

Director's Report

Project Name: Ginko Self Storage
 Description: Preliminary site plan and special land use approval
 Date on Agenda this packet pertains to: February 1, 2024

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|--|--|
| <input checked="" type="checkbox"/> Public Hearing | <input checked="" type="checkbox"/> Special Land Use |
| <input checked="" type="checkbox"/> Initial Submittal | <input type="checkbox"/> Rezoning |
| <input type="checkbox"/> Revised Plans | <input type="checkbox"/> Other: |
| <input checked="" type="checkbox"/> Preliminary Approval | |
| <input type="checkbox"/> Final Approval | |

Contact	Consultants & Departments	Approval	Denial	Approved w/Conditions	Other	Comments
Sean O'Neil	CDD Director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Per reviewer's comments
DLZ	Engineering Consultant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Per letter dated 12/21/23
Justin Quagliata	Staff Planner	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Per letter dated 12/20/23
Jason Hanifen	WLT Fire Marshal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Per letter dated 12/21/23



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

December 21, 2023

Sean O' Neil, Director
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: Ginko Self Storage - Preliminary Site Plan Review- 4th Review

DLZ # 2345-7567-04

Dear Mr. O' Neil,

Our office has reviewed the above-mentioned revised plan prepared by PEA Group and dated October 24, 2023. These plans were reviewed for general engineering feasibility and conformance with the Township Engineering Design Standards. We offer the following comments for your consideration:

Site Improvement Information-

- Three (3) self-storage buildings totaling 28,950 sq.ft.
- Associated parking including one (1) ADA parking space.
- One entrance off White Lake Road.
- Proposed leaching basins for stormwater management.
- Site to be serviced by well for water and septic for sanitary.

The following items should be noted with respect to Planning Commission review:

We note that comments from our previous review dated July 20, 2023 are in *italics*. Responses to those comments are in **bold**. New comments are in standard font.

General

1. *There is a Master Deed as part of the Prospectors Square Condominium overall plan. The requirements of this deed will need to be met. Comment addressed. Design engineer has responded that the requirements of the Master Deed have been met.* **The design engineer has noted that the**

project design complies with the requirements of the Prospectors Square Condominium Master Deed. Comment remains as a notation.

Grading/Paving

1. *Assure that a swale that can positively drain is provided along the west side of the parking area and Building #1. This can be further clarified on FSP/FEP submittals. It appears that the intent is for the swale to drain from both the north and south to a storm structure at a low point in the swale. Additional details shall be provided at the time of FSP/FEP submittal. We also note that the rim elevation label for this (RIM 28.40) is not pointing to the structure but to a random point on the berm. This will require revision and can be addressed on the FSP/FEP. **Comment addressed. Rim elevation label is now shown pointing to the storm sewer structure.***
2. The proposed parking layout has been revised from a previous layout in order to provide for 5 (versus 4 previously proposed) parking spaces. DLZ notes that the revised configuration is not ideal in terms of backing out of the northern two spaces, however we believe there is sufficient room to physically make the turning movements required.

Sanitary Sewer

1. *Oakland County Health Department will need to approve and permit septic field for this property. **Comment remains.***

Watermain

1. *We defer to the Township Fire Department with regard to fire suppression requirements. **Comment remains.***
 2. *Provide a fire truck turning plan for a 40 foot fire truck to demonstrate all proposed buildings are accessible by a fire truck. Comment addressed; however, it is not clear how Building #1 will be accessed by fire truck in the event of a fire. We defer to Township Fire Department for further comment. **We note that the current submittal provides for a 250' fire hose length to cover Building #1. We continue to defer to the Township Fire Department as to whether this is considered acceptable relative to fire suppression coverage. Comment remains as a notation.***
 3. *Oakland County will need to approve the well and permit for this property. **Comment remains.***
 4. *A well is proposed as the source of water for this site. Per our files, there exists a Water Supply Agreement that states that wells are to be abandoned if water main becomes available for use. We defer to the Township as to whether this agreement was ever signed. Please note that our files indicate that this agreement was received by the Township on December 18, 2000. **The design***
-

engineer has commented that the owner will sign the agreement; please provide a copy of the signed agreement. Comment remains.

Stormwater Management

1. *Per the Prospectors Square Condominium Plan, Master Deed, and Exhibit B to the Master Deed, each lot within the condominium must retain stormwater. The Master Deed and the Exhibit B to the Master Deed also require the owner of each lot to retain a specific amount of storm water and detain the remainder before out letting to the existing pond in the rear of the property. Please provide additional stormwater calculations supporting the required detention volume. Comment outstanding; the calculations on the plan need to be clarified to show they meet minimum White Lake Township design standards. Required detention volume calculations need to be provided to demonstrate site improvements can achieve the required storage volume. The Engineering design Standards do not allow retention (i.e., no positive outlet) in parking areas, please refer to Item C.4.o of the Engineering Design Standards. This will need to be updated on the plan set to demonstrate feasibility. **Comment addressed. The site shall have zero runoff and stormwater shall be managed via infiltration. Calculations demonstrating this have been provided by the design engineer.***

In addition, leaching basins are only allowed per the following requirements from WLT Engineering Design Standards C.5.a.-c.:

Engineered Infiltration Systems may be utilized when all the following conditions exist:

- a. *No adequate storm sewer, open ditch, or road drain is available for storm water disposal and an open retention pond is not prudent or feasible. Condition not met; this condition has not been demonstrated on the plan set. **A statement has been provided on the plan set to this effect on Sheet C-6.0; condition satisfied. Comment remains as a notation.***
 - b. *Soil composition is optimum and ground water table is suitable for percolation. Optimum soil conditions defines soil composed entirely of coarse sand, gravel, or a coarse sand gravel mixture. A soils report by a licensed engineer with borings to 10 feet below the bottom of the infiltration system with groundwater level data and in situ or laboratory determined permeability rates and recommending the advisability of an Engineered Infiltration System shall be provided. Condition not met; this condition has not been demonstrated on the plan set. Design engineer states that a geotechnical report is forthcoming. **Condition satisfied. A geotechnical report has been provided***
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demonstrating the above requirements; we also note that the recommendations of the report, relative to site construction, be followed.

- c. *Leaching basins shall be sized as a combination storage and groundwater discharge detention basin with storage volume determined the same as open detention basins. The discharge rate shall not exceed a perc rate of 6" per hour for the bottom and sides of the soil/stone interface (sides of the trenches). Stone voids ratio may be assumed as 0.40. This has not been provided on the plan set; please provide calculations supporting the required storage volume. Comment outstanding; calculations do not demonstrate that the storage volume like what would be required for a detention basin can be accommodated. **Condition satisfied. Calculations now demonstrate required storage volume will be provided.***

*One of two standard basins based on the designs shown on the Township Standard Storm Sewer Detail Sheet or proprietary underground storage/infiltration systems or other engineered systems if approved by the Township Engineer may be used. **Condition satisfied and remains as a notation.***

Recommendation

Our previous comments have been addressed, we are now recommending approval of the Preliminary Site Plan for this development. Please contact our office should you have any questions.

Sincerely,

DLZ Michigan



Michael Leuffgen, P.E.
Department Manager



Victoria Loemker, P.E.
Senior Engineer

Cc: Nick Spencer, Building Department, *via email*
Hannah Kennedy-Galley, Community Development, *via email*
Aaron Potter, DPS Director, White Lake Township, *via email*
Jason Hanifen, Fire Marshall, White Lake Township, *via email*

WHITE LAKE TOWNSHIP PLANNING COMMISSION

REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

TO: Planning Commission

FROM: Sean O'Neil, AICP, Community Development Director
Justin Quagliata, Staff Planner

DATE: December 20, 2023

RE: Ginko Self-Storage
Preliminary Site Plan and Special Land Use – Review #4

Staff reviewed the revised site plan prepared by PEA Group (revision date October 24, 2023). The following comments from the first review dated March 1, 2023, second review dated June 20, 2023, and third review dated July 12, 2023 are listed below. Responses, if necessary, to those comments are provided in **(green)**.

Ginko Investments, LLC (Michael Grasser) has requested preliminary site plan and special land use approval to construct a self-storage facility on Parcel Number 12-01-127-004, located on the north side of White Lake Road, west of Old White Lake Road. The parcel is Unit 4 of the Prospectors Square commercial condominium, zoned LM (Light Manufacturing), and approximately 2.14 acres in size. **The LLC listed on the site plan review application does not exist. Property ownership records show the parcel is owned by Ginko Investment Company, LLC. Revise the site plan review application and Coversheet accordingly.** **(Comment outstanding. The title of the LLC on the application remains incorrect).** **(Comment outstanding. Change the word 'Investments' to 'Investment' on the application to be consistent with the legal name of the LLC).** **Evidence, satisfactory to the Township Attorney, that the signatories on the application are authorized to execute on behalf of the Property Owner and Applicant shall also be provided (according to the Michigan Department of Licensing and Regulatory Affairs – Corporations Division online filing system, Michael Grasser is not the Resident Agent of the LLC).** **(Comment outstanding. No such evidence has been provided).** **(Comment addressed. A copy of a letter from the resident agent of the LLC authorizing Michael Grasser to act as the Applicant for the proposed storage facility has been provided).**

The Applicant is proposing to construct 210 (**now 203**) storage units among three single-story buildings totaling 20,950 (**now 28,950**) square feet in size. **The building footprint area listed in the Site Data Table and floor area listed on the site plan review application are incorrect – revise accordingly.** (**Comment addressed. The building sizes have been updated.**)

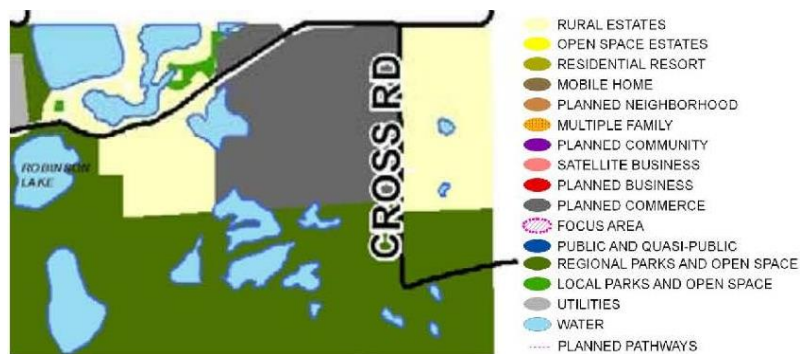
Following are the sizes of each building (building numbers identified on **preliminary site plan and preliminary floor plan**):

- Building 1: 3,750 (**now 6,750**) square feet (contains a bathroom)
- Building 2: 6,900 square feet
- Building 3: 10,300 (**now 15,300**) square feet

Master Plan

The Future Land Use Map from the Master Plan designates the subject site in the Planned Commerce category, which brings together light industry, research and development, office-warehouse distribution, and corporate office uses into a well-designed, campus-like setting. Outdoor storage and activities are discouraged in this category and would require the highest level of visual and noise buffering.

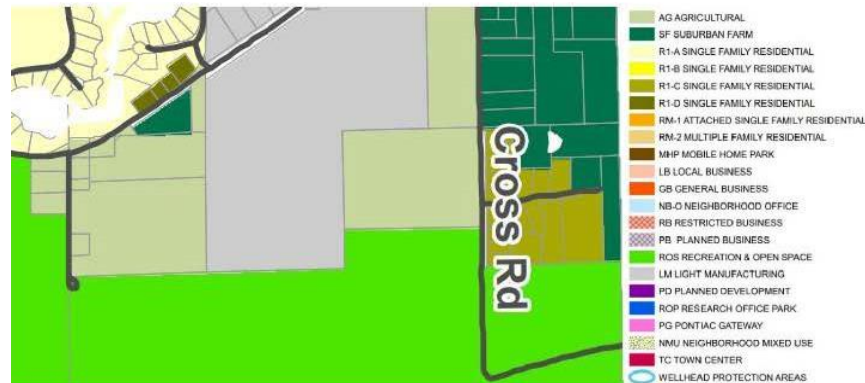
FUTURE LAND USE MAP



Zoning

The subject site is located in the LM (Light Manufacturing) zoning district, which requires a minimum of 175 feet of lot width and one acre of lot area. The parcel meets the minimum standards for both lot area and lot width of the LM zoning district. Warehousing and self-storage facilities are a special land use in the LM zoning district.

ZONING MAP



Physical Features

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map indicates floodplain is not present on the site. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetland Map indicates a wetland is located offsite to the north.

Access

The parcel fronts on White Lake Road. A driveway is proposed 25 feet from the east property line. In accordance with Article 5, Section 21 of the zoning ordinance, **a six-foot-wide sidewalk shall be installed within the right-of-way along the White Lake Road property frontage. If not provided, a variance is required from the Zoning Board of Appeals.** (Comment addressed. A six-foot-wide concrete sidewalk has been proposed).

A 28-foot-wide (now 30-foot-wide) cantilevered slide gate is proposed at the driveway (Sheet C-3.1 still shows a 28-foot-wide gate – revise for consistency). (Comment addressed. Sheet C-3.0 shows the gate is 30-foot-wide; the 28-foot dimension noted on Sheet C-3.1 is the dimension of the access drive from back-of-curb to back-of-curb (25-foot-wide drive aisle provided between edges of the gutter pan). **Gated vehicular access is subject to review and approval by the Fire Department, and a permit is required from the Building Official.** (Comment remains as a notation. Gate details/specifications shall be provided at final site plan).

Sheet C-3.1 shall be revised to demonstrate how a fire truck will access Building 1 (via the drive aisle east of Building 1 and west of Building 2?). Can a 40-foot-long truck driving south via the aforementioned access aisle make an east/west turn? (Comments outstanding). (Comments addressed. Sheet C-3.1 has been revised to show the requested turning movements). Pursuant to the zoning ordinance, designation of fire lanes is required at preliminary site plan.

Utilities

The project would be served by a private well and septic system (the Oakland County Health Division (OCHD) regulates private well and septic systems). The Township Engineering Consultant will perform an analysis of stormwater and grading to ensure compliance with all applicable ordinances as well as the Township Engineering Design Standards.

Staff Analysis – Preliminary Site Plan

The development standards for the LM district require 70-foot front yard setbacks, and 50-foot side and rear yard setbacks. The maximum building height allowed is 40 feet or two stories, whichever is less. Prospectors Square condominium requires different minimum setbacks than the underlying zoning district. For Unit 4, the following setbacks are required:

- Front (south) setback: 30 feet
- Rear (north) setback: 40 feet **(revise the setback requirement in the Site Data Table)**
(comment addressed)
- East side setback: 20 feet
- West side setback: 38-foot greenbelt

The proposed west side yard setback (drive aisle/maneuvering lane) is 25 feet. If a 38-foot greenbelt is not provided, a variance is required from the Zoning Board of Appeals. (Comment addressed. A 38-foot setback from the west property line has been proposed).

Building Architecture and Design

Based on the preliminary elevations, the proposed building materials for the project are a mix of common brick with a limestone cap five feet up around the base of the buildings and metal wall panels. ~~Buildings 1 and 2 are 12.5 feet in height and Building 3 is 14 feet in height.~~ **Buildings 1 and 3 are 14 feet in height and Building 2 is 12.79 feet in height.**

A sample board of building materials to be displayed at the Planning Commission meeting and elevations in color are required by the zoning ordinance and must be submitted at final site plan. Additionally, the address (street number) location shall be shown on the building. Six-inch-tall numbers visible from the street shall be required. The address locations are subject to approval of the Fire Marshal. (Comments remain as a notation).
(Street number locations on the buildings are shown on Sheet A-1.0).

Landscaping and Screening

Landscaping must comply with the provisions of the zoning ordinance and should be designed to preserve existing significant natural features and to buffer service areas, parking lots, and dumpsters. A mix of evergreen and deciduous plants and trees are preferred, along with seasonal accent plantings. A landscape plan is not required as part of the preliminary site plan, but was provided for consideration and will be reviewed in detail during final site plan review if the preliminary site plan is approved. Following are initial comments on the landscape plan:

- **See comment on previous page regarding required greenbelt along west property line. (Comment addressed. A 38-foot setback from the west property line has been proposed).**
- **Calculations for required and provided interior landscaping shall be provided. (Comment addressed. The aforementioned calculations have been provided).**
- **The total number of evergreen trees in the Plant List is incorrect. Revise accordingly. (Comment addressed. The total number of evergreen trees has been corrected).**
- **The total number of trees in the Plant List is incorrect. Revise accordingly. (Comment addressed. The total number of trees has been corrected).**
- **233 shrubs are required for interior landscaping and 101 shrubs are proposed. Therefore, a variance is required from the Zoning Board of Appeals. (Comment rescinded. 233 shrubs have been proposed).**
- **47 trees are required for interior landscaping and 33 new trees are proposed. The landscape calculations indicate 48 trees are being counted as interior landscaping. Existing trees on the site being counted towards interior landscaping shall be identified on the plan. Off-site trees shall not be counted as interior landscaping for the proposed self-storage facility. (Comment outstanding. Greenbelt landscaping adjacent to the road right-of-way is being counted as interior landscaping. Therefore, the proposed amount of interior landscaping is deficient and requires a variance from the Zoning Board of Appeals. An extensive land form buffer (six-foot berm landscaped in accordance with the ordinance) is required adjacent to the road right-of-way, but not proposed; therefore, a variance is required from the Zoning Board of Appeals). (The Applicant's engineer stated a variance will be requested).**
- **The common name and scientific name are swapped for some species in the Plant List. Revise accordingly. (Comment addressed. The Plant List columns have been revised).**
- **An extensive land form buffer (six-foot berm landscaped in accordance with the ordinance), or, a land form buffer (three-foot berm landscaped in accordance with the ordinance) AND a six-foot masonry screen wall (landscaped in accordance with the ordinance) are required along the west property line. If not provided, a variance is required from the Zoning Board of Appeals. (Comment outstanding. A variance is required from the Zoning Board of Appeals). (The Applicant's engineer stated a variance will be requested).**

- **Cyclone fencing should not be permissible and shall be removed from the plan. Remove the chain link fence detail and the chain link access gate detail from Sheet C-9.0. A different fencing type may be proposed for consideration.** (Comments addressed. A decorative fence (non-obscuring) has been proposed. At final site plan, the Planning Commission shall determine if non-obscuring fencing is acceptable. Also, the Applicant shall clarify why decorative fencing has not been proposed around the entire property (no fencing at northwest portion of the property).
- All required landscape areas in excess of 200 square feet shall be irrigated to assist in maintaining a healthy condition for all plantings and lawn areas. **An irrigation plan shall be provided at final site plan.** (Comment remains as a notation). (A note has been added to Sheet L-1.0 noting the an irrigation plan is required at final site plan).
- All required site irrigation systems shall include a rain sensor or similar measure to ensure irrigation does not occur during or shortly after precipitation events. All site plans shall note installation of required irrigation. **Add note to irrigation plan at final site plan.** (Comment remains as a notation).
- Trees shall not be planted closer than four feet to a property line. **Add note to landscape plan at final site plan.** (Comment addressed. A note has been added to the plan).
- **No more than two planted trees in a row shall be of the same species.** (Comment outstanding. Three Eastern Red Cedar trees are planted in a row along the west property line). (Comment outstanding. Three white spruces in a row are now proposed along the west property line). (Comment addressed. The landscape plan has been revised accordingly).
- **Pine trees are prohibited in the Township. Replace White Pine with a different evergreen species.** (Comment addressed. Pine trees are no longer proposed).
- **The planting detail mentions mulch, and the ordinance states the mulch product itself shall be at least doubled-shredded quality. Revise accordingly.** (Comment addressed. Double-shredded mulch has been specified on the landscape plan and details).
- **Lawn in the front yard shall be sod and lawn elsewhere shall be hydroseed or sod.** (Comment addressed. It appears irrigated sod lawn has been proposed around the entire site except in the landscaped area along the west property line. In the Key on Sheet L-1.0 there is a symbol for restored lawn, though staff did not locate any such areas on the plan. If not proposed, this item shall be removed from the Key). (The Key has been modified to indicate restored seed lawn at areas disturbed in the right-of-way or adjacent properties).
- **The words “one year” shall be replaced with “30 days” in Note 4.** (Comment rescinded. The revised landscape plan contains different general planting notes).

- **Note 11 references the Jackson Road right-of-way. Revise accordingly. (Comment rescinded. The revised landscape plan contains different general planting notes).**
- **Trees identified for protection during construction and the means of protection shall be identified on the landscape plan. No construction shall occur until tree protection has been installed and approved by the Community Development Director. (Comment remains as a notation).**

Trash Receptacle Screening

No dumpster is proposed. If a dumpster is proposed in the future, an amended site plan shall be submitted for administrative review to ensure the location and screening comply with the zoning ordinance standards. **A note reiterating the prior sentences shall be added to Sheet C-3.0. (Comment addressed. A note has been added to the plan).**

Parking

For self-storage, the zoning ordinance requires four spaces per 1,000 square feet of office plus one per employee working the largest shift. The parking calculations within the Site Data Table on Sheet C-3.0 indicates five parking spaces are required. Three parking spaces are proposed. **The site plan notes a variance to allow a reduction in parking is required. (Comment outstanding. A variance is required from the Zoning Board of Appeals). (Comment rescinded. The revised plan provides the required number of parking spaces). It is unclear how vehicles would maneuver out of the proposed parking spaces – clarify intended circulation for vehicles exiting proposed parking spaces. (Comment partially addressed. A paved area adjacent to the parking spaces has been provided. A ‘No Parking’ sign and hatched pavement striping shall be provided to deter parking in this area. (Comment addressed. Sheet C-3.0 shows the aforementioned items). A ‘No parking’ sign detail and hatched pavement striping detail shall be provided). (Comment outstanding. A ‘No Parking’ sign detail has not been provided). (Comment addressed. A ‘No Parking’ sign detail has been provided on Sheet C-9.0).**

The zoning ordinance requires each individual parking space (with the exception of barrier free spaces) be delineated by dual stripes, two feet apart centered on the dividing lines and painted white. Revise the site plan to show the box pattern, and provide a parking stall striping detail. If the required striping is not provided, a variance must be requested from the Zoning Board of Appeals. (Comment partially addressed. The site plan has been revised to show the box pattern with a note regarding dual striping. However, a parking stall striping detail has not been provided). (Comment addressed. A double striping detail has been provided on Sheet C-9.0). A “Van Accessible” sign detail for the barrier-free parking shall also be provided (the sign legend on Sheet C-3.0 states refer to detail sheet for sign details, but no sign details are provided on Sheet C-9.0). (Comment addressed. Sign details have been provided on Sheet C-9.0).

All dimensions for drive widths and parking space depth shall be revised. The site plan measures drive widths to the back of curb; road measurement surface is taken between the edges of the gutter pan (drive width shall be provided between the edges of the gutter pan). Furthermore, gutter pan shall not be included in the measurement of parking space depth. Revise accordingly. (Comments outstanding. The parking space depth shall be measured to the edge of the gutter pan (parking space depth (length) may be reduced to 17 feet where a vehicle will overhang a seven-foot-wide sidewalk or landscaped area). (Comment addressed. Dimensions and General Note 1 on Sheet C-3.0 have been revised accordingly). Also, the driveway width is proposed at 22 feet; 25 feet is required between the edges of the gutter pan. If not provided, a variance is required from the Zoning Board of Appeals. (Comment outstanding. A variance is required from the Zoning Board of Appeals). (Comment rescinded. Driveway width has been revised to meet ordinance requirements). Furthermore, the drive aisle east of Building 3 is 18.5 feet in width; 20 feet is required for one-way drives and 24 feet is required for two-way drives. If not provided, a variance is required from the Zoning Board of Appeals). (Comment outstanding. A variance is required from the Zoning Board of Appeals). (Comment rescinded. Drive width has been revised to meet ordinance requirements).

Note the landscape plan shows snow storage areas, and the site plan indicates areas with mountable curb and gutter for snow storage areas.

Off-Street Loading Requirements

The zoning ordinance requires two loading spaces for a development of this size (one space plus one space for each 20,000 square feet in excess of 20,000 square feet). Such loading and unloading spaces must be an area 10 feet by 50 feet, with a 15-foot height clearance. **No loading spaces are proposed, so a variance is required from the Zoning Board of Appeals.** (Comment outstanding. A variance is required from the Zoning Board of Appeals). (Comment rescinded. A loading area has been added to the revised plans (located at the north end of the site)). **The loading calculations in the Site Data Table on Sheet C-3.0 shall also be revised.** (Comment addressed. The aforementioned calculation has been updated).

Signs

The zoning ordinance requires the area, quantity, location, and dimensions of all signs to be provided with the preliminary site plan. The site plan does not show the location of a monument sign. (A monument sign is now shown west of the driveway. A variance for the sign location is required as the monument sign does not meet the minimum setback from the road right-of-way. (Comment outstanding. A variance is required from the Zoning Board of Appeals). (Comment rescinded. The plan now proposes a 20 square foot sign which would be a part of the stacked stone wall located parallel to White Lake Road). Also, the zoning ordinance section number referenced for signage is incorrect and shall be removed). (Comment outstanding). (Comment addressed. The label has been revised to remove reference to the ordinance section number). While signage details were not provided, staff can administratively review and approve signage. Any/all signage would be required to comply with the zoning ordinance.

Outdoor Lighting

Site lighting is required to comply with the zoning ordinance. Information on site lighting must be provided (photometric plan and complete lighting fixture specification sheets) and will be reviewed in detail during final site plan. While the site plan shows light pole locations and the utility plan and site plan show wall-pack lighting, outdoor lighting is reviewed and approved via a photometric plan and required attachments. **All luminaries shall be removed from existing sheets in the plan set.** (Comment outstanding. Luminaries are still shown on the building elevations and site plan). (Comment addressed. All lighting has been removed from the revised plans). **Additionally, Note 5 on Sheet C-3.0 shall be removed.** (Comment addressed. The previous Note 5 has been removed).

