



**Take notice that the City of Ashland Common Council will meet at 6:00 PM in the City Hall Council Chambers, 601 Main Street W. Ashland, WI to consider and act upon the following agenda.**

*To attend virtually, the meeting from your computer, tablet or smartphone:*

<https://global.gotomeeting.com/join/500263957>

*Or dial in using your phone. United States (Toll Free): 1-877-309-2073 Access Code: 500-263-957*

*Please contact the Clerk's office if you require accommodations to attend the meeting.*

## **Tuesday, July 29, 2025 Ashland City Council Meeting Agenda**

### **1. CALL TO ORDER**

A. Roll Call, Moment of Silence and Pledge of Allegiance

### **2. APPROVAL OF AGENDA**

### **3. APPROVAL OF MINUTES**

A. July 8, 2025 City Council and Committee of the Whole Meeting Minutes

### **4. CITIZEN PARTICIPATION PERIOD**

### **5. MAYOR'S REPORT**

A. Announcements

B. Appointments

### **6. ADMINISTRATOR'S REPORT**

### **7. ANNUAL PRESENTATION BY MARY MCPHETRIDGE, EXECUTIVE DIRECTOR OF THE ASHLAND AREA CHAMBER OF COMMERCE**

### **8. OLD BUSINESS**

A. Approve to Accept a Maintenance Quote from Wisocnsin Pump Works for Main Lift Station Pumps Rehabilitation (*Public Works*) Roll

### **9. NEW BUSINESS**

- A. **Consider a Request to Rescind Property Taxes Charged to the City of Ashland and Ashland County due to Assessment Roll Error** *(Finance)* Voice
- B. **Consider to Approve to Waive the Advertising Requirements of Chapter 194.04 Procurement of Goods and Services, Ashland City Ordinances, and Approve Repair Costs for the Fire Department's 2005 Custom Fire Water Tender** *(Fire Department)* Roll
- C. **Consider a Resolution to Issue a Conditional Use Permit (CUP) to Allow a Fence Exceeding Four Feet in Height in the Corner Side Yard at 307 14th Avenue East, Parcel No. 201-01797-0000, Zoned Single-Family Residential (R-1); Applicants: Ceili Shields and Trevor Hansen** *(Planning and Development)* Roll
- D. **Consider an Ordinance to Amend Chapter 800 (1130) Ordinance to Amend the Official Zoning map of the City of Ashland, Ashland City Ordinances, to Conditionally Rezone 618 Beaser Avenue, Parcel No. 201-00540-0000, from Public Institutional (PI) with Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O). Applicant: Beaser Professional Building, LLC.** *(Planning and Development)* Roll
- E. **Consider a Resolution to Issue a Conditional Use Permit (CUP) to Allow a Multi-Family Residential Land Use for 618 Beaser Avenue, Parcel No. 201-00540-0000, Contingent on Zone Change to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O); Applicant: Beaser Professional Building, LLC., Alex Vickroy** *(Planning and Development)* Roll
- F. **Consider an Ordinance to Amend Chapter 806 (201-1884) Ordinance to Approve a Planned Unit Development (PUD), Ashland City Ordinances, for a Specific Implementation Plan (SIP) to Allow a Multi-Family Residential Land Use on Parcel # 201-00356-0000, Zoned Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O) and Planned Unit Development Overlay, Located between Beaser Avenue and 11th Avenue west; Applicant: Vision Inc.** *(Planning and Development)* Roll
- G. **Consider an Ordinance to Amend Chapter 781 (1764) Unified Development Ordinance, Ashland City Ordinances, Amending 6.7(C)(3)(e) General Requirements for Freestanding Light Fixtures** *(Planning & Development)* Roll

## **10. ADJOURNMENT**

*The City of Ashland does not discriminate on the basis of sex, race, creed, color, national origin, sexual orientation, age or disability in employment or provision of services, programs or activities.*

*Upon reasonable notice, the City of Ashland will accommodate the needs of disabled individuals or individuals with limited English proficiency through auxiliary aids or services. For additional information or to request this service, contact the City Clerk's Office at 715-682-7071 (not a TDD telephone number) or FAX: 715-682-7048*





Tuesday, July 8, 2025



## MEETING MINUTES

### ASHLAND CITY COUNCIL Tuesday, July 8, 2025 – 6:00 PM Ashland City Hall Council Chambers

#### 1. CALL TO ORDER

The Tuesday, July 8, 2025 Ashland City Council meeting was called to order by Mayor Matt MacKenzie at 6:00 p.m.

A. **Roll Call, Moment of Silence and Pledge of Allegiance**

**PRESENT:** Shawn Brede, Peter Levi, Andrew Goyke, James Gregoire, Charlie Ortman, Nancy Sztynдор

**ABSENT:** Kevin Seefeldt (Excused)

**ALSO PRESENT:** Mayor Matthew MacKenzie, City Administrator Brant Kucera, City Clerk Denise Oliphant, City Attorney Tyler Wickman, Public Works Director John Butler, Planning Director Steven Wiley, Parks and Recreation Director Catlyn Nowicki. and other interested citizens

#### 2. APPROVAL OF AGENDA

A motion by Gregoire, seconded by Goyke to approve the agenda, passed unanimously by roll call vote.

#### 3. APPROVAL OF MINUTES

A. **June 24, 2025 City Council and Committee of the Whole Meeting Minutes**

A motion by Gregoire, seconded by Goyke to approve the minutes, carried unanimously by voice vote.

#### 4. CITIZEN PARTICIPATION PERIOD

There were no Citizens who requested to address the Council.

#### 5. MAYOR'S REPORT

A. **Announcements**

The Mayor attended the Northwest Regional Planning Committee meeting in Hayward on June 25, 2025. He also attended a roundtable discussion regarding mental health issues recently. He

Tuesday, July 8, 2025



offered to Council the opportunity to ride along with property maintenance, public works crew and police officers. The Fourth of July festivities was well attended throughout the community.

**B. Appointments**

A motion by Gregoire, seconded by Szyndor to approve the reappointment of Tom Buzzi to the Board of Zoning Appeals, term to expire in July 2028, passed unanimously by voice vote.

## **6. ADMINISTRATOR'S REPORT**

Kucera introduced the newly hired Parks and Recreation Director, Catlyn Nowicki, who began with the City on June 30, 2025. Planter barrels have been placed along Main Street. There are plans for doing additional native and perennial plantings in the tree wells yet this year. Wisconsin State Statutes were changed shortly after the introduction of the EV charging stations owned the City, making them no longer available for use to customers beyond the City's fleet. He attended the Wisconsin City Managers' Association conference in Sturgeon Bay at the end of June. The City will be hosting a meeting in the Fall of 2025 with the Wisconsin Department of Natural Resources, along with the City of Superior, to present and discuss brownfield area revitalization. The Administrator and Mayor will both be meeting with Northland College staff in the upcoming week.

## **7. CONSENT AGENDA**

- A. **Accept a Boreal Waters Scholarship Grant for Paramedic Tuition Assistance** (*Fire Department*)
- B. **Planning and Development Permit and Property Maintenance Reports**
- C. **Miscellaneous Minutes**

Goyke moved, seconded by Gregoire approve the Consent Agenda. The motion passed unanimously by voice vote.

## **8. OLD BUSINESS**

- A. **Approve a Development Agreement between the City of Ashland and Vision, Inc. for Development of the Former Roffers Site** (*Planning and Development*) Roll  
A motion by Ortman, seconded by Levi to approve passed unanimously by roll call vote.
- B. **Consider a Resolution Declaring Official Intent to Reimburse Expenditures from Proceeds of Borrowing through the State of Wisconsin Clean Water Loan Program (CWLP) for the FY2026 Turner Road Lift Station Improvements Project** (*Public Works*) Roll

A motion by Ortman, seconded by Goyke to approve the resolution, passed unanimously by roll call vote.

**File #17842**

## **9. ADJOURNMENT**

A motion by Goyke seconded by Gregoire to adjourn was passed unanimously by voice vote.

Respectfully Submitted,

Denise Oliphant,  
City Clerk

**MEETING MINUTES**  
**COMMITTEE OF THE WHOLE MEETING**  
**Tuesday, July 8, 2025 – 6:00 PM**  
**Ashland City Hall Council Chambers**

The Tuesday, July 8, 2025 City of Ashland Committee of the Whole Meeting was called to order by Council President Charlie Ortman at 6:25 p.m.

1. **Roll Call**

**PRESENT:** Shawn Brede, Peter Levi, Andrew Goyke, James Gregoire, Charlie Ortman, Nancy Sztynдор

**ABSENT:** Kevin Seefeldt (Excused)

**ALSO PRESENT:** Mayor Matthew MacKenzie, City Administrator Brant Kucera, City Clerk Denise Oliphant, City Attorney Tyler Wickman, Public Works Director John Butler, Planning Director Steven Wiley, and other interested citizens.

2. **Approval of Agenda**

A motion by Gregoire, seconded by Levi to approve the agenda carried unanimously by voice vote.

3. **Council President's Report**

Ortman talked of the public fire protection policy.

4. **DISCUSSION ITEMS**

A. **Presentation and Discussion of the City of Ashland Property Maintenance Enforcement Process (*Goyke*)**

Wiley introduced the item, followed by Wickman, and answered questions from Council. No action was taken on this item.

B. **Discussion Regarding Stormwater System Maintenance and Projects (*Public Works*)**

Butler presented the item and answered questions from Council. No action was taken on this item.

C. **Vacant Housing Ordinance Draft for Review and Discussion (*Administrator*)**

Kucera requested to defer this item to the next meeting for better preparation.

5. **Items for Future Discussion**

Sztynдор asked to discuss the lighter side of property maintenance, such as the consistency and timing of notices and such.

6. **Adjournment**

A motion by Sztynдор and seconded by Goyke to adjourn was passed unanimously by voice vote.

Respectfully Submitted,

Denise Oliphant,  
City Clerk

Ref: 2025-165

**COUNCIL AGENDA: 5.B.**  
**(7/29/2025)**

**SUBJECT: Appointments**

**RECOMMENDATION:** Approval

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**DEPARTMENT OF ORIGIN:** Mayor

**CLEARANCES:** Mayor

**EXHIBITS:**

**EXPENDITURES REQUIRED:** NA

**AMOUNT BUDGETED:**

**APPROPRIATION REQUIRED:**

**TREASURER'S CERTIFICATE:** NA

**COMPLIANCE WITH CHAPTER 51:** Section 51.26 (b) of Chapter 51, Ashland City Ordinances, permits the Mayor and/or Clerk to schedule items directly for Council action. The Mayor and/or City Clerk has chosen to direct this item directly to Council pursuant to the authority granted to them in Chapter 51, Ashland City Ordinances.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** NA

**SUMMARY STATEMENT:**

The Mayor is requesting approval of the following reappointment:

Harbor Commission

Tom Yankee, term to expire July 31, 2028

**SUBJECT:** Approve to Accept a Maintenance Quote from Wisocnsin Pump Works for Main Lift Station Pumps Rehabilitation (*Public Works*) Roll

**RECOMMENDATION:** Approve

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**DEPARTMENT OF ORIGIN:** Public Works

**CLEARANCES:** City Administrator  
City Attorney  
Public Works Director

**EXHIBITS:** 1. Wisconsin Pump Works Quote  
2. Equipment Replacement Fund - Wisconsin DNR

**EXPENDITURES REQUIRED:** \$148,305.00 Construction Total  
\$ 7,415.25 Construction Contingency (5%)  
**\$155,720.25 Total**

**AMOUNT BUDGETED:** \$155,720.25 - Fund 690 Equipment Replacement Fund

**APPROPRIATION REQUIRED:** -\$0-

**TREASURER'S CERTIFICATE:** The Treasurer's Office has certified that Wisconsin Pumps Works is in compliance with the provisions of Ordinance 923.10 Ashland City Ordinances.

**COMPLIANCE WITH CHAPTER 51:** The Council as Committee of the Whole previously discussed and approved this item to move forward to the Council for formal approval.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** The proposed construction conforms to the goals and community values identified in the City of Ashland's Comprehensive Plan.

**SUMMARY STATEMENT:**



At the September 24, 2024 meeting, Council approved entering into an agreement with Short, Elliott, Hendrickson, Inc. (SEH) for professional design services under the 2025/2026 Sanitary Sewer Lift Stations Project. The project focuses on various upgrades to two sewer pumping stations, Turner Road and Main Lift Station. The Main Lift Station is responsible for the transmission of approximately 80% of all wastewater in the City to the wastewater treatment plant (WWTP).

At the March 11, 2025 meeting, the Public Works Director presented updates on the project, with information provided explaining that the work at the Main Lift Station required a change in plans due to the cost of replacing the pumps, which were originally installed in 1991. Various codes for engineering design and building improvements dictate the need for expensive upgrades to the pump station's electrical system. The cost of this work was determined to be infeasible when considering other needs (continued collection system improvements, upgrades to WWTP) that the Wastewater Utility needs to address in the medium term future.

As a result, staff selected a project alternative that will rehabilitate the existing pumps, extending their useful life by ten to fifteen years. The alternative was suggested by Wisconsin Pump Works, a specialized contractor with the ability to replace impellers and wear rings for the existing pumps. Multiple inspections of the pumps have verified that, despite their age, the pumps are in good working order. However, the impellers and wear rings are warble components requiring replacement after 34 years in service. Pump rehabilitation is expected to improve both the reliability of the pumps, reducing the risk of sewer overflow due to pump failure, and the efficiency of the pumps, reducing the long-term cost of electricity at the lift station.

The cost of rehabilitating the pumps is an eligible expense under the Wastewater Utility's Equipment Replacement Fund (ERF), which encourages sustainable operation of the Utility by funding the replacement of equipment throughout the assets' useful life. The idea is that at the end of the asset's useful life, funds will be available for replacement or rehabilitation. The current balance of the ERF is roughly \$2 million.

The staff are recommending pump rehabilitation as the City's best course of action to ensure continue to ensure reliable pump operation. SEH has verified that the Wisconsin Pump Works is reputable in performing this type of work and that the pricing provided offers good value to the Wastewater Utility.

As allowed by City Ordinance Chapter 194, City staff negotiated the cost of the agreement with Wisconsin Pump Works without the need for formal bidding. Due to the criticality of the Main Lift Station pumps and the specialized nature of the work, staff recommends contracting with Wisconsin Pump Works for the pump rehabilitation work.

Wisconsin Pump Works  
1720 Fire Lane Dr  
Green Bay, WI 54311

**Bill To**  
Ashland Water Utility  
2020 6th Street East  
Ashland WI 54806  
United States  
Phone:

**Ship To**  
Ashland Water Utility  
2020 6th Street East  
Ashland WI 54806  
United States

**Details**

Quote for the Sale and Installation of 2 - 14" Plug Valves at the Main Lift Station. Note: Freight is NOT included. \*\*CITY IS RESPONSIBLE TO BYPASS/PLUG LIFT STATION SUCTION LINE PRIOR TO WORK\*\* WE WILL ASSIST THE CITY VACTOR TRUCK WITH CLEANING THE STATION (REQUIRES CONFINED SPACE ENTRY) PRIOR TO INSTALLING THE VALVES. \*\*PRICING ALSO INCLUDES THE SALE & INSTALL OF (6) NEW IMPELLER/WEAR RING ASSEMBLIES. ONE SPARE ASSEMBLY IS INCLUDED AS REQUESTED.

| Prepared By   | Phone        | Email                                                                        |
|---------------|--------------|------------------------------------------------------------------------------|
| Dillon Braith | 877-645-8004 | <a href="mailto:info@wisconsinpumpworks.com">info@wisconsinpumpworks.com</a> |

| Sales Rep | Expires    | Terms  |
|-----------|------------|--------|
| John Roth | 07/12/2025 | Prepay |

| Item                | Comment                                                                                                                                                                                                                                                                                  | QTY | Rate        | Amount       |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|--------------|
| INSTALL SERVICES    | Installation of 2 - 14" Plug Valves with Pratt/Milliken Geared Handwheel Operators and (6) New Impeller/Wear Ring Assemblies. Includes on-site service labor, confined space entry, travel charges, Valves, Fasteners, and Misc. items required for installation. **Time and Materials** | 1   |             | \$41,520.00  |
| 23427<br>QUOTE ITEM | GRUNDFOS/YCC 8615-4A/BHT IMPELLER AND WEAR RING ASSEMBLY (6 LH & 1 RH0                                                                                                                                                                                                                   | 7   | \$15,255.00 | \$106,785.00 |

**Subtotal** \$148,305.00

**Total** \$148,305.00

*Pricing is valid for 10 days and does not include freight charges or applicable taxes.*

**Items quoted for repair and leftover 30 days, without a decision to repair, will be discarded.**





Quote  
#QTE008535  
03/05/2025

Wisconsin Pump Works  
1720 Fire Lane Dr  
Green Bay, WI 54311

Signature:\_\_\_\_\_ Date:\_\_\_\_\_

**NOTE: All orders are subject to Tariff Surcharges. Tariff Surcharges are based on Tariff values charged by individual Vendors and are not set amount. These Tariff Surcharges are subject to change at any time.**

Online credit card/ECheck payments are handled by a third party processor and 3% fees will apply when making payment.

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Thank you for your business.  
Toll Free: 877-645-8004 | Email: [info@wisconsinpumpworks.com](mailto:info@wisconsinpumpworks.com) | Website: <http://www.wisconsinpumpworks.com>



QTE008535

**ACCEPTANCE**

The following Terms and Conditions are an integral part of the offer to sell the equipment and/or services offered in this proposal. When the BUYER signifies acceptance of this quotation by submission of a Purchase Order or signed SELLER Quotation, it shall become a binding contract when accepted and signed by an authorized signer of the SELLER. Any changes or amendments to this proposal made by the BUYER must have SELLER's approval in writing to become a part of this contract. These Terms and Conditions and the accompanying Purchase Order or signed SELLER Quotation shall comprise the entire agreement between the parties and no course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any terms used in this contract. Unless stated otherwise, the terms and conditions of the manufacturers listed herein will apply to this quotation. Any attachments or listed documents are considered a part of this quotation and are made part of the agreement. **Quote is firm for thirty (30) days unless otherwise stated on the face of the attached quotation.**

**APPROVAL DRAWINGS**

All items listed are based on SELLER'S interpretation of the requirements in accordance with the plans and specifications. Any preliminary drawings or literature attached to our quotation are for illustration purposes only to show approximate arrangements. Specific drawings and submittal data will be furnished for approval as required after receipt and acceptance of the BUYER'S order. Any submittal or manuals when provided by SELLER will be in the form of a PDF electronic file only. Any form of media beyond the electronic file would be the responsibility of BUYER. Fabrication of products or equipment ordered will not begin until approval and direction to proceed is received in writing. No warranty is made regarding quantities, materials of construction or type of materials quoted. Operation, installation, and maintenance of materials quoted are the responsibility of the OWNER or CONTRACTOR.

**DELIVERY**

Any shipment or delivery date received represents our best estimate, but no liability, direct or indirect, is assumed by SELLER for failure to ship or deliver on such dates. Unless otherwise directed, SELLER shall have the right to make early or partial shipments and invoices covering the same to BUYER shall be due and payable in accordance with payment terms hereof. FOB shall be origin unless stated otherwise on the front of these Terms and Conditions. Delivery schedule(s) will be contingent on supply-chain availability and variability for material components, therefore, lead-times are subject to change without notice. Published weights are careful estimates but are not guaranteed. SELLER will endeavor, insofar, as it is possible, to comply with shipping instructions specified by the Purchaser. However, SELLER reserves the right to ship merchandise by such means of transportation as it may select. The manufacturer will ship the equipment via best way. Demurrage shall be billed to the account of the Purchaser. **DAMAGE CLAIMS:** Care is taken in packaging all shipments. After BUYER has been given the receipt by the transportation company, all claims for breakage or shortages, whether concealed or obvious, must be made in writing by the BUYER to the carrier and SELLER within seven (7) days after receipt of shipment. When damage or shortages are obvious, written comments on the bill of lading are required before the driver is released. **RETURNED PRODUCTS:** In no instance is equipment to be returned without first obtaining SELLER'S written approval and returned materials authorization. If shipment is postponed at the request of the purchaser after manufacturing has been commenced, payment will be due on notice from us that the equipment is ready for shipment. Pro rata payments shall be made for partial shipments.

**STORAGE**

Any item of the product on which shipment is delayed by BUYER may be placed in storage by SELLER at BUYER'S expense and risk. If a delay in shipment is requested by BUYER after an order has been entered and accepted:

- a. No charge will be made if the request for delay is made more than six (6) weeks before acknowledged shipping date and the requested delay is for a period not in excess of thirty (30) days.
- b. A charge will be made if the requested delay exceeds a period of thirty (30) days or if the request is made within six (6) weeks of the acknowledged shipping date. SELLER will advise BUYER of the charge within ten (10) days of receiving BUYER'S request for delay.
- c. If the product is within six (6) weeks of the acknowledged shipping date, then SELLER has the option of completing, invoicing and storing the product and charging one and one-half percent (1.5%) per month, or the maximum percentage permitted by law, whichever is lesser, of the established price for such product, plus storage cost.

**PAYMENT**

Payment terms, upon credit approval, are of net thirty (30) days from the date of each invoice for material shipped (or when ready for shipment if shipment is deferred by BUYER) **unless stated otherwise on the face of the attached quotation.** Flow down provisions are not accepted and shall not be enforceable against SELLER. Retention is not allowed. In the event any payment becomes past due, a charge of one-half percent (1.5%) will be assessed monthly. These terms are completely independent from, and not contingent upon, when BUYER receives payment from the OWNER. A processing fee of up to four percent (4%) will be added for credit card payments. All merchandise sold is subject to lien laws. Partial or final payment shall constitute acceptance of delivered materials, products, or equipment.

**FORCE MAJEURE**

Neither Party will be liable for any failure or delay in performing an obligation under these Terms and Conditions that is due to any of the following causes, to the extent beyond its reasonable control: acts of God, accident, riots, war, terrorist act, epidemic, pandemic, quarantine, civil commotion, breakdown of communication facilities, breakdown of web host, breakdown of internet service provider, natural catastrophes, governmental acts or omissions, changes in laws or regulations, national strikes, fire, explosion, generalized lack of availability of raw materials or energy. For the avoidance of doubt, Force Majeure shall not include (a) financial distress nor the inability of either party to make a profit or avoid a financial loss, (b) changes in market prices or conditions, or (c) a party's financial inability to perform its obligations hereunder.

**TAXES AND BONDS**

Taxes and bonds are **NOT** included in our pricing. Any applicable taxes or bonds will be added to the price and shown separately on each invoice. All prices exclude sales, use, duties, excise, and other taxes in respect to manufacture, sale, or delivery, all of which are to be paid by the buyer unless a proper exemption certificate is furnished. BUYER agrees to reimburse our company for taxes SELLER must pay on BUYER'S behalf.

**PRICE ESCALATION and/or MATERIAL DEPOSITS**

If between the proposal date and actual procurement and through no fault of the SELLER, the relevant cost of labor, material, freight, brokerage fees, tariffs, and other SELLER costs combined relating to the contract increase, then the contract price shall be subject to escalation and increased accordingly. If required by the BUYER, increase shall be verified by documentation and the amount of contract price escalation shall be calculated as either the actual increased cost to the Seller or, if agreed by the Parties, the equivalent increase of a relevant industry recognized third-party index. SELLER shall undertake good faith efforts to obtain savings in its procurement of materials to avoid escalation costs. BUYER shall cooperate with SELLER in such efforts to obtain such cost savings. SELLER shall contemporaneously track any escalation costs.

Quotation, r4.2025



#### **CLAIMS AND BACKCHARGES**

BUYER agrees to examine all materials immediately upon delivery and report to SELLER in writing any defects or shortages noted no later than ten (10) days following the date of receipt. The parties agree that if no such claim is made within said time, it shall be considered acceptable and in good order with respect to any defect or shortage which would have been revealed by such an inspection. In no event will SELLER be responsible for any charge for modification, servicing, adjustment or for any other expense without written authorization from SELLER prior to the performance of any such work. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY THIRD PARTY FOR ANY LOSS OF USE, REVENUE OR PROFIT, OR FOR CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, FOR ANY REASON, INCLUDING WITHOUT LIMITATION, DAMAGES ARISING OUT OF A DELAY IN OR FAILURE OF DELIVERY, DEFECTS IN MATERIAL AND WORKMANSHIP AND/OR FAILURE OF GOODS TO PERFORM TO APPLICABLE SPECIFICATIONS, DRAWINGS, BLUEPRINTS OR SAMPLES AS SET FORTH OR DESCRIBED HEREIN, IF ANY, OF A BREACH BY SELLER OF ANY OTHER TERM OR OBLIGATION OF SELLER UNDER THE CONTRACT. No penalty clauses of any description will be effective unless approved in writing over the signature of a principal of SELLER. Under no circumstances shall SELLER be liable for any consequential, special or incidental damages, including liquidated damages, arising from any breach by it in this transaction, AND ALL SUCH CONSEQUENTIAL, SPECIAL AND INCIDENTAL DAMAGES, INCLUDING LIQUIDATED DAMAGES, ARE EXCLUDED FROM ANY REMEDIES AVAILABLE TO THE BUYER.

#### **SECURITY INTEREST & TITLE**

Until all amounts due SELLER have been paid in full, SELLER shall retain a security interest in the product and have all rights of a secured party under the Uniform Commercial Code and applicable law, including the right to repossess the product or equipment without legal process and the right to require the BUYER to assemble the equipment and make it available to SELLER at a place reasonably convenient to both parties.

#### **WARRANTY**

Equipment and parts not manufactured by the SELLER carry only the warranty of the manufacturer of said parts. SELLER does not make any express or implied warranty for equipment and/or parts it did not manufacture. Credits for defective material and workmanship in said equipment and/or parts are only in accordance with the underlying company policy of the manufacturer. SELLER makes no warranty whatsoever with respect to any equipment and/or parts as to their merchantability or fitness for a particular purpose. It is further agreed that the SELLER assumes no liability whatsoever for failure of equipment due to normal usage and wear.

#### **INDEMNIFICATION**

To the fullest extent permitted by the law in which the project is located, BUYER and SELLER shall indemnify and hold one another and their respective employees and agents harmless from and against all claims, damages, losses, liabilities, actions, causes of action, demands, fines, penalties, judgments, costs, and expenses, including but not limited to attorneys' fees, court costs, expert fees and costs, arising out of or resulting from BUYER's or SELLER's own negligent acts, omissions or misconduct, to the extent such negligence is covered by BUYER's and SELLER's respective insurance policies. In the event any third party asserts against SELLER a claim for patent infringement, royalties or licensing fees with respect to BUYER's use of the products, materials, or equipment provided hereunder, BUYER agrees to indemnify SELLER for all liability damages, costs and expenses in connection therewith.

#### **CANCELLATION**

Buyer may cancel this contract only in writing signed by BUYER's duly authorized agent and acknowledged in writing by SELLER's duly authorized agent. Should this order be cancelled, BUYER shall be obligated to pay for the level of work performed and products shipped. Work performed includes any engineering, calculations, preparation of submittals, drawings, and/or travel to job site in relation to this order. In addition to any other remedies provided under these Terms and Conditions, SELLER may terminate this contract with immediate effect by providing signed, written notice to BUYER, if BUYER: (i) fails to pay any amount when due under the contract and such failure continues for 30 days after BUYER's receipt of written notice of nonpayment; (ii) has not otherwise performed or complied with any of these Terms and Conditions; or (iii) becomes insolvent, files a petition for bankruptcy or commences or has commenced against it proceedings in bankruptcy, receivership, reorganization or assignment for the benefit of creditors.

#### **FIELD WORK**

Unless specifically stated on our quotation, installation, start-up service, field testing, supervision, operation, and training are not included in our pricing of product. In the event that SELLER or any of its employees or agents do perform work or services on-site at the project's location, BUYER agrees to hold SELLER and its employees or agents harmless for any injuries or damage to property caused by their acts or omission, except to the extent said injuries or property damage arise from gross negligence or intentional misconduct.

#### **MODIFICATIONS**

This contract can be modified only in writing which specifically states that it amends these Terms and Conditions and is signed by both parties and their duly authorized agents. It is further agreed that this contract shall not be modified in any respect except in writing signed by the party and their duly authorized agent against whom the modification is sought to be enforced.

#### **AUTHORITY OF SELLER'S AGENTS**

No agent, employee or representative of the SELLER has any authority to bind the SELLER to any affirmation, representation or warranty concerning the goods sold under this Contract, and unless an affirmation, representation or warranty made by an agent, employee, or representative is specifically included within this written contract, it shall not be enforceable by the BUYER.

#### **NO THIRD-PARTY BENEFICIARIES**

This contract is for the sole benefit of BUYER and SELLER and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of these Terms and Conditions.

#### **GOVERNING LAW**

All matters arising of or relating to the contract or the Terms and Conditions shall be governed by and construed in accordance with the laws of the state in which the project is located.

#### DISPUTE RESOLUTION

In the event of any dispute between BUYER and SELLER arising out of the terms of the contract and these Terms and Conditions, such dispute shall be decided by arbitration administered by the American Arbitration Association in accordance with the then-prevailing Commercial Arbitration Rules and Mediation Procedures of the American Arbitration Association. BUYER and SELLER mutually agree that any dispute involving claims valued at or above \$1,000,000.00 shall be heard by a panel of three (3) arbitrators. The venue for all arbitration proceedings shall be the State of California. The foregoing agreement to arbitrate shall be specifically enforceable in any court of competent jurisdiction. The award rendered by the arbitrators shall be final and judgment may be entered upon it in accordance with applicable law in any court of competent jurisdiction.

#### SEVERABILITY

The partial or complete invalidity of any one or more provisions of these Terms and Conditions shall not affect the validity or continuing force and effect of any other provision. If any provision is invalid, in whole or in part, the provision shall be considered reformed to reflect the intent thereof to the greatest extent possible consistent with applicable law.

#### ASSIGNMENT – DELEGATION

No right or interest in this Contract shall be assigned by the BUYER without the written permission of the SELLER, and no delegation of any obligation owed, or of the performance of any obligation by the BUYER shall be made without the written permission of the SELLER. Any attempted assignment or delegation shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

Please Remit to:  
PO Box 735936  
Chicago IL, 60673-5936  
Online payment accepted at <http://www.iowapumpworks.com>  
Pay Now 3% charge for credit card and \$2.25 charge for e-check  
PAST DUE INVOICES ARE SUBJECT TO 1.5% PER MONTH FINANCE CHARGE



# EQUIPMENT REPLACEMENT FUND

---

Every municipality that has a Wisconsin Pollution Discharge Elimination System (WPDES) permit for wastewater treatment facilities, urban runoff treatment works, or structural urban best management practices (BMP) is required to properly operate and maintain the facilities, including maintaining adequate funding, as a condition of the WPDES permit, see s. NR 205.07(1)(j), Wis. Adm. Code.

In addition, a municipality receiving a loan from the Clean Water Fund Program (CWFP) is required to establish an equipment replacement fund (ERF) to be used only for expenses incurred for equipment related to the municipality's wastewater treatment works, urban runoff treatment works, or structural urban BMP. Under the CWFP, "treatment work/s" has the meaning given in s. 283.01(18), Wis. Stats., and includes the collection system.

Prior to preparing the municipality's Financial Assistance Agreement (FAA), the DNR loan project manager will review the municipality's user charge system (UCS). The UCS must include a proposed ERF schedule and projected ERF deposits. The ERF schedule and fund deposits must cover the entire treatment works or structural urban BMP.

## FAQ

The following information is to help establish and maintain the municipality's equipment replacement fund (ERF):

## WHAT DOES REPLACEMENT MEAN?

According to s. NR 162.003(77), Wis. Adm. Code, replacement means "obtaining and installing equipment, accessories or appurtenances (accessories or associated items) that are necessary during the useful life of the treatment works or structural urban best management practice (BMP) to maintain the capacity and performance for which the treatment works or structural urban BMP were designed and constructed."

## WHAT IS THE INTENT OF THE ERF?

A municipality may use funds on deposit in the ERF to pay costs incurred to replace equipment necessary for the operation of the WPDES-permitted treatment works or structural urban BMP. If the municipality includes installation costs when determining the replacement cost of the equipment, those costs may be paid out of the ERF, also. **Major maintenance may also qualify as replacement, such as rebuilding an engine or pump, to avoid replacing a piece of equipment.**



Ref: 2025-166

COUNCIL AGENDA: 9.A.  
(7/29/2025)

**SUBJECT:** Consider a Request to Rescind Property Taxes Charged to the City of Ashland and Ashland County due to Assessment Roll Error (*Finance*) Voice

**RECOMMENDATION:** Approval

---

**DEPARTMENT OF ORIGIN:** Finance

**CLEARANCES:** Treasurer, Finance Director

**EXHIBITS:**

1. WI DOR Chargeback Process Summary
2. 201-02226-0000 TAX BILL (2024)
3. 201-03408-0000 TAX BILL (2024)
4. 201-03873-0000 TAX BILL (2024)
5. 201-04019-0000 TAX BILL (2024)
6. 201-04101-0000 TAX BILL (2024)
7. 2023 Real Estate Tax Bill 201-03611-0300
8. 2024 Real Estate Tax Bill 201-01958-0000
9. 2024 Real Estate Tax Bill 201-01959-0200
10. 2024 Real Estate Tax Bill 201-03611-0300
11. 2024 Real Estate Tax Bill 201-05008-1000
12. RECEIPT OF PAYMENT FOR 201-01958-0000 (NOT TAXED - SA ONLY)
13. RECEIPT OF PAYMENT FOR 201-01959-0200 (NOT TAXED - SA ONLY)
14. RECEIPT OF PAYMENT FOR 201-03611-0300 (2025) 2023 TAXES
15. RECEIPT OF PAYMENT FOR 201-03611-0300 (2025)
16. RECEIPT OF PAYMENT FOR 201-05008-1000 (2025)

**EXPENDITURES REQUIRED:** NA

**AMOUNT BUDGETED:** NA



**APPROPRIATION**                      NA  
**REQUIRED:**

**TREASURER'S**                      NA  
**CERTIFICATE:**

**COMPLIANCE WITH CHAPTER 51:** Section 51.26 (b) of Chapter 51, Ashland City Ordinances, permits the Mayor and/or Clerk to schedule items directly for Council action. The Mayor and/or City Clerk has chosen to direct this item directly to Council pursuant to the authority granted to them in Chapter 51, Ashland City Ordinances.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** NA

**SUMMARY STATEMENT:**

Various parcels owned by the City of Ashland and also Ashland County were not marked “exempt” by the assessor’s office for the 2024 tax roll. This resulted in said parcels having real estate taxes calculated and imputed for collection.

Per instructions from the Department of Revenue, the City paid the County the City’s “delinquent” taxes as listed on the tax roll. In order to apply to the Department of Revenue for a chargeback of taxes from other taxing jurisdictions on all applicable municipal parcels, the governing body of the City must approve to rescind said taxes.



## Chargeback Process Summary *(sec. 70.43, Wis. Stats.)*

Wisconsin Department of Revenue, August 25, 2022

### Roles for Corrections of Errors by Assessors

#### Assessor

- Discovers palpable error in real estate or personal property assessment in current year's assessment roll
- Makes note on current assessment roll
- Provides to property owner:
  - » Written notice of the correction
  - » Board of Review (BOR) appeal rights
- Refers correction to BOR
- Fill out Form PA-5/661 – Correction of Errors by Assessor – only if correction is certified by BOR
  - » Report may be a PA-5/661 Form or an assessment software system generated report
  - Link to DOR form: [revenue.wi.gov/DORForms/pa-5661f.pdf](https://revenue.wi.gov/DORForms/pa-5661f.pdf)
  - » Send copy to municipal clerk

#### Municipal Clerk/Treasurer

- Calculates refund of assessor's correction using the proper year's mill rate and fills in refund amount on Form PA-5/661
- Issues corrected tax bill to property owner
- Refunds or rescinds taxes if property owner is:
  - » Paid in full – issues a refund
  - » Not paid in full – only pays amount of corrected bill and the balance is rescinded (forgiven)
- Note:** If taxes are rescinded, the municipality must cover the difference by paying the outstanding balance to the county
- Settles in full with other taxing jurisdictions
- Sends a copy of completed correction of errors report to the county. County should include:
  - » Value reduction on the Statement of Assessment (SOA), Line 23
  - » Refunded/rescinded amount on the February settlement
- Submits Form PC-201, Request for Chargeback of Rescinded or Refunded Taxes, to DOR by October 1 (only if the tax amount for a single description of property and tax year is \$250 or more)
- Record the refunded/rescinded amount or amount due on the Statement of Taxes (SOT), Section I
- Attaches a copy of Form PA-5/661, Correction of Errors by Assessor, to current year assessment roll

#### Wisconsin Department of Revenue

- Reviews Form PC-201 to confirm/determine amount of resinded or refunded taxes by November 15
- Sends determination letter to municipal clerk and each affected taxing jurisdiction
- **Note:** Taxing jurisdictions must pay the municipality by February 15 of the following year

### Additional Information

- Refer to sec. [74.41](#), Wis. Stats. for the laws about this process
- For other types of value reductions, different statutes apply:
  - » Delayed Action of Reviewing Authority [70.511](#)
  - » Recovery of Unlawful Taxes [74.35](#)
  - » Claim on Excess Assessment [74.37](#)
  - » Chargeback process is the same, however, the value change from a prior year is *not* reported on the SOA and the tax amount is *not* reported on the SOT
- **Questions?** Contact us at [lgs@wisconsin.gov](mailto:lgs@wisconsin.gov).

STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024

CITY OF ASHLAND  
ASHLAND COUNTY

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

ASHLAND COUNTY

BILL NUMBER: 1469

IMPORTANT: · Correspondence should refer to parcel number.  
· See reverse side for important information.  
· Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

361556  
SEC 04, T 47 N, R 04 W  
PLAT: ELLI-ELLIS DIVISION CITY OF ASHLAND  
BLOCK/CONDO: 194 LOT 13  
W 50' OF LTS 13 & 14 BLOCK 194 ELLIS DIVISION

Property Address: 311 7TH ST W

Parcel #: 201-02226-0000

Alt. Parcel #:

|                              |                                       |                                |                                                                                 |                                                                      |
|------------------------------|---------------------------------------|--------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Assessed Value Land<br>3,300 | Ass'd. Value Improvements<br>30,700   | Total Assessed Value<br>34,000 | Ave. Assmt. Ratio<br>0.6317                                                     | Net Assessed Value Rate<br>(Does NOT reflect credits)<br>0.025440665 |
| Est. Fair Mkt. Land<br>5,200 | Est. Fair Mkt. Improvements<br>48,600 | Total Est. Fair Mkt.<br>53,800 | <input type="checkbox"/> A Star in this box<br>means Unpaid Prior<br>Year Taxes | School taxes reduced by<br>school levy tax credit<br>\$66.27         |

| Taxing Jurisdiction   | 2023<br>Est. State Aids<br>Allocated Tax Dist. | 2024<br>Est. State Aids<br>Allocated Tax Dist. | 2023<br>Net Tax | 2024<br>Net Tax | % Tax<br>Change |
|-----------------------|------------------------------------------------|------------------------------------------------|-----------------|-----------------|-----------------|
| ASHLAND COUNTY        | 783,558                                        | 879,572                                        | 244.25          | 256.70          | 5.1%            |
| CITY OF ASHLAND       | 5,404,592                                      | 5,508,285                                      | 349.48          | 361.09          | 3.3%            |
| VTAE (NORTHWOOD TECH) | 364,136                                        | 398,051                                        | 11.49           | 12.90           | 12.3%           |
| ASHLAND SCHOOL DIST   | 13,234,442                                     | 14,006,339                                     | 259.50          | 234.29          | -9.7%           |
| Total                 | 19,786,728                                     | 20,792,247                                     | 864.72          | 864.98          |                 |
|                       | First Dollar Credit                            |                                                | 63.17           | 50.82           | -19.6%          |
|                       | Lottery & Gaming Credit                        |                                                |                 |                 |                 |
|                       | Net Property Tax                               |                                                | 801.55          | 814.16          | 1.6%            |

Make Check Payable to:  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

Full Payment Due On or Before January 31, 2025  
\$1,102.43

Or First Installment Due On or Before January 31, 2025  
\$695.35

And Second Installment Payment Payable To  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

And Second Installment Due On or Before July 31, 2025  
\$407.08

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

Net Property Tax 814.16  
DELINQUENT WATER 288.27

**TOTAL DUE FOR FULL PAYMENT**  
Pay By January 31, 2025  
▶ \$ 1,102.43

Warning: If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. Failure to pay on time. See reverse.

FOR INFORMATIONAL PURPOSES ONLY  
- Voter Approved Temporary Tax Increases

|                     |                           |                                               |                       |
|---------------------|---------------------------|-----------------------------------------------|-----------------------|
| Taxing Jurisdiction | Total<br>Additional Taxes | Total Additional Taxes<br>Applied to Property | Year<br>Increase Ends |
| ASHLAND SCHOOL DIST | 2,134,545.00              | 157.95                                        | 2036                  |

PLEASE RETURN LOWER  
PORTION WITH REMITTANCE

REAL ESTATE PROPERTY TAX BILL FOR 2024

Bill #: 1469

Parcel #: 201-02226-0000

Alt. Parcel #:

Total Due For Full Payment \$1,102.43  
Pay to Local Treasurer By Jan 31, 2025

OR PAY INSTALLMENTS OF:

| 1ST INSTALLMENT        | 2ND INSTALLMENT         |
|------------------------|-------------------------|
| Pay to Local Treasurer | Pay to County Treasurer |
| \$695.35               | \$407.08                |
| BY January 31, 2025    | BY July 31, 2025        |

☐ Check For Billing Address Change.

