



**Public Works Committee of Council Agenda**  
**June 11, 2024 - 4:30 PM**  
**233 South Main Street, Monroe, Ohio**

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1. Approval of the Public Works Committee Minutes of May 14, 2024
2. Discussion Items by Director of Public Works
3. Discussion, questions, and requests for future meetings.
4. Adjournment



**Public Works Committee of Council  
May 14, 2024  
233 South Main Street, Monroe, Ohio**

The Public Works Committee of Council met at 4:30 p.m. in the Council Chambers located at 233 South Main Street, Monroe, Ohio.

Present: Christina McElfresh, Vice Mayor; Ben Wagner, Council Member; Larry Lester, City Manager; Jake Burton, Director of Finance; Gary Morton, Director of Public Works; Matt Grubbs, Assistant Fire Chief; Kacey L. Waggaman, Assistant City Manager; and Angela S. Wasson, Clerk of Council and Assistant to the City Manager.

Mr. Wagner moved to approve the Public Works Committee minutes of June 13 and August 1, 2023; seconded by Mrs. McElfresh. Voice vote. Motion carried.

Mr. Morton stated there may be a lot of items on the monthly agenda; however, the intent of the meetings is to get these items before the Committee early.

*2024 Concrete Assessment Program.* Mr. Morton advised there will not be a 2024 Concrete Assessment Program. He and his staff have been meeting with the City of Kettering and will remodel Monroe's program to the City of Kettering's. Mr. Morton indicated that East Avenue would have been part of this program, but it needs all new storm sewer and all of the concrete curb needs replaced. There are large trees on the south end of East Avenue and we need to determine how we will deal with those. The pavement condition rating of East Avenue is at 43 and that is a poor condition on the rating scale. Mr. Morton added that the Downtown Master Plan is something that also needs to be considered to determine if a streetscape would be added. Mr. Morton would like to apply for a Community Development Block Grant (CDBG) to install a sidewalk on the west end at the library going down the hill.

*Public Works Facility Design Update.* Mr. Morton reported that there have been several meetings with the architect and taken measurements to come up with the square footage that is needed for the future. The building will need to be completed in stages due to the cost. Mrs. McElfresh is of the opinion that the equipment is protected and not sitting in the weather. Mr. Morton pointed out that the only way that could happen is to continue to utilize the existing facilities as he felt that the office space and heated area was the most critical for the first phase.

*Station 62 Expansion.* Mr. Morton advised that Station 62 is in the same position as Public Works as they need a training room and a larger bay area. The initial numbers are very high and Mr. Morton would like to revisit those before bringing that to the Public Works Committee. Mr. Grubbs added that expansion of the bay area, training room, and plumbing are the priorities.

*Public Works Facility Location.* Mr. Morton stated initially it was discussed to put the building on the west side of the land; however, it would be approximately \$3 million to move the earth on the west side. If the facility is moved to the east side it would save roughly \$1 million. Mr. Morton's understanding is to develop the front half of the property as commercial/industrial and



the back half possibly as residential. We are looking at approximately \$2.4 million of earthwork on the west side on top of the \$3 million we paid for the property. It is \$1.4 million less on the east side. Mrs. McElfresh would like to see a map to show the different areas for the next meeting.

*Great Miami River Trail.* Mr. Morton recently received telephone calls from the Ohio Department of Transportation (ODOT) to obtain a status update on this project. As you know, we are sitting on \$500,000 of ODOT money and \$500,000 of Ohio Department of Natural Resources (ODNR) money. Mr. Morton explained to ODOT that we are in a holding pattern. Mr. Morton's opinion is that the design should be started over as the initial design was poorly done. He recommended that Council return the grant funding as you cannot change the scope of the project applied for.

Mr. Morton explained that partnering with the Miami Conservancy District will be a great benefit once the trail is built. He pointed out that they own the land where the erosion is taking place along the Great Miami River.

*South Main Street Waterline Project.* Mr. Morton explained from Carson Road to Mason Avenue would be a water main replacement on South Main Street. The water main would be replacing an 8 inch main with a 12 inch main. This will allow us to fully fill the Main Street water tank.

Mr. Burton suggested obtaining an Ohio Water Development Authority loan and we would know by the end of June. They do an average interest rate based on the municipal market and it is currently 3.8%. On a project of this size the fee being part of this loan program would be roughly \$3,500. We can choose the terms from 10 to 30 years and we are looking at a 20 to 25 year term.

The Public Works Committee meeting adjourned at 5:36 p.m.

