AGENDA
CHASKA PLANNING COMMISSION
CHASKA CITY HALL - COUNCIL CHAMBERS & ZOOM
Wednesday, November 9, 2022
7:00 PM

1. Call to Order
2. Roll Call
3. Adopt Agenda
4. Visitor Presentation
5. Approve Previous Meeting Minutes
   - 5.A. Approve the October 12th 2022 Planning Commission Meeting Minutes
6. Consent Items
7. Action Items
   - 7.A. PUBLIC HEARING: Recommend Approval of the Preliminary Site & Building Plan, Preliminary Plat and Zoning Ordinance Amendment (ZOA) for Structures, Inc./Jeremy Banken/PC #2022-57
   - 7.B. PUBLIC HEARING: Recommend Approval of the Preliminary Site & Building Plan and Rezoning for the Northern Water Treatment Plant/City of Chaska/PC #2022-58
8. Other Business
9. Adjourn

CHASKA PLANNING COMMISSION
MINUTES
OCTOBER 12, 2022

1. Call to Order

Chairperson Brass called the meeting to order at 7 pm.

2. Roll Call

Roll call was taken. Members present: Commissioners Rylee, Gaare, Aasen, Urbanski, Baswa, and Chairperson Brass.

Members absent: Commissioners Lacey and Olson.

Also present: Nate Kabat, Community Development Director, Liz Hanson, City Planner; and Jacob Saufley, City Attorney.

3. Adopt the Agenda

Motion by Commissioner Urbanski, second by Commissioner Aasen to adopt the agenda as presented.
Motion carried.

4. Visitor Presentation

No one appeared under Visitor Presentation.

5. Approve Previous Meeting Minutes

A. Approve the September 14, 2022 Planning Commission Meeting Minutes

Motion by Commissioner Gaare, second by Commissioner Baswa to approve the minutes of the September 14, 2022 Planning Commission meeting, as presented.
Motion carried.

6. Consent Agenda

Motion by Commissioner Urbanski, second by Commissioner Gaare, to approve the Consent Agenda as follows:

a. Recommend Approval of the Final Site & Building Plan for Chaska Tech Center/Amcon Construction/PC #2022-55
b. Recommend Approval of the Eitel House Final Plat/Jonathan Association/PC #2022-56.

Motion carried.

7. Action Items

A. CONTINUED FROM SEPTEMBER 14, 2022 PLANNING COMMISSION: Recommend Approval of the Final Plat for Hidden Maples/Landmark Builders/PC #2022-53

City Planner Hanson presented the item to the Commission.

Chair Brass opened this item up for discussion from the Commission, the audience, and those following the meeting on-line.

Commissioner Rylee explained that he had voted 'no' at both the Concept and Preliminary stages and plans to vote 'no' once again tonight. He stated that in general, in this case, he would give the Park Board, the City Council, and City staff an 'F' because this eliminates a public park. He noted that he did not think it mattered whether it was the City's fault or the school districts fault. He noted that the park was eliminated in 2019 and the irony is that this plan takes out a park and puts in four homes for families. He explained that while this may not be a life or death kind of failure, he feels it certainly qualifies as a failure of government. He stated that the fact that there are not 200 people present to talk about this project and the elimination of a public park is a 'symptom' of what is going on in downtown Chaska and explained that he feels that this action will just make the situation worse.

Motion by Commissioner Gaare, second by Commissioner Baswa, to recommend City Council approval of the final plat for Hidden Maples, subject to the following conditions:

1. Approvals shall be based on the following graphic exhibits:
    a. Cover Sheet (pg C0.01), submitted by Civil Methods, Inc., dated July 29, 2022
    b. Existing Conditions (pg C1.01), submitted by Civil Methods, Inc., dated July 29, 2022
    c. Site Layout (pg C2.01), submitted by Civil Methods, Inc., dated July 29, 2022
    d. Grading & Utility Plan (pg C5.01), submitted by Civil Methods, Inc., dated July 29, 2022
    e. Erosion & Sediment Control Plan (pg C6.01), submitted by Civil Methods, Inc., dated July 29, 2022
    f. SWPPP Narrative (pg C6.02), submitted by Civil Methods, Inc., dated July 29, 2022
    g. Details (pg C7.0X), submitted by Civil Methods, Inc., dated July 29, 2022
    h. Tree Inventory (pg C8.01), submitted by Civil Methods, Inc., dated July 29, 2022
    i. Landscaping Plan (pg C8.02), submitted by Civil Methods, Inc., dated July 29, 2022
    j. House Plans (pgs 1-16), submitted by AVA Studio, dated September 23, 2022
    k. Final Plat, submitted by Schoborg Land Services, Inc.
2. Adherence to the City's Boulevard Tree Policy and local street section design.
3. Adherence to the following building setbacks:
    a. Front (house): 20 feet
    b. Rear: 25 feet
    c. Side(house/garage): 5 feet
    d. Side (corner): 20 feet
    e. Chaska Creek: 50 feet from edge
4. Prior to final plat recording, developer shall enter into an agreement with the City for the provision of necessary infrastructure and associated development costs.
5. Compliance with the City's anti-monotony and design requirements zoning ordinance (Section 15.28.290).
6. Provision of a storm water management plan meeting City and Carver County WMO standards.
7. Provision of a construction traffic plan to be reviewed and approved by the City Engineer.
8. Adherence with Zoning Code Section 15.20 Flood Protection.
9. Provision differentiated designs between all the homes to meet zoning section 15.28.290.
10. Provision of developer responsibility to coordinate with the City to remove any hazardous trees or limbs on or near the site as determined by the Public Works Director, prior to issuance of a building permit.

11. Provision that all grading/building plans provide sufficient elevation above the regulatory flood protection elevation, and to be addressed at building permit submittal.

Motion carried 5-1 (Rylee opposed).

B. PUBLIC HEARING: Recommend Approval of the Final Site & Building Plan and Zoning Ordinance Amendments for Hazeltine Plaza Apartments/Trident Development/PC #2022-54

City Planner Hanson presented the item to the Commission.

Chairperson Brass asked if the Commission had any questions for staff prior to the Public Hearing.

Commissioner Rylee asked about the breezeway concept with respect to cars and expressed concern with people coming off of Hundertmark and cutting through to Kohl's. He questioned if that had been discussed and whether the thought was that this was actually a good idea.

City Planner Hanson stated that it was discussed previously. She explained that the reason they have to put in the breezeway is so they can keep that access point open, which is something Kohl's has been adamant about keeping and clarified that this plan has been approved by Kohl's.

Commissioner Rylee asked how much traffic could go through there and reiterated his question about whether this was really a good idea.

Community Development Director Kabat noted that the breezeway was proposed at the Concept phase and had a lot of discussion. He explained that the Concept Plan was approved by both the Commission and the Council and noted that it had also been included at the Preliminary stage and has just continued throughout the process. He stated that one of the things that they have looked at is the parking and the traffic circulation. He explained that with the site design, there has been some intentional design elements included in order to create separation so people understand that they are driving through a residential area. He noted that the City Engineer has been involved in looking at thinks such as site lines and feels that this has been thoroughly vetted at this point. He stated that this is a unique element to the project, but is not something that is unheard of in other areas of the Twin Cities, including one at the Zen Apartments in downtown Chaska.

Chair Brass stated that he thought that this developer had previously stated that they have other developments that include this same type of breezeway concept.

Roger Fink, Trident Development, explained that this would be the first breezeway that they have created that allowed traffic underneath it. He stated that they engaged an architect, Kaas-Wilson, who has experience in designing this type of element. He noted that they have added speed bumps for incoming traffic and railings on each side of the drive-thru lanes so pedestrians are not tempted to cross traffic while under the breezeway. He explained that they also have plans for signs that tell them to watch for oncoming traffic and/or pedestrians. He stated that he felt that the addition of the crosswalk and the convex mirror will be additional safety features. He explained that Kohl's would not have allowed this project to move forward if they did not keep

that driveway open. He noted that they believe that the bulk of the traffic will be coming from Hazeltine and 41.

Community Development Director Kabat stated that there was a traffic analysis completed, so the statement that the bulk of the traffic would be coming from the north entrance is not an assumption and was actually studied and measured through this process.

Commissioner Rylee asked about this setting a precedent because, to him, this location is commercial, especially with relation to setbacks and FAR.

Community Development Director Kabat explained that the change that is being proposed in the Ordinance is very targeted and limited. He noted that that his is a very unique project because it is a residential multi-family project proposed within a Planned Commercial District (PCD). He stated that currently, the PCD, for a residential project, references the Planned Residential District (PRD) standards. He explained that what staff is proposing in this situation is a limited Ordinance amendment that would specifically remove the specific reference to the PRD guideline for just setback and FAR and would only apply when there is a multi-family building proposed within a PCD. He noted that there are not a lot of other places where this will be able to occur in the City other than within a redevelopment, which would come before the Commission. He stated that this is a newer idea for Chaska to put a multi-family building within a PCD. He stated that staff felt it made sense to tweak the language in the Ordinance and noted that the changes proposed are focused on the scale components.

Chair Brass stated that he felt Community Development Director Kabat explained that really well and noted that he also thinks the idea of strategically and surgically fine-tuning and amending the Ordinance makes sense, rather than having a broad variance, because he felt that would actually set a precedent.

Commissioner Urbanski gave the example of Ridgedale Mall and noted that they have recently done something similar with two or three residential projects and noted that it has really created some vibrancy in the area. He stated that he likes this project and sees it as a nice way to get younger families into communities, or for people who may be downsizing and would like to walk to things like restaurants and grocery stores.

Chair Brass opened the public hearing at 7:40 p.m.

Mr. Fink expressed his appreciation to City staff and noted that he felt that they have been brilliantly navigating the complexities of this application. He introduced his wife, Diana, who was in the audience tonight and explained that he had been doing this type of presentation at public hearings for about 25 years and this is the very first time she has ever come along with him.

City Planner Hanson noted that there is someone on-line that would like to address the Commission.

Wade Sorenson, 1456 Sofia Drive, stated that he feels this is a better option than what had previously been proposed, but felt it was still a bit like taking a sledgehammer to the Zoning Ordinance. He encouraged the Commission to not consider changing the overall PCD definition,

but instead update the PCD-15, like they were doing for use of utility brick, to allow for different FAR and setbacks. He shared his concern with the proposed change setting a precedent and allowing the overarching PCD to ignore FAR and setback standards. He noted that, in his opinion, that approach would take a scalpel to the Ordinance rather than a sledgehammer.

Chair Brass asked staff to explain the difference and why there were making this recommendation.

Community Development Director Kabat explained that staff had discussed it in the way that Mr. Sorenson had suggested and noted that the challenge with that direction is that the Zoning Code states that the City 'shall' utilize the PRD section of the Code for residential uses in a PCD. He stated that this language takes away the ability to do it within the PCD-15 amendment. He reminded the Commission that this change is really specific to PCDs and there is only a handful of them that exist in the City. He stated that, in his opinion, what is being discussed is actually a very narrow change.

Chair Brass stated that he also feels as though this change is narrow.

Chairperson Brass closed the public hearing at 7:46 p.m.

Commissioner Rylee stated that he thinks this is a great spot for this and as Commissioner Urbanski referenced, will be an enhancement to that area of the City.

Chair Brass stated that he also feels that this is a good project and explained that in his professional life he has been involved in similar projects with apartment buildings in commercial areas that have been very successful. He stated that he feels this will be a good addition to the City and will brings more families and residents into an area that has been tough to fill. He noted that the retail landscape does not appear to be getting any better, and this feels like a strategic way to help grow the City.

Commissioner Baswa stated that he was very glad to see a tot lot included in this project.

Chair Brass stated that he agreed and felt that the developer did a really good job with the open space and livability of the area.

Motion by Commissioner Urbanski, second by Commissioner Baswa, to recommend approval of the Hazeltine Plaza Apartments Final Site & Building Plan (PC#2022-54), subject to the following conditions:

1. Approvals shall be based on the following graphic exhibits:
    a. Narrative (pgs 1-2), submitted by Trident Development, LLC, dated September 26, 2022
    b. Trip Generation Study (pgs 1-5), prepared by SSTS, dated July 19, 2022
    c. Cover (pg C1), prepared by Carlson McCain, dated September 6, 2022
    d. Existing Conditions Survey (pg C2), prepared by Carlson McCain, dated September 6, 2022
    e. Removals Plan (pg C3), prepared by Carlson McCain, dated September 6, 2022

   f. Site Plan (pg C4), prepared by Carlson McCain, dated September 6, 2022
   g. Turning Analysis (Fire/Snow Storage) (pg C4.1), prepared by Carlson McCain, dated September 6, 2022
   h. Turning Analysis (Loading Dock) (pg C4.2), prepared by Carlson McCain, dated September 6, 2022
   i. Utility Plan (pg C5), prepared by Carlson McCain, dated September 6, 2022
   j. Utility Plan (Storm Sewer) (pg C5.1), prepared by Carlson McCain, dated September 6, 2022
   k. Grade Plan (pg C6), prepared by Carlson McCain, dated September 6, 2022
   l. Stormwater Pollution Prevention Plan (pgs C7-C7.1), prepared by Carlson McCain, dated September 6, 2022
   m. Details (pgs C8-C8.4), prepared by Carlson McCain, dated September 6, 2022
   n. Landscape Plan (pgs L1-L5), prepared by Carlson McCain, dated September 6, 2022
   o. Tree Preservation Plan (pg TP1), prepared by Carlson McCain, dated September 6, 2022
   p. Photometric Plan, prepared by Berd Electric, dated August 4, 2022
   q. Exterior Materials, prepared by KW Architects, dated July 20, 2022
   r. Exterior Elevations (pgs 1-2), prepared by KW Architects, dated July 20, 2022
2. Compliance with the zoning PCD-15 (ord. nos. 802, 946, and 1020).
3. Compliance with applicable zoning requirements, in particular Chapter 15.28 (Special Regulations).
4. Provision of adequate sound proofing of the drive-under/breezeway to ensure noise does not conflict with residents.
5. Coordinate with the City Engineer to ensure that adequate sight-lines are preserved at all access points to Hundertmark Road.
6. Adherence to the following building setbacks as found in PCD-15:
   a. Hundertmark Road: 100 feet from centerline
   b. From southernmost property line: 30 feet
   c. From northernmost property line: 25 feet
7. Adherence to the following parking setbacks as found in PCD-15:
   a. Hundertmark Road: 10 feet from right-of-way
   b. Hazeltine Boulevard: 10 feet from right-of-way
   c. Interior Property Lines: 5 feet
8. Coordination with the City Engineer for the provision of public utilities to the site.
9. Provision of a storm water management plan meeting City and Carver County WMO standards.
10. Provision of a construction traffic plan to be coordinated and approved by the City Engineer.
11. Provision of review and approval of Kohl's per the existing Reciprocal Easement Agreement.

Motion carried.

Motion by Commissioner Aasen, second by Commissioner Gaare, to recommend approval of the Zoning Ordinance Amendment (ZOA) to PCD-15 per draft ordinance.

Motion carried.

Motion by Commissioner Baswa, second by Commissioner Aasen, to recommend approval of the Zoning Ordinance Amendment (ZOA) to Section 15.16.030 Planned Commercial Development District per draft ordinance.

Motion carried.

8. Other Business

9. Receive Other Meeting Minutes

A. Receive the August 15 and 29, 2022 Meeting Minutes, Receive the September 12 and 19, 2022 Meeting Minutes
B. Receive the September 12, 2022 EDA Meeting Minutes

Commissioner Urbanski

- Commented that there was a meeting held last week on the Community Center and because they have gathered a lot of public input, the next meeting will be more of a design stage type meeting. He noted that once they get some sketches put together there will be some type of public Open House meetings in order to get feedback on the design.

10. Adjourn

Motion by Commissioner Urbanski, second by Commissioner Gaare, to adjourn the meeting at 7:50 pm.
Motion carried.

REQUEST FOR ACTION
CHASKA PLANNING COMMISSION
11/09/2022

Subject: **Structures, Inc. – Preliminary Site & Building Plan, Preliminary Plat and Zoning Ordinance Amendment**

Applicant: Jeremy Banken

Location: Old Audubon Road – South of Arbor Drive, North of Ravoux Circle

Case No.: 2022-57

Synopsis: The applicant is requesting approval of a Preliminary Site & Building Plan, Preliminary Plat and Zoning Ordinance Amendment to PID-9 to construct new office/warehouse buildings with exterior storage on the vacant lot south of Arbor Drive and North of Ravoux Circle

Prepared By: Elizabeth Hanson

Staff Recommendation: Motion to recommend approval

BACKGROUND

In June 1997, the East Creek Carriage Homes and plat were approved by the City Council (Res. No. 97-61). The East Creek Carriage Homes are just southwest of the subject site on Ravoux Road. During these approvals the lot to the east and northeast was platted as an Outlot (outlot A), which was a tract for future replatting into single family detached residential lots south of the NSP highline, and industrial lots north of the highline. The single family detached residential lots have been developed south of the NSP highline (East Creek Acres 1st and 2nd Acres). Tonight we are looking at a plan to develop north of the NSP highline in Outlot A.

In December 2018, the Structures, Inc. original Concept Plan was approved. In April 2019, the Preliminary Site & Building Plan, Preliminary Plat, and Rezoning (PID-9) were approved. These approvals showed the proposal of one building with parking and an exterior storage yard. After those approvals the applicant did soil testing and concluded that there are parts of the site with very poor soils. Because of this, the layout of the site has been carefully looked at to avoid poor soil areas for the building.

The applicant came back with a revised preliminary plan in May 2020 for a building and layout that better avoided the poor soils on site. This plan also showed the proposal of one building with parking and an exterior storage yard but re-oriented on the site (this plan is shown on the next page). After those approvals it was still determined that the site/layout proposed would generate significant costs to fix the soils to accommodate the development. The applicant decided to walk away from the previous approvals done in 2019 and 2020 to re-analyze the layout for the site that would be financially feasible.

In July 2022, the applicant came forward with a new Concept Plan, which was subsequently approved by Planning Commission and City Council. The new plan showed the construction of 3 buildings on 3 lots. The 3 building/lot layout would help avoid atypical foundation systems needed for larger buildings on poor soils. 2 different concepts were proposed (Concept A & B); Concept A was considered the more favorable layout.

CHANGES SINCE CONCEPT PLAN
The following are changes that have occurred since Concept Plan approval:

- Layout; the applicant is proposing a layout that is similar to Concept A presented in the Concept Plan application. Lot 1 shows a difference with the access drive being placed on the north side of the site versus the south side. This provides greater separation of the site from the residential to the south. A stormwater pond is now shown on the south side where the access drive was previously shown. In addition, larger planting islands are provided between the lots so that more greenspace/landscaping can be achieved. Pedestrian connections are provided on Lots 1 & 3 out to the public streets.

Goals
The goals indicated by the applicant are to contribute to the economic vibrancy in the City, add new buildings that add to the architectural fabric of the area, provide an in-demand industrial need that will stimulate the local economy, provide an employment opportunity for Chaska residents, and provide a street presence in Chaska that will tie in to local existing structures.

Existing Conditions
The subject property is located on a vacant outlot between Arbor Drive and Ravoux Circle that is approximately 5.25 acres in size. There exists a 125 foot wide easement on the south side of the property that is for the NSP highline. The site has and is used for agricultural purposes.

NSP Highline Easement
The project proposes to encroach into the easement area for parking, landscaping and fencing purposes. The applicant has been in direct contact with Xcel Energy about their plans to encroach. The response from Xcel Energy has been favorable and they have no initial objections to the uses within the easement area. Confirmation of such is provided as a supplement in the packet. The applicant will need to continue to work with Xcel Energy on their encroachments.

CURRENT REQUEST
The request this evening is for Preliminary Site & Building Plan, Preliminary Plat, and Zoning Ordinance Amendment to PID-9 approval for the construction of three new office/warehouse buildings and exterior storage yards for industrial businesses. Structures Inc. is proposing to split the property under consideration into three parcels. Structures will then construct the development in three phases, starting with Lot 1 that will be located closest to Ravoux Rd and working east towards Old Audubon Rd. The proposed buildings will be spec warehouses ranging from 6,200 SF to 7,400 SF.

Adjacent properties
The site is bounded on the south by residential; the north by industrial; the west by Ravoux Road; and the east by Old Audubon Road.

Use
The use of this site for office/industrial is consistent with the Comprehensive Plan's guidance for this parcel to be industrial. It is also consistent with the current zoning in place Planned Industrial District (PID-9). PID-9 district standards allow for exterior storage as long as it meets the City's exterior storage requirements (i.e. screening).

A Zoning Ordinance Amendment (ZOA) to PID-9 needs to be done to reflect the 3 lot layout. The current PID-9 regulations only reflect the previous 1-lot layout.

Layout
The layout is showing main access into the site off of Old Audubon Road from a shared driveway on Arbor Drive. The shared driveway provides shared accesses to all three lots/buildings. The buildings are situated more on the north side of the site with parking areas surrounding them. Exterior storage on the west and east lots are proposed within fenced in areas. The middle lot would not have exterior storage. The three buildings would range between 6,200 square feet up to 7,400 square feet. A privacy fence will delineate the south edge of the site to separate/buffer the industrial from the residential.

Building Location/Design
The proposed buildings will be spec buildings ranging from 6,200 SF to 7,400 SF. These buildings will roughly comprise of 15% office space with 85% shop space. The shop space will most likely be used for maintaining equipment like Bobcats, trailers and trucks. Also, the back lots will be used for outdoor storage based on the ultimate use of the building(s).

The buildings will be attractive, yet simple, one-story structures totaling 22 feet in height. The front entrances will top off at 25 feet in height. Building materials will be consistent throughout the three buildings to provide a cohesive industrial development. The roofs will be covered with an EPDM membrane and slope gradually to the south at ¼" per foot. Clerestory windows will be placed on most sides to allow natural daylight to enter that space as well. The exterior materials will be glass, modular brick precast panels, architectural texture precast panels, and architectural metal panel. The modular brick precast panels were also used on the Formacoat building and classified as Class I material.

In addition to the buildings, the site is showing exterior storage yards on the west and east lots. These exterior areas are proposed to be secured off with chain link fencing.

The proposed design of the buildings are generally rectangular in footprint and one-story in height; at its tallest point it will be 25 feet where the front entrances are.

"Industrial and warehouse buildings shall use at least two (2) different Class I materials and shall be composed of at least thirty (30) percent Class I material, and at least one (1) Class II materials and be composed of at least thirty (30) percent Class II materials; and not more than forty (40) percent of Class III materials"

Building Materials	
Class I	Glass, Modular Brick (30.5%)
Class II	Architectural Precast Panels (60.1%)
Class III	Metal Panels (9.4%)
CLASS I REQUIRED	30%; two different materials
CLASS II REQUIRED	30%; one material
PROVIDED	Class I: 30.5%; two different materials Class II: 60.1%; one different material

The fronts of the buildings on Ravoux Road and Old Audubon Road will be oriented to the street side. The shop space/loading dock will be oriented toward the rear and center of the site and thus will not be as cumbersome at the street level.

The exterior storage areas are proposed to be surrounded by fencing and integrated into the loading areas of the outer lots. Privacy fencing is shown near the south property line and south portions of the project edge to help screen from adjacent residential. The exterior storage areas are specifically delineated within the site and fenced off from all areas so that it's clear where the exterior storage areas are. Staff would advise that additional screening in the form of opaque fencing and landscaping be achieved around the edges of these exterior storage areas. These items will need to be addressed during final.

Parking/Access/Circulation

The site is proposing to incorporate 66 parking spaces. The following charts summarize the overall parking demand on the site, based on the approximated sizes of the proposed uses:

Uses	Approx. Size	Code Req.	Est. Parking Req.
Lot 1 (west lot)	7,400 sf	1ps/250sf Office (15%) 1ps/350sf Warehouse (85%)	4 parking spaces 18 parking spaces
Lot 2 (middle lot)	6,200 sf	1ps/250sf Office (15%) 1ps/350sf Warehouse (85%)	4 parking spaces 15 parking spaces
Lot 3 (east lot)	7,400 sf	1ps/250sf Office (15%) 1ps/350sf Warehouse (85%)	4 parking spaces 18 parking spaces
		REQUIRED	**63 parking spaces**
		PROVIDED	**66 parking spaces**

According to the table above the applicant is sufficient in meeting parking for the site. All lots will have the required number of parking for the proposed uses.

The project is proposing to have one vehicle entrance into the site off of Old Audubon Road from the existing shared driveway on Arbor Drive. This shared driveway will be provided onto

the Structures' property to access the three lots. There is shared access achieved on the north, side of the site that all three lots can use. The applicant will have to create a cross access easement for the site so that the lots can have full movement across the sites and out to Old Audubon Road. An access easement area is shown on the plat that encumbers the area north of Lot 2 and a portion of Lot 3.

The shared driveway on Arbor Drive will also continue to act as the access for the industrial properties to the north. A shared agreement exists between the current property owners today. This agreement will need to be amended to include the Structures site.

Setbacks
The required setbacks for the site are as follows:

BUILDING SETBACKS	
Direction	**Setback**
From Property Lines Abutting Residential	100 feet
East and West Property Lines	30 feet
Interior Property Lines	15 feet

PARKING SETBACKS	
Direction	**Setback**
East & West Property Lines	10 feet from ROW
Interior Property Lines	5 feet
From Property Lines Abutting Residential	10 feet

The exterior storage areas must also comply with the aforementioned building setbacks. The site plan is showing compliance with these.

Landscaping, Screening & Fencing
The table below indicates the landscaping requirements for this site:

LANDSCAPING REQUIREMENTS & PROPOSED		
	Required	**Proposed**
Overstory Trees	66 caliper inches (26 trees)	109 caliper inches (37 trees)
Understory Trees	7	4
Shrubs	70	81

The proposed plan does not meet the understory tree requirement. The applicant will have to address this deficiency in the final submittal.

Landscaping and berming will be incorporated on the exterior perimeter of the privacy fence on the south side of the site. Berming is shown on the west side and southwest side of the site.

The applicant has increased the size of the planting islands that fall between the lot lines of each lot since Concept Plan approval. Because of this more greenspace will be achieved, plus more space for landscaping. Staff would advise the applicant to further enhance these areas with additional trees/screening.

A 6-foot privacy fence is proposed along the south side of the site to screen from the adjacent residential properties. The privacy fence proposed will be a cedar fence with posts. In addition, landscaping is shown along the entire stretch of the south privacy fence to help soften this edge. Staff would advise the applicant to look into an 8-foot privacy fence here to maximize the height of screening. The applicant would need to look into this for their final submittal.

In addition to the 6-foot privacy fence, the applicant is proposing a 6-foot black chain link fence to delineate the loading and exterior storage areas of Lots 1 and 3. Although most of this fence will be unseen from the residential side, there are a few areas will it will be visible from public right-of-way. The portions that are visible should be a more decorative style fencing that can achieve at least 90% opacity whether that's through it's own design or year-round screening. This will need to be addressed at final submittal. These areas are denoted in red on Exhibit A below.

There are still a couple areas on the site plan that staff would advise the applicant to look at further for landscaping and screening to ensure that any exterior storage areas are screened from adjacent views. A marked up plan labeled Exhibit A is provided below to show areas that need further attention. Yellow indicates areas for additional screening and/or trees. Red indicates the areas of the 6-foot chain link fence to be converted to opaque decorative fencing.

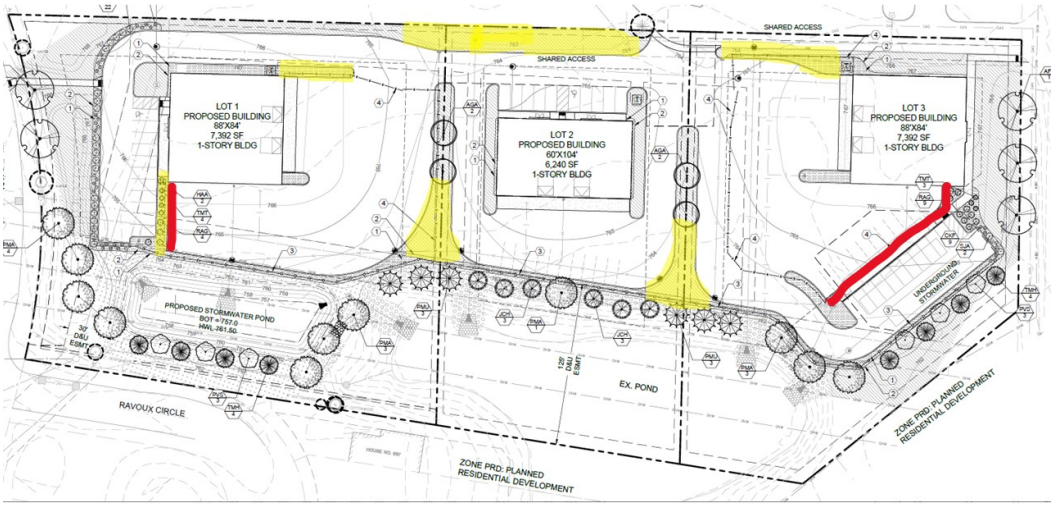

Exhibit A

Sidewalks and Pedestrian Connections
The site's perimeters do not show public sidewalks today. A sidewalk exists on the west side of Ravoux Road but the east and both sides of Old Audubon Road do not. It is possible that in the future the City will install sidewalks on the sides of streets where they are lacking. The applicant has provided pedestrian connections from Lot 1 and Lot 3 to connect out to the adjacent street.

Lighting
Lighting is shown in the form of wall packs and pole lighting. Wall packs are shown at 20 feet in height and pole lights are shown at 23 feet in height. All lighting must meet the City's zoning ordinance section 15.28.250.

Signage
Signs will have to meet the required sign regulations for this development and be reviewed and approved through a separate permit process with the City. Signs will have to go through a separate sign permitting process.

Utilities
Water and sewer are available to serve this site. Details on the connections to the public utilities will need to be coordinated with the City Engineer.

Stormwater
Stormwater for the new facilities will be handled on-site and independently from the existing regional stormwater pond. An underground stormwater retention system will be utilized and placed under proposed pavement, south of Lot 3, to maximize the usable area. Stormwater from Lots 1 and 2 will be treated via filtration system west of the existing pond. Storm water from the north properties will be captured via storm sewer and will be directed to the existing pond, bypassing the new storm system entirely. Overall site drainage will continue to flow from north to south, where it will then be treated prior to being discharged into downstream facilities.

The applicant will continue to work with the City and the Watershed district to ensure their Stormwater Plan meets all City and County WMO standards. An existing pond exists on the southeast portion of the property. As stated above it will not be used for the new lots. The existing pond should be placed in its own drainage and utility easement, to be maintained by the City.

Wetlands
The National Wetland Inventory classifies the existing pond as a wetland. Anderson Engineering performed a field inspection and determined the property does not contain any jurisdictional wetlands. A copy of the All Clear letter has been included in the submittal package.

Platting
Platting will be pursued for this project. The layout shows three separate lots. A drainage and utility easement is shown to encompass the existing south stormwater pond that is currently maintained by the City.

Zoning Ordinance Amendment (ZOA)
The project is pursuing a Zoning Ordinance Amendment to the Planned Industrial District No. 9 (PID-9). The amendment would entail the following:

- Amend Section I to include the new legal descriptions of the 3-lot plat
- Amend Section I to include the graphic exhibits of the new 3 building plan
- Amend the Permitted Uses section to include the 3 lots

Neighborhood Meeting
The applicant conducted a neighborhood meeting on June 27, 2022 to introduce the concept plan to adjacent neighbors. One neighbor showed up to the meeting. The developer did not note any significant concerns.

Deadline for Agency Action
The City of Chaska received the complete application for this request on October 24, 2022. Pursuant to Minnesota State Statutes the City must act on this request by **Friday, December 23, 2022 (60 days)**, unless the City provides the petitioner with written reasons for an additional 60-day review period. The additional review period would extend to Tuesday, February 21, 2022. The City may with the petitioner's consent extend the review period beyond the Tuesday, February 21, 2022 date. Lastly, if the City denies the petitioners request "… it must state in writing the reasons for the denial at the time it denies the request."

PLANNING COMMISSION ACTION REQUESTED:

Motion to recommend approval of the Preliminary Site & Building Plan and Preliminary Plat for Structures, Inc., subject to the following conditions:

1. **Approvals shall be based on the following graphic exhibits:**
    a. **Narrative – Site Plan (pgs 1-3), submitted by Structures, undated**
    b. **Cover Sheet (pg C1), submitted by Anderson, dated October 20, 2022**
    c. **Preliminary Plat (pg C2), submitted by Anderson, dated October 20, 2022**
    d. **Preliminary Plat Exhibit (pg C2.1), submitted by Anderson, dated October 24, 2022**
    e. **Existing Conditions Survey (pg C3), submitted by Anderson, dated October 20, 2022**
    f. **Demolition Plan (pg C4), submitted by Anderson, dated October 20, 2022**
    g. **Grading & Drainage Plan (pg C5), submitted by Anderson, dated October 20, 2022**
    h. **Utility Plan (pg C6), submitted by Anderson, dated October 20, 2022**
    i. **Erosion & Sediment Control Plan (pg C7), submitted by Anderson, dated October 20, 2022**
    j. **SWPPP (pgs C8-9), submitted by Anderson, dated October 20, 2022**
    k. **Civil Site Details (pgs C10-12), submitted by Anderson, dated October 20, 2022**
    l. **Tree Preservation Plan (pg L1), submitted by Anderson, dated October 20, 2022**
    m. **Planting Plan (pg L2), submitted by Anderson, dated October 20, 2022**
    n. **Planting Notes & Details (pg L3), submitted by Anderson, dated October 20, 2022**
    o. **Photometric Plan, submitted by jth Lighting Alliance, dated November 3, 2022**
    p. **Truck Turning Movement Exhibit (pgs E1-E3), submitted by Anderson, dated September 30, 2022**
    q. **Snow Storage Exhibit (pg E4), submitted by Anderson, dated September 30, 2022**
    r. **Structures Rendering (pg A1), submitted by HTG Architects, dated October 19, 2022**
    s. **Main Level Floor Plan Building A (pg A2.1), submitted by HTG Architects, dated October 19, 2022**
    t. **Main Level Floor Plan Building B (pg A2.2), submitted by HTG Architects, dated October 19, 2022**
    u. **Main Level Floor Plan Building C (pg A2.3), submitted by HTG Architects, dated October 19, 2022**
    v. **Exterior Elevations Building A (pg A3.1), submitted by HTG Architects, dated October 19, 2022**

w. **Exterior Elevations Building B (pg A3.2), submitted by HTG Architects, dated October 19, 2022**
x. **Exterior Elevations Building C (pg A3.3), submitted by HTG Architects, dated October 19, 2022**

2. **Adherence with the City Engineers Memo dated November 4, 2022.**
3. **Provision that vehicle access on Ravoux Road is prohibited.**
4. **Compliance with section 15.28.120 Building Design/Materials and Site Design for all three buildings.**
5. **Provision that exterior storage will not exceed 8 feet in height or the height of the privacy fence, whichever is less.**
6. **Provision that all mechanical equipment will be fully screened from view.**
7. **Provision of a Drainage & Utility easement over the southern pond, and to be shown on the plat.**
8. **Coordination with the City Engineer for the provision of public utilities to the site.**
9. **Provision of a storm water management plan meeting City and Carver County WMO standards.**
10. **Compliance with applicable zoning requirements, in particular zoning section 15.28 (Special Regulations).**
11. **Any and all building signage shall be submitted separately, comply with zoning ordinance Section 15.32, and shall require approval by staff prior to installation.**
12. **Provision to meet the understory tree requirements and to be addressed at final submittal.**
13. **Provision that all open storage areas shall be fully screened by an opaque decorative fence subject to the provisions of CZO 15.28.210 paragraph D,1 and Exhibit A in this report, and be addressed at final submittal.**
14. **Provision to further enhance the screening around the edges of the site and exterior storage areas as directed in Exhibit A in this report and to be addressed at final submittal.**
15. **Provision to further evaluate a 8-foot privacy fence for the south fence and to be addressed at final submittal.**
16. **Provision that open storage areas shall comply with building setback requirements and shall not be located forward of the principal buildings as constructed.**
17. **Provision of a fire truck turning exhibit to be provided at final submittal.**
18. **Provision of a final maintenance agreement for Arbor Drive signed by all applicable parties, to be submitted at final submittal.**
19. **Provision of cross access easements across all lots and to be executed prior to final plat recording.**
20. **Provision of a maintenance agreement for the shared accesses, stormwater features, and utilities, and to be provided at final submittal.**

Motion to recommend approval of the Zoning Ordinance Amendment (ZOA) to PID-9.

CITY OF CHASKA

ORDINANCE NO. xxxx

MOTION BY COUNCILMEMBER _____, SECOND BY COUNCILMEMBER _____

AN ORDINANCE AMENDING ORDINANCE NO. 963 (ZONING ORDINANCE) BY REZONING CERTAIN REAL ESTATE WITHIN THE CITY OF CHASKA

THE CITY COUNCIL OF THE CITY OF CHASKA DO ORDAIN:

Section I. Rezoning. The boundaries of the Zoning District as established by Ordinance No. 963 and as shown on the Zoning Map of Chaska, Minnesota are hereby amended as follows:

The following described real estate is rezoned to Planned Industrial District No. 9 (PID-9) for all of Lots 1-3, Block 1 of the Structures, Inc., Carver County, Minnesota.

The following graphic exhibits shall serve as the general guide for development of the Structures, Inc. area:

1. Cover Sheet (pg C1), submitted by Anderson, dated October 20, 2022
2. Preliminary Plat (pg C2), submitted by Anderson, dated October 20, 2022
3. Preliminary Plat Exhibit (pg C2.1), submitted by Anderson, dated October 24, 2022
4. Existing Conditions Survey (pg C3), submitted by Anderson, dated October 20, 2022
5. Demolition Plan (pg C4), submitted by Anderson, dated October 20, 2022
6. Grading & Drainage Plan (pg C5), submitted by Anderson, dated October 20, 2022
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8. Erosion & Sediment Control Plan (pg C7), submitted by Anderson, dated October 20, 2022
9. SWPPP (pgs C8-9), submitted by Anderson, dated October 20, 2022
10. Civil Site Details (pgs C10-12), submitted by Anderson, dated October 20, 2022
11. Tree Preservation Plan (pg L1), submitted by Anderson, dated October 20, 2022
12. Planting Plan (pg L2), submitted by Anderson, dated October 20, 2022
13. Planting Notes & Details (pg L3), submitted by Anderson, dated October 20, 2022
14. Photometric Plan, submitted by jth Lighting Alliance, dated November 3, 2022

15. Truck Turning Movement Exhibit (pgs E1-E3), submitted by Anderson, dated September 30, 2022
16. Snow Storage Exhibit (pg E4), submitted by Anderson, dated September 30, 2022
17. Structures Rendering (pg A1), submitted by HTG Architects, dated October 19, 2022
18. Main Level Floor Plan Building A (pg A2.1), submitted by HTG Architects, dated October 19, 2022
19. Main Level Floor Plan Building B (pg A2.2), submitted by HTG Architects, dated October 19, 2022
20. Main Level Floor Plan Building C (pg A2.3), submitted by HTG Architects, dated October 19, 2022
21. Exterior Elevations Building A (pg A3.1), submitted by HTG Architects, dated October 19, 2022
22. Exterior Elevations Building B (pg A3.2), submitted by HTG Architects, dated October 19, 2022
23. Exterior Elevations Building C (pg A3.3), submitted by HTG Architects, dated October 19, 2022

Section II. **PID-9 District regulations.** Permitted uses and regulations applicable to the PID-9 District is hereby amended to read as follows:

A. Intent

The intent of PID-9 is to create an area for offices and "Clean and Quiet" industrial and related uses that can be developed and operated in a high quality physical environment, one which will be complementary to and compatible with the residential area to the south.

It is intended that development within PID-9 be characterized by relatively high employment levels, high quality jobs, and higher building to land ratios, all which support the objectives of increasing employment opportunities with the City and near downtown for the purpose of strengthening the City's non-residential tax base.

B. Permitted Uses

Permitted uses shall be the following:

1. Lots 1-3, Block 1, Structures, Inc.:

a) Office and administrative facilities
b) Light manufacturing, fabrication, compounding, processing, packaging, treatment, assembly and indoor storage of goods, products and materials
c) Scientific research, investigation, testing or experimentation
d) Uses similar in nature to those listed above and which, in the opinion of the City Council will not be detrimental to the integrity and intent of the PID-9 District

C. Accessory Uses

Customary accessory uses incidental to the foregoing principal use, including but not limited to the following:

1. Off street parking and loading facilities as regulated by Sections 15.28.030 and 15.28.040 of the zoning ordinance.
2. Signs as regulated by Section 15.32 of the Zoning Ordinance
3. Open storage as regulated by Section 15.12.150.E. of the Zoning Ordinance

D. Building Setbacks

Minimum building and open storage setbacks shall be as follows:

1. From Property Lines Abutting Residential: 100 feet
2. East and West Property Lines: 30 feet
3. Interior Property Lines: 15 feet

Minimum parking setbacks shall be as follows:

1. From Property Lines Abutting Residential: 10 feet
2. From Right-of-Way (ROW): 10 feet
3. Interior Property Lines: 5 feet

E. Development Standards:

Development standards applicable to the I-Industrial District (Chaska Zoning Ordinance) relative to screening, loading docks, building and parking/driving area setbacks, open storage and landscaping shall apply to the PID-9 District. Development standards shall also include the following:

1. Vehicle access on Ravoux Road shall be prohibited

Section III. Effective Date. This Ordinance shall be in full force and effect from and after its date of passage, adoption, and publication according to law.

Passed and adopted by the City Council of the City of Chaska, Minnesota this 21st day of November, 2022.

_____
Mark Windschitl, Mayor

Attest:_____
Deputy Clerk

City of Chaska
Memorandum

To: **Planning Commission**
From: **Alex Mollenkamp, Assistant City Engineer**
on behalf of Matt Clark, City Engineer
Date: **November 4, 2022**
Subject: **Structures Inc Preliminary Plat**

The site utility plans propose connections to the sanitary sewer and water mains that exist within the property and are readily available to be connected. The final construction plans will need to be coordinated with the City utility departments.

An existing City stormwater pond on the south portion of the site provides stormwater management for the existing land use only. The proposed development includes a private stormwater management system to manage runoff exceeding the existing pond design. An easement for the existing pond and public drainage infrastructure shall be included on the plat. The proposed site grading and stormwater management plan will be required to meet all the City and watershed agency requirements.

The single access to Old Audubon Road for this site works well for the proposed land use and is well spaced between existing access points. The access to Old Audubon Road via a shared driveway access (Arbor Drive) with adjacent businesses provides adequate service to this proposed development. Currently, all light industrial land uses in the area access off of Old Audubon Road, leaving Ravoux Road for residential traffic use.

Narrative – Site Plan

Structures Inc. is a nationally reputable company engaged in providing exceptional site solutions using earth retention and pavement systems for some of the largest and most complex projects in the United States. Structures Inc. is proud to call Chaska its home and is looking to develop land to provide opportunities for other companies to do the same.

Structures Inc. is proposing to split the property under consideration into three parcels. Structures will then construct the development in three phases, starting with Lot 1 that will be located closest to Ravoux Rd and working east towards Old Audubon Rd. The proposed buildings will be spec warehouses ranging from 6,200 SF to 7,400 SF. These building will roughly comprise of 15% office space with 85% shop space. The shop space will most likely be used for maintaining equipment like Bobcats, trailer and trucks. Also, the back lots will be used for outdoor storage based off the ultimate use of the building(s).

The buildings will be an attractive, yet simple one-story structures characterized by two primary masses. The typical building height is 22 feet with an entry feature that will be 25 feet. Building material will be consistent throughout the three buildings to provide a cohesive commercial development. The roofs will be covered with an EPDM membrane and slope gradually to the south at ¼" per foot. Windows will be placed around the buildings to allow natural daylight to enter that space and reduce demands on electric lighting. The exterior materials will be textured precast concrete panels, glass, and metal Aluminum windows are placed to let daylight in the open office spaces. An image has been attached to this narrative to give a sense of what the buildings will look like.

Screening of the back lots will consist of vegetation, berming, trees and a pre-finished privacy fence to hide and secure the back-lot spaces. These screening techniques will assist in minimizing light pollution from the site and exterior buildings. Trash and recycling dumpsters, and transformers will be located within enclosures that will be made of materials that match the buildings.

Important features that will be designed in relation to the exterior finishes are:

1. To have a street presents that will tie into the local existing structures with a very timeless and updated design to bring an uplift to Old Audubon Road.
2. It is very important to obtain properly divided outside storage that can be secured and somewhat hidden from the rest of the neighborhood with design of structure and landscape.
3. Office and employee parking for this new concept with access from Old Audubon Road and will be fluent with the neighbors that currently exist.
4. The landscape will tie into the heavily wooded area and buffer to feal more residential than commercial.
5. The exterior finishes will be very progressive with Stone, Efis, metal color clad siding with a contemporary application.

STRUCTURES
REDEFINING SITE SOLUTIONS

Rezoning Request

The property under consideration is currently zoned PRD – Planned Residential Development, but Structures Inc. is asking that the property be rezoned to PID – Planned Industrial Development so that it may build facilities on the site that would be comprised of both office and shop space. The property to the south of the lot is zoned PRD, but properties to the north and east are zoned I (Industrial) and PID, so the rezoning is consistent with current zoning districts in the area. The development will transform a currently vacant lot into a useful and economically relevant piece of property.

Site Features

Currently the parcel is a vacant lot that historically, has been used for agricultural purposes. There is a 125' power line easement that runs the entirety of the south property line. Within this easement lies a regional stormwater pond that serves both the properties to the north and a portion of the residential area to the south. Utility services for the new buildings will connect directly to the city water and sewer lines that run east/west and north/south respectively through the site. Layout of the new buildings and pavement areas have been arranged to avoid these numerous site constraints.

