

Planning Commission Memorandum

- To: Planning Commissioners
- From: John Hinzman, Community Development Director
- Date: November 9, 2020
- Item: Vermillion Acres Senior Housing Preliminary Plat, Site Plan, and Variance #2020-05 -Headwaters\Mint Development

Planning Commission Action Requested

Hold a public hearing and review the following actions for development of a three story, 75 unit senior housing facility consisting of 60 dependent care, and 15 memory care units as proposed by Headwaters Development and Mint Development. The 11.33 acre property is currently owned by Patrick W Schmitt and Sarah A Molitor and generally located at 1190 County Road 47:

- 1) Preliminary Plat of VERMILLION ACRES, a one lot subdivision.
- 2) Site Plan for a construction of a three story, 75 unit senior housing building.
- 3) Variance to Hastings City Code Section 155.07(E)(6) Required 15% Roof Pitch for Residential Care Facilities.

BACKGROUND INFORMATION

Comprehensive Plan

The property is guided High Density Residential within the draft 2040 Comprehensive Plan. The proposed use and density are consistent with the Comprehensive Plan.

Zoning

The property is zoned R-4 High Density Residence. The proposed use and density are permitted under the R-4 Zoning District.

Existing Condition

The property is relatively flat containing a mature tree line along the west and east perimeters. Approximately 2/3rd of the site is located within the 100 year floodplain of the Vermillion River. The Vermillion River trail is located along the eastern and northern property lines. Development is planned on approximately three acres located at the southwest corner of the property. The existing home would be removed.

Adjacent Zoning and Land Use

The following land uses abut the property:

Direction	Use	Comp Plan District	Zoning District
North	Vacant - Wooded -	Floodplain	Floodway
	Vermillion River Floodway		
East	Single Family Home	Low Density Residential	R-1 - Single
			Family
South	County Road 47 -	Medium Density	R-3 -
	Riverwood Townhomes	Residential	Medium\High
	Vermillion Shores Apt.		Density Res.
West	Agriculture	Low Density Residential	A - Agriculture

Comprehensive Plan Amendment and Rezoning

The City Council approved the Comprehensive Plan Amendment to High Density Residential and the Rezoning to R-4 High Density Residence on April 6, 2020. The Planning Commission recommended approval of both action on March 9, 2020.

Planning Committee of City Council

The Planning Committee of City Council (Chair Vaughan, Balsanek, and Leifeld) reviewed the potential land use change and senior housing proposal on January 30, 2020 and were generally supportive of the change.

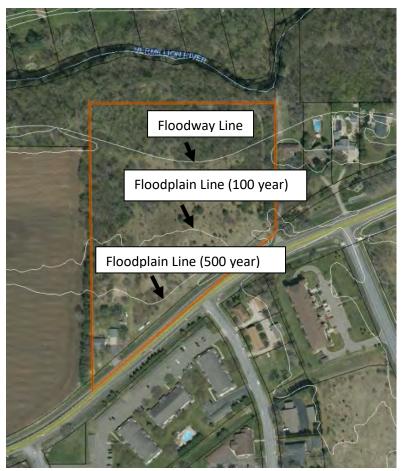
Neighborhood Meeting

The developers will hold a neighborhood meeting on November 5, 2020. A summary of the meeting will be presented at the Planning Commission Meeting.

A similar neighborhood meeting was held on March 4, 2020 to discuss the proposal with the neighborhood. Approximately ten residents were in attendance and discussed existing traffic along County Road 47, proposed impact of development to traffic, tree removal, building height, and change in land use.

Public Notification

Notification of the meeting was sent to all property owners within 350 feet of the proposed property. Please see the attached public comments for further information.



Floodway and Floodplain Portions of the site are identified for flooding risk per the Flood Insurance Rate Map as developed by FEMA.

Areas north of the Floodway Line have the most restrictive prohibitions for building and site grading. The Floodway is a distinct zoning district on the zoning map with very limited uses. Floodway areas (northern ¼ of the site) are not included in the development request.

Areas north of the 100 Year Floodplain Line also have building and site grading restrictions, but land uses are regulated by the underlying zoning district. Areas

within the 100 Year Floodplain (northern 2/3rd of the site) are not included in the Comprehensive Plan Amendment.

Areas north of the 500 Year Floodplain Line do not have specific building or grading restrictions by the City of Hastings.

PRELIMINARY PLAT REVIEW

Request

Preliminary Plat approval of VERMILLION ACRES, a one lot subdivision of unplatted property.

Difference Between Preliminary Plat and Final Plat

Preliminary Plat approval includes the plan for future subdivision of the entire development including a review of lots, streets, grading, stormwater, utilities, public land dedication, and landscaping. Final Plat approval is the formal subdivision of all or a portion of a Preliminary Plat into lots of record for home construction. The Preliminary Plat establishes the plan for development, while the Final Plat formally puts the plan into effect.

Streets

No new public streets are included as part of this plat. All access drives would be privately owned and maintained. The plat includes a singular private entrance to County Road 47 aligning with Riverwood Drive and the dedication of additional right-of-way along County Road 47. Dakota County will likely require left and right turn lanes from County Road 47; this may be at the expense of the developer.

Easements

A ten foot drainage and utility easement must be established along the perimeter of the lot and over all areas within the 100 year flood zone.

Park Land Dedication

At the August 19, 2020 meeting, the Park and Recreation Commission recommended the payment of cash in lieu of land to satisfy park dedication requirements. The park dedication payment would be collected upon final plat in amount of \$82,500 (75 units x \$1,100 per unit).

Interceptor Sewer Fee

Payment of sewer interceptor sewer fees in the amount of 36,375 (75 units x 485 per unit) would be paid at the time of final plat.

Stormwater Maintenance Agreement

A stormwater access and maintenance agreement will need to be executed between the city and the property owner prior to recording of the final plat mylars to ensure access for emergency maintenance.

Development Agreement

Upon final plat approval the City and developer shall enter into a Development Agreement to memorialize conditions of approval and to establish applicable escrow amounts to ensure completion of public improvements.

Grading Drainage and Erosion Control

Grading Drainage and Erosion Control plans will be reviewed as part of the site plan.

Dakota County Plat Commission Review

The site abuts County Road 47. The Dakota County Plat Commission approved the plat on September 30, 2020 subject to review and approval of the Final Plat.

RECOMMENDATION

Approval of the Preliminary Plat is recommended subject to the following conditions:

- 1) Conformance with the plans submitted with the Planning Commission Staff Report dated November 9, 2020
- 2) Final approval of all Civil Plans including Grading, Drainage and Erosion Control Plan, and Utility Plan by the Public Works Director.
- 3) Establishment of sureties and payment of escrow prior to commencement of site grading and utilities.
- 4) All disturbed areas on the property shall be stabilized with rooting vegetative cover to eliminate erosion control problems.
- 5) Resolution of Dakota County Plat Commission conditions including the cost and responsibility for any future left and\or right turn lanes into the site.
- 6) Establishment of drainage and utility easements along the outer 10 feet of the property and within all areas within the 100 year flood plain.
- 7) Approval is subject to a one year Sunset Clause; the plat must be recorded with Dakota County within one year of City Council approval or approval is null and void.

SITE PLAN REVIEW

Request

Site Plan approval to construct a three story senior housing facility containing 60 assisted living and 15 memory care units (75 total units). The facility would include dining and community space areas for residents. 29 at grade interior parking stalls would located at the ground level of the western building wing.

Streets

No new public streets. All access drives would be privately owned and maintained.

Vehicular Access and Circulation

The site contains a singular entrance to County Road 47 aligning with Riverwood Drive at the direction of Dakota County. Internal circulation includes visitor parking to east of the entrance and a one way drop off lane to the main building entrance. Truck deliveries would occur near the parking garage on the west end of the site and includes a turn around area for larger vehicles.

Traffic Review

SRF Consulting has conducted a traffic review on the impact of the proposed development. The main objectives of the review were to quantify the trip generation potential, understand potential impacts to the adjacent roadway network, and identify transportation considerations that may be necessary to accommodate the proposed development. The report concluded that there are no significant transportation impacts expected as a result of the proposed senior living facility from a volume perspective, and found:

- 195 daily trips in and out of the site are estimated.
- 14 am peak hour trips are estimated.
- 19 pm peak hour trips are estimated.
- Overall trip volume is estimated to be less than the 60 unit Vermillion Shores Apartment (located across the street).
- County Road 47 can accommodate the proposed increase in traffic volume from the development, but the roadway is reaching capacity as a two lane road.

Building Setbacks

Building setbacks to property lines meet minimum requirements as follows:

	Required	Provided	
North - Vermillion River	35 feet	400 feet	
East - Residential	33.25 feet*	270 feet	
South - County Road 47	35 feet	75 feet	
West - Agriculture	33.25 feet*	40 feet	

* 25 feet + 1\2 foot for every 1 foot of building height over 25 feet (41.5' - 25' x 0.5')

Pedestrian Access

Pedestrian access is acceptable. A private connection will be made to the existing Vermillion River trail located to the north and east of the building which provides access to the greater Hastings Trail system and an underpass crossing of County Road 47. Interior private trails are included around a proposed private dog park.

Required Parking

Parking exceeds minimum requirements as follows:

		Parking		
Required Parking	Number	Requirement	Needed	Provided
Residential Care Facility -				
Semi Independent	60	1 per 2 units	30	
Residential Care Facility -				
Dependent	15	1 per 3 units	5	
TOTAL			35	82 (29 interior + 53 exterior)

Maximum Parking Exception

Per City Code, the maximum number of parking spaces may not exceed 20% of the minimum requirement (42 spaces) without an exception being granted by the City Council. The developer has stated the following in support of a parking exception:

When our team reviewed the City's classification, we believe that our assisted living units more appropriately fall into semi-dependent care in lieu of dependent care. Although this doesn't drastically increase the allowed parking count for the project, it does help us get closer to operational needs. Our secure, indoor and climate-controlled parking is an important amenity we provide our assisted living residents. Due to inherent site restrictions of bedrock and shallow water table levels, we are unable to provide "underground parking". As a result, we removed important programming space within the first floor to accommodate the amenity. If we targeted the parking count that is compliant, it would be extremely difficult for us to provide adequate parking for guests, visitors, staff and those assisted living residents that still drive. Typically, we anticipate 50% of our assisted living residents to have vehicles which wouldn't leave limited and inadequate spaces for staff, guests and visitors.

We ask that Planning Commission and City Council's consideration to only count our external surface parking against the code requirement that impact impervious area and storm water management on site in lieu of those within the building footprint. If this is a reasonable request, we are willing to reduce external surface parking as necessary to meet the City's requirements.

City Staff is supportive of the exception to parking based upon the needs of the developer.

Architectural Design

Architectural design exceeds minimum requirements. The building façade incorporates a mixture of limestone veneer and two colors of fiber cement siding. There is variation in façade depths. Windows and decks break up the façade. Materials are fairly similar on all four sides of the building. The building is three stories in height with a varying roofline. The first floor parking area has been incorporated into the building design to mimick residential units.

Landscape Plan

Minimum planting quanties are as follows:

Trees	Required	Proposed
One tree per 4,000 s.f. of	10 Trees	
paved surface		
One tree per 50 feet of lot	58 Trees	
perimeter		
Replacements for Significant	11 Trees	
Trees Removed		
Credit for Raingarden (1 Tree	(10 Trees)	
per 10 s.f. of rain garden)		
TOTAL	69 Trees	67 Trees

Shrubs	Required	Proposed
One shrub per 40 feet of lot	72 shrubs	441 shrubs
perimeter		

- **Perimeter Tree Planting** Trees will be planted every 50 feet along the perimeter of the site in the developed area.
- **Parking Lot Screening** a ten foot landscape area containing a variety of shrubs planted 2.5 feet on center has been incorporated to screen the parking area from County Road 47.
- **Tree Preservation** The majority of the site is within wetland areas where tree preservation will occur. Three significant trees will be removed and replaced per the City's tree replacement policy.
- **Raingarden Credit** The landscape ordinance allows for a reduction in the number of tree plantings when a raingarden is incorporated into stormwater design. The developer proposes construction of a 1,000 s.f. raingarden along the western property line.

The Landscape Plan is acceptable with the following change:

1) An additional two trees must be added to the landscape plan to meet minimum plant quantity requirements.

Lighting Plan

Proposed exterior lighting levels are acceptable. Lighting must be no greater than 0.5 footcandle of illumination when abutting residential propeorty and 1.0 footcandles when facing commercial.

Grading, Drainage, Erosion Control and Utility Plan Review

The Public Works Department is providing concurrent review of the Grading, Drainage, Erosion Control, and Utility Plans. Site Plan approval shall be conditioned upon final approval of the Grading, Drainage, Erosion Control and Utility Plan by the Public Works Director.

RECOMMENDATION

Approval of the Site Plan is recommended subject to the following conditions:

- 1. Conformance with the plans submitted with the Planning Commission Staff Report dated November 9, 2020
- 2. Preliminary and Final Plat approval of VERMILLION ACRES.
- 3. Variance to the minimum 15 percent roof pitch requirement for Residential Care Facilities.
- 4. An additional two trees must be added to the landscape plan to meet minimum plant quantity requirements.
- 5. Final approval of all Civil Plans including Grading, Drainage and Erosion Control Plan, and Utility Plan by the Public Works Director.
- 6. All disturbed areas on the property shall be stabilized with rooting vegetative cover to eliminate erosion control problems.
- 7. Disturbed areas of the site shall be maintained to the requirements of the City's property maintenance ordinance.
- 8. Establishment of sureties and payment of escrow prior to commencement of site grading and utilities
- 9. All Rooftop equipment shall be screened by a parapet wall or painted to match the building.
- 10. Approval of plans for any outdoor trash enclosure areas by the Community Development Director.

- 11. Any uncompleted site work (including landscaping) must be escrowed at 125 percent of the estimated value prior to issuance of a certificate of occupancy.
- 12. Approval is subject to a one-year Sunset Clause; if significant progress is not made towards the proposal within one year of City Council approval, the approval is null and void.

VARIANCE REVIEW

Variance Definition

Variances are deviations from strict compliance of City Code provisions. The Board of Adjustment and Appeals may recommend issuance of a Variance upon determination of findings of fact and conclusions supporting the variance as established in Chapter 30.02, Subd. F of the City Code.

Board of Zoning Adjustment and Appeals

Hastings City Code Chapter 30.02 establishes the Board of Zoning Adjustment and Appeals and appoints the Planning Commission to facilitate the Board's roles and duties. Applications for Variances require Board of Zoning Adjustment and Appeals review.

Requested Variance – Minimum 15 Percent Roof Pitch for Residential Care Facilities

Hastings City Code 155.07(E)(6) – requires all residential care facilities to have a roof pith of no less than 15 percent. A flat roof (zero percent pitch) is proposed for the subject building.

Variance Review

The Planning Commission may consider variances to the Zoning Code that are not contrary to the public interest where owing to special conditions, and where a literal enforcement of the provision of the City Code would result in practical difficulties. Variances may be granted providing the following has been satisfied:

(1) Because of the particular physical surroundings, shape or topographic conditions of the land involved, a practical difficulty to the owner would result, as distinguished from a mere inconvenience, if the strict letter of the regulations were to be carried out;

The developer seeks to minimize the height of the building to better conform to the low and mid density housing of the surrounding area. Shallow bedrock in the area affect to capacity to manage stormwater, the flat roof provides a mechanism for stormwater treatment impeded by the physical conditions of the land.

(2) The conditions upon which the petition for a variance is based are unique to the tract of land for which the variance is sought and one not applicable, generally, to other property with the same zoning classification;

The majority of the site is protected flood plain and developable areas are challenged by shallow bedrock, presenting a unique condition.

(3) The purpose of the variance is not based exclusively upon a desire to increase the value or income potential of the parcel of land;

Construction of a flat roof does not increase value or income to the property.

(4) The granting of the variance will not be detrimental to the public welfare or injurious to other land or improvements in the vicinity in which the tract of land is located;

Granting of the variance will not be detrimental to the public welfare or injurious to other land improvements in the vicinity. Diminishing the height of the building via construction of a flat roof will decrease the massing of the building.

(5) The proposed variance will not impair an adequate supply of light and air to property, or substantially increase the congestion of the public streets, or increase the danger of fire, or endanger the public safety or substantially diminish or impair property values within the vicinity; (Prior Code, §11.08)

The property will not impair light, air, congestion, fire danger, public safety, or property values within the vicinity.

(6) The variance is in harmony with the purposes and intent of ordinance;

The ordinance provision was established to promote visual interest in building construction through the incorporation of a pitched roof. The architectural plans for the building incorporate variations in building height and façade relief to ensure goal of visual interest.

(7) The variance is consistent with the comprehensive plan;

The property is guided for high density residential development. The proposed use is consistent with the Comprehensive Plan.

(8) The proposal puts the property to use in a reasonable manner;

The proposal puts the property to use in a reasonable manner.

(9) There are practical difficulties in complying with the official control. "Practical Difficulties" as used in connection with granting of a variance means that:

(a) The property owner proposed to use the property in a reasonable manner not permitted by an official control

Incorporation of a flat roof on a multi-family building is an acceptable and reasonable use.

(b) The practical difficulty is caused by the provisions of this chapter and has not been created by any persons presently or formerly having an interest in the parcel of land; a practical difficulty is not present if the proposal could be reasonably accomplished under the current Ordinance requirements.

The practical difficulty has not been created by the property owner. Currently, several natural conditions on the site affect our capacity to mitigate storm water efficiently and effectively. These conditions include the presence of shallow bedrock, low-lying topography, small allowable buildable area, and the proximity of a neighboring flood zone. The flat roof, as a solution, allows us the benefit of being able to directionally shed water across the entire footprint of the structure, and our design team utilizes this benefit to coordinate specific drop points on two of the building's elevations with downspouts. These locations are critical with integrating into additional at-grade storm water management solutions to properly disperse of the water. A standard, sloped roof design would not have allowed us the benefit of directionally shedding water across the entirety of the building footprint.

(c) The variance, if granted, will not alter the essential character of the locality.

The variance would allow construction consistent with the zoning district.

(d) Economic considerations alone do not constitute practical difficulties.

The variance is not sought for economic considerations.

(e) Practical difficulties include inadequate access to direct sunlight for solar systems

Not applicable

RECOMMENDATION

Approval of the Variance is recommended subject to the above findings of fact in the Variance Review.

ATTACHMENTS

- Site Location Map
- Project Development Data Applicant Letter
- Traffic Review SRF
- Preliminary Plat
- Site Plan
- Public Comments
- Application

LOCATION MAP



PROJECT DEVELOPMENT DATA

Parcel Basics

The existing site is currently an undeveloped, 457,380 square foot (10.5 acre) parcel located at 1190 County Road 47, Hastings, MN 55033. The property is bounded by Dakota County Road 47 to the south, farmland to the west, Vermillion River on the north, and previously developed residential lots to the east.

Program

The site will be developed and finished to accommodate a three-story, 75-unit, senior housing structure whose focus will be to provide assisted living and memory care apartments to senior citizens, while supported by the full range of additional services provided by Jaybird Senior Living ("Jaybird"), the facility operator.

The site will also include a series of amenities for the residents as well. These amenities include patios, gardens, dog run, and walking paths. The walking paths will also connect to the central site circulation as well as the public walking path located on the eastern and northern boarder of the site.

Building Design

The main building will be a three-story wood frame structure over a concrete slab on grade foundation – a structural configuration and height implemented elsewhere in Hastings at developments such as Vermillion Shores located just south of this proposed development site.

The ground floor will welcome residents and visitors through the main entrance with a covered drop-off, house some of the building's public spaces including commercial kitchen and dining rooms, pub, and administrative offices, and connection to the rest of the development amenities. Ground floor will also house a closed 15-suite memory care wing. There will be ground floor covered parking for 29 spots, including 3 handicap accessible spots; covered parking is integral to the overall building structure.

Levels two and three will contain another sixty (60) resident apartments primarily made up of one bedroom / one-bath residences, with some studio options. Selected residences are provided with balconies and other unit amenities. On the second floor there will be a large community space, salon, and therapy area for residents. Each floor also contains spaces for health care attendants, and common area functions such as laundry (to supplement washer/ dryers available in most units).