Staff Analysis – Special Land Use

Special land uses are evaluated using the 11 standards listed in Article 6, Section 10 of the zoning ordinance (attached). The ordinance requires the Planning Commission find affirmatively to each of the standards if the special land use is to be approved. Conditions or limitations may be imposed on a special land use approval by the Planning Commission. **If the Planning Commission decides to approve the special land use, staff recommends the following condition:**

- **24-hour self-storage shall be prohibited; the self-storage facility shall be closed daily between 10:00 p.m. and 6:00 a.m. (Comment remains as a notation. General Note 6 has been added to Sheet C-3.0 reiterating the previous statement).**

Planning Commission Options / Recommendation

The Planning Commission may recommend approval, approval with conditions, or denial of the preliminary site plan to the Township Board; action on the special land use is determined by the Planning Commission. ~~**Staff recommends the plans be revised and resubmitted to address the items identified in this review. A list of any requested variances shall also be provided. The outstanding comments on Page 1 shall be addressed as authorization to make this development application has not been submitted. Note noncompliance with zoning ordinance standards is being driven by the extent of development on a 2.14-acre site. The number and/or size of buildings could be reduced to achieve conformance with the zoning ordinance. If considered by the Planning Commission, any recommendation of approval of the preliminary site plan or approval of the special land use shall be conditioned on the Applicant addressing all staff and consultant review comments and recommendations, and requesting and receiving the necessary variances from the Zoning Board of Appeals.**~~ (Staff recommends the project is eligible for consideration by the Planning Commission. Any recommendation of approval of the preliminary site plan or approval of the special land use shall be conditioned on the Applicant addressing all staff and consultant review comments and recommendations, and requesting and receiving the necessary variances from the Zoning Board of Appeals).

The following plans were reviewed:

- Plans prepared by PEA Group dated February 2, 2023 (revision date ~~May 30~~~~June 29~~October 24, 2023). The utility, grading, and drainage plans for the site are subject to the approval of the Township Engineering Consultant and shall be completed in accordance with the Township Engineering Design Standards.
- Preliminary floor plan and **building** elevations prepared by ~~Detroit Architectural Group~~ dated ~~February 17, 2023~~ PEA Group dated December 15, 2022 (revision date ~~April 17~~~~June 29~~October 20, 2023). Sheet A-1.0 shall be signed and sealed by a design professional. (Comment outstanding). (Comment addressed. The plan is signed and sealed by an architect).
- Sheet C-1.0 (topographic survey) shall be signed and sealed by a licensed professional surveyor. (Comment outstanding). (Comment addressed. The survey is signed and sealed by a surveyor).



Fire Department
Charter Township of White Lake

7420 Highland Road
White Lake, MI 48383
Office (248) 698-3993
www.whitelaketwp.com/fire

Site / Construction Plan Review

To: Sean O'Neil, Planning Department Director

Date: 12/21/2023

Project: GINKO SELF STORAGE

Job #: 2002-248A

Date on Plans: 10/24/2023

The Fire Department has the following comments with regards to the 4th review of preliminary site plans for the project known as Ginko Self Storage.

1. The access drive and parking lot shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all weather driving capabilities.
2. The access drive shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches.
3. The required turning radius shall accommodate the largest Fire Department apparatus (40') and provide a turn radius profile showing apparatus movement on future plans. **Needs to be shown throughout the site plan. (Needs to show movement from the middle drive between building #2 & #3 moving North and turning to the West towards building #1).**
4. The angle of approach/Departure to and from White Lake roads shall not exceed 8 degrees.
5. Placement of "No Parking Fire Lane" Signs will be evaluated and installed prior to Certificate of Occupancy being issued.
6. The use of traffic calming devices shall be prohibited unless approved by the fire code official. Plans **must** be submitted for approval if traffic calming devices are being considered for use.
7. Plans for proposed access gate **must** be submitted to the fire code official for approval. **Please provide Fire Dept. operation instructions as well as how to operate the gate during the times of power outages.**
8. Dead-end fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with **Table D103.4**.

The fire Dept. has no further comments until the above highlighted comments have been addressed

Jason Hanifen
Fire Marshal
Charter Township of White Lake
(248)698-3993
jhanifen@whitelaketwp.com

Plans are reviewed using the International Fire Code (IFC), 2015 Edition and Referenced NFPA Standards.



Fire Department
Charter Township of White Lake

7420 Highland Road
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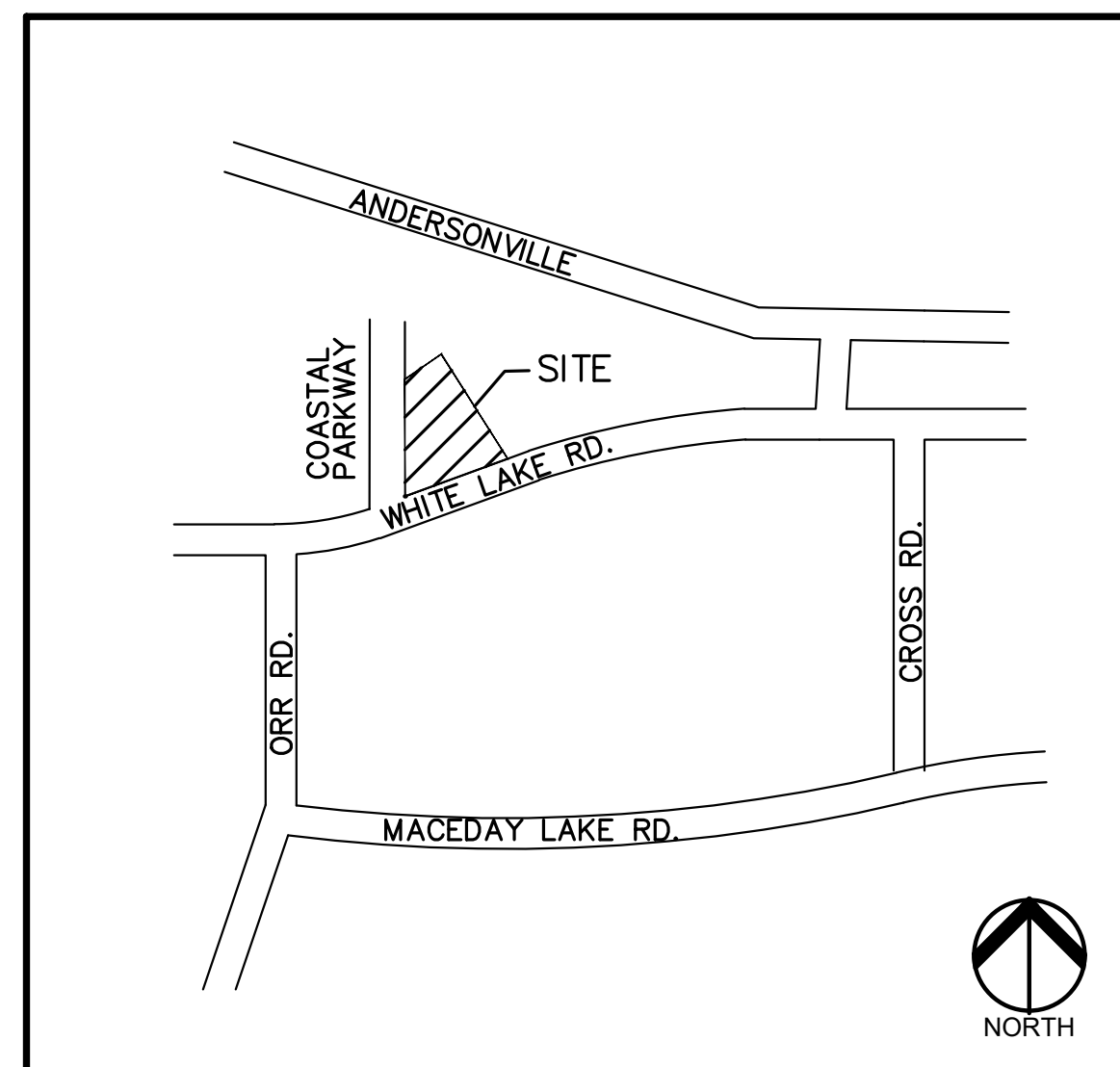
SITE PLAN APPROVAL

GINKO SELF STORAGE

WHITE LAKE ROAD

WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

PERMIT / APPROVAL SUMMARY		
DATE SUBMITTED	DATE APPROVED	PERMIT / APPROVAL
2/2/2023		SPA AND SLU APPROVAL



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS	
NUMBER	TITLE
	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-3.0	PRELIMINARY SITE PLAN
C-3.1	FIRE TRUCK TURNING MOVEMENTS
C-4.0	PRELIMINARY GRADING PLAN
C-6.0	PRELIMINARY UTILITY PLAN
C-9.0	NOTES AND DETAILS
C-9.1	DETAILS
L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
A-1.0	PRELIMINARY FLOOR PLAN AND BUILDING ELEVATIONS

DESIGN TEAM

<p>OWNER</p> <p>GINKO INVESTMENT COMPANY, LLC 2438 NORTH ROCHESTER ROAD OAKLAND TOWNSHIP, MICHIGAN 48363 CONTACT: JOHN SUTPHIN PHONE: (248) 880-8093 EMAIL: JSUTPHIN@USA.NET</p>	<p>CIVIL ENGINEER</p> <p>PEA GROUP 1849 POND RUN AUBURN HILLS, MICHIGAN 48326 CONTACT: JAMES P. BUTLER, PE PHONE: 844.813.2949 EMAIL: JBUTLER@PEAGROUP.COM</p>
<p>DEVELOPER</p> <p>MICHAEL GRASSER 2276 GARLAND AVENUE SYLVAN LAKE, MICHIGAN 48320 PHONE: (248) 505-4744 EMAIL: BOCCEMG@CLOUD.COM</p>	<p>LANDSCAPE ARCHITECT</p> <p>PEA GROUP 7927 NEMCO WAY, STE. 115 BRIGHTON, MI 48116 CONTACT: JANET EVANS PHONE: 844.813.2949 EMAIL: JEVANS@PEAGROUP.COM</p>



REVISIONS	
DESCRIPTION	DATE
PER AGENCIES COMMENTS	5/30/2023
PER AGENCIES COMMENTS	6/29/2023
PER AGENCIES COMMENTS	8/4/2023
PER AGENCIES COMMENTS	9/22/2023
PER AGENCIES COMMENTS	10/24/2023



LEGAL DESCRIPTION

Part of the North 1/2 of Section 01, T.3 N., R.8 E., White Lake Township, Oakland County, Michigan, described as follows:

Unit No. 4 of "Prospectors Square" Condominium as recorded in Liber 22118, Page 870, Oakland County Records.

BENCHMARKS: (PER NAVD88 DATUM)

SITE B.M. #1: STEEL GEAR-PIN IN S.W. FACE OF UTILITY POLE 60'± N. OF N 1/4 CORNER SEC. 1. UTILITY POLE HAS OH TO N. AND WSW ALONG WHITE LAKE RD. ELEV. 1031.58

SITE B.M. #2: STEEL GEAR-PIN IN N. FACE OF UTILITY POLE N. SIDE OF WHITE LAKE RD. ELEV. 1030.85

SITE B.M. #3: STEEL GEAR PIN IN N. FACE OF UTILITY POLE N. SIDE OF WHITE LAKE RD., 100'± W. OF S.E. CORNER OF UNIT #4. ELEV. 1031.65

SITE B.M. #4: (AT CONDO RD. GRADE) STEEL GEAR PIN IN N. FACE OF UTILITY POLE, 40'± N.W. OF S.W. CORNER OF UNIT 4, N.W. CORNER OF WHITE LK. RD. AND GRAVEL ROAD TO N. TO "MARINERS CAVE CONDO" SITE. ELEV. 1031.88

REF. B.M.: (per job # 97626) R.R. SPIKE IN N. FACE OF 36" OAK TREE ALONG S. PARENT PARCEL LINE (ACS SITE), 225' E. OF SECTION LINE AND 20' N. OF S. PARCEL LINE. ELEV.: 1017.78

LEGEND:

- OH-ELEC-W-O- EX. OH. ELEC. POLE & GUY WIRE
- UG-CATV- EX. U.G. CABLE TV & PEDESTAL
- UG-COMM- EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
- UG-ELEC- EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
- - - - EX. GAS LINE
- ⊙ EX. GAS VALVE & GAS LINE MARKER
- EX. TRANSFORMER & IRRIGATION VALVE
- - - - EX. WATER MAIN
- ⊕ EX. HYDRANT, GATE VALVE & POST INDICATOR VALVE
- ⊙ EX. WATER VALVE BOX & SHUTOFF
- ⊙ EX. SANITARY SEWER
- ⊙ EX. SANITARY CLEANOUT & MANHOLE
- ⊙ EX. COMBINED SEWER MANHOLE
- - - - EX. STORM SEWER
- ⊙ EX. CLEANOUT & MANHOLE
- ⊙ EX. SQUARE, ROUND, & BEEHIVE CATCH BASIN
- ⊙ EX. YARD DRAIN & ROOF DRAIN
- ⊙ EX. UNIDENTIFIED STRUCTURE
- ⊙ EX. MAILBOX, SIGN & LIGHTPOLE
- ⊙ EX. FENCE
- ⊙ EX. GUARD RAIL
- ⊙ EX. SPOT ELEVATION
- ⊙ EX. CONTOUR
- ⊙ EX. WETLAND

- ⊙ IRON FOUND / SET
- ⊙ NAIL FOUND / NAIL & CAP SET
- ⊙ BRASS PLUG SET
- ⊙ MONUMENT FOUND / SET
- ⊙ SECTION CORNER FOUND
- ⊙ R M C RECORDED / MEASURED / CALCULATED

PEA GROUP
t: 844.813.2949
www.peagroup.com

STATE OF MICHIGAN
TODD D. SHELLY
PROFESSIONAL SURVEYOR
NO. 4001041111
LICENSED PROFESSIONAL SURVEYOR

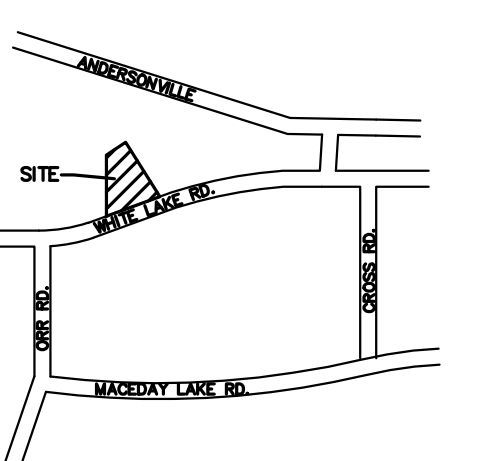
Todd D. Shelly

NORTH

0 15 30 60
SCALE: 1" = 30'

811 Know what's below. Call before you dig.

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CLIENT
GINKO INVESTMENT COMPANY, LLC
2438 ROCHESTER ROAD
OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

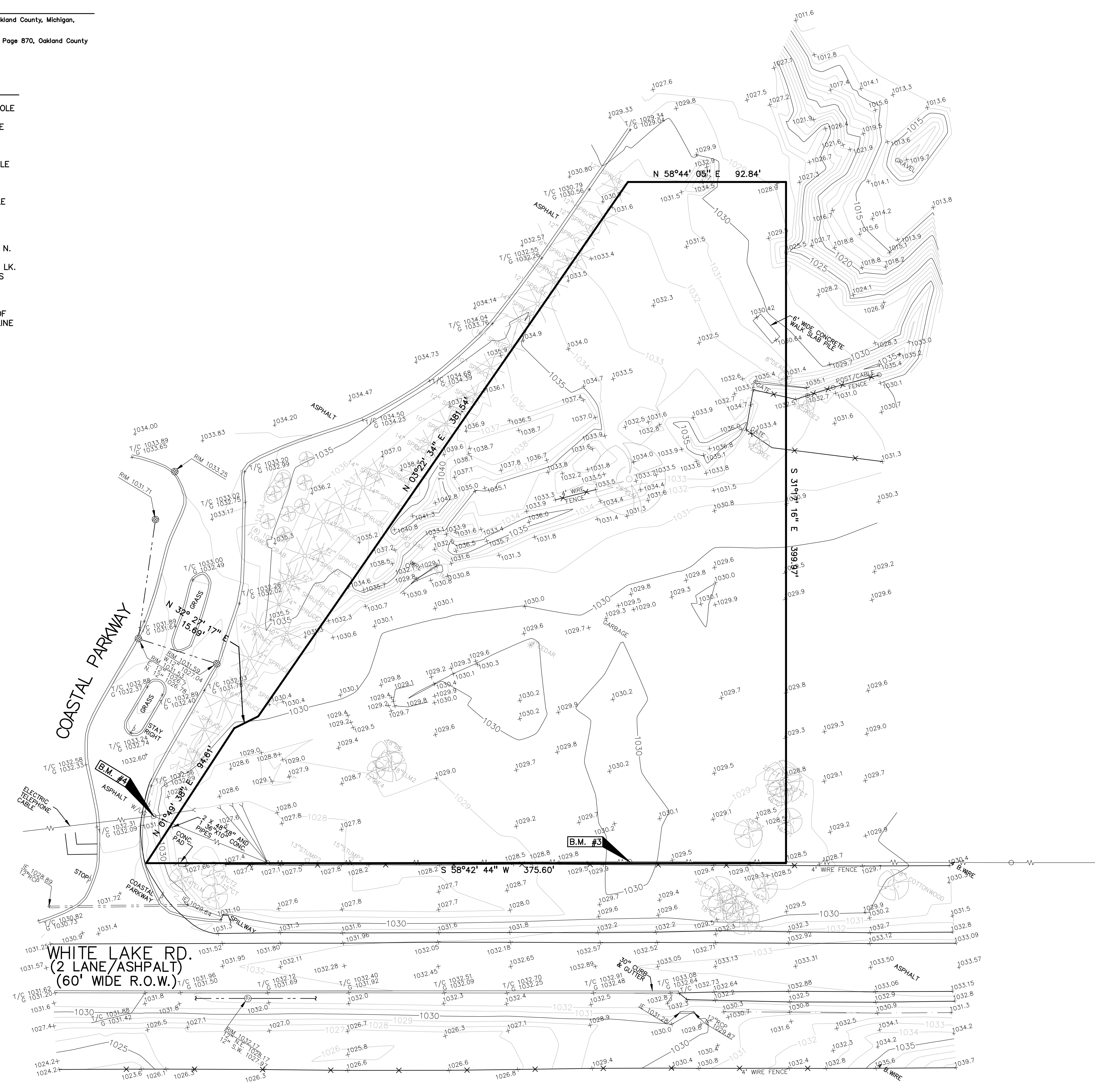
REVISIONS

PER AGENCIES COMMENTS	DATE
PER AGENCIES COMMENTS	05/30/23
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PER AGENCIES COMMENTS	09/22/23
PER AGENCIES COMMENTS	10/24/23

ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023

DRAWING TITLE
TOPOGRAPHIC SURVEY

PEA JOB NO.	2002-248A
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	



NOT FOR CONSTRUCTION **C-1.0**

S:\PROJECTS\2002\2002248A\DWG\SITE_PLAN(C-1.0)DWG-2002248A.dwg

LEGAL DESCRIPTION

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BENCHMARKS: (PER NAVD88 DATUM)

SITE B.M. #1: STEEL GEAR-PIN IN S.W. FACE OF UTILITY POLE 60± N. OF N 1/4 CORNER SEC. 1. UTILITY POLE HAS OH TO N. AND WSW ALONG WHITE LAKE RD. ELEV. 1031.58

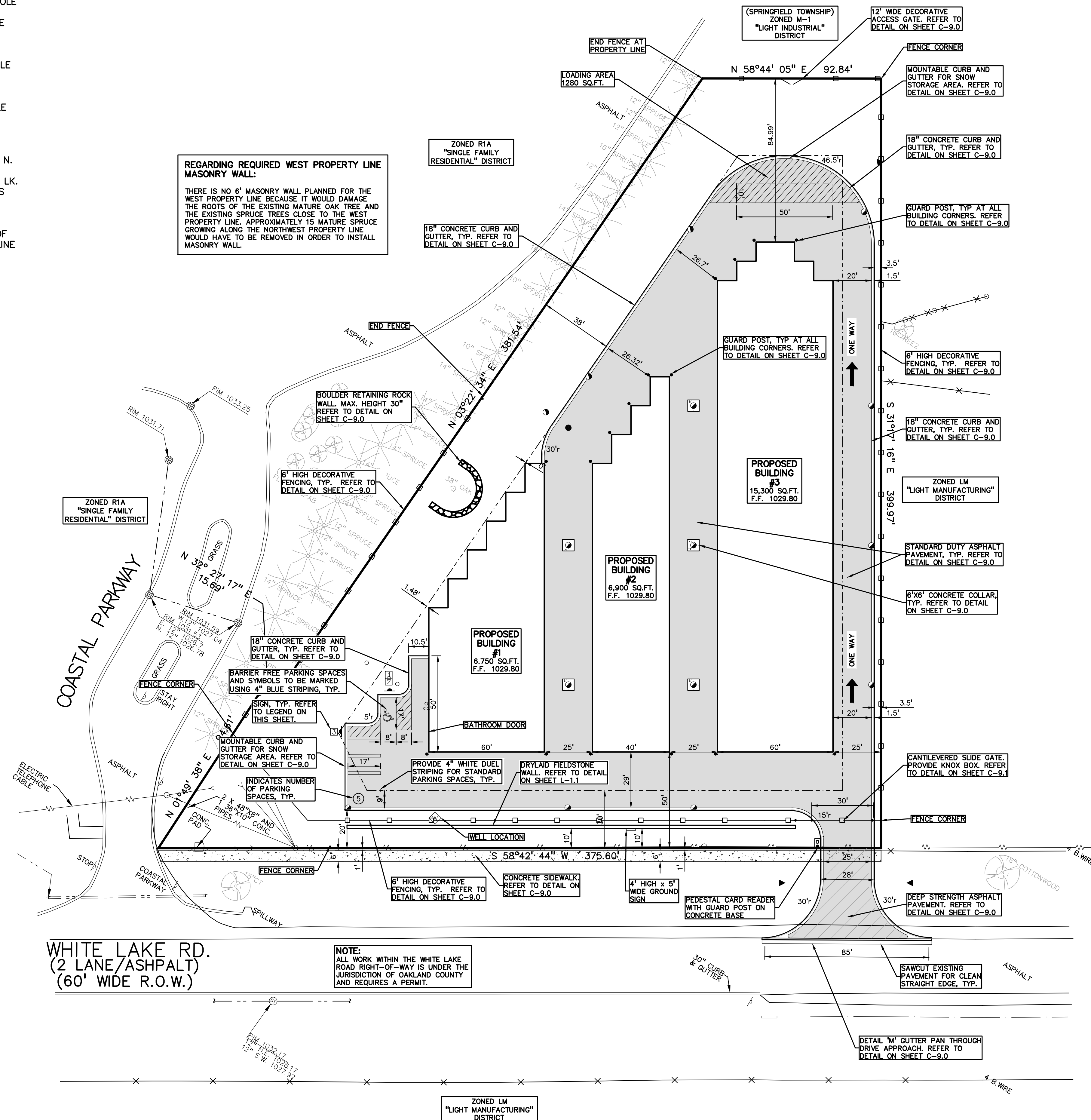
SITE B.M. #2: STEEL GEAR-PIN IN N. FACE OF UTILITY POLE N. SIDE OF WHITE LAKE RD. ELEV. 1030.85

SITE B.M. #3: STEEL GEAR PIN IN N. FACE OF UTILITY POLE N. SIDE OF WHITE LAKE RD., 100± W. OF S.E. CORNER OF UNIT #4. ELEV. 1031.65

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REF. B.M.: (per job # 97626) R.R. SPIKE IN N. FACE OF 36" OAK TREE ALONG S. PARENT PARCEL LINE (ACS SITE), 225' E. OF SECTION LINE AND 20' N. OF S. PARCEL LINE. ELEV.: 1017.78

REGARDING REQUIRED WEST PROPERTY LINE MASONRY WALL:
THERE IS NO 6' MASONRY WALL PLANNED FOR THE WEST PROPERTY LINE BECAUSE IT WOULD DAMAGE THE ROOTS OF THE EXISTING MATURE OAK TREE AND THE EXISTING SPRUCE TREES CLOSE TO THE WEST PROPERTY LINE. APPROXIMATELY 15 MATURE SPRUCE GROWING ALONG THE NORTHWEST PROPERTY LINE WOULD HAVE TO BE REMOVED IN ORDER TO INSTALL MASONRY WALL.



WHITE LAKE RD. (2 LANE/ASHPALT) (60' WIDE R.O.W.)

NOTE: ALL WORK WITHIN THE WHITE LAKE ROAD RIGHT-OF-WAY IS UNDER THE JURISDICTION OF OAKLAND COUNTY AND REQUIRES A PERMIT.

SITE DATA TABLE:

PARCEL NUMBER: 12-01-127-004
 SITE AREA: 2.14 ACRES (93,090 SQ.FT.) NET AND GROSS
 ZONING: LM - LIGHT MANUFACTURING
 PROPOSED USE: COMMERCIAL (28,950 SF)
BUILDING INFORMATION:
 MAXIMUM ALLOWABLE BUILDING HEIGHT = 40 FEET (2 STORIES)
 PROPOSED BUILDING HEIGHT = 1 STORY
 BUILDING FOOTPRINT AREA = 28,950 SQ.FT.
 BUILDING LOT COVERAGE = 31.10%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT:	30'	50'
WEST SIDE:	20'	38'
EAST SIDE:	20'	25'
REAR:	40'	84.99'

PARKING CALCULATIONS:
 COMMERCIAL = MINIMUM 4 PER 1000 SF OF OFFICE + ONE PER EMPLOYEE.
 TOTAL RETAIL PARKING REQUIRED = 5 SPACES
 TOTAL PROPOSED PARKING SPACES = 5 SPACES INC. 1 H/C SPACES

LOADING CALCULATIONS:
 LOADING REQUIRED = 0 TO 20,000 SQ.FT. + 1 SPACE FOR EACH 20,000 SQ.FT. IN EXCESS OF 20,000 SQ.FT. = 2 SPACES (10' x 50') OR 1000 SQ.FT.
 LOADING PROVIDED = 1280 SQ.FT.

SITE SOILS INFORMATION:
 ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR OAKLAND COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:
 50D - UNDISAMMENTS ROLLING TO STEEP

- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL DIMENSIONS SHOWN ARE TO FACE OF GUTTER PAN, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
 - "NO PARKING-FIRE LANE" SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
 - REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
 - REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS.
 - IF A DUMPSTER IS PROPOSED IN THE FUTURE, AN AMENDED SITE PLAN SHALL BE SUBMITTED FOR ADMINISTRATIVE REVIEW TO ENSURE THE LOCATION AND SCREENING COMPLY WITH THE ZONING ORDINANCE STANDARDS.
 - 24 HOUR SELF STORAGE SHALL BE PROHIBITED; THE SELF STORAGE FACILITY SHALL BE CLOSED DAILY BETWEEN 10:00 P.M. AND 6:00 A.M..