Stormwater for the new facilities will be handled on-site and independently from the existing regional stormwater pond. An underground stormwater retention system will be utilized and placed under proposed pavement, south of Lot 3, to maximize the usable area. Stormwater from Lots 1 and 2 will be treated via filtration system west of the existing pond. Storm water from the north properties will be captured via storm sewer and will be directed to the existing pond, bypassing the new storm system entirely. Overall site drainage will continue to flow from north to south, where it will then be treated prior to being discharged into downstream facilities. A Stormwater Management report has been completed and is included with the submittal package.

Site soils typically found are classified as hydraulic soil Type D and range from peat to poorly graded sand. A copy of the geotechnical report completed by Braun Intertec is included in the submittal package.

The National Wetland Inventory classifies the existing pond as a wetland. Anderson Engineering performed a field inspection and determined the property does not contain any jurisdictional wetlands. A copy of the All Clear letter has been included in the submittal package.

Sustainable Initiatives

The three proposed buildings will be covered in EPDM membrane roofing that provides cooling and energy saving benefits. To integrate day lighting inside the building and open office spaces, windows will be placed around the exterior, also reducing the demand for interior electric lighting. A majority of the proposed bituminous pavement will be on site will be made from recycled concrete aggregate, thus reducing the need for new aggregate material and lessoning environmental impacts.

Long Term Maintenance

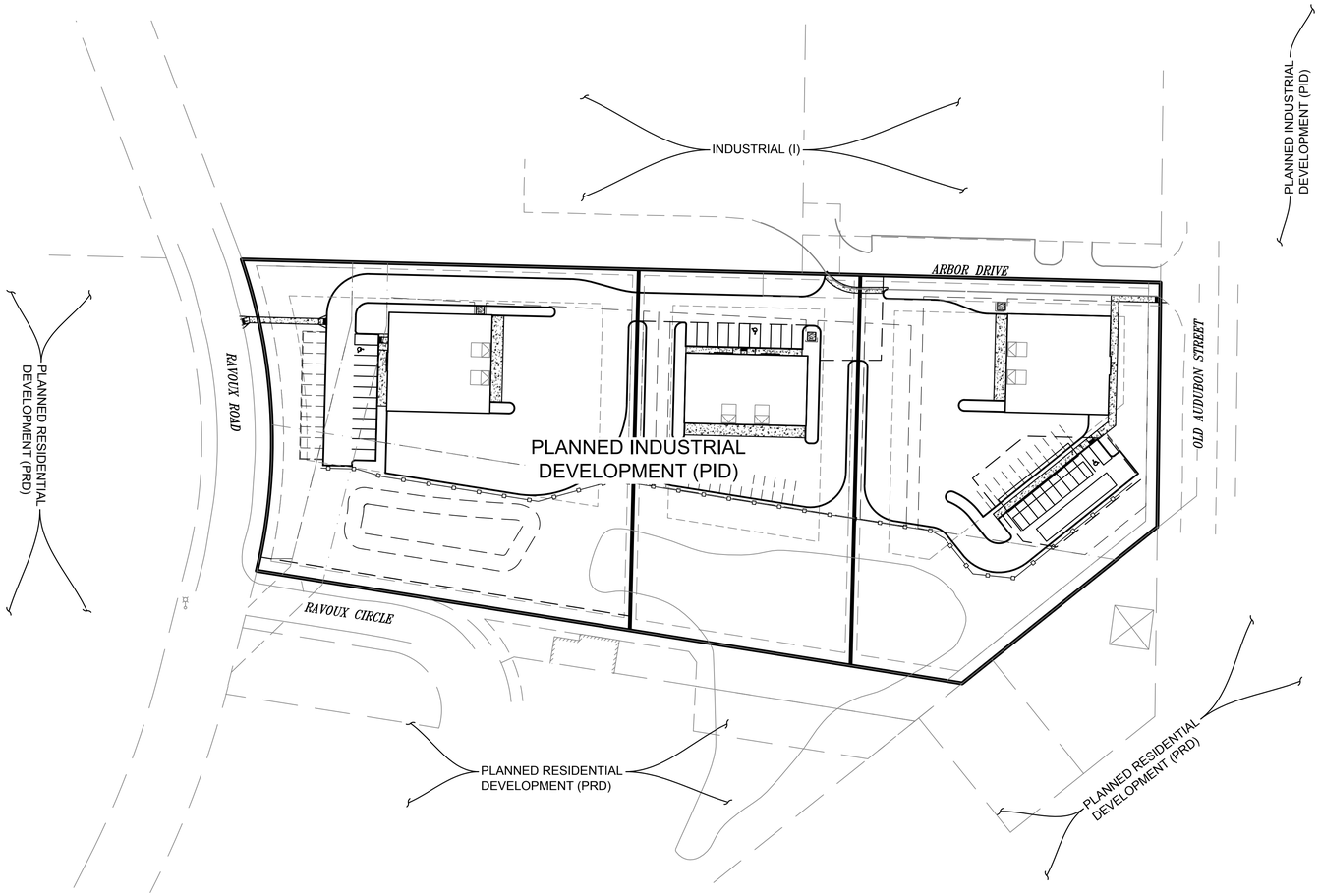
The site will not be part of an association and Owners of their respective Lots will be responsible for the long-term maintenance of pavements, utilities, and stormwater facilities located on such property. A document will be drafted and recorded describing individual responsibilities as it pertained to the shared access and stormwater features found throughout the site.

The site will enter into a Maintenance Agreement between the Lower Minnesota River Watershed District and the City of Chaska. This document will describe landowners' responsibility for yearly inspections and or/ maintenance.

Conclusion

By locating the new warehouse buildings in Chaska, Structures Inc. will contribute to the economic vibrancy of the city, and the new buildings will add to the architectural fabric. Structures will be providing an in-demand commercial need that will stimulate the local economy. This location brings many features to the city block, as well as a more fluent operation for businesses and will be a potential employment opportunity for Chaska Residents.

PRELIMINARY PLAT
STRUCTURES INC.
CHASKA, MN



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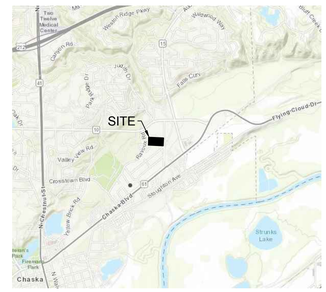
LOCATION MAP

N.T.S.



INDEX

SHEET	DESCRIPTION
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C2	PRELIMINARY PLAT
C3	EXISTING CONDITIONS SURVEY
C4	DEMOLITION PLAN
C5	GRADING & DRAINAGE PLAN
C6	UTILITY PLAN
C7	EROSION & SEDIMENT CONTROL PLAN
C8	SWPPP - PG 1
C9	SWPPP - PG 2
C10	CIVIL SITE DETAILS 1
C11	CIVIL SITE DETAILS 2
C12	CIVIL SITE DETAILS 3
L1	TREE PRESERVATION PLAN
L2	PLANTING PLAN
L3	PLANTING NOTES & DETAILS
A2.1	MAIN LEVEL FLOOR PLAN BUILDING 'A'
A2.2	MAIN LEVEL FLOOR PLAN BUILDING 'B'
A2.3	MAIN LEVEL FLOOR PLAN BUILDING 'C'
A3.1	EXTERIOR ELEVATIONS BUILDING 'A'
A3.2	EXTERIOR ELEVATIONS BUILDING 'B'
A3.3	EXTERIOR ELEVATIONS BUILDING 'C'

ARCHITECT

HTG ARCHITECTS
1010 MAINSTREET
HOPKINS, MN 55343
952-278-8880

APPLICANT

STRUCTURES, INC.
117 PEAVEY CIRCLE
CHASKA, MN 55318
952-937-6257

LANDSCAPE ARCHITECT

ANDERSON ENGINEERING OF MN, LLC
13605 1ST AVENUE NORTH, SUITE 100
PLYMOUTH, MN 55441
763-412-4000

SURVEYOR / ENGINEER

ANDERSON ENGINEERING OF MN, LLC
13605 1ST AVENUE NORTH, SUITE 100
PLYMOUTH, MN 55441
763-412-4000

ANDERSON
13605 1st Avenue N. #100
Plymouth, MN 55441 | ae-mn.com
P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

COVER SHEET

DRAWING NO.

C1

PLOTTED:	COMM. NO.
10/20/22	15311

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SITE DATA

PARKING REQUIREMENTS

LOT 1	
OFFICES - 15% (1,110 SF):	1 SPACE / 250 SF FLOOR = 4.44 STALLS
SHOP - 85% (6,282 SF):	1 SPACE / 350 SF FLOOR = 17.95 STALLS (1 / 350 SF FLOOR PROOF OF PARKING)
LOT 2	
OFFICES - 15% (936 SF):	1 SPACE / 250 SF FLOOR = 3.74 STALLS
SHOP - 85% (5,304 SF):	1 SPACE / 350 SF FLOOR = 15.15 STALLS (1 / 350 SF FLOOR PROOF OF PARKING)
LOT 3	
OFFICES - 15% (1,110 SF):	1 SPACE / 250 SF FLOOR = 4.44 STALLS
SHOP - 85% (6,282 SF):	1 SPACE / 350 SF FLOOR = 17.95 STALLS (1 / 350 SF FLOOR PROOF OF PARKING)

PROPOSED PARKING

LOT 1	
REGULAR:	10 STALLS (9'x20')
HANDICAP:	1 (VAN ACCESSIBLE)
PROOF OF PARKING:	12 STALLS (9'x20')
TOTAL:	23 STALLS
LOT 2	
REGULAR:	9 STALLS (9'x20')
HANDICAP:	1 (VAN ACCESSIBLE)
PROOF OF PARKING:	10 STALLS (9'x20')
TOTAL:	20 STALLS
LOT 3	
REGULAR:	10 STALLS (9'x20')
HANDICAP:	1 (VAN ACCESSIBLE)
PROOF OF PARKING:	12 STALLS (9'x20')
TOTAL:	23 STALLS

EXISTING

PROPERTY ADDRESS:	UNASSIGNED, CHASKA, MINNESOTA.
PID:	301460020
EX. PARCEL AREA:	5.25 ACRE
ZONING:	PRD - PLANNED RESIDENCE DEVELOPMENT
2040 COMP. PLAN:	I - INDUSTRIAL

PROPOSED

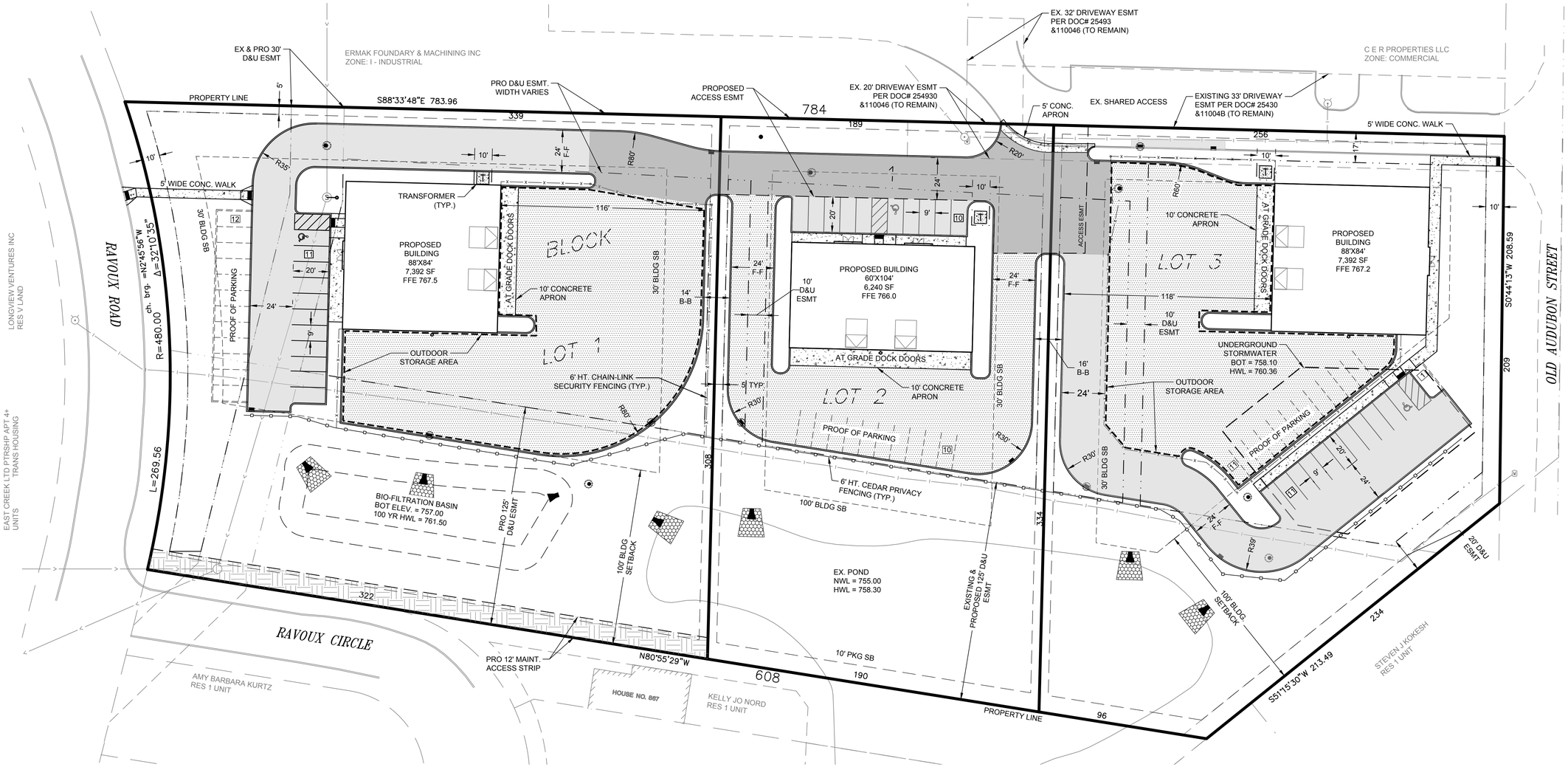
ZONING:	PID - PLANNED INDUSTRIAL DEVELOPMENT
BUILDING SETBACKS	
FRONT YARD:	30 FEET
REAR YARD:	30 FEET
SIDE YARD NORTH:	30 FEET
SIDE YARD SOUTH:	100 FEET
PARKING SETBACKS	
FRONT:	10 FEET
REAR:	5 FEET
SIDE NORTH:	5 FEET
SIDE SOUTH:	10 FEET
LOT DIMENSIONS	
LOT 1:	90,799 SQUARE FEET (2.08 ACRES)
LOT 2:	60,658 SQUARE FEET (1.39 ACRES)
LOT 3:	77,451 SQUARE FEET (1.78 ACRES)
TOTAL	228,908 SQUARE FEET (5.25 ACRES)

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- BUILDING SETBACKS
- PARKING SETBACKS
- OUTDOOR STORAGE AREA
- EXISTING DRAINAGE AND UTILITY EASEMENT
- PROPOSED DRAINAGE AND UTILITY EASEMENT
- 6' HT. CEDAR BOARD PRIVACY FENCE
- 6' HT. CHAIN-LINK SECURITY FENCE
- PROPOSED BITUMINOUS PAVEMENT
- HEAVY DUTY BITUMINOUS
- PROPOSED CONCRETE
- RECYCLED CONCRETE PAVEMENT



ANDERSON

13605 1st Avenue N. #100
Plymouth, MN 55441 | ae-mn.com
P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

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PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

PRELIMINARY PLAT

DRAWING NO.

C2

PLOTTED:	COMM. NO.
10/20/22	15311

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SITE DATA

EXISTING

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2040 COMP. PLAN:	I - INDUSTRIAL

PROPOSED

ZONING:	PID - PLANNED INDUSTRIAL DEVELOPMENT
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REAR YARD:	30 FEET
SIDE YARD NORTH:	30 FEET
SIDE YARD SOUTH:	100 FEET
PARKING SETBACKS	
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REAR:	5 FEET
SIDE NORTH:	5 FEET
SIDE SOUTH:	10 FEET

LOT DIMENSIONS

LOT 1:	90,799 SQUARE FEET (2.08 ACRES)
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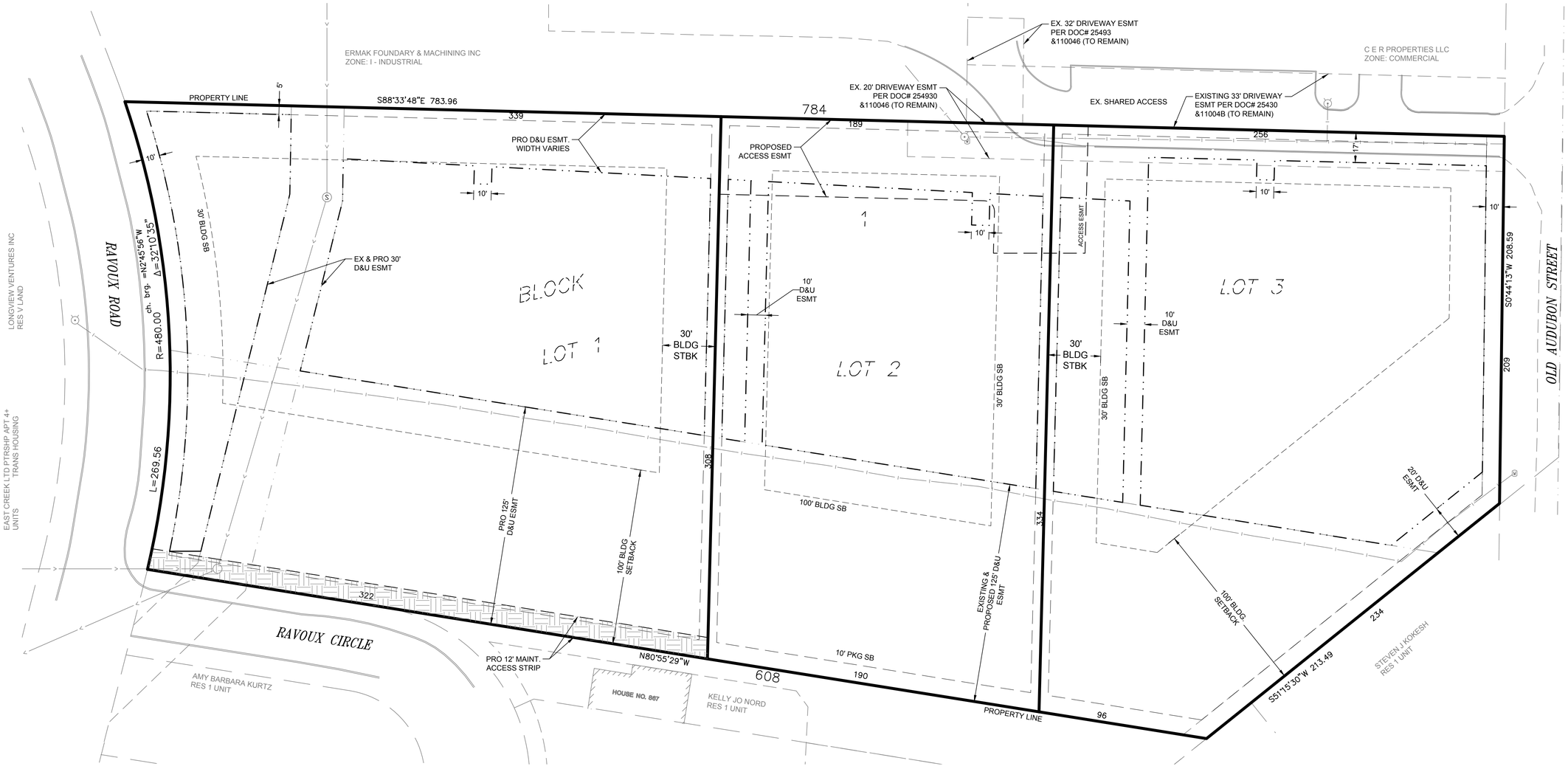
TOTAL	228,908 SQUARE FEET (5.25 ACRES)

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- BUILDING SETBACKS
- PARKING SETBACKS
- EXISTING DRAINAGE AND UTILITY EASEMENT
- PROPOSED DRAINAGE AND UTILITY EASEMENT



ANDERSON

13605 1st Avenue N. #100
Plymouth, MN 55441 | ae-mn.com
P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/24/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022
2	10/24/22	PRELIMINARY PLAT EXHIBIT

PRELIMINARY PLAT
OCTOBER 24, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

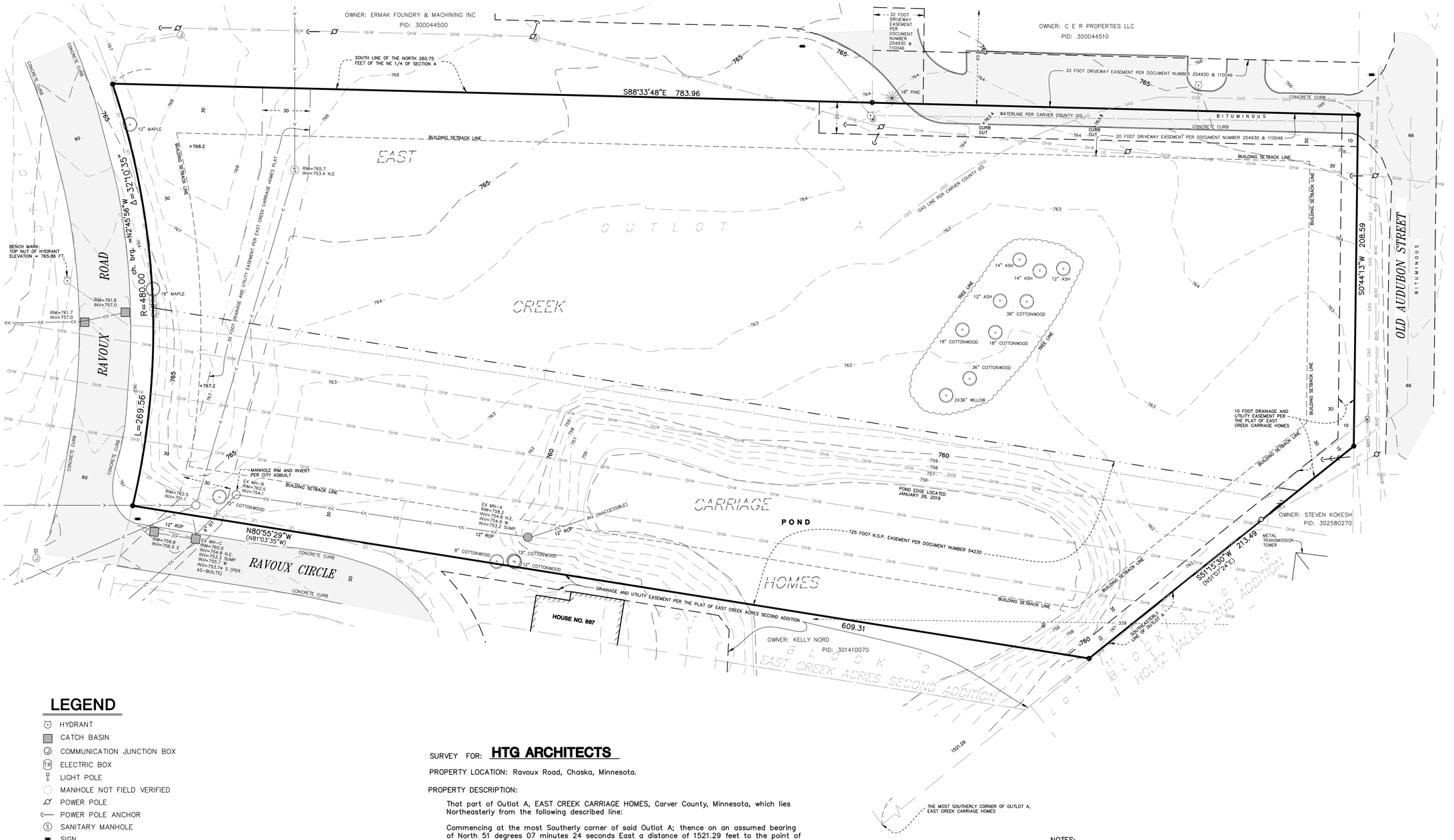
PRELIMINARY PLAT EXHIBIT

DRAWING NO.

C2.1

PLOTTED:	COMM. NO.
10/24/22	15311

Oct 24, 2022 – 10:43am BField Y:\5300\15311_HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files_01 SHEETS\15311_C_PRE PLAN EXHIBIT.dwg
Xref Filename: \ 15311_S_1 \ 15311_TITLEBLOCK_24X36 \ 15311_c_base_A\



LEGEND

- HYDRANT
- CATCH BASIN
- COMMUNICATION JUNCTION BOX
- ELECTRIC BOX
- LIGHT POLE
- MANHOLE NOT FIELD VERIFIED
- POWER POLE
- POWER POLE ANCHOR
- SANITARY MANHOLE
- SIGN
- WATER VALVE
- FOUND IRON MONUMENT
- SET IRON PIPE WITH P.L.S. NO. 20281
- DECIDUOUS TREE
- GAS — GAS MAIN
- OHW — OVERHEAD WIRES
- SANITARY SEWER
- STORM SEWER
- UE — UNDERGROUND ELECTRIC
- WATER MAIN
- BITUMINOUS SURFACE

N W E S

0 30 60 90

SCALE IN FEET

1" = 30'

SURVEY FOR: **HTG ARCHITECTS**

PROPERTY LOCATION: Ravoux Road, Chaska, Minnesota.

PROPERTY DESCRIPTION:

That part of Outlot A, EAST CREEK CARRIAGE HOMES, Carver County, Minnesota, which lies Northeasterly from the following described line:

Commencing at the most Southerly corner of said Outlot A; thence on an assumed bearing of North 51 degrees 07 minutes 24 seconds East a distance of 1521.29 feet to the point of beginning of the line to be described; thence North 81 degrees 03 minutes 35 seconds West 609.31 feet to the Easterly line of Ravoux Road and said line there terminating.

The property is currently zoned PRD (Planned Residence Development) and has the following building setbacks.

BUILDING SETBACKS

Front	=	30 feet
Side	=	30 feet
Rear	=	30 feet

Building setbacks are 30 feet from all property lines or the height of the building, whichever is greater.

NOTES:

1. The horizontal datum is the Carver County Coordinate System, NAD 83 (2011) adjustment.
2. The vertical datum is NAVD88. The site bench mark is the top nut of the hydrant, located on the west side of Ravoux Road and 135 feet north of the intersection of Ravoux Circle and Ravoux Road depicted hereon, Bench Mark Elevation = 765.86 feet.
3. The area of the property described hereon is 228,908 square feet or 5.2550 acres.
4. The location and extent of underground utilities, are based upon Gopher State One Call locate ticket no. 190230413; existing drawings provided by the City of Chaska and above ground evidence. There is no guarantee as to the accuracy or the completeness of this information. The size and location should be considered approximate. Additional underground utilities may be present. Verification of the existence and location of all utilities should be obtained from the utility owners prior to any planning or design. In accordance with Minnesota Statute, the location of utilities shall be confirmed prior to any demolition or construction.
5. The legal description and easement information depicted is based on Fidelity National Title Insurance Company Commitment for Title Insurance, Commitment No. 55102, issued by its Commercial Partners Title, LLC, and dated October 1, 2018. Additional easements and/or encumbrances could be present.
6. At the time of this survey, portions of the subject property were covered in significant amounts of snowfall, snow piles and ice. Some improvements may not be depicted.

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THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

JACK BOLKE, LS — 2/12/2019

20281 MN. REG. NO. — DATE

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:

DRAWING TITLE

EXISTING CONDITIONS SURVEY

DRAWING NO.

C3

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:34am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_08 Survey_01 CAD files\15311_S_1.dwg
Xref Filename: \ 15311_a_base_ACAD2018 \ 15311_c_titleblock \ 15311_a_gis_base_ACAD2018 \ 15311_TITLEBLOCK_24X36\

KEY NOTES

1. REMOVE EXISTING CONCRETE CURB & GUTTER
2. SAWCUT 2' PARALLEL TO CONCRETE CURB & GUTTER. REMOVE EXISTING ASPHALT PAVEMENT AND REPLACE IN-KIND.
3. DRAINAGE AND UTILITY EASEMENT (TYP.)
4. CLEAR & GRUB ALL TREES STUMPS AND UNDERSTORY BRUSH WITHIN LIMITS OF WORK
5. EXISTING OVERHEAD ELECTRICAL TO BE RELOCATED INCLUDING POWER POLES.
6. RELOCATE EXISTING NATURAL GAS LINE.
7. RELOCATE EXISTING UNDERGROUND ELECTRICAL AS NECESSARY
8. SHARED ACCESS TO REMAIN IN USE FOR NEIGHBORING PROPERTY THROUGHOUT THE DURATION OF CONSTRUCTION.
9. INSTALL PERIMETER SILT FENCE PRIOR TO ANY DEMOLITION ACTIVITIES.
10. PROTECT EXISTING UTILITY LINE IN-PLACE.
11. RAISE EXISTING SANITARY RIM ELEVATION TO FINISHED GRADE. SEE SHEET C5 FOR MORE INFORMATION.
12. EXISTING HYDRANT TO REMAIN IN PLACE.
13. INSTALL TREE PROTECTION FENCING PER DETAIL 1/L3

CONTRACTOR NOTES

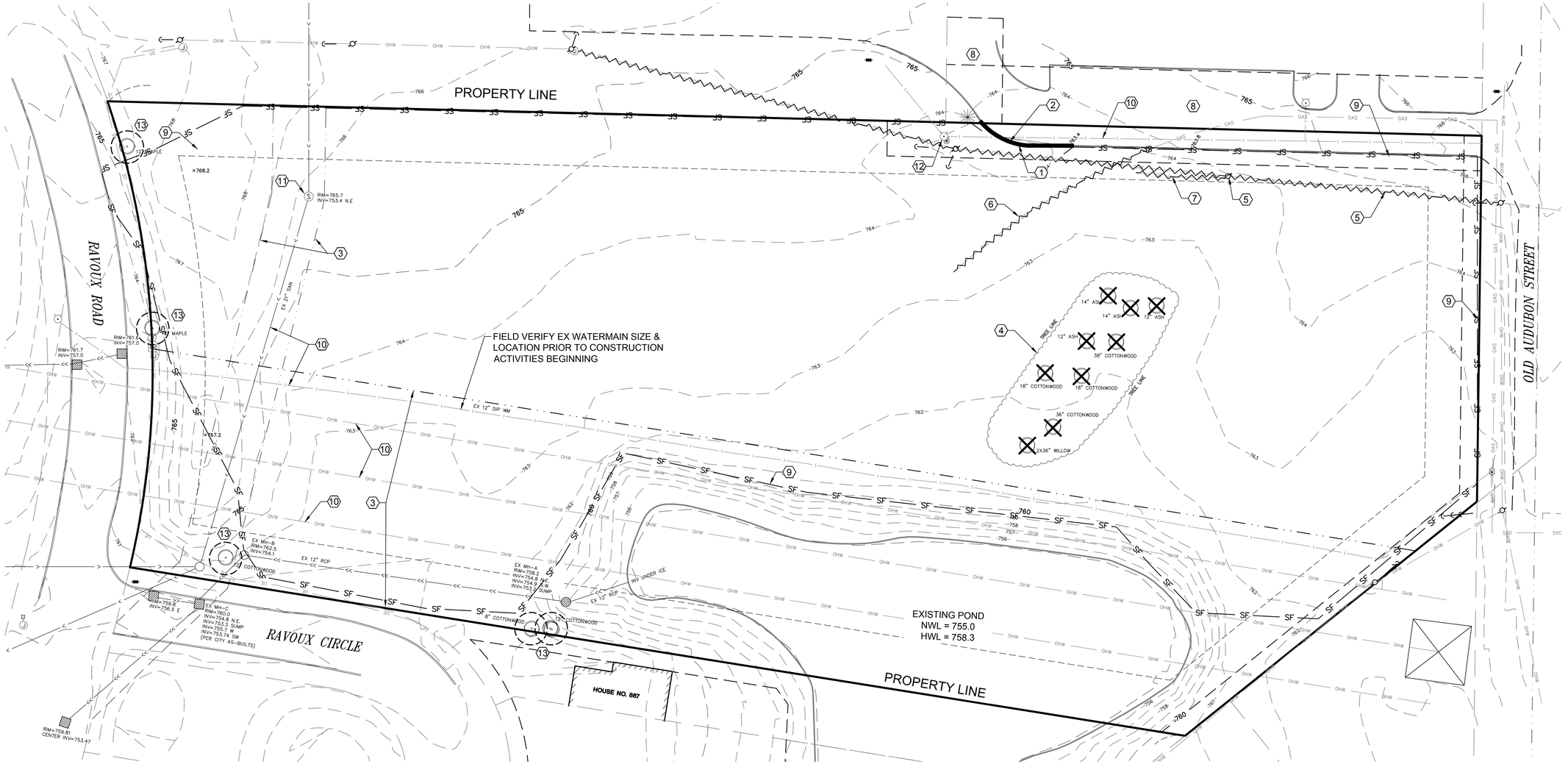
1. UTILITIES SHOWN ARE FOR INFORMATIONAL USE ONLY AND ARE NOT GUARANTEED IN ACCURACY. VERIFY ALL TOPOGRAPHIC INFORMATION PRIOR TO COMMENCING WORK. NOTIFY PROJECT MANAGER OF ANY/ALL DISCREPANCIES IMMEDIATELY.
2. CONTRACTOR SHALL HIRE PRIVATE UTILITY LOCATOR AS NECESSARY TO VERIFY UNDERGROUND UTILITIES. UTILITIES SHOWN ON PLANS MAY VARY FROM EXISTING CONDITIONS, AND CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO UTILITY LINES SHOWN, NOT SHOWN, OR SHOWN INCORRECTLY.
3. CONTRACTOR TO COORDINATE WITH SMALL UTILITY COMPANIES ON REMOVAL & RELOCATION OF THEIR RESPECTIVE UTILITIES.
4. UTILITIES MUST BE LOCATED PRIOR TO EXCAVATION OR GRADING ON ANY SITE. CALL GOPHER STATE ONE AT 1-800-252-1166 AS SOON AS POSSIBLE TO SCHEDULE UTILITY LOCATIONS.

LEGEND

- PROPERTY LIMITS
- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING FENCE
- EXISTING GAS MAIN
- EXISTING OVERHEAD WIRES
- EXISTING TELEPHONE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING HYDRANT AND GV
- EXISTING SANITARY MANHOLE
- EXISTING STORM SEWER INLET
- REMOVE EXISTING UTILITY LINE
- REMOVE EXISTING CONCRETE C&G
- REMOVE TREE

N

0 30' 60'



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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

DEMOLITION PLAN

DRAWING NO.

C4

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:34am BField Y:\15300\15311_HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files\
Xref Filename: \ 15311_S_1 \ 15311_TITLEBLOCK_24X36 \ 15311_c_base_A\

KEY NOTES

1. CONCRETE SIDE WALK CROSS SLOPE @ 2.0% AWAY FROM BUILDING (TYP.) UNLESS OTHERWISE NOTED.
2. MATCH EXISTING CURB & GUTTER ELEVATION.
3. RAISE EXISTING SANITARY RIM ELEVATION TO FINISHED GRADE.
4. INSTALL HANDICAP PEDESTRIAN RAMP

CONTRACTOR NOTES

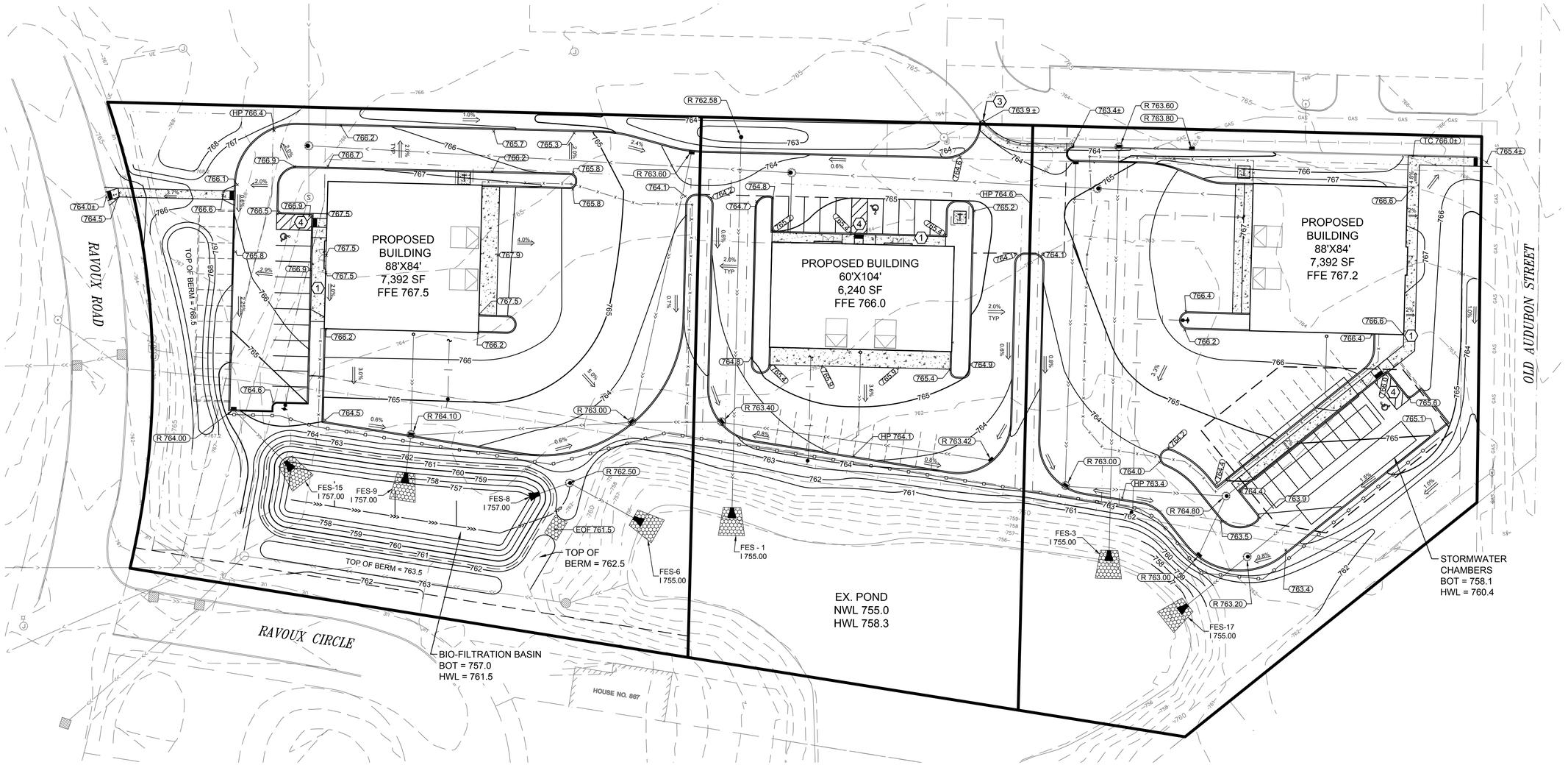
1. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL APPLICABLE EROSION & SEDIMENT CONTROL ITEMS.
2. SPECIFIED EROSION/SEDIMENT CONTROL MEASURES ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
3. THE TOTAL DISTURBED AREA IS EQUAL TO 3.959 ACRES. AN MPCA PERMIT IS REQUIRED. PROVIDE DOCUMENTATION TO THE CITY PRIOR TO ANY GRADING WORK BEGINNING.
4. PROPOSED SPOT ELEVATIONS ARE TO TOP OF FINISHED SURFACE UNLESS OTHERWISE NOTED ON PLANS.
5. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES. LOCATIONS OF UTILITIES SHOWN BASED ON SURVEY AND AS-BUILT INFORMATION AND MAY NOT REPRESENT ACTUAL CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR UTILIZING UTILITY LOCATES PRIOR TO STARTING ANY WORK.

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- 966 EXISTING MINOR CONTOUR
- 965 EXISTING MAJOR CONTOUR
- 966 PROPOSED MINOR CONTOUR
- 965 PROPOSED MAJOR CONTOUR
- × 959.4 EXISTING SPOT ELEVATION
- DRAINAGE ARROW
- PROPOSED CONCRETE C&G
- PRIVACY FENCE
- x SECURITY FENCE



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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

GRADING & DRAINAGE PLAN

DRAWING NO.

C5

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:34am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files_01 SHEETS\15311_C_GRAD.dwg
Xref Filename: \ 15311_S_1 \ 15311_TITLEBLOCK_24X36 \ 15311_c_base_A\

KEY NOTES

1. WET TAP EXISTING 12" WATERMAIN W/ SADDLE. INSTALL 6X12 TEE & GATE VALVE.
2. RAISE EXISTING SANITARY RIM ELEVATION TO FINISHED GRADE. CONNECT 6" PVC SANITARY VIA CORE DRILL & BOOT CONNECTION TO EX. MH @ ELEVATION 759.3. INSTALL "INTRA FLOW" INSIDE DROP.
3. INSTALL 4" PERFORATED PVC 20 LF MIN. BEHIND BACK OF CURB AT ALL LOWPOINT. (TYP.)
4. 7'X7' CONC. PAD FOR ELECTRICAL TRANSFORMER.
5. INSTALL 6" HYDRANT WITH GATE VALVE & LEAD.
6. FIELD VERIFY MIN. 18" VERTICAL SEPARATION AT UTILITY CROSSING PRIOR TO CONSTRUCTION.

CONTRACTOR NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND PER THE GEOTECHNICAL REPORT UNLESS DIRECTED OTHERWISE.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE MOST CURRENT CITY OF CHASKA CODE AND STANDARDS, AND THE 2018 EDITION OF MNDOT STANDARD CONSTRUCTION SPECIFICATIONS (INCLUDING SUPPLEMENTS) AND THE C.E.A.M. STANDARD SPECIFICATIONS-2013 EDITION UNLESS DIRECTED OTHERWISE.
3. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE MUNICIPAL, WATERSHED DISTRICT, COUNTY, MPCA, DEPT. OF HEALTH, AND MNDOT PERMITS.
4. THE LOCATION AND TYPE OF EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE INFORMATION IS NOT WARRANTED TO BE ACCURATE OR COMPLETE. THE CONTRACTOR, IN COOPERATION WITH THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY, IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES.
5. LOCATE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED.
6. PROVIDE MINIMUM 10' HORIZONTAL & 18" VERTICAL SEPARATION OF ALL WATERMAIN CROSSINGS FROM STORM OR SANITARY SEWER.
7. ALL WATER SERVICE SHALL BE INSTALLED WITH 7.5 FEET MINIMUM COVER FROM FINISHED GRADE, MAX 10 FT. WATERMAIN TO BE INSTALLED PER C.E.A.M. SPECIFICATIONS, WHERE COVER DEPTHS CANNOT BE ACHIEVED, CONTRACTOR SHALL PROVIDE A MINIMUM 4 INCHES OF INSULATION OVER WATERMAIN AND CONTACT THE ENGINEER.
8. WATER SERVICE MATERIALS SHALL BE PVC C900. CONTRACTOR SHALL VERIFY EXISTING WATERMAIN SIZE AND MATERIAL PRIOR TO CONSTRUCTION. ALL INSTALLED PIPE WILL REQUIRE TESTING PER CITY AND STATE REQUIREMENTS. THIS WILL INCLUDE, AT A MINIMUM, CONDUCTIVITY AND PRESSURE TESTING, AS WELL AS TESTING FOR BACTERIA AND PROPER DISINFECTION. FOLLOW C.E.A.M STANDARD SPECIFICATION UNLESS NOTED OTHERWISE. INSTALL TRACER WIRE, JOINT RESTRAINTS AND THRUST BLOCKING ON ALL WATERMIAN PIPE AND FITTINGS, PER CITY OF CHASKA STANDARDS.
9. ALL COMPONENTS OF WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT MUST UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATING. THE USE OF UNLINED OR UNCOADED PIPE IS NOT ALLOWED. PROVIDE 8 MIL POLYWRAP ON DIP WATERMAIN PER CITY STANDARDS.
10. SANITARY SEWER PIPE MATERIALS SHALL BE PVC SDR 26. PIPE SHALL BE INSULATED PER CITY AND C.E.A.M. STANDARDS WHERE 7.5 FOOT COVER DEPTHS ATE NOT ACHIEVED. ALL SANITARY SEWER PIPE WILL REQUIRE TESTING PER CITY AND C.E.A.M. STANDARDS. THIS WILL INCLUDE, AT A MINIMUM. LEAKAGE AND ALIGNMENT TESTING.
11. PVC SANITARY SEWER MUST MEET ASTM STANDARDS LISTED IN MINNESOTA RULES, CHAPTER 4714,TABLE 701.1 AND INSTALLATION STANDARD 1. FITTING MUST COMPLY WITH ASTM D1866, D2665, OR F794 RESPECTIVELY. JOINTS MUST BE APPROVED MECHANICAL OR PUSH-ON UTILIZING ELASTOMERIC SEAL, OR SOLVENT WELDING USING ASTM F656 AND ASTM D2564. THE INSTALLATION MUST COMPLY WITH ASTM D2321.
12. ALL NEW NON METALLIC SANITARY AND WATER SERVICE PIPE SHALL HAVE TRACER WIRE, PER CITY SPECIFICATIONS.
13. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING AN A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONCEAL 231 WATERSTOP SEALANT, OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER. STORM SEWERS MUST MEET ASTM F714 (SEE MINNESOTA RULES, CHAPTER 4714 SECTION 1102.4 AND INSTALLATION STANDARD 1).
14. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF A BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 4714 , SECTION 1109.0. TESTING OF WATER AND SEWER SHALL COMPLY WITH 2023 CEAM REQUIREMENTS.
15. SUBSTITUTIONS FROM INFO. SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD AND CITY ENGINEER.
16. UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER AND SEWER SERVICE PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.

