

**NOTICE
OSHTEMO CHARTER TOWNSHIP
ZONING BOARD OF APPEALS - REGULAR MEETING**

**MEETING WILL BE HELD IN PERSON
AT OSHTEMO TOWNSHIP HALL
7275 W MAIN STREET**

Masks Are Now Optional in Oshtemo Township Buildings

(Meeting will be available for viewing through <https://www.publicmedianet.org/qavel-to-qavel/oshtemo-township>)

**TUESDAY, NOVEMBER 15, 2022
3:00 P.M.**

AGENDA

1. Call to Order
2. Pledge of Allegiance
3. Approval of Agenda
4. Public Comment on Non-Agenda Items
5. Approval of Minutes: August 23rd, 2022
6. **Site Plan – Faraday Defense**
Fishbeck, on behalf of Faraday Properties LLC, is requesting site plan approval for a 60,785 square foot two-story office and manufacturing/distribution facility within the Western Michigan University (WMU) Business Technology Research Park 2.
7. 2023 Meeting Dates
8. Other Updates and Business
9. Adjournment

**Policy for Public Comment
Township Board Regular Meetings, Planning Commission & ZBA Meetings**

All public comment shall be received during one of the following portions of the Agenda of an open meeting:

- a. Citizen Comment on Non-Agenda Items or Public Comment – while this is not intended to be a forum for dialogue and/or debate, if a citizen inquiry can be answered succinctly and briefly, it will be addressed or it may be delegated to the appropriate Township Official or staff member to respond at a later date. More complicated questions can be answered during Township business hours through web contact, phone calls, email (oshtemo@oshtemo.org), walk-in visits, or by appointment.
- b. After an agenda item is presented by staff and/or an applicant, public comment will be invited. At the close of public comment there will be Board discussion prior to call for a motion. While comments that include questions are important, depending on the nature of the question, whether it can be answered without further research, and the relevance to the agenda item at hand, the questions may not be discussed during the Board deliberation which follows.

Anyone wishing to make a comment will be asked to come to the podium to facilitate the audio/visual capabilities of the meeting room. Speakers will be invited to provide their name, but it is not required.

All public comment offered during public hearings shall be directed, and relevant, to the item of business on which the public hearing is being conducted. Comment during the Public Comment Non-Agenda Items may be directed to any issue.

All public comment shall be limited to four (4) minutes in duration unless special permission has been granted in advance by the Supervisor or Chairperson of the meeting.

Public comment shall not be repetitive, slanderous, abusive, threatening, boisterous, or contrary to the orderly conduct of business. The Supervisor or Chairperson of the meeting shall terminate any public comment which does not follow these guidelines.

(adopted 5/9/2000)
(revised 5/14/2013)
(revised 1/8/2018)

Questions and concerns are welcome outside of public meetings during Township Office hours through phone calls, stopping in at the front desk, by email, and by appointment. The customer service counter is open from Monday-Thursday, 8:00 a.m. – 5:00 p.m., and on Friday, 8:00 a.m. – 1:00 p.m. Additionally, questions and concerns are accepted at all hours through the website contact form found at www.oshtemo.org, email, postal service, and voicemail. Staff and elected official contact information is provided below. If you do not have a specific person to contact, please direct your inquiry to oshtemo@oshtemo.org and it will be directed to the appropriate person.

Oshtemo Township Board of Trustees		
<u>Supervisor</u>		
Libby Heiny-Cogswell	216-5220	libbyhc@oshtemo.org
<u>Clerk</u>		
Dusty Farmer	216-5224	dfarmer@oshtemo.org
<u>Treasurer</u>		
Clare Buszka	216-5260	cbuszka@oshtemo.org
<u>Trustees</u>		
Cheri Bell	372-2275	cbell@oshtemo.org
Kristin Cole	375-4260	kcole@oshtemo.org
Zak Ford	271-5513	zford@oshtemo.org
Kizzy Bradford	375-4260	kbradford@oshtemo.org

Township Department Information			
<u>Assessor:</u>			
Kristine Biddle	216-5225	assessor@oshtemo.org	
<u>Fire Chief:</u>			
Greg McComb	375-0487	gmccomb@oshtemo.org	
<u>Ordinance Enforcement:</u>			
Rick Suwarsky	216-5227	rsuwarsky@oshtemo.org	
<u>Parks Director:</u>			
Karen High	216-5233	khigh@oshtemo.org	
Rental Info	216-5224	oshtemo@oshtemo.org	
<u>Planning Director:</u>			
Iris Lubbert	216-5223	ilubbert@oshtemo.org	
<u>Public Works Director:</u>			
Anna Horner	216-5228	ahorner@oshtemo.org	

**OSHTEMO CHARTER TOWNSHIP
ZONING BOARD OF APPEALS**

**DRAFT MINUTES OF A REGULAR MEETING HELD AUGUST 23, 2022 AT
OSHTEMO TOWNSHIP HALL, 7275 WEST MAIN STREET**

Agenda

SITE PLAN APPROVAL: FLAVORSUM BUILDING ADDITION

ON BEHALF OF THE OWNER, HCD PROPERTIES, LLC WAS REQUESTING SITE PLAN APPROVAL TO CONSTRUCT A 30,084 SF BUILDING ADDITION, A 749 SF BUILDING ADDITION, AND A 1,023 SF BUILDING ADDITION ONTO THE EXISTING 34,989 SF BUILDING ON-SITE. Parcel Number 05-34-155-050.

A meeting of the Oshtemo Charter Township Zoning Board was held Tuesday, August 23, 2022, beginning at approximately 3:00 p.m.

ALL MEMBERS WERE PRESENT: Anita Smith, Chair
Dusty Farmer
Fred Gould
Harry Jachym
Micki Maxwell
Louis Williams, Vice Chair

Also present were Iris Lubbert, Planning Director, Colten Hutson, Zoning Administrator, Jim Porter, Township Attorney, Martha Coash, Recording Secretary, and one guest, Elaine Westhouse of Comprehensive Engineering.

Call to Order and Pledge of Allegiance

Chairperson Smith called the meeting to order and invited those present to join in reciting the "Pledge of Allegiance."

Approval of Agenda

Chairperson Smith determined there were no changes to the agenda, let it stand as published, and moved to the next agenda item.

Public Comment on Non-Agenda Items

As no members of the public were present, the Chair moved to the next item.

Approval of the Minutes of July 26, 2022

Chairperson Smith noted two corrections to the minutes: p. 6 – Mr. needed to be changed to Ms. Maxwell, and on page 7 – wither should have read either. Hearing no further changes, she asked for a motion of approval.

Ms. Maxwell made a motion to approve the Minutes of July 26, 2022, with the corrections as noted. Mr. Williams seconded the motion. The motion was approved unanimously.

Chairperson Smith moved to the next agenda item.

SITE PLAN APPROVAL: FLAVORSUM BUILDING ADDITION ON BEHALF OF THE OWNER, HCD PROPERTIES, LLC WAS REQUESTING SITE PLAN APPROVAL TO CONSTRUCT A 30,084 SF BUILDING ADDITION, A 749 SF BUILDING ADDITION, AND A 1,023 SF BUILDING ADDITION ONTO THE EXISTING 34,989 SF BUILDING ON-SITE. Parcel Number 05-34-155-050.

Mr. Hutson indicated Comprehensive Engineering, on behalf of the owner, HCD Properties LLC, was requesting site plan approval to construct a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition onto the existing building located at 3680 Stadium Park Way. Currently serving as an office and a manufacturing facility for food flavorings, the applicant was seeking to expand their business operations. The expansion will provide additional space for warehouse and cold storage.

3680 Stadium Park Way falls within the I-1: Industrial District zoning classification. The existing manufacturing use is a permitted use with conditions within the I-1: Industrial District. The proposed warehouse and cold storage uses are permitted by right within the I-1: Industrial District.

He said when reviewing this site plan review request, there are two sets of criteria that need to be considered: the general site plan review criteria outlined in Section 64, and the conditions for specific permitted use requirements outlined in Section 48.70. He provided an analysis of the proposal against these two code sections. Overall, most of the requirements of Section 64 and Section 48.70 have been met or are not applicable.

Mr. Hutson said the recommendation of approval sets forth a list of eight conditions required to be addressed by the applicant. He provided the following recommendation and conditions for approval and indicated all of the eight required conditions could be handled administratively.

RECOMMENDATION:

Planning Department staff recommended the approval of the proposed Site Plan for a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition at 3680 Stadium Park Way with the following eight conditions:

- 1) A Soil Erosion and Sedimentation Control (SESC) permit from the Kalamazoo County Drain Commissioner's Office will be required prior to building permit issuance.
- 2) A permit by the Road Commission of Kalamazoo County authorizing work within the public right-of-way will be required prior to building permit issuance.
- 3) An 8" watermain connection is proposed on the north side of the building. All watermain connections shall be coordinated with the City of Kalamazoo Department of Public Services. Water Fees for additional usage shall be paid to the Township prior to building permit issuance. Acceptance of watermain construction and testing must be provided prior to issuing a certificate of occupancy.
- 4) A 6" sanitary sewer connection is proposed to an existing lead off of Stadium Drive. Sewer Fees for additional connection shall be paid to the Township prior to building permit issuance. Prein & Newhof shall be notified in advance for inspection of this connection for any work in the public right-of-way or easements.
- 5) Finalization for the design of the non-motorized facility or any other engineering details shall be subject to the administrative review and approval of the Township Engineer prior to building permit issuance.
- 6) An updated planning and zoning application with the applicant's signature as well as the property owner's signature will be required to be submitted prior to building permit issuance.
- 7) Copies of the necessary recorded easements shall be provided to the Township prior to issuing a certificate of occupancy.
- 8) All non-motorized facilities on the approved site plan shall be installed prior to issuing a certificate of occupancy.

Chairperson Smith asked if Board members had questions.

Mr. Jachym confirmed with Mr. Hutson that all the items that have not yet been met are included in the 8 conditions as set forth by staff.

Chairperson Smith asked if the applicant wished to speak.

Ms. Elaine Westhouse of Comprehensive Engineering, and representing the owner, said they are working with the City of Kalamazoo to finalize the water main loop and with the Oshtemo Engineer regarding the sidewalk placement.

The Chair moved to Board Deliberations.

Ms. Maxwell said the recommendation seemed straightforward; there were no further questions or comments.

Ms. Maxwell made a motion to approve the proposed Site Plan for a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition at 3680 Stadium Park Way with the eight conditions from staff as listed above. Ms. Farmer seconded the motion. The motion was approved unanimously.

Other Updates and Business

Ms. Lubbert reminded the Board that a change to the ordinance may be coming forward for their feedback which would allow certain site plan submissions to be reviewed administratively rather than require Zoning Board of Appeals review and approval.

Adjournment

Chairperson Smith noted the Zoning Board of Appeals had exhausted its agenda. There being no other business, she adjourned the meeting at approximately 3:16p.m.

Minutes prepared:
August 24, 2022

Minutes approved:
_____, 2022

DRAFT

Memorandum

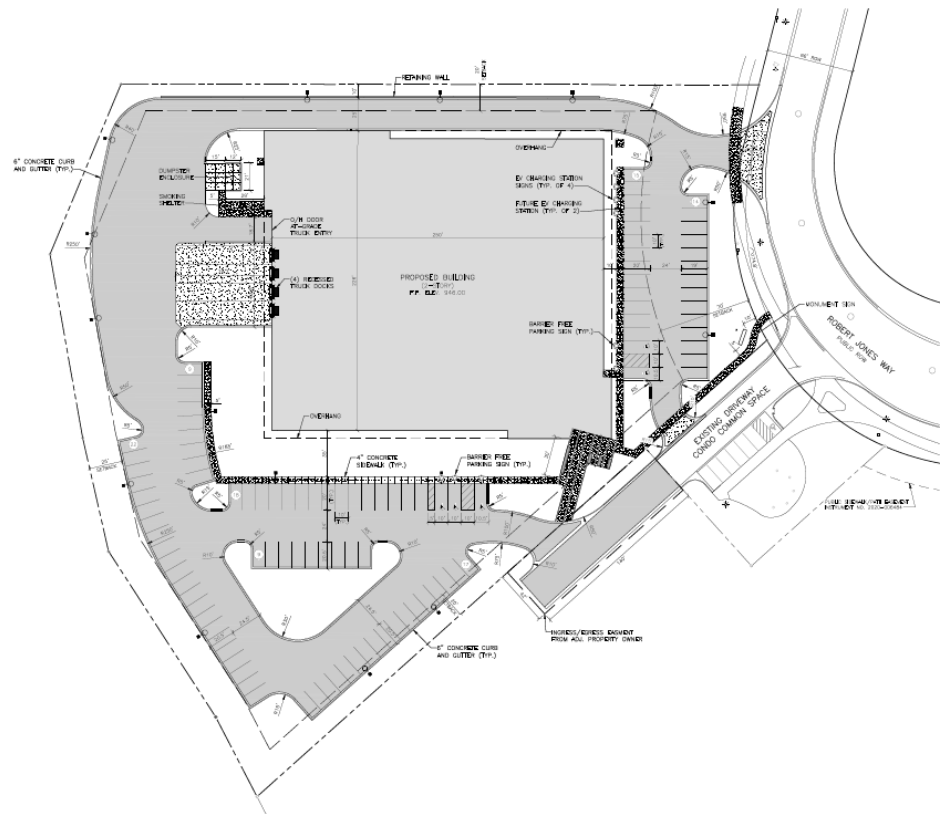
TO: Oshtemo Township Zoning Board of Appeals
FROM: Kyle Mucha, AICP, Senior Planner
Paul Lippens, AICP, NCI, Vice President
SUBJECT: Faraday Defense – Office & Manufacturing/Distribution Facility – Site Plan Review
DATE: November 8, 2022

On behalf of the Charter Township of Oshtemo Planning Department, McKenna has reviewed the proposed Faraday Project Site Plan submission for a office and manufacturing/distribution facility within the Western Michigan University (WMU) Business Technology Research Park 2 and offers the following comments and findings for your consideration. This review is based on the revised site plan application dated October 24, 2022.

SITE DESCRIPTION

The proposed development site is approximately 4.5-acres and is located within Western Michigan University’s Research Park, zoned BRP (Business & Research Park). The site is primarily grassland with a few existing trees located in the southeastern portion of the subject site. The applicant proposes to construct a 60,785 square foot two-story office, warehouse, and manufacturing building. The proposed building will be connected to municipal water and sewer services.

The site is Unit 3 of WMU BTR 2.0 Park – Robert Jones Way and is zoned BRP – Business & Research Park.



REVIEW COMMENTS

BRP Development Standards (§20.50)

The "BRP" district allows for the establishment of coordinated campus-style development including technology, research, light industry, office, life sciences, and development uses. District provisions ensure a high quality of development through the coordination of uses and amenities within the development.

The proposed construction of the Faraday Defense building meets the intent of the BRP District.

- a. *Overall Development Plan. Where two or more parcels, lots, or units are to be developed together in accordance with an overall plan, or where one development parcel is to be divided into individual lots or building sites, evidence must be submitted, signed by the owners of all property involved or their legal representatives, showing that the remaining portions of the property will be developed in accordance with the intent and specific provisions of this District.*

In early 2015, Western Michigan University (WMU), partnering with Oshtemo Township, began working in earnest to develop a 53-acre vacant parcel of land at the southwest corner of Stadium Drive and Drake Road into a business park. Conceptualized to accommodate uses such as medical research facilities, offices, engineering, and product development, this new park, named *BTR 2.0*, can be considered a thematic successor to the nearby Business, Technology, and Research (BTR) Park in the City of Kalamazoo. The first unit within this incrementally established site condominium, the Ascension Borgess Medical Office Building, was established in 2019. This proposed development will be the second unit within the park to develop. The site plan has been presented to the Township and reviewed by staff in anticipation of a future land division that would formally establish the project site. The proposed project site is consistent with the approved BTR 2.0 layout.

- b. *Building and Site Design. The developer must create architectural and design standards for buildings and signs [sites] prior to the division of land within the "BRP" District. The architectural and design standards must be submitted to the Planning Commission for review and approval prior to development. Building and sign [site] designs shall be reviewed and approved by the Planning Commission based upon said standards.*

As part of the initial approval of the BTR 2.0 park, Western Michigan University created architectural and design standards that were reviewed and approved by the Planning Commission. WMU maintains a design review committee that is authorized to evaluate each project prior to a site plan submittal to the Township and that body has approved this project against their standards. An approval letter, supplied by the applicant dated September 23, 2022 indicates the WMU BTR Park 2 Design Review Committee has approved the proposed site plan for the Faraday Defense Corporation's facility.

The following specific conditions regarding building and site design shall be incorporated into the design standards and/or the development plan:

1. *The design and siting of buildings and other improvements shall respect the contours of the area and respect existing natural features.* The site is predominantly grassland with small clusters of deciduous trees. The natural topography of the site slopes from an elevation of 947 feet to 936 feet in the north/northeastern portion of the subject site. The proposed construction of the subject facility will modify elevations to a smaller range between 944 feet and 946 feet. We find that the proposed construction generally respects the majority of the existing topography of the subject site.

2. *The design of buildings and exterior improvements on each individual site shall be complementary and compatible to create a unified development image.* The WMU BTR Park 2 Design Review Committee has approved the proposed site plan in a letter dated September 23, 2022.
 3. *Proposed development shall be landscaped in compliance with Section 53.50. Where practical, native plants including tall grass prairie plantings should be included in the required buffer materials.* The applicant has submitted a landscaping plan, which will be evaluated during the site plan review requirement section of this memorandum.
 4. *The placement of sculpture, fountains, and similar yard area improvements is encouraged and will not be subject to setback requirements.* No apparent placement of sculptures or fountains has been noted on the site plan.
- c. *Low Impact Development (LID) best management practices shall be used in the development of any site or development within the "BRP" District. The design of storm water management systems shall respond to the natural drainage patterns of the area and be in coordination with the groundwater protection standards of Section 56.10 and the groundwater protection policies set forth in the Master Plan.* The applicant states "the on-site storm water management system will convey stormwater and discharge to the regional stormwater management system constructed by the BTR Park 2.0 project". The applicant has also provided the below statement regarding stormwater management systems on the site plan. The Township Engineer has provided a review memorandum dated September 12, 2022 indicating the stormwater system is acceptable.

STORMWATER MANAGEMENT SUMMARY

THE DESIGN CRITERIA FOR THE BTR PARK 2.0 STORM WATER MANAGEMENT SYSTEM IS TO MEET OR EXCEED RETENTION VOLUME REQUIREMENT FOR THE 100-YEAR, 24-HOUR STORM EVENT. THE STORMWATER MANAGEMENT SYSTEM CONSISTS OF 3 SEPARATE ON-SITE INFILTRATION BASINS THAT AIM TO PROVIDE PRE-TREATMENT OF STORM WATER (IN SEDIMENT FOREBAY) AND RETENTION (BY INFILTRATION) BACK INTO THE GROUND WATER SYSTEM. STORM SEWER CONVEYANCE SYSTEMS HAVE BEEN DESIGNED TO PASS THE 10-YEAR 24-HOUR STORM EVENT. IN AN EFFORT TO PROMOTE SUSTAINABILITY AND GREEN INFRASTRUCTURE, INFILTRATION (LEACHING) BASINS ARE PROPOSED TO HELP REDUCE RUNOFF VELOCITIES/VOLUMES AND TO HELP PROMOTE ON-SITE STORMWATER INFILTRATION.

- d. *The business and research park development shall be designed to incorporate and/or promote the preservation of the site's natural features and unique physical characteristics. A natural features preservation plan shall be submitted. Green space enhancement plans for land area along public roads abutting and serving the development shall also be required; this shall apply to property fronting on highways identified in Section 50.60.A.* In a response memo from the applicant, dated September 26, 2022, it has been indicated that an estimated 37 low value trees will be removed and replaced with 39 red & white oaks, which are considered to be high-value species. The applicant further states that all disturbed areas within the proposed project shall be restored to natural prairie. We find this acceptable subject to final approval by the Oshtemo Township Zoning Board of Appeals.
- e. *One or more of the following sustainable products and/or methodologies shall be incorporated into each property within a development: installation of green roof systems, development in compliance with LEED-certification standards, installation of renewable energy (solar, wind, etc.) technology, or other products or*

methodologies proposed to and approved by the Planning Commission and satisfying the intent of this Ordinance. In a response memo dated September 26, 2022, the applicant proposes the following sustainable products and/or methodologies to be incorporated within the development:

1. Four (4) electric vehicle charging spaces, located in the northeast corner of the easternly parking lot.
2. Bicycle parking (6-space bike rack) has been added to the site.
3. Parking lot lights are dark sky approved per BTR design standards.
4. Stormwater to discharge to regional infiltration basins constructed by the BRT 2.0 Project.
5. Native/Adapted & drought tolerant plantings.
6. Provide 25% or greater open space on the site.
7. On-site recycling receptacle.

f. **Development Standards.**

1. Except as elsewhere specified herein, the parcel, lot, building site, yard, area and setback requirements shall be as specified in Article 50. The following table describes the setback requirements for the BRP District:

Setback	Required	Proposed	Comments
Front	70 feet	>70 feet	Requirement met
Side	20 feet or height of the abutting side of the building at its highest point: <i>proposed height of building is 33 feet.</i>	35 feet	Requirement met
Rear	20 feet or height of the abutting side of the building at its highest point	>33 feet	Requirement met

2. A parcel shall contain at least ten acres. Said parcel may be subsequently subdivided in compliance with Township procedures. Each lot or unit created shall be of sufficient size to satisfy the requirements herein as well as sound planning and design principles. This provision has been satisfied: the proposed subject site is Unit #3 within the approved Business Park.
3. Development on the site shall comply with the standards of Section 56.20.A of this Ordinance. Additional setback, open space, or buffer yard area may be required along adjacent water bodies, streams, or drains to limit the impact of the proposed development on the health and/or function of the stream or drain. The applicant has submitted a narrative pertaining to Section 56.20 – Storm Water Management and has been accepted by the Township Engineer in a response letter dated September 12, 2022.
4. 50 percent of the entire development shall be retained as open space. This open space can be developed as dedicated open space that is separate from individual parcels, lots or building sites, or provided on each individual parcel, lot or building site within the development, or a combination of these options. In no case, shall an individual parcel, lot or building site have less than 20 percent open space. The applicant proposes an estimated 1.15 acres of open space preservation on the subject site, which accounts for 25.8% of the overall 4.5-acre parcel. We find that the intent of this provision has been met.

g. Parking and Circulation.

1. *Any business and research park development intended to be developed into more than one lot or unit shall be serviced by an internal public road.* This provision has been satisfied via Robert Jones Way.
2. *Access for a business and research park development onto the existing public road and access to individual sites shall be designed in compliance with Article 51, the Master Plan and Access Management Plan. In a communication provided by Jeffrey D Long, Director of Business Operations for Western Michigan University, dated September 26, 2022, “the shared access driveway identified as a General Common Element is intended to service the southern lots as the County Road Commission would not allow another curb cut closer to the Drake Road entrance. The design guidelines encourage shared driveways for multiple developments [which] is our basis for approving a shared use driveway for the Faraday project.”*

Based on the communication received from Western Michigan University, we find that the use of this shared driveway can be approved however, it should be noted that the Road Commission of Kalamazoo County has given the proposed plan a preliminary approval. Further, the proposed easement shall be required to be recorded with the Kalamazoo County Register of Deeds, with a copy provided to Oshtemo Township and Western Michigan University for their records prior to final approval.

3. *Sidewalks shall be provided along all internal public streets and to each site and principal building within the development.* The site plan indicates that there is an existing sidewalk network along Robert Jones Way. The site plan indicates internal connection will be provided to access the building via the public sidewalk network.
 4. *Off-street parking shall be provided in accordance with Article 52. Parking layouts designed to accommodate cross-access and/or cross-parking arrangements and facilitate pedestrian travel will be encouraged.* Parking requirements will be addressed under the site plan review portion of this memorandum.
 5. *Loading areas may be located in side or rear yards; however, side yard loading areas shall be screened from front yard view as well as view of public streets. Loading areas shall be designed so as not to interfere with parking and circulation, and to prevent the backing of trucks or other vehicles onto a public street or general circulation drive.* The site plan proposes four loading docks, located to the rear of the subject site, along the western elevation of the building. We find this provision has been satisfied.
 6. *Five percent of the minimum required off-street vehicular parking spaces may be substituted with bicycle parking.* The site is required to have 104 parking spaces. The applicant proposes 99 spaces with an additional six (6) spaces for bicycle parking. Based on this provision, we find that the off-street parking meets the ordinance requirements.
- h. Public water and sanitary sewer shall be provided as part of the site development.* The site plan indicates connections for public water and sanitary sewer.

- i. *All utilities, including telephone, electric and cable television, shall be placed underground.* The site plan appears to meet this requirement of providing underground utilities.
- j. *Exterior lighting shall be provided by LED lighting products and shall be oriented to pedestrians as well as to vehicles.* A photometric plan, which includes the installation of LED lighting, has been submitted for review and will be further detailed in later portions of this memorandum.

Site Plan Review (\$64.60)

In accordance with the site plan review process, the site plan shall contain all of the materials and information listed below.

1. General Requirements. The site plans are required to be sealed by the architect, engineer, surveyor or landscape architect: this requirement has been satisfied.
2. Access and Circulation. Site plans must include dimensioned drawings of all existing and proposed:
 - a. *Public and private easements contiguous to and within the proposed development which are planned to be continued, created, relocated or abandoned.* Public sanitary sewer and water mains are shown on the site plan. The applicant has also shown a 20' wide easement for an existing 8" water main along the eastern portion of the site.
 1. *Acceleration, deceleration, passing lanes and approaches; dedicated road or service drive locations; proposed locations of driveways, access drives, street intersections; driveway locations on opposite frontage; dimensioned fire lanes, including curve radii; and surfacing materials.* The site plan shows access onto Robert Jones Way towards the northeastern portion of the subject parcel. In addition, two additional ingress/egress points are shown connecting to an existing driveway, with proposed expansion, along the southeastern portion of the site. In a response memo dated September 26, 2022, the applicant indicates "as a shared use driveway between multiple tenants, multiple connection points to tenant parking spaces are both encouraged and required, to reduce the size of parking areas. This approach and layout adhere to the Section 2.J.1 and 2.J.2 of the WMU BTR 2.0 Design and Maintenance Standards." In a communication provided by Jeffrey D Long, Director of Business Operations for Western Michigan University, dated September 26, 2022, "the shared access driveway identified as a General Common Element is [is] intended to service the southern lots as the County Road Commission would not allow another curb cut closer to the Drake Road entrance. The design guidelines encourage shard driveways for multiple developments [which] is our basis for approving a shared use driveway for the Faraday project."

Based on the communication received from Western Michigan University, we find that the use of this shared driveway can be approved however, final approval from the Road Commission of Kalamazoo County prior to building permit issuance will be required.

3. Building and Structures.
 - a. *Location, height, and outside dimensions of all existing and proposed buildings or structures on the site, with setbacks and yard dimensions.* Locational setbacks from property lines appear to meet ordinance requirements as presented.

4. Utilities, soil erosion, sedimentation control, and drainage. Overall, this condition is met; this will be reviewed in a subsequent section of this memorandum.
5. Landscaping Plan. The applicant has submitted a landscaping plan, which will be reviewed in a subsequent section of this memorandum.
6. Lighting Plan. The applicant has submitted a lighting plan, which utilizes LEDs as stipulated in the BRP Site Design Requirements. The proposed lighting will utilize cut-off fixtures, which will not permit light to pass beyond the horizontal plane. Further, per the submitted lighting plan, lighting is being designed to direct light onto the development and away from other adjacent property. The proposed lighting is within the color parameters as outlined within the Ordinance (Kelvin rating between 3,000 and 5,000). Per the lighting plan, and in accordance with Section 54.60 of the Township Zoning Ordinance, Outdoor Lighting Standards, the measured foot-candles of the proposed lighting will not exceed 0.5 foot-candles at the property line. The applicant will need to confirm the proposed lighting pole height meets ordinance requirements prior to issuance of a building permit.

Off-Street Parking (§52.100)

The applicant proposes the following off-street parking spaces, based on the requirements of Section 52.100 of the Township Zoning Ordinance:

PARKING QUANTITIES

OFFICES: 1 SPACE/150 SF
 MANUFACTURING: 1.5 SPACES/1,000 SF
 WAREHOUSE: 1 SPACE/1,500 SF

REQUIRED PARKING:

1ST FLOOR OFFICE: 3,906 SFT/150 = 27 SPACES
 2ND FLOOR OFFICE: 5,968 SFT/150 = 40 SPACES
 MANUFACTURING: 6,997 SFT x 1.5/1000 = 11 SPACES
 WAREHOUSE: 38,013 SFT/1500 = 26 SPACES

TOTAL REQUIRED PARKING: 104 SPACES

PROVIDED PARKING:

90 STANDARD SPACES
 5 BARRIER FREE + VAN ACCESSIBLE SPACES
 4 EV CHARGING SPACES

99 TOTAL SPACES

BICYCLE PARKING:

6 SUPER CYCLOOPS 2175-B-C-P
 BY COLUMBIA CASCADE
 SURFACE MOUNTED; POWDER COAT BLACK

The following table provides further review regarding the required parking for the proposed site, as regulated by Township Ordinance.

Parking	Required	Proposed
Office: 1 space per 150 sq.ft.	(9,874 sq.ft. / 150) = 66	*
Manufacturing: 1.5 spaces per 1,000 sq.ft.	(6,997 / 1,000) * 1.5 = 11	*

Warehouse: 1 space per 1,500 sq. ft.	(38,013 sq. ft. / 1,500) = 26	*
<i>Total</i>	103	*

*The applicant indicates a total of 99 spaces will be provided, as shown in the image on the previous page. The number of spaces provided meets ordinance requirements due to the installation of bicycle parking, which offers a reduction in the number of required spaces.

Landscaping (§53.30)

- a. Section 53.30 – Landscaping, General Provisions – requires landscaping plans to be sealed by a landscape architect for site plans that include more than 70 parking spaces. The site plan dated October 24, 2022 has not been stamped/sealed by a landscape architect.

- 2. Parking Lot Landscaping: Section 53.50.B.2 “parking lots with 11 spaces or more shall provide landscaping at 25 square feet per parking lot space”. A minimum of 2,600 square feet of parking lot landscaping is required.
 - 1. *There shall be a minimum of one (1) canopy tree and two (2) low growing shrubs for every 200 square feet of required parking lot landscaping.* The site plan depicts canopy trees within landscape islands within the parking lot. The site plan dated October 24, 2022 does not show the required shrubs and will need to be corrected.

 - 2. *The minimum size of any parking lot landscape feature shall be no less than six (6) feet in any single dimension and no less than 200 square feet in area.* Dimensions have been provided which exceed the minimum six (6) feet requirement.

 - 3. *To reduce the impacts of extensive concrete or asphalt, a parking lot landscape feature must be provided at least every 200 linear feet of parking spaces.* Parking lot landscaping features have been provided in accordance with this requirement.

 - 4. *Parking lot landscape features shall be protected by the installation of a raised concrete or asphalt curb, anchored landscape timbers around of the border, or other suitable means. A minimum distance of three (3) feet shall be established between proposed trees and the backside of the protection device.* The landscaping plan appears to indicate concrete curbing will be used to protect landscaping features.

- 3. Street Rights-of-Way Greenbelts
 - 1. *Greenbelts shall be 20 feet wide along public rights-of-way and 15 feet wide along private rights-of-way, measured from the right-of-way line.* The amended site plan notes a greenbelt of 15 feet wide which does not meet the minimum standards along Robert Jones Way. Additionally, no greenbelt is shown along the shared driveway/access road and will need to be revised to include this provision.

 - 2. *The greenbelt shall be landscaped with a minimum equivalent of one (1) canopy tree and two (2) understory trees for every 100 linear feet, or fraction thereof, of frontage abutting a street*

right-of-way. The revised landscaping plan notes two (2) canopy trees and four (4) understory trees within the greenbelt.

3. *Parking lots adjacent to street rights-of-way shall provide shrubs at a ratio of 1.5 shrubs for every one (1) parking space. Shrubs that reach a mature height of at least three (3) feet shall be utilized and they shall be in groupings spaced at least three (3) feet on center to screen the parking lot from the right-of-way.* The amended site plan provides 21 shrubs along the street right-of-way, which satisfies the requirement. However, we encourage the applicant to space out the required shrubs to better screen the parking areas from the public right-of-way.