Respectfully submitted,

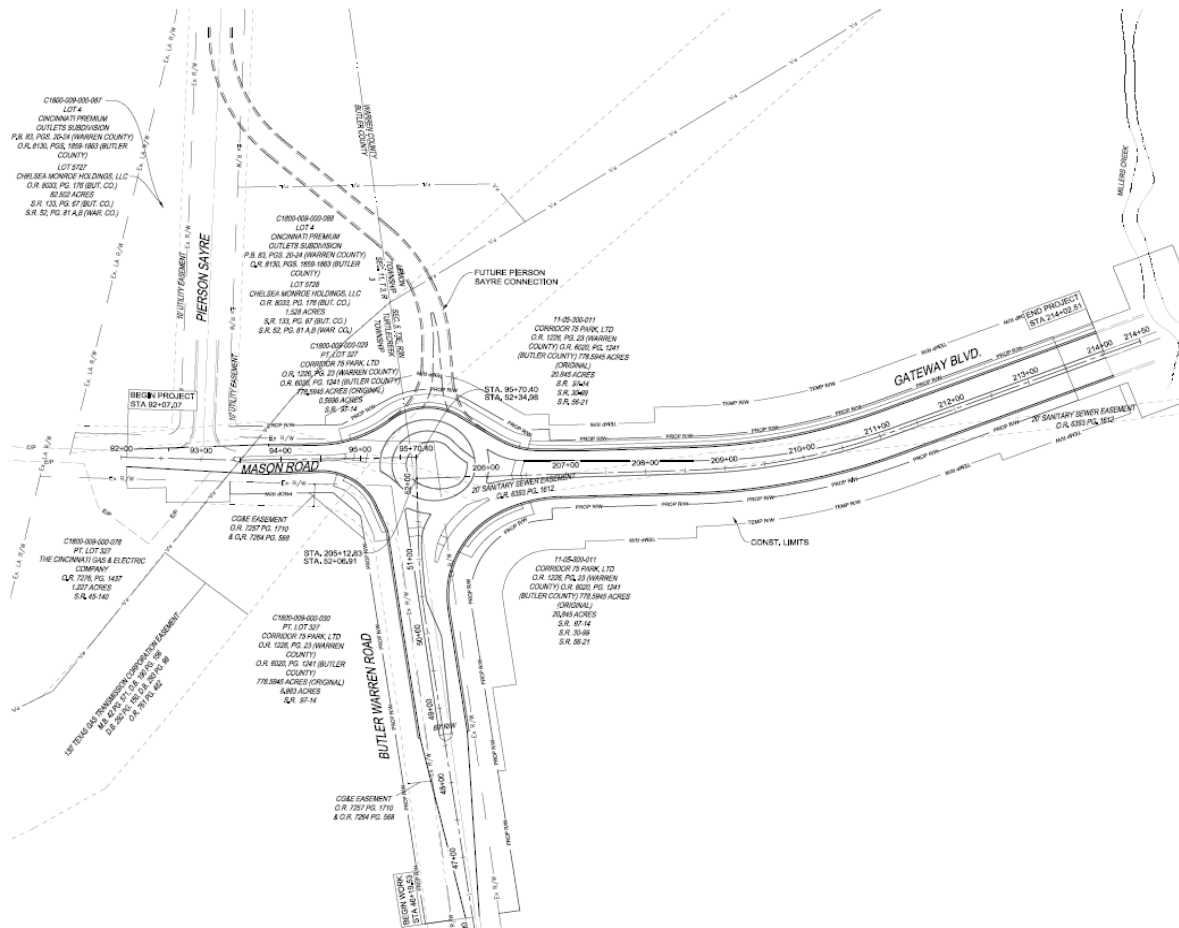
Angela S. Wasson, MMC  
Clerk of Council

# Public Works Committee Meeting Agenda

## June 11, 2024

### Gateway/Butler Warren Road Design

- On May 30, City Engineer Paul Goodhue and I met with Lenny Robinson, owner of Corridor 75 Business Park, to discuss a potential roundabout at the intersection of Butler-Warren Rd, Mason Rd, and Gateway Blvd extension.
- The previous design shown to Mr. Robinson was, in his words, unacceptable.
- Mr. Robison and his partners are accepting of the roundabout idea
- We are making a few minor adjustments to the preliminary design.
- Once these drawings are complete, the City, Mr. Robison, and his partners will agree to move forward with Right-of-Way negotiations.
- O.R. Colon will be asked to quote this work and carry out the negotiations on behalf of the City to purchase the Right-of-Way.
- Simultaneously, the Economic Development Committee will discuss options for grant funding through multiple agencies.



## **Timrick Place Rehabilitation**

- Under Contract
- Waiting on contractor to start

## **Main Street Water Main Replacement**

- Under Contract
- Waiting on contractor to start

## **Public Works Facility Land Options**

- Discuss two options proposed by our architectural team, comparing the cost of the east side of the property to the west side of the property.
- Costs are much higher than originally considered when purchasing land
- See attachment A for a review of the site memorandum and cost analysis.

## **Public Works Land Development**

- Clarify the committee's intent of the land development
  - Bought 106 acres of land for \$3,000,000.00
  - Public Works to utilize between 10-12 acres of land.
  - Sell the remaining 94-96 acres of land for a minimum of the \$3,000,000.00 investment.
- Staff are working with KZF to create renderings depicting what a master-planned site would look like.
- Discuss the advantages of mater-planning this land
- Discuss the use of the land within the master planning process
- Discuss why it is necessary to master plan this land now and how this helps the city into the future.
  - Master planning the land will allow the land to be marketed nationally, bringing in larger investors/developers.
  - Master planning will help drive the land value up.
  - Master planning now and selling off the land will free up capital dollars to invest back into the facility.
- It is the opinion of our consultants that the city could sit on this land for many years before it is developed as a Light Industrial site.
  - Topography challenges are too expensive to overcome on this land.
  - It is likely that most other open land would develop before this land.
  - Wetlands and streams will be expensive to mitigate for light industrial development.
    - With high-density and single-family development, these wetlands and streams can be incorporated into the development as green/park space.

## **Garver Rd./New Garver Rd Update**

- Consultant is currently working through title searches and appraisals.
- No other updates on this project.

## **Pedestrian Safety Project**

- Staff has recently reviewed some early design concepts of the proposed sidewalks at the intersection of William Groth Drive and Mains Street running North along the Police Department property.
- No other updates on this project.

## **Great Miami River Trail**

- Communication has been delivered to ODNR and OKI, notifying them that Monroe has released grant funding for this project.
- City Engineer Paul Goodhue and I met with Stantec on May 30 to discuss the possibility of hiring them for trail engineering.
- I am currently arranging a site visit for Stantec to visit the site.
- I have sent Stanec all the electronic files we received from Brandstetter-Carroll.
  - They will evaluate them to see if they can be of any use and to save cost.
- Stantec will price out the engineering in phases.
  - Likely four phases.
- The area of erosion around Dick's Creek will be its own phase.
  - I have talked to the Miami Conservancy District about this and made them aware that I will be requesting financial assistance from them on this segment of trail engineering. It was received well.
- The area around Dick's Creek is continuing to erode at a rapid rate; drone footage shows significant erosion from last fall.

## **Corridor 63 Safety Study**

- Engineering has engaged seven firms with a request for qualifications (RFQ) for a safety study of the State Route 63 Corridor. The study will go from Britton Lane to Lawton Ave.
- The following is a high-level overview of what this study will accomplish.
  - Evaluate the safety of Britton Lane and S.R. 63 intersection. Looking at crash data, traffic counts, and other information, we will receive safety improvement recommendations.
  - Evaluate the safety of the Main Street and S.R. 63 intersection. Looking at crash data, traffic counts, and other information, we will receive safety improvement recommendations.
  - We will evaluate the dedicated access to the Raterman property off State Route 63.
    - There is a dedicated access point that ODOT has agreed to access for this property.
      - It is unclear how much traffic it would take for ODOT to allow full access to the property, meaning a traffic light between Lawton Ave. and Main St... We will try to determine this with ODOT's

participation.