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_



STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024

CITY OF ASHLAND  
ASHLAND COUNTY

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

ASHLAND COUNTY

BILL NUMBER: 2699

IMPORTANT: • Correspondence should refer to parcel number.  
• See reverse side for important information.  
• Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

361556 272844  
SEC 04, T 47 N, R 04 W, SW¼  
PLAT: POLK-POLKS ADD TO CITY  
BLOCK/CONDO: 8 LOT 23  
LOTS 23 & 24 BLOCK 8 POLKS ADDITION & THAT  
PART OF LOTS 13 & 14 BLOCK 22 FULLERS ADDITION  
LYING E OF THE W 160'

Parcel #: 201-03873-0000  
Alt. Parcel #:

Property Address: 1201 9TH AVE W

|                               |                                        |                                 |                                                                                 |                                                                      |
|-------------------------------|----------------------------------------|---------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Assessed Value Land<br>9,500  | Ass'd. Value Improvements<br>83,200    | Total Assessed Value<br>92,700  | Ave. Assmt. Ratio<br>0.6317                                                     | Net Assessed Value Rate<br>(Does NOT reflect credits)<br>0.025440665 |
| Est. Fair Mkt. Land<br>15,000 | Est. Fair Mkt. Improvements<br>131,700 | Total Est. Fair Mkt.<br>146,700 | <input type="checkbox"/> A Star in this box<br>means Unpaid Prior<br>Year Taxes | School taxes reduced by<br>school levy tax credit<br>\$ 180.68       |

| Taxing Jurisdiction   | 2023<br>Est. State Aids<br>Allocated Tax Dist. | 2024<br>Est. State Aids<br>Allocated Tax Dist. | 2023<br>Net Tax | 2024<br>Net Tax | % Tax<br>Change |
|-----------------------|------------------------------------------------|------------------------------------------------|-----------------|-----------------|-----------------|
| ASHLAND COUNTY        | 783,558                                        | 879,572                                        | 665.94          | 699.88          | 5.1%            |
| CITY OF ASHLAND       | 5,404,592                                      | 5,508,285                                      | 952.85          | 984.50          | 3.3%            |
| VTAE (NORTHWOOD TECH) | 364,136                                        | 398,051                                        | 31.32           | 35.17           | 12.3%           |
| ASHLAND SCHOOL DIST   | 13,234,442                                     | 14,006,339                                     | 707.54          | 638.79          | -9.7%           |
| Total                 | 19,786,728                                     | 20,792,247                                     | 2,357.65        | 2,358.34        |                 |
|                       | First Dollar Credit                            |                                                | 63.17           | 50.82           | -19.6%          |
|                       | Lottery & Gaming Credit                        |                                                |                 |                 |                 |
|                       | Net Property Tax                               |                                                | 2,294.48        | 2,307.52        | 0.6%            |

Make Check Payable to:  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

Full Payment Due On or Before January 31, 2025  
\$2,495.77

Or First Installment Due On or Before January 31, 2025  
\$1,342.01

And Second Installment Payment Payable To  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

And Second Installment Due On or Before July 31, 2025  
\$1,153.76

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

Net Property Tax 2,307.52  
DELINQUENT WATER 188.25

TOTAL DUE FOR FULL PAYMENT

Pay By January 31, 2025  
▶ \$ 2,495.77

Warning: If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. Failure to pay on time. See reverse.

FOR INFORMATIONAL PURPOSES ONLY  
- Voter Approved Temporary Tax Increases

|                     |                           |                                               |                       |
|---------------------|---------------------------|-----------------------------------------------|-----------------------|
| Taxing Jurisdiction | Total<br>Additional Taxes | Total Additional Taxes<br>Applied to Property | Year<br>Increase Ends |
| ASHLAND SCHOOL DIST | 2,134,545.00              | 430.66                                        | 2036                  |

PLEASE RETURN LOWER  
PORTION WITH REMITTANCE

REAL ESTATE PROPERTY TAX BILL FOR 2024

Bill #: 2699  
Parcel #: 201-03873-0000  
Alt. Parcel #:

Total Due For Full Payment \$2,495.77  
Pay to Local Treasurer By Jan 31, 2025

OR PAY INSTALLMENTS OF:

| 1ST INSTALLMENT        | 2ND INSTALLMENT         |
|------------------------|-------------------------|
| Pay to Local Treasurer | Pay to County Treasurer |
| \$1,342.01             | \$1,153.76              |
| BY January 31, 2025    | BY July 31, 2025        |

☐ Check For Billing Address Change.

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024

CITY OF ASHLAND  
ASHLAND COUNTY

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

ASHLAND COUNTY

BILL NUMBER: 2780

IMPORTANT: · Correspondence should refer to parcel number.  
· See reverse side for important information.  
· Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.  
361556 324602  
SEC 04, T 47 N, R 04 W  
PLAT: SUPE-SUPERIOR ADDITION TO CITY  
BLOCK/CONDO: 23 LOT 5  
LOTS 5 & 6 BLOCK 23 SUPERIOR ADDITION

Property Address:

Parcel #: 201-04019-0000  
Alt. Parcel #:

|                               |                                                            |                                                |                                                                                 |                                                                      |
|-------------------------------|------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Assessed Value Land<br>12,100 | Ass'd. Value Improvements                                  | Total Assessed Value<br>12,100                 | Ave. Assmt. Ratio<br>0.6317                                                     | Net Assessed Value Rate<br>(Does NOT reflect credits)<br>0.025440665 |
| Est. Fair Mkt. Land<br>19,200 | Est. Fair Mkt. Improvements                                | Total Est. Fair Mkt.<br>19,200                 | <input type="checkbox"/> A Star in this box<br>means Unpaid Prior<br>Year Taxes | School taxes reduced by<br>school levy tax credit<br>\$23.58         |
| <b>Taxing Jurisdiction</b>    |                                                            |                                                |                                                                                 |                                                                      |
|                               | 2023<br>Est. State Aids<br>Allocated Tax Dist.             | 2024<br>Est. State Aids<br>Allocated Tax Dist. | 2023<br>Net Tax                                                                 | 2024<br>Net Tax<br>% Tax<br>Change                                   |
| ASHLAND COUNTY                | 783,558                                                    | 879,572                                        | 86.92                                                                           | 91.35<br>5.1%                                                        |
| CITY OF ASHLAND               | 5,404,592                                                  | 5,508,285                                      | 124.37                                                                          | 128.51<br>3.3%                                                       |
| VTAE (NORTHWOOD TECH)         | 364,136                                                    | 398,051                                        | 4.09                                                                            | 4.59<br>12.2%                                                        |
| ASHLAND SCHOOL DIST           | 13,234,442                                                 | 14,006,339                                     | 92.35                                                                           | 83.38<br>-9.7%                                                       |
| <b>Total</b>                  | 19,786,728                                                 | 20,792,247                                     | 307.73                                                                          | 307.83                                                               |
|                               | <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit</b> |                                                |                                                                                 |                                                                      |
|                               |                                                            |                                                | 307.73                                                                          | 307.83                                                               |

Make Check Payable to:  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

Full Payment Due On or Before January 31, 2025  
\$307.83

Or First Installment Due On or Before January 31, 2025  
\$153.92

And Second Installment Payment Payable To  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

And Second Installment Due On or Before July 31, 2025  
\$153.91

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

Net Property Tax

307.83

TOTAL DUE FOR FULL PAYMENT

Pay By January 31, 2025

▶ \$ 307.83

Warning: If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. Failure to pay on time. See reverse.

FOR INFORMATIONAL PURPOSES ONLY  
- Voter Approved Temporary Tax Increases

Taxing Jurisdiction  
ASHLAND SCHOOL DIST

Total  
Additional Taxes  
2,134,545.00

Total Additional Taxes  
Applied to Property  
56.21

Year  
Increase Ends  
2036

PLEASE RETURN LOWER  
PORTION WITH REMITTANCE

REAL ESTATE PROPERTY TAX BILL FOR 2024

Bill #: 2780  
Parcel #: 201-04019-0000  
Alt. Parcel #:

Total Due For Full Payment

\$307.83

Pay to Local Treasurer By Jan 31, 2025

OR PAY INSTALLMENTS OF:

1ST INSTALLMENT  
Pay to Local Treasurer  
\$153.92  
BY January 31, 2025

2ND INSTALLMENT  
Pay to County Treasurer  
\$153.91  
BY July 31, 2025

☐ Check For Billing Address Change.

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024

CITY OF ASHLAND  
ASHLAND COUNTY

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

ASHLAND COUNTY

BILL NUMBER: 2839

IMPORTANT: • Correspondence should refer to parcel number.  
• See reverse side for important information.  
• Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

361556 324602  
SEC 04, T 47 N, R 04 W  
PLAT: SUPE-SUPERIOR ADDITION TO CITY  
BLOCK/CONDO: 43 LOT 2  
LOTS 2, 3, 4, & 5 BLK 43 SUPERIOR ADDITION

Property Address:

Parcel #: 201-04101-0000  
Alt. Parcel #:

|                              |                                                            |                                                |                                                                                 |                                                                      |
|------------------------------|------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Assessed Value Land<br>700   | Ass'd. Value Improvements                                  | Total Assessed Value<br>700                    | Ave. Assmt. Ratio<br>0.6317                                                     | Net Assessed Value Rate<br>(Does NOT reflect credits)<br>0.025440665 |
| Est. Fair Mkt. Land<br>1,100 | Est. Fair Mkt. Improvements                                | Total Est. Fair Mkt.<br>1,100                  | <input type="checkbox"/> A Star in this box<br>means Unpaid Prior<br>Year Taxes | School taxes reduced by<br>school levy tax credit<br>\$1.36          |
| <b>Taxing Jurisdiction</b>   |                                                            |                                                |                                                                                 |                                                                      |
|                              | 2023<br>Est. State Aids<br>Allocated Tax Dist.             | 2024<br>Est. State Aids<br>Allocated Tax Dist. | 2023<br>Net Tax                                                                 | 2024<br>Net Tax                                                      |
| ASHLAND COUNTY               | 783,558                                                    | 879,572                                        | 5.03                                                                            | 5.28                                                                 |
| CITY OF ASHLAND              | 5,404,592                                                  | 5,508,285                                      | 7.20                                                                            | 7.43                                                                 |
| VTAE (NORTHWOOD TECH)        | 364,136                                                    | 398,051                                        | 0.24                                                                            | 0.27                                                                 |
| ASHLAND SCHOOL DIST          | 13,234,442                                                 | 14,006,339                                     | 5.34                                                                            | 4.83                                                                 |
|                              |                                                            |                                                |                                                                                 | % Tax<br>Change                                                      |
|                              |                                                            |                                                |                                                                                 | 5.0%                                                                 |
|                              |                                                            |                                                |                                                                                 | 3.2%                                                                 |
|                              |                                                            |                                                |                                                                                 | 12.5%                                                                |
|                              |                                                            |                                                |                                                                                 | -9.6%                                                                |
| <b>Total</b>                 | 19,786,728                                                 | 20,792,247                                     | 17.81                                                                           | 17.81                                                                |
|                              | <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit</b> |                                                |                                                                                 |                                                                      |
|                              | <b>Net Property Tax</b>                                    |                                                | 17.81                                                                           | 17.81                                                                |

Make Check Payable to:  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

Full Payment Due On or Before January 31, 2025  
\$17.81

Or First Installment Due On or Before January 31, 2025  
\$17.81

And Second Installment Payment Payable To  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

And Second Installment Due On or Before July 31, 2025  
\$0.00

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

Net Property Tax 17.81

TOTAL DUE FOR FULL PAYMENT

Pay By January 31, 2025

\$ 17.81

Warning: If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. Failure to pay on time. See reverse.

FOR INFORMATIONAL PURPOSES ONLY  
- Voter Approved Temporary Tax Increases

Taxing Jurisdiction  
ASHLAND SCHOOL DIST

Total  
Additional Taxes  
2,134,545.00

Total Additional Taxes  
Applied to Property  
3.25

Year  
Increase Ends  
2036

PLEASE RETURN LOWER  
PORTION WITH REMITTANCE

REAL ESTATE PROPERTY TAX BILL FOR 2024

Bill #: 2839  
Parcel #: 201-04101-0000  
Alt. Parcel #:

Total Due For Full Payment \$17.81  
Pay to Local Treasurer By Jan 31, 2025

OR PAY INSTALLMENTS OF:

|                                                                             |                                                                          |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 1ST INSTALLMENT<br>Pay to Local Treasurer<br>\$17.81<br>BY January 31, 2025 | 2ND INSTALLMENT<br>Pay to County Treasurer<br>\$0.00<br>BY July 31, 2025 |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------|

☐ Check For Billing Address Change.

ASHLAND COUNTY  
201 MAIN ST W  
ASHLAND WI 54806

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

**STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2023**

CITY OF ASHLAND  
ASHLAND COUNTY

EL TARASCO LLC  
819 MACARTHUR AVE  
ASHLAND WI 54806

EL TARASCO LLC

**BILL NUMBER: 2522**

**IMPORTANT:** · Correspondence should refer to parcel number.  
· See reverse side for important information.  
· Be sure this description covers your property. This description is for property tax bill only and may not be a full legal description.

359087 343406 343403 337479 ACRES: 4.700  
SEC 27, T 48 N, R 04 W, SW¼ of SE¼  
PLAT: 670-670 CERTIFIED SURVEY MAP  
BLOCK/CONDO: LOT 2  
LOT 2 OF CERTIFIED SURVEY 670 LESS LOTS 1 AND 2 OF CSM 755

**Property Address:** 2200 LAKE SHORE DR E

**Parcel #:** 201-03611-0300  
**Alt. Parcel #:**

|                                      |                                    |                                       |                                                                                  |                                                                             |
|--------------------------------------|------------------------------------|---------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Assessed Value Land</b><br>45,000 | <b>Ass'd. Value Improvements</b>   | <b>Total Assessed Value</b><br>45,000 | <b>Ave. Assmt. Ratio</b><br>0.7446                                               | <b>Net Assessed Value Rate</b><br>(Does NOT reflect credits)<br>0.025432969 |
| <b>Est. Fair Mkt. Land</b><br>60,400 | <b>Est. Fair Mkt. Improvements</b> | <b>Total Est. Fair Mkt.</b><br>60,400 | <input type="checkbox"/> <b>A Star in this box means Unpaid Prior Year Taxes</b> | <b>School taxes reduced by school levy tax credit</b><br>\$80.73            |

| <b>Taxing Jurisdiction</b> | <b>2022<br/>Est. State Aids<br/>Allocated Tax Dist.</b>    | <b>2023<br/>Est. State Aids<br/>Allocated Tax Dist.</b> | <b>2022<br/>Net Tax</b> | <b>2023<br/>Net Tax</b> | <b>% Tax<br/>Change</b> |
|----------------------------|------------------------------------------------------------|---------------------------------------------------------|-------------------------|-------------------------|-------------------------|
| ASHLAND COUNTY             |                                                            | 783,558                                                 |                         | 323.27                  | 100.0%                  |
| CITY OF ASHLAND            |                                                            | 5,404,592                                               |                         | 462.55                  | 100.0%                  |
| VTAE (NORTHWOOD TECH)      |                                                            | 364,136                                                 |                         | 15.20                   | 100.0%                  |
| ASHLAND SCHOOL DIST        |                                                            | 13,234,442                                              |                         | 343.46                  | 100.0%                  |
| <b>Total</b>               |                                                            | 19,786,728                                              |                         | 1,144.48                | 100.0%                  |
|                            | <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit</b> |                                                         |                         | 1,144.48                | 100.0%                  |
|                            | <b>Net Property Tax</b>                                    |                                                         |                         |                         |                         |

**Make Check Payable to:**  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

**Full Payment Due On or Before January 31, 2024**  
\$1,187.89

**Or First Installment Due On or Before January 31, 2024**  
\$615.65

**And Second Installment Payment Payable To**  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

**And Second Installment Due On or Before July 31, 2024**  
\$572.24

**FOR TREASURERS USE ONLY**

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

**Net Property Tax** 1,144.48  
DELINQUENT WATER 43.41

**TOTAL DUE FOR FULL PAYMENT**

Pay By January 31, 2024

▶ \$ 1,187.89

**Warning:** If not paid by due dates, installment option is lost and total tax is delinquent subject to interest and, if applicable, penalty. **Failure to pay on time. See reverse.**

PA-6862 (R-8-15)

▼ **PLEASE RETURN LOWER PORTION WITH REMITTANCE** ▼

**REAL ESTATE PROPERTY TAX BILL FOR 2023**

**Bill #:** 2522  
**Parcel #:** 201-03611-0300  
**Alt. Parcel #:**

**Total Due For Full Payment** \$1,187.89  
Pay to Local Treasurer By Jan 31, 2024

**OR PAY INSTALLMENTS OF:**

| <b>1ST INSTALLMENT</b><br>Pay to Local Treasurer | <b>2ND INSTALLMENT</b><br>Pay to County Treasurer |
|--------------------------------------------------|---------------------------------------------------|
| \$615.65<br>BY January 31, 2024                  | \$572.24<br>BY July 31, 2024                      |

☐ Check For Billing Address Change.

EL TARASCO LLC  
819 MACARTHUR AVE  
ASHLAND WI 54806

**FOR TREASURERS USE ONLY**

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_



**STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024**

CITY OF ASHLAND  
ASHLAND COUNTY

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

**BILL NUMBER: 1304**

**IMPORTANT:** · Correspondence should refer to parcel number.  
· See reverse side for important information.  
· Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

265348 265347  
SEC 04, T 47 N, R 04 W  
PLAT: ELLI-ELLIS DIVISION CITY OF ASHLAND  
BLOCK/CONDO: 162 LOT 1  
WEST 60' OF LOTS 1 THRU 4 INCL & THE WEST 60'  
OF THE SOUTH 20' OF LOT 5 BLOCK 162 ELLIS  
DIVISION TAX EXEMPT

**Parcel #:** 201-01958-0000**Alt. Parcel #:****Property Address:**

|                            |                                    |                             |                                                                                          |                                                                             |
|----------------------------|------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Assessed Value Land</b> | <b>Ass'd. Value Improvements</b>   | <b>Total Assessed Value</b> | <b>Ave. Assmt. Ratio</b><br>0.6317                                                       | <b>Net Assessed Value Rate</b><br>(Does NOT reflect credits)<br>0.025440665 |
| <b>Est. Fair Mkt. Land</b> | <b>Est. Fair Mkt. Improvements</b> | <b>Total Est. Fair Mkt.</b> | <input type="checkbox"/> <b>A Star in this box<br/>means Unpaid Prior<br/>Year Taxes</b> | <b>School taxes reduced by<br/>school levy tax credit</b><br>\$0.00         |

| Taxing Jurisdiction                                                             | 2023<br>Est. State Aids<br>Allocated Tax Dist. | 2024<br>Est. State Aids<br>Allocated Tax Dist. | 2023<br>Net Tax | 2024<br>Net Tax | % Tax<br>Change |
|---------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------|-----------------|-----------------|
| ASHLAND COUNTY                                                                  | 783,558                                        | 879,572                                        |                 |                 | 0.00            |
| CITY OF ASHLAND                                                                 | 5,404,592                                      | 5,508,285                                      |                 |                 | 0.00            |
| VTAE (NORTHWOOD TECH)                                                           | 364,136                                        | 398,051                                        |                 |                 | 0.00            |
| ASHLAND SCHOOL DIST                                                             | 13,234,442                                     | 14,006,339                                     |                 |                 | 0.00            |
| <b>Total</b>                                                                    | 19,786,728                                     | 20,792,247                                     |                 |                 |                 |
| <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit<br/>Net Property Tax</b> |                                                |                                                |                 |                 |                 |

|                                                                                                                                            |                                                                                |                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Make Check Payable to:</b><br>ASHLAND CITY TREASURER<br>JACEY DEAN<br>601 MAIN STREET WEST<br>ASHLAND WI 54806-0747<br>715-685-1605     | <b>Full Payment Due On or Before January 31, 2025</b><br>\$332.62              | <b>Net Property Tax</b><br>SIDEWALKS<br>0.00<br>332.62 |
|                                                                                                                                            | <b>Or First Installment Due On or Before January 31, 2025</b><br>\$332.62      |                                                        |
| <b>And Second Installment Payment Payable To</b><br>TRACEY A. HOGLUND<br>ASHLAND CO. TREASURER<br>201 WEST MAIN STREET<br>ASHLAND WI 54806 | <b>And Second Installment Due On or Before July 31, 2025</b><br>\$0.00         |                                                        |
|                                                                                                                                            | <b>FOR TREASURERS USE ONLY</b><br>PAYMENT _____<br>BALANCE _____<br>DATE _____ |                                                        |

**TOTAL DUE FOR FULL PAYMENT**  
Pay By January 31, 2025  
▶ \$ 332.62

**Warning:** If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. **Failure to pay on time. See reverse.**

PA-686/2 (R-8-15)

▼ **PLEASE RETURN LOWER  
PORTION WITH REMITTANCE** ▼

**REAL ESTATE PROPERTY TAX BILL FOR 2024****Bill #:** 1304**Parcel #:** 201-01958-0000**Alt. Parcel #:**

**Total Due For Full Payment** \$332.62  
Pay to Local Treasurer By Jan 31, 2025

**OR PAY INSTALLMENTS OF:**

|                                                                                     |                                                                                 |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>1ST INSTALLMENT</b><br>Pay to Local Treasurer<br>\$332.62<br>BY January 31, 2025 | <b>2ND INSTALLMENT</b><br>Pay to County Treasurer<br>\$0.00<br>BY July 31, 2025 |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|

☐ Check For Billing Address Change.

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

**FOR TREASURERS USE ONLY**  
PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

**STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024**

CITY OF ASHLAND  
ASHLAND COUNTY

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

**BILL NUMBER: 1305**

**IMPORTANT:** · Correspondence should refer to parcel number.  
· See reverse side for important information.  
· Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

280533  
SEC 04, T 47 N, R 04 W  
PLAT: ELLI-ELLIS DIVISION CITY OF ASHLAND  
BLOCK/CONDO: 162 LOT 1  
THAT PART OF LOTS 1 TO 11 & 13 TO 19 BLOCK 162  
ELLIS DIVISION; INCLUDING VACATED ALLEY ADJ &  
1/2 VACATED 4TH AVE ADJ DESC IN V 547 PG ...

**Parcel #:** 201-01959-0200**Alt. Parcel #:****Property Address:**

|                            |                                    |                             |                                                                                  |                                                                             |
|----------------------------|------------------------------------|-----------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Assessed Value Land</b> | <b>Ass'd. Value Improvements</b>   | <b>Total Assessed Value</b> | <b>Ave. Assmt. Ratio</b><br>0.6317                                               | <b>Net Assessed Value Rate</b><br>(Does NOT reflect credits)<br>0.025440665 |
| <b>Est. Fair Mkt. Land</b> | <b>Est. Fair Mkt. Improvements</b> | <b>Total Est. Fair Mkt.</b> | <input type="checkbox"/> <b>A Star in this box means Unpaid Prior Year Taxes</b> | <b>School taxes reduced by school levy tax credit</b><br>\$0.00             |

| <b>Taxing Jurisdiction</b>                                                      | <b>2023<br/>Est. State Aids<br/>Allocated Tax Dist.</b> | <b>2024<br/>Est. State Aids<br/>Allocated Tax Dist.</b> | <b>2023<br/>Net Tax</b> | <b>2024<br/>Net Tax</b> | <b>% Tax<br/>Change</b> |
|---------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|-------------------------|-------------------------|-------------------------|
| ASHLAND COUNTY                                                                  | 783,558                                                 | 879,572                                                 |                         | 0.00                    |                         |
| CITY OF ASHLAND                                                                 | 5,404,592                                               | 5,508,285                                               |                         | 0.00                    |                         |
| VTAE (NORTHWOOD TECH)                                                           | 364,136                                                 | 398,051                                                 |                         | 0.00                    |                         |
| ASHLAND SCHOOL DIST                                                             | 13,234,442                                              | 14,006,339                                              |                         | 0.00                    |                         |
| <b>Total</b>                                                                    | <b>19,786,728</b>                                       | <b>20,792,247</b>                                       |                         |                         |                         |
| <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit<br/>Net Property Tax</b> |                                                         |                                                         |                         |                         |                         |

|                                                                                                                                            |                                                                                    |                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Make Check Payable to:</b><br>ASHLAND CITY TREASURER<br>JACEY DEAN<br>601 MAIN STREET WEST<br>ASHLAND WI 54806-0747<br>715-685-1605     | <b>Full Payment Due On or Before January 31, 2025</b><br>\$249.22                  | <b>Net Property Tax</b><br>SIDEWALKS<br>0.00<br>249.22 |
|                                                                                                                                            | <b>Or First Installment Due On or Before January 31, 2025</b><br>\$249.22          |                                                        |
| <b>And Second Installment Payment Payable To</b><br>TRACEY A. HOGLUND<br>ASHLAND CO. TREASURER<br>201 WEST MAIN STREET<br>ASHLAND WI 54806 | <b>And Second Installment Due On or Before July 31, 2025</b><br>\$0.00             |                                                        |
|                                                                                                                                            | <b>FOR TREASURERS USE ONLY</b><br><br>PAYMENT _____<br>BALANCE _____<br>DATE _____ |                                                        |
|                                                                                                                                            |                                                                                    |                                                        |

**Warning:** If not paid by due dates, installment option is lost and total tax is delinquent subject to interest and, if applicable, penalty. **Failure to pay on time. See reverse.**

PA-686/2 (R 8-15)

▼ **PLEASE RETURN LOWER PORTION WITH REMITTANCE** ▼

**REAL ESTATE PROPERTY TAX BILL FOR 2024****Bill #:** 1305**Parcel #:** 201-01959-0200**Alt. Parcel #:**

**Total Due For Full Payment** \$249.22  
Pay to Local Treasurer By Jan 31, 2025

**OR PAY INSTALLMENTS OF:**

|                                                                                     |                                                                                 |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>1ST INSTALLMENT</b><br>Pay to Local Treasurer<br>\$249.22<br>BY January 31, 2025 | <b>2ND INSTALLMENT</b><br>Pay to County Treasurer<br>\$0.00<br>BY July 31, 2025 |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|

☐ Check For Billing Address Change.

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

|                                |       |
|--------------------------------|-------|
| <b>FOR TREASURERS USE ONLY</b> |       |
| PAYMENT                        | _____ |
| BALANCE                        | _____ |
| DATE                           | _____ |

STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024

CITY OF ASHLAND  
ASHLAND COUNTY

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

CITY OF ASHLAND

BILL NUMBER: 2515

IMPORTANT: · Correspondence should refer to parcel number.  
· See reverse side for important information.  
· Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

366960 359087 343406 343403 ACRES: 4.700  
SEC 27, T 48 N, R 04 W, SW¼ of SE¼  
PLAT: 670-670 CERTIFIED SURVEY MAP  
BLOCK/CONDO: LOT 2  
LOT 2 OF CERTIFIED SURVEY 670 LESS LOTS 1 AND  
2 OF CSM 755

Property Address: 2200 LAKE SHORE DR E

Parcel #: 201-03611-0300  
Alt. Parcel #:

|                               |                                                            |                                                |                                                                                 |                                                                      |
|-------------------------------|------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Assessed Value Land<br>45,000 | Ass'd. Value Improvements                                  | Total Assessed Value<br>45,000                 | Ave. Assmt. Ratio<br>0.6317                                                     | Net Assessed Value Rate<br>(Does NOT reflect credits)<br>0.025440665 |
| Est. Fair Mkt. Land<br>71,200 | Est. Fair Mkt. Improvements                                | Total Est. Fair Mkt.<br>71,200                 | <input type="checkbox"/> A Star in this box<br>means Unpaid Prior<br>Year Taxes | School taxes reduced by<br>school levy tax credit<br>\$87.71         |
| <b>Taxing Jurisdiction</b>    |                                                            |                                                |                                                                                 |                                                                      |
|                               | 2023<br>Est. State Aids<br>Allocated Tax Dist.             | 2024<br>Est. State Aids<br>Allocated Tax Dist. | 2023<br>Net Tax                                                                 | 2024<br>Net Tax<br>% Tax<br>Change                                   |
| ASHLAND COUNTY                | 783,558                                                    | 879,572                                        | 323.27                                                                          | 339.75<br>5.1%                                                       |
| CITY OF ASHLAND               | 5,404,592                                                  | 5,508,285                                      | 462.55                                                                          | 477.91<br>3.3%                                                       |
| VTAE (NORTHWOOD TECH)         | 364,136                                                    | 398,051                                        | 15.20                                                                           | 17.08<br>12.4%                                                       |
| ASHLAND SCHOOL DIST           | 13,234,442                                                 | 14,006,339                                     | 343.46                                                                          | 310.09<br>-9.7%                                                      |
| <b>Total</b>                  | 19,786,728                                                 | 20,792,247                                     | 1,144.48                                                                        | 1,144.83                                                             |
|                               | <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit</b> |                                                |                                                                                 |                                                                      |
|                               |                                                            |                                                | 1,144.48                                                                        | 1,144.83                                                             |

Make Check Payable to:  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

Full Payment Due On or Before January 31, 2025  
\$1,279.47

Or First Installment Due On or Before January 31, 2025  
\$707.06

And Second Installment Payment Payable To  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

And Second Installment Due On or Before July 31, 2025  
\$572.41

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

Net Property Tax 1,144.83  
DELINQUENT WATER 134.64

TOTAL DUE FOR FULL PAYMENT

Pay By January 31, 2025

▶ \$ 1,279.47

Warning: If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. Failure to pay on time. See reverse.

FOR INFORMATIONAL PURPOSES ONLY  
- Voter Approved Temporary Tax Increases

Taxing Jurisdiction  
ASHLAND SCHOOL DIST

Total  
Additional Taxes  
2,134,545.00

Total Additional Taxes  
Applied to Property  
209.06

Year  
Increase Ends  
2036

PLEASE RETURN LOWER  
PORTION WITH REMITTANCE

REAL ESTATE PROPERTY TAX BILL FOR 2024

Bill #: 2515  
Parcel #: 201-03611-0300  
Alt. Parcel #:

Total Due For Full Payment \$1,279.47  
Pay to Local Treasurer By Jan 31, 2025

OR PAY INSTALLMENTS OF:

|                                                                              |                                                                            |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 1ST INSTALLMENT<br>Pay to Local Treasurer<br>\$707.06<br>BY January 31, 2025 | 2ND INSTALLMENT<br>Pay to County Treasurer<br>\$572.41<br>BY July 31, 2025 |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------|

☐ Check For Billing Address Change.

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

STATE OF WISCONSIN  
REAL ESTATE PROPERTY TAX BILL FOR 2024

CITY OF ASHLAND  
ASHLAND COUNTY

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

CITY OF ASHLAND

BILL NUMBER: 3630

IMPORTANT: • Correspondence should refer to parcel number.  
• See reverse side for important information.  
• Be sure this description covers your property. This description is  
for property tax bill only and may not be a full legal description.

344783 ACRES: 376.430  
SEC 18, T 47 N, R 04 W  
PLAT: N/A-NOT AVAILABLE  
PART OF SECTION 18 TOWN OF GINGLES ANNEXED TO  
CITY OF ASHLAND FOR AIRPORT USE SECTION 18  
T47N R4W

Property Address:

Parcel #: 201-05008-1000  
Alt. Parcel #:

|                            |                                                            |                                                       |                                                                                 |                                                       |                         |
|----------------------------|------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------|
| Assessed Value Land        | Ass'd. Value Improvements<br>629,800                       | Total Assessed Value<br>629,800                       | Ave. Assmt. Ratio<br>0.6317                                                     | Net Assessed Value Rate<br>(Does NOT reflect credits) | 0.025440665             |
| Est. Fair Mkt. Land        | Est. Fair Mkt. Improvements<br>997,000                     | Total Est. Fair Mkt.<br>997,000                       | <input type="checkbox"/> A Star in this box<br>means Unpaid Prior<br>Year Taxes | School taxes reduced by<br>school levy tax credit     | \$1,227.53              |
| <b>Taxing Jurisdiction</b> |                                                            |                                                       |                                                                                 |                                                       |                         |
|                            | <b>2023</b><br>Est. State Aids<br>Allocated Tax Dist.      | <b>2024</b><br>Est. State Aids<br>Allocated Tax Dist. | <b>2023</b><br>Net Tax                                                          | <b>2024</b><br>Net Tax                                | <b>% Tax<br/>Change</b> |
| ASHLAND COUNTY             | 783,558                                                    | 879,572                                               |                                                                                 | 4,754.96                                              | 100.0%                  |
| CITY OF ASHLAND            | 5,404,592                                                  | 5,508,285                                             |                                                                                 | 6,688.66                                              | 100.0%                  |
| VTAE (NORTHWOOD TECH)      | 364,136                                                    | 398,051                                               |                                                                                 | 238.98                                                | 100.0%                  |
| ASHLAND SCHOOL DIST        | 13,234,442                                                 | 14,006,339                                            |                                                                                 | 4,339.93                                              | 100.0%                  |
| <b>Total</b>               | 19,786,728                                                 | 20,792,247                                            |                                                                                 | 16,022.53                                             | 100.0%                  |
|                            | <b>First Dollar Credit<br/>Lottery &amp; Gaming Credit</b> |                                                       |                                                                                 | 50.82                                                 | 100.0%                  |
|                            | <b>Net Property Tax</b>                                    |                                                       |                                                                                 | 15,971.71                                             | 100.0%                  |

**Make Check Payable to:**  
ASHLAND CITY TREASURER  
JACEY DEAN  
601 MAIN STREET WEST  
ASHLAND WI 54806-0747  
715-685-1605

Full Payment Due On or Before January 31, 2025  
\$15,971.71

Or First Installment Due On or Before January 31, 2025  
\$7,985.86

**And Second Installment Payment Payable To**  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

And Second Installment Due On or Before July 31, 2025  
\$7,985.85

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

Net Property Tax 15,971.71

**TOTAL DUE FOR FULL PAYMENT**

Pay By January 31, 2025

▶ \$ 15,971.71

Warning: If not paid by due dates, installment option is lost  
and total tax is delinquent subject to interest and, if applicable,  
penalty. Failure to pay on time. See reverse.

FOR INFORMATIONAL PURPOSES ONLY  
- Voter Approved Temporary Tax Increases

**Taxing Jurisdiction**  
ASHLAND SCHOOL DIST

|                                   |                                                       |                               |
|-----------------------------------|-------------------------------------------------------|-------------------------------|
| <b>Total<br/>Additional Taxes</b> | <b>Total Additional Taxes<br/>Applied to Property</b> | <b>Year<br/>Increase Ends</b> |
| 2,134,545.00                      | 2,925.94                                              | 2036                          |

PLEASE RETURN LOWER  
PORTION WITH REMITTANCE

REAL ESTATE PROPERTY TAX BILL FOR 2024

Bill #: 3630  
Parcel #: 201-05008-1000  
Alt. Parcel #:

**Total Due For Full Payment** \$15,971.71  
Pay to Local Treasurer By Jan 31, 2025

OR PAY INSTALLMENTS OF:

|                                                                                       |                                                                                     |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>1ST INSTALLMENT</b><br>Pay to Local Treasurer<br>\$7,985.86<br>BY January 31, 2025 | <b>2ND INSTALLMENT</b><br>Pay to County Treasurer<br>\$7,985.85<br>BY July 31, 2025 |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|

☐ Check For Billing Address Change.

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

FOR TREASURERS USE ONLY

PAYMENT \_\_\_\_\_  
BALANCE \_\_\_\_\_  
DATE \_\_\_\_\_

2024 Real Estate Property Tax Receipt

06/13/2025  
09:33:50 AM

Tax District: CITY OF ASHLAND  
County: ASHLAND COUNTY  
Parcel #: 201-01958-0000  
Alt. Parcel #:  
Property Address:  
Section/Town/Range: 04-47N-04W  
Volume/Page: 505/627 505/624  
Acres: 0.000  
Plat: ELLI-ELLIS DIVISION CITY OF ASHLAND  
Block/Condo Bldg: 162 LOT 1

Legal Description:  
WEST 60' OF LOTS 1 THRU 4 INCL & THE WEST 60' OF THE SOUTH 20' OF LOT 5  
BLOCK 162 ELLIS DIVISION TAX EXEMPT

Bill #: 1304

|            |               |             |        |                        |
|------------|---------------|-------------|--------|------------------------|
| Total Land | Total Improve | Total Value | Ratio  | Est. Fair Market Value |
| 0          | 0             | 0           | 0.6317 | 0                      |

Payment

Date Paid: 05/12/2025  
Interest/Penalty Date: 05/12/2025  
Receipt #: 1110  
Gen. Property Tax: 0.00  
Special Assessment: 0.00  
Special Charges: 332.62  
Delinquent Utility Charges: 0.00  
Private Forest Crop Taxes: 0.00  
Woodland Tax Law Taxes: 0.00  
Managed Forest Land Taxes: 0.00  
Interest: May 2025 13.30  
Penalty: May 2025 6.65  
Other Charges: 0.00  
Total Amount Paid: 352.57  
CR Batch #:50669 Transaction #: 26287  
Transaction Cash: 0.00  
Transaction Check: 3,445.97  
Transaction Other: 0.00  
Transaction Overpayment: 0.00

Balance

Prior Tax Balance: 332.62  
Tax Amount Paid: 332.62  
New Tax Balance: 0.00  
Interest: May 2025 0.00  
Penalty: May 2025 0.00  
New Balance Due: 0.00

Payment Note:  
CITY OF ASHLAND, CK # 108550

If Paid By Check, Tax Receipt Is Not Valid Until Check Has Cleared All Banks.

RECEIVED BY:

TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

2024 Real Estate Property Tax Receipt

06/13/2025  
09:32:46 AM

Tax District: CITY OF ASHLAND  
County: ASHLAND COUNTY  
Parcel #: 201-01959-0200  
Alt. Parcel #:  
Plat: ELLI-ELLIS DIVISION CITY OF ASHLAND  
Property Address:  
Section/Town/Range: 04-47N-04W  
Volume/Page: 547/322  
Acres: 0.000  
Block/Condo Bldg: 162 LOT 1

Legal Description:  
THAT PART OF LOTS 1 TO 11 & 13 TO 19 BLOCK 162 ELLIS DIVISION; INCLUDING  
VACATED ALLEY ADJ & 1/2 VACATED 4TH AVE ADJ DESC IN V 547 PG 322 LESS EAST  
75'

Bill #: 1305

| Total Land | Total Improve | Total Value | Ratio  | Est. Fair Market Value |
|------------|---------------|-------------|--------|------------------------|
| 0          | 0             | 0           | 0.6317 | 0                      |

Payment

Date Paid: 05/12/2025  
Interest/Penalty Date: 05/12/2025  
Receipt #: 1111  
Gen. Property Tax: 0.00  
Special Assessment: 0.00  
Special Charges: 249.22  
Delinquent Utility Charges: 0.00  
Private Forest Crop Taxes: 0.00  
Woodland Tax Law Taxes: 0.00  
Managed Forest Land Taxes: 0.00  
Interest: May 2025 9.97  
Penalty: May 2025 4.98  
Other Charges: 0.00  
Total Amount Paid: 264.17  
CR Batch #:50669 Transaction #: 26287  
Transaction Cash: 0.00  
Transaction Check: 3,445.97  
Transaction Other: 0.00  
Transaction Overpayment: 0.00

Balance

Prior Tax Balance: 249.22  
Tax Amount Paid: 249.22  
New Tax Balance: 0.00  
Interest: May 2025 0.00  
Penalty: May 2025 0.00  
New Balance Due: 0.00

Payment Note:  
CITY OF ASHLAND, CK # 108550

If Paid By Check, Tax Receipt Is Not Valid Until Check Has Cleared All Banks.

RECEIVED BY:

TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

# 2023 Real Estate Property Tax Receipt

06/13/2025  
09:35:25 AM

**Tax District:** CITY OF ASHLAND  
**County:** ASHLAND COUNTY  
**Parcel #:** 201-03611-0300  
**Alt. Parcel #:**

**Property Address:** 2200 LAKE SHORE DR E  
**Section/Town/Range:** 27-48N-04W SW SE  
**Volume/Page:** 359087 343406 343403  
**Acres:** 4.700

**Plat:** 670-670 CERTIFIED SURVEY MAP

**Block/Condo Bldg:** LOT 2

**Legal Description:**

LOT 2 OF CERTIFIED SURVEY 670 LESS LOTS 1 AND 2 OF CSM 755

**Bill #:** 2522

**Certificate #:** 737

| Total Land | Total Improve | Total Value | Ratio  | Est. Fair Market Value |
|------------|---------------|-------------|--------|------------------------|
| 45,000     | 0             | 45,000      | 0.7446 | 60,400                 |

## Payment

**Date Paid:** 05/12/2025  
**Interest/Penalty Date:** 05/12/2025  
**Redemption #:** 33346  
**Gen. Property Tax:** 1,144.48  
**Special Assessment:** 0.00  
**Special Charges:** 0.00  
**Delinquent Utility Charges:** 43.41  
**Private Forest Crop Taxes:** 0.00  
**Woodland Tax Law Taxes:** 0.00  
**Managed Forest Land Taxes:** 0.00  
**Interest:** May 2025 190.07  
**Penalty:** May 2025 95.03  
**Other Charges:** 0.00  
**Total Amount Paid:** 1,472.99  
**CR Batch #:** 50669 **Transaction #:** 26287  
**Transaction Cash:** 0.00  
**Transaction Check:** 3,445.97  
**Transaction Other:** 0.00  
**Transaction Overpayment:** 0.00

## Balance

**Prior Tax Balance:** 1,187.89  
**Tax Amount Paid:** 1,187.89  
**New Tax Balance:** 0.00  
**Interest:** May 2025 0.00  
**Penalty:** May 2025 0.00  
**New Balance Due:** 0.00

**Payment Note:**

CITY OF ASHLAND, CK # 108550

**If Paid By Check, Tax Receipt Is Not Valid Until Check Has Cleared All Banks.**

**RECEIVED BY:**

TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

EL TARASCO LLC  
819 MACARTHUR AVE  
ASHLAND WI 54806

2024 Real Estate Property Tax Receipt

06/13/2025  
09:34:52 AM

Tax District: CITY OF ASHLAND

County: ASHLAND COUNTY

Parcel #: 201-03611-0300

Alt. Parcel #:

Plat: 670-670 CERTIFIED SURVEY MAP

Legal Description:  
LOT 2 OF CERTIFIED SURVEY 670 LESS LOTS 1 AND 2 OF CSM 755

Property Address: 2200 LAKE SHORE DR E

Section/Town/Range: 27-48N-04W SW SE

Volume/Page: 366960 359087 343406

Acres: 4.700

Block/Condo Bldg: LOT 2

Bill #: 2515

|            |               |             |        |                        |
|------------|---------------|-------------|--------|------------------------|
| Total Land | Total Improve | Total Value | Ratio  | Est. Fair Market Value |
| 45,000     | 0             | 45,000      | 0.6317 | 71,200                 |

Payment

Date Paid: 05/12/2025

Interest/Penalty Date: 05/12/2025

Receipt #: 1112

Gen. Property Tax: 1,144.83

Special Assessment: 0.00

Special Charges: 0.00

Delinquent Utility Charges: 134.64

Private Forest Crop Taxes: 0.00

Woodland Tax Law Taxes: 0.00

Managed Forest Land Taxes: 0.00

Interest: May 2025 51.18

Penalty: May 2025 25.59

Other Charges: 0.00

Total Amount Paid: 1,356.24

CR Batch #:50669 Transaction #: 26287

Transaction Cash: 0.00

Transaction Check: 3,445.97

Transaction Other: 0.00

Transaction Overpayment: 0.00

Balance

Prior Tax Balance: 1,279.47

Tax Amount Paid: 1,279.47

New Tax Balance: 0.00

Interest: May 2025 0.00

Penalty: May 2025 0.00

New Balance Due: 0.00

Payment Note:  
CITY OF ASHLAND, CK # 108550

If Paid By Check, Tax Receipt Is Not Valid Until Check Has Cleared All Banks.