Exterior building materials will be masonry, painted siding, and E.I.F.S. [exterior finish and insulation system] and the structure will have a flat roof system. Gutters and downspouts will discharge on grade and into catch basins that will flow through storm water treatment areas – on grade and/or below grade – prior to exiting the site. Once again, storm water management plan, including collection, infiltration, rate control and discharge are fully explained and detailed within the submittal drawings.

A preliminary floor plan design for your review is included as Exhibit A

Miscellaneous Building Components

Mechanical systems are primarily contained within the structure. Limited screening, where required, will be achieved by roof screens designed to coordinate with the building architecture.

Site trash enclosure is not illustrated in the development plan and will not be used. Interior trash rooms are utilized in the facility plan, dumpsters will be rolled out on collection days, and back inside to trash rooms following pick up.

Site deliveries will have a dedicated access door on the south side of the building. All building activities, trash removal, move-in / move-out are all achieved on the west side of the building.

Neighborhood Meeting

An open neighborhood meeting was held the evening of March 4, 2020 to introduce the project to area residents, summarize the development parameters, review preliminary designs and project images, and answer questions. The development team also wanted to be able to address any concerns the neighboring residents had within the content of the final submittal to the City of Hastings.

The meeting lasted 90 minutes and was well attended by approximately 20 area residents, 12 of whom signed in and left contact information. During the meeting, following the project introduction, the development team answered a variety of questions regarding facility design and operational details, development offerings, proposed development schedule, and rental rates. Feedback by meeting attendees was overwhelmingly positive.

There were some concerns voiced by a few meeting attendees, primarily around neighbors that were unhappy with the traffic levels, lack of traffic controls, and potential building height. There were a couple of additional minor concerns.

The development team relayed the fact to those in attendance, that a traffic study had been completed in conjunction with the planning of Hastings Senior Living and that ultimately, any modification to traffic patterns or traffic controls would be guided by mandates prepared by city and county engineers. Furthermore, we assured residents we heard their additional concerns and believe we have addressed every one of their concerns in the redesign of the project, which is included in this application for review.

Refer to **Exhibit B** for a letter to the City of Hastings responding to certain concerns among other development considerations.

We plan to host another neighborhood meeting in advance of the public hearing at the end of October and early November.

FACILITY OPERATIONS

Jaybird Senior Living - Proposed Operator

The proposed operator of our senior housing community is Jaybird which is one of the largest healthcare management company in the Midwest. We expect rapid change in senior care over the next 5 - 10 years as senior housing continues to evolve from a focus on simply housing and hospitality to a more integrated delivery of medical and social care, especially in the wake of the recent Global Pandemic we recently experienced. We believe Jaybird will be the best option to provide the high-quality care alternatives our residents deserve.

Jaybird currently operates our 91-unit senior housing community in Spirit Lake, IA (Keelson Harbour) and our 92-unit senior housing community in Monticello, MN (Willows Landing).

Jaybird is one of the largest operators in the Midwest with 70 communities and manages nearly 3,500 units throughout its portfolio. The portfolio includes Independent Living Communities, Assisted Living Communities, Memory Care Communities, Transitional Care Centers, and Adult Day Programs.

Public Benefits of Senior Housing

The proposed senior community will benefit the public by providing senior housing for the area so that seniors who have spent their lives in Hastings and the surrounding communities remain in the area. Many local seniors will be attracted by the health benefits of a senior housing community as an attractive alternative to the isolation of living alone and the burden of maintaining a home. The proposed facility will help to meet the current housing needs of seniors in the immediate area (several neighbors are on senior housing waiting lists), while also helping to meet the anticipated needs of unmet demand in the near future as projected by a recent independent market study.

Senior Living is a great community partner – not only creating a place where people come to volunteer, but also housing people who are interested in contributing back to their surrounding community. Senior Housing residents participate in local churches, volunteer opportunities, and engage in the greater community. Senior Housing, and specifically the programs and activities promoted by Jaybird, also support local economic development since seniors typically prefer to shop in their familiar community. In addition, Jaybird brings stable, high quality jobs to the communities in which they operate.

There is also no better neighbor than a senior citizen. They are light on the land, streets and park systems, yet senior communities create significant tax base without burdening infrastructure and school systems.

Jaybird prefers this size of senior housing community like the proposed Hastings Senior Living since operational efficiencies are gained through larger developments when compared to smaller ones. Some of the operating benefits of a larger building are listed below:

- i. A larger facility can afford to offer a broader range of healthcare services, options, and amenities to Hastings seniors while limiting disruptive moves from one facility to another for additional care.
- Creating a larger pool of care staff helps to support stable services for our residents. More hours of care and therefore staffing can be offered to provide more consistent employment, rather than a lot of part-time positions that are more difficult to fill with qualified care givers. This is expected to be increasingly important if the current shortage of qualified nurses continues, as we expect, as our population ages.
- iii. A larger building allows for more competitive wages and benefits at all levels of staff which typically translates to better care for our residents.
- iv. A larger facility offers more apartment options, which reduces the chance that families have to split up (i.e. one spouse needs Memory Care and the other can live in an Assisted Living Unit, all under one roof)

Additionally, this type of project also provides the public benefit of encouraging a turnover of single family housing in the area. When seniors move into these communities, neighborhoods typically experience younger families moving into the formerly senior owned housing stock which helps to revitalize these neighborhoods.

Finally, in addition to construction jobs, Hastings Senior Living is expected to employ many people on site as care is provided to our residents 24 hours a day. The building is projected to employ over 30 individuals (FTEs) in a combination of full and part time positions.





SRF No. 13759

То:	Michael Hoagberg
From:	Matthew Pacyna, PE, Principal Zach Toberna, EIT, Engineer
Date:	September 30, 2020
Subject:	Hastings Senior Living Traffic Review; Hastings, MN

Introduction

As requested, SRF has completed a traffic review associated with the proposed senior living development in Hastings, Minnesota. The proposed development is north of the County Road 46/47 and across from Riverwood Drive. The main objectives of this review are to quantify the trip generation potential of the proposed development, understand potential impacts to the adjacent roadway network, and identify transportation considerations that may be necessary to accommodate the proposed development. The following information provides the assumptions, analysis, and review findings offered for consideration.

Review Summary

Based on our review, the following items were identified.

- 1. **Proposed Development:** The proposed development includes a total of 75-senior residential units, which includes 15 memory care and 60 assisted living type units. The site is currently zoned R-4 and guided as high density residential.
- Site Trip Generation: A trip generation estimate for the proposed land use was developed for the a.m. and p.m. peak hours and on a daily basis using the *ITE Trip Generation Manual*, 10th Edition. Results of the trip generation estimate, shown in Table 1, indicates that the proposed development is expected to generate approximately 14 a.m. peak hour, 19 p.m. peak hour, and 195 daily trips into/out of the site.

Land Use Type (ITE Code)	Size	Weekday A.M Peak Hour Trips		Weekday P.M Peak Hour Trips		Daily	
		In	Out	In	Out	Trips	
Memory/Assisted Living (254)	75 Beds	9	5	7	12	195	

Table 1	Pronosed	Development Tr	in Generation	Fstimate
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3. <u>Adjacent Development Trip Generation</u>: The Vermillion Shores Apartment development, located in the southeast quadrant of the County Road 46/47 and West 31st Street intersection, started construction in Spring 2019 and is expected to be completed by the time the proposed senior living facility opens. <u>The adjacent development is expected to generate approximately</u> 27 a.m. peak hour, 33 p.m. peak hour, and 439 daily trips into/out of the study area.

Land Use Type (ITE Code)	Size	Weekday A.M Peak Hour Trips		Weekday P.M Peak Hour Trips		Daily	
		In	Out	In	Out	Trips	
Low-Rise Multifamily Housing (220)	60 DU	6	21	21	12	439	

 Table 2. Vermillion Shores Development Trip Generation Estimate

4. **ADT Volume Review:** A review of average daily traffic (ADT) volumes within the study area was completed and is shown in Table 3. The review identifies primary roadways in the study area and their respective existing and projected (i.e. year 2040) estimated ADT volumes. Note that the existing and year 2040 ADT volume information is based on the *Dakota County 2040 Comprehensive Plan* and/or the Minnesota Department of Transportation (MnDOT). Estimated ADT volumes were developed by distributing the expected development daily traffic volumes throughout the area based on existing travel patterns and engineering judgement. The increase in traffic volumes associated with the proposed development is anticipated to be relatively small and all study area roadways are expected to remain within the estimated roadway capacity in the near term. However, the future year 2040 volumes along County Road 46/47 are pushing the capacity threshold of the existing facility type and an expansion to a four-/five-lane urban facility may be needed in the future. Appropriate planning should be incorporated into the proposed development plan to avoid significant impacts in the future should this expansion occur.

	Average Daily Traffic Volume (vehicles per day)					
Roadway	Existing	Existing w/ Development	Year 2040	Roadway Capacity		
County Road 46/47 (West of Riverwood Drive)	10,800	11,075	13,900	14,000 to 15,000		
County Road 46/47 (East of 31st Street)	10,800	11,175	13,900	14,000 to 15,000		
31st Street	860	1,300	1,600 (1)	8,000 to 10,000		

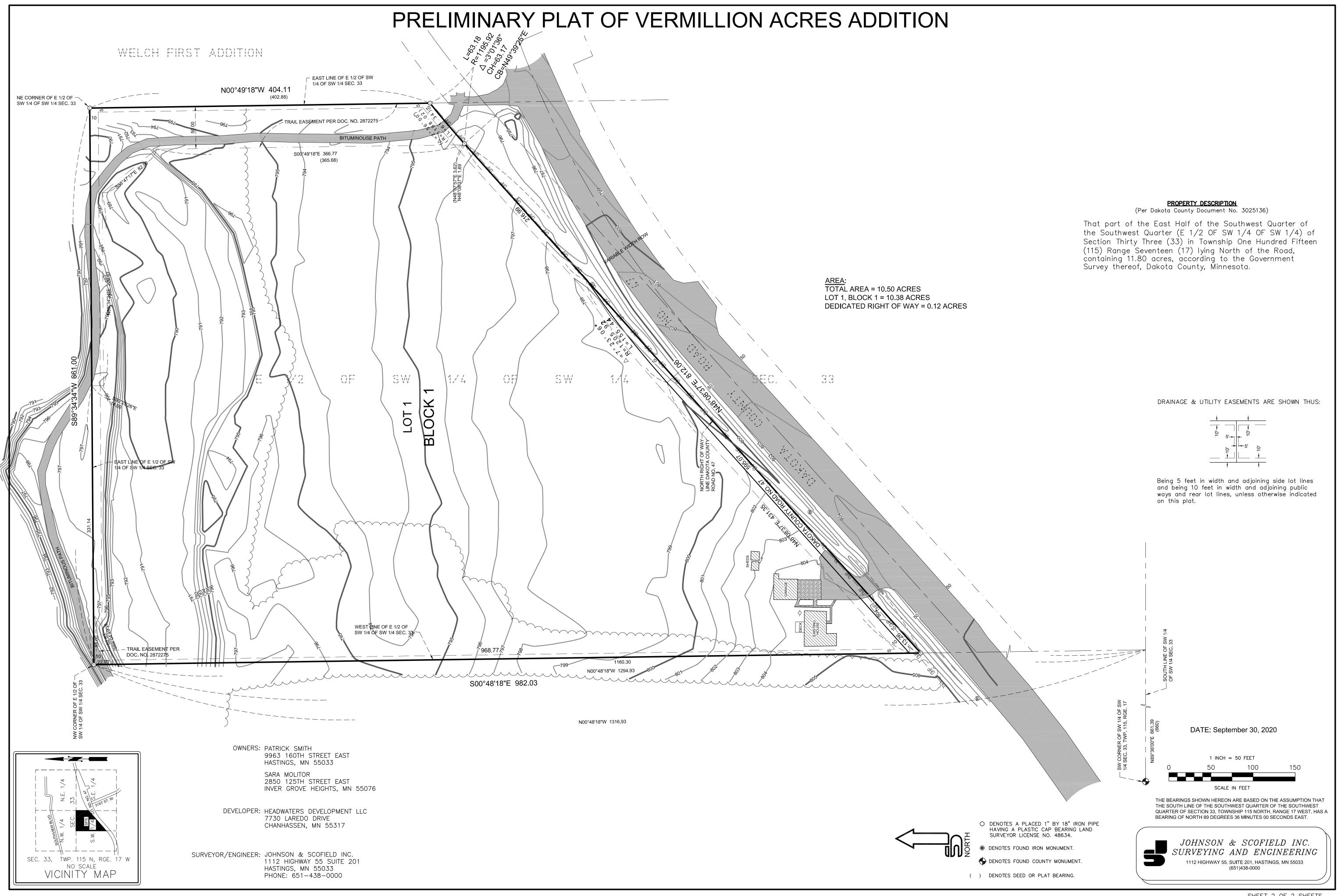
Table 3. Study Area Roadway Traffic Volume Change

(1) Assumes a background growth rate of 1.5 percent; consistent with the Dakota County 2040 Comprehensive Plan.

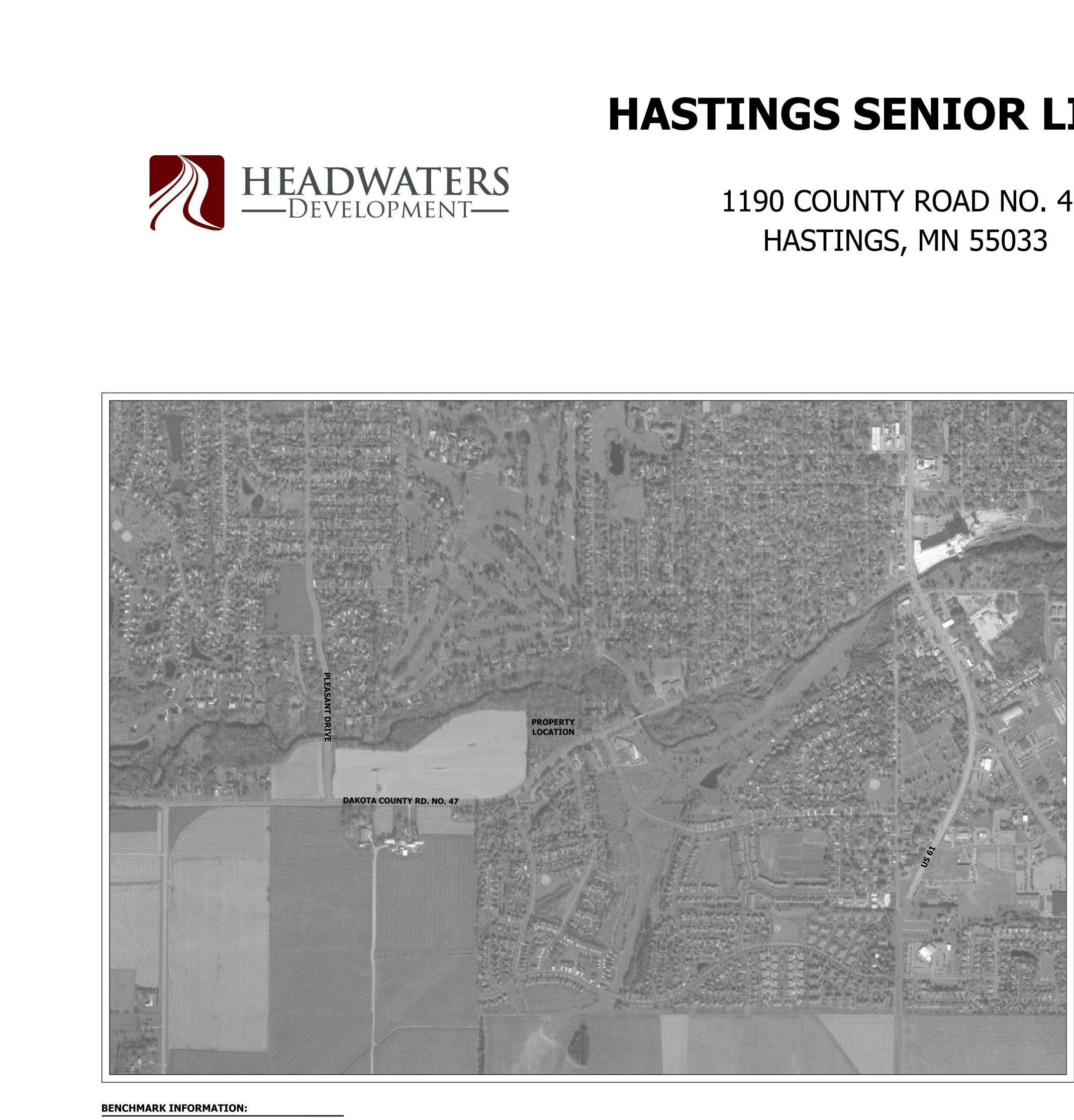
5. <u>Multimodal Considerations</u>: There is an existing multi-purpose trail along the north side of County Road 46/47 from the Vermillion River to the proposed development property. This multi-purpose trail should be continued through the proposed development to provide future connectivity as the area develops. There is also an existing multi-purpose trail along the south side of County Road 46/47 between the Vermillion River and Village Trail. New north-south pedestrian crossings between the two trail facilities should be considered.

Conclusion

There are no significant transportation impacts expected as a result of the proposed senior living facility from a volume perspective.



SHEET 2 OF 2 SHEETS



BENCHMARK NO. 1 = DISC IN SOUTHEAST CORNER BRIDGE OVER VERMILLION RIVER ON DAKOTA CO. ROAD NO. 47. ELEV = 796.72

PROJECT CONTACTS

OWNER HEADWATERS DEVELOPMENT, LLC MICHAEL HOAGBERG 17550 HEMLOCK AVENUE LAKEVILLE, MN 55044 EMAIL: mhoagberg@headwatersdevelopment.com DEVELOPER MINT DEVELOPMENT CO. ROB BARSE TEL: 612-499-6095 EMAIL: rob@mintdevco.com ARCHITECT ARTEKTA ARCHITECTS JEFFREY MORRAU 26 ROBERTS STREET NORTH SUITE #A190 FARGO, ND 58102 TEL: 701-526-3693 EMAIL: jm@artekta.com

HASTINGS SENIOR LIVING

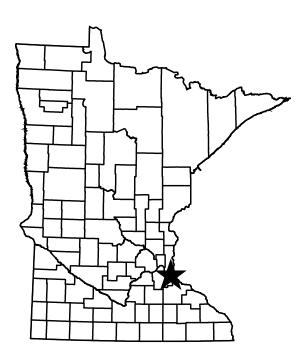
1190 COUNTY ROAD NO. 47

TRUE NORTH

CIVIL ENGINEER DESIGN TREE ENGINEERING & LAND SURVEYING MICHAEL GERBER 3339 W. ST. GERMAIN SUITE 250 ST. CLOUD, MN 56301 TEL: 320-227-0203 EMAIL: mjg@dte-ls.com.com

LANDSCAPE ARCHITECT CRAIG LARSON LANDSCAPE ARCHITECTS CRAIG LARSON 901 9TH STREET S FARGO, ND 58103 TEL: 701-361-1916 EMAIL: craig@craiglarsonla.com

GENERAL CONTRACTOR ENGELSMA CONSTRUCTION, INC. BRIAN TEETERS 7119 31ST AVE N MINNEAPOLIS, MN 55427 TEL: 763-536-9200 EMAIL: briant@ecimn.com



INDEX OF SHEETS: COVER SHEET EMOVALS PLA CIVIL SITE PLAN GRADING PLAN JTTI ITY PI AN ROSION CONTROL PLA DETAILS DETAILS ROSION CONTROL DETAILS & SWPPP NARRATIV LANTING PLAN DETAILS L102 EXTERIOR BUILDING PERSPECTIVES A401 EXTERIOR BUILDING ELEVATIONS AND INFORMATION A402 ELECTRICAL PHOTOMETRIC PLAN E101

GENERAL NOTES:

1-800-252-1166.

