1	2	1	Moist					
				1								
		8.0-10.0	SS	5	4	3	Very Moist					
				2								
15		13.5-15.0	SS	15	6	8	Very Moist	20.0	FILL: Dark gray mix of sand, gravel, concrete fragments, and cinders  No recovery for 18.5' - 20' depth sample <b>Water Seepage at 20'</b>			
		18.5-20.0	SS	6	8	3						
25								24.4	FILL: Mix of limestone fragments and gravel  BOTTOM OF BORING: 24.4'			
		23.5-24.4	SS	14	50/5"		Wet					

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-12  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/15/2019

GROUND WATER OBSERVATION	Proportions Used	140 lb Wt. x 30" fall on 2" O.D. Sampler	
<u>18.0</u> FEET BELOW SURFACE AT COMPLETION	Trace            Less than 5%	Cohesionless Density	Cohesive Consistency
_____ FEET BELOW SURFACE AT 24 HOURS	Few              5 to 10%	0 - 10            Loose	0 - 4            Soft
_____ FEET BELOW SURFACE AT _____ HOURS	Little           15 to 25%	10 - 30          Medium Dense	4 - 8           Medium Stiff
	Some            30 to 45%	30 - 50          Dense	8 - 15          Stiff
	Mostly          50 to 100%	50 +             Very Dense	15 - 30        Very Stiff
			30 +            Hard

LOCATION OF BORING                      **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
				0-6	6-12	12-18			
		0.0-2.0	SS	21	19	20	Moist		FILL: Brown Sandy Lean Clay
				18				2.0	
	4.5+	2.0-4.0	SS	8	16	26	Moist		FILL: Olive and Gray Sandy Lean Clay with Gravel
				18				4.0	
	2.25	4.0-6.0	SS	7	9	12	Moist		FILL: Gray mix of sandy lean clay, sand, cinders, and gravel
5				12				6.0	
		6.0-8.0	SS	2	3	4	Moist		FILL: Dark gray mix of lean clay, sand, wood, and glass
				4				8.0	
		8.0-10.0	SS	6	8	4	Very Moist		FILL: Mix of wood and gray clay
10				2					No recovery for 8' - 10' depth sample
								13.0	
		13.5-15.0	SS	5	3	5	Very Moist		FILL: Mix of wood and clay/silt fines
15									
								18.0	<b>Water Seepage at 18'</b>
		18.5-20.0	SS	11	6	9	Wet		FILL: Mix of limestone fragments, wood, sand, and fines
20									
		22.0-22.2	SS	50/2"				22.0	
								22.2	Possible Limestone Bedrock
25									BOTTOM OF BORING: 22.2'

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-13  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/15/2019

<b>GROUND WATER OBSERVATION</b>  <u>None</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS	<b>Proportions Used</b> Trace            Less than 5% Few                5 to 10% Little             15 to 25% Some              30 to 45% Mostly            50 to 100%	<b>140 lb Wt. x 30" fall on 2" O.D. Sampler</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>Cohesionless Density</b></td> <td style="width: 50%;"><b>Cohesive Consistency</b></td> </tr> <tr> <td>0 - 10            Loose</td> <td>0 - 4            Soft</td> </tr> <tr> <td>10 - 30        Medium Dense</td> <td>4 - 8            Medium Stiff</td> </tr> <tr> <td>30 - 50        Dense</td> <td>8 - 15          Stiff</td> </tr> <tr> <td>50 +            Very Dense</td> <td>15 - 30        Very Stiff</td> </tr> <tr> <td></td> <td>30 +            Hard</td> </tr> </table>	<b>Cohesionless Density</b>	<b>Cohesive Consistency</b>	0 - 10            Loose	0 - 4            Soft	10 - 30        Medium Dense	4 - 8            Medium Stiff	30 - 50        Dense	8 - 15          Stiff	50 +            Very Dense	15 - 30        Very Stiff		30 +            Hard
<b>Cohesionless Density</b>	<b>Cohesive Consistency</b>													
0 - 10            Loose	0 - 4            Soft													
10 - 30        Medium Dense	4 - 8            Medium Stiff													
30 - 50        Dense	8 - 15          Stiff													
50 +            Very Dense	15 - 30        Very Stiff													
	30 +            Hard													

**LOCATION OF BORING                      See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
				0-6	6-12	12-18			
5		0.0-2.0	SS	6	4	7	Moist	0.4	Topsoil FILL: Brown mix of sand, gravel, and clay/silt fines
		2.0-4.0	SS	5	7	7	Moist		
		4.0-6.0	SS	5	7	7	Moist	4.0	FILL: Brown mix of clay/silt fines, sand, and gravel Low recovery for 4' - 6' depth sample
		6.0-8.0	SS	4	3	3	Moist		Limestone fragments in sample
10		8.0-10.0	SS	3	4	4	Moist		
		13.5-14.6	SS	8	25	50/1"	Moist	14.0	
		15.0-15.1	SS	50/1"				15.1	Possible Limestone Bedrock
									BOTTOM OF BORING: 15.1'

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.







# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-15  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/18/2019

<b>GROUND WATER OBSERVATION</b>  <u>None</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS	<b>Proportions Used</b> Trace            Less than 5% Few                5 to 10% Little             15 to 25% Some              30 to 45% Mostly            50 to 100%	<b>140 lb Wt. x 30" fall on 2" O.D. Sampler</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"><b>Cohesionless Density</b></td> <td style="width: 33%;"></td> <td style="width: 33%;"><b>Cohesive Consistency</b></td> </tr> <tr> <td>0 - 10            Loose</td> <td>0 - 4</td> <td>Soft</td> </tr> <tr> <td>10 - 30        Medium Dense</td> <td>4 - 8</td> <td>Medium Stiff</td> </tr> <tr> <td>30 - 50        Dense</td> <td>8 - 15</td> <td>Stiff</td> </tr> <tr> <td>50 +            Very Dense</td> <td>15 - 30</td> <td>Very Stiff</td> </tr> <tr> <td></td> <td>30 +</td> <td>Hard</td> </tr> </table>	<b>Cohesionless Density</b>		<b>Cohesive Consistency</b>	0 - 10            Loose	0 - 4	Soft	10 - 30        Medium Dense	4 - 8	Medium Stiff	30 - 50        Dense	8 - 15	Stiff	50 +            Very Dense	15 - 30	Very Stiff		30 +	Hard
<b>Cohesionless Density</b>		<b>Cohesive Consistency</b>																		
0 - 10            Loose	0 - 4	Soft																		
10 - 30        Medium Dense	4 - 8	Medium Stiff																		
30 - 50        Dense	8 - 15	Stiff																		
50 +            Very Dense	15 - 30	Very Stiff																		
	30 +	Hard																		

**LOCATION OF BORING**                      **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*		SOIL IDENTIFICATION						
				From	To	To				Remarks include color, type of soil, etc. Rock-color, type, condition, hardness						
				0-6	6-12	12-18										
		0.0-2.0	SS	3	17	8	Moist		FILL: Brown mix of clay/silt fines, sand, and cinders							
				8				2.0	No recovery for 0' - 2' depth sample							
		2.0-4.0	SS	8	6	5	Moist		FILL: Mix of clay/silt fines, cinders, and gravel							
				5					No recovery for 2' - 4' depth sample							
		4.5+	SS	6	6	8	Moist		4.5	Brown mix of silty sand, gravel, and sandy lean clay						
				7												
5		4.5+	SS	7	8	13	Moist									
				13												
		4.5+	SS	9	17	16	Moist									
				22												
10																
		13.5-13.7	SS	50/2"					13.5	No recovery for 13.5' - 13.7' depth sample						
								13.7	Possible Limestone Bedrock							
15									BOTTOM OF BORING: 13.7'							