- FIRE DEPARTMENT NOTES:**
- THE ACCESS DRIVE AND PARKING LOT SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACES SO AS TO PROVIDE ALL WEATHER DRIVING CAPABILITIES.
 - THE ACCESS DRIVE SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAT 20 FEET, EXCLUSIVE OF SHOULDERS, EXCEPT FOR APPROVED SECURITY GATES IN ACCORDANCE WITH SECTION 503.6, AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF 13.5 FEET.
 - PLACEMENT OF "NO PARKING FIRE LANE" SIGNS WILL BE EVALUATED AND INSTALLED PRIOR TO CERTIFICATION OF OCCUPANCY BEING ISSUED.
 - THE USE OF TRAFFIC CALMING DEVICES SHALL BE PROHIBITED UNLESS APPROVED BY THE FIRE CODE OFFICIAL. PLANS MUST BE SUBMITTED FOR APPROVAL IF TRAFFIC CALMING DEVICES ARE BEING CONSIDERED FOR USE.
 - PROPOSED GATE PLANS MUST BE SUBMITTED TO THE FIRE CODE OFFICIAL FOR APPROVAL.
- REQUESTED VARIANCES:**
- APPROVAL TO ELIMINATE THE REQUIREMENT FOR THE INSTALLATION OF A 6 FOOT HIGH BERM, OR A 3 FOOT HIGH BERM AND A 6 FOOT HIGH MASONRY SCREEN WALL ALONG THE WEST PROPERTY LINE.
 - APPROVAL TO INSTALL A 20 FOOT GREENBELT IN LIEU OF A 38 FOOT WIDE EXTENSIVE LAND FORM BUFFER ALONG THE WHITE LAKE ROAD RIGHT-OF-WAY.

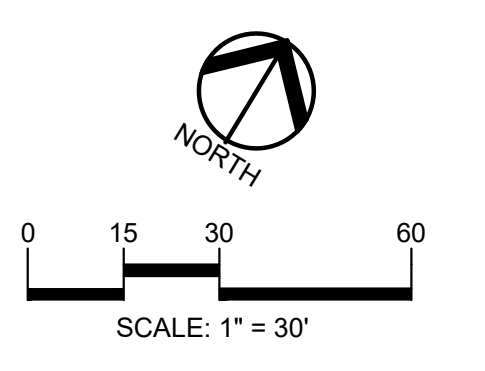
LEGEND:

[Symbol]	CONCRETE PAVEMENT
[Symbol]	ASPHALT PAVEMENT
[Symbol]	GRAVEL
[Symbol]	WETLAND
[Symbol]	CONCRETE CURB AND GUTTER
[Symbol]	REVERSE GUTTER PAN
[Symbol]	SETBACK LINE
[Symbol]	SIGN LIGHTPOLE
[Symbol]	FENCE GUARD RAIL

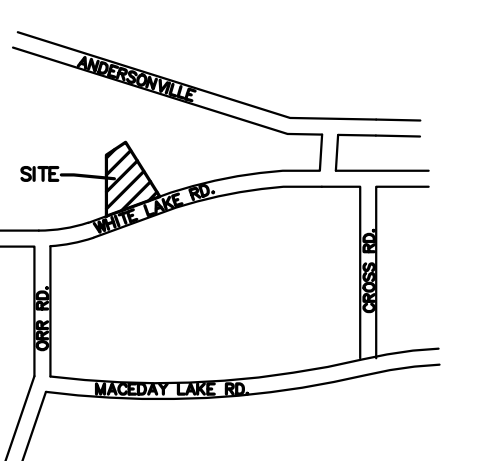
SIGN LEGEND:

[Symbol]	"BARRIER FREE" SIGN	1
[Symbol]	"VAN ACCESSIBLE" SIGN	2
[Symbol]	"NO PARKING" SIGN	3

REFER TO DETAIL SHEET FOR SIGN DETAILS



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2438 ROCHESTER ROAD
OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

REVISIONS

PER AGENCIES COMMENTS	05/30/23
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PER AGENCIES COMMENTS	08/04/23
PER AGENCIES COMMENTS	09/22/23
PER AGENCIES COMMENTS	10/24/23

ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023
DRAWING TITLE
PRELIMINARY SITE PLAN

PEA JOB NO.	2002-2484
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	

NOT FOR CONSTRUCTION **C-3.0**

LEGAL DESCRIPTION

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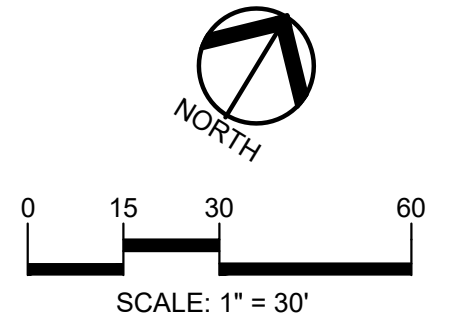
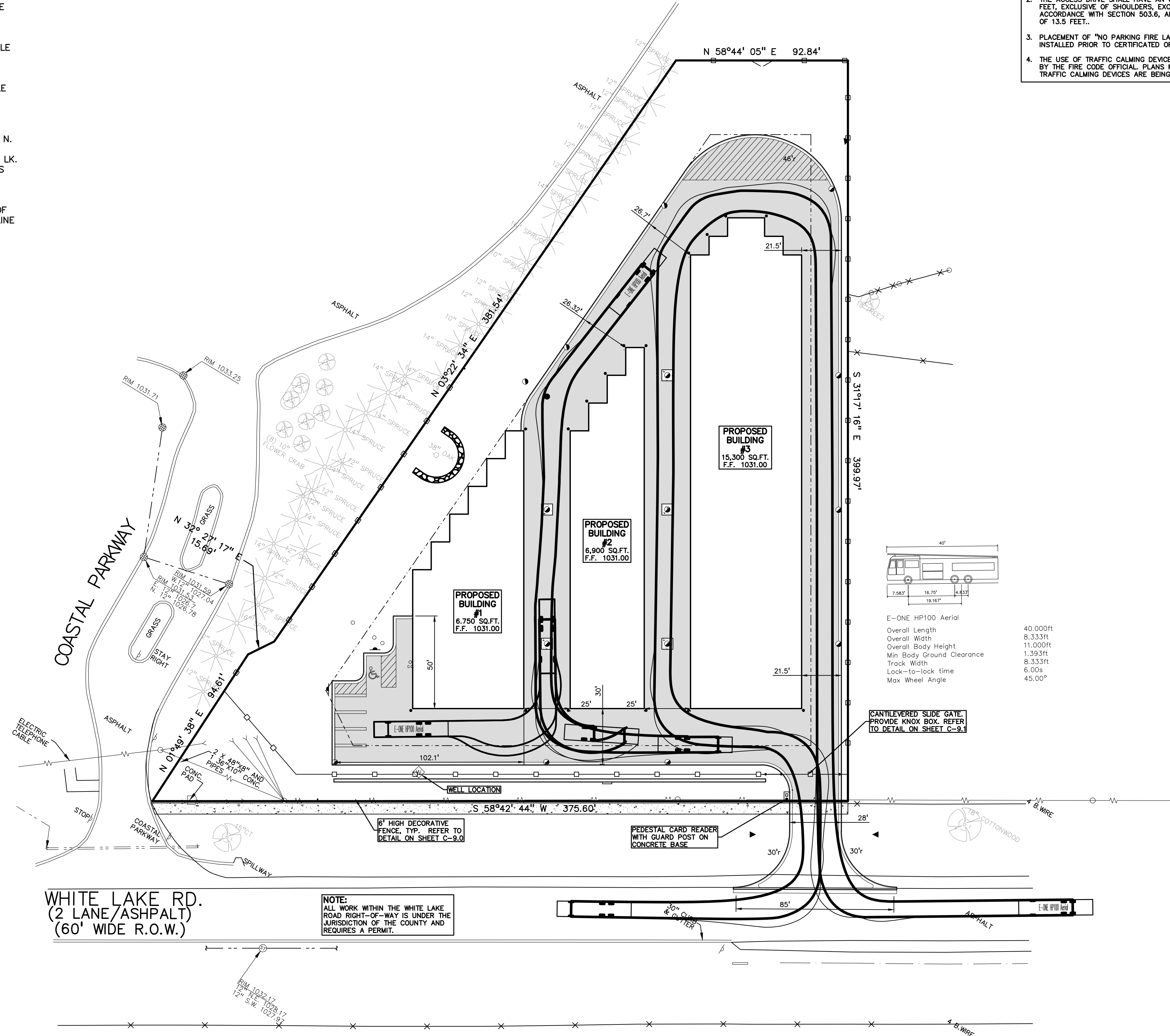
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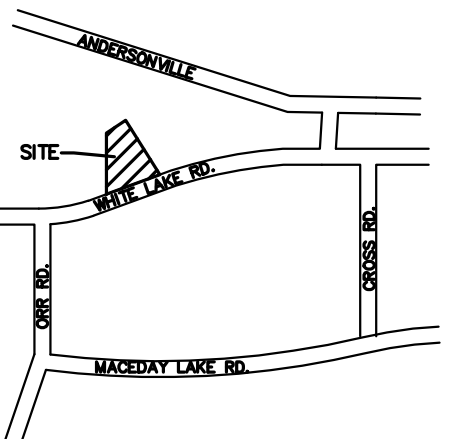
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CLIENT
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2438 ROCHESTER ROAD
OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

REVISIONS

PER AGENCIES COMMENTS	05/30/23
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ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023

DRAWING TITLE
FIRE TRUCK MOVEMENT

PEA JOB NO.	2002-248A
P.M.	JPB
DN	SWS
DES.	SWS

DRAWING NUMBER:

S:\PROJECTS\2002\2002248A\DWG\SITE_PLAN\C-3.1\FIRE-2002248A.dwg

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RETAINING WALL NOTE:
TOP OF WALL (T/W) AND BOTTOM OF WALL (B/W) GRADES ARE THE FINISH GRADE AT THE TOP AND BOTTOM OF THE RETAINING WALL, NOT ACTUAL TOP AND BOTTOM OF THE WALL STRUCTURE.

EARTHWORK BALANCING NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

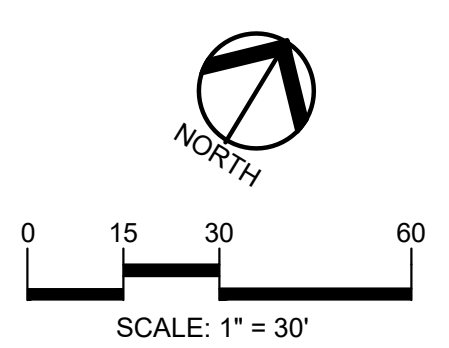
GRADING LEGEND:

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION: TYPICALLY TOP OF PAVEMENT IN PAVED AREAS, GUTTER GRADE IN CURB LINES.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED REVERSE GUTTER PAN
- PROPOSED RIDGE LINE
- PROPOSED SWALE/DITCH

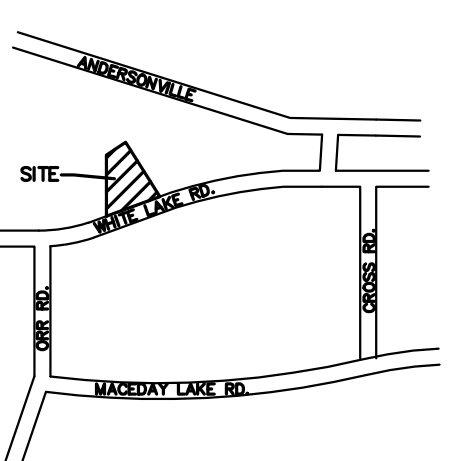
ABBREVIATIONS

T/C = TOP OF CURB	G = GUTTER GRADE
T/P = TOP OF PAVEMENT	FG = FINISH GRADE
T/S = TOP OF SIDEWALK	RIM = RIM ELEVATION
T/W = TOP OF WALL	B/W = BOTTOM OF WALL

REFER TO GRADING NOTES ON SHEET C-9.0



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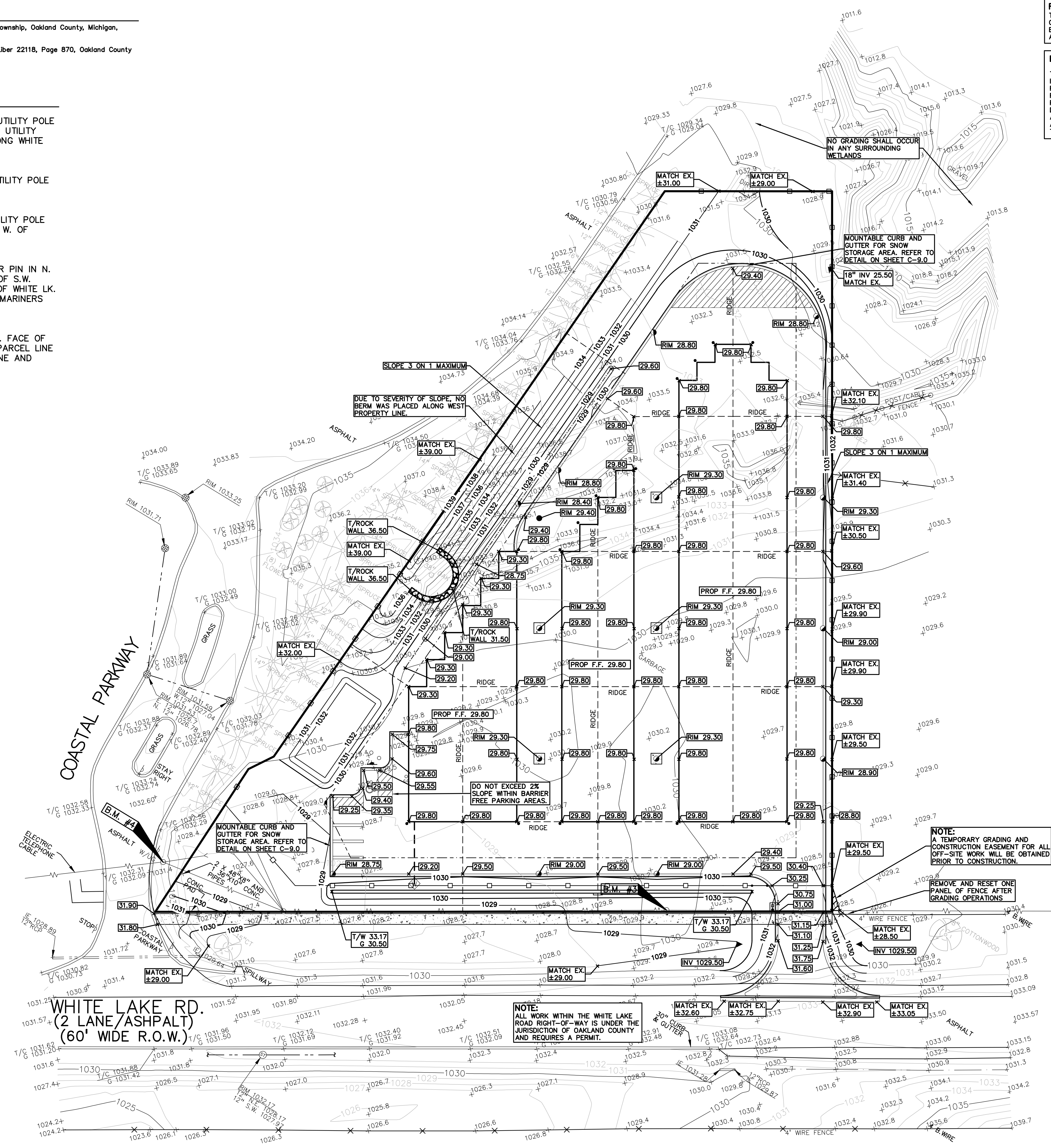
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GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

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DRAWING TITLE
PRELIMINARY GRADING PLAN

PEA JOB NO.	2002-248A
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	



NOT FOR CONSTRUCTION

C-4.0

S:\PROJECTS\2002\2002248A\DWG\SITE_PLAN\PEA_C-4_01940-2023248A.dwg

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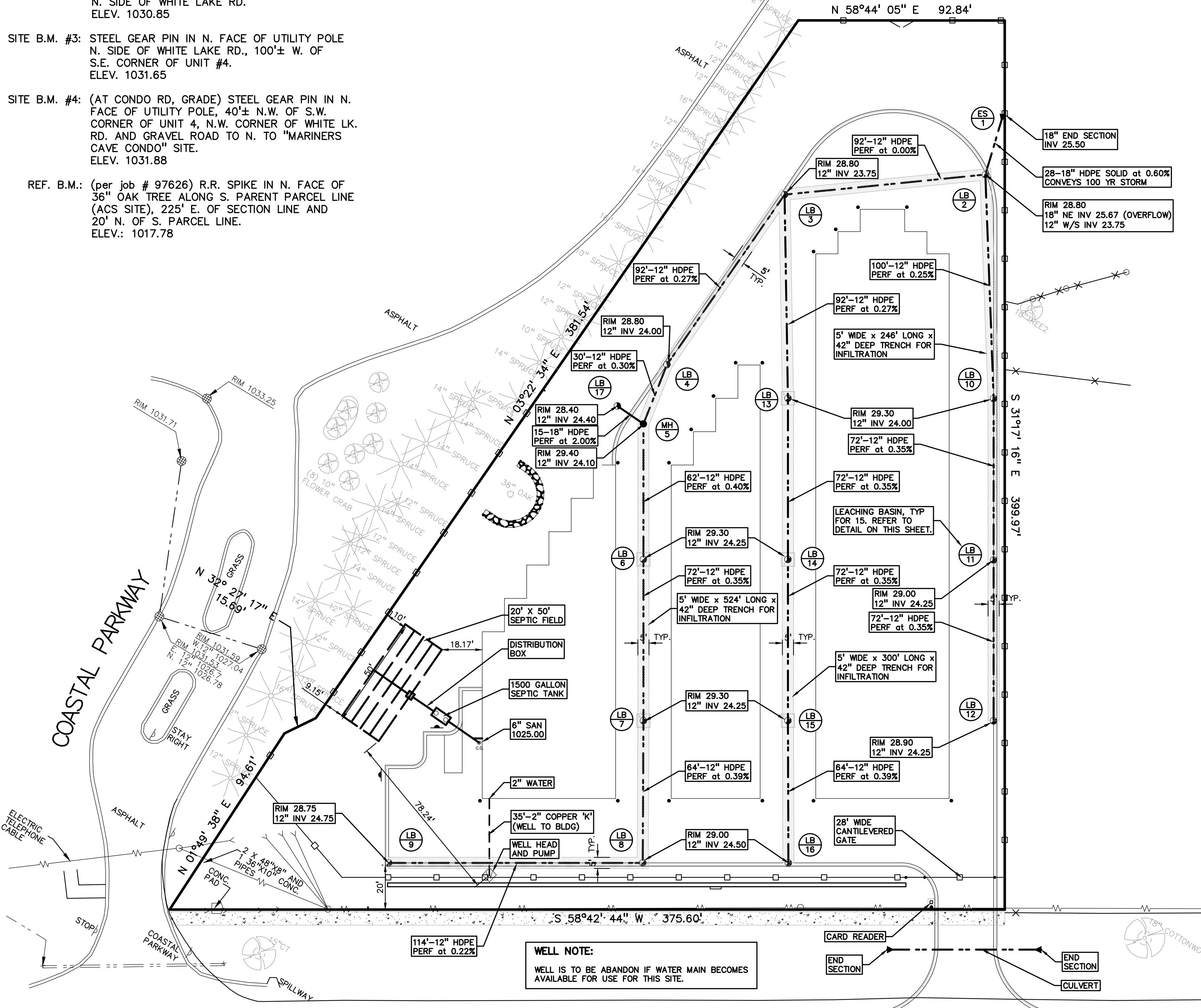
SITE B.M. #2: STEEL GEAR-PIN IN N. FACE OF UTILITY POLE N. SIDE OF WHITE LAKE RD. ELEV. 1030.85

SITE B.M. #3: STEEL GEAR PIN IN N. FACE OF UTILITY POLE N. SIDE OF WHITE LAKE RD., 100± W. OF S.E. CORNER OF UNIT #4. ELEV. 1031.65

SITE B.M. #4: (AT CONDO RD. GRADE) STEEL GEAR PIN IN N. FACE OF UTILITY POLE, 40± N.W. OF S.W. CORNER OF UNIT 4, N.W. CORNER OF WHITE LK. RD. AND GRAVEL ROAD TO N. TO "MARINERS CAVE CONDO" SITE. ELEV. 1031.88

REF. B.M.: (per job # 97626) R.R. SPIKE IN N. FACE OF 36" OAK TREE ALONG S. PARENT PARCEL LINE (ACS SITE), 225' E. OF SECTION LINE AND 20' N. OF S. PARCEL LINE. ELEV.: 1017.78

STORM OUTLET NOTE:
NO ADEQUATE STORM SEWER, OPEN DITCH OR ROAD DITCH IS AVAILABLE FOR STORM SEWER DISPOSAL. SINCE SOIL COMPOSITION IS OPTIMUM AND GROUND WATER TABLE IS SUITABLE FOR PERCOLATION, TOWNSHIP STANDARD LEACHING BASINS AND STONE TRENCH ARE PROPOSED. IF THE SYSTEM BECOMES RESTRICTED AN OVERFLOW PIPE IS PROVIDED TO DISCHARGE INTO THE WETLANDS. A GEOTECHNICAL REPORT WILL BE PROVIDED.



WELL NOTE:
WELL IS TO BE ABANDON IF WATER MAIN BECOMES AVAILABLE FOR USE FOR THIS SITE.

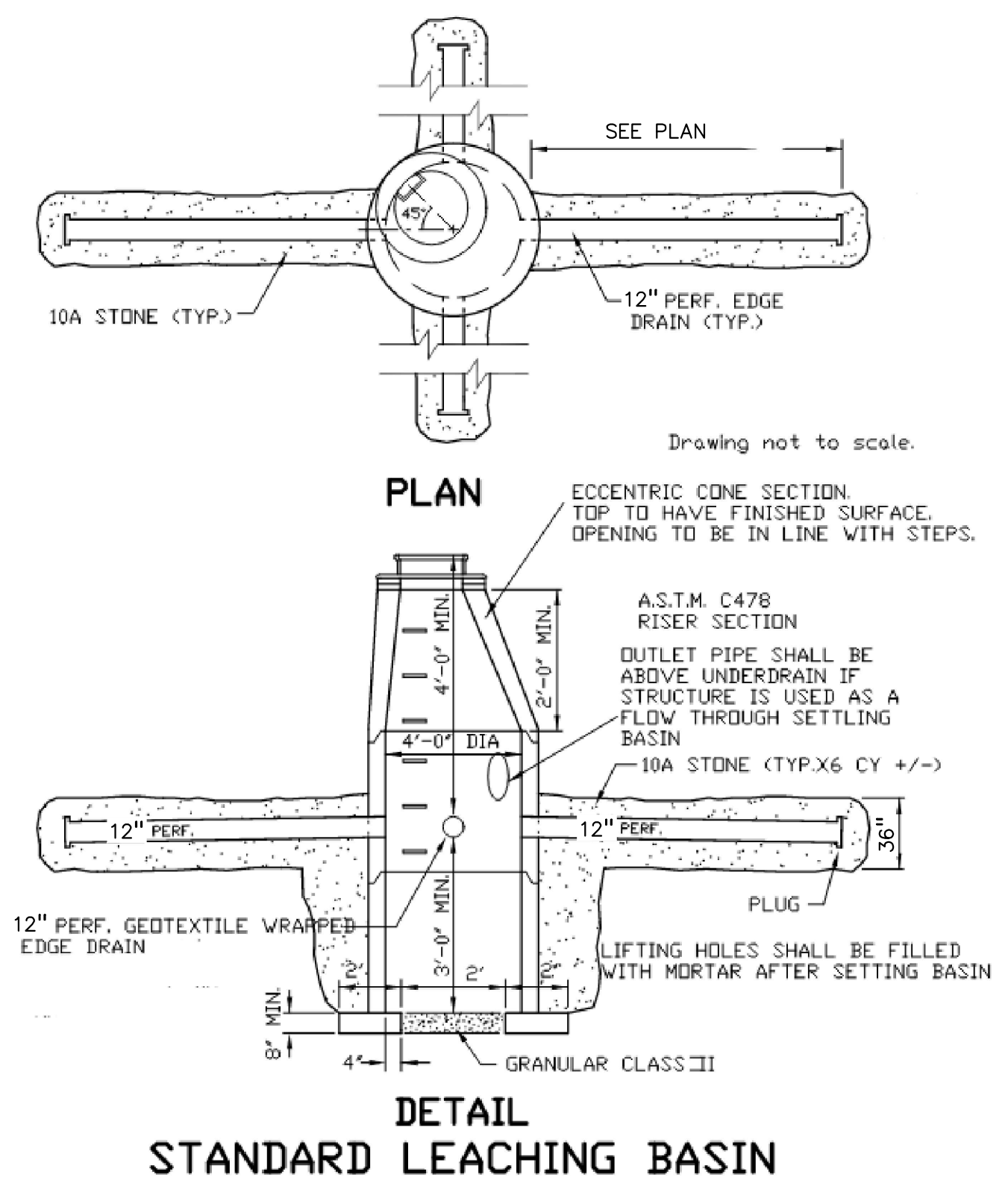
NOTE:
ALL WORK WITHIN THE WHITE LAKE ROAD RIGHT-OF-WAY IS UNDER THE JURISDICTION OF OAKLAND COUNTY AND REQUIRES A PERMIT.

WHITE LAKE RD. (2 LANE ASPHALT) (60' WIDE R.O.W.)