1. TOPOGRAPHIC SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, TOPOGRAPHY WITH SPOT ELEVATIONS AND PHYSICAL FEATURES WAS PROVIDED BY:

JOHNSON & SCOFIELD INC. SURVEYING & ENGINEERING 1112 HIGHWAY 55 SUITE 201 HASTINGS, MN 55033

- 2. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION OF THIS PROJECT.
- 3. GOPHER STATE ONE CALL DAMAGE PREVENTION SYSTEM FOR BURIED UTILITIES.
- 4. CITY OF HASTINGS PUBLIC WORKS CONTACT INFORMATION:

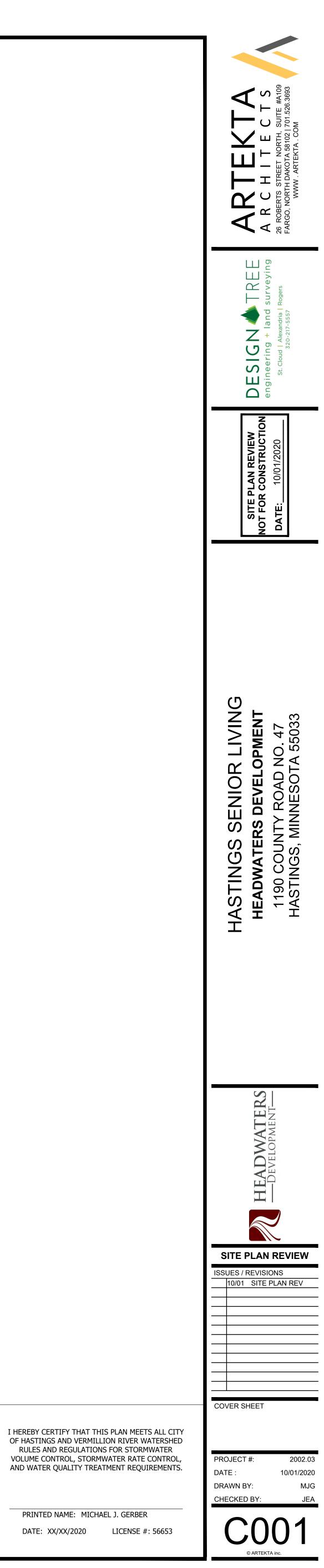
CITY OF HASTINGS PUBLIC WORKS 1225 PROGRESS DRIVE HASTINGS, MN 55033

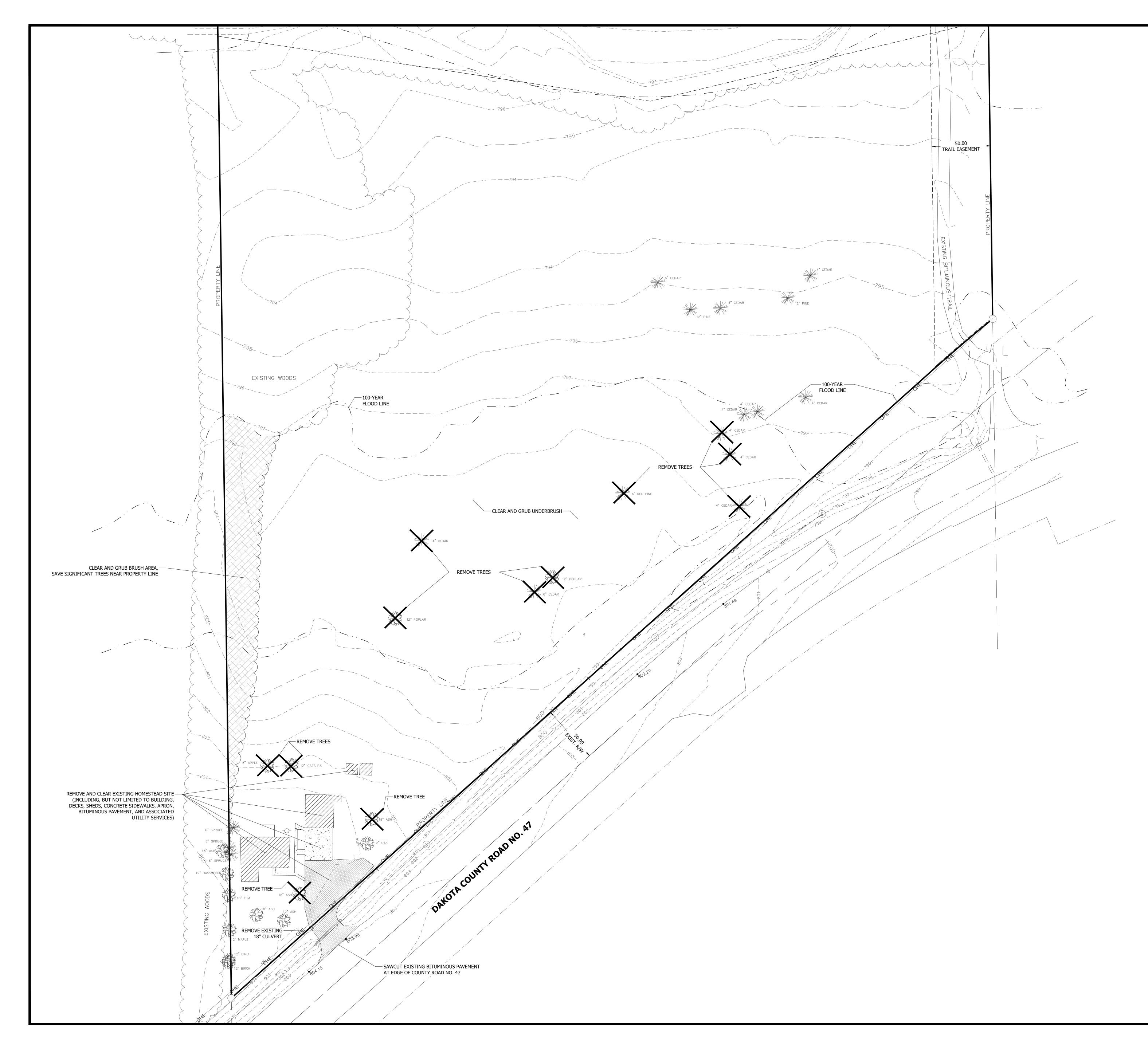
651-480-6185

- 5. NO CONSTRUCTION MAY BEGIN UNTIL EROSION AND SEDIMENT CONTROLS ARE IN PLACE AND APPROVED BY THE CITY.
- 6. NO CONSTRUCTION MAY BEGIN UNTIL A PRECONSTRUCTION MEETING IS HELD WITH THE CITY.
- 7. NO CHANGES SHALL BE MADE TO APPROVED PLANS WITHOUT WRITTEN CONSENT OF THE CITY.
- 8. IRRIGATION SYSTEMS REQUIRE SEPARATELY METERED SUPPLY LINE CONNECTED TO THE PUBLIC MAIN LINE AND PERMITTING THROUGH THE CITY BUILDING DEPARTMENT.
- 9. PREVAILING SPECIFICATIONS: CITY OF HASTINGS STANDARD SPECS, MN MUTCD, MNDOT SPECIFICATIONS, CEAM SPECIFICATIONS.
- 10. CITY OF HASTINGS WILL INSPECT THE CONDITION OF THE EXISTING DRIVEWAYS, SIDEWALKS, CURB AND GUTTER, AND OTHER MUNICIPAL FACILITIES LOCATED IN THE PUBLIC RIGHT-OF-WAY PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES FOUND, UNLESS PROVIDED NOTIFICATION OF DAMAGE PRIOR TO THE START OF THE PROJECT.
- 11. RYAN STEMPSKI WILL COORDINATE INSPECTIONS ON UTILITIES, ROAD CONSTRUCTION, AND INFRASTRUCTURE WITHIN THE CITY'S RIGHT-OF-WAY. PROVIDE RYAN A MINIMUM OF 48 HOURS OF ADVANCE NOTICE. RYAN CAN BE REACHED AT 651-480-2368.

RULES AND REGULATIONS FOR STORMWATER VOLUME CONTROL, STORMWATER RATE CONTROL,

PRINTED NAME: MICHAEL J. GERBER





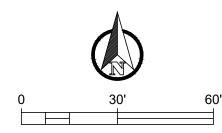
- Johnson & Scofield Inc. Surveying and Engineering 1112 HIGHWAY 55, SUITE 201 HASTINGS, MN 55033

- CONSTRUCTION.
- 1-800-252-1166.

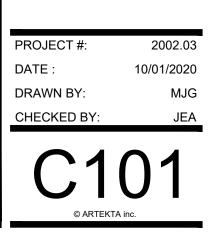
BENCHMARK INFORMATION:

S⁴⁰ 1. EXISTING CONDITIONS AND TOPOGRAPHIC INFORMATION PROVIDED BY: TEL:651-438-0000 2. CONTRACTOR SHALL FIELD VERIFY ALL BUILDING DIMENSIONS AND REMOVAL LIMITS PRIOR TO ANY CONSTRUCTION. 3. SAWCUT BITUMINOUS PAVEMENT FULL DEPTH AT ALL TIE-IN LOCATIONS. \mathbf{C}_{0} 4. THE LOCATIONS AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN HEREIN ARE APPROXIMATE. THEY HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND/ OR RECORDS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING , A si LOCATION AND ELEVATION TO ENSURE THAT ANY EXISTING UTILITIES (SHOWN OR NOT SHOWN) ARE NOT DAMAGED DURING CONSTRUCTION. 5. ALL UTILITIES AND SERVICES SHOWN OR NOT SHOWN SHALL BE REMOVED OR Шg ABANDONED WITHIN THE HOMESTEAD AREA. COORDINATE WITH LOCAL GAS COMPANY, UTILITY COMPANY, OR PROPER AUTHORITIES PRIOR TO REMOVAL OR R ABANDONING, UNLESS OTHERWISE NOTED. 6. ALL SIGNIFICANT TREES AS DEFINED BY THE HASTINGS TREE PRESERVATION GUIDELINES NOT MARKED FOR REMOVAL SHALL BE PROTECTED DURING SIGN + 7. GOPHER STATE ONE CALL DAMAGE PREVENTION SYSTEM FOR BURIED UTILITIES. **D**E BENCHMARK NO. 1 = DISC IN SOUTHEAST CORNER BRIDGE OVER VERMILLION RIVER ON DAKOTA CO. ROAD NO. 47. ELEV = 796.72OR CON SIGNIFICANT TREE REMOVAL NTITY ROAD N(NESOTA NIOR Ш S ASTIN(1190 Co HASTING HEADWATERS —Development—

TYPE	QUAN
8" DIA. HARDWOOD DECIDUOUS	4
12" DIA SOFTWOOD DECIDUOUS	2
12' TALL CONIFEROUS	6



60'

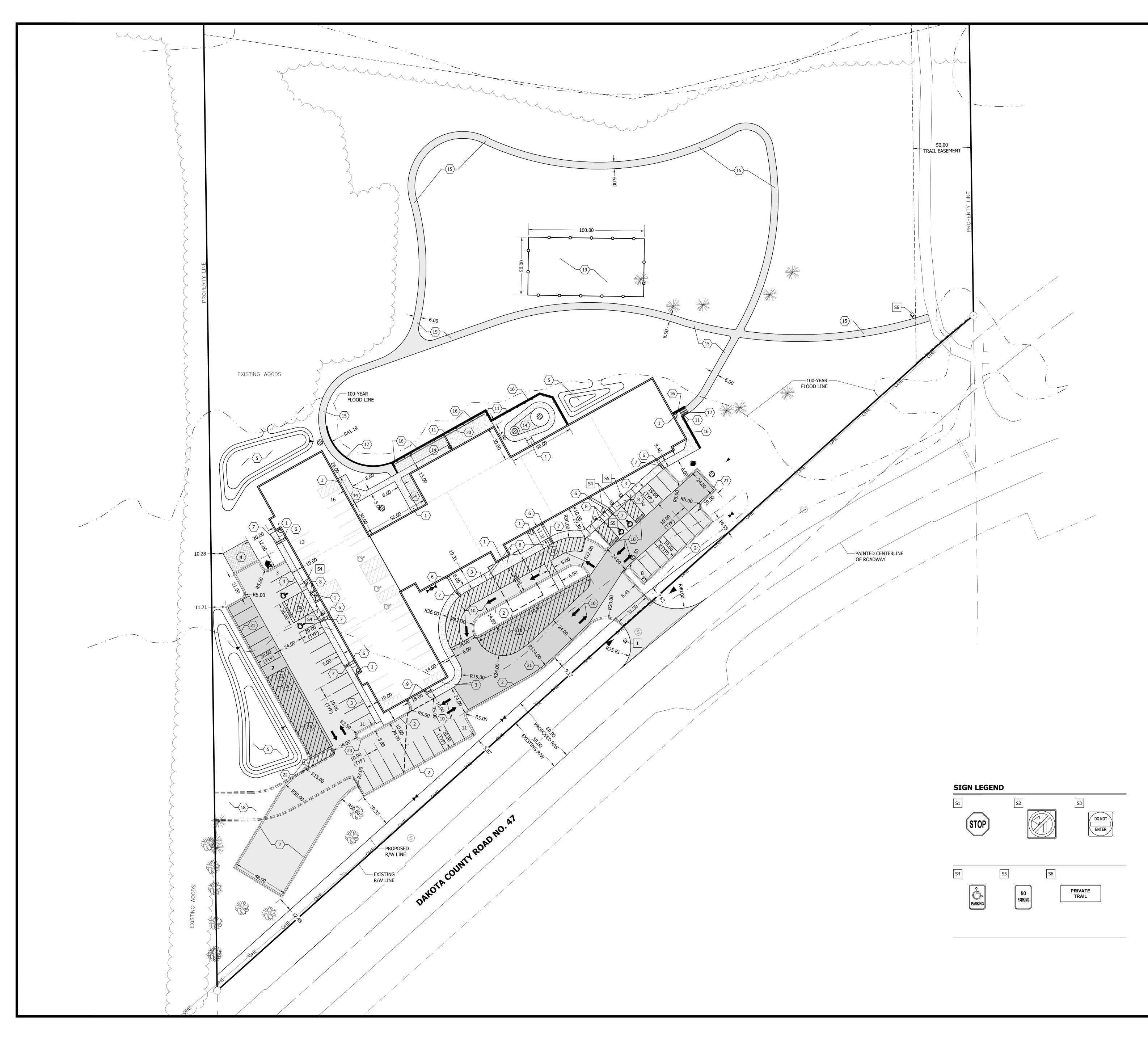


SITE PLAN REVIEW

10/01 SITE PLAN REV

ISSUES / REVISIONS

REMOVALS PLAN



- EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- TO CONSTRUCTION.
- COLOR.
- REQUIREMENTS.
- 5-297.254.
- TREE REMOVAL.
- UTILITIES. 1-800-252-1166.

1. ALL DIMENSIONS SHOWN ARE TO FLOW LINE, CENTERLINE OF FENCE, OR 2. CONTRACTOR SHALL VERIFY ALL PLAN AND DETAIL DIMENSIONS PRIOR 3. ALL CROSSWALK STRIPING SHALL BE WHITE IN COLOR. LL 4. ALL INTERIOR PARKING STALL STRIPING SHALL BE 4" AND YELLOW IN \mathbf{C}_{0} 5. ACCESSIBLE PARKING STALL STRIPING, ACCESS AISLE, AND SYMBOL SHALL BE PAINTED IN ACCORDANCE WITH LOCAL AUTHORITY **ଏ** ଥ 6. CONSTRUCT PEDESTRIAN RAMPS PER MNDOT STANDARD PLAN NO. Ш б 7. TRAIL ALIGNMENT WITHIN 100-YEAR FLOOD AREA SHOWN FOR REFERENCE ONLY. FINAL ALIGNMENT TO BE FIELD VERIFIED TO AVOID Ш. У R 8. GOPHER STATE ONE CALL DAMAGE PREVENTION SYSTEM FOR BURIED SIGN + Id **PROPERTY INFORMATION** DE 10.502 AC 3.6 ±AC 0.115 AC 1.915 AC NET INCREASE IMPERVIOUS AREA 1.800 AC PARKING INFORMATION 26 STALLS 3 STALLS 29 STALLS 42 STALLS 4 STALLS 46 STALLS 75 STALLS IVIL DETAILS) Z TE 6) RROWS 1190 HASTI **A** 21 CONSTRUCT 4' CURB CUT HEADWATERS —Development LEGEND $\overrightarrow{}$ MENT SITE PLAN REVIEW ACE SECTION ISSUES / REVISIONS 10/01 SITE PLAN REV CONCRETE CRETE l signage 1441 ONAL ARROW CIVIL SITE PLAN Ġ IBLE PARKING SYMBOL 2002.03 PROJECT #: 10/01/2020 DATE : DRAWN BY: MJG CHECKED BY: JEA 0 30' C201

TOTAL PROPERTY AREA DISTURBED AREA EXISTING IMPERVIOUS AREA PROPOSED IMPERVIOUS AREA

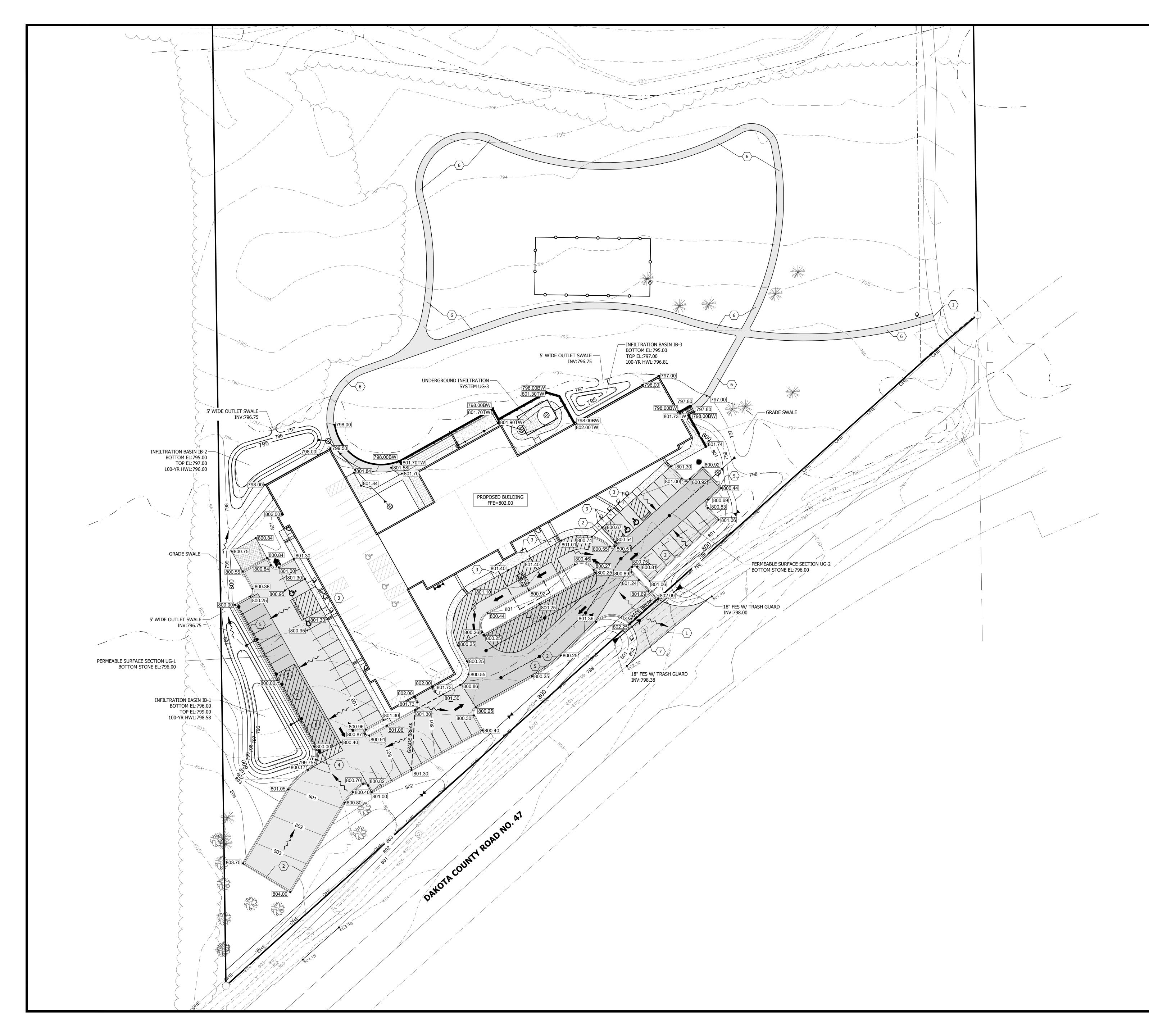
INTERIOR PARKING STALLS	26
INTERIOR ACCESSIBLE STALLS	3
TOTAL INTERIOR STALLS	29
EXTERIOR PARKING STALLS	42
EXTERIOR ACCESSIBLE STALLS	4
TOTAL EXTERIOR STALLS	46
TOTAL STALLS	75