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# TEST BORING LOG

PROJECT NAME Buckeye Auto Parts - 2474 McKinley Ave., Columbus, OH BORING NO. DB-16  
 CLIENT McKinley Avenue Acquisitions, LLC PROJ. NO. 19-G-22606-A SURF. ELEV. \_\_\_\_\_  
 DATE DRILLED 11/18/2019

<b>GROUND WATER OBSERVATION</b>  <u>None</u> FEET BELOW SURFACE AT COMPLETION _____ FEET BELOW SURFACE AT 24 HOURS _____ FEET BELOW SURFACE AT _____ HOURS	<b>Proportions Used</b> Trace            Less than 5% Few                5 to 10% Little             15 to 25% Some              30 to 45% Mostly            50 to 100%	<b>140 lb Wt. x 30" fall on 2" O.D. Sampler</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;"><b>Cohesionless Density</b></td> <td><b>Cohesive Consistency</b></td> </tr> <tr> <td style="border-right: 1px solid black;">0 - 10            Loose</td> <td>0 - 4            Soft</td> </tr> <tr> <td style="border-right: 1px solid black;">10 - 30        Medium Dense</td> <td>4 - 8            Medium Stiff</td> </tr> <tr> <td style="border-right: 1px solid black;">30 - 50        Dense</td> <td>8 - 15          Stiff</td> </tr> <tr> <td style="border-right: 1px solid black;">50 +            Very Dense</td> <td>15 - 30        Very Stiff</td> </tr> <tr> <td></td> <td>30 +            Hard</td> </tr> </table>	<b>Cohesionless Density</b>	<b>Cohesive Consistency</b>	0 - 10            Loose	0 - 4            Soft	10 - 30        Medium Dense	4 - 8            Medium Stiff	30 - 50        Dense	8 - 15          Stiff	50 +            Very Dense	15 - 30        Very Stiff		30 +            Hard
<b>Cohesionless Density</b>	<b>Cohesive Consistency</b>													
0 - 10            Loose	0 - 4            Soft													
10 - 30        Medium Dense	4 - 8            Medium Stiff													
30 - 50        Dense	8 - 15          Stiff													
50 +            Very Dense	15 - 30        Very Stiff													
	30 +            Hard													

**LOCATION OF BORING                      See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness	
				From	To					
				0-6	6-12	12-18				
5		0.0-2.0	SS	4	9	8	Moist	2.0	FILL: Brown mix of clay/silt fines, sand, gravel, and brick No recovery for 0' - 2' depth sample	
		2.0-4.0	SS	5	6	11	Moist		4.0	FILL: Gray Silty Sand with Gravel
		4.0-6.0	SS	1	1	13	Moist			6.0
	3.0	6.0-8.0	SS	10	6	5	Moist		8.0	
10		8.0-10.0	SS	7	8	9	Moist	13.5		FILL: Brown mix of clay/silt fines, sand, gravel, brick, and cinders No recovery fro 8' - 10' depth sample
		13.5-15.0	SS	3	1	1	Very Moist		18.5	FILL: Brown Sandy Lean Clay; contains brick fragments
		18.5-20.0	SS	7	5	5	Very Moist			25.0
	1.0	23.5-25.0	SS	8	6	3	Very Moist			
25								25.0	BOTTOM OF BORING: 25.0'	

\* The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





**APPENDIX I**

**SCPZ DELINEATION DETERMINATION**

## **Stream Corridor Protection Zone Delineation Determination**

The stream corridor protection zone for this development along the Scioto River has been determined using the COC SWDM 1.3.1 (Stream Corridor Protection Zone Delineation). Within this site, there are three separate locations in which the SCPZ had to be determined independently.

### Southern Portion – Scioto River SCPZ

From the southern edge of Larrison Lake to the south, the SCPZ has been determined to be 50 feet from the top of bank of the Scioto River. This width is the largest of the three methods of determination, therefore it is the appropriate determination for the Scioto River.

### Northeastern Portion – Larrison Lake Area

From the southern edge of Larrison Lake to the north, the SCPZ has been determined to be the same as the Federal Emergency Management Agency designated 100-year floodway. See Mass Excavation plans sheet 5 (Appendix G) for exact locations.

### Northern Portion – Unnamed Tributary of the Scioto River

From the northern border of the site to the west edge, the SCPZ has been determined to be the maximum width of 250'. The total tributary area of this stream is 5.88 square miles. Using the formula from COC SWDM 1.3.1, the width of the SCPZ equates to 288.2'. However, the maximum for this formula is 250' total width, therefore the SCPZ line for this portion of the site has been determined to be 125' offset from the centerline of the stream.



**APPENDIX J**

**FEMA FIRMette**



**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations must be compared to the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Ohio State Plane South Zone 5001 (FIPSZONE 3402). The horizontal datum was NAD83. Differences in datum, spheroid, projection or state plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA/NNGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FIRM was provided in digital format by Franklin County. This information was produced at a scale of 1:1,200 from aerial photography dated 2004.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