RECEIVED BY:

TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806



2024 Real Estate Property Tax Receipt

06/13/2025  
09:31:00 AM

Tax District: CITY OF ASHLAND  
County: ASHLAND COUNTY  
Parcel #: 201-05008-1000  
Alt. Parcel #:  
Plat: N/A-NOT AVAILABLE  
Property Address:  
Section/Town/Range: 18-47N-04W  
Volume/Page: 344783  
Acres: 376.430  
Block/Condo Bldg:

Legal Description:  
PART OF SECTION 18 TOWN OF GINGLES ANNEXED TO CITY OF ASHLAND FOR AIRPORT  
USE SECTION 18 T47N R4W

Bill #: 3630

|            |               |             |        |                        |
|------------|---------------|-------------|--------|------------------------|
| Total Land | Total Improve | Total Value | Ratio  | Est. Fair Market Value |
| 0          | 629,800       | 629,800     | 0.6317 | 997,000                |

Payment

Date Paid: 05/02/2025  
Interest/Penalty Date: 04/30/2025  
Receipt #: 1079  
Gen. Property Tax: 15,971.71  
Special Assessment: 0.00  
Special Charges: 0.00  
Delinquent Utility Charges: 0.00  
Private Forest Crop Taxes: 0.00  
Woodland Tax Law Taxes: 0.00  
Managed Forest Land Taxes: 0.00  
Interest: Apr 2025 479.15  
Penalty: Apr 2025 239.58  
Other Charges: 0.00  
Total Amount Paid: 16,690.44  
CR Batch #:50669 Transaction #: 26241  
Transaction Cash: 0.00  
Transaction Check: 16,690.44  
Transaction Other: 0.00  
Transaction Overpayment: 0.00

Balance

Prior Tax Balance: 15,971.71  
Tax Amount Paid: 15,971.71  
New Tax Balance: 0.00  
Interest: May 2025 0.00  
Penalty: May 2025 0.00  
New Balance Due: 0.00

Payment Note:  
CITY OF ASHLAND, CK # 108493

If Paid By Check, Tax Receipt Is Not Valid Until Check Has Cleared All Banks.

RECEIVED BY:  
  
TRACEY A. HOGLUND  
ASHLAND CO. TREASURER  
201 WEST MAIN STREET  
ASHLAND WI 54806

CITY OF ASHLAND  
601 MAIN ST W  
ASHLAND WI 54806

Ref: 2025-169

COUNCIL AGENDA: 9.B.  
(7/29/2025)

**SUBJECT:** Consider to Approve to Waive the Advertising Requirements of Chapter 194.04 Procurement of Goods and Services, Ashland City Ordinances, and Approve Repair Costs for the Fire Department's 2005 Custom Fire Water Tender (*Fire Department*) Roll

**RECOMMENDATION:** The Fire Chief recommends approval

---

**DEPARTMENT OF ORIGIN:** Fire & EMS Department

**CLEARANCES:** Fire Chief  
Finance Director

**EXHIBITS:**

1. Ashland 2005 Tank Replacment 6-2025
2. Fiberglass Tank Repairs Over the Years
3. K3Poly Warranty

**EXPENDITURES REQUIRED:** \$89,000 plus 20% contingency

**AMOUNT BUDGETED:** \$120,000 Fund 461 2025 Capital Budget

**APPROPRIATION REQUIRED:** None

**TREASURER'S CERTIFICATE:** The Treasurer's Office has certified that Custom Fire Apparatus is in compliance with the provisions of Ordinance 923.10 Ashland City Ordinances.

**COMPLIANCE WITH CHAPTER 51:** Section 51.26 (b) of Chapter 51, Ashland City Ordinances, permits the Mayor and/or Clerk to schedule items directly for Council action. The Mayor and/or City Clerk has chosen to direct this item directly to Council pursuant to the authority granted to them in Chapter 51, Ashland City Ordinances.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** This item conforms to the Ashland Comprehensive Plan in that it is "...in accordance with existing and

future needs, best promote public health, safety, morals, and the general welfare..." for the City's residents and community.

### **SUMMARY STATEMENT:**

The Ashland Fire Department maintains a 2005 Custom Fire Water Tender with a 4,000 gallon tank to supplement our water supply in the City for fire suppression, for fire suppression in under-hydranted areas within the city, and for the two townships where we provide fire protection services.

This truck was built with a fiberglass water tank that sits inside the metal box. This fiberglass water tank has cracked and been repaired five times over the last 20 years. The most recent repair cost \$4,000 and did not survive the trip back to Ashland. At the time the truck was built, poly tanks were significantly more expensive than fiberglass tanks. Our truck committee preferred a poly tank but needed to go with the fiberglass tank in order to stay on the \$325,000 budget that was approved by the Assistance to Firefighters Grant which paid for 90% of this truck in 2024. In the last 20 years, the leading manufacturer of poly tanks has built a facility in Wisconsin and the costs are now more comparable to fiberglass. Also, the performance of poly tanks far surpasses fiberglass.

Custom Fire, located in Ocoela, WI, built our Tender in 2024 and gave us a quote to remove the fiberglass tank and replace it with a poly tank. While the tank is removed, any structural and corrosion repairs that may be needed to the frame due to years of water leaks and frame components will be addressed. These repairs are not listed and will be completed at an additional charge if needed for the cost of time and materials. The three water dump chutes will be replaced with stainless steel dump chutes. The current dump chutes are made of mild steel and have corroded and become irregular inside, causing issues with closing the valves over the years. The stainless chutes will reduce future maintenance and the replacement valves, combined with other repairs and tank replacement, will extend the life of this emergency vehicle for up to another 20 years.

In addition to the cracks in the fiberglass that cause the water to leak out, the baffles of the tank have separated from the wall of the tank and are not repairable.

The new poly tank comes with a lifetime warranty that covers the costs of future repairs to the tank. Should a leak occur, we will still have the expense of driving the tender to Osceola and the cost of removing the top of the tank body. The warranty covers the repairs to the poly tank.

The final cost of this project is unknown until the tank is removed from the truck, but all indications are that this project will come in under budget. The request to waive the advertising requirements of [Chapter 194 is due to work already done by](#) Custom Fire Apparatus Inc of Osceola, WI and prevents having to pay another vendor to go through this same process. Due to a fire at the Custom Fire Apparatus Inc. facility, no blueprints of the tank exist for another vendor to use to build another tank. The additional downtime and additional cost for soliciting bids from other vendors are cost-prohibitive if another vendor is even willing to commit to the work within the next two years. Finally, this project was requested and approved during the capital budget process. All necessary funds are available for this repair.





Custom Fire Apparatus, Inc.  
509 68th Avenue  
Osceola, WI 54020

# PRICE ESTIMATE

| 2005 Ashland Pumper Tanker Tank Replacment                                                                                         |                              |                     |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------|
| <b>TO: Ashland Fire Department</b>                                                                                                 | <b>DATE:</b>                 | <b>JOB #:</b>       |
| 215 6th St E                                                                                                                       | 7/16/2025                    |                     |
| Ashland, WI 54806                                                                                                                  |                              | <b>TERMS:</b>       |
|                                                                                                                                    |                              | 30 DAYS             |
|                                                                                                                                    | <b>PROPOSED SHIP DATE:</b>   | <b>SHIPPED VIA:</b> |
|                                                                                                                                    |                              |                     |
| <b>ATTN: Kurt Blakeman</b>                                                                                                         | <b>ESTIMATE PREPARED BY:</b> | <b>FOB:</b>         |
| <a href="mailto:kblakema@coawi.org">kblakema@coawi.org</a>                                                                         | Craig Nelson                 |                     |
| UPF poly 4000 Gallon tank                                                                                                          |                              | \$ 54,725.16        |
| Disassembly                                                                                                                        | 24 Hrs                       | \$ 3,600.00         |
| Remove Tank                                                                                                                        | 5 Hrs                        | \$ 750.00           |
| Install Tank                                                                                                                       | 7 Hrs                        | \$ 1,050.00         |
| Assembly                                                                                                                           | 33 Hrs                       | \$ 4,950.00         |
| Miscellaneous Parts                                                                                                                |                              | \$ 185.00           |
| 3-New Electric Tank Dump Valves, Electric Extension on the Rear Valve                                                              |                              | \$ 14,553.00        |
| 2-New Stainless Steel Dump Valve Extensions on Sides                                                                               |                              | \$ 1,125.00         |
| Custom Fire will Inspect Tank Cradle and advise on repairs as needed                                                               |                              |                     |
| Standard NFPA 55" LED Lightbar                                                                                                     |                              | \$ 3,675.00         |
| New Air Primer, Remove Oil Primer                                                                                                  |                              | \$ 3,985.00         |
|                                                                                                                                    |                              |                     |
|                                                                                                                                    |                              |                     |
|                                                                                                                                    |                              |                     |
| Shop Supplies                                                                                                                      |                              | \$ 175.00           |
|                                                                                                                                    |                              |                     |
| Shipping Not Included                                                                                                              |                              |                     |
| <b>Customer Signature:</b>                                                                                                         |                              |                     |
| <b><u>Estimate Subject to Increase if Further Damage/Issues are Found, You will be Notified Before Work is Completed</u></b>       |                              |                     |
| <b><u>Due to market volatility, all Surcharges attached to purchased products shall be passed on to Buyer with no mark-up.</u></b> |                              |                     |
| <b>TOTAL:</b>                                                                                                                      |                              | <b>\$ 88,773.16</b> |

**Price is valid for 30 calendar days from above date**

**Thank you for your business, Service Dept.**

1-715-294-5841

[service@customfire.com](mailto:service@customfire.com)

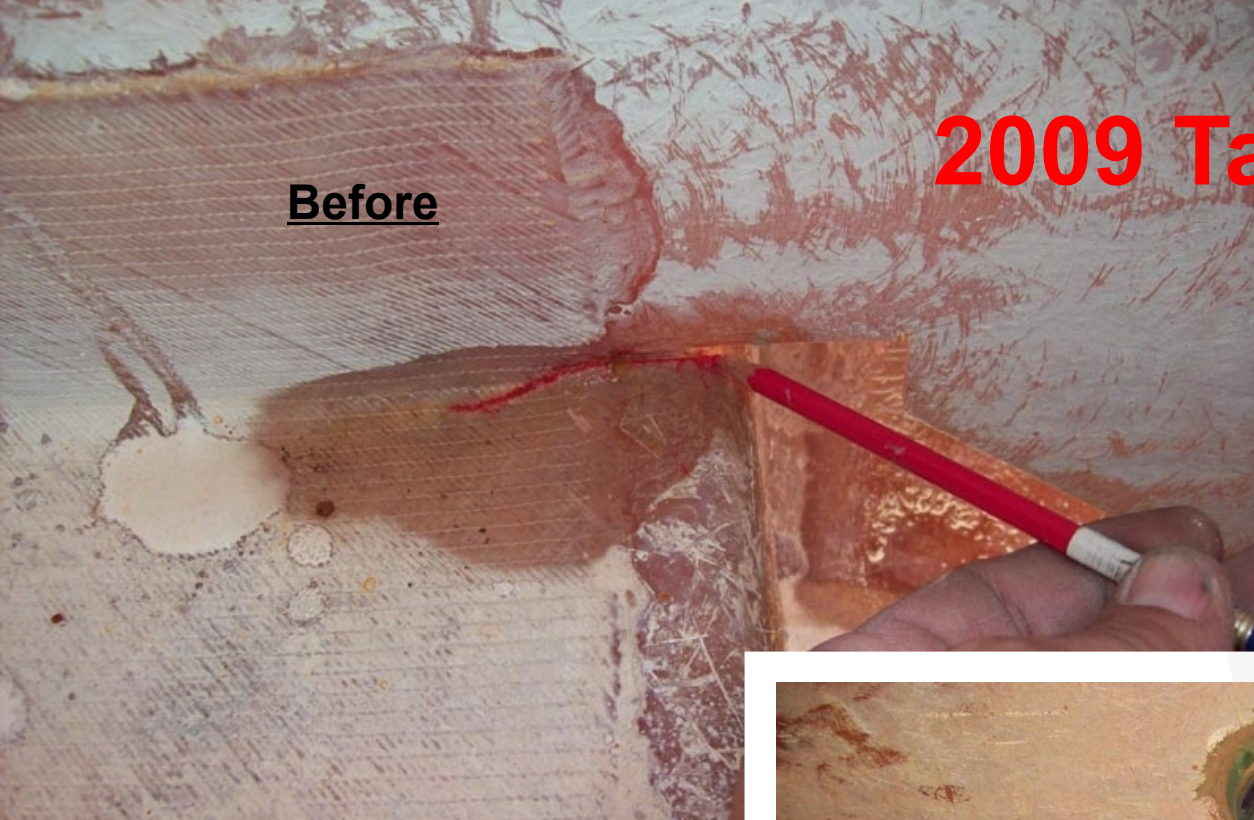
# Fiberglass Tank Repairs

Sequence of repairs  
through time



# 2009 Tank Repair

Before



Before



After



After

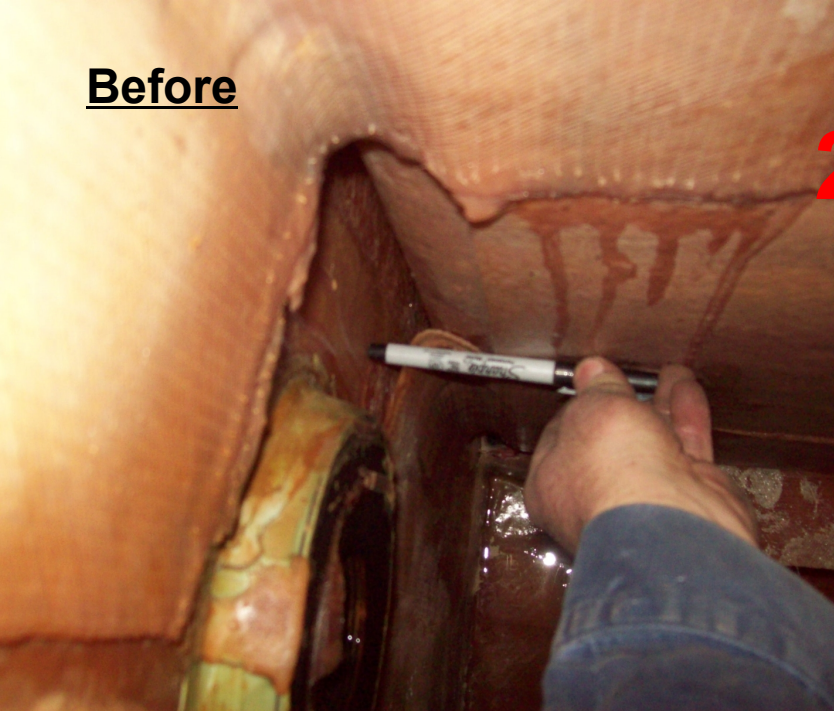


After





Before



## 2014 Tank Repairs

Before



Before



After



After



After



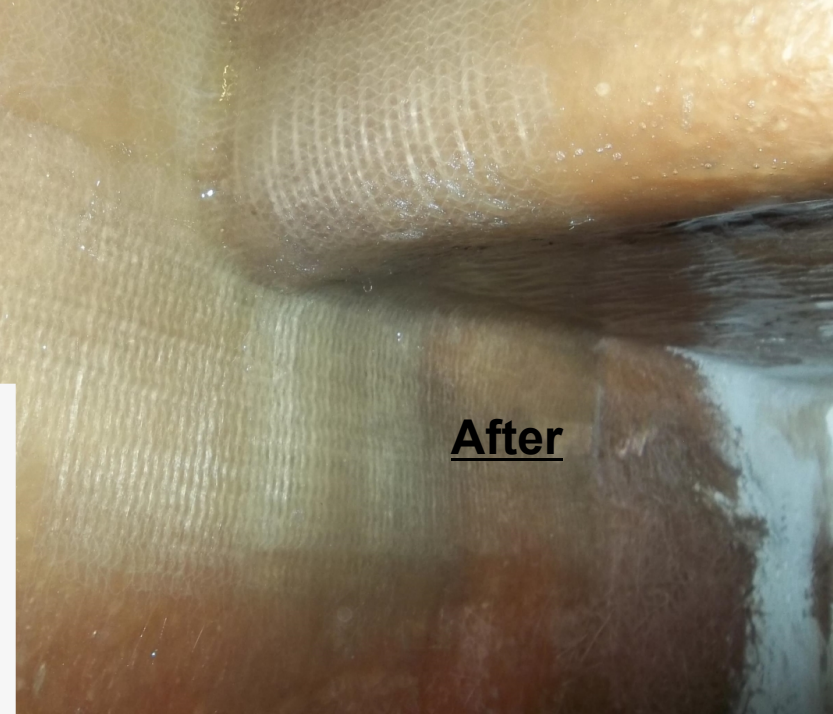


# 2016 Tank Repair

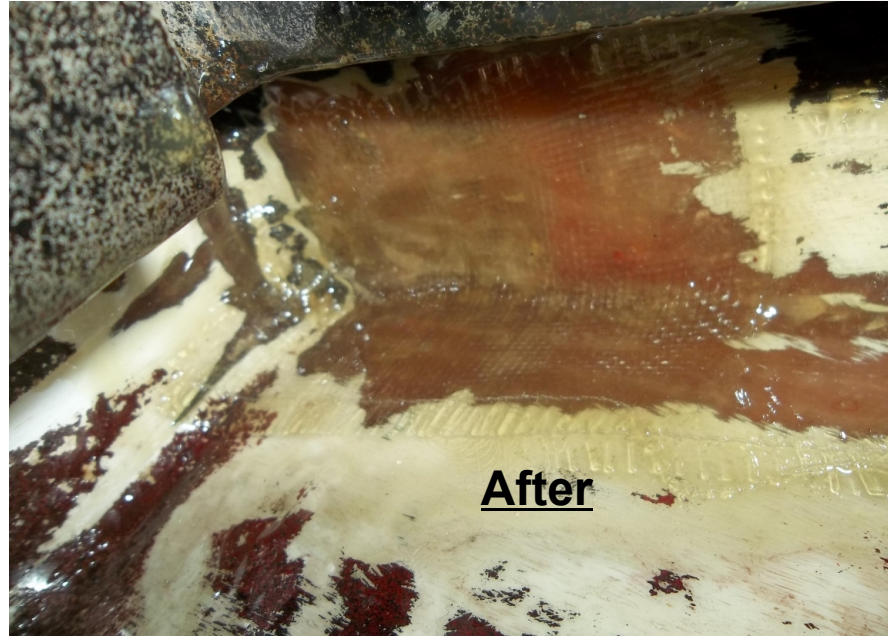
Before



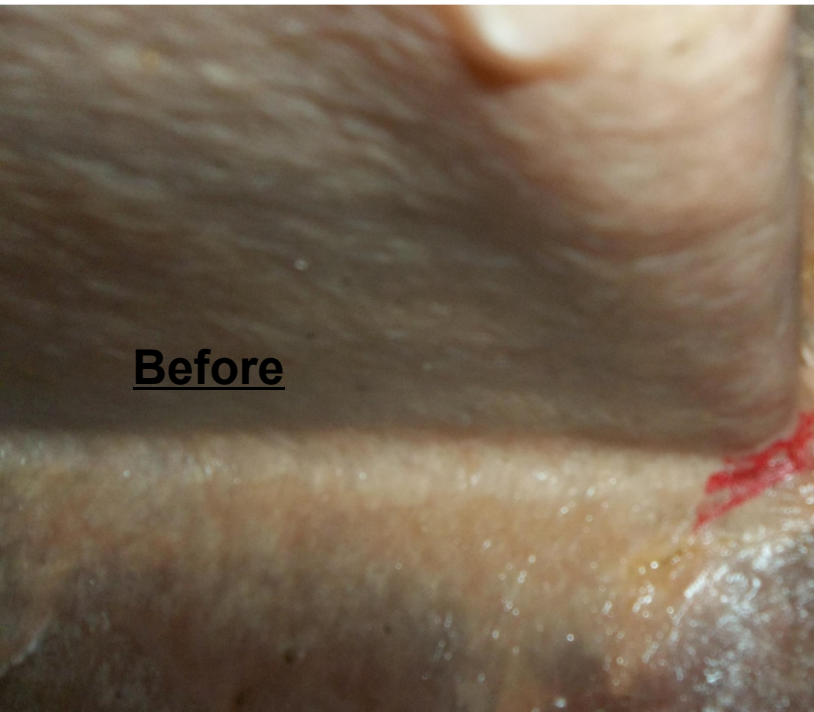
After



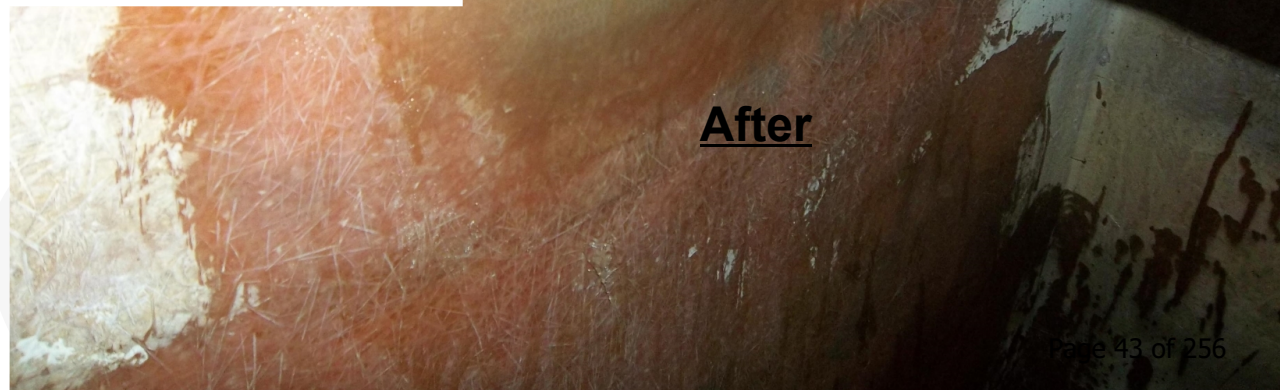
After



Before



After





Why it's beyond repair



The labor to attempt repairing it would cost as much as a new tank, with no guarantee of how long it will last



The tank has bowed away from all the supports on both sides.





### **WATER TANK WARRANTY**

K3 Research, LLC dba K3Fire Poly Products located at 430 Phillips Court, Chetek, WI USA (hereinafter "K3") offers a limited lifetime warranty on all water and foam tanks. K3 warrants to the original purchaser of the tank that it will be free from manufacturing defects in material and workmanship for the service life of the vehicle, ten years for skid units. The tank must be installed in accordance with K3 installation recommendations. Every tank is thoroughly inspected and tested for leaks before leaving our facility. Should any problems develop with your tank and will not meet performance criteria during the service life of the vehicle, notify K3 in writing or call 715-925-1044. This warranty extends to the original buyer and may not be assigned to another entity without the prior written consent of K3 except an original equipment manufacturer may assign this warranty to the first owner of the apparatus.

If the tank problem would render the truck out of service, K3 will make every effort to dispatch a service technician within 48 hours to repair the tank. If the vehicle can remain in service, K3 will dispatch a service technician within a mutually agreed upon time period. If the tank is located outside of North America, K3 will reimburse reasonable labor and material necessary for the repair only. K3 is not responsible for costs associated with international travel or any other international cost.

K3 will repair, or, at their option, replace the tank with a new tank. K3 will cover all customary and reasonable costs to remove and install the tank. This warranty will not cover tanks that have been improperly installed, misused or abused, and the serial number must not have been altered, defaced or removed. K3 will not cover any unauthorized third-party repairs or alterations. Any of these actions may void the warranty. After 10 years of service life, K3 will repair the tank only at K3's facility. K3 reserves sole discretion as to repair of defects covered under this warranty, or replacement of the tank. K3's responsibilities as described herein shall not exceed the original purchase price of the tank(s); if K3 replaces the tank all further warranty obligations to the original tank shall be void.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. K3 HAS A MAXIMUM OBLIGATION AND WILL NOT BE LIABLE FOR ANY AMOUNT THAT EXCEEDS THE PRESENT PURCHASE PRICE PLUS INSTALLATION AND REMOVAL COST OF THE TANK, FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHERWISE ARISING OUT OF FAILURE OF ITS PRODUCT. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF THE TANK COMPANY.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. K3 neither assumes, nor authorizes any person supposing to act on its behalf, to change, nor to assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you also may have other rights which vary from state to state. Some states do not allow exclusion of limitation of incidental or consequential damage, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Serial Number: \_\_\_\_\_  
Customer P.O.: \_\_\_\_\_

Tank Type/Size: \_\_\_\_\_  
K3 Job #: \_\_\_\_\_

**SUBJECT:** Consider a Resolution to Issue a Conditional Use Permit (CUP) to Allow a Fence Exceeding Four Feet in Height in the Corner Side Yard at 307 14th Avenue East, Parcel No. 201-01797-0000, Zoned Single-Family Residential (R-1); Applicants: Ceili Shields and Trevor Hansen (*Planning and Development*) Roll

**RECOMMENDATION:** Approval

---

**DEPARTMENT OF ORIGIN:** Planning & Development

**CLEARANCES:** Planning and Development Director  
Plan Commission (Unanimously recommended approval at July 15, 2025 Plan Commission meeting)

**EXHIBITS:**

1. Proposed Resolution No. 17843
2. Plan Commission Staff report - July 15, 2025

**EXPENDITURES REQUIRED:** N/A

**AMOUNT BUDGETED:** N/A

**APPROPRIATION REQUIRED:** N/A

**TREASURER'S CERTIFICATE:** N/A

**COMPLIANCE WITH CHAPTER 51:** Plan Commission reviewed and unanimously recommended approval at their July 15, 2025 meeting.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** The subject property is located within the overlap of the Downtown Core & Commercial Districts and the Traditional Neighborhood & Mixed-Use District. The Future Land Use Map does not rigidly define land use districts but allows some overlap and flexibility to accommodate different uses

as needed. The subject property is occupied by a single-family home that predates the Comprehensive Plan and current Unified Development Ordinance (UDO). The single-family land use is consistent with the UDO and will not change. The Comprehensive Plan recognizes the importance of neighborhood aesthetics and staff believe that a well-maintained fence can allow the applicants to enjoy their property while maintaining/not detracting from the aesthetics of the property. The staff are of the opinion that the proposed six-foot fence would not conflict with the intent of the Comprehensive Plan by detracting from the neighborhood's aesthetics.

**SUMMARY STATEMENT:**

Applicants Ceili Shields and Trevor Hansen are the owners of the 307 14th Avenue East property. They request approval of a Conditional Use Permit (CUP) to allow a fence exceeding four feet in height in the corner side yard at 307 14th Avenue East, Parcel No. 201-01797-0000. The CUP would allow a fence of up to six (6) feet in height in the corner side yard on the property. The fence would be a wooden privacy fence.

Planning staff and the Plan Commission reviewed the CUP request. The Plan Commission considered the CUP request at their July 15, 2025 meeting and unanimously recommended approval of the CUP according to the conditions recommended by staff. Staff and the Plan Commission now recommend Council approval of the CUP request.

The Plan Commission staff report is included with the CUP resolution. Please see the included Plan Commission staff report for more information.

## RESOLUTION No. 17843

**RESOLUTION TO ISSUE A CONDITIONAL USE PERMIT (CUP) TO ALLOW A FENCE EXCEEDING FOUR FEET IN HEIGHT IN THE CORNER SIDE YARD AT 307 14<sup>TH</sup> AVENUE EAST PARCEL NO. 201-01797-0000, ZONED SINGLE-FAMILY RESIDENTIAL (R-1) DISTRICT; APPLICANT: CEILI SHIELDS AND TREVOR HANSEN.**

**WHEREAS**, the Common Council of the City of Ashland is authorized to issue Conditional Use Permits; and

**WHEREAS**, the applicant has requested a Conditional Use Permit per Chapter 781, Ashland City Ordinances, to allow a fence exceeding four feet in height in the corner side yard at 307 14<sup>th</sup> Avenue East Parcel No. 201-01797-0000, zoned Single-Family Residential (R-1) District; and

**WHEREAS**, the Plan Commission held a Public Hearing on July 15, 2025 and has recommended approval of the Conditional Use Permit with the following conditions:

Staff recommends APPROVAL of the Conditional Use Permit contingent on the following conditions:

1. A fence height of up to six (6) feet is permitted for proposed fencing in the street side yard (the length of the corner side yard between the front and rear facades of the house) along the 3<sup>rd</sup> Street East property line. Solid fencing shall not be installed in the front yard of the property.
2. The proposed fencing shall be installed with the supports facing inward and finished side facing outward consistent with the UDO design standards.
3. The proposed fencing shall be painted or stained within one year of permit issuance and maintained in a good state of repair.
4. Conditional Use Permit is only for the fencing proposed and not for any additional uses or improvements. If any additional changes are proposed such uses will require additional staff and/or Conditional Use Permit approvals through Plan Commission and the Common Council.
5. A fence permit is required prior to the installation of the proposed fencing.

**NOW, THEREFORE, BE IT RESOLVED** by the Common Council of the City of Ashland that the Conditional Use Permit is in accordance with the Ashland Unified Development Ordinance and is hereby approved contingent upon compliance with the above listed conditions.

PASSED: July 29, 2025

\_\_\_\_\_  
Councilperson

ATTEST:

\_\_\_\_\_  
Denise Oliphant, City Clerk

\_\_\_\_\_  
Matthew Mac Kenzie, Mayor

APPROVED AS TO FORM:

\_\_\_\_\_  
Tyler Wickman, City Attorney

**FOR APPLICANT:**

*Applicant understands and accepts the conditions of approval for the CUP as indicated within this resolution, and was provided notice of Common Council approval of this resolution within 5 business days of such approval.*

\_\_\_\_\_  
Applicant (Print and signature)

\_\_\_\_\_  
Date



DEPARTMENT OF  
PLANNING &  
DEVELOPMENT  
601 Main Street West  
Ashland, WI 54806

## STAFF REPORT

Plan Commission – July 15, 2025

**Agenda Item # 6b:**                    **Conditional Use Permit Request to allow a fence exceeding 4 feet in height in the corner side yard at 307 14<sup>th</sup> Avenue East**

Zoning District:                    Single-family Residential (R-1)

Property Address:                307 14<sup>th</sup> Avenue East

Parcel #:                            # 201-01797-0000

Applicant:                         Ceili Shields and Trevor Hansen

Staff Contact:                    Steven Wiley

### **Background**

Applicants Ceili Shields and Trevor Hansen request review and approval of a conditional use permit (CUP) to allow a fence exceeding 4 feet in height in the corner side yard of their property at 307 14<sup>th</sup> Avenue East (Parcel # 201-01797-0000). The subject parcel is located on the eastern side of the city at the corner of 14<sup>th</sup> Avenue East and 3<sup>rd</sup> Street East. The parcel is 0.321 acres (13,983 square feet) in area and contains a single-family home and detached garage. Access to the parcel is off of the alley adjacent to the rear parcel line. The applicants have been in touch with Planning staff regarding their desire to construct a 6-foot tall solid fence for privacy and safety reasons. Staff reviewed the applicant's proposed fence placement and determined that the proposed six-foot fencing in the corner side yard requires a Conditional Use Permit. The applicants submitted a Conditional Use Permit application to allow them to construct a privacy fence up to six (6) feet tall in the corner side yard of their property.

| <b><i>Existing Land Use</i></b> | <b><i>Zoning</i></b>            |
|---------------------------------|---------------------------------|
| Single-family Residential       | Single-Family Residential (R-1) |

| <b><i>Existing Uses</i></b> |                           | <b><i>Zoning</i></b>                    |
|-----------------------------|---------------------------|-----------------------------------------|
| <b>North</b>                | Single-Family Residential | Single and Two-Family Residential (R-2) |
| <b>South</b>                | Single-Family Residential | Single-Family Residential (R-1)         |
| <b>East</b>                 | Single-Family Residential | Single-Family Residential (R-1)         |
| <b>West</b>                 | Single Family Residential | Single-Family Residential (R-1)         |

| <b>Land Use Recommendation</b> | <b>Land Use</b> |
|--------------------------------|-----------------|
|--------------------------------|-----------------|





*The subject property is outlined in the above aerial image*

### **Site Design and Parking**

The subject property includes a two-story home along the south side of the property with a large street side yard adjacent to the home. A detached garage is located between the house and the alley. Access is provided off of the alley along the west side of the property. No changes are proposed to the house, garage, or driveway/parking.





*Above are images taken by the applicants. They show the subject property which includes the house and detached garage along with a row of shrubs in the front yard and vegetation along the 3<sup>rd</sup> St E property line.*

## Fencing



The applicants would like to install a 6-foot tall wood privacy fence around most of the side, rear, and street side yards as shown in the above aerial image. The lines shown in red are locations of proposed fencing that are permitted by-right under the zoning ordinance with a fence permit. The areas shown in orange are locations for which a Conditional Use Permit (CUP) is required to allow a height greater than 4 feet. The fencing standards allow fencing to exceed the maximum heights allowed under the ordinance with the approval of a CUP. By ordinance fencing is restricted to 4 feet tall in the front and corner side yard. Staff could support a six-foot fence if the applicants install the fencing with the supports facing inwards per ordinance, paint or stain the fencing and maintain the fence in good repair. Staff would recommend placing conditions on the approval accordingly. Staff does not have concerns with six-foot tall fencing along the property line in the street side yard (along the 3<sup>rd</sup> St E property line between the front and rear facades of the house). The applicants want solid fencing for privacy reasons and to prevent a direct line of sight and interaction between their dog and other dogs in the neighborhood. If the applicants wish to do a solid fence, they have the option of running the fence in line with the front of the house parallel to 14<sup>th</sup> Ave E out to the street side yard and back along the 3<sup>rd</sup> St E property line. Planning staff and the Public Works Director confirmed that the fencing will not interfere with vision triangle requirements. Below is an image of the type of fencing proposed by the applicants.





### **Landscaping**

The UDO does not require specific landscaping standards for single and two-family properties. The property contains a grass lawn and row of shrubs in the front yard of the property behind the sidewalk along 14<sup>th</sup> Avenue East. No changes are proposed to the existing landscaping.

### **Lighting**

The property is a single-family residential property. No lighting is required nor are any lighting-related changes proposed.

### **Building Elevations**

No changes are proposed to the existing home or garage.

### **Signage**

Since the property is a single-family residential property no signage exists on the parcel nor is any signage required. No exterior signage is proposed.

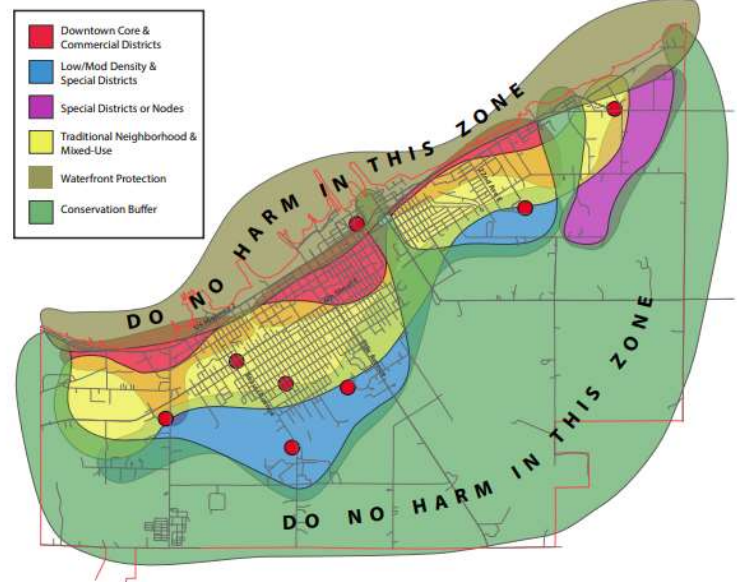
### **Standards for Conditional Use Review**

The City of Ashland's Unified Development Ordinance Section 3.9 (C) Conditional Use Permit – Approval Criteria (and all subsections thereof), create the legal framework to regulate, administer, and enforce the conditional use standards for the City of Ashland. The following decision criteria were used to review the submitted conditional use:

1. **Consistency with Comprehensive Plan.**

The subject property is located within the overlap of the Downtown Core & Commercial District and the Traditional Neighborhood & Mixed-Use District. The Future Land Use Map does not rigidly define land use districts but allows some overlap and flexibility to accommodate different uses as needed. The subject property is occupied by a single-family home that predates the Comprehensive Plan and current UDO. The single-family land use is consistent with the UDO and will not change. The Comprehensive Plan recognizes the importance of neighborhood aesthetics and staff believes that a well-maintained fence can allow the applicants to enjoy their property while maintaining/not detracting from the aesthetics of the property. Staff is of the opinion that the proposed 6-foot fence would not conflict with the intent of the Comprehensive Plan by detracting from the neighborhood's aesthetics.

FUTURE LAND USE PLAN



2. **Compatibility.**

The single-family land use is compatible with the current Unified Development Ordinance. If the applicants agree to meet conditions as mentioned the proposed fence would also be compatible with the UDO. The UDO allows for property owners to construct fences that meet the ordinance height and design standards on their properties. The CUP process allows for fencing to exceed the base ordinance height maximums, in this case increasing the height to a maximum of 6 feet. The UDO design standards for fences do not allow a CUP process to deviate from the design standards. Therefore, staff would recommend conditions of approval listed above to allow a fencing height of up to 6 feet in the corner side yard subject to appropriate conditions. Approval conditions would ensure that the fencing is compatible with the intent of the UDO.

3. **Importance of Services to the Community.**

The subject property is occupied by a single-family home and detached garage. The CUP allowance for increased fence height does not directly benefit the community. However, in meeting certain conditions, the proposed fence can allow the property owners to enjoy their property to the maximum extent possible. The design and placement of the fence would not detract from the area aesthetics.

4. **Neighborhood Protections.**

The subject property is located on a corner lot in an established residential neighborhood on the east side of the city. The UDO fencing standards are in place to establish reasonable regulations on fencing heights and designs while allowing owners options to construct fences for privacy and other reasons on their properties. Staff would have more concerns if the applicants would not paint or stain the fence. Due to the width of the right-of-way and fence's proposed location off of the road (approximately 17-18 feet) and the applicants' willingness to paint or stain the fence, staff does not believe the fence will detract from the neighborhood character.

**5. Conformance with Other Requirements:**

The property must conform to all other applicable City code requirements, including (but not limited to):

- All applicable sections of the UDO.
- The applicant shall obtain necessary zoning and building approvals along with building permits for any future improvements on the property.

**Review Recommendation**

Staff recommends APPROVAL of the Conditional Use Permit to allow a fence exceeding 4 feet in height in the corner side yard at 307 14<sup>th</sup> Ave E (Parcel # 201-01797-0000) contingent on the following conditions

1. A fence height of up to six (6) feet is permitted for proposed fencing in the street side yard (the length of the corner side yard between the front and rear facades of the house) along the 3<sup>rd</sup> St E property line. Solid fencing shall not be installed in the front yard of the property.
2. The proposed fencing shall be installed with the supports facing inward and finished side facing outward consistent with the UDO design standards.
3. The proposed fencing shall be painted or stained within one year of permit issuance and maintained in a good state of repair.
4. Conditional Use Permit is only for the fencing proposed and not for any additional uses or improvements. If any additional changes are proposed such uses will require additional staff and/or Conditional Use Permit approvals through Plan Commission and the Common Council.
5. A fence permit is required prior to the installation of the proposed fencing.

Additionally, as a Public Hearing is scheduled for the proposed Conditional Use Permit, the Plan Commission should hear all input from the public prior to making a determination. The required Class 2 public hearing notice was issued on June 26<sup>th</sup> & July 3<sup>rd</sup> and discretionary letters were sent to all surrounding property owners within 200 feet of the proposed development.

*Approvals are based on background information provided by the applicant and known conditions. Deviations from this information may be considered a change in the application and reconsideration and possible revision to the approvals may be made by the Plan Commission and Common Council.*



Ref: 2025-171

COUNCIL AGENDA: 9.D.  
(7/29/2025)

**SUBJECT:** Consider an Ordinance to Amend Chapter 800 (1130) Ordinance to Amend the Official Zoning map of the City of Ashland, Ashland City Ordinances, to Conditionally Rezone 618 Beaser Avenue, Parcel No. 201-00540-0000, from Public Institutional (PI) with Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O). Applicant: Beaser Professional Building, LLC. (*Planning and Development*) Roll

**RECOMMENDATION:** Approval

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**DEPARTMENT OF ORIGIN:** Planning & Development

**CLEARANCES:** Planning and Development Director  
Plan Commission (Unanimously recommended approval at their 15th, 2025 meeting)

**EXHIBITS:**

1. Ord. to approve a Zone Change for Parcel 201-00540-0000 07-29-25
2. Plan Commission Staff Report - July 15, 2025

**EXPENDITURES REQUIRED:** N/A

**AMOUNT BUDGETED:** N/A

**APPROPRIATION REQUIRED:** N/A

**TREASURER'S CERTIFICATE:** N/A

**COMPLIANCE WITH CHAPTER 51:** Plan Commission unanimously recommended approval at their July 15, 2025 meeting.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** The proposed rezoning of the subject parcel (201-01797-0000) from Public Institutional with a Gateway Overlay (PI-GTWY-O) to Mixed Residential Commercial with a Gateway Overlay (MRC-GTWY-O) is consistent with the Future Land Use Plan identified in the City's Comprehensive Plan. The property is located within the Traditional Neighborhood & Mixed-Use Future Land Use zone. It is also located where the Comprehensive Plan displays an opportunity for a commercial node (red circles). The Comprehensive Plan calls for mixed-use opportunities at some locations within the Traditional Neighborhood & Mixed-Use zone. The plan states, "Neighborhoods are not typically considered for mixed-use opportunities but it is strongly recommended that the community begin to consider small cafes (coffee shops, tea houses, bakeries, etc.) or a local mom-n-pop hardware store or pottery or art shop. The Commercial Nodes (identified by the red circles) represent these opportunities." The proposed MRC zoning would allow the mixed residential and commercial uses identified in the Comprehensive Plan for the area of the subject property. The zone change request for the former Beaser School/CESA-12 property is consistent with the recommendation in the Future Land Use section of the Comprehensive Plan.

The proposed use for the historical Beaser School would incorporate both residential and commercial space.

Reinvesting in neighborhoods is an important factor in strengthening a city's neighborhoods and housing market. This is a priority determined for the current and future health of the community. The current housing stock continues to age and deteriorate at an increasing rate as the average age of homes continues to rise. Incorporating and establishing new living units utilizing the existing built environment revitalizes our neighborhoods and further promotes the goals of pursuing infill of empty or unused lots and maintaining or increasing density in the neighborhoods surrounding the downtown. A multi-use complex can drive **place-based economic development**, another priority of focus in the comprehensive plan. These types of development foster local growth by creating a hub for commerce, culture, and community engagement. By integrating residential, commercial, and recreational spaces, these complexes attract diverse businesses and residents, generating foot traffic that supports local enterprises. They encourage small business development by providing accessible storefronts, coworking spaces, and flexible venues for events and markets. Additionally, multi-use complexes promote sustainable infrastructure and smart urban planning, enhancing the area's appeal for investment. By anchoring economic activity within a specific location, they strengthen the community's identity, improve quality of life, and ensure long-term economic resilience.

#### **SUMMARY STATEMENT:**

Applicant Beaser Professional Building, LLC, Alex Vickroy, requests approval of a zoning map amendment (zone change) for the property at 618 Beaser Avenue (Parcel # 201-00540-0000). The subject property is the Beaser School/CESA # 12 property and the applicant requests a zone change from Public Institutional (PI) with a Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with a Gateway Overlay (GTWY-O). The MRC zoning would allow the applicant the ability to adaptively reuse a portion of the property as a multi-family land use while using the other portion for commercial uses. Planning staff and the Plan Commission reviewed the zone change request and the Plan Commission unanimously recommended

approval at the July 15th, 2025 Plan Commission meeting. Staff and the Plan Commission recommend Council approval of the requested zone change. The draft ordinance and Plan Commission staff report are included in the Council packet. Please see the included Plan Commission staff report for more information.