KEY NOTES:

KEY	NOTES:
	CONCRETE STOOP (SEE ARCHITECTURAL)
2	B612 CURB & GUTTER
3	CONCRETE INTEGRAL SIDEWALK (SEE CIVI
$\langle 4 \rangle$	CONCRETE PAD FOR TRASH ENCLOSURE
5	INFILTRATION BASIN
6	2' WIDE CONCRETE VALLEY GUTTER
$\langle 7 \rangle$	CIP TRENCH DRAIN THROUGH SIDEWALK
8	ACCESSIBLE PEDESTRIAN RAMP (SEE NOTE
9	BOLLARD
$\langle 10 \rangle$	PAINTED MESSAGE AND DIRECTIONAL ARR
$\langle 11 \rangle$	PATIO RAILING
$\langle 12 \rangle$	CONCRETE STEPS
(13)	LIGHT POLE (SEE ELECTRICAL)
$\langle 14 \rangle$	CONCRETE OR PAVER PATIO
(15)	6' BITUMINOUS WALKING PATH
$\langle 16 \rangle$	CIP RETAINING WALL (SEE ARCHITECTURA
$\langle 17 \rangle$	MODULAR BLOCK RETAINING WALL
$\langle 18 \rangle$	FUTURE ROAD IMPROVEMENTS (BY OTHER
(19)	6' CHAIN LINK FENCED IN DOG PARK
20	PREFABRICATED TRENCH DRAIN

- 22 RAIN GUARDIAN
- 23 D412 CURB & GUTTER

PROPOSED BITUMINOUS PAVEM
PROPOSED PERMEABLE SURFAC
PROPOSED NON-REINFORCED C
PROPOSED REINFORCED CONCR
PROPOSED CURB AND GUTTER
PROPOSED RETAINING WALL
PROPOSED TRAFFIC CONTROL S
PROPOSED PAINTED DIRECTION
PROPOSED PAINTED ACCESSIBL



- HEREIN ARE APPROXIMATE. THEY HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND/ OR RECORDS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION AND ELEVATION TO NOT DAMAGED DURING CONSTRUCTION.
- 2.00% CROSS SLOPE, OR 5.00% LONGITUDINAL SLOPE.
- CROSS SLOPE IN SIDEWALK AREAS.
- SHALL NOT EXCEED 2.00% CROSS SLOPE IN ALL DIRECTIONS. 6. CONSTRUCT PEDESTRIAN RAMPS PER MNDOT STANDARD PLAN NO. 5-297.254.
- 7. ALL SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL EVALUATION REPORT DATED MAY 15, 2020 BY BRAUN INTERTEC.
- 8. ALL EXCESS OR WASTE MATERIAL GENERATED AS PART OF IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
- ALTER 100-YEAR FLOOD AREA CAPACITY. TRAIL SHALL BE CONSTRUCTED IN ACCORDANCE TO ADA REQUIREMENTS.
- HAS BEEN PROVIDED. THE CONTRACTOR SHALL REVIEW THE ALL STATE AND LOCAL REQUIREMENTS.
- 11. INFILTRATION AREAS SHALL NOT BE EXCAVATED TO FINAL GRADE USED WITHIN INFILTRATION AREAS.
- UTILITIES. 1-800-252-1166.

BENCHMARK INFORMATION:

RIVER ON DAKOTA CO. ROAD NO. 47. ELEV = 796.72

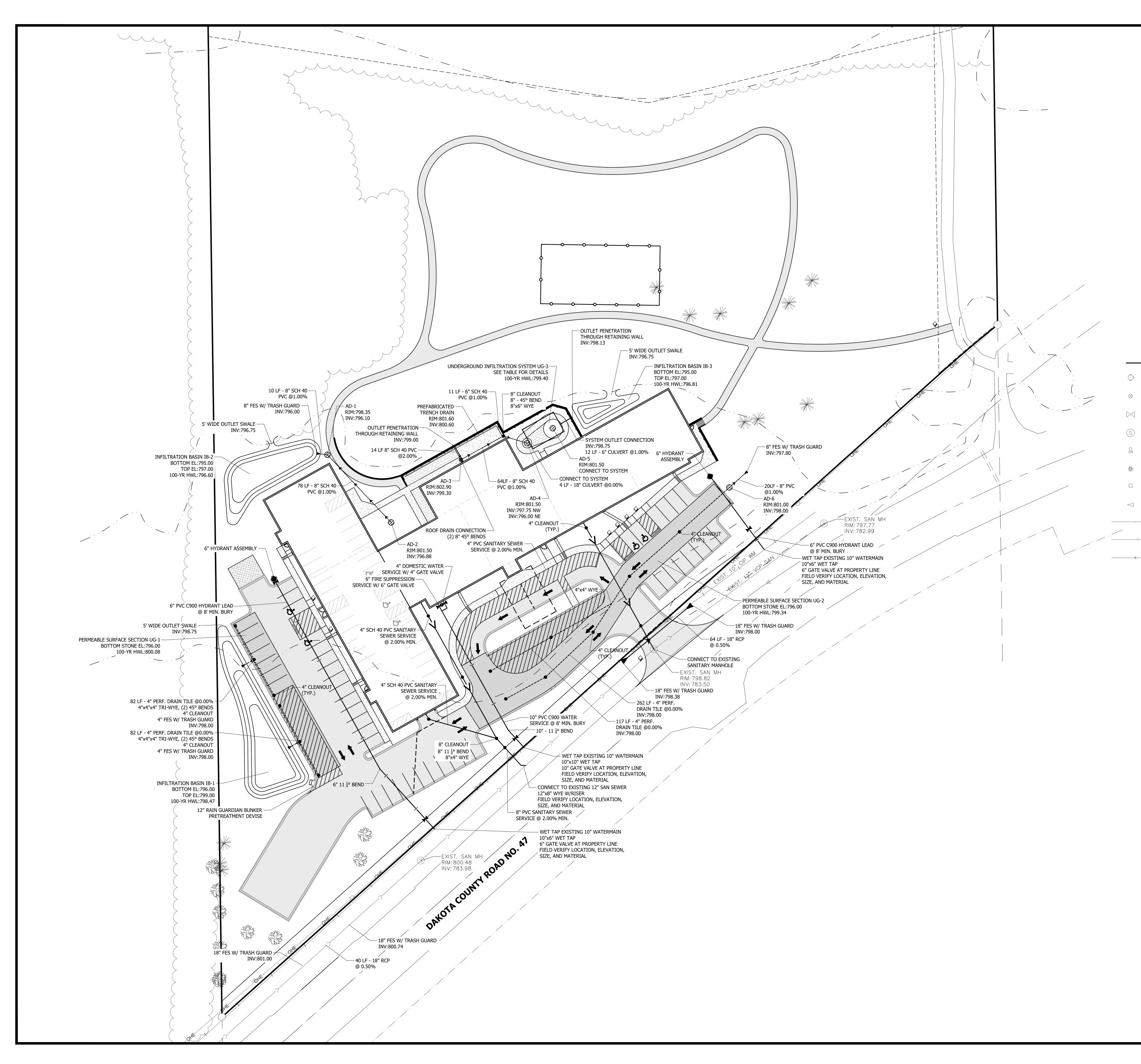
1. THE LOCATIONS AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN ENSURE THAT ANY EXISTING UTILITIES (SHOWN OR NOT SHOWN) ARE 2. SIDEWALKS SHALL MEET ADA REQUIREMENTS, AND SHALL NOT EXCEED 3. CONCRETE ENTRANCES AND APPROACHES SHALL NOT EXCEED 2.00% \mathbf{C}_{0} 4. ACCESSIBLE PARKING STALLS SHALL MEET ADA REQUIREMENTS, AND R CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF Z 9. TRAIL ALIGNMENT AND GRADE WITHIN 100-YEAR FLOOD AREA SHOWN SIG FOR REFERENCE ONLY. FINAL ALIGNMENT TO BE FIELD VERIFIED TO AVOID TREE REMOVAL. FINAL GRADE TO BE FIELD VERIFIED TO NOT 10. IN ADDITION TO THESE PLANS, A STORMWATER MANAGEMENT STUDY STORMWATER BOOK AND USE THE INFORMATION TO COMPLY WITH UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND STABLIZED. ONLY LOW IMPACT TRACK EQUIPMENT SHALL BE E PLAIN OR CON 12. GOPHER STATE ONE CALL DAMAGE PREVENTION SYSTEM FOR BURIED BENCHMARK NO. 1 = DISC IN SOUTHEAST CORNER BRIDGE OVER VERMILLION **GRADING LEGEND** Υ MAJOR CONTOUR \mathbf{C} MINOR CONTOUR 7 CONTOUR LABEL MAJOR CONTOUR MINOR CONTOUR CONTOUR LABEL LOW DIRECTION 1190 HASTI SPOT ELEVATION* S SPOT ELEVATION* (1) MATCH INTO EXISTING BITUMINOUS PAVEMENT $\langle 3 \rangle$ ACCESSIBLE PEDESTRIAN RAMP (SEE NOTE 6) HEADWATERS —Development 6 2.00% MAX. CROSS SLOPE, 5.00% MAX. LONGITUDINAL SLOPE, MATCH EXISTING GRADES \approx SITE PLAN REVIEW ISSUES / REVISIONS 10/01 SITE PLAN REV GRADING PLAN PROJECT #: 2002.03 10/01/2020 DATE : DRAWN BY: MJG CHECKED BY: JEA 0 30' 60 C301

	= EXISTING M
	= EXISTING M
- — -100 — — -	= EXISTING CO
	= PROPOSED N
	= PROPOSED N
100	= PROPOSED C
	= SURFACE FLO
• 1 ⁴ +++++	= EXISTING SP
• XXXX.XX	= PROPOSED S

*SPOT ELEVATIONS ALONG CURB & GUTTER AND OTHER REVEALS ARE TO FLOWLINE, UNLESS OTHERWISE NOTED.

KEY NOTES:

- $\langle 2 \rangle$ TIPPED CURB AND GUTTER
- $\langle 4 \rangle$ RAIN GUARDIAN
- $\left< 5 \right>$ CONSTRUCT 4' CURB CUT
- 7
 ADJUST MANHOLE TO FINISH GRADE



- 1. THE LOCATIONS AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN HEREIN ARE APPROXIMATE. THEY HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND/ OR RECORDS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION AND ELEVATION TO ENSURE THAT ANY EXISTING UTILITIES (SHOWN OR NOT SHOWN) ARE NOT DAMAGED DURING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY AND COORDINATE BUILDING UTILITY CONNECTION 2. SIZES, LOCATIONS, AND ELEVATIONS WITH PLUMBING, MECHANICAL, AND ELECTRICAL CONTRACTORS.
- 3. ALL WATER PIPING SHALL BE BURIED A MINIMUM OF 8'.
- 4. SEE WATER DETAILS FOR ADDITIONAL INFORMATION.
- 5. WATER LINES SHALL MAINTAIN A MINIMUM OF 10' OF SEPARATION FROM SANITARY SEWER AND STORM SEWER INFRASTRUCTURE. 6. SANITARY SEWER CLEANOUTS SHALL BE PROVIDED WITHIN 5' OF THE BUILDING
- FOR UNIT'S CONNECTION.
- 7. SANITARY SEWER CLEANOUT SPACING SHALL NOT EXCEED 90'.
- 8. SANITARY SEWER SERVICES SHALL HAVE A MINIMUM OF 2.00% GRADE. 9. SEE SANITARY SEWER DETAILS FOR ADDITIONAL INFORMATION.
- 10. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MINNESOTA STATE PLUMBING CODE.
- 11. ALL PIPING SHALL BE TESTED IN ACCORDANCE WITH THE MINNESOTA STATE PLUMBING CODE.
- 12. ALL IMPROVEMENTS SHALL REMAIN VISIBLE FOR INSPECTION .
- 13. GOPHER STATE ONE CALL DAMAGE PREVENTION SYSTEM FOR BURIED UTILITIES. 1-800-252-1166

BENCHMARK INFORMATION:

BENCHMARK NO. 1 = DISC IN SOUTHEAST CORNER BRIDGE OVER VERMILLION RIVER ON DAKOTA CO. ROAD NO. 47. ELEV = 796.72

UT	ILITY LEGEND	
= EXISTING HYDRANT	ē 1	= PROPO
= EXISTING CURB STOP	θ	= PROPO
= EXISTING GATE VALVE	M	= Propo
= EXISTING SANITARY MANHOLE		= PROPO
= EXISTING CLEANOUT	•	= PROPO
= EXISTING STORM MANHOLE	ullet	= Propo
= EXISTING CATCH BASIN		= PROPO
= EXISTING CULVERT APRON	-	= PROPO
— = EXISTING WATER LINE	l	- = Propo
= EXISTING SANITARY LINE	<	- = Propo
— = EXISTING STORM LINE		- = Propo
		DDODO

----- =PROPOSED UNDERDRAIN

DESCRIPTION	STRUCTURE TYPE
AD-1	12" NYLOPLAST AREA DRAIN
AD-2	12" NYLOPLAST AREA DRAIN
AD-3	12" NYLOPLAST AREA DRAIN
AD-4	30" NYLOPLAST AREA DRAIN
AD-5	30" NYLOPLAST AREA DRAIN
AD-6	12" NYLOPLAST AREA DRAIN

UNDERGROUND INFILTRATION SYSTEM U **REOLITREMENTS***

REQUIRE	IMEN IS*		
BOTTOM STONE EL:	795.50		
BOTTOM CHAMBER EL:	796.00		
TOP CHAMBER EL:	799.00		
TOP STONE EL:	799.50		
STONE POROSITY:	0.40		
BOTTOM STONE THICKNESS:	6 IN.		
TOP STONE THICKNESS:	6 IN.		
SIZE STONE THICKNESS:	12 IN.		
END STONE THICKNESS:	12 IN.		
CHAMBER ROW SPACING:	18 IN.		
6" CULVERT OUTLET INV:	798.25		
REQUIRED STORAGE BELOW OUTLET:	1,023.50 CF		
REQUIRED TOTAL STORAGE:	1,401.20 CF		

*4 ROWS 22 LF - 36" CMP WITH (2) 36" CMP HEADERS SYSTEM SHOWN FOR REFERENCE ONLY, CONTRACTOR SHALL SUBMIT SHOP DRAWING OF SYSTEM FOR APPROVAL PRIOR TO CONSTRUCTION.

OSED HYDRANT

OSED CURB STOP

OSED GATE VALVE

OSED SANITARY MANHOLE

OSED CLEANOUT

OSED STORM MANHOLE

POSED CATCH BASIN

OSED CULVERT APRON

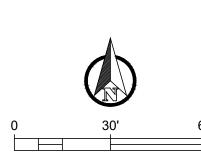
OSED WATER LINE

OSED SANITARY LINE

OSED STORM LINE



JG-3	

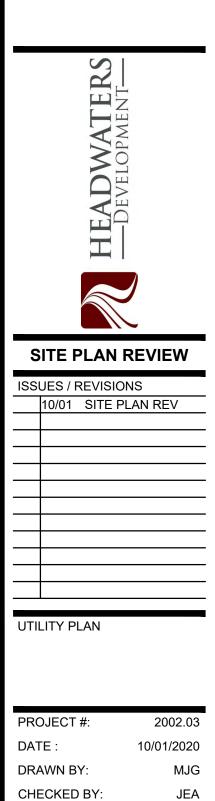


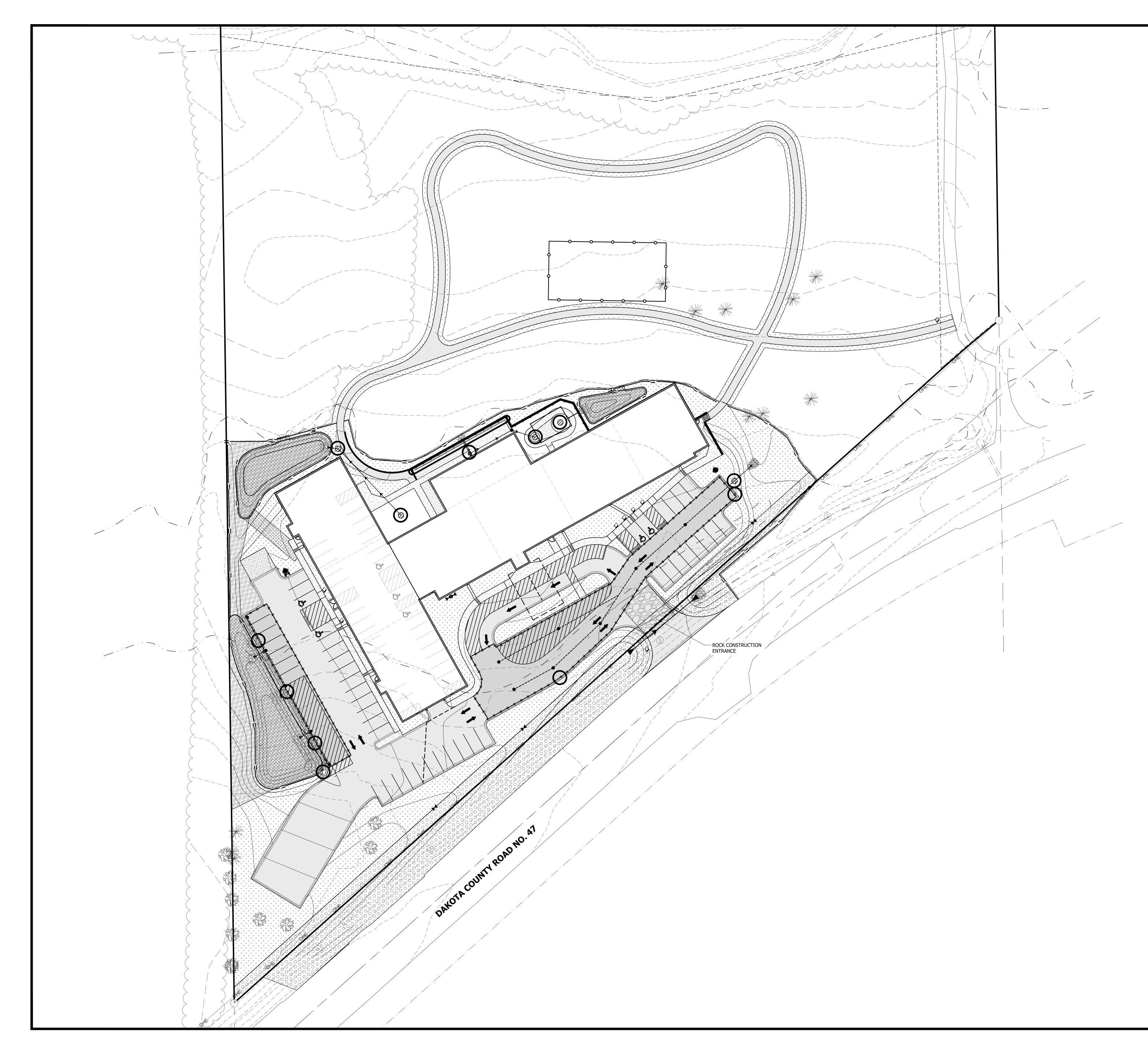
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SITE PLAN REVIEW NOT FOR CONSTRUCTIO	10/01/2020
SITE NOT FOI	DATE:_