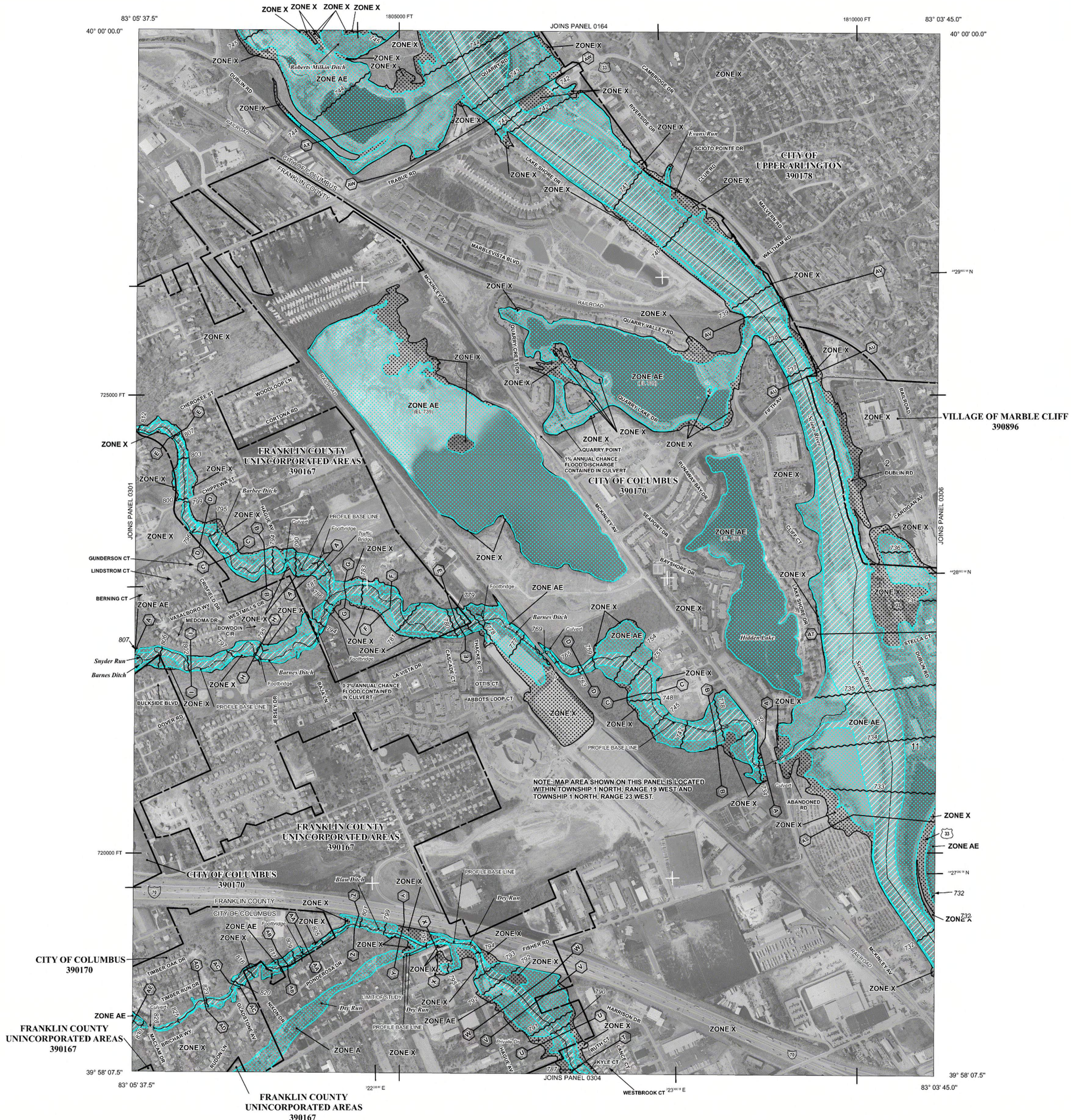
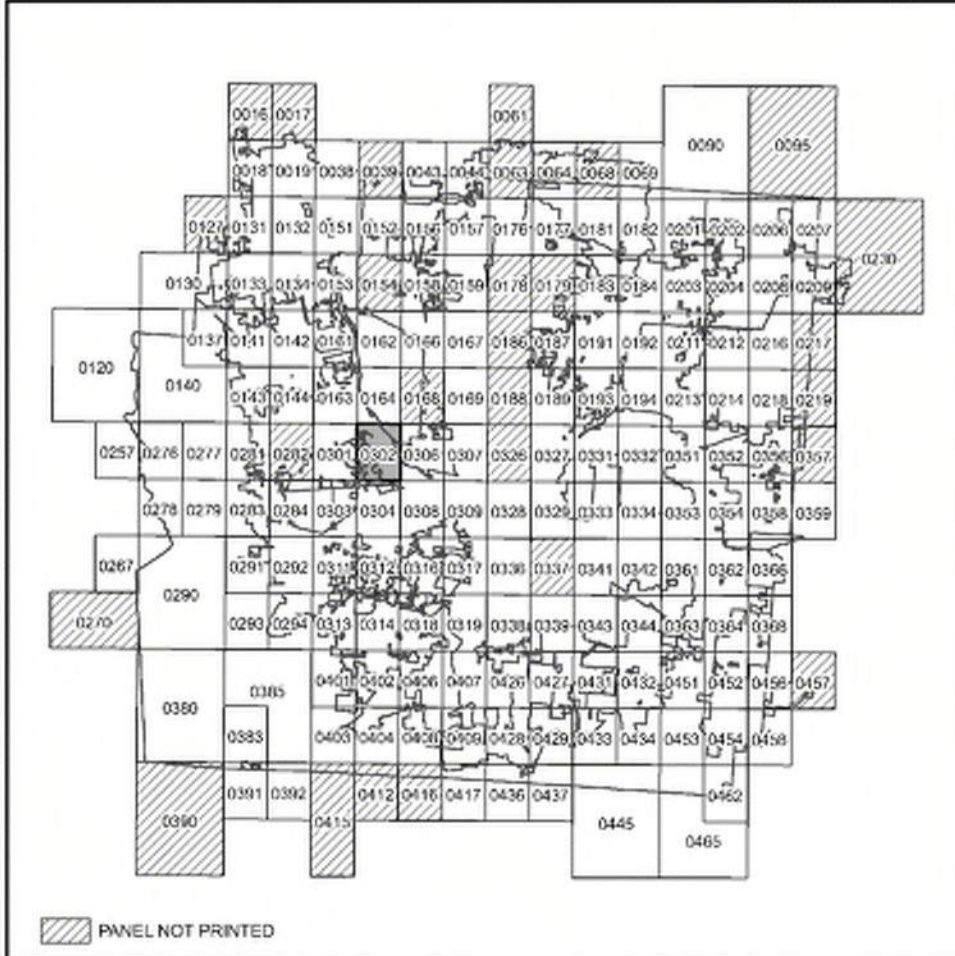
Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov/>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfip/>.

The "profile base lines" depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the "profile base line", in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

**PANEL INDEX**



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equal or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard may include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance 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 AR** Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities
- 513 Base Flood Elevation line and value; elevation in feet\* (EL 10)
- \*Referenced to the North American Vertical Datum of 1988

**Cross section line**

**Transect line**

85° 03' 45.0" 41' 24" 22.5"

487900 M

1000-meter Universal Transverse Mercator grid values, zone 17

2250000 FT

5000-foot grid ticks: Ohio State Plane South Coordinate System, 5001 Zone (FIPSZONE 3402) Lambert Conformal Conic

KA0015 x

Bench mark (see explanation in Notes to Users section of this FIRM panel)

• M1.5

River Mile

**MAP REPOSITORY**

Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**

AUGUST 2, 1995

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

7/16/1997  
4/21/1999  
3/16/2000  
9/19/2007

June 17, 2008 - to update corporate limits, to change Special Flood Hazard Areas, to update map format, to add roads and road names, to incorporate previously issued Letters of Map Revision, and to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 500'**

250 500 1000 FEET

150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0302K**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**FRANKLIN COUNTY, OHIO**

**AND INCORPORATED AREAS**

**PANEL 302 OF 465**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
COLUMBUS, CITY OF	390170	0302	K
FRANKLIN COUNTY	390167	0302	K
MARBLE CLIFF, VILLAGE OF	390896	0302	K
UPPER ARLINGTON, CITY OF	390178	0302	K