**Sequential Ordinance No.**

**Codification Ordinance No.**

**AN ORDINANCE TO APPROVE A ZONING MAP AMENDMENT (ZONE CHANGE) FOR 618 BEASER AVENUE (PARCEL # 201-00540-0000) FROM PUBLIC INSTITUTIONAL (PI) WITH GATEWAY OVERLAY (GTWY-O) TO MIXED RESIDENTIAL/COMMERCIAL (MRC) WITH GATEWAY OVERLAY (GTWY-O),**

The Mayor and Common Council of the City of Ashland do ordain as follows:

**SECTION 1**

**Zone Change Approval.** A Zoning Map Amendment (Zone Change) from Public Institutional (PI) with Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O) is hereby approved on the following described property:

618 BEASER AVENUE (PARCEL # 201-00540-0000)

**SECTION 2**

**Effective Date of Ordinance:** This Ordinance shall become effective upon passage and publication.

\_\_\_\_\_  
Councilperson

PASSED:  
PUBLISHED:

ATTEST: \_\_\_\_\_  
Denise Oliphant, City Clerk

\_\_\_\_\_  
Matthew MacKenzie, Mayor

APPROVED AS TO FORM:

\_\_\_\_\_  
Tyler Wickman, City Attorney

## STAFF REPORT - Plan Commission – July 15, 2025

**Agenda Item #6c: Public Hearing and Vote on a Request to Rezone Parcel #201-00540-0000 from Public Institutional (PI) with a Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with a Gateway Overlay (GTWY-O).**

**Current Zoning:** Public Institutional (PI) with a Gateway Overlay (GTWY-O)

**Proposed Zoning:** Mixed Residential/Commercial (MRC) with a Gateway Overlay (GTWY-O)

**Applicants:** Beaser Professional Building, LLC

**Property Owner:** Beaser Professional Building, LLC (Alex Vickroy)

**Staff Contact:** Steven Wiley

### **Background and Property Location**

*The subject parcel is outlined in red in the image to the right. Beaser Avenue runs along the west side of the subject parcel. Sixth Street is to the north and Beaser Park is adjacent to the property along the south end.*





This re-zone request is for the future development of a mixed-use residential-commercial property consisting of newly renovated living units and boutique art studios. The subject parcel, currently zoned public institutional (P-I), would not allow this proposed use. Re-zoning the property to a Mixed Residential/Commercial District (MRC) would allow this use under the approval of a Conditional Use Permit (CUP). The CUP, for a mixed-use residential development, will be pursued contingent upon approval of the re-zone.

The proposed development would result in the preservation and restoration of an iconic Ashland school building. The existing facility is comprised of two buildings that are attached. The historic Beaser School on the north end is a three-story brick structure that was built in 1899 and is listed on the local, state and national historic registers. The one-story building to the south is the CESA 12 building and currently houses offices and the Vaughn Public Library while its downtown location is under renovation. The library is projected to move back to its newly renovated home in March of 2026.

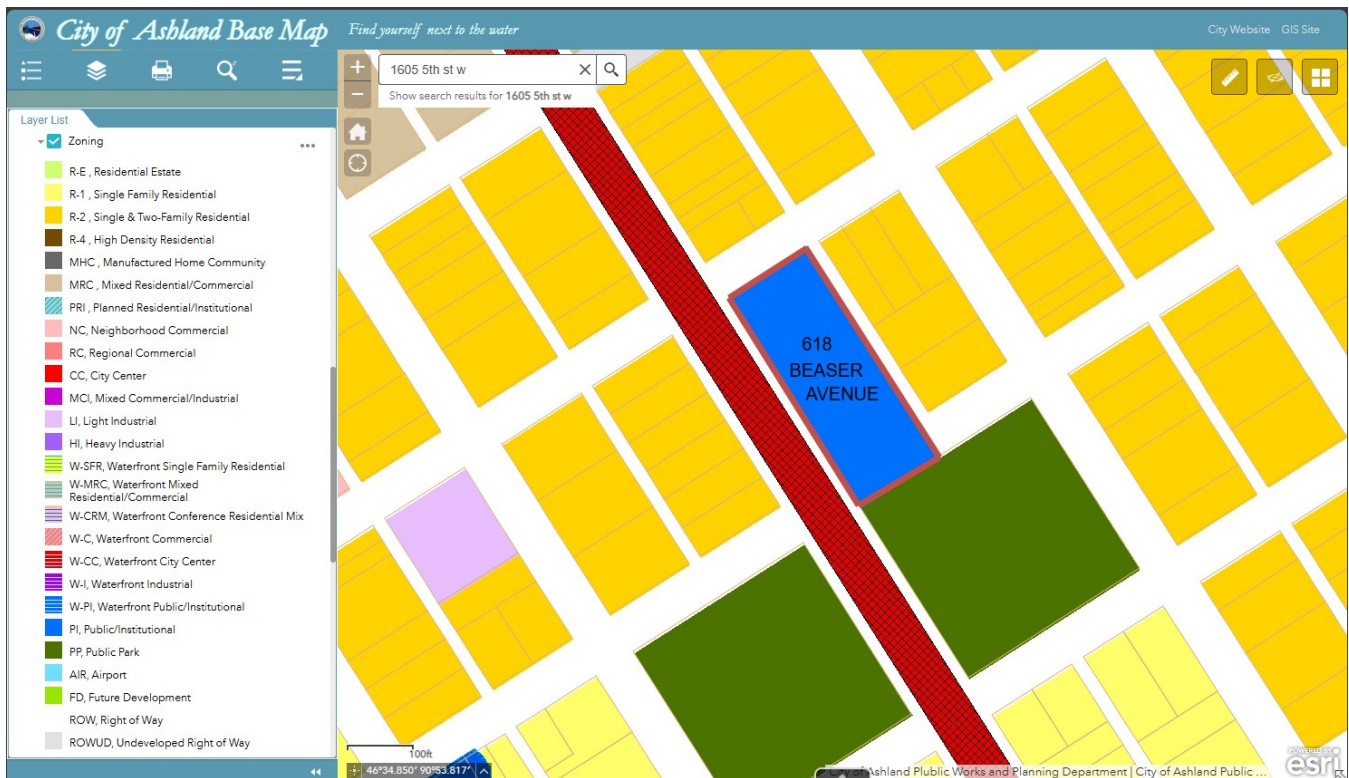
A rezoning from the property's current zoning designation of Public Institutional to a Mixed Residential/Commercial zone would accommodate new residential and commercial uses consistent with the intent of the Comprehensive Plan and compatible with the existing neighborhood. The property was assigned Public Institutional (PI) zoning because of the former school and CESA 12 use that were in place at the time. Since CESA 12 vacated the building assorted art studios and other functions have moved into the property. The property was recently sold to Alex Vickroy who owns the property under Beaser Professional Building, LLC. Since Mr. Vickroy has acquired the property, he has indicated his desire to reuse the original Beaser School portion as apartment units. The property would function as a mixed-use property which is not currently permitted under the PI zoning. Staff and the applicant discussed his mixed-use proposal and determined that based on the residential and commercial uses proposed, the Future Land Use Map in the Comprehensive Plan, and nearby surrounding zoning, a zone change from PI to MRC zoning is the most appropriate. The Gateway Overlay zoning (due to the parcel's location on Beaser Avenue) would remain. [SW1]

| <b><u>Existing Land Use</u></b>                                | <b><u>Zoning</u></b>                                |
|----------------------------------------------------------------|-----------------------------------------------------|
| Historic Beaser School, Offices, Temporary Vaughn Library site | Public Institutional (PI), Gateway Overlay (GTWY-O) |

### **Adjacent Land Use and Zoning**

| <b><u>Existing Uses</u></b> |             | <b><u>Zoning</u></b>                                                |
|-----------------------------|-------------|---------------------------------------------------------------------|
| North                       | Residential | Single & Two-Family Residential (R-2) with Gateway Overlay (GTWY-O) |
| South                       | Beaser Park | Public Park (PP)                                                    |
| East                        | Residential | Single & Two-Family Residential (R-2) with Gateway Overlay (GTWY-O) |
| West                        | Residential | Single & Two-Family Residential (R-2) with Gateway Overlay (GTWY-O) |

| <b><u>Land Use Recommendation</u></b> | <b><u>Land Use</u></b>                 |
|---------------------------------------|----------------------------------------|
| Future Land Use Map Recommendation    | Traditional Neighborhood and Mixed-Use |



The subject property is outlined in red above. The blue is the current Public Institutional zoning of the subject parcel. The gold to the north, east and west is Single and Two-Family Residential zoning. The red cross-hatched zoning along Beaser Avenue is the Gateway Overlay zoning. The dark green to the south is Public Park. The light brown in the upper left-hand corner of the map is Mixed Residential/Commercial zoning.

## Standards for Review

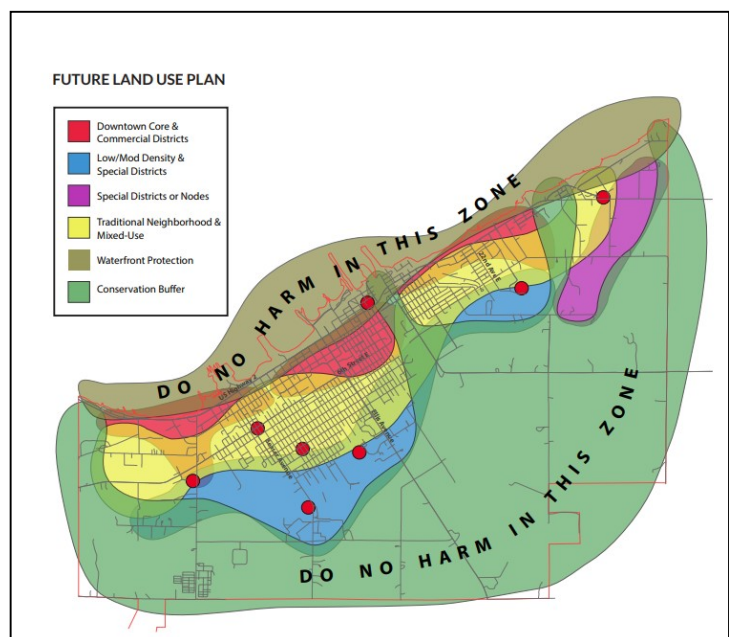
The City of Ashland's Unified Development Ordinance (U.D.O.) 781, Section 3.3: Zoning Map Amendment (Rezoning) creates the legal framework to regulate, administer, and enforce the rezoning process for the City of Ashland.

## Decision Criteria

In determining whether to approve or deny an application for a zoning map amendment, the following criteria should be considered:

1. *The Zoning Map Amendment is consistent with the Comprehensive Plan.*

The proposed rezoning of the subject parcel (201-01797-0000) from Public Institutional with a Gateway Overlay (PI-GTWY-O) to Mixed Residential Commercial with a Gateway Overlay (MRC-GTWY-O) is consistent with the Future Land Use Plan identified in the City's Comprehensive Plan. The property is located within the Traditional Neighborhood & Mixed-Use Future Land Use zone. It is also located where the Comprehensive Plan displays an



opportunity for a commercial node (red circles). The Comprehensive Plan calls for mixed-use opportunities at some locations within the Traditional Neighborhood & Mixed-Use zone. The plan states, "Neighborhoods are not typically considered for mixed-use opportunities but it is strongly recommended that the community begin to consider small cafes (coffee shops, tea houses, bakeries, etc.) or a local mom-n-pop hardware store or pottery or art shop. The Commercial Nodes (identified by the red circles) represent these opportunities." The proposed MRC zoning would allow the mixed residential and commercial uses identified in the Comprehensive Plan for the area of the subject property. The zone change request for the former Beaser School/CESA-12 property is consistent with the recommendation in the Future Land Use section of the Comprehensive Plan.

The proposed use for the historical Beaser School would incorporate both residential and commercial space.

Reinvesting in our neighborhoods is an important factor in strengthening the city's neighborhoods and housing market. This is a priority determined for the current and future health of the community. The current housing stock continues to age and deteriorate at an increasing rate as the average age of homes continues to rise. Incorporating and establishing new living units utilizing the existing built environment revitalizes our neighborhoods and further promotes the goals of pursuing infill of empty or unused lots and maintaining or increasing density in the neighborhoods surrounding the downtown. Incorporating mixed use facilities that provide services for the neighborhood residents helps knit Ashland together. A multi-use complex can be a powerful driver of place-based economic development, another priority of focus in the comprehensive plan. These types of development fostering local growth by creating a dynamic hub for commerce, culture, and community engagement. By integrating residential, commercial, and recreational spaces, these complexes attract diverse businesses and residents, generating foot traffic that supports local enterprises. They encourage small business development by providing accessible storefronts, coworking spaces, and flexible venues for events and markets. Additionally, multi-use complexes promote sustainable infrastructure and smart urban planning, enhancing the area's appeal for investment. By anchoring economic activity within a specific location, they strengthen the community's identity, improve quality of life, and ensure long-term economic resilience tailored to local needs.

2. *The Zoning Map Amendment promotes public health, safety, morals, and the general welfare, as well as the efficiency and economy in the process of development.*

The proposed zoning amendment would promote public health, safety, morals and the general welfare of the area, which consists of primarily single-family residential uses as well as an adjacent ball park and community garden utilized by the community. The proposed development would enhance social sustainability by creating affordable living and creative opportunities, supporting artists, local entrepreneurs, and community engagement. A zoning amendment enables inclusive development that benefits a broader population. Modernizing an existing historic building ensures compliance with updated building codes, improving structural integrity, fire safety, and accessibility. Mixed-use developments also encourage walkability, reducing reliance on cars, and promoting active lifestyles. The integration of residential and commercial spaces enhances security by fostering a lively and engaged community.

Combining residential, commercial, and creative spaces streamlines land use, reducing sprawl and maximizing available infrastructure. Upgrading the existing structure instead of demolishing and rebuilding minimizes waste and lowers costs. The development attracts businesses, residents, and tourists, stimulating the local economy while ensuring sustainable urban growth.



Overall, this approach balances historical character with modern functionality, creating a vibrant and resilient community that fosters economic growth, well-being, and long-term sustainability.

3. *The Zoning Map Amendment is compatible with the present zoning and conforming uses of nearby property and with the character of the neighborhood.*

The subject parcel is surrounded by primarily single and two-family residential uses on the north, east and west sides. Adjacent to the subject site on the south side is public park that contains a playground and a community garden. Across from this green space on the other side of Beaser Avenue are the Martinsen and Bebeau Ball Fields. These Public Park (PP) zones would be further enhanced by the proposed development, as well as the proposed 150-unit apartment complex two blocks to the north on the vacant site. These projects combined, can be designed to integrate seamlessly by maintaining appropriate height restrictions, density limits, and land-use regulations and can complement a transitional zone, bridging commercial corridors and residential areas while encouraging balanced urban growth.

This development will enhance the walkability and accessibility of nearby residential properties and parks. The presence of existing adjacent green spaces further reinforces community well-being, allowing for active living and resident interaction and social opportunity.

Many of the properties north of the subject property between 5<sup>th</sup> St W and Main Street are zoned MRC. Though the subject parcel is not contiguous with the existing MRC-zoned properties, MRC zoning is not out of place in the area. The subject property's location near other MRC-zoned parcels, coupled with the nature of the existing building on the parcel and its location at a prominent intersection on a major corridor in the City mean that the MRC zoning and the uses permitted by right and conditional use are the most appropriate of the potential zoning districts for the subject parcel.

Historic preservation of the existing Beaser school helps to maintain the cultural and architectural legacy of the area, strengthening residents' sense of place and identity while fostering local creativity with the incorporation of artist studio space. Thoughtful architectural design ensures it blends aesthetically with surrounding structures, maintaining scale and style consistency. The proposed reuse under MRC zoning would function as an asset to the area, sustaining responsible growth, efficient land use, and enriched community engagement while maintaining harmony with existing zoning and land uses.



*The subject property is outlined above in red.*

4. *The property to be amended (rezoned) is suitable\* for the uses permitted by the Zoning District that would be applied by the proposed Zoning Map Amendment.*

The property is suitable for the uses permitted in the MRC zoning district under by-right zoning or a Conditional Use Permit. This zoning allows multi-family dwelling units of unlimited size as long as the reuse complies with all other aspects of the zoning ordinance and building codes. Additional Commercial uses, including artist's studios, offices and business or personal services are also allowed under the approval of a Conditional Use Permit. The current facility already contains offices and space for a martial arts studio in addition to the temporary Public Library Service. Under the existing zoning of Public Institutional, the proposed uses of apartments or new artist studios would not be allowed under either permitted or conditional uses.

5. *The Zoning Map Amendment is generally consistent with the principles of sustainability specified in Unified Development Ordinance (UDO) Section 1.4: Integration of Principles of Sustainability.*

Rezoning the subject parcel to MRC zoning would be consistent with the principles of sustainability specified in the UDO in several key ways:

- **Preserving Built Heritage** – Reusing the existing structure prevents demolition waste and preserves the cultural and architectural value of the building. This promotes *historic preservation* while reducing resource consumption from new construction.
- **Efficient Land Use** – Amending zoning to allow residential and mixed-use development fosters *compact, walkable communities* rather than encouraging suburban sprawl. This enhances access to local services and reduces dependence on cars.
- **Reducing Environmental Impact** – Repurposing an existing building minimizes the environmental footprint compared to new development. Using sustainable construction techniques, such as energy-efficient upgrades and water-saving systems, enhances long-term environmental benefits.
- **Encouraging Economic Revitalization** – Repurposed spaces can attract investment and revitalize underutilized properties. A zoning change allows for *economic sustainability* by introducing diverse uses that generate activity and long-term viability.
- **Supporting Public Infrastructure** – Adaptive reuse makes use of existing roads, utilities, and public services, reducing the strain on municipal resources compared to new construction. This ensures *efficient infrastructure use* that aligns with sustainability goals.

By enabling mixed-use development, a zoning map amendment to this property reinforces sustainable urban planning, reduces environmental degradation, and promotes economic and social resilience.

### **Review Recommendation**

Staff recommends APPROVAL of the request to rezone subject parcel 201-00540-0000 From Public Institutional (PI) with a Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with a Gateway Overlay (GTWY-O).

In addition to the staff report, Plan Commission and City Council should consider public input received through the Public Hearing. The required Class 2 public hearing notice was issued on June 26<sup>th</sup> and July 3<sup>rd</sup>.

*\*Suitable as defined by Merriam Webster means “adapted to a use or purpose” or “able, qualified.”*

*Approvals are based on background information provided by the applicant and known conditions. Deviations from this information may be considered a change in the application and reconsideration and possible revision may be made by the Plan Commission.*



**SUBJECT:** Consider a Resolution to Issue a Conditional Use Permit (CUP) to Allow a Multi-Family Residential Land Use for 618 Beaser Avenue, Parcel No. 201-00540-0000, Contingent on Zone Change to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O); Applicant: Beaser Professional Building, LLC., Alex Vickroy (*Planning and Development*) Roll

**RECOMMENDATION:** Approval

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**DEPARTMENT OF ORIGIN:** Planning & Development

**CLEARANCES:** Planning and Development Director  
Plan Commission (Unanimously recommended approval at their July 15, 2025 Plan Commission meeting)

**EXHIBITS:**

1. Proposed Resolution No. 17844
2. Plan Commission Staff Report - July 15, 2025

**EXPENDITURES REQUIRED:** N/A

**AMOUNT BUDGETED:** N/A

**APPROPRIATION REQUIRED:** N/A

**TREASURER'S CERTIFICATE:** N/A

**COMPLIANCE WITH CHAPTER 51:** Plan Commission reviewed and unanimously recommended approval at their July 15, 2025 meeting.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** This Conditional Use Permit is consistent with the goals of the Comprehensive Plan. The proposed use for the historical Beaser School would incorporate both residential and commercial space.

Reinvesting in our neighborhoods is an important factor in strengthening the city's neighborhoods and housing market. This is a priority determined for the current and future health of the community. The current housing stock continues to age and deteriorate at an increasing rate as the average age of homes continues to rise. Incorporating and establishing new living units utilizing the existing built environment revitalizes our neighborhoods and further promotes the goals of pursuing infill of empty or unused lots and maintaining or increasing density in the neighborhoods surrounding the downtown. Incorporating mixed use facilities that provide services for the neighborhood residents helps knit Ashland together. A multi-use complex can be a powerful driver of **place-based economic development**, another priority of focus in the comprehensive plan. These types of development fostering local growth by creating a dynamic hub for commerce, culture, and community engagement. By integrating residential, commercial, and recreational spaces, these complexes attract diverse businesses and residents, generating foot traffic that supports local enterprises. They encourage small business development by providing accessible storefronts, coworking spaces, and flexible venues for events and markets. Additionally, multi-use complexes promote sustainable infrastructure and smart urban planning, enhancing the area's appeal for investment. By anchoring economic activity within a specific location, they strengthen the community's identity, improve quality of life, and ensure long-term economic resilience tailored to local needs.

#### **SUMMARY STATEMENT:**

Applicant Beaser Professional Building, LLC, Alex Vickroy requests a Conditional Use Permit (CUP) to allow a multi-family residential use at the 618 Beaser Avenue property (Parcel No. 201-00540-0000). The applicant plans to adaptively reuse the original Beaser School as apartment units. The former CESA # 12 building would house assorted commercial uses. The CUP request is contingent on approval of the Zone Change request for the same property. Mixed Residential/Commercial (MRC) zoning allows multi-family (3 or more units) land uses through the CUP process. The applicant indicated that he does not plan to alter the bulk or footprint of the existing structure onsite. If major site changes are proposed, the applicant may need to obtain Site Plan approval through the Plan Commission.

Planning staff and the Plan Commission have reviewed the CUP request and the Plan Commission considered the request at their July 15, 2025 Plan Commission meeting. The Plan Commission unanimously recommended approval at the meeting. The draft resolution and Plan Commission staff report are included in the Council packet. Please see the included Plan Commission staff report for more information.

## RESOLUTION No. 17844

**RESOLUTION TO ISSUE A CONDITIONAL USE PERMIT (CUP) TO ALLOW A MULTI-FAMILY RESIDENTIAL LAND USE FOR 618 BEASER AVENUE PARCEL No. 201-00540-0000 CONTINGENT ON ZONE CHANGE TO MIXED RESIDENTIAL / COMMERCIAL (MRC) WITH GATEWAY OVERLAY (GTWY-O); APPLICANT: BEASER PROFESSIONAL BUILDING, LLC., ALEX VICKROY**

**WHEREAS**, the Common Council of the City of Ashland is authorized to issue Conditional Use Permits; and

**WHEREAS**, the applicant has requested a Conditional Use Permit per Chapter 781, Ashland City Ordinances, to allow a Multi-Family Residential Land Use at 618 Beaser Avenue (parcel 201-00540-0000), contingent on zone change to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O) District; and

**WHEREAS**, the Plan Commission held a Public Hearing on July 15<sup>th</sup>, 2025 and has recommended approval of the Conditional Use Permit with the following conditions:

Staff recommends APPROVAL of the Conditional Use Permit contingent on the following conditions:

- 1.) Conditional Use Permit is contingent on the required zone change for the subject property from Public Institutional (PI) with Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O).
- 2.) Applicant shall submit all required plans for required Plan Reviews and Building Permits.

**NOW, THEREFORE, BE IT RESOLVED** by the Common Council of the City of Ashland that the Conditional Use Permit is in accordance with the Ashland Unified Development Ordinance and is hereby approved contingent upon compliance with the above listed conditions.

PASSED: July 29<sup>th</sup>, 2025

\_\_\_\_\_  
Councilperson

ATTEST:

\_\_\_\_\_  
Denise Oliphant, City Clerk

\_\_\_\_\_  
Matthew MacKenzie, Mayor

APPROVED AS TO FORM:

\_\_\_\_\_  
Tyler Wickman, City Attorney

**FOR APPLICANT:**

*Applicant understands and accepts the conditions of approval for the CUP as indicated within this resolution, and was provided notice of Common Council approval of this resolution within 5 business days of such approval.*

\_\_\_\_\_  
Applicant (Print and signature)

\_\_\_\_\_  
Date

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## STAFF REPORT - Plan Commission – July 15, 2025

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**Agenda Item #6d: Conditional Use Permit Request to allow a multi-unit Mixed Residential Commercial use in a Mixed Residential/Commercial (MRC) District with a Gateway Overlay (GTWY-O).**

**Zoning District:** Mixed Residential/Commercial (MRC) District with a Gateway Overlay (GTWY-O)

**Property Address:** 618 Beaser Avenue

**Parcel #:** 201-00540-0000

**Applicant:** Beaser Professional Building, LLC (Alex Vickroy)

**Staff Contact:** Steven Wiley

**Background and Property Location**

The subject parcel is outlined in red in the image on the next page. Beaser Avenue runs along the west side of the subject parcel. Sixth Street is to the north and Beaser Park is adjacent to the property along the south end. This Conditional Use Permit request is to allow for the rehabilitation of the historic Beaser School (CESA12) building into a mixed-use residential/commercial building. This CUP request follows and is contingent upon the review and approval of the re-zoning request for the subject parcel from a Public Institutional (PI) zone to a Mixed Residential/Commercial zone (MRC). The proposed new development will incorporate newly renovated living units and boutique art studios. The multi-family use is only allowed in the MRC zone with the approval of a Conditional Use Permit (CUP).

The subject site is located at the corner of Beaser Ave and 6th St W and is adjacent to Beaser Park, offering a fairly high-traffic, high-exposure location. The property includes the Historic Beaser School, a three-story brick building of approximately 19,000 square feet, along with an attached one-story former CESA12 building spanning approximately 16,500 square feet. The total lot size is 1.17 acres. The proposed development will undertake the preservation and restoration of this historic Ashland school building built in 1899 which is listed on the local, state and national historic registers. The building has already undergone some renovation work including, but not limited to, the replacement of windows. The one-story CESA12 building currently houses offices and the Vaughn Public Library while its permanent home is under renovation. The restoration of this structure would not commence until the library has made its transition back to its downtown location.

The surrounding uses are primarily single-family residences to the north, east and west. To the south is Beaser Park which contains an active community garden and kids' playground. Across Beaser Avenue, to the south, is the Martinsen & Bebeau Field Complex.

| <b><u>Existing Land Use</u></b>                                | <b><u>Zoning</u></b>                                |
|----------------------------------------------------------------|-----------------------------------------------------|
| Historic Beaser School, Offices, Temporary Vaughn Library site | Public Institutional (PI), Gateway Overlay (GTWY-O) |

### **Adjacent Land Use and Zoning**

| <b><u>Existing Uses</u></b> |             | <b><u>Zoning</u></b>                                                |
|-----------------------------|-------------|---------------------------------------------------------------------|
| North                       | Residential | Single & Two-Family Residential (R-2) with Gateway Overlay (GTWY-O) |
| South                       | Beaser Park | Public Park (PP) with Gateway Overlay (GTWY-O)                      |
| East                        | Residential | Single & Two-Family Residential (R-2) with Gateway Overlay (GTWY-O) |
| West                        | Residential | Single & Two-Family Residential (R-2) with Gateway Overlay (GTWY-O) |

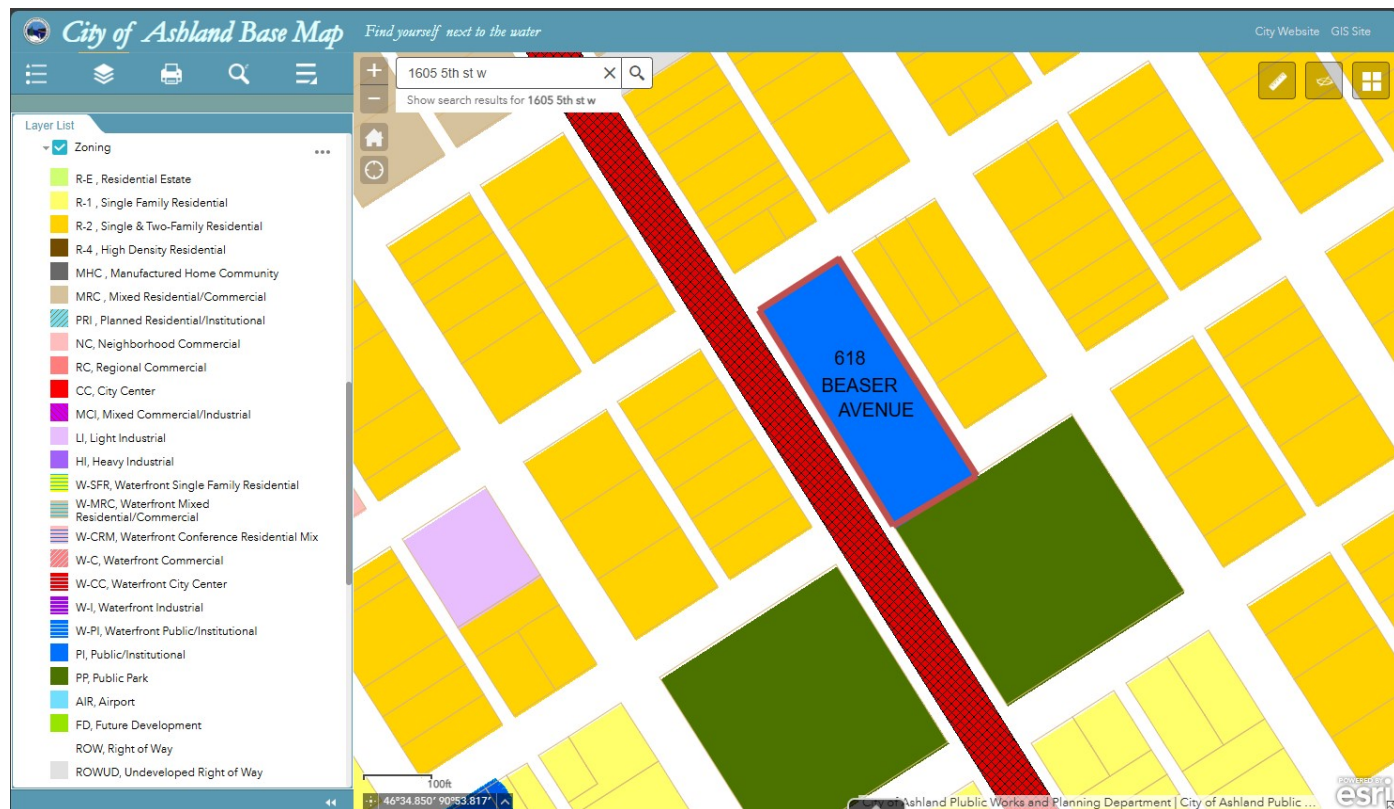
| <b><u>Land Use Recommendation</u></b> | <b><u>Land Use</u></b>                 |
|---------------------------------------|----------------------------------------|
| Future Land Use Map Recommendation    | Traditional Neighborhood and Mixed-Use |



*The subject parcel is outlined in red in the image to the left. Beaser Avenue runs along the west side of the subject parcel. Sixth Street is to the north and Beaser Park is adjacent to the property along the south end.*



This proposal outlines the request on behalf of the owner, with the support of city staff, to allow a multi-unit residential use in a mixed residential/commercial district. The property's end use would accommodate mixed residential and commercial functions while also preserving the historical integrity of the structure. This new project would emphasize the necessity of updating the building to meet modern building codes and zoning ordinances, including safety, accessibility, and environmental standards. It would also highlight the benefits of incorporating art studios helping to foster creativity and cultural engagement within the community. Additionally, this proposal aligns with local economic strategies, enhances neighborhood vibrancy, and maintains historical significance. The approval process includes CUP approval, architectural plan review and approval along with assurances that the project supports sustainable growth and urban revitalization.



*The subject property is outlined in red above. The blue is the current Public Institutional zoning of the subject parcel (a zone change to Mixed Residential/Commercial is requested). The gold to the north, east and west is Single and Two-Family Residential zoning. The red cross-hatched zoning along Beaser Avenue is the Gateway Overlay zoning. The dark green to the south is Public Park.*

The work planned by the applicant includes the reuse of the original Beaser School as a multi-family use. The applicant would provide covered parking within the building and maintain the existing surface parking on-site. No exterior site changes are proposed at this time. If the applicant would make significant modifications on site (such as adding building mass, impervious surfaces, etc.) a Site Plan Review through Plan Commission may be required. At this time the work proposed is entirely within the building.

### **Standards for Review**

The City of Ashland's Unified Development Ordinance Section 3.9 (C) Conditional Use Permit – Approval Criteria (and all subsections thereof), create the legal framework to regulate, administer, and enforce the conditional use standards for the City of Ashland. The following decision criteria were used to review the submitted conditional use:

## **1. Consistency with Comprehensive Plan.**

This Conditional Use Permit is consistent with the goals of the Comprehensive Plan. The proposed use for the historical Beaser School would incorporate both residential and commercial space.

Reinvesting in our neighborhoods is an important factor in strengthening the city's neighborhoods and housing market. This is a priority determined for the current and future health of the community. The current housing stock continues to age and deteriorate at an increasing rate as the average age of homes continues to rise. Incorporating and establishing new living units utilizing the existing built environment revitalizes our neighborhoods and further promotes the goals of pursuing infill of empty or unused lots and maintaining or increasing density in the neighborhoods surrounding the downtown. Incorporating mixed use facilities that provide services for the neighborhood residents helps knit Ashland together. A multi-use complex can be a powerful driver of place-based economic development, another priority of focus in the comprehensive plan. These types of development fostering local growth by creating a dynamic hub for commerce, culture, and community engagement. By integrating residential, commercial, and recreational spaces, these complexes attract diverse businesses and residents, generating foot traffic that supports local enterprises. They encourage small business development by providing accessible storefronts, coworking spaces, and flexible venues for events and markets. Additionally, multi-use complexes promote sustainable infrastructure and smart urban planning, enhancing the area's appeal for investment. By anchoring economic activity within a specific location, they strengthen the community's identity, improve quality of life, and ensure long-term economic resilience tailored to local needs.

## **2. Compatibility**

The subject parcel is surrounded by primarily single and two-family residential uses on the north, east and west sides. Adjacent to the subject site on the south side is a public park (Beaser Park) that contains a playground and a community garden. Across from this green space on the other side of Beaser Avenue are the Martinsen and Bebeau Ball Fields. These Public Park (PP) zones would be further enhanced by the proposed development, as well as the proposed 150-unit apartment complex two blocks to the north on the vacant site. These projects combined, can be designed to integrate seamlessly by maintaining appropriate height restrictions, density limits, and land-use regulations and can complement a transitional zone, bridging commercial corridors and residential areas while encouraging balanced urban growth. This development will enhance the walkability and accessibility of nearby residential properties and parks. The presence of existing adjacent green spaces further reinforces community well-being, allowing for active living and resident interaction and social opportunity.



*The subject property is outlined above in red.*

### **3. Importance of services to the community**

This project will help stimulate the local economy. Multi-use conversions attract small businesses and entrepreneurs like cafes, wellness clinics, co-working spaces. This not only creates jobs but brings services to underserved areas, helping make the neighborhood more vibrant and resilient. This type of development also encourages community interaction. Mixed-use designs foster daily interaction among residents, local business owners, and service providers. This cultivates a stronger sense of place, which supports everything from mental health to civic engagement.

### **4. Neighborhood protections**

This project will help to anchor neighborhood identity. Historic schools often hold deep sentimental value, representing generations of shared experience. By preserving and repurposing such a building, a community reinforces its unique heritage and identity—something that's increasingly rare in today's fast-changing landscapes. Historic preservation of the existing Beaser school helps to maintain the cultural and architectural legacy of the neighborhood, strengthening residents' sense of place and identity. Thoughtful architectural design ensures it blends aesthetically with surrounding structures, maintaining scale and style consistency. This development would function as an asset to the area, sustaining responsible growth, efficient land use, and enriched community engagement while maintaining harmony with existing zoning and land uses.

### **5. Conformance with other requirements of this Ordinance**

This multi-use project will evolve to meet several criteria that support mixed residential and commercial development. Any project involving a change in use—such as this one—or any exterior modifications to a historic structure requires a Site Design Review. This ensures the project meets standards for aesthetics, traffic flow, parking, landscaping, and compatibility with surrounding uses. The development must also meet building code standards that ensure safety, accessibility, and functionality for all occupants. This includes standard requirements for the designated occupancy classification, fire and life safety codes, accessibility codes, MEP systems including energy codes. The applicant will be required to submit drawings completed by a professional engineer or architect that will be reviewed for code compliance before approval is granted and a permit issued.

### **6. Other factors**

This project serves to preserve built heritage, reduce environmental impact with efficient land use and encourage economic revitalization.

## **Review Recommendation**

Staff recommends APPROVAL of the request to allow for a multi-unit Mixed Residential Commercial use in a Mixed Residential/Commercial (MRC) with a Gateway Overlay (GTWY-O) with the following conditions:

1. Conditional Use Permit is contingent on the required zone change for the subject property from Public Institutional (PI) with Gateway Overlay (GTWY-O) to Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O).
2. Applicant shall submit all required plans for required Plan Reviews and Building Permits.

In addition to the staff report, Plan Commission and City Council should consider public input received through the Public Hearing. The required Class 2 public hearing notice was issued on June 26<sup>th</sup> and July 3<sup>rd</sup>.

*\*Suitable as defined by Merriam Webster means "adapted to a use or purpose" or "able, qualified."*

*Approvals are based on background information provided by the applicant and known conditions. Deviations from this information may be considered a change in the application and reconsideration and possible revision may be made by the Plan Commission.*

Ref: 2025-167

COUNCIL AGENDA: 9.F.  
(7/29/2025)

**SUBJECT:** Consider an Ordinance to Amend Chapter 806 (201-1884) Ordinance to Approve a Planned Unit Development (PUD), Ashland City Ordinances, for a Specific Implementation Plan (SIP) to Allow a Multi-Family Residential Land Use on Parcel # 201-00356-0000, Zoned Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O) and Planned Unit Development Overlay, Located between Beaser Avenue and 11th Avenue west; Applicant: Vision Inc. (*Planning and Development*) Roll

**RECOMMENDATION:** Approval

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**DEPARTMENT OF ORIGIN:** Planning & Development

**CLEARANCES:** Planning and Development Director  
Plan Commission (Unanimously recommended approval at their July 15, 2025 meeting)

**EXHIBITS:**

1. Proposed Ordinance No. 2025-2020
2. Plan Commission Staff Report - July 15, 2025
3. Vision, Inc. - Planned Unit Development (PUD) Additional Information
4. Proposed Vision Project Site Maps
5. Site Plan
6. Landscape Plan
7. Project Manual: Ashton Apartments, Ashton, WI
8. Ashland Apartments - Stormwater Calculations, June 26, 2025

**EXPENDITURES REQUIRED:** N/A

**AMOUNT BUDGETED:** N/A

**APPROPRIATION REQUIRED:** N/A

**TREASURER'S  
CERTIFICATE:**

N/A

**COMPLIANCE WITH CHAPTER 51:** Plan Commission reviewed and unanimously recommended approval at their July 15, 2025 meeting.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** The proposed Planned Unit Development-Special Implementation Plan (PUD-SIP) is consistent with the Comprehensive Plan goals. The subject parcel is located within the overlap of the Downtown Core & Commercial Districts and Traditional Neighborhood & Mixed-Use zones of the Future Land Use Map. The Plan recommends for the Downtown Core & Commercial Districts that mixed-use development increasingly populates this zone. Buildings would front the right-of-way more often than has occurred in the post-WWII era. For the Traditional Neighborhood and Mixed-Use Districts zones, typically single and two-family residential are the primary land uses in the zone. The Comprehensive Plan also recommends small cafés, local hardware stores, or pottery or art shops. The subject site is located within the overlap of the two future land use zones and the Comprehensive Plan does not delineate firm boundaries between each zone.

Part 1 of the Comprehensive Plan includes the goal to “Diversify and Upgrade via Infill Housing” (pg. 54). The proposed development involves the reuse of an urban infill site close to the downtown where utilities are readily available. The plan encourages projects such as the one proposed and recognizes that the City will also need to provide incentives in many cases to get projects done. The plan states that there is a need for additional housing options within the City.

The proposed project is consistent with the Comprehensive Plan in that it is a redevelopment of a vacant former brownfield site with much-needed infill apartment housing. The project would provide amenities for its residents and the developer is taking measures to minimize the amount of outdoor surface parking present onsite.

**SUMMARY STATEMENT:**

Developer Vision, Inc. requests PUD-SIP approval to allow their proposed multi-family residential land use for the former Roffers Construction site on Beaser Avenue. The City Council approved the development agreement for the redevelopment of the property at the July 8, 2025 City Council meeting. The Plan Commission reviewed and recommended approval of the SIP at the July 15, 2025 Plan Commission meeting. Planning staff determined that the proposed SIP is consistent with the previously-approved GDP. Staff and the Plan Commission recommend approval, and the Plan Commission materials are included. Please see the Plan Commission staff report and submittal for more information.



## Sequential Ordinance No. 2025-2020

**AN ORDINANCE TO AMEND CHAPTER 806 (201-1884) ORDINANCE TO APPROVE A PLANNED UNIT DEVELOPMENT, ASHLAND CITY ORDINANCES, FOR A SPECIFIC IMPLEMENTATION PLAN (SIP) TO ALLOW A MULTI-FAMILY RESIDENTIAL LAND USE ON PARCEL NO. 201-00356-0000 ZONED MIXED RESIDENTIAL / COMMERCIAL (MRC) WITH GATEWAY OVERLAY (GTWY-O) AND PLANNED UNIT DEVELOPMENT OVERLAY, LOCATED BETWEEN BEASER AVENUE AND 11<sup>TH</sup> AVENUE WEST; APPLICANT: VISION INC.**

The Mayor and Common Council of the City of Ashland do ordain as follows:

**Ordinance § 806.06** *shall be amended to add the following:*

**SECTION III**  
**(2025-2020) Vision, Inc. PUD-SIP**

- (a) Plan Approval. A Planned Unit Development-Specific Implementation Plan is hereby approved on the following described property which is zoned Mixed Residential/Commercial with Gateway Overlay and Planned Unit Development Overlay:

PARCEL # 201-00356-0000, LOCATED BETWEEN BEASER AVENUE AND 11<sup>TH</sup> AVENUE WEST

A copy of the multi-family PUD-SIP staff report and associated final approved plans are attached to this ordinance and are incorporated by reference.