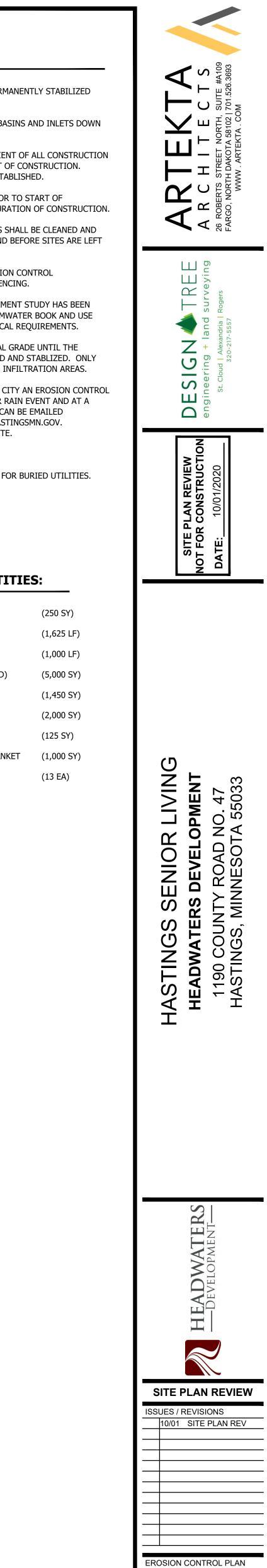


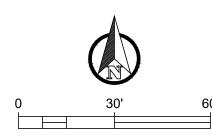


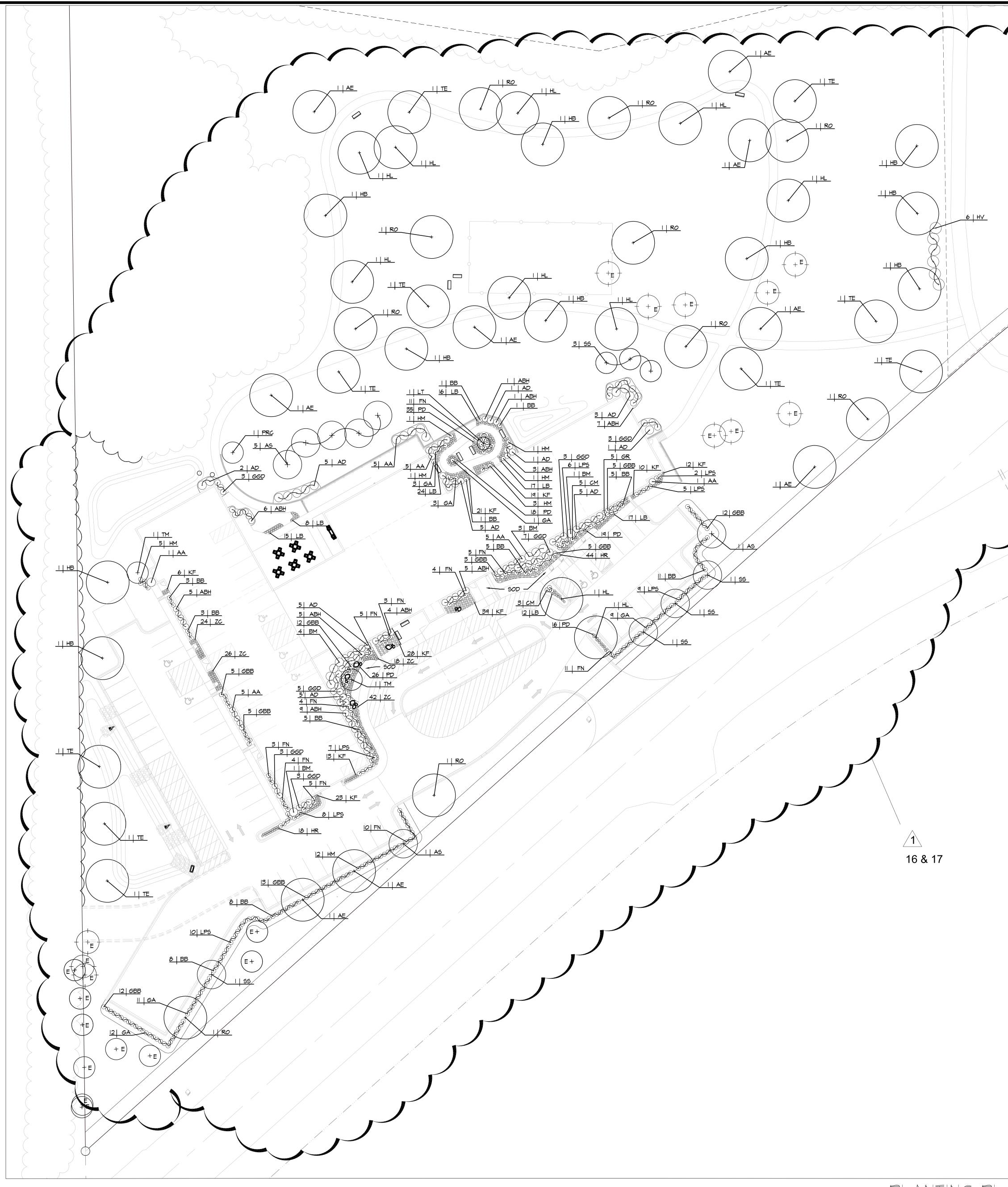
- 1. ALL DISTURBED AREAS SHALL BE FINAL GRADED AND PERMANENTLY STABILIZED WITH THE SEED MIX IDENTIFIED ON PLANS.
- 2. INLET PROTECTION SHALL BE PROVIDED ON ALL CATCH BASINS AND INLETS DOWN GRADIENT OF CONSTRUCTION ACTIVITY.
- 3. PROVIDE SILT FENCE PERIMETER CONTROL DOWN GRADIENT OF ALL CONSTRUCTION ACTIVITY AND TEMPORARY STOCKPILES PRIOR TO START OF CONSTRUCTION. PERIMETER CONTROLS ARE REQUIRED UNTIL TURF IS ESTABLISHED.
- 4. TEMPORARY ROCK ENTRANCES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
- 5. NO OFFSITE VEHICLE TRACKING IS PERMITTED. STREETS SHALL BE CLEANED AND SWEPT WHENEVER TRACKING OF SEDIMENTS OCCURS AND BEFORE SITES ARE LEFT IDLE FOR WEEKENDS AND HOLIDAYS.
- 6. REFER TO THE SWPPP AND THE CITY OF HASTINGS EROSION CONTROL REQUIREMENTS FOR FURTHER EROSION CONTROL SEQUENCING.
- 7. IN ADDITION TO THESE PLANS, A STORMWATER MANAGEMENT STUDY HAS BEEN PROVIDED. THE CONTRACTOR SHALL REVIEW THE STORMWATER BOOK AND USE THE INFORMATION TO COMPLY WITH ALL STATE AND LOCAL REQUIREMENTS.
- 8. INFILTRATION AREAS SHALL NOT BE EXCAVATED TO FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND STABLIZED. ONLY LOW IMPACT TRACK EQUIPMENT SHALL BE USED WITHIN INFILTRATION AREAS.
- 9. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING TO THE CITY AN EROSION CONTROL INSPECTION FORM AFTER EVERY HALF INCH OR GREATER RAIN EVENT AND AT A MINIMUM OF ONT TIME PER WEEK. INSPECTION FORMS CAN BE EMAILED ELECTRONICALLY TO RYAN STEMPSKI AT RSTEMPSKI@HASTINGSMN.GOV. INSPECTION FORMS CAN BE FOUND ON THE MPCA WEBSITE.
- 10. A RAIN GAGE MUST BE PROVIDED ON SITE.
- 11. GOPHER STATE ONE CALL DAMAGE PREVENTION SYSTEM FOR BURIED UTILITIES. 1-800-252-1166.

EROSION CONTROL QUANTITIES:

	ROCK CONSTRUCTION ENTRANCE
	SILTFENCE
-*****	SEDIMENT CONTROL LOG
> + + + + + + + + + +	SEED MIX 25-151 (HYDROSEED OR SOD)
	SEED MIX 33-261 (HYDROSEED)
	SEED MIX 25-121 (HYDROSEED)
	CLASS III RIPRAP
	CATEGORY III EROSION CONTROL BLANK
\bigcirc	INLET PROTECTION







KEY	QTY	COMMON NAME	SCIENTIFIC NAME	TYPE	SIZE	NOTES
DEC		SHADE TREES				1
AE	9	Accolade Elm	Ulmus japonica x wilsoniana 'Morton	B¢B	2.0" cal.	
ΤE	10	Triumph Elm	Ulmus 'Morton Glossy'	B¢B	2.0" cal.	
RO	10	Red Oak	Quercus rubra	B¢B	1.5" cal.	
HL	10	Northern Acclaim Honeylocust	Gleditsia triacanthos var. inermis 'Harve'	B∉B	1.5" cal.	
HB	10	Hackberry	Celtis occidentalis	B∉B	2.0" cal.	
OR	NAMENT	AL DECIDUOUS TREES		_1		
AS	7	Autumn Splendor Horse Chestnut	Aesculus x arnoldiana 'Autumn Splendor	B∉B	1.5" cal.	
PRC		Prairie Rose Crabapple	Malus 'Prairie Rose'	B∉B	1.5" cal.	
55	7	Spring Snow Crabapple	Malus 'Spring Snow'	B¢B	1.5" cal.	
TM	2	Hotwings Tatarian Maple	Acer tataricum 'GarAnn'	B∉B	1.5" cal.	
LT		Limelight Tree	Hydrangea paniculata 'Limelight'	B∉B	1.5" cal.	
DE	CIDUOUS	¢ EVERGREEN SHRUBS				
GGD	27	Garden Glow Dogwood	Cornus hessei 'Garden Glow'	Cont.	18"	
AD	33	Arctic Fire Dogwood	Cornus sericea 'Farrow' Arctic Fire	Cont.	18"	
ABH	46	Annabelle Hydrangea	Hydrangea arborescens 'Annabelle'	Cont.	18"	
AA	22	Regent Serviceberry	Amelanchier alnifolia 'Regent'	Cont.	18"	
GBB	72	Golden Barberry	Berberis thubergii 'Goruzam'	Cont.	18"	
GA	39	Golden Arborvitae	Thuja occidentalis aurea	Cont.	18"	
HM	24	Hetz Midget Arborvitae	Thuja occidentalis 'Hetz Midget'	Cont.	18"	
BB	51	Mr. Bowling Ball Arborvitae	Thuja occidentalis Bobozam	Cont.	18"	
LPS	47	Little Princess Spirea	Spiraea japonica 'Little Princess'	Cont.	18"	
FN	65	Firefly Nightglow Bush Honeysuckle	Diervilla splendens 'El Madrigal'	Cont.	18"	
BM	9	Blue Muffin Cranberry	Viburnum dentatum 'Christom'	Cont.	18"	
HV Per		Nannyberry	Biburnum lentago 'Homefree"	Cont.	18"	
СМ	8	Walkers Low Catmint	Nepeta x faassenii 'Walker's Low'	Cont.	l gal.	
ZC	110	Zagreb Coreopsis	Coreopsis vericillata 'Zagreb'	Cont.	l gal.	
HR	62	Happy Returns Daylily	Hemerocallis 'Happy Returns'	Cont.	l gal.	
GR	5	Goldstrum Rudebeckia	Rudbeckia fulgida 'Goldstrum'	Cont.	l gal.	
OR	NAMENT	AL GRASSES				1
KF	7	Karl Foerester	Calamagrostis x acutiflora 'karl foerester'	Cont.	l gal.	
LB	109	Little Bluestem	Schizachyrium scoparium	Cont.	l gal.	
PD	4	Prairie Dropseed	Sporobolus heterolepis	Cont.	l gal.	
PD	4	Prairie Dropseed	Sporobolus heterolepis	Cont.	l gal.	

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LANDSCAPE REQUIREMENT	
NTERIOR LOT:	I TREE PE
NTERIOR LOT REQ'D.:	IO TREES
PERIMETER LOT:	I TREE PE I SHRVB P
PERIMETER LOT REQ'D.: 30ULEVARD:	58 TREES PERIMETE NA
BOULEVARD REQ'D.:	NA

5		and the second second			1000	NO. OF			
-	TRE	E	PER	40	00	SQU	ARE	FEET	
C) TF	REE	5						

ER 50' OF LOT PERIMETER PER 40' OF LOT PERIMETER

PERIMETER LOT REQ'D .:	58 TREES & 72 SHRUBS (TO BE USED AT
BOULEVARD:	PERIMETER & ELSE WHERE ON SITE) NA
BOULEVARD REQ'D .:	NA
PARKING LOT ISLAND LANDSCAPING REQ'D.:	NA

FOR TREES REMOVED: 6-5' CONIFEROUS, 3-2.5" HARDWOOD, 2- 2.5" SOFTWOOD= TOTAL II TREES

PLANTING NOTES

REPLACE TREES REQ'D.

- THE WORK OF OTHER TRADES.
- 2. LOCATE AND FLAG ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DAMAGE TO UTILITIES OR OTHER SITE IMPROVEMENTS CAUSED BY CONTRACTOR WILL BE REPAIRED AT NO COST TO THE OWNER.
- 3. ALL PLANT MATERIALS MUST CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK (A.S.N.S.), LATEST EDITION PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, WASHINGTON D.C.
- 4. LARGER SIZED PLANT MATERIALS OF THE SPECIES LISTED MAY BE USED IF THE STOCK SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
- 5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN A LIVE AND HEALTHY GROWING CONDITION FOR ONE FULL GROWING SEASON (ONE YEAR) AFTER FINAL PROJECT ACCEPTANCE OR SHALL BE REPLACED FREE OF CHARGE WITH THE SAME GRADE AND SPECIES.
- 6. THE LOCATIONS OF PLANT MATERIAL IS CRITICAL AND SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS. DO NOT PLANT TREES OR SHRUBS IN SWALE AREAS.
- 7. THE LANDSCAPE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND MATERIALS INJURIOUS TO PLANT GROWTH FROM PLANTING PITS AND BEDS PRIOR TO BACKFILLING WITH PLANTING MIX.
- 8. EXCAVATE AND BACKFILL ALL PLANTING BEDS TO A MINIMUM 12-INCH DEPTH WITH PLANTING SOIL MIX.
- 9. PLANTING SOIL MIX SHALL CONSIST OF ONE (I) PART SHARP SAND, ONE (I) PART PEAT MOSS, AND TWO (2) PARTS CLEAN LOAM TOPSOIL. THOROUGHLY MIX PLANTING SOIL COMPONENTS PRIOR TO PLACEMENT.
- IO. PROVIDE SHREDDED HARDWOOD IN ALL PLANTING BEDS TO A 3-INCH MINIMUM DEPTH. APPLY PRE- EMERGENT TO ALL PLANTING BEDS PRIOR TO MULCHING.
- II. SOD, AS SPECIFIED, ALL AREAS AS INDICATED ON THE PLANS.
- 12. SEED, AS SPECIFIED, ALL AREAS DISTURBED BY CONSTRUCTION.
- 13. 13. ALL TURF AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED AS SHOWN ON PLANS.

- I. ALL WORK SHALL BE COORDINATED WITH 14. OWNER RESERVES THE RIGHT TO SUBSTITUTE 1. THE APPROXIMATE LOCATIONS OF KNOWN PLANT MATERIAL TYPE, SIZE, AND/OR QUANTITY.
 - 15. SITE CONTRACTOR RESPONSIBLE FOR BRINGING GRADE TO +/- .I'. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE FINAL 4-6" OF TOPSOIL AND SHALL FINE GRADE ANY SOD, SEED, AND PLANTING BED AREAS TO REFLECT POSITIVE DRAINAGE.
 - 16. ALL LAWN AND PLANTING AREAS ARE TO BE IRRIGATED, UNLESS OWNER SPECIFIES OTHERWISE. ALL PLANTING BEDS SHALL HAVE DRIP IRRIGATION AND ALL TURF AREAS SHALL HAVE SPRAY. SEE IRRIGATION SPECIFICATION.
- CONFORMS TO THE A.S.N.S. ALL SPECIES 17. CONTRACTOR TO MAINTAIN TEMPORARY 3. PROTECT ALL BUILDINGS, STRUCTURES, IRRIGATION ON NEWLY SODDED AND SEEDED AREAS UNTIL FULL ESTABLISHMENT.
 - 18. PROVIDE PLANTING SOIL TO A HEIGHT WITHIN 6" OF THE TOP OF EACH PLANTER. SEE ARCH FOR SIZE AND DETAILS.
 - 19. ADJUST PROPOSED PLANTINGS WHERE STORM INLETS HAVE BEEN INSTALLED, SO AS FURNISH, INSTALL, AND MONITOR SILT FENCE TO NOT PLACE PLANTING IN SWALE, OR LOW AREA.
- GENERAL NOTES, SITE UTILITY MAINS AND SERVICE LINES (I.E. GAS, CABLE TV, TELEPHONE, POWER, WATER, SEWER) HAVE BEEN INDICATED ON THE CIVIL DRAWINGS. HOWEVER, THE EXACT LOCATION MAY VARY FROM THE APPROXIMATE INDICATED LOCATIONS. THEREFORE, THE

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REPLACEMENT TREES:

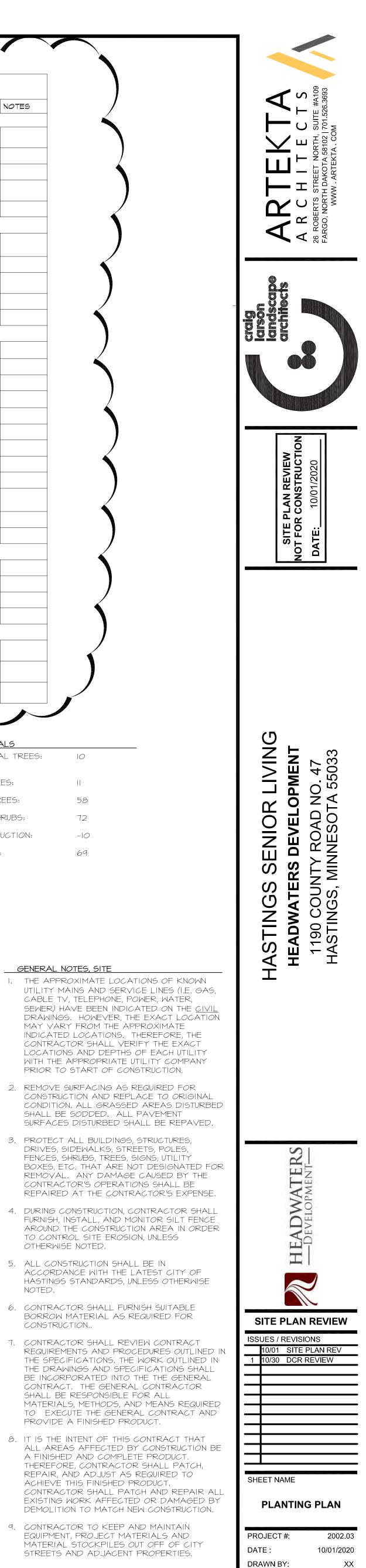
PERIMETER LOT TREES:

PERIMETER LOT SHRUBS:

TOTAL SITE TREES:

RAIN GARDEN REDUCTION:

- WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO START OF CONSTRUCTION. 2. REMOVE SURFACING AS REQUIRED FOR CONSTRUCTION AND REPLACE TO ORIGINAL
- SURFACES DISTURBED SHALL BE REPAVED. DRIVES, SIDEWALKS, STREETS, POLES, FENCES, SHRUBS, TREES, SIGNS, UTILITY
- CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. 4. DURING CONSTRUCTION, CONTRACTOR SHALL
- TO CONTROL SITE EROSION, UNLESS OTHERWISE NOTED. 5. ALL CONSTRUCTION SHALL BE IN
- ACCORDANCE WITH THE LATEST CITY OF HASTINGS STANDARDS, UNLESS OTHERWISE NOTED.
- BORROW MATERIAL AS REQUIRED FOR CONSTRUCTION..
- REQUIREMENTS AND PROCEDURES OUTLINED IN THE SPECIFICATIONS. THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS SHALL BE INCORPORATED INTO THE THE GENERAL CONTRACT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, METHODS, AND MEANS REQUIRED TO EXECUTE THE GENERAL CONTRACT AND PROVIDE A FINISHED PRODUCT.
- 8. IT IS THE INTENT OF THIS CONTRACT THAT ALL AREAS AFFECTED BY CONSTRUCTION BE A FINISHED AND COMPLETE PRODUCT. THEREFORE, CONTRACTOR SHALL PATCH, REPAIR, AND ADJUST AS REQUIRED TO ACHIEVE THIS FINISHED PRODUCT. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING WORK AFFECTED OR DAMAGED BY DEMOLITION TO MATCH NEW CONSTRUCTION.
- 9. CONTRACTOR TO KEEP AND MAINTAIN EQUIPMENT, PROJECT MATERIALS AND MATERIAL STOCKPILES OUT OFF OF CITY STREETS AND ADJACENT PROPERTIES.