In addition to the parking lot and greenbelt landscaping, a minimum of 10 percent of the developed area of the parcel, lot or building site must be landscaped (53.70). In addition to the other tree requirements outlined herein, one (1) canopy tree will be required for every 1,500 square feet and one (1) understory tree will be required for every 2,500 square feet of the interior site landscaping. The amended landscaping plan notes the following:

<u>TOWNSHIP ORDINANCE 53.70 TABLE:</u>				
10% OF THE AREA MUST BE LANDSCAPED				
AREA OF THE PROPERTY: XXX SF				
LANDSCAPED AREA	<u>REQUIRED</u>		<u>PROVIDED</u>	
	XX	SF	XX	SF
PERCENT	XX		XX	

We note that additional landscaping elements have been shown on the site plan however the calculations have not been provided as it pertains to the developed area of the parcel. Full calculations will need to be provided to confirm that the landscaping requirements have been satisfied. We advise the applicant that *“Developed area of the lot or building site shall mean the physical extension and/or construction of any man-made change or alteration to an improved or unimproved property.”* A minimum of 10 percent of the developed area of the parcel, lot or building site must be landscaped. This amount must be stated on the plan and labelled as Interior Site Landscaping Area. The area cannot include the 2,600 square feet of parking lot landscaping or the street right of way landscaping.

One (1) canopy tree is required for every 1,500 square feet and one (1) understory tree is required for every 2,500 square feet of the interior site landscaping (Section 53.70).

Engineering Comments

The Township Engineer has provided the following comments:

When the BTR 2.0 park was initially created, two stormwater basins were designed and established to serve all development within the park. Contours have been provided which show that this site’s stormwater will be handled appropriately. A final sealed plan, fully detailing grading and drainage is needed prior to building permit issuance.

Public Safety Comments

The Oshtemo Township Fire Department has no additional comments at the time.

RECOMMENDATION

We find that the site plan can be approved, subject to the following conditions being satisfied:

1. The project site shall be formally established in accordance with the site plan prior to issuance of a building permit.
2. Compliance with Oshtemo Township's Engineering requirements; provide a sealed, final stormwater plan showing grading and drainage prior to building permit issuance.
3. Compliance with Oshtemo Township's Fire Safety Requirements.
4. Compliance with the Road Commission of Kalamazoo County requirements; final approval for the shared driveway will be obtained and provided to the Township prior to building permit issuance.
5. An Easement for the shared driveway shall be established and recorded with the Kalamazoo County Register of Deeds, with a copy provided to Oshtemo Township and Western Michigan University for their records prior building permit issuance.
6. Provide the height of proposed lighting poles on the lighting detail sheet prior to issuance of a building permit.
7. Install sustainable products as indicated in the applicant's response memo:
 - a. Four (4) electric vehicle charging spaces, located in the northeast corner of the easternly parking lot.
 - b. Bicycle parking (6-space bike rack) has been added to the site.
 - c. Parking lot lights are dark sky approved per BTR design standards.
 - d. Stormwater to discharge to regional infiltration basins constructed by the BRT 2.0 Project.
 - e. Native/Adapted & drought tolerant plantings.
 - f. Provide 25% or greater open space on the site.
 - g. On-site recycling receptacle.
8. An amended site plan, stamped by a licensed professional, shall be submitted to and approved by the Township prior to building permit issuance which provides the required greenbelt dimensions: 20 feet wide along public rights-of-way and 15 feet wide along private rights-of-way, measured from the right-of-way line.
9. An amended landscaping plan, stamped by a licensed professional, shall be submitted to and approved by the Township prior to building permit issuance meeting the ordinance requirements outlined in this memo.

Respectfully submitted,

McKENNA



Paul Lippens, AICP, NCI
Vice President



Kyle Mucha, AICP
Senior Planner

Cc: Iris Lubbert, Planning Director, Oshtemo Township



7275 W. Main Street, Kalamazoo, Michigan 49009-9334
Phone: 269-216-5223 Fax: 269-375-7180

PLEASE PRINT

PROJECT NAME & ADDRESS Faraday Defense - WMU BTR Park 2.0 Unit 3

PLANNING & ZONING APPLICATION

Applicant Name : Nate Barton
Company Fishbeck
Address 1515 Arboretum Drive SE
Grand Rapids, MI 49546
E-mail nabarton@fishbeck.com
Telephone 616-464-3919 Fax _____
Interest in Property Civil Engineering Consultant

THIS
SPACE
FOR
TOWNSHIP
USE
ONLY

OWNER*:

Name Faraday Properties LLC
Address P.O. Box 2343
Portage, MI 49081
Email ruthp@partnerproperties.holdings
Phone & Fax 269-267-3586

Fee Amount _____
Escrow Amount _____

NATURE OF THE REQUEST: (Please check the appropriate item(s))

- | | |
|---|---|
| <input type="checkbox"/> Planning Escrow-1042 | <input type="checkbox"/> Land Division-1090 |
| <input checked="" type="checkbox"/> Site Plan Review-1088 | <input type="checkbox"/> Subdivision Plat Review-1089 |
| <input type="checkbox"/> Administrative Site Plan Review-1086 | <input type="checkbox"/> Rezoning-1091 |
| <input type="checkbox"/> Special Exception Use-1085 | <input type="checkbox"/> Interpretation-1082 |
| <input type="checkbox"/> Zoning Variance-1092 | <input type="checkbox"/> Text Amendment-1081 |
| <input type="checkbox"/> Site Condominium-1084 | <input type="checkbox"/> Sign Deviation-1080 |
| <input type="checkbox"/> Accessory Building Review-1083 | <input type="checkbox"/> Other: _____ |

BRIEFLY DESCRIBE YOUR REQUEST (Use Attachments if Necessary): _____

Site Plan Review for Proposed Faraday Defense office and
manufacturing/distribution facility within the WMU Business Technology
Research Park 2. See attached drawings and design information for your use.

LEGAL DESCRIPTION OF PROPERTY *(Use Attachments if Necessary):*

See attached drawings (C101 and C201) for legal description.

PARCEL NUMBER: 3905- 25-430-010 (Unit 3 of the WMU BTR 2.0 Site Condo)

ADDRESS OF PROPERTY: TBD (requested from Kristine Biddle on 8/1/2022)

PRESENT USE OF THE PROPERTY: Vacant Land

PRESENT ZONING BRP **SIZE OF PROPERTY** 4.45 acres

**NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS
HAVING A LEGAL OR EQUITABLE INTEREST IN THE PROPERTY:**

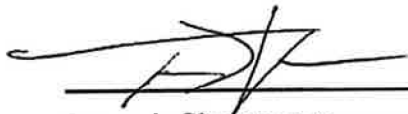
Name(s)

Address(es)

_____	_____
_____	_____

SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) acknowledge that we have received the Township's Disclaimer Regarding Sewer and Water Infrastructure. By submitting this Planning & Zoning Application, I (we) grant permission for Oshtemo Township officials and agents to enter the subject property of the application as part of completing the reviews necessary to process the application.



Owner's Signature (* If different from Applicant)



Applicant's Signature

8-29-2022

Date

8/30/22

Date

- Copies to:
- Planning -1
- Applicant -1
- Clerk -1
- Deputy Clerk -1
- Attorney-1
- Assessor -1
- Planning Secretary - Original

PLEASE ATTACH ALL REQUIRED DOCUMENTS

Atkins Fick Group, Inc.

Faraday Project

Unit 3 of WMU BTR 2.0 Park - Robert Jones Way
Oshtemo Township, MI

Issued for Site Plan Approval - October 24, 2022
Project Number 220450

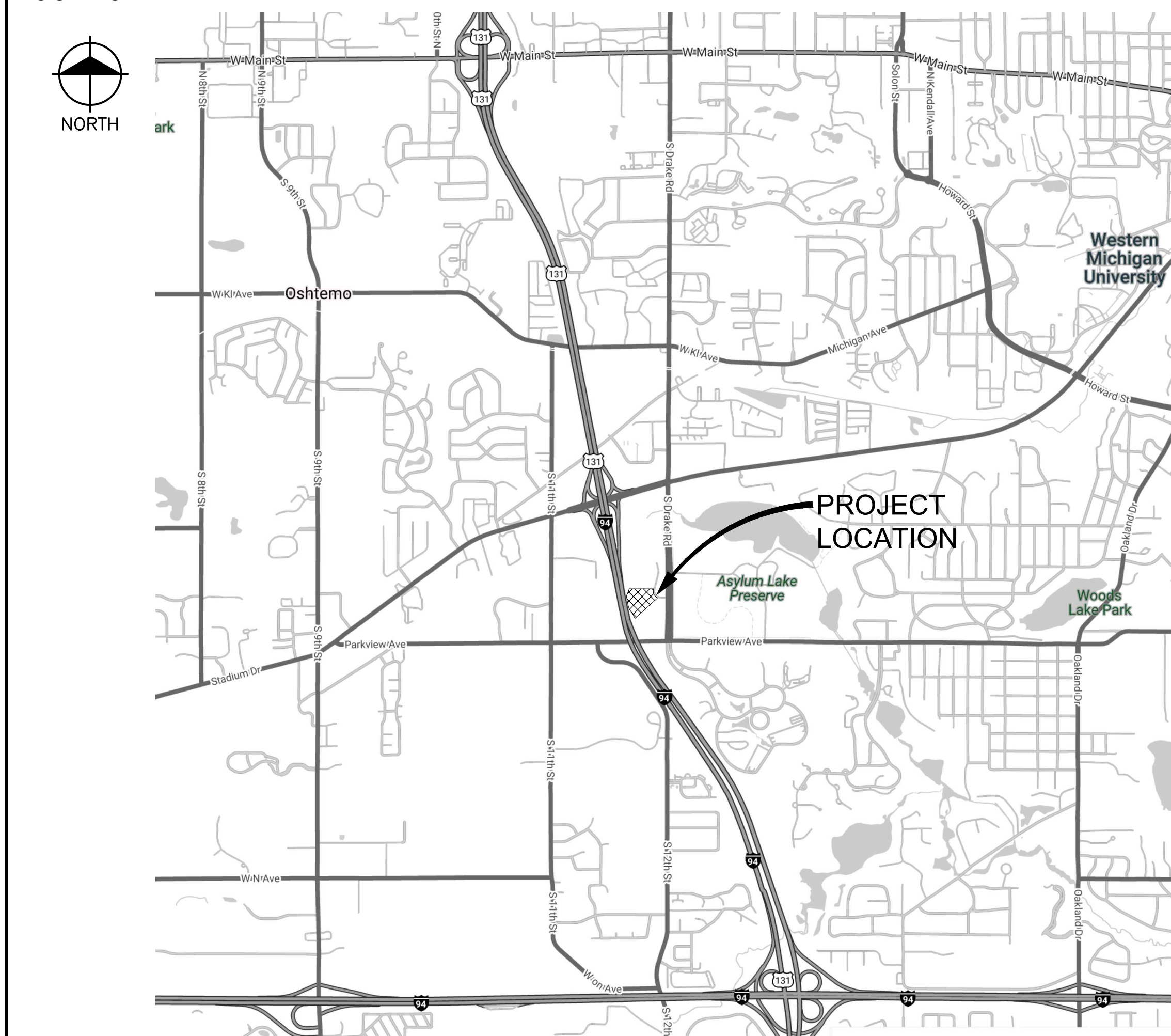


Engineers | Architects | Scientists | Constructors

fishbeck.com
800.456.3824

1515 Arboretum Drive
Grand Rapids, Michigan

LOCATION MAP



CIVIL

REV. #	ISSUE DATE	DRAWING NUMBER / DESCRIPTION
10/24/2022	G001	COVER
10/24/2022	C101	EXISTING CONDITIONS
10/24/2022	C201	SITE LAYOUT PLAN
10/24/2022	C301	GRADING PLAN
10/24/2022	C310	STORM WATER MANAGEMENT PLAN
10/24/2022	C401	UTILITY PLAN
10/24/2022	C501	DETAILS
10/24/2022	C502	DETAILS
10/24/2022	C601	RCKC DRIVEWAY PLAN
10/24/2022	L101	LANDSCAPE PLAN
10/24/2022	E101	SITE LIGHTING PLAN
10/24/2022	E102	SITE PHOTOMETRIC PLAN
10/24/2022	E103	LUMINAIRE CUTSHEETS

ARCHITECTURAL

REV. #	ISSUE DATE	DRAWING NUMBER / DESCRIPTION
9/26/2022	A00	OVERALL FLOOR PLAN
9/26/2022	A01	OFFICE FLOOR PLANS
9/26/2022	A12	EXTERIOR ELEVATIONS

UTILITY INFORMATION

THE EXISTING UTILITIES SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN LOCATED FROM UTILITY RECORD DRAWINGS. ACTUAL UTILITY LOCATIONS MAY VARY FROM WHAT IS SHOWN. ALL UTILITIES TO BE FIELD VERIFIED BY UTILITY OWNER PRIOR TO CONSTRUCTION.

ZONING

OSHTEMO CHARTER TOWNSHIP
MS. IRIS LUBBERT, AICP
7275 W. MAIN STREET
KALAMAZOO, MI 49009
EMAIL: ILUBBERT@OSHTEMO.ORG
PHONE: (269) 216-5232

SOIL EROSION PROGRAM

KALAMAZOO COUNTY DRAIN COMMISSIONER'S OFFICE
MR. JASON WIERSMA
201 W. KALAMAZOO AVENUE
KALAMAZOO, MI 49007
EMAIL: JASON.WIERSMA@KALAMAZOOCOUNTY.COM
PHONE: (269) 384-8117

STORM WATER

KALAMAZOO COUNTY DRAIN COMMISSIONER'S OFFICE
MS. PATRICIA CROWLEY
201 W. KALAMAZOO AVENUE
KALAMAZOO, MI 49007
PHONE: (269) 384-8117

WATER

CITY OF KALAMAZOO PUBLIC SERVICES
MR. STEVE SKALSKI
415 STOCKBRIDGE AVENUE
KALAMAZOO, MI 49001
PHONE: (269) 337-8215

SEWER

OSHTEMO CHARTER TOWNSHIP
PUBLIC WORKS DEPARTMENT
MR. MARC ELLIOTT
7275 W. MAIN STREET
KALAMAZOO, MI 49009
EMAIL: MELLIOTT@OSHTEMO.ORG
PHONE: (269) 375-4260

ELECTRIC

CONSUMERS ENERGY
MR. GREG SCHULTZ
2500 E. CORK STREET
KALAMAZOO, MI 49001
EMAIL: GTSCHULTZ@CMSENERGY.COM
PHONE: (800) 477-5050

GAS

CONSUMERS ENERGY
2500 E. CORK STREET
KALAMAZOO, MI 49001
PHONE: (800) 477-5050

FIBER

CTS TELECOM, INC.
MR. SCOTT GERDEMAN
13800 E. MICHIGAN AVENUE
GALESBURG, MI 49053
EMAIL: SGERDEMAN@CTSTELECOM.COM
PHONE: (269) 746-4411

TRAFFIC

ROAD COMMISSION OF KALAMAZOO COUNTY
MR. BRIAN FRANKLIN
3801 E. KILGORE ROAD
KALAMAZOO, MI 49001
EMAIL: BFRANKLIN@KALAMAZOOCOUNTYROADS.COM
PHONE: (269) 381-3170 EXT. 273

FIRE

OSHTEMO TOWNSHIP FIRE DEPARTMENT
MR. JIM WILEY
ASSISTANT FIRE CHIEF // FIRE MARSHAL
7275 WEST MAIN STREET
KALAMAZOO, MI 49009
EMAIL: JWILEY@OSHTEMO.COM
PHONE: (269) 375-0487



Engineers | Architects | Scientists | Constructors



Atkins Fick Group, Inc.
Oshtemo Township, Michigan
Faraday Project

REVISIONS

NOT FOR CONSTRUCTION

DATE	DESCRIPTION
10/24/2022	SPR RESUBMISSION NO. 2
9/28/2022	SPR RESUBMISSION
8/30/2022	SITE PLAN REVIEW

Drawn By	NB
Designer	NB
Reviewer	
Manager	RDM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
220450

SHEET NO.

G001

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BENCH MARKS

BENCH MARK 1 ELEVATION: 946.63
TOP OF BOLT ON SOUTHWEST SIDE OF HYDRANT UNDER "A" IN "USA", WEST SIDE OF ROBERT JONES WAY, 200 FEET NORTH OF DRIVE FOR RELIC TOWER

BENCH MARK 2 ELEVATION: 946.08
COTTON SPINDLE IN EAST SIDE OF 18 IN. MAPLE, 80 FEET SOUTHWEST OF THE EXTENDED NORTHERLY CURB LINE FOR THE RELIC TOWER ENTRANCE, ALONG THE SOUTHERLY BOUNDARY OF UNIT 3

SYMBOL LEGEND

- BENCH MARK
- PROJECT PROPERTY BOUNDARY
- PROPERTY LINE
- ROW LINE
- EASEMENT LINE
- SOIL BORING
- SHRUBS
- CONIFEROUS TREE
- DECIDUOUS TREE
- TREE LINE
- WETLAND
- EDGE OF WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- LIGHT
- UTILITY POLE
- SIGN
- MAIL BOX
- GUARD RAIL
- FENCE LINE
- GRAVEL SURFACE
- PAVED SURFACE
- EXISTING CURB & GUTTER
- BARRIER FREE MARKING
- 8" SAN. SANITARY SEWER & MANHOLE
- 12" STM. STORM SEWER & MANHOLE
- CATCH BASIN CURB AND LAWN TYPE
- VALVE
- HYDRANT
- 6" WTR. WATER MAIN
- PLUG
- 4" FM. FORCE MAIN
- 2" GAS. GAS MAIN
- ELEC. UNDERGROUND ELECTRIC
- FIBER OPTICS
- TEL. UNDERGROUND TELEPHONE
- 2" OIL. OIL TRANSMISSION LINE
- 6" STEAM. UNDERGROUND STEAM
- 2" SPRK. UNDERGROUND SPRINKLER
- CATV. CABLE TELEVISION
- TELEPHONE PEDESTAL

SURVEY NOTES

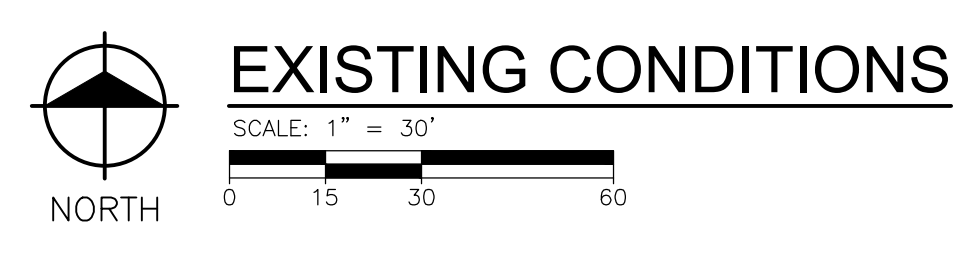
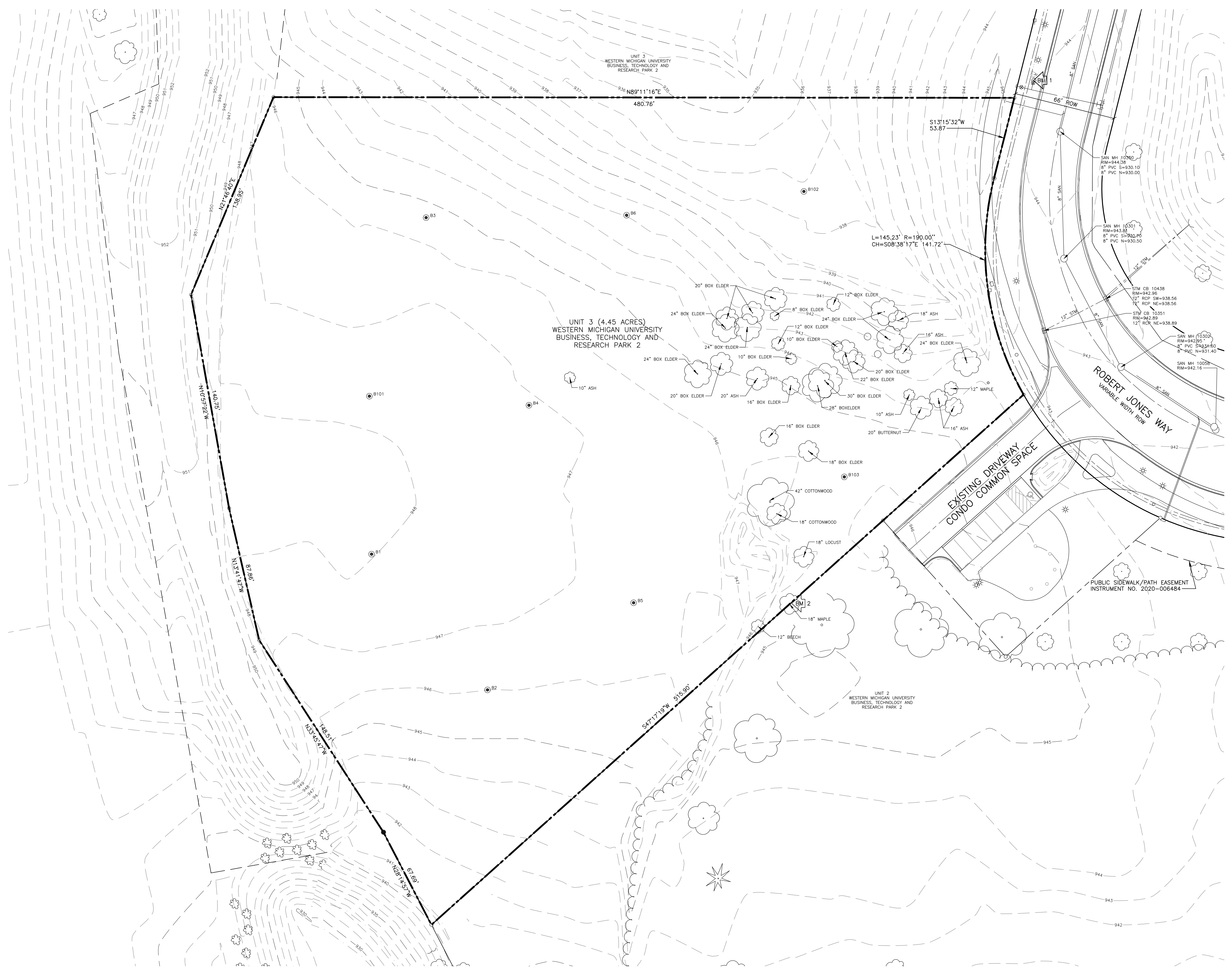
- TOPOGRAPHIC SURVEY PERFORMED BY FISHBEEK IN APRIL 2022 AND REFLECTS CONDITIONS AT THAT TIME. SUPPLEMENTAL INFORMATION PROVIDED BY THE WMU BTR PARK 2.0 DESIGN IS INCLUDED FOR OFFSITE ROAD, UTILITY AND TOPOGRAPHIC DATA.

GEOTECHNICAL NOTES

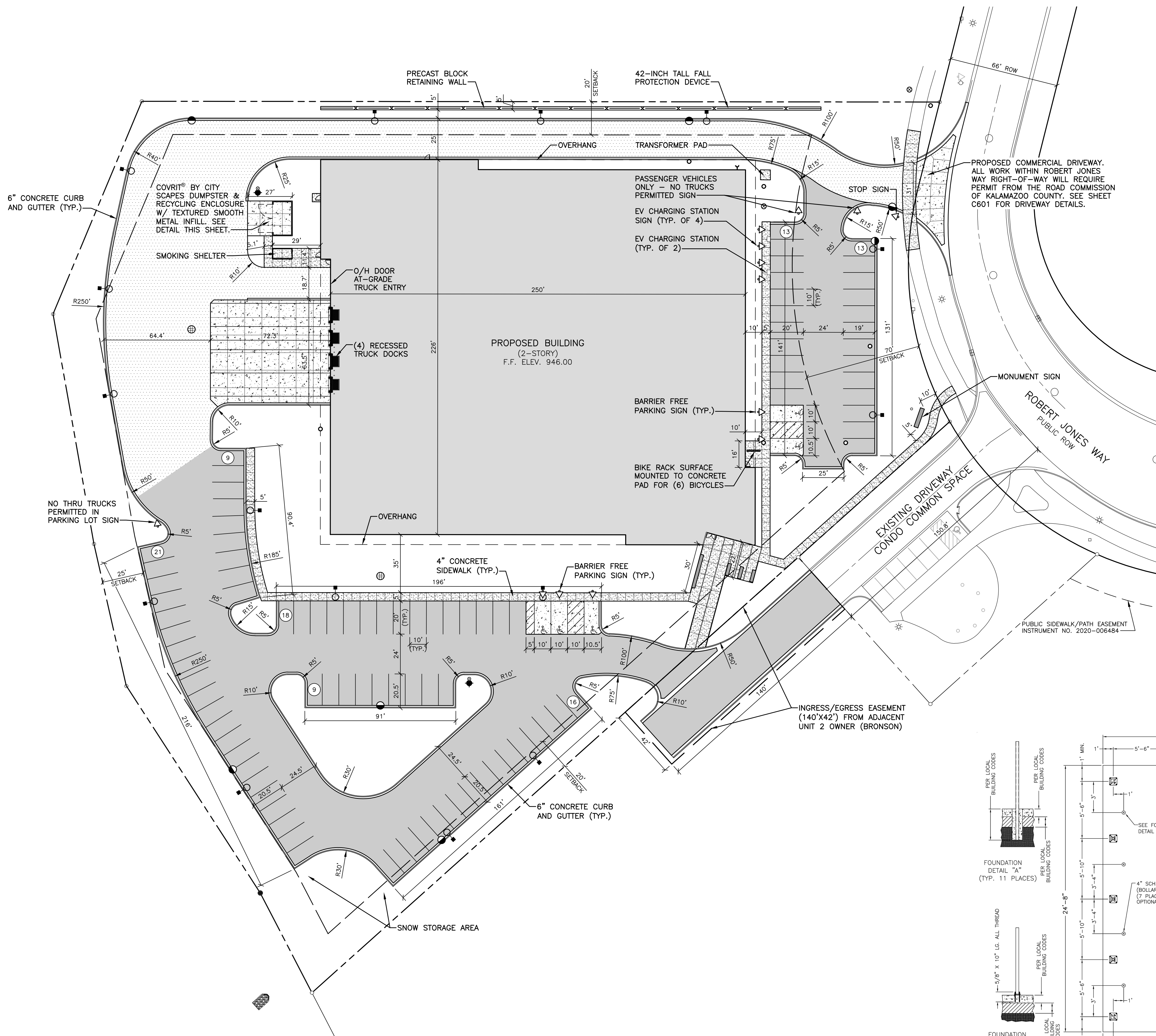
- GEOTECHNICAL FIELD INVESTIGATION AND REPORT PREPARED BY SUE ON MAY 2, 2022 AND REFLECTS CONDITIONS AT THAT TIME.
- USCS SOIL CLASSIFICATION:
UPPER SOILS: SAND, CLAY, AND SILTS (SC, SM, CL AND ML)
LOWER SOILS: SAND (SP)

LEGAL DESCRIPTION

UNIT 3 OF WESTERN MICHIGAN UNIVERSITY BUSINESS, TECHNOLOGY AND RESEARCH PARK 2 CONDOMINIUM, BEING PART OF THE SOUTHEAST 1/4 OF SECTION 25, TOWN 2 SOUTH, RANGE 12 WEST, OSHTEMO TOWNSHIP, KALAMAZOO COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS:



PLOT INFO: Z:\02220450\CAD\C201\220450.DWG LAYOUT: C201 DATE: 10/24/2022 TIME: 1:44:07 PM USER: MABARTON



PROJECT SITE SUMMARY

ADDRESS:
XXXX ROBERT JONES WAY, KALAMAZOO, MICHIGAN 49006

PLAT:
UNIT 3 OF THE WMU BTR PARK 2 CONDOMINIUM

ZONING:
BRP - BUSINESS AND RESEARCH PARK DISTRICT

ACREAGE:
4.45 ACRES

PROPOSED BUILDING:
2-STORY OFFICE + WAREHOUSE + MANUFACTURING (60,785 SFT)
(31.4% OF LAND COVERED BY BUILDINGS)

BUILDING SETBACKS:
FRONT: 70 FEET
REAR: 25 FEET
REAS: 20 FEET

OPEN SPACE PRESERVATION:
PROPOSED: 50,205 SFT (1.15 ACRES; 25.8%)

SYMBOL LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 4" THICK CONCRETE SIDEWALK
- STANDARD CURB AND GUTTER
- STANDARD INVERTED CURB AND GUTTER
- (L) LANDING (2% MAX. SLOPE ALL DIRECTIONS)
- (R) RAMP (8.33% MAX. RUNNING SLOPE)
- PARKING SPACE COUNT
- SITE LIGHT POLE

NOTES

1. DIMENSIONS ARE TO BACK OF CURB, OUTSIDE FACE OF BUILDING, AND EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
2. KEEP THE APPROVED AND/OR MOST CURRENT SET OF PROJECT DRAWINGS ON SITE AT ALL TIMES. CONTRACTOR TO CONFIRM THEY ARE IN POSSESSION OF THE MOST CURRENT DRAWING FILES.