- (b) Conditions. The following conditions shall be incorporated into the PUD-SIP:

1. Approval is for the finalized plans submitted. If the applicant decides to make changes from the approved plans the applicant shall follow up with Planning and Development staff, and obtain required approvals through staff, and if necessary Plan Commission and Council.
2. The applicant shall obtain all necessary Plan Review approvals and building permits for the proposed project prior to starting construction.
3. PUD-SIP to allow a multi-family residential land use under a PUD Overlay on Parcel # 201-00356-0000.
4. The City Council waived the 10-acre minimum area requirement for a PUD on 4.5-acre Parcel # 201-00356-0000 in the MRC zoning district with the finding that the proposed PUD encompasses a clearly defined area that will not preclude logical development of adjacent properties in a manner consistent with the intent of the UDO.
5. Substantial development progress shall occur on Phase 1 of the development within 12 months of PUD-SIP approval.
6. City Council granted relief from UDO Section 4.6(C)(3) Maximum height of principal building. Forty- five (45) feet. Height allowance up to Fifty-five (55) feet.
7. City Council granted relief from UDO Section 4.6(C)(7). Minimum floor area per unit in multi-family uses. Under the PUD, unit floor areas may be up to 10% less than the ranges below (a-d) prescribed by code:
  - A. Efficiency Unit. Five Hundred (500) square feet.
  - B. One-bedroom unit. Six hundred (600) square feet.
  - C. Two-bedroom unit. Seven hundred fifty (750) square feet.
  - D. Three or more-bedroom units. Seven hundred fifty (750) plus one hundred fifty (150) square feet for each additional bedroom beyond two (2)..
8. Consistent with the approved PUD-GDP, building setbacks shall meet High Density Residential District

(R-4) zoning standards.

9. Developer to work with City Planning and Public Works staff on finalizing the access between Beaser Avenue and residential alley on the south side of the site. Developer to construct this access during the course of the project.
10. The applicant submitted a finalized stormwater management plan including calculations on the amount of runoff anticipated based on the proposed impervious area (to include buildings and drive areas). Planning and Public Works staff shall review the stormwater management plan and calculations and verify that the stormwater management calculations demonstrate that the proposed stormwater retention ponds and other features are sized appropriately to handle all runoff generated onsite and that no runoff onto surrounding properties will occur as a result of this development. If staff determines any changes to the stormwater management plans or calculations are required, staff and the applicant shall work together to resolve any issues.
11. Landscaping shall be installed consistent with the submitted landscaping plan and schedule.
12. Any signage shall meet UDO standards and require submission of sign proofs for Planning and Development review and issuance of a sign permit prior to installation.
13. Lighting shall be installed consistent with the submitted photometric plan. Lighting shall meet the standard for “Commercial residential open parking facilities” as described in UDO Section 6.7(D)(2).
14. Any changes in the proposed land use or additional uses proposed shall require a PUD amendment and Plan Commission/City Council review.

#### **SECTION IV**

Effective Date of Ordinance: This Ordinance shall become effective upon passage and publication.

PASSED: July 29, 2025  
PUBLISHED: August 7, 2025

\_\_\_\_\_  
Councilperson

ATTEST:

\_\_\_\_\_  
Denise Oliphant, City Clerk

\_\_\_\_\_  
Matthew Mac Kenzie, Mayor

APPROVED AS TO FORM:

\_\_\_\_\_  
Tyler Wickman, City Attorney



DEPARTMENT OF  
PLANNING &  
DEVELOPMENT  
601 Main Street West  
Ashland, WI 54806

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## STAFF REPORT

Plan Commission – July 15<sup>th</sup>, 2025

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|                          |                                                                                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Agenda Item # 6a:</b> | <b>Public Hearing: Planned Unit Development Review – Specific Implementation Plan (SIP) Approval for a Multi-Family land Use</b> |
| Zoning District:         | Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O) and Planned Unit Development (PUD) District                     |
| Property Address:        | No Address-Vacant                                                                                                                |
| Parcel #:                | # 201-00356-0000                                                                                                                 |
| Applicant:               | Vision Inc.                                                                                                                      |
| Staff Contact:           | Steven Wiley                                                                                                                     |

### **Background**

The City of Ashland has owned the subject site (vacant parcel # 201-00356-0000) for several years. The City has put out Requests for Proposals (RFPs) for developers to reuse the site for the past few years and until now has not seen much interest in redeveloping the site. In late 2024 developer Vision Inc. reached out to City staff regarding their interest in acquiring and redeveloping the site. City staff has met with the developer several times regarding the multi-family proposal. The developer would like to proceed with their proposal to redevelop the property. Due to this, City staff and the developer have drafted a Development Agreement which was recently finalized and approved at the July 8<sup>th</sup>, 2025 Council meeting. City staff and staff from Ehlers Inc. have worked on the creation of the City's newest Tax Increment District (TID #11) in which the new development will be located. The Tax Increment District would allow for the City to provide development incentives without which the project would not happen. The Joint Review Board and Plan Commission held meetings on April 1<sup>st</sup>, 2025 to review and discuss the proposed TID # 11 and TID # 11 Project Plan. The Plan Commission held a public hearing and voted to recommend approval of the TID # 11 Project Plan. The City Council voted to approve the TID # 11 Project Plan at the April 15<sup>th</sup>, 2025 Council meeting. The Joint Review Board voted to approve the creation of TID 11 and the TID 11 project plan at the May 22<sup>nd</sup>, 2025 JRB meeting. The developer has worked with staff and finalized the General Development Plan (GDP) which is the first part of the Planned Unit Development (PUD) submittal. The Plan Commission voted to recommend approval of the PUD-GDP for the subject site at the April 22<sup>nd</sup>, 2025 Plan Commission meeting. The City Council subsequently voted to approve the PUD-GDP at the May 13<sup>th</sup>, 2025 Council meeting. The developer is pursuing the PUD due to the flexibility it can provide the project while still ensuring high quality development through the public process. The developer has finalized their plans and are now submitting for the Specific Implementation Plan (SIP) which is the second and final part of the PUD approval.

The subject parcel is the former Roffers Site which is a former brownfield parcel. The site was closed by the WI DNR in 2017 and the City has documentation from the closure process that was provided to the developers. The subject parcel is approximately 197,562 square feet (approximately 4.5 acres) in area and is located between Beaser Avenue (on the west boundary) and 11<sup>th</sup> Ave W (on the east boundary). The 5<sup>th</sup> Street Corridor trail runs east-west along the southern edge of the site. The Ashland Police Department is located across 11<sup>th</sup> Avenue West to the east of the subject site. The site is adjacent to single and two-family residential homes which are located to the north and south of the site. The subject parcel and properties to the north and west are zoned Mixed Residential Commercial (MRC) with a Gateway Overlay (GTWY-O). The subject parcel now also has a Planned Unit Development (PUD) overlay. The parcels to the east are zoned MRC and the parcels to the south are zoned Single and Two Family Residential (R-2). Parcels with frontage along Beaser Avenue have the Gateway Overlay (GTWY-O) zoning attached. The former Beaser School (CESA property) and Beaser Park are located on Beaser Avenue south of the subject site.

The developers have appeared before the Plan Commission and introduced the item as a discussion-only item at the February 18<sup>th</sup> Plan Commission meeting. The PUD-GDP was approved at the May 13<sup>th</sup>, 2025 Council meeting. Both the Plan Commission and Council have expressed support for the proposed development. The developers have informed staff that strict compliance with the MRC zoning standards would prevent them from including the proposed covered parking and the number of units needed to make the development cash flow. Additionally, the developers asked for flexibility from the zoning standard for minimum unit area in the event that the finalized unit sizes come in slightly less than the UDO minimum. The PUD-GDP conditions allow the developers flexibility to exceed the 45-foot height ordinance maximum and flexibility for unit sizes which could vary slightly from the ordinance minimum areas of 500 sq. ft., 600 sq. ft., and 750 sq. ft. for efficiency, one-bedroom, and two-bedroom units respectively. In exchange the City can ask the developer to exceed ordinance standards in other areas. The developer is proposing to provide covered parking to meet a portion of their parking requirement. Staff and the developer have also discussed that building materials and landscaping could also be other areas where the developer could offset the ordinance relief requested. Vision Inc. has submitted materials for a PUD-SIP review and approval.

The UDO standards set the minimum area for a Planned Unit Development at ten (10) acres. However, the Zoning Administrator, Plan Commission, or Common Council can waive this requirement if they find that it is in the best interest of the City to allow a PUD with less than 10 acres. The subject parcel is approximately 4.5 acres in area. Staff finds that the PUD would encompass a clearly-defined area (the subject parcel only). Staff is of the opinion that the proposed PUD zoning and the proposed development are in the best interest of the City and recommended that the Plan Commission and Council waive the 10-acre minimum area requirement based on this finding. Council agreed to do so with the approval of the PUD-GDP. The developers have explained that they would like to begin construction this year and complete construction by fall 2026.

| <b>Existing Land Use</b>                 | <b>Zoning</b>                                                                                               |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Vacant – City-owned, Former Roffers Site | Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O) and Planned Unit Development (PUD) Overlay |



## Adjacent Land Uses and Zoning

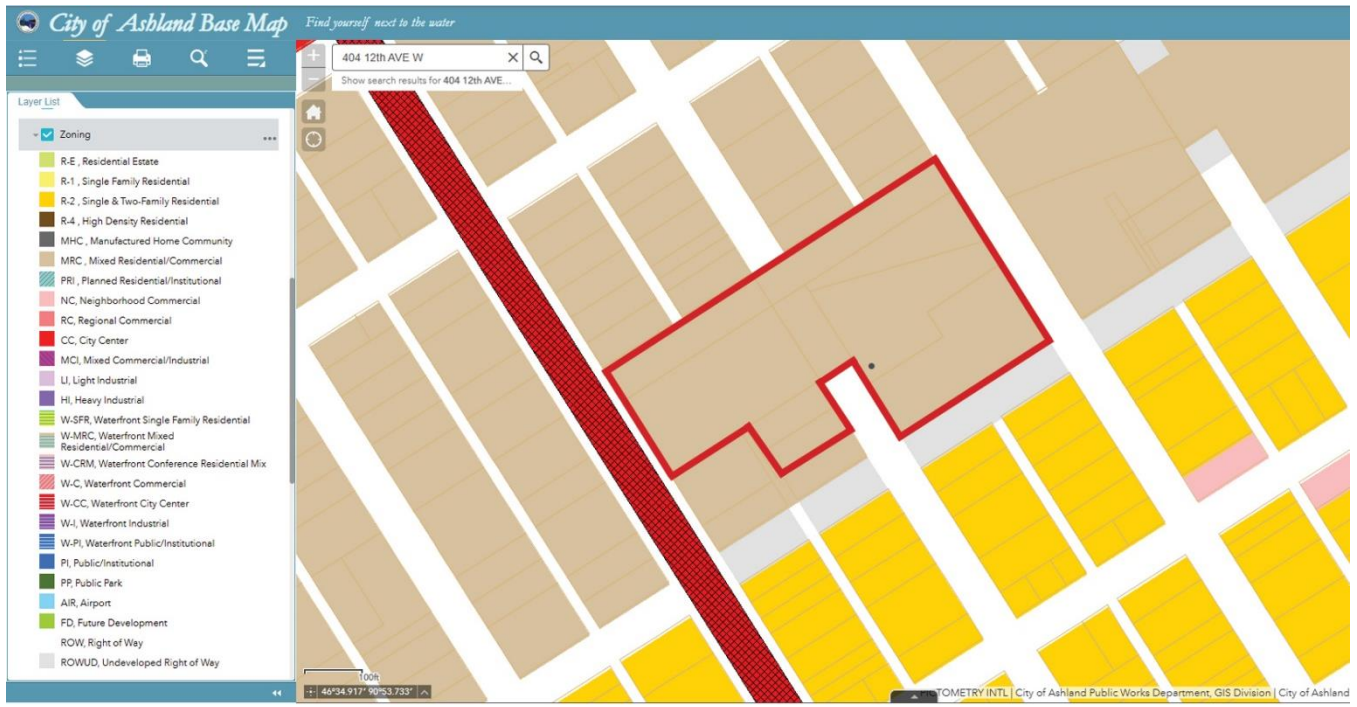
| Existing Uses |                                   | Zoning                                                                                                         |
|---------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------|
| North         | Single and Two-Family Residential | Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O), Mixed Residential/Commercial (MRC)           |
| South         | Single and Two-Family Residential | Single and Two-Family Residential (R-2) with Gateway Overlay (GTWY-O), Single and Two-Family Residential (R-2) |
| East          | Ashland Police Department         | Mixed Residential/Commercial (MRC)                                                                             |
| West          | Single and Two-Family Residential | Mixed Residential/Commercial (MRC) with Gateway Overlay (GTWY-O)                                               |

| Land Use Recommendation            | Land Use                                                                                   |
|------------------------------------|--------------------------------------------------------------------------------------------|
| Future Land Use Map Recommendation | Overlap of Downtown Core and Commercial Districts and Traditional Neighborhood & Mixed Use |



The subject parcel is outlined in red in the above image. Beaser Avenue runs along the west edge of the subject parcel and 11<sup>th</sup> Avenue East is to the east of the subject parcel. The 5<sup>th</sup> Street Corridor trail runs along the south of the parcel.



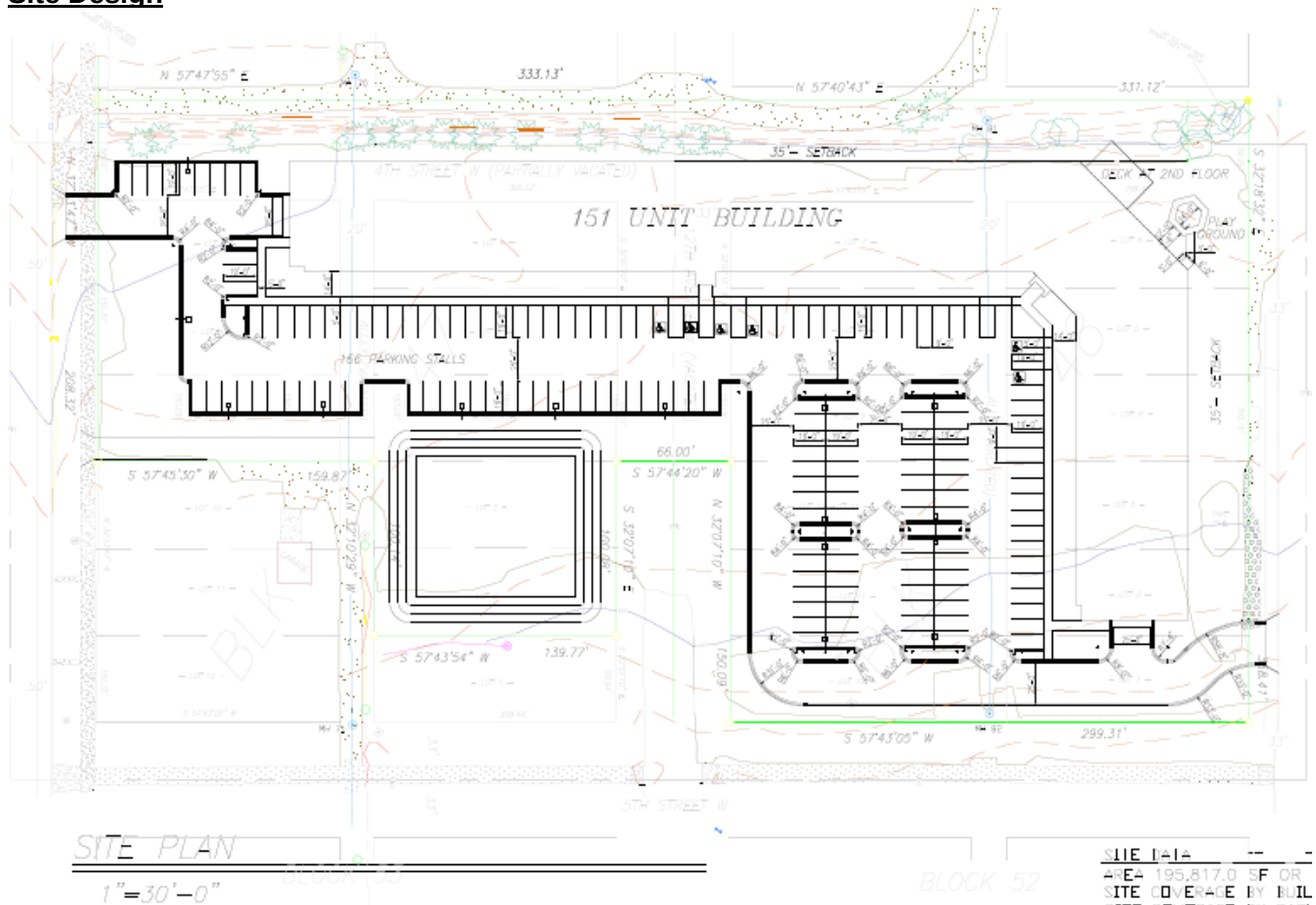


*The subject property is outlined in red above. The tan is the current Mixed Residential/Commercial (MRC) zoning of the subject parcel and some adjacent properties. The yellow-orange to the south is the Single and Two-Family Residential (R-2) zoning. The red cross-hatched zoning along Beaser Avenue is Gateway Overlay zoning.*

## Use

The applicant is proposing a multi-family housing development and associated access drives/parking, open spaces, and stormwater retention on the subject site. The multi-family housing development and parking areas will be new structures on the currently vacant parcel. The applicant's proposal to construct a multi-family use was discussed at the February 18<sup>th</sup>, 2025 Plan Commission meeting and the Commission expressed support for the proposal at that time. The Plan Commission recommended approval of the PUD-GDP at the April 22<sup>nd</sup>, 2025 Plan Commission meeting. The City Council also voted to approve the PUD-GDP at the May 13<sup>th</sup>, 2025 Council meeting. The developer is proposing the same multi-family housing development that was approved under the PUD-GDP but has finalized the plans as required for the PUD-SIP review.

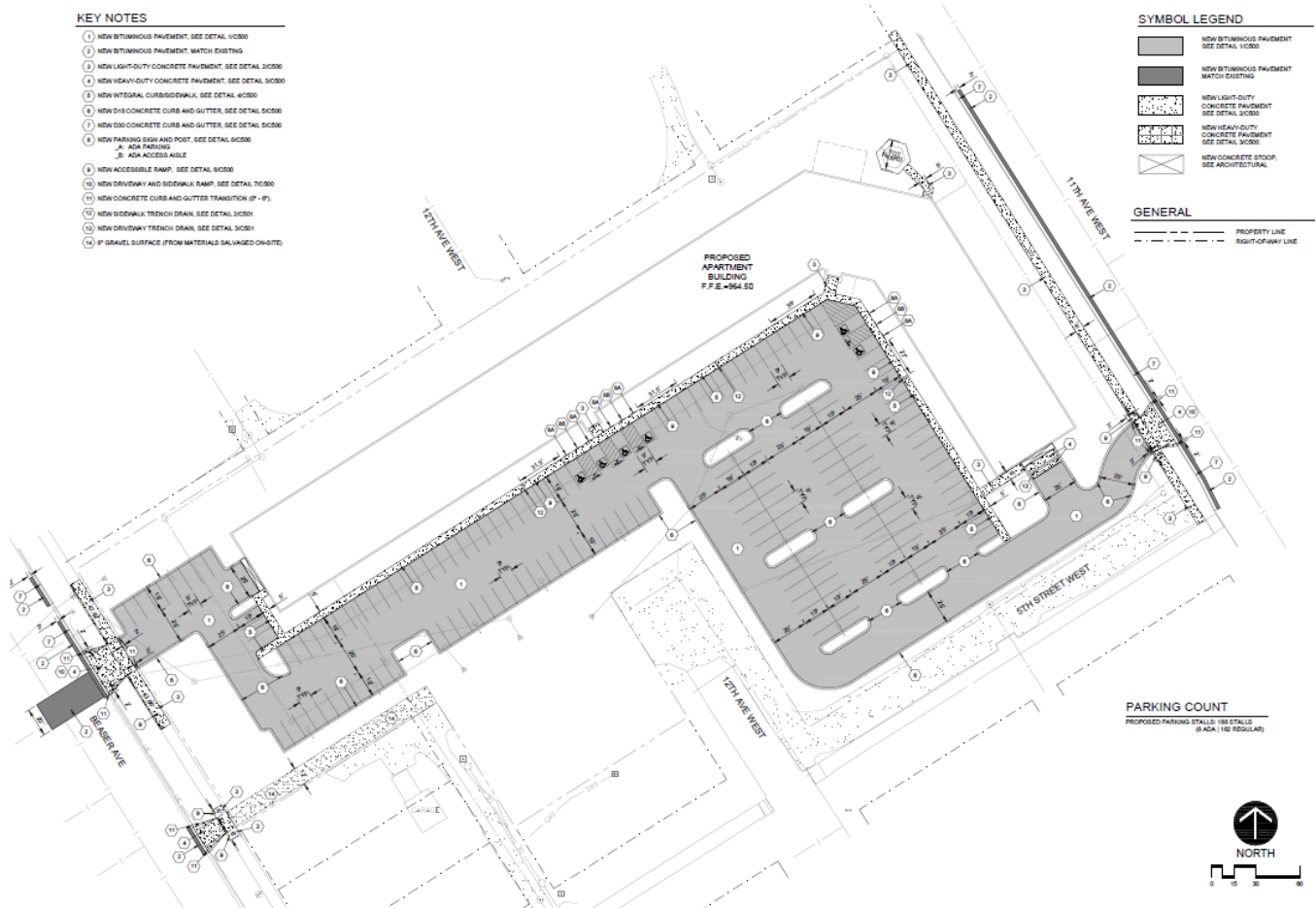
## Site Design



The developers have worked with their designer on a site plan and since updated the site plan, which they have submitted to City staff as part of this approval process. The plan includes the placement of a single building on the north and east portions of the site and the building will house covered parking and the proposed 151 apartment units along with associated community spaces. Access drives are proposed from Beaser Avenue and 11<sup>th</sup> Avenue West. One large stormwater retention pond is proposed (on the southern portion of the site). Landscaping is proposed around the building and parking areas and in planter islands within the parking areas. Some landscaping on the north would serve as a partial buffer between the proposed building and neighboring residential homes.

|                    | Required                                                                                   | Provided                                                     |
|--------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Parking Spaces     | 1 per efficiency unit, 1 per one-bedroom unit, 2 per 2 bedroom unit - 185 spaces total     | 299 Spaces provided - 167 surface stalls, 132 covered stalls |
| Impervious Surface | R-4 Zoning Standards apply - 40% maximum for building, 60% maximum for impervious surfaces | 22.6% by building, 36% by parking, 1.4% by other - 60% total |
| Building Height    | Base code allows 45 feet. PUD-GDP allows 55 feet                                           | 55 feet maximum                                              |

|                                                           | <u>Minimum</u>        | <u>Provided</u> |
|-----------------------------------------------------------|-----------------------|-----------------|
| Front Setback (11 <sup>th</sup> Ave W)                    | Base Zoning - 35 feet | 35 feet         |
| Side Setback (north)                                      | Base Zoning - 15 feet | 35 feet         |
| Side Setback (south)                                      | Base Zoning - 15 feet | 70 feet         |
| Rear Setback (Beaser Ave)                                 | Base Zoning - 35 feet | >70 feet        |
| * Setback minimums can be adjusted during the PUD Process |                       |                 |



Access to the site is provided off of Beaser Avenue and 11<sup>th</sup> Ave W. The site is a former brownfields site and to staff's knowledge there are no known wetlands on the site. The proposed multi-family building would be situated on the north and east portion of the site. The total impervious area proposed for the site is approximately 117,541.9 square feet which is about 60 percent of the total site area. The access drives leading into the site were revised from the PUD-GDP and are shown currently as 25 feet wide which is code compliant for drive aisles with adjacent perpendicular parking spaces. The drive aisles within the site are 25 feet wide with perpendicular parking along both sides. The UDO requires 25-foot aisle widths when parking is located perpendicular to the aisles.

The PUD process allows the Plan Commission and City Council to set the maximum impervious surface allowance for the site. The MRC zoning applies the standards for the zoning district most closely resembling the proposed land use. For the multi-family use provided the High Density Residential (R-4) standards apply. The UDO allows for up to 60% impervious coverage for residential uses. Staff would

recommend maintaining a 60% impervious surface maximum here unless the Plan Commission sees fit to reduce this allowance. The proposed plan is at 60 percent impervious coverage and meets the code maximum allowance.

Setbacks of the R-4 district would apply. The applicants' site plan shows that the proposed building placement would meet or exceed these setbacks. Staff recommends maintaining the R-4 zoning setbacks. The applicant's site plan shows setbacks which meet or significantly exceed ordinance minimums and staff is supportive of the setbacks proposed in the site plan.

The Plan Commission and City Council may also set parking requirements for the site as part of the PUD process. Staff would recommend maintaining the ordinance requirement of one (1) parking space per efficiency unit, one (1) parking space per one-bedroom unit, and two (2) parking spaces per two-bedroom unit. The surface parking and covered parking together exceed the parking requirements. Staff has discussed parking with the applicant and does not have concerns with the parking as proposed. The applicant explained that the amount of surface parking stalls is to accommodate tenants, guests, and snow storage. The amount of surface parking provided is less than the code maximum so the overall impacts visually and on impervious surface coverage is significantly less than if no parking was proposed within the building.

The UDO requires that all parking and drive areas be paved with concrete or bituminous pavement. Properly designed porous pavement, concrete pavers, permeable pavers, or other materials may be approved provided that design and materials are consistent with the intent of the ordinance. The applicants have noted that the access drives and parking areas will consist of new bituminous pavement which is compliant with the UDO standards. The developer has proposed an access from Beaser Avenue to the 12<sup>th</sup> Ave W alley that would allow property owners and visitors to access their properties from Beaser Avenue. Staff would recommend as a condition of SIP approval that the developer and City staff finalize this access and the developer construct this access during the project.

#### **Stormwater Management/Utilities**

Staff has had discussions with the applicants along with the Department of Public Works. The applicants and their designer have updated their grading and utility plans which show the proposed one larger (15,246 sq. ft.) retention pond which will serve the site versus two smaller ponds originally proposed. The plans also show the proposed private storm sewer and sanitary sewer lines, trench drains, and storm sewer catch basins. The stormwater facilities will be sized to handle the anticipated stormwater runoff. The developer's engineer has submitted finalized stormwater specifications and calculations with information on anticipated runoff volumes and stormwater management capacity. Please see the plan set included in the packet materials for more information.

LANDSCAPE PLAN

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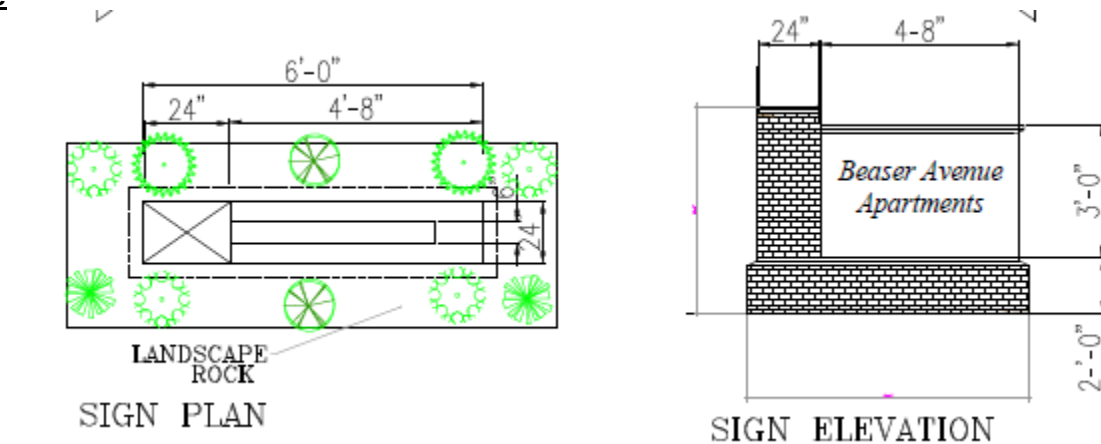


| <b>Landscaping Requirements</b>                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| Parcels less than 5 acres in area - Landscaping is based on undeveloped area                                                              |
| Deciduous trees: 1 tree per 2,500 sq. ft. (32 trees) OR                                                                                   |
| Coniferous trees: 1 tree per 1,000 sq. ft. (79 trees) AND                                                                                 |
| 1 shrub per 1,000 sq. ft. (79 shrubs)                                                                                                     |
| Parking Areas (20 or more spaces) - 10% of the interior parking area to be landscaped area. 25% of the required 10% to be planter islands |

| <b>Landscaping Proposed</b>              |
|------------------------------------------|
| Black Hills Spruce – 21 trees            |
| Crimson Cloud Hawthorn - 2 trees         |
| Amur Maackia - 7 trees                   |
| Prairifire Crab Apple - 8 trees          |
| American Hophornbeam - 7 trees           |
| Ivory Silk Japanese Tree Lilac – 2 trees |
| Celebration Maple – 7 trees              |
| Common Hackberry – 4 trees               |
| Kentucky Coffeetree – 3 trees            |
| White Oak – 8 trees                      |
| Northern Pin Oak – 2 trees               |
| Sentry Linden – 5 trees                  |
| Purple Leaf Plum 3 Gal – 2 shrubs        |
| 2-2 ½" B&B – 2 shrubs                    |
| Anthony Waterer Spirea – 15" – 10 shrubs |
| Little Princess Spirea – 15" – 27 shrubs |
| Isanti Dogwood 2' – 14 shrubs            |
| Scandia Juniper – 15" 26 shrubs          |
| Total Coniferous Trees – 21 Trees        |
| Total Deciduous Trees – 55 Trees         |
| Total Shrubs – 81 Shrubs                 |

The Plan Commission may request additional landscaping beyond that required by code if desired under the PUD process.

## Signage



Currently there are no signs on the subject parcel. The applicant has submitted a design for a monument sign in the plan set. The sign standards for R-4 zoning would apply. A freestanding sign is permitted for a multi-family development such as this one. The sign copy area is limited to 32 sq. ft. and the maximum sign height permitted is 6 feet. The maximum sign structure area permitted is 75 sq. ft. Signs may not be internally illuminated. Staff would recommend applying the base sign standards in this case. The areas and heights of the monument sign as proposed would meet the ordinance requirements. The sign was proposed under the GDP at the north side of the 11<sup>th</sup> Ave W driveway entrance. Staff will work with the applicants to finalize the proposed placement of the signage as part of the sign permit process. Staff would recommend as a condition of approval that any signage meet the UDO sign requirements for R-4 zoning and that the applicants obtain a sign permit prior to constructing signage onsite.

## Lighting

The applicants have submitted a lighting plan which shows lighting levels. Ordinance requires minimum light levels for all drive and parking areas and that light trespass at the property lines not exceed 0.5 footcandles. Code states that for parking facilities for 3 or more vehicles on a residential site they should be lit to provide at least 0.25 footcandles on any surface with an average illumination level of at least 0.75 footcandles. The uniformity ratio between average and minimum illumination shall be no greater than 4 to 1. Staff reviewed the applicant's lighting plan and the light levels proposed for the parking and drive areas along with uniformity ratios appear to meet code. Staff also does not see any issues with light trespass at the property lines.

## Building Elevations

The UDO does not have many design standards for the MRC/R-4 zoning. The PUD process allows the Plan Commission and City Council the ability to set specific design requirements during the process. The applicants have provided building elevations as part of the GDP and SIP submittals. The proposed elevations are in the application materials included in the packet for this item. They were not included in the staff report due to the inability to see many of the details when they are scaled down. The elevations show pitched roofs and balconies for the living units. The applicants have finalized their building facades as part of the SIP process. The overall building height proposed as of now is 52 feet, 8 inches. The applicants requested and were granted a 55-foot height maximum for the proposed building under the PUD-GDP approval. They are requesting this because they need to accommodate one floor of covered parking and three floors of living units. Their design calls for a pitched roof which they believe is consistent architecturally with the neighborhood. Staff does not have concerns with the

height maximum requested. If the Plan Commission would like to recommend any requirements for specific façade materials the Commission may do so.

### **Standards for Planned Unit Development Review**

The City of Ashland's Unified Development Ordinance Section 3.8 (E) Creation of a Planned Unit Development (PUD) Overlay District – Approval Criteria provide the approval criteria for a PUD Specific Implementation Plan for the City of Ashland. The following decision criteria were used to review the submitted PUD-SIP:

#### **1. Consistency with Comprehensive Plan.**

The PUD-SIP proposed is consistent with the Comprehensive Plan goals. The subject parcel is located within the overlap of the Downtown Core & Commercial Districts and Traditional Neighborhood & Mixed-Use zones of the Future Land Use Map. The Plan recommends for the Downtown Core & Commercial Districts that mixed-use development increasingly populate this zone. Buildings would front the right-of-way more often than has occurred in the post WWII era. For the Traditional Neighborhood & Mixed-Use Districts zone typically single and two-family residential are the primary land uses in the zone. The Comprehensive Plan also recommends small cafes, local hardware stores, or pottery or art shops. The subject site is located within the overlap of the two future land use zones and the Comprehensive Plan does not delineate firm boundaries between each zone.

Part 1 of the Comprehensive Plan includes the goal to “Diversify and Upgrade via Infill Housing” (pg. 54). The proposed development involves the reuse of an urban infill site close to the downtown where utilities are readily available. The plan encourages projects such as the one proposed and recognizes that the City will also need to provide incentives in many cases to get projects done. The plan states that there is a need for additional housing options within the City.

The proposed project is consistent with the Comprehensive Plan in that it is a redevelopment of a vacant former brownfield site with much needed infill apartment housing. The project would provide amenities for its residents and the developer is taking measures to minimize the amount of outdoor surface parking present onsite.

## 2. Consistency with the UDO

This use is consistent with the UDO and would be permitted as a Conditional Use under the base MRC zoning. The land use, site coverage/impervious surface area, landscaping, and stormwater design will comply with the ordinance.

Lighting, paving, and signage will also comply. The only relief from the ordinance requested and granted under the PUD-GDP was for building height and minimum unit areas. Staff is of the opinion that the covered parking, pitched roofs, and building materials offer opportunities to offset the ordinance relief requested.

Density, setbacks, and use of the proposed structure are consistent with the ordinance. The proposed

development is located on the northern and eastern portion of the parcel towards 11<sup>th</sup> Ave E and parking located on the interior of the site away from the streets wherever possible.

Landscaping is proposed around the building and parking areas and within parking areas so this will help aesthetically. Staff finds that granting relief from the height and unit area minimums of the UDO is in the public interest if the applicants are providing features such as covered parking and pitched roofs which are not required by code.

FUTURE LAND USE PLAN



## 3. Open Space

The design includes an outdoor recreational area, playground, outdoor patio, and deck for the residents. Additionally, there are landscaping areas and buffers proposed around the building particularly to the north and east. There is a stormwater retention pond to the south of the proposed building. The developers have stated that Ryan Nelson of their team will serve as the managing member of the ownership entity and provide leadership and oversight. Ongoing management and maintenance will be handled by Vision MC, Inc. a subsidiary of Vision, Inc. specifically established to manage all Vision, Inc.-owned properties. They are committed to retaining and maintaining their developments once completed.

## 4. Effect on the Neighborhood

The existing development around the subject site consists of single and two-family residential uses on standard urban residential parcels. The Ashland Police Department is located across 11<sup>th</sup> Ave W to the east. The former Beaser School/CESA property and Beaser Park are to the south. Though the proposed development is higher density than the existing residential development the applicants are taking measures such as installing required landscaping, adding pitched roofs and gables, and breaking up the building facades with window openings, balconies, and material changes. All of these measures will ensure that the proposed development fits contextually with the surrounding neighborhood. Though traffic will result due to the new development, there are two means of entering and exiting the site (on Beaser Avenue and 11<sup>th</sup> Ave W) so not all of the traffic is anticipated to enter and exit onto one street. The developers have also proposed an alley access to connect the 12<sup>th</sup> Ave W alley with Beaser Avenue to allow access for neighboring properties off of Beaser Avenue. Planning staff

discussed this with Public Works and the Public Works Director believes an access from the alley to Beaser Avenue can work.

## **5. Phasing**

The applicants plan to complete the development as proposed in one phase. In the future there could be potential for a second phase depending on how this project goes and land availability. The project as proposed is treated as one phase. The developers' intent is to implement the project as submitted. The project would consist of one building, associated access drives/parking, stormwater management, outdoor areas, and landscaping. If the applicants decide they need to deviate from the originally proposed GDP/SIP they would come back to City staff and the Plan Commission for further review.

## **6. Relationship to Existing Structures**

The area around the subject site is well developed and urban in nature with single and two-family residential homes and some larger structures such as the Ashland Police Department and former Beaser School/CESA building. The proposed placement of the structure will not impact the developability of any surrounding parcels. There are existing City utilities running under the subject site and Public Works and Planning staff have been coordinating on plans to relocate these in anticipation of the proposed development. The relocation of the utilities will not negatively impact other properties. The proposed building's height (at 52 feet, 8 inches) is taller than the adjacent structures nearby but the pitched roofs and other façade design elements including balconies and material changes will mitigate the impact the building has on adjacent structures. Additionally, the developers are proposing a 35-foot side setback on the northern side of the site which will further reduce the impact because the building would be placed further back than the base 15-foot setback required. Staff does not have concerns with the proposed development's relationship to existing structures.

## **Application Submittal Requirements**

UDO Section 3.8 includes the submittal requirements for a PUD-SIP review. These include the following items which staff has reviewed:

- a. Context Map: A map of the project including its relationship to the surrounding properties, topography, or other prominent site features. **The applicants and their designer have submitted the required context map which contains this information. The map displays the proposed development's placement and layout in relation to the surrounding parcels, existing development on those parcels, and streets. An aerial of the site is included on the context map.**
- b. Statement: A statement as to why the planned unit development (PUD) zoning is proposed. The statement shall identify reasons why planned unit development (PUD) zoning is preferable to development under standard zoning districts. **The applicants submitted a statement to staff explaining that they wish to develop this property as a multi-family land use. They have submitted elevations showing pitched roofs and indicating building heights. Additionally, they have submitted building floor plans showing unit layouts. The applicants are requesting the PUD zoning to allow them the flexibility required for building height and unit area to allow for pitched roofs that would aesthetically fit the neighborhood. Base zoning allows up to a 45-foot height maximum. The applicants requested and were granted 55 feet. They requested and were granted flexibility on unit size minimums also. They received up to a 10% allowance from the unit area minimums required by code and are using units similar to those in other developments they have done. The developers are accommodating covered parking and three floors of living units to achieve the unit count needed for the development to cash flow. The applicants have stated that they will meet the other UDO requirements. Therefore, the flexibility allowed by the PUD zoning is desirable.**



- c. Site Plan: A site plan of the planned unit development (PUD) at a scale of not less than one-inch equals one hundred feet (1" = 100') showing the following:
- (1) Land uses and development densities: The drawings in the submitted plan set are all scaled at 1" = 100' or greater and show the proposed multi-family development. The site plan page includes data on unit counts and staff believes there is enough data to meet this requirement.
  - (2) The size, arrangement, and location of parcels: The site plan shows the parcel which is the subject property for which the PUD will apply and includes the parcel location off of Beaser Avenue, 11<sup>th</sup> Ave W, and the 5<sup>th</sup> Street Corridor Trail. The parcel area of 195,817 sq. ft./4.49 acres is listed on the plan.
  - (3) The proposed general location of buildings or groups of buildings: The site plan shows the single proposed multi-family building on the north and east portion of the site.
  - (4) The location, design, and construction of public and private streets: The site plan shows the existing streets that serve the area including Beaser Avenue, 11<sup>th</sup> Ave W, and 12<sup>th</sup> Ave W. For the access drive and drive areas within the subject development the plan shows their locations and includes dimensions and labels describing the surfacing (asphalt pavement) proposed.
  - (5) The location of recreational areas and open space and a description of who will own and maintain the spaces: The site plan shows an outdoor recreational area/playground, lower level patio, and upper level deck, along with stormwater retention area. The PUD-GDP application also included a statement from the developer explaining that their management company (Vision MC, Inc.) will maintain the property including open spaces.
  - (6) A general landscaping plan: The applicant has submitted a landscaping plan with locations, the number and type of proposed plantings, and a landscaping schedule and legend. For parcels less than 5 acres in area landscaping required would be based on the undeveloped area. The number of trees proposed exceeds the code requirement and the developer has updated the plan with required shrubs and parking lot landscaping. If the Plan Commission would like to see further landscaping as part of the PUD, staff would request that the Commission provide input while considering the SIP.
  - (7) A general grading plan, indicating onsite stormwater management facilities and indicating the amount and location of off-site drainage: The applicant has submitted a grading and erosion control plan as part of the submittal package. This plan includes existing and proposed contours, proposed grade slopes, and stormwater management facilities. The plan does not indicate any off-site drainage occurring.
  - (8) Identification of mature vegetation on the site and a proposal to preserve such vegetation worthy of protection: The applicants' site plan identifies existing vegetation including trees on the northern edge of the site. The finalized landscaping plan does not indicate that these trees will be removed. The developer will plant new trees and shrubs in accordance with UDO requirements.
  - (9) Identification and/or delineation of wetlands and floodplains within the site and a proposal to protect such areas from encroachment or degradation: There are no wetlands or floodplains on site to staff's and the applicants' knowledge. This is also noted on the preliminary and finalized plans.
  - (10) Statistical data on the size of the development, density/intensity of various sub-areas, and expected phasing or staging: The applicant's site plan includes data on the physical sizes of the building and on unit counts for each unit type. The project is planned in one stage of implementation.
  - (11) A description of the intended organizational structure for a property owner's association, if any: The developers have explained to staff that upon completion of the development, Ryan Nelson, CEO of development company Vision, Inc., will serve as the managing member of

the entity, providing leadership and oversight. Ongoing management and maintenance will be handled by Vision MC, Inc., a subsidiary of Vision, Inc., specifically established to manage all Vision, Inc.-owned properties. The developer is committed to retaining and maintaining their developments post-stabilization.

- (12) A description of the deed restrictions or restrictive covenants, if any: There are no deed restrictions or restrictive covenants to staff's or the applicant's knowledge. There is a DNR closure letter regarding measures that might need to occur if some areas of the site are disturbed. This letter was included in the RFP materials sent out and shared with the developers. The developers are aware of it and would meet any DNR requirements during their site preparation.

### **Review Recommendation**

Staff recommends APPROVAL of the PUD-SIP contingent on the following conditions:

- Approval is for the finalized plans submitted. If the applicant decides to make changes from the approved plans the applicant shall follow up with Planning and Development staff, and obtain required approvals through staff, and if necessary Plan Commission and Council.
- The applicant shall obtain all necessary Plan Review approvals and building permits for the proposed project prior to starting construction.
- PUD-SIP to allow a multi-family residential land use under a PUD Overlay on Parcel # 201-00356-0000.
- The City Council waived the 10-acre minimum area requirement for a PUD on 4.5-acre Parcel # 201-00356-0000 in the MRC zoning district with the finding that the proposed PUD encompasses a clearly defined area that will not preclude logical development of adjacent properties in a manner consistent with the intent of the UDO.
- Substantial development progress shall occur on Phase 1 of the development within 12 months of PUD-SIP approval.
- City Council granted relief from UDO Section 4.6(C)(3) Maximum height of principal building. Forty-five (45) feet. Height allowance up to Fifty-five (55) feet.
- City Council granted relief from UDO Section 4.6(C)(7). Minimum floor area per unit in multi-family uses.
  - a. Efficiency Unit. Five Hundred (500) square feet.
  - b. One bedroom unit. Six hundred (600) square feet.
  - c. Two bedroom unit. Seven hundred fifty (750) square feet.
  - d. Three or more bedroom units. Seven hundred fifty (750) plus one hundred fifty (150) square feet for each additional bedroom beyond two (2). Under the PUD unit floor areas may be up to 10% less than the ranges above (a-d) prescribed by code.
- Consistent with the approved PUD-GDP, building setbacks shall meet High Density Residential District (R-4) zoning standards.
- Developer to work with City Planning and Public Works staff on finalizing the access between Beaser Avenue and residential alley on the south side of the site. Developer to construct this access during the course of the project.
- The applicant submitted a finalized stormwater management plan including calculations on the amount of runoff anticipated based on the proposed impervious area (to include buildings and drive areas). Planning and Public Works staff shall review the stormwater management plan and calculations and verify that the stormwater management calculations demonstrate that the proposed stormwater retention ponds and other features are sized appropriately to handle all runoff generated onsite and that no runoff onto surrounding properties will occur as a result of this development. If staff determines any changes to the stormwater management plans or calculations are required, staff and the applicant shall work together to resolve any issues.