STRUCTURE SCHEDULE

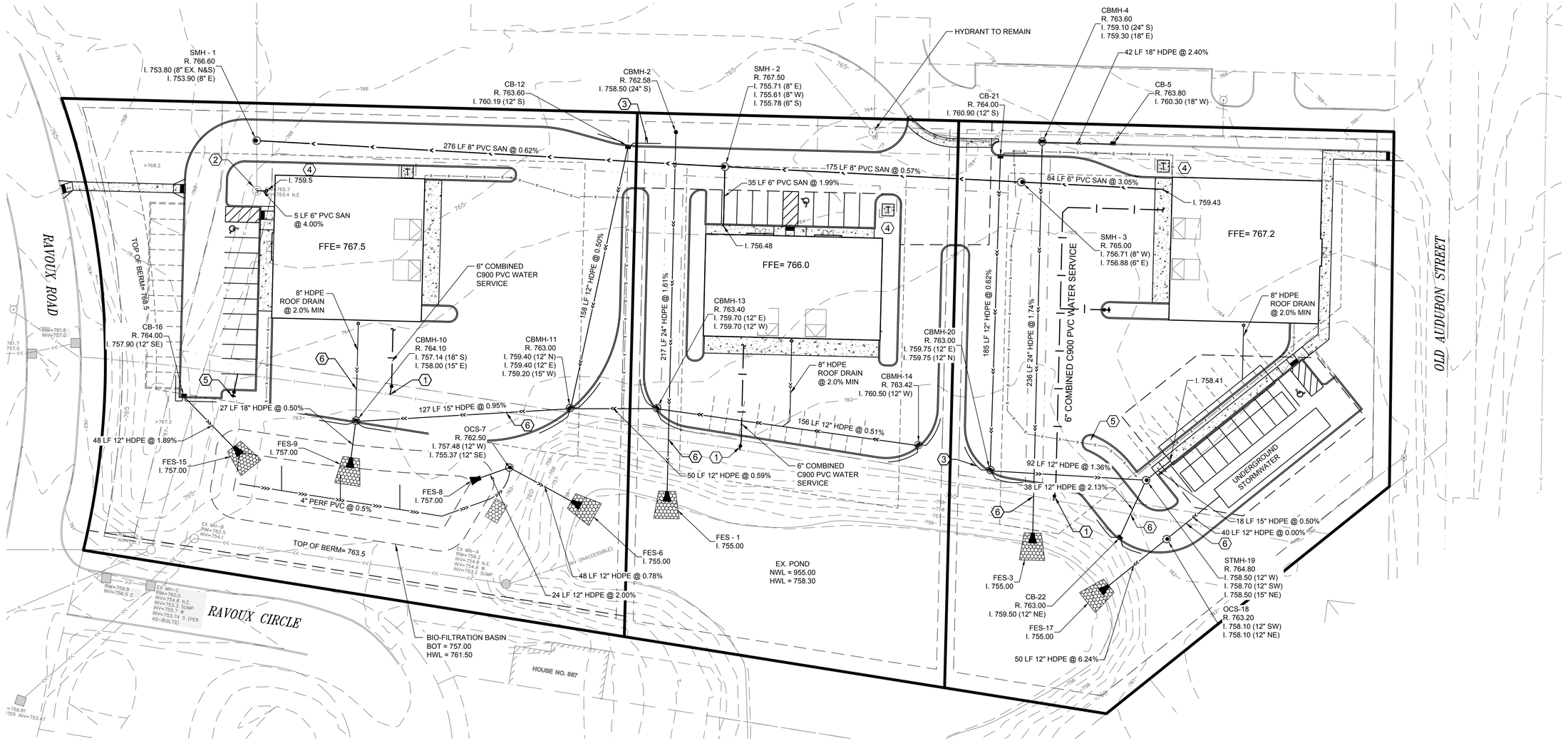
STRUCTURE NO.	SIZE	CASTING / NOTES
FES-1	24" HDPE	W/ RIP RAP
CBMH-2	48" ROUND	R-4341-A - BEEHIVE TYPE
FES-3	24" HDPE	W/ RIP RAP
CBMH-4	48" ROUND	R-3067-L
CB-5	2'X3' BOX	R-3067-L
FES-6	12" HDPE	W/ RIP RAP
OCS-7	48" ROUND	R-1648-A - SOLID "STORM"
FES-8	12" HDPE	W/O RIP RAP
FES-9	18" HDPE	W/ RIP RIP
CBMH-10	48" ROUND	R-3067-L
CBMH-11	48" ROUND	R-3067-L
CB-12	2'X3' BOX	R-3067-L
CBMH-13	48" ROUND	R-3067-L
CBMH-14	48" ROUND	R-3067L
FES-15	12" HDPE	W/ RIP RAP
CB-16	2'X3' BOX	R-3067L
FES-17	12" HDPE	W/ RIP RAP
OCS-18	48" ROUND	R-1648-A - SOLID "STORM"
STMH-19	48" ROUND	R-1648-A - SOLID "STORM"
CBMH-20	48" ROUND	R-3067-L
CB-21	2'X3' BOX	R-3067-L
CB-22	2'X3' BOX	R-3067-L
SMH-1	48" ROUND	R-1642-A
SMH-2	48" ROUND	R-1642-A
SMH-3	48" ROUND	R-1642-A

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- CONSTRUCTION LIMITS
- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED WATERMAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED DRAINTILE
- PROPOSED WATERMAIN FITTING
- PROPOSED SANITARY MANHOLE AND CLEANOUT
- PROPOSED STORM STRUCTURE
- FLARED END SECTION W/ RIPRAP



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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

UTILITY PLAN

DRAWING NO.

C6

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:34am BField
Xref Filename: \ 15311_S_1 \ 15311_TITLEBLOCK_24X36 \ 15311_C_base_A \ X:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files_01 SHEETS\15311_C_UTIL.dwg

STORM WATER POLLUTION PREVENTION PLAN NOTES:

1. GRADING CONTRACTORS SHALL VERIFY LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
2. ALL EROSION CONTROL MEASURES CALLED FOR ON THESE PLANS AND SPECIFICATIONS, WHICH MAY INCLUDE SILT FENCE, SEDIMENTATION BASINS OR TEMPORARY SEDIMENT TRAPS, SHALL BE CONSTRUCTED AND SERVICEABLE IN THE FOLLOWING ORDER:
   - A. ROCK CONSTRUCTION ENTRANCES A MINIMUM OF 50 FEET
   - B. SILT FENCE
   - C. TEMPORARY CULVERTS
   - D. TEMPORARY SEDIMENTATION BASINS AND OUTFALL FACILITIES
   - E. SORMWATER POND CONSTRUCTION
   - F. COMMON EXCAVATION AND EMBANKMENT (GRADING)
   - G. SEED AND MULCH OR SOD
   - H. BIO-ROLL BARRIERS IN FINISHED GRADED AREAS
   - I. INLET AND OUTLET FACILITIES SUBSEQUENT TO STORM SEWER WORK
3. GRADING CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY AND NPDES PHASE II PERMITTING REQUIREMENTS AS WELL AS EROSION CONTROL MEASURES AS MAY BE SHOWN ON THESE PLANS OR SPECIFICATIONS. GRADING CONTRACTOR SHALL IMPLEMENT ANY ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED TO PROTECT ADJACENT PROPERTY.
4. ALL EROSION CONTROL FACILITIES SHALL BE MAINTAINED BY THE CONTRACTOR DURING GRADING OPERATIONS. ANY TEMPORARY FACILITIES WHICH ARE TO BE REMOVED AS CALLED FOR ON THESE PLANS AND SPECIFICATIONS SHALL BE REMOVED BY THE GRADING CONTRACTOR WHEN DIRECTED BY THE ENGINEER. THE GRADING CONTRACTOR SHALL RESTORE THE SUBSEQUENTLY DISTURBED AREA IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
5. THE GRADING CONTRACTOR SHALL SCHEDULE THE SOILS ENGINEER SO THAT CERTIFICATION OF ALL CONTROLLED FILLS WILL BE FURNISHED TO THE OWNER DURING AND UPON COMPLETION OF THE PROJECT.
6. ALL DISTURBED AREAS, EXCEPT AREAS TO BE PAVED AND/OR SPECIFICALLY DESIGNED BY A LANDSCAPE PLAN, SHALL BE COVERED WITH A MINIMUM 6" OF TOP SOIL OR AS INDICATED IN SPECIFICATIONS OR LANDSCAPING PLAN. ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED AT THE PRESCRIBED RATES WITHIN 72 HOURS OF FINAL GRADING UNLESS OTHERWISE NOTED.

   SEED MIX: MNDOT NO. 25-141 59# / ACRE
   MULCH: TYPE 1 2 TONS / ACRE (DISK ANCHORED)
   FERTILIZER: TYPE 3 22-5-10 350# / ACRE

   ALL EXPOSED SOIL AREAS WITH A CONTINUOUS POSITIVE SLOPE WITHIN 200 LINEAL FEET OF ANY SURFACE WATER, MUST HAVE TEMPORARY EROSION PROTECTION OR PERMANENT COVER FOR THE EXPOSED SOIL AREAS YEAR ROUND, ACCORDING TO THE FOLLOWING TABLE OF SLOPES AND TIME FRAMES:

TYPE OF SLOPE	TIME (Maximum time an area can remain open when the area is not actively being worked)
STEEPER THAN 3:1	7 DAYS
10:1 TO 3:1	4 DAYS
FLATTER THAN 10:1	21 DAYS

7. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS SHOWN ON THE PLAN WERE TAKEN FROM A PLAN FURNISHED BY OWNER.
8. CONTRACTORS GRADING AND EROSION CONTROL OPERATIONS SHALL TAKE PLACE WITHIN THE CONSTRUCTION LIMITS.
9. IT IS REQUIRED THAT SOILS TRACKED FROM THE SITE BY MOTOR VEHICLES BE CLEANED DAILY FROM PAVED ROADWAY SURFACES THROUGHOUT THE DURATION OF CONSTRUCTION.
10. PROVIDE TEMPORARY SEDIMENTATION BASINS AS DIRECTED BY THE ENGINEER.
11. ALL REQUIREMENTS OF THE LOCAL WATERSHED DISTRICT SHALL BE SATISFIED PER THE APPROVED PERMIT.
12. ALL EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN AND IMPLEMENTED IN THE FIELD AS DIRECTED BY THE ENGINEER SHALL CONFORM TO THE MPCA'S "PROTECTING WATER QUALITY IN URBAN AREAS: BEST MANAGEMENT PRACTICES FOR MINNESOTA".
13. DEWATERING AND / OR BASIN DRAINING DISCHARGE SHALL BE DIRECTED TO SEDIMENTATION BASINS WHEREVER POSSIBLE. ALL DISCHARGE POINTS SHALL BE ADEQUATELY PROTECTED FROM EROSION & SCOUR THROUGH USE OF APPROVED ENERGY DISSIPATION DEVICES.
14. ALL SOLID WASTE / CONSTRUCTION DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH MPCA REQUIREMENTS. HAZARDOUS MATERIALS SHALL BE STORED / DISPOSED OF IN COMPLIANCE WITH MPCA REGULATIONS.
15. CONTRACTOR SHALL USE RAPID STABILIZATION METHODS PER MNDOT 2575 AS NEEDED DURING THE COURSE OF THE WORK TO MAINTAIN CONFORMANCE WITH THE CITY AND NPDES II PERMIT REQUIREMENTS. THIS WORK SHALL CONSIST OF OPERATIONS NECESSARY TO RAPIDLY STABILIZE SMALL CRITICAL AREA, TO PREVENT OFF SITE SEDIMENTATION AND / OR TO COMPLY WITH PERMIT REQUIREMENTS. THE WORK MAY BE PERFORMED AT ANY TIME DURING THE CONTRACT AND DURING NORMAL WORKING HOURS. THIS WORK WILL BE CONDUCTED ON SMALL AREAS THAT MAY OR MAY NOT BE ACCESSIBLE WITH NORMAL EQUIPMENT. THIS WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE MNDOT STANDARDS SPECIFICATIONS, THE DETAILS SHOWN IN THE PLANS, AND THE FOLLOWING:

    THERE ARE FIVE STABILIZATION METHODS APPROVED FOR THESE OPERATIONS. THESE METHODS MAY BE CONDUCTED INDEPENDENTLY OR IN COMBINATION.

METHOD	RAPID STABILIZATION
1	TYPE 1 MULCH WITH DISC ANCHORING
2	TYPE 3 MULCH WITH TYPE HYDRAULIC MULCH
3	TYPE HYDRAULIC MULCH WITH SEED MIXTURE 22-111
4	CATEGORY 3 EROSION CONTROL BLANKET WITH SEED MIXTURE
5	RIPRAP CLASS II WITH GEOTEXTILE TYPE III

    THESE EFFORTS WILL BE INCIDENTAL TO THE EROSION CONTROL BID ITEM.
16. CHANGE OF COVERAGE: FOR STORM WATER DISCHARGES FROM CONSTRUCTION PROJECTS WHERE THE OWNER OR OPERATOR CHANGES, (E.G., AN ORIGINAL DEVELOPER SELLS PORTIONS OF THE PROPERTY TO VARIOUS BUILDERS) THE NEW OWNER OR OPERATOR MUST SUBMIT A SUBDIVISION REGISTRATION WITHIN 7 DAYS OF ASSUMING TRANSFERS, SALE OR CLOSING ON THE PROPERTY.
17. INDIVIDUAL SITE BUILDERS SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL NECESSARY EROSION CONTROL MEASURES AS MAY BE REQUIRED. REQUIRED ECM'S SHALL CONSIST OF BUT NOT BE LIMITED TOT HE FOLLOWING:
    - A. SILT FENCE SURROUNDING CONSTRUCTION AREA. SILT FENCE SHALL HAVE THE BOTTOM DUG IN WITH SOIL FIRMLY COMPACTED.
    - B. ROCK CONSTRUCTION ENTRANCE HAVING 1" TO 2" CLEAR ROCK OVER GEOTEXTILE FABRIC.
    - C. STREET CLEANING AS MAY BE REQUIRED SHOULD VEHICLE TRACKING OCCUR.

    INDIVIDUAL SITE BUILDERS ARE REQUIRED TO MAINTAIN ECM'S UNTIL SUCH TIME AS INDIVIDUAL YARDS/VEGETATION ARE ESTABLISHED.
18. CONTRACTOR SHALL PROVIDE A TEMPORARY SEDIMENTATION BASIN ON SITE FOR CONSTRUCTION WASH OUT USE. TEMPORARY BASIN SHALL BE LOCATED AS TO PROVIDE EASY ACCESS FOR CONSTRUCTION VEHICLES AND CONCRETE TRUCKS AS NECESSARY.
19. INLET SEDIMENTATION CONTROL IS TO BE PROVIDED TO ALL STORM SEWER CATCH BASIN THROUGHOUT CONSTRUCTION. MEASURES APPLIED SHALL COMPLY WITH BEST MANAGEMENT PRACTICES FOR MINNESOTA AND APPLICATION OF NPDES PHASE II AS APPROPRIATE FOR PHASE OF CONSTRUCTION.
20. CONTRACTOR SHALL PREVENT SOIL LOSS DURING CONSTRUCTION DUE TO WIND EROSION THROUGHOUT CONSTRUCTION. DUST SHALL BE SUPPRESSED THOUGH THE APPLICATIONS OF WATER, AS DEEMED NECESSARY BY THE CONTRACTOR, OR THROUGH EQUIVALENT BMP'S AS APPROVED BY THE ENGINEER.
21. IF LEED ACCREDITATION IS APPLICABLE, CONTRACTOR SHALL DOCUMENT THE IMPLEMENTATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN THROUGH DATE-STAMPED PHOTOS AND INSPECTION LOGS / REPORTS. REPORTS SHALL INCLUDE AT A MINIMUM DESCRIPTION OF ALL EMPLOYED BMP'S (INCLUDING BOTH MEASURES TO PREVENT SOIL LOSS DUE TO RUNOFF AND SOIL LOSS DUE TO WIND EROSION), BMP'S DEEMED UNNECESSARY DUE TO SITE CONDITIONS, CORRECTIVE ACTIONS TAKEN IN RESPONSE TO PROBLEMS, AND ANY ADDITIONAL INFORMATION RELEVANT TO THE CONDITION OF THE EROSION AND SEDIMENT CONTROL PLAN AS IT WAS ESTABLISHED AT THE TIME OF CONSTRUCTION.

STORMWATER POLLUTION PREVENTION PLAN SCHEDULE OF INSTALLATION & MAINTENANCE

ITEM	INSTALLATION	INSPECTION & MAINTENANCE	REMOVAL
SILT FENCE	PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS.	INSPECT & MAINT. AFTER EACH RUN-OFF EVENT. REMOVE SEDIMENTS AS REQUIRED.	AFTER TRIBUTARY DRAINAGE AREA IS RESTORED.
ROCK CONST. ENTRANCE	PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS.	INSPECT REGULARLY. MAINTAIN AS NEEDED.	PRIOR TO PAVING.
OUTLET SKIMMER STRUCTURE	AFTER POND GRADING IS COMPLETED.	INSPECT REGULARLY. MAINTAIN AS NEEDED.	PERMANENT.
RIP-RAP & FILTER	UPON COMPLETION OF POND GRADING, CONC. SWALE CONST. AND OUTLET INSTALLATION.	INSPECT & MAINTAIN AT LEAST ANNUALLY AND AFTER HEAVY RAINFALL EVENT.	PERMANENT.
DETENTION POND	DURING EARTHWORK OPERATIONS.	AFTER HEAVY RAINFALL EVENTS. REMOVE SEDIMENTS AS NEEDED.	PERMANENT.
SEED & MULCH	AFTER POND GRADING IS COMPLETED.	INSPECT & MAINTAIN AFTER HEAVY RAINS. REPLACE WASH-OUT AREAS IMMEDIATELY	NO REMOVAL NECESSARY.
INLET PROTECTION	UPON INLET CONSTRUCTING	WHEN 1/3 CAPACITY OF BMP IS REACHED	AFTER TRIBUTARY AREAS ARE FULLY RESTORED

KEY NOTES

1. INSTALL & MAINTAIN SILT FENCE PERIMETER SEDIMENT PROTECTION. (SEE DETAIL ERO-1C / C9)
2. INSTALL AND MAINTAIN INLET SEDIMENT PROTECTION. (SEE DETAIL ERO-4B / C9)
3. INSTALL TEMP ROCK ENTRANCE
4. INSTALL EROSION CONTROL BLANKET & SEED WITHIN SWALE(S) AND WITHIN AREAS WITH A SLOPE OF 4:1 OR STEEPER. BLANKET TO BE "NATURAL NET ONLY" CATEGORY 3N PER MNDOT SPEC 3885. (SEE DETAIL ERO-2 / C9)
   D GRADING OR PRIOR TO ANY RAIN EVENT.
5. PLACE RIPRAP AT EMERGENCY OVERFLOW

PHASING NOTES

PHASE 1
- A. ACCESS CONNECTION AND SHARED DRIVEWAY.
- B. 24" STORM TO EX. POND.
- C. BIO-FILTRATION BASIN & UNDERGROUND STORM CHAMBERS.
- D. LOT 1 BUILDING & PAVEMENT.
- E. STAGING LOCATED ON LOT 3.

PHASE 2
- A. LOT 2 BUILDING & PAVEMENT.
- B. STAGING LOCATED ON LOT 3.

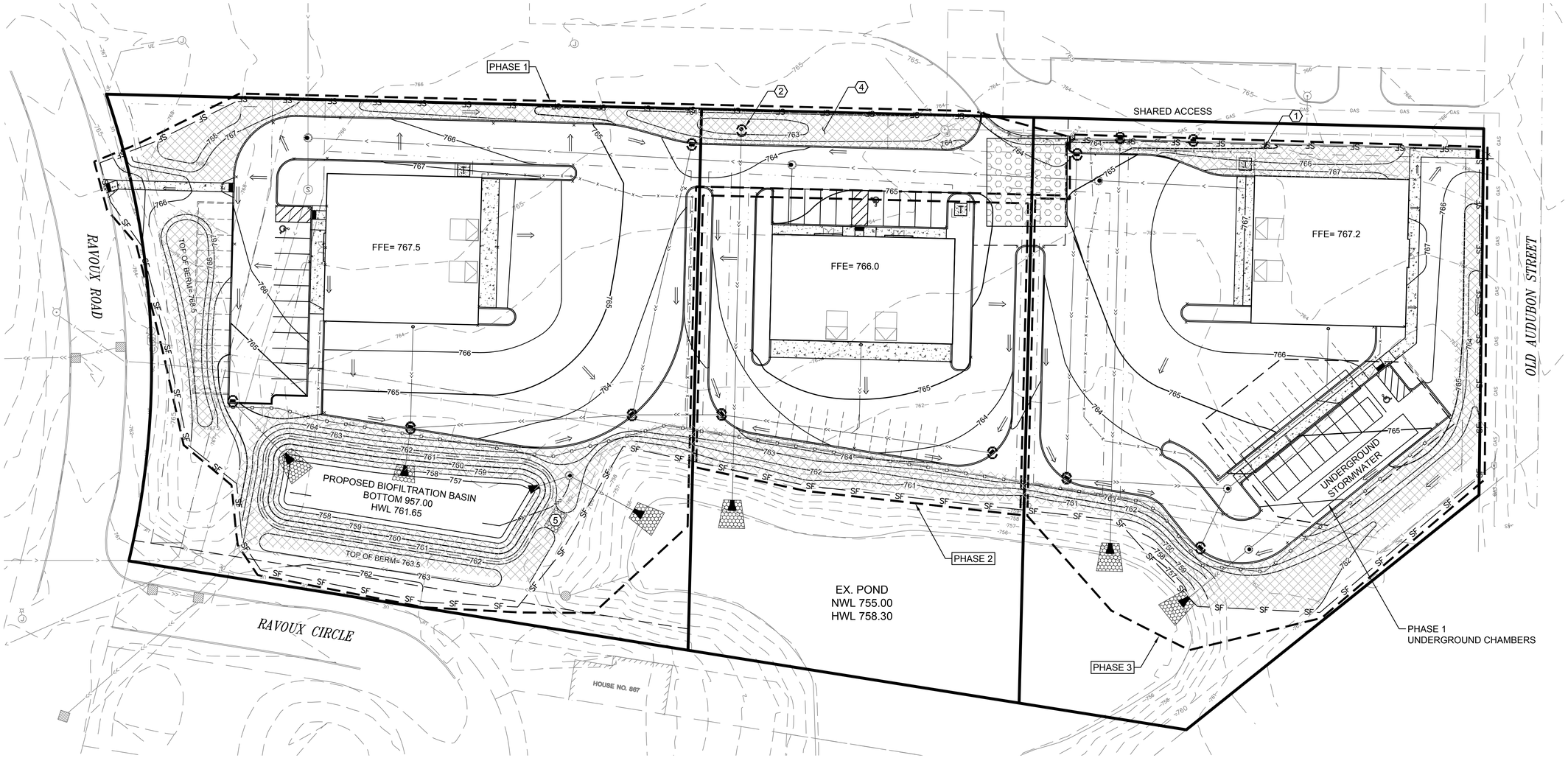
PHASE 3
- A. EAST 24" STORM TO POND.
- B. LOT 3 BUILDING & PAVEMENT.
- C. STAGING LOCATED ON LOT 3.

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- 966 EXISTING MINOR CONTOUR
- 965 EXISTING MAJOR CONTOUR
- 966 PROPOSED MINOR CONTOUR
- 965 PROPOSED MAJOR CONTOUR
- × 959.4 EXISTING SPOT ELEVATION
- DRAINAGE ARROW
- PROPOSED CONCRETE C&G
- SF SILT FENCE
- INLET SEDIMENT PROTECTION
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET



ANDERSON
13605 1st Avenue N. #100
Plymouth, MN 55441 | ae-mn.com
P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

EROSION & SEDIMENT CONTROL PLAN

DRAWING NO.

C7

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:35am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files_01 SHEETS\15311_C_GRAD.dwg
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STORM WATER POLLUTION PREVENTION PLAN NARRATIVE - PAGE 1 OF 2

PROJECT DESCRIPTION/LOCATION

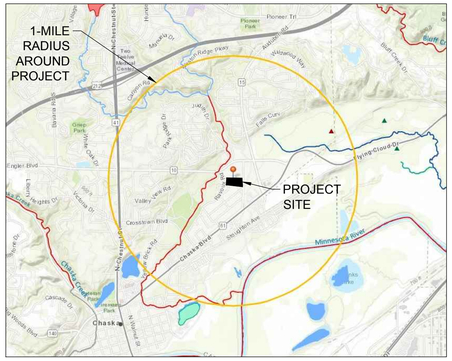
STRUCTURES INC. IS LOCATED IN THE CITY OF CHASKA, MN IN CARVER COUNTY BOUNDED ON ARBOR DRIVE TO THE NORTH, OLD AUDUBON STREET TO THE EAST, RAVOUX CIRCLE AND RESIDENTIAL DEVELOPMENT TO THE SOUTH, AND RAVOUX ROAD THE TO THE WEST. THE PROPERTY IS LOCATED IN THE LOWER MINNESOTA RIVER WATERSHED, AND THE SITE ENCOMPASSES 5.25 ACRES.

THE PLANNED SCOPE OF THE PROJECT INCLUDES:

- CONSTRUCTION OF 3 NEW WAREHOUSE BUILDINGS.
- THE INSTALLATION OF EROSION CONTROL MEASURES AS REQUIRED FOR THE MASS GRADING OF THE SITE FOR THE CONSTRUCTION OF THE NEW WAREHOUSE BUILDINGS AND ACCOMPANYING PARKING LOTS AND LOADING DOCKS.
- INSTALLATION OF SANITARY SEWER, WATERMAIN, AND STORM SEWER.
- PLACEMENT ON CONCRETE AS REQUIRED TO ESTABLISH CURB, GUTTER, AND SIDEWALKS THROUGHOUT THE SITE.

RECEIVING WATERS

THESE WATERS ARE LOCATED WITHIN ONE MILE (AERIAL RADIUS) OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE. DUE TO THE PROXIMITY OF THE RECEIVING WATERS, THE BMPS DESCRIBED IN APPENDIX A OF THE NPDES PERMIT MAY APPLY TO ALL AREAS OF THE SITE.



WATERS WITHIN 1 MILE RADIUS					
NAME OF WATER BODY	TYPE (LAKE, RIVER, WETLAND, DITCH, ETC)	APPENDIX A SPECIAL WATER (YES OR NO)	IMPAIRED WATER WITHIN 1 MILE OF PROJECT SITE (YES OR NO)	APPROVED TMDL	RECEIVING WATERS (YES OR NO)
MINNESOTA RIVER	RIVER	NO	YES	NO	YES
EAST CREEK	CREEK	NO	YES	NO	NO
ASSUMPTION CREEK	CREEK	YES	YES	NO	NO
SEMINARY FEN	WETLAND	YES	YES	YES	NO

DUE TO THE PROXIMITY OF THE MINNESOTA RIVER, EAST CREEK, ASSUMPTION CREEK, AND SEMINARY FEN, THE FOLLOWING WILL BE IMPLEMENTED ACCORDING TO THE MPCA REQUIREMENTS FOR DISCHARGING INTO IMPAIRED WATERS:

1. PERMITEES MUST IMMEDIATELY INITIATE STABILIZATION OF EXPOSED SOIL AREAS, AS DESCRIBED IN ITEM 8.4 OF THE NPDES CONSTRUCTION GENERAL PERMIT, AND COMPLETE THE STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES.
2. PERMITEES MUST PROVIDE A TEMPORARY SEDIMENT BASIN AS DESCRIBED IN SECTION 14 FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.
3. PERMITEES MUST INCLUDE AN UNDISTURBED BUFFER ZONE OF NOT LESS THAN 100 LINEAR FEET FROM A SPECIAL WATER (NOT INCLUDING TRIBUTARIES) AND MUST MAINTAIN THIS BUFFER ZONE AT ALL TIMES, BOTH DURING CONSTRUCTION AND AS A PERMANENT FEATURE POST CONSTRUCTION, EXCEPT WHERE A WATER CROSSING OR OTHER ENCROACHMENT IS NECESSARY TO COMPLETE THE PROJECT. PERMITEES MUST FULLY DOCUMENT THE CIRCUMSTANCE AND REASONS THE BUFFER ENCROACHMENT IS NECESSARY IN THE SWPPP AND INCLUDE RESTORATION ACTIVITIES. THIS PERMIT ALLOWS REPLACEMENT OF EXISTING IMPERVIOUS SURFACE WITHIN THE BUFFER. PERMITEES MUST MINIMIZE ALL POTENTIAL WATER QUALITY, SCENIC AND OTHER ENVIRONMENTAL IMPACTS OF THESE EXCEPTIONS BY THE USE OF ADDITIONAL OR REDUNDANT BMP'S AND MUST DOCUMENT THIS IN THE SWPPP FOR THE PROJECT.

SOIL TYPES

SOIL TYPES TYPICALLY FOUND ON THIS PROJECT RANGE FROM PEAT TO POORLY GRADED SAND. PER SOIL BORINGS TAKEN BY BRAUN INTERTEC DATED MAY 3RD, 2019. BRAUN INTERTEC REPORT IS TO BE KEPT ON SITE AS PART OF THE SWPPP AND IS TO BE MADE AVAILABLE UPON REQUEST.

LONG TERM MAINTENANCE AND OPERATION

STRUCTURES INC. HAS ENTERED INTO A MAINTENANCE AGREEMENT WITH THE CITY OF CHASKA THAT IDENTIFIES THE AGENCY THAT IS RESPONSIBLE FOR ONGOING MAINTENANCE, AND HOW RESPONSIBILITY WILL BE TRANSFERRED TO OTHER AGENTS.

PROJECT PERSONNEL AND TRAINING

THIS SWPPP WAS PREPARED BY PERSONNEL THAT ARE CERTIFIED IN THE DESIGN OF CONSTRUCTION SWPPP. COPIES OF THE CERTIFICATIONS ARE ON FILE WITH THE ENGINEER.

PROVIDE A CERTIFIED EROSION CONTROL SUPERVISOR IN GOOD STANDING WHO IS KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES. THE EROSION CONTROL SUPERVISOR WILL WORK WITH THE PROJECT ENGINEER / SWPPP DESIGNER TO OVERSEE THE IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS BEFORE, DURING, AND AFTER CONSTRUCTION UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA. PROVIDE PROOF OF CERTIFICATION AT THE RECONSTRUCTION MEETING. WORK WILL NOT BE ALLOWED TO COMMENCE UNTIL PROOF OF CERTIFICATION HAS BEEN PROVIDED TO THE PROJECT ENGINEER.

PROVIDE AT LEAST ONE CERTIFIED INSTALLER FOR EACH CONTRACTOR OR SUBCONTRACTOR THAT INSTALLS THE PRODUCTS LISTED IN SPECIFICATION SECTION 2573.3.A.2 CERTIFIED INSTALLERS. PROVIDE PROOF OF CERTIFICATION AT THE RECONSTRUCTION MEETING. WORK WILL NOT BE ALLOWED TO COMMENCE UNTIL PROOF OF CERTIFICATION HAS BEEN PROVIDED TO THE PROJECT ENGINEER.

CHAIN OF RESPONSIBILITY

THE OWNER AND CONTRACTOR ARE CO-PERMITTEES FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION PERMIT. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION PERMIT AT ALL TIMES UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA THE CONTRACTOR WILL DEVELOP A CHAIN OF COMMAND WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE, THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION, AND A NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

PROJECT CONTACTS

THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS BEFORE, DURING, AND AFTER CONSTRUCTION UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED.

CONTACT INFORMATION		
ORGANIZATION	CONTACT NAME	PHONE
STRUCTURES INC.	JEREMY BANKEN	952-300-9451
ANDERSON ENGINEERING (SWPPP DESIGN)	JACOB DOBIAS*	763-412-4000
(CONTRACTOR)		

*CERTIFIED FOR DESIGN OF CONSTRUCTION SWPPP BY UNIVERSITY OF MINNESOTA, EXPIRES 5/31/26

MPCA DUTY OFFICER 24 HOUR EMERGENCY NOTIFICATION:
651-649-5451 OR 800-422-0798

SITE INSPECTION AND MAINTENANCE

CONTRACTOR SHALL PROVIDE NAME, CONTACT INFO, AND TRAINING DOCUMENTATION FOR THE PERSON RESPONSIBLE FOR SWPPP IMPLEMENTATION AND INSPECTION/MAINTENANCE OF BMPS.

INSPECT THE ENTIRE CONSTRUCTION SITE A MINIMUM OF ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES WITHIN A 24 HOUR TIME FRAME. INSPECT ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT, EROSION PREVENTION AND SEDIMENT CONTROL BMPS UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION AND THE N.O.T. HAS BEEN SUBMITTED. INSPECT SURFACE WATER INCLUDING DRAINAGE DITCHES FOR SIGNS OF EROSION AND SEDIMENT DEPOSITION. INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF TRACKING ONTO PAVED SURFACES. INSPECT SURROUNDING PROPERTIES FOR EVIDENCE OF OFF SITE SEDIMENT ACCUMULATION.

RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES IN WRITING WITHIN 24 HOURS. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO THE PROJECT ENGINEER.

FOR PROJECTS THAT DISCHARGE TO PROHIBITED WATERS, CONDUCT ROUTINE SITE INSPECTIONS AT A MINIMUM OF ONCE EVERY 72 HOURS (3 DAYS).

INCLUDE THE FOLLOWING IN THE RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY:

A. DATE AND TIME OF INSPECTIONS
B. NAME OF PERSONS CONDUCTING INSPECTIONS
C. FINDINGS OF INSPECTIONS, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTIONS
D. CORRECTIVE ACTION TAKEN, INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES
E. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCH IN 24 HOURS
F. DOCUMENTS AND CHANGES MADE TO THE SWPPP

REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPS BY IN THE TIME PROVIDED BELOW:

A. REPAIR, REPLACE, OR SUPPLEMENT PERIMETER CONTROL DEVICES WHEN IT BECOMES NONFUNCTIONAL OR SEDIMENT REACHES ½ THE HEIGHT OF THE DEVICE. COMPLETE REPAIRS BY
B. THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY.
C. REPAIR OR REPLACE INLET PROTECTION DEVICES WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES ½ THE HEIGHT AND/OR DEPTH OF THE DEVICE. COMPLETE REPAIRS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVER.
D. DRAIN AND REMOVE SEDIMENT FROM TEMPORARY AND PERMANENT SEDIMENT BASINS ONCE THE SEDIMENT HAS REACHED ½ THE STORAGE VOLUME. COMPLETE WORK WITHIN 72 HOURS OF DISCOVERY.
E. REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATER INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. RESTABILIZED ANY AREAS THAT ARE DISTURBED BY SEDIMENT REMOVAL OPERATION. SEDIMENT REMOVAL AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF DISCOVERY. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR WORKING IN SURFACE WATERS.
F. REMOVE TRACKED SEDIMENT FROM PAVED SURFACES BOTH ON AND OFF SITE WITHIN 24 HOURS OF DISCOVERY. STREET SWEEPING MAY HAVE TO OCCUR MORE OFTEN TO MINIMIZE OFF SITE IMPACTS. LIGHTLY WET THE PAVEMENT PRIOR TO SWEEPING
G. MAINTAIN ALL BMPS UNTIL WORK HAS BEEN COMPLETED, SITE HAS GONE UNDER FINAL STABILIZATION, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

AREA SUMMARY

ACREAGE SUMMARY	
AREA	ACRES
PROPERTY	5.25
DISTURBED	3.959
IMP. PRE-CONSTRUCTION	0.07
IMP. POST-CONSTRUCTION	2.51
NEW IMP.	2.44
PERVIOUS AT COMPLETION	2.74

SPECIAL SITE NOTES

IF SITE REQUIRES PERMANENT STORMWATER MANAGEMENT HYDROLOGIC AND WATER QUALITY MODELING DATA IS AVAILABLE UPON REQUEST.

THE SWPPP COORDINATOR MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA AND SHALL BE RESPONSIBLE FOR THE FOLLOWING:

- SUBMIT THE NPDES PERMIT APPLICATION AND COMPLY WITH ALL REQUIREMENTS
- IMPLEMENT THE SWPPP.
- OVERSEE INSTALLATION AND MAINTENANCE PRACTICES AND REPAIRS IDENTIFIED IN THE SWPPP.
- IMPLEMENT AND OVERSEE EMPLOYEE TRAINING AND RECORD IN OR WITH THE SWPPP.
- CONDUCT OR PROVIDE FOR INSPECTION AND MONITORING ACTIVITIES AND MAINTAIN LOGS AS PERMIT REQUIRES.
- IDENTIFY OTHER POTENTIAL POLLUTANT SOURCES NOT LISTED IN THE SWPPP AND ADD THEM.
- IDENTIFY ANY DEFICIENCIES IN THE SWPPP AND CORRECT THEM.
- ENSURE THAT CHANGES TO CONSTRUCTION PLANS ARE ADDRESSED IN THE SWPPP.
- FILE THE NOTICE OF TERMINATION UPON PROJECT COMPLETION.

AFTER THE NOTICE OF TERMINATION HAS BEEN FILED, THE OWNER SHALL BE RESPONSIBLE FOR ASSIGNING RESPONSIBILITY FOR PERMANENT MAINTENANCE MEASURES.

PERMITS

THE FOLLOWING PERMITS APPLY TO THIS PROJECT:

AGENCY	TYPE OF PERMIT	PERMIT # AND DATES
MINNESOTA POLLUTION CONTROL AGENCY (MPCA)	NPDES CONSTRUCTION PERMIT	
CITY OF CHASKA	GRADING PERMIT	
CITY OF CHASKA	BUILDING PERMIT	

NOTE: IF THE 25' BUFFERS ARE MAINTAINED FORM THE WETLANDS, ADDITIONAL PERMITS WILL NOT BE REQUIRED.

LOCATION OF SWPPP REQUIREMENTS

THE REQUIRED SWPPP ELEMENTS MAY BE LOCATED IN MANY PLACES
WITHIN THE PLAN SET.

SWPPP AMENDMENTS

A QUALIFIED INDIVIDUAL MUST COMPLETE ALL SWPPP CHANGES. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.

PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OF ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION OPERATION, MAINTENANCE, WEATHER, OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.

PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCE OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL.

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Plymouth, MN 55441 | ae-mn.com
P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

SWPPP 1

DRAWING NO.

C8

PLOTTED:	COMM. NO.
10/20/22	15311

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STORM WATER POLLUTION PREVENTION PLAN NARRATIVE - PAGE 2 OR 2

STABILIZATION TIME FRAMES

ALL AREAS DISTURBED BY CONSTRUCTION WILL RECEIVE SEED OR SOD ACCORDING TO THE PLANS AND SPECIFICATIONS AND WITHIN THE SPECIFIED VEGETATIVE TIME SCHEDULE. FINAL STABILIZATION WILL OCCUR WHEN THE SITE HAS A UNIFORM VEGETATIVE COVER WITH A DENSITY OF 70% OVER THE ENTIRE DISTURBED AREA COMPARED TO EXISTING CONDITIONS. ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS MUST BE REMOVED AS PART OF THE SITE FINAL STABILIZATION. ALL SEDIMENT MUST BE CLEANED OUT OF CONVEYANCES AND TEMPORARY SEDIMENTATION BASINS IF APPLICABLE.

AREA	TIME FRAME	NOTES
LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE	WITHIN 24 HOURS OF CONNECTION TO SURFACE WATER OR PROPERTY EDGE	1, 2, 3
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE	7 DAYS	1, 3
PIPE AND CULVERT OUTLETS	24 HOURS	
STOCKPILES	7 DAYS	1

1. INITIATE INLET STABILIZATION IMMEDIATELY WHEN CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED ON ANY PORTION OF THE SITE. COMPLETE STABILIZATION WITHIN THE TIME FRAME LISTED. IN MANY INSTANCES THIS WILL REQUIRE STABILIZATION TO OCCUR MORE THAN ONCE DURING THE COURSE OF THE PROJECT. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT CLAY OR SILT AND STOCKPILED AND CONSTRUCTED ROAD BASE ARE NOT APPROPRIATE AND THEREFORE EXEMPT FROM THE STABILIZATION REQUIREMENT.

2. APPLICATION OF MULCH, HYDROMULCH, TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN THESE AREAS.

3. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER, ANY WORK STILL BEING PERFORMED WILL BE SNOW MULCHED, SEEDED, AND BLANKETED WITHIN THE TIME FRAMES IN THE NPDES PERMIT.

4. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS. USE RAPID STABILIZATION METHOD 2, 3, OR 4 AS DIRECTED BY THE ENGINEER. THE SEED MIX USED IN THE RAPID STABILIZATION MAY BE SUBSTITUTED AS FOLLOWS:

   A. SINGLE YEAR CONSTRUCTION BETWEEN MAY 1 - AUGUST 1, SEED WITH SEED MIXTURE 21.111
   B. SINGLE YEAR CONSTRUCTION BETWEEN AUGUST 1 AND OCTOBER 31, SEED WITH SEED MIXTURE 21-112
   C. MULTI YEAR CONSTRUCTION 22-111

5. KEEP DITCHES AND EXPOSED SOILS IN AN EVEN ROUGH GRADED CONDITION IN ORDER TO BE ABLE TO APPLY EROSION CONTROL MULCHES, HYDROMULCHES AND BLANKETS.

GENERAL SWPPP NOTES FOR CONSTRUCTION ACTIVITY

1. CONTRACTOR SHALL AMEND THE SWPPP AND DOCUMENT ANY AND ALL CHANGES TO THE SWPPP AND ASSOCIATED PLAN SHEETS WITHIN 7 DAYS UPON IMPLEMENTATION. STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES.
2. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW ALL MINIMUM OF 7 DAYS FOR THE ENGINEER TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY THE ENGINEER. THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL.
3. IT IS THE DESIGNER'S INTENT THAT THE CONTRACTOR BUILD PONDS AND INSTALL EROSION CONTROL BMPS BEFORE PUTTING THEM INTO ACTIVE SERVICE TO THE MAXIMUM EXTENT PRACTICABLE.
4. BURNING OF ANY MATERIAL IS NOT ALLOWED WITHIN PROJECT BOUNDARY.
5. DO NOT DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. DELINEATE AREAS NOT TO BE DISTURBED PRIOR TO STARTING GROUND DISTURBING ACTIVITIES. IF IT BECOMES NECESSARY TO DISTURBED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS OBTAIN WRITTEN PERMISSION FROM THE PROJECT ENGINEER PRIOR TO PROCEEDING. PRESERVE ALL NATURAL BUFFERS SHOWN ON THE PLANS.
6. ROUT STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE. PROVIDE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES AS NEEDED TO KEEP CHANNELS FROM ERODING AND TO PREVENT NUISANCE CONDITIONS AT THE OUTLET.
7. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREA WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
8. THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS SHALL BE PLACED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND TO CAPTURE SEDIMENT ON SITE. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES COMMENCE.
9. ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UP GRADIENT OF ANY BUFFER ZONES BEFORE AND UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. MAINTAIN SEDIMENT CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
10. LOCATE PERIMETER CONTROL ON THE CONTOUR TO CAPTURE OVERLAND, LOW-VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS. PLACE J-HOOKS AT A MAXIMUM OF 100 FOOT INTERVALS.
11. PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES. PLACE BMP A MINIMUM 5 FEET FROM THE TOE OF SLOPE WHERE FEASIBLE. DO NOT PLACE STOCKPILES IN NATURAL BUFFER AREAS, SURFACE WATERS OR STORMWATER CONVEYANCES.
12. FLOATING SILT CURTAIN IS ALLOWED AS PERIMETER CONTROL FOR IN WATER WORK ONLY. INSTALL THE FLOATING SILT CURTAIN AS CLOSE TO SHORE AS POSSIBLE. PLACE PERIMETER CONTROL BMP ON LAND IMMEDIATELY AFTER THE IN WATER WORK IS COMPLETED.
13. DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
14. PLACE CONSTRUCTION EXITS, AS NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. PROVIDE CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACK OUT. MAINTAIN CONSTRUCTION EXITS WHEN EVIDENCE OF TRACKING IS DISCOVERED. REGULAR STREET SWEEPING IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE. CONSTRICTION EXITS ARE INCIDENTAL.
15. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE. IN THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN, THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. CLEAN OUT ALL PERMANENT STORMWATER BASINS REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS OR TEMPORARY SEDIMENT TRAPS TO THE DESIGN CAPACITY AFTER ALL UP GRADIENT LAND DISTURBING ACTIVITY IS COMPLETED.
16. PROVIDE SCOUR PROTECTION AT ANY OUTFALL OF DEWATERING ACTIVITIES.
17. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.

POLLUTION PREVENTION

1. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE.
2. STORE ALL BUILDING MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS, PESTICIDES, HERBICIDES, INSECTICIDES. FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS UNDER COVER WITH SECONDARY CONTAINMENT.
3. PROVIDE A SECURE STORAGE AREA WITH RESTRICTED ACCESS FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE. RETURN ALL HAZARDOUS MATERIALS AND TOXIC WASTE TO THE DESIGNATED STORAGE AREA AT THE END OF THE BUSINESS DAY UNLESS INFEASIBLE. STORE ALL HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING BUT NOT LIMITED TO OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT, PETROLEUM BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS WITH SECONDARY CONTAINMENT. CLEAN UP SPILLS IMMEDIATELY.
4. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
5. POSITION ALL PORTABLE TOILETS SO THAT THEY ARE SECURE AND CANNOT BE TIPPED OR KNOCKED OVER. PROPERLY DISPOSE OF ALL SANITARY WASTE.
6. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FORM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES. PROVIDE A SPILL KIT AT EACH LOCATION THAT VEHICLES AND EQUIPMENT ARE FUELED OR MAINTAINED AT.
7. LIMIT VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA OF THE SITE. CONTAIN RUNOFF FROM THE WASHING AREA TO A TEMPORARY SEDIMENT BASIN OR OTHER EFFECTIVE CONTROL. PROPERLY DISPOSE OF ALL WASTE GENERATED BY VEHICLE AND EQUIPMENT WASHING. ENGINE DEGREASING IS NOT ALLOWED ON THE SITE.
8. PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
9. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. INCLUDE IN THE PLAN HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT PLAN TO THE ENGINEER.
10. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTING, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
11. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, PARTICLES, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING SITE, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT SAW CUT SLURRY AND PLANING WASTE FROM LEAVING SITE AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS INCLUDING DITCHES AND CULVERTS.