PARKING QUANTITIES

OFFICES: 1 SPACE/150 SF
MANUFACTURING: 1.5 SPACES/1,000 SF
WAREHOUSE: 1 SPACE/1,500 SF

REQUIRED PARKING:
1ST FLOOR OFFICE: 3,906 SFT/150 = 27 SPACES
2ND FLOOR OFFICE: 5,368 SFT/150 = 40 SPACES
MANUFACTURING: 6,997 SFT x 1.5/1,000 = 11 SPACES
WAREHOUSE: 38,013 SFT/1,500 = 26 SPACES

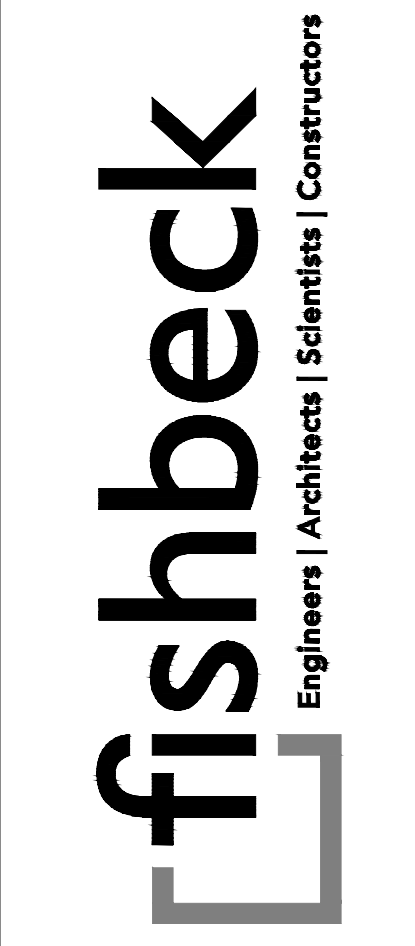
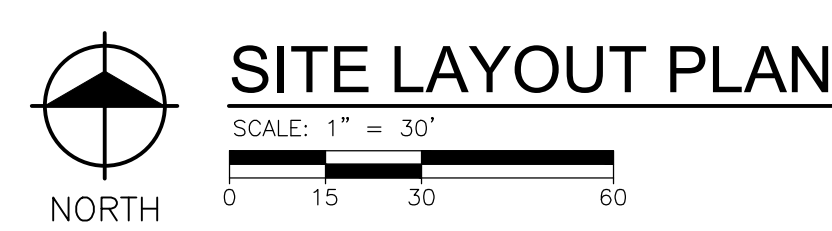
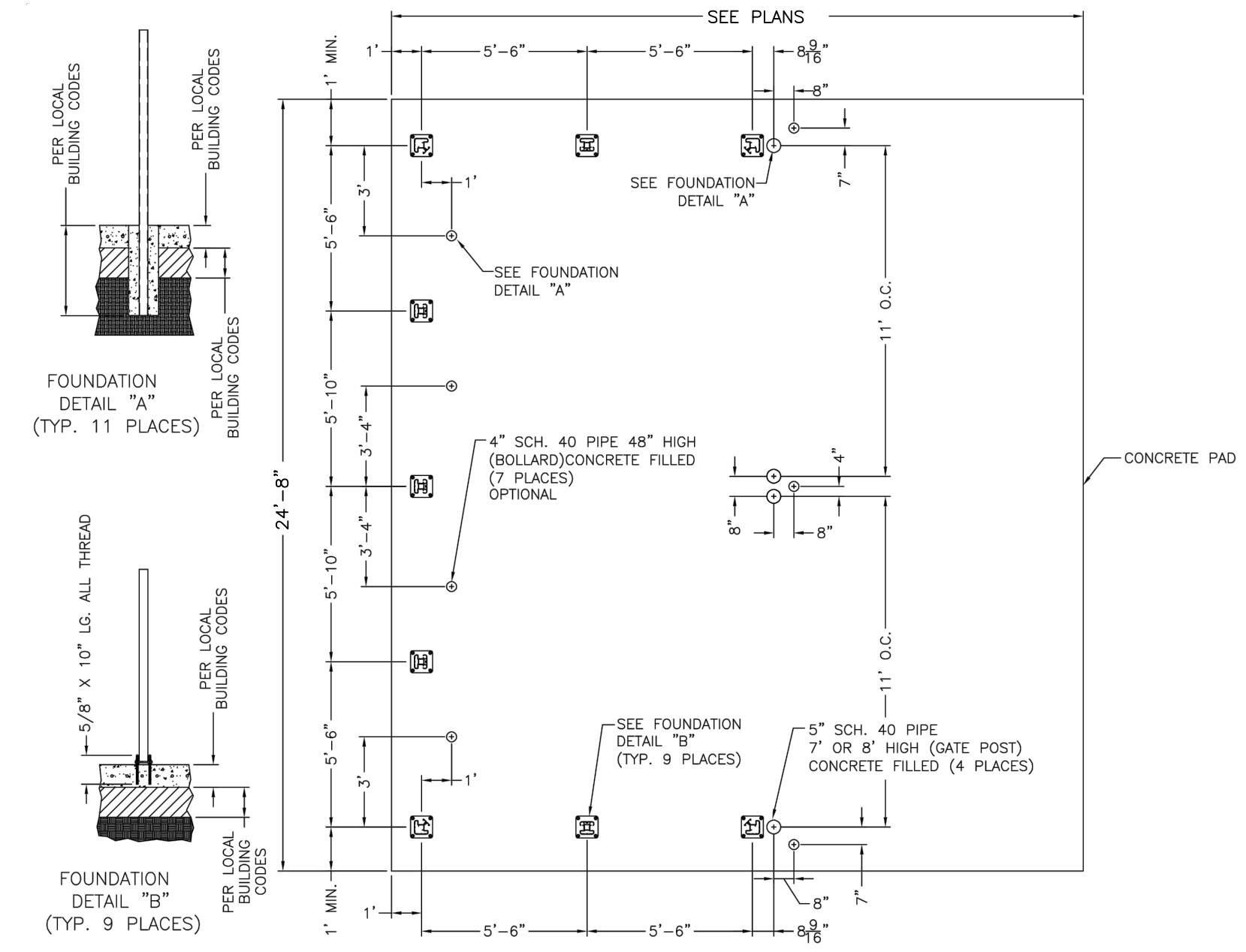
TOTAL REQUIRED PARKING: 104 SPACES

PROVIDED PARKING:

- 90 STANDARD SPACES
- 5 BARRIER FREE + VAN ACCESSIBLE SPACES
- 4 EV CHARGING SPACES
- 99 TOTAL SPACES

BICYCLE PARKING:

- 6 SUPER CYCLOPS 2175-8-C-P BY COLUMBIA CASCADE SURFACE MOUNTED; POWDER COAT BLACK



Atkins Fick Group, Inc.
Oshtemo Township, Michigan
Faraday Project

REVISIONS

NOT FOR CONSTRUCTION

10/24/2022	SPR RESUBMISSION NO. 2
9/28/2022	SPR RESUBMISSION
8/30/2022	SITE PLAN REVIEW

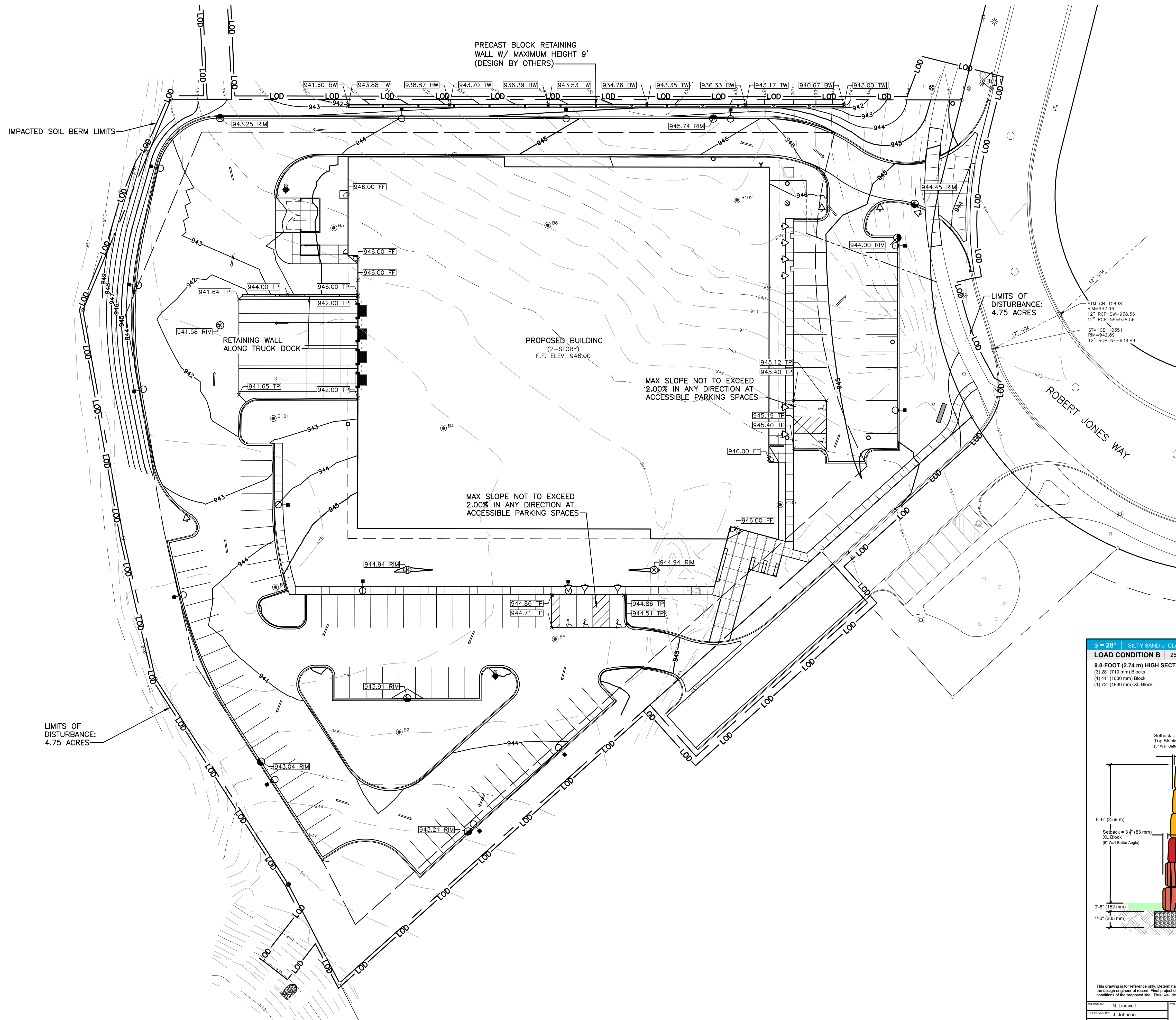
Drawn By: ADO
Designer: NB
Reviewer:
Manager: RDM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
220450

SHEET NO.

C201



BENCH MARKS

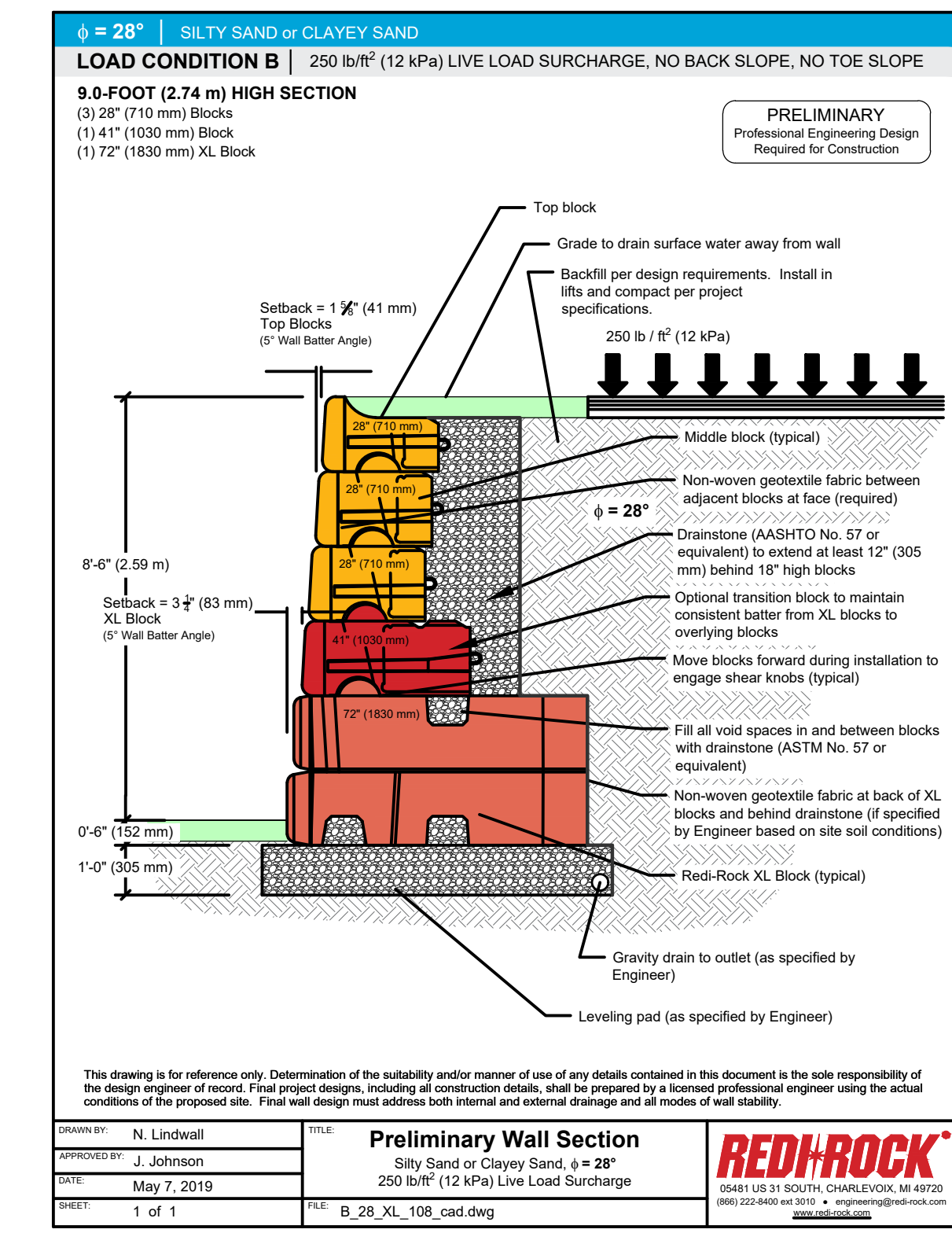
BENCH MARK 1 ELEVATION: 946.63
TOP OF BOLT ON SOUTHWEST SIDE OF HYDRANT UNDER "A" IN "USA", WEST SIDE OF ROBERT JONES WAY, 200 FEET NORTH OF DRIVE FOR RELIC TOWER

SYMBOL LEGEND

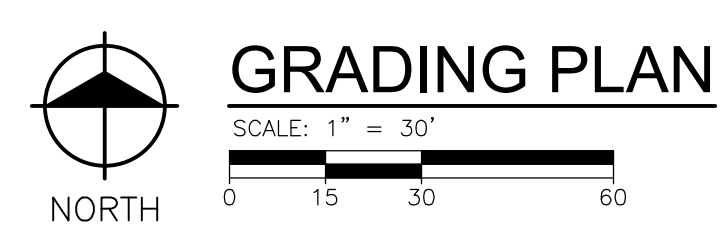
LOD	LIMITS OF DISTURBANCE
725	EXISTING MAJOR CONTOUR
724	EXISTING MINOR CONTOUR
725	PROPOSED MAJOR CONTOUR
724	PROPOSED MINOR CONTOUR
(L)	LANDING (2% MAX. SLOPE ALL DIRECTIONS)
(R)	RAMP
724.50 XX	SPOT ELEVATION
EM	EDGE OF METAL
EW	EDGE OF WALK
FF	FINISH FLOOR
GP	GUTTER PAN
GR	GRADE ELEVATION
HP	HIGH POINT
LP	LOW POINT
TC	TOP OF CURB
TP	TOP OF PAVEMENT
BW	BOTTOM OF WALL
TW	TOP OF WALL

NOTES

- FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
- STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
- GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
- ADA PARKING AREAS NOT TO EXCEED 2.0% SLOPE IN ALL DIRECTIONS.
- GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
- REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.



DESIGNED BY: N. Lindvall	TITLE: Preliminary Wall Section	
APPROVED BY: J. Johnson	Silty Sand or Clayey Sand, $\phi = 28^\circ$	
DATE: May 7, 2019	250 lb/ft ² (12 kPa) Live Load Surcharge	
SCALE: 1" = 1'	Redi-Rock XL Block (typical)	



REVISIONS

NOT FOR CONSTRUCTION

10/24/2022	SPR RESUBMISSION NO. 2
9/28/2022	SPR RESUBMISSION
8/30/2022	SITE PLAN REVIEW

Drawn By	ADO
Designer	NB
Reviewer	
Manager	RDM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
220450

SHEET NO.

C301

BENCH MARKS

BENCH MARK 1 ELEVATION: 946.63
TOP OF BOLT ON SOUTHWEST SIDE OF HYDRANT UNDER "A" IN "USA", WEST SIDE OF ROBERT JONES WAY, 200 FEET NORTH OF DRIVE FOR RELIC TOWER

BENCH MARK 2 ELEVATION: 946.08
COTTON SPINDLE IN EAST SIDE OF 18 IN. MAPLE, 80 FEET SOUTHWEST OF THE EXTENDED NORTHERLY CURB LINE FOR THE RELIC TOWER ENTRANCE, ALONG THE SOUTHERLY BOUNDARY OF UNIT 3

SYMBOL LEGEND

- BTR PARK 2.0 DRAINAGE DIVIDE (DESIGN)
- SUB-CATCHMENT AREA DRAINAGE BOUNDARY
- SUB-CATCHMENT AREA TAG
- 12" STORM STORM SEWER & MANHOLE
- CATCH BASIN
- PROPOSED PRIVATE STORM WATER EASEMENT

STORMWATER MANAGEMENT SUMMARY

THE DESIGN CRITERIA FOR THE BTR PARK 2.0 STORM WATER MANAGEMENT SYSTEM IS TO MEET OR EXCEED RETENTION VOLUME REQUIREMENT FOR THE 100-YEAR, 24-HOUR STORM EVENT. THE STORMWATER MANAGEMENT SYSTEM CONSISTS OF 3 SEPARATE ON-SITE INFILTRATION BASINS THAT AIM TO PROVIDE PRE-TREATMENT OF STORM WATER (IN SEDIMENT FOREBAY) AND RETENTION (BY INFILTRATION) BACK INTO THE GROUND WATER SYSTEM. STORM SEWER CONVEYANCE SYSTEMS HAVE BEEN DESIGNED TO PASS THE 10-YEAR 24-HOUR STORM EVENT. IN AN EFFORT TO PROMOTE SUSTAINABILITY AND GREEN INFRASTRUCTURE, INFILTRATION (LEACHING) BASINS ARE PROPOSED TO HELP REDUCE RUNOFF VELOCITIES/VOLUMES AND TO HELP PROMOTE ON-SITE STORMWATER INFILTRATION.

WEST BASIN - BTR DESIGN DATA

- CONTRIBUTING AREA: 13.7 AC
- AT FULL DEVELOPMENT C=0.68
- IMPERVIOUS AREA: 9.34 AC
- PERVIOUS AREA: 4.36 AC
- DESIGN INFILTRATION RATE: 3.50 IN/HR
- SOIL BORING INFILTRATION RATE: 7-12 IN/HR
- AREA OF INFILTRATION: 14,381 SF @ 918.00
- 100 YEAR STORM VOLUME REQUIREMENT: 132,943 CFT
- BASIN VOLUME PROVIDED: 137,018 CFT
- 100 YEAR HIGH WATER LEVEL: 923.37
- OVERFLOW STRUCTURE RIM ELEVATION: 923.50
- TOP OF BERM ELEVATION: 925.00
- PRETREATMENT REQUIRED: 5,100 CFT
- FOREBAY SIZE: 6,183 CFT

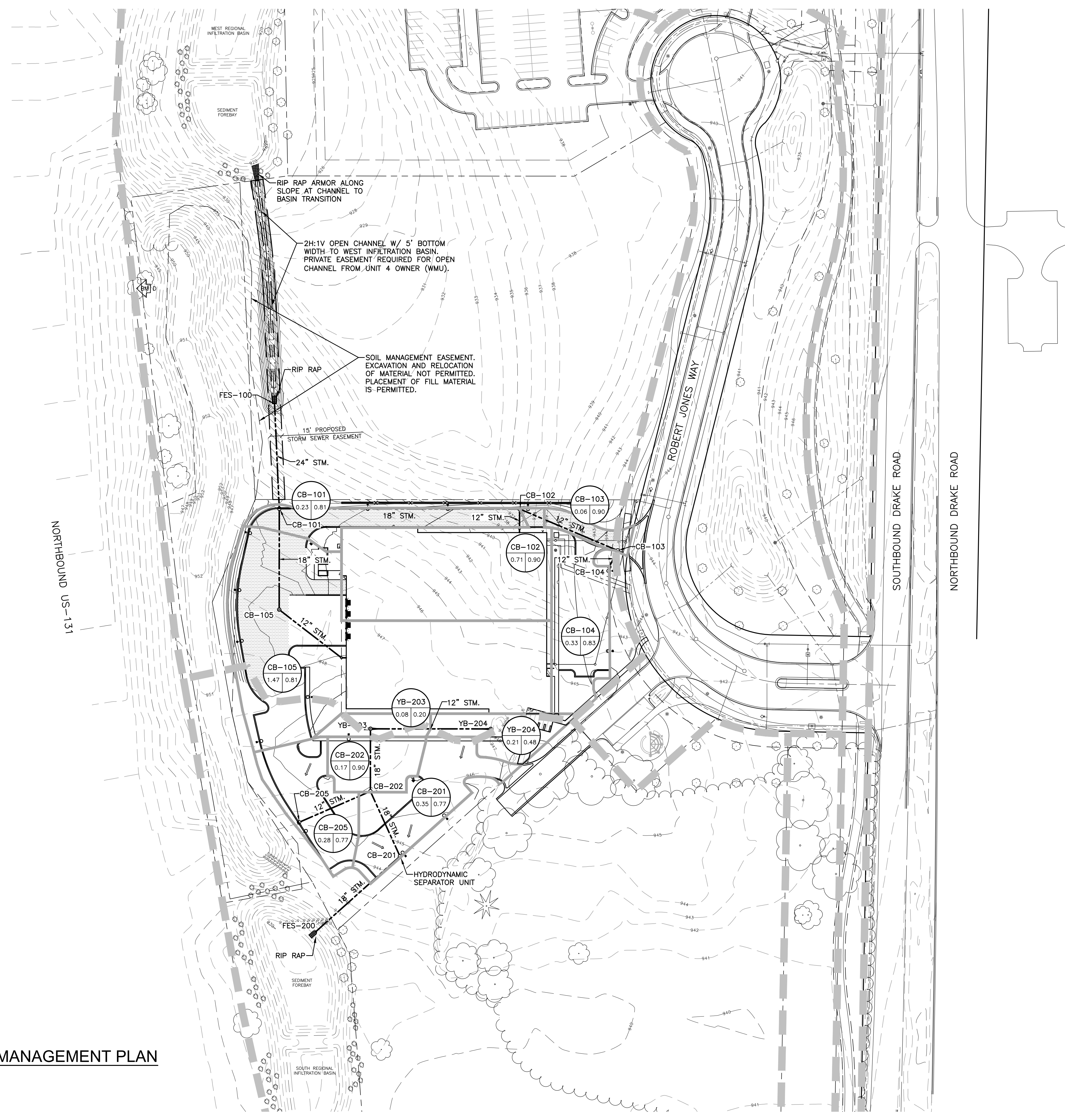
SOUTH BASIN - BTR DESIGN DATA

- CONTRIBUTING AREA: 10.98 AC
- AT FULL DEVELOPMENT C=0.68
- IMPERVIOUS AREA: 7.60 AC
- PERVIOUS AREA: 3.38 AC
- DESIGN INFILTRATION RATE: 3.60 IN/HR
- SOIL BORING INFILTRATION RATE: 16 IN/HR
- AREA OF INFILTRATION: 10,815 SF @ 933.00
- 100 YEAR STORM VOLUME REQUIREMENT: 107,485 CFT
- BASIN VOLUME PROVIDED: 115,170 CFT
- 100 YEAR HIGH WATER LEVEL: 937.72
- OVERFLOW SPILLWAY ELEVATION: 938.00
- TOP OF BERM ELEVATION: 939.50
- PRETREATMENT REQUIRED: 4,200 CFT
- FOREBAY VOLUME: 6,318 CFT

FARADAY DESIGN INFORMATION

- WEST BASIN DRAINAGE AREA**
- CONTRIBUTING AREA: 3.04 AC
 - COMPOSITE "C" VALUE=0.78
 - IMPERVIOUS AREA: 2.51 AC
 - PERVIOUS AREA: 0.53 AC
 - COMPOSITE "C" VALUE BASED ON CONTRIBUTING DRAINAGE AREA FROM STORM SEWER SYSTEM
 - 100-YEAR STORM VOLUME: 22,302 CFT
 - % OF BASIN CAPACITY UTILIZED: 18.5%
 - WEST BASIN REMAINING CAPACITY: 98,502 CFT
 - CURRENT DEVELOPMENT "C"-VALUE=0.54

- SOUTH BASIN DRAINAGE AREA**
- CONTRIBUTING AREA: 1.36 AC
 - COMPOSITE "C" VALUE=0.55
 - IMPERVIOUS AREA: 0.67 AC
 - PERVIOUS AREA: 0.69 AC
 - COMPOSITE "C" VALUE BASED ON CONTRIBUTING DRAINAGE AREA FROM STORM SEWER SYSTEM
 - 100-YEAR STORM VOLUME: 4,608 CFT
 - % OF BASIN CAPACITY UTILIZED: 4.0%
 - SOUTH BASIN REMAINING CAPACITY: 110,562 CFT
 - CURRENT DEVELOPMENT "C"-VALUE=0.07



PLT: I:\P\220450\CADD\C310\220450.DWG LAYOUT: C310 DATE: 10/24/2022 TIME: 12:29:29 PM USER: MABARTON



STORM WATER MANAGEMENT PLAN

BENCH MARKS

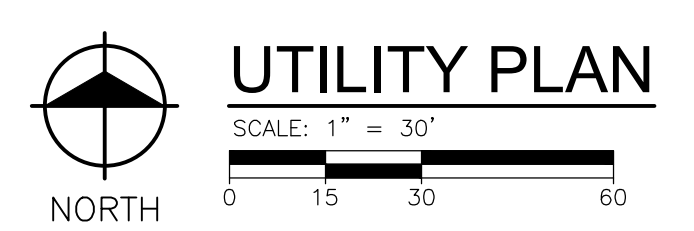
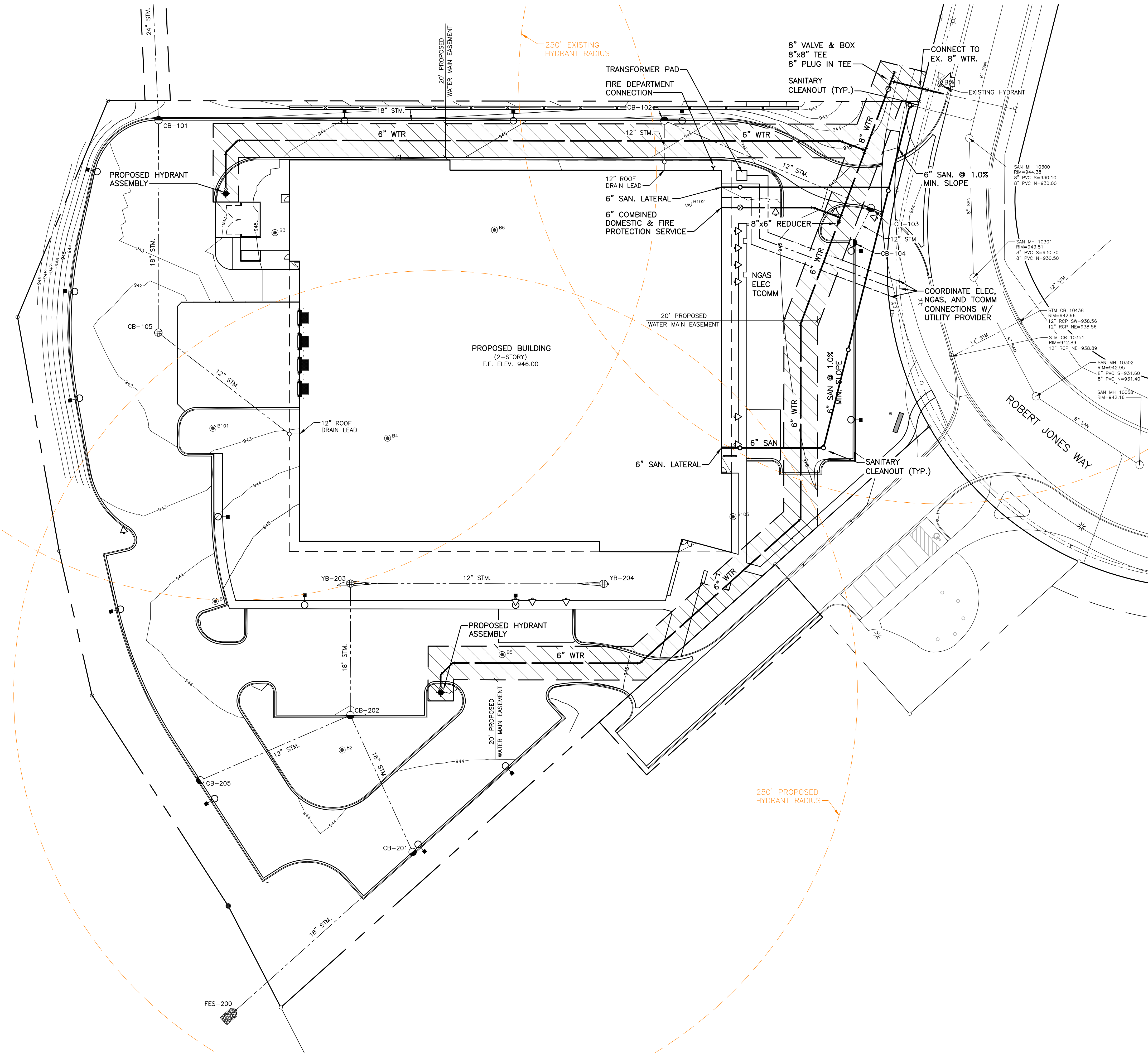
BENCH MARK 1 ELEVATION: 946.63
TOP OF BOLT ON SOUTHWEST SIDE OF HYDRANT UNDER "A" IN "USA", WEST SIDE OF ROBERT JONES WAY, 200 FEET NORTH OF DRIVE FOR RELIC TOWER