Site Drainage Data	
Total Area (A):	2.15 acre
Weighted Coefficient of Runoff (C):	0.62
Rainfall Intensity	
Time of Concentration (Tc)	10.00 min
Since Tc <= 15 min, I1 = 2.0 in/hr	2.00 in/hr
I1 = 30.2 i / (T + 9.17) ^{0.81}	
I10 = 50.12 / (T + 9.17) ^{0.81}	4.58 in/hr
I100 = 83.3 / (T + 9.17) ^{0.81}	7.62 in/hr
100-Year Peak Inflow	10.16 cfs
Q100h = C(I100)A	
CPVC: Channel Protection Volume	
Vcpcv = (4,719)CA	6,290 cf
Retention / Infiltration Storage Volume (Vrb)	
Vrb = (18,985 x C x A) - Vcpcv	19,017 cf
Design Requirements	
CPVC	6,290 cf
Retention Storage Volume	19,017 cf
Provided Pipe Volume:	
Average Infiltration Area (At)	5,350 sf
At = 1070 LF storm pipe x 5' wide	
Surface Storage Volume (Vss)	
Vss = At x H (3' high) x .40	6,420 cf
minus 6" storm pipe void x .40	336 cf
	6,084 cf
Subsurface Storage Volume (Vsubsurface)	
Vsubsurface = NO Engineered Sub Soils	0 cf
Infiltration Volume (Vi) (based on 6 Hr period)	
Ksat = Infiltration Rate per "A" soil group	4.58 in/hr
Sf = Ksat safety factor	1
Vi = (Ksat x Sf x 6 x At) / 12 in	12,252 cf
Total Sedimentation Storage Volume (Vt)	
Vt = Vss + Vsubsurface + Vi	18,338 cf
Pipe Storage Design	
Length =	1070.00 ft.
Pipe Diameter =	12.00 in.
c.f. / ft. =	0.7850 cf/ft
Volume =	839.95 cf
Total Volume =	19175.45 cf ok

UTILITY LEGEND:

- OH-ELEC-W-O: EX. OH. ELEC. POLE & GUY WIRE
- UG-CATV: EX. U.G. CABLE TV & PEDESTAL
- UG-COMM: EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
- UG-ELEC-MH: EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
- EX GAS LINE
- EX GAS VALVE & GAS LINE MARKER
- EX TRANSFORMER & IRRIGATION VALVE
- EX WATER MAIN
- EX HYDRANT, GATE VALVE & POST INDICATOR VALVE
- EX WATER VALVE BOX & SHUTOFF
- EX SANITARY SEWER
- EX SANITARY CLEANOUT & MANHOLE
- EX COMBINED SEWER MANHOLE
- EX STORM SEWER
- EX CLEANOUT & MANHOLE
- EX SQUARE, ROUND, & BEEHIVE CATCH BASIN
- EX YARD DRAIN & ROOF DRAIN
- EX UNIDENTIFIED STRUCTURE
- PROPOSED WATER MAIN
- PROPOSED HYDRANT AND GATE VALVE
- PROPOSED TAPPING SLEEVE, VALVE & WELL
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY CLEANOUT & MANHOLE
- PROPOSED STORM SEWER
- PROPOSED STORM SEWER CLEANOUT & MANHOLE
- PROPOSED CATCH BASIN, INLET & YARD DRAIN



SEPTIC CALCULATIONS

Project:	Ginko Self Storage
Location:	White Lake Township, Michigan
Project No.:	2002-248A

Design per the USEPA Onsite Wastewater Treatment System Manual, dated February, 2002 as well as the amount of customers serviced with the Average Tank Size

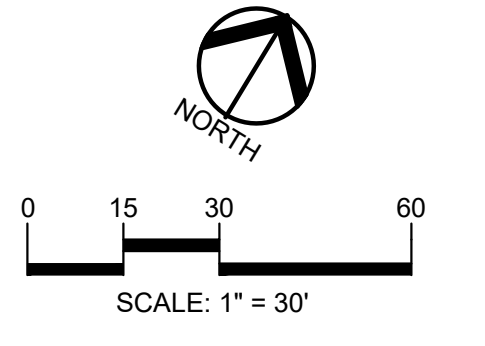
Building Usage:	Office/Sales	50 SF
Current Building Space:		1 Employees
Total Number of Employees:		
Office or Industrial (Flow per Employee): Table 3-4 USEPA 7-16 gal		16 gallons/person/day
Employee Design Flow (Daily Peak Flow):		16 gallons/day
Number of Customer/day	2 Customers	
Public Lavatory (Table 3-4 USEPA) per user	6 gal./customer/day	
Customer Daily Design Usage		12 gallons/day
Peak Facility Design Flow		28 gallons/day
Hydraulic Loading Rate: (for a bed system)	0.40 gpd/ft ²	
Septic Field Area Requirement (Soil Dispersal Area):	Per Table under C.5 of MCSSD	70 sq ft

Proposed Septic Field Calculations

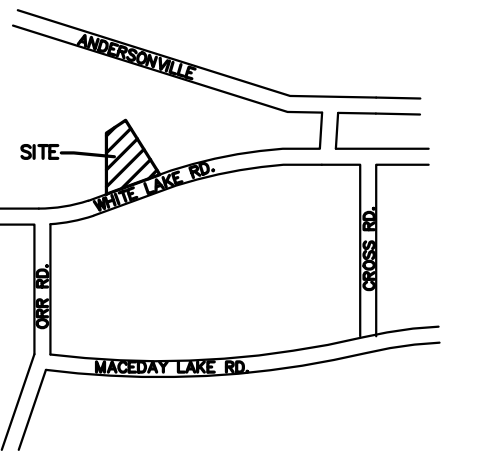
PRIMARY Septic Field Width:	20 ft
PRIMARY Septic Field Length:	50 ft
PRIMARY Septic Field Area:	1,000 sq ft

Septic Tank Calculations

Required Septic Tank Capacity Per Oakland County for Commercial Site for flows under 1000 gal/day is 1500 gallons	
Proposed Septic Tank Capacity:	1,500 gallons



CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE OR WARRANTY IS MADE AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

REVISIONS

PER AGENCIES COMMENTS	05/30/23
PER AGENCIES COMMENTS	06/29/23
PER AGENCIES COMMENTS	08/04/23
PER AGENCIES COMMENTS	09/22/23
PER AGENCIES COMMENTS	10/24/23

ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023

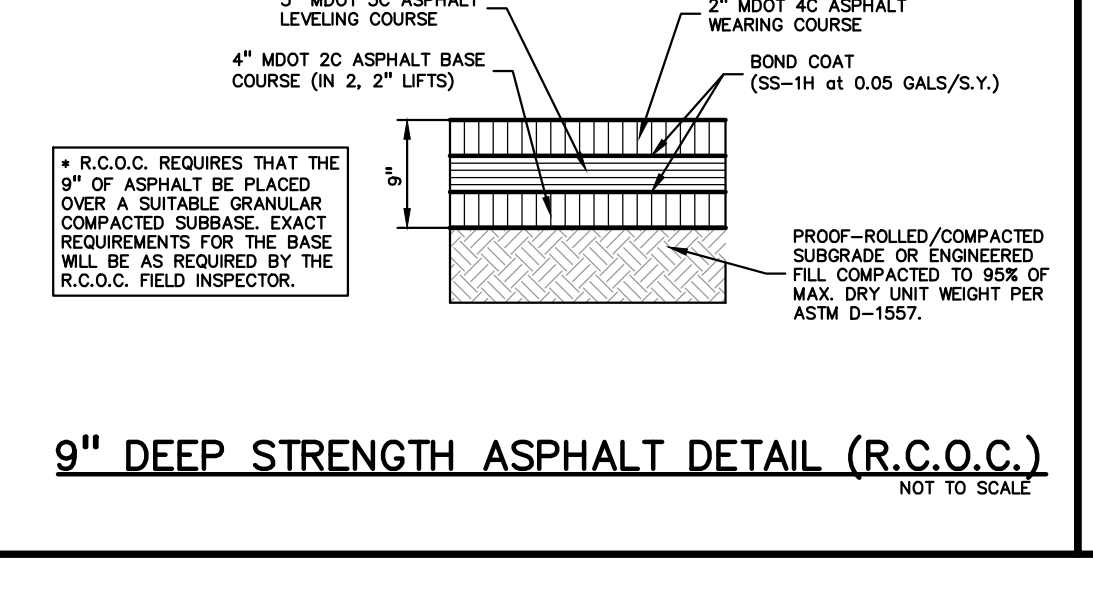
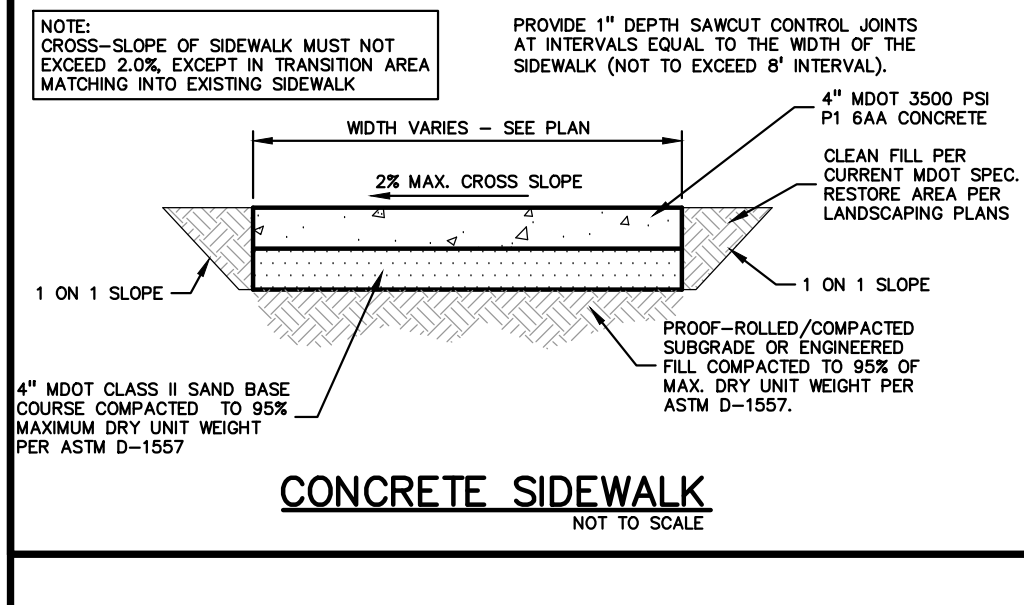
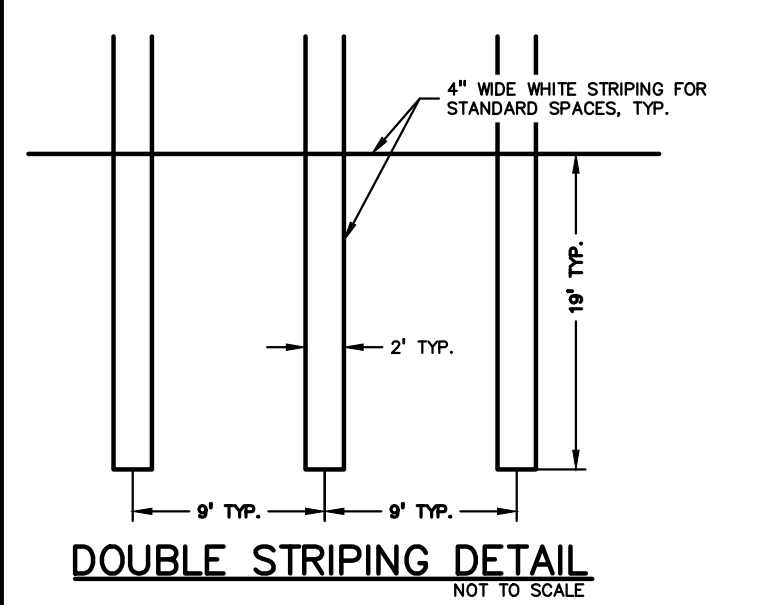
DRAWING TITLE
PRELIMINARY UTILITY PLAN

PEA JOB NO.	2002-248A
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	

- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT OSHA, MDOT AND MUNICIPALITY STANDARDS AND REGULATIONS.
 - THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
 - THE CONTRACTOR SHALL CONTACT THE ENGINEER SHOULD THEY ENCOUNTER ANY DESIGN ISSUES DURING CONSTRUCTION. IF THE CONTRACTOR MAKES DESIGN MODIFICATIONS WITHOUT THE WRITTEN DIRECTION OF THE DESIGN ENGINEER, THE CONTRACTOR DOES SO AT HIS OWN RISK.
 - ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL TOWNSHIP INSPECTION FEES.
 - THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE 811/CALL CLARITY UTILITY LOCATING CENTER, THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. IF NO NOTIFICATION IS GIVEN AND DAMAGE RESULTS, SAID DAMAGE WILL BE REPAIRED AT SOLE EXPENSE OF THE CONTRACTOR. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
 - CONTRACTOR SHALL VERIFY THAT THE PLANS AND SPECIFICATIONS ARE THE VERY LATEST PLANS AND SPECIFICATIONS AND FURTHERMORE, VERIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN APPROVED. ALL ITEMS CONSTRUCTED BY THE CONTRACTOR PRIOR TO RECEIVING FINAL APPROVAL, HAVING TO BE ADJUSTED OR RE-DONE, SHALL BE AT THE CONTRACTORS EXPENSE. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE PLANS AND/OR SPECIFICATIONS, THEY SHALL SEEK CLARIFICATION IN WRITING FROM THE ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO SHALL BE AT SOLE EXPENSE TO THE CONTRACTOR.
 - ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
 - ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
 - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, SIGNAGE, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION). THE DESIGN ENGINEER, OWNER, TOWNSHIP AND STATE SHALL NOT BE HELD LIABLE FOR ANY CLAIMS RESULTING FROM ACCIDENTS OR DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO COMPLY WITH TRAFFIC AND PUBLIC SAFETY REGULATIONS DURING THE CONSTRUCTION PERIOD.
 - THE USE OF CRUSHED CONCRETE IS PROHIBITED ON THE PROJECT WITHIN 100 FEET OF ANY WATER COURSE (STREAM, RIVER, COUNTY DRAIN, ETC.) AND LAKE, REGARDLESS OF THE APPLICATION OR LOCATION OF THE WATER COURSE OR LAKE RELATIVE TO THE PROJECT LIMITS.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND/OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

- PAVING NOTES:**
- IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
 - REFER TO ARCHITECTURAL PLANS FOR DETAILS OF FROST SLAB AT EXTERIOR BUILDING DOORS.
 - CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS SHOULD BE INCREASED AND PLACEMENT OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.
 - ALL EXPANSION JOINTS AND CONCRETE PAVEMENT JOINTS TO BE SEALED.
 - CONCRETE CURBING JOINTING - UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION
 - JOINTS WHEN ADJACENT TO ASPHALT PAVEMENT
 - PLACE CONTRACTION JOINTS AT 10' INTERVALS
 - PLACE 1/2" EXPANSION JOINT AT CATCH BASINS, EXISTING AND PROPOSED SIDEWALK OR EXISTING CURBING.
 - PLACE 1" EXPANSION JOINT
 - AT SPRING POINTS OF INTERSECTIONS OR ONE OF THE END OF RADIUS LOCATIONS IN A CURVE
 - AT 400' MAXIMUM INTERVALS ON STRAIGHT RUNS
 - AT THE END OF RADIUS AT OPPOSITE ENDS IN A CURBED LANDSCAPE ISLAND
 - JOINTS WHEN TIED TO CONCRETE PAVEMENT
 - PLACE CONTRACTION JOINTS OPPOSITE ALL TRANSVERSE CONTRACTION JOINTS IN PAVEMENT
 - PLACE 1/2" EXPANSION JOINT AT CATCH BASINS, EXISTING AND PROPOSED SIDEWALK OR EXISTING CURBING.
 - PLACE 1" EXPANSION JOINT OPPOSITE ALL TRANSVERSE EXPANSION JOINTS IN PAVEMENT
 - CURB AND GUTTER AND CONCRETE SHALL BE TIED TOGETHER SIMILAR TO A LONGITUDINAL LANE JOINT (MDOT B1 JOINT)
 - IN BETWEEN POURS OF PROPOSED CONCRETE CURBING (CONSTRUCTION JOINT):
 - CARRY THE REBAR CONTINUOUSLY BETWEEN POURS
 - IF THE REBAR IS NOT LONG ENOUGH TO CARRY CONTINUOUSLY, THEN TIE TWO PIECES OF REBAR PER THE LATEST MDOT SPECIFICATIONS
 - CONCRETE SIDEWALK JOINTING - UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION
 - PLACE TRANSVERSE CONTRACTION JOINTS EQUAL TO THE WIDTH OF THE WALK WHEN WIDTH IS LESS THAN 8'
 - PLACE TRANSVERSE AND LONGITUDINAL CONTRACTION JOINTS EQUAL TO 1/2 THE WIDTH OF THE WALK WHEN WIDTH IS EQUAL TO OR GREATER THAN 8'
 - PLACE 1" EXPANSION JOINT WHERE ABUTTING SIDEWALK RAMP AND/OR RADIUS IN INTERSECTION
 - PLACE TRANSVERSE 1/2" EXPANSION JOINT AT MAXIMUM OF 100' SPACING
 - PLACE 1/2" EXPANSION JOINT WHEN ABUTTING A FIXED STRUCTURE, OTHER PAVEMENT (CONCRETE PAVEMENT AND DRIVE APPROACHES), UTILITY STRUCTURES, LIGHT POLE BASES AND COLUMNS