RECORD RETENTION

THE SWPPP, ALL CHANGES TO IT AND INSPECTION AND MAINTENANCE RECORDS MUST BE KEPT ON-SITE DURING CONSTRUCTION. THE OWNER MUST RETAIN A COPY OF THE SWPPP ALONG WITH THE FOLLOWING RECORDS FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOTICE OF TERMINATION (NOT).

1. ANY OTHER PERMITS REQUIRED FOR THE PROJECT.
2. RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION
3. ALL PERMANENT OPERATIONS AND MAINTENANCE AGREEMENT THAT HAVE BEEN IMPLEMENTED INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE; AND
4. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.

SWPPP SCHEDULE OF INSTALLATION & MAINTENANCE

ITEM	INSTALLATION	INSPECTION & MAINTENANCE	REMOVAL
SILT FENCE	PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS.	INSPECT & MAINT. AFTER EACH RUN-OFF EVENT. REMOVE SEDIMENTS AS REQUIRED.	AFTER TRIBUTARY DRAINAGE AREA IS RESTORED.
ROCK CONST. ENTRANCE	PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS.	INSPECT REGULARLY. MAINTAIN AS NEEDED.	PRIOR TO PAVING.
OUTLET SKIMMER STRUCTURE	AFTER POND GRADING IS COMPLETED.	INSPECT REGULARLY. MAINTAIN AS NEEDED.	PERMANENT.
RIP-RAP & FILTER	UPON COMPLETION OF POND GRADING, CONC. SWALE CONST. AND OUTLET INSTALLATION.	INSPECT & MAINTAIN AT LEAST ANNUALLY AND AFTER HEAVY RAINFALL EVENT.	PERMANENT.
DETENTION POND	DURING EARTHWORK OPERATIONS.	AFTER HEAVY RAINFALL EVENTS. REMOVE SEDIMENTS AS NEEDED.	PERMANENT.
SEED & MULCH	AFTER POND GRADING IS COMPLETED.	INSPECT & MAINTAIN AFTER HEAVY RAINS. REPLACE WASH-OUT AREAS IMMEDIATELY	NO REMOVAL NECESSARY.
INLET PROTECTION	UPON INLET CONSTRUCTING	WHEN 1/3 CAPACITY OF BMP IS REACHED	AFTER TRIBUTARY AREAS ARE FULLY RESTORED

DESCRIPTION OF PERMANENT STORMWATER TREATMENT SYSTEMS

A BIO-FILTRATION BASIN AND UNDERGROUND GEOSTORAGE CHAMBERS WILL BE USED TO MEET STORMWATER RATE, VOLUME, AND QUALITY REQUIREMENTS. SEE STORMWATER MANAGEMENT PLAN REPORT FOR DETAILS.

CALCULATIONS FOR TEMPORARY & PERMANENT STORMWATER TREATMENT SYSTEMS

SEE STORMWATER MANAGEMENT PLAN REPORT FOR DETAILS.

SITE ASSESSMENTS FOR GROUNDWATER OR SOIL CONTAMINATION

LAND HAS NOT BEEN DEVELOPED. THEREFORE, THERE IS NOT PROBABLE CAUSE OF SOIL CONTAMINATION ON SITE.

SITE CONSTRAINTS

THE ORGANIC SOILS ON SITE ARE VERY LOOSE SOILS AND ARE CONSIDERED UNSUITABLE FOR INFLATION PRACTICES. THE AREAS ON SITE WITH EXISTING SILTY AND CLAYEY SOILS MAY COLLECT WATER DURING TIMES OF INCLEMENT WEATHER OR SNOW MELT. WATER SHOULD BE REMOVED FROM WITHIN EXCAVATION DURING CONSTRUCTION. THE ON-SITE CLAYEY SAND SOILS ARE CONSIDERED POTENTIALLY CORROSIVE. BURIED METALLIC UTILITIES SHOULD BE COATED OR PROTECTED.

MINIMIZE SOIL COMPACTION & PRESERVE TOPSOIL

THE FOLLOWING ACTIONS CAN BE MADE TO MINIMIZE / PREVENT SOIL COMPACTION DURING CONSTRUCTION ACTIVITIES:
1. REDUCE CONTACT AREA PRESSURE TO PROTECT TOPSOIL BY INCREASING THE CONTACT ARE OF THE WHEEL, USE WIDE TIRES, USE TIRE INFLATION PRESSURE CONTROL SYSTEM, USE CRAWLER TRACKS ON SENSITIVE SITES.
2. REDUCE WHEEL LOAD
3. REDUCE WHEEL SLIP
4. REDUCE NUMBER OF PASSES

ENVIRONMENTAL IMPACTS

ENDANGERED SPECIES: ENDANGERED SPECIES WILL NOT BE IMPACTED WITH THIS PROJECT.

ARCHAEOLOGICAL REVIEW: THE SITE IS NOT ANTICIPATED TO BE AN ARCHAEOLOGICAL SITE.

NOTICE OF TERMINATION

1. PRIOR TO SUBMITTING NOTICE OF TERMINATION TO THE MPCS, THE PERMANENT STORMWATER TREATMENT SYSTEM HAS BEEN CONSTRUCTED, INSPECTED, AND IS OPERATING AS DESIGNED.
2. SUBMIT NOTICE OF TERMINATION TO THE MPCA ONCE PERMIT TERMINATION CONDITIONS ARE MET.

ESTIMATED BMPS QUANTITIES

BMP	ORIGINAL ESTIMATE	MODIFICATION	DATE
ENERGY DISSIPATER			
TEMP. DIVERSION DIKES			
CHECK DAMS			
TEMP SEEDING			
PERMANENT SEEDING			
PERMANENT SODDING			
MULCHES (SPECIFY TYPES)			
CAT 3 EROSION CONTROL BLANKET	37,000 SF		
SOIL TACKIFIERS			
SILT FENCING	1,700 LF		
EROSION CONTROL MATS			
STORM DRAIN INLET PROTECTION	13 EA		
TEMPORARY OR PERMANENT SEDIMENTATION BASINS	1 EA		
CONSTRUCTION ENTRANCE	1 EA		
DEWATERING (TREATMENT LOCATION, SCHEMATIC, & SAMPLING PLAN REQUIRED			
CONCRETE TRUCK WASHOUT			

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STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

SWPPP 2

DRAWING NO.

C9

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:35am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files\
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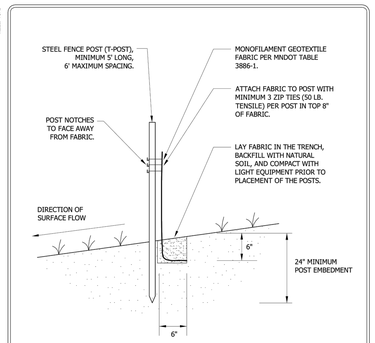
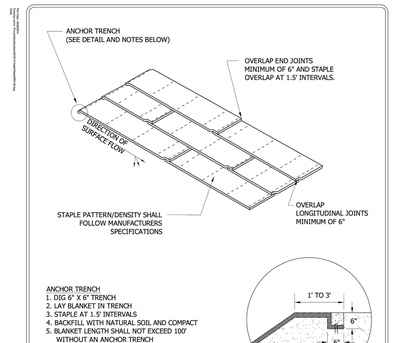


NOTES:
1. SPLICING WILL BE MADE AT OPPOSING SILT FENCE POSTS BY PLACING POSTS AND SILT FENCE NEXT TO EACH OTHER AND ROTATING 360°.
2. SILT FENCE IS MACHINE SLICED TYPE SILT FENCE THAT IS HAND INSTALLED IN AREAS INACCESSIBLE TO EQUIPMENT DUE TO SPACE LIMITATIONS, WET SOILS, STEEP SLOPES, ETC.

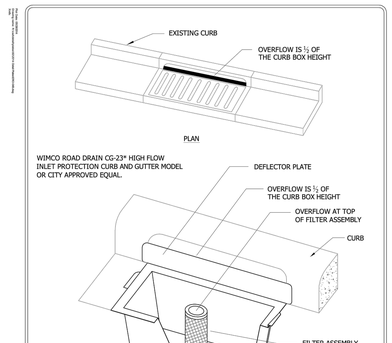
Stantec — SILT FENCE STANDARD — CHASKA, MINNESOTA — LAST REVISION: APRIL 2008 — PLATE NO. ERO-1C



ANCHOR TRENCH
1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH

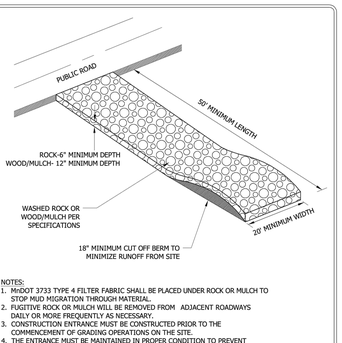
NOTE:
SLOPE SURFACE SHALL BE FREE OF ROCKS, SOIL CLUMPS, STICKS, VEHICLE IMPRINTS, AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT.

Stantec — EROSION CONTROL BLANKET INSTALLATION — CHASKA, MINNESOTA — LAST REVISION: APRIL 2008 — PLATE NO. ERO-2



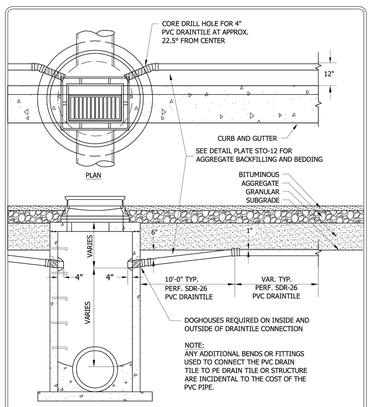
* FOR THE NEW R-3290-VB STANDARD CASTING, INSTALL WIMCO ROAD DRAIN CG-3290 OR CITY APPROVED EQUAL.

Stantec — INLET PROTECTION - CATCH BASIN INSERT AFTER CURB CONSTRUCTION — CHASKA, MINNESOTA — LAST REVISION: APRIL 2008 — PLATE NO. ERO-4B

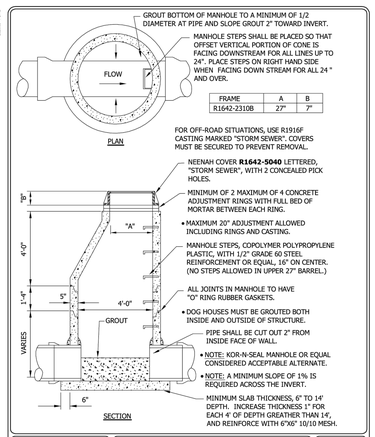


NOTES:
1. MNDOT 3733 TYPE 4 FILTER FABRIC SHALL BE PLACED UNDER ROCK OR MULCH TO STOP MUD MIGRATION THROUGH MATERIAL.
2. FUGITIVE ROCK OR MULCH WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.
3. CONSTRUCTION ENTRANCE MUST BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF GRADING OPERATIONS ON THE SITE.
4. THE ENTRANCE MUST BE MAINTAINED IN PROPER CONDITION TO PREVENT TRACKING OF MUD OFF THE SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL ROCK, WOOD/MULCH, OR REMOVAL AND REINSTALLATION OF THE PAD.
5. THIS ENTRANCE WILL BE USED BY ALL VEHICLES ENTERING OR LEAVING THE PROJECT.
6. THE CONSTRUCTION ENTRANCE WILL BE REMOVED PRIOR TO THE PLACEMENT OF BITUMINOUS SURFACING.

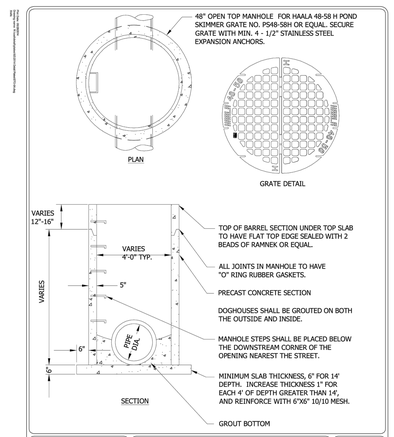
Stantec — ROCK CONSTRUCTION ENTRANCE — CHASKA, MINNESOTA — LAST REVISION: APRIL 2008 — PLATE NO. ERO-7



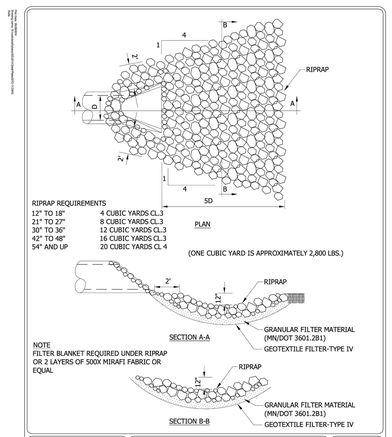
Stantec — DRAINTILE INSTALLATION INTO CATCHBASIN MANHOLE — CHASKA, MINNESOTA — LAST REVISION: APRIL 2016 — PLATE NO. STO-14



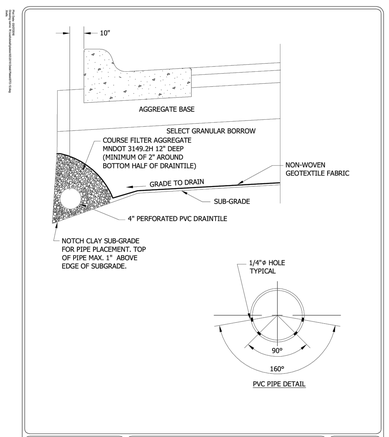
Stantec — STORM SEWER MANHOLE — CHASKA, MINNESOTA — LAST REVISION: MARCH 2017 — PLATE NO. STO-1



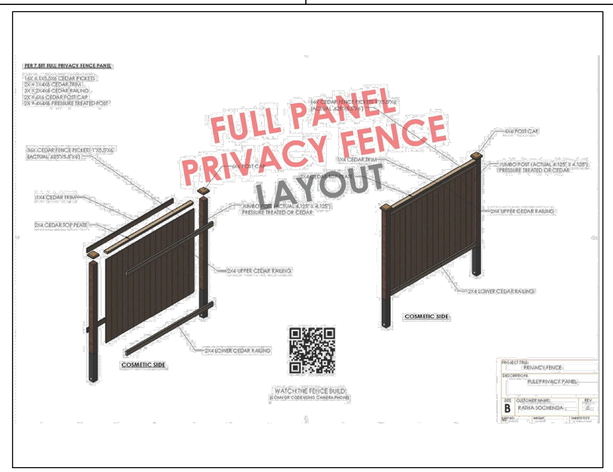
Stantec — TYPE II CATCHBASIN MANHOLE POND SKIMMER CHASKA, MINNESOTA — LAST REVISION: JUNE 2012 — PLATE NO. STO-5A



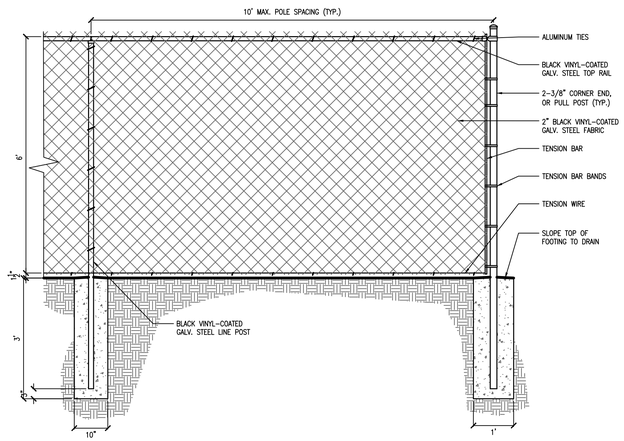
Stantec — RIPRAP AT OUTLETS — CHASKA, MINNESOTA — LAST REVISION: APRIL 2004 — PLATE NO. STO-11



Stantec — PERFORATED PVC DRAINTILE PIPE BELOW CONCRETE CURB — CHASKA, MINNESOTA — LAST REVISION: NOV. 2016 — PLATE NO. STO-12



ANDERSON — 6' HT. CEDAR PRIVACY FENCE — 1



ANDERSON — 6' HT. CHAIN-LINK SECURITY FENCE — 2

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1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

CIVIL SITE DETAILS
1

DRAWING NO.

C10

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:35am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files\
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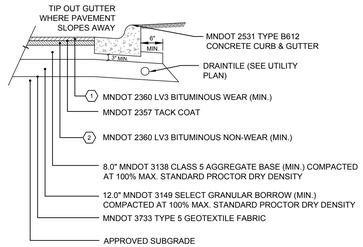
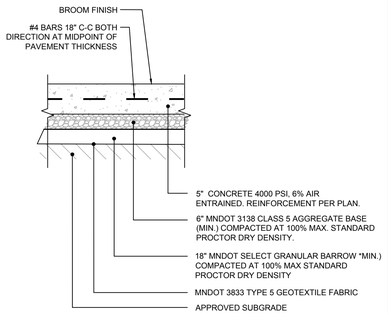


KEY NOTES		
KEY NOTE	LIGHT DUTY	HEAVY DUTY
1	1.5"	2"
2	2"	3"

NOTES:
VERIFY PAVEMENT SECTION DESIGN AND SUBGRADE REQUIREMENTS WITH GEOTECHNICAL REPORT AND RECOMMENDATIONS PRIOR TO CONSTRUCTION.

NOT TO SCALE

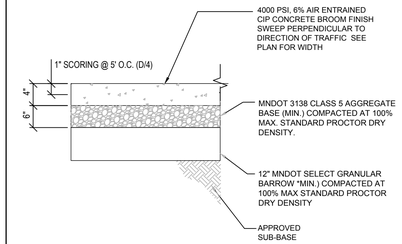
ANDERSON | BITUMINOUS PAVEMENT SECTION | 1



NOTES:
1. CONTRACTOR SHALL SUBMIT JOINTING PLAN FOR APPROVAL PRIOR TO FINAL PAVING. CONTROL JOINTS AND EXPANSION JOINTS SHALL BE USED ACCORDINGLY.
2. VERIFY PAVEMENT SECTION DESIGN AND SUBGRADE REQUIREMENTS WITH GEOTECHNICAL REPORT AND RECOMMENDATIONS PRIOR TO CONSTRUCTION.

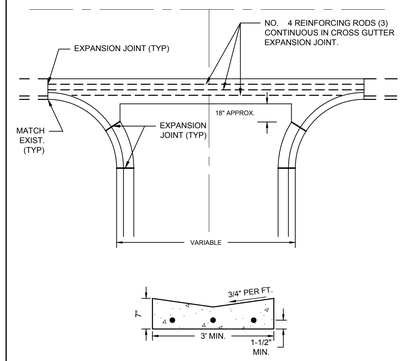
NOT TO SCALE

ANDERSON | CONCRETE PAVEMENT SECTION | 2



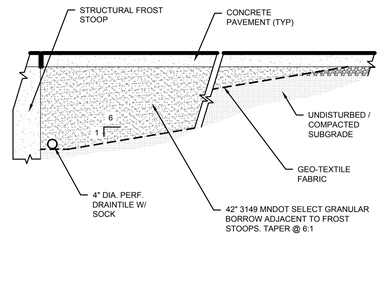
NOT TO SCALE

ANDERSON | CONCRETE WALK SECTION & CONCRETE JOINTS | 3



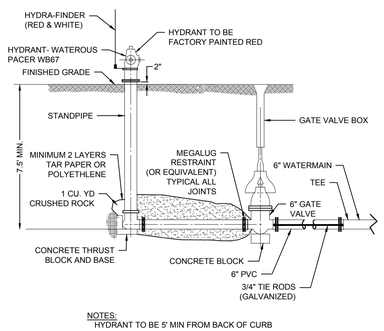
NOT TO SCALE

ANDERSON | CONCRETE VALLEY GUTTER | 4



NOT TO SCALE

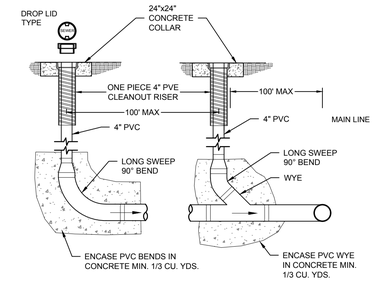
ANDERSON | FROST STOOP DETAIL | 5



NOTES:
HYDRANT TO BE 5' MIN FROM BACK OF CURB

NOT TO SCALE

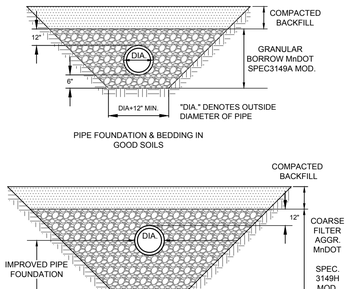
ANDERSON | HYDRANT & GATE VALVE DETAIL | 6



END OF LINE CLEANOUT IN LINE CLEANOUT

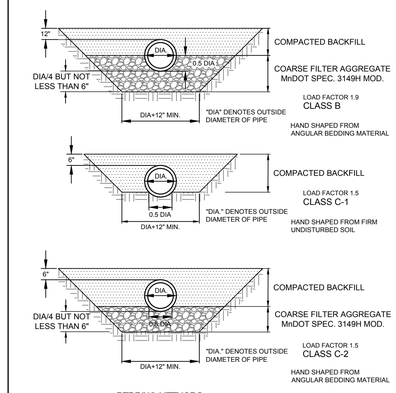
NOT TO SCALE

ANDERSON | SANITARY CLEAN OUT | 7



NOT TO SCALE

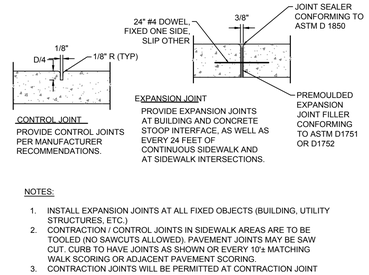
ANDERSON | PVC PIPE BEDDING | 8



BEDDING METHODS RCP OR DIP

NOT TO SCALE

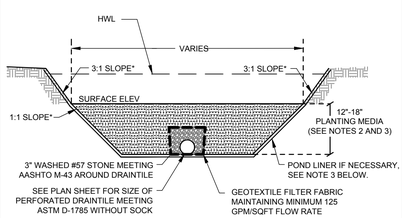
ANDERSON | RCP & DIP PIPE BEDDING | 9



NOTES:
1. INSTALL EXPANSION JOINTS AT ALL FIXED OBJECTS (BUILDING, UTILITY STRUCTURES, ETC.)
2. CONTRACTION / CONTROL JOINTS IN SIDEWALK AREAS ARE TO BE TOOLED (NO SAWCUTS ALLOWED). PAVEMENT JOINTS MAY BE SAW CUT. CURB TO HAVE JOINTS AS SHOWN OR EVERY 10± MATCHING WALK SCORING OR ADJACENT PAVEMENT SCORING.
3. CONTRACTION JOINTS WILL BE PERMITTED AT CONTRACTION JOINT LOCATIONS AS APPROVED BY ENGINEER.
4. SIDEWALK JOINT SPACE = 5'
5. ALL JOINTS SHALL BE PARALLEL WITH AND/OR PERPENDICULAR TO BUILDING AND CURB LINES UNLESS APPROVED BY ENGINEER.
6. ON CURB & GUTTER INSTALL EXP. JOINTS AT ALL PTs & PCs OR CURVES & AT 50' INTERVALS ON STRAIGHT SECTIONS.

NOT TO SCALE

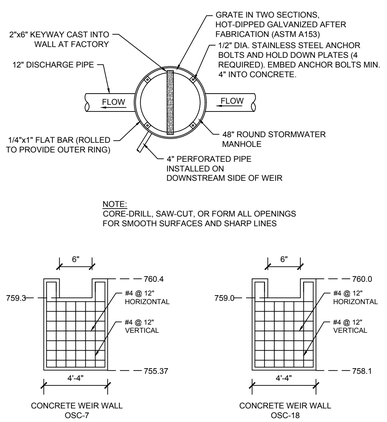
ANDERSON | CONCRETE JOINTS & NOTES | 10



NOTES:
1. EXISTING SOIL UNDER FILTRATION BASIN TO BE SCARIFIED TO A DEPTH OF 8-12".
2. MEDIA MIX 'D' CONSITUTING OF THE FOLLOWING VOLUME BY WEIGHT:
   COURSE SAND (ASTM C-33)..... 50% - 65%
   TOP SOIL..... 25% - 35%
   COMPOST (MNDOT M890 GRADE 2)..... 10% - 15%
   IRON FILINGS..... 5% - 8%
3. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OF THE BIOFILTRATION BASIN, CONTRACTOR TO INSTALL LINER. LINER SHALL EXTEND TO 6 IN. ABOVE HWL.

NOT TO SCALE

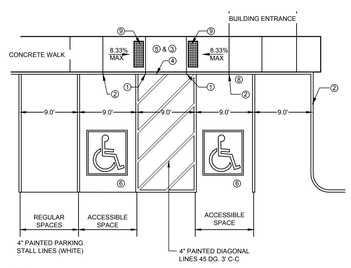
ANDERSON | FILTRATION BASIN TYPICAL SECTION | 11



NOTE:
CORE-DRILL, SAW-CUT, OR FORM ALL OPENINGS FOR SMOOTH SURFACES AND SHARP LINES

NOT TO SCALE

ANDERSON | OUTLET CONTROL STRUCTURE DETAIL | 10

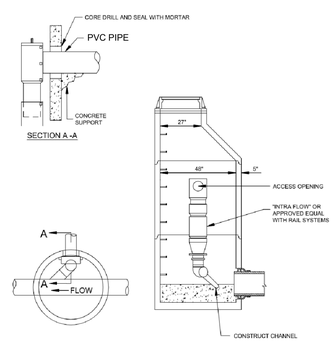


NOTES:
CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.
ALL GRADE BREAKS WITHIN THE PAN SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.
TO ENSURE RAMPS AND LANDING ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY.
ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.
TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
A MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL.

① 0" CURB HEIGHT FOR FULL LENGTH OF CONCRETE WALK
② FLUSH CURB HEIGHT
③ DETECTABLE WARNING MAY BE PART OF 4'X4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213 JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB.
⑤ 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS
⑥ IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X4 ' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
⑦ ACCESSIBILITY SYMBOL 28" HIGH BY 24" WIDE IN A 48 SQUARE BLUE BACKGROUND WITH WHITE BORDER PER USDOT MUTCD FIG 3B-22.
⑧ MONOLITHIC CONCRETE CURB
MATCH ADJACENT HY-VEE DETECTIBLE WARNING PLATE MATERIAL AND STYLE.

NOT TO SCALE

ANDERSON | ADA ACCESSIBLE STALL DETAIL | 11



NOT TO SCALE

ANDERSON | LOW PROFILE INSIDE DROP SANITARY MANHOLE | 12

ANDERSON
13605 1st Avenue N. #100
Plymouth, MN 55441 | ae-mn.com
P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

CIVIL SITE DETAILS
2

DRAWING NO.

C11

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:35am BField X:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files_01 SHEETS\15311_C_DET-1.dwg
Xref Filename: \ 15311_TITLEBLOCK_24X36 \ 15311_C_base_A \

Oct 20, 2022 - 11:35am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_07 Civil_01 CAD files_01 SHEETS\15311_C_DET-1.dwg
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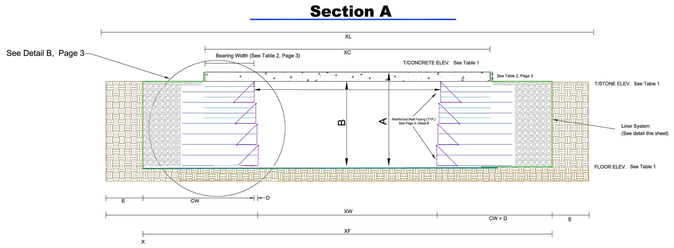
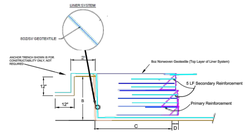
Section A





Detail A
Typical Perimeter Detail
Not to scale

LEGEND

- Open Chamber
- Stone Backfill
- Limits of Excavation
- Precast Concrete Roof Deck
- Reinforced Walls

Section B

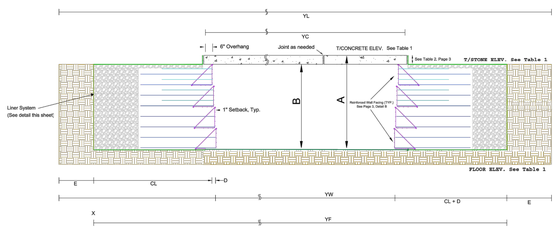


Table 1
GeoStorage® System Dimensions

Chamber
A: Invert-Surface Height
B: Wall Height
CW: Wall Width along length (Section A)
CL: Wall Width along width (Section B)
D: Batter Width
E: Width of Back Cut (at wall height)
F: Top of Wall- Top of Perimeter Stone
XW: Width of Chamber at Toe
XF: Width of Floor Surface
XL: Width of Top Surface
YW: Length of Chamber at Toe (each)
YF: Length of Floor Surface
YL: Length of Top Surface
XC: Width of Concrete Roof
YC: Length of Concrete Roof (each)
Geogrid Embedment
Total Storage Capacity (SF)
Floor Elevation
Top of Stone Elevation
Top of Concrete Elevation

NOTE: AT THE CHAMBER END CAPS (S. WIDTH), THE WALL SHALL BE CONSTRUCTED AS SHOWN IN THE BOTTOM 3 FT. OF OF DETAIL B, WITH 1½" STONE, 9 INCH GEOGRID SPACING AND NO GEOTEXTILE WRAP.

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GeoStorage	GeoStorage Engineering LLC	Structures Inc. Chaska, MN
		GeoStorage® Underground Stormwater Detention System
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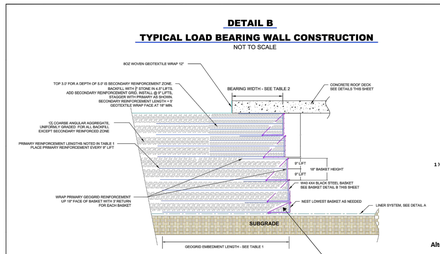
		GeoStorage® System
		SCALE: NTS
		DESIGNED BY: 9-9-22
		DRAWN BY: TS
		CHECKED BY: TS
		SHEET NO.: 2 of 4
		DRAWING NO.: T-002

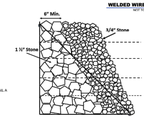
DETAIL B
TYPICAL LOAD BEARING WALL CONSTRUCTION
NOT TO SCALE



Note: Heavy duty plastic ties may replace the bracket in the bottom "nested" basket
Tie lowest basket to upper basket at 2 ft spacing.

DETAIL C
WELDED WIRE BASKET DETAILS
NOT TO SCALE

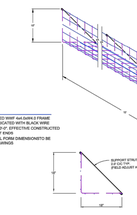
WELDED WIRE FORM DETAIL
NOT TO SCALE



Alternate Bridge Seat Chamber Wall Face (top 3 ft)
In-Lieu of Geotextile Face Wrap

NOTES:
1. FACING TO CONSIST OF PREFABRICATED WWF 6x6 (6x6W2.9 XW2.9 WWF)
2. ALL FORMS AND STRUTS WILL BE TIED OFF TO WITH BLACK WIRE
3. OVERALL LENGTH OF WIRE FORMING 10'-0". EFFECTIVE CONSTRUCTED LENGTH OF 9'-6" WITH 3" OVERLAP AT JOINT.
4. STRUT LENGTH AND CROSS SECTIONAL FORM DIMENSIONS TO BE PROVIDED IN FABRICATORS SHOP DRAWINGS

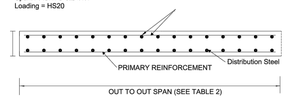
SUPPORT STRUT
NOT TO SCALE



SECTION X-X
NOT TO SCALE

CONCRETE ROOF DECK DETAILS
NOT TO SCALE

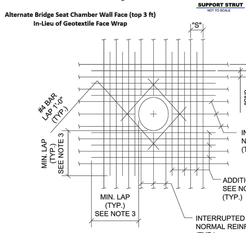
Design: AASHTO Bridge Section 3.24
Span: AASHTO 3.24.1.1
Loading = HS20



NOTE: 1-1/2" CLEARANCE ON ALL REBAR TOP AND BOTTOM IF MANUFACTURED UNDER PLANT CONTROL CONDITIONS (PRECAST), 2" CLEARANCE ON LOWER REBAR LAYER IF CAST IN THE FIELD. 3" CLEARANCE ON BOTH SIDES.
LIFTING ANCHORS - A L PATTERSON CORE LIFT LOOPS OR EQUAL, TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

Table 2

Maximum Overburden	Slab Thickness	Out-to Out Slab Width	Clear Span at Top of Chamber	Bearing Width	Primary Reinforcement	Distribution Reinforcement	Temp. & Shrink. Reinforcement	Fc Concrete

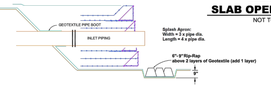


NOTES:
1. NUMBER OF ADD'L REIN. BARS AT EA. SIDE OF OPENING SHALL EQUAL HALF THE NUMBER OF INTERRUPTED BARS IN E.A. LAYER OF REIN.
2. SIZE OF ADDITIONAL BARS TO EQUAL SIZE OF INTERRUPTED REINF. BARS.
3. PROVIDE STD HOOKFOR BARS IF LAP LENGTH EXTENSION CANNOT BE OBTAINED AT JOINTS OR OTHER OBSTRUCTIONS. PLACE ADD'L BARS IN SAME PLANES AS INTERRUPTED REINF.
4. DIAGONAL BARS SHALL BE #4 BARS. LOCATE DIAGONALS IN EACH LAYER OF REINF.
5. PLACE DIAGONAL BARS INSIDE NORMAL REINF.
6. ALL REINF. TO CLEAR OPENING OR FLANGE COLLARS BY 1"

BAR SIZE	MIN. LAP
#4	21"
#5	26"
#6	31"
#7	36"
#8	42"

ADDITIONAL REINFORCING BAR DETAIL AT OPENINGS (Manholes)
NOT TO SCALE

DETAIL D
SLAB OPENING DETAIL
NOT TO SCALE



TYPICAL SECTION THRU INLET PIPING
NOT TO SCALE

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		GeoStorage® Underground Stormwater Detention System
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		SCALE: NTS
		DESIGNED BY: 9-9-22
		DRAWN BY: TS
		CHECKED BY: TS
		SHEET NO.: 3 of 4
		DRAWING NO.: T-003

CONSTRUCTION REQUIREMENTS FOR THE INSTALLATION OF A GEOSTORAGE® STORM WATER DETENTION SYSTEM

THE GEOSTORAGE® UNDERGROUND STORMWATER DETENTION SYSTEM DETAILED IN THESE DOCUMENTS IS A PATENTED TECHNOLOGY LICENSED BY GEOSTORAGE CORP. ONLY GEOSTORAGE CORP., OR ONE OF ITS REGIONAL INSTALLERS/ENGINEERS IS AUTHORIZED TO PROVIDE ENGINEERING OR CONSTRUCTION SERVICES RELATED TO THIS SYSTEM.

1.0 MATERIAL

1.1 BACKFILL SOILS

1.1.1 REINFORCED AND RETAINED BACKFILL SHALL BE ¾-INCH to 1 1/2-INCH UNIFORMLY GRADED,ANGULAR COARSE AGGREGATE WITH A WASH LOSS OF NO MORE THAN 0.5% AND SHALL HAVE 40% VOIDS AS MEASURED BY ASTM C29. THE MATERIAL SHALL MEET ASTM D2488 ANGULAR OR SUBANGULAR CLASSIFICATION. THE MATERIAL HARDNESS SHALL BE MEASURED PER AASHTO T96 (LA ABRASION TEST) AND EXHIBIT A MAXIMUM LOSS OF 40%. FREEZE-THAW RESISTANCE SHALL BE MEASURED PER AASHTO T104 WITH A MAXIMUM LOSS OF 12% AFTER 5 CYCLES IN MAGNESIUM SULFATE SOLUTION. BACKFILL SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE.

1.1.2 BASE LAYER MATERIALS (AS NEEDED-SEE SECTION 2.3) BELOW THE LINER SHALL MEET THE REQUIREMENTS of AASHTO M 145 FOR A-1, A-2, or A-3.* (< 35% PASSING #200 SIEVE).

1.2 LINER MATERIALS

1.2.1 GEOTEXTILE

1.2.1.A GEOTEXTILE SHALL BE 8 OZ/SY (MARV) MATERIAL PER ASTM D261 MANUFACTURED FROM POLYPROPYLENE OR POLYESTER FIBERS. THE PUNCTURE STRENGTH SHALL BE 240 LBS (MARV) PER ASTM D483. GEOTEXTILE SHALL BE NON-WOVEN AND NEEDLEPUNCHED

1.3 GEOSYNTHETIC REINFORCEMENT SHALL BE A BIAXIAL GEOGRID WITH A LONG TERM ALLOWABLE DESIGN STRENGTH (LTADS) EQUAL TO 1,000 LBS/FT WITH THE SPECIFIED BACKFILL IN THE LOAD BEARING DIRECTION (PERPENDICULAR TO THE WALL FACE) PER GRI-GG4. THE MINIMUM AVERAGE MOLECULAR WEIGHT SHALL BE 25,000 AND THE MAXIMUM NUMBER OF CARBOXYL END GROUPS SHALL BE 30 PER KILOGRAM FOR POLYESTER GEOGRIDS. THE APERTURE DIMENSION SHALL BE 3/8 INCH (MIN) AND 1.0 INCH X 1.0 INCH (MAX). GEOGRID ULTIMATE TENSILE STRENGTH IS 2,400 LBS/FT (+10% / -0%) (MARV).
1.4 CONCRETE AND REINFORCING STEEL SHALL MEET THE REQUIREMENTS NOTED ON THE APPLICABLE PLAN SHEETS.

2.0 TECHNICAL REQUIREMENTS

2.1 THE OWNER OR OWNER'S REPRESENTATIVE SHALL VERIFY THAT THE BACKFILL MEETS THE GRADATION AND OTHER REQUIREMENTS OF SECTION 1.1 PRIOR TO PROCEEDING WITH CONSTRUCTION.

2.2 PRIOR TO CONSTRUCTION OF THE GEOSTORAGE® SYSTEM, THE CONTRACTOR SHALL CLEAR AND GRUB THE FLOOR OF THE GEOSTORAGE® SYSTEM REMOVING TOPSOIL, BRUSH, SOD OR OTHER ORGANIC OR DELETERIOUS MATERIAL. ANY UNSUITABLE SOILS SHALL BE OVEREXCAVATED AND REPLACED WITH THE BASE LAYER BACKFILL.

2.3 FOUNDATION SOILS FOR DETENTION APPLICATIONS SHALL MEET THE ENGINEERS COMPACTION REQUIREMENTS FOR SUBGRADE PREPARATION BELOW THE ROAD BASE MATERIAL. FOUNDATION PREPARATION FOR INFILTRATION APPLICATIONS SHALL NOT REDUCE THE DESIGN INFILTRATION RATE. SUBSEQUENT STONE LAYERS ABOVE THE FOUNDATION SOIL SHALL BE INSTALLED AS PER SECTION 2.4.

2.4 STONE BACKFILL FOR THE PERIMETER WALLS AND PIERS (WHERE APPLICABLE) SHALL BE PLACED IN LAYERS NOT EXCEEDING 9 INCHES. COMPACTION WILL BE DETERMINED ON THE BASIS OF NON-MOVEMENT OF THE MATERIAL. THREE PASSES OF A VIBRATORY PLATE WITH A CENTRIGUGAL FORCE OF 2500 LBS. SHALL BE REQUIRED ON EVERY LIFT.

2.5 TESTING METHODS AND FREQUENCY AND VERIFICATION OF MATERIAL PROPERIES SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE.

2.6 A COMPLETE SET OF APPROVED CONSTRUCTION DRAWINGS AND CONTRACT SPECIFICATIONS SHALL BE ON SITE AT ALL TIMES DURING THE CONSTRUCTION OF THE GEOSTORAGE® SYSTEM.

3.0 INSTALLATION

3.1 GEOTEXTILE SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE PLANS. GEOTEXTILE SEAMS SHALL BE OVERLAPPED18 INCHES OR SEWN IN A "PRAYER" SEAM WITH A 6 INCH OVERLAP OR HEAT LYSTERED WITH A 6 INCH OVERLAP. AT PIPE PENETRATIONS THE GEOTEXTILE SHALL BE CUT AND CLAMPED AS SHOWN ON THE PLANS TO INSURE NO SOILS MIGRATE THROUGH THE OPENING.

3.1.A INLET AND OUTLET PIPES SHALL BE EXTENDED FROM THE PERIMETER LINER TO THE CHAMBER WALL FACE. WELDED WIRE FORMS SHALL BE CUT AROUND THE PIPE AT THE WALL FACE WHERE THE PIPE PROTRUDES. GEOGRIDS SHALL BE EXTENDED FROM THE FACE BACK INTO THE STONE BACKFILL AROUND THE PERIMETER OF THE PIPE TO PREVENT STONE FROM RAVELING INTO THE CHAMBER. SPLASH DISSIPATORS (E.G. RIP-RAP) SHALL BE INSTALLED ON THE CHAMBER FLOOR BELOW THE PIPE INVERT.

3.3 WELDED WIRE FORMS SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE PLANS. WHERE NECESSARY THE FORMS SHALL BE NESTED AS SHOWN ON THE PLANS TO MATCH THE REQUIRED WALL HEIGHT.

3.4 GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE PLANS.

3.4.1 GEOSYNTHETIC REINFORCEMENT SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTH(S). GEOSYNTHETIC REINFORCEMENT SEAMS SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AT THE FACE OF ALL WALLS AND PIERS.

3.4.2 GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED FLAT AND FREE OF WRINKLES. GEOSYNTHETIC MATERIAL USED TO WRAP THE FACE OF WALLS AND PIERS SHOULD BE PULLED TAUGHT BEFORE BEING BACKFILLED. . IF SLACK IS OBSERVED IN THE WRAP FACE OF WALLS OR PIERS, MATERIALS SHALL BE REMOVED AS NEEDED TO REMEDY THE SITUATION.

3.4.3 GEOSYNTHETIC REINFORCEMENT LOCATED AT MID HEIGHT OF THE WELDED WIRE FORM SHALL BE CUT PERPENDICULAR TO THE WALL LENGTH TO ACCOMMODATE THE SUPPORT STRUTS. THE FRONT OF THE GEOSYSNTHETIC REINFORCEMENT SHALL BUTT AGAINST THE WALL FACE.

3.4.4 AT WALL AND PIER CORNERS GEOGRID SHALL BE INSTALLED TO PREVENT RAVELING OF STONE AT A CORNER SEAM. THE GEOGRID SHALL EXTEND A MINIMUM OF 18 INCHES ON EITHER SIDE OF THE SEAM. THE TOP AND BOTTOM OF THE GEOGID SPLICE SHALL BE CUT TO ALLOW FOR THE 90 DEGREE BEND. PLASTIC TIES SHALL BE USED TO SECURE THE GEOGRID SPLICE TO THE MAIN REINFORCEMENT ON BOTH SIDES OF THE SPLICE. WHERE THE WALL IS STEPPED A SPLICE PATCH SHALL BE PLACED OVER THE EXPOSED STONE AT THE CORNER NOTCH AND SECURED WITH PLASTIC TIES.

3.4.5 TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON ANY GEOSYNTHETIC MATERIAL. RUBBER-TIRED VEHICLES MAY OPERATE ON TOP OF GEOSYNTHETIC MATERIALS AT SPEEDS LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNS SHALL NOT BE PERMITTED.

3.4.6 IN THE EVENT THAT THE GEOSYNTHETIC REINFORCEMENT IS TORN AT THE FACE OF A WALL OR PIER THE OWNER OR OWNERS REPRESENTATIVE ON SITE SHALL BE NOTIFIED IMMEDIATELY. AT THE OWNERS DISCRETION THE TEAR MAY BE REPAIRED WITH HDPE BIAXIAL GEOGRID SPLICED OVER THE TEAR AND EXTENDING A MINIMUM OF 6 INCHES BEYOND THE TEAR. THE BIAXIAL CONNECTION TO THE GEOSYNTHETIC REINFORCEMENT SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 300 LBS/FT.

3.4.7 ROOF PANEL SEAMS SHALL BE SEALED SO THAT SOIL DOES NOT RAVEL INTO THE CHAMBER. THIS CAN BE ACCOMPLISHED BY USING MASTIC OR BY EXTENDING THE GEOTEXTILE OVER THE SEAMS.

3.4.8 PIPE PENETRATIONS THROUGH CHAMBER WALL SHALL BE WITHIN 15 DEGREES OF PERPENDICULAR. PIPE PENETRATIONS AT CORNERS SHALL BE AT 45 DEGREES +/- 15 DEGREES.

4.0 DRAINAGE

4.1 A TEMPORARY SOIL BERM SHALL BE CONSTRUCTED AROUND THE GEOSTORAGE® SYSTEM EXCAVATION TO DIVERT ALL WATER RUNOFF AWAY FROM THE WORK AREA.

4.2 IT SHALL BE THE OWNER OR OWNER'S REPRESENTATIVE RESPONSIBILITY TO INSURE THAT THE SEASONAL HIGH WATER TABLE IS A MINIMUM OF 3 FEET BELOW THE LINER SYSTEM.

5.0 CHANGES TO THE DESIGN

5.1 NO CHANGES TO THE DESIGN SPECIFICATIONS OR DIMENSIONS SHALL BE MADE WITHOUT THE EXPRESS, WRITTEN CONSENT OF GEOSTORAGE ENGINEERING.