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
39049C0302K

**MAP REVISED**  
JUNE 17, 2008

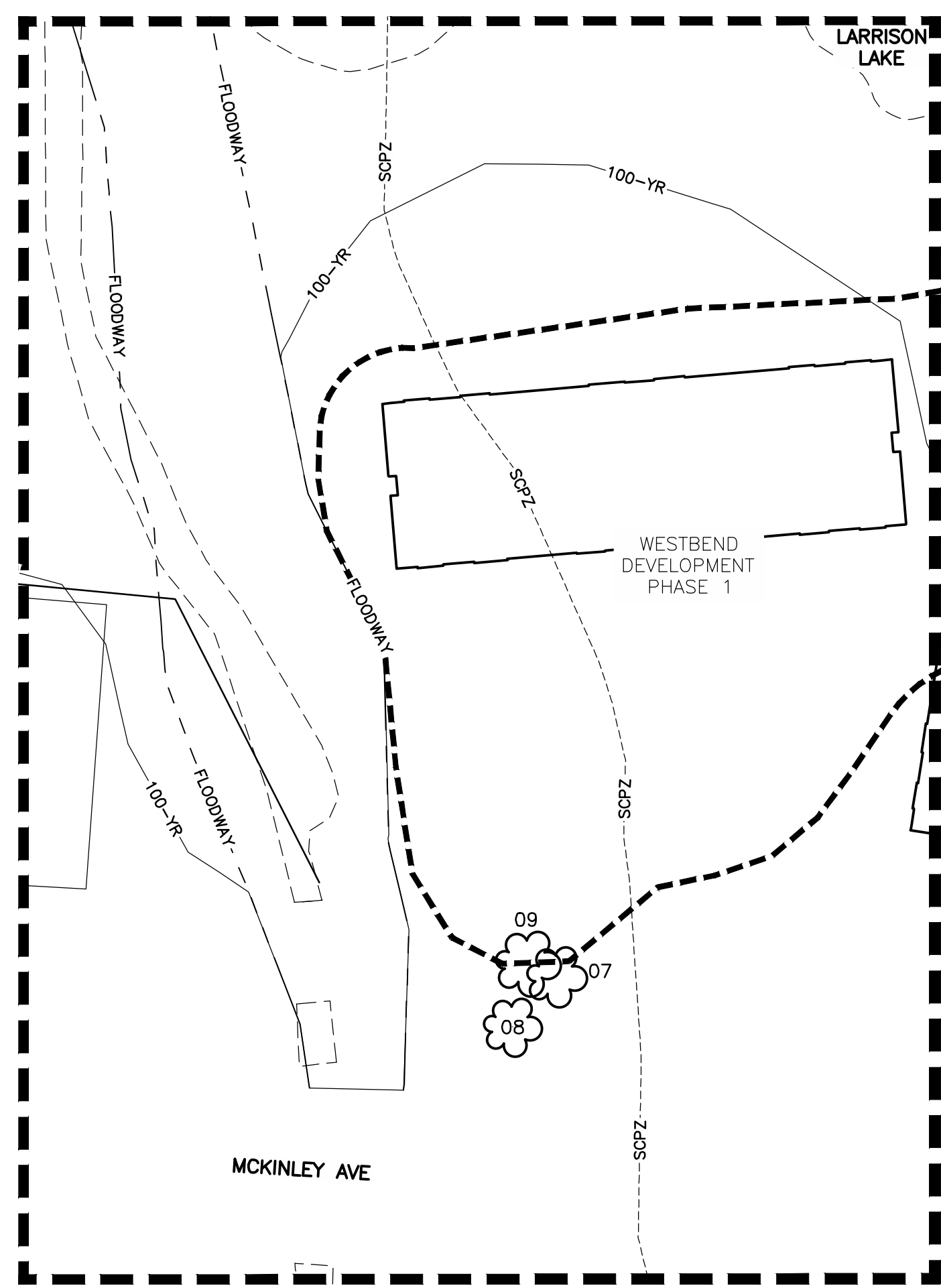
**Federal Emergency Management Agency**



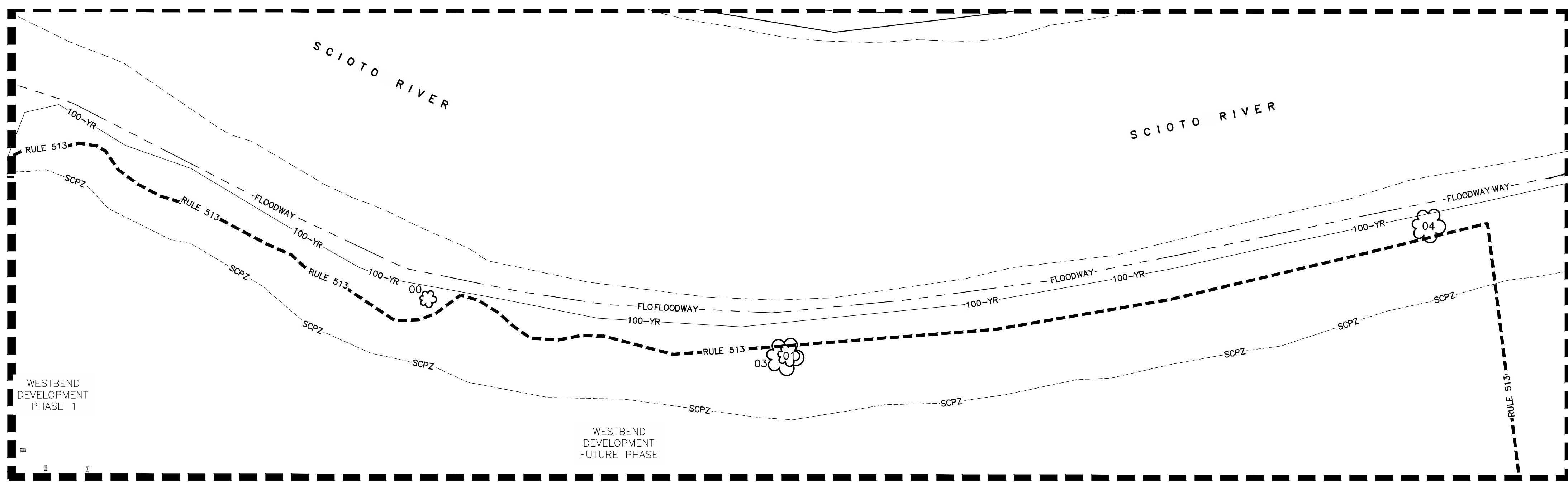
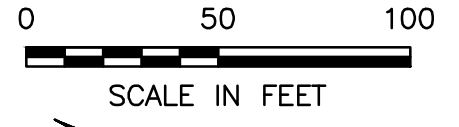
**APPENDIX K**