CHECKED BY:

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IRRIGATION SPECIFICATIONS, SECTION 328400

- 1.1 SECTION INCLUDES A. Furnishing and install the components required for an automatic complete underground irrigation sprinkler system. System includes: a.Piping.
 - b.Encasement for piping. c. Manual valves.
- d.Pressure-reducing valves. e. Automatic control valves.
- f. Automatic drain valves. g. Transition fittings. h. Dielectric fittings.
- i. Miscellaneous piping specialties. j. Sprinklers.
- k. Quick couplers. Drip irrigation specialties. m. Controllers.
- n. Boxes for automatic control valves. B. Obtain or prepare a scaled design of the proposed irrigation system which meets Irritation Design
- Standards. C. Coordination of Utility Locates ("Call Before You Dig"). Verification of existing static Pressure.
- D. All work and verification for securing water supply and a 2" supply line for the system. E. All work and verification and installation for back flow preventer and water meter. F. Maintenance period.
- G. Sleeving for irrigation pipe.
- 1.2 SYSTEM DESCRIPTION A. Performance Requirements: This system is designed with a minimum water pressure of 50 psi, maximum of 70
- psi at the connection to main backflow prevention device and 40 psi at the last head in each zone. If pressure falls above or below indicated values, Contractor shall notify the General Contractor. B. Irrigation zone control shall be automatic operation with controller and automatic control valves. C. Minimum Working Pressures: The following are minimum pressure requirements for pipingm, valves, and specialties unless otherwise indicated:
- 1. Irrigation Main Pipina: CL-200 PVC 2. Circuit Piping: CL-200 PVC D. Required Irrigation: Turf and ground covers shall be watered according to local daily ET rates, applied during the hours between 10:00 p.m. and 6:00 a.m. The system shall be adjustable to accommodate **2.4 CONTROLLERS** growth

1.3 QUALITY ASSURANCE

- A. Installer's qualifications: All irrigation work shall be done by a suitably experienced and qualified irrigation contractor, having trained and competent personnel adequate for the scope of work. Minimum of five (5) years' experience installing underground sprinkler systems of comparable size. a. Underground sprinkler system work shall be performed only by experienced workmen familiar with sprinkler system installation work under the supervision of a qualified experienced superintendent.
- B. The contractor shall coordinate the work related to this contract with the work of other trades. C. Construct the system to arade and in conformance to areas and locations designated on the drawings. D. Excavating, backfilling and compacting operations: Comply with earthwork requirements and as specified.
- E. All materials shall be supplied from a single source distributor. 1.4 SUBMITTALS
- A. Submit five (3) copies of manufacturer's product data and installation instructions for approval for each of the system components including all sprinkler heads, automatic valves, controllers, and quick coupling valves. B. Manufacturer's Catalog Data and Literature: Submit three copies of the manufacturer's descriptive data for the following components to be used on this project:
- 1. Control system. 2. Piping materials, tubing, and fittings. 3. Valves and accessories.
- 4. Sprinkler heads. 5. Backflow preventers.
- 6. Automatic controller. 7. Control wiring. 8. Rain shut-off device.
- 9. Valve boxes and lids. 10. Operator and Maintenance (O&M) Manual.
- C. Installation Instructions: Submit three copies of the manufacturer's installation instructions for components of the underground sprinkler system to be used on this project.
- D. Maintenance and Operation Instructions: Submit 3 copies of the manufacturer's maintenance instructions for maintaining the underground sprinkler system to be used on this project. Instructions shall include operation of the controls, seasonal activities and shutdown. For sprinklers, controllers and automatic control valves to include in operation and maintenance manuals
- E. Certificates of Conformance: Submit 3 copies of written certification from the supplier of the Contractor-furnished items to be used on this project that they conform to the requirements of this specification section F. Shop Drawings:
- 1. Submit three copies of Irrigation drawings. 2. Submit three copies of Sprinkler System drawings including legend showing the following:
- a. See Planting Plan Drawing sheet call out note at first floor mechanical room for locating irrigation system omponents and the point of beginning for the construction of the irrigation syste b. The layout of piping, heads, valves, controllers, backflow preventers, sensors and the water source,
- including mains, meters and other adjacent utilities. c. Location of sleeves under roads, camper pads and parking areas d. Location and coverage of sprinkler heads and coefficient of uniformity.
- e. Plant and landscaping features. f. Site structures and obstacles that may interfere with the coverage of the system.
- g. Schedule of fittings to be used on this project. Include the manufacturer's parts catalog. Drawings shall be same scale as the full-size Contract Drawings. h. Total number of heads of different types, numbers of circuits, and lengths and sizes of piping. i. System and supply pressures.
- j. Wiring diagram between existing power source and controller/water pump. k. Legend.
- G. Detail Drawings: Submit 3 copies of details showing sprinkler head installation, pipe trench section showing depth of bury and pipe size, installation of backflow prevention units, and schematic of control wiring or
- H. Design Data: Submit 3 copies of performance curves showing the performance characteristics of the underground sprinkler system to be used on this project. I. Plant Watering Schedule: Submit 3 copies of the proposed daily and weekly watering schedule. Indicate
- the location and number of proposed watering zones. Sprinklers shall operate between the hours of 10:00 p.m. and 6:00 a.m. Zones shall alternate. J. Samples: Provide one sprinkler, valve and nozzle of each type to be used on this project.
- 1.5 DELIVERY, STORAGE AND HANDLING A. Deliver materials in original rolls, packages, cartons, and containers with the name of manufacturer, brand, and model. Inspect materials delivered to the site for damage. B. Deliver, handle and carry piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture. Do not drag pipe. Deliver fittings, valves, and accessories in such a manner as to ensure delivery to trench in sound undamaged condition. Do not drag pipe.
- C. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending. 1.6 SYSTEM STARTUP
- A. Installer's Field Services: Prepare and start systems. Provide one complete spring startup and one fall shutdown. Include adequate number of quick couplers for injection of air into the system to evacuate moisture for fall winterizing of the system.
- 1.7 MAINTENANCE A. Extra Materials–Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents: 1. Sprinklers: Equal to 5% of amount installed for each type and size indicated.
- 2. 3 valve keys for manual valves. 3. 3 valve box keys.
- 4. 3 keys for valve markers.
- 5. 3 wrenches for each type head core and for removing and installing each type head. 6. 4 keys for irrigation-controller housing boxes.
- 7. 4 irrigation controller enclosure B. Schedule: Furnish a schedule indicating the length of time each valve is required to be open to provide a determined amount of water.

2.1 MATERIALS--PIPES A. Polyvinyl Chloride (PVC) Pipe, Fittings and Solvent Cement:

- 1. Pipe shall conform to the requirements of ASTM D 1785, PVC 1120 Schedule 40; or ASTM D 2241, PVC 1120 SDR 21, Class 200. 2. PVC Pipe, Pressure Rated: ASTM D 2241, PVC 1120 compound.
- a. PVC Socket Fittings: ASTM D 2467, Schedule 40.
- b. PVC Socket Unions: Construction similar to MSS SP-107, except both head piece and tailpiece shall be PVC with socket or threaded ends. 3. Fittings for 4" and larger shall conform to requirements of ASTM D, Ductile Iron. Mechanical joint fittings with mega-lugs and 50% stainless steel bolt packs. B. Polyethylene (PE) Plastic Piping:
- 1. Pipe shall conform to ASTM D2239 SIDR 15. Type 3408 Polyethylene Pipe shall have a working pressure of 100 psi. 2. Fittings shall conform to ASTM D 2609. Type 1 PVC barbed insert fittings as manufactured by Spears.
- C. Dielectric Fittings --Provide dielectric fittings between copper and ferrous metal piping materials. 1. Fittings shall conform to ASTM F 441, Schedule 80, CPVC threaded pipe nipples, 4 inch (100 mm) minimum length

D. Piping Joining Materials

- 1. Solvent Cements for Joining PVC Piping: ASTM D 2564. Include Primer According to ASTM F 656
- 2.2 MATERIALS-- DRIP IRRIGATION SPRINKLER HEADS A. Planting beds will be irrigated using Rain Bird drip emitter or soaker hose.
- a. Zones flow less than 5.0 GPM-XCZ-LF-100 b. Zones flow greater than 5.0 GPM-XCZ-XCZ-100-TBOS Solenoid adapter & latching solenoid.
- 2.3 MATERIALS-- ROTOR OR SPRAY SPRINKLER HEADS
- A. Open Turf areas will be irrigated using Rain Bird Rotor Pop-Up Sprinklers. a 8005 Series or Falcon 6504 Series
- B. Open Turf areas will be irrigated using Rain Bird Spray Head Sprinklers. a. 1800 Series Spray Heads

- A. Oraanic Mulch: Shall be shredded, woody material free from deleterious materials (insects, disease, debris and seeds) and suitable as a top dressing of trees and shrubs, consisting of one of the following: B. Basis-of-Design Product: Subject to compliance with requirements, provide comparable product by one of the following
- 1. Rain Bird Corporation. a. Model: ESP-LXME
- C. Description / Features:
- 1. Hot-swappable modules, no need to power down the controller to add/remove modules, 8- or 12-stations base unit expandable to 48 stations with 8- and 12-statytion nodules.
- 2. Flow Smart Module[™] factory installed (ESP-LXMEF) or field upgradeable (ESP-LXME) 3. Dynamic station numbering eliminates station numbering gaps
- 4. Master valve/pump start circuit 5. Weather Sensor input with override switch
- 6. 6 user-selectable languages
- 7. Standard 10kV surge protection 8. Non-Volatile (100-year) program memory

9. Front panel is removable and programmable under battery power 10. Compatible with Rain Bird Landscape Irrigation and Maintenance Remote

- 11. Plastic, locking, UV resistant, wall-mount case, Optional Metal and Stainless Steel Case & Pedestal
- 12. Station timing: 0 min to 12 hrs. 13. Seasonal Adjust: 0% to 300% (16 hrs. maximum station run time)
- 14. 4 independent programs (ABCD) 15. ABCD programs can overlap
- 16. 8 start times per program per day and run-time from 1 minute to twelve hours in 1-minute increments 17. Program Day Cycles include Custom days of the week, Odd, Odd31, Even, and Cyclical dates
- 18. Manual station, program, test program. 2.5 MATERIALS--VALVES

A. Plastic Automatic Control Valves: a. Rain Bird PGA Series

- b. With solenoid adapters and latching solenoid
- c. Description: Molded-plastic body, normally closed, diaphragm type with manualflow adjustment and operated by 24volt ac solenoid.
- B. Remote Control Valve, Electrical: 24V solenoid actuated globe valves 1 to 2 inch in size. Valve body shall be constructed of ultra-violet plastic and be housed in a 10" round valve box. Acceptable manufacturers are Rain Bird Corporation and Hunter Industries. C. Quick Coupling Valves
- a. Rain Bird 5-LRC Quick Coupler with Model 55-K-1 Key with SH-2 Hose Swivel Ell or approved equal. b. Description: Factory-fabricated, bronze or brass, two-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.
- i.Locking-Top Option: Vandal-resistant locking feature. Include one matching key(s). D. Backflow Preventers: 1. RPZ Backflow Preventer

2.6 ACCESSORIES AND APPURTENANCES

- A. Valve Boxes: Plastic valve box and cover, with open bottom and openings for piping; designed for installing flush with grade.
- 1. Size: As required for valves and service.. 2. Shape: Rectangular.
- 3. Sidewall Material:" PE, ABS, or FRP.
- 4. Cover Material: PE, ABS, or FRP. a. Lettering: "Zone Number"
- B. Moisture Sensing Device: 1. Automatic Rain Shut-Off Device: One piece, maintenance and adjustment free, reacts to a minimum 1/8 inch of rain water, unaffected by humidity levels, commercial grade materials, no exposed mechanical switch or electrodes, solid state construction with internal relay operating voltage of 24 to 30 VAC, static charge pre-tested, maximum switch current of one amp. Mini-Clik or Wireless Rain Clik as manufactured by Hunter
- Industries. C. Air/Vacuum Relief: Construct of PVC with a maximum operating pressure of 140 psi. D. Automatic Controller Electrical: 120/230VAC, 50/60Hz, 2A max at 120V, 1A max at 230V. Decoder line output
- 34V peak to peak, power draw of 40 mA per active output. Controller must have 6 two-wire output paths to field decoders and programmable decoder station IDs from controller panel. Rainbird ESP MC Controller.

2.7 MATERIALS--ELECTRICAL CIRCUITS A. Control Wiring: Conductor shall be soft drawn bare copper ASTM B-3. 18-gauge stranded wire. Manufactured by Paige

- Industries. B. Conduit: UL 651, rigid polyvinyl chloride conduit, Class 200.
- PART 3 EXECUTION
- 3.1 INSTALLATION A. Earthwork:
- a. Excavating, trenching, and backfilling. Clearing, grubbing, and grading shall be according to their respective specification sections. Install sprinkler system after

site grading has been completed.

- B. Provide minimum cover over top of underground piping according to the following: a. Irrigation Main Piping: Minimum depth of 18 inches below finished grade.
- b. Circuit Piping: 8 inches below finished grade. c. Drain Piping: 8 inches below finished grade.
- d. Sleeves: 24 inches below finished grade. C. Preparation
- 1. Set stakes to identify locations of proposed irrigation system. Obtain Architect's approval before excavation.

D. Pipe installation

- 1. Minimum horizontal clearances between lines: 4 inches for 2-inch pipe and less; 12 inches for 2-inch pipe and more. 2. Minimum vertical clearances between lines: One inch. Install piping free of sags and bends.
- 3. Minimum Pitch Down: 6 inches per 100 feet in direction of drain valves. Lay piping on solid sub base,
- uniformly sloped without humps or depressions. 4. Install fittings for changes in direction and branch connections.
- 5. Lay piping in dry weather when temperature is above 40 degrees. Allow joints to cure at least 24 hours at temperatures above 40 degrees before testing.
- 6. Minimum Backfill Cover: a. 24 inches for pressure mainline pipe and valve control wire.
- b. 12 inches for non-pressure lateral pipe. c. 24 inches for all piping under paved or non-paved pedestrian paths, roads, parking lots, trailer pads
- and trails.
- d. 36 inches for all piping under traffic e. Install pipe in sleeves under parking lots, roadways, and sidewalks at depths of 24 and 36 inches. Fill remainder of trench or pipe cover to within 3 inches of top with excavated soil, and compact soil
- with plate hand-held compactors to same density as undisturbed adjacent soil. 7. Install sleeves, as needed, made of CL-200 PVC pipe and solvent joints. 8. Restoration: Fill top 3 inches with topsoil and compact with same density as surrounding soil. Restore
- turf and plants and Ground Cover. Restore concrete pavements. E. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to
- the following: 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements. 2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to
- STM D 2855. F. Threaded Brass or Galvanized Steel Pipe: Prior to installation ream pipe. Cut threads as specified in ANSI/ASME B1.2. Make joints with pipe joint compound applied to male end only.
- G. Dielectric Protection: Where pipes of dissimilar metal are joined, make connection with dielectric fitting.

- G. Dielectric Protection: Where pipes of dissimilar metal are joined, make connection with dielectric fitting. H. Isolation, Control and Quick Coupling Valves: Install plumb in a valve box extending from grade to below valve body, with a minimum of 4 inches cover measured from finish grade to top of valve stem. Install automatic valves beside sprinkler heads with a valve box. Install 2 inches above finish grade in planter bed, level with finish grade in turf areas. Install hose bib above grade with support.
- I. Backflow Preventers: Flush pipe lines prior to installing device. Install in new connection to existing water distribution system, between connection and control valves. Install with concrete pads. Do not install device in pits or where any part of the device could become submerged in standing water. Install device a minimum of 12 inches from trees, walls, fences, structures and other obstructions. J. Valve Boxes and Lids: Install with one cubic foot pea gravel sump below valve. Support valve box with
- concrete block. Provide wire screen between gravel sump and bottom of valve body for rodent protection. For turf areas, install flush with finish grade. For planter beds, install 2 inches above finish grade. For sloped conditions, install valve box level with terrain. K. Rain Shut-Off Device: Install as per manufacturer's recommendations. For wall mounted controllers, attach
- device to side of building or eave, minimum 8 feet above finish grade and a minimum of 12 inches from building wall or eave. . Electrical Circuits: Bury wires beside mainline pipe in same trench. Provide PVC electrical conduit where
- wires run under paved or non-paved pedestrian paths and vehicular roads. Tag wires at controller and control valve location with plastic tie wrapped tags. Provide one control wire to each control valve location and one common wire looped from controller to each control valve. Provide one separate control valve wire of a different color from controller to each control valve cluster. 1. Loops: Provide a 12-inch loop of wire at each valve where controls are connected.
- 2. Expansion and Contraction: Bundle multiple tubes or wires and tape together at 10-foot intervals with 12-inch loop for expansion and contraction. 3. Splices: Make electrical splices waterproof. Locate all field electrical splices in valve boxes.
- M. Automatic Controller: Determine exact location of controllers in field before installation. Coordinate the electrical service to these locations. Install in accordance with manufacturer's recommendations and NFPA 70

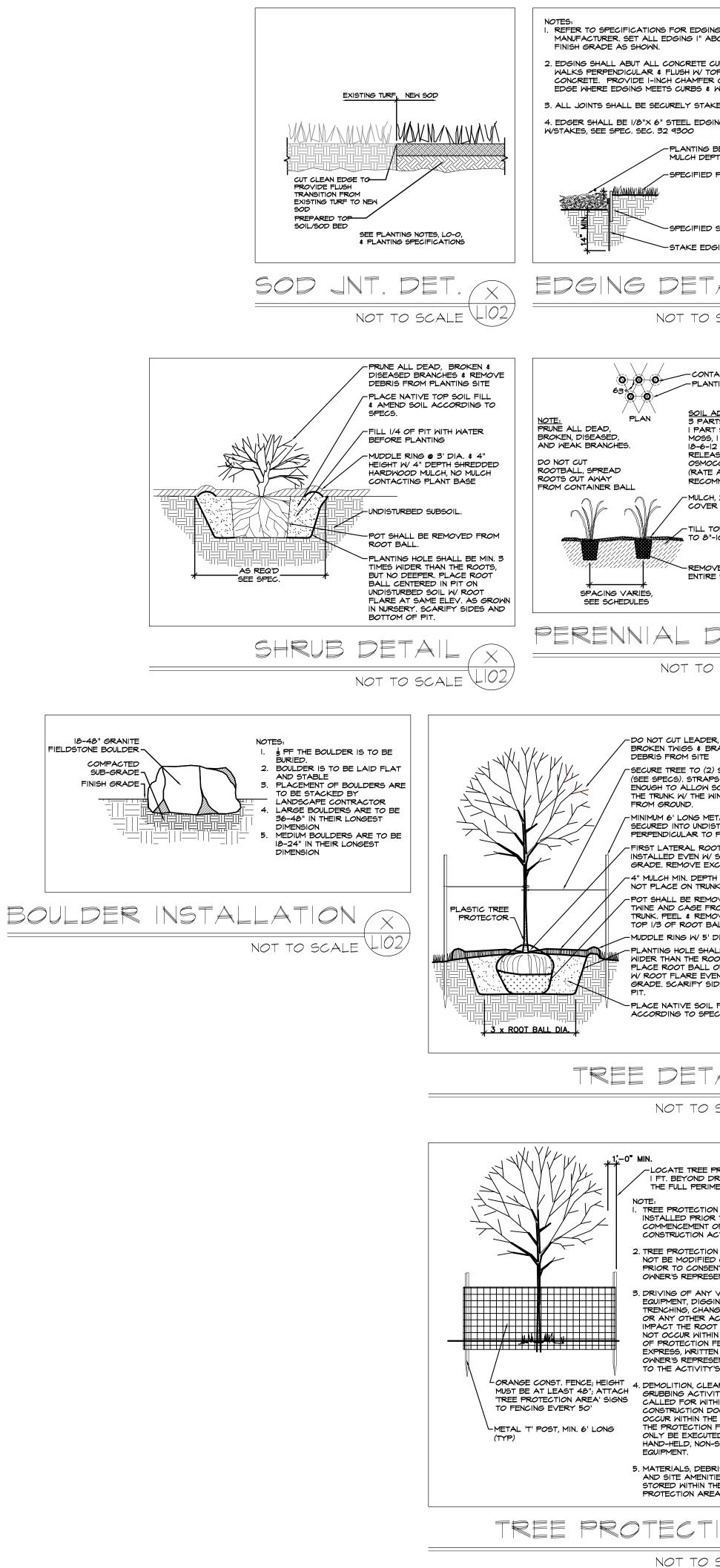
3.2 FIELD QUALITY CONTROL A. Preform Tests and inspections.