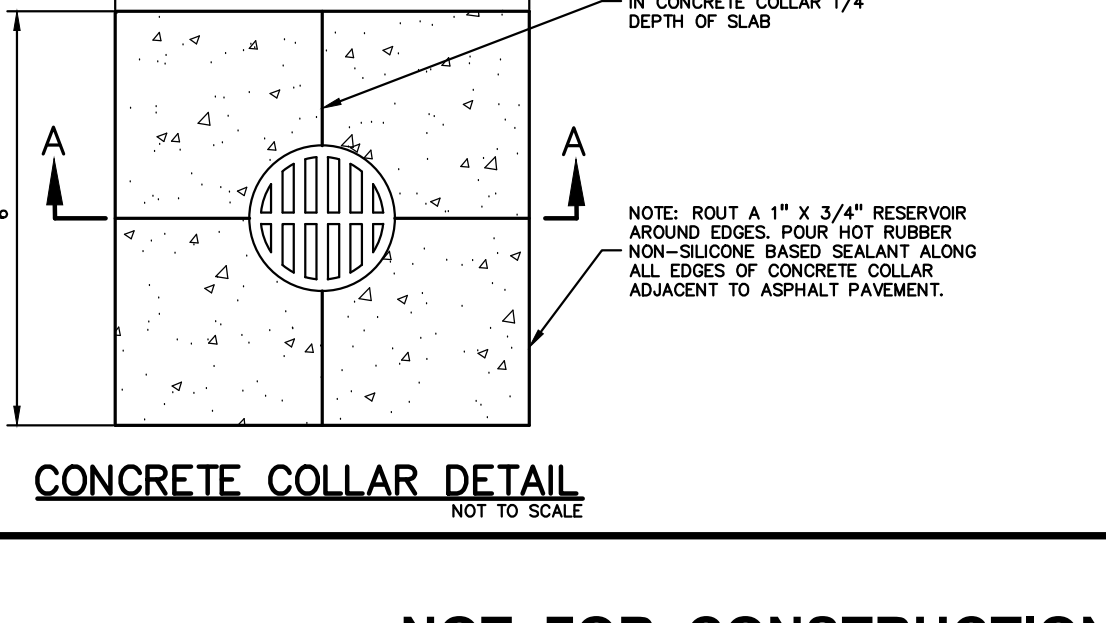
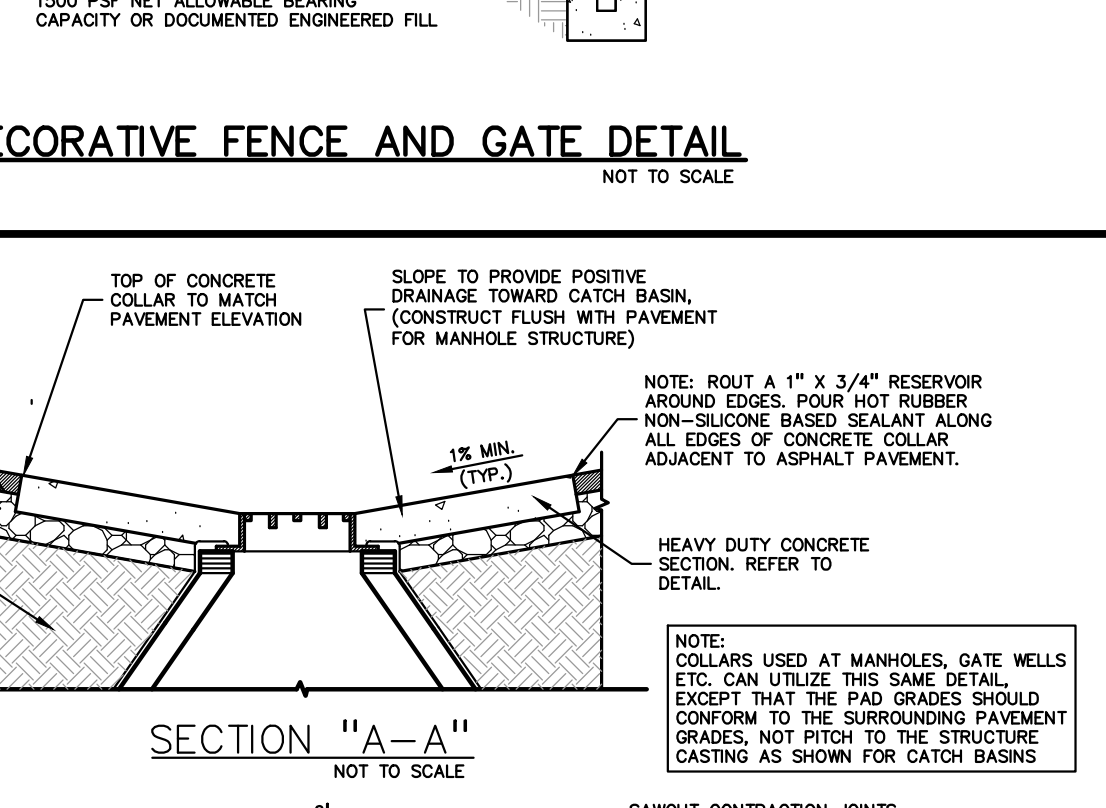
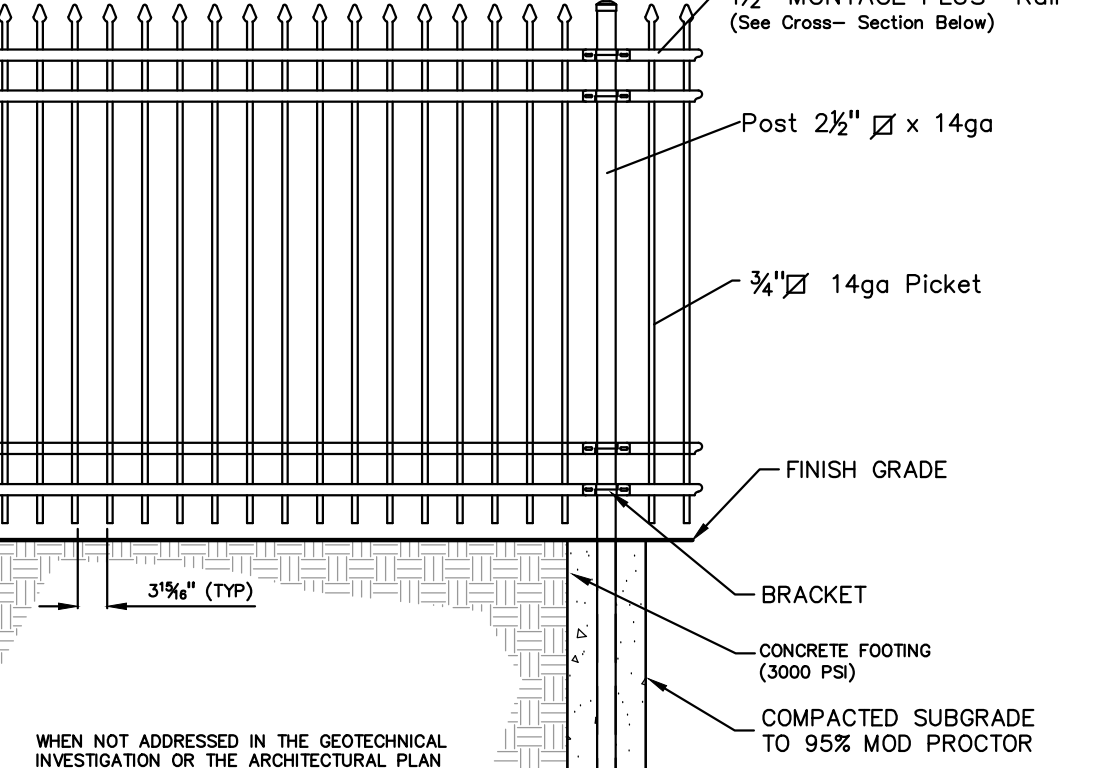
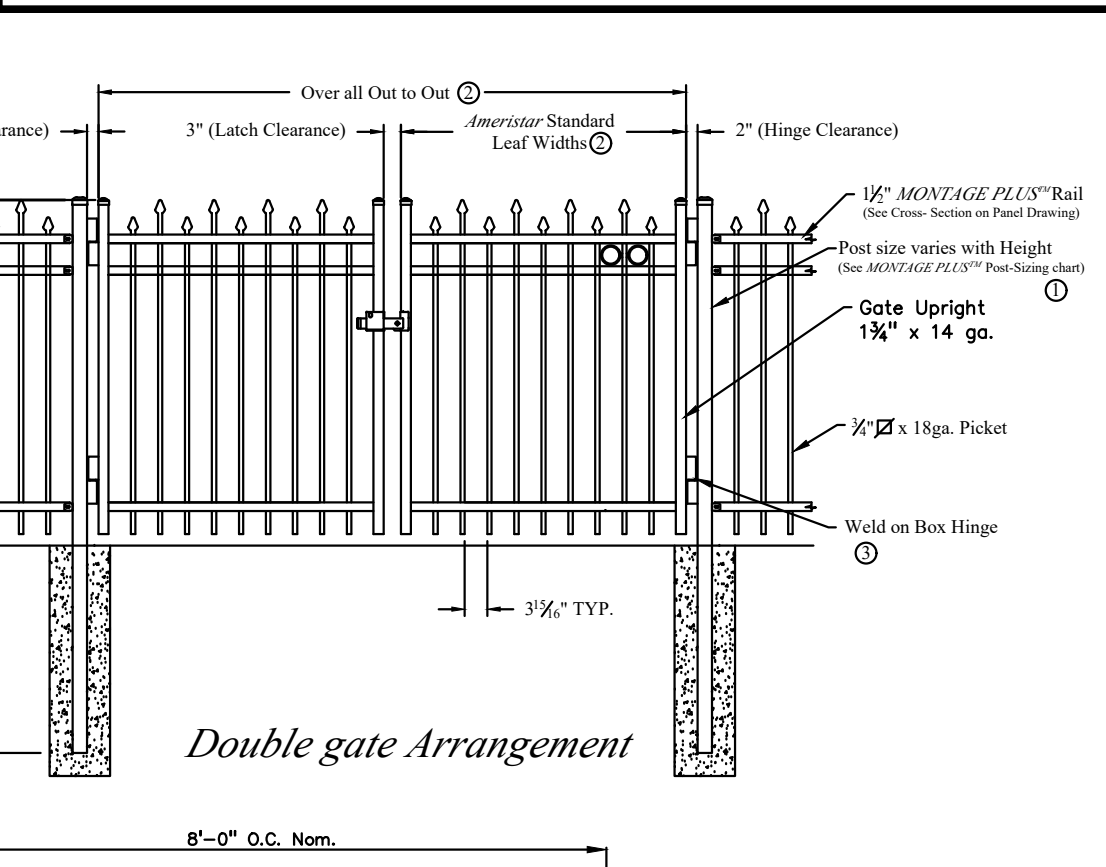
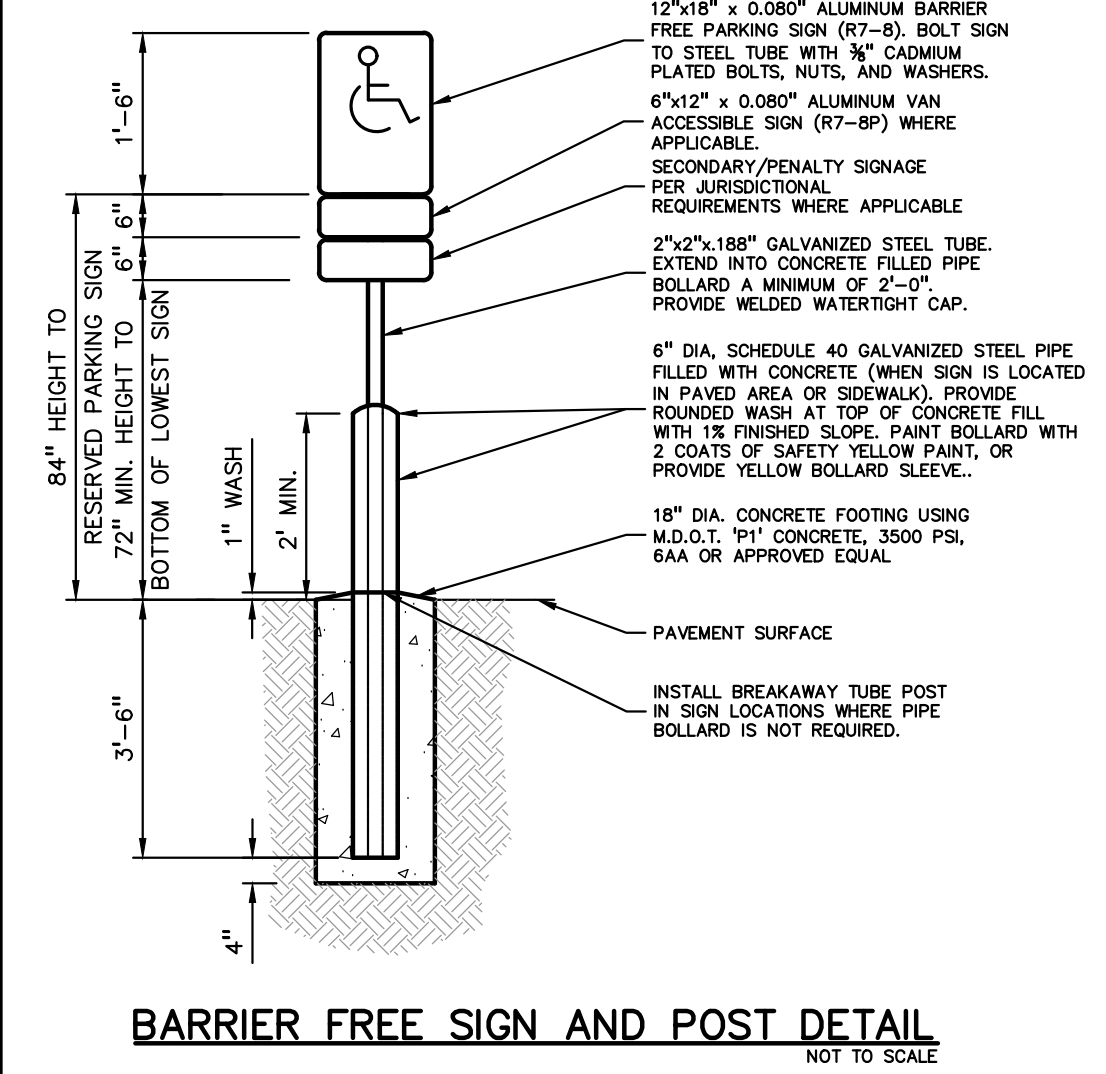
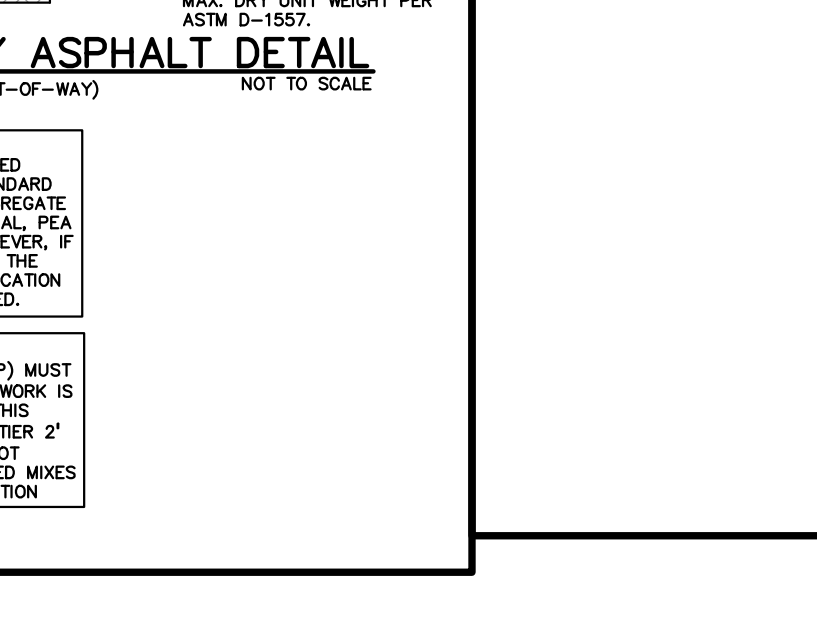
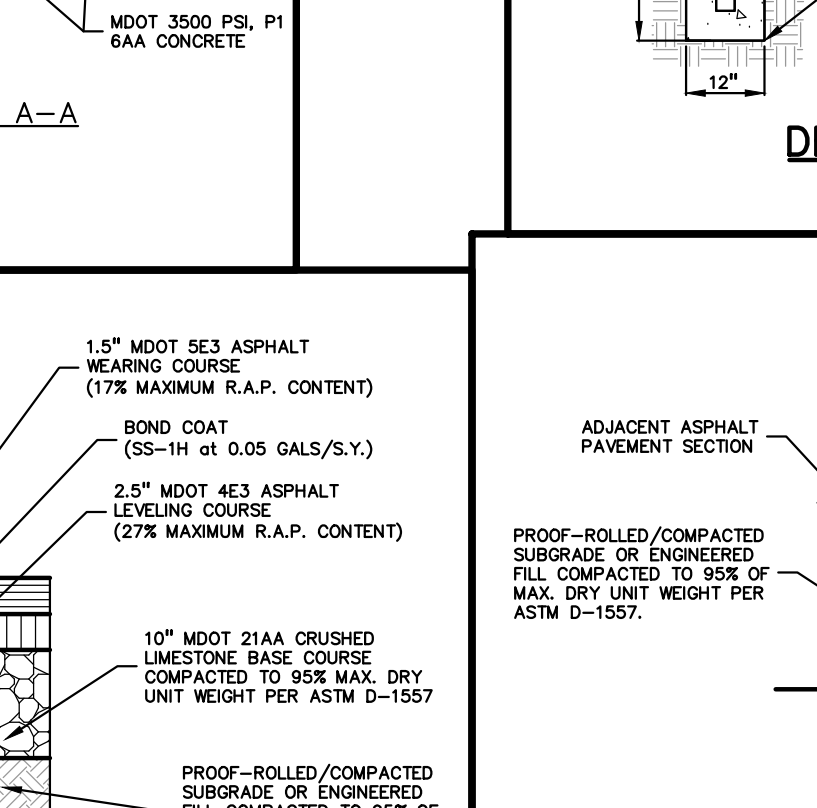
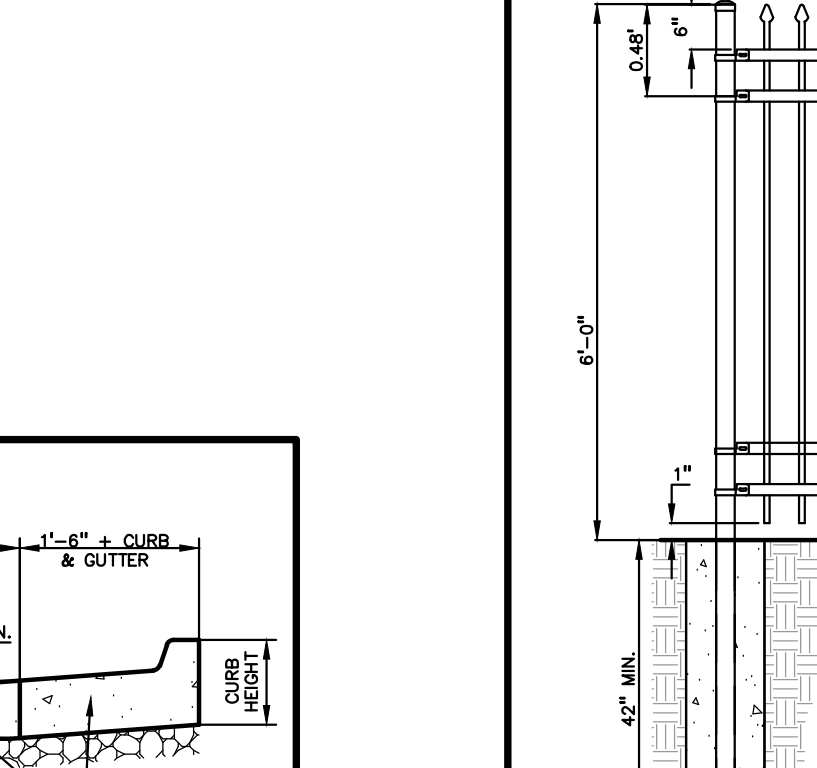
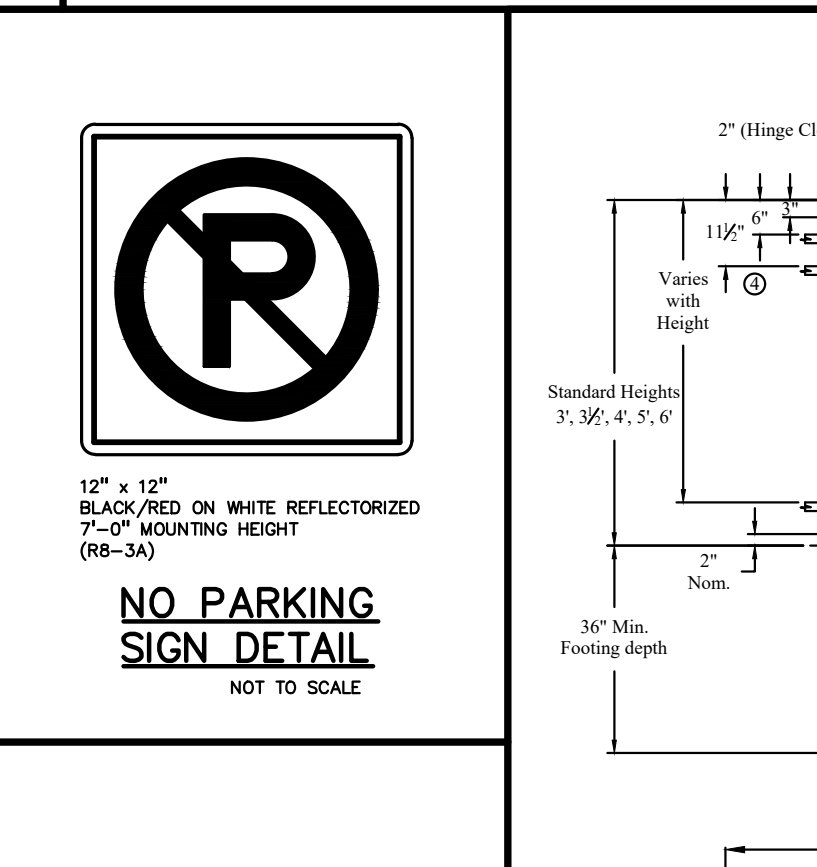
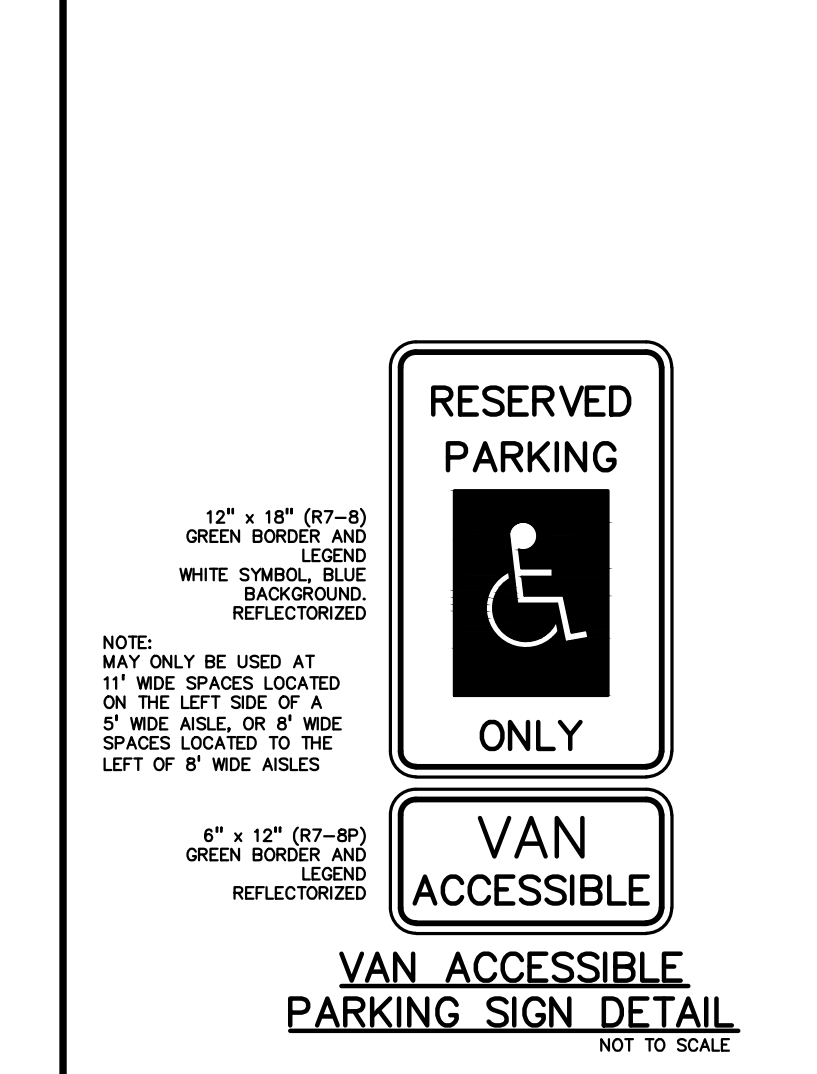
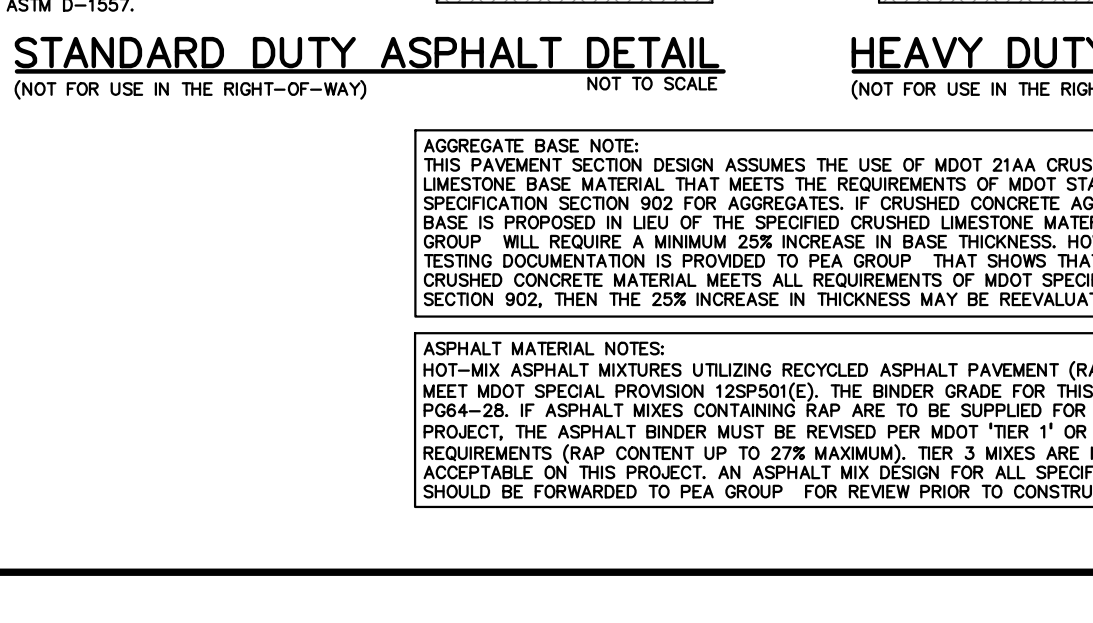
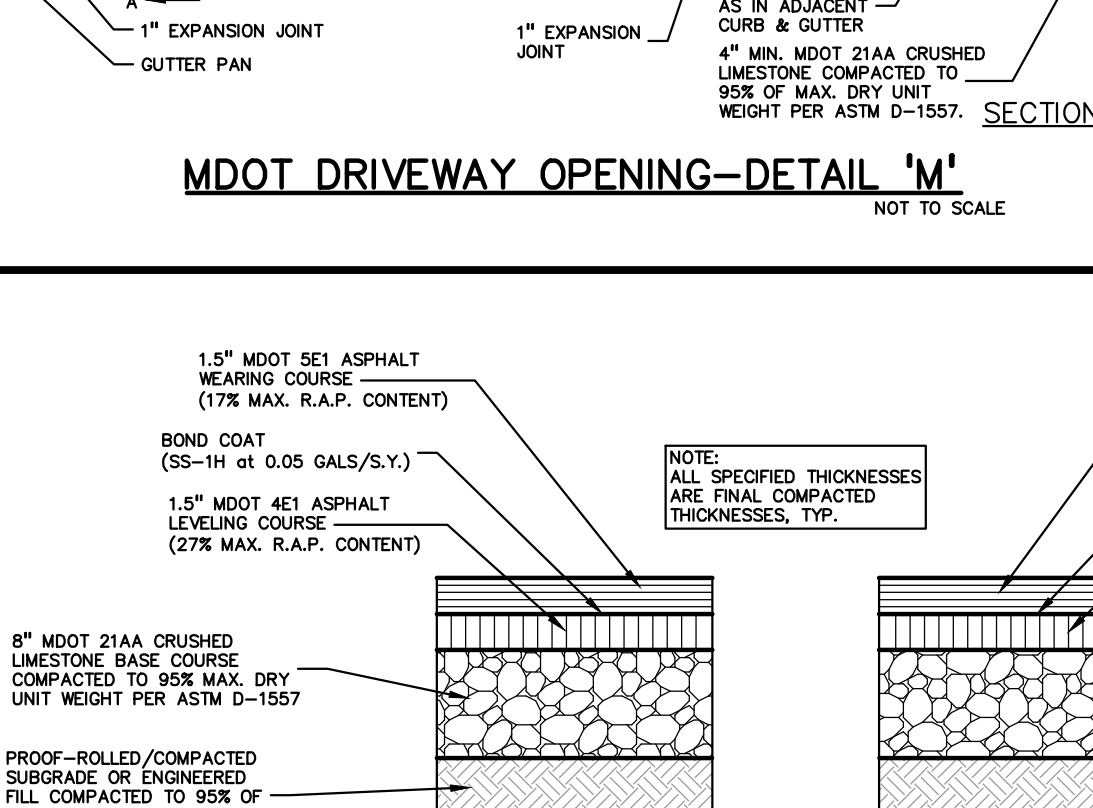
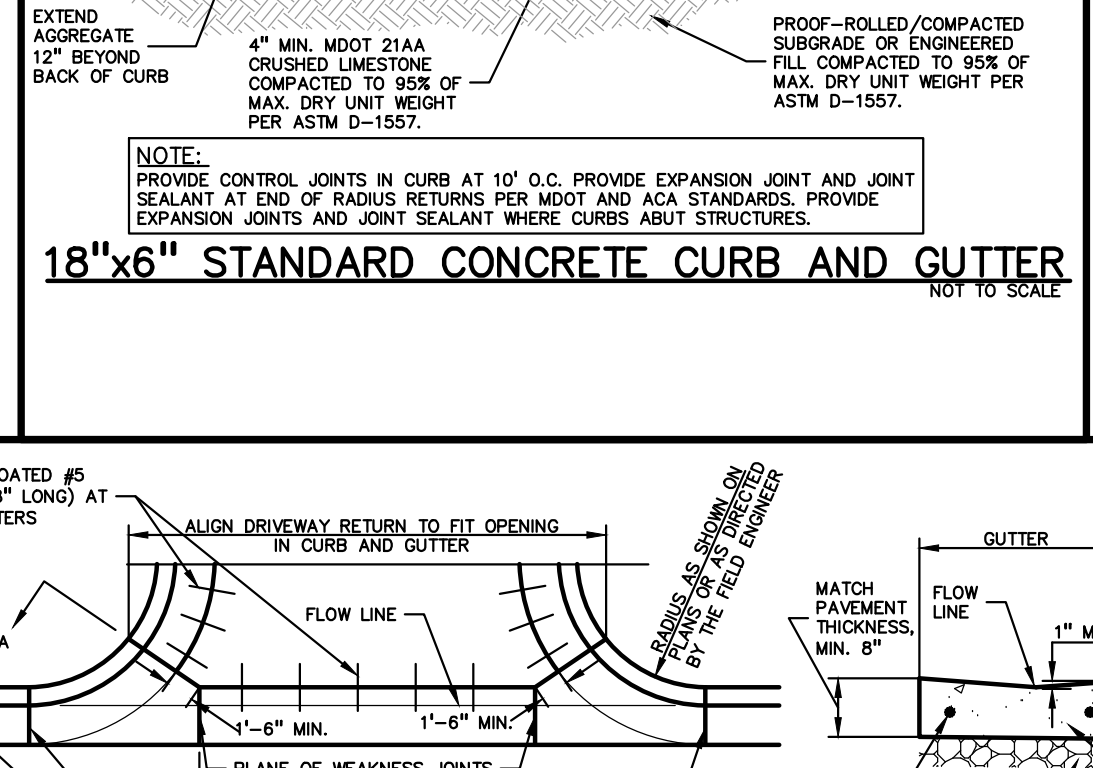
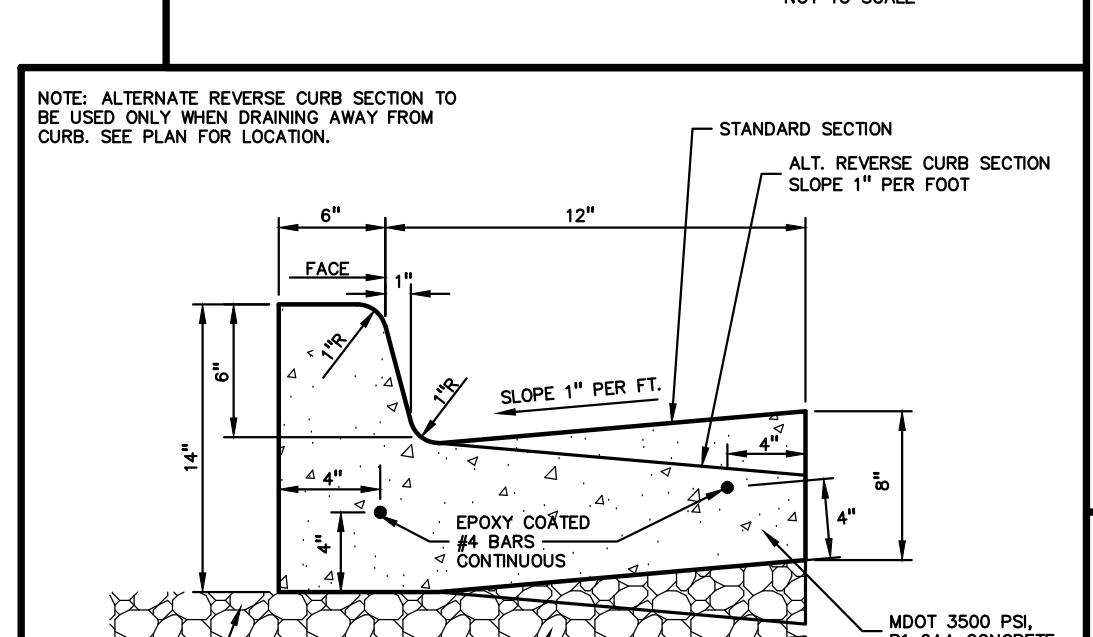
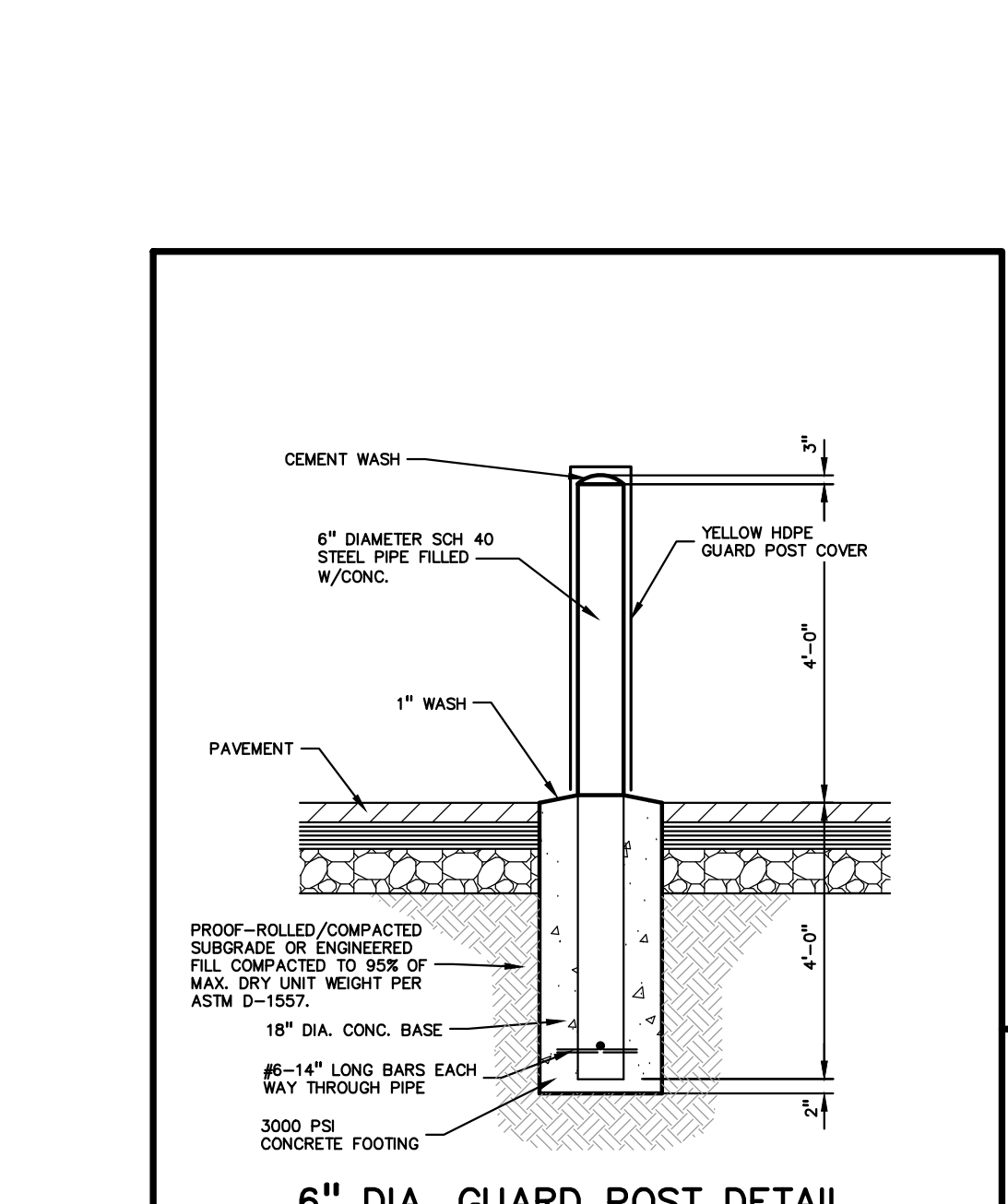
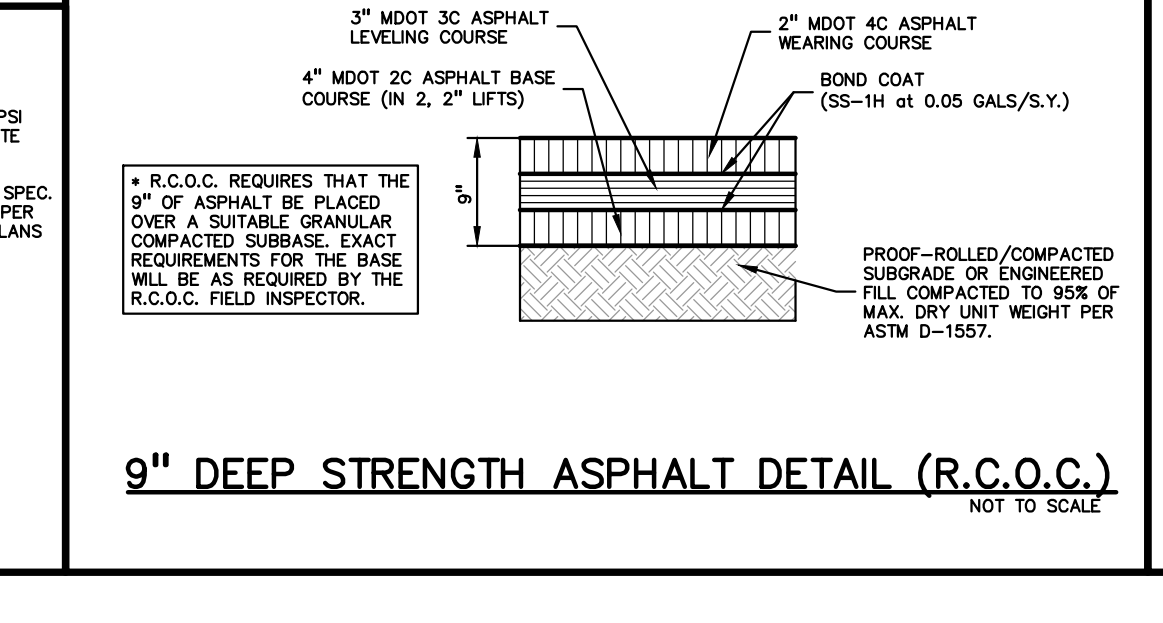
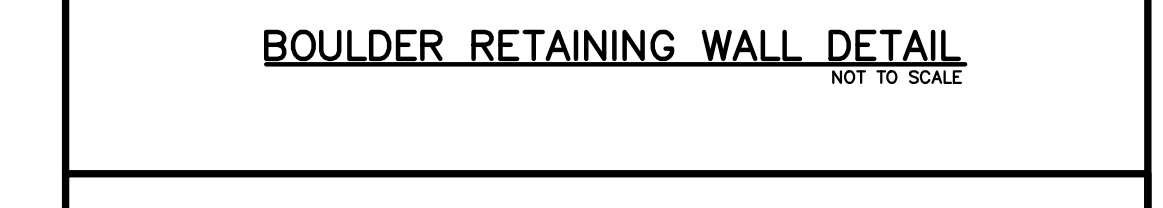
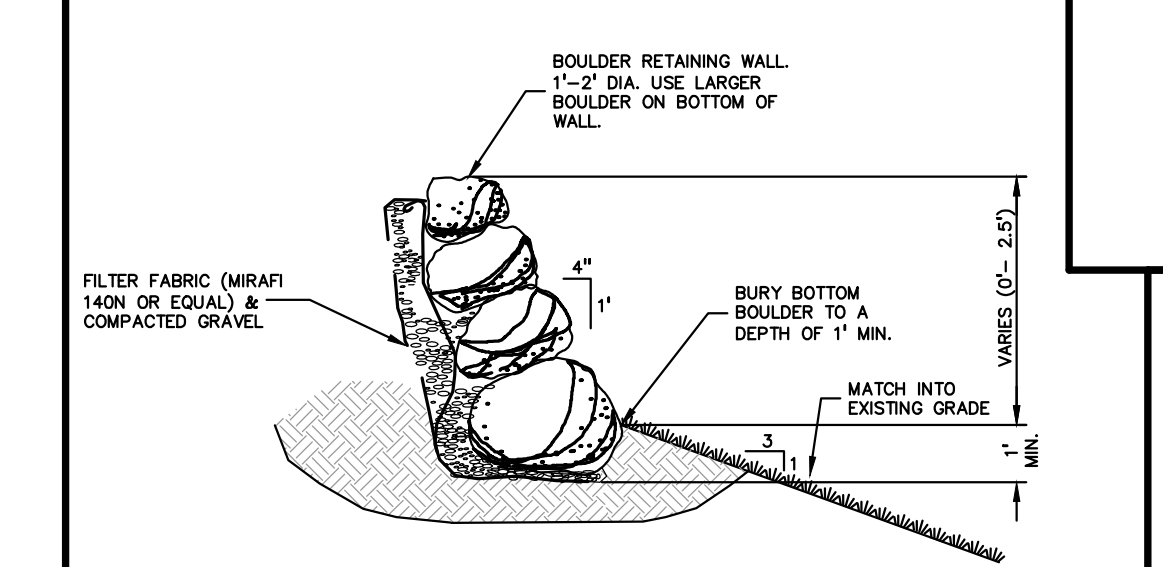
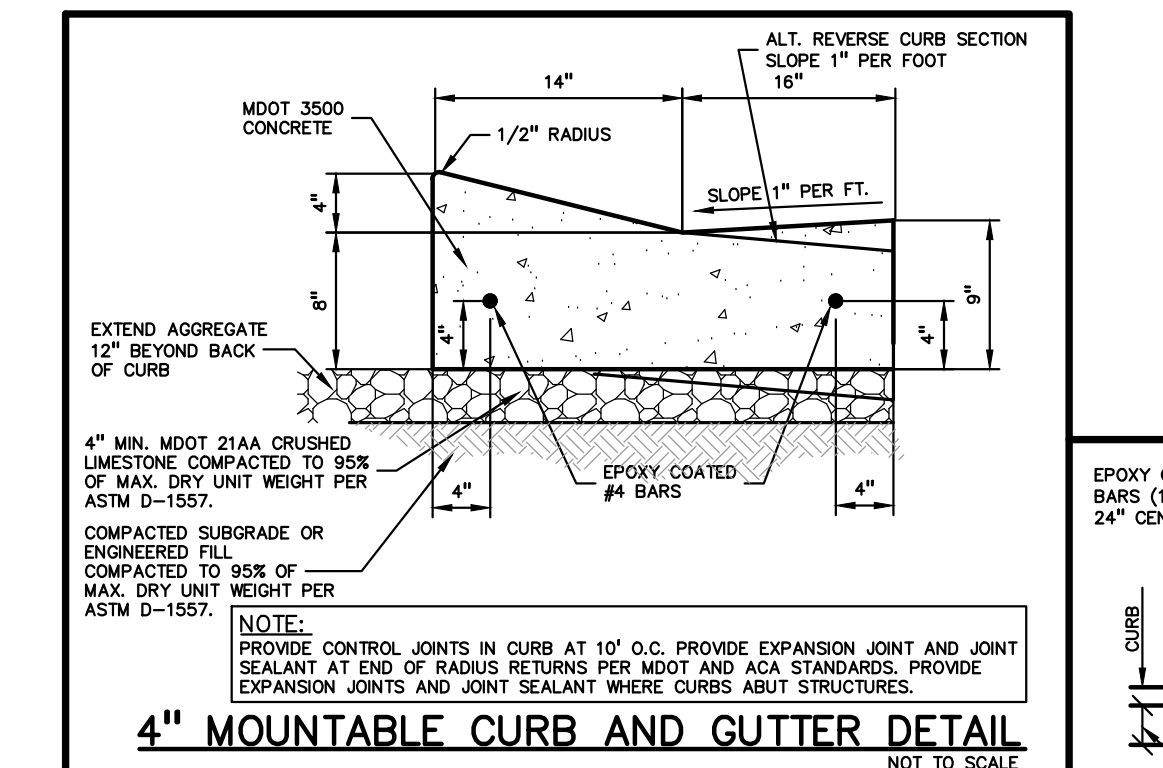
- GENERAL GRADING AND EARTHWORK NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
 - ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
 - THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
 - ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE AUTHORIZED PUBLIC AGENCY OF JURISDICTION. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
 - ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT.
 - REFER TO SOIL EROSION CONTROL PLAN FOR ADDITIONAL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
 - ALL DISTURBED AREAS SHALL BE SEEDDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE THIRD PARTY TESTING COMPANY, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.
 - ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
 - THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROOFOILED USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEORIGIDS OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DIRECTED BY FIELD CONDITIONS.
 - SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL AREAS OR BELOW PROPOSED SUBGRADE IN CUT AREAS WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
 - SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED AS RECOMMENDED IN THE GEOTECHNICAL ENGINEERING REPORT FOR THE PROJECT.
 - ANY SUBGRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.