6.0 METHOD OF PAYMENT

6.1 SEE CONTRACT DOCUMENTS

7.0 DESIGN PARAMETERS

7.1 METHODOLOGY
ROOF: AASHTO 17TH EDITION
CHAMBER-ABUTMENT WALLS: FHWA-HRT-11-026

7.2 LOADING: HS-20

7.3 SEISMIC ACCELERATION COEFFECIENT: ___

7.4 CONCRETE STRENGTH
F'c @ 28 DAYS: 6,000 PSI (PRECAST)

7.5 STEEL STRENGTH (GRADE 60)
F'y: 60 KSI PER ASTM A615

NOTE: SETTLEMENTS ASSOCIATED WITH THE CONSOLIDATION OF A COMPRESSIBLE SOIL BELOW THE BASE LAYER HAVE NOT BEEN INVESTIGATED AND ARE BEYOND THE SCOPE OF THESE GUIDELINES. IT IS THE OWNER'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF RECORD OF ANY POTENTIAL SETTLEMENTS.

8.0 SPECIAL PROVISIONS

9.0 REFERENCE DOCUMENTS

Draft Print
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GeoStorage	GeoStorage Engineering LLC	Structures Inc. Chaska, MN
		GeoStorage® Underground Stormwater Detention System
THE INFORMATION INCLUDED ON THIS DRAWING, SHEETING RELATING TO PRODUCTS, METHODS, DESIGNS, TECHNIQUES, AND IDEAS EMBRACED HEREBY IS CONFIDENTIAL AND THE PROPERTY OF GeoStorage Engineering LLC AND MAY NOT BE COPIED OR REPRODUCED IN ANY WAY WITHOUT PRIOR WRITTEN PERMISSION.		SPECIFICATIONS GeoStorage® Single Chamber Design System
		SCALE: NTS
		DESIGNED BY: 9-9-22
		DRAWN BY: TS
		CHECKED BY: TS
		SHEET NO.: 4 of 4
		DRAWING NO.: T-004

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Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPR	BJF

DRAWING TITLE

CIVIL SITE DETAILS
3

DRAWING NO.

C12

PLOTTED:	COMM. NO.
10/20/22	15311

TREE DATA: TYPE & STATUS TABLE

TAG ID	TYPE	CAL.	CLASS	STATUS
100	ASH	12	SIGNIFICANT	REMOVED
101	ASH	14	SIGNIFICANT	REMOVED
102	ASH	14	SIGNIFICANT	REMOVED
103	COT	38	EXEMPT	REMOVED
104	ASH	12	SIGNIFICANT	REMOVED
105	COT	18	EXEMPT	REMOVED
106	COT	18	EXEMPT	REMOVED
107	COT	36	EXEMPT	REMOVED
108	WIL	36 x2	SIGNIFICANT	REMOVED
109	PINE	18	SIGNIFICANT	REMAIN
110	MAP	12	SIGNIFICANT	REMAIN
111	MAP	18	SIGNIFICANT	REMAIN
112	COT	12	EXEMPT	REMAIN
113	COT	8	EXEMPT	REMAIN
114	COT	12	EXEMPT	REMAIN
115	COT	12	EXEMPT	REMAIN

TREE LEGEND

ASH	ASH
COT	COTTONWOOD
MAP	MAPLE_
PINE	PINE
WIL	WILLOW

CITY CODE: TREE PRESERVATION

STRUCTURES INC. - THREE LOT SPLIT
ZONE: L-I LIMITED INDUSTRY / GI GENERAL INDUSTRIAL

SIGNIFICANT TREES: 15.28.070 (D.) (1.) (a.)
- CONIFEROUS TREES TWELVE (12) FEET OR MORE IN HEIGHT
- OVERSTORY DECIDUOUS TREES TEN (10) INCHES OR MORE IN DIA.
- UNDERSTORY DECIDUOUS TREES SIX (6) INCHES OR MORE IN DIA.

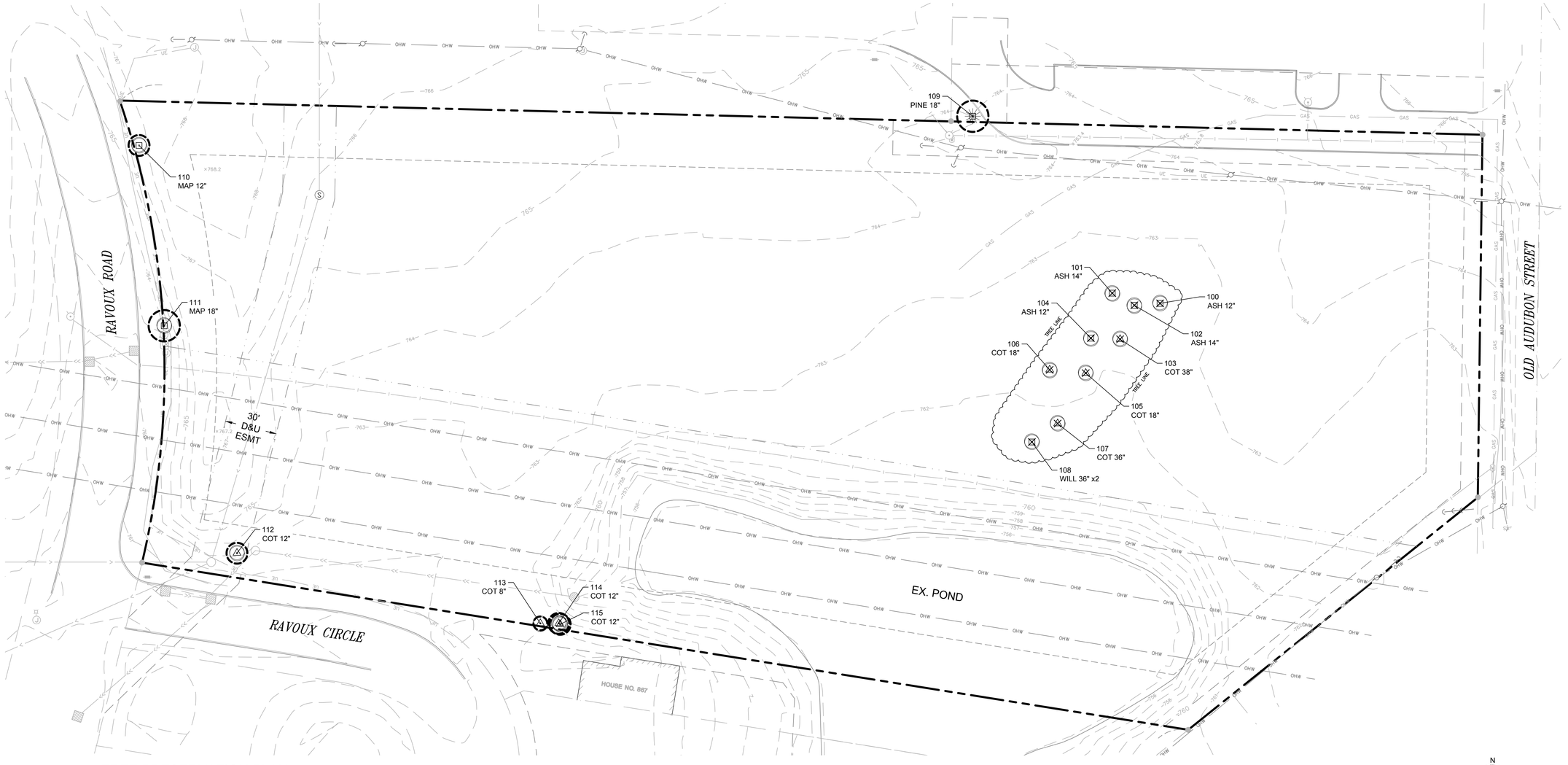
CREDITS: 15.28.070 (E.) (3.)
- CREDIT FOR EXISTING TREES: SITES CONTAINING SIGNIFICANT EXISTING TREES WHICH WILL BE RETAINED MAY BE GIVEN A CREDIT AGAINST THE CALIPER INCH REQUIREMENTS LISTED ABOVE.
  - THE AMOUNT OF CREDIT WILL BE BASED UPON LOCATION AND SIZE AS DETERMINED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. CREDIT SHALL NOT BE GIVEN FOR DEAD, DISEASED OR DAMAGED TREES.

LEGEND

———	PROPERTY LIMITS
— · — · —	CONSTRUCTION LIMITS
	TREE PROTECTION
☐	PROTECTED TREES TO REMAIN
☒	PROTECTED TREES TO REMOVE
△	EXEMPT TREES TO REMAIN
⊠	EXEMPT TREES TO REMOVE

NOTES

1. INSTALL TREE PROTECTION AROUND EXISTING TREES TO REMAIN (TYP.). WHERE CLUSTERS OF TREES ARE TO BE PROTECTED, CONTRACTOR SHALL INSTALL PROTECTION FENCING AROUND THE OUTERMOST DRIPLINE OF THE CLUSTER. SEE 1/L3.



1 TREE PRESERVATION PLAN
SCALE: 1" = 30' (22 x 34 PLAN SHEET)

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STRUCTURES INC.

THREE LOT SPLIT

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PRINT NAME: CURT H. CLAEYS, PLA

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 45613

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
CHC	JAF	CHC

DRAWING TITLE

TREE PRESERVATION PLAN

DRAWING NO.

L1

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:35am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_06 LA_01 CAD files_01 SHEETS\15311_L_PRESERVATION.dwg
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PLANTING SCHEDULE

CONIFEROUS TREES	CODE	QTY	COMMON / BOTANICAL NAME	CONT	CAL/HT
	JCH	6	CHINESE JUNIPER JUNIPERUS CHINENSIS	B&B	6' HT.
	PMU	6	MUGO PINE PINUS MUGO	B&B	6' HT.
	TMH	8	HICKS ANGLO-JAPANESE YEW TAXUS X MEDIA 'HICKSII'	B&B	6' HT.
DECIDUOUS TREES	**CODE**	**QTY**	**COMMON / BOTANICAL NAME**	**CONT**	**CA/HT**
	AFJ	5	AUTUMN BLAZE MAPLE ACER X FREEMANII 'JEFFSRED'	B&B	2 - 1/2" CAL.
	PMA	11	AMUR CHOKECHERRY PRUNUS MAACKII	B&B	2 - 1/2" CAL.
	PVS	6	SCHUBERT CHOKECHERRY PRUNUS VIRGINIANA 'SCHUBERT'	B&B	2 - 1/2" CAL.
ORNAMENTAL TREES	**CODE**	**QTY**	**COMMON / BOTANICAL NAME**	**CONT**	**CAL/HT**
	AGA	4	'AUTUMN BRILLIANCE' SERVICEBERRY AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	B&B	2" CAL.

SHRUBS	CODE	QTY	COMMON / BOTANICAL NAME	CONT
	HAA	1	ANNABELLE SMOOTH HYDRANGEA HYDRANGEA ARBORESCENS 'ANNABELLE'	1 GAL
	RAG	13	GRO-LOW FRAGRANT SUMAC RHUS AROMATICA 'GRO-LOW'	5 GAL.
	SJA	24	JAPANESE SPIREA SPIRAEA JAPONICA 'ANTHONY WATERER'	5 GAL.
	TMT	7	TAUNTON YEW TAXUS X MEDIA 'TAUNTONII'	5 GAL.
PERENNIALS	**CODE**	**QTY**	**COMMON / BOTANICAL NAME**	**CONT**
	CKF	36	FEATHER REED GRASS CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	1 GAL

CITY CODE: REQUIRED PLANTING

STRUCTURES INC. - THREE LOT SPLIT
ZONE: I-I LIMITED INDUSTRY / GI GENERAL INDUSTRIAL

SITE DATA / LOT DIMENSIONS: 15.28.070
- LOT 1: 7,392 SF 1-STORY BLDG
- LOT 2: 6,240 SF 1-STORY BLDG
- LOT 3: 7,392 SF 1-STORY BLDG

CITY CODE	MIN. REQUIRED	PROVIDED
TOTAL STREET TREES REQUIRED: STREET TREES SHALL NOT BE LESS THAN 40' APART WITH A MIN. OF (1) PER LOT.	1 PER 40' LF PUBLIC STREET	5 TREES
TOTAL OVERSTORY TREES REQUIRED:		
LOT 1 7, 392 BLDG SF /320= 23.1 23.1 AT 2.5 CALIPER INCHES (70%) = 16.17 = 16 16 CAL. IN. / 2.5 = 6.4 = 6 TREES AT 2.5 CAL INCHES	6 TREES +RESIDENTIAL SCREENING (16 CAL. IN.)	16 TREES
LOT 2 6,240 BLDG SF /320= 19.5 19.5 AT 2.5 CALIPER INCHES (70%) = 6.65 = 7 7 CAL. IN. / 2.5 - 2.8 = 3 TREES AT 2.5 CAL. INCHES	3 TREES +RESIDENTIAL SCREENING (7 CAL. IN.)	9 TREES
LOT 3 7, 392 BLDG SF /320= 23.1 23.1 AT 2.5 CALIPER INCHES (70%) = 16.17 = 16 16 CAL. IN. / 2.5 = 6.4 = 6 TREES AT 2.5 CAL INCHES	6 TREES +RESIDENTIAL SCREENING (16 CAL. IN.)	12 TREES
TOTAL UNDERSTORY TREES REQUIRED: 15 x .25= 3.75 = 4	4 TREES	4 TREES
TOTAL NUMBER OF SHRUBS REQUIRED: NUM #/UNDSTRY = 2(SFDUs) (30) = (60)(DBL = 75+ ADJOINING A RESIDENTIAL, PUBLIC USE OR PUBLIC STREET REQUIRES SCREENING.	70 + + RESIDENTIAL & STREET SCREENING	81 SHRUBS

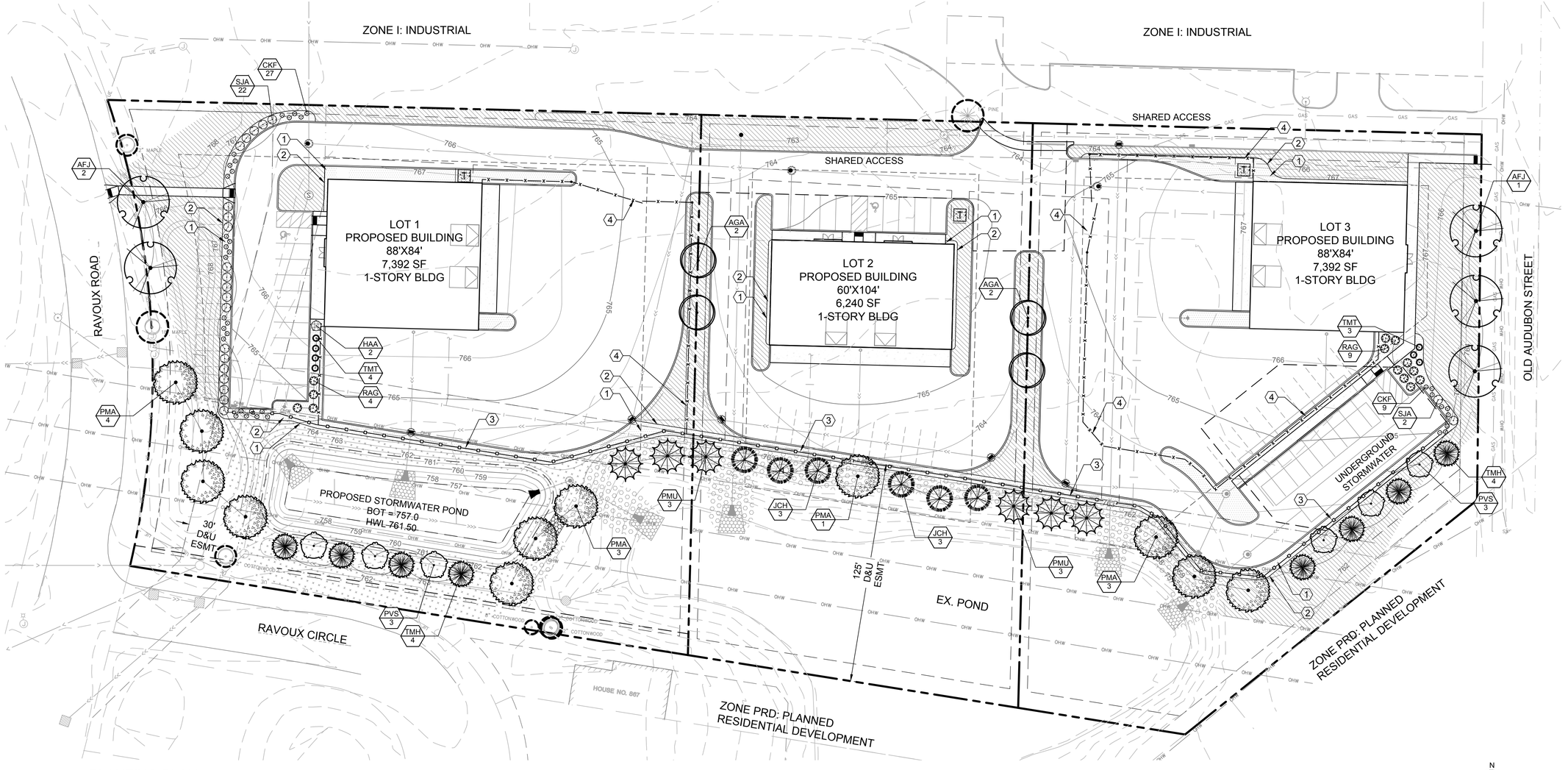
TREE CREDITS: 15.28.070 (E.) (3.)
- CREDIT FOR EXISTING TREES: SITES CONTAINING SIGNIFICANT EXISTING TREES WHICH WILL BE RETAINED MAY BE GIVEN A CREDIT AGAINST THE CALIPER INCH REQUIREMENTS LISTED ABOVE.
  - THE AMOUNT OF CREDIT WILL BE BASED UPON LOCATION AND SIZE AS DETERMINED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. CREDIT SHALL NOT BE GIVEN FOR DEAD, DISEASED OR DAMAGED TREES.

LEGEND

- PROPERTY LIMITS
- CONSTRUCTION LIMITS
- NEW SOD WITH IRRIGATION
- NEW SEED MIX #1 MNDOT 25-131
- NEW SEED MIX #2 MNDOT 33-262
- (1) 3" DEEP, 1-1/2" WASHED RIVER ROCK MULCH OVER FABRIC
- (2) LANDSCAPE EDGER, SEE NOTES L3
- (3) PRIVACY FENCING
- (4) SECURITY FENCING

NOTES

1. ALL PLANTINGS SHALL RECEIVE IRRIGATION (SEE L3 FOR IRRIGATION NOTES)
2. REFER TO PLAN SHEET L2 FOR SODDING, SEEDING, FERTILIZER AND TOPSOIL NOTES
3. ALL LANDSCAPING DISTURBED BEYOND THE NEW PLANTINGS SHALL BE REPLACED IN KIND.
4. PRIVACY FENCING SHALL BE OPAQUE PRIVACY FENCING. SEE CIVIL PLANS FOR MORE INFORMATION.



1 PLANTING PLAN
SCALE: 1" = 30' (22 x 34 PLAN SHEET)

0 30' 60' N

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Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

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PRINT NAME: CURT H. CLAEYS, PLA

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 45613

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
CHC	JAF	CHC

DRAWING TITLE

PLANTING PLAN

DRAWING NO.

L2

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:36am BField Y:\15300\15311 HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_06 LA_01 CAD files_
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GENERAL LANDSCAPE NOTES

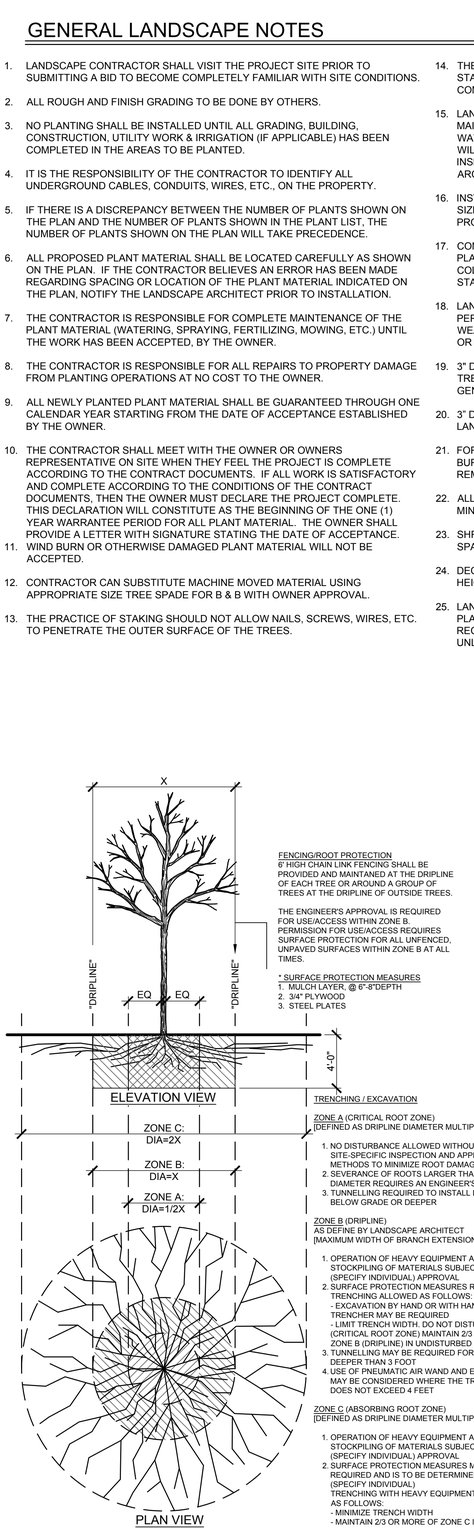
1. LANDSCAPE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO BECOME COMPLETELY FAMILIAR WITH SITE CONDITIONS.
2. ALL ROUGH AND FINISH GRADING TO BE DONE BY OTHERS.
3. NO PLANTING SHALL BE INSTALLED UNTIL ALL GRADING, BUILDING, CONSTRUCTION, UTILITY WORK & IRRIGATION (IF APPLICABLE) HAS BEEN COMPLETED IN THE AREAS TO BE PLANTED.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ALL UNDERGROUND CABLES, CONDUITS, WIRES, ETC., ON THE PROPERTY.
5. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN THE PLANT LIST, THE NUMBER OF PLANTS SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
6. ALL PROPOSED PLANT MATERIAL SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLAN. IF THE CONTRACTOR BELIEVES AN ERROR HAS BEEN MADE REGARDING SPACING OR LOCATION OF THE PLANT MATERIAL INDICATED ON THE PLAN, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETE MAINTENANCE OF THE PLANT MATERIAL (WATERING, SPRAYING, FERTILIZING, MOWING, ETC.) UNTIL THE WORK HAS BEEN ACCEPTED, BY THE OWNER.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS TO PROPERTY DAMAGE FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
9. ALL NEWLY PLANTED PLANT MATERIAL SHALL BE GUARANTEED THROUGH ONE CALENDAR YEAR STARTING FROM THE DATE OF ACCEPTANCE ESTABLISHED BY THE OWNER.
10. THE CONTRACTOR SHALL MEET WITH THE OWNER OR OWNERS REPRESENTATIVE ON SITE WHEN THEY FEEL THE PROJECT IS COMPLETE ACCORDING TO THE CONTRACT DOCUMENTS. IF ALL WORK IS SATISFACTORY AND COMPLETE ACCORDING TO THE CONDITIONS OF THE CONTRACT DOCUMENTS, THEN THE OWNER MUST DECLARE THE PROJECT COMPLETE. THIS DECLARATION WILL CONSTITUTE AS THE BEGINNING OF THE ONE (1) YEAR WARRANTEE PERIOD FOR ALL PLANT MATERIAL. THE OWNER SHALL PROVIDE A LETTER WITH SIGNATURE STATING THE DATE OF ACCEPTANCE.
11. WIND BURN OR OTHERWISE DAMAGED PLANT MATERIAL WILL NOT BE ACCEPTED.
12. CONTRACTOR CAN SUBSTITUTE MACHINE MOVED MATERIAL USING APPROPRIATE SIZE TREE SPADE FOR B & B WITH OWNER APPROVAL.
13. THE PRACTICE OF STAKING SHOULD NOT ALLOW NAILS, SCREWS, WIRES, ETC. TO PENETRATE THE OUTER SURFACE OF THE TREES.
14. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ALL TREE STAKES, GUYS, STRAPS AND TRUNK PROTECTION MEASURES FOLLOWING THE COMPLETION OF THE WARRANTEE PERIOD OR AS DIRECTED BY THE OWNER.
15. LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE THE OWNER WITH MAINTENANCE INFORMATION DURING THE GUARANTEE PERIOD RELATING TO WATERING, FERTILIZING, PRUNING, PEST CONTROL, AND RELATED ITEMS. THIS WILL BE PREPARED AND DELIVERED TO THE OWNER AFTER PROVISIONAL INSPECTION APPROVAL HAS BEEN GIVEN BY THE OWNER AND/OR LANDSCAPE ARCHITECT.
16. INSTALL CORRUGATED PLASTIC TREE GUARDS, WHITE IN COLOR, WITH THE SIZE OF TUBE 1" DIA. (MIN.) LARGER THAN THE CALIPER OF THE TREE TO BE PROTECTED.
17. CONTRACTOR TO FURNISH & INSTALL METAL EDGING AS SHOWN ON THE PLANS & DETAILS. METAL EDGING SHALL BE ALUMINUM OR STEEL, BLACK IN COLOR, WITH A MINIMUM THICKNESS OF 1/8" AND 4" DEEP. INSTALL 1 METAL STAKE EVERY 3-1/2 FEET OF EDGING.
18. LANDSCAPE FABRIC (FILTER MAT) TO HAVE A COMBINED WEIGHT OF 4.5-5.5 OZ. PER S.Y. FABRIC SHOULD BE U.V. STABILIZED AND HAVE A FIVE YEAR MINIMUM WEATHERABILITY FACTOR IN FULL SUNLIGHT. FABRIC TO BE PHILLIPS DUON R OR EQUIVALENT. SAMPLE REQUIRED FOR APPROVAL.
19. 3" DEPTH SHREDDED HARDWOOD MULCH SHALL BE INSTALLED UNDER ALL TREES AND SHRUBS THAT ARE ISOLATED FROM GROUNDCOVER AREAS AND GENERAL SHRUB MASSES.
20. 3" DEPTH OF 1"TO 1-1/2" WASHED RIVER ROCK SHALL BE INSTALLED OVER LANDSCAPED FABRIC AS INDICATED ON THE PANS & DETAILS.
21. FOR BALLED & BURLAP PLANT MATERIAL, REMOVE THE TOP HALF OF THE BURLAP FROM THE ROOT BALL. WIRE CAGES, STRAPS, ETC. SHALL BE REMOVED FROM THE TOP HALF OF THE ROOTBALL BEFORE INSTALLATION.
22. ALL CONTAINER MATERIAL SHALL HAVE BEEN GROWN IN CONTAINER FOR A MINIMUM OF 6 MONTHS PRIOR TO INSTALLATION.
23. SHRUBS SHALL BE PLANTED A MINIMUM OF ONE HALF THEIR ON-CENTER SPACING FROM PAVING EDGE UNLESS OTHERWISE NOTED.
24. DECIDUOUS SHRUBS SHALL HAVE MINIMUM OF FIVE (5) CANES AT SPECIFIED HEIGHT UNLESS OTHERWISE NOTED IN PLANT SCHEDULE.
25. LANDSCAPE CONTRACTOR SHALL PROVIDE AND INSTALL NURSERY GROWN PLANT MATERIAL CONFORMING TO THE REQUIREMENTS AND RECOMMENDATIONS OF THE LATEST EDITION OF ANSI Z60.1 STANDARDS UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

GENERAL IRRIGATION NOTES

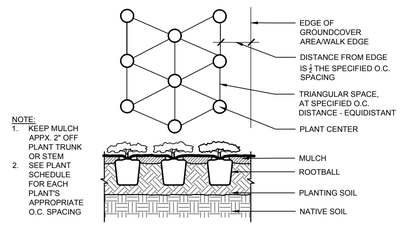
1. PRIOR TO CONSTRUCTION, VERIFY WITH THE GENERAL CONTRACTOR AND ALL LOCAL UTILITY COMPANIES TO LOCATE EXACT LOCATIONS OF UNDERGROUND UTILITIES.
2. THE IRRIGATION SHALL BE DESIGN/BUILD SYSTEM BY THE CONTRACTOR. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN IRRIGATION LAYOUT PLAN AND SPECIFICATIONS AS PART OF THE SCOPE OF WORK WHEN BIDDING. THESE SHALL BE APPROVED BY THE OWNER PRIOR TO ORDER AND/OR INSTALLATION.
3. VALVE AND CIRCUITS SHALL BE SEPARATED BASED ON WATER USE, SO THAT TURF AREAS ARE WATERED SEPARATELY FROM SHRUB AND GROUND COVER AREAS. IRRIGATION HEADS IN TURF AREAS SHALL BE VALVED SEPARATELY FROM SHRUB AND GROUND COVER AREAS. IT IS RECOMMENDED THAT FULL SUN AND SHADY AREAS TO BE VALVED SEPARATELY AS WELL AS HIGH RUN-OFF AND LOW RUN-OFF AREAS TO BE VALVED SEPARATELY.
4. CONFIRM LIMITS OF IRRIGATION, EXISTING AND FUTURE HARDSCAPE AND BUILDING LOCATIONS PRIOR TO THE DESIGN OF THE IRRIGATION SYSTEM.
5. CONTRACTOR SHALL VERIFY WATER SOURCE LOCATION AND PRESSURE AND SUPPLY A SYSTEM THAT PROVIDES FULL AND COMPLETE COVERAGE TO ALL AREAS TO BE IRRIGATED.
6. SYSTEM SHOULD BE DESIGNED TO OPERATE AT UP TO 300 GPM @ 90 PSI TO COMPLETE WATER SCHEDULES WITHIN 12-HOURS MAXIMUM.
7. RAIN SENSORS AND OTHER WATER SAVING TECHNOLOGIES SHALL BE INCLUDED WITHIN THE IRRIGATION DESIGN.
8. PROVIDE THE OWNER WITH AN OPERATING SCHEDULE THAT WORKS WITH THE APPROVED LAYOUT PLAN AND IDENTIFY ANY FIELD ADJUSTMENTS PRIOR TO PROJECT COMPLETION.
11. LOCATE VALVE BOXES AWAY FROM ROAD/CURB SO THEY ARE LESS VISUAL WHERE APPLICABLE.
12. DO NOT TRENCH THROUGH THE ROOT BALLS OF NEW PLANTINGS.
13. AVOID OVER-SPRAY ONTO ROADS, SIDEWALKS, SIGNS AND PARKING AREAS. SPRINKLER ARCS SHALL BE DETERMINED ON SITE BY THE IRRIGATION INSTALLER TO PROVIDE THE MAXIMUM COVERAGE POSSIBLE. CAREFULLY ADJUST THE ARCS AND RADIUS OF EACH SPRINKLER TO PROVIDE HEAD-TO-HEAD COVERAGE.
14. WITHIN EXTREME SLOPED AREAS:
    - 14.1. INSTALL STATIONS SEPARATELY FOR TOP AND BOTTOM OF SLOPED AREAS
    - 14.2. INSTALL LATERAL PIPES PARALLEL TO SLOPE
    - 14.3. IF SLOPE IS TOO EXTREME FOR MACHINERY, INSTALL LATERAL PIPES SAFELY AND TEE-FED INDIVIDUAL SPRINKLERS VIA DOWNHILL PIPING PERPENDICULAR TO FEED LINE
15. MAINLINE PIPING BENEATH TRAFFIC AREAS SHALL BE INSTALLED WITH A MINIMUM EARTH COVER OF 30-INCHES FROM BOTTOM OF ROAD SUB-GRADE AND CONTAIN SLEEVES NOT LESS THAN TWO NOMINAL DIMENSIONS GREATER THAT THE PIPE PASSING THROUGH.
16. IRRIGATION INSTALLER SHALL FURNISH AND INSTALL SLEEVE MATERIAL UNDER ALL ROADWAYS, WALKS AND DRIVEWAYS WHERE NECESSARY
17. TOP OF MAINLINES SHALL BE AT LEAST 30-INCHES BELOW GRADE IN TURF AREAS.
18. TOP OF LATERAL LINES SHALL BE AT LEAST 18-INCHES BELOW GRADE.
19. MAINLINE PRESSURE PIPE FITTINGS 3-INCHES AND LARGER SHALL BE PUSH ON GASKET JOINED AND SHALL HAVE MECHANICAL JOINT RESTRAINTS. MAINLINE PRESSURE PIPE FITTINGS 2.5-INCHES AND SMALLER SHALL BE GLUED AND SHALL HAVE CONCRETE THRUST BLOCKS AT FITTINGS THAT COMPRISE CHANGE IN DIRECTION.
20. OTHERS SHALL FURNISH, INSTALL AND BRING 24-INCHES ABOVE GRADE A MUNICIPAL POTABLE STUB FOR IRRIGATION, COORDINATE WITH GENERAL CONTRACTOR.
21. INSTALLER IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE BACKFLOW PREVENTOR, WATER METER AND BOOSTER PUMP, IF APPLICABLE.
22. IRRIGATION CONTROL WIRE SHALL BE DIGITAL TWO-WIRE, UL LISTED FOR DIRECT BURIAL.
23. SCHEDULE AND PROGRAM CONTROLLER AND VALVES FOR APPROPRIATE LANDSCAPE WATER REQUIREMENTS
24. CONNECT ALL ELECTRICAL WIRING IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES INCLUDING:
    - 24.1. ALL LOW VOLTAGE IRRIGATION CONTROL WIRE SHALL BE INSTALLED WITH THE MAINLINE PIPE WHERE POSSIBLE
    - 24.2. DO NOT LOOP THE LOW VOLTAGE IRRIGATION CONTROL WIRE PATH.
    - 24.3. SNAKE WIRE AT BOTTOM OF TRENCH BENEATH MAINLINE.
    - 24.4. PROVIDE 18-INCH OF SLACK CONTROL WIRE AT ALL CHANGES IN DIRECTION.
    - 24.5. PROVIDE 24-INCH OF SLACK CONTROL WIRE AT EACH REMOTE CONTROL VALVE COILED INSIDE VALVE BOX.
    - 24.6. ALL WIRE SPLICES SHALL BE WATERTIGHT CONNECTORS AND CONTAINED IN VALVE BOX.
    - 24.7. ALL WIRING BENEATH HARDSCAPES SHALL BE CONTAINED IN SLEEVING, SEPARATE FROM PIPING. ELECTRICAL SLEEVES ARE TO BE SIZED APPROPRIATELY FOR EASE OF WIRE INSTALLATION AND REPAIR.
    - 24.8. ALL WIRING SHALL BE IDENTIFIED AT EACH END TO PROVIDE INDICATION AS TO WHICH LOCATION THE WIRE IS CONNECTED.
    - 24.9. GROUNDING PER MANUFACTURER'S RECOMMENDATION OR LOCAL ELECTRICAL CODE.

SODDING, SEEDING & TOPSOIL

1. ALL PLANTINGS SHALL RECEIVE FERTILIZER AS FOLLOWS:
    - 1.1. SUMMER AND FALL PLANTING: 0-20-20 GRANULAR (IN SAUCER AROUND PLANT AT THE RATE OF 12 OZ. PER 2-3" CAL. TREE & 6 OZ. PER SHRUB).
    - 1.2. SPRING PLANTING: 10-10-10 GRANULAR (APPLY ABOVE REFERENCED FERTILIZER AT A RATE OF 12 OZ. PER 1-1/2" CAL. TREE OR LARGER & 6 OZ. PER SHRUB & PERENNIAL.
2. ALL PLANTINGS SHALL RECEIVE AN AMENDED SOIL MIX CONSISTING OF THREE (3) PARTS:
    - 2.1. 45% APPROVED TOPSOIL (ONE SITE PREFERRED)
    - 2.2. 45% ORGANIC MATTER (TYPE 1 SPHAGNUM PEAT MOSS FINELY DIVIDED WITH A PH OF 3.1 - 5.0.)
    - 2.3. 10% SAND (FINE CLEAN MASONRY SAND)
3. AREAS CONFINED TO A MASS PLANTING AREA (PLANTING BED) SHALL RECEIVE THE AMENDED SOIL MIX AT MIN. 12" DEPTH THROUGHOUT THE PLANTING AREA. AMENDED SOIL MIX SHALL BE MIXED THOROUGHLY AND INSTALLED IN 6" LIFTS.
4. AREAS TO RECEIVE SOD OR SEED SHALL HAVE A 6" MINIMUM DEPTH OF TOPSOIL. TOPSOIL SHALL PROVIDE FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, CLAY CLUMPS, BRUSH WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONE LARGER THAN 1" IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
5. SOD SHALL BE HIGHLAND SOD, 30" X 100' ROLLS PREFERRED WHERE APPLICABLE, TO BE LAID PARALLEL WITH THE CONTOURS AND HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR DRAINAGE SWALES, THE SOD SHALL BE STAKED INTO THE GROUND. SCARIFY THE EXISTING GRADES WITH FIELD CULTIVATOR PRIOR TO PLACING OF TOPSOIL AND FINISH GRADING FOR SOD. IMMEDIATELY PRIOR TO PLACING SOD, CONTRACTOR SHALL APPLY 10-6-4 FERTILIZER AT THE RATE OF 10 POUNDS PER 1000 SQ. FT.
6. ALL AREAS SPECIFIED AS "SEED #1" TO BE SEEDED PER MNDOT RECOMMENDED APPLICATION RATES AND METHODS. "MNDOT 25-131" OR APPROVED EQUAL IS A BASIS OF DESIGN. CONTRACTOR IS RESPONSIBLE FOR ALL EROSION CONTROL NEEDS TO ESTABLISH VIGOROUS GROWTH PER MNDOT 2014 SEEDING MANUAL STANDARDS.
7. ALL AREAS SPECIFIED AS "SEED #2" TO BE SEEDED PER MNDOT RECOMMENDED APPLICATION RATES AND METHODS. "MNDOT 33-262" OR APPROVED EQUAL IS A BASIS OF DESIGN. CONTRACTOR IS RESPONSIBLE FOR ALL EROSION CONTROL NEEDS TO ESTABLISH VIGOROUS GROWTH PER MNDOT 2014 SEEDING MANUAL STANDARDS.



1 TREE PROTECTION DETAIL
SCALE: N.T.S.



2 SHRUB BED SPACING (TYP.)
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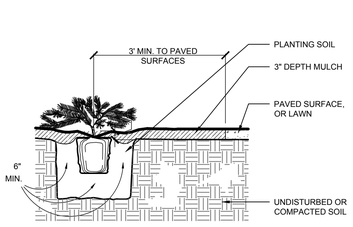
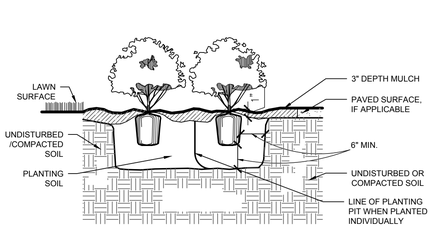


3 EVERGREEN SHRUB PLANTING (TYP.)
SCALE: N.T.S.



4 DECIDUOUS SHRUB PLANTING (TYP.)
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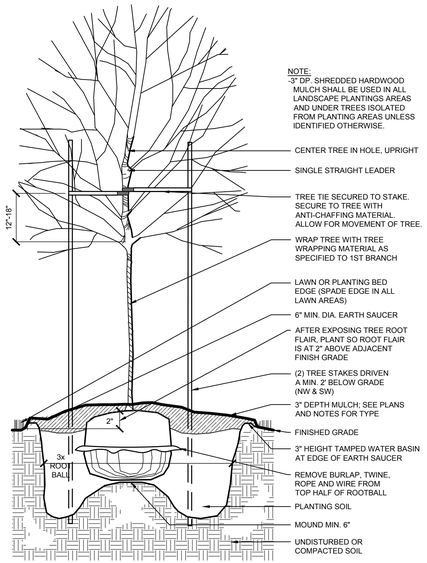

5 DECIDUOUS TREE PLANTING (TYP.)
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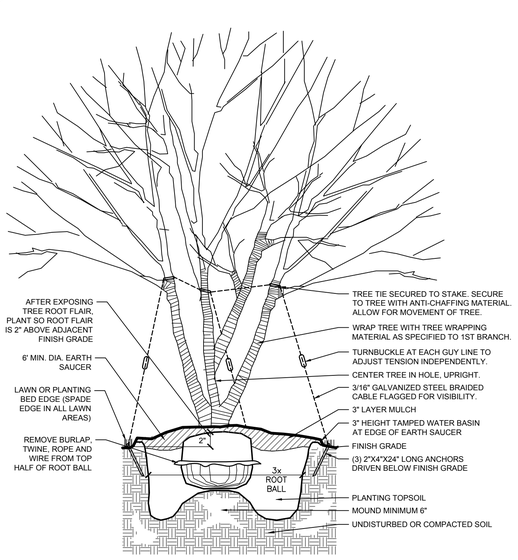

6 ORNAMENTAL TREE PLANTING (TYP.)
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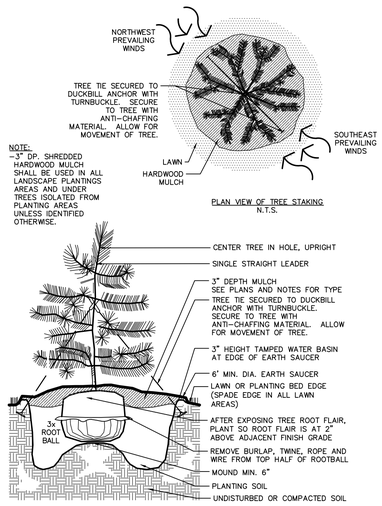

7 EVERGREEN TREE PLANTING (TYP.)
SCALE: N.T.S.

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P 763.412.4000 | F 763.412.4090
Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT H. CLAEYS, PLA

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 10/20/2022 LICENSE NO. 45613

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
1	10/20/22	INCOMPLETE LETTER - 10/14/2022

PRELIMINARY PLAT
OCTOBER 20, 2022

DESIGNED:	DRAWN:	CHECKED BY:
CHC	JAF	CHC

DRAWING TITLE

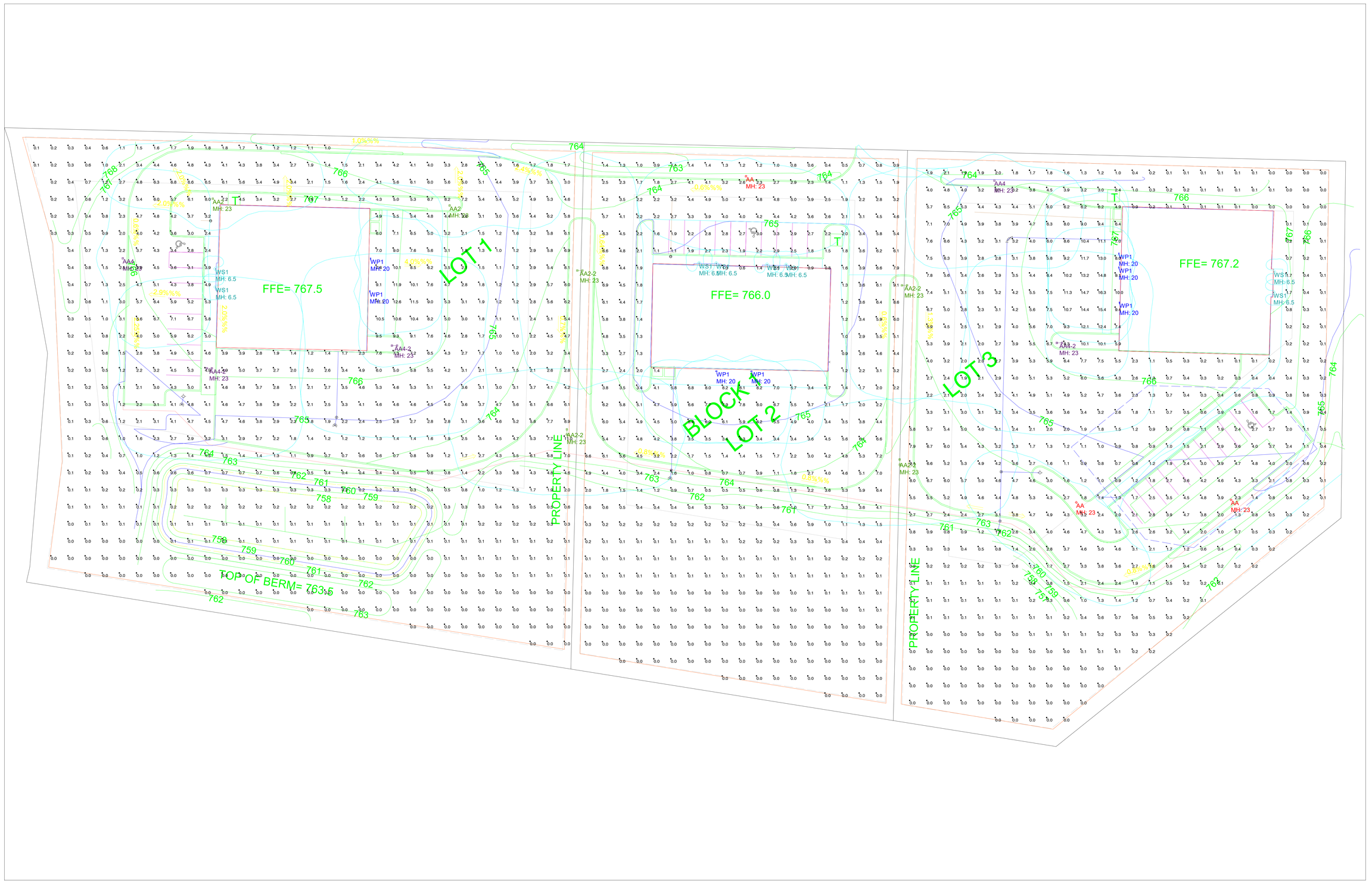
PLANTING NOTES & DETAILS

DRAWING NO.