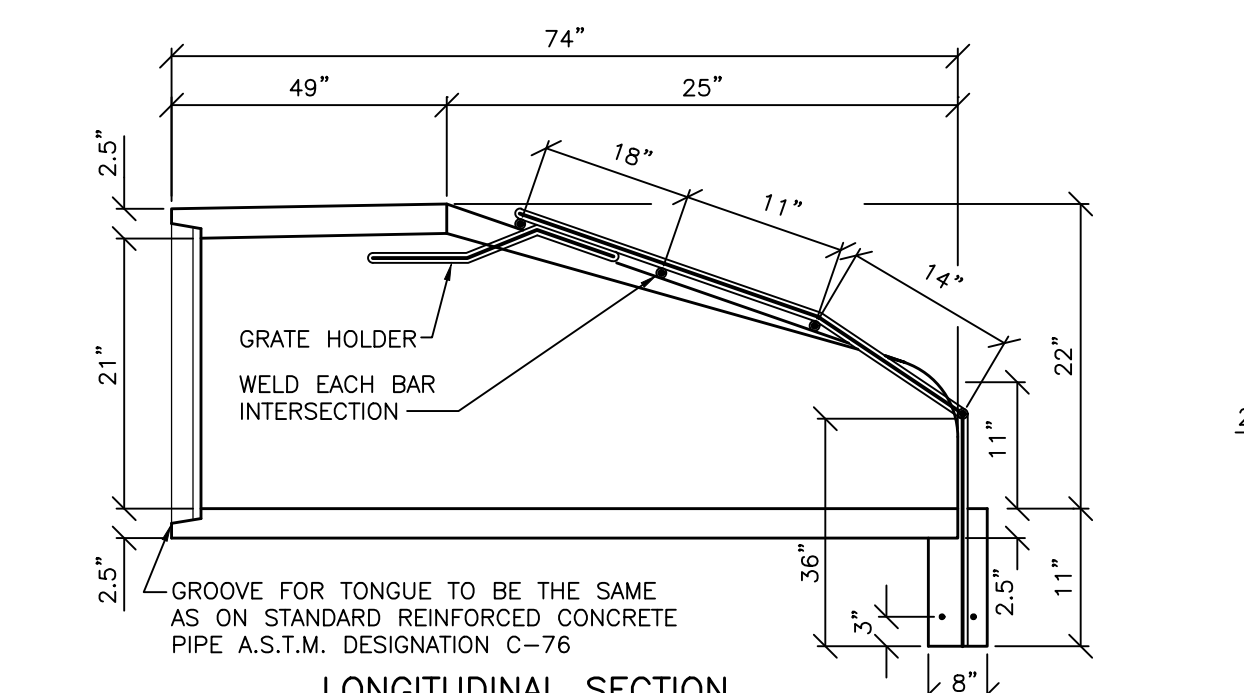
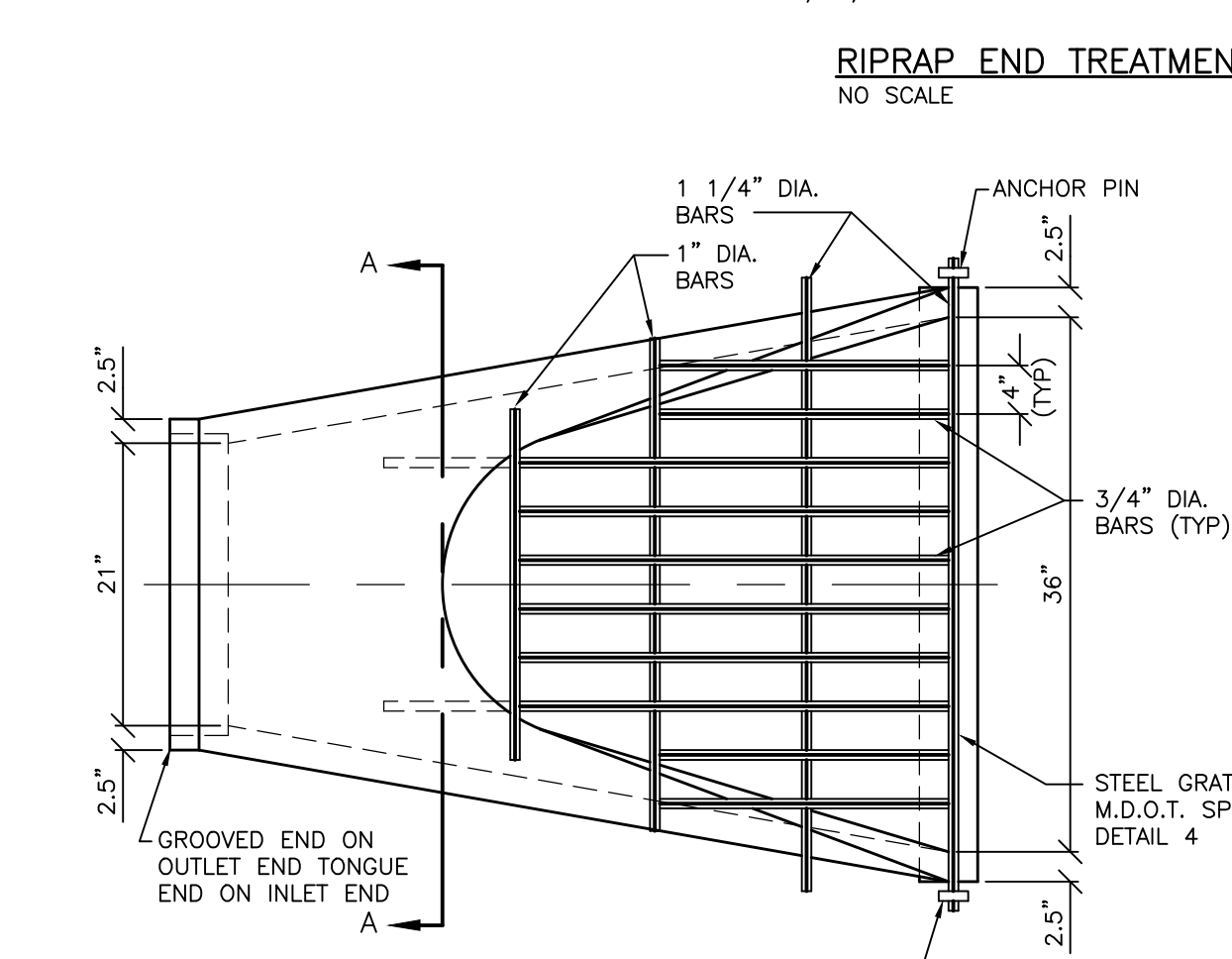
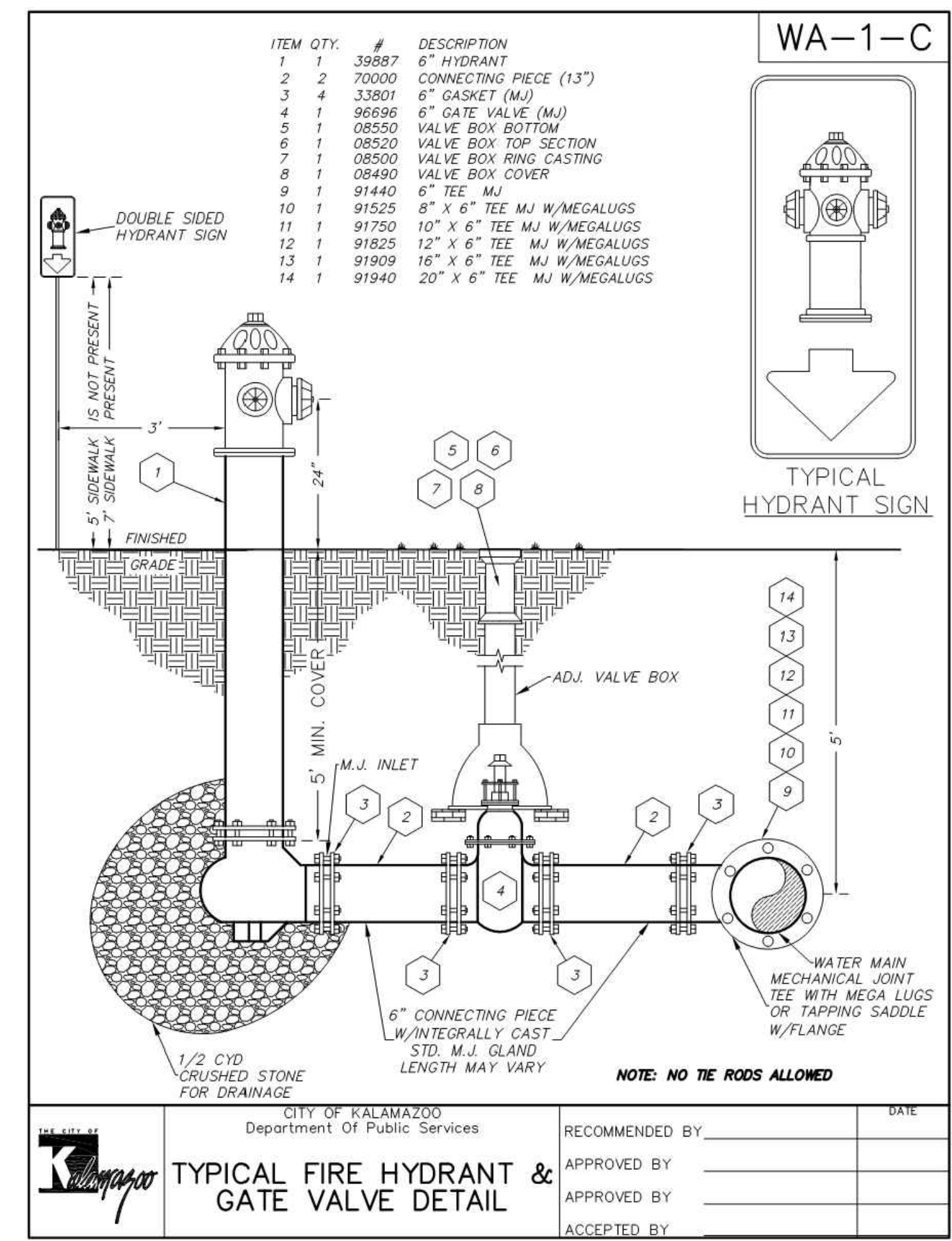
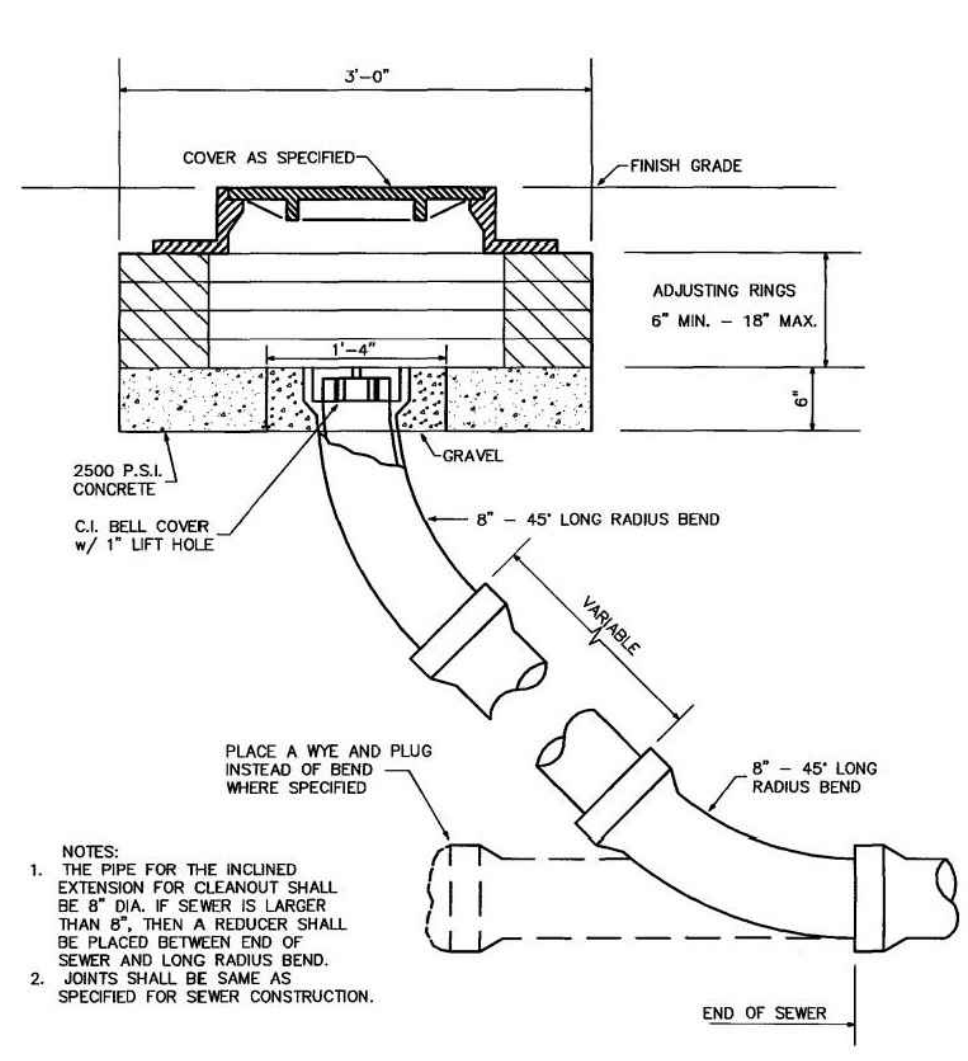
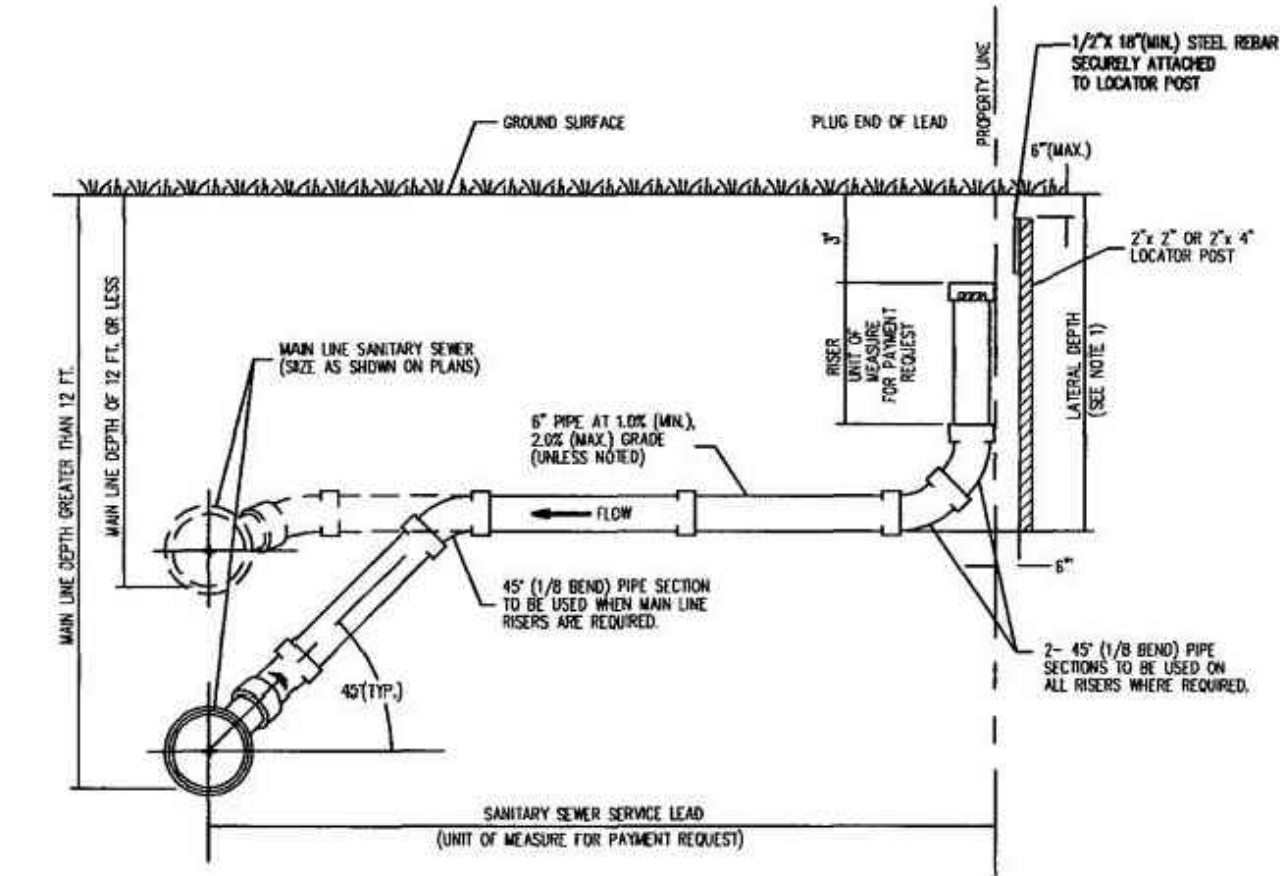
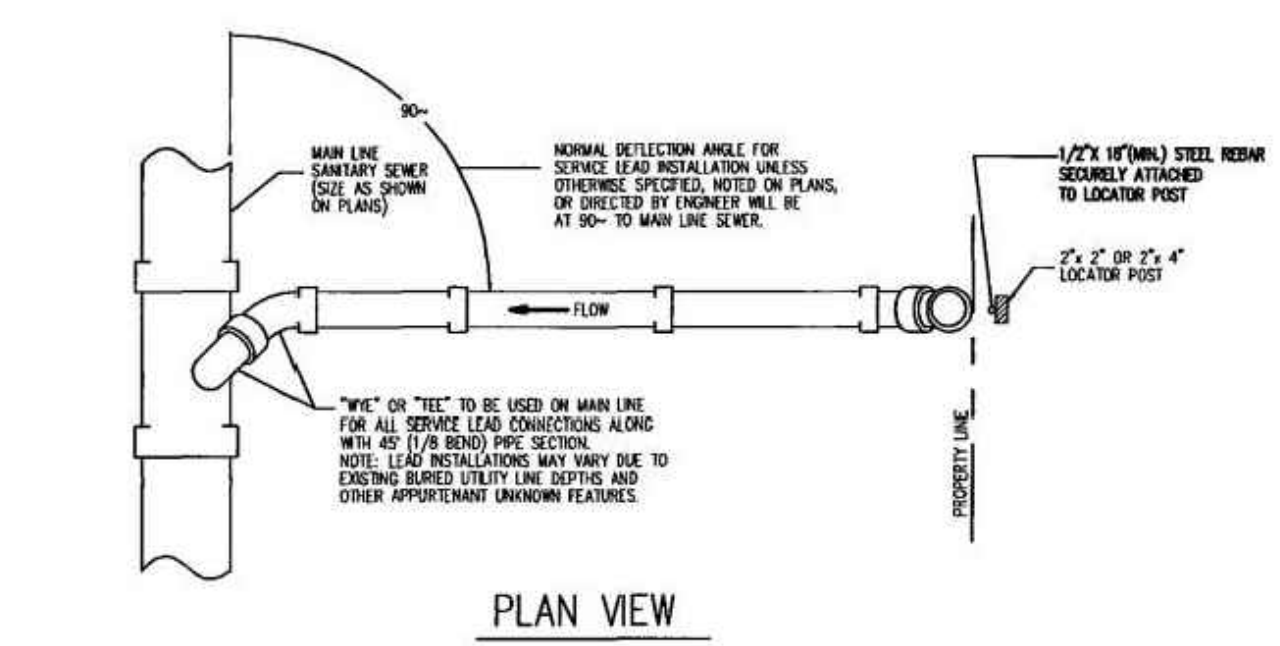
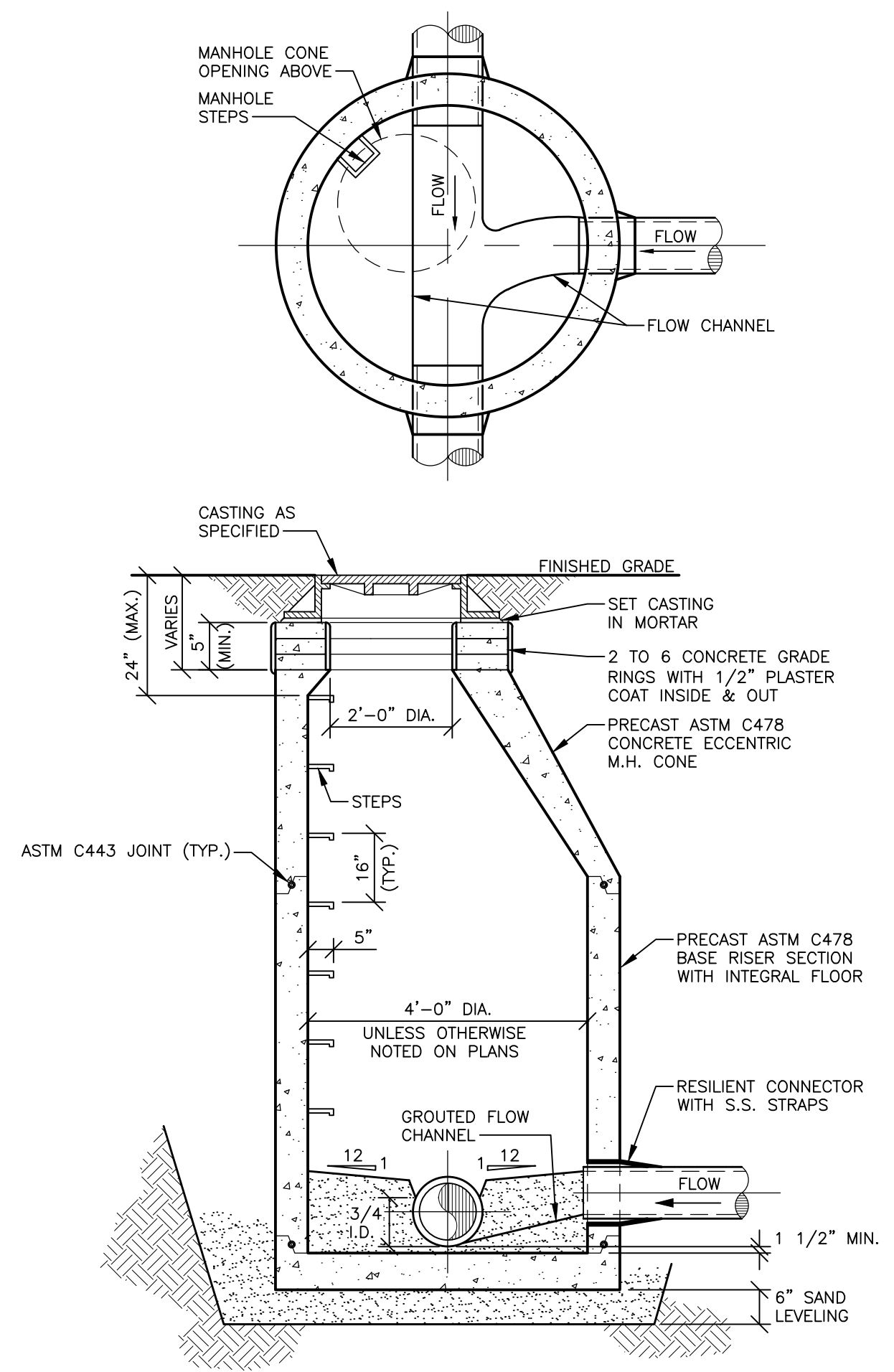
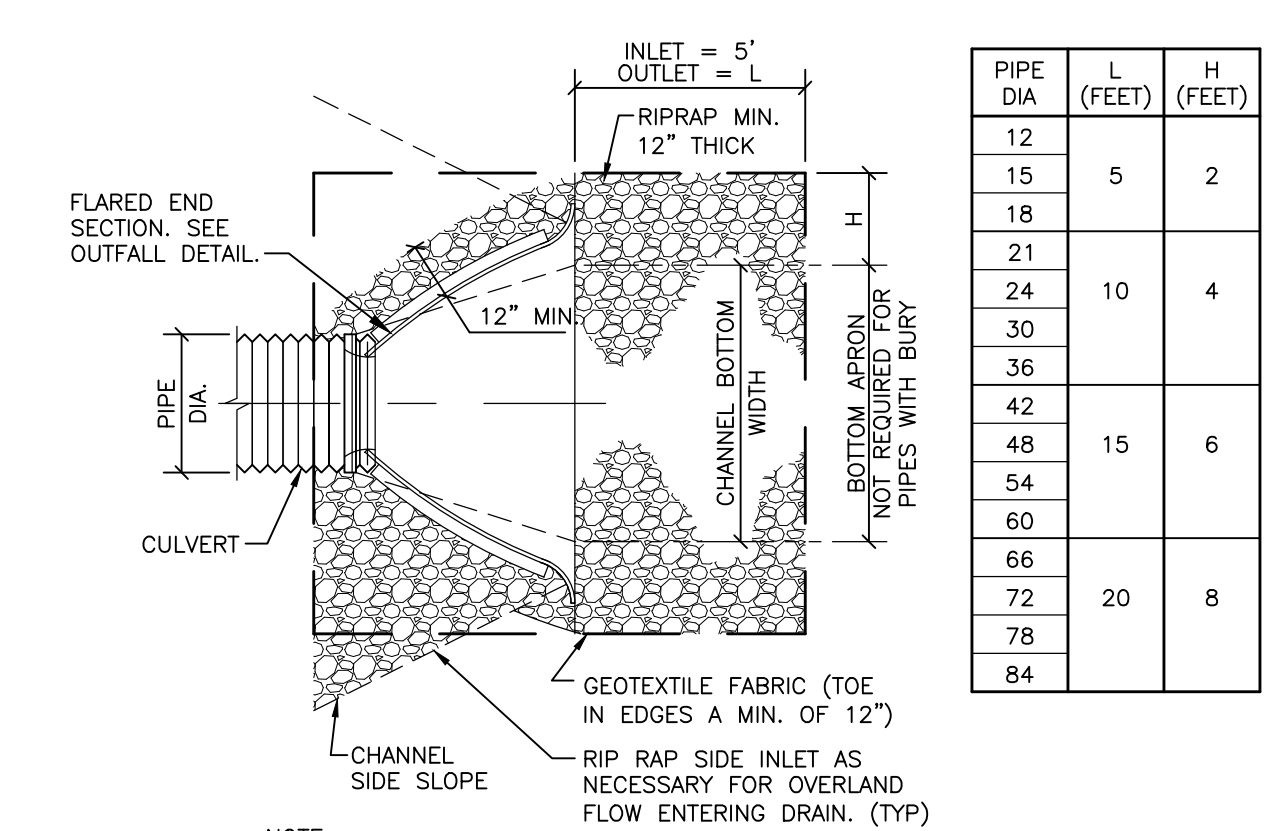
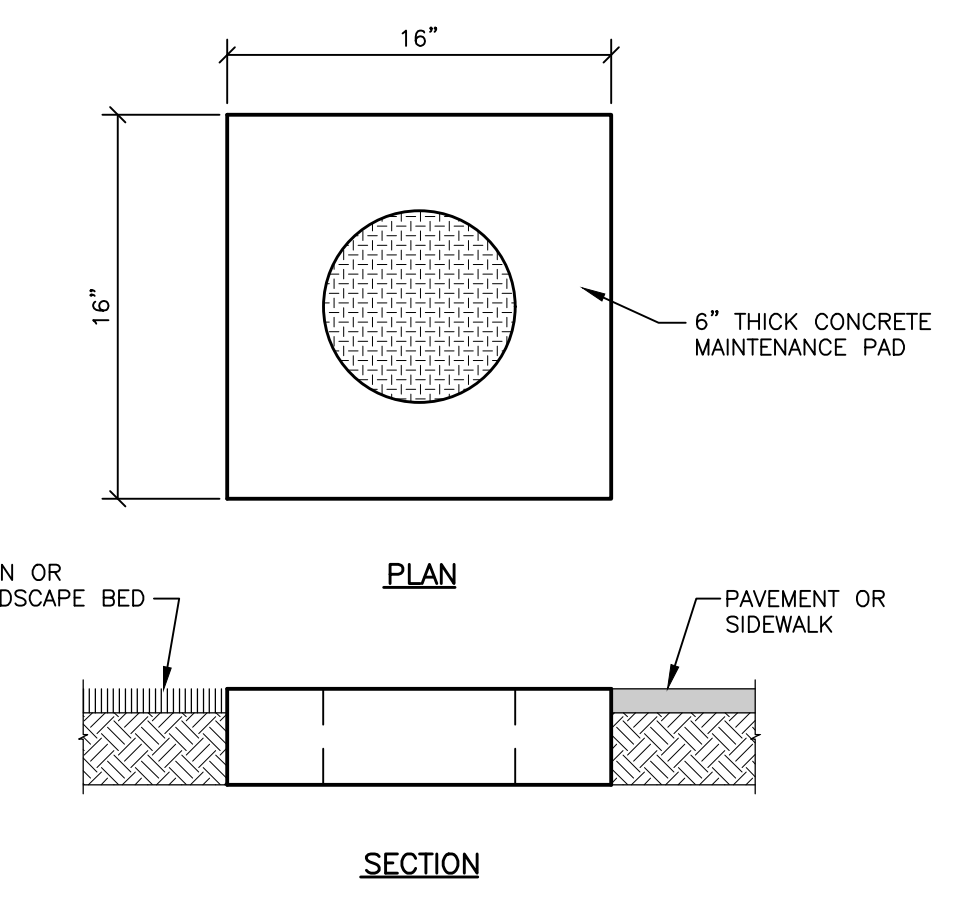
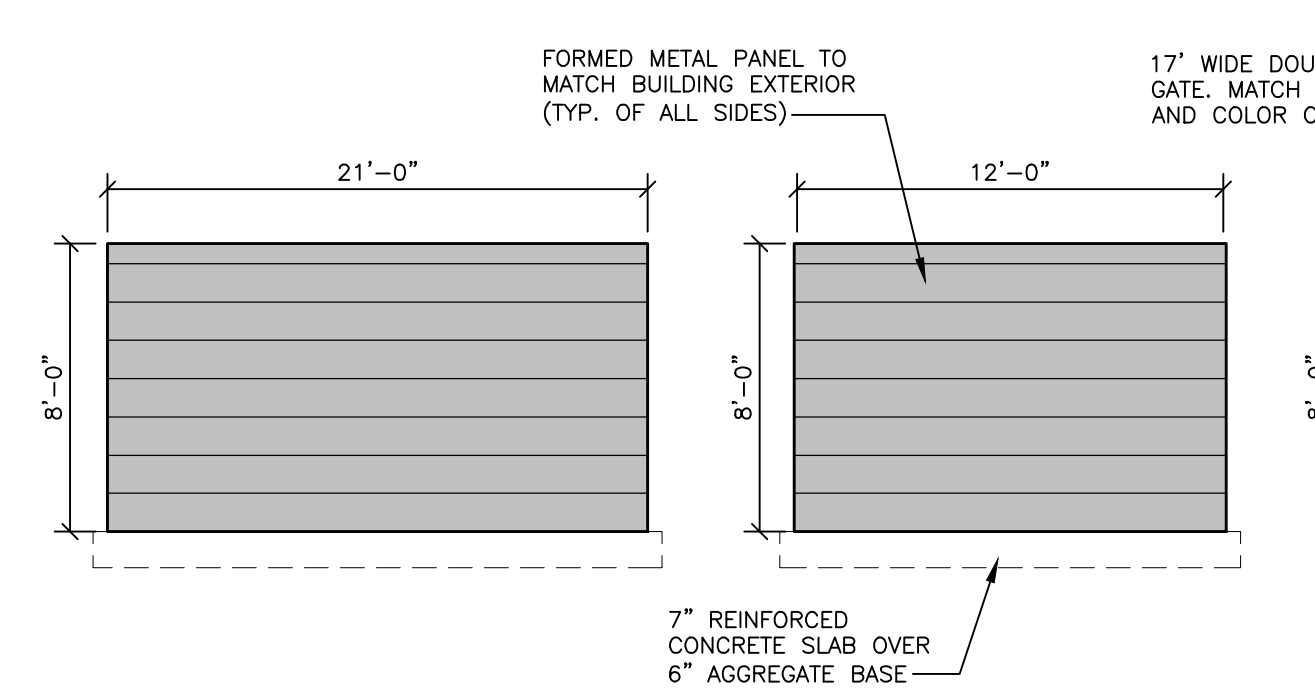
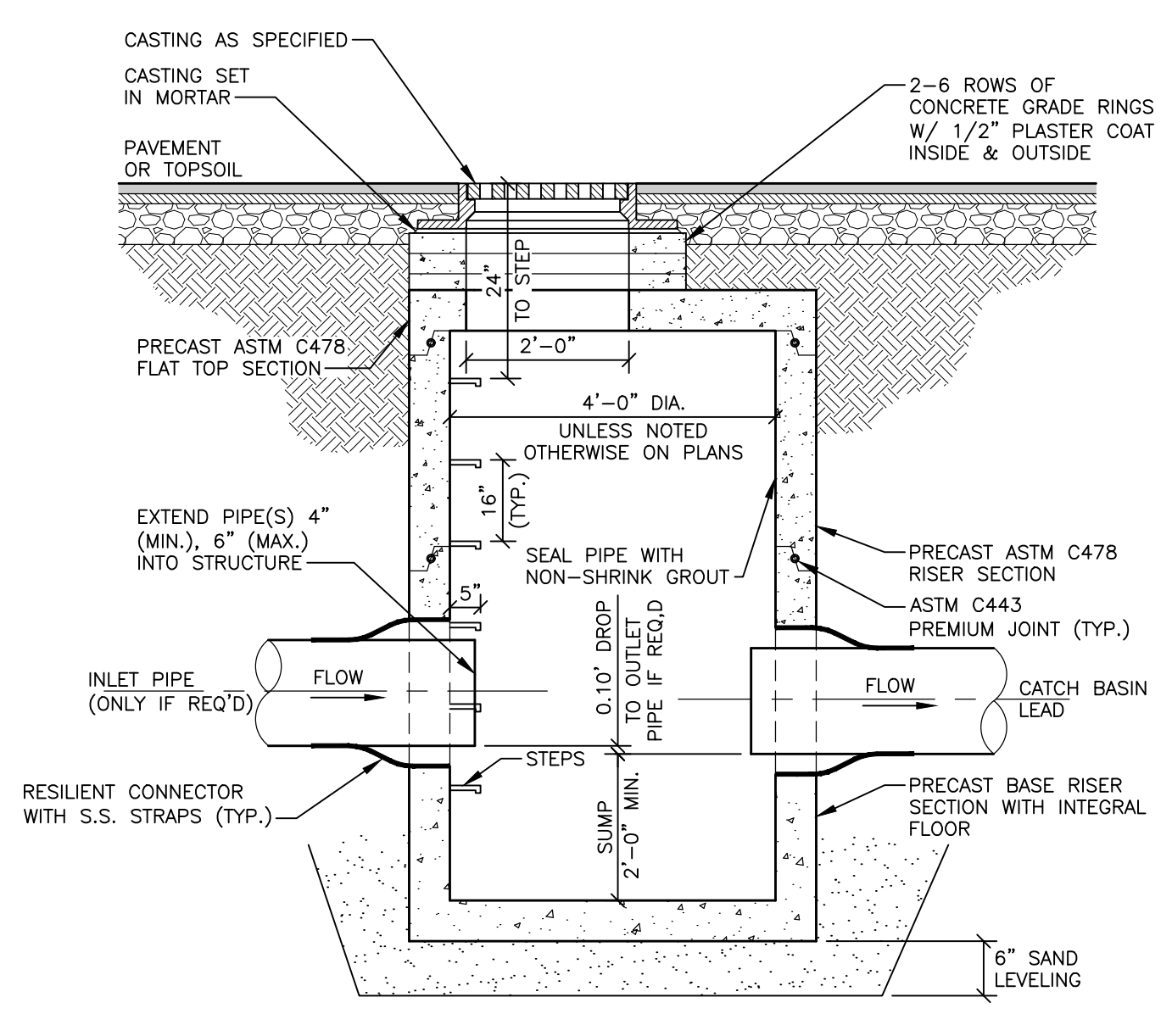
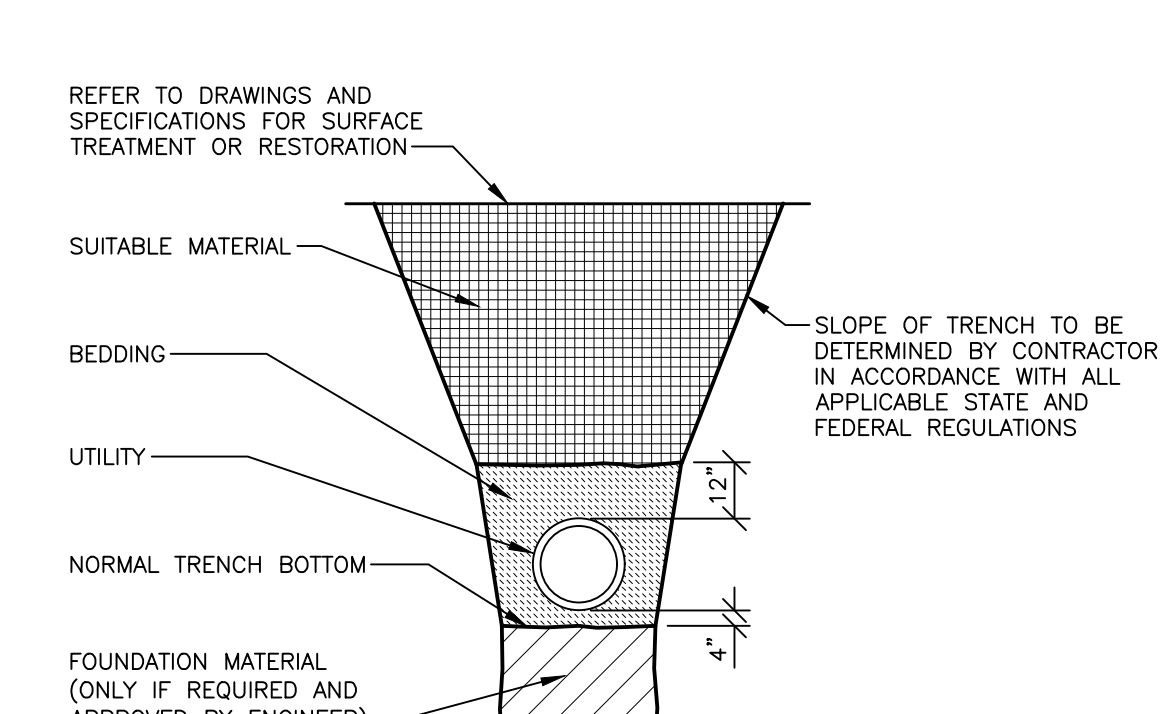
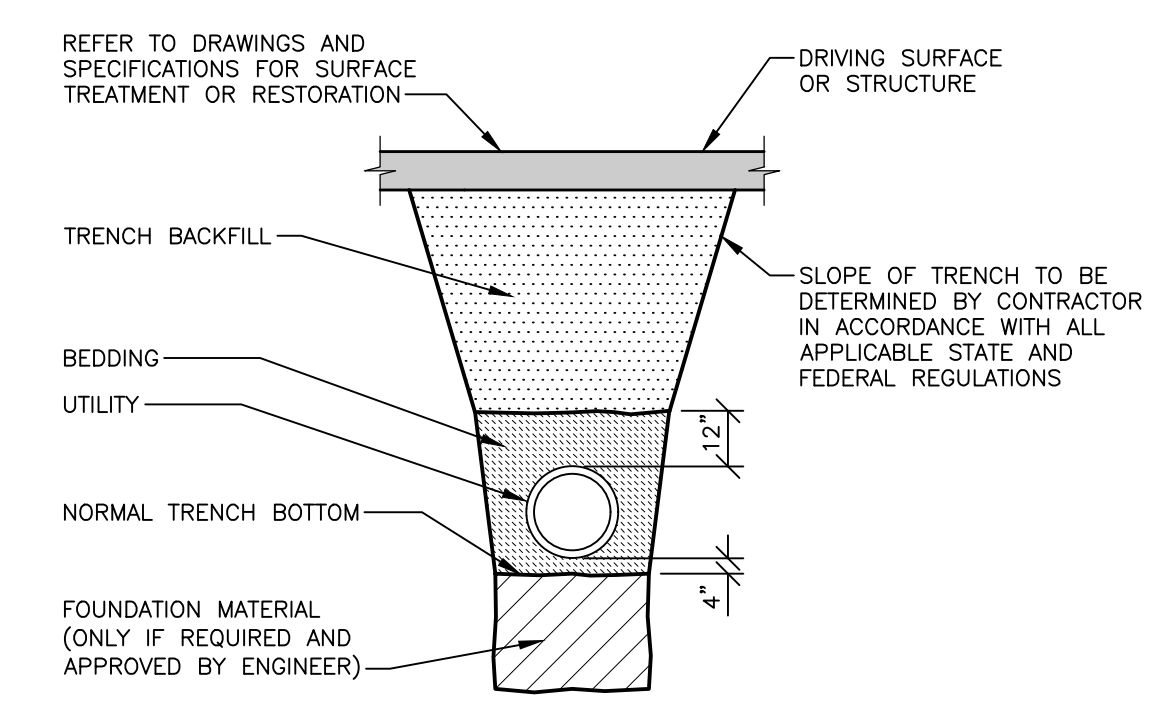
SYMBOL LEGEND