- GENERAL UTILITY NOTES:**
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP.
 - ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
 - WHERE EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
 - THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UTILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY UTILITIES.
 - THE CONTRACTOR SHALL COORDINATE TO ENSURE ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED FOR THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, IRRIGATION, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT AND LANDSCAPING.
 - PIPE LENGTHS INDICATED ARE FROM CENTER OF STRUCTURE AND TO END OF FLARED END SECTION UNLESS NOTED OTHERWISE.
 - CONTRACTOR SHALL INSPECT ALL EXISTING PUBLIC STORM SEWER, SANITARY SEWER AND WATER MAIN STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION AND WITH THE GOVERNING AGENCY INSPECTOR PRIOR TO ESTABLISHING FINAL GRADE. NOTIFY THE ENGINEER, OWNER/DEVELOPER, AND GOVERNING AGENCY IF STRUCTURE IS DEEMED TO BE STRUCTURALLY UNSOUND AND/OR IN NEED OF REPAIR.

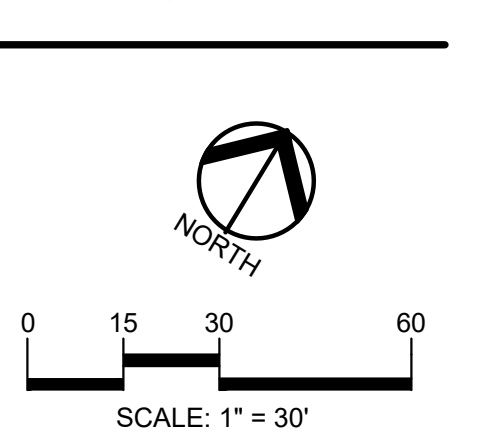
- WATER MAIN NOTES:**
- ALL WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 6.0' BELOW FINISH GRADE.
 - ALL TEES, BENDS, CONNECTIONS, ETC. ARE CONSIDERED INCIDENTAL TO THE JOB.
 - MAINTAIN 10' HORIZONTAL CLEARANCE BETWEEN OUTER EDGE OF WATERMAIN AND ANY SANITARY/STORM SEWER OR STRUCTURE.
 - ALL NEW WATER MAIN MUST PASS PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE TOWNSHIP.
 - WATER MAIN SERVICE LEADS SHALL BE TYPE "K" ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
 - ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE TOWNSHIP.
 - THE WATER MAIN CONTRACTOR SHALL NOTIFY THE INSPECTION DEPARTMENT AT LEAST THREE WORKING DAYS IN ADVANCE OF STARTING CONSTRUCTION.

- SANITARY SEWER NOTES:**
- DOWNSPOUTS, WEEP TILE, FOOTING DRAINS OR ANY CONDUIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO A SANITARY SEWER.
 - ALL SANITARY LEADS SHALL BE CONSTRUCTED AT 1.00% MINIMUM SLOPE.
 - ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 23.5 PIPE AND FITTINGS. ALL JOINTS TO BE ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
 - SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 75 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.J.I.W. #1565 BOX OR EQUAL.



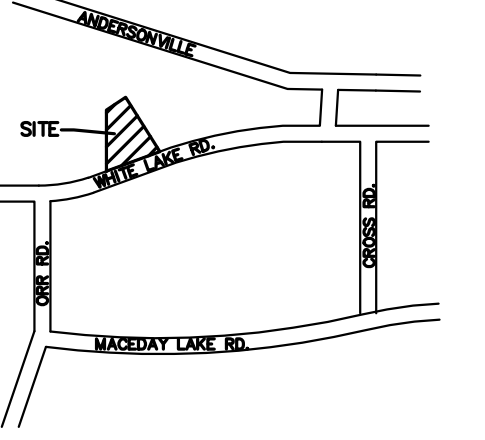
PEA GROUP
t: 844.813.2949
www.peagroup.com

STATE OF MICHIGAN
PROFESSIONAL ENGINEER



811 Know what's below. Call before you dig.

CAUTION!!
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CLIENT
GINKO INVESTMENT COMPANY, LLC
2438 ROCHESTER ROAD
OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

REVISIONS

PER AGENCIES COMMENTS	05/30/23
PER AGENCIES COMMENTS	06/29/23
PER AGENCIES COMMENTS	08/04/23
PER AGENCIES COMMENTS	09/22/23
PER AGENCIES COMMENTS	10/24/23

ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023

DRAWING TITLE
NOTES AND DETAILS

PEA JOB NO. 2002-248A
P.M. JPB
D.N. SWS
DES. SWS

DRAWING NUMBER:
C-9.0

NOT FOR CONSTRUCTION

SCHLAGE

650 Series Keyswitches



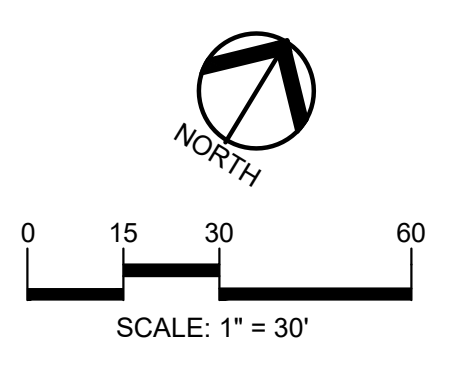
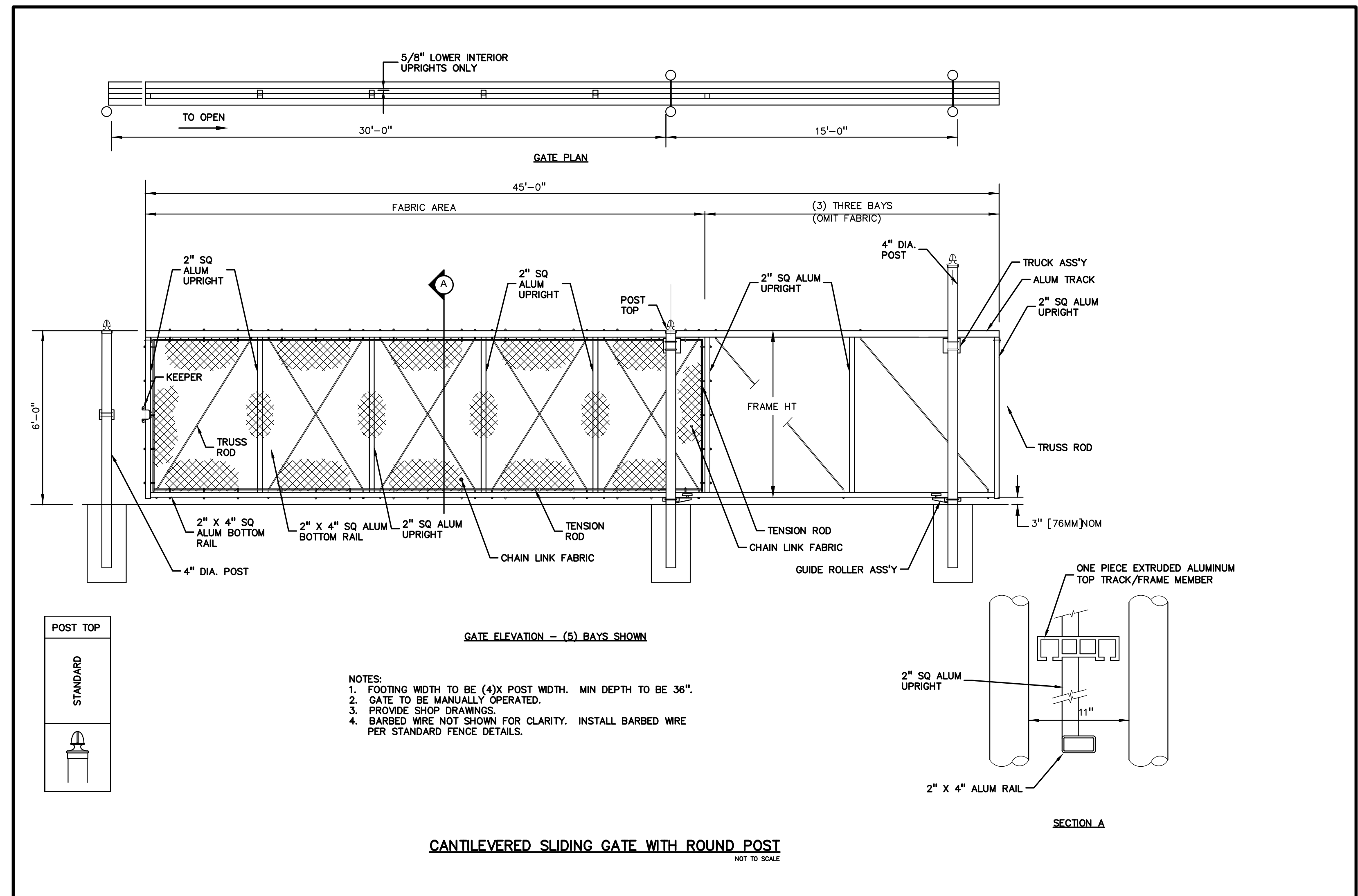
Overview

Schlage 650 Series keyswitches utilize an innovative magnetic spring design which allows installers to configure both clockwise and counterclockwise key turn direction as well as momentary or maintained action in seconds. Single gang and narrow stile are available with numerous options which include heavy-duty plate, weather resistant cover (single gang stile only), 2 LED lights - green/red, anti-tamper switch and Schlage Everest cylinder. In addition to the standard (303) satin stainless steel finish, there are five additional architectural finishes to choose from.

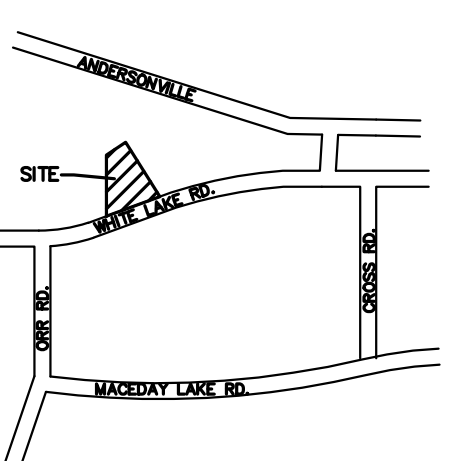
Features and benefits

- Easy to install and maintain
- Single gang and narrow stile offer ultimate flexibility
- Multiple options
- Patented magnetic spring design allows installers to configure momentary to maintained action in seconds
- Available options include red/green LED lights, anti-tamper switch and Schlage Everest cylinder
- Available water-resistant cover
- Single pole, double throw or double pole, double throw in both maintained and momentary action with a variety of combinations
- Standard 630 satin stainless steel plate with 5 additional finish options on heavy-duty zinc plate
- Standard or narrow stile cover options

KNOX BOX
NOT TO SCALE



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CLIENT
GINKO INVESTMENT COMPANY, LLC
2438 ROCHESTER ROAD
OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

REVISIONS	
PER AGENCIES COMMENTS	05/30/23
PER AGENCIES COMMENTS	06/29/23
PER AGENCIES COMMENTS	08/04/23
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ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023

DRAWING TITLE
DETAILS

PEA JOB NO.	2002-248A
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	

INTERIOR LANDSCAPING PLANT LIST

DECIDUOUS TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
4	AC8	Shadblow Serviceberry	<i>Amelanchier canadensis</i>	8-10' Ht.	B&B
2	AT2.5	Paw Paw Tree	<i>Asimina triloba</i>	2.5" cal.	B&B
2	CA8	Alternate Leaved Dogwood	<i>Cornus alternifolia</i>	8' Ht.	B&B
5	CC8	Redbud	<i>Cercis canadensis</i>	8' Ht.	B&B
1	QA3	White Oak	<i>Quercus alba</i>	3" cat.	SPADE MOVED
14	TOTAL DECIDUOUS TREES				

EVERGREEN TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
5	AB8	Balsam Fir	<i>Abies balsamea</i>	8' Ht.	B&B
19	JV8	Eastern Red Cedar	<i>Juniperus virginiana</i>	8' Ht.	SPADE MOVED
5	PG8	White Spruce	<i>Picea glauca</i>	8' Ht.	B&B
11	TP8	Green Giant Arborvitae	<i>Thuja plicata x standishii 'Green Giant'</i>	8' Ht.	B&B
40	TOTAL EVERGREEN TREES				
54	TOTAL TREES				

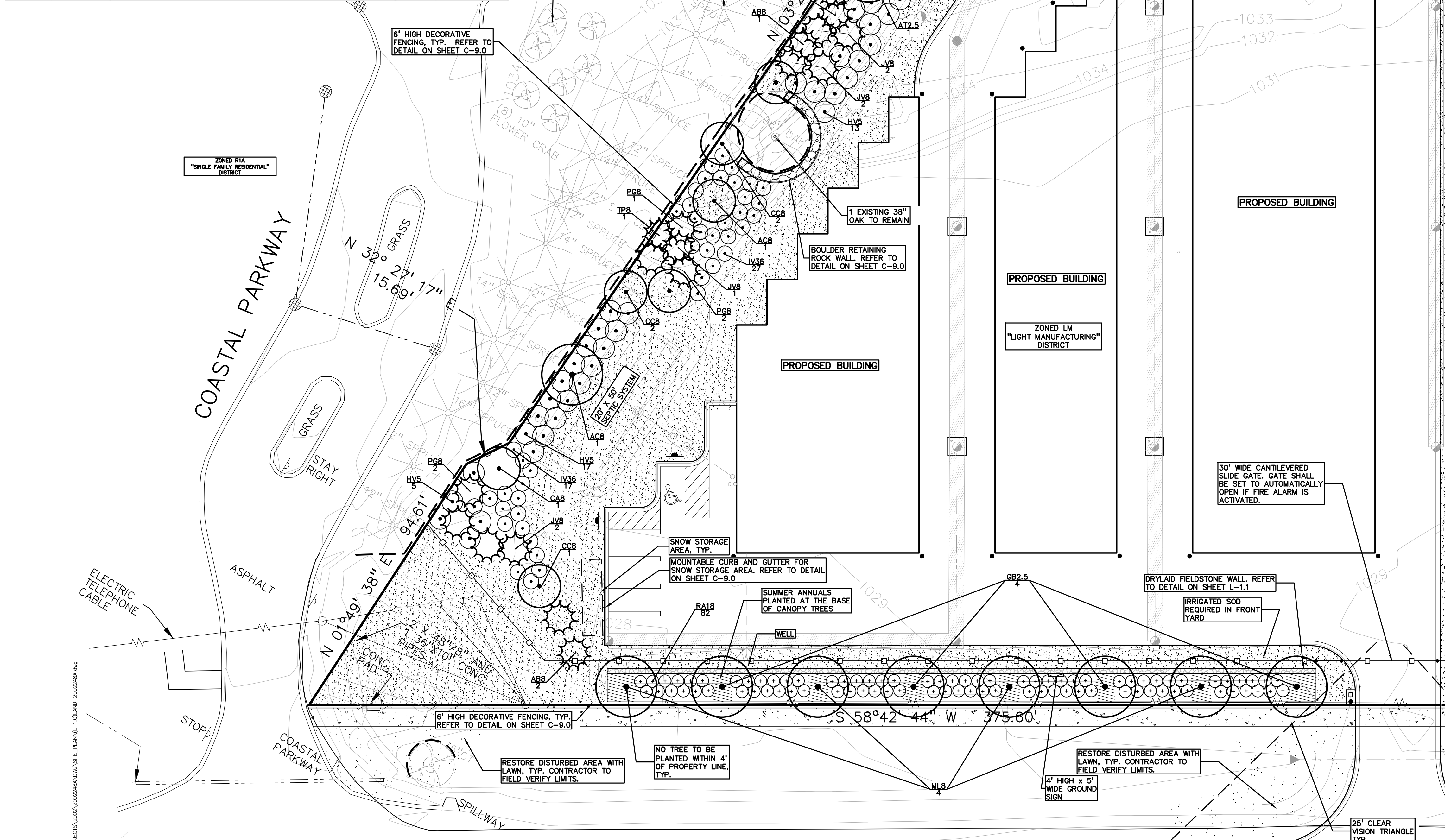
SHRUB PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
32	CS30	Kelsey Dwarf Dogwood	<i>Cornus sericea 'Kelsey'</i>	30" Ht.	Cont.
42	HV5	Common Witch-hazel	<i>Hamamelis virginiana</i>	5' Ht.	B&B
44	IV36	Michigan Holly	<i>Ilex verticillata</i>	36" Ht.	B&B
82	RA18	Gro-low Sumac	<i>Rhus aromatica</i>	18" Ht.	B&B
33	VD30	Arrowood Viburnum	<i>Viburnum dentatum</i>	30" Ht.	B&B
233	TOTAL SHRUBS				