- To date, most of the potential developments we have seen for this development site have only generated enough traffic for a right-in/right-out on S.R. 63.

#### SS4A Grant

- As the council was made aware, Monroe was awarded \$476,000.00.
  - This grant will provide Monroe with a transportation master plan.
    - The plan will include:
      - Passenger cars
      - Semi-Trucks
      - Multi-model transportation
        - Bikeways/trails
        - Walking paths
        - Sidewalk connectivity
  - We will focus on our major state routes, major and minor arterials
  - It will provide six new intersection cameras.
    - Some will be used to replace existing cameras, which are vital.
    - Some will be placed in intersections where no camera currently exists.
  - The new camera technology will allow us to simultaneously see and record all four intersection segments.
  - Currently, we can use multiple segments but only record whichever segment the PTZ camera points to.
  - Current cameras can be viewed and monitored in the Public Works building and Police Dispatch.

### Tying it all together

The list of projects we are currently working on may seem extensive, but a common theme among them ties them all together: safety. The Pedestrian Safety Project, Great Miami River Trail, Corridor 63 Safety Study, and the SS4A Grant are individual projects. Still, all share the goal of making Monroe a safer city for drivers, cyclists, and pedestrians. By collecting scientific data within each project, we aim to demonstrate the need for safety improvements in Monroe, which will allow us to apply for safety funding available in Ohio. With a well-thought-out plan in place, we can effectively show how each project contributes to improving safety in our city, allowing us to score well on our funding applications.



2550 Corporate Exchange Drive, Suite 300  
Columbus, Ohio 43231  
Phone: (614) 901-2235

Calculated: MTR  
Checked: JRP

City of Monroe Public Works Facility - Option 1		PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS	
ITEM	DESCRIPTION	UNIT	TOTAL COST
	Onsite Pavement	SY	\$731,849.44
	Public Road and Utilities	LF	\$741,000.00
	Storm Sewer	LF	\$135,000.00
	Excavation (Earthwork Cut)	CY	\$818,760.00
	Embankment (Earthwork Fill)	CY	\$1,170,450.00
	Private Waterlines	LF	\$63,210.00
	Retaining Wall	LF	\$240,000.00
	Wetlands Mitigation**	LUMP SUM	\$15,000.00
		<b>SUBTOTAL</b>	<b>\$3,915,269.44</b>
		<b>20% CONTINGENCY</b>	<b>\$783,053.89</b>
		<b>TOTAL</b>	<b>\$4,698,323.33</b>

City of Monroe Public Works Facility - Option 2		PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS	
ITEM	DESCRIPTION	UNIT	TOTAL COST
	Onsite Pavement	SY	\$731,849.44
	Public Road and Utilities	LF	\$651,300.00
	Storm Sewer	LF	\$135,000.00
	Excavation (Earthwork Cut)	CY	\$871,608.00
	Embankment (Earthwork Fill)	CY	\$860,652.00
	Private Waterlines	LF	\$58,555.00
	Retaining Wall	LF	\$135,000.00
	Wetlands Mitigation**	LUMP SUM	\$0.00
		<b>SUBTOTAL</b>	<b>\$3,443,964.44</b>
		<b>20% CONTINGENCY</b>	<b>\$688,792.89</b>
		<b>TOTAL</b>	<b>\$4,132,757.33</b>

\*\* Mitigation requires both payment and additional permitting timeline.



# Site Memorandum

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**Monroe Public Works Facility**  
Hamilton Lebanon RD

**June 6, 2024**



AMERICAN  
**STRUCTUREPOINT**  
INC.

2550 CORPORATE EXCHANGE DRIVE, SUITE 300  
COLUMBUS, OHIO 43231  
614.901.2235

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



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## Appendices

- Appendix A – USGS Web Soil Survey**
- Appendix B – Option 1 Site Concept**
- Appendix C – Option 2 Site Concept**

## Site Executive Summary

The purpose of this memorandum is to provide a comparison between two site concepts for the Monroe Public Works Facility located off the existing Clark Boulevard. Several aspects of each concept have been compared, leading to an approximate cost estimate for each development. The most notable differences between the site include the following as noted in Table 1:

Table 1: Site Comparison

<b>Site Concept Comparison</b>		
	<b>Option 1 – West Site</b>	<b>Option 2 – East Site</b>
Total Site Area Required	11.75 AC	10.15 AC
Total Land Value Required (At \$30,000 per acre)	\$352,500	\$304,500
Site Setbacks	20' Front Yard Setback 10' Side and Rear Yard Setback *200' Setback Along Residential	20' Front Yard Setback 10' Side and Rear Yard Setback
Soil Remediation (See Appendix A)	**Potential Risk (4 Soil Profiles)	Low Risk (2 Soil Profiles)
Public Roadway Length Required	570 Feet	500 Feet
Wetland Mitigation	0.04 AC - 0.08 AC **Mitigation Timeline: 3-6 months	N/A
Potential Stream Impacts	112' SCPZ Setback	N/A
Monitoring Well Impacts	**Two Potential Monitoring Wells (To Be Removed)	No Monitoring Wells Present
Existing Woodland Impacts	7.74 AC	5.02 AC
Length of Retaining Walls	480 Feet	270 Feet
<b>Preliminary Opinion of Probable Site Construction Cost</b>	<b>\$3,915,000</b>	<b>\$3,443,000</b>
<b>Estimated Contingency (20%)</b>	<b>\$783,000</b>	<b>\$688,800</b>

\*A variance can be applied for with the City to remove the 200' setback along the residential neighborhood. Note that work near residential lots could bring complaints/discontent from residential neighbors.

\*\* Not included in site construction cost since impact is unknown at this time

A breakdown of each site concept option can be found in the following sections of the report, including more detailed information on the zoning, soils, and notable site features. Additional information can be found in the provided appendices and figures as referenced in each option's summary.

## Site Overview

The objective of this report is to identify the key design aspects of two options for the proposed City of Monroe public works facility. Some specific items that were considered were zoning code, soils, ground cover, grading, utilities, and drainage outlets. The analysis of these items is intended to provide an objective overview, which will help in weighing the benefits and drawbacks of both options. Shown below in Figure 1 is the existing site, which sits on approximately 105 acres of land. Only the northern portion of the site is considered for the facility.