- Landscaping shall be installed consistent with the submitted landscaping plan and schedule.
- Any signage shall meet UDO standards and require submission of sign proofs for Planning and Development review and issuance of a sign permit prior to installation.
- Lighting shall be installed consistent with the submitted photometric plan. Lighting shall meet the standard for “Commercial residential open parking facilities” as described in UDO Section 6.7(D)(2).
- Any changes in the proposed land use or additional uses proposed shall require a PUD amendment and Plan Commission/City Council review.

Additionally, as a Public Hearing is scheduled for the proposed PUD-GDP, the Plan Commission should hear all input from the public prior to making a determination. The required Class 2 public hearing notice was issued on June 26<sup>th</sup> & July 3<sup>rd</sup> and discretionary letters were sent to all surrounding property owners within 200 feet of the proposed development.

*Approvals are based on background information provided by the applicant and known conditions. Deviations from this information may be considered a change in the application and reconsideration and possible revision to the approvals may be made by the Plan Commission and Common Council.*



## **400 Beaser Avenue, Ashland Planned Unit Development (PUD) Additional Information**

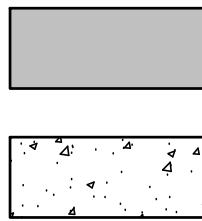
We would like to request relief from the zoning ordinance's square foot minimum, as some of our proposed units may fall slightly below this requirement (within a 10% range). This variance allows us to enhance affordability while compensating with additional amenities provided throughout the building. In some of our previous developments, studio units have been slightly below 500 square feet, and we want to ensure our current application accommodates this precedent. We are still early in the planning process and our design has not been finalized, so we cannot confirm individual unit square footage at this time – but we would appreciate the flexibility to follow similar floor plans from prior developments. All proposed units will meet applicable building codes and safety standards.

Upon stabilization of the development, Ryan Nelson, CEO of Vision, Inc., will serve as the managing member of the entity, providing strong leadership and oversight. Ongoing management and maintenance will be handled by Vision MC, Inc., a subsidiary of Vision, Inc., specifically established to manage all Vision, Inc.-owned properties. We are committed to retaining and maintaining our developments post-stabilization, ensuring the property remains in capable hands and upholds the high standards of Vision, Inc.



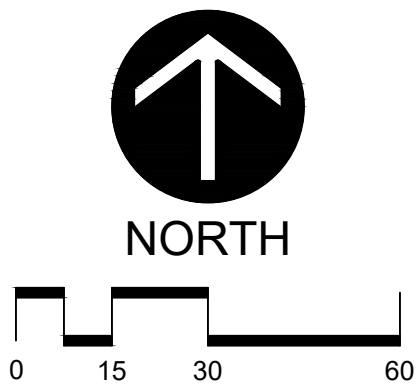


SYMBOL LEGEND



NEW BITUMINOUS PAVEMENT  
SEE DETAIL

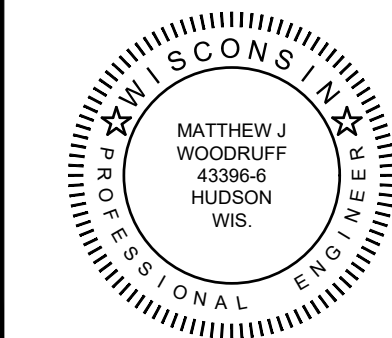
NEW CONCRETE PAVEMENT  
SEE DETAIL



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**VISION INC.**  
PO BOX 23  
SUPERIOR, WI 54880

**ASHLAND  
APARTMENTS**  
ASHLAND, WI



| Rev. | Date | Description |
|------|------|-------------|
|      |      |             |
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Project #: 12256011  
Drawn By: KBK  
Checked By: TJH  
Issue Date: 04.03.25  
Sheet Title:

CONTEXT MAP

Sheet:  
**C101**



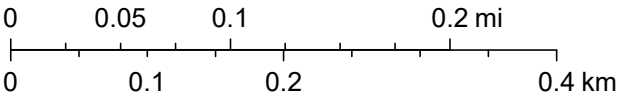
Proposed Vision Project Site



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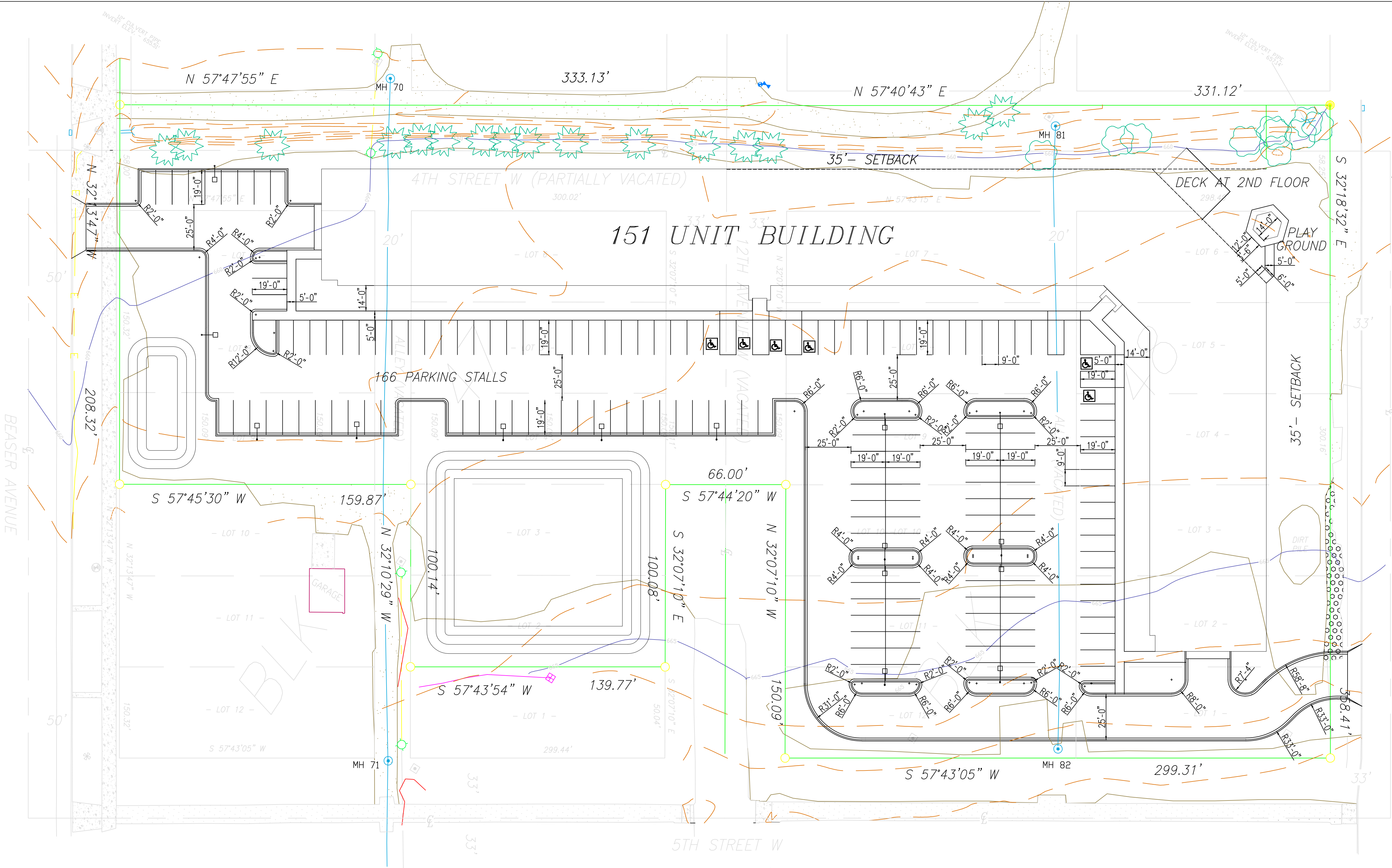
- Tax Parcels
- State Highway
- Ten Foot Contours 2015
- Road Centerlines
- Municipality
- World Hillshade
- US Highway
- Rivers & Streams

1:8,044



Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community





ONE BEDROOM UNITS = 54  
TWO BEDROOM UNITS = 34  
EFFICIENCY UNITS = 63  
TOTAL = 151

LIGHT FIXTURE

SITE PLAN

1"=30'-0"

|                                    |                            |
|------------------------------------|----------------------------|
| SITE DATA                          |                            |
| AREA                               | 195,817.0 SF OR 4.49 ACRES |
| SITE COVERAGE BY BUILDING          | = 44,441.8 SF OR 22.6%     |
| SITE COVERAGE BY PARKING AND WALKS | = 72,277.4 SF OR 36%       |
| SITE COVERAGE BY PATIO             | = 822.7 SF                 |
| TOTAL SITE COVERAGE                | = 117,541.9 SF OR 60%      |
| GREEN SPACE LAWN AREA              | 78,275.1 SF OR 40%         |

|                          |  |
|--------------------------|--|
| PARKING DATA             |  |
| 167 OPEN PARKING STALLS  |  |
| 132 OPEN PARKING STALLS  |  |
| 299 TOTAL PARKING STALLS |  |

|               |              |
|---------------|--------------|
| BUILDING DATA |              |
| FIRST FLOOR   | 44,441.8 SF  |
| SECOND FLOOR  | 44,441.8 SF  |
| THIRD FLOOR   | 44,441.8 SF  |
| FOURTH FLOOR  | 44,441.8 SF  |
| TOTAL         | 177,767.2 SF |

CDM NO 2511

DATE 6/1/25

REVISION

PROJECT NAME

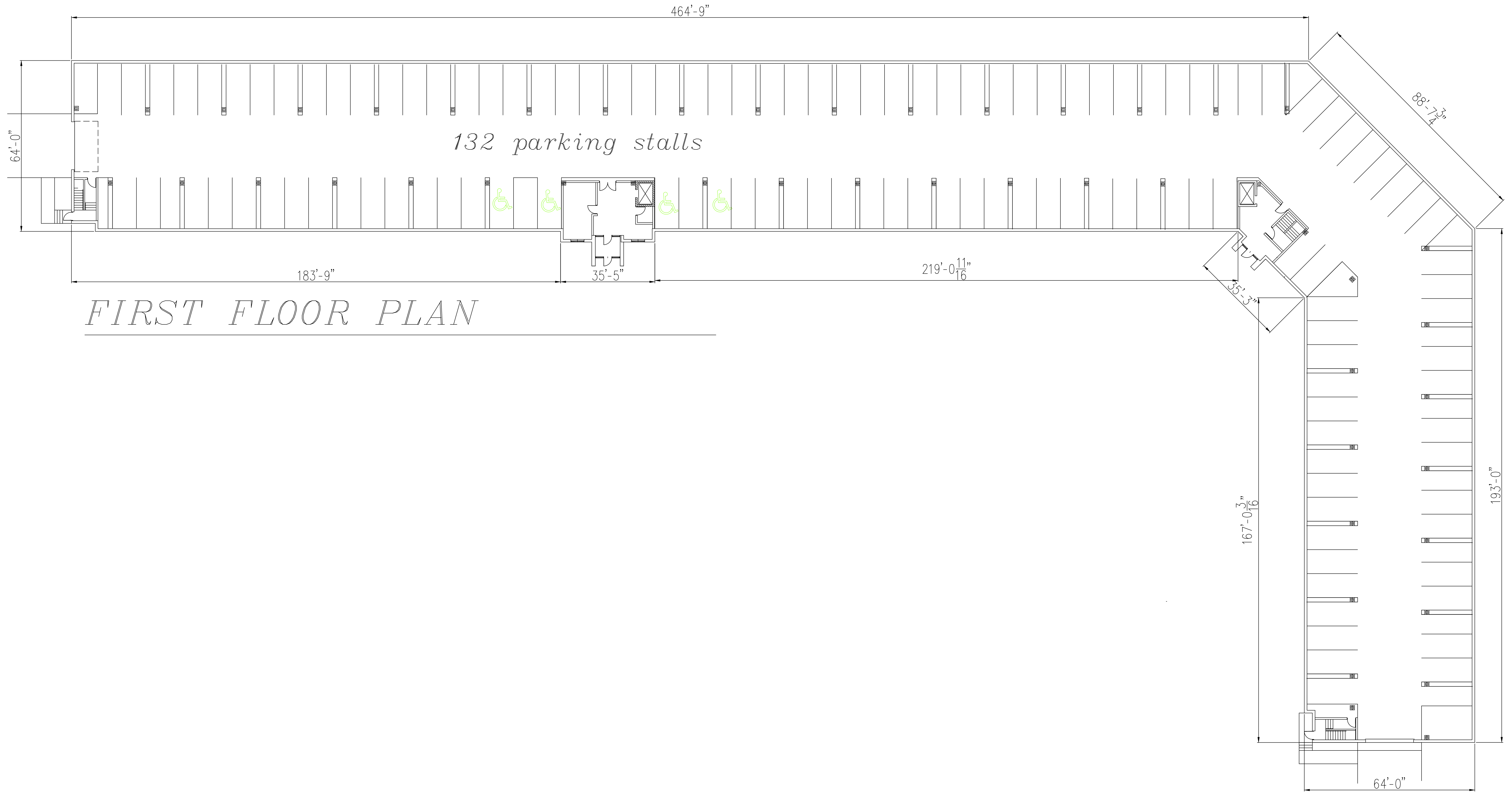
151 UNIT APARTMENT  
BUILDING  
ASHLAND WISCONSIN

RHA ARCHITECT'S LLC  
ARCHITECTS, PLANNERS, DESIGNERS  
P.O. BOX 983  
ST. CLOUD, MINNESOTA  
PHONE 320-287-7115  
EMAIL RHA4200@T4H00.COM

SHEET NO

AI





FIRST FLOOR PLAN

FRONT ELEVATION

COMM NO 1710

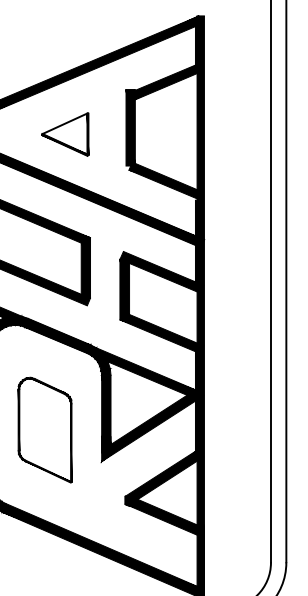
DATE 12/22/17

REVISION

PROJECT NAME

151 UNIT APARTMENT  
BUILDING  
ASHLAND WISCONSIN

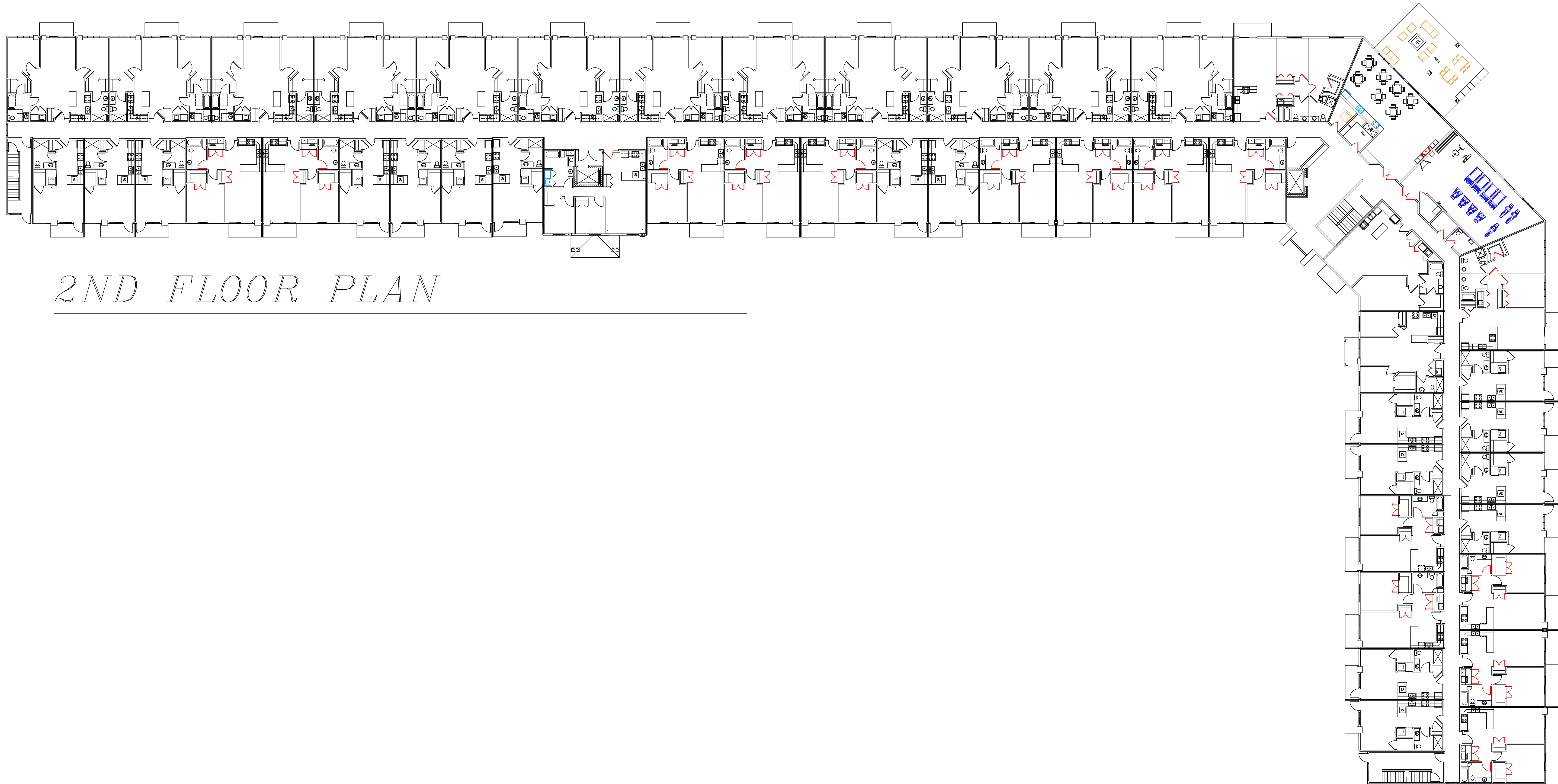
RHA ARCHITECT'S INC.  
ARCHITECTS, PLANNERS, DESIGNERS  
PO BOX 383  
ST. CLOUD, MINNESOTA  
PHONE 320-257-7115  
EMAIL RHAA200@TAHOOCOM



SHEET NO.

A2





2ND FLOOR PLAN



REAR ELEVATION

COMM NO 1710

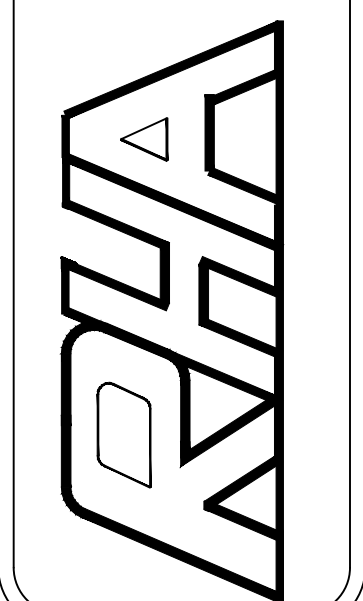
DATE 12/22/17

REVISION

PROJECT NAME

151 UNIT APARTMENT  
BUILDING  
ASHLAND WISCONSIN

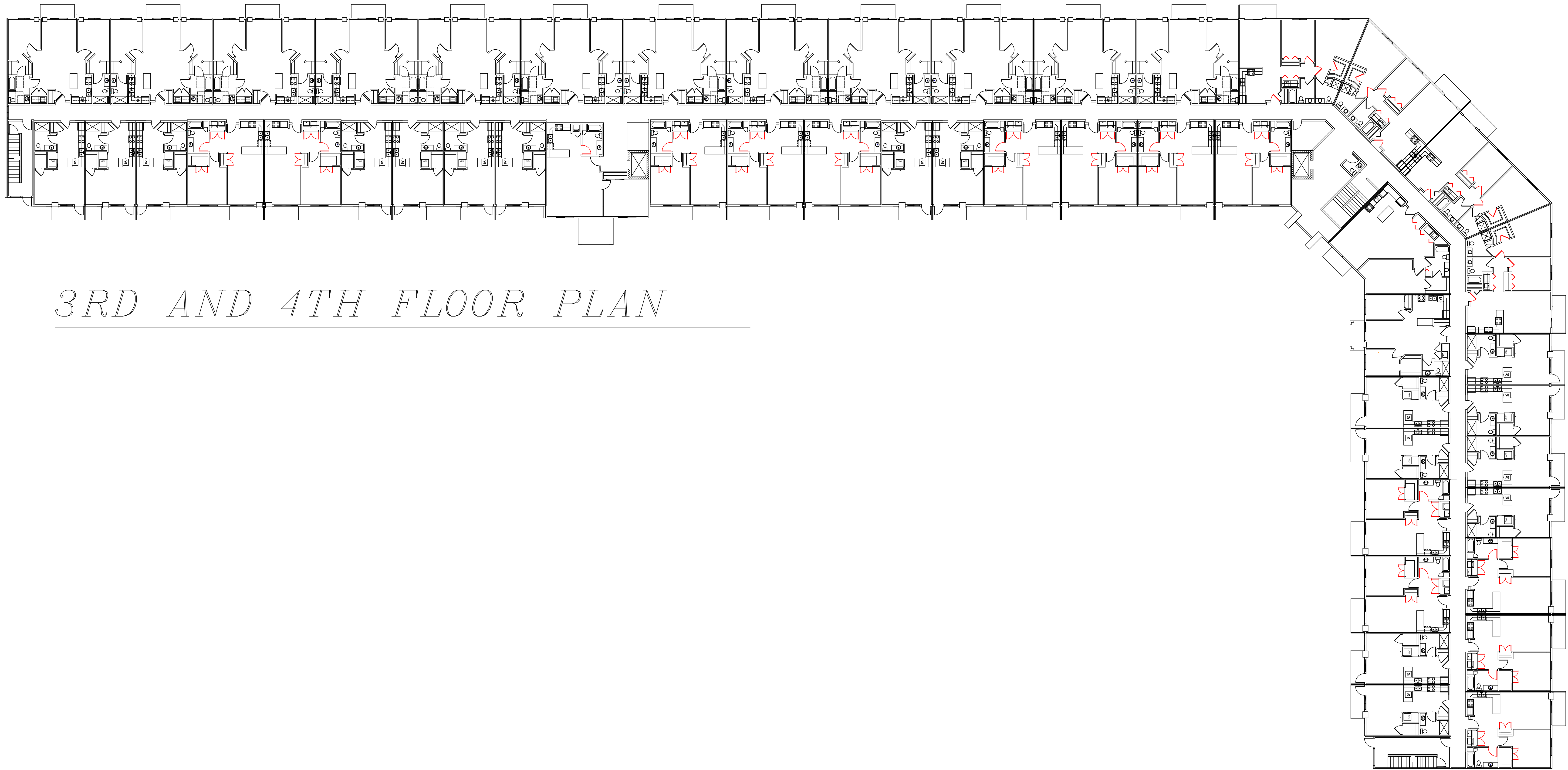
RHA ARCHITECT'S INC.  
ARCHITECTS, PLANNERS, DESIGNERS  
PO BOX 383  
ST. CLOUD, MINNESOTA  
PHONE 320-257-7115  
EMAIL RHAA200@TAHOOCOM



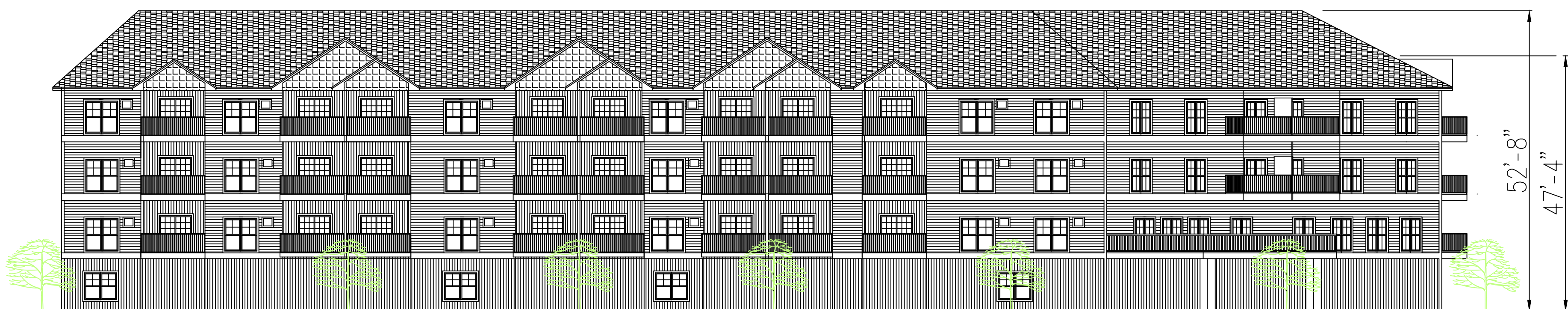
SHEET NO.

A3





3RD AND 4TH FLOOR PLAN



SIDE ELEVATION

COMM NO 1710

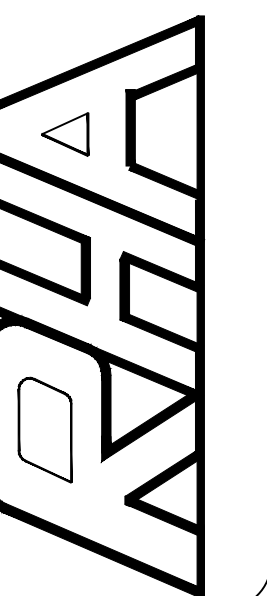
DATE 12/22/17

REVISION

PROJECT NAME

151 UNIT APARTMENT  
BUILDING  
ASHLAND WISCONSIN

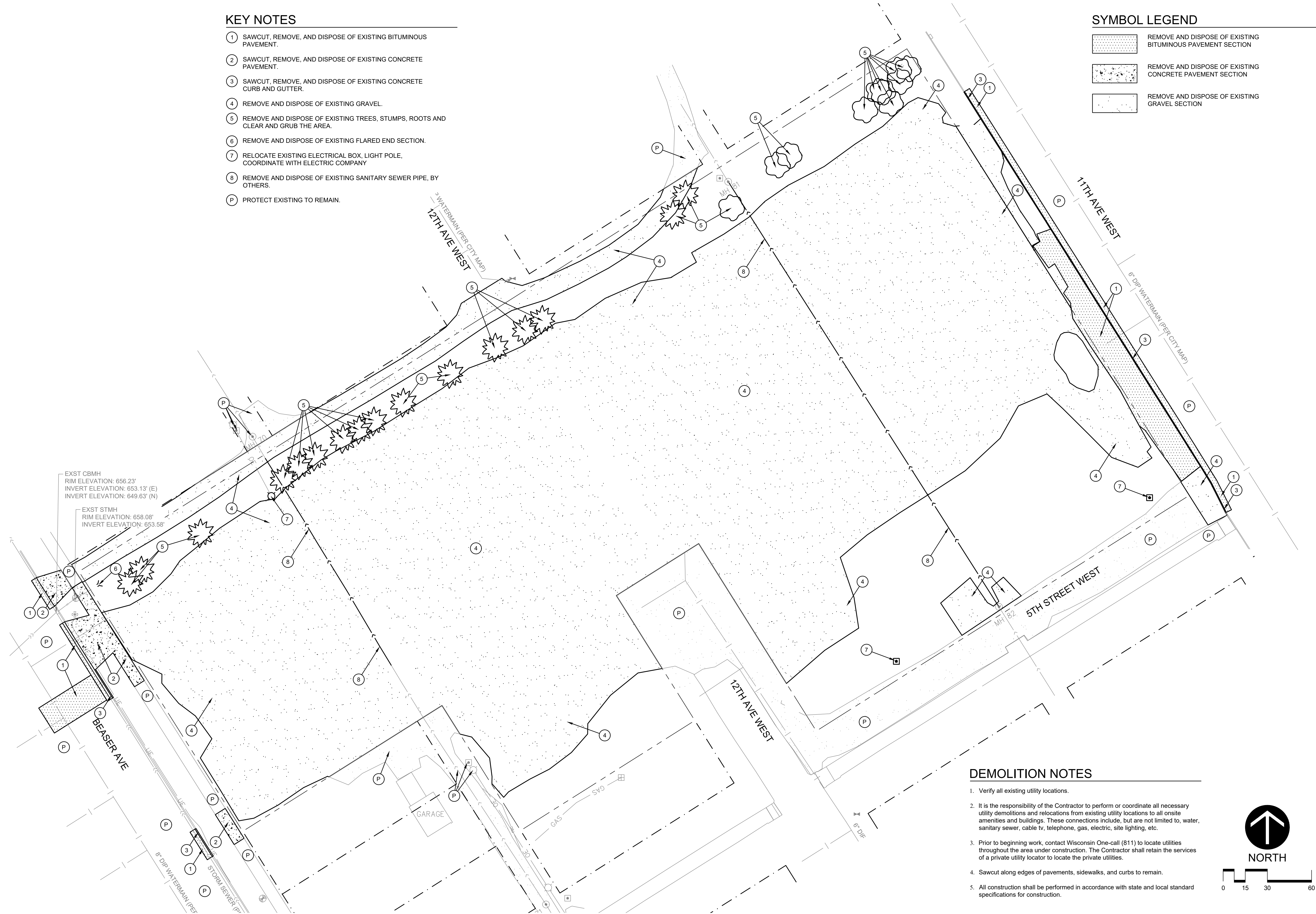
RHA ARCHITECT'S INC.  
ARCHITECTS, PLANNERS, DESIGNERS  
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ST. CLOUD, MINNESOTA  
PHONE 320-257-7115  
EMAIL RHAA200@TAHOOCOM



SHEET NO.

A4





KEY NOTES

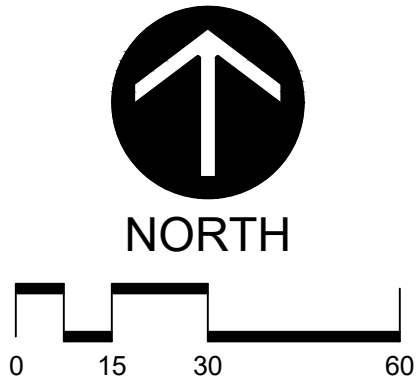
- 1 SAWCUT, REMOVE, AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT.
- 2 SAWCUT, REMOVE, AND DISPOSE OF EXISTING CONCRETE PAVEMENT.
- 3 SAWCUT, REMOVE, AND DISPOSE OF EXISTING CONCRETE CURB AND GUTTER.
- 4 REMOVE AND DISPOSE OF EXISTING GRAVEL.
- 5 REMOVE AND DISPOSE OF EXISTING TREES, STUMPS, ROOTS AND CLEAR AND GRUB THE AREA.
- 6 REMOVE AND DISPOSE OF EXISTING FLARED END SECTION.
- 7 RELOCATE EXISTING ELECTRICAL BOX, LIGHT POLE, COORDINATE WITH ELECTRIC COMPANY
- 8 REMOVE AND DISPOSE OF EXISTING SANITARY SEWER PIPE, BY OTHERS.
- P PROTECT EXISTING TO REMAIN.

SYMBOL LEGEND

- REMOVE AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT SECTION
- REMOVE AND DISPOSE OF EXISTING CONCRETE PAVEMENT SECTION
- REMOVE AND DISPOSE OF EXISTING GRAVEL SECTION

DEMOLITION NOTES

- Verify all existing utility locations.
- It is the responsibility of the Contractor to perform or coordinate all necessary utility demolitions and relocations from existing utility locations to all onsite amenities and buildings. These connections include, but are not limited to, water, sanitary sewer, cable tv, telephone, gas, electric, site lighting, etc.
- Prior to beginning work, contact Wisconsin One-call (811) to locate utilities throughout the area under construction. The Contractor shall retain the services of a private utility locator to locate the private utilities.
- Sawcut along edges of pavements, sidewalks, and curbs to remain.
- All construction shall be performed in accordance with state and local standard specifications for construction.



**Larson Engineering, Inc.**  
816 W. St. Germain Street  
Suite 308, St. Cloud, MN 56301  
320.774.1944  
www.larsonengr.com

Client:

VISION INC.  
PO BOX 23  
SUPERIOR, WI 54880

Project Title:

**ASHLAND APARTMENTS**  
ASHLAND, WI

| Rev. | Date | Description |
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Project #: 12256011  
Drawn By: KBK  
Checked By: TJH  
Issue Date: 06.27.25

Sheet Title:

**DEMOLITION PLAN**

Sheet:

**C100**

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KEY NOTES

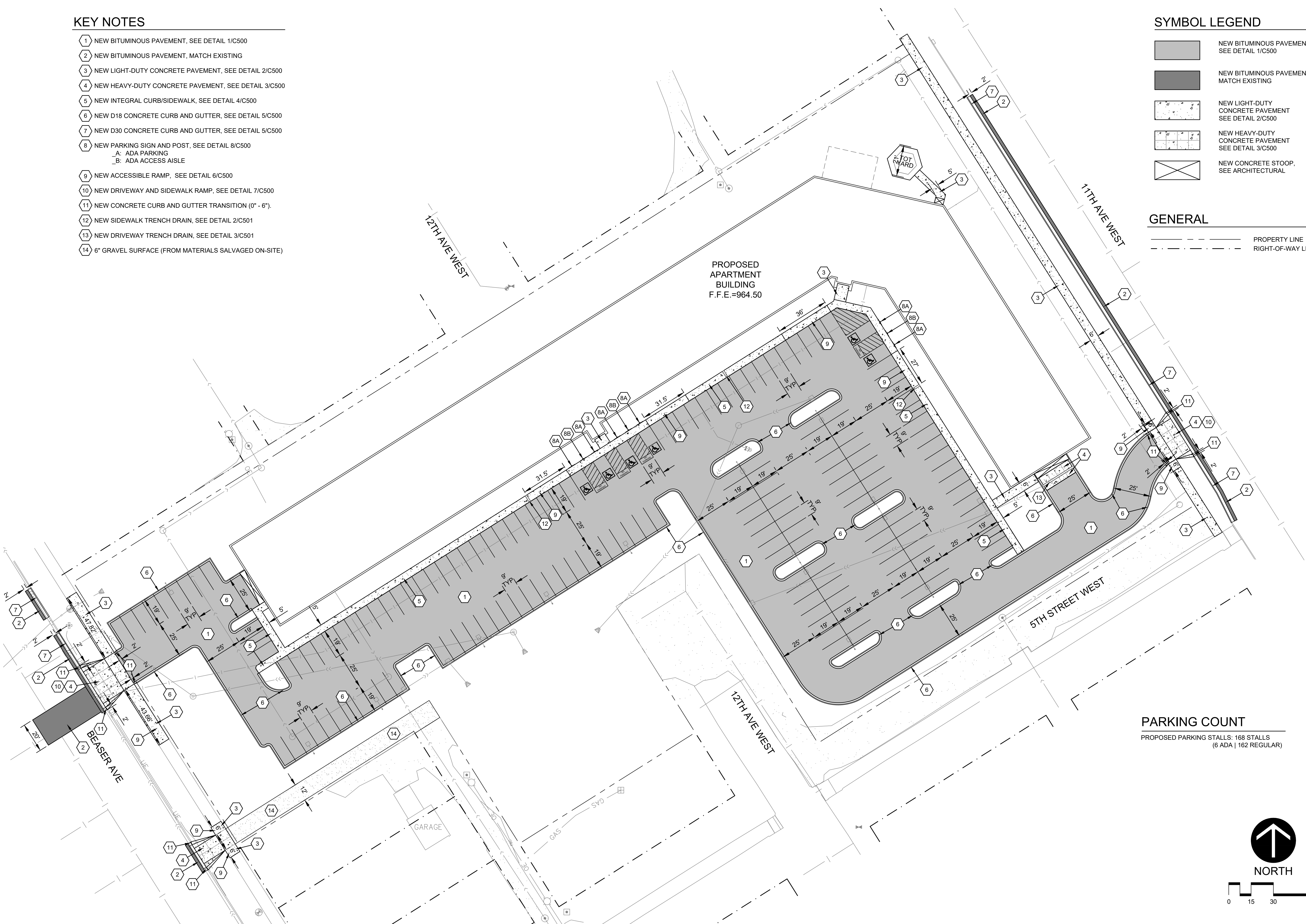
- 1
- NEW BITUMINOUS PAVEMENT, SEE DETAIL 1/C500
- 2
- NEW BITUMINOUS PAVEMENT, MATCH EXISTING
- 3
- NEW LIGHT-DUTY CONCRETE PAVEMENT, SEE DETAIL 2/C500
- 4
- NEW HEAVY-DUTY CONCRETE PAVEMENT, SEE DETAIL 3/C500
- 5
- NEW INTEGRAL CURB/SIDEWALK, SEE DETAIL 4/C500
- 6
- NEW D18 CONCRETE CURB AND GUTTER, SEE DETAIL 5/C500
- 7
- NEW D30 CONCRETE CURB AND GUTTER, SEE DETAIL 5/C500
- 8
- NEW PARKING SIGN AND POST, SEE DETAIL 8/C500
- A:
- ADA PARKING
- B:
- ADA ACCESS AISLE
- 9
- NEW ACCESSIBLE RAMP, SEE DETAIL 6/C500
- 10
- NEW DRIVEWAY AND SIDEWALK RAMP, SEE DETAIL 7/C500
- 11
- NEW CONCRETE CURB AND GUTTER TRANSITION (0" - 6").
- 12
- NEW SIDEWALK TRENCH DRAIN, SEE DETAIL 2/C501
- 13
- NEW DRIVEWAY TRENCH DRAIN, SEE DETAIL 3/C501
- 14
- 6" GRAVEL SURFACE (FROM MATERIALS SALVAGED ON-SITE)

SYMBOL LEGEND

- NEW BITUMINOUS PAVEMENT  
SEE DETAIL 1/C500
- NEW BITUMINOUS PAVEMENT  
MATCH EXISTING
- NEW LIGHT-DUTY  
CONCRETE PAVEMENT  
SEE DETAIL 2/C500
- NEW HEAVY-DUTY  
CONCRETE PAVEMENT  
SEE DETAIL 3/C500
- NEW CONCRETE STOOP,  
SEE ARCHITECTURAL

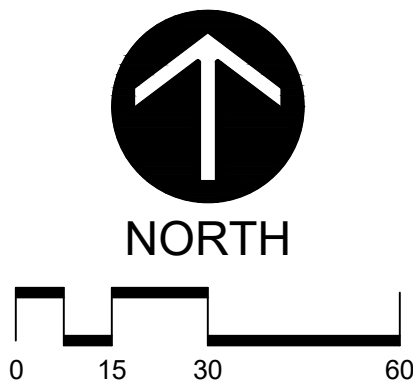
GENERAL

- PROPERTY LINE
- RIGHT-OF-WAY LINE



PARKING COUNT

PROPOSED PARKING STALLS: 168 STALLS  
(6 ADA | 162 REGULAR)



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Client:

VISION INC.  
PO BOX 23  
SUPERIOR, WI 54880

Project Title:

ASHLAND  
APARTMENTS  
ASHLAND, WI

STATE OF WISCONSIN  
PROFESSIONAL ENGINEER  
GREGORY A. BUCHAL  
31358-6  
WILSON  
WI

| Rev. | Date | Description |
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Project #: 12256011  
Drawn By: KBK  
Checked By: TJH  
Issue Date: 06.27.25  
Sheet Title:

SITE PLAN

Sheet:

C200



KEY NOTES

- 1 NEW SILT FENCE, SEE DETAIL 1/C502
- 2 NEW INLET PROTECTION (13 TYP), SEE DETAIL 2/C502
- 3 NEW EROSION CONTROL BLANKET, SEE DETAIL 3/C502
- 4 NEW ROCK CONST. ENTRANCE, SEE DETAIL 4/C502
- 5 NEW RIP-RAP, SEE DETAIL 6/C501
- 6 NEW WET DETENTION POND, SEE DETAIL 5/C502

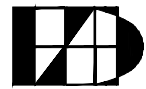
WETLAND NOTE:  
CITY MAPPING DID NOT  
INDICATE ANY WETLAND OR  
FLOOD PLAIN BOUNDARY'S  
WITHIN THE PROPERTY.

SYMBOL LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS - MAJOR INTERVAL
- PROPOSED CONTOURS - MINOR INTERVAL
- GRADE BREAK LINE
- GRADE SLOPE
- SILT FENCE
- RIP-RAP AND ROCK CONST. ENTRANCE
- EROSION CONTROL BLANKET
- INLET PROTECTION

SPOT ABBREVIATIONS:  
TC - TOP OF CURB  
GL - GUTTER LINE  
B - BITUMINOUS  
C - CONCRETE  
EOF - EMERGENCY OVERFLOW  
FFE - FINISH FLOOR ELEVATION  
G - GROUND  
GRVL - GRAVEL  
HP - HIGH POINT  
RIM - TOP OF CASTING  
(\*) - EXISTING TO BE VERIFIED

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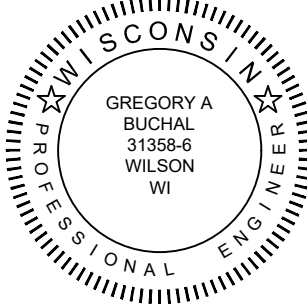
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VISION INC.  
PO BOX 23  
SUPERIOR, WI 54880

Client:

ASHLAND  
APARTMENTS  
ASHLAND, WI

Project Title:

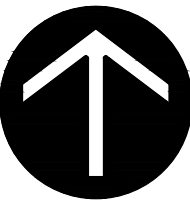


GRADING NOTES

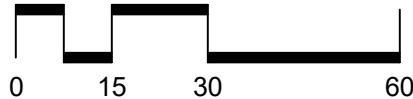
- Tree protection consisting of snow fence or safety fence installed at the drip line shall be in place prior to beginning any grading or demolition work at the site.
- All elevations with an asterisk (\*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
- Grades shown in paved areas represent finish elevation.
- All disturbed areas to receive 4" of good quality topsoil and sod.
- All construction shall be performed in accordance with state and local standard specifications for construction.

EROSION CONTROL NOTES

- See Sheet C502 for Erosion Control Notes.