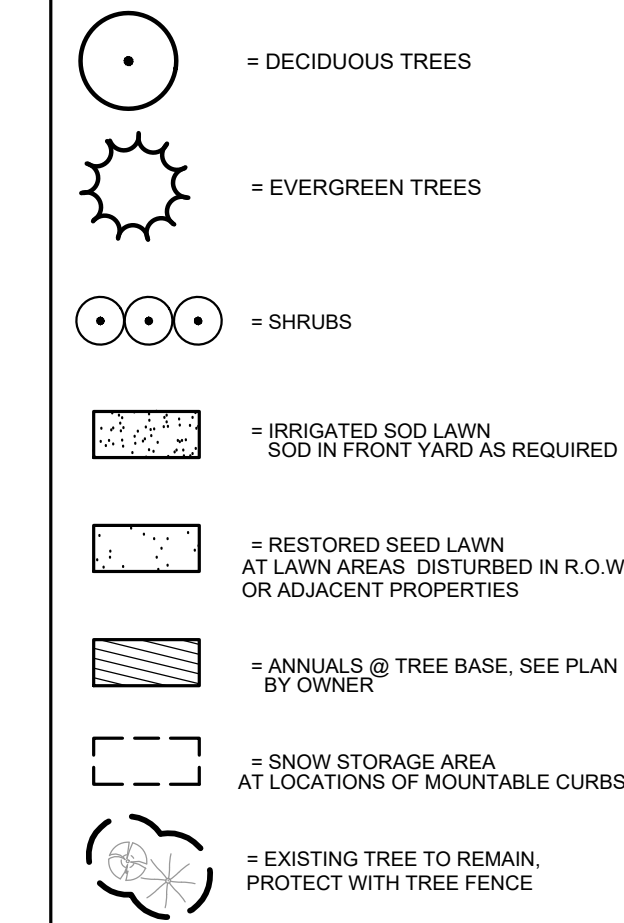
FRONTAGE LANDSCAPING PLANT LIST

DECIDUOUS TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
4	GB2.5	Princeton Sentry Ginkgo	<i>Ginkgo biloba 'Princeton Sentry'</i>	2.5" Cal.	B&B
4	ML8	Jane Magnolia	<i>Magnolia lilliflora 'Jane'</i>	8' Ht.	B&B
8	TOTAL DECIDUOUS TREES				
8	TOTAL TREES				



KEY:



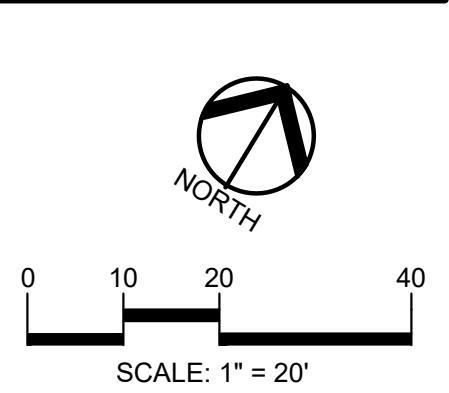
NO CONSTRUCTION SHALL OCCUR UNTIL TREE PROTECTION HAS BEEN INSTALLED AND APPROVED BY THE COMMUNITY DEVELOPMENT DIRECTOR.
SEE L-1.1 FOR LANDSCAPE DETAILS
IRRIGATION PLANS TO BE PROVIDED AT FINAL SITE PLAN, WITH RAIN SENSOR

GENERAL PLANTING NOTES:

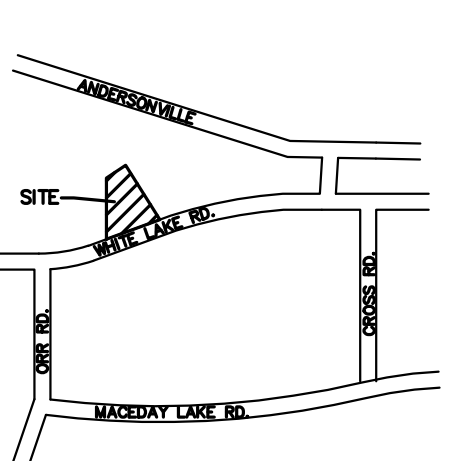
- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSEYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 4" DOUBLE SHREDDED HARDWOOD BARK MULCH WITH PRE-EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 4" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS. PLANT REPLACEMENT SHALL BE DONE WITHIN 30 DAYS.
- CONTRACTOR SHALL NOT INSTALL PLANTS UNDER BUILDING OVERHANG AND SHALL NOTIFY LANDSCAPE ARCHITECT IF DRAWINGS CONFLICT WITH BUILDING OVERHANGS.
- TREES SHALL NOT CONFLICT / BLOCK PROPOSED REGULATORY / DIRECTION SIGNAGE, MONUMENT SIGNS, ADDRESS OR LIGHT POLES. SHIFT TREES AS NECESSARY TYP.
- ALL LANDSCAPE AREAS SHALL BE PROVIDED WITH A READILY AVAILABLE WATER SUPPLY. NEWLY PLANTED MATERIALS SHALL BE REGULARLY WATERED UNTIL ESTABLISHED, ANY PROPOSED IRRIGATION SYSTEMS SHALL NOT BE LOCATED WITHIN THE RIGHT-OF-WAY.
- RECOMMENDED PLANTING DATES ARE MARCH 1 TO MAY 15 FOR ALL MATERIALS AND OCTOBER 15 TO DECEMBER 15 FOR DECIDUOUS MATERIALS. PLANTINGS OUTSIDE THESE DATES SHALL HAVE PRIOR TOWNSHIP APPROVAL, AND MAY REQUIRE SPECIAL TREATMENT, SUCH AS EXTRA WATERING OR MULCHING, TO INCREASE SURVIVAL POTENTIAL.
- IRRIGATION PLAN IS REQUIRED AT FINAL SITE PLAN. A RAIN SENSOR OR SIMILAR MEASURE SHALL BE PROVIDED TO ENSURE IRRIGATION DOES NOT OCCUR DURING OR SHORTLY AFTER PRECIPITATION.
- NO TREE TO BE PLANTED WITHIN 4' OF PROPERTY LINE.
- NO WHITE PINE TO BE PROPOSED AND NO MORE THAN TWO PLANTED TREES IN A ROW SHALL BE OF THE SAME SPECIES, PER TWP. ORDINANCE.
- NO CONSTRUCTION SHALL OCCUR UNTIL TREE PROTECTION HAS BEEN INSTALLED AND APPROVED BY THE COMMUNITY DEVELOPMENT DIRECTOR.

LANDSCAPE CALCULATIONS PER WHITE LAKE TWP.: ZONED LM LIGHT MANUFACTURING DISTRICT

TOTAL SITE AREA	REQUIRED	PROVIDED
1.37 ACRES (59,526 SF) NET AND GROSS		
INTERIOR LANDSCAPING	15% OF TOTAL LOT AREA 93,090 SQ. FT. X .15 = 13,963 SQ. FT. REQ.	31,529 SF LANDSCAPE AREA (33.9 %)
FRONTAGE LANDSCAPING	13,963 SQ. FT. / 300 = 46.5 46.5 * 1 = 47 DEC. TREES 46.5 * 5 = 233 SHRUBS	54 PROPOSED TREES 233 PROPOSED SHRUBS
		8 PROPOSED TREES



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CLIENT
GINKO INVESTMENT COMPANY, LLC
2438 ROCHESTER ROAD
OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
WHITE LAKE TOWNSHIP, MICHIGAN

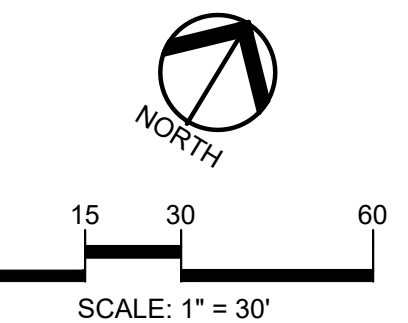
REVISIONS

PER AGENCIES COMMENTS	DATE
	05/30/23
	06/29/23
	08/04/23
	09/22/23
	10/24/23

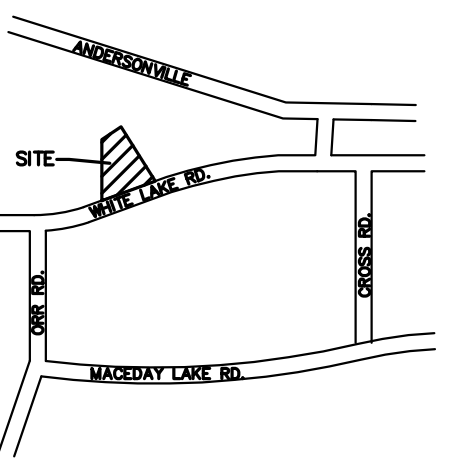
ORIGINAL ISSUE DATE:
FEBRUARY 2, 2023
DRAWING TITLE

PRELIMINARY LANDSCAPE PLAN

PEA JOB NO. 2002-248A
P.M. JPB
DN. BZ
DES. JLE
DRAWING NUMBER:



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CLIENT
GINKO INVESTMENT COMPANY, LLC
 2438 ROCHESTER ROAD
 OAKLAND TOWNSHIP, MICHIGAN 48363

PROJECT TITLE
GINKO SELF STORAGE
 WHITE LAKE TOWNSHIP, MICHIGAN

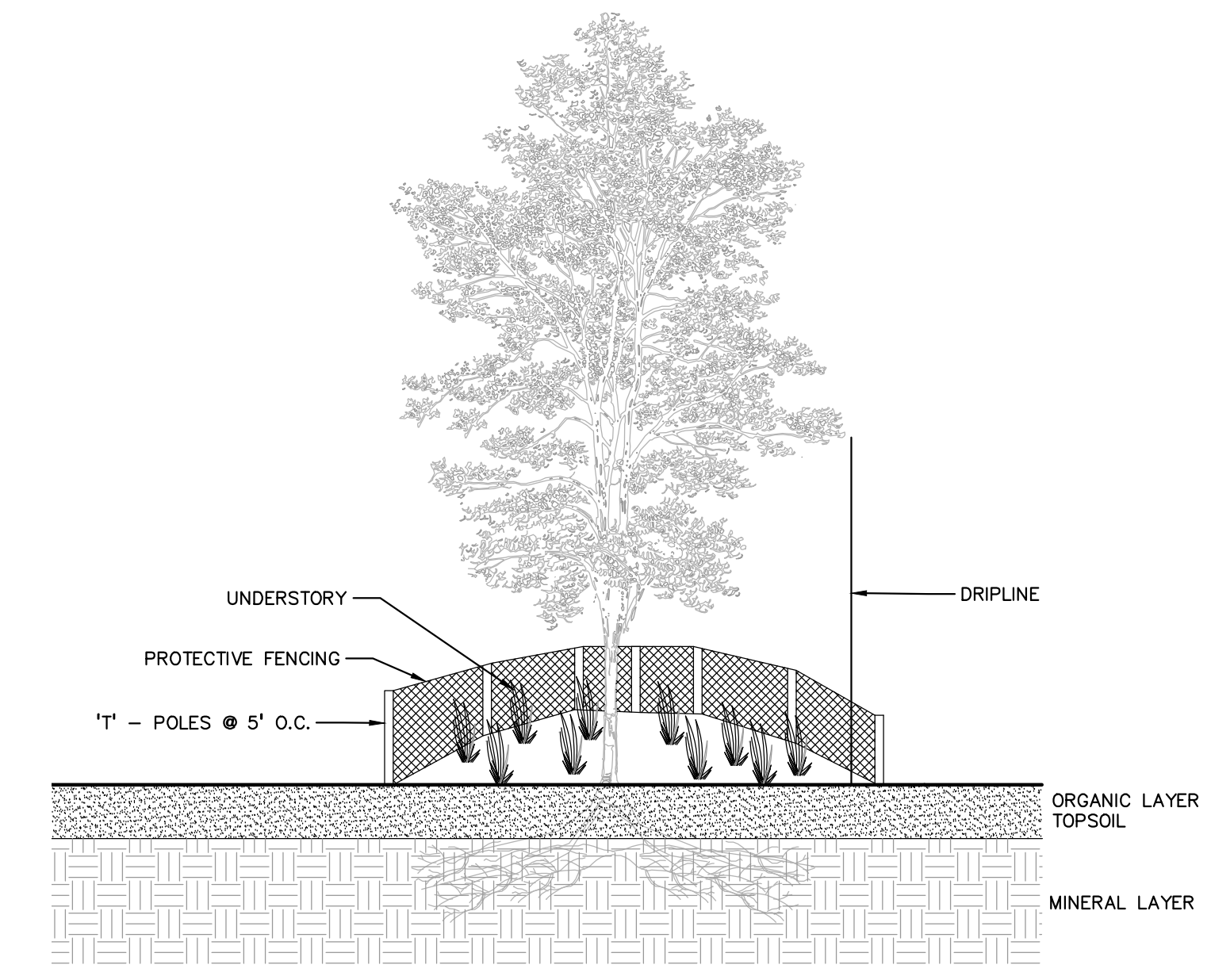
REVISIONS	
PER AGENCIES COMMENTS	05/30/23
PER AGENCIES COMMENTS	06/29/23
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PER AGENCIES COMMENTS	09/22/23
PER AGENCIES COMMENTS	10/24/23

ORIGINAL ISSUE DATE:
 FEBRUARY 2, 2023

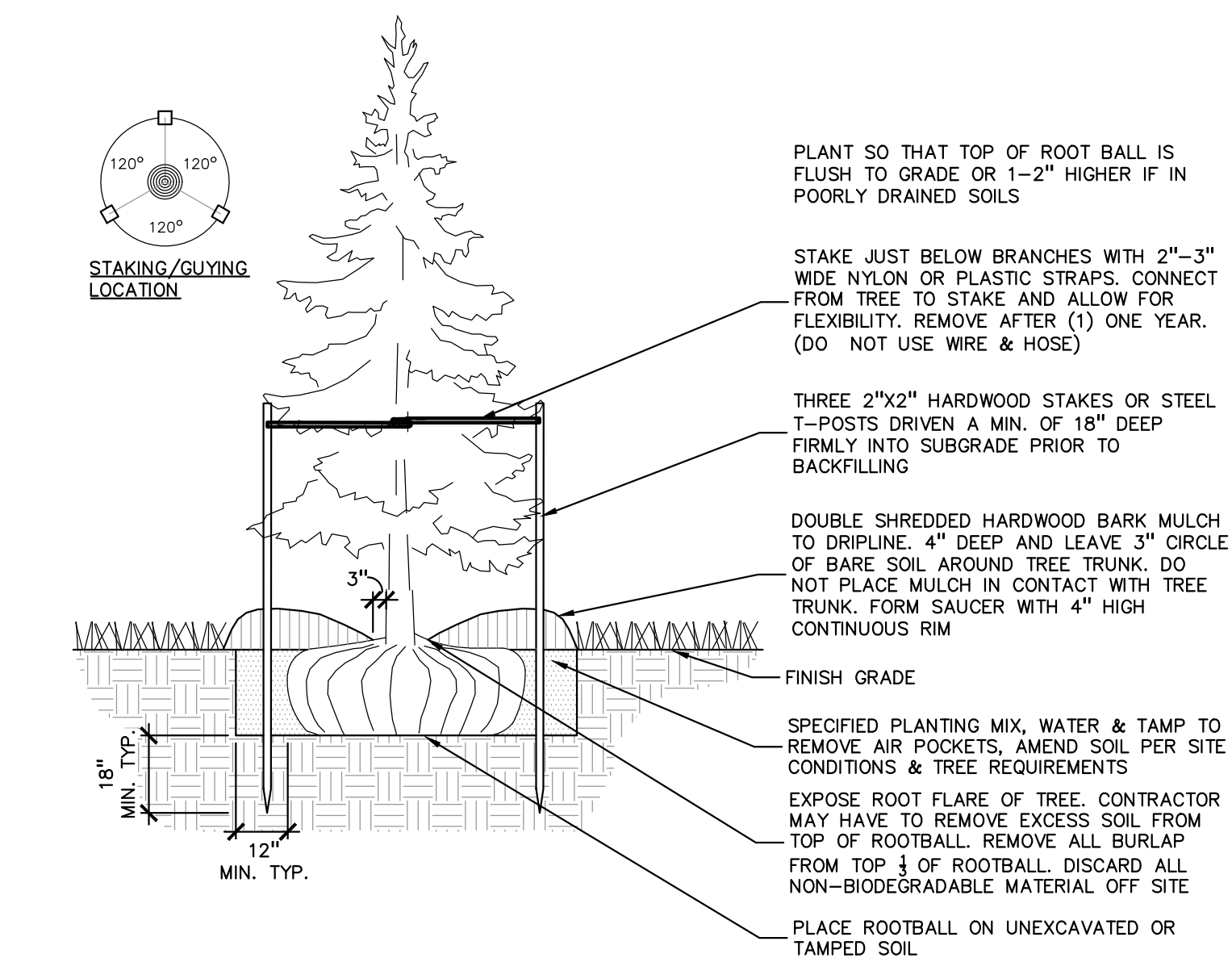
DRAWING TITLE

LANDSCAPE DETAILS

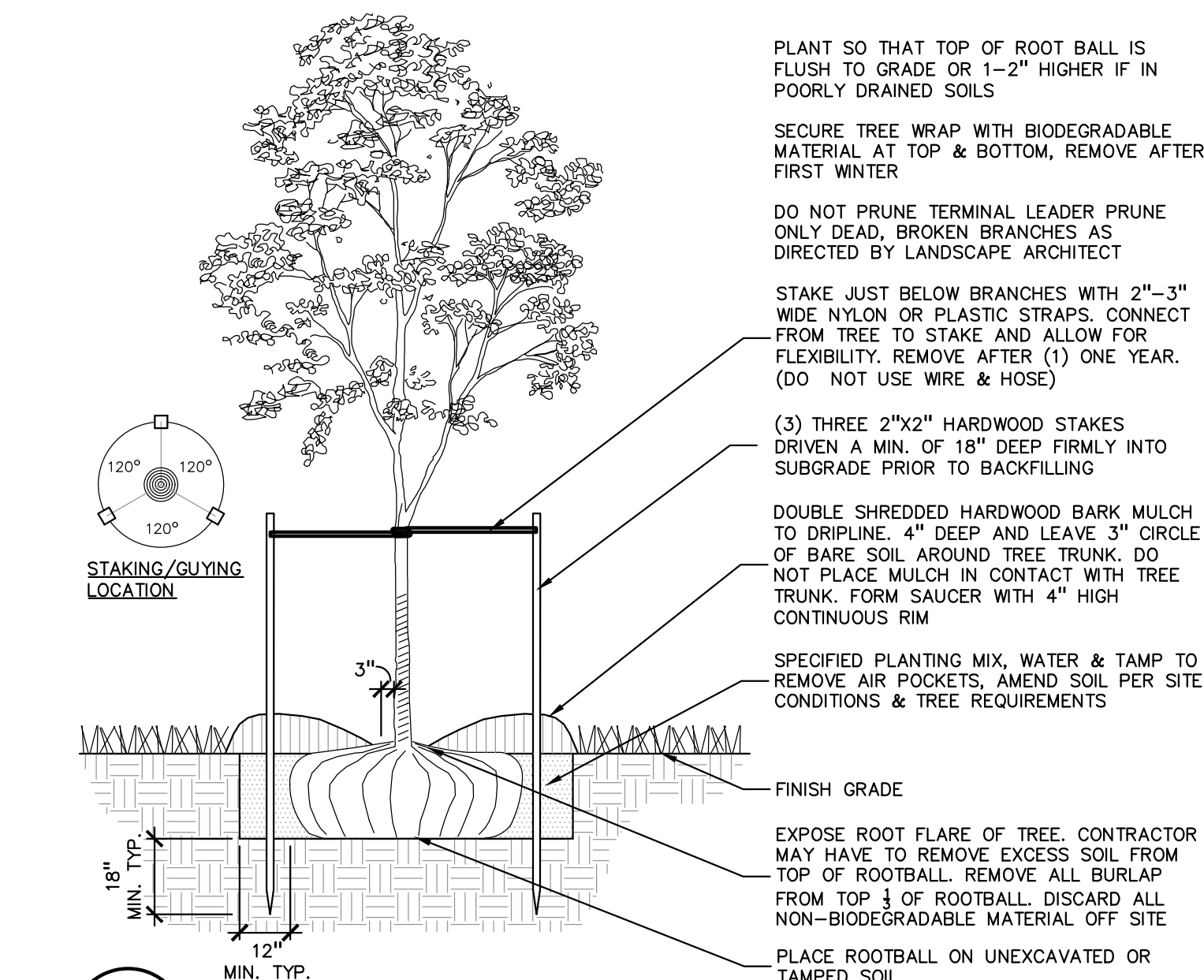
PEA JOB NO.	2002-248A
P.M.	JPB
DN.	BZ
DES.	PSC
DRAWING NUMBER:	



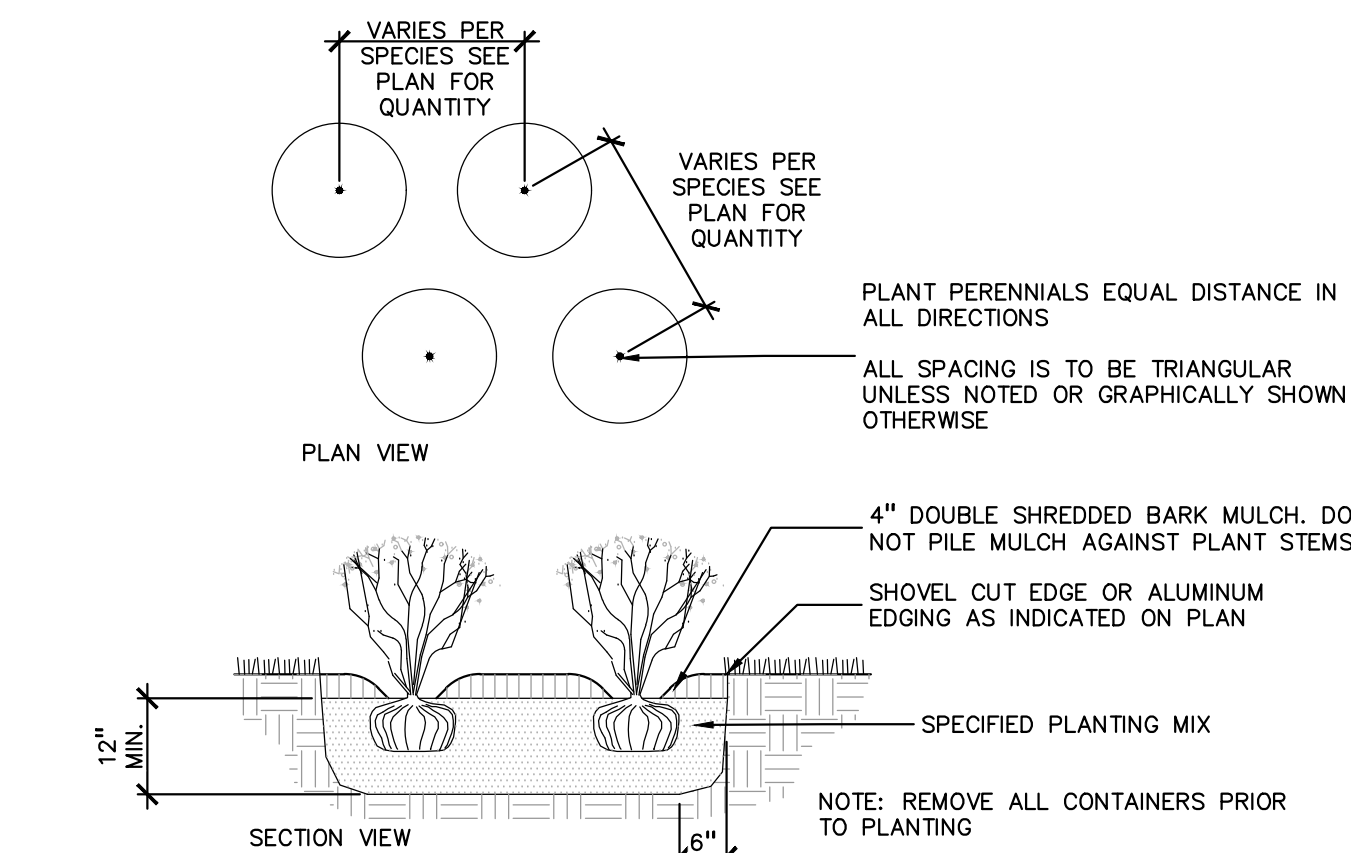
3 TREE PROTECTION DETAIL
 SCALE: 1" = 3'-0"