Figure 1: Site Location

## Zoning Code

This site is classified in the L-1 Light Industrial zone per the City of Monroe Planning and Zoning Map, as shown in Figure 2. The use of this district is reserved exclusively for industrial and related purposes per the City of Monroe planning and zoning code. Each parcel is required to have setbacks. According to the code, setbacks refer to unobstructed, unoccupied open area between the furthestmost projection of a structure and the property line of the lot on which the structure is located. Setbacks shall not contain any structure except when in conformance with this code. A list of permitted obstructions in minimum required yards is outlined in section 1204.05 of the code. Items such as the public works facility and salt barns will not be permitted within the setback area. This zoning district requires that all side and rear setbacks must be at least 10' and the front yard setback must be a minimum of 20'. Additionally, any side or rear yard that abuts residential property must have a minimum 200' setback. Should the client express interest in any site improvements that vary from The City of Monroe planning and zoning code a variance must be requested.

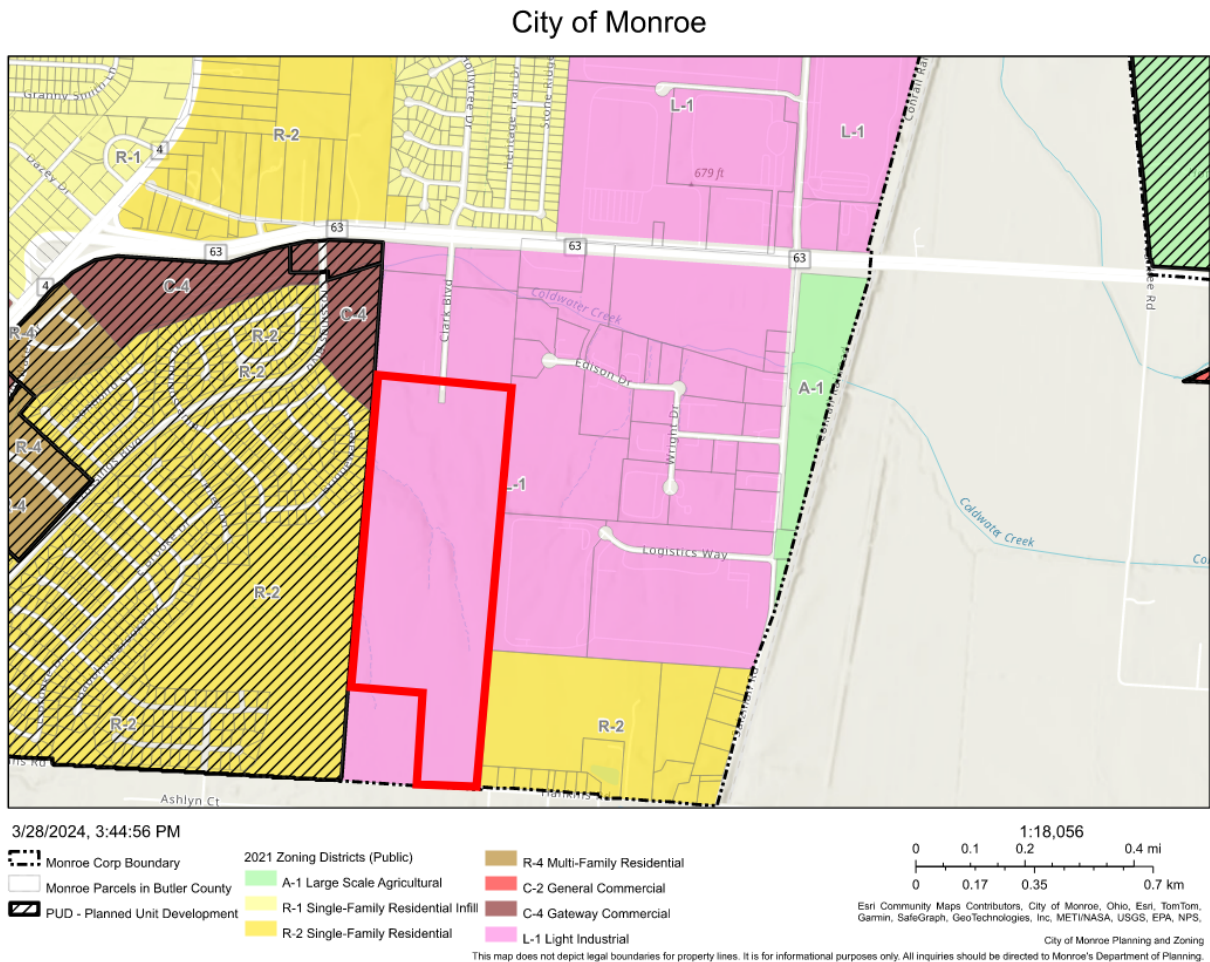


Figure 2: The City of Monroe Planning and Zoning Map

## Site Analysis

This study area primarily consists of grassland and woods, and the topography of this site clearly indicates that water drains from south to north towards Cold Water Creek, which ultimately drains to the Ohio River. Existing elevations indicate there is approximately 55' of fall across the study area. Surrounding the site is a residential neighborhood to the west, industrial buildings to the north and east, and woods/farmland to the south. According to the USDA Web Soil Survey, which can be referenced in Appendix A, the two hydraulic soil groups located on site are soil group C and D. Soil type and conditions are essentially the same across the site.

The proposed site consists of a public works facility at approximately 92,200 SF, an outdoor cold storage at 23,000 SF, and a salt barn and brine area at 9,200 SF combined. When analyzing the site, two options were proposed, as shown in Appendix B and C. The site was situated on both sides of Clark Blvd and existing and proposed conditions were carefully considered. The benefits and concerns are outlined below.

### Option 1

Option 1, shown in Appendix B, proposes the development on the west side of Clark Blvd. The majority of this site has a steep change in elevation with runoff draining from south to north. The acreage of this site is approximately 11.75 acres. There are two wetlands located on the north end of the site and a stream running in the southwest corner. Additionally, an existing ditch is located on the southeast side of the site. A large portion of the south end of the site is covered in woodland that will need to be demolished, and there are also two monitoring wells and a fence in the vicinity as well.