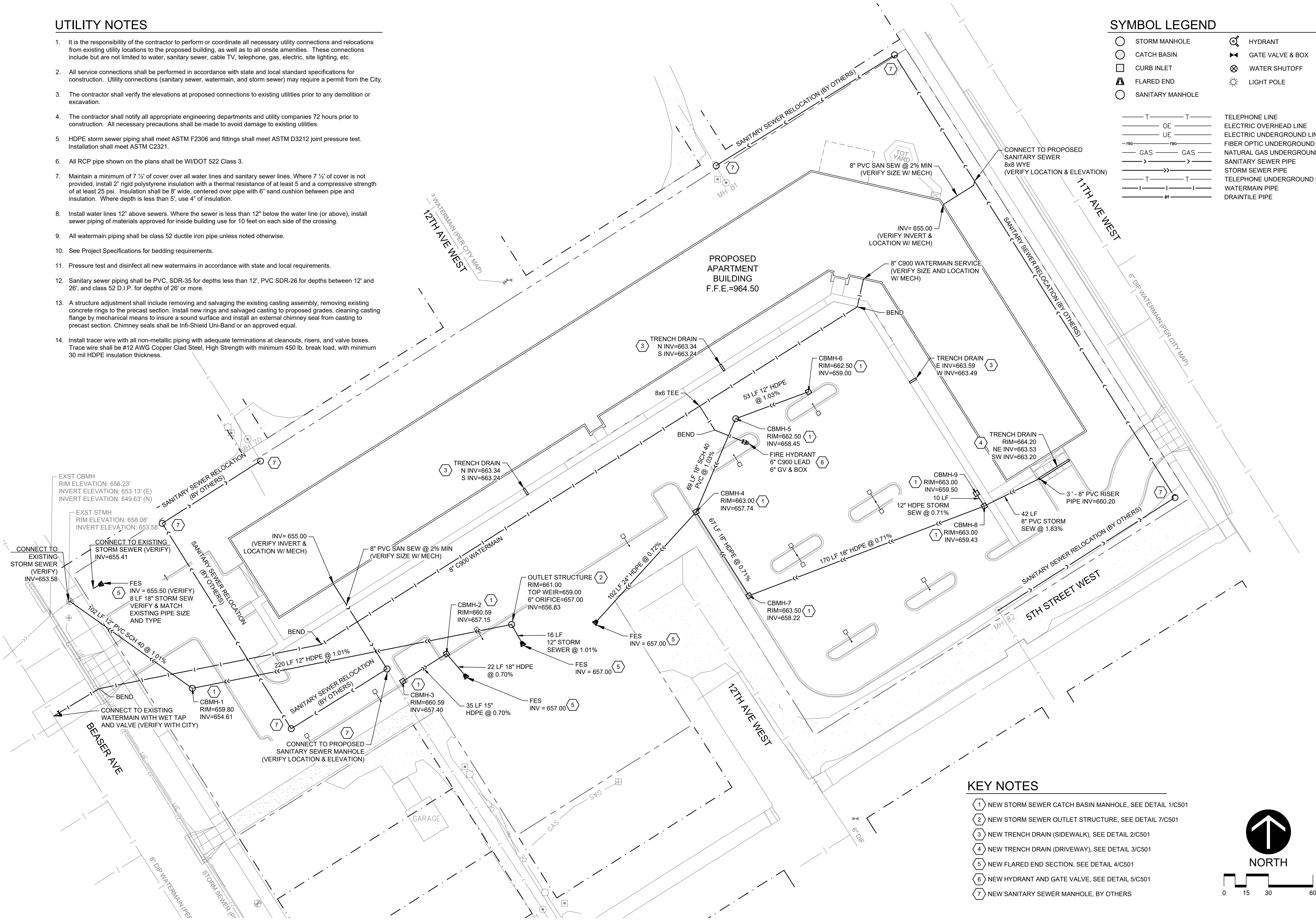
NORTH



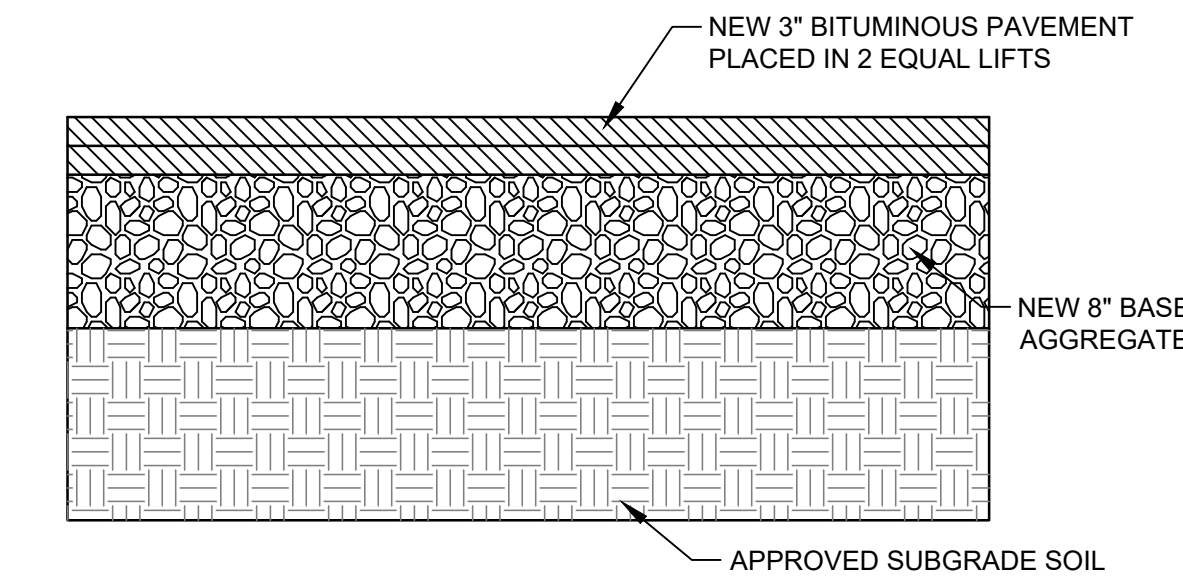


UTILITY NOTES

- It is the responsibility of the contractor to perform or coordinate all necessary utility connections and relocations from existing utility locations to the proposed building, as well as to all onsite amenities. These connections include but are not limited to water, sanitary sewer, cable TV, telephone, gas, electric, site lighting, etc.
- All service connections shall be performed in accordance with state and local standard specifications for construction. Utility connections (sanitary sewer, watermain, and storm sewer) may require a permit from the City.
- The contractor shall verify the elevations at proposed connections to existing utilities prior to any demolition or excavation.
- The contractor shall notify all appropriate engineering departments and utility companies 72 hours prior to construction. All necessary precautions shall be made to avoid damage to existing utilities.
- HDPE storm sewer piping shall meet ASTM F2306 and fittings shall meet ASTM D3212 joint pressure test. Installation shall meet ASTM C2321.
- All RCP pipe shown on the plans shall be W/DOT 522 Class 3.
- Maintain a minimum of 7 1/2' of cover over all water lines and sanitary sewer lines. Where 7 1/2' of cover is not provided, install 2" rigid polystyrene insulation with a thermal resistance of at least 5 and a compressive strength of at least 25 psi. Insulation shall be 8" wide, centered over pipe with 6" sand cushion between pipe and insulation. Where depth is less than 5', use 4" of insulation.
- Install water lines 12" above sewers. Where the sewer is less than 12" below the water line (or above), install sewer piping of materials approved for inside building use for 10 feet on each side of the crossing.
- All watermain piping shall be class 52 ductile iron pipe unless noted otherwise.
- See Project Specifications for bedding requirements.
- Pressure test and disinfect all new watermains in accordance with state and local requirements.
- Sanitary sewer piping shall be PVC, SDR-35 for depths less than 12', PVC SDR-26 for depths between 12' and 26', and class 52 D.I.P. for depths of 26' or more.
- A structure adjustment shall include removing and salvaging the existing casting assembly, removing existing concrete rings to the precast section. Install new rings and salvaged casting to proposed grades, cleaning casting flange by mechanical means to insure a sound surface and install an external chimney seal from casting to precast section. Chimney seals shall be Infi-Shield Uni-Band or an approved equal.
- Install tracer wire with all non-metallic piping with adequate terminations at cleanouts, risers, and valve boxes. Trace wire shall be #12 AWG Copper Clad Steel, High Strength with minimum 450 lb. break load, with minimum 30 mil HDPE insulation thickness.



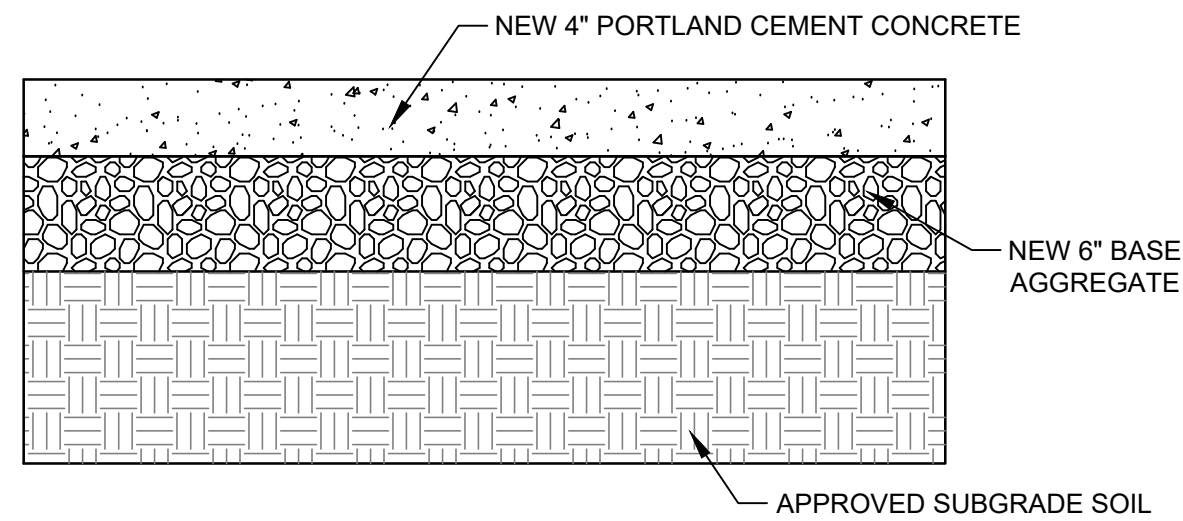




NOTE:  
CONTRACTOR SHALL VERIFY PAVEMENT SECTION WITH GEOTECHNICAL REPORT.

**BITUMINOUS  
PAVEMENT SECTION**  
NOT TO SCALE

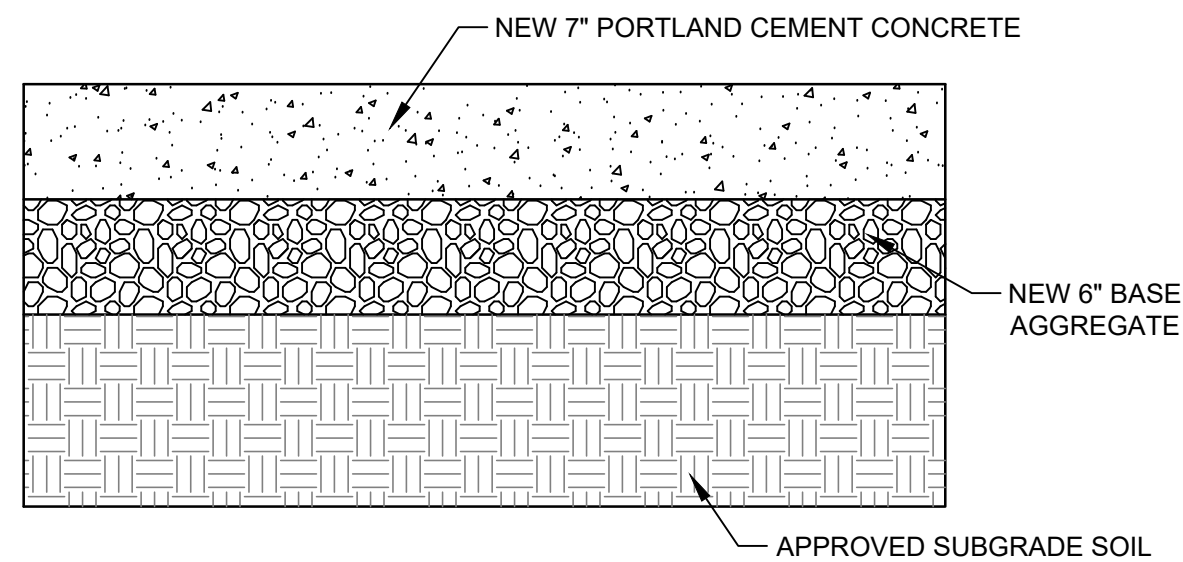
1  
C500



NOTE:  
CONTRACTOR SHALL VERIFY PAVEMENT SECTION WITH GEOTECHNICAL REPORT.

**LIGHT-DUTY CONCRETE  
CONSTRUCTION DETAIL**  
NOT TO SCALE

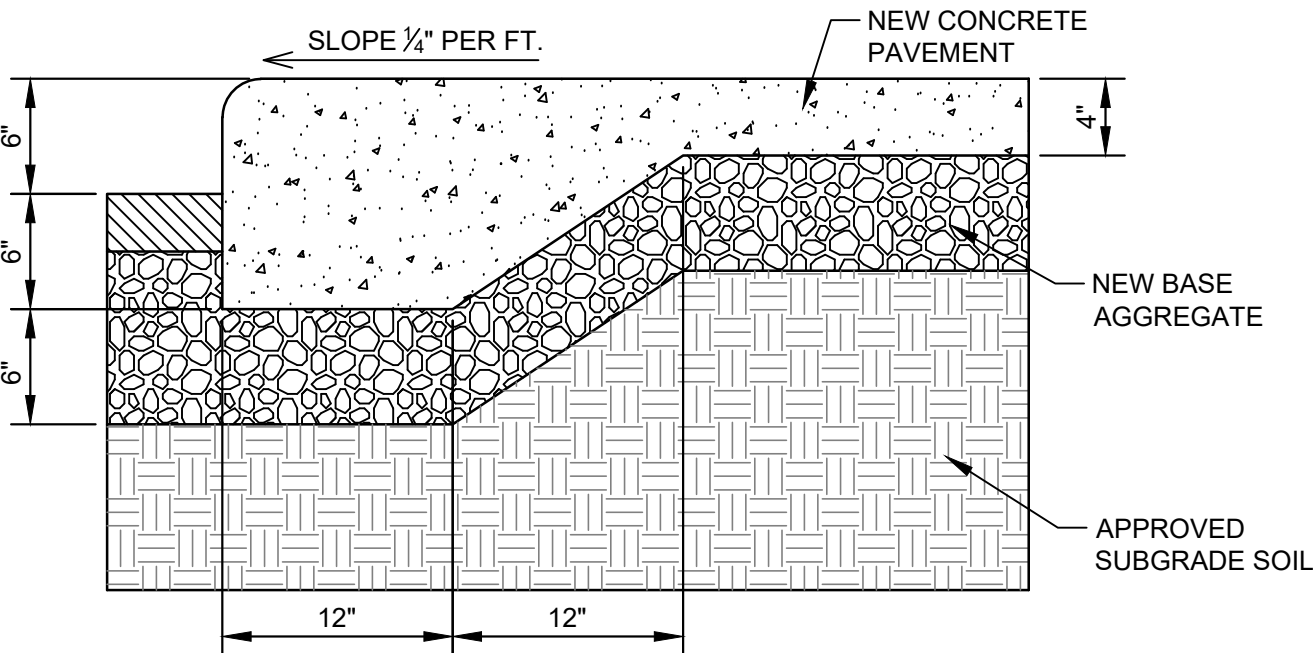
2  
C500



NOTE:  
CONTRACTOR SHALL VERIFY PAVEMENT SECTION WITH GEOTECHNICAL REPORT.

**HEAVY-DUTY CONCRETE  
CONSTRUCTION DETAIL**  
NOT TO SCALE

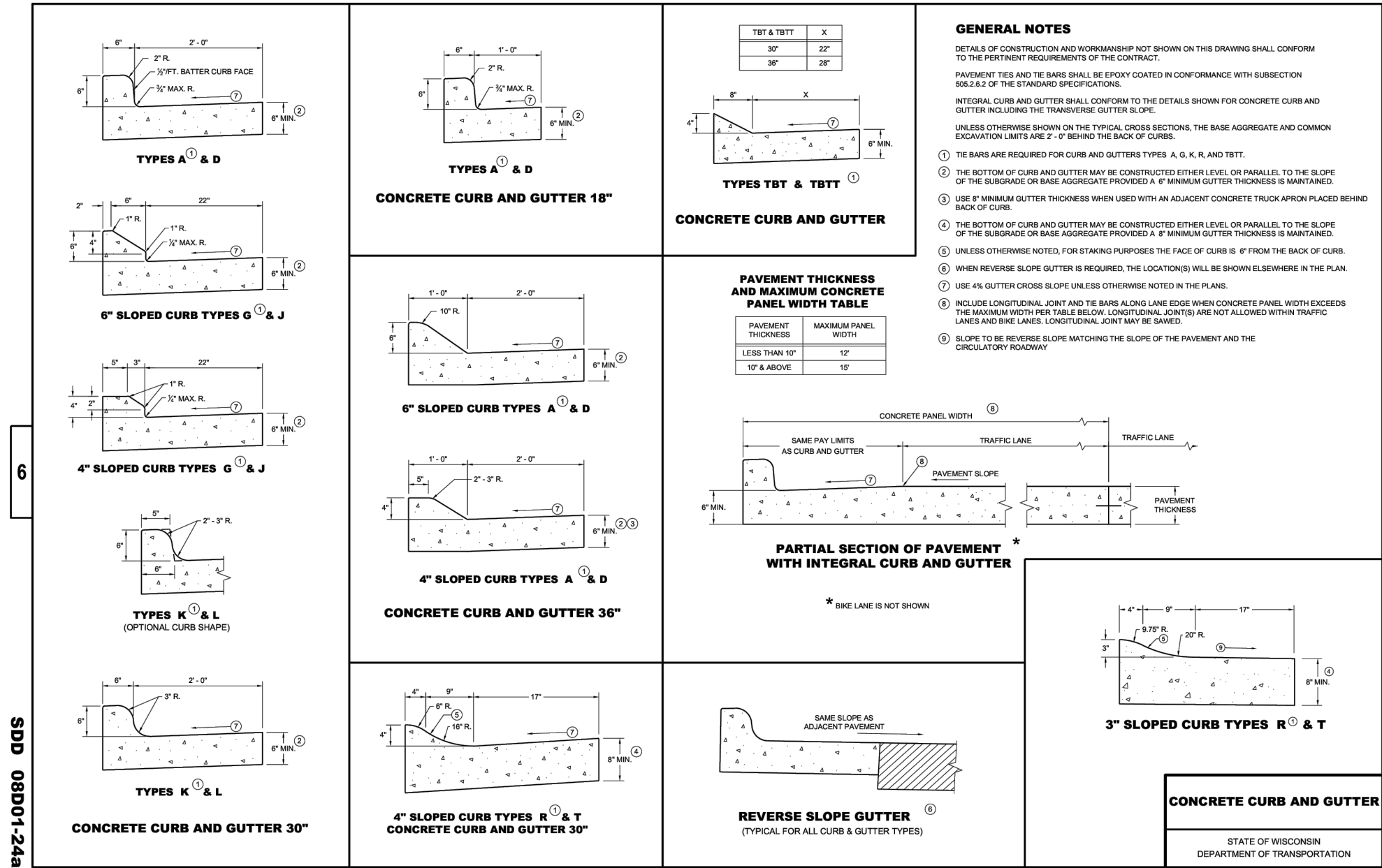
3  
C500



NOTE:  
CONTRACTOR SHALL VERIFY PAVEMENT SECTION WITH GEOTECHNICAL REPORT.

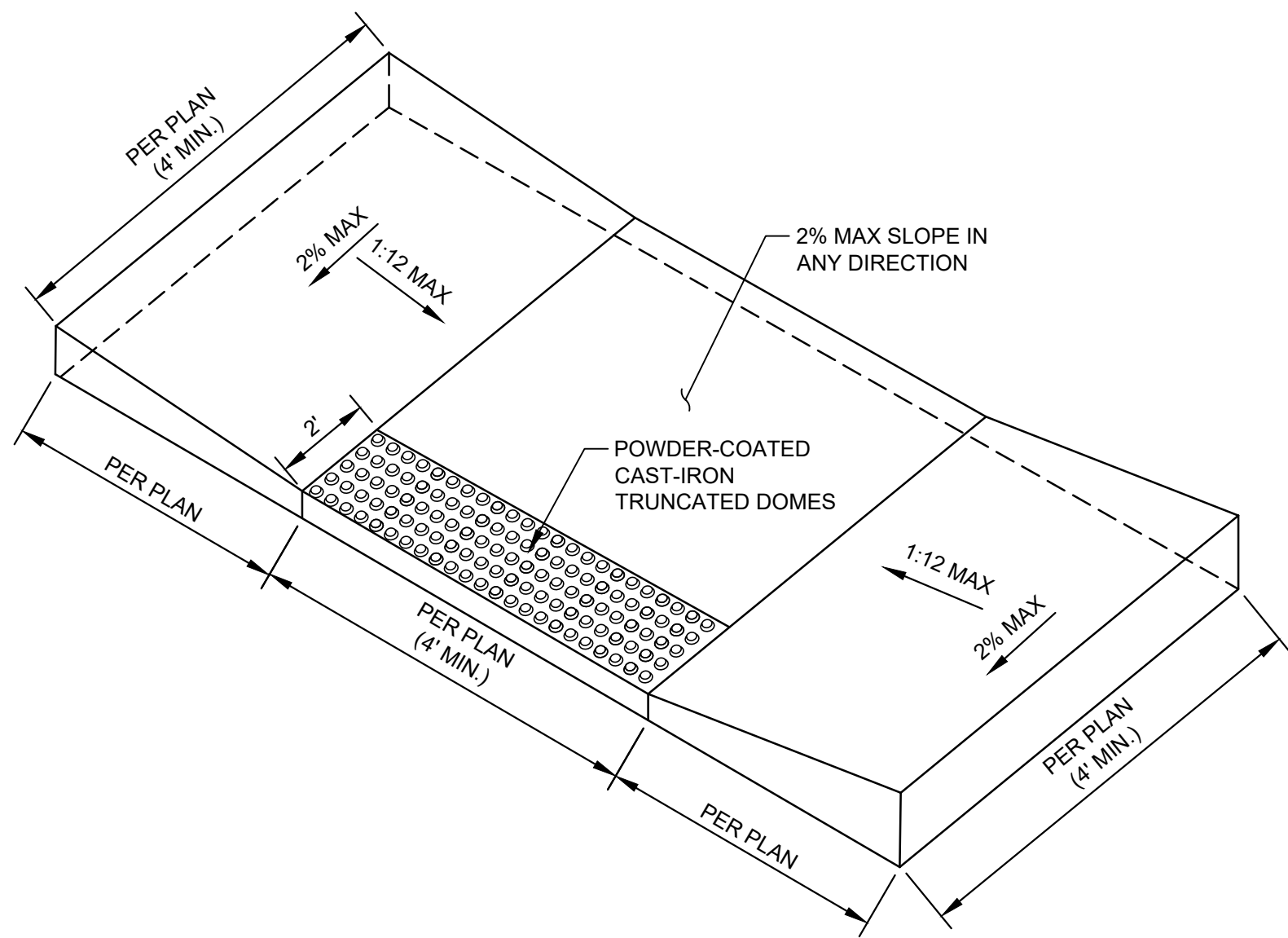
**INTEGRAL CURB  
& SIDEWALK DETAIL**  
NOT TO SCALE

4  
C500



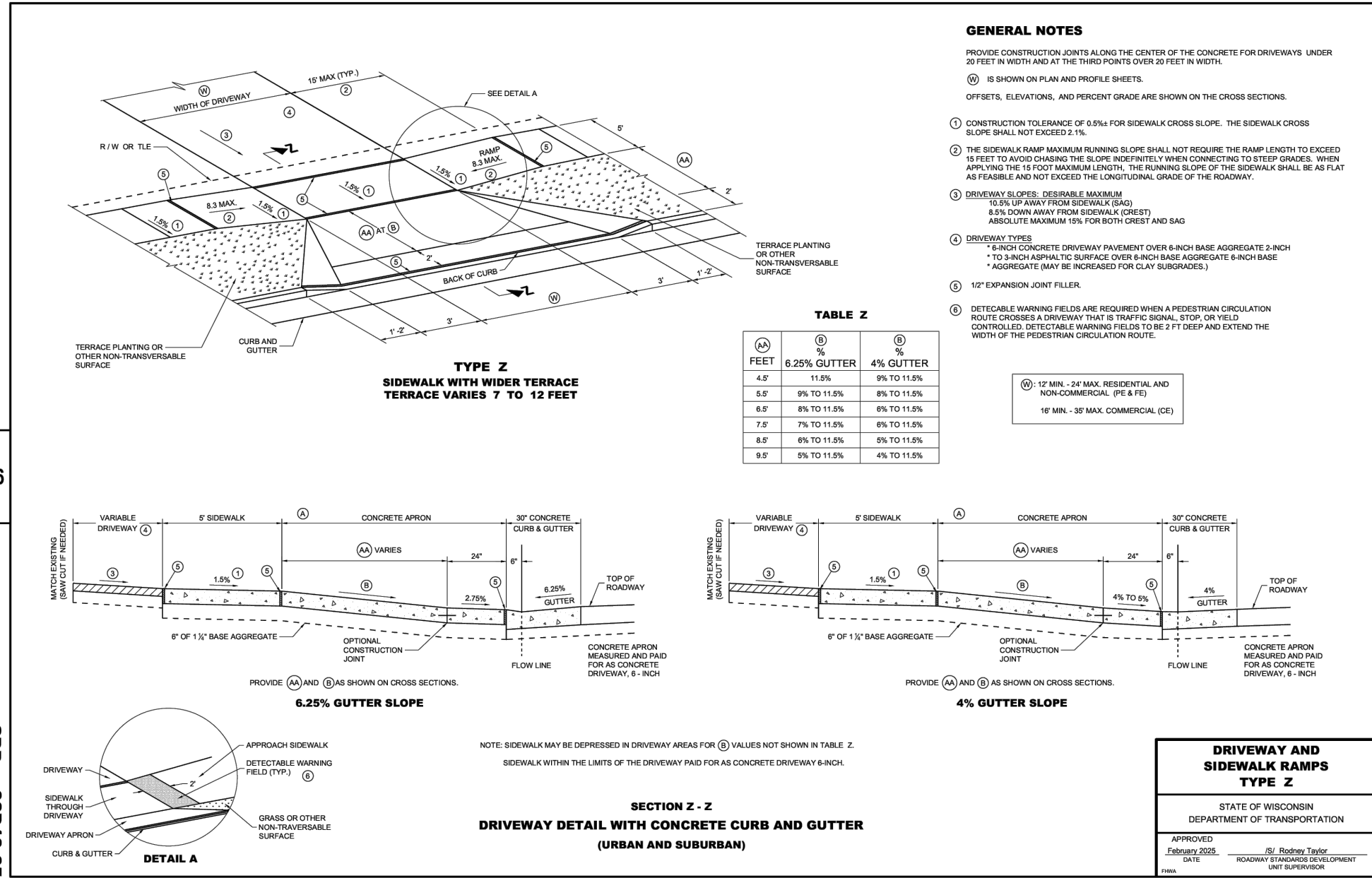
**CONCRETE CURB  
& GUTTER DETAIL**  
NOT TO SCALE

5  
C500



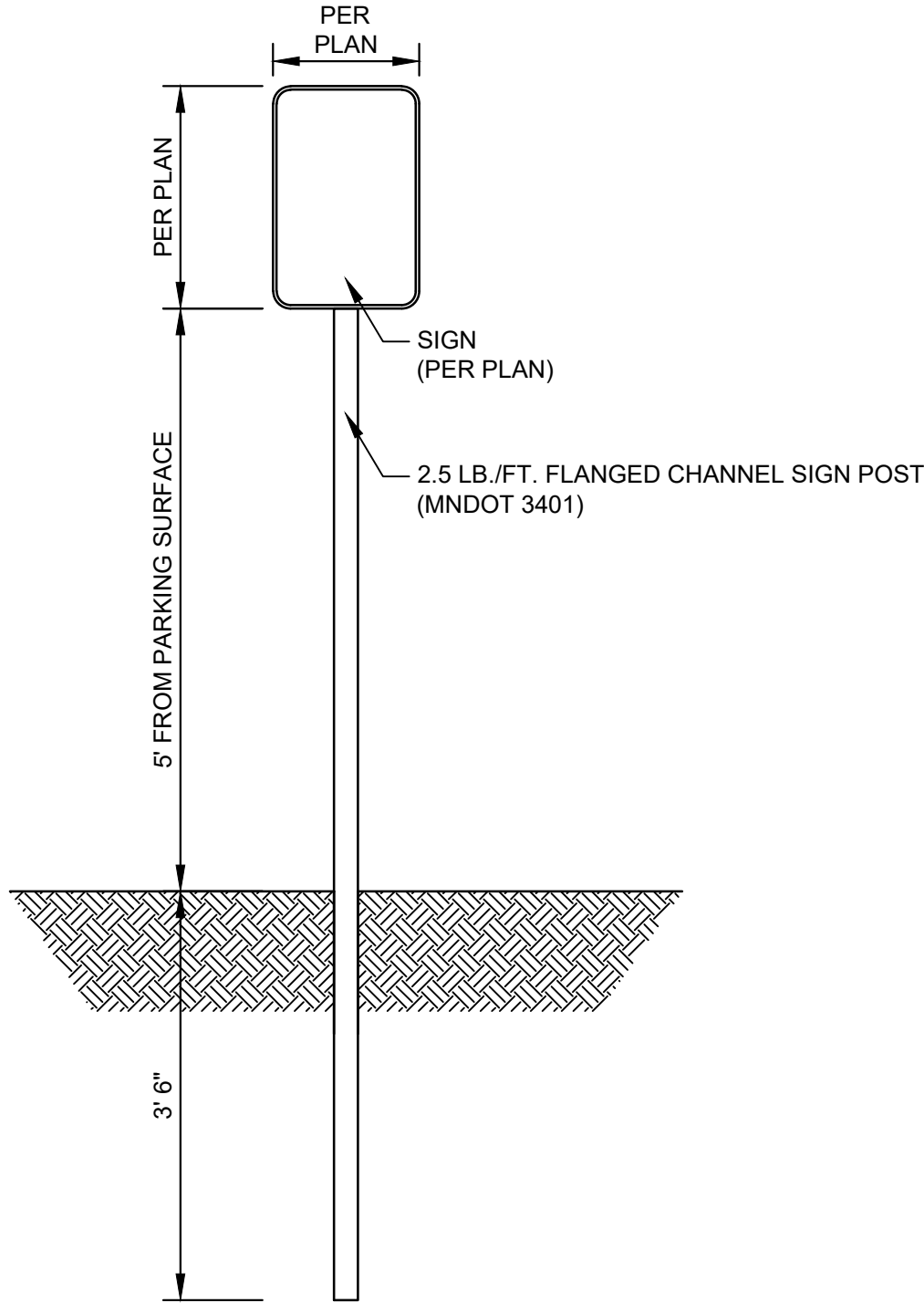
**ACCESSIBLE RAMP DETAIL  
WITH TRUNCATED DOMES**  
NOT TO SCALE

6  
C500



**DRIVEWAY AND  
SIDEWALK RAMP DETAIL**  
NOT TO SCALE

7  
C500



NOTES:  
1. ALL SIGNS TO BE INSTALLED IN ACCORDANCE WITH MMUTCD AND MNDOT CURRENT STANDARD SIGNS MANUAL.  
2. SEE PROJECT MANUAL FOR SIGN TYPES AND SPECIFICATION.  
3. ALL SIGNS SHALL BE REVIEWED AND APPROVED BY OWNER/ENGINEER PRIOR TO CONSTRUCTION.  
4. SIGN POSTS TO BE 6\"/>

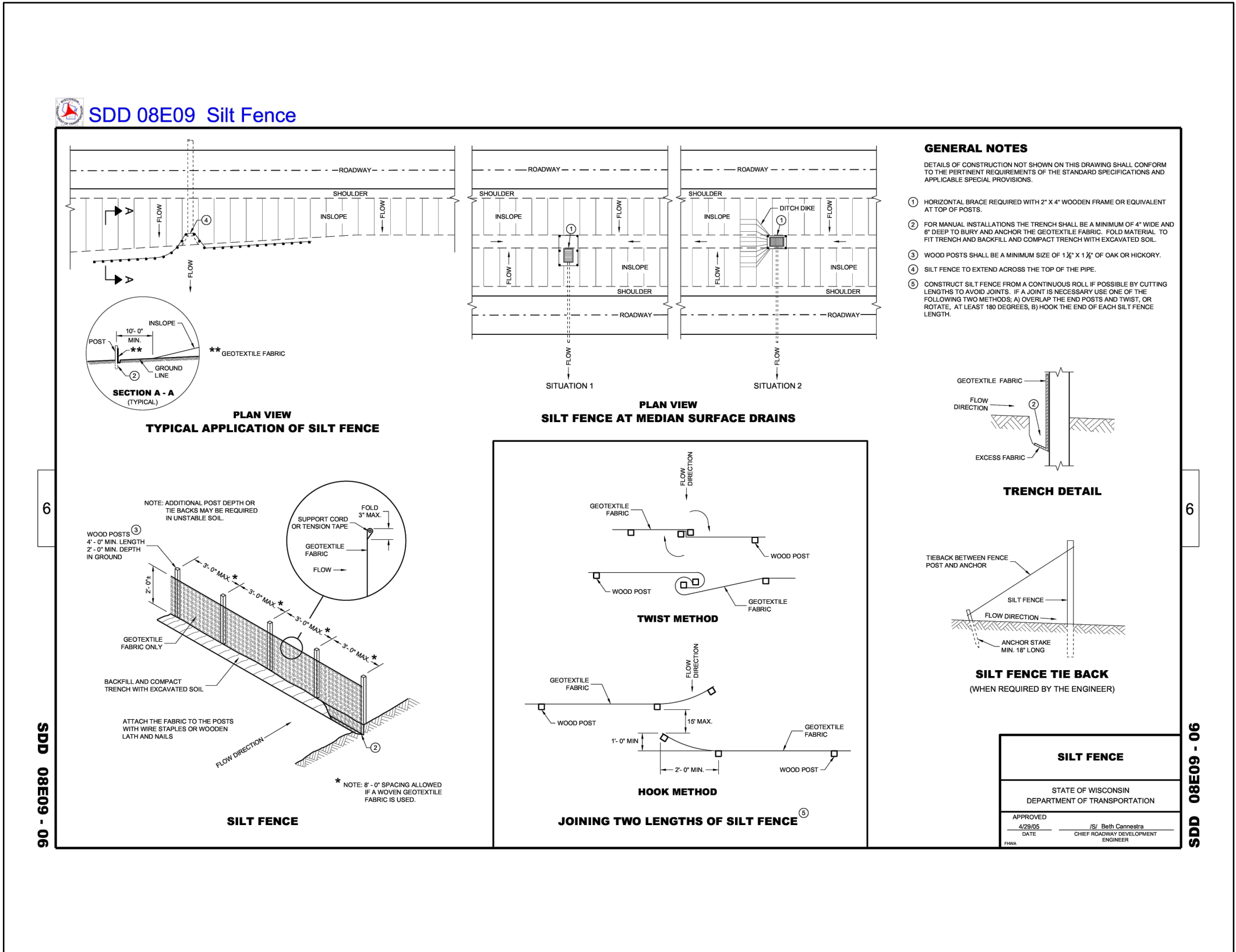
**PARKING SIGN  
AND POST DETAIL**  
NOT TO SCALE

8  
C500

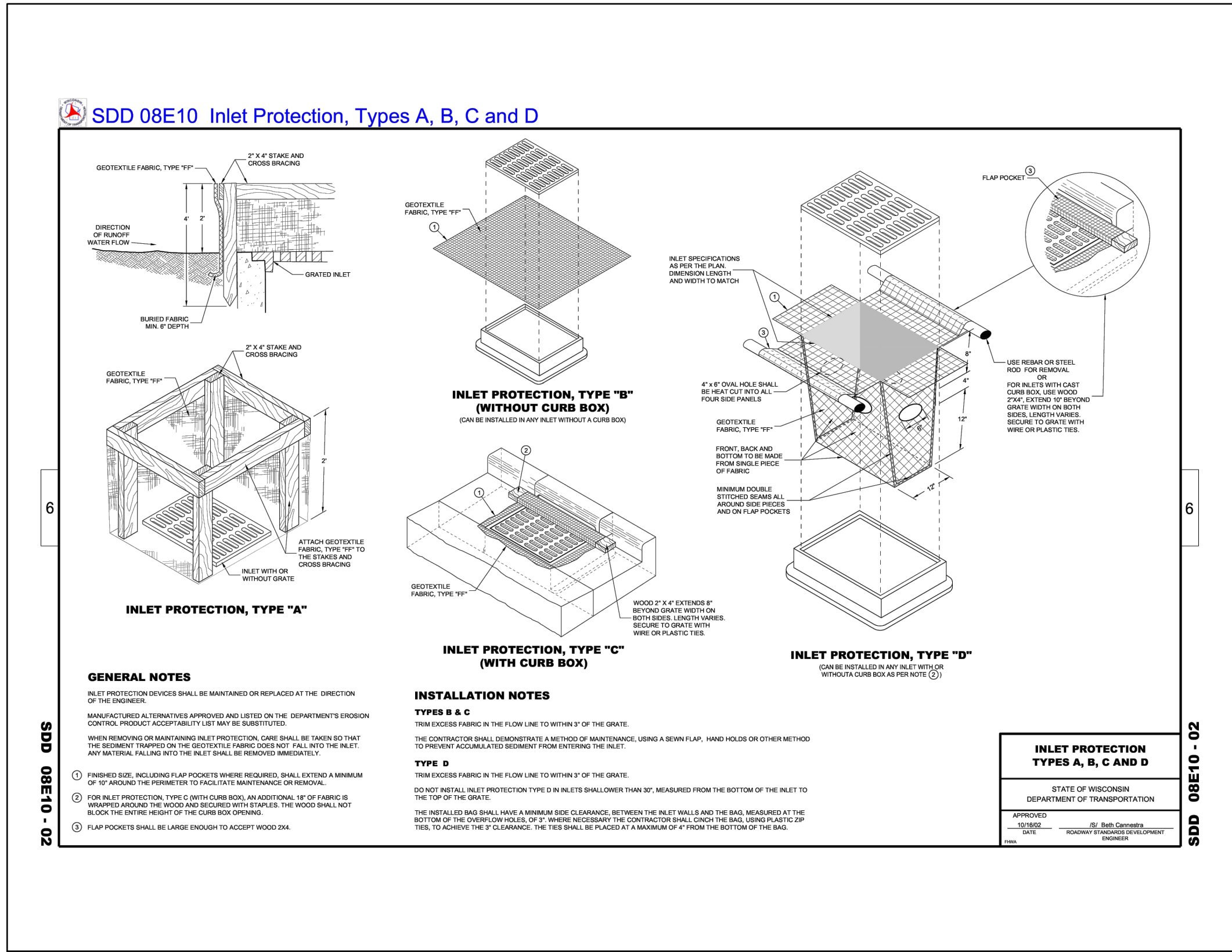




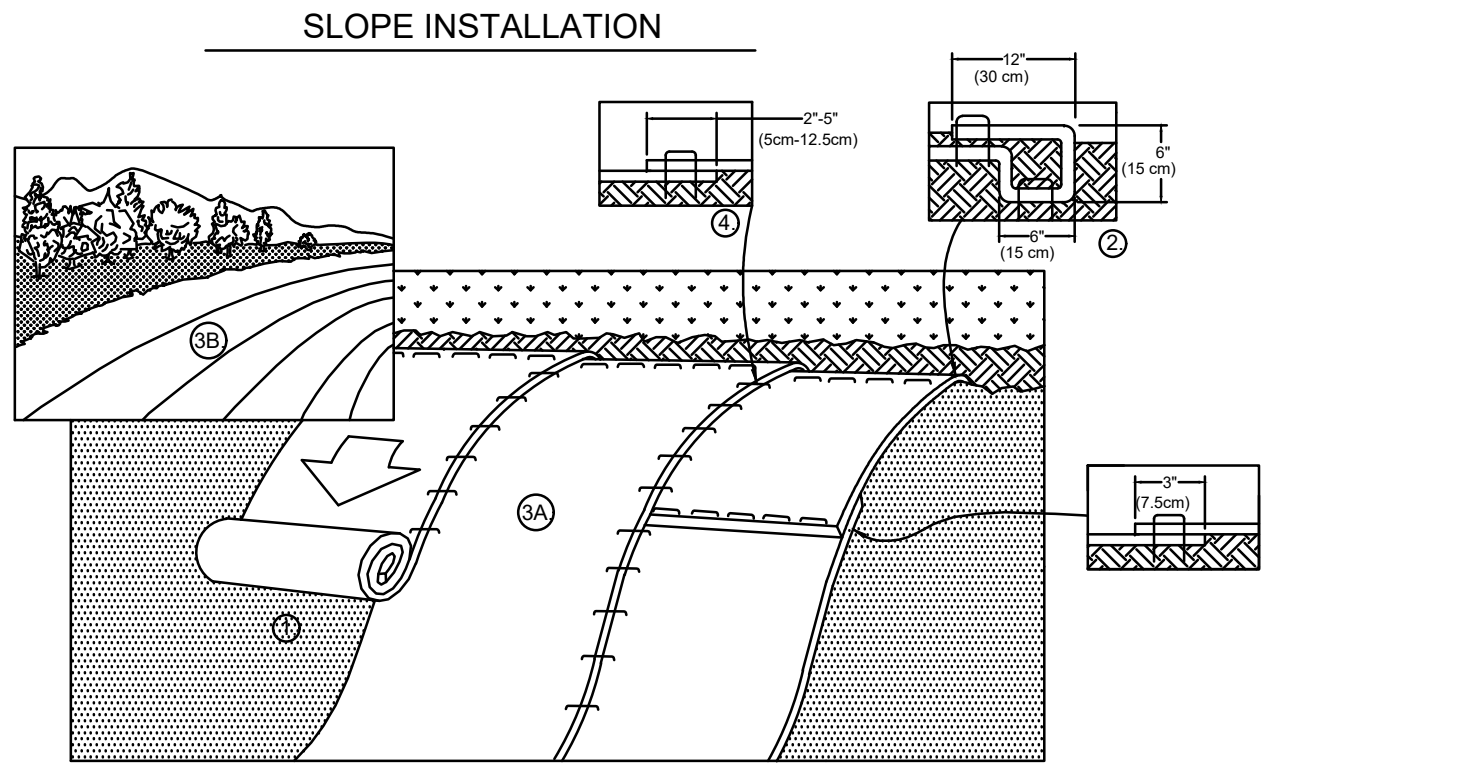




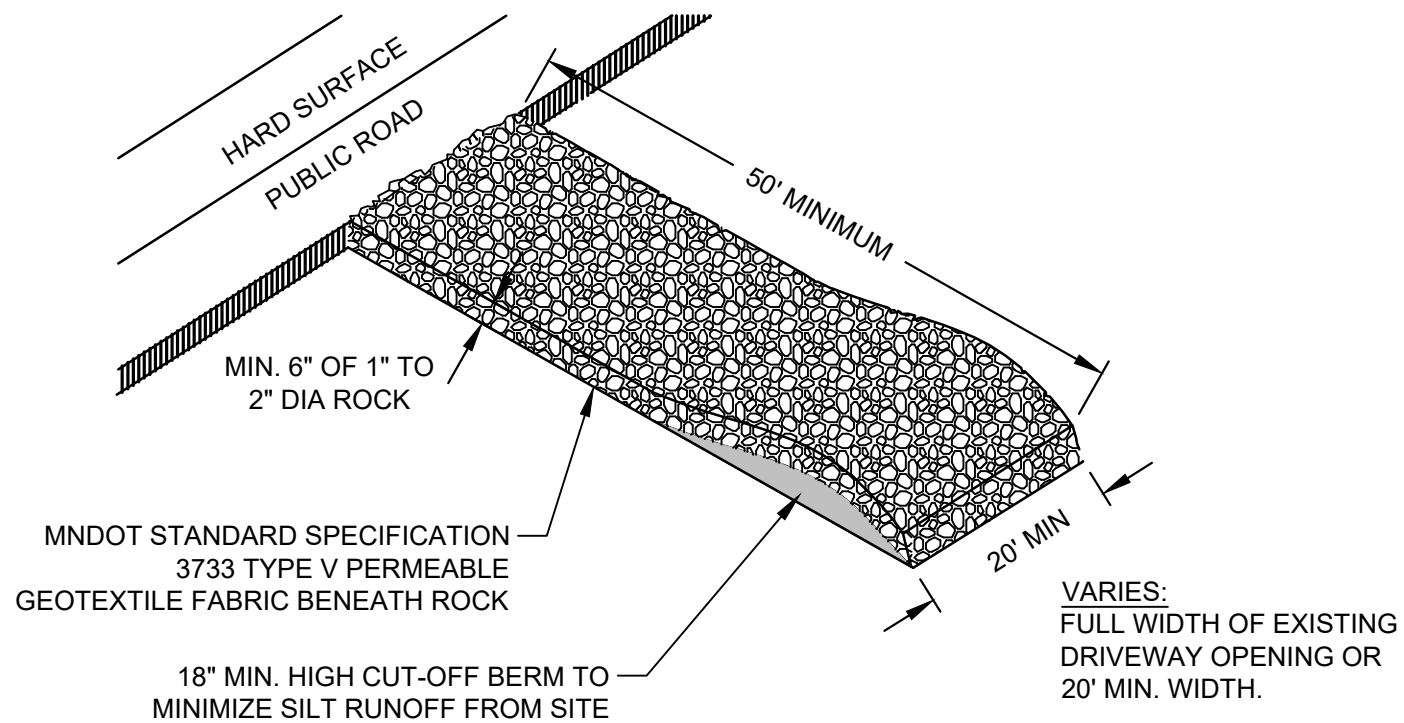
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C502  
SILT FENCE DETAIL  
NOT TO SCALE