- 8" SAN. SANITARY SEWER & MANHOLE
- WYE & LEAD
- RISER & LEAD
- STANDARD SEWER CLEANOUT
- 12" STORM STORM SEWER & MANHOLE
- CATCH BASIN
- UNDERDRAIN
- 8" WATER WATER MAIN
- VALVE & BOX
- VALVE & CHAMBER
- METER
- PLUG
- STANDARD FIRE HYDRANT ASSEMBLY
- CURB STOP & BOX
- GAS MAIN
- ELECTRIC
- TELEPHONE/FIBER OPTIC
- PROPOSED PUBLIC WATER MAIN EASEMENT

NOTES

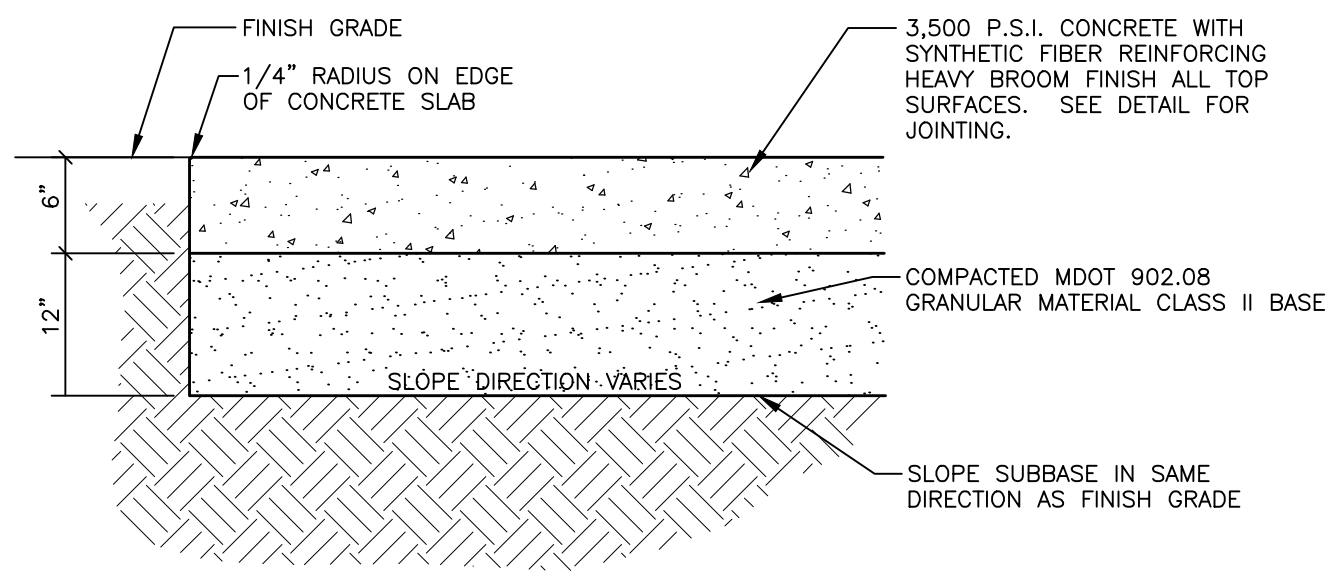
1. EXISTING UTILITIES LOCATIONS SHOWN ARE APPROXIMATE.
2. VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO EXCAVATION WHERE NECESSARY.
3. PROTECT AND MAINTAIN SERVICE OF OTHER UTILITIES AT CROSSINGS.
4. DO NOT CONNECT ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER SERVICES TO THE SANITARY SEWER.
5. END SECTIONS ARE INCLUDED IN PIPE LENGTHS SHOWN.
6. PROVIDE RIPRAP AT ALL END SECTIONS UNLESS OTHERWISE NOTED.
7. PROVIDE AND MAINTAIN INLET FILTERS AT ALL CATCH BASIN INLETS, DURING CONSTRUCTION.
8. WATER MAIN TO HAVE A MINIMUM OF 5.5 FEET OF COVER.
9. FIRE HYDRANTS LOCATED IN CURB ISLAND OR GREEN SPACE SHALL BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT (TYP.).
10. PROVIDE A MINIMUM OF EIGHTEEN (18) INCHES OF VERTICAL SEPARATION AND TEN (10) FEET OF HORIZONTAL SEPARATION BETWEEN THE WATER MAIN AND ALL SANITARY AND STORM SEWERS.
11. FACE NOZZLES OF SITE FIRE HYDRANTS TOWARD BUILDING.
12. ADJUST ALL CASTINGS TO FINISH GRADES.
13. PIPE LENGTHS ARE TO CENTER OF STRUCTURES UNLESS NOTED OTHERWISE. ALL PIPE LENGTHS ARE FOR THE CONVENIENCE OF THE CONTRACTOR.



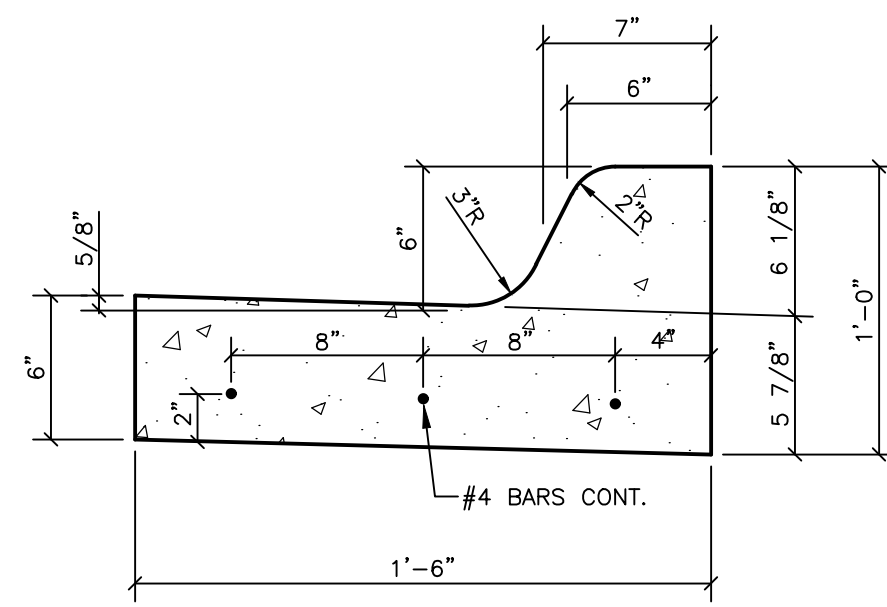


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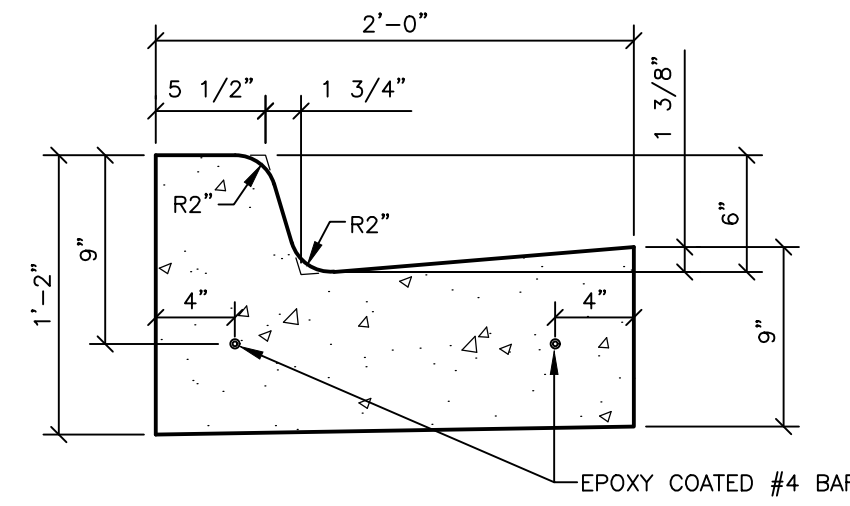
NOTE 1. - THE NORMAL DEPTH OF A SANITARY SEWER LATERAL SHALL BE 12 FEET BELOW THE EXISTING GRADE AS MEASURED IN FRONT OF THE HOUSE, OR AT THE PROPERTY LINE ON VACANT LOTS. THIS DEPTH MAY BE INCREASED FOR ADVERSE TOPOGRAPHY OR LARGE BUILDING SET BACKS, AS DETERMINED BY THE ENGINEER. IF THE DEPTH OF THE MAIN IS SUCH THAT THE ABOVE LATERAL DEPTH CAN NOT BE ACHIEVED, THE LATERAL SHALL BE PLACED AT A 1X GRADE FROM THE MAIN LINE TO THE PROPERTY LINE.



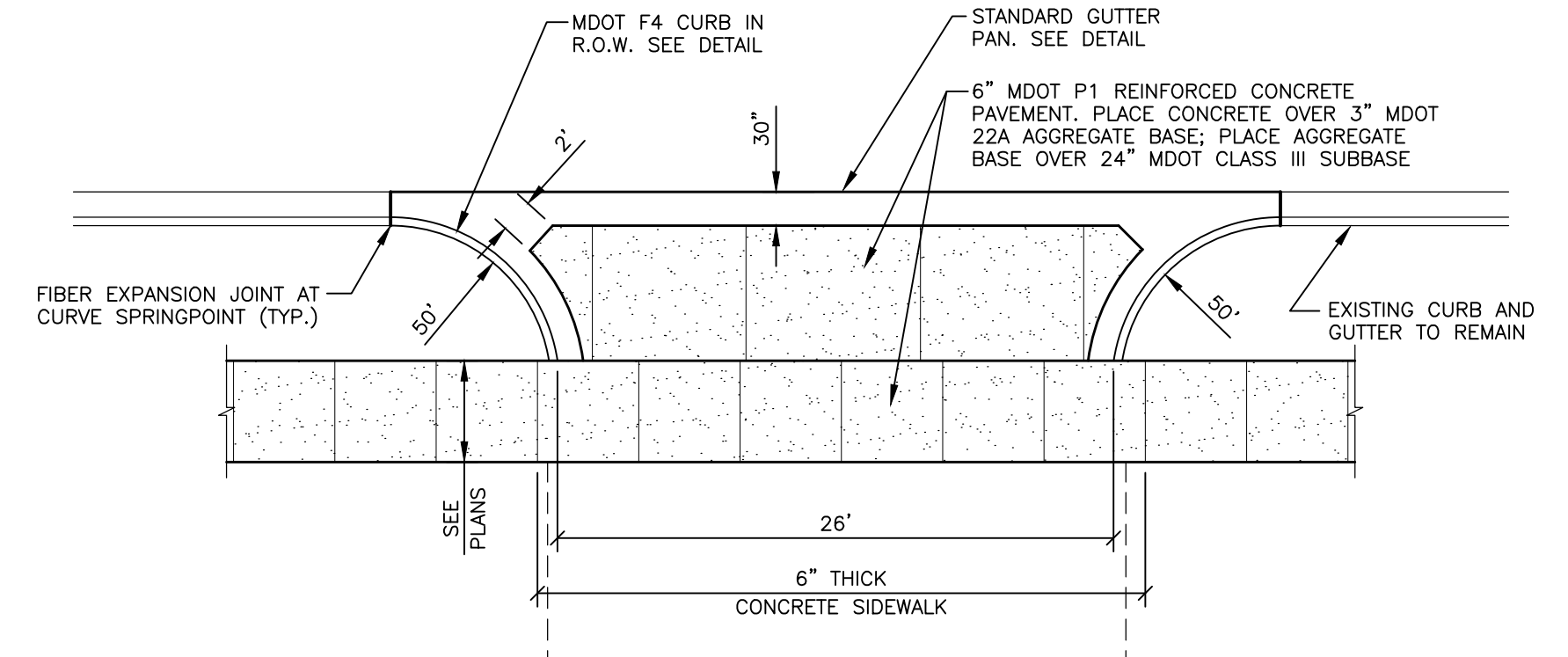
CONCRETE PAVEMENT SECTION
NO SCALE



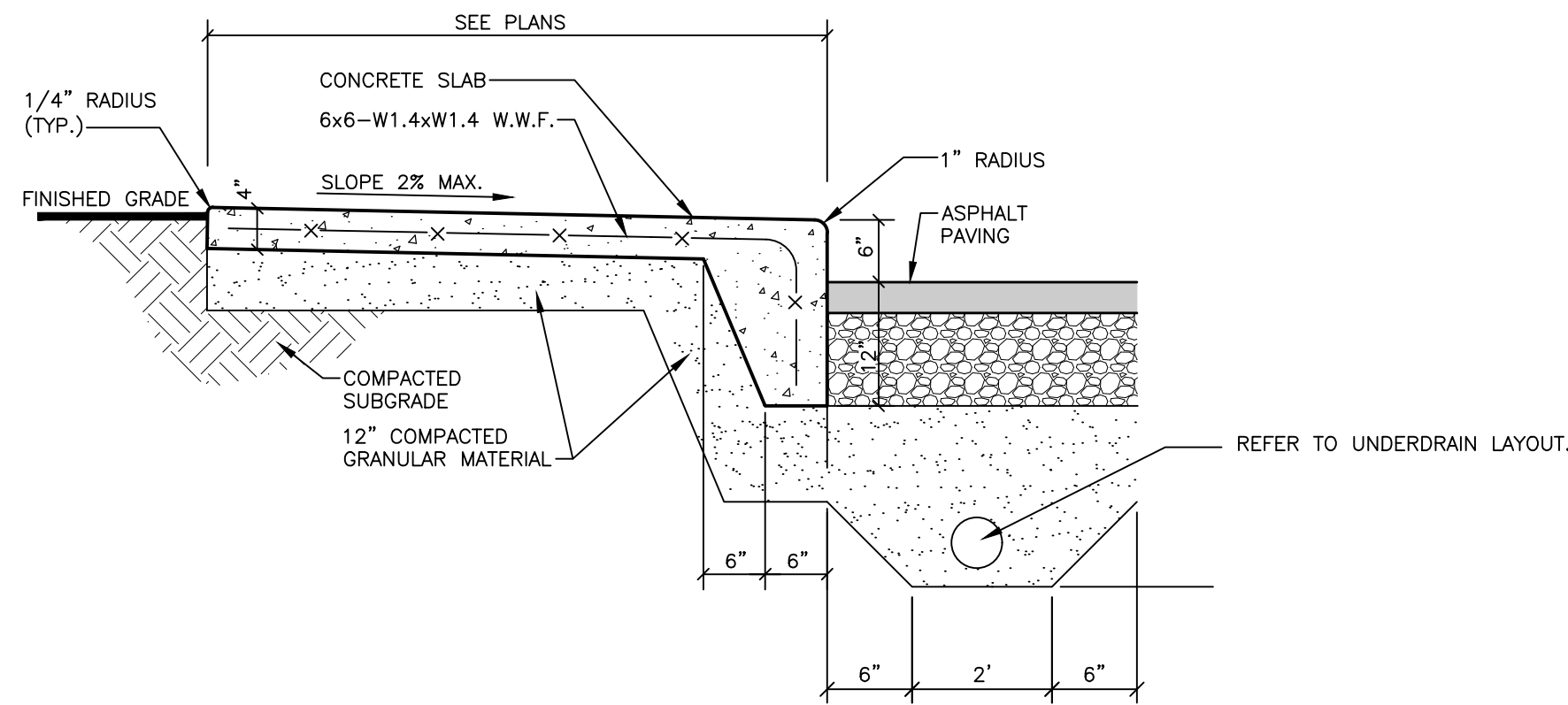
STANDARD CROWN CURB & GUTTER
NO SCALE



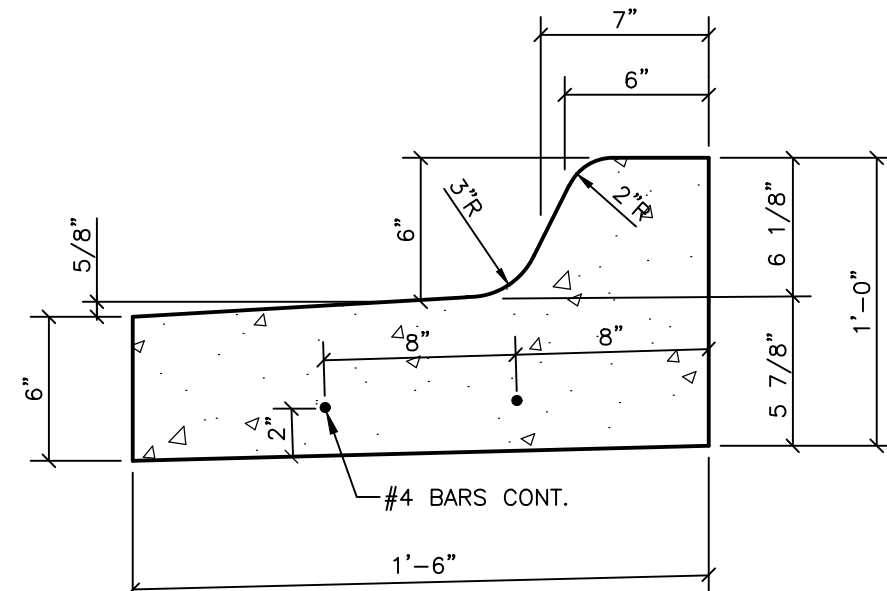
MDOT DETAIL F4 CURB & GUTTER
NO SCALE



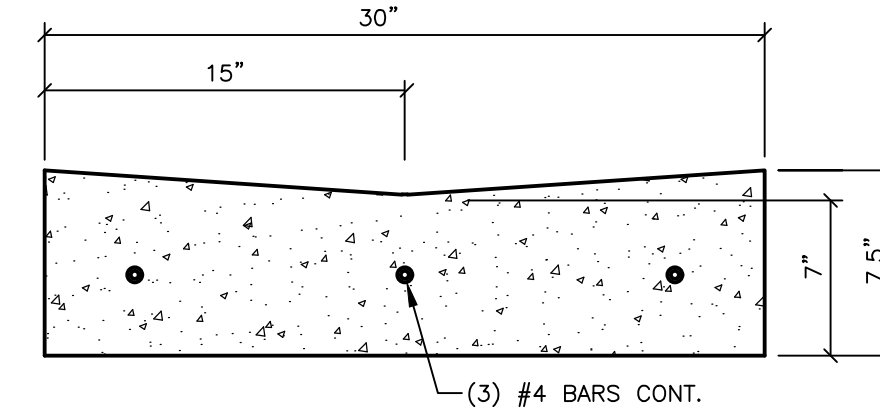
COMMERCIAL DRIVEWAY DETAIL
NO SCALE



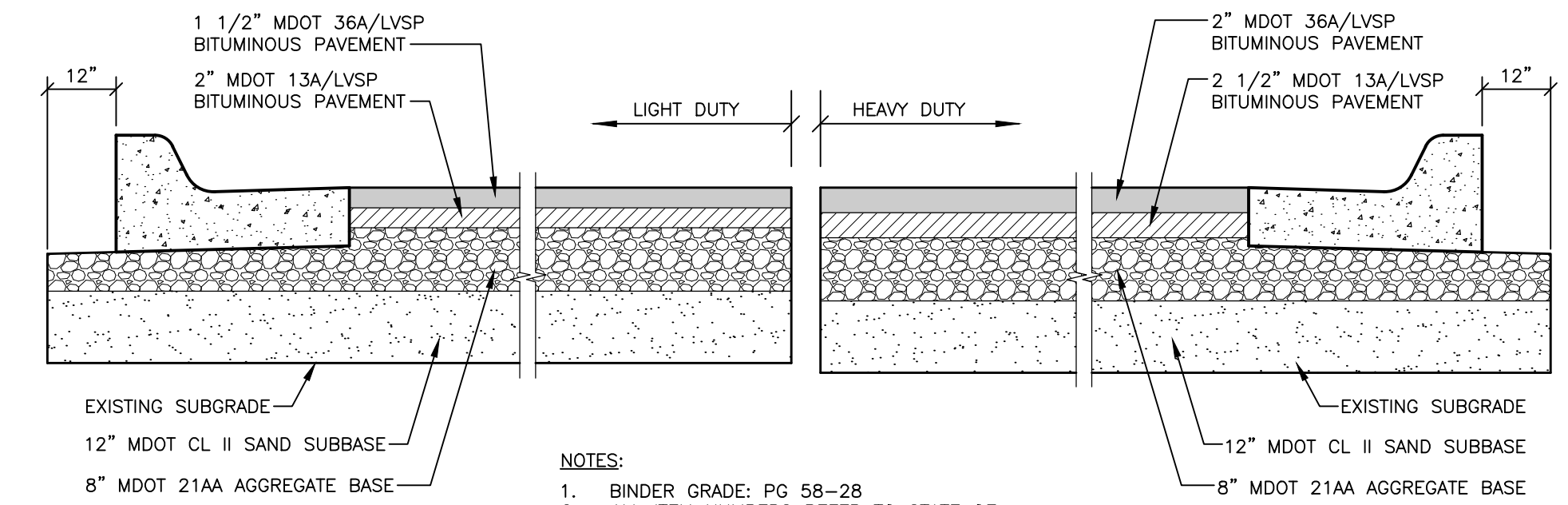
THICKENED EDGE SIDEWALK DETAIL
NO SCALE



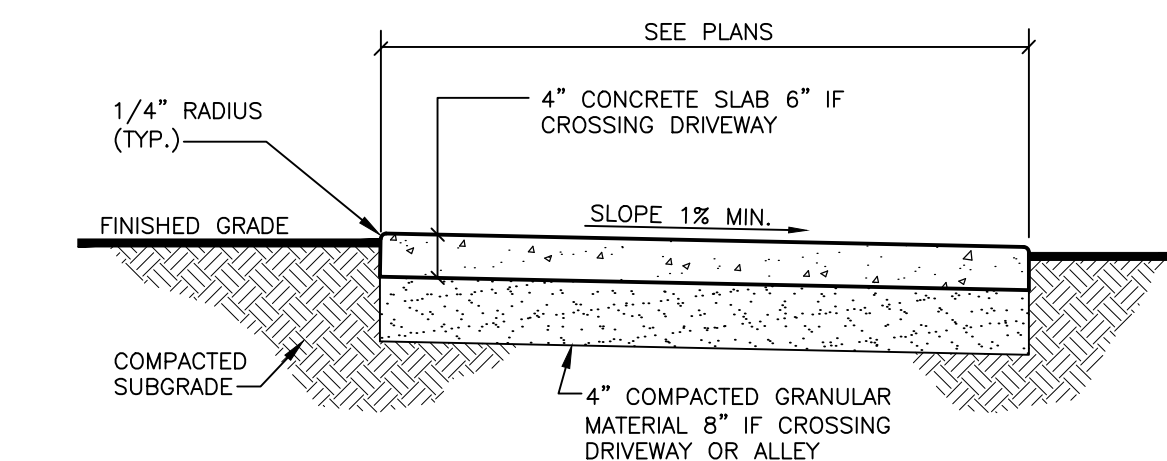
INVERTED CROWN CURB & GUTTER
NO SCALE



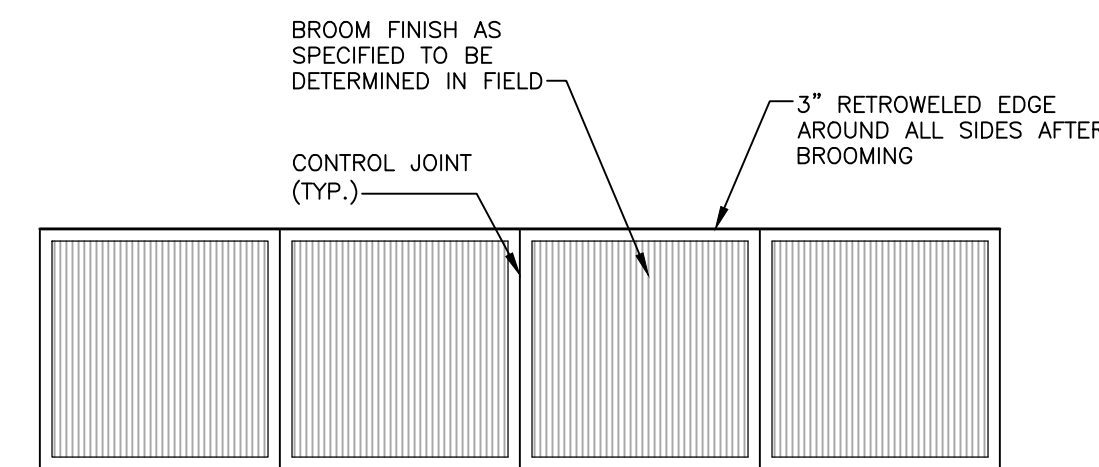
STANDARD GUTTER PAN
NO SCALE



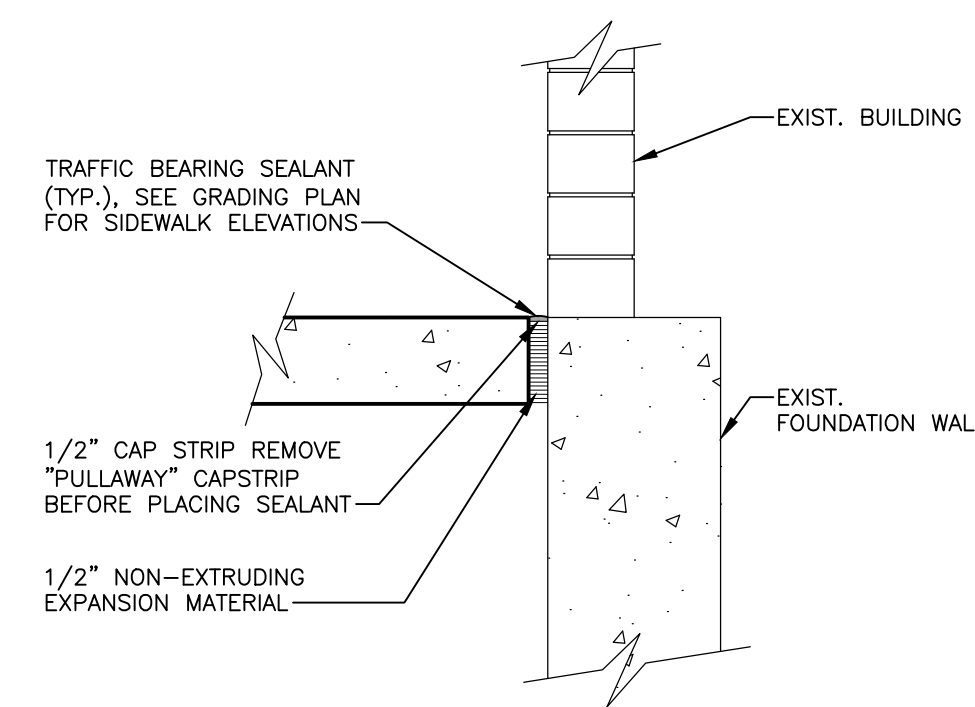
STANDARD/HEAVY DUTY ASPHALT PAVEMENT SECTION
NO SCALE



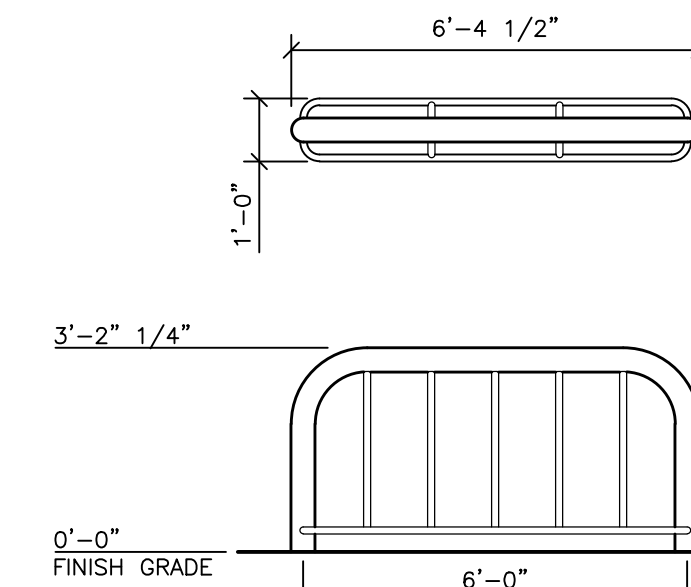
SIDEWALK DETAIL
NO SCALE



BROOM FINISH SIDEWALK DETAIL
NO SCALE



EXPANSION JOINT AT BUILDING DETAIL
NO SCALE



BIKE RACK DETAIL
NO SCALE

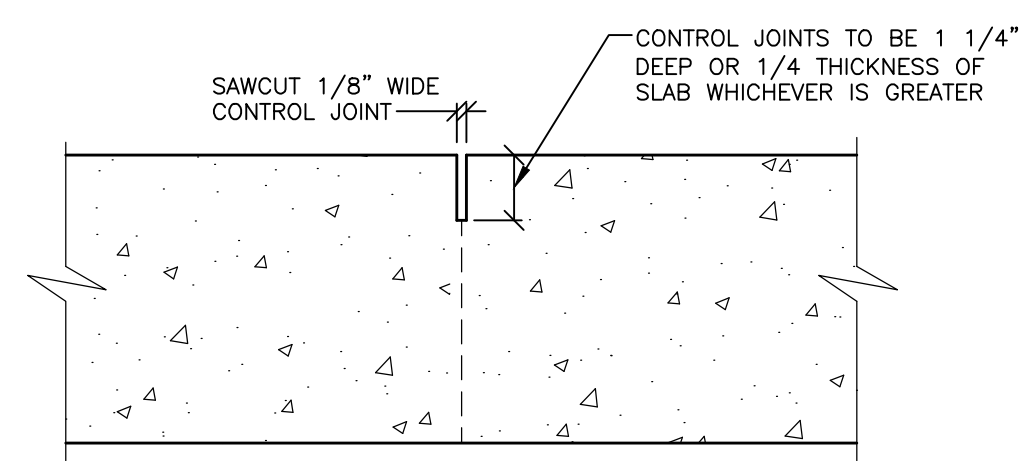
INSTALLATION IN LAWN AREAS:
POSTS ARE TO BE LOCATED 5'-0" FROM EDGE OF CURB. BURY POST 3'-0" DEEP AND AS SHOWN ON DRAWINGS. MOUNT SIGN TO POST PER MANUFACTURER'S RECOMMENDATIONS.