- 1. Irrigation Consultant: The Irrigation Consultant will inspect components, assemblies, and equipment installations, including connections, and to assist in testing. B. Test and Inspections: 1. Leakage Test: After installation, charge system and test for leaks. Repair leaks and retest until not leaks
- 2. Operations Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation
- 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment. C. Any irrigation product will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports 3.3 ADJUSTMENT
- A. Adjust settings of controllers.
- B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler C. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with, or not more than 1/2 inch above, finish grade.
- 3.4 CLEANING
- A. Flush dirt and debris from piping before installing sprinklers and other devices.
- A. Install components having pressure rating equal to or greater than system operating pressure. B. Piping in control-valve boxes and aboveground may be joined with flanges or unions instead of joints indicated.
- C. Underground irrigation main piping shall be the following: 1. SDR 21, PVC CL-200, pressure-rated pipe; PVC socket fittings and solvent-cemented joints.
- D. Circuit piping shall be the following: 1. SDR 21, PVC CL-200, pressure-rated pipe; PVC socket fittings and solvent-cemented joints.
- E. Underground Branches and Offsets at Sprinklers and Devices: 1. Plastic swing-joint assemblies, with offsets for flexible joints, manufactured for this application. Thick wall, flexible, polyethylene swing pipe, with fittings that have male spiral barbs on one end and either male or female screw ends opposite (glue fittings and female barb adapters not allowed). Pipe shall be Irritrol blue strip or equal.
- 3.5 OTHER CONSIERATIONS

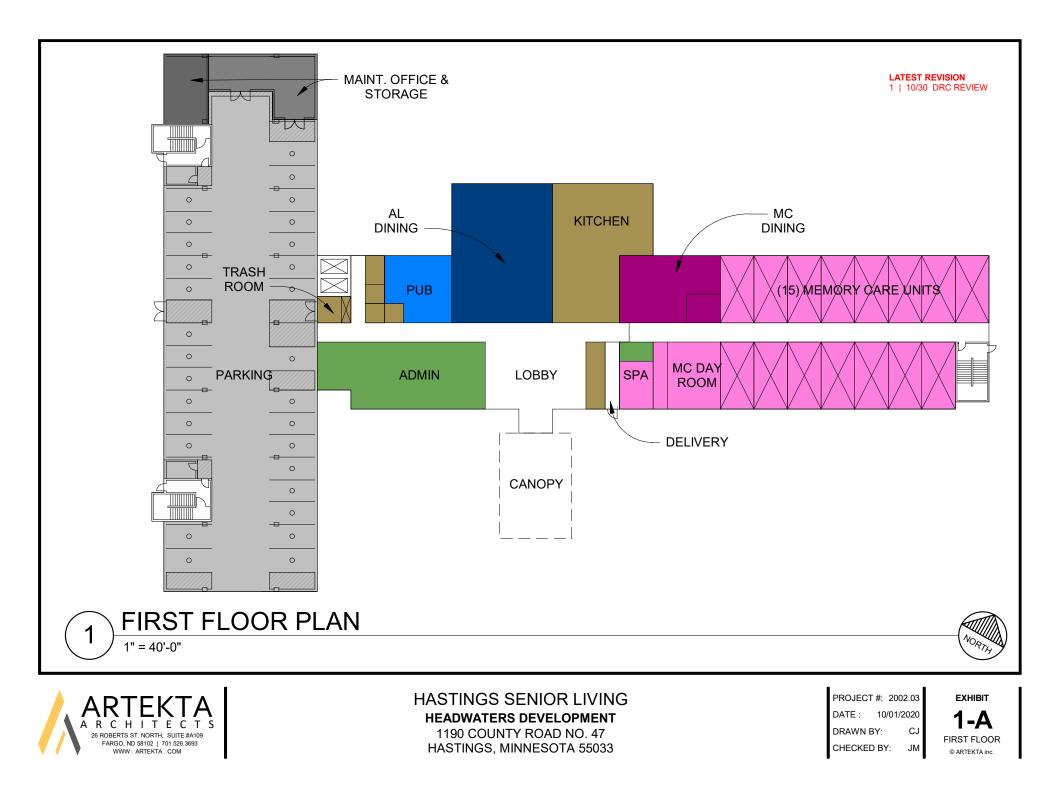
3.5 PIPING SCHEDULE

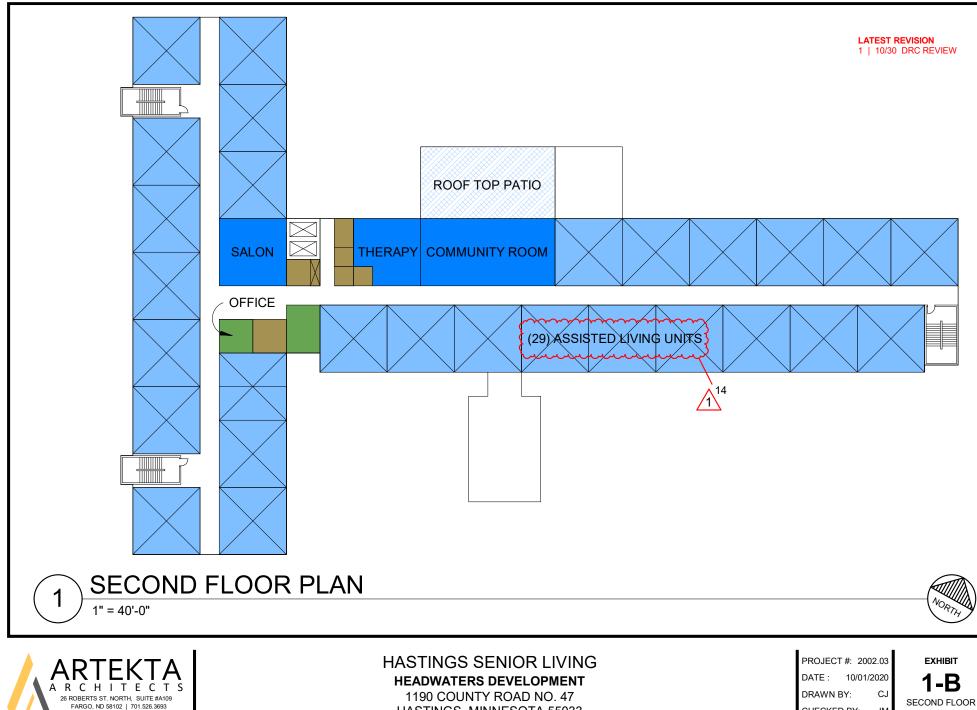
- A. Irrigation contractor responsible for location of utility lines if it has not already been done so by landscape contractor if two contractors are separate. B. Irrigation sleeves will be located with lathe by concrete contractor on site. Coordinate with concrete contractor if this has not been completed.
- . Irrigation contractor responsible for Spring Startup and Fall Blow out for 1st Full Season.
- D. Contractor is to provide as built irrigation drawing upon completion of project to owner. E. Contractor is to do system walk through with owner.

END OF SECTION



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TING BED W/ SPECIFIED 1 DEPTH	
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TO SCALE LIO2	crais arch arch
CONTAINER PLANTING POCKET	
<u>OIL ADMENDENT:</u> PARTS SILTY LOAM, PART SPHAGNUM PEAT 1055, I PART PERLITE,	
8-6-12 N-P-K CONTROL ELEASE FERTILIZER ISMOCOAT OR EQUAL RATE AS PER MANUF.	
ECOMMEDATIONS) NLCH, 2" DEPTH DO NOT OVER PLANT CROWNS	EVIEV IRUC
ILL TOPSOIL W/ AMENDMENT 0 8"-10" MIN. DEPTH.	AN REVIE CONSTRUC 10/01/2020
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ROOTS SHALL BE N W/ SURROUNDING /E EXCESS SOIL & DISPOSE	VIN MENT 47 5033
DEPTH BY 5' DIA. MIN. DO TRUNK OR TRUNK FLARE. REMOVED OR REMOVE DE FROM ROOT BALL \$	R LIV - OPM - NO. 4 TA 55
REMOVE BURLAP FROM OT BALL. V 5' DIA. ¢ 4" HEIGHT MIN.	DAD NOT
E SHALL BE MIN. 3 TIMES E ROOTS, BUT NO DEEPER. ALL ON UNDISTURBED SOIL E VEN WITH OR !!" ABOVE	SENIOR LIVING SE DEVELOPMENT TY ROAD NO. 47 AINNESOTA 55033
E EVEN WITH OR I" ABOVE BY SIDES AND BOTTOM OF SOIL FILL & AMEND SOIL	S SENIOR LIVII ERS DEVELOPMEN INTY ROAD NO. 47 , MINNESOTA 5503
9 SPECS.	ASTINGS SENIOR LIVIN HEADWATERS DEVELOPMENT 1190 COUNTY ROAD NO. 47 HASTINGS, MINNESOTA 55033
	ASTING HEADWATI 1190 COU HASTINGS
TO SCALE LIO2	HAS HEA HAS
REE PROTECTION FENCE ND DRIPLINE AROUND PERIMETER OF TREE	
CTION SHALL BE RIOR TO THE IENT OF ANY OTHER ON ACTIVITY.	
CTION FENCING SHALL VIFIED OR REMOVED ONSENT OF THE PRESENTATIVE.	
ANY VEHICLE OR DIGGING, EXCAVATING, CHANGING OF GRADE,	
ER ACTIONS THAT ROOT ZONE SHALL WITHIN THE BOUNDARIES TON FENCING WITHOUT	
RITTEN CONSENT BY THE PRESENTATIVE PRIOR VITY'S COMMENCEMENT.	T-
CLEARING OR CTIVITIES THAT ARE & WITHIN THE ON DOCUMENTS AND	MEN
N THE BOUNDARY OF TION FENCING MAY ECUTED USING NON-SELF-PROPELLED	VELO
DEBRIS, EQUIPMENT, MENITIES SHALL NOT BE HIN THE TREE AREA.	HEA DEV
TO SCALE LIO2	
	SITE PLAN REVIEW
	10/01 SITE PLAN REV 1 10/30 DCR REVIEW
	SHEET NAME
	DETAILS & IRRIGATION
	PROJECT #: 2002.03 DATE : 10/01/2020 DRAWN BY: XX
	<u>снескер ву: xx</u>
	© ARTEKTA inc.



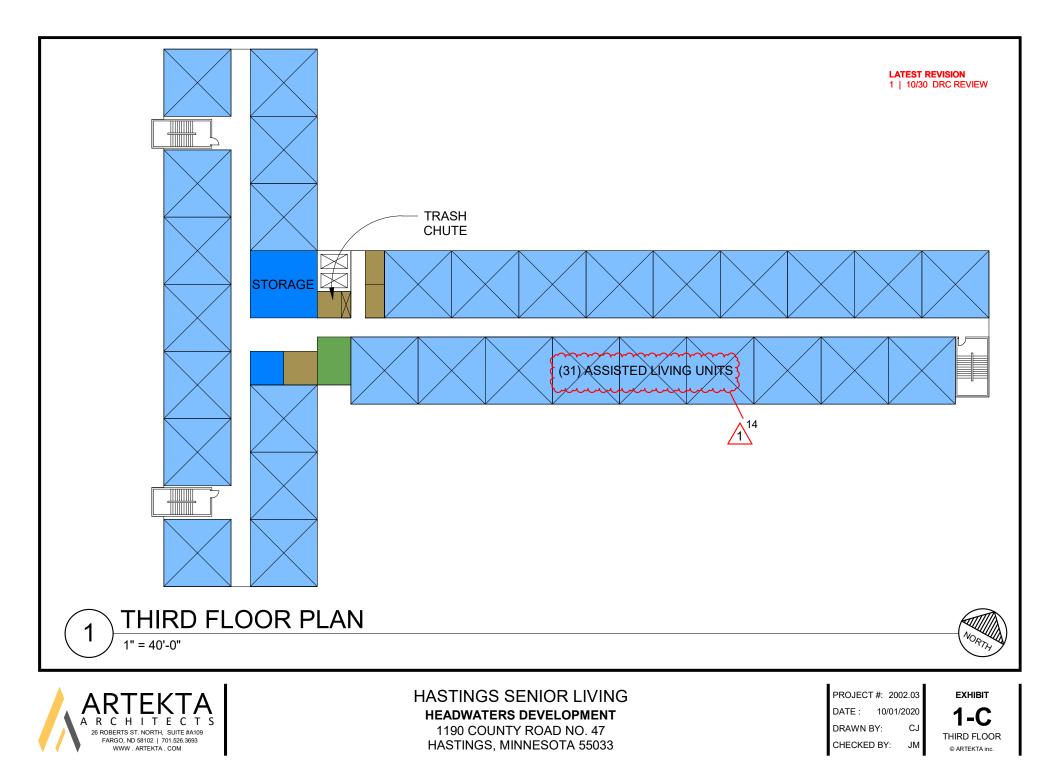


HASTINGS, MINNESOTA 55033

WWW . ARTEKTA . COM

CHECKED BY: JM

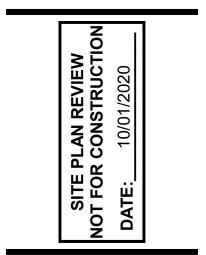
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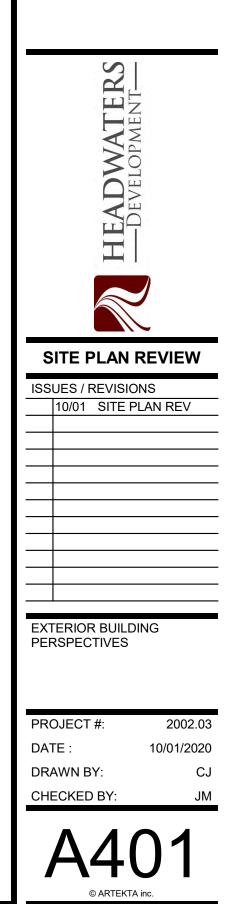


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EAST ELEVATION: MATERIALS (SEE 4/A402)								
CODE								
SV-1	STONE VENEER - LIMESTONE	I	1,545	16.2%				
FC-1	FIBER CEMENT LAP SIDING & TRIM	2	2,630	27.6%				
FC-2	FIBER CEMENT VERTICAL & TRIM	2	3,854	40.4%				
FC-3	FIBER CEMENT PANEL	2	195	2.0%				
CX-1	CONCRETE (EXP. FOUNDATION)	3	292	3.1%				
-	1	890	9.3%					
-	45	0.5%						
FN-1	88	0.9%						
FN-2	-	-						
CA-1 ASPHALT SHINGLE CANOPIES								
LV-1 MECHANICAL LOUVER								
TOTAL 9,539								
MATERIAL CLASS TOTALS								
CLASS 1 (25% MIN. REQ'D)								
	CLASS 2 (25% MIN. REQ'D)			70.0%				
	CLASS 3			4.5%				

WEST ELEVATION: MATERIALS (SEE 3/A402)							
CODE	MATERIAL CLASS AREA						
SV-1	STONE VENEER - LIMESTONE	I	1,745	19.1%			
FC-1	FIBER CEMENT LAP SIDING & TRIM	2	2,022	22.2%			
FC-2	FIBER CEMENT VERTICAL & TRIM	2	3,789	41.5%			
FC-3	FIBER CEMENT REVEAL PANEL	2	210	2.3%			
CX-1	CONCRETE (EXP. FOUNDATION)	3	44	0.5%			
-	WINDOW / DOOR GLAZING	1	1,178	12.9%			
-	OPAQUE OPENINGS (DOORS)	3	45	0.5%			
FN-1	COMP. WOOD FENCE (SCREEN)	3	88	1.0%			
FN-2	DECORATIVE ALUM. FENCE	-	-	-			
CA-1	ASPHALT SHINGLE CANOPIES	-	-	-			
LV-1	MECHANICAL LOUVER	-	-	-			
TOTAL 9,121							
MATERIAL CLASS TOTALS							
CLASS 1 (25% MIN. REQ'D)							
	CLASS 2 (25% MIN. REQ'D)			66.0%			
	CLASS 3			2.0%			

NOR	TH
CODE	MA
SV-1	STC
FC-1	FIB
FC-2	FIB
FC-3	FIB
CX-1	CO
-	WIN
-	OPA
FN-1	CO
FN-2	DEC
CA-1	ASF
LV-1	ME
	тот
	MA
	CLA
	CLA
	CLA