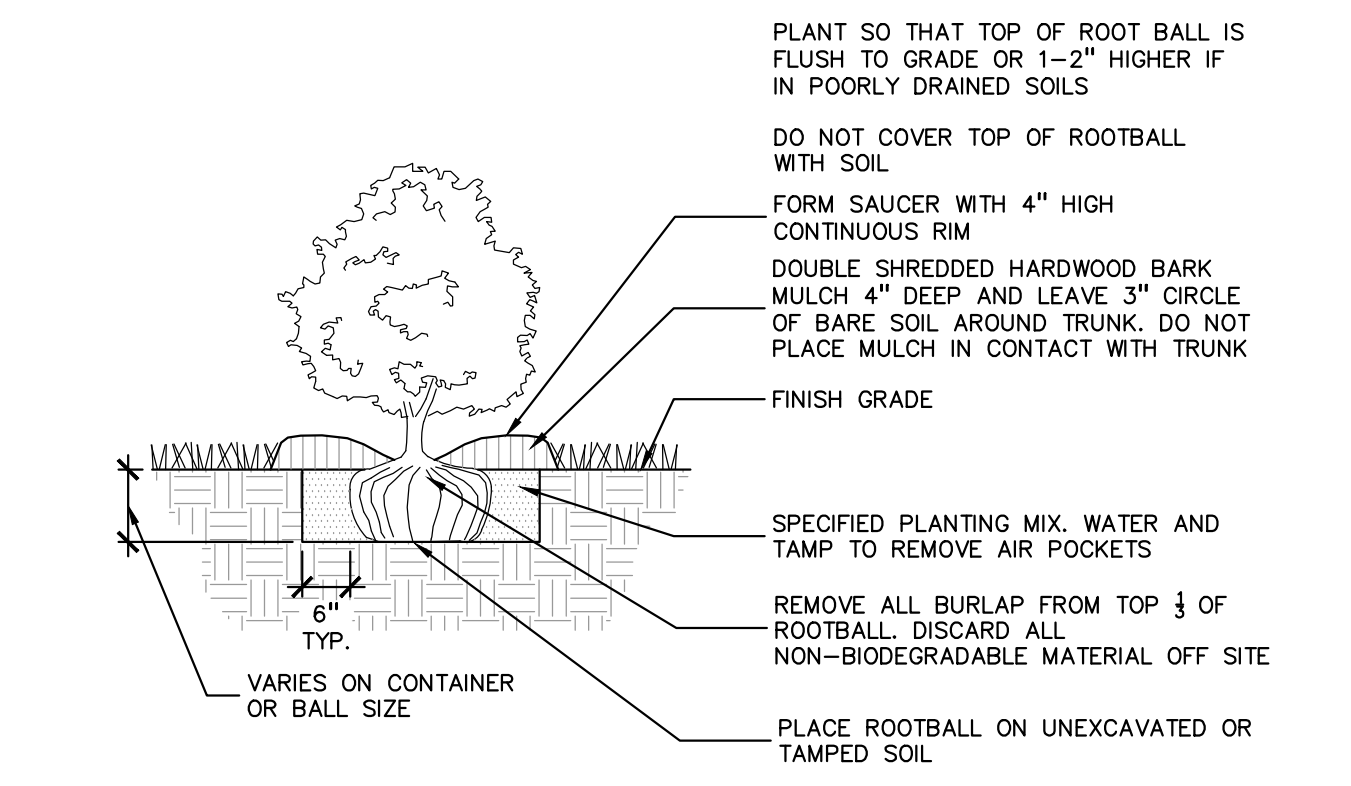
2 EVERGREEN TREE PLANTING DETAIL
 SCALE: 1" = 3'-0"



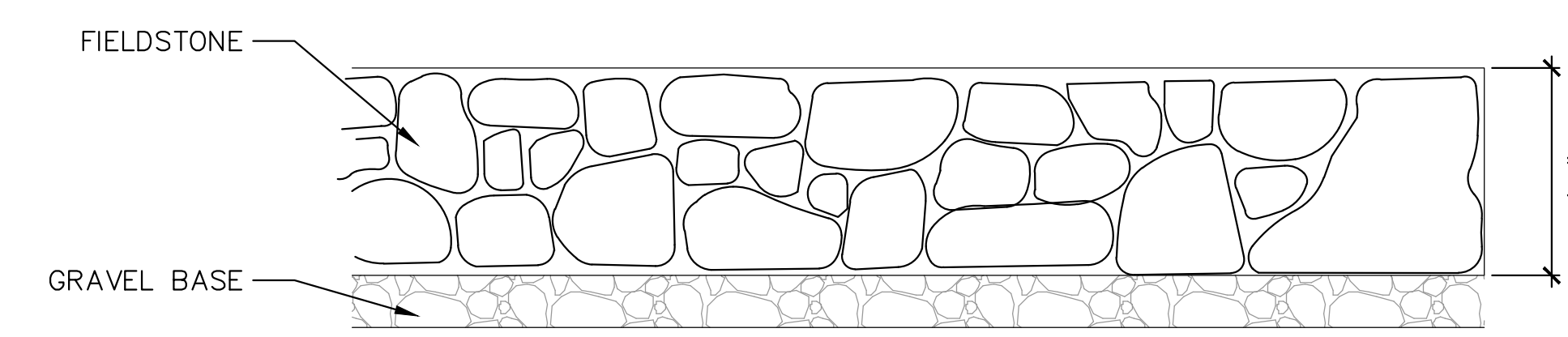
1 DECIDUOUS TREE PLANTING DETAIL
 SCALE: 1" = 3'-0"



6 PERENNIAL PLANTING DETAIL
 SCALE: 1" = 2'-0"



5 SHRUB PLANTING DETAIL
 SCALE: 1" = 2'-0"



7 DRYLAID FIELDSTONE WALL DETAIL
 SCALE: 1" = 2'-0"

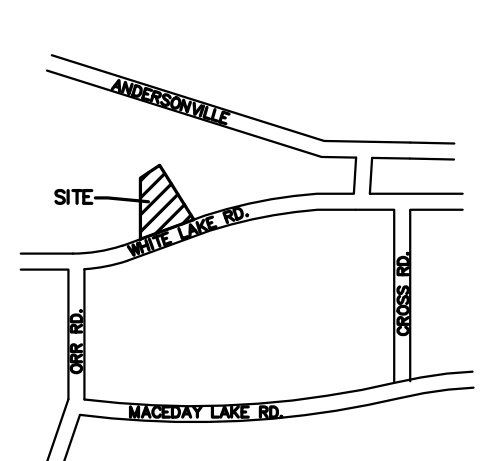


Michael B. Grasser & Associates
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 e-mail: bob@mbg.com

Landscaping, Site Planning,
 Architectural & Interior Layout and Design



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CLIENT
GINKO INVESTMENT COMPANY, LLC
 2276 GARLAND BOULEVARD
 SYLVAN LAKE, MICHIGAN 48320

PROJECT TITLE
GINKO SELF STORAGE
 WHITE LAKE TOWNSHIP, MICHIGAN

REVISIONS	
PER AGENCIES COMMENTS	05/30/23
PER AGENCIES COMMENTS	06/29/23
PER AGENCIES COMMENTS	10/20/23

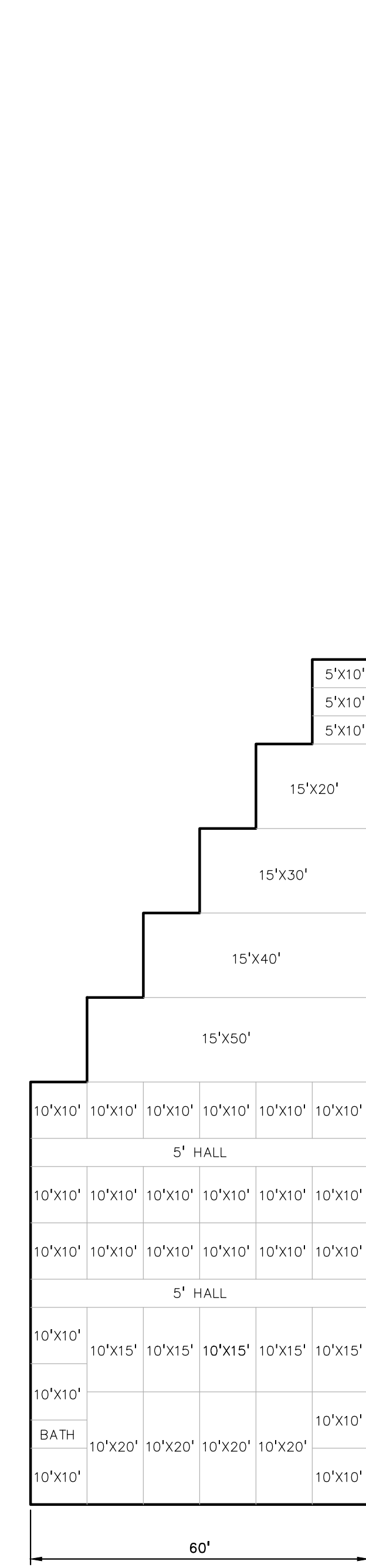
ORIGINAL ISSUE DATE:
 DECEMBER 15, 2022

DRAWING TITLE
PRELIMINARY FLOOR PLAN AND BUILDING ELEVATIONS

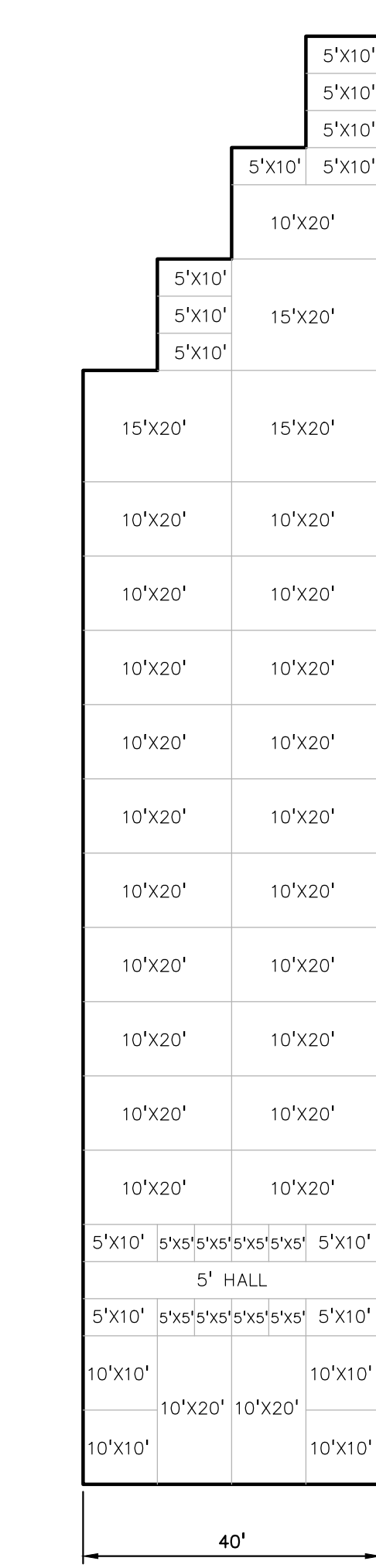
PEA JOB NO. 2002-248A
 P.M. JPB
 DN. SS
 DES. SS

DRAWING NUMBER:

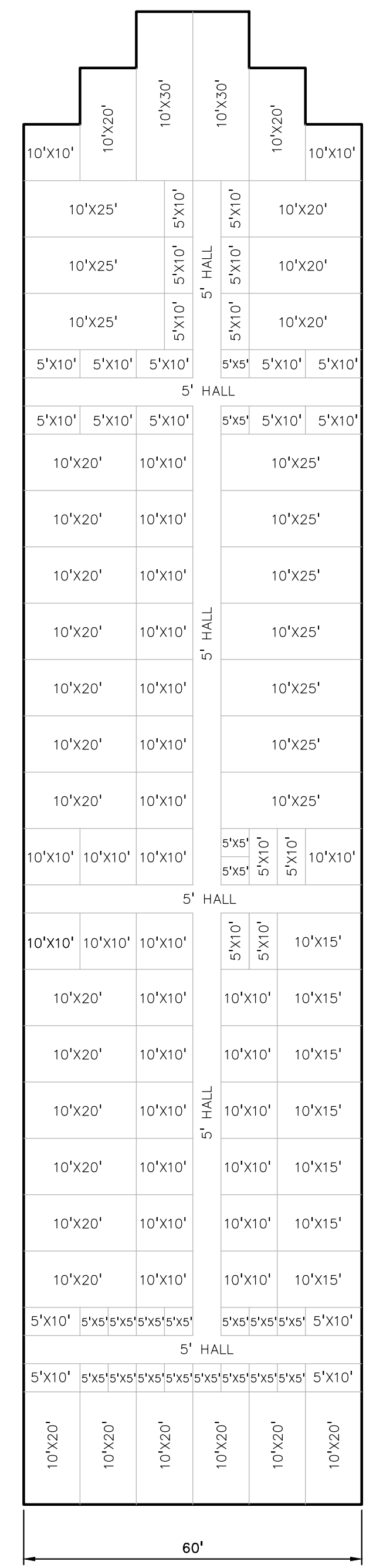
NOT FOR CONSTRUCTION **A-1.0**



BUILDING #1 FLOOR PLAN (6,750 SF)
 SCALE : 1" = 20'

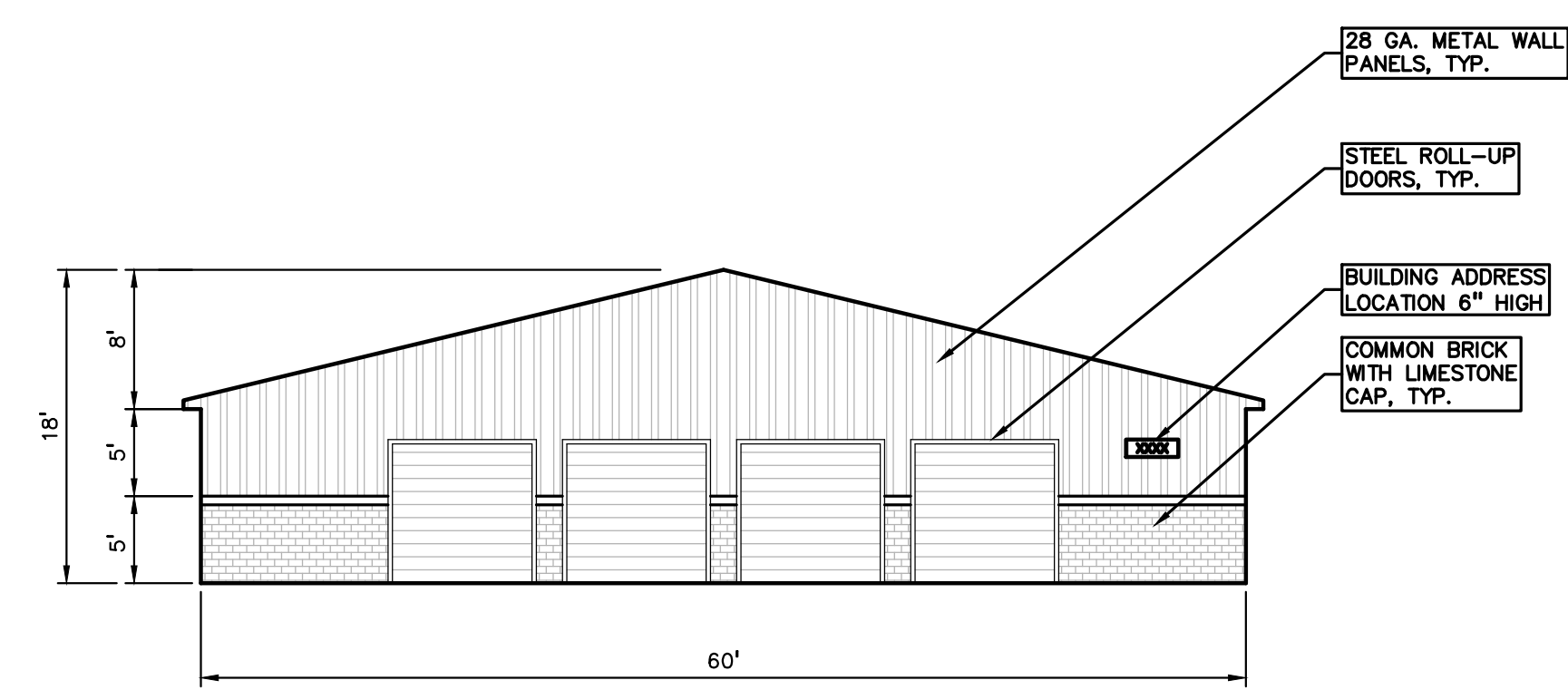


BUILDING #2 FLOOR PLAN (6,900 SF)
 SCALE : 1" = 20'

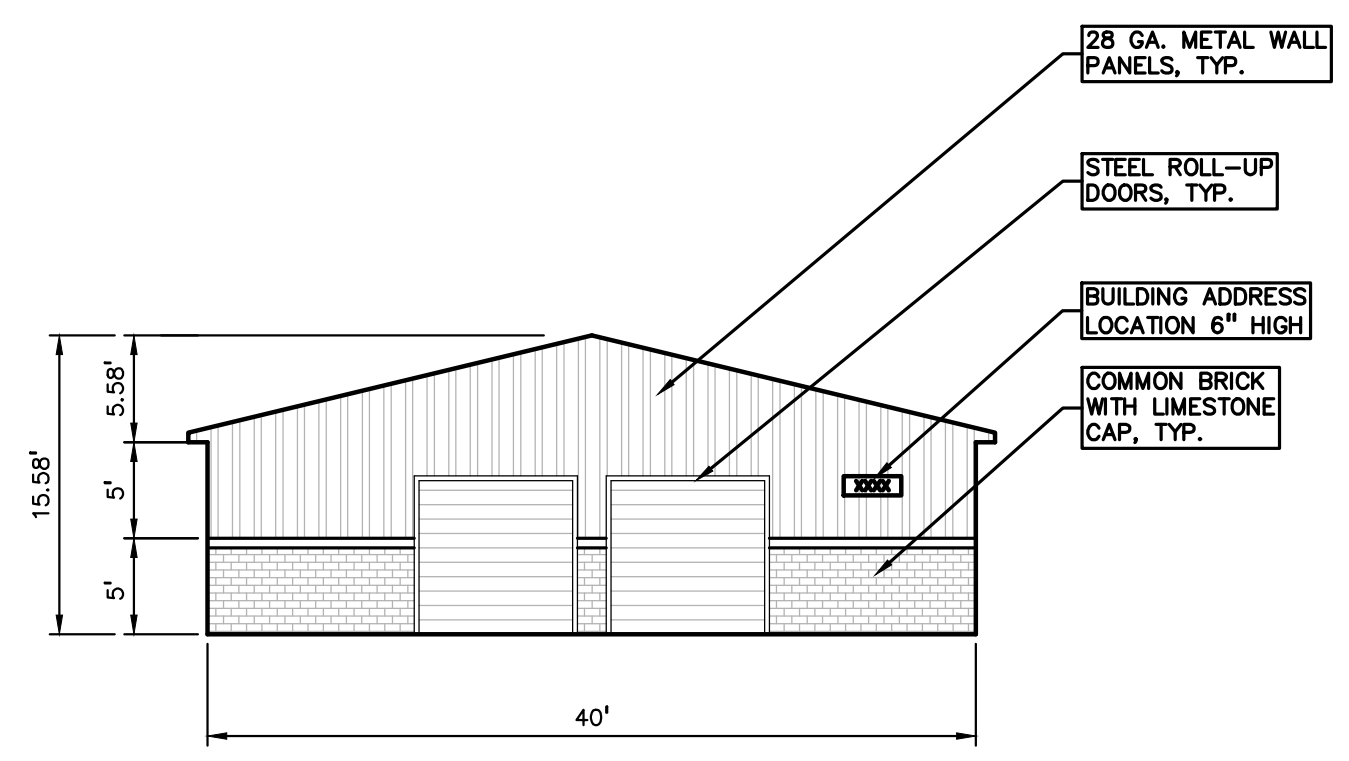


BUILDING #3 FLOOR PLAN (15,300 SF)
 SCALE : 1" = 20'

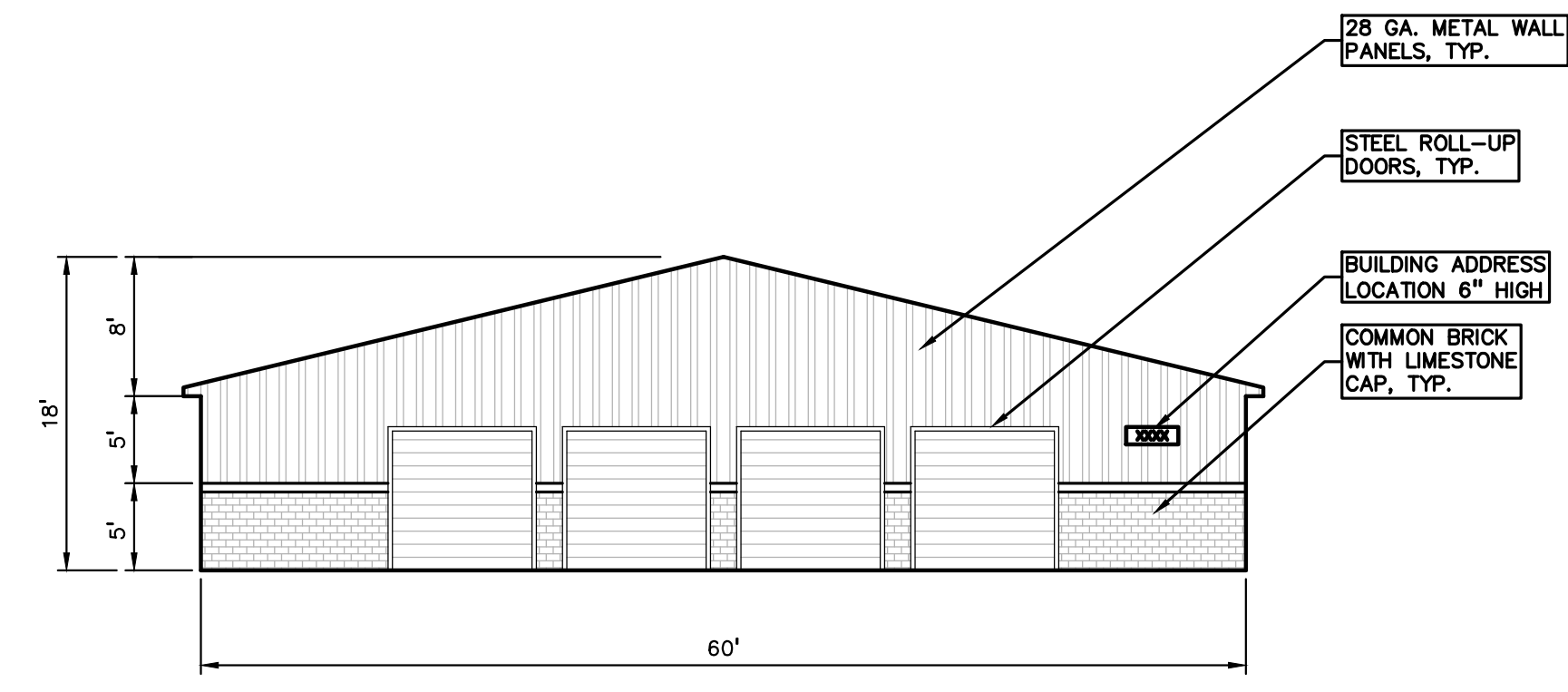
BUILDING #1 - #3 UNIT TABULATION		
SIZE	UNITS	SQ. FT.
5'x5'	27	675
5'x10'	39	1950
10'x10'	55	5500
10'x15'	12	1800
10'x20'	51	10200
10'x25'	10	2500
10'x30'	2	600
15'x20'	4	1200
15'x30'	1	450
15'x40'	1	600
15'x50'	1	750
BATH	1	50
TOTAL	203	26275



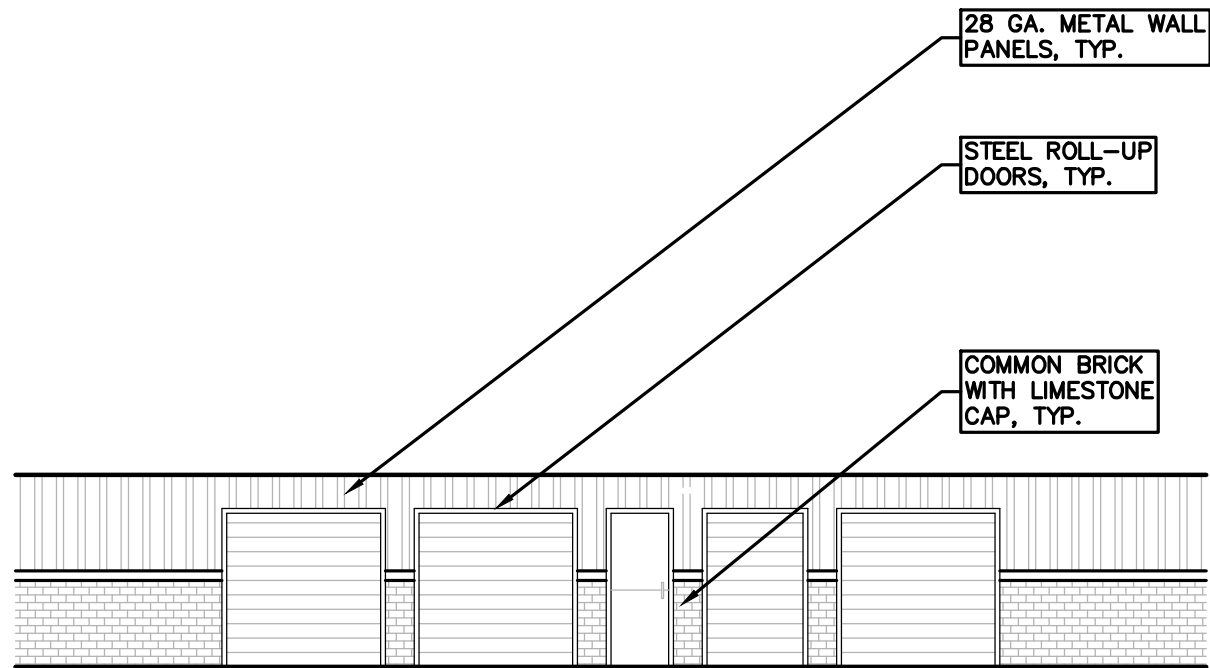
BUILDING #1 - SOUTH ELEVATION
 SCALE : 1" = 10'



BUILDING #2 - SOUTH ELEVATION
 SCALE : 1" = 10'



BUILDING #3 - SOUTH ELEVATION
 SCALE : 1" = 10'



TYPICAL BUILDING EAST/WEST ELEVATIONS
 SCALE : 1" = 10'

NOTES:
 1. A MATERIAL SAMPLE BOARD SHALL BE PROVIDED FOR THE PLANNING COMMISSION REVIEW. COLORED BUILDING ELEVATIONS SHALL BE PROVIDED AS PART OF THE FINAL SITE PLAN REVIEW. STREET ADDRESS TO BE BUILDING MOUNTED.
 2. SIX (6) INCH TALL NUMBERS SHALL BE BUILDING MOUNTED. ADDRESS LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE FIRE MARSHAL.