PARKING - FIRE LANE SIGNS:
12"x18", NON-REFLECTIVE

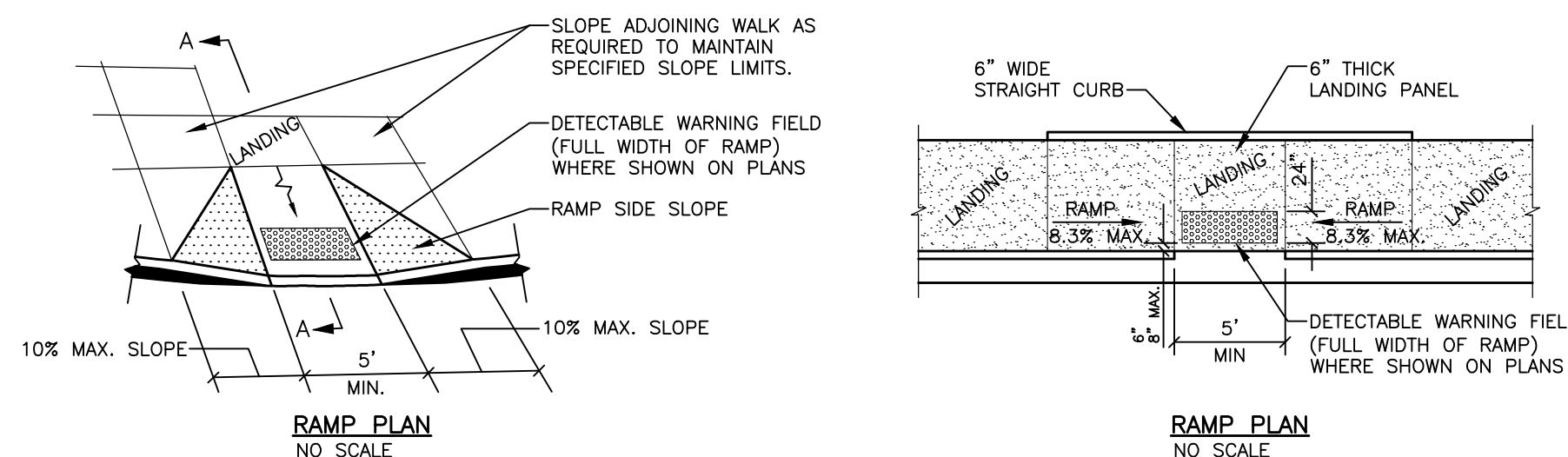
ACCESSIBLE PARKING SIGNS:
REFLECTIVE 0.080; ALUMINUM WITH SCOTCHLITE, OR APPROVED EQUAL.

SUPPLEMENTAL VAN ACCESSIBLE SIGNS:
REFLECTIVE 0.080; ALUMINUM WITH SCOTCHLITE, OR APPROVED EQUAL.

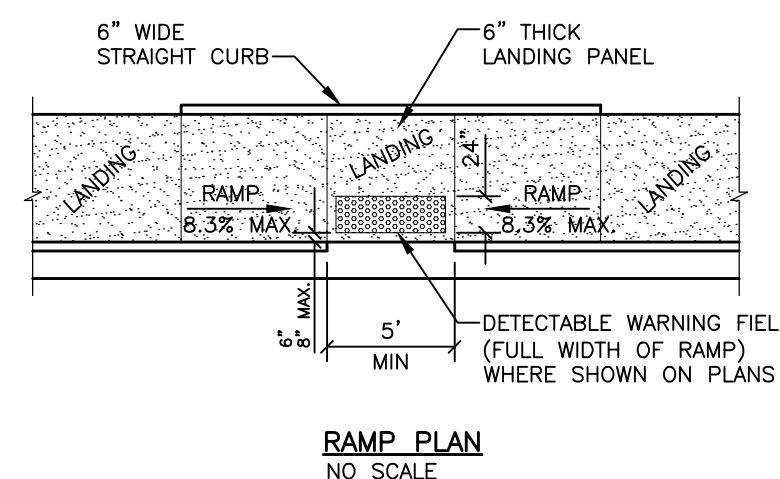
WRONG WAY SIGNS:
30"x18" UV SCREEN PRINTED ALUMINUM



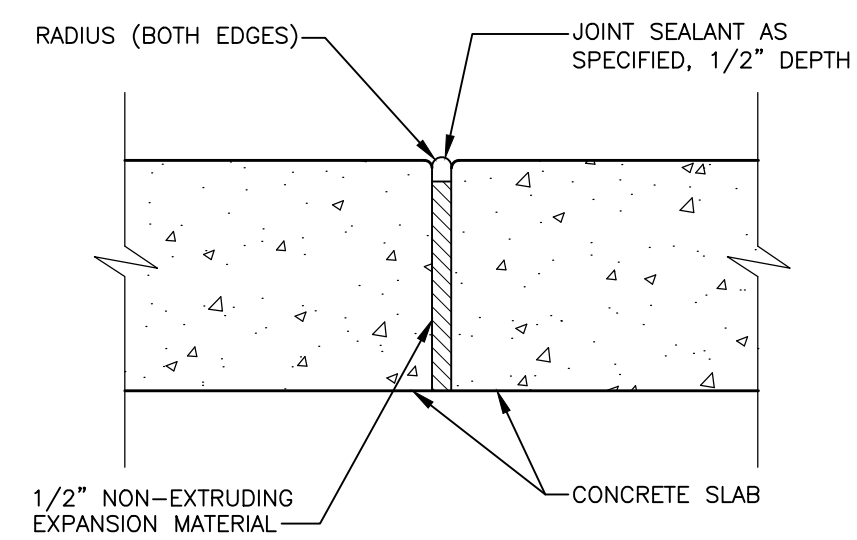
CONTROL JOINT SECTION
NO SCALE



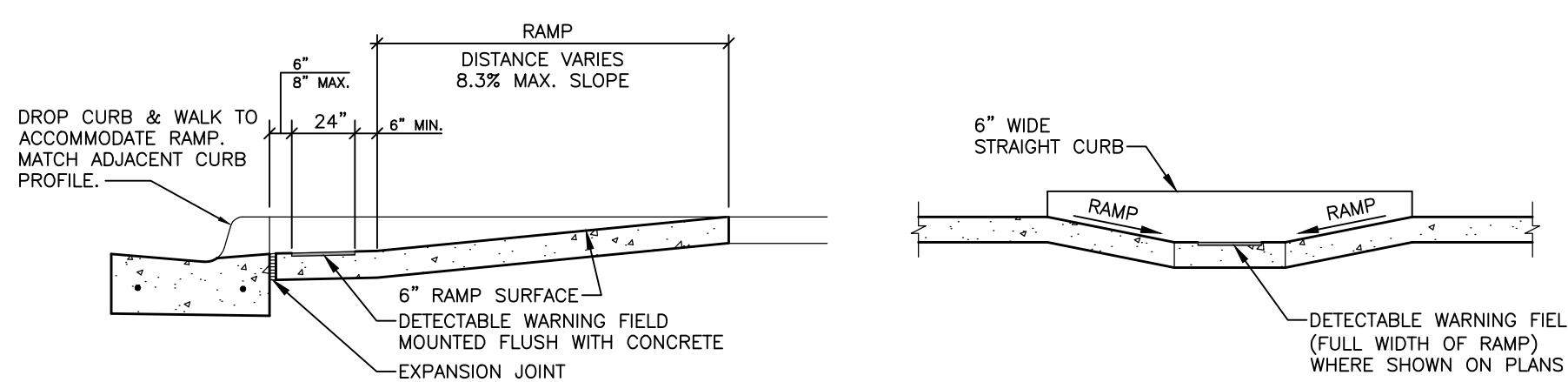
RAMP PLAN
NO SCALE



RAMP PLAN
NO SCALE

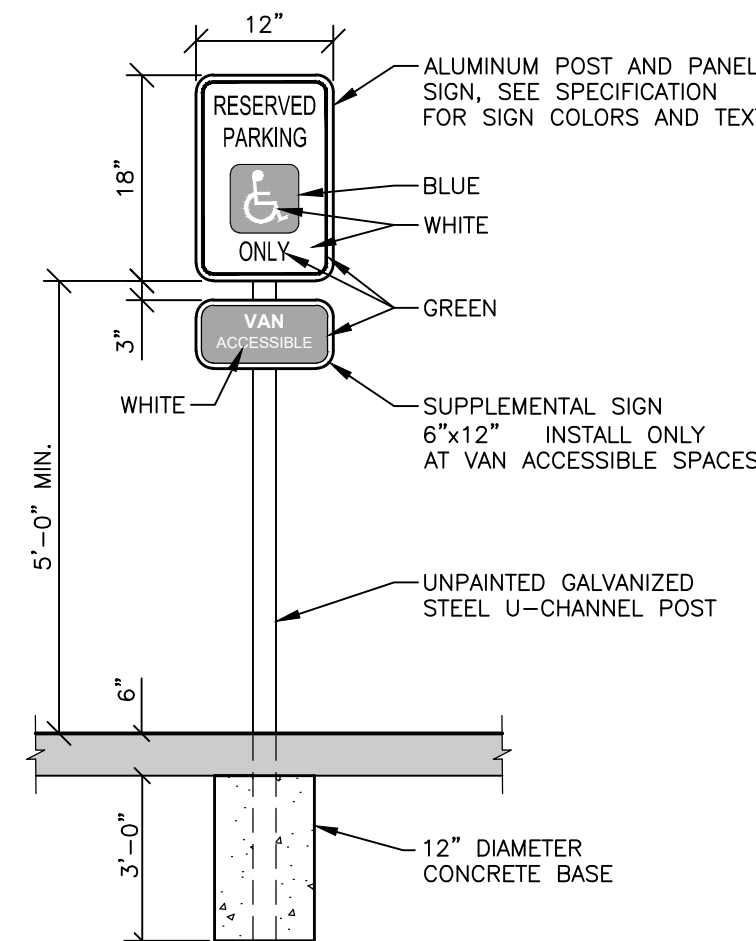


ISOLATION (EXPANSION) JOINT SECTION
NO SCALE

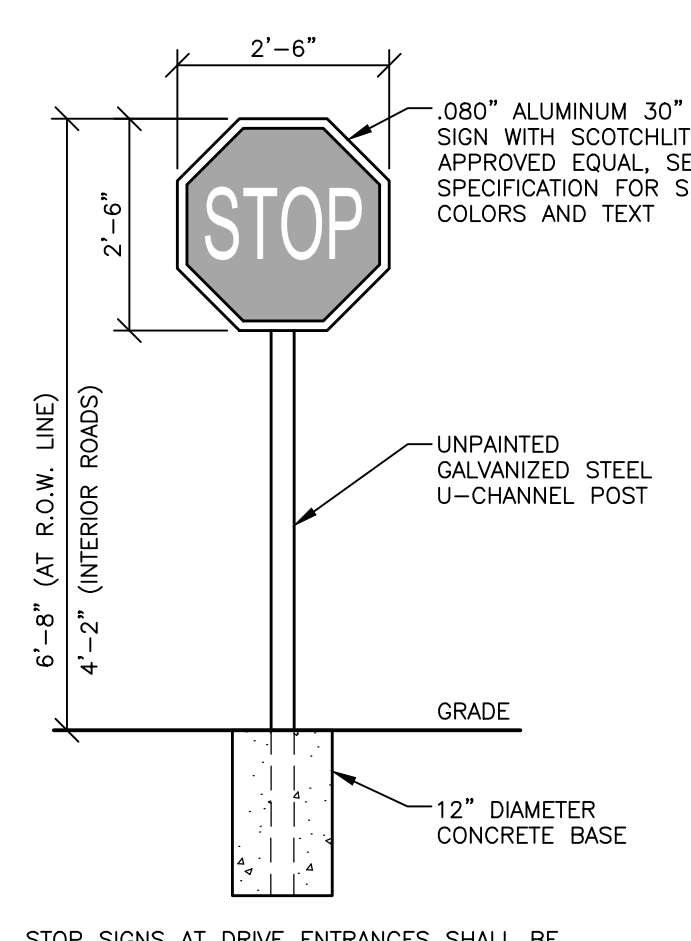


RAMP SECTION (AA)
NO SCALE

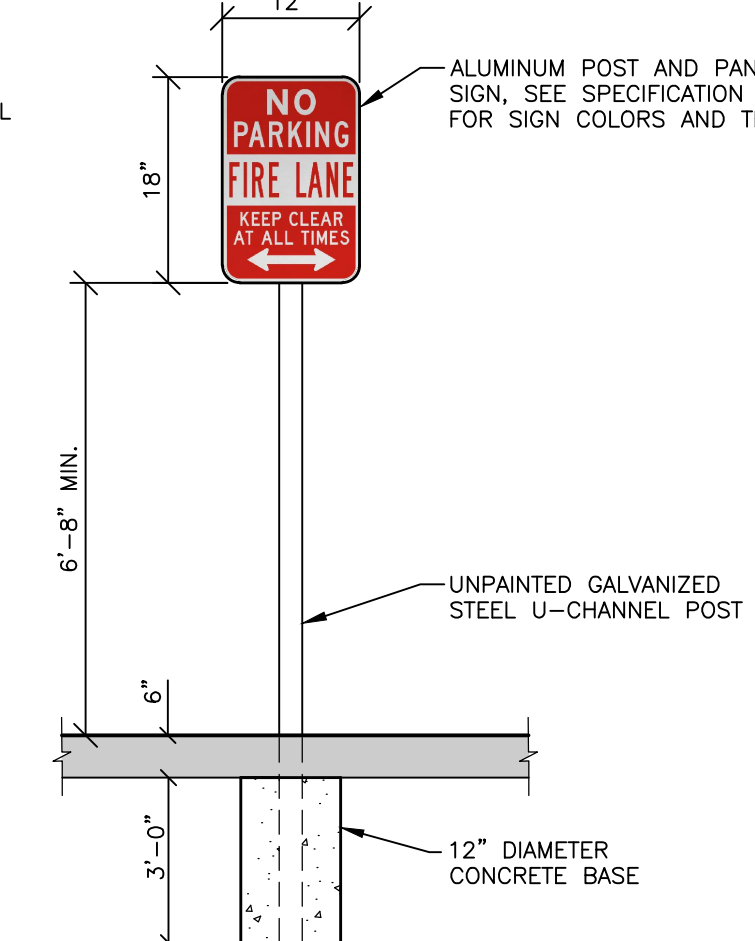
SIDEWALK RAMP DETAIL
NO SCALE



VAN ACCESSIBLE BARRIER FREE PARKING SIGN DETAIL
NO SCALE



STOP SIGN DETAIL
NO SCALE



SIGN DETAIL
NO SCALE

**EGLE SOIL EROSION AND
SEDIMENTATION CONTROL MEASURES**

KEY	DETAIL	CHARACTERISTICS
54		Use geotextile and posts or poles. May be constructed or prepackaged. Easy to construct and locate as necessary.
56		Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet.
57		Used at every point where construction traffic enters or leaves a construction site.

⊗ TEMPORARY MEASURE ⊙ PERMANENT MEASURE

SYMBOL LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- 6-INCH REINFORCED CONCRETE PAVEMENT
- 4" THICK CONCRETE SIDEWALK (6" THICK ACROSS DRIVEWAY)
- EXPANSION JOINT
- STANDARD CURB AND GUTTER
- STANDARD INVERTED CURB AND GUTTER
- SITE LIGHT POLE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- (L) LANDING (2% MAX. SLOPE ALL DIRECTIONS)
- (R) RAMP (12:1 MAX. LONGITUDINAL SLOPE)
- 724.50 XX SPOT ELEVATION
- BS BOTTOM OF STAIR
- EM EDGE OF METAL
- EW EDGE OF WALK
- FF FINISH FLOOR
- GP GUTTER PAN
- GR GRADE ELEVATION
- HP HIGH POINT
- LP LOW POINT
- TC TOP OF CURB
- TP TOP OF PAVEMENT
- TS TOP OF STAIR

LAYOUT NOTES

- DIMENSIONS ARE TO BACK OF CURB, OUTSIDE FACE OF BUILDING, AND EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- KEEP THE APPROVED AND/OR MOST CURRENT SET OF PROJECT DRAWINGS ON SITE AT ALL TIMES. CONTRACTOR TO CONFIRM THEY ARE IN POSSESSION OF THE MOST CURRENT DRAWING FILES.
- ALL WORK PERFORMED IN RIGHT-OF-WAY REQUIRES PROPER PERMITS FROM THE ROAD COMMISSION OF KALAMAZOO COUNTY (RCKC). NOTIFY THE RCKC PRIOR TO THE START OF ANY WORK OR DISTURBANCES WITHIN THE RIGHT-OF-WAY.
- CONCRETE CURB AND GUTTER SHALL BE INSTALLED TO EXISTING EDGE OF PAVEMENT. NO ADDITIONAL PAVEMENT REMOVAL SHALL OCCUR DURING CURB INSTALL. PROTECT EXISTING ASPHALT EDGE DURING REMOVAL AND CONSTRUCTION.

GRADING NOTES

- CONTRACTOR SHALL BE AWARE OF AND COMPLIANT WITH THE ENVIRONMENTAL BASELINE ENVIRONMENTAL ASSESSMENT AND DUE CARE PLAN FOR WORK WITH SOILS ON THE PROJECT.
- FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
- STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
- GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
- GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
- REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
- RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, AND MULCH UNLESS OTHERWISE NOTED ON THE PLANS.
- PROVIDE EROSION CONTROL MATTING ON ALL SLOPES GREATER THAN 3H:1V OR AS NOTED ON THE PLANS.
- THE PROPOSED DRIVEWAY HAS BEEN DESIGNED TO LIMIT THE AMOUNT OF STORM WATER RUNOFF DRAINING INTO THE ROAD RIGHT-OF-WAY. ALL STORM WATER GENERATED WITHIN THE WMU BTR PARK 2.0 ROADWAY (ROBERT JONES WAY) IS MANAGED BY THE EAST REGIONAL INFILTRATION BASIN. ALL STORM WATER GENERATED OUTSIDE OF THE RIGHT-OF-WAY IS COLLECTED AND CONVEYED TO OTHER INFILTRATION BASINS (WEST AND SOUTH - SEE SHEET C310 FOR DETAILS).
- A COPY OF THE APPROVED SEGC PERMIT WILL BE PROVIDED TO THE RCKC PRIOR TO THE START OF CONSTRUCTION.

REVISIONS

NOT FOR CONSTRUCTION

10/24/2022	SPR RESUBMISSION NO. 2
9/28/2022	SPR RESUBMISSION
8/30/2022	SITE PLAN REVIEW

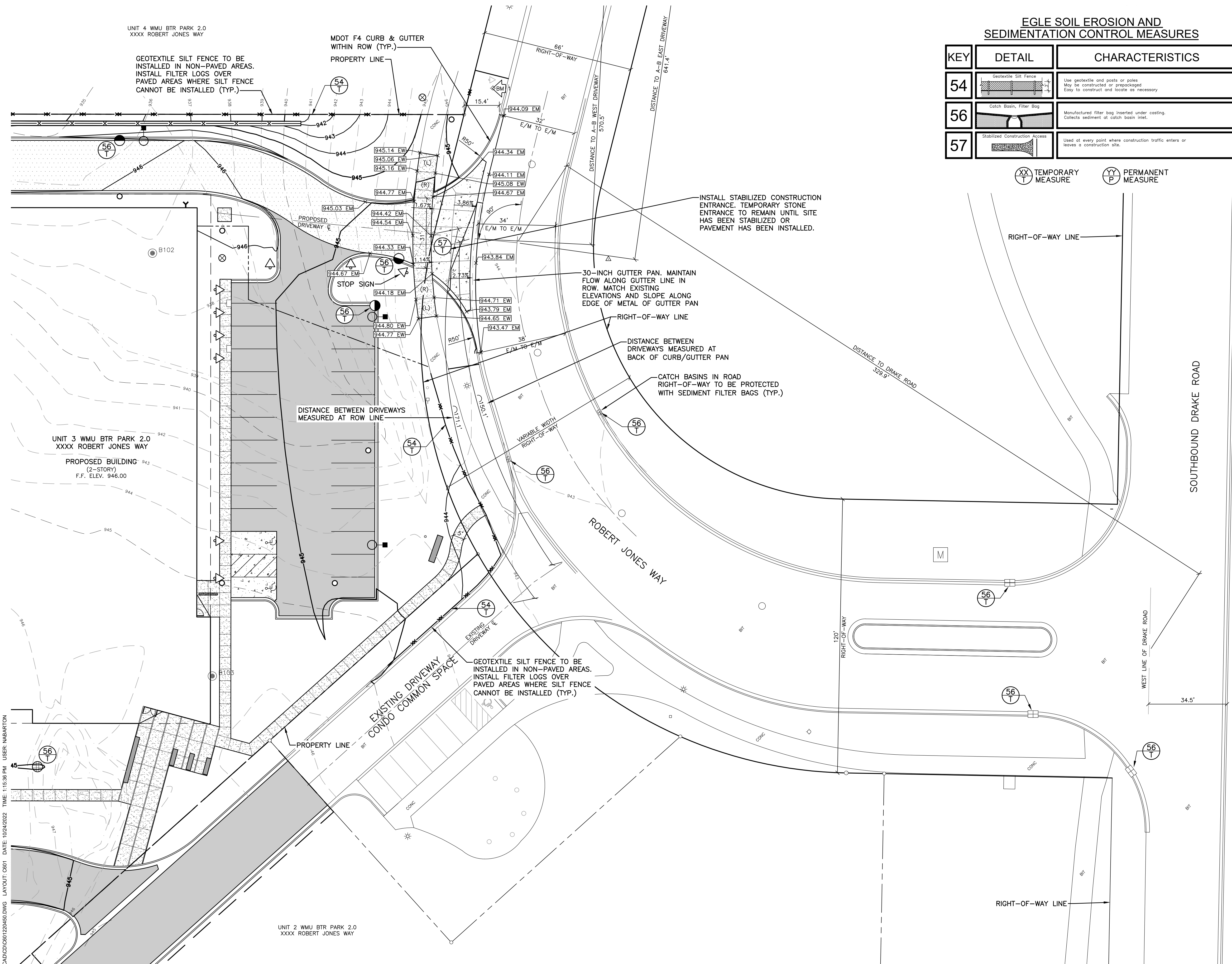
Drawn By NB
Designer NB
Reviewer
Manager RDM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
220450

SHEET NO.

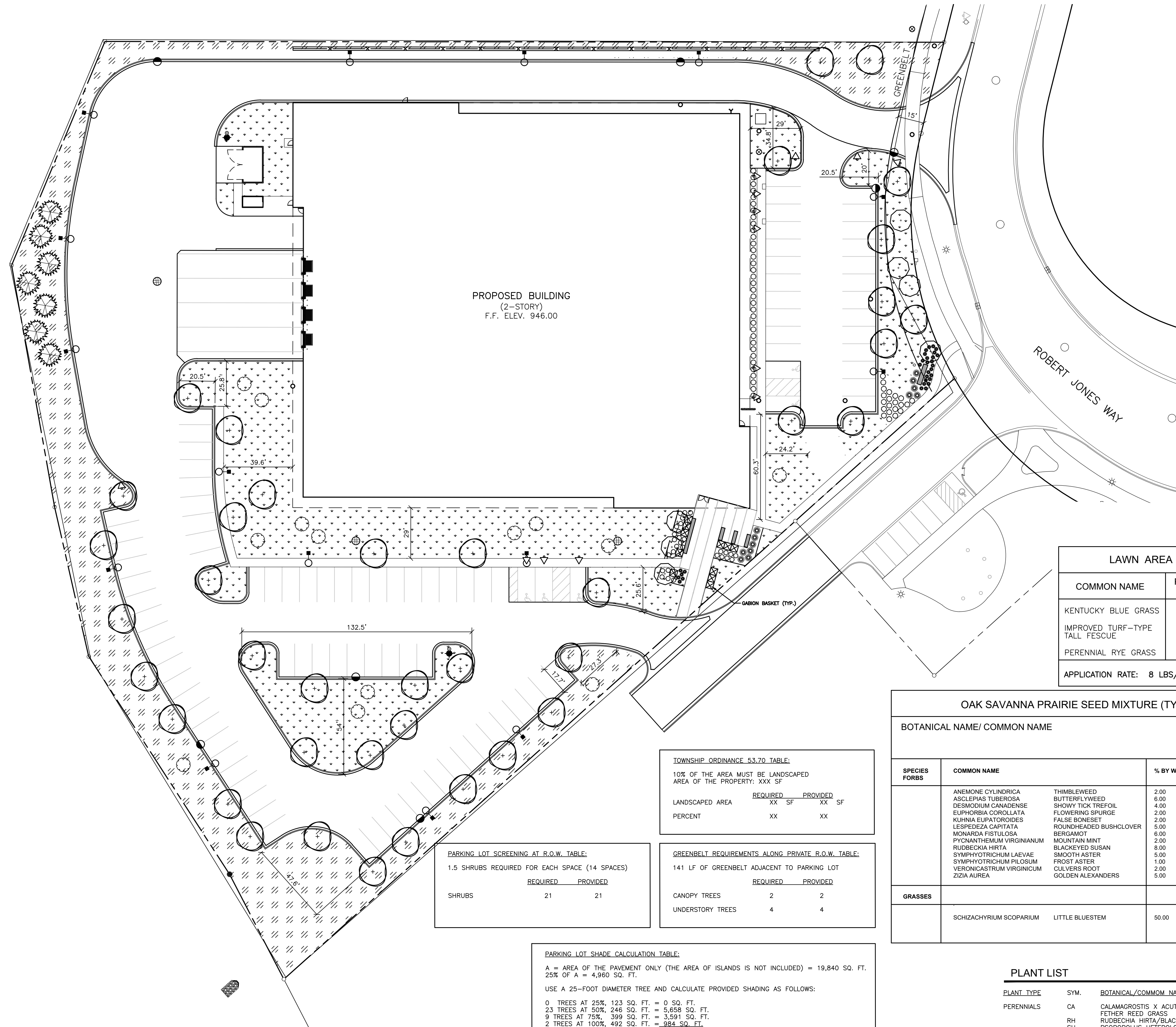
C601



PLOT INFO: Z:\02\220450\CAD\C601\220450.DWG LAYOUT: C601 DATE: 10/24/2022 TIME: 1:15:36 PM USER: MABARTON

RCKC DRIVEWAY PLAN
SCALE: 1" = 20'
0 10 20 40

PLOT INFO: Z:\02\220450\CADD\101220450.DWG LAYOUT: L101 DATE: 10/24/2022 TIME: 14:17:17 PM USER: NABARTON



SYMBOL LEGEND

- PERENNIALS/GROUND COVER
- EVERGREEN SHRUBS
- DECIDUOUS SHRUBS
- DECIDUOUS ORNAMENTAL TREE
- DECIDUOUS SHADE TREE
- CONIFEROUS EVERGREEN TREE
- TURF SEEDED AREA (MIX A)
- PRAIRIE SEED MIX AREA (MIX B)

NOTES

1. REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL CONDITIONS TO THE CONSTRUCTION MANAGER FOR RESOLUTION.
2. FURNISH AND INSTALL 8" OF FURNISHED MODIFIED TOPSOIL FOR ALL PLANT BEDS, UNLESS OTHERWISE NOTED ON THE DETAILS, WITH A PH 7.0 THAT CONTAINS ALL THE MICROORGANISMS NECESSARY FOR HEALTHY PLANT GROWTH. THE CONTRACTOR SHALL PROVIDE SOIL SAMPLE AND SUPPLIER TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO DELIVERY.
3. FURNISH AND INSTALL 4" OF FURNISHED MODIFIED TOPSOIL FOR ALL TURF SEEDED OR SODDED AREAS FOR FINE GRADING, UNLESS OTHERWISE NOTED.
4. EXTRA CARE SHOULD BE TAKEN TO PREVENT TURF SEED OR NATURAL AREA SEED FROM GETTING INTO PLANT BEDS AND ADJACENT NATURAL AREAS.
5. FURNISH AND INSTALL 2-3" OF SHREDDED HARDWOOD MULCH TO ALL PLANT BEDS AND TREE INSTALLATIONS.
6. LANDSCAPE CONTRACTOR SHALL COORDINATE ALL IRRIGATION INSTALLATION.
7. ALL TREES SHOULD HAVE A STRONG CENTRAL LEADER UNLESS NOTED OTHERWISE.
8. ALL NURSERY STOCK SHALL BE FIRST CLASS QUALITY AND IN EXCELLENT HEALTH. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT ALL MATERIALS THAT DO NOT MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
9. ALL NURSERY STOCK MATERIAL SHALL MEET ALL REQUIREMENTS OF THE SPECIFICATIONS.
10. MAINTAIN 5' CLEARANCE FOR ALL TREES FROM MAJOR WATER, ELECTRIC, GAS, AND SEWER LINES. REPORT DISCREPANCIES WITH THE CONSTRUCTION MANAGER.
11. ANY LANDSCAPE MATERIAL THAT FAILS WITHIN ONE YEAR FROM THE BUILDING OPENING SHALL BE REMOVED AND REPLACED.
12. ALL TREES AND SHRUBS SHALL BE PLANTED A MINIMUM DISTANCE OF 3' FROM THE PROTECTION DEVICE (CONCRETE CURB).