Several concerns are brought to light when considering these existing conditions. The wetlands located on site are protected by the Ohio Environmental Protection Agency (OEPA). Typically, the removal process for wetlands requires a delineation to be submitted to the OEPA for review, obtaining permitting for removals including impact fees, and any additional OEPA permitting if necessary. Another potential area of concern is the stream running through the site. This stream will need to be delineated and confirmed. If the stream is confirmed it will require a Stream Corridor Protection Zone (SCPZ). The SCPZ is a stream setback that is intended to sustain natural stream processes and native vegetation. This means that any structures or grading activity is prohibited in this area. Based on the calculations used to determine the width of the SCPZ, the width required for this site is approximately 112'. The site plan shown in Appendix B indicates no impacts to this SCPZ based on the site layout. The existing ditch located in the southeast corner of the proposed site will be rerouted along Clark Blvd and will ultimately outlet into the basin. Prior to construction, removal of the fence, monitoring wells, and woodlands will also be required. Additionally, due to the large change in elevation this site will likely require retaining structures to mitigate steep grades. Appendix B shows a retaining wall located between the basin and drive on the north end of the site. This is meant to be a visual representation of what might occur and does not necessarily depict elevations or wall heights that would be determined in final engineering. The public works facility is also constrained by a 200' setback from the residential neighborhood to the west. This area prohibits any placement of facilities within the setback. However, should there be interest in placing facilities in this setback, a variance may be requested from the city.

As a result of this proposed development, Clark Blvd and any relevant utilities will be required to extend along the frontage of the site. This will result in approximately 17,000 SF of asphalt pavement, 500' of water main extension, 500' of electric extension, 500' of telecom extension, 500' of gas main extension, and 650' of sanitary main extension. Storm water will be managed with a network of storm sewers that will drain to the proposed basin. The basin will outlet to an existing swale that will ultimately drain to Cold Water Creek. The analyzed costs for site development of Option 1 including pavement improvements, public and private utilities, public roadway, and embankment comes to approximately \$3,915,000. Wetland mitigation costs, both soft and hard, could range from \$10,000 to \$20,000 depending on the total impacted area and the classification of wetland. Wetland mitigation submittals with the EPA could also add an additional 3-6 months of reviews.

American Structurepoint proposes the following list for site development for Option 1. It is important to note this is not an exhaustive list but is solely a representation of development that may occur:

- Removal of woodland
- Removal of monitoring well
- Removal of fence
- Rerouting of existing ditch in conflict with proposed Clark Blvd extension
- Proposed Clark Blvd extension
- Proposed sanitary main extension along Clark Blvd
- Proposed water main extension along Clark Blvd
- Proposed public works facility building
- Proposed salt barn and salt brine area
- Proposed cold storage building
- Proposed drives and parking lots
- Proposed water service
- Proposed sanitary service
- Proposed public and private storm sewer
- Proposed retaining wall
- Proposed basin and outlet

## Option 2

Option 2, shown in Appendix C, proposes the development on the east side of Clark Blvd. This acreage of this site is 10.15 acres. The majority of this site has a steep change in elevation with runoff draining from south to north. There is an existing ditch located on the southwest side of the site and a smaller portion of the south end of the site is covered in woodland that will need to be demolished.

Several concerns are brought to light when considering these existing conditions. Due to the large change in elevation this site will likely require retaining structures to mitigate steep grades. Appendix C shows a retaining wall located between the drive, basin, laydown area and property line. This is meant to be a visual representation of what might occur and does not necessarily depict what is going to be required. Moreover, the existing ditch located in the southwest corner of the site will need to be rerouted along Clark Blvd and will ultimately drain to the basin. The existing woodland must be removed prior to construction.

As a result of this proposed development, Clark Blvd and any relevant utilities will be required to extend along the frontage of the site. This will result in approximately 15,030 SF of asphalt pavement, 500' of water main extension, 500' of electric extension, 500' of telecom extension, 500' of gas main extension, and 650' of sanitary main extension. Storm water will be managed with a network of storm sewers that will drain to the proposed basin. The basin outlet will cross Clark Blvd and outlet to an existing swale that will ultimately drain to Cold Water Creek. Since the outlet crosses into another potential property it will likely require a storm drainage easement on the west side of Clark Blvd. The analyzed costs for development of Option 2 including pavement improvements, public and private utilities, public roadway, and excavation comes to approximately \$3,443,000.

American Structurepoint proposes the following list for site development for Option 2. It is important to note this is not an exhaustive list but is solely a representation of development that may occur:

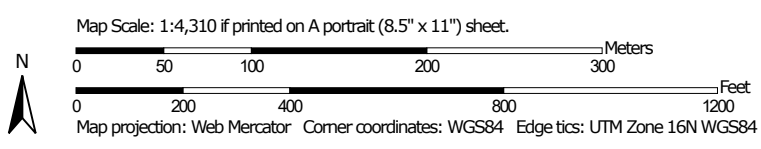
- Removal of woodland
- Rerouting of existing ditch in conflict with proposed Clark Blvd extension
- Proposed Clark Blvd extension
- Proposed sanitary main extension along Clark Blvd
- Proposed water main extension along Clark Blvd
- Proposed public works facility building
- Proposed salt barn and salt brine area
- Proposed cold storage building
- Proposed drives and parking lots
- Proposed water service
- Proposed sanitary service
- Proposed public and private storm sewer
- Proposed basin and outlet

## Appendix A – USGS Web Soil Survey

































Hydrologic Soil Group—Butler County, Ohio



Soil Map may not be valid at this scale.