**STREAM CORRIDOR PROTECTION ZONE MITIGATION PLAN &  
TREE SURVEY**

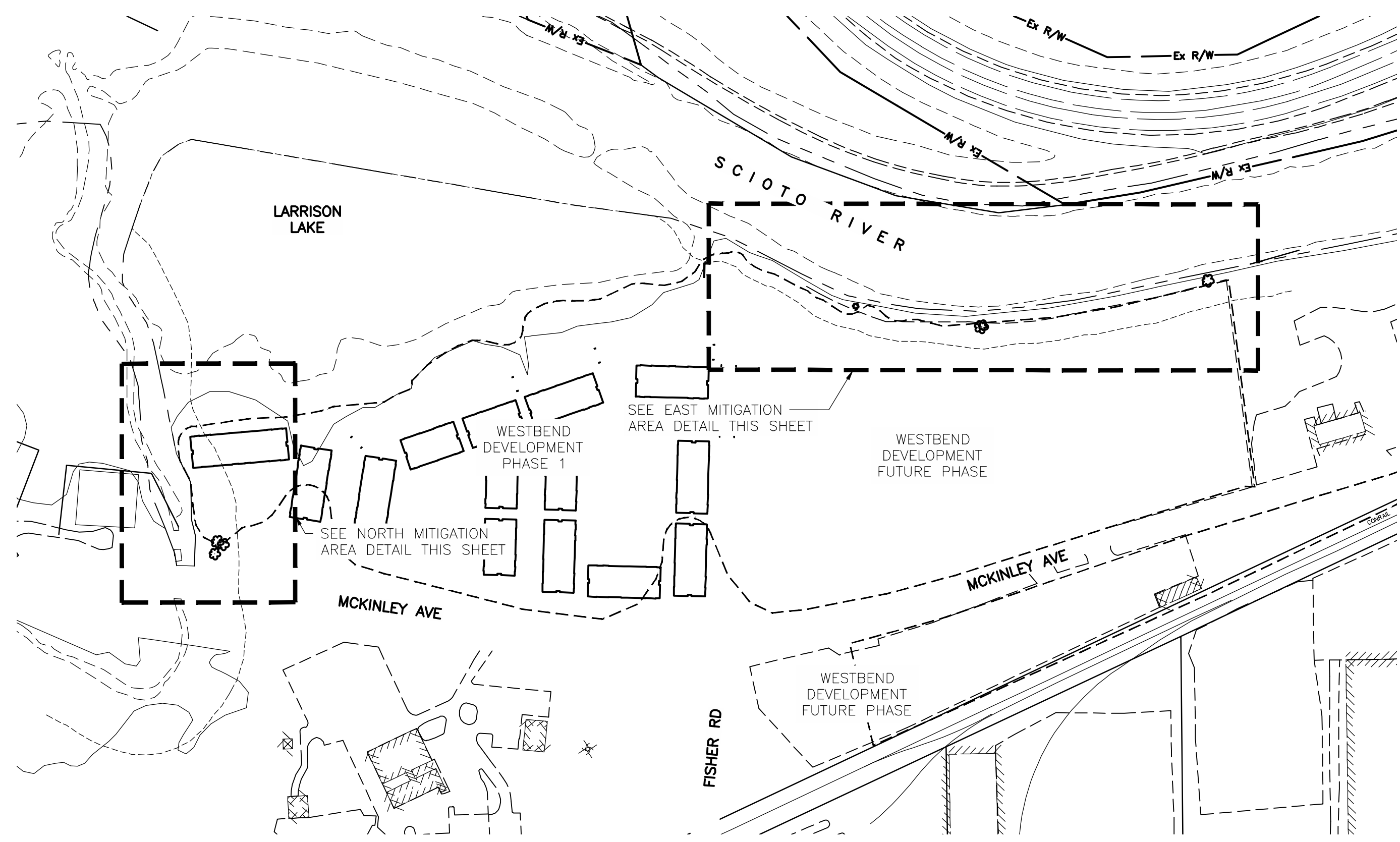
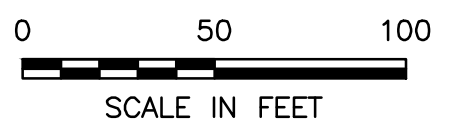
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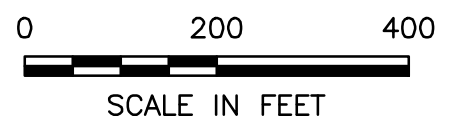
**NORTH MITIGATION AREA DETAIL**



**EAST MITIGATION AREA DETAIL**



**SITE OVERVIEW**



**EXISTING TREE DATA TABLE**

TREE ID	SPECIES	CONDITION	BOTANICAL	SIZE (IN. DIA.)	NOTES
00	UNSPECIFIED	GOOD		13	
01	COTTONWOOD	GOOD	POPULUS DELTOIDES	17	
02	UNSPECIFIED	GOOD		16	
03	COTTONWOOD	GOOD	POPULUS DELTOIDES	29	
04	COTTONWOOD	GOOD	POPULUS DELTOIDES	26	
07	MAPLE	GOOD	ACER NEGUNDO	25	OUTSIDE FENCE LINE
08	MAPLE	GOOD	ACER NEGUNDO	24	OUTSIDE FENCE LINE
09	COTTONWOOD	GOOD	POPULUS DELTOIDES	27	OUTSIDE FENCE LINE
TOTAL INCHES DIAMETER				177	

REVISIONS	BY	DATE

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC  
Consulting Civil Engineers and Surveyors

2130 QUARRY TRAILS DR,  
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 (614) 299-2992 (Fax)  
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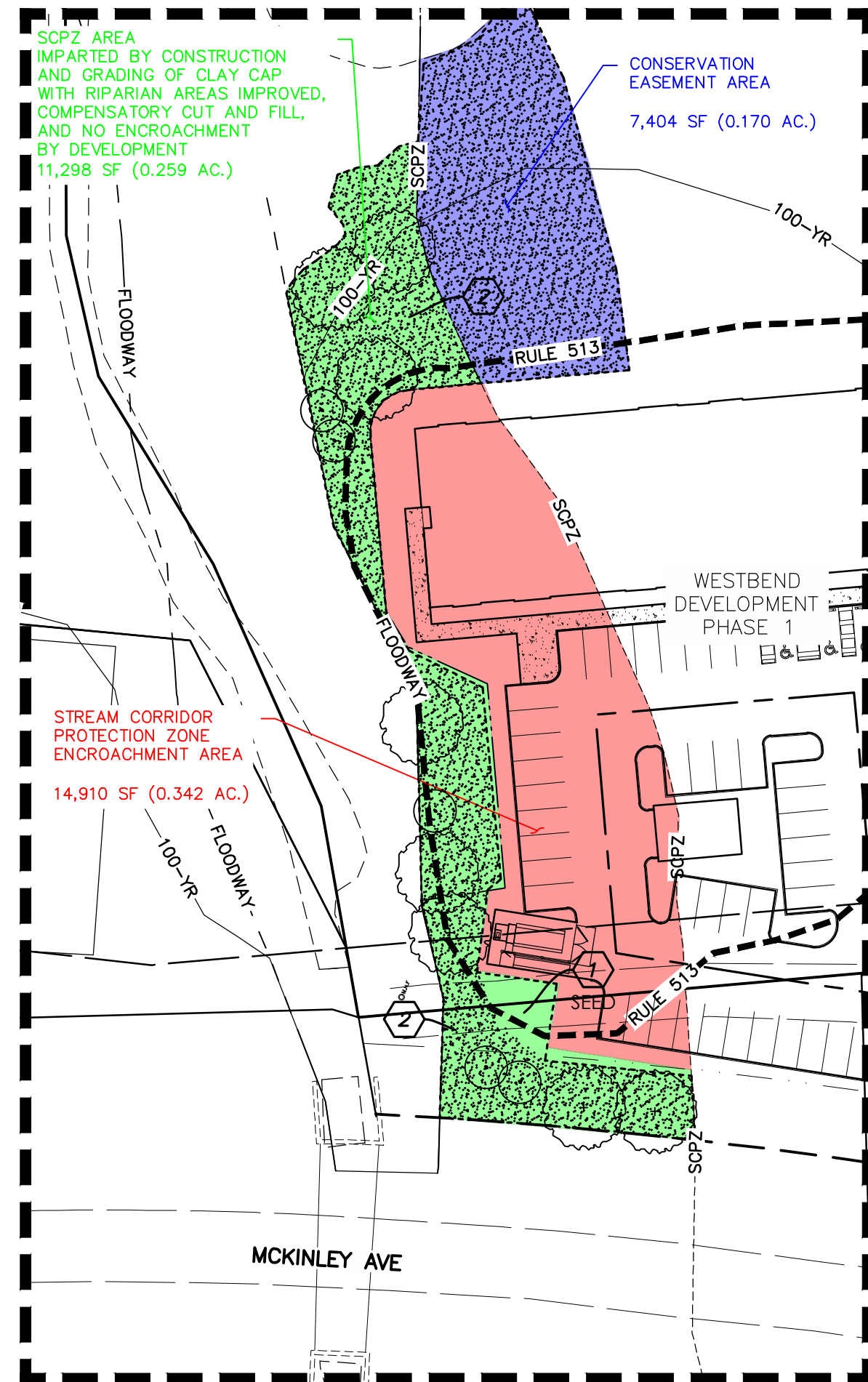
CITY OF COLUMBUS, OHIO  
**WESTBEND DEVELOPMENT**  
 2474 MCKINLEY AVENUE

JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	6/26/2023

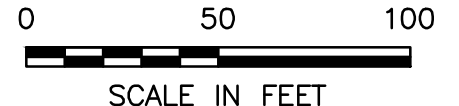
**EXISTING TREE SURVEY**

SCALE:	
AS SHOWN	
SHEET NO.	OF
1	1





**NORTH MITIGATION AREA DETAIL**



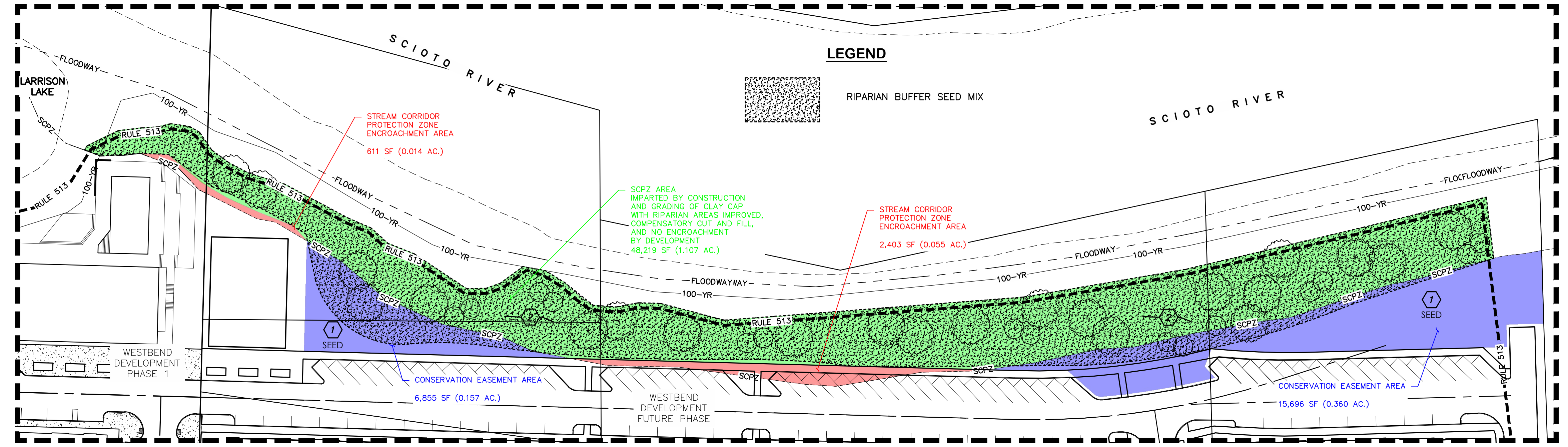
**CONSTRUCTION NOTES**

1. LAWN AREA, FILL WITH PLANTING SOIL, MINIMUM DEPTH SHALL BE 4". MEET ADJACENT SURFACES FLUSH. PROVIDE POSITIVE DRAINAGE ACROSS ALL SURFACES.

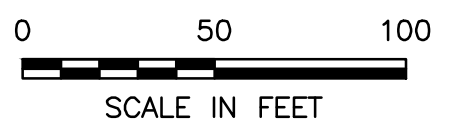
2. NATIVE SHORT MEADOW SEED MIX - OPN SEED (WWW.OPNSEED.COM) ITEM# ENSGM01. SEED RATES: HYDROSEEDED/ BROADCAST - 15.0 LB/ ACRE, 0.34 LB/1,000SF, 48 SEEDS/ SF DRILLED - 12.0 LB/ ACRE, 38 SEEDS/ SF

GENERAL PRODUCT INFORMATION:  
 THIS MIX OF NATIVE GRASSES AND WILDFLOWERS TYPICALLY GROWS TO A HEIGHT OF 3 TO 5 FEET.  
 FLOWER COLOR: YELLOW, PURPLE, GREEN, WHITE, PINK, BLUE  
 HEIGHT: 3 TO 5 FEET  
 LIGHT REQUIREMENTS: FULL SUN  
 SOIL HYDROLOGY: MESIC SOILS  
 BLOOM TIME: SPRING THROUGH FALL  
 PLANT TYPE: ANNUALS/PERENNIALS  
 ATTRACTS: BIRDS, BEES, BUTTERFLIES, POLLINATORS

SPECIES NAME	COMMON NAME	%
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	25.00%
ELYMUS CANADENSIS	NODDING WILD RYE	25.00%
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	20.31%
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	10.00%
BOULTELLOIA CURTIPENDULA S	IDE-OATS GRAMA	4.12%
TRIDENS FLAVUS	PURPLE TOP	3.12%
DESMANTHUS ILLINOENSIS	ILLINOIS BUNDLEFLOWER	2.94%
ECHINACEA PURPUREA	PURPLE CONEFLOWER	2.62%
HELIOPSIS HELIANTHOIDES	OX EYE SUNFLOWER	1.62%
RUBECKIA HIRTA	BLACK-EYED SUSAN	1.37%
GALLARDIA PULCHELLA	INDIAN BLANKET	1.25%
ASCLEPIAS TUBEROSA	BUTTERFLY WEED	0.69%
ASCLEPIAS SYRACA	COMMON MILKWEED	0.50%
CENTAUREA CYANUS	CORNFLOWER	0.31%
DALEA PURPUREA	PURPLE PRAIRIE CLOVER	0.31%
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	0.31%
MONARDA CITRODORA	LEMON MINT	0.25%
LESPEDEZA CAPITATA	ROUNDHEADED BUSHCLOVER	0.06%
DALEA CANDIDA	WHITE PRAIRIE CLOVER	0.06%
MONARDA FISTULOSA	WILD BERGAMOT	0.06%
ASTER AZUREUS SKY	BLUE ASTER	0.06%