LAWN AREA SEED MIXTURE (TYPE A)

COMMON NAME	PROPT BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
KENTUCKY BLUE GRASS	20%	95%	85%
IMPROVED TURF-TYPE TALL FESCUE	70%	95%	85%
PERENNIAL RYE GRASS	10%	95%	85%

APPLICATION RATE: 8 LBS/1000 FT²

OAK SAVANNA PRAIRIE SEED MIXTURE (TYPE B)

BOTANICAL NAME/ COMMON NAME		PERCENT OF MIX BY WEIGHT	APPLICATION RATE
SPECIES FORBS		40%	3 OZ./1000 S.F. OR 6 LBS./ACRE
ANEMONE CYLINDRICA	THIMBLEWEED	2.00	
ASCLEPIAS TUBEROSA	BUTTERFLYWEED	6.00	
DESMODIUM CANADENSE	SHOWY TICK TREFLOIL	4.00	
EUPHORBIA COROLLATA	FLOWERING SPURGE	2.00	
KUHNIYA EUPATOROIDES	FALSE BONESET	2.00	
LESPEDEZA CAPITATA	ROUNDHEADED BUSHCLOVER	5.00	
MONARDA FISTULOSA	BERGAMOT	6.00	
PHYCANTHEMUM VIRGINIANUM	MOUNTAIN MINT	2.00	
RUIDECKIA HIRTA	BLACKEYED SUSAN	6.00	
SYMPHYOTRICHUM LAEVAE	SMOOTH ASTER	5.00	
SYMPHYOTRICHUM PILOSUM	FROST ASTER	1.00	
VERONICASTRIUM VIRGINICUM	CULVERS ROOT	2.00	
ZIZIA AUREA	GOLDEN ALEXANDERS	5.00	
GRASSES		60%	3 OZ./1000 S.F. OR 6 LBS./ACRE
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	50.00	

TOWNSHIP ORDINANCE 53.70 TABLE:

10% OF THE AREA MUST BE LANDSCAPED AREA OF THE PROPERTY: XXX SF

LANDSCAPED AREA	REQUIRED XX SF	PROVIDED XX SF
PERCENT	XX	XX

PARKING LOT SCREENING AT R.O.W. TABLE:

1.5 SHRUBS REQUIRED FOR EACH SPACE (14 SPACES)

	REQUIRED	PROVIDED
SHRUBS	21	21

GREENBELT REQUIREMENTS ALONG PRIVATE R.O.W. TABLE:

141 LF OF GREENBELT ADJACENT TO PARKING LOT

	REQUIRED	PROVIDED
CANOPY TREES	2	2
UNDERSTORY TREES	4	4

PARKING LOT SHADE CALCULATION TABLE:

A = AREA OF THE PAVEMENT ONLY (THE AREA OF ISLANDS IS NOT INCLUDED) = 19,840 SQ. FT.
 25% OF A = 4,960 SQ. FT.

USE A 25-FOOT DIAMETER TREE AND CALCULATE PROVIDED SHADING AS FOLLOWS:

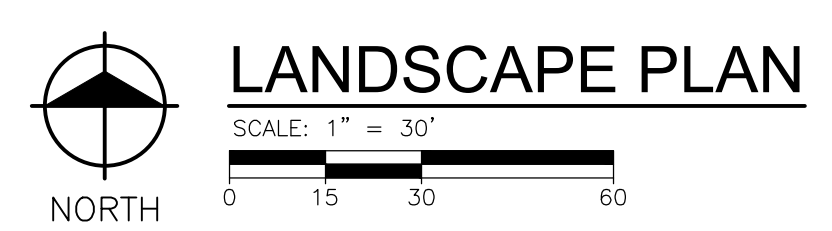
0 TREES AT 25%, 123 SQ. FT. = 0 SQ. FT.
23 TREES AT 50%, 246 SQ. FT. = 5,658 SQ. FT.
9 TREES AT 75%, 369 SQ. FT. = 3,591 SQ. FT.
2 TREES AT 100%, 492 SQ. FT. = 984 SQ. FT.

TOTAL: 10,233 SQ. FT AREA OF SHADE PROVIDED

TOTAL AREA OF PARKING: 40,540 SF
 X .25
 TOTAL: 10,135 SF AREA OF SHADE REQUIRED

TREE QUANTITIES TABLE:

	PROVIDED
CANOPY TREES IN GREENBELT	2
UNDERSTORY TREES IN GREENBELT	4
CANOPY TREES	37
UNDERSTORY TREES	3
EVERGREEN TREES	7
TOTAL TREES ON SITE	53



KEY NOTES

1. ALUMINUM LANDSCAPE EDGING

IRRIGATION NOTES

- SITE IRRIGATION NOTES:**
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DESIGN BUILD IRRIGATION SYSTEM.
 - ALL PLANT BEDS SHALL HAVE DRIP IRRIGATION
 - WATER ALL TURF/SOD AREAS (TYPE A) ON THE PROPERTY WITH A COMBINATION OF TURF AND QR SPRAY ZONES.

LAWN AREA- SEED MIX

COMMON NAME	PROPT BY WT	PURITY %	GERMINATION
KENTUCKY BLUEGRASS	20%	95%	85%
IMPROVED TURF-TYPE TALL FESCUE	70%	95%	85%
PERENNIAL RYEGRASS	10%	95%	85%

PLANT LIST

PLANT TYPE	SYM.	BOTANICAL/COMMON NAME	QTY.	SIZE/CONDITIONNOTES
PERENNIALS	CA	CALAMAGROSTIS X ACUTIFOLIA 'KARL FORSTER'/KARL FORESTER'S FETHER REED GRASS	15	#2 CONT
	RH	RUBEBCHIA HIRTA/BLACK-EYED SUSAN	8	#1 CONT
	SH	PSOROBOLUS HETEROLOPISIS/PRAIRIE DROPSOED	31	#1 CONT
	SHRUBS	AM	ARONIA MELANOCARPA 'UCONNAM166'/LOW SCAPE	56
CR		HEDGER CHOKEBERRY	12	#2 CONT
OR		CORNUS RACEMOSE/GRAY DOGWOOD	14	#2 CAL B&B
RA		RHUS AROMATICA 'GRO-LOW'/GRO-LOW FRAGRANT SUMAC	21	#3 CONT
TREES	AC	AMELANCHIER CANADENSIS X G.'ROBIN HILL'/ROBIN HILL	7	8' HT B&B MULTI-TRUNK
	PA	PINK SERVICEBERRY	25	2' CAL B&B
	OR	QUERCUS ALBA/WHITE OAK	14	2' CAL B&B
	OR	QUERCUS RUBRUM/RED OAK	14	2' CAL B&B
	PN	PINUS NIGRA/AUSTRIAN PINE	7	6' HT B&B

REVISIONS

NOT FOR CONSTRUCTION

10/24/2022 SPR RESUBMISSION NO. 2
 9/28/2022 SPR RESUBMISSION
 8/30/2022 SITE PLAN REVIEW

Drawn By ADO
 Designer MV
 Reviewer
 Manager RDM

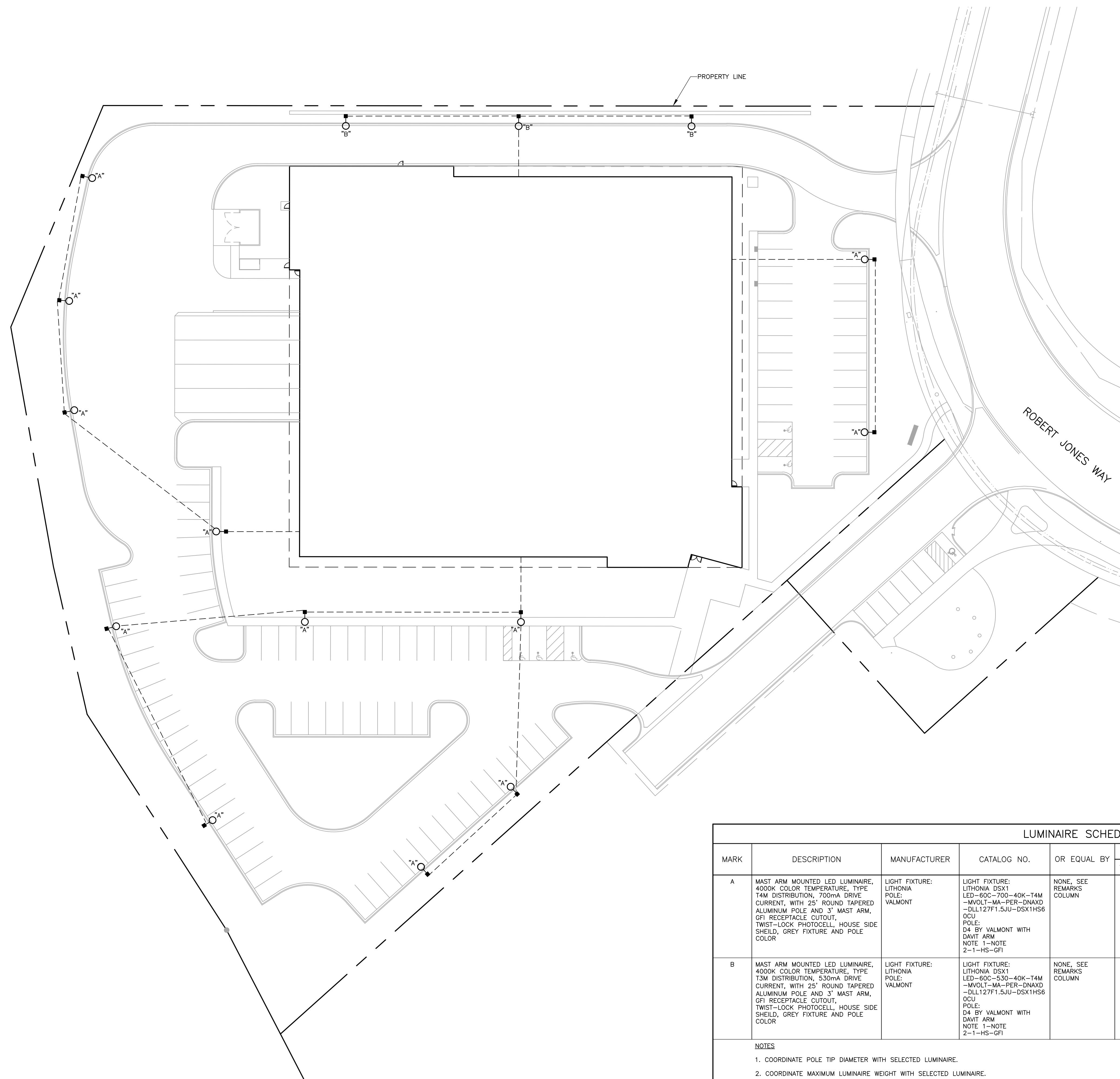
Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
220450

SHEET NO.

L101

PLOT INFO: Z:\02\2204\00\CADD\01\101224\00.DWG LAYOUT: E101 DATE: 10/24/2022 TIME: 1:05:48 PM USER: MABARTON



SYMBOL LEGEND

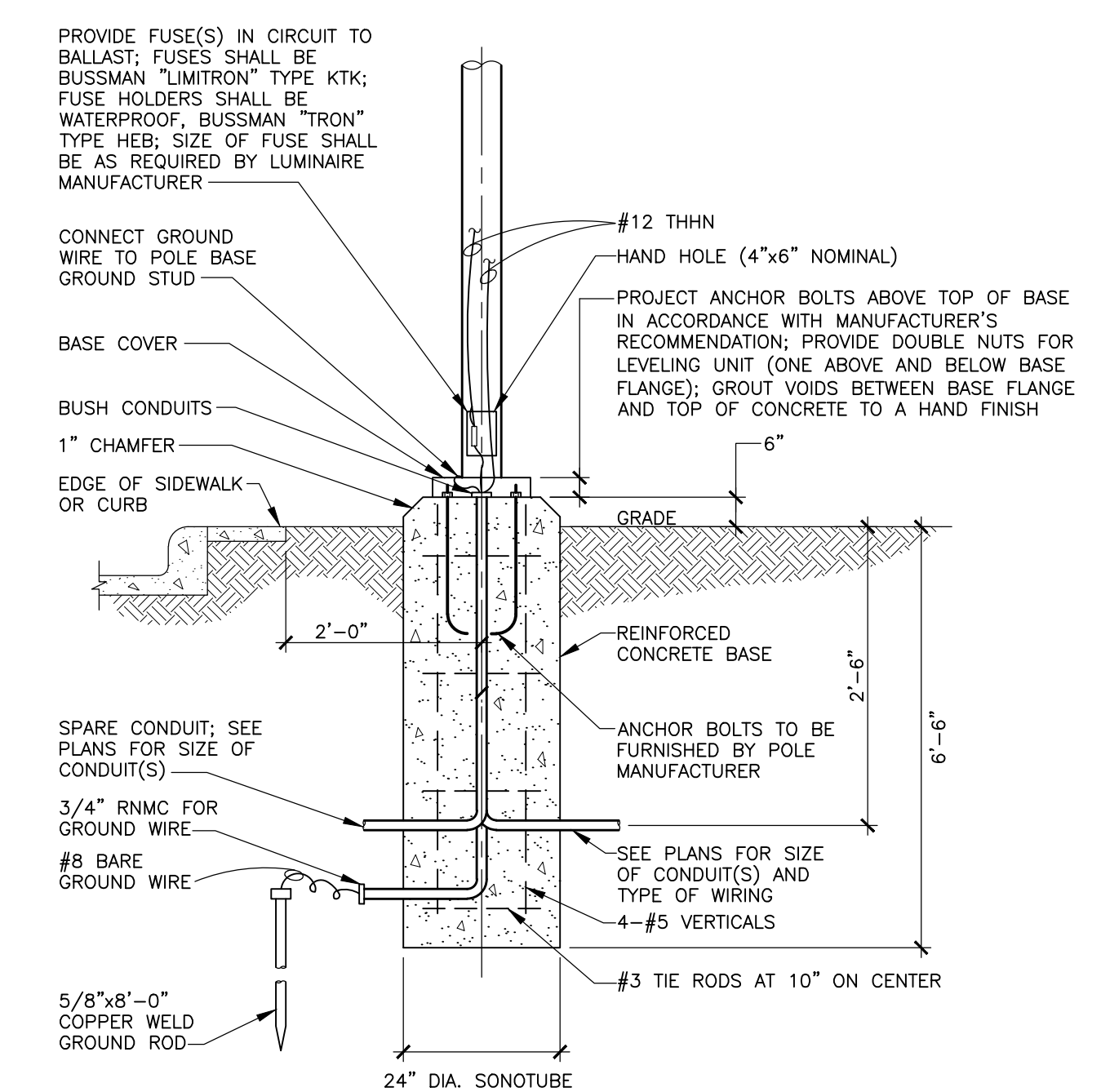
- SITE LUMINAIRE AND POLE, SEE LUMINAIRE SCHEDULE
- SITE SECURITY LUMINAIRE AND POLE, SEE LUMINAIRE SCHEDULE
- UNDERGROUND UTILITY CONDUCTORS BY OTHERS

LIGHTING CONTROL

IN ACCORDANCE WITH OSHTEMO TOWNSHIP LIGHTING ORDINANCE REQUIREMENTS, NON-SECURITY LIGHTING WILL BE TIMER AND PHOTOSENSOR CONTROLLED. NON-SECURITY LIGHTING WILL TURN OFF AT AN OWNER SPECIFIED TIME AT NIGHT WHEN BUILDING IS NO LONGER IN USE. PHOTOSENSORS WILL ALSO TURN OFF LIGHTING WHEN ENOUGH DAYLIGHT IS PRESENT. SECURITY LIGHTING SHALL BE PHOTOSENSOR CONTROLLED ONLY AND WILL TURN OFF WHEN ENOUGH DAYLIGHT IS PRESENT.

NOTES

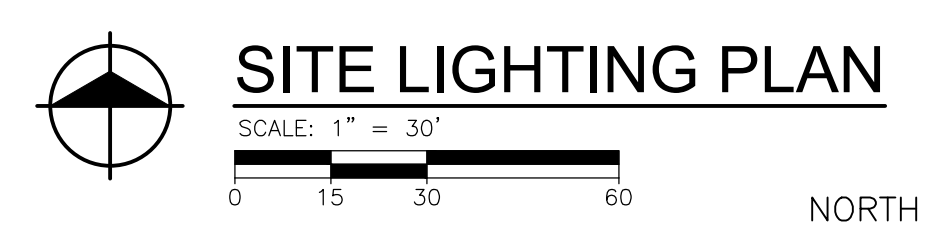
1. SITE LIGHTING SHALL COMPLY WITH MMU BTR DESIGN AND MAINTENANCE STANDARDS AND OSHTEMO TOWNSHIP LIGHTING ORDINANCE.
2. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF 2017 NATIONAL ELECTRICAL CODE (NEC), WITH STATE OF MICHIGAN AMENDMENTS AND AUTHORITY HAVING JURISDICTION. PROVIDE EVIDENCE THAT INSTALLED ELECTRICAL WORK HAS BEEN APPROVED BY AUTHORITY HAVING JURISDICTION.
3. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.
4. CONDUCTORS SHALL BE NEW, TYPE THHN/THWN, 600V, 75/90 DEGREE C RATED WITH NYLON JACKET. STRANDED COPPER FOR ALL SIZED.
5. REFERENCE CIVIL DRAWINGS FOR LOCATIONS OF UTILITIES.
6. INSTALL GREEN, INSULATED, EQUIPMENT GROUNDING CONDUCTORS IN ALL RACEWAYS. GREEN, INSULATED, EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED WITH ALL BRANCH CIRCUITS.
7. CONDUIT LOCATED BELOW GRADE SHALL BE RIGID NON-METALLIC CONDUIT (SCHEDULE 80). CONDUIT LOCATED ABOVE GRADE SHALL BE RIGID STEEL CONDUIT. WHEN PENETRATING CONCRETE SURFACE OR GRADE MAKE A TRANSITION TO RIGID STEEL CONDUIT 6" BELOW SURFACE AT A MINIMUM.
8. CONDUIT BELOW GRADE SHALL BE 24" BELOW GRADE TO TOP OF CONDUIT.
9. MINIMUM CONDUIT SIZE SHALL BE 1" UNLESS NOTED OTHERWISE.
10. GROUND RODS SHALL BE COPPER-CLAD STEEL, 5/8" DIAMETER BY 6'-0" LONG. CONNECTIONS TO GROUND SHALL BE EXOTHERMIC WELD OF IRREVERSIBLE COMPRESSION.
11. UNDERGROUND GROUNDING CONDUCTORS SHALL BE BARE STRANDED COPPER.
12. PROVIDE SUBMITTAL FOR LUMINAIRES AND POLES FOR REVIEW AND APPROVAL OF ENGINEER AND OWNER. SUBMITTAL TO INCLUDE SHOP DRAWINGS IDENTIFYING: MANUFACTURER, MODEL NUMBER, DETAILS OF CONSTRUCTION AND INSTALLATION, COLOR AND FINISH, AND WARRANTY FOR LUMINAIRE.
13. ALL LIGHT FIXTURES SHALL BE FULL CUT-OFF.
14. SEE RAISED CONCRETE BASE DETAIL ON THIS SHEET FOR POLE MOUNTING.



OUTDOOR LIGHTING STANDARD CONCRETE BASE DETAIL
NO SCALE

MARK	DESCRIPTION	MANUFACTURER	CATALOG NO.	OR EQUAL BY	LUMINAIRE DATA					REMARKS	
					VOLTAGE	LOAD	LUMENS	CCT	CRI		DIMMING
A	MAST ARM MOUNTED LED LUMINAIRE, 4000K COLOR TEMPERATURE, TYPE T4M DISTRIBUTION, 700mA DRIVE CURRENT, WITH 25' ROUND TAPERED ALUMINUM POLE AND 3' MAST ARM, GFI RECEPTACLE CUTOUT, TWIST-LOCK PHOTOCELL, HOUSE SIDE SHIELD, GREY FIXTURE AND POLE COLOR	LIGHT FIXTURE: LITHONIA POLE: VALMONT	LIGHT FIXTURE: LITHONIA DSX1 LED-60C-700-40K-T4M -MVOLT-MA-PER-DNAXD -DLL127F1.5JU-DSX1HS6 OCU POLE: D4 BY VALMONT WITH DAVIT ARM NOTE 1-NOTE 2-1-HS-GFI	NONE, SEE REMARKS COLUMN	120/277	131W	14443	4000K	80	-	FIXTURE AND POLE ARE SELECTED TO MATCH EXISTING DRIVE FIXTURES, FIELD VERIFY EXISTING INSTALLED POLE AND FIXTURE COLOR, SEE NOTE 3
B	MAST ARM MOUNTED LED LUMINAIRE, 4000K COLOR TEMPERATURE, TYPE T3M DISTRIBUTION, 530mA DRIVE CURRENT, WITH 25' ROUND TAPERED ALUMINUM POLE AND 3' MAST ARM, GFI RECEPTACLE CUTOUT, TWIST-LOCK PHOTOCELL, HOUSE SIDE SHIELD, GREY FIXTURE AND POLE COLOR	LIGHT FIXTURE: LITHONIA POLE: VALMONT	LIGHT FIXTURE: LITHONIA DSX1 LED-60C-530-40K-T4M -MVOLT-MA-PER-DNAXD -DLL127F1.5JU-DSX1HS6 OCU POLE: D4 BY VALMONT WITH DAVIT ARM NOTE 1-NOTE 2-1-HS-GFI	NONE, SEE REMARKS COLUMN	120/277	99W	8464	4000K	80	-	FIXTURE AND POLE ARE SELECTED TO MATCH EXISTING DRIVE FIXTURES, FIELD VERIFY EXISTING INSTALLED POLE AND FIXTURE COLOR, SEE NOTE 3

- NOTES**
1. COORDINATE POLE TIP DIAMETER WITH SELECTED LUMINAIRE.
 2. COORDINATE MAXIMUM LUMINAIRE WEIGHT WITH SELECTED LUMINAIRE.
 3. OVERALL POLE HEIGHT, INCLUDING BASE, SHALL NOT EXCEED 25'-0" IN ACCORDANCE WITH LOCAL ORDINANCES.
- UNO = UNLESS NOTED OTHERWISE



REVISIONS

NOT FOR CONSTRUCTION

10/24/2022	SPR RESUBMISSION NO. 2
9/28/2022	SPR RESUBMISSION
8/30/2022	SITE PLAN REVIEW

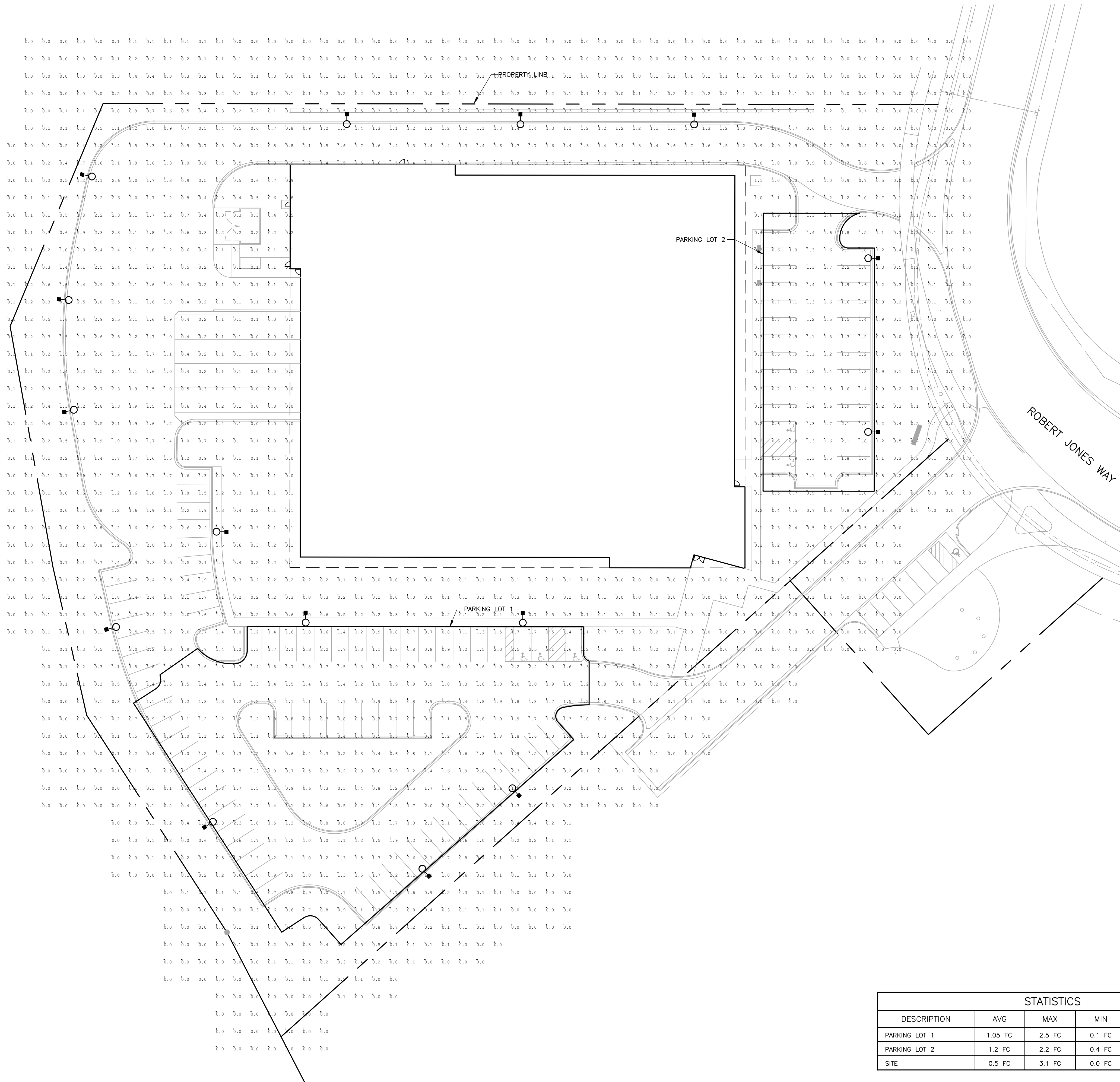
Drawn By: MJS
Designer: MJS
Reviewer:
Manager: RDM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
220450
SHEET NO.

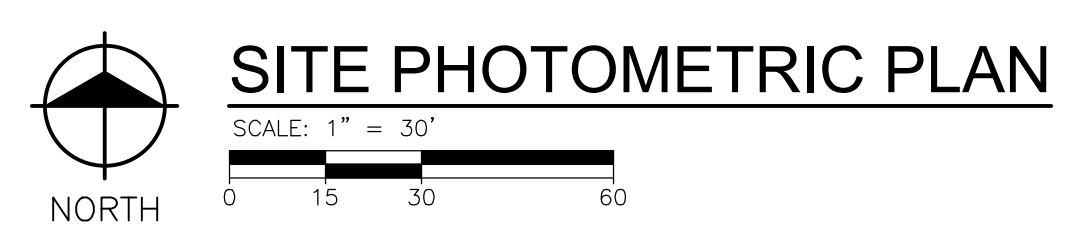
E101

PLOT INFO: Z:\02220450\CADD\01E101220450.DWG LAYOUT: E102 DATE: 10/24/2022 TIME: 1:10:12 PM USER: MABARTON



- NOTES**
- LUMINAIRE LAYOUT WAS DESIGNED TO TRY AND MEET REQUIREMENTS OF BOTH WMU BTR SITE DESIGN AND MAINTENANCE STANDARD AND OSHTEMO TOWNSHIP LIGHTING ORDINANCE.
 - WMU BTR DESIGN AND MAINTENANCE STANDARDS:
 - SHARP CUT-OFF LUMINAIRES.
 - 0.5 FOOTCANDLES (FC) MINIMUM FOR "IN USE" AREAS.
 - AVERAGE FC LEVEL AROUND 1 FC.
 - OSHTEMO TOWNSHIP LIGHTING ORDINANCE:
 - ALL LUMINAIRES TO BE CUT-OFF.
 - LIGHT LEVELS AT PROPERTY LINES SHALL NOT EXCEED 0.5 FC.
 - MAXIMUM TO MINIMUM RATIO OF PARKING LOTS SHALL NOT EXCEED 20:1.
 - DURING NON-OPERATIONAL HOURS ONLY LIGHTING NECESSARY FOR SECURITY SHALL REMAIN ON.
 - POLE MOUNTED LUMINAIRES SHALL BE 25'-0" OVERALL IN HEIGHT OR LESS, POLE MOUNTED LUMINAIRES OVER 25'-0" REQUIRE APPROVAL FROM TOWNSHIP.

STATISTICS					
DESCRIPTION	AVG	MAX	MIN	MAX/MIN	AVG/MIN
PARKING LOT 1	1.05 FC	2.5 FC	0.1 FC	25:1	10.5:1
PARKING LOT 2	1.2 FC	2.2 FC	0.4 FC	5.5:1	3:1
SITE	0.5 FC	3.1 FC	0.0 FC	N/A	N/A



REVISIONS

NOT FOR CONSTRUCTION

10/24/2022	SPR RESUBMISSION NO. 2
9/28/2022	SPR RESUBMISSION
8/30/2022	SITE PLAN REVIEW

Drawn By: MJS
Designer: MJS
Reviewer:
Manager: RDM

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PROJECT NO.
220450

SHEET NO.

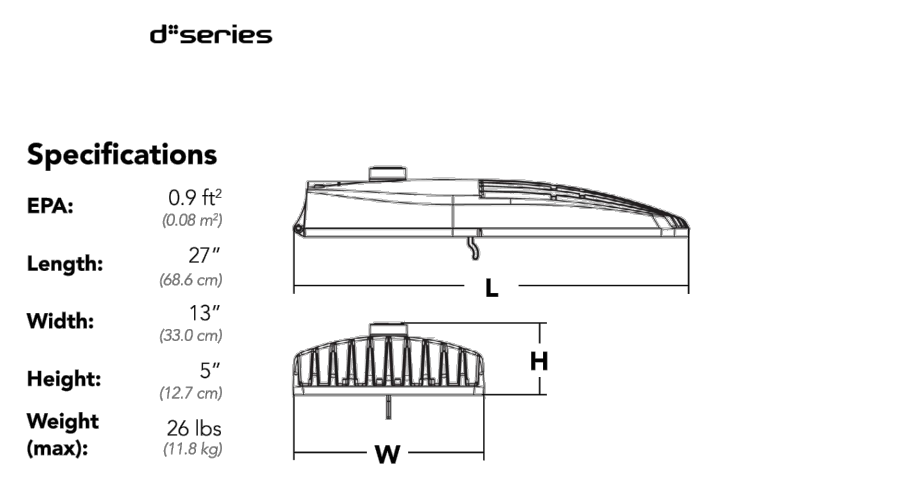
E102

Ordering Information

Accessories table with columns for Part Number, Description, and Notes. Includes items like S308 1510P (P) and S308 610P (P).

Visit Lithonia Lighting's POWER CENTRAL to see our wide selection of poles, accessories and educational tools.

- NOTES: 1. MVOLT driver operates on any line voltage from 120-277V 50/60Hz. 2. Not available with single board, 530 mA product (DSC 530 or 60C 530 DS).



Specifications: EPA: 0.9 ft² (0.08 m²), Length: 27" (68.6 cm), Width: 13" (33.0 cm), Height: 5" (12.7 cm), Weight (max): 26 lbs (11.8 kg).

A+ Capable options indicated by this color background.

Ordering Information

DSX1 LED table with columns: Series, LEDs, Drive current, Color temperature, Distribution, Voltage, Mounting, Options, Finish. Includes example: DSX1 LED 60C 1000 40K T3M MVOLT MA DDBXD.

LITHONIA LIGHTING Commercial Outdoor One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-7378 • www.lithonia.com

Performance Data

Lumen Ambient Temperature (LAT) Multipliers. Use these factors to determine relative lumen output for average ambient temperatures from 40°C (104°F).

Table with columns: Ambient, Lumen Multiplier. Shows values for 0°C, 10°C, 20°C, 25°C, 30°C, 40°C.