FN-1

SV-1

SV-1

<LV-1≻





	SITE		IATION		
		PROPERTY ZONING HIGH DENSITY RESIDENTIAL RESIDENTIAL CARE FACILITIE DEPENDENT & SEMI-DEPEND HASTINGS SENIOR LIVING IS A FACILITY DIVIDED AMONG 3-S 75 TOTAL UNITS WITH 60 ASS MEMORY CARE UNITS ALONG INCLUDING DINING HALLS, DA BUILDING WILL BE SPRINKLEF			
	02	FIRST FLOOR SECOND FLOOR	~34,900 SF ~32,200 SF		A R C 26 ROBERTS FARGO, NOR WW
	03				
		RESIDENTIAL LOT REGULATION		PROVIDED	
			2,500 SF -	457,471 SF -	
		INTERIOR SIDE SETBACK*	1/2 BLDG HT = 20' - 9" (+ 8' - 3"*) = 29' - 0" MIN.	40' - 8" WEST 269' - 4" EAST	
		* BUILDINGS OVER 25 FEET IN FOOT ADDITIONAL SETBACK FOOT OF BUILDING HEIGHT C	I I HEIGHT SHALL FOR EACH ADD	REQUIRE 1/2	
		ACCESSORY STRUCTURE RE		· · · · · · · · · · · · · · · · · · ·	N REV NSTRI
					OT FC
NULLWON SUPERATION 30 - 01 MAR NULLWON SUPERATION 20 - 01 MAR PERFORMANCE 20 - 01 MAR NULLWON SUPERATION 20 - 01 MAR PERFORMANCE 20 - 01 MAR NULLWON SUPERATION 20 - 01 MAR <td></td> <td></td> <td></td> <td></td> <td></td>					
			ALLOWED	PROVIDED	
			25' - 0" (+91' - 6"**) =	40' - 8" WEST	
		REAR YARD	116' - 6"		
MID PARAPET 100 · 0" LOW PARAPET 138 · 0" THIRD FLOOR 123 · 10 1/8" SECOND FLOOR 113 · 0" FIRST FLOOR 100 · 0" HIGH PARAPET 100 · 0" HIGH PARAPET 140 · 0" ILOW PARAPET 138 · 0" SECOND FLOOR 138 · 0" THIRD FLOOR 138 · 0" SECOND FLOOR 138 · 0" THIRD FLOOR 138 · 0"					HASTING HEADWAT
123 - 10 1/8" SECOND FLOOR 113 - 0" FIRST FLOOR 100 - 0" HIGH PARAPET 147 - 6" MID PARAPET 140 - 0" LOW PARAPET 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" 138 - 0" THIRD FLOOR SECOND FLOOR 138 - 0" THIRD FLOOR 138 - 0" 138 - 0" THIRD FLOOR 100 - 0" </td <td></td> <td></td> <td> <u>MID PA</u></td> <td>RAPET 140' - 0" 🔶</td> <td></td>			<u>MID PA</u>	RAPET 140' - 0" 🔶	
113'-0" Image: Construction of the second seco	• [<u>THIRD</u> 123' -	FLOOR 10 1/8"	
FIRST FLOOR Image: Constraint of the second se			SECOND	FLO <u>OR</u> 113' - 0" 🔶	WATERS LOPMENT-
High PARAPET 141'- 6" ISSUES / REVISIONS MID PARAPET 140'- 0" I0/01 SITE PLAN REV LOW PARAPET 138'- 0" I THIRD FLOOR 123'- 10 1/8" I SECOND FLOOR 113'- 0" EXTERIOR BUILDING ELEVATIONS AND INFORMATION PROJECT #: 2002.03 DATE : DATE : 10/01/2020 DRAWN BY: CJ JMIC PARAPET 100'- 0"			FIRST	F <u>LOOR</u> 100' - 0"	HEAD
SECOND FLOOR 113' - 0" ◆ FIRST FLOOR 100' - 0" ◆			MID PA	141' - 6" • RAP <u>ET</u> 140' - 0" •	ISSUES / REVISIONS
SECOND FLOOR 113' - 0" ◆ INFORMATION PROJECT #: 2002.03 DATE : 10/01/2020 DRAWN BY: CJ CHECKED BY: JM			<u>THIRD</u> 123' -	FLOOR 10 1/8"	
FIRST FLOOR 100' - 0" CHECKED BY: JM	ALL AND ALL AN		SECOND	F <u>LOOR</u> 113' - 0" 🔶	INFORMATION PROJECT #: 2002.03

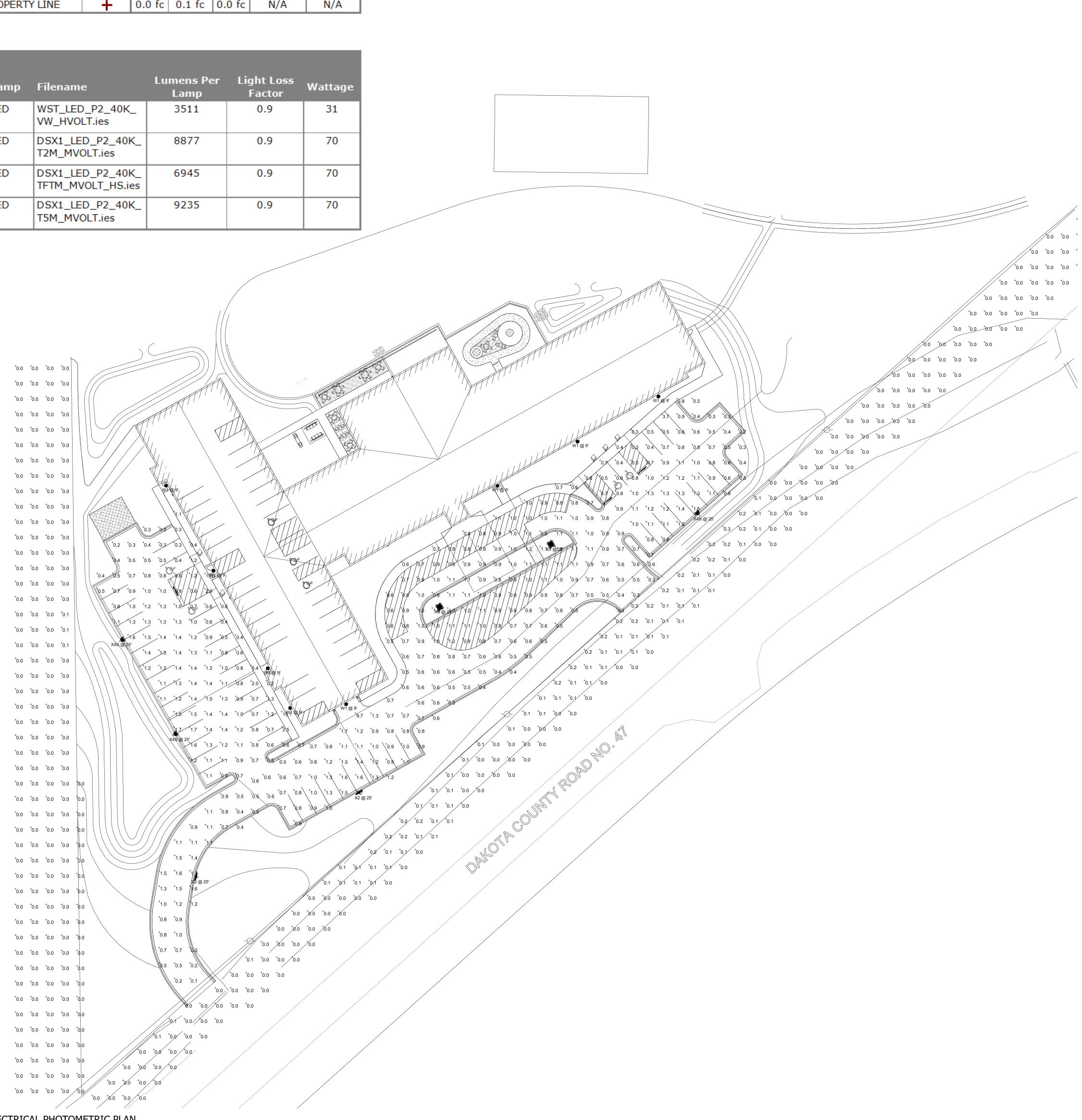
1 STONE VENEER - LIMESTONE 1 1,606 10,6% 1 FIBER CEMENT LAP SIDING & TRIM 2 5,102 33,7% 2 FIBER CEMENT VERTICAL & TRIM 2 4,841 32,0% 3 FIBER CEMENT VERTICAL & TRIM 2 4,841 32,0% 4 CONCRETE (EXP. FOUNDATION) 3 1,049 6,9% 0 WINDOW / DOOR GLAZING 1 1,884 12,4% 0 CAOCRETE (EXP. FOUNDATION) 3 4 0,1% 1 CONCRETE (EXP. FOUNDATION) 3 1,049 6,9% 0 CAOUCO OPENINGS (DOORS) 3 4 0,1% 1 CONP. WOOD FENCE (SCREEN) 3 250 1,6% 2 DECORATIVE ALUM. FENCE - - 1 ASPHALT SHINGLE CANOPIES - - 1 MATERIAL CLASS TOTALS % CLASS 1 - CLASS 1 CLASS 2 68,4% CLASS 3 - CLASS 3 CLASS 3 - - - CLASS 3 CLASS 3 - -	OR	TH ELEVATION: MATERIALS	<u>`</u>	<u> </u>	
1 FIBER CEMENT LAP SIDING & TRIM 2 5,102 33,7% 2 FIBER CEMENT VERTICAL & TRIM 2 4,841 32,0% 3 FIBER CEMENT VERTICAL & TRIM 2 4,841 32,0% 4 CONCRETE (EXP. FOUNDATION) 3 1,049 6,9% 4 CONCRETE (EXP. FOUNDATION) 3 1,049 6,9% 9 OPAQUE OPENINGS (DOORS) 3 4 0,1% 1 COMP. WOOD FENCE (SCREEN) 3 250 1,6% 2 DECORATIVE ALUM, FENCE - - - 1 COMP. WOOD FENCE (SCREEN) 3 250 1,6% 2 DECORATIVE ALUM, FENCE - - - 1 ASPHALT SHINGLE CANOPIES - - - 1 MATERIAL CLASS TOTALS % CLASS 1 2,5% - CLASS 2 68,4% CLASS 3 8,6% CLASS 3 - - CLASS 3 S - - - - - - 1 MATERIAL CLASS TOTALS % CLASS 3	DE	MATERIAL	CLASS	AREA	%
2 FIBER CEMENT VERTICAL & TRIM 2 4.841 32.0% 3 FIBER CEMENT PANEL 2 4.12 2.7% 1 CONCRETE (EXP. FOUNDATION) 3 1.049 6.9% 1 COMP. WOOD FRACE (SCREEN) 3 250 1.6% 2 DECORATIVE ALUM. FENCE - - - 1 ASPHALT SHINGLE CANOPIES - - 1 MECHANICAL LOUVER - - - 1 MECHANICAL LOUVER - - - TOTAL 15,148 100% CLASS 1 23.0% CLASS 1 CLASS 1 25% CLASS 2 CS3 8.6% CLASS 3 - - - CA-1 FC-3 FC-1 FC-2 FC-2 HIGH PA	-1	STONE VENEER - LIMESTONE	I	1,606	10.6%
3 FIBER CEMENT PANEL 2 412 2.7% 1 CONCRETE (EXP. FOUNDATION) 3 1.049 6.9% 1 COMP. WOOD FENCE (SCREEN) 3 250 1.8% 2 DECORATIVE ALUM. FENCE - - - 1 ASPHALT SHINGLE CANOPIES - - - 1 MATERIAL CLASS TOTALS % - - CLASS 1 23.0% CLASS 2 68.4% CLASS 3 - CLASS 2 68.4% CLASS 3 - - - CLASS 3 8.6% - - - - I// EC3 FC-1 FC-2 HIGH P/ MD P/ I// D I//	-1	FIBER CEMENT LAP SIDING & TRIM	2	5,102	33.7%
1 CONCRETE (EXP. FOUNDATION) 3 1.049 6.9% WINDOW / DOOR GLAZING 1 1.884 12.4% OPAQUE OPENINGS (DOORS) 3 4 0.1% 1 COMP. WOOD FENCE (SCREEN) 3 250 1.6% 2 DECORATIVE ALUM. FENCE - - -1 ASPHALT SHINGLE CANOPIES - - 1 MATERIAL CLASS TOTALS % CLASS 1 10.1% 13.8% CLASS 2 68.4% CLASS 3 8.6%	-2	FIBER CEMENT VERTICAL & TRIM	2	4,841	32.0%
WINDOW / DOOR GLAZING 1 1.884 12.4% OPAQUE OPENINGS (DOORS) 3 4 0.1% 1 COMP. WOOD FENCE (SCREEN) 3 250 1.6% 2 DECORATIVE ALUM. FENCE - - - 1 ASPHALT SHINGLE CANOPIES - - - 1 MACHANICAL LOUVER - - - 1 MECHANICAL LOUVER - - - MATERIAL CLASS TOTALS % CLASS 1 23.0% CLASS 1 23.0% CLASS 1 (25% MIN. REQ'D) - CLASS 2 68.4% CLASS 3 8.6%	-3	FIBER CEMENT PANEL	2	412	2.7%
OPAQUE OPENINGS (DOORS) 3 4 0.1% 1 COMP. WOOD FENCE (SCREEN) 3 250 1.6% 2 DECORATIVE ALUM. FENCE - - - 1 ASPHALT SHINGLE CANOPIES - - - 1 MATERIAL CLASS TOTALS - - - TOTAL 15,148 100% - - - MATERIAL CLASS TOTALS % CLASS 1 23.0% CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6% - - HIGH PA	-1	CONCRETE (EXP. FOUNDATION)	3	1,049	6.9%
1 COMP. WOOD FENCE (SCREEN) 3 250 1.6% 2 DECORATIVE ALUM. FENCE - - 1 ASPHALT SHINGLE CANOPIES - - 1 MECHANICAL LOUVER - - 1 MECHANICAL LOUVER - - TOTAL 15,148 100% MATERIAL CLASS TOTALS CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6%		WINDOW / DOOR GLAZING	1	1,884	12.4%
2 DECORATIVE ALUM. FENCE - - 1 ASPHALT SHINGLE CANOPIES - - 1 MECHANICAL LOUVER - - TOTAL 15,148 100% MATERIAL CLASS TOTALS % CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6%		OPAQUE OPENINGS (DOORS)	3	4	0.1%
1 ASPHALT SHINGLE CANOPIES - - 1 MECHANICAL LOUVER - - TOTAL 15,148 100% MATERIAL CLASS TOTALS % CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6%	-1	COMP. WOOD FENCE (SCREEN)	3	250	1.6%
1 MECHANICAL LOUVER -	-2	DECORATIVE ALUM. FENCE	-	-	-
TOTAL 15,148 100% MATERIAL CLASS TOTALS % MATERIAL CLASS TOTALS CLASS 1 23.0% CLASS 1 (25% MIN. REQ'D) CLASS 2 68.4% CLASS 2 (25% MIN. REQ'D) CLASS 3 8.6% CLASS 3	-1	ASPHALT SHINGLE CANOPIES	-	-	-
MATERIAL CLASS TOTALS % CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6%	-1	MECHANICAL LOUVER	-	-	-
CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6% CLASS 3 8.6%		TOTAL		15,148	100%
CLASS 1 23.0% CLASS 2 68.4% CLASS 3 8.6% CLASS 3 8.6%					
CLASS 2 CLASS 3 CLASS 3 CLASS 2 (25% MIN. REQ'D) CLASS 3 CLASS					
CLASS 3 (CA-1) (CA-1) (EC-3) (EC-1) (EC-2) (EC-2) (EC-2) (EC-2) (EC-2) (IGH PA MID PA 1 LOW PA 1		CLASS 1			23.0%
CA-1 FC-3 FC-1 FC-2 HIGH PA MID PA 1 LOW PA 1 1					
		CLASS 3	3)	F	8.6%

FC-1 FC-2 HIGH PARAPET 141' - 6" CA-1 _____ <u>MID PARAPET</u> _____ 140' - 0" ↔ _ _ __ _ _ _ _ _ _ _ _ _ _____ _____ _ _ _ LOW PARAPET THIRD FLOOR 123' - 10 1/8" SECOND FLOOR 113' - 0" FIRST FLOOR 100' - 0"

FC-2 (FC-1) FC-3 _____ ____ ------_ __ _ __ _ __ the state of the s (CX-1)

Schedule									
Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
W1	8	Lithonia Lighting	WST LED P2 40K VW HVOLT	WST LED, Performance package 2, 4000 K, visual comfort wide, HVOLT	LED	WST_LED_P2_40K_ VW_HVOLT.ies	3511	0.9	31
X2	2	Lithonia Lighting	DSX1 LED P2 40K T2M MVOLT	DSX1 LED P2 40K T2M MVOLT	LED	DSX1_LED_P2_40K_ T2M_MVOLT.ies	8877	0.9	70
X4S	3	Lithonia Lighting	DSX1 LED P2 40K TFTM MVOLT HS	DSX1 LED P2 40K TFTM MVOLT with houseside shield	LED	DSX1_LED_P2_40K_ TFTM_MVOLT_HS.ies	6945	0.9	70
X5	2	Lithonia Lighting	DSX1 LED P2 40K T5M MVOLT	DSX1 LED P2 40K T5M MVOLT	LED	DSX1_LED_P2_40K_ T5M_MVOLT.ies	9235	0.9	70

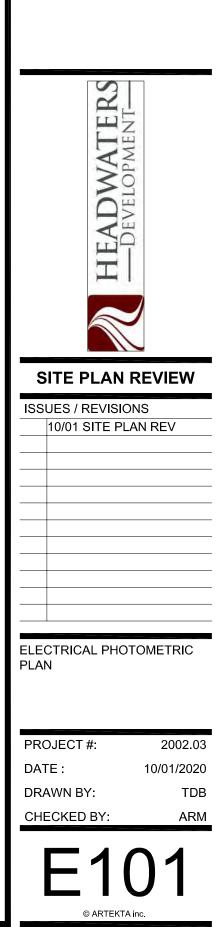
Statistics						
Description	Symbol	Avg	Мах	Min	Max/Min	Avg/Min
DRIVE-UP LOOP	+	0.8 fc	1.2 fc	0.3 fc	4.0:1	2.7:1
EAST PARKING LOT	+	0.9 fc	3.8 fc	0.2 fc	19.0:1	4.5:1
SOUTH PARKING LOT	+	1.2 fc	9.7 fc	0.5 fc	19.4:1	2.4:1
SOUTH PROPERTY LINE	+	0.0 fc	0.3 fc	0.0 fc	N/A	N/A
WEST DRIVE	+	0.9 fc	1.7 fc	0.1 fc	17.0:1	9.0:1
WEST PARKING LOT	+	1.3 fc	15.5 fc	0.2 fc	77.5:1	6.5:1
WEST PROPERTY LINE	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A



ELECTRICAL PHOTOMETRIC PLAN



SENIOR LIVING RS DEVELOPMENT 1190 COUNTY ROAD NO. HASTINGS, MINNESOTA 5 HASTINGS



PUBLIC COMMENTS - VERMILLION ACRES

Sent: Friday, October 30, 2020 4:13 PM To: PublicComment <<u>PublicComment@hastingsmn.gov</u>> Subject: Public Hearing

Dear John,

I live on Village Trail and received your letter regarding the notice of the public hearing for Vermillion Acres Senior Housing.

I assume the current walking/bicycling path near that property will be left intact. That is a beautiful path and I walk it frequently.

The other concern I have is traffic flow in this area. I know Dakota County is currently conducting a traffic study on County Highway 46 including this area. The intersection of County Highway 46 and Village Trail does back up on Village Trail at certain times of the day.

I do plan on attending the public hearing November 9th.

Sincerely, Jan Shannon



City of Hastings Community Development Department

Land Use Application

Address or PID of Pro	operty:19-03300-	67-010/	1190 County	Road 46	
Address: 7730 L	eadwaters Developme aredo Dr, Unit 446 assen, MN 55317	nt, LLC		ner: Patrick 5 9963 160th St E fastings, MN 550	
Phone: 612-723-3				512-236-3498	
Fax:			Fax:		
Email: Mhoagberg@	Dheadwatersdevelopm	nent.cor		fudd51@midco.n	et
Description of Reque	est: Preliminary pl	at for Ve	rmillion Acres	Addition.	
	n review of multi-family ts?	units (thr	ee or more att	ached), are the un	its intended to be
Check Applicable Lin	e(s) Please Note: A	II Fees and	d Escrows are d	lue at time of appl	ication.
Rezone	\$500		inor Subdivisio		
Final Plat	\$600	Sp	ecial Use Perm	nit \$500	
Variance	\$250	Co	mp Plan Amer	nd. \$500	
Vacation	\$400	Lo	t Split/Lot Line	Adj. \$50	
House Move		Ar	nnexation	\$500 plus	s legal expenses
	\$500 + escrow	EA	W		1,000 escrow
X Site Plan	\$500 + escrow	In	terim Use Pern	nit \$500	
Total Amount Due: \$	s N		ks payable to (ards also acce	City of Hastings. oted.	
Please ensure that a	Il copies of required doc		re attached.	the whole	it 09/02/2020
Applicant Signature	Date		Owner S	ignature	Date
0.					
	erg, Managing Directo	<u> </u>		ick Schmitt	
Applicant Name and	Title – Please Print		Owner N	lame – Please Print	1
OFFICIAL USE ONLY	0.410.			ata Bacida	
File #	Rec'd By:			ate Rec'd: pp. Complete	
Fee Paid:	Receipt #		A	pp. complete	