L3

PLOTTED:	COMM. NO.
10/20/22	15311

Oct 20, 2022 - 11:36am BField Y:\5300\15311_HTG-STRUCTURES INC-CHASKA MN_000 Structures Lot Split 2022_06 LA_01 CAD files_01 SHEETS\15311_L_PLANTING.dwg
Xref Filename: \ 15311_S_1 \ 15311_TITLEBLOCK_24X36 \ 15311_c_base_A \ 15311_C_SITE \



Not to Scale

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
LOT 1_Planar	Illuminance	Fc	2.33	12.6	0.0	N.A.	N.A.
LOT 2_Planar	Illuminance	Fc	2.13	9.1	0.0	N.A.	N.A.
LOT 3_Planar	Illuminance	Fc	2.49	16.3	0.0	N.A.	N.A.

Luminaire Schedule								
Symbol	Qty	Label	Manufacturer	Description	Arrangement	Lum. Lumens	Lum. Watts	LLF
	3	AA4-2		VP-2-320L-145-4K7-4W	Back-Back	21357	150	0.900
	2	AA4		VP-2-320L-145-4K7-4W	Single	21357	150	0.900
	4	AA2-2		VP-2-320L-145-4K7-2	Back-Back	21536	150	0.900
	2	AA2		VP-2-320L-145-4K7-2	Single	21536	150	0.900
	8	WS1		BEGA 24506 BRZ K3	Single	1814	22	0.900
	7	WP1		RWL2-160L-115-4K7-4-U	Single	14979	109.8	0.900
	3	AA		VP-2-320L-145-4K7-3	Single	21761	150	0.900

1. Lighting Reflectance of 80/50/20 used unless noted otherwise
2. Interior calc points shown at 30" A.F.F. unless noted otherwise
3. Exterior calc points shown at grade unless noted otherwise
4. Emergency egress calc points shown at 0" A.F.F.
5. Photometric drawings are for Design purposes only, not for Construction documents

MN, ND, SD, WI, WI
5885 146TH ST W
APPLE VALLEY, MN 55124
952-223-6326
WWW.JTHLIGHTING.COM

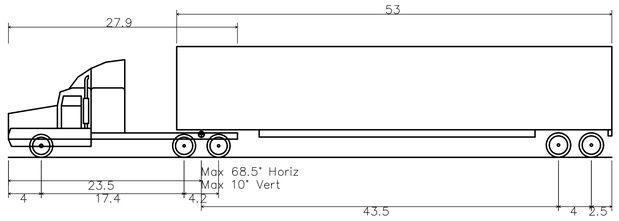
jth LIGHTING ALLIANCE

Calculated light levels shown are estimates based on information available at time of layout request. Due to unknown site conditions JTH Lighting assumes no responsibility for installed light levels.

Project #:
Date:11/3/2022

Paper Size: ARCH E1 - 30x42

STRUCTURES



WB–67 – Interstate Semi–Trailer	
Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock–to–lock time	6.00s
Max Steering Angle (Virtual)	28.40°

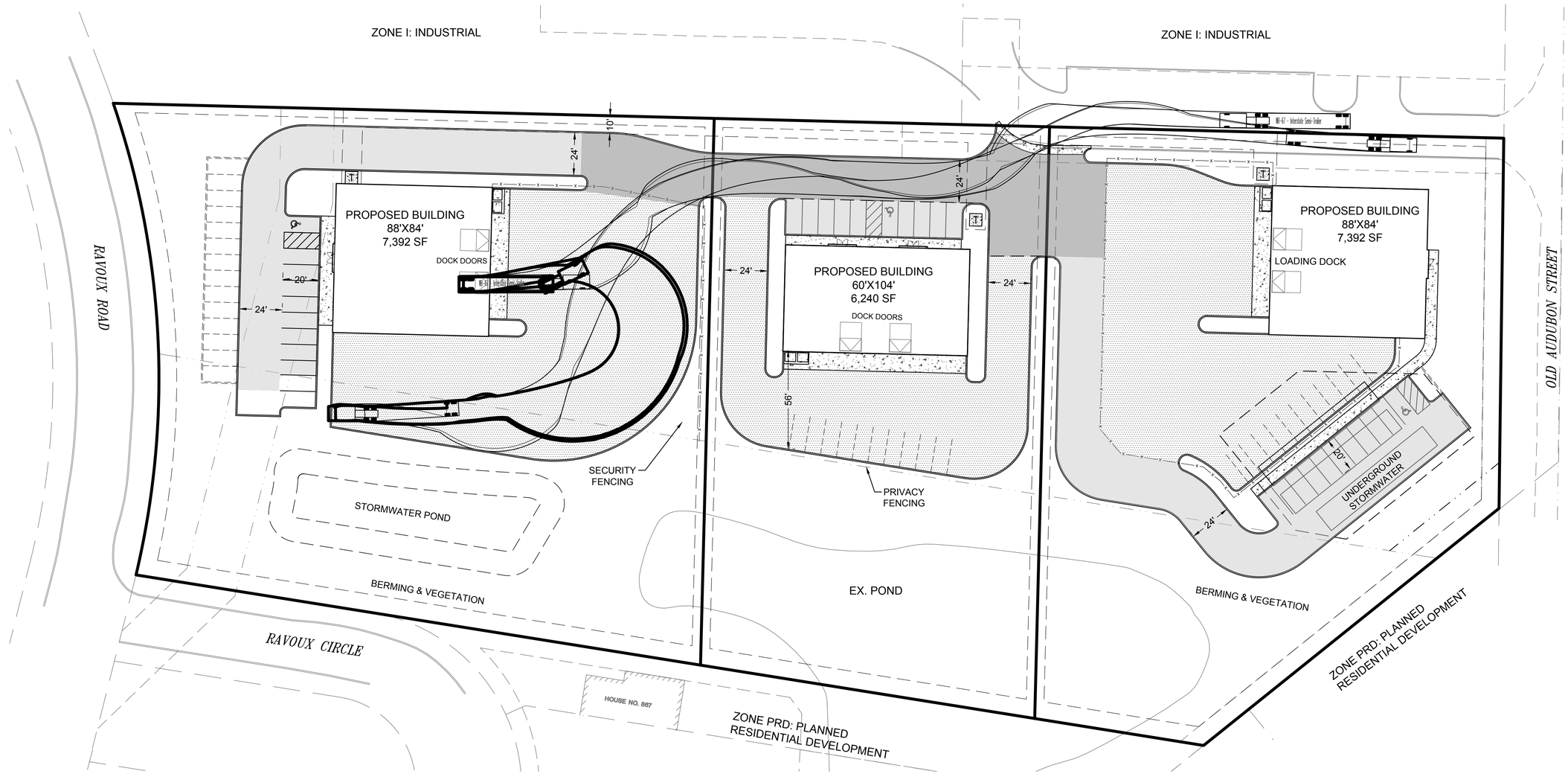
1 WB-67 SEMI-TRUCK DETAIL
SCALE:N.T.S.

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- BUILDING SETBACKS
- PARKING SETBACKS
- EXISTING DRAINAGE AND UTILITY EASEMENT
- CEDAR BOARD PRIVACY FENCE
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE C&G



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Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

CHASKA, MINNESOTA

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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 9/30/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS

PRELIMINARY PLAT
SEPTEMBER 30, 2022

DESIGNED:	DRAWN:	CHECKED BY:

DRAWING TITLE

TRUCK TURNING MOVEMENT EXHIBIT - LOT 1

DRAWING NO.

E1

PLOTTED:	COMM. NO.
----	15311

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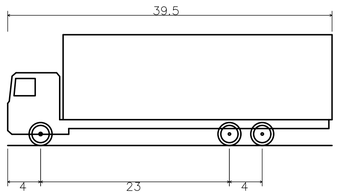


SU-40 – Single Unit Truck	
Overall Length	39.500ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°

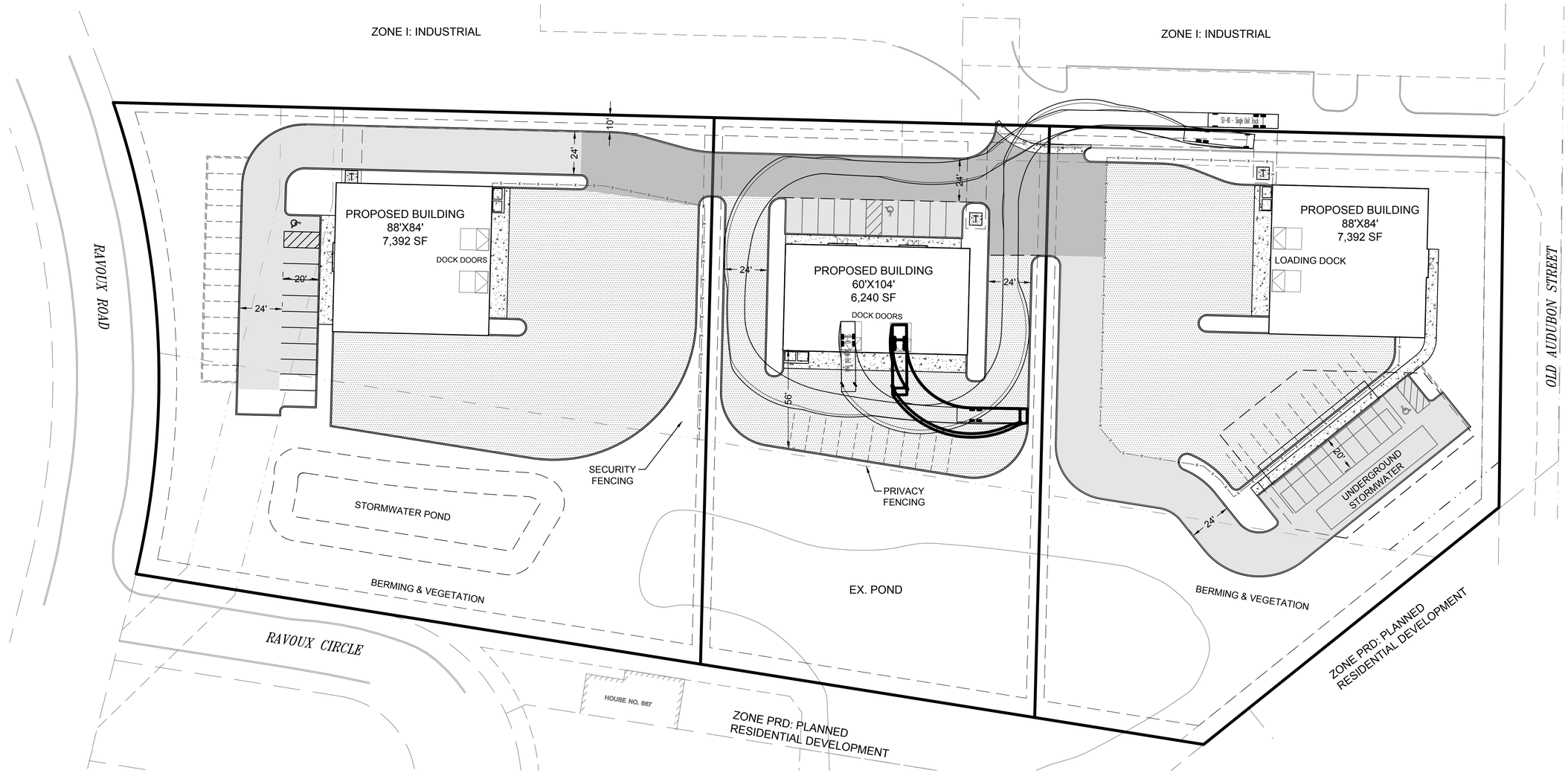
1 SU-40 SEMI-TRUCK DETAIL
SCALE:N.T.S.

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- BUILDING SETBACKS
- PARKING SETBACKS
- EXISTING DRAINAGE AND UTILITY EASEMENT
- CEDAR BOARD PRIVACY FENCE
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE C&G



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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 9/30/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS

PRELIMINARY PLAT
SEPTEMBER 30, 2022

DESIGNED:	DRAWN:	CHECKED BY:

DRAWING TITLE

TRUCK TURNING MOVEMENT EXHIBIT- LOT 2

DRAWING NO.

E2

PLOTTED:	COMM. NO.
----	15311

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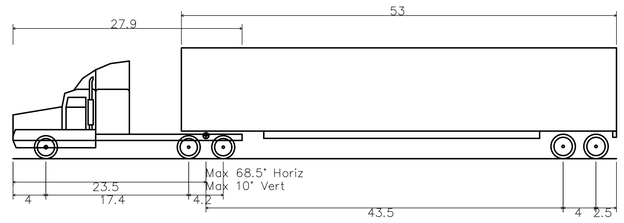


WB–67 – Interstate Semi–Trailer	
Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock–to–lock time	6.00s
Max Steering Angle (Virtual)	28.40°

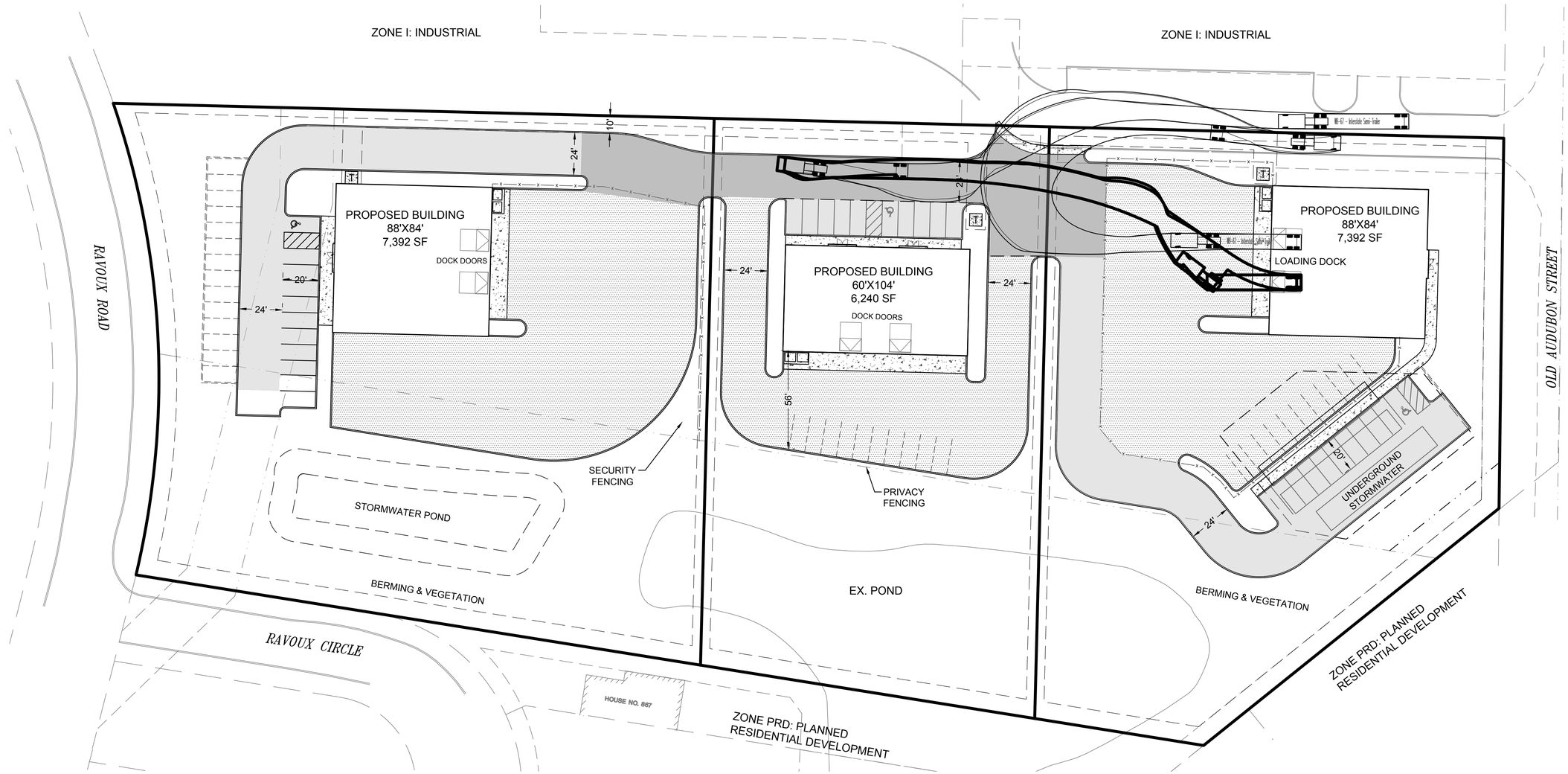
1 WB-67 SEMI-TRUCK DETAIL
SCALE:N.T.S.

N

0 30' 60'

LEGEND

- PROPERTY LIMITS
- BUILDING SETBACKS
- PARKING SETBACKS
- EXISTING DRAINAGE AND UTILITY EASEMENT
- CEDAR BOARD PRIVACY FENCE
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE C&G



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Plymouth, MN 55441 | ae-mn.com
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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 9/30/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS

PRELIMINARY PLAT
SEPTEMBER 30, 2022

DESIGNED:	DRAWN:	CHECKED BY:

DRAWING TITLE

TRUCK TURNING MOVEMENT EXHIBIT - LOT 3

DRAWING NO.

E3

PLOTTED:	COMM. NO.
----	15311

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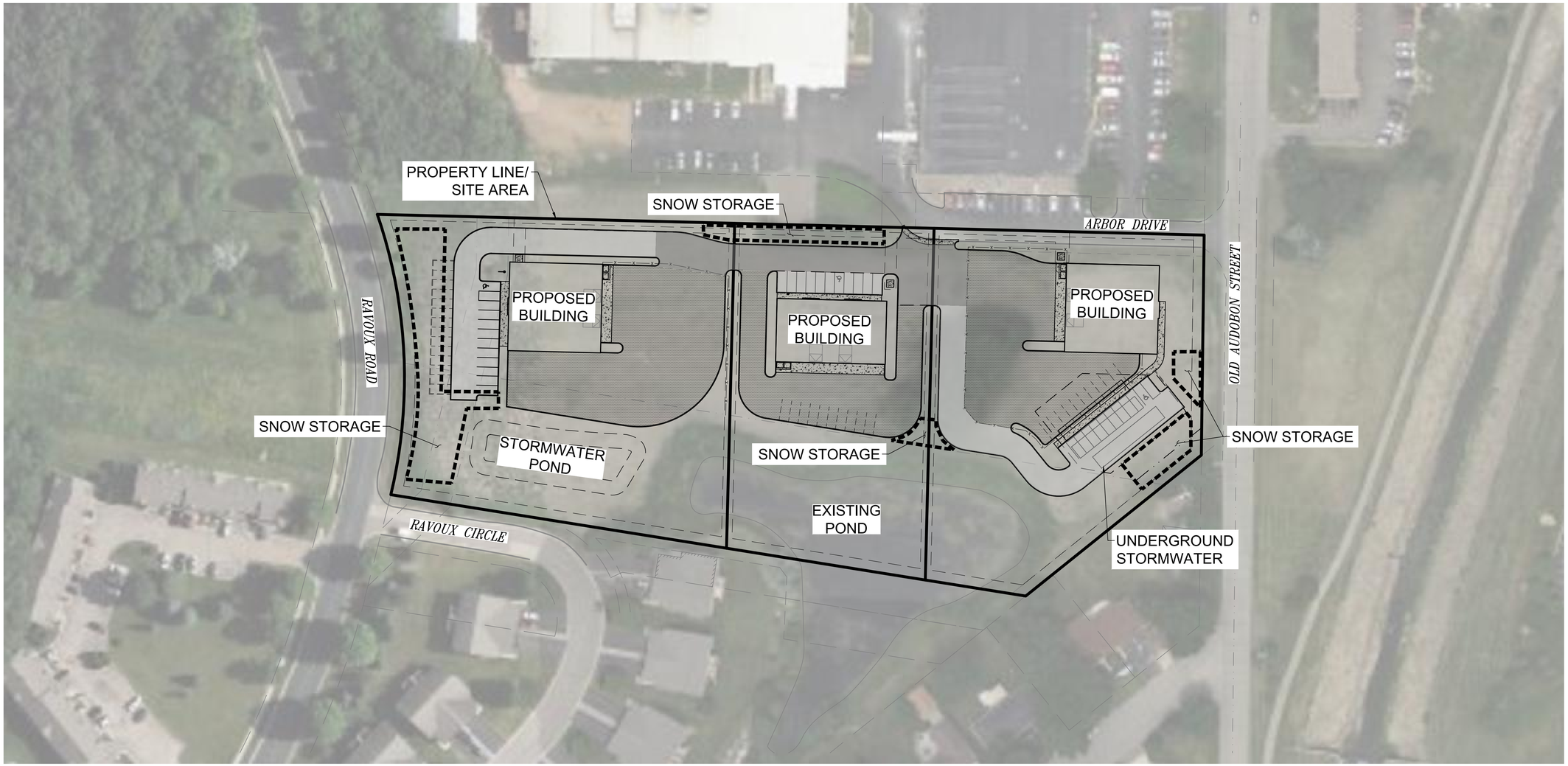

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Plymouth, MN 55441 | ae-mn.com
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Anderson Engineering of Minnesota, LLC

STRUCTURES INC.

THREE LOT SPLIT

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PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: **NOT FOR CONSTRUCTION**

DATE: 9/30/2022 LICENSE NO. 57224

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS

PRELIMINARY PLAT
SEPTEMBER 30, 2022

DESIGNED:	DRAWN:	CHECKED BY:
BJF	JPD	BJF

DRAWING TITLE

SNOW STORAGE EXHIBIT

DRAWING NO.

E4

PLOTTED:	COMM. NO.
----	15311

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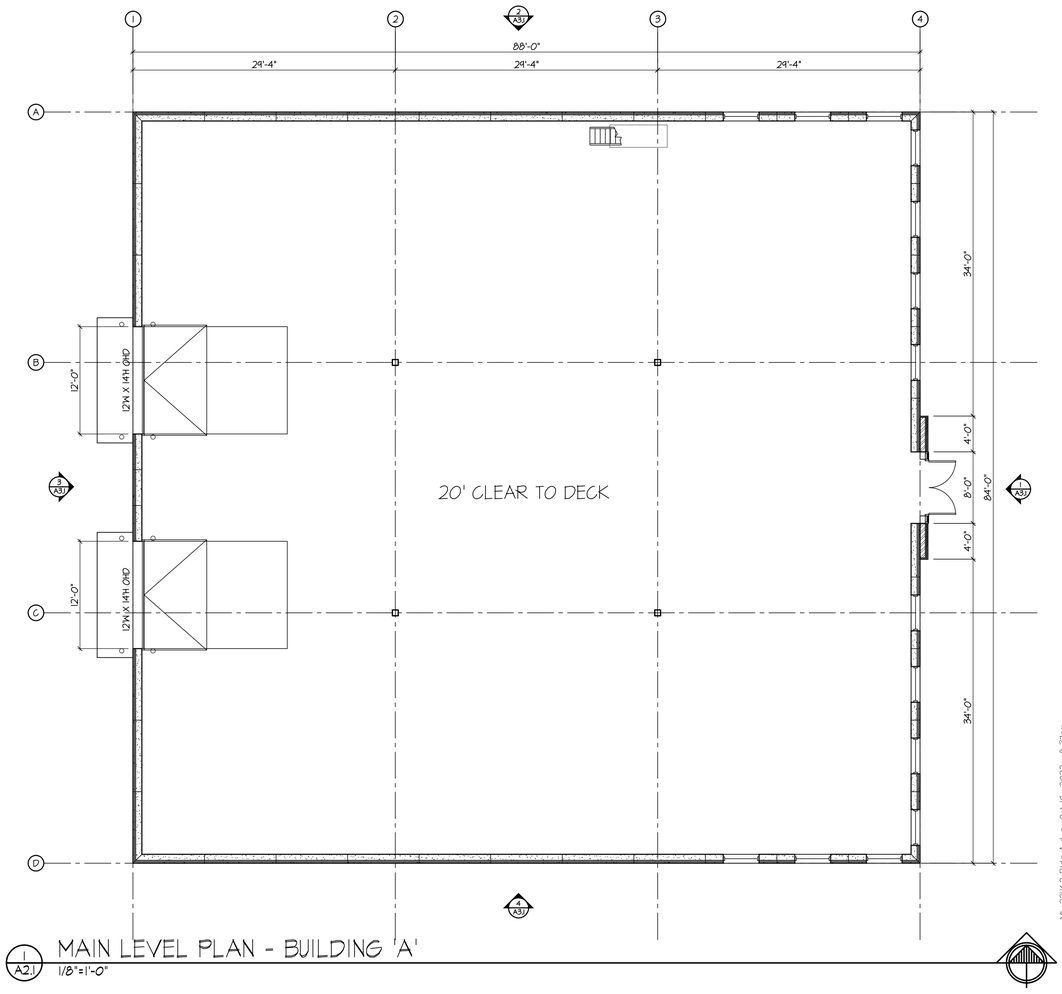
OPTION 1

MODULAR BRICK

METAL PANEL

ARCHITECTURALLY TEXTURED PRECAST INSULATED WALL PANEL

MANUFACTURED STONE



1 A2.1 MAIN LEVEL PLAN - BUILDING 'A'

1/8"=1'-0"

HTG architects

www.htg-architects.com
Minneapolis Bismarck

1010 Mainstreet, Suite 100
Hopkins, MN. 55343
Tel: 952.278.8880

PROJECT

STRUCTURES INC.
THREE LOT SPLIT

CHASKA, MINNESOTA

ISSUED SET	CITY SUBMITTAL	09-30-2022
REVISIONS		
DATE	NO.	
10/19/22		CITY RESUBMITTAL

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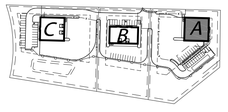
THOMAS R. MOORSE

REG. NO. - DATE



MAIN LEVEL FLOOR PLAN
BUILDING 'A'

DRAWN BY: AAM CHECKED BY: TRM

A2.1

221162 ML-221162-Bldg-A

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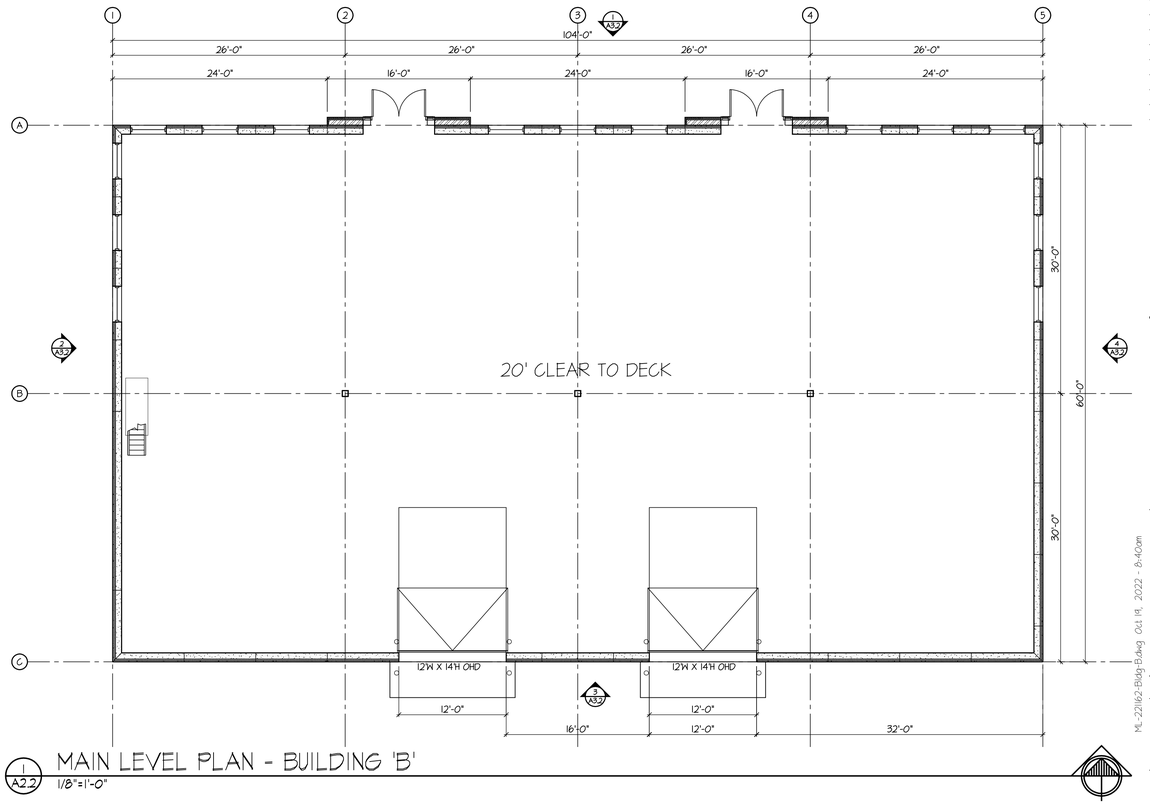
ML-221162-Bldg-A.dwg Oct 19, 2022 - 8:37am



1 A2.2 MAIN LEVEL PLAN - BUILDING 'B'
1/8"=1'-0"

HTG architects

www.htg-architects.com
Minneapolis Bismarck

1010 Mainstreet, Suite 100
Hopkins, MN. 55343
Tel: 952.278.8880

PROJECT

STRUCTURES INC.
THREE LOT SPLIT

CHASKA, MINNESOTA

ISSUED SET	CITY SUBMITTAL	09-30-2022
REVISIONS		
DATE	NO.	
10/19/22	CITY RESUBMITTAL	

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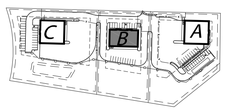
THOMAS R. MOORSE

-
REG. NO. DATE



MAIN LEVEL FLOOR PLAN
BUILDING 'B'

ML-221162-Bldg-B.dwg Oct 19, 2022 - 8:40am

DRAWN BY: AAM CHECKED BY: TRM

A2.2

221162 ML-221162-Bldg-B

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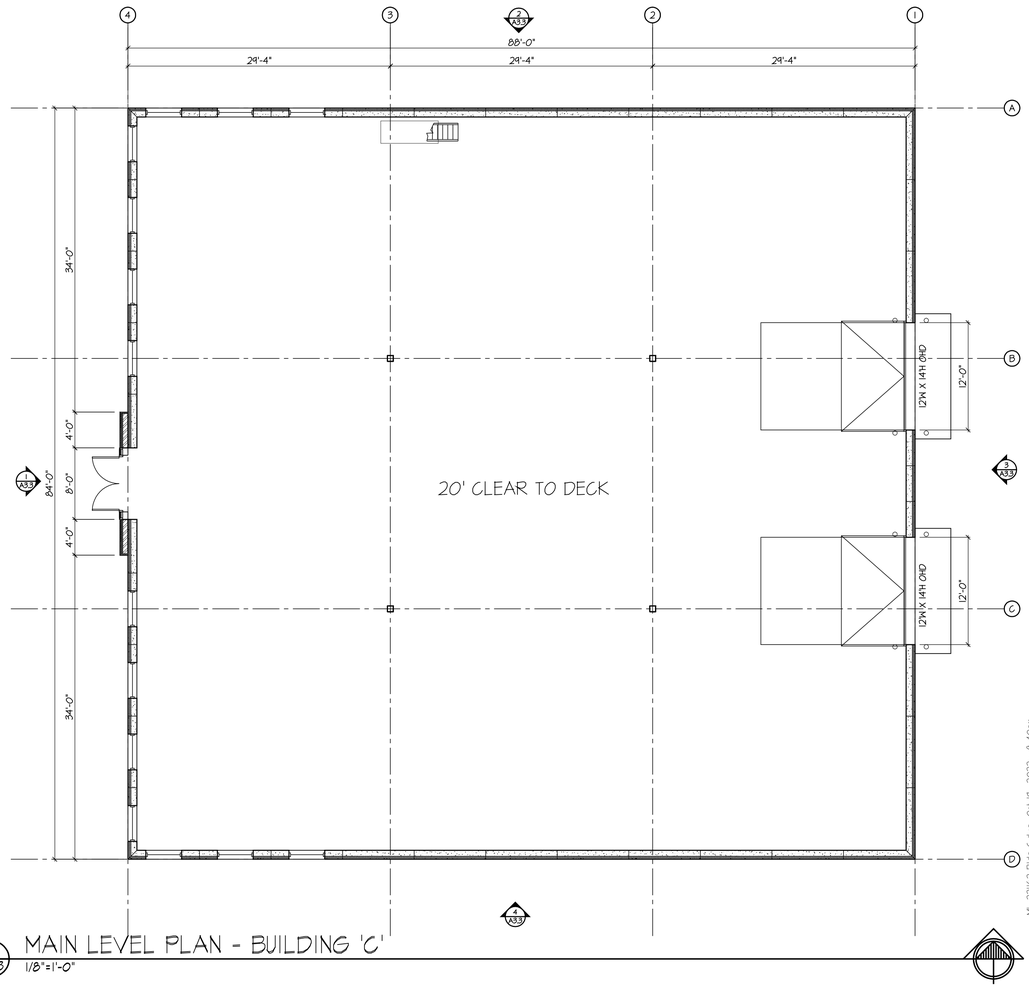

MAIN LEVEL PLAN - BUILDING 'C'

1/8"=1'-0"

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Tel: 952.278.8880

PROJECT

STRUCTURES INC.
THREE LOT SPLIT

CHASKA, MINNESOTA

ISSUED SET	CITY SUBMITTAL	09-30-2022

REVISIONS

DATE	NO.	
10/19/22		CITY RESUBMITTAL

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THOMAS R. MOORSE

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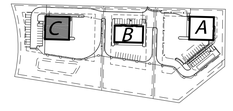
REG. NO. DATE



MAIN LEVEL FLOOR PLAN
BUILDING 'C'

ML-221162-Bldg-C.dwg Oct 19, 2022 - 8:40am

DRAWN BY: AAM CHECKED BY: TRM

A2.3

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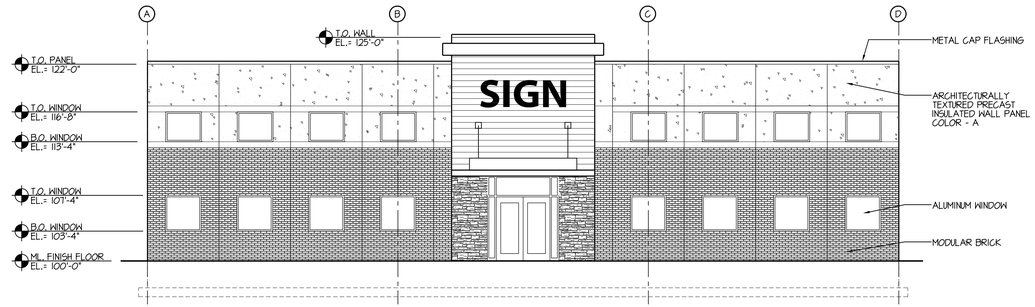
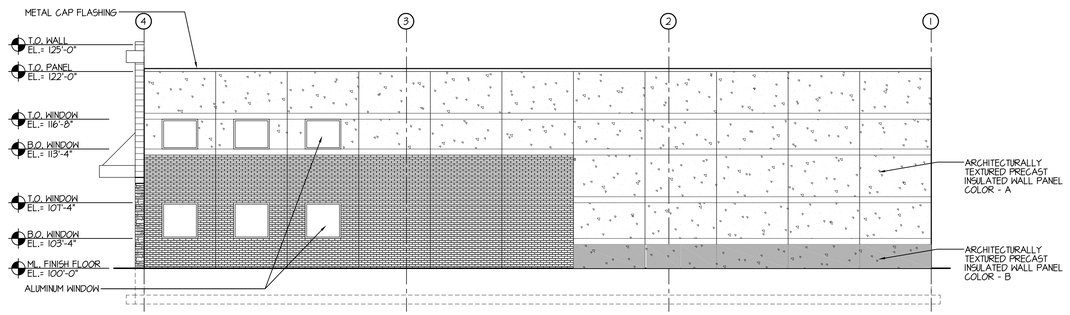


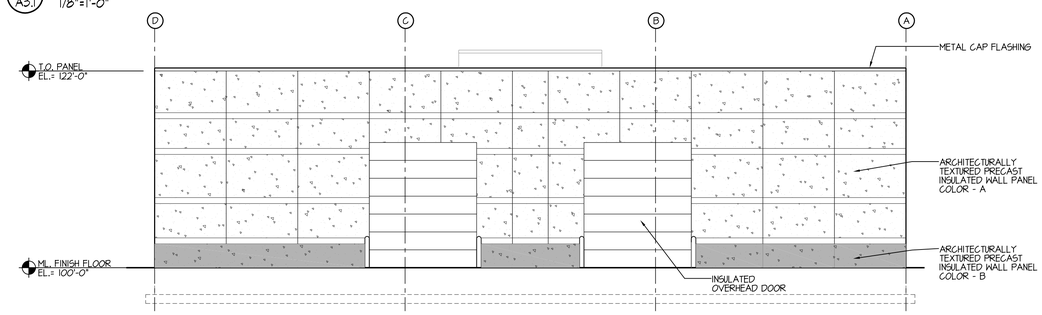
1 A3.1 EAST ELEVATION (FRONT)

1/8"=1'-0"



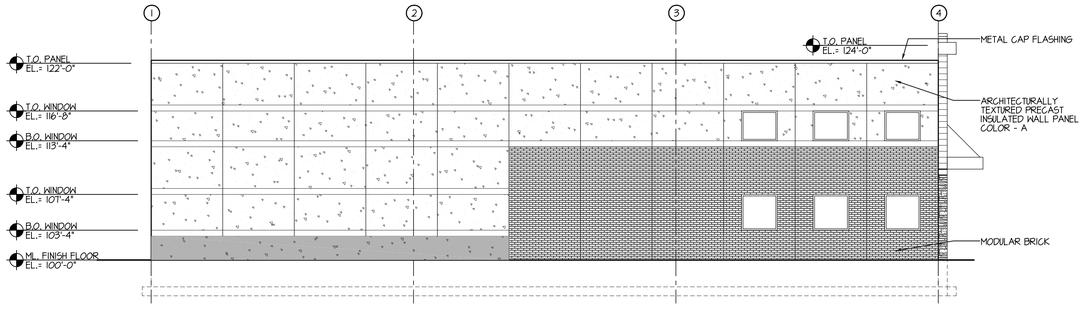
2 A3.1 NORTH ELEVATION

1/8"=1'-0"



3 A3.1 WEST ELEVATION

1/8"=1'-0"



4 A3.1 SOUTH ELEVATION

1/8"=1'-0"

MATERIALS KEY:

	CLASS I		CLASS II	CLASS III				
	% GLASS	% MODULAR BRICK	% ARCHITECTURALLY TEXTURED PRECAST INSULATED WALL PANEL	% OVERHEAD DOOR	% MANUFACTURED STONE	% METAL CANOPY	% METAL PANEL	% OVERALL WALL
NORTH	88 SF 4.5 %	560 SF 28.5 %	1,281 SF 65.6 %	N/A	10 SF 0.5 %	N/A	11 SF 0.9 %	1,962 SF 100 %
EAST	36 SF 16.4 %	134 SF 38.1 %	521 SF 27.8 %	N/A	16 SF 4.0 %	16 SF 0.8 %	235 SF 13.3 %	1,844 SF 100 %
WEST	N/A	N/A	1,162 SF 81.8 %	336 SF 18.2 %	N/A	N/A	N/A	1,848 SF 100 %
SOUTH	88 SF 4.5 %	560 SF 28.5 %	1,281 SF 65.6 %	N/A	10 SF 0.5 %	N/A	11 SF 0.9 %	1,962 SF 100 %
TOTAL	481 SF 6.3 %	1,854 SF 24.2 %	4,613 SF 60.1 %	336 SF 4.4 %	96 SF 1.3 %	16 SF 0.2 %	269 SF 3.5 %	7,671 SF 100 %
	CLASS I = 30.5 %		CLASS II = 60.1 %	CLASS III = 9.4 %				100 %

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PROJECT

STRUCTURES INC.
THREE LOT SPLIT

CHASKA, MINNESOTA

ISSUED SET	CITY SUBMITTAL	09-30-2022
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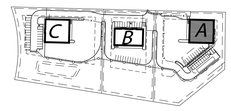

EXTERIOR ELEVATIONS
BUILDING 'A'

EE-221162-Bldg-A.dwg Oct 18, 2022 - 12:59pm

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A3.1

221162 EE-221162-Bldg-A

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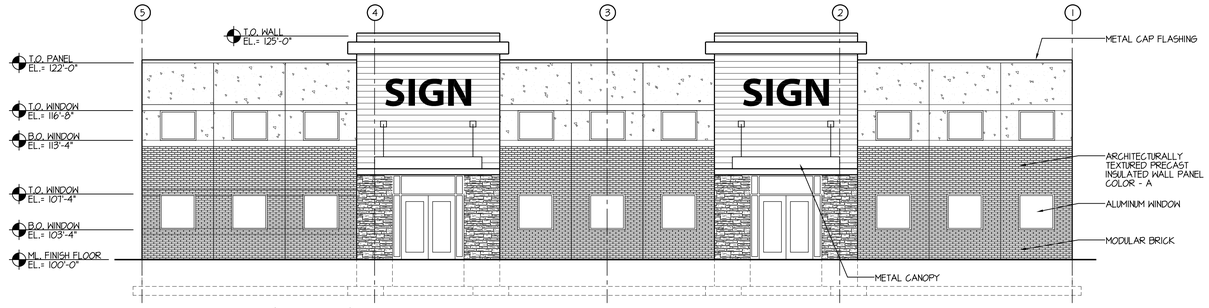
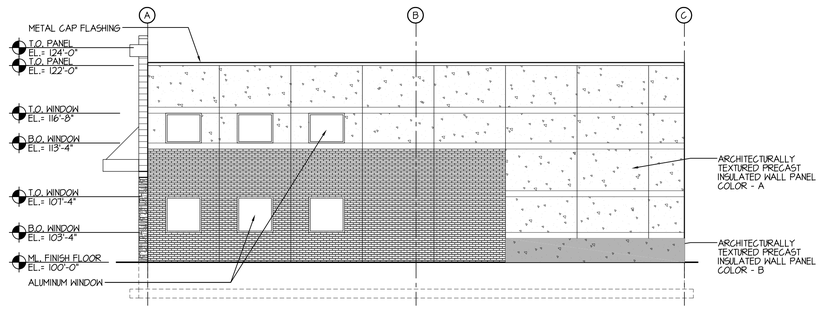


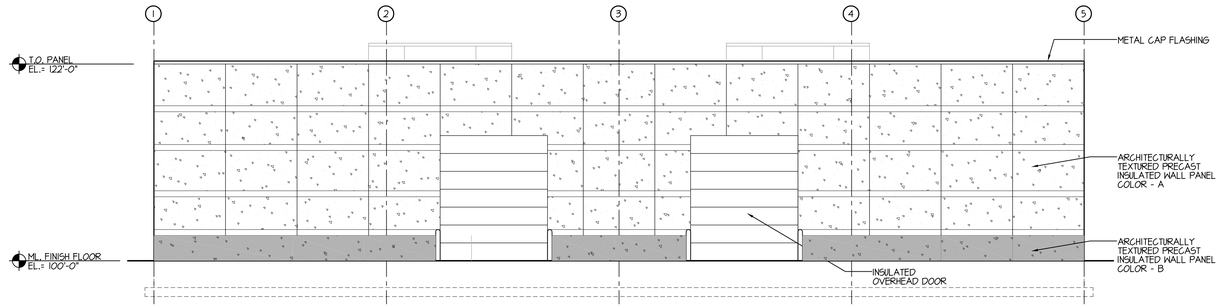
1 A3.2 NORTH ELEVATION (FRONT)

1/8"=1'-0"



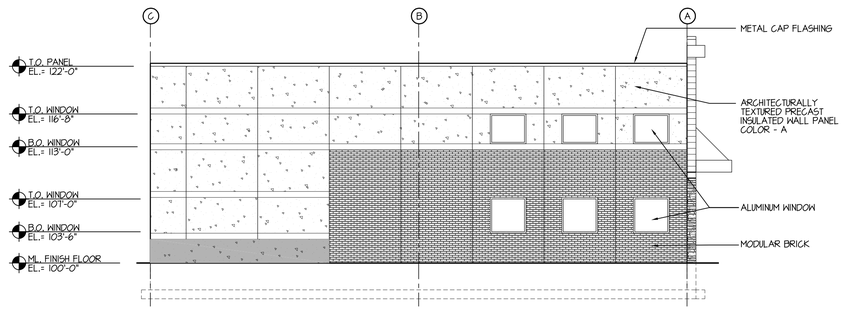
2 A3.2 WEST ELEVATION

1/8"=1'-0"



3 A3.2 SOUTH ELEVATION

1/8"=1'-0"



4 A3.2 EAST ELEVATION

1/8"=1'-0"

MATERIALS KEY:

	CLASS I		CLASS II	CLASS III				
	% GLASS	% MODULAR BRICK	% ARCHITECTURALLY TEXTURED PRECAST INSULATED WALL PANEL	% OVERHEAD DOOR	% MANUFACTURED STONE	% METAL CANOPY	% METAL PANEL	% OVERALL WALL
NORTH	486 SF 17.4 %	1801 SF 32.1 %	551 SF 23.1 %	N/A	152 SF 6.4 %	32 SF 1.3 %	410 SF 14.7 %	2,804 SF 100 %
EAST	88 SF 6.5 %	454 SF 34.1 %	772 SF 51.4 %	N/A	10 SF 0.7 %	N/A	17 SF 1.3 %	1,346 SF 100 %
WEST	88 SF 6.5 %	454 SF 34.1 %	772 SF 51.4 %	N/A	10 SF 0.7 %	N/A	17 SF 1.3 %	1,346 SF 100 %
SOUTH	N/A	N/A	1,852 SF 85.3 %	336 SF 14.1 %	N/A	N/A	N/A	2,288 SF 100 %
TOTAL	562 SF 8.0 %	1,686 SF 22.4 %	4,041 SF 54.4 %	336 SF 4.6 %	172 SF 2.3 %	32 SF 0.4 %	504 SF 6.8 %	7,369 SF 100 %
	CLASS I = 30.4 %		CLASS II = 54.4 %	CLASS III = 14.2 %				100 %

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PROJECT

STRUCTURES INC.
THREE LOT SPLIT

CHASKA, MINNESOTA

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REVISIONS		
DATE 10/19/22	NO. 1	CITY RESUBMITTAL

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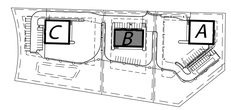

EXTERIOR ELEVATIONS
BUILDING 'B'

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A3.2

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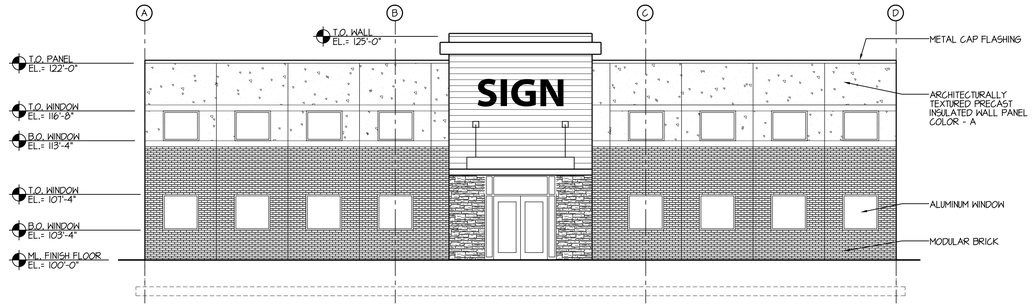
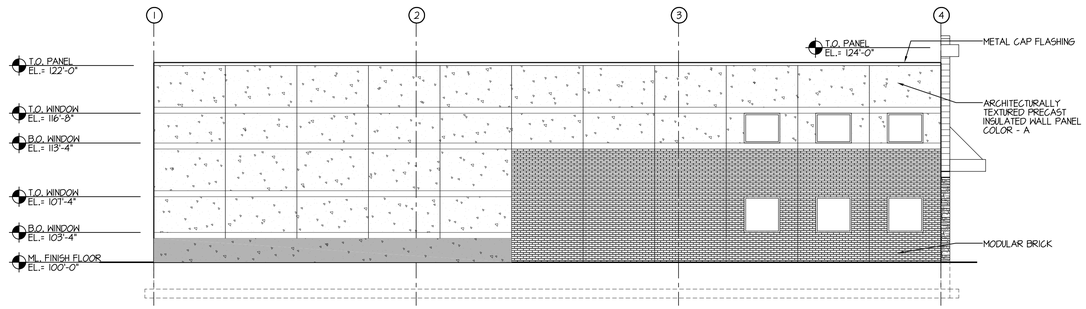


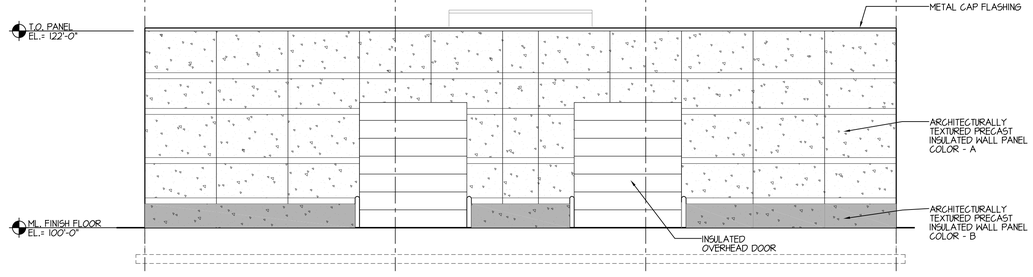
1 A3.3 WEST ELEVATION (FRONT)

1/8"=1'-0"



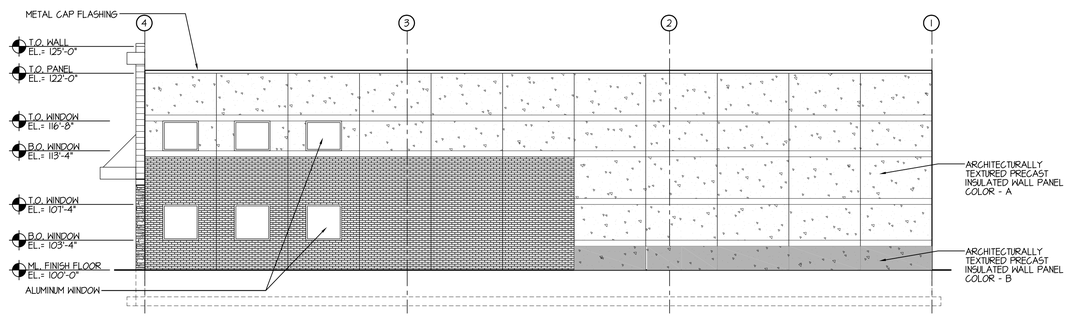
2 A3.3 NORTH ELEVATION

1/8"=1'-0"



3 A3.3 EAST ELEVATION

1/8"=1'-0"



4 A3.3 SOUTH ELEVATION

1/8"=1'-0"

MATERIALS KEY:

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EAST	N/A	N/A	1,162 SF 84.8 %	336 SF 18.2 %	N/A	N/A	N/A	1,848 SF 100 %
SOUTH	88 SF 4.5 %	560 SF 28.5 %	1,281 SF 65.6 %	N/A	10 SF 0.5 %	N/A	17 SF 0.9 %	1,962 SF 100 %
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PROJECT

STRUCTURES INC.
THREE LOT SPLIT

CHASKA, MINNESOTA

ISSUED SET	CITY SUBMITTAL	09-30-2022
REVISIONS		
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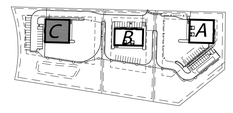

EXTERIOR ELEVATIONS
BUILDING 'C'

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A3.3

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REQUEST FOR ACTION
CHASKA PLANNING COMMISSION
November 9, 2022

Subject: **North Water Treatment Plant – Preliminary Site & Building Plan and Rezoning**

Applicant: City of Chaska Water & Sewer Department

Location: Site of Chaska City Well 7, east of Hundertmark Road and north of Pioneer Trail (PID #300280340 and 300280360)

Case No.: 2022-58

Synopsis: Applicant seeks to obtain approval of a Preliminary Site & Building Plan and Rezoning for a water treatment facility on the western edge of the Hazeltine National Golf Course

Prepared By: Elizabeth Hanson

Staff Recommendation: Motion to recommend approval

Background

The City of Chaska Well 7 is located east of Hundertmark Road and north of Pioneer Trail on the western edge of Hazeltine National Golf Course. Currently the water supply from Well 7 is not treated. With the water being presently untreated, the well is limited to use on high demand days primarily in the summer when irrigation use drives peak demand for water.