### MAP LEGEND

- Area of Interest (AOI)**
  -  Area of Interest (AOI)
- Soils**
  - Soil Rating Polygons**
    -  A
    -  A/D
    -  B
    -  B/D
    -  C
    -  C/D
    -  D
    -  Not rated or not available
  - Soil Rating Lines**
    -  A
    -  A/D
    -  B
    -  B/D
    -  C
    -  C/D
    -  D
    -  Not rated or not available
  - Soil Rating Points**
    -  A
    -  A/D
    -  B
    -  B/D
- Water Features**
  -  Streams and Canals
- Transportation**
  -  Rails
  -  Interstate Highways
  -  US Routes
  -  Major Roads
  -  Local Roads
- Background**
  -  Aerial Photography
- Other**
  -  C
  -  C/D
  -  D
  -  Not rated or not available

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

**Warning:** Soil Map may not be valid at this scale.  
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Butler County, Ohio  
 Survey Area Data: Version 23, Aug 31, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 28, 2019—Dec 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DaB	Dana silt loam, 2 to 6 percent slopes	C	9.3	11.6%
EcE2	Eden silty clay loam, 15 to 25 percent slopes, moderately eroded	D	9.3	11.7%
EcUE2	Eden-Urban land complex, 15 to 25 percent slopes, moderately eroded	D	1.0	1.2%
OcB	Ockley silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes	B	2.0	2.5%
RtB	Russell silt loam, 2 to 6 percent slopes	B	9.4	11.8%
RvB2	Russell-Miamian silt loams, 2 to 6 percent slopes, moderately eroded	C	5.9	7.4%
RwB2	Russell-Miamian silt loams, bedrock substratum, 2 to 6 percent slopes, moderately eroded	D	2.5	3.2%
UDaB	Urban land-Dana complex, 2 to 6 percent slopes		3.2	4.0%
UMtC2	Urban land-Miamian-Russell, bedrock substratum, complex, 6 to 12 percent slopes, eroded	C	0.0	0.0%
UOcB	Urban land-Ockley, Southern Ohio Till Plain, complex, 2 to 6 percent slopes		1.3	1.6%
UPa	Urban land-Patton complex, 0 to 2 percent slopes		0.9	1.1%
URvB2	Urban land-Russell-Miamian complex, 2 to 6 percent slopes, moderately eroded	C	2.4	3.0%
URwB2	Urban land-Russell-Miamian, bedrock substratum, complex, 2 to 6 percent slopes, moderately eroded	D	2.4	3.1%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
UWeB	Urban land-Wea complex, 2 to 6 percent slopes		1.3	1.6%
WeUB	Wea-Urban land complex, 2 to 6 percent slopes	B	2.5	3.1%
WyC2	Wynn silt loam, 6 to 12 percent slopes, eroded	C	25.3	31.6%
WyUC2	Wynn-Urban land complex, 6 to 12 percent slopes, eroded	C	1.3	1.6%
<b>Totals for Area of Interest</b>			<b>79.9</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method: Dominant Condition*

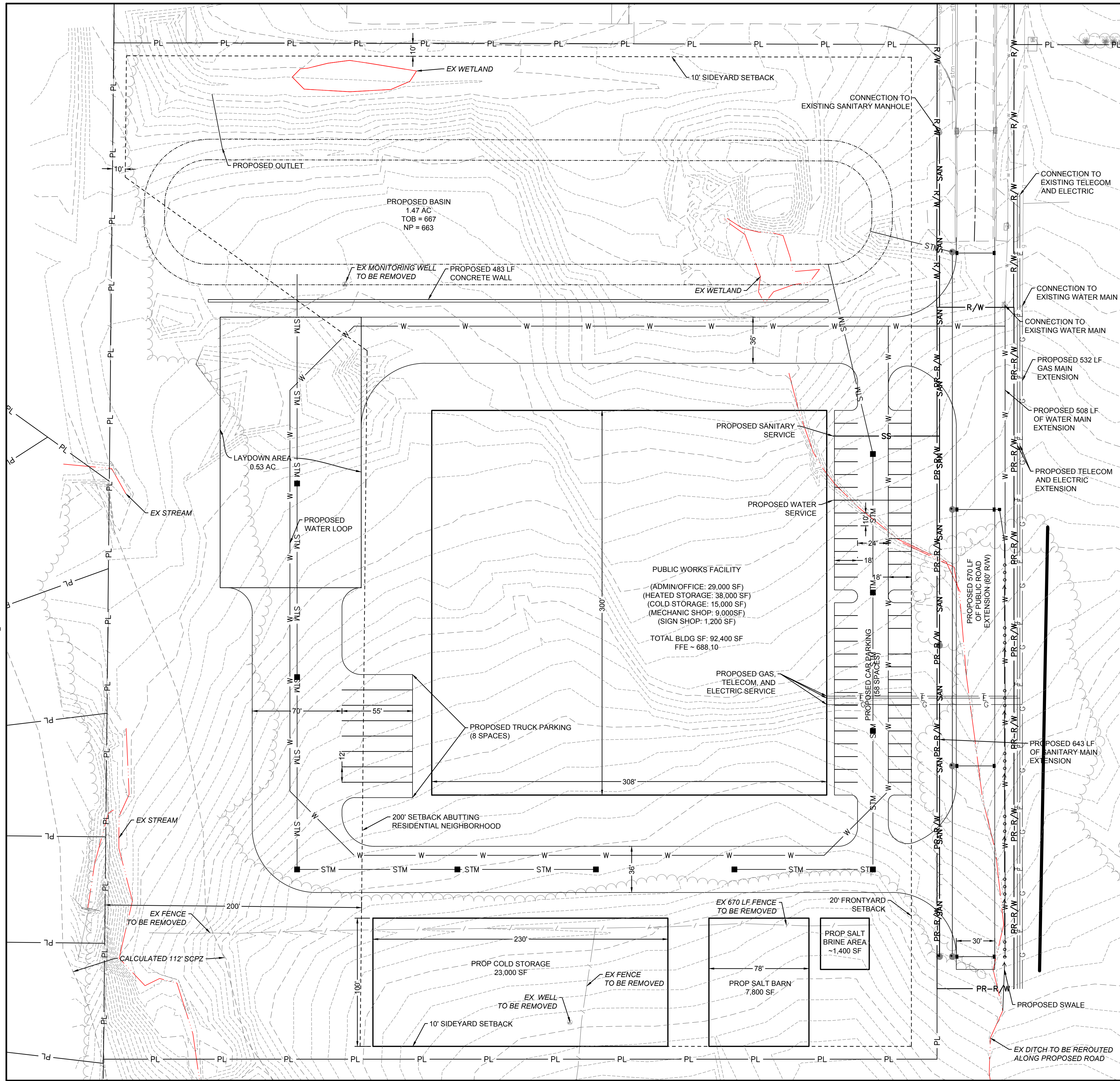
*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*