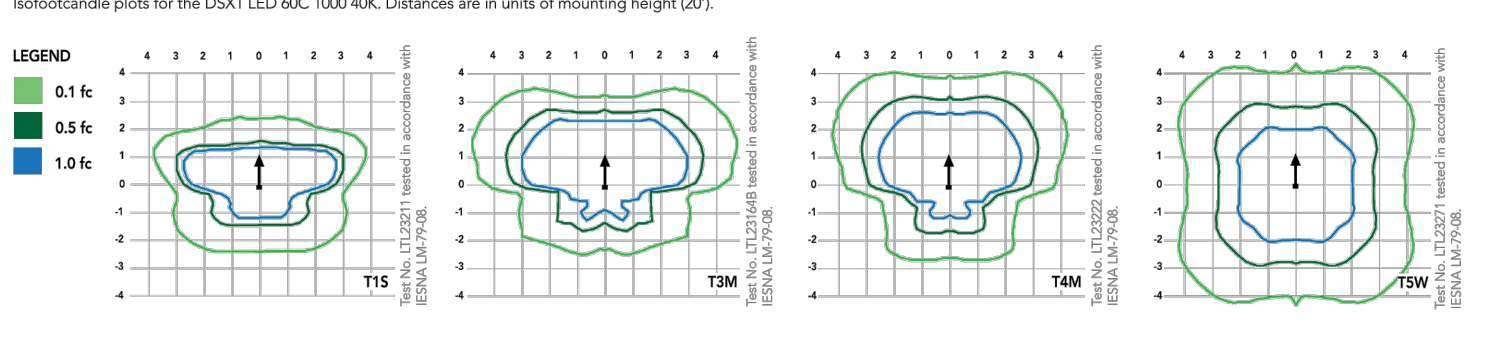
Electrical Load. Table with columns: Ambient, Drive current, Voltage, Watts, Current (A).

Table with columns: Ambient, Drive current, Voltage, Watts, Current (A). Shows values for 30, 40, 60.

Projected LED Lumen Maintenance. Data references the extrapolated performance projections for the lifetimes noted in a 20°C ambient.

Table with columns: Operating Hours, DSX1 LED 60C 1000, DSX1 LED 60C 700. Shows lumen maintenance factors.

Photometric Diagrams



FEATURES & SPECIFICATIONS

INTENDED USE: The latest design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for area and accent lighting applications. FINISH: Exterior parts are protected by a zinc-infrared Super Durable TGIC thermostat powder coat finish.

ELECTRICAL: Light engine configurations consist of 30, 40 or 60 high-efficiency LEDs mounted to metal core circuit boards to maximize heat dissipation and promote long life. LISTINGS: Four-ball mast arm mount provides easy, secure installation for normal 1 1/4" to 2" diameter arms.

Performance Data

Lumen Output. Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Large table showing Lumen Output for various configurations (700mA, 1000mA, 40C, 700mA, 1000mA, 131W, 60C, 1000mA, 20W).

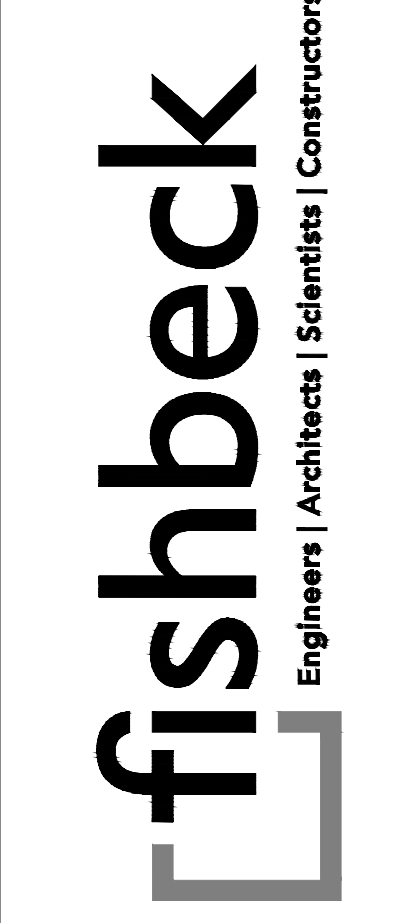
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NOTES: 1. LUMINAIRE CUTSHEET SHOWN FOR REFERENCE. SEE LUMINAIRE SCHEDULE FOR MODEL NUMBER(S).

Capable Luminaire. This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

To learn more about A+, visit www.acuitybrands.com/aplus. 1. See ordering tree for details. 2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire.

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Atkins Fick Group, Inc. Oshtemo Township, Michigan Faraday Project

REVISIONS

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9/28/2022 SPR RESUBMISSION
8/30/2022 SITE PLAN REVIEW

Drawn By: MJS
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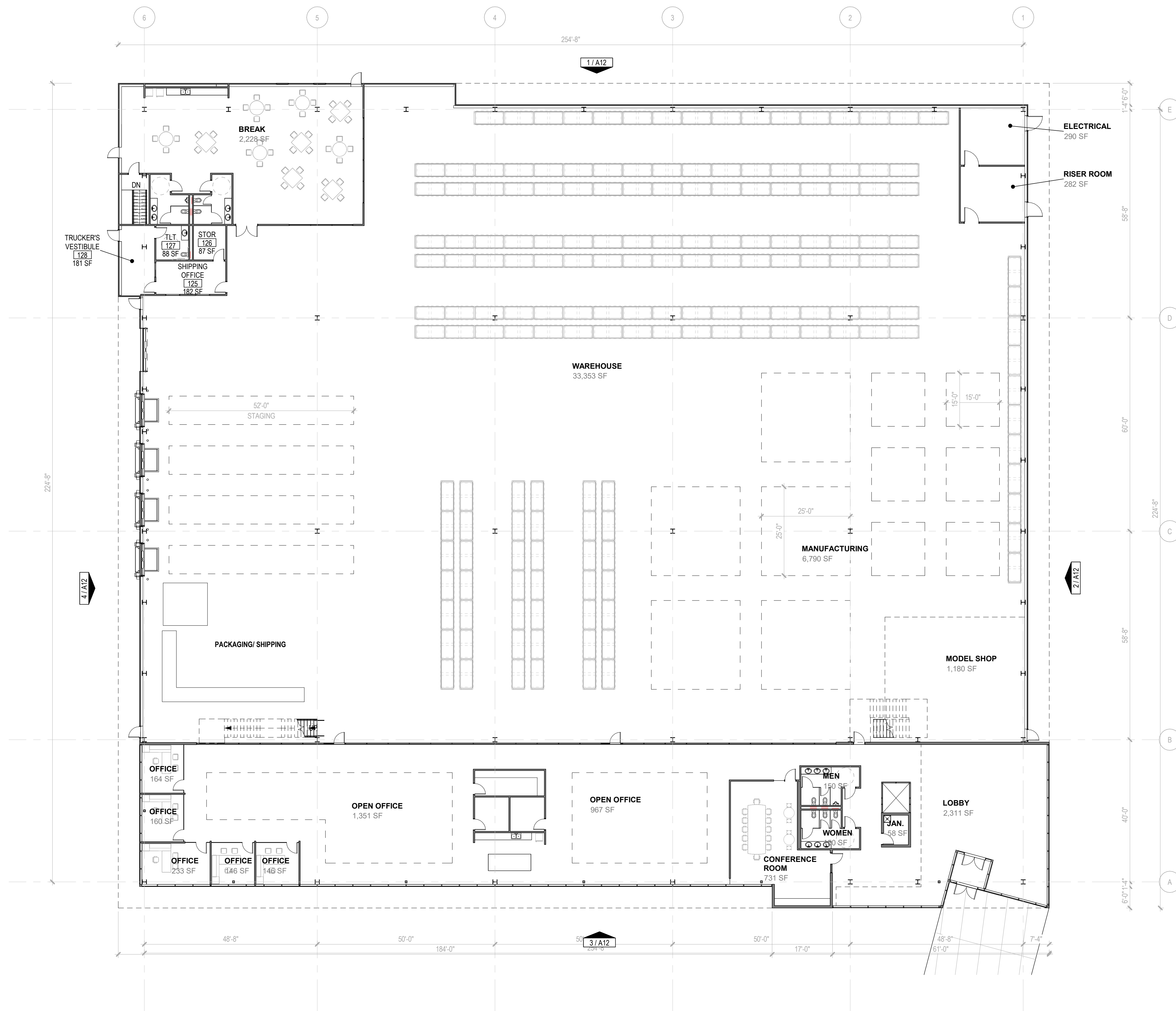
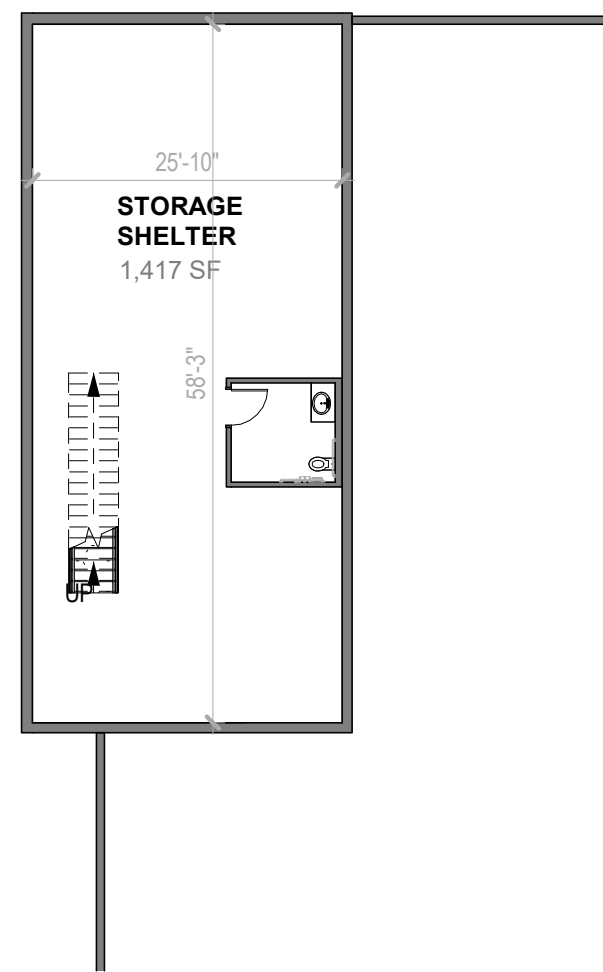
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PROJECT NO. 220450

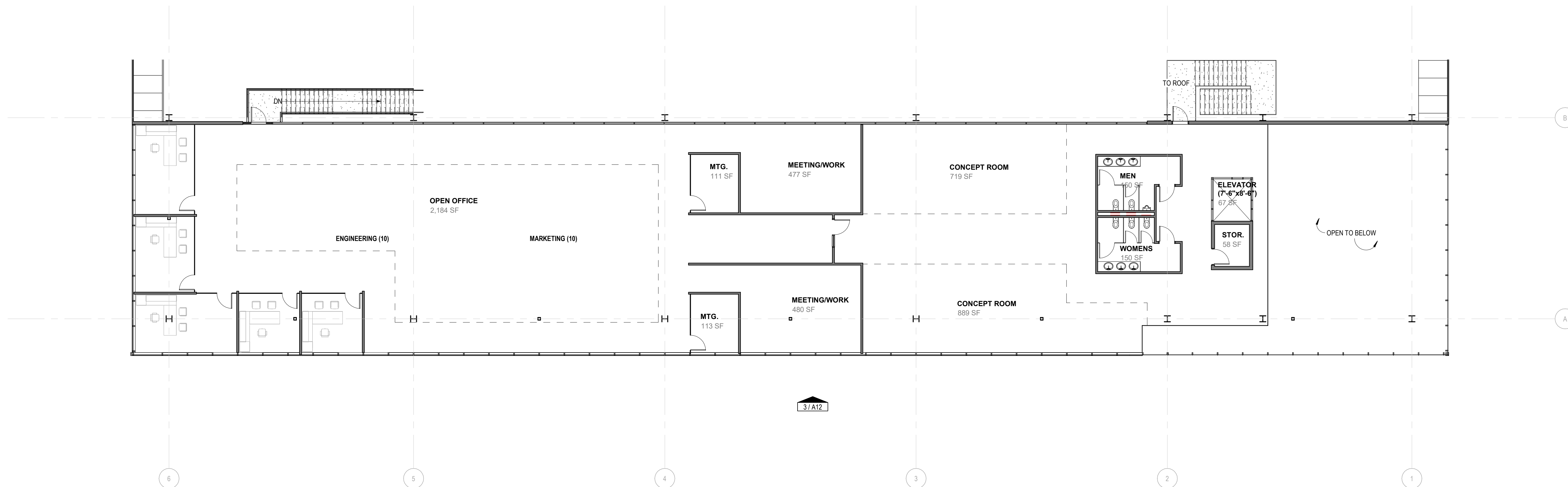
SHEET NO.

E103

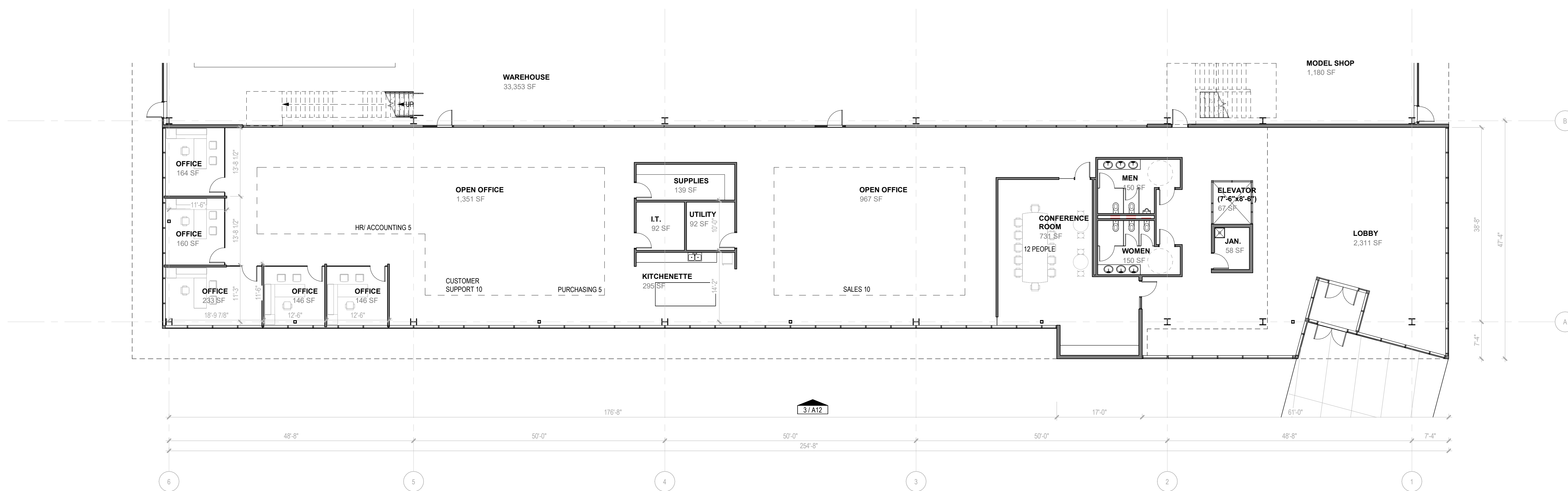
BASEMENT LEVEL
1/16" = 1'-0"



OVERALL FLOOR PLAN

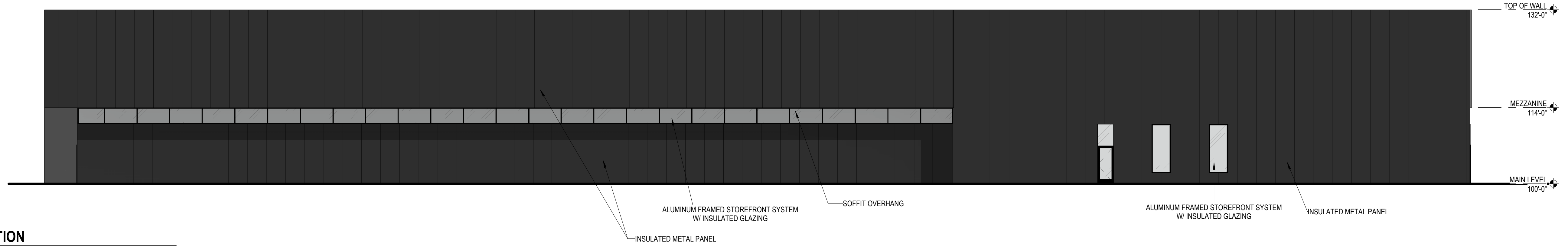


2 SECOND FLOOR OFFICE
3/32" = 1'-0"



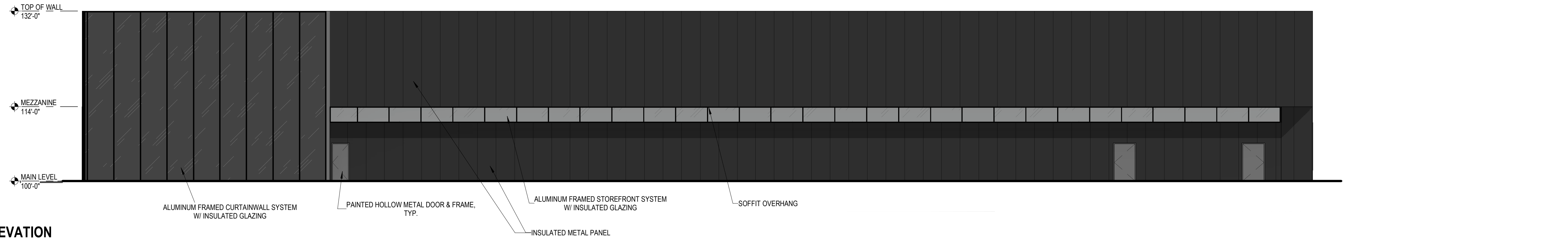
1 FIRST FLOOR OFFICE
3/32" = 1'-0"

OFFICE FLOOR PLANS



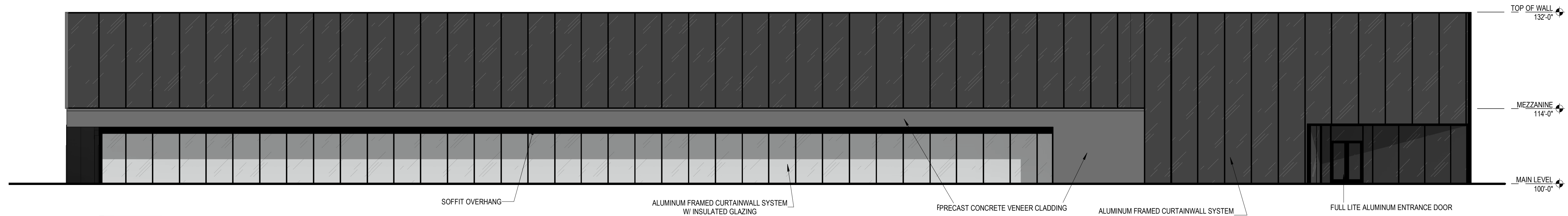
NORTH ELEVATION

3/32" = 1'-0"



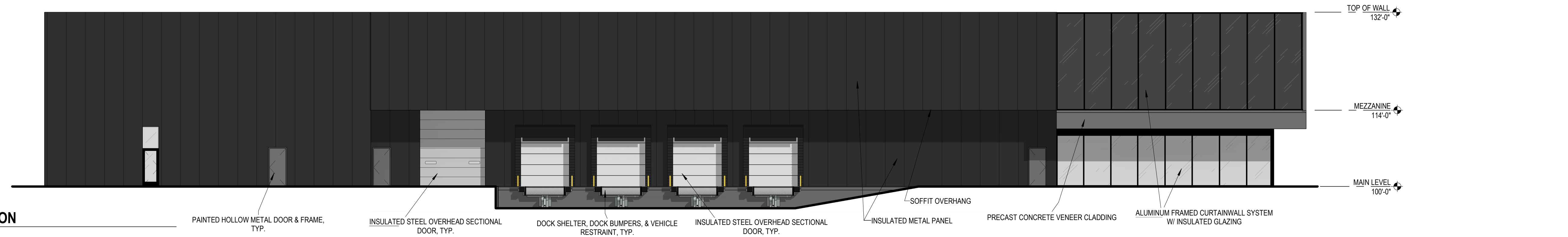
EAST ELEVATION

3/32" = 1'-0"



SOUTH ELEVATION

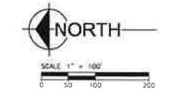
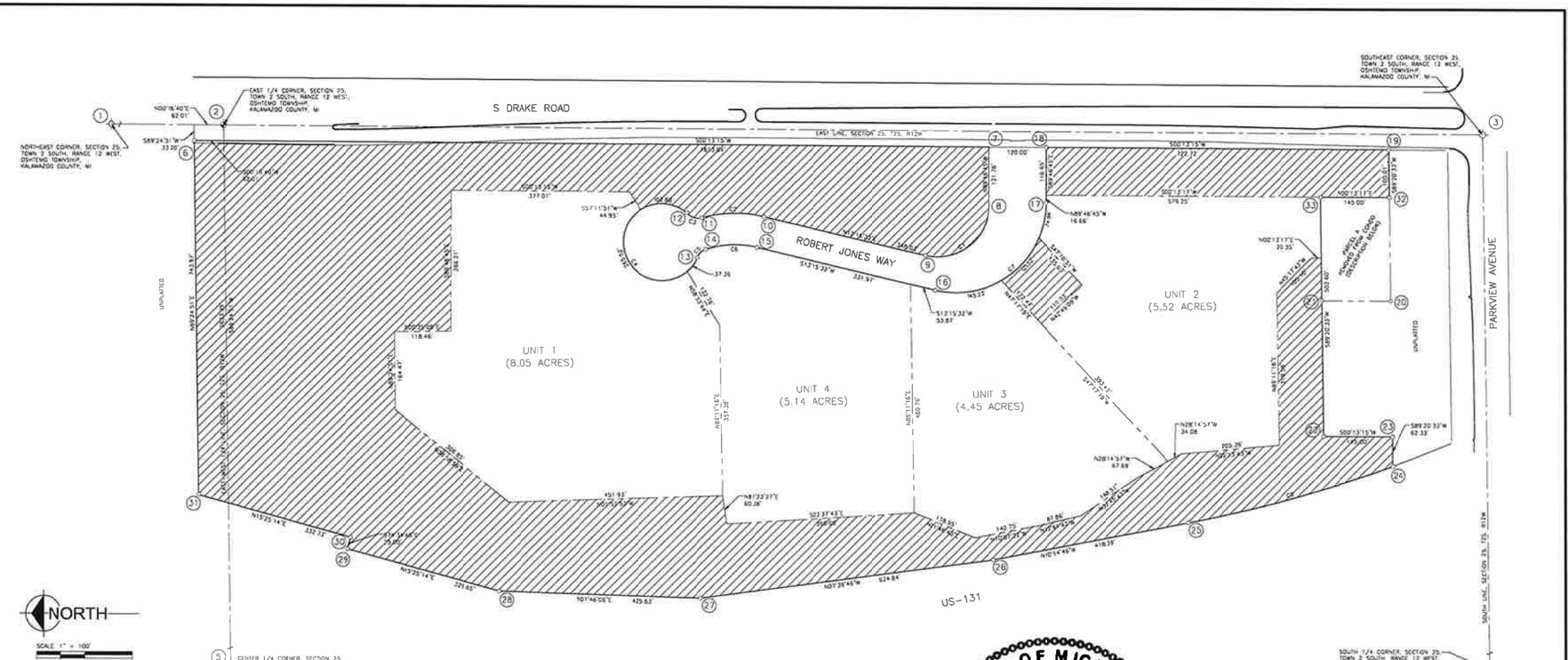
3/32" = 1'-0"



WEST ELEVATION

3/32" = 1'-0"

EXTERIOR ELEVATIONS



- LEGEND**
- = SECTION CORNER
 - ⊕ = QUARTER CORNER
 - ⊕ = CENTER QUARTER CORNER
 - = EXISTING CONCRETE MONUMENT
 - = EXISTING PROPERTY IRON
 - ▨ = GENERAL COMMON ELEMENT

CURVE TABLE

CURVE	LENGTH	RADIUS	BEARING	CHORD
C1	181.82	110.00	N82°15'36"W	172.22
C2	133.57	285.00	N01°03'34"W	133.51
C3	35.97	31.30	N1°30'10"E	34.06
C4	405.78	81.00	S78°27'42"W	96.35
C5	75.42	20.00	S42°43'20"E	24.46
C6	119.27	199.00	S02°36'27"E	108.81
C7	241.48	188.00	S31°15'26"E	191.17
C8	448.17	278.78	N19°33'42"W	447.58

COORDINATE TABLE

POINT #	NORTHING	EASTING
1	6000.0000	10000.0000
2	7245.2842	9287.1291
3	1468.7680	9778.8837
4	4630.5607	7345.2681
5	1318.4833	7332.8727
6	1427.0233	8954.2675
7	3721.1217	8941.9235
8	5721.5830	8628.1423
9	5668.8210	9718.4555
10	8220.5138	8798.2025
11	6337.6282	8798.6128
12	5370.0616	8801.9427
13	6347.5288	9712.2756
14	6329.4104	9730.1256
15	8220.5111	8732.0788
16	3845.1512	5844.2848
17	5511.5142	8828.1874
18	3811.1248	5843.4825
19	4888.4292	5844.0350
20	4834.7839	5837.0722

COORDINATE TABLE

POINT #	NORTHING	EASTING
21	5028.7828	9627.6311
22	5028.4816	9192.8871
23	4881.4923	9342.0282
24	4880.9723	9219.7378
25	5310.0497	9158.6556
26	5722.8728	9280.4490
27	6342.2842	8937.3225
28	8197.5613	9010.2476
29	7080.2440	9097.8227
30	7078.8864	9122.0227
31	7291.4470	9210.4355
32	4897.2812	5844.4888
33	3028.2863	5843.2104

GENERAL NOTES

- BENCHMARK A - ELEV. 845.17 (NNVD) TOP OF NORTHEAST BOLT ON LIGHT POLE BASE AT SOUTHERLY QUADRANT OF ROBERT JONES WAY AND RELIC TOWER PARKING AREA.
- BEARINGS SHOWN HEREON ARE BASED ON THE EAST LINE OF SECTION 25, T2S, R12W, KALAMAZOO COUNTY, MICHIGAN, PER DESCRIPTION RECORDED IN LIBER 1058, PAGE 1037, KALAMAZOO COUNTY RECORDS.
- IRON BARS 1/2 INCH IN DIAMETER AND 36 INCHES IN LENGTH AND ENCASED IN 4" OF CONCRETE WERE PLACED AT BOUNDARY CORNERS 6 THROUGH 19, AND CORNERS 22 THROUGH 33 IN ACCORDANCE WITH THE IRON BARS 1/2 INCH IN DIAMETER AND 36 INCHES IN LENGTH WERE PLACED AT CORNERS 20 AND 21.
- ALL DIMENSIONS ARE IN FEET.
- FLOOD PLAIN NOTE: CONDOMINIUM LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN), PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 26072C01600, EFFECTIVE FEBRUARY 17, 2016.
- THE TOTAL AREA OF THE CONDOMINIUM IS 45.63 ACRES, MORE OR LESS.
- ALL STREETS AND UTILITIES SHOWN HEREON "MUST BE BUILT". ALL OTHER IMPROVEMENTS "NEED NOT BE BUILT".
- ALL UNSOLD UNITS AND LIMITED COMMON ELEMENT AREAS, AND ALL GENERAL COMMON ELEMENT AREAS ARE CONVERTIBLE AND CONTRACTABLE AREAS, UNLESS OTHERWISE DESIGNATED.
- REPLAT NO. 1 CREATED UNITS 2, 3, AND 4, AND REMOVED PARCEL FROM THE CONDOMINIUM.



PARCEL (REMOVED FROM CONDO)
 BENCHMARK 1/4 OF SECTION 25, T2S, R12W, KALAMAZOO COUNTY, MICHIGAN, PER DESCRIPTION RECORDED IN LIBER 1058, PAGE 1037, KALAMAZOO COUNTY RECORDS.
 THE EAST 1/4 CORNER OF SAID SECTION 25, THENCE ALONG THE EAST LINE OF SAID SECTION, NORTH 00°18'01" FEET, THENCE SOUTH 89°24'51" WEST 33.65 FEET TO THE WEST RIGHT-OF-WAY LINE OF SOUTH DRAKE ROAD, THENCE ALONG SAID WEST RIGHT-OF-WAY LINE AND PARALLEL WITH THE EAST LINE OF SAID SECTION 25, SOUTH 00°18'01" FEET TO THE EAST-WEST 1/4 LINE OF SAID SECTION, THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE AND PARALLEL WITH THE EAST LINE OF SAID SECTION, SOUTH 02°18'12" WEST 2438.66 FEET, THENCE SOUTH 89°20'13" WEST 145.00 FEET TO THE POINT OF BEGINNING, THENCE CONTINUING SOUTH 89°20'13" WEST 318.98 FEET, THENCE NORTH 145.00 FEET, THENCE SOUTH 89°20'13" WEST 217.58 FEET, THENCE SOUTH 89°13'17" WEST 145.00 FEET TO BEGINNING, CONTAINS 0.72 ACRES (31,581 SQUARE FEET), MORE OR LESS.

SURVEYOR'S CERTIFICATE

I, SCOTT W. HOPKINS, PROFESSIONAL SURVEYOR OF THE STATE OF MICHIGAN, HEREBY CERTIFY THAT THE SUBDIVISION PLAN KNOWN AS THE WESTERN MICHIGAN UNIVERSITY BUSINESS, TECHNOLOGY AND RESEARCH PARK 2, KALAMAZOO COUNTY CONDOMINIUM SUBDIVISION PLAN NO. _____ AS SHOWN ON THE ACCOMPANYING DRAWINGS, REPRESENTS A SURVEY ON THE GROUND MADE UNDER MY DIRECTION; THAT THE REQUIRED MONUMENTS AND IRON MARKERS WILL BE PLACED IN THE GROUND WITHIN 12 MONTHS FROM RECORDATION OF THE CONDOMINIUM SUBDIVISION PLAN AS REQUIRED BY RULES PROMULGATED UNDER SECTION 142 OF ACT NO. 89 OF THE PUBLIC ACTS OF 1978; THAT THE ACCURACY OF THIS SURVEY IS WITHIN THE LIMITS REQUIRED BY THE RULES PROMULGATED UNDER SECTION 142 OF ACT NO. 89 OF THE PUBLIC ACTS OF 1978; AND THAT THE BEARINGS, AS SHOWN, ARE NOTED ON THE SURVEY PLAN AS REQUIRED BY THE RULES PROMULGATED UNDER SECTION 142 OF ACT NO. 89 OF THE PUBLIC ACTS OF 1978.

AMENDED DATE: FEBRUARY 10, 2022
 ORIGINAL DATE: JANUARY 24, 2020

SCOTT W. HOPKINS
 PROFESSIONAL SURVEYOR NO. 4001052475
 FISHBECK
 4775 CAMPUS DRIVE
 KALAMAZOO, MI 49008

PRIOR TO EXCAVATION CONTACT MISS DIG 3 WORKING DAYS IN ADVANCE 1-800-482-7171

SURVEY PLAN
THE WESTERN MICHIGAN UNIVERSITY
BUSINESS, TECHNOLOGY AND RESEARCH PARK 2
 Fishbeck -- 1515 Arboretum Drive SE -- Grand Rapids, Michigan 49546

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September 23, 2022

Iris Lubbert
Colten Hutson
Jim Porter
Oshtemo Township
7275 West Main Street
Kalamazoo, MI 49009

Re: The WMU BTR Park 2 Design Review Committee's site plan approval for the proposed Faraday Defense Corporation facility in the BTR 2 business park.

Dear Iris, Colten, and Jim:

The WMU BTR Park 2 Design Review Committee has approved the proposed site plan for the Faraday Defense Corporation's facility, as presented, in the WMU BTR Park 2. We consent for the project to continue through Oshtemo's site review process

If you have any questions or require additional information, please contact me at 269.387.3579 or at Jeffrey.long@wmich.edu

Sincerely



Jeffrey D Long
Director of Business Operations

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Zoning Board of Appeals

Fourth Tuesday of every month @ 3PM

Proposed 2023 Meeting Dates

1/24
2/21
3/21
4/25
5/23
6/20
7/25
8/22
9/26
10/24
11/14*
12/12*
1/23/2024

*Dates shifted to avoid holidays or for consistency with the Development Schedule of Applications.