As the City has grown and continues to develop, Well 7 is becoming more critical as a standard contributor to the City's water supply. Providing compliant water quality is a cornerstone for meeting high standards of life. This project provides the Chaska Water Utility the ability to optimize a highly productive existing water supply resource in Well 7 while also increasing the capacity of treated water available to the community. The overarching goal of the proposed treatment facility at Well 7 is to supplement current treated water supply with an additional source in an important geography within the distribution system.

The purpose of the proposed North Water Treatment Plant (NWTP) is to provide a water treatment facility capable of treating the existing water supply at Well 7 to the standards that the other water supply wells receive at the South Water Treatment Plant (SWTP) located on Victoria Drive adjacent to the Municipal Services Building.

City staff have conducted studies to determine the best location to add wells to the City system. Those studies indicated utilizing the existing asset at Well 7 by adding water treatment is the most cost-effective approach.

In April 2022, the Concept Plan was approved for the Northern Water Treatment Plant.

Existing Conditions
The site is .56 acres across the two parcel and currently serves at the site of a pumphouse structure that contains Chaska Well 7, several electrical cabinets, and communications cabinets that are leased to various telecommunications companies. The well extends well below grade to access the aquifer. The site is owned by the City of Chaska. The land is currently graded with substantial earth berm containing grasses, vegetation, and various types of deciduous and coniferous trees. The property slopes to the south and drains surface water runoff into a wetland marsh area along the south property line.

Current zoning on the site is O-Open, which effectively allows the current use to continue. With the change to a water treatment plant from the current well use, the site will be rezoned to P2 which is in line with other sites where City facilities are located including the South Water Treatment Plant.

Comprehensive Plan
The site of the proposed North Water Treatment Plant currently contains a well. With the site presently used for public purpose and anticipating the need for the proposed treatment facility on this site, the 2040 Comprehensive Plan guides the parcels proposed for this project as Public/Semi-Public.

The 2040 Comprehensive Plan defines the Public/Semi-Public land use as follows:

Lots or parcels guided for public, semi-public and private educational facilities, places of worship, hospitals, convalescent homes, penal facilities, and facilities of local, state, and federal governments.

Neighboring the site for the proposed North Water Treatment Plant, Hazeltine National Golf Course (proper) is guided as Golf Course, and the approximately 500 feet wide strip adjacent to Hundertmark Road is guided as Mixed Residential with a portion of land between those two guided as Open Space. Mixed Residential, per the Comp Plan, are afford area for residential, commercial, office, park, civic, and open space uses. Low, Medium, and High-Density Residential uses are allowed. In particular, the area adjacent south of this site at the corner of Hundertmark Road and Pioneer Trail has a concept plan that was approved in 2013 for a neighborhood commercial development.

Project Goals. The applicant stated their project goals as:

- *To supplement current treated water supply with an additional source in an important geography within the distribution system.*
- *To ensure that residents have adequate and equitable access to safe and compliant drinking water.*
- *To fit respectfully into the neighboring community with high regards to appearance, access, sustainability, storm water handling and landscape.*

CURRENT REQUEST
The request for the project includes a preliminary site & building plan and rezoning request. Construction of the proposed building will require removal of the existing pumphouse building serving Well 7 to create the opportunity for the most efficient use of the buildable site. A portion of the proposed water treatment plant structure will be located directly over the foundation of the existing pumphouse, yet the proposed structure will extend further east into the site allowing the building to optimize the land available on the east side of the existing pumphouse building. The additional space is critical for chemical storage for the future facility. The proposed facility will total approximately 12,000 square feet in size.

The proposed water treatment plant structure is intended to nestle into the existing earthen berm that arches around the north and east boundaries of the site. The proposed location leverages the berm to provide additional cover against the water treatment plant structure hence helping the building fit naturally into the existing topography.

The height and configuration of the water treatment plant is driven by the process within. The treatment process harnesses gravity to help the water flow through the various stages of treatment. In essence the WTP building encloses an indoor waterfall beginning at the highest point which drives the filtration process through the building to distribution. Therefore, the roof line and building envelope are strictly driven by the treatment process. As a result, adjustments to the building height and configuration are much more difficult to modify. The highest part of the proposed structure is expected to be approximately 37' in height and most of the structure will be under 32' with portions housing the well and chemicals closer to 20' above grade.

Building Design & Materials
The proposed exterior building design is intended to align with other City of Chaska public service buildings including the existing water treatment plant at Engler and Victoria Drive, the fire station on Engler, the Chaska Community Center, and Chaska City Hall. All of these facilities contribute to a signature look that includes a Chaska brick blend exterior, incorporation of white metal façade and windows, and red metal gabled roof. This signature look contributes to Chaska's distinct small-town community feel, and clearly establishes City facilities. The proposed design incorporated 360-degree architecture due to its exposure on all sides.

During the Concept Plan, Stantec developed two options for the facility's roof. Option one was to install the signature red metal roof. Option two was to install a more muted grey metal roof in line with the roof of the Chaska Curling and Event Center and intended to blend in more with the color palate of the Chaska Commons shopping center buildings. The preferred look that came out of the Concept Plan review was the gray roof. This style is reflected in the preliminary plans.

The City of Chaska has certain building design and material requirements for public buildings. A portion of it is stated as follows:

"Office, Commercial, Public and Institutional buildings shall use at least three (3) Class I materials and shall be composed of at least seventy (70) percent Class I materials and shall not exceed thirty (30) percent Class II or Class III materials."

Building Materials	
Class I	Glass, Modular Brick, Architectural Metal (84%)
Class II	Manufactured Stone, Precast Stone (16%)
Class III	None
CLASS I REQUIRED	70%; three different materials
CLASS II REQUIRED	Not Exceed 30%
PROVIDED	84% Class I; three different materials 16% Class II; two different materials

Access/Parking
The concept plan proposes to continue using the existing access onto Hundertmark Road that is used Well 7. The water treatment facility will not house permanent staff. Water and Sewer Department staff will visit the facility on a regular basis. Vehicles needed to service the facility will be accommodated in the planned access drive and via two pervious paver parking stalls. The driveway is proposed to be configured with concrete to allow trucks to back out and exit the site in the forward direction onto Hundertmark.

Setbacks
The required setbacks for the site are as follows:

BUILDING SETBACKS	
Direction	**Setback**
Hundertmark Road	100 feet from centerline
From North, South and East Property Lines	15 feet

Due to the nature of deep well infrastructure the well must remain in the current location to remain compliant with Minnesota Department of Health (MDH) standards. It is believed that the well was constructed in compliance with the well setback requirements established at that time it was drilled. The impact is that the face of the pumphouse structure is approximately 5' closer to Hundertmark than the current setback requirements allow. Due to the location of the well within the pumphouse structure the portion of new water treatment plant structure proposed to be constructed over the existing well will need to follow the existing foundation of the pumphouse and will need to encroach the setback by 5' as it does now. The balance of the proposed water treatment plant structure will comply with the current setback requirements.

Another slight divergence to note, due to the nature of the proposed water treatment building it is expected that underground tanks will be required. Given the constraints of the proposed site it is anticipated that a portion of one of the holding tanks will need to be located within the 100' setback. The top of the proposed tank(s) will be exposed concrete or covered with earth and vegetation.

Utilities
Water and sewer are available to the site. A permanent easement acquired by the City from Hazeltine National Golf Club in December 2014 will be utilized to route sanitary sewer from the proposed site across the open field to the nearest sanitary sewer. The City Engineer is actively involved in ensuring appropriate connections to the facility.

Temporary easements may be required from Hazeltine National Golf Club to conduct some of the grading construction activities and utility installations.

Fees
Staff will work to define the appropriate approach to fees for the City facility.

Trails/Pedestrian Facilities
A City trail currently exists on the west side of Hundertmark Road. No trail is planned on the east side of Hundertmark Road. However, the site will need to be designed to accommodate provision of future sidewalk along the east side of Hundertmark Road when development occurs.

Landscaping & Screening
The table below indicates the landscaping requirements for this site and how the applicant meets or does not meet them:

LANDSCAPING REQUIREMENTS & PROPOSED		
	Required	**Proposed**
Overstory Trees	38 caliper inches (14 trees)	46 caliper inches (20 inches existing; 26 inches proposed)
Understory Trees	3	8
Shrubs	24	72

The applicant is showing that they meet the landscaping requirements for this site.

In addition to landscaping, the applicant has provided several renderings of how the building is screened from the Hazeltine Golf Course. Renderings were taken at zoomed in and zoomed out levels. The views from the golf course were mainly taken from the nearest portions of the course, which were the north and south driving ranges. There exists a significant layer of vegetation that wraps near the north and east sides of the water treatment property. With both existing and proposed landscaping the facility will be minimally seen from the golf course.

Lighting
The site lighting and lighting attached to the building proposed for this plan should be fully screened and face downward. Building lights in the form of recessed cans, wall packs and decorative sconces will be provided. Bollards will also be installed for the walkway. Full details of the lighting and photometric analysis have been provided in this submission, and meet lighting requirements.

Stormwater
With the size of the proposed development being less than an acre, stormwater management requirements do not apply. However, the grading plan should ensure that drainage is routed away from neighboring properties and either captured onsite with smaller scale BMPs like rain gardens or directed towards existing stormwater systems on Hundertmark Road.

Platting
The development is currently platted, so a re-platting is not being considered for this proposal. However, the project is proposed across two separate lots that will need to be combined as part of the process.

Rezoning
The site is being rezoned from O-open to P2-Public Buildings.

Neighborhood Meeting
City staff have had conversations with Hazeltine. They have expressed interest in understanding visual impacts from the height of the building to the golf course. City staff have explained that the height of the proposed building is necessary to accommodate necessary water treatment equipment and processes. Visual impacts will be addressed through landscaping.

Deadline for Agency Actions
The City of Chaska received the complete application for this request on Tuesday, October 25, 2022. Pursuant to Minnesota State Statutes the City must act on this request by Saturday, December 24, 2022 (60 days), unless the City provides the petitioner with written reasons for an additional 60-day review period. The additional review period would extend to Wednesday, February 22, 2022. The City may with the petitioner's consent extend the review period beyond the Wednesday, February 22, 2022. Lastly, if the City denies the petitioners request "… it must state in writing the reasons for the denial at the time it denies the request."

PLANNING COMMISSION ACTION REQUESTED:
Motion to recommend approval of the North Water Treatment Plant – Preliminary Site & Building Plan (PC# 2022-58), subject to the following conditions:

1. **Approvals shall be based on the following graphic exhibits:**
    a. **Narrative (pgs 1-4), prepared by Stantec, dated October 24, 2022**
    b. **Site Plan Concept Overview (Figure 1), prepared by Stantec, dated October 24, 2022**
    c. **Existing Conditions Site Plan (Figure 2), prepared by Stantec, dated October 24, 2022**
    d. **Site Grading Plan Concept (Figure 3-3a), prepared by Stantec, dated October 24, 2022**
    e. **Site Plan Concept (Figure 4-4a), prepared by Stantec, dated October 24, 2022**
    f. **Tree Survey (Figure 5), prepared by Stantec, dated October 24, 2022**
    g. **Landscape Plan (Figure 6), prepared by Stantec, dated October 24, 2022**
    h. **Planting Schedule (Figure 7), prepared by Stantec, dated October 24, 2022**

i. **Concept Building Elevations (Figure 8), prepared by Stantec, dated October 24, 2022**
j. **Concept Building Elevations & Perspective (Figure 9), prepared by Stantec, dated October 24, 2022**
k. **Concept Building Perspectives (Figure 10), prepared by Stantec, dated October 24, 2022**
l. **Main Level Concept Plan (Figure 11), prepared by Stantec, dated September 29, 2022**
m. **Site Plan Photometrics Concept (Figure 12), prepared by Stantec, dated September 27, 2022**
n. **Lighting Cutsheets (Figures 13-14), prepared by Stantec, dated October 24, 2022**
o. **Chaska WTP View Renderings (pgs 1-8), prepared by Stantec**

2. **Compliance with the zoning P2 (Section 15.12.180) of the Chaska Zoning Ordinance).**
3. **Compliance with section 15.28.120 Building Design/Materials for Commercial, Industrial, Public, & Institutional.**
4. **Compliance with applicable zoning requirements, in particular Chapter 9 (General Requirements).**
5. **Provision of 360-degree architecture be used on all facades.**
6. **Adherence to the following building setbacks:**
    a. **Hundertmark Road: 100 feet from centerline**
    b. **From North, South and East Property Lines property lines: 15 feet**
7. **Coordination with the City Engineer for the provision of public utilities to the site.**
8. **Provision of a grading plan should route drainage away from neighboring properties.**
9. **Provision to combine the two lots of the proposed development site into a single lot.**
10. **Provision to obtain necessary temporary easements from Hazeltine National Golf Club to conduct grading construction activities and utility installations.**

Motion to recommend approval of the rezoning from Open (O) to P2 – Public Buildings.

Stantec Consulting Services Inc.
733 Marquette Avenue Suite 1000, Minneapolis MN 55402-2314

October 24, 2022
File: 193805386

Attention: **Liz Hanson - City Planner City of Chaska**
Reference: **Preliminary Site Plan Submittal for North Water Treatment Plant**

Dear Liz,

This letter includes our presentation of items required for the Preliminary Site Plan Submittal for consideration by the City of Chaska's Planning Commission. We look forward to gaining concurrence from the Commission and continuing the design process. Our team will be happy to provide any additional information that will assist in the review of this project.

Purpose

The purpose of the proposed North Water Treatment Plant (NWTP) Project is to allow the City to harness one of its highest producing water supply assets while improving resiliency and reliability for the overall water system. The intended use of the subject property is to implement a drinking water treatment facility to serve the City's current Well 7 and future Well 10.

Analysis performed for Chaska's 2020 Master Plan indicated that additional infrastructure is needed to meet the projected water demands by the year 2040. Construction of the proposed NWTP will increase the City's available high quality drinking water by 1750 gpm. Currently Well 7 is not treated and serves as a backup water source used only in times of increased water demand. In recent years when it becomes necessary to operate Well 7 to the distribution system for extended periods of time, residents notice the change in water quality and complaints ensue. The change in water quality is caused by high levels of manganese in the groundwater which is which is supplied by the Jordan aquifer.

Description of Building Materials

In the spring of 2022, the concept plan for the NWTP was presented to the Planning Commission. On April 18, 2022 the Planning Commission passed a resolution approving the concept plan.

We understand that it is important that the building blend in with the neighboring community and the adjacent developments. The building materials and colors will be selected with concurrence from the City such that it will be complementary to the nearby shopping and dining along Hundertmark Road. One of the key characteristics of the building is the sloped metal roof and the metal and trim around the perimeter of the flat roof area of the facility. Incorporating feedback provided by the Planning Commission, the roof and associated metal trim will be grey in color as reflected in the attached elevation views and renderings.

Exterior wall materials will include modular face brick, manufactured stone accent bands, and prefinished metal vertical wall panels. The sloped areas of the roof will be prefinished standing seam metal with prefinished metal fascia and soffit panels. The flat roof will have single-ply membrane roofing system with

Reference: Preliminary Site Plan Submittal for North Water Treatment Plant

tapered insulation to direct water to the roof drains. Exterior doors will be prefinished aluminium with insulated glazing or painted hollow metal doors and frames. Exterior windows will have prefinished aluminium frames with tinted insulated glazing.

This building will be designed based on the following Minnesota Codes and as adopted, the 2018 IBC Codes.
2020 Minnesota Building Code
2020 Minnesota Energy Code
2020 Minnesota Accessibility Code
2020 Minnesota Mechanical and Fuel Gas Code
2020 Minnesota Plumbing Code
2020 Minnesota Fire Code
Minnesota Electrical Code

Exterior lighting will be designed to minimize light pollution. Building lights will be a combination of recessed cans, wall packs (with shields / sharp cut off distribution), and decorative sconces. Bollards will be provided for the walkway. All lighting will be LED. Dimmers will be provided for the sconces and bollards. The existing streetlight will remain and therefore will provide the parking lot lighting. Cutsheets for each type of light are included in this submittal.

The building will have several welcoming features including an inviting driveway and walkway between the main door and other points of egress. The walkway will be marked by planters on one side and pedestals on the other which will provide subtle illumination of the walkway at night. An American flag will accompany the walkway and will be positioned proudly in the grounds in front of the highest point of the facility. The walkway and planters will allow motorists and pedestrians on Hundertmark Road to enjoy the exterior of the facility while also protecting the water supply within the facility.

The project will require demolition of the existing Well 7 structure to make room for the new treatment facility. The site will not allow the opportunity for multiple access points for one direction flow into and out of the site. The new WTP will involve reconstruction of the current driveway within the same general location and alignment as the existing driveway with the addition of a short turnaround branch to allow vehicles to exit the site driving forward. The new driveway will be concrete in contrast to the current driveway which is bituminous.

The primary purpose of the driveway is to will allow clear access to the Well 7 pump and motor in addition to the delivery of four chemicals. Chemical deliveries will be monthly or bi-monthly and will be similar to the chemicals employed at the existing facility with the addition of two chemicals that will be used as part of the treatment process.

The building address will be clearly marked with anodized aluminium letters which will be lit by indirect lighting at night.

The building will be constructed such that it is built into the existing berm on the north eastern edge of the site. This will both minimize the mass of the building exposed on the portion facing Hazeltine National, the building will be more natural to the site, and construction costs will be minimized as less face material will need to be finished as a large portion of the east face will be below grade. The remainder of the site will be

Reference: **Preliminary Site Plan Submittal for North Water Treatment Plant**

graded to match into the existing terrain similar to what exists there today. Storm water runoff from the back of the roof will be managed by the installation of Rain Guardians and rip rap and will follow existing drainage patterns. The storm water runoff from the front of the roof will be managed by piping the runoff into a stormwater collection system. Additionally, the two proposed parking stalls will be pervious pavement. Grading will be provided to direct additional hard surface areas to the pervious pavement. During construction perimeter BMP's will be installed to contain stormwater runoff. Final restoration of the site will be turf with the possibility of the back of the building having more native grasses. Final planting and species for turf restoration still need to be finalized with City staff.

Sustainable Initiatives

The NWTP will contain relatively large volumes of water pumped from the ground, and the groundwater will act as a source of geothermal heating and cooling.

Process Considerations: To further reduce the energy required for raw water supply pumping, a dedicated reclaim pump will be installed to decant water from the backwash holding tank to be recycled to the head of the treatment process. This recycle system can account for up to 10% of the raw water flowrate. The recycle pump requires approximately a 3 HP motor as compared to the well pumps which are

Large amounts of energy are required to change the temperature of large volumes of water which are contained within the WTP. The groundwater supply within the facility is expected to be approximately 55 degrees Fahrenheit when brought to the surface by the wells. This volume of water will serve as a heat source in the winter and a heat sink in the summer as it moves through the treatment process from aeration to detention, filtration and storage.

The mechanical design of the facility embraces the natural temperature of the water which helps cool the building in the warmer months and heat the building in the colder months. Similar to the south water treatment facility (SWTP), the treatment process selected for the NWTP will utilize gravity to move water throughout the treatment process to the greatest extent possible, avoiding pumping through multiple stages of treatment and reducing the energy consumed.

Motors for the required pumps will be equipped with variable frequency drives, which will allow the speed of the motor adjusted to use energy efficiently. The motors will be specified to be high efficiency motors. Where available, premium efficiency motors will be utilized.

All interior lighting will be LED and occupancy sensors will be used in all appropriate spaces to minimize energy consumption.

Preliminary Plan Meets Concept Conditions

The preliminary plan acknowledges each of the items referenced in the resolution prepared by the Planning Commission regarding the Concept Plan submittal in April of this year. Each of the items will be addressed and incorporated as part of the final design.

Reference: **Preliminary Site Plan Submittal for North Water Treatment Plant**

Additional items identified in the checklist:

- Wetland Delineation Report. An investigation of the site has been conducted. There are no wetlands present on the site.
- Stormwater Report - The small amount of new impervious surfaces created by the project does not trigger storm water rules or a permit. The storm water runoff will be managed as discussed above. If there are further questions about the storm water management, we would be happy to review them with you.
- The project site consists of two independent parcels owned by the City. The project will include a request to combine/replat the property into one parcel and have the property zoned as Public Buildings (P-2).

As always, our team at Stantec sincerely appreciates the opportunity to work with the City of Chaska and welcomes any questions you may have.

Regards,

Stantec Consulting Services Inc.

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Principal
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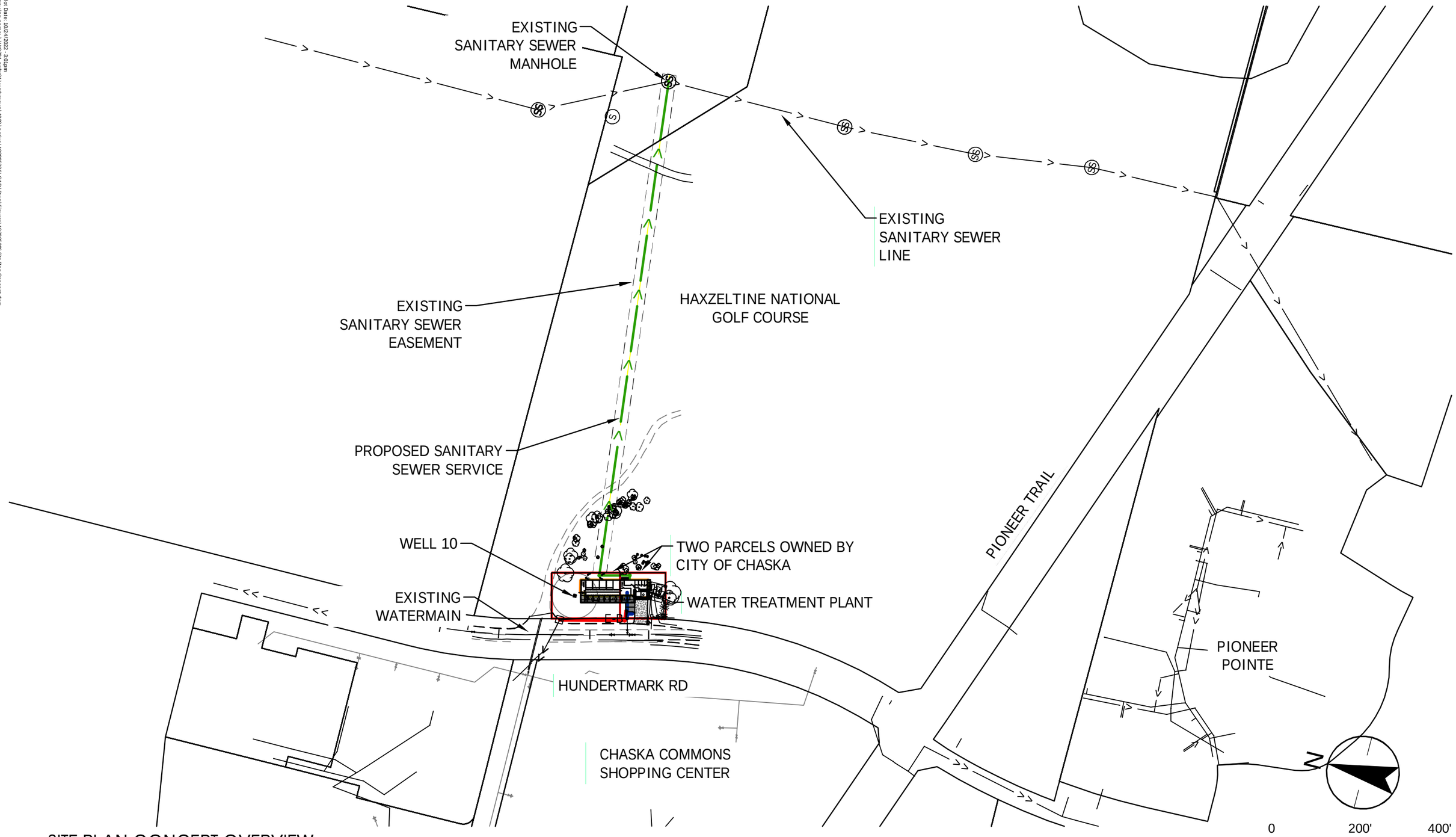
Mobile: 651 775-5156
Eric.Lembke@stantec.com

Ryan Capelle, P.E.
Senior Associate
Direct: 612 712 2025
Mobile: 651 775-5027
Ryan.Capelle@stantec.com

Attachments: Figures 1-15

c. Matt Clark
Matt Haefner

Plot Date: 10/24/2022 - 3:01pm
Drawing name: \\ld0291.pplrs01\work\group\ 193B\active\ 193805386\CAD\Dwg\Figures\193805386-Site Plan Concept.dwg
Xrefs: 193805386GRX.dgn, 193805386GRXU, 193805386_XSAZ, 193805386_XSNO, 193805386_XSXV, 193805386_XSXO-MAIN LEVEL CONCEPT PLAN, 193805386_XSXT, 193805386_XSS



SITE PLAN CONCEPT OVERVIEW

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 1

DATE 10/24/2022 PROJ. NO. 193805386

Stantec
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Plot Date: 09/28/2022 - 10:41am
Drawing name: \\US031-prfs01\workgroup\193805386\CAD\Dwg\Figures\193805386-Existing Site Plan.dwg
Xrefs: 193805386XSPL, 193805386_XSXZ, 193805386_XSXV, 193805386_XSXT

EXISTING SANITARY SEWER EASEMENT

TWO PARCELS OWNED BY CITY OF CHASKA

DRAINAGE MANHOLE

COMMUNICATION FACILITY

EXISTING CONC. PAD

COMMUNICATION CABINET

20"x12" TEE

20" DIP WM

12" DIP WM

EXISTING WELL HOUSE NO. 7

ELECTRIC HANDHOLE

ELECTRICAL TRANSFORMERS

HYDRANT

20" DIP WM

E-B

F-B

FO-B

COMMUNICATION HANDHOLES

20" BFV & BOX

20"x16" REDUCER

16" DIP WM

20" DIP WM

18" BFV & BOX

18" DIP WM

20"x18" REDUCER

20"x20" TEE

16"x8" TEE

HUNDERTMARK RD

N

0 25' 50'

EXISTING CONDITIONS SITE PLAN

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 2

DATE 09/27/22 PROJ. NO. 193805386

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Drawing name: \\US0291-pstrs01\workgroup\1938\active\193805386\CAD\Dwg\Figures\193805386-Site Plan Concept.dwg
Xrefs: 193805386XPL; 193805386XHU; 193805386_XRZ; 193805386_XSHO; 193805386_XSXV; 193805386_XSHO-MAIN LEVEL CONCEPT PLAN; 193805386_XEXI; 193805386_XSS

EXISTING SANITARY SEWER EASEMENT

PROPOSED SANITARY SEWER SERVICE

TWO PARCELS OWNED BY CITY OF CHASKA

WATER TREATMENT PLANT

EXISTING WELL NO. 7

PLANTING AREA

EXISTING WELL BUILDING PERIMETER

SNOW STORAGE

WELL 10

6' CONCRETE SIDEWALK

(2)10'X20' PARKING STALLS WITH PERVIOUS PAVERS

CLEARWELL BELOW GRADE

PROPOSED CONCRETE DRIVEWAY

12" PVC STORM SEWER

HUNDERTMARK RD

CONNECT TO EXISTING 20" DIP WATER MAIN

0 25' 50'

SITE GRADING PLAN CONCEPT

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 3

DATE 10/24/2022 PROJ. NO. 193805386

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Drawing name: \\US0291-pstrs01\workgroup\1938\active\193805386\CAD\Dwg\Figures\193805386-Site Plan Concept.dwg
Xrefs: 193805386XSPL; 193805386XSWL; 193805386_XSRZ; 193805386_XSNO; 193805386_XSXV; 193805386_XSNO-MAIN LEVEL CONCEPT PLAN; 193805386_XSFL; 193805386_XSSS

EXISTING SANITARY SEWER EASEMENT

PROPOSED SANITARY SEWER SERVICE

TWO PARCELS OWNED BY CITY OF CHASKA

WATER TREATMENT PLANT

PLANTING AREA

EXISTING WELL NO. 7

EXISTING WELL BUILDING PERIMETER

SNOW STORAGE

WELL 10

6' CONCRETE SIDEWALK

(2)10'X20' PARKING STALLS WITH PERVIOUS PAVERS

CLEARWELL BELOW GRADE

12" PVC STORM SEWER

PROPOSED CONCRETE DRIVEWAY

CONNECT TO EXISTING 20" DIP WATER MAIN

HUNDERTMARK RD

30.90%
16.10%
15.68%
1.79%
2.20%
1.75%
3.82%

0 25' 50'

SITE GRADING PLAN CONCEPT

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 3a

DATE 10/24/2022 PROJ. NO. 193805386

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Plot Date: 10/24/2022 - 3:20pm
Drawing name: \\us031-ppfs01.\workgroup\193805386\CAD\Dwg\Figures\193805386-Site Plan Concept.dwg
Xrefs: 193805386XSKI, 193805386XSKU, 193805386_XSAZ, 193805386_XSNO, 193805386_XSXV, 193805386_XSNO-MAIN LEVEL CONCEPT PLAN, 193805386_XSIT, 193805386_XSS

EXISTING SANITARY SEWER EASEMENT

PROPOSED SANITARY SEWER SERVICE

TWO PARCELS OWNED BY CITY OF CHASKA

146-8"

15' RY BLDG SETBACK

REQUIRED 50' CLEAR ZONE

WELL 10

35'

28'

51'

WATER TREATMENT PLANT

Filter 1
Filter 2
Filter 3
Filter 4
Detention Tank A
Stairwell
Entrance Vestibules
Filter Pipe Gallery
Detention Tank B
Electrical Room
High Service Pump Room
Main Entry
Rest Rm
Office / Lab
Potassium Permanganate Room
Polyphosphate Room
Fluoride Room
Chlorine Room
RAISED PLANTERS SEE LANDSCAPE DWGS
ACCESS HATCH

4'
39'

EXISTING WELL NO. 7

EXISTING WELL BUILDING PERIMETER

SNOW STORAGE

PLANTING AREA

10'

108'-8"

28'

50' BLDG SETBACK

100'

6' CONCRETE SIDEWALK

STAMPED CONCRETE WITH RAISED PLANTING BEDS

CLEARWELL BELOW GRADE

12" PVC STORM SEWER

PROPOSED CONCRETE DRIVEWAY

(2)10'X20' PARKING STALLS WITH PERVIOUS PAVERS

CONNECT TO EXISTING 20" DIP WATER MAIN

HUNDERTMARK RD

E-B
FO-B

N

0 25' 50'

SITE PLAN CONCEPT

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 4

DATE 10/24/2022 PROJ. NO. 193805386

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Drawing name: \\US0231-prfs01\workgroup\193805386\CAD\Dwg\Figures\193805386-Site Plan Concept.dwg
Xrefs: 193805386XPL, 193805386XSKU, 193805386_XSAZ, 193805386_XSNO, 193805386_XSXV, 193805386_XSNO-MAIN LEVEL CONCEPT PLAN, 193805386_XSCI, 193805386_XSS

EXISTING SANITARY SEWER EASEMENT

PROPOSED SANITARY SEWER SERVICE

TWO PARCELS OWNED BY CITY OF CHASKA

146-8"

15' RY BLDG SETBACK

REQUIRED 50' CLEAR ZONE

WELL 10

35'

28'

51'

50' BLDG SETBACK

100'

Stairway Entrance Vestibules

Filter 1

Filter 2

Filter 3

Filter 4

Detention Tank A

Electrical Room

Potassium Permanganate Room

Polyphosphate Room

Fluoride Room

Chlorine Room

WATER TREATMENT PLANT

Filter Pipe Gallery

Detention Tank B

High Service Pump Room

Main Entry

Rest Room

Office / Lab

Well 7 Pump Room

4'

39'

EXISTING WELL NO. 7

EXISTING WELL BUILDING PERIMETER

SNOW STORAGE

PLANTING AREA

10'

108'-8"

28'

6' CONCRETE SIDEWALK

STAMPED CONCRETE WITH RAISED PLANTING BEDS

CLEARWELL BELOW GRADE

12" PVC STORM SEWER

CONNECT TO EXISTING 20" DIP WATER MAIN

PROPOSED CONCRETE DRIVEWAY

(2)10'X20' PARKING STALLS WITH PERVIOUS PAVERS

E-B

F-B

FO-B

HUNDERTMARK RD

N

0 25' 50'

SITE PLAN CONCEPT

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 4a

DATE 10/24/2022 PROJ. NO. 193805386

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Plot Date: 10/24/2022 - 3:06pm
Drawing name: \\is0231-ppfs01\workgroup\ 19381\active\ 193805386\ CAD\ Dwg\ Figure\ 193805386-Tree Survey.dwg
Xrefs: 193805386X3PL_193805386_XSXT

24" BOXELDER
8" BOXELDER
8" BOXELDER
8" BOXELDER
12" WHITE ASH
25" AMUR MAPLE
20" WHITE ASH
18' BLACK HILLS SPRUCE
24' BLACK HILLS SPRUCE
24' BLACK HILLS SPRUCE
PROPERTY LINE
971
970
969
968
966
964
962
958
957
959
960
E-B
F-B
FO-B
HUNDERTMARK RD
N
0
25'
50'

TREE SURVEY

CITY OF CHASKA, MN
WATER TREATMENT PLANT

FIGURE 5

DATE 10/24/2022 PROJ. NO. 193805386

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Plot Date: 10/24/2022 - 3:26pm
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Xrefs: 193805386_XSNO, 193805386_XSNO-MAIN LEVEL CONCEPT PLAN, 193805386_XSS1, 193805386_XSN1, 193805386XSPL

24" BOXELDER
TO REMAIN

NATIVE SEED AREA, TYPICAL

TURF AREA, TYPICAL

QN
5

QB
1

BHS
1

SH
1

QB
1

CB
6

IS
12

EC
7

EC
7

RAISED
PLANTER
TYPICAL

PD
17

IS2
14

CB
4

TT
5

PROPERTY LINE

30" AMUR MAPLE
TO REMAIN

20" AMUR MAPLE
TO REMAIN

24" BLACK HILLS SPRUCE
TO REMAIN

AS
3

MS
1

AP
2

SI
2

LANDSCAPE SIGHT TRIANGLE

970 968 966 964 962 960 958 956

E-B FO-B C

HUNDERTMARK RD

NOTE:
1. TURF, AND PLANTING AREAS SHALL RECEIVE PERMANENT IRRIGATION.
2. TREES SHALL RECEIVE SUPPLEMENTAL IRRIGATION ON SEPARATED IRRIGATION ZONES.
3. NATIVE PLANTING AREAS SHALL NOT RECEIVE IRRIGATION.
4. ZONES TO BE ESTABLISHED EXCLUSIVELY FOR EACH TYPE OF IRRIGATION (I.E. ROTARY SPRAY, POP-UP SPRAY, BUBBLER, SUBSURFACE DRIP) AND EXPOSURE CONDITIONS (I.E. SOUTH AND WEST FACING, NORTH AND EAST FACING, TOP OF SLOPES, TREES WITHIN TURF, TREES WITHIN NATIVE SEEDING AREAS, ETC.).

N

0 25' 50'

LANDSCAPE PLAN

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 6

DATE 10/24/2022 PROJ. NO. 193805386

Stantec
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LANDSCAPE CALCULATION NOTES

ALL TURF AND GRASS AREAS SHALL BE DE-COMPACTED TO A DEPTH OF 18" PRIOR TO PLACEMENT OF 6" TOPSOIL.