**EAST MITIGATION AREA DETAIL**

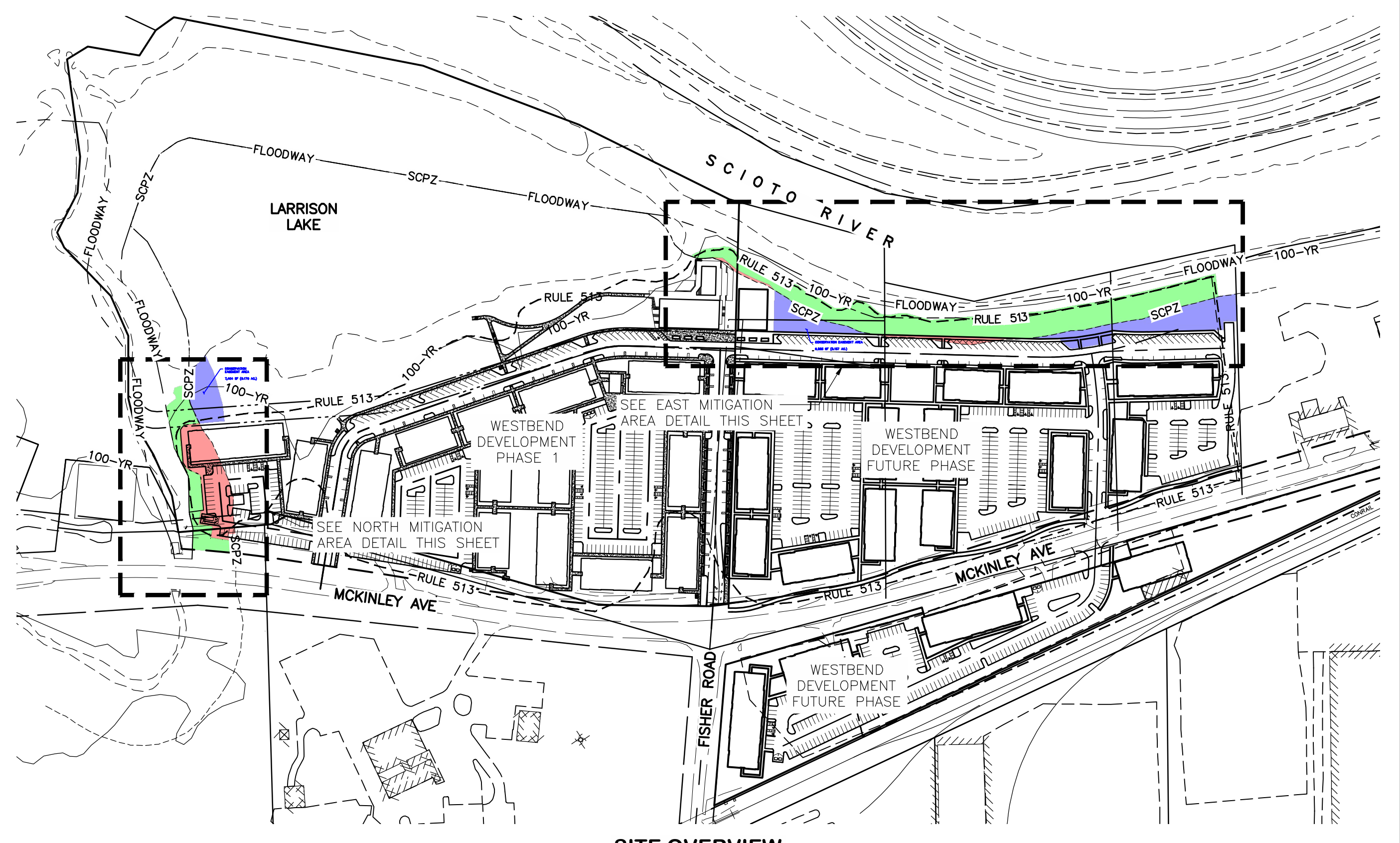


**PHASE 1 SCPZ MITIGATION TREES PROVIDED**

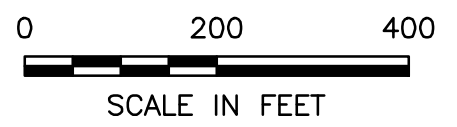
SHADE TREES							
BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	REMARKS	COUNT	TOTAL CALIPER INCHES
PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX	30	60
QUERCUS RUBRA	NORTHERN RED OAK	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX		
ACER SACCHARUM	SUGAR MAPLE	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX		
QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX		
TAXODIUM DISTICHUM	BALD CYPRESS	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX		
ORNAMENTAL TREES							
BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	REMARKS	COUNT	TOTAL CALIPER INCHES
CERCIS CANADENSIS	EASTERN REDBUD	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX	20	40
AMERLANCHIER ARBOREA	SERVICEBERRY	2" CAL.	B&B	PER PLAN	PHASE 1, SLOPED AREA MIX		
<b>TOTAL</b>						<b>50</b>	<b>100"</b>

**GENERAL NOTES**

- EACH CONTRACTOR IS TO VERIFY WITH OWNER AND UTILITY COMPANIES THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION, TO DETERMINE IN THE FIELD THE ACTUAL LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL CALL UTILITY PROTECTION SERVICE 72 HOURS PRIOR TO CONSTRUCTION.
- EXAMINE FINISH SURFACE, GRADES, TOPSOIL QUALITY AND DEPTH. DO NOT START ANY WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. VERIFY LIMITS OF WORK BEFORE STARTING.
- CONTRACTOR RESPONSIBLE FOR COST OF REPAIRS TO EXISTING SITE CONDITIONS WHEN DAMAGED BY CONTRACTOR. REPAIR TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN LAWN AREAS.
- FINE GRADE LAWN AREAS TO PROVIDE A SMOOTH AND CONTINUAL GRADE FREE OF IRREGULARITIES OR DEPRESSIONS.
- CONTRACTOR SHALL SEED OR SOD ALL AREAS DISTURBED DURING CONSTRUCTION, SEE PLAN.
- ALL PLANTS SHALL MEET OR EXCEED STANDARDS SET IN THE U.S.A. STANDARD FOR NURSERY STOCK.
- ALL PLANTING OPERATIONS SHALL ADHERE TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS.



**SITE OVERVIEW**



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REVISIONS	BY	DATE

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC.  
 Consulting Civil Engineers and Surveyors