## Appendix B – Option 1 Site Concept

PLOT SCALE: 1"=112' DATE: 6/1/24 - 11:28 AM EDITED BY: MAHMOUD DRAWING FILE: \\COLUS\NIP\PROJECTS\2023\04-30\_OPTION 1\_PUBLIC WORKS.DWG



**SITE LEGEND**

— PL —	EX PROPERTY LINE
— R/W —	EX RIGHT-OF-WAY
—	EX PAVEMENT/ SIDEWALK
—	EX PAVEMENT STRIPING
—	EX CURB
—	EX ROAD CENTERLINE
—	EX TREE DRIP LINE
—	EX FENCE
—	EX STREAM
— stm —	EX STORM SEWER
— san —	EX SANITARY SEWER
— w —	EX WATER LINE
— g —	EX GAS LINE
— fo —	EX FIBER OPTIC LINE
— t —	EX TELECOMMUNICATION
—	PROP STORM SEWER
— SAN —	PROP SANITARY SEWER
— W —	PROP WATER MAIN
—	PROP SWALE
●	PROP MANHOLE
■	PROP CATCH BASIN
■	PROP CURB INLET

**MONROE PUBLIC WORKS FACILITY**  
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 700 Broadway Street  
 Cincinnati, OH 45202  
 main 513.621.6211  
 kzf.com

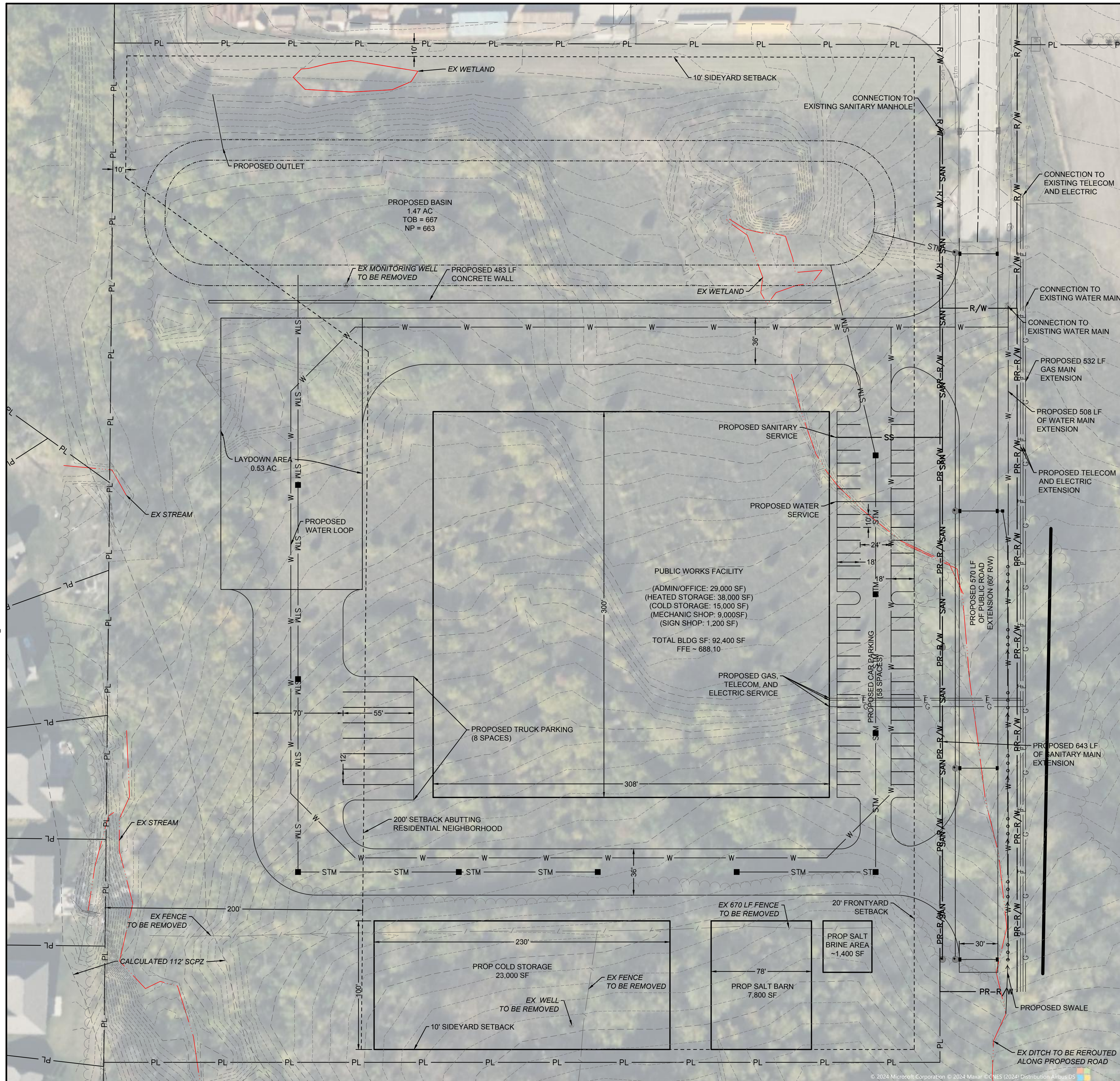
DESIGNED	COMM. NO.
MTR	
DRAWN	DATE
MTR	6/4/2024
CHECKED	PROJ. MGR.
JRP	JRP

**CONCEPT PLAN**  
**OPTION 1**

DRAWING NUMBER ISSUE  
**EX01**

NOT FOR CONSTRUCTION

PLOT SCALE: 1"=40' DATE: 6/1/24 - 11:28 AM EDITED BY: MAHMOUD DRAWING FILE: \\COLUS\NIP\PROJECTS\2023\04-30\_OPTION\_1\_PUBLIC\_WORKS.DWG



**SITE LEGEND**

- PL — EX PROPERTY LINE
- R/W — EX RIGHT-OF-WAY
- EX PAVEMENT/ SIDEWALK
- EX PAVEMENT STRIPING
- EX CURB
- EX ROAD CENTERLINE
- EX TREE DRIP LINE
- EX FENCE
- EX STREAM
- stm — EX STORM SEWER
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- w — EX WATER LINE
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DESIGNED MTR	COMM. NO.
DRAWN MTR	DATE 6/4/2024
CHECKED JRP	PROJ. MGR. JRP