LANDSCAPING REQUIREMENTS

TOTAL GROSS SQUARE FOOTAGE OF ALL FLOORS OF A BUILDING DIVIDED BY 320

WATER TREATMENT PLANT = 12.120 TOTAL GROSS SQUARE FOOTAGE
12.120 SF/320 = 37.88 CALIPER INCHES
38 CALIPER INCHES REQUIRED

TOTAL UNDERSTORY TREES = 25% OF OVERSTORY TREES
11 x 0.25 = 2.75 UNDERSTORY TREES
3 UNDERSTORY TREES REQUIRED

TOTAL SHRUBS = ONE SHRUB PER 30 FT OF SITE PERIMETER
705 LF/30 = 23.5 CALIPER INCHES
24 SHRUBS REQUIRED

TREE REPLACEMENT TOTAL CALIPERS

EXISTING SIGNIFICANT TREES	
TREES: 2 conif. trees x 24' height x 2.4 cal in conversion =	20.0 cal. inches
TOTAL SIGNIFICANT TREE CALIPER INCHES =	**20.0 cal. inches**
PROPOSED TREE REPLACEMENT TOTAL CALIPERS	
OVERSTORY DECID.	
TREES: 2 trees x 3.5 cal./tree =	7 cal. inches
TREES: 4 trees x 2.5 cal./tree =	10.0 cal. inches
OVERSTORY CONIF.	
TREES: 2 trees x (8' ht. / 2.4 = 3.3 = 3.0 cal.) =	6.0 cal. inches
TREES: 1 trees x (6' ht. / 2.4 = 2.5 = 3.0 cal.) =	3.0 cal. inches
TOTAL PROPOSED TREE CALIPER INCHES =	**26 cal. inches**
	46 TOTAL cal. inches
ADDITIONAL CALIPER INCHES FROM UNDERSTORY TREES	
TREES: 3 trees x 2.0 cal./tree =	6.0 cal. inches
TREES: 5 trees x 1.5 cal./tree =	7.5 cal. inches
TOTAL PROPOSED ADDITIONAL TREE CALIPER INCHES =	**13.5 cal. inches**

PLANT SCHEDULE

OVERSTORY TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY
	AS	ACER X FREEMANII 'SIENNA'	SIENNA GLEN® MAPLE	2.5" B&B	3
	SH	GLEDITSIA TRIACANTHOS `SKYLINE`	SKYLINE HONEY LOCUST	2.5" B&B	1
	BHS	PICEA GLAUCA `DENSATA`	BLACK HILLS SPRUCE	6` HT. B&B	1
	AP	PINUS NIGRA	AUSTRIAN PINE	8` HT. B&B	2
	QB	QUERCUS BICOLOR	SWAMP WHITE OAK	3.5" B&B	2
UNDERSTORY TREES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**QTY**
	MS	MALUS X 'SPRING SNOW'	SPRING SNOW CRABAPPLE	2" B&B	1
	QN	QUERCUS X WAREI 'NADLER'	KINDRED SPIRIT® OAK	15 GAL	5
	SI	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE LILAC	2" B&B	2
SHRUBS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**QTY**
	CB	CORNUS SERICEA 'BAILADELINE'	FIREDANCE™ RED TWIG DOGWOOD	5 GAL	10
	EC	EUONYMUS ALATUS 'COMPACTUS'	COMPACT BURNING BUSH	5 GAL	14
	TT	TAXUS X MEDIA 'TAUNTONII'	TAUNTON'S ANGLO-JAPANESE YEW	5 GAL	5
ANNUALS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**QTY**
	IS	IPOMOEA BATATAS 'SWEET CAROLINE LIME'	SWEET CAROLINE LIME SWEET POTATO	PLUG	12
	IS2	IPOMOEA BATATAS 'SWEET CAROLINE SWEETHEART PURPLE'	SWEET CAROLINE PURPLE SWEET POTATO	PLUG	14
PERENNIALS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**QTY**
	PD	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	#1	17

Plot Date: 09/28/2022 - 3:30pm
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Xrefs: 193805386_XSNO, 193805386_XSHO-MAIN LEVEL CONCEPT PLAN, 193805386_XSSS, 193805386_XSFI, 193805386XSPL

PLANTING SCHEDULE

CITY OF CHASKA
WATER TREATMENT PLANT

FIGURE 7

DATE 09/28/2022 PROJ. NO. 193805386

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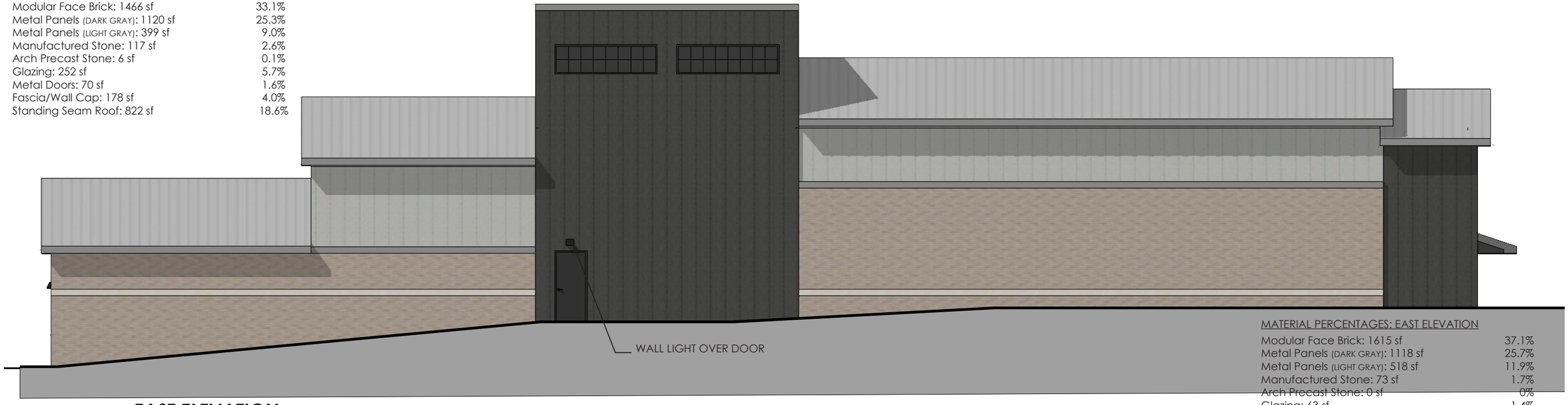
Minneapolis, MN 55402
www.stantec.com

WEST ELEVATION

MATERIAL PERCENTAGES: WEST ELEVATION

Modular Face Brick: 1466 sf	33.1%
Metal Panels (DARK GRAY): 1120 sf	25.3%
Metal Panels (LIGHT GRAY): 399 sf	9.0%
Manufactured Stone: 117 sf	2.6%
Arch Precast Stone: 6 sf	0.1%
Glazing: 252 sf	5.7%
Metal Doors: 70 sf	1.6%
Fascia/Wall Cap: 178 sf	4.0%
Standing Seam Roof: 822 sf	18.6%



EAST ELEVATION

MATERIAL PERCENTAGES: EAST ELEVATION

Modular Face Brick: 1615 sf	37.1%
Metal Panels (DARK GRAY): 1118 sf	25.7%
Metal Panels (LIGHT GRAY): 518 sf	11.9%
Manufactured Stone: 73 sf	1.7%
Arch Precast Stone: 0 sf	0%
Glazing: 63 sf	1.4%
Metal Doors: 24 sf	0.6%
Fascia/Wall Cap: 162 sf	3.7%
Standing Seam Roof: 780 sf	17.9%

CONCEPT BUILDING ELEVATIONS

CITY OF CHASKA, MN
WATER TREATMENT PLANT

FIGURE 8

DATE: 10-24-2022

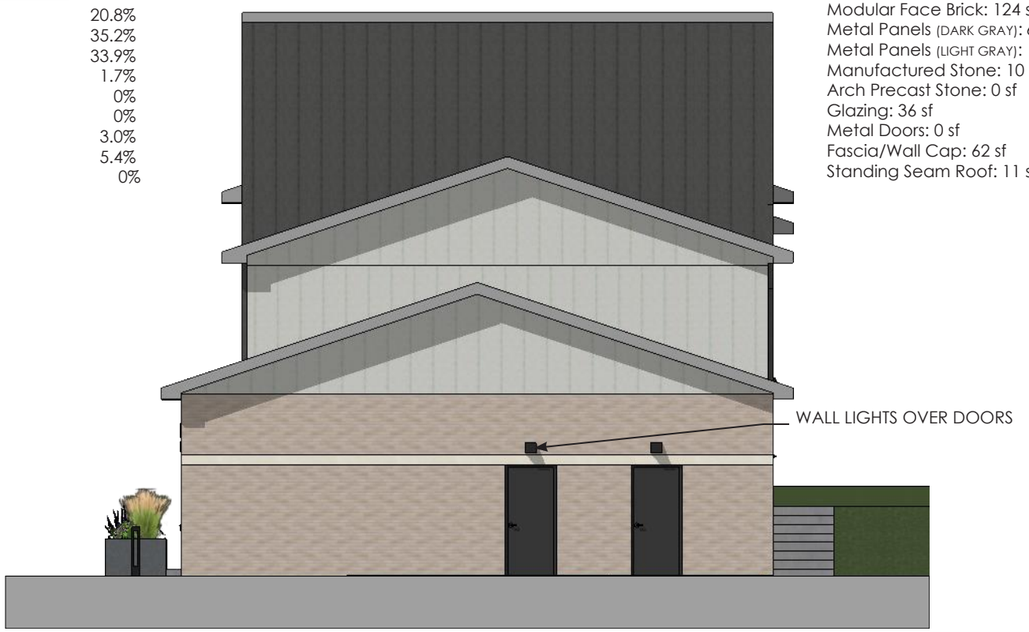
PROJ. NO. 193805386

Stantec

MATERIAL PERCENTAGES: NORTH ELEVATION

Modular Face Brick: 333 sf	20.8%
Metal Panels (DARK GRAY): 563 sf	35.2%
Metal Panels (LIGHT GRAY): 542 sf	33.9%
Manufactured Stone: 26 sf	1.7%
Arch Precast Stone: 0 sf	0%
Glazing: 0 sf	0%
Metal Doors: 48 sf	3.0%
Fascia/Wall Cap: 86 sf	5.4%
Standing Seam Roof: 0 sf	0%

NORTH ELEVATION



MATERIAL PERCENTAGES: SOUTH ELEVATION

Modular Face Brick: 124 sf	11.3%
Metal Panels (DARK GRAY): 660 sf	59.9%
Metal Panels (LIGHT GRAY): 199 sf	18.0%
Manufactured Stone: 10 sf	0.9%
Arch Precast Stone: 0 sf	0%
Glazing: 36 sf	3.3%
Metal Doors: 0 sf	0%
Fascia/Wall Cap: 62 sf	5.6%
Standing Seam Roof: 11 sf	1.0%

SOUTH ELEVATION

CONCEPT BUILDING ELEVATIONS & PERSPECTIVE

CITY OF CHASKA, MN
WATER TREATMENT PLANT

FIGURE 9

DATE: 10-24-2022

PROJ. NO. 193805386

Stantec

CONCEPT BUILDING PERSPECTIVES

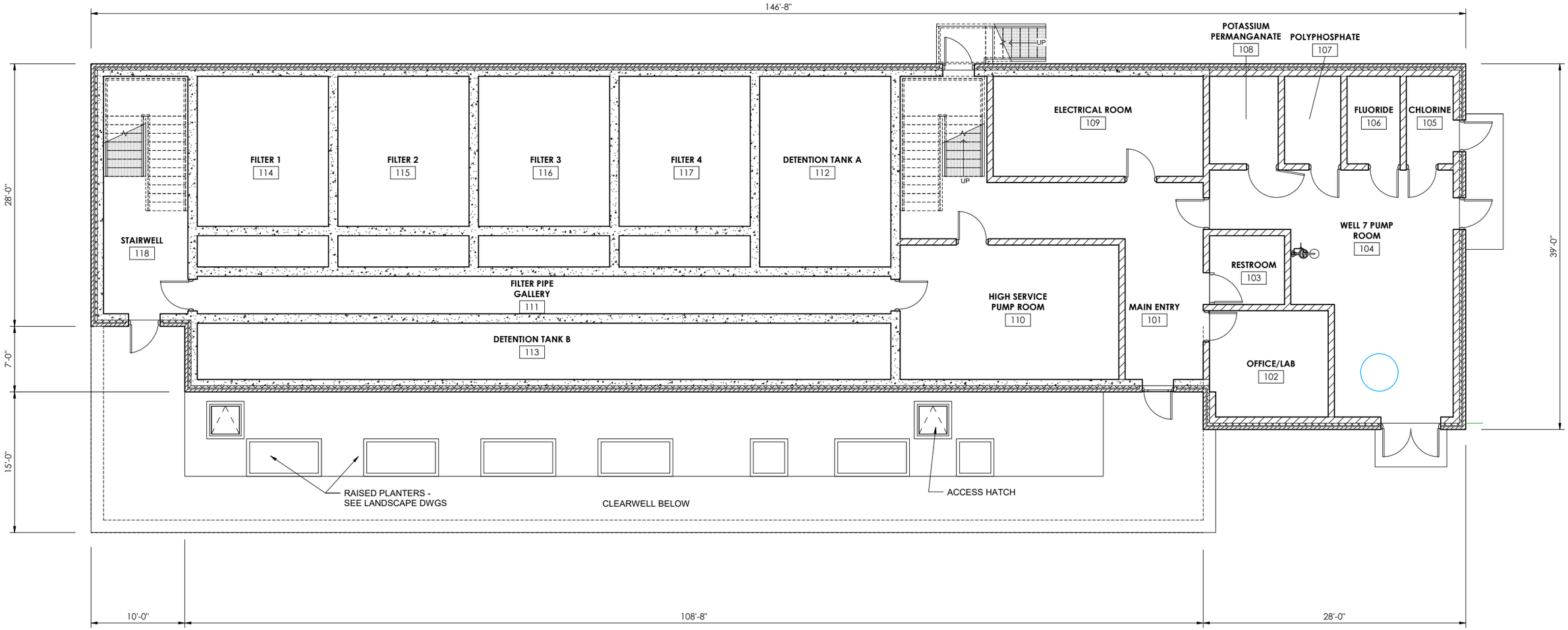
CITY OF CHASKA, MN
WATER TREATMENT PLANT

FIGURE 10

DATE: 10-24-2022

PROJ. NO. 193805386

Stantec



1 MAIN LEVEL

0 2'-8" 5'-4" 10'-8"

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MAIN LEVEL CONCEPT PLAN

CITY OF CHASKA, MN

CHASKA WATER TREATMENT PLANT

FIGURE 11

DATE 09/29/2022 PROJ. NO. 193805386

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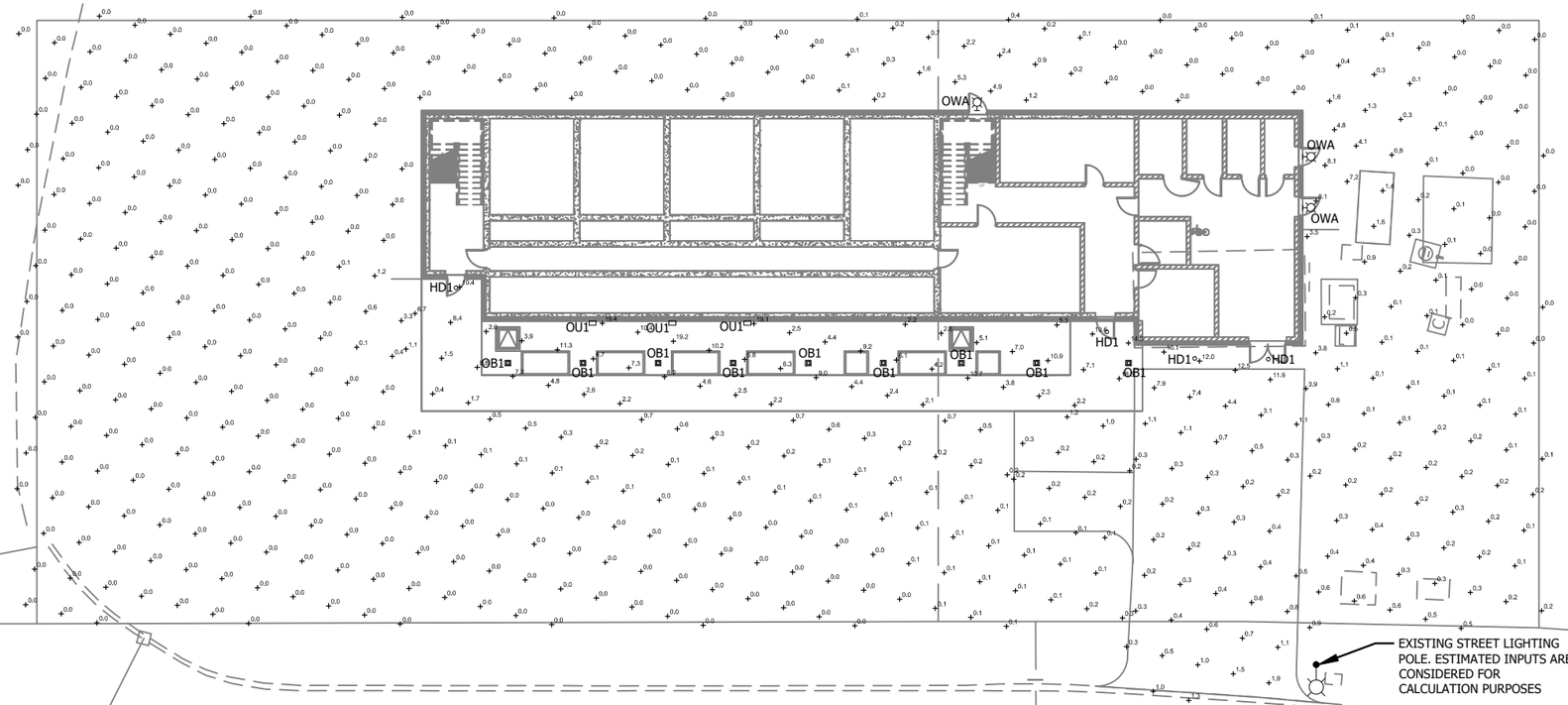

LUMINAIRE SCHEDULE

Label	QTY	Manufacturer	Catalog	Description	Number Lamps	LLF	Lamp Output	Input Power
OB1	9	BEGA Converted by LUMCat V 18.04.2017 / M.S.		84063K3	1	0.8	1363	23
OWA	3	Lithonia Lighting	WDGE1 LED P1 40K 80CRI VW	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT WIDE OPTIC	1	0.8	1229	10.0002
OU1	3	Griven	OR150-NW-UNV-WB-WB	ORPHEO	1	0.8	2610	41
HD1	4	Gotham Architectural Lighting	ICO 40/20 6AR LSS 60D	ICO 4000K 2000 LUMENS 60 DEGREE BEAM	1	0.8	2673	26

STATISTICS

DESCRIPTION	Avg	Max	Min	Max/Min	Avg/Min
DRIVEWAY	1.4 fc	11.9 fc	0.2 fc	59.5:1	7.0:1
ENTIRE SITE	0.2 fc	7.2 fc	0 fc	N/A	N/A
PARKING	0.3 fc	1.2 fc	0.1 fc	12.0:1	3.0:1
WALKWAY	6.8 fc	19.4 fc	0.2 fc	97.0:1	34.0:1

N

0 25' 50'

SITE PLAN PHOTOMETRICS CONCEPT

CITY OF CHASKA, MN

WATER TREATMENT PLANT

FIGURE 12

DATE 09/27/22 PROJ. NO. 193805386

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Drawing name: \\US029-cpfs01\workgroup\1938\active\193805386\CAD\DwgXRefs\193805386-Lighting cutsheets.dwg
Xrefs:

LED bollards - rotationally symmetrical light distribution

OB1

BEGA

Type:
BEGA Product:
Project:
Modified:

Application
LED bollards with rotationally symmetrical light distribution designed to provide glare-free illumination perfect for squares, pathways and entrances. Provided with mounting system that allows the luminaire to be adjusted independent of anchor bolt orientation.

Materials
Luminaire housing and posts constructed of die-cast and extruded marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflector made of pure anodized aluminum
Silicone applied robotically to casting, plasma treated for increased adhesion
High temperature silicone gasket
Mechanically captive stainless steel fasteners
Anchorage constructed of galvanized steel

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65
Weight: 23.8 lbs

Electrical

Operating voltage	120-277 V AC
Minimum start temperature	-30° C
LED module wattage	19.4 W
System wattage	23.0 W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	1,371 lumens (3000K)
Lifetime at Ta = 15° C	286,000 h (L70)
Lifetime at Ta = 30° C	117,000 h (L70)

LED color temperature

4000K - Product number + **K4**
3500K - Product number + **K35**
3000K - Product number + **K3**
2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors: Black (BLK), Bronze (BRZ), White (WHT), Silver (SLV), RAL:, CUS:

Bollard - rotationally symmetrical

	LED	A	B	Anchorage
84 063	19.4 W	6 ⅜	39 ⅜	**79 817**

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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Updated 03/15/19

gotham®

Luminaire Type: HD1
Catalog Number (autopopulated):

Gotham Architectural Downlighting
LED Downlights

6" Incito®
Downlight

Solid-State Lighting
(US and International Patents Pending)

C.E.C. TITLE 20 COMPLIANT

Buy American

A+ CAPABLE

FEATURES

INTENDED USE
- Achieve the lowest installed power density and operating costs while achieving every layer of light via the optimized general illumination distributions from the EVO family, and the high centerbeam accent layers from the highly flexible Incito family. The EVO and Incito families maintain consistent luminous apertures, dimming characteristics, and color quality to ensure the blending of families in common spaces renders an unparalleled, tailored visual experience.

OPTICAL SYSTEM
- Ten optimized distribution patterns allow designers to achieve tailored effects.
- Self-flanged semi-specular or matte-diffuse lower reflector utilized in combination with a highly transmissive lens.
- Patented Bounding Ray™ Optical Principle design (U.S. Patent No. 5,800,050) provides smooth and continuous transition from lensed source to the top of the reflector down to the bottom of the reflector.

MECHANICAL SYSTEM
- Light engine and driver are accessible from above or below ceiling.
- 16-gauge black painted steel mounting frame with C-channel mounting bars included. Post-installation adjustment possible from above or below ceiling.
- Galvanized steel junction box with hinged access covers and spring latch. Three combination 1/2"-3/4" and one 1/2" knockout for straight-through conduit runs. Capacity: 8 (4in, 4out) No. 12 AWG conductors rated for 90°C.
- Accommodates up to 1½"-thick ceilings.

ELECTRICAL SYSTEM
- Solid-state LED light engine available in 2700 K, 3000 K, 3500 K or 4000 K color temperatures. CRI: 85 typical.
- eldoLED ecoDrive 0-10V driver available with 10% dimming level.
- eldoLED ecoDrive 0-10V driver available with 1% dimming level.
- eldoLED SOLOdrive 0-10V driver available with <1% dimming level.
- eldoLED SOLOdrive DALI driver available with <1% dimming level.
- eldoLED POWERdrive DMX with RDM (remote device management) available with <1% dimming level.
- Rated system life of 60,000 hours at >70% output.
- Emergency battery pack with remote test switch available.
- Tested in accordance with LM-79 and LM-80 standards.

LISTINGS
- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling.

BUY AMERICAN
- This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
- 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

A+ Capable options indicated by this color background.

ORDERING INFORMATION

EXAMPLE: ICO 30/50 6ARFL LD 20D 120 EZB

Series	Color temperature	Nominal delivered lumen values[1]	Aperture/Trim color	Trim style	Finish	Beam	Voltage
ICO	**27/** 2700 K **30/** 3000 K **35/** 3500 K **40/** 4000 K	**20** 2000 lumens **25** 2500 lumens **30** 3000 lumens **35** 3500 lumens **40** 4000 lumens **45** 4500 lumens **50** 5000 lumens **55** 5500 lumens **60** 6000 lumens **65** 6500 lumens **70** 7000 lumens **75** 7500 lumens **80** 8000 lumens **85** 8500 lumens	**6AR** Clear **6PR** Pewter **6WTR** Wheat **6GR** Gold **6WR**[2] White **6BR**[2] Black	**(blank)** Self-flanged **FL** Flangeless	**LSS** Semi-specular **LD** Matte diffuse	**20D** 20° beam angle **25D** 25° beam angle **30D** 30° beam angle **35D** 35° beam angle **40D** 40° beam angle **45D** 45° beam angle **55D** 55° beam angle **60D** 60° beam angle **65D** 65° beam angle **70D** 70° beam angle	**120** **277** **347**[3]

Driver

EZ10	eldoLED 0-10V ECOdrive. Linear dimming to 10% min.
EZ1	eldoLED 0-10V ECOdrive. Linear dimming to 1% min.
EZB	eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.
EDAB	eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.
EDXB	eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Refer to DMXR Manual.

Options

SF	Single fuse
TRW[4]	White painted flange
TRBL[5]	Black painted flange
ELR[6]	Emergency battery pack with remote test switch, CEC compliant
CP[7]	Chicago plenum
BGTD	Bodine generator transfer device
CRI90	High CRI (90+)
HAO	High ambient capability up to 40°C. Fixture height is 10-3/8"
NPS80EZ	nLight® dimming pack controls 0-10V eldoLED drivers.
NPS80EZ ER[8]	nLight® dimming pack controls 0-10V eldoLED drivers. ER controls fixtures on emergency circuit.
LTVI[9]	Lutron ECOsystem interface for compatibility with 0-10V EZ10, EZ1 or EZB.
RRL___	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190.

GOTHAM ARCHITECTURAL DOWNLIGHTING I P 800.705.SERV (7378) I gothamlighting.com

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gotham®

Plot Date: 09/29/2022 - 3:39pm
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Xrefs:

OU1

ORPHEO
Wall Mounted Luminaire

GRIVEN

DESCRIPTION

The ORPHEO wall mounted luminaire features a square profile with upward and downward light distributions, or single downward or upward light emission to create functional illumination and effect lighting scenarios. Optics include a choice of spot, narrow, medium, or wide beam spreads. Light distributions on the bi-directional models may be specified independently to achieve the desired design intent. Premium class LEDs in RGBW with 4000K natural white deliver the widest range of warm white shades and pastel tones assortment. White light sources may be dynamic from 2700K to 6500K, or static warm, neutral, or cool white. Integral driver with universal 120v to 277v input combined with on-board controls programmed by an infra-red hand-held remote deliver simple cost-effective solutions for simple stand-alone or synchronized luminaire sequencing. The luminaire may also interface with external DMX control systems for sophisticated lighting scenes.

FEATURES

- Available in RGBW, dynamic white, or static white
- Single or bi-directional optical configurations
- Four light distributions
- Standalone programming or interface with DMX
- Suitable for use indoors or outdoors
- Four standard finishes or custom RAL finish

IP66 / IK10 / CE /

Date: _____ Type: _____ Catalog Number: _____

Project Name: _____

ORDERING INFORMATION

LUMINAIRE

MODEL	COLOR *	VOLTAGE	OPTICS ONE *	OPTICS TWO * ¥	FINISH*
OR150 ORPHEO Wall Luminaire	RGBW RGBW (4000K White)	UNV 120-277V	SP Spot 6°	SP Spot 6°	AG Anthracite Gray (RAL7016)
	DW Dynamic White (2700K-6500K White)		NB Narrow 18°	NB Narrow 18°	BL Black (RAL9005)
	WW Warm White (3000K White)		MB Medium 26°	MB Medium 26°	SG Griven Silver Grey
	NW Neutral White (4000K White)		WB Wide 45°	WB Wide 45°	WH White (RAL9003)
	CW Cool White (6500K White)				CC Custom Color (RAL Finish)
Unless an RDM control is used, ORPHEO RGBW must always be purchased with one AL2660 WeeZerd 1 to set its DMX address.	* Contact factory for custom monochrome colors		* Contact factory for availability of spreading diffusers ¥ For single emission, up or down, leave **Optics Two** column blank **Note:** Orient optics up or down as desired during installation		* Contact factory for marine grade finish

EXPERIENCE BRANDS

www.griven-usa.com (For other Experience Brands companies, please visit www.experiencebrandsusa.com)
In a continuing effort to offer the best product possible, we reserve the right to change, without notice, specifications or materials. Technical specification sheets that appear on www.griven-usa.com are the most recent ones available.

1/4

Rev 20211115

WDGE1 LED
Architectural Wall Sconce

Buy American

Catalog Number

Notes

Type OWA

Hit the Tab key or mouse over the page to see all interactive elements.

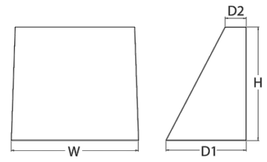
Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: (without options) 9 lbs



WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1 P2	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K[1] 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[2]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[3] **Shipped separately** AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.

Options		Finish			
E4WH[3]	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)	DDBXD	Dark bronze	DDBTXD	Textured dark bronze
PE[4]	Photocell, Button Type	DBLXD	Black	DBLBXD	Textured black
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)	DNAXD	Natural aluminum	DNATXD	Textured natural aluminum
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHXD	White	DWHGXD	Textured white
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.	DSSXD	Sandstone	DSSTXD	Textured sandstone
BAA	Buy America(n) Act Compliant				

Accessories
Ordered and shipped separately.

WDGEAWS DDBXD — WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE1PBBW DDBXD U — WDGE1 surface-mounted back box (specify finish)

NOTES
1 50K not available in 90CRI.
2 347V not available with E4WH, DS or PE.
3 E4WH not available with PE or DS.
4 PE not available with DS.
5 Not qualified for DLC. Not available with E4WH.

LITHONIA LIGHTING — COMMERCIAL OUTDOOR

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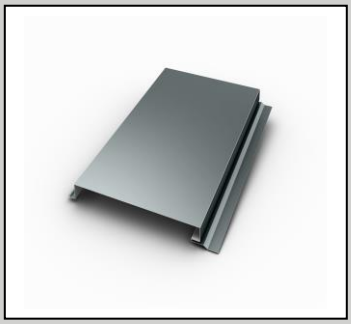
WDGE1 LED
Rev. 03/01/22

Technical Information Sheet



UNA-CLAD™ UC-500

Item Description
Flush Soffit And Fascia Panel

Description

UNA-CLAD UC-500 Flush Panel is a factory-formed, interlocking, architectural metal panel designed for soffit and fascia applications. The UC-500 Flush Panel offers the design professional a flush or flat appearance by utilizing an interlocking leg and concealed fastening system. The panel is available in a wide variety of materials and finishes including Kynar™ coated Galvanized Steel, Galvalume® Steel and Aluminum.

NOTE: The UC-500 panel is designed and tested for soffit and fascia applications only. Any installation outside of these applications, is at the risk of the contractor and is not the responsibility of Holcim Solutions and Products US, LLC.

Method of Application

1. UNA-CLAD UC-500 must be installed in a sequential order.
2. A smooth, solid substrate of plywood, OSB, or a substructure of min22 ga (0.79 mm), 7/8" (22 mm) hat channels is recommended for the UNA-CLAD UC-500 metal flush panel.
3. Application of a Elevate approved underlayment prior to panel installation is recommended.

Storage

- UNA-CLAD metal panels should be stored in a well ventilated, dry place where no moisture can contact them. Moisture (From rain, snow, condensation, etc.) trapped between layers of material may cause water stains or white rust, which can affect the service life of the material and will detract for the appearance.
- If outdoor storage cannot be avoided, protect the panels with a ventilated canvas or waterproof paper cover. Do not use plastic, which can cause condensation. Keep the material off the ground in an inclined position with an insulator such as wood.

Storage Continued

- Storage of end-use materials with protective film applied to the surface should be:
  - Less than six months with masking applied (warehouse storage and outdoor exposure combined).
  - Stored in an enclosed building or holding facility.
  - Wrapped/packaged to prevent exposure to direct UV, water, oils, or other contaminants.
  - Protective film may become brittle with long term UV exposure.
  - Maintained in an environment within a temperature range of 45 to 90 °F (7 to 32 °C) and 20 to 80% relative humidity

Precautions

- Oil canning is not a cause for rejection. Heavier gauges, narrower widths, striations, and embossing minimize oil canning.
- Sealant for end laps and lap joints shall be non-drying, non-toxic, and non-shrinking with a serviceable temperature of -60 to 212 °F (-51 to 100 °C).
- Quality, long-life butyl sealants work best as a gasket sandwiched between two pieces of metal. Non-acetic cured silicone color matching sealants are recommended when voids must be filled. Sealants are not a substitute for proper assembly and workmanship.
- Exercise caution when lifting, moving, transporting, storing, or handling UNA-CLAD metal to avoid possible physical damage.
- Refer to Safety Data Sheets (SDS) for safety information.
- Immediately remove protective film after installation.

Manufacturing Location: Anoka, MN

Product Data

Property	Value
Panel Type	Flush
Panel Interlock	Interlocking Joint
Taper Panels	No
Net Free Area	2.75" sq per LF on 12" UC-500V panels
Radius Panels	No
Stiffening Ribs Striations Sealant	Optional Optional as UC-500V No
Standard Panel Surface	Smooth
Optional Panel Surface	Stucco Embossed
Substrate	Solid Substrate or Hat Channels

Product Size

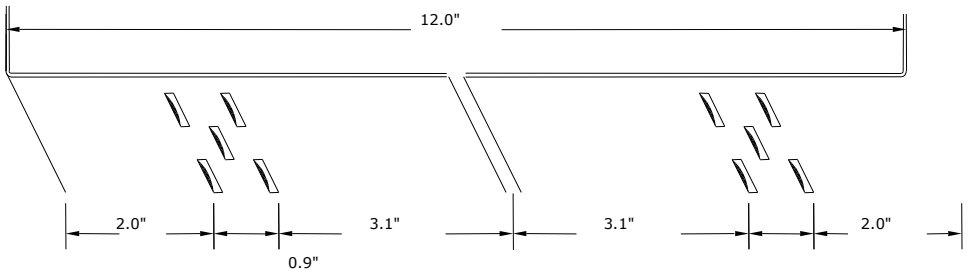
Property	Value
Panel Width Optimal Panel Width	8" (203.2 mm) – 20" (508 mm) 18" (457.2 mm) 12" (304.8 mm) 16" (406.4 mm) 20" (508 mm)
Panel Depth Seam Height Minimum Panel Length Maximum Panel Length	1" (25.4 mm) 1.143 " (29 mm) 36" (914.4 mm) 600" (15.24 m)

Technical Information

Property	Value
Water Penetration Air Infiltration Structural Performance	ASTM E 283 ASTM E 283 ASTM E 330
Water Penetration Fire Rating Hail Impact Rating Florida Building Code	ASTM E 1646 UL Class A Rated Assemblies, UL 263, and UL 790 Class 4, UL 2218 Approved

NOTE: Testing is not applicable for all combinations of substrates, materials, and dimensions. All construction assemblies must be installed in accordance with the tested assembly. Please refer to the Metal Tested Assembly Guide on the Elevate website for tested assemblies and code listings. Please contact your Regional Technical Coordinator for warranty requirements and additional Information.

Optional Venting Pattern



Typical Properties

Material and Thickness	Metal Specification	Available Finishes
Aluminum 0.032" (0.81 mm) 0.040" (1.02 mm)	Base Metal: Aluminum Minimum Yield: 21 KSI (145 MPa) Thermal Expansion: 12.6 x 10^{-6} in/in/ °F (22.2 m/m.K x 10^{-6}) Mod. Of Elasticity: 10.0 x 10^{3} x KSI (68.9 MPa)	Anodized Kynar 500®/Hylar 5000® Unpainted/Mill Finish
Galvanized Steel 26 ga (0.48 mm) 24 ga (0.64 mm) 22 ga (0.79 mm)	Base Metal: AISI-G90 Galvanized steel Minimum Yield: 33 to 45 KSI (227 to 310 MPa) Thermal Expansion: 06.7 x 10^{-6} in/in/ °F (13.9 m/m.K x 10^{-6}) Mod. Of Elasticity: 29.0 x 10^{6} x KSI (200 GPa)	Kynar 500®/Hylar 5000® Unpainted G90
Galvalume® Steel 26 ga (0.48 mm) 24 ga (0.64 mm) 22 ga (0.79 mm)	Base Metal: AZ-50 Hot Dipped Galvalume Minimum Yield: 50 KSI (345 MPa) Thermal Expansion: 06.7 x 10^{-6} in/in/ °F (13.9 m/m.K x 10^{-6}) Mod. Of Elasticity: 29.0 x 10^{6} x KSI (200 GPa)	Zincalume® Plus – Clear Acrylic Coated Kynar 500®/Hylar 5000®
Copper 16 oz (0.56 mm) 20 oz (0.69 mm)	AGSC minimum copper content of 99.9% copper, silver counting as copper, cold rolled from ingots of 122 alloy. Thermal Expansion: 9.3 x 10^{-6} in/in/ °F (16.5 m/m.K x 10^{-6}) AGSC copper meets and/ or exceeds ASTM B370 specification.	Natural

NOTE: For standard color selection, consult the current UNA-CLAD Color Selection Guide. Custom color services are available upon request. Consult the current base metal Sheet & Coil TIS for additional information on the base metal and coating. Not all materials and thicknesses are available from all locations

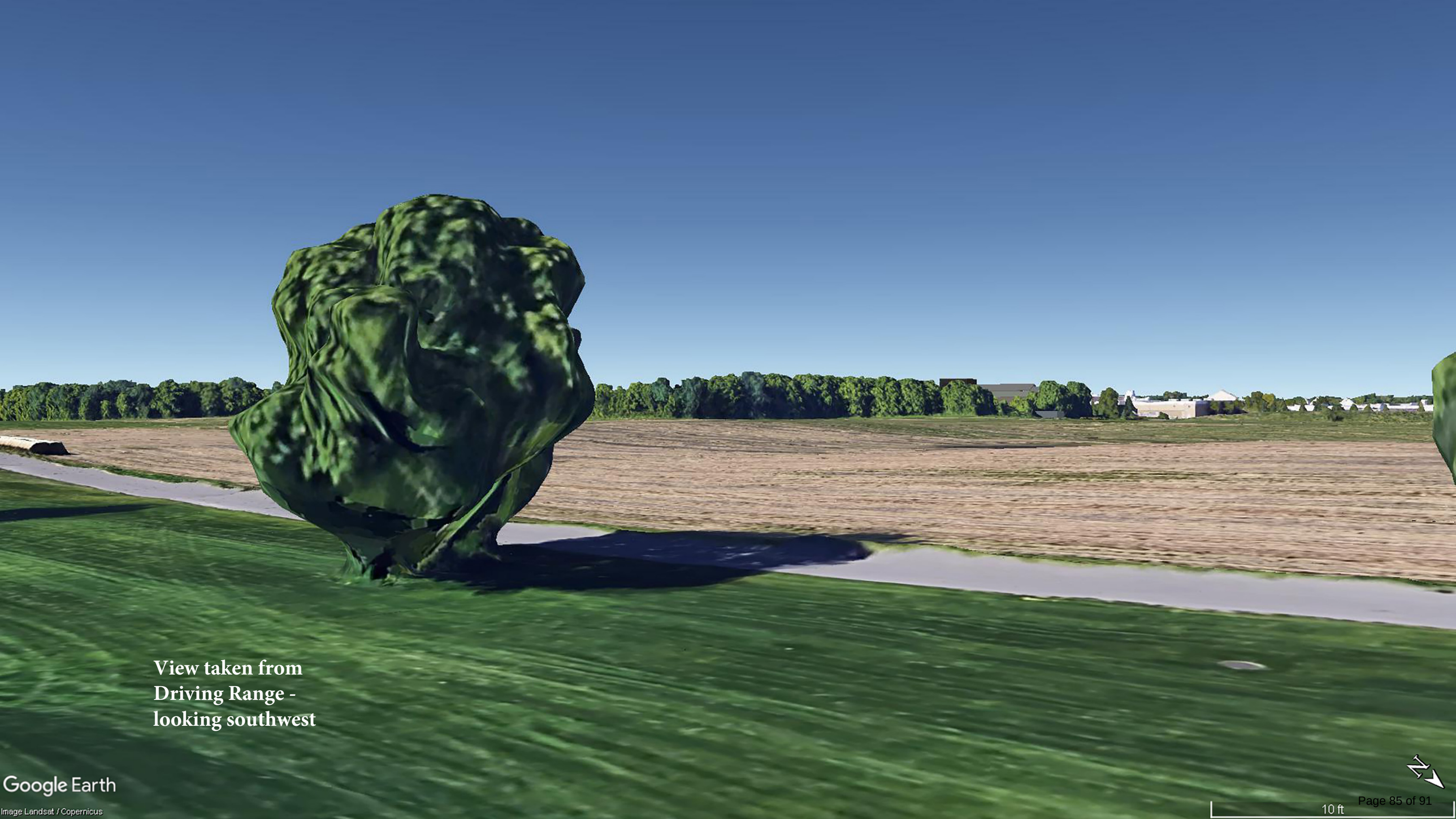
Please contact Holcim Technical Services at 800-428-4511 for further information.

This sheet is meant to highlight Elevate products and specifications and is subject to change without notice. Holcim takes responsibility for furnishing quality materials that meet published Elevate product specifications or other technical documents, subject to normal manufacturing tolerances. Neither Holcim nor its representatives practice architecture. Holcim offers no opinion on and expressly refuses any responsibility for the soundness of any structure. Holcim accepts no liability for structural failure or resultant damages. Consult a competent structural engineer prior to installation if the structural soundness or structural ability to properly support a planned installation is in question. No Holcim representative is authorized to vary this disclaimer.

Firestone, the brand of premier roofing, wall, and lining systems you know and trust, will be coming to you under a new name: Elevate. During our transition, products carrying the brand name **Firestone** will change to **Elevate** on product labels and packaging, Technical Information Sheets, and elsewhere. Only the brand name is changing. Our products remain the same.

For further information on our brand transition to Elevate, scan the code below with your smartphone, or visit our website: www.holcimelevate.com

View taken from Driving Range - looking southwest


View taken from
Driving Range -
looking southwest
Google Earth
Image Landsat / Copernicus
10 ft

View taken from
Driving Range -
looking southwest
Google Earth
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View taken from
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looking southwest
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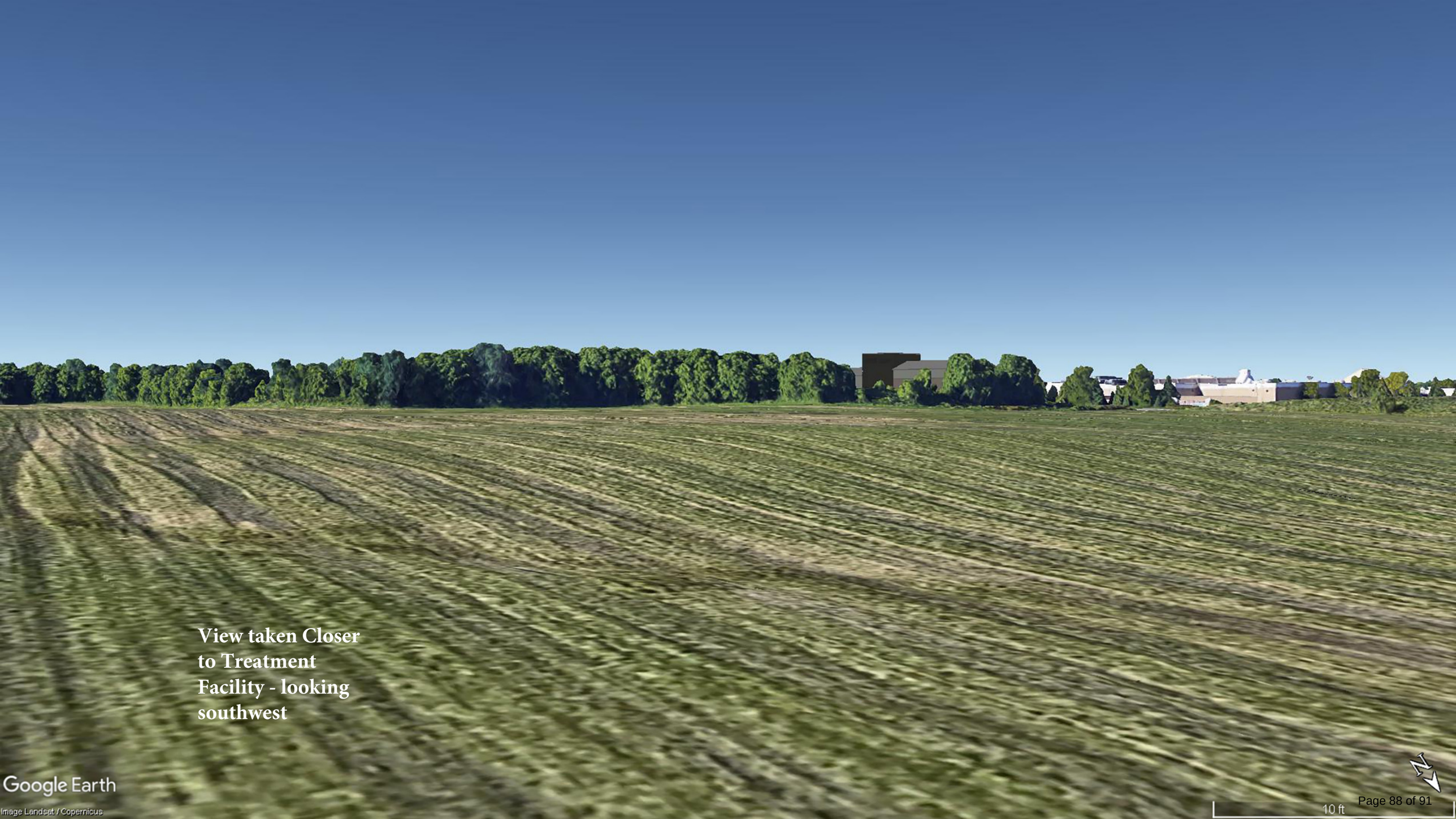
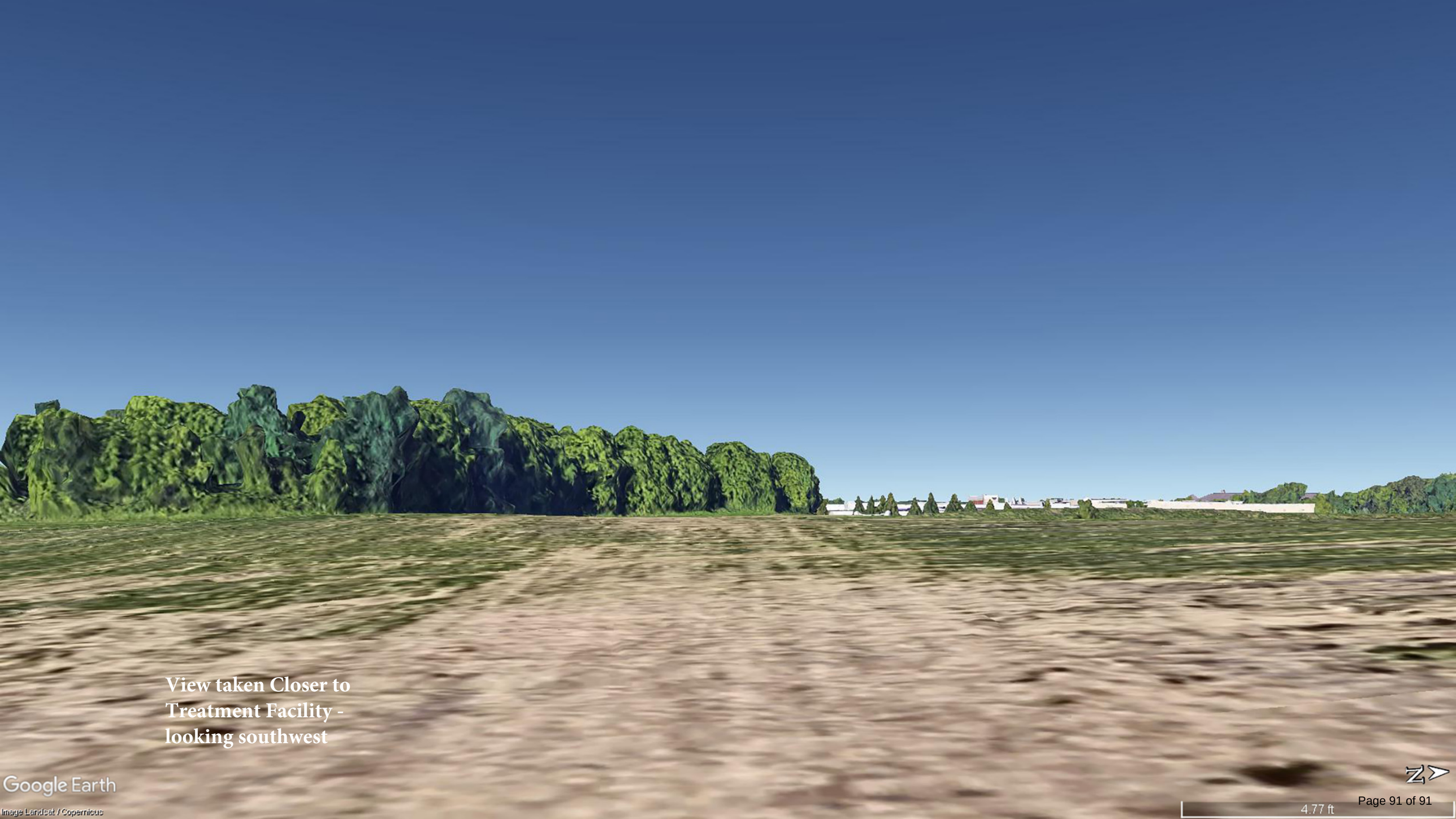

View taken Closer to Treatment Facility - looking southwest
Google Earth
Image Landsat / Copernicus
10 ft

View taken Closer to Treatment Facility - looking southwest
Google Earth
Image Landsat / Copernicus
8.25 ft

View taken Closer to Treatment Facility - looking southwest
Google Earth
Image Landsat / Copernicus
8.02 ft


View taken Closer to Treatment Facility - looking southwest
Google Earth
Image Landsat / Copernicus
4.77 ft