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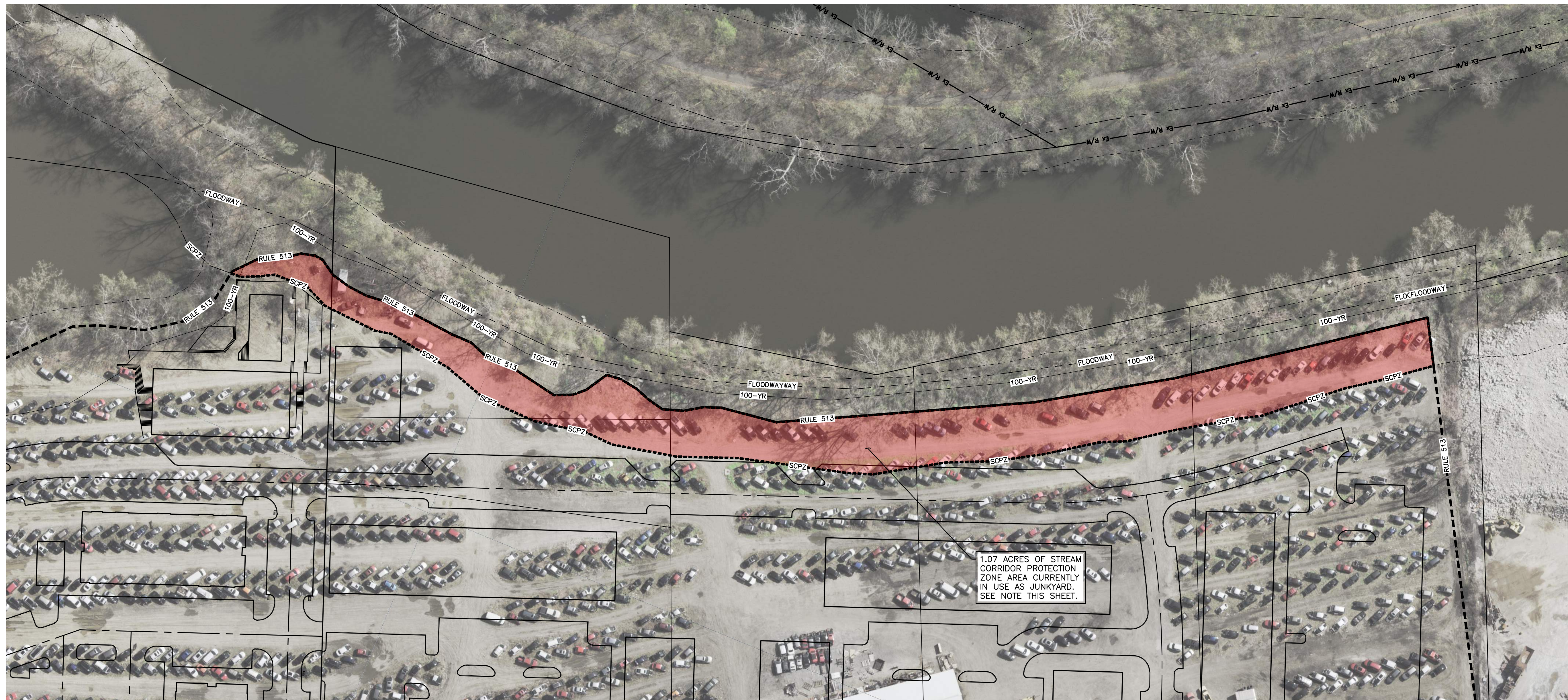
JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	7/13/2023

**TREE MITIGATION PLAN**

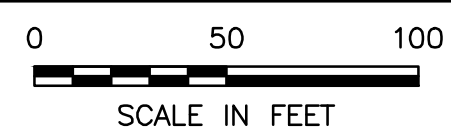
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SHEET NO. 1	OF 2



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**EAST MITIGATION AREA DETAIL**



**NOTES**

1. AREAS WITHIN THE STREAM CORRIDOR PROTECTION ZONE THAT ARE CURRENTLY IN USE AS A JUNKYARD CONSIST OF GRAVEL AND RECYCLED ASPHALT ROADS ALONG WITH BARE LANDFILL WHERE SCRAPPED VEHICLES ARE STORED. CURRENTLY NO PROVISIONS BEYOND THE CURRENT VEGETATION AND STREAMBANK OF THE RIVER ARE IN PLACE TO PREVENT EROSION IN THE SCPZ OR RUNOFF OF POTENTIALLY HAZARDOUS CHEMICALS FROM THE LANDFILL OR SCRAPPED VEHICLES. THE CAPPING OF THE LANDFILL WITH CLEAN CLAY AND CHANGE IN LAND USE WILL PREVENT HARMFUL RUNOFF FROM TRASH OR JUNKYARD ACTIVITIES WHILE PROVIDING A LESS ERODIBLE GROUND CONDITION WITHIN THE SCPZ. THESE AREAS WILL THEN BE PLANTED PER THE MITIGATION PLAN EXTENDING THE VEGETATED ZONE ALONG THE RIVER FROM APPROXIMATELY 40 FEET TO 80 FEET. THIS AREA FALLS ALONG AN OUTER BEND WHERE THE ADDITIONAL RIPARIAN WIDTH OF THE SCPZ CAN BE BENEFICIAL AGAINST EROSION DURING FLOODING EVENTS.

REVISIONS	BY	DATE

**E. P. FERRIS**  
 AND  
**ASSOCIATES**  
 INC  
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CITY OF COLUMBUS, OHIO  
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JOB NO.:	1005.036
DESIGNED BY:	JLC
DRAWN BY:	JLC
CHECKED BY:	CJB
APPROVED BY:	CJB
DATE:	7/13/2023

**TREE MITIGATION PLAN**

SCALE:	
1" = 50'	
SHEET NO.	OF
2	2





## CENTRAL OHIO WETLAND CONSULTING, LLC

6260 Havens Rd.  
Blacklick, Ohio 43004  
[mkaminski434@gmail.com](mailto:mkaminski434@gmail.com)  
(614) 940-8771

September 22, 2023

Mr. Chad J. Buckley, P.E.  
E.P. Ferris & Associates, Inc.  
2130 Quarry Trails Drive, 2<sup>nd</sup> Floor  
Columbus, Ohio 43228

**Reference: WestBend Development  
McKinley Avenue  
City of Columbus, Franklin County, Ohio**

Dear Mr. Buckley:

Central Ohio Wetland Consulting, LLC (COWC) provides this letter in response to City of Columbus comments regarding impacts to the Barbee Ditch Stream Corridor Protection Zone (SCPZ) associated with the proposed WestBend Development. Review of the Preferred Alternative plan for the WestBend Development indicates the Barbee Ditch SCPZ will be impacted due to construction of Building O, asphalt-paved parking areas, and grading and installation of a clay cap over existing landfill areas. These activities require encroachment into the Barbee Ditch SCPZ, but do not require direct impacts to the stream.

The portion of Barbee Ditch that flows through the northern part of the proposed WestBend Development is bordered by former landfill and quarry areas, a junkyard, and residential properties. Understory vegetation adjacent to, and along the Barbee Ditch corridor, is dominated by invasive Morrow's Honeysuckle (*Lonicera morrowii*). These riparian areas are not considered high-quality. The proposed capping of adjacent landfill areas, removal of invasive species, and planting of native vegetation within encroachment areas of the Barbee Ditch SCPZ will provide an overall net benefit to the stream corridor.

Additional mitigation for encroachment into the Barbee Ditch SCPZ is proposed in the form of conservation easements along the Scioto River. Conservation easements along the Scioto River will provide permanent protection to the Scioto River floodplain/floodway areas, and riparian areas adjacent to the proposed WestBend Development. The Scioto River and its corridor are of greater value than that of Barbee Ditch, in that the Scioto River is much more environmentally sensitive and contains a much greater species diversity. Protecting the Scioto River corridor through development restrictions and conservation easements will help control flooding and loss of high-quality riparian habitat.

Based on information gathered during our surface water delineation for the proposed WestBend Development (field reconnaissance dated May 25, 2022), and review of the proposed Grading Plan and the Preferred Alternative plan, it is COWC's opinion that encroachment into the Barbee Ditch SCPZ will not have a negative impact on the overall quality or function of this stream. Conservation easements proposed along the Scioto River also appear to provide adequate mitigation for encroachment into the Barbee Ditch SCPZ.

Please contact COWC owner Matt Kaminski at [mkaminski434@gmail.com](mailto:mkaminski434@gmail.com) with any questions or concerns regarding this letter.

Respectfully submitted,

**Central Ohio Wetland Consulting, LLC**

A handwritten signature in cursive script that reads "Matthew R. Kaminski".

Matthew R. Kaminski, Owner  
Wetland Scientist, 401/404 Specialist