**CONCEPT PLAN  
OPTION 1**

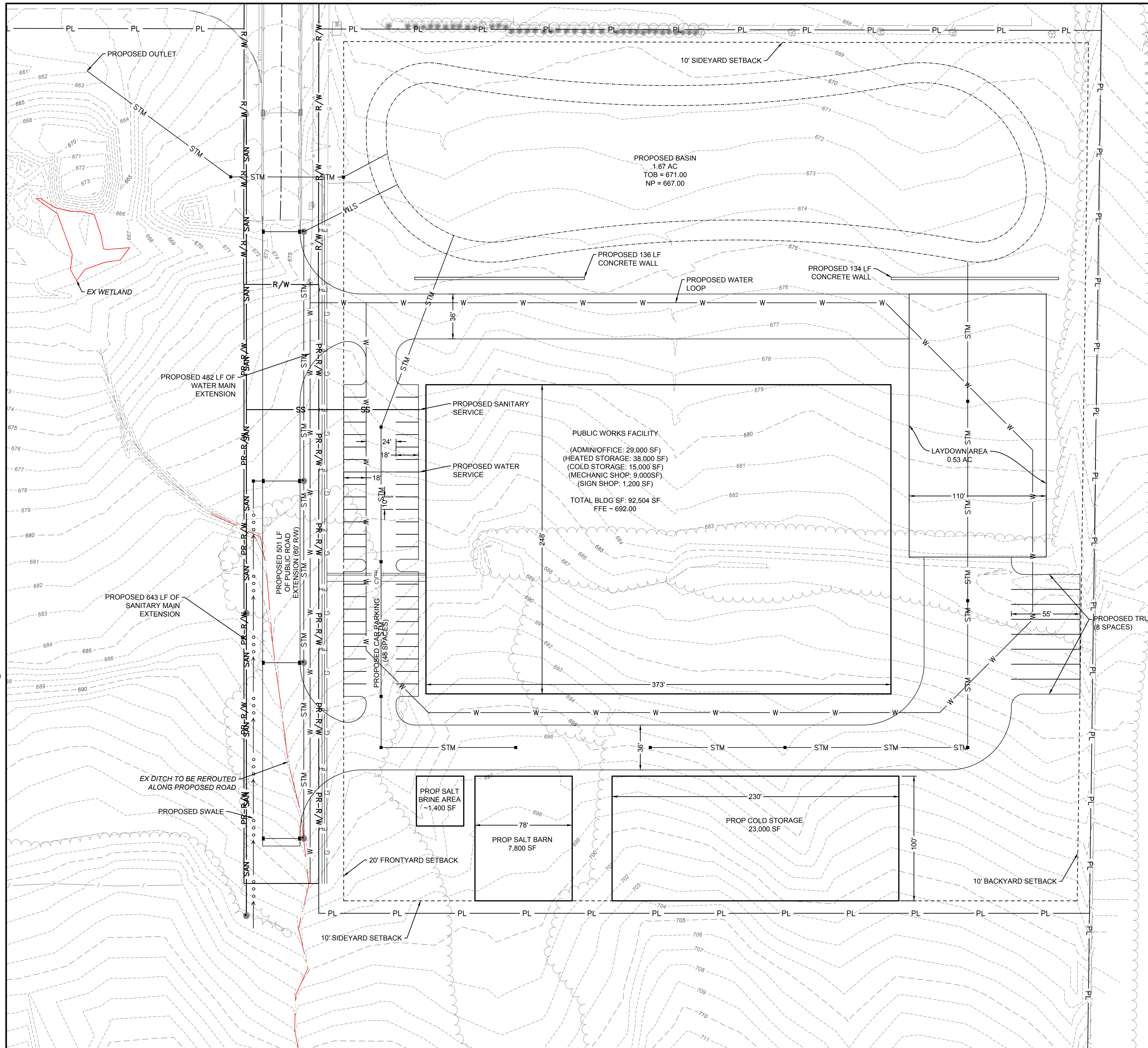
DRAWING NUMBER ISSUE  
**EX01**

NOT FOR CONSTRUCTION



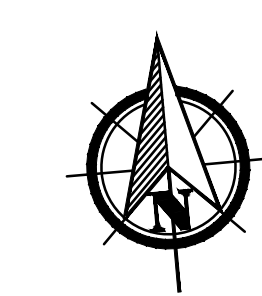
## Appendix C – Option 2 Site Concept

PLOT SCALE: 1"=40' DATE: 5/31/24 1:28 PM EDITED BY: MAHMOUD DRAWING FILE: C:\2023\202324\DRAWINGS\CIVIL\EXHIBITS\_PUBLIC WORKS\2023-04-30\_OPTION 2 PUBLIC WORKS.DWG



**SITE LEGEND**

— PL —	EX PROPERTY LINE
— R/W —	EX RIGHT-OF-WAY
—	EX PAVEMENT/ SIDEWALK
—	EX PAVEMENT STRIPING
—	EX CURB
—	EX ROAD CENTERLINE
—	EX TREE DRIP LINE
—	EX FENCE
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stm	EX STORM SEWER
san	EX SANITARY SEWER
w	EX WATER LINE
g	EX GAS LINE
fo	EX FIBER OPTIC LINE
t	EX TELECOMMUNICATION
—	PROP STORM SEWER
— SAN —	PROP SANITARY SEWER
— W —	PROP WATER MAIN
—	PROP SWALE
○	PROP MANHOLE
■	PROP CATCH BASIN
■	PROP CURB INLET



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CHECKED JRP	PROJ. MGR. JRP

**CONCEPT PLAN  
 OPTION 2**

DRAWING NUMBER ISSUE  
**EX01**

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PLOT SCALE: 1:1 EDIT DATE: 5/1/24 - 1:28 PM EDITED BY: MAHMOUD DRAWING FILE: C:\2023\02\28\24\0.DRAWINGS\CIVIL\EXHIBITS\_PUBLIC WORKS\2023-04-30\_OPTION 2 PUBLIC WORKS.DWG



**SITE LEGEND**

- PL — EX PROPERTY LINE
- R/W — EX RIGHT-OF-WAY
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CHECKED JRP	PROJ. MGR. JRP

**CONCEPT PLAN**  
**OPTION 2**

DRAWING NUMBER ISSUE  
**EX02**

NOT FOR CONSTRUCTION