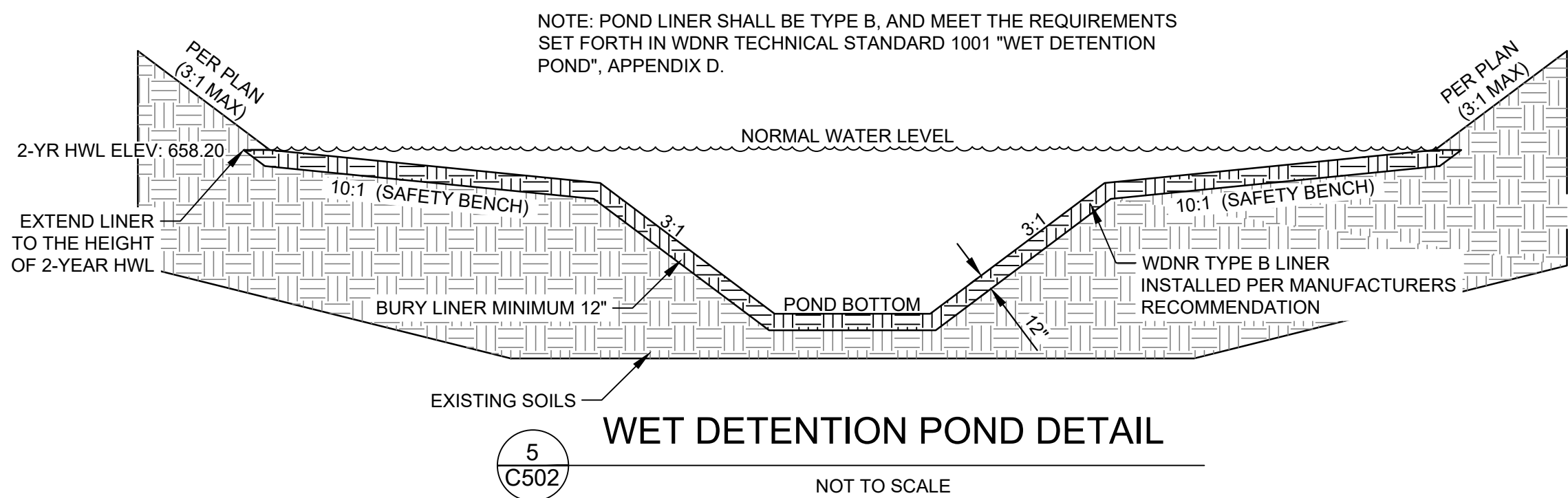
2  
C502  
INLET PROTECTION DETAIL  
NOT TO SCALE



3  
C502  
EROSION CONTROL BLANKET  
NOT TO SCALE



4  
C502  
ROCK CONSTRUCTION ENTRANCE  
NOT TO SCALE



5  
C502  
WET DETENTION POND DETAIL  
NOT TO SCALE

## EROSION CONTROL NOTES

- Owner and Contractor shall obtain WI DNR permit. Contractor shall be responsible for all fees pertaining to this permit. The SWPPP shall be kept onsite at all times.
- Install temporary erosion control measures (inlet protection, silt fence, and rock construction entrances) prior to beginning any excavation or demolition work at the site.
- Erosion control measures shown on the erosion control plan are the absolute minimum. The contractor shall install temporary earth dikes, sediment traps or basins, additional siltation fencing, and/or disk the soil parallel to the contours as deemed necessary to further control erosion. All changes shall be recorded in the SWPPP.
- All construction site entrances shall be surfaced with crushed rock across the entire width of the entrance and from the entrance to a point 50' into the construction zone.
- The toe of the silt fence shall be trenched in a minimum of 6". The trench backfill shall be compacted with a vibratory plate compactor.
- All grading operations shall be conducted in a manner to minimize the potential for site erosion. Sediment control practices must be established on all down gradient perimeters before any up gradient land disturbing activities begin.
- All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces are exempt from this requirement.
- The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water. Stabilization of the last 200 lineal feet must be completed within 24 hours after connecting to a surface water. Stabilization of the remaining portions of any temporary or permanent ditches or swales must be complete within 7 days after connecting to a surface water and construction in that portion of the ditch has temporarily or permanently ceased.
- Pipe outlets must be provided with energy dissipation within 24 hours of connection to surface water.
- All riprap shall be installed with a filter material or soil separation fabric and comply with the Wisconsin DNR Standard Specifications.
- All storm sewers discharging into wetlands or water bodies shall outlet at or below the normal water level of the respective wetland or water body at an elevation where the downstream slope is 1 percent or flatter. The normal water level shall be the invert elevation of the outlet of the wetland or water body.
- All storm sewer catch basins not needed for site drainage during construction shall be covered to prevent runoff from entering the storm sewer system. Catch basins necessary for site drainage during construction shall be provided with inlet protection.
- In areas where concentrated flows occur (such as swales and areas in front of storm catch basins and intakes) the erosion control facilities shall be backed by stabilization structure to protect those facilities from the concentrated flows.
- Inspect the construction site once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. All inspections shall be recorded in the SWPPP.
- All BMPs must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the capacity of the BMP. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access. All repairs shall be recorded in the SWPPP.
- If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
- All soils tracked onto pavement shall be removed daily.
- All infiltration areas must be inspected to ensure that no sediment from ongoing construction activity is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.
- Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
- Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with WI DNR disposal requirements.
- Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with WI DNR regulations.
- External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed onsite.
- All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with WI DNR regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
- Upon completion of the project and stabilization of all graded areas, all temporary erosion control facilities (silt fences, hay bales, etc.) shall be removed from the site.
- All permanent sedimentation basins must be restored to their design condition immediately following stabilization of the site.
- Contractor shall submit Notice of Termination for WI DNR permit within 30 days after Final Stabilization.

**Larson Engineering, Inc.**  
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**VISION INC.**  
PO BOX 23  
SUPERIOR, WI 54880

**ASHLAND APARTMENTS**  
ASHLAND, WI

**GREGORY A. BLUCHAL**  
31358-6  
WILSON  
WI

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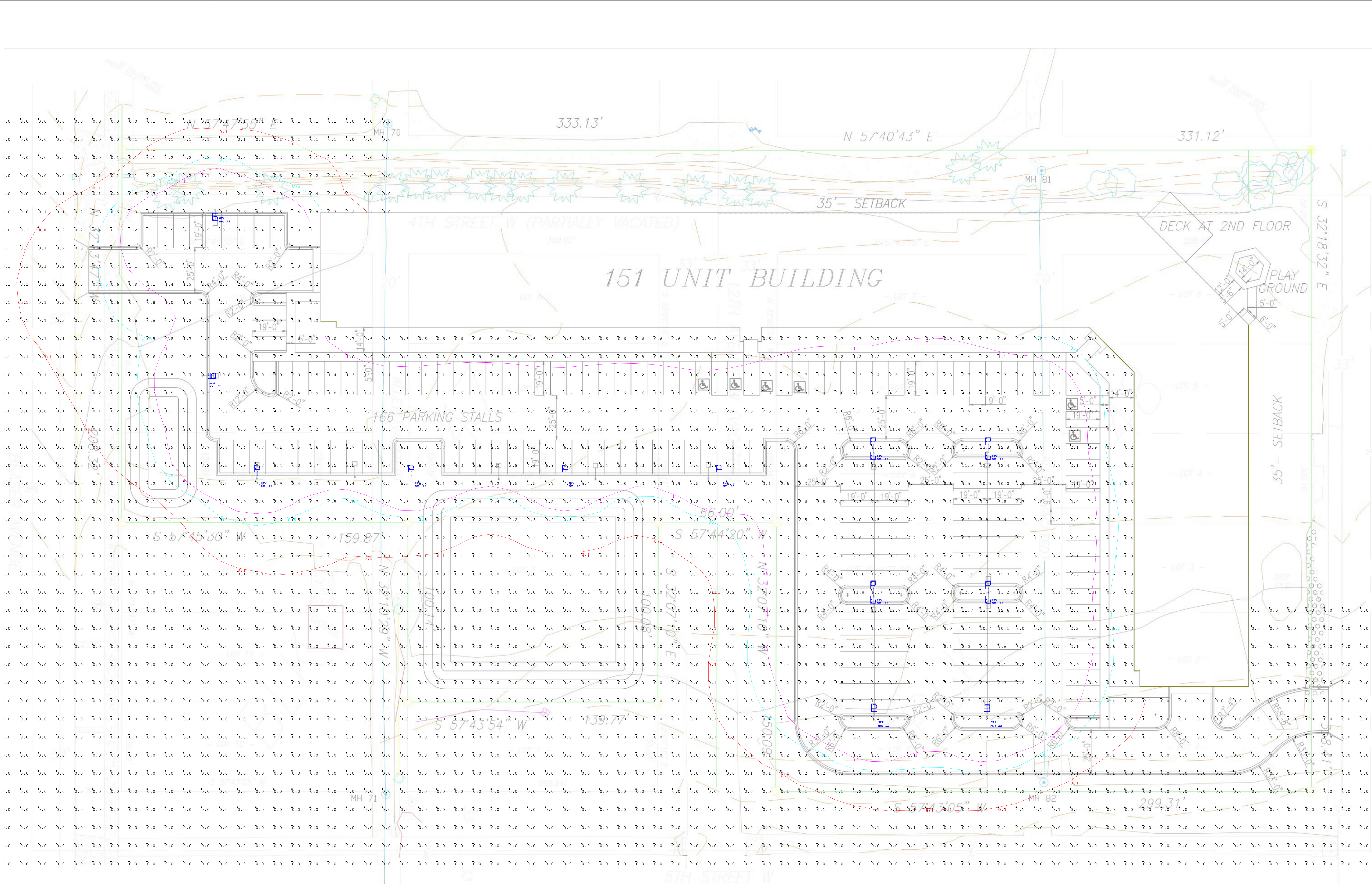
Project #: 12256011  
Drawn By: KBK  
Checked By: TJH  
Issue Date: 06.27.25  
Sheet Title:

**DETAILS**

Sheet:

**C502**





1. Standard Reflectance of 80/50/20 unless noted otherwise  
2. Not a Construction Document, for Design purposes only  
3. Standard indoor calc points @ 30" A.F.F. unless noted otherwise  
4. Standard outdoor calc points @ Grade unless noted otherwise  
5. Egress calc points @ 0" A.F.F.  
6. Mlazgar Associates assumes no responsibility for installed light levels due to field conditions, etc.

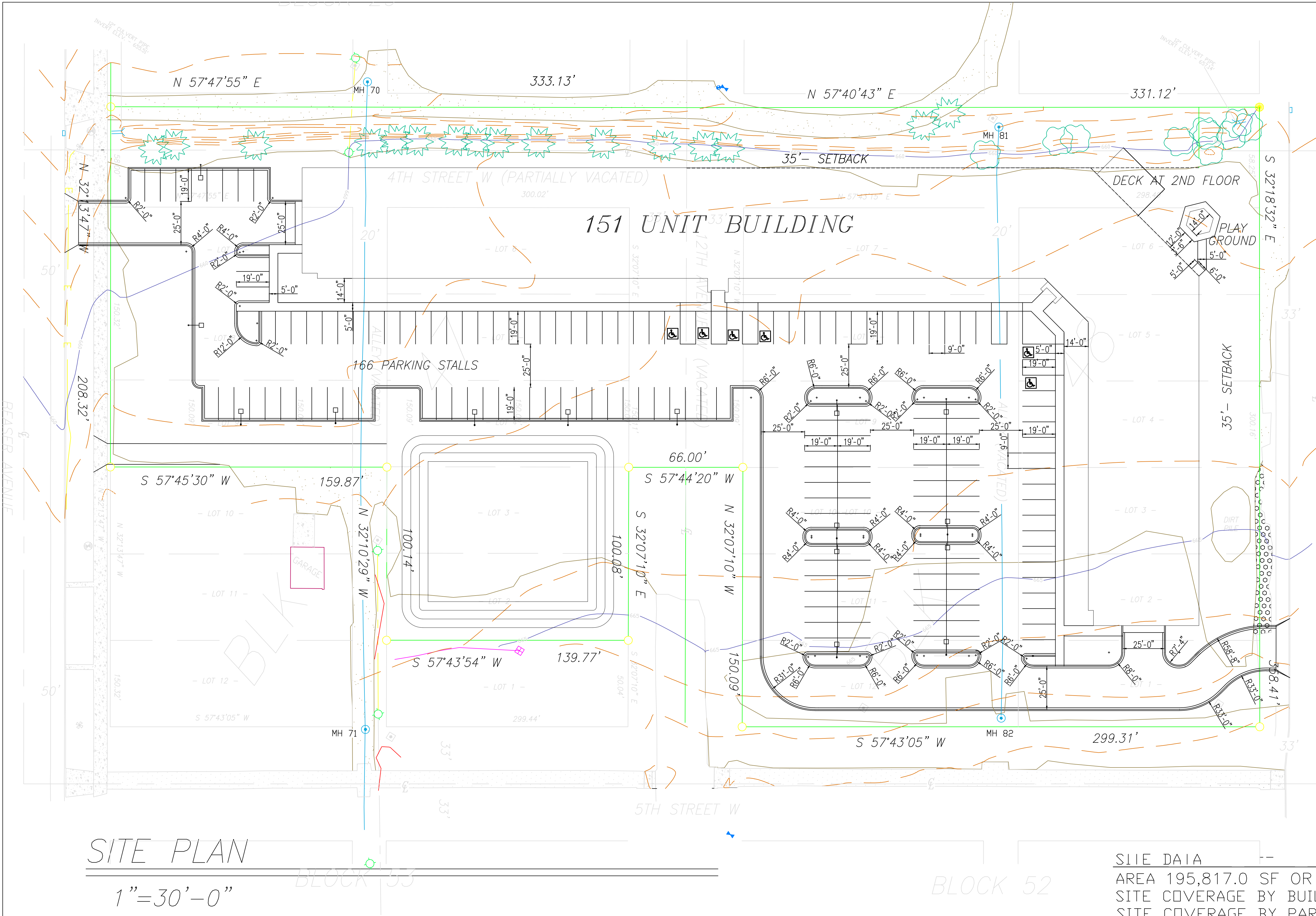
| Calculation Summary |             |       |      |      |     |         |         |
|---------------------|-------------|-------|------|------|-----|---------|---------|
| Label               | CalcType    | Units | Avg  | Max  | Min | Avg/Min | Max/Min |
| CalcPts_1           | Illuminance | Fc    | 1.57 | 13.7 | 0.0 | N.A.    | N.A.    |

| Luminaire Schedule                                                                    |     |       |              |                                 |             |             |            |
|---------------------------------------------------------------------------------------|-----|-------|--------------|---------------------------------|-------------|-------------|------------|
| Symbol                                                                                | Qty | Label | Manufacturer | Description                     | Arrangement | Lum. Lumens | Lum. Watts |
|  | 2   | SP1   |              | ALF LS250 T3 G2 FSK-25000Lm-40K | Single      | 26624       | 167        |
|  | 6   | SP2   |              | ALF LS250 T4 G2 FSK-25000Lm-40K | Single      | 25598       | 158.3      |
|  | 4   | SP3   |              | ALF LS250 T5 G2 FSK-25000Lm-40K | Back-Back   | 26126       | 158.4      |

| Revisions |      |          |  |
|-----------|------|----------|--|
| #         | Date | Comments |  |
|           |      |          |  |

|                        |              |                 |                 |
|------------------------|--------------|-----------------|-----------------|
| RLMA Project #: 174601 | Drawn By: BS | Date: 6/25/2025 | Scale: 1" = 20' |
|------------------------|--------------|-----------------|-----------------|





ONE BEDROOM UNITS = 54  
TWO BEDROOM UNITS = 34  
EFFICIENCY UNITS = 63  
TOTAL = 151

#### SITE DATA

AREA 195,817.0 SF OR 4.49 ACRES  
SITE COVERAGE BY BUILDING = 44,441.8 SF OR 22.6%  
SITE COVERAGE BY PARKING AND WALKS = 72,277.4 SF OR 36%  
SITE COVERAGE BY PATIO = 822.7 SF  
TOTAL SITE COVERAGE = 117,541.9 SF OR 60%  
GREEN SPACE LAWN AREA 78,275.1 SF OR 40%

#### PARKING DATA

167 OPEN PARKING STALLS  
132 OPEN PARKING STALLS  
299 TOTAL PARKING STALLS

#### BUILDING DATA

|              |              |
|--------------|--------------|
| FIRST FLOOR  | 44,441.8 SF  |
| SECOND FLOOR | 44,441.8 SF  |
| THIRD FLOOR  | 44,441.8 SF  |
| FOURTH FLOOR | 44,441.8 SF  |
| TOTAL        | 177,767.2 SF |



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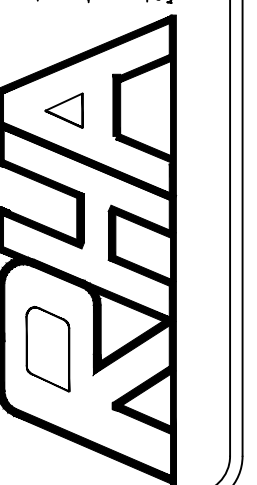
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REVISION

PROJECT NAME

151 UNIT APARTMENT  
BUILDING  
ASHLAND WISCONSIN

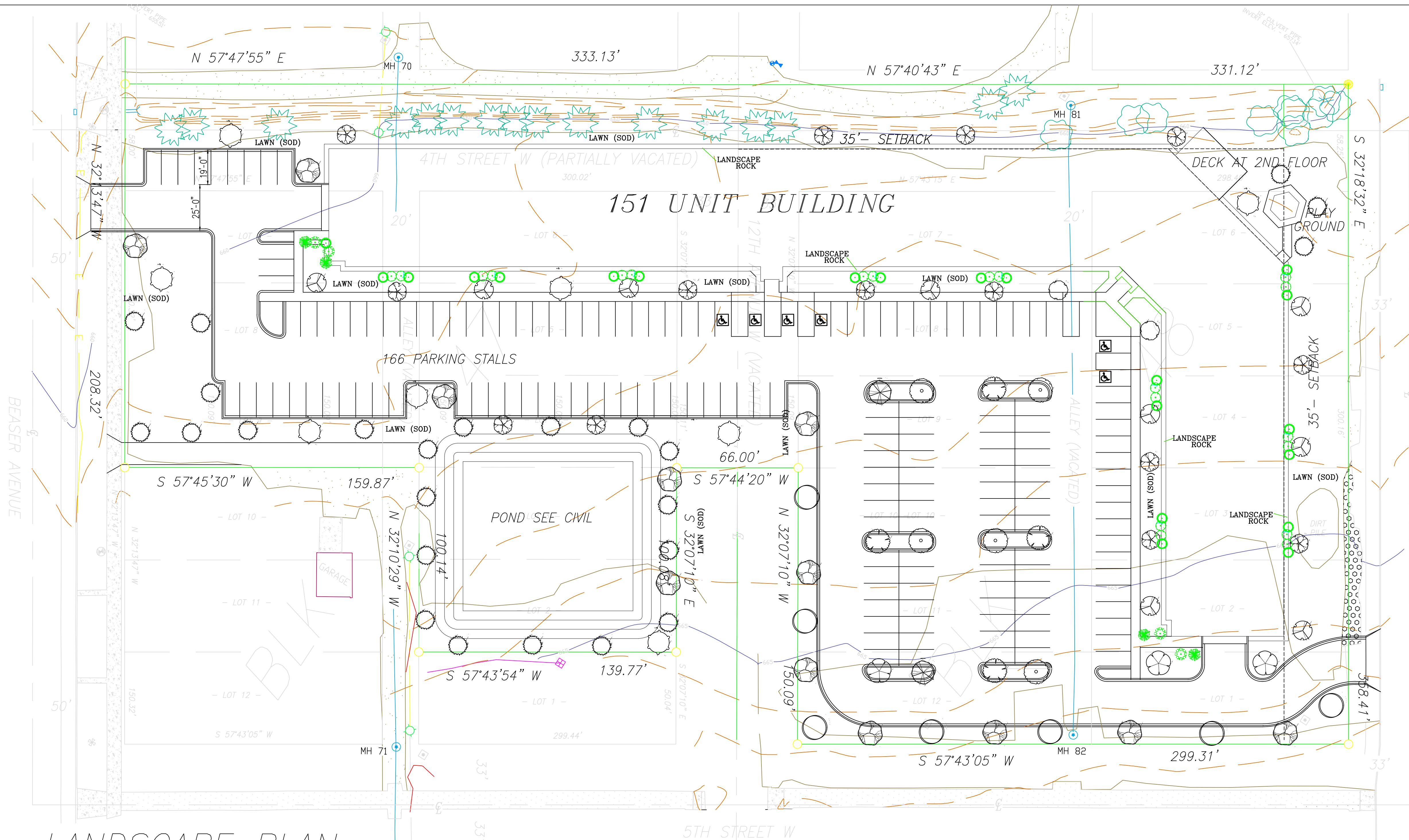
RHA ARCHITECT'S LLC  
ARCHITECTS, PLANNERS, DESIGNERS  
P.O. BOX 343  
ST. CLOUD, MINNESOTA  
PHONE 320-267-7115  
EMAIL RHAA200@TAHOOCOM



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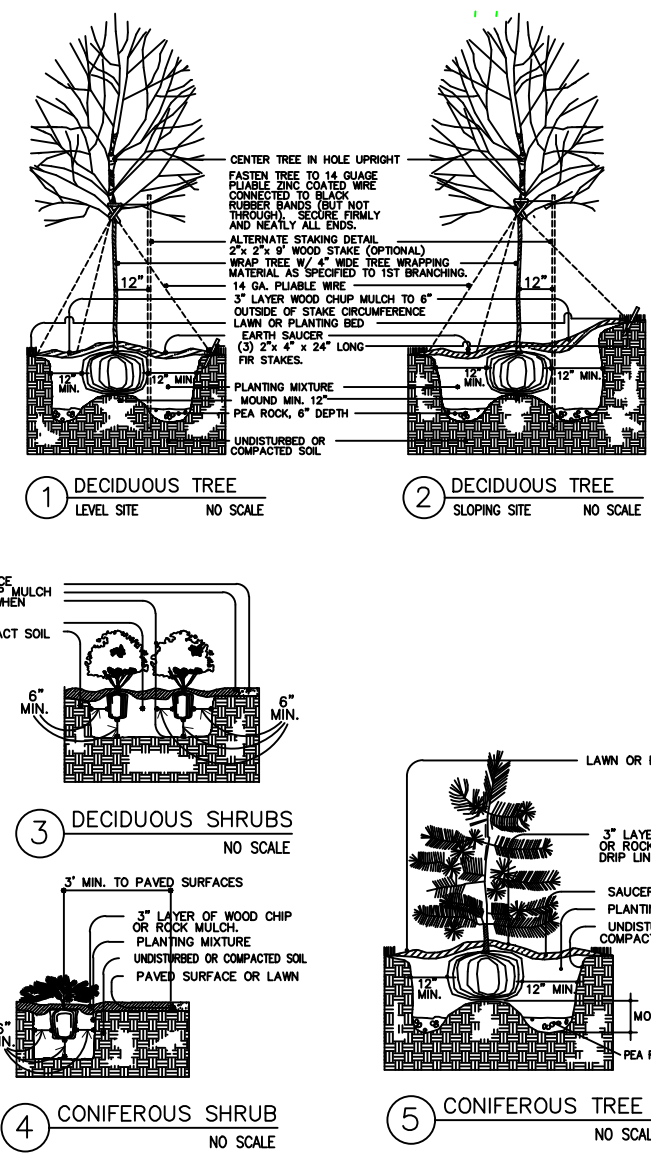
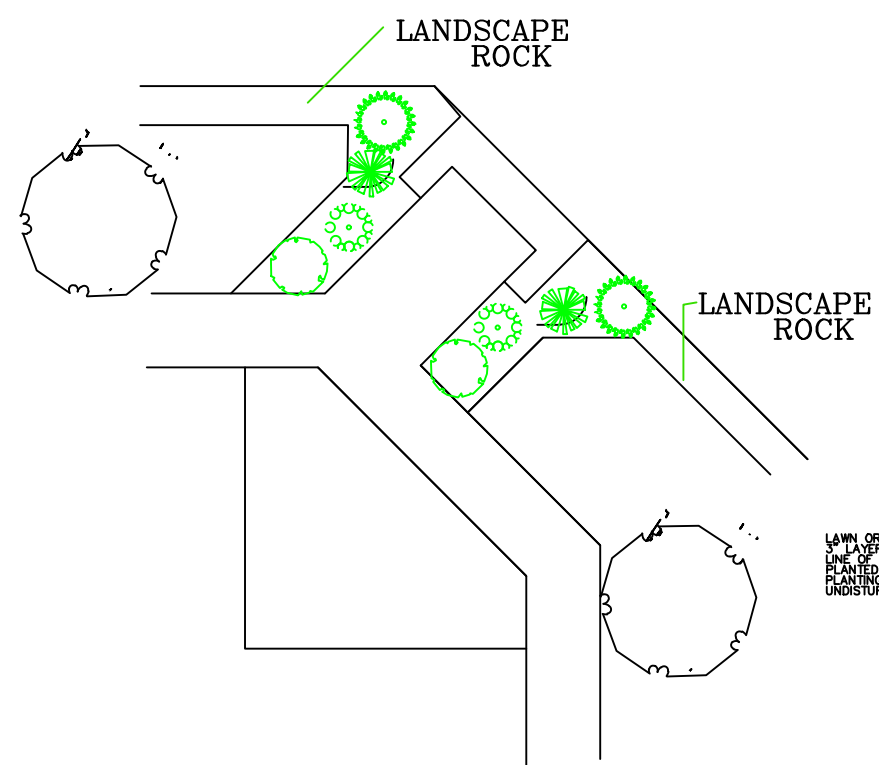
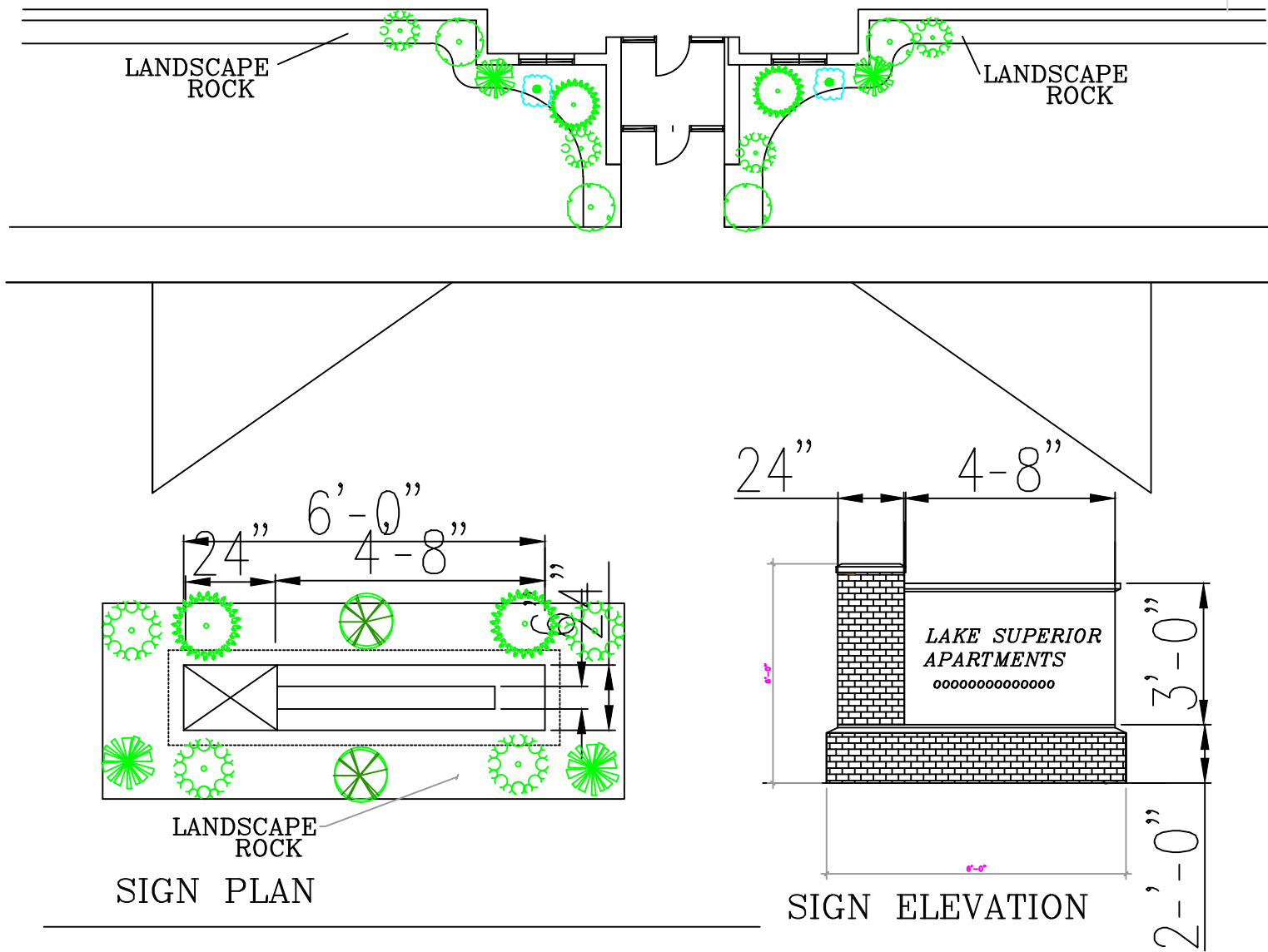




LANDSCAPE PLAN

1"=30'-0"

BLOCK 53



EXCAVATION CONTRACTOR TO LOCATE LARGE ROCKS DISCOVERED DURING EXCAVATION TO AREAS AS DIRECTED BY GC

LANDSCAPE CONTRACTOR TO PROVIDE PRICE FOR UNDERGROUND SPRINKLER SYSTEM

LANDSCAPE CONTRACTOR TO PROVIDE PRICE FOR WORK SHOWN WITHIN ALLOWANCE AS SPECIFIED (PROVIDE ALTERNATE LAYOUT IF LAYOUT SHOWN DOES NOT MEET ALLOWANCE)

GENERAL NOTES:

- LANDSCAPE CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID TO BECOMING A PART OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ASHLAND AND THE STATE OF WISCONSIN.
- ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN STANDARD OF NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMEN.
- IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN ON THE LIST, THE NUMBER OF PLANTS SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
- ALL CONTAINER MATERIALS TO BE GROWN IN CONTAINER A MINIMUM OF 6 MONTHS.
- ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD OF NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMEN.
- REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
- GUARANTEE NEW PLANT MATERIAL THROUGHT ONE CALENDAR YEAR FOR DECIDUOUS TREES UP TO 12" CAL. & CONIFERUS UP TO 12" CAL. LARGER TREES WILL BE GUARANTEED FOR TWO CALENDAR YEARS FROM TIME OF PROFESSIONAL ACCEPTANCE.
- IF THE CONTRACTOR FEELS AN ERROR HAS BEEN MADE IN THE PLANTING, HE SHALL BE RESPONSIBLE FOR CORRECTING THE ERROR AT HIS OWN EXPENSE.
- ALL NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AND MULCHED BY THE CONTRACTOR PRIOR TO LEAVING THE SITE.
- LANDSCAPE CONTRACTOR SHALL REMOVE ALL NEW TREES MOVED ONTO THE SITE AND TO THE SOILS OF THIS PROJECT (HEAVY TO HEAVY LIGHT TO LIGHT, HEAVY TO LIGHT SOILS).
- SOIL SHALL BE HIGHER THAN 30" x 100" BUILT PARALLEL TO THE CONTIGUOUS AND HAVE SLOPED GRADIENTS. THE SOIL SHALL BE STATED INTO THE GROUND. SCARIFY THE EXISTING GRADES WITH FIELD CULTIVATOR TO A MIN. DEPTH OF 12" PRIOR TO PLACING OF TOPSOIL AND FRESH GRADING FOR SOIL.
- CONTRACTOR SHALL APPLY 10-14-14 FERTILIZER AT THE RATE OF 10 POUNDS PER 1000 SQ. FT. IMMEDIATELY PRIOR TO PLACING SOIL.
- GRASSABLE TREES SHALL HAVE NO BRANCHES BELOW 36" ABOVE THE ROOT BALL, AND HAVE NO V CROTCHES.
- ALL PLANTING AREAS RECEIVING OVERLOOKED, PERMANENT, ANNUALS & VINES SHALL RECEIVE A MIN. 8" DEPTH OF PLANTING MATERIAL APPROVED BY OWNER/LANDSCAPE ARCHITECT.
- IF THE CONTRACTOR FEELS AN ERROR HAS BEEN MADE IN THE PLANTING, HE SHALL BE RESPONSIBLE FOR CORRECTING THE ERROR AT HIS OWN EXPENSE.
- ALL NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AND MULCHED BY THE CONTRACTOR PRIOR TO LEAVING THE SITE.
- LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE OWNER WITH MAINTENANCE INFORMATION DURING GUARANTEE PERIOD RELATING TO WATERING, FEEDING, PRUNING, PEST CONTROL, AND RELATED ITEMS. THIS WILL BE PREPARED AND DELIVERED TO OWNER AFTER DESIGN/CONSTRUCTION APPROVAL. HAS BEEN OBTAINED FROM LANDSCAPE ARCHITECT.
- WRAPPING MATERIAL SHALL BE CORRUGATED TREE PROTECTION WITH THE SIZE OF TUBE 1" DIA. (MIN.) LARGER THAN THE CALIPER HIGH SIZE OF TREE TO BE PROTECTED. WRAP ALL TREES. EXCEPT LACKBERRY. TREE SHALL BE PROTECTED PRIOR TO 12/1 AND TUBES REMOVED BY 5/1.
- POLY EDGE UNLESS SPECIFIED OTHERWISE, SHALL BE BLACK VINYL EDGE. EITHER COTY-OLA SALES INC. BLACK KNIGHT STYLE EDGE OR DUTCH CORN STYLE EDGE.
- ROCK MULCH WILL BE 3" DEEP 1-1/2" DIA. WASHED RIVER ROCK WITH WEED CHOK.
- 3" DEEP WOOD MULCH WILL BE INSTALLED UNDER ALL TREES AND SHRUBS THAT ARE ISOLATED FROM UNDERSTORY AREAS AND GENERAL SHRUB MASSES.
- LANDSCAPE FABRIC (FELT MAT) TO HAVE A COMBINED WEIGHT OF 4-5 LBS. PER SQ. YD. 1/2" THICK AS PER PLAN AND ANNUAL PLANTING TO 1/2" CAL. & CONIFERUS UP TO 12" CAL. FULL SUNSHINE FABRIC TO BE PHILIPS DUNN'S OR EQUIVALENT. SAMPLE REQUIRED FOR APPROVAL.
- ALL PLANTING SHALL RECEIVE FERTILIZER AS FOLLOWS: SUMMER AND FALL PLANTING - BEFORE WINTER PRECEDE UP APPLY 0-20-20 GRAMMARS IN SANDER AROUND PLANT AT THE RATE OF 1-12 OZ. CAN PER 2-3" CAL. TREE & 1-4 OZ. CAN FULL PER SHRUB. FOLLOW UP WITH THE SAME AMOUNT OF 10-10-10 THE FOLLOWING SPRING.

General Notes:

- 1. Plant material is shown in very, depending on that location of average and value.
- 2. See City of Ashland for grading and requirements.
- 3. See City of Ashland for grading and requirements.
- 4. See City of Ashland for grading and requirements.
- 5. See City of Ashland for grading and requirements.
- 6. See City of Ashland for grading and requirements.

PLANT SCHEDULE

| SYMBOL CODE      | BOTANICAL NAME                      | COMMON NAME                    | SIZE          | CONTAINER QTY |
|------------------|-------------------------------------|--------------------------------|---------------|---------------|
| EXISTING TREES   |                                     |                                |               |               |
| EVERGREEN TREES  |                                     |                                |               |               |
| Pd               | Picea glauca 'Densata'              | Black Hills Spruce             | 6' Hgt. B&B   | 21            |
| ORNAMENTAL TREES |                                     |                                |               |               |
| CC               | Crataegus laevigata 'Crimson Cloud' | Crimson Cloud Hawthorn         | 1.5' Cal. B&B | 2             |
| MA               | Maackia amurensis                   | Amur Maackia                   | 1.5' Cal. B&B | 7             |
| MP               | Malus x 'Prairifire'                | Prairifire Crab Apple          | 1.5' Cal. B&B | 8             |
| OV               | Ostrya virginiana                   | American Hophornbeam           | 1.5' Cal. B&B | 7             |
| SI               | Syringa reticulata 'Ivory Silk'     | Ivory Silk Japanese Tree Lilac | 1.5' Cal. B&B | 2             |
| OVERSTORY TREE   |                                     |                                |               |               |
| AM               | Acer x freemansi 'Marmo'            | Celebration Maple              | 2.5' Cal. B&B | 7             |
| CO               | Celtis occidentalis                 | Common Hackberry               | 2.5' Cal. B&B | 4             |
| GD               | Gymnocladus dioica 'Espresso'       | Kentucky Coffeetree            | 2.5' Cal. B&B | 3             |
| QA               | Quercus alba                        | White Oak                      | 2.5' Cal. B&B | 8             |
| QE               | Quercus ellipsoidalis               | Northern Pin Oak               | 2.5' Cal. B&B | 2             |
| TS               | Tilia americana 'Sentry'            | Sentry Linden                  | 2.5' Cal. B&B | 5             |
| 2                | PURPLE LEAF PLUM 3 GAL              |                                |               |               |
| 2                | 2-2 1/2" B&B                        |                                |               |               |
| 10               | ANTHONY WARKER SPIREA 1.5"          |                                |               |               |
| 27               | LITTLE PRINCESS SPIREA 1.5"         |                                |               |               |
| 14               | ISANTI DOGWOOD 2"                   |                                |               |               |
| 26               | SCANDIA JUNIPER 1.5"                |                                |               |               |

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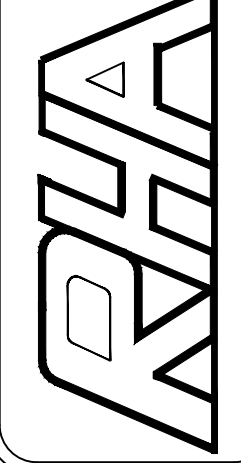
DATE 6/1/25

REVISION

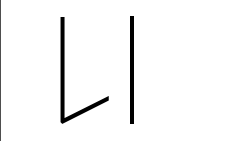
PROJECT NAME

151 UNIT APARTMENT  
BUILDING  
ASHLAND WISCONSIN

RHA ARCHITECT'S LLC  
ARCHITECTS, PLANNERS, DESIGNERS  
PHONE 320-267-7115  
P.O. BOX 343  
ST. CLOUD, MINNESOTA EMAIL RHAA200@TAHOOCOM



SHEET NO.





# **Project Manual**

## **ASHTON APARTMENTS ASHTON, WI**

**Prepared for**

**Vision Inc.  
PO Box 23  
Superior, WI 54880**

**Larson Project No. 12256011.000  
Issue Date: June 26, 2025**



**Larson  
Engineering**

**816 W. St. Germain St., Suite 308  
St. cloud, MN 56301  
320.428.5824 Fax: 651.481.9201**



**SECTION 00 01 05****CERTIFICATION PAGE****Project:**

Ashland Apartments  
Ashland, MN

**Owner:**

Vision Inc.  
Ryan Nelson  
PO Box 23  
Superior, WI 54880  
218.590.8983

**Civil Engineer:**

Larson Engineering, Inc.  
Gregory A. Buchal, P.E.  
816 W. St. Germain St.  
Suite 308  
St. Cloud, MN 56301  
320.428.5824 Fax: 651.481.9201

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

|                         |               |                  |
|-------------------------|---------------|------------------|
|                         | June 26, 2025 | 31358-6          |
| Gregory A. Buchal, P.E. | Date          | Registration No. |

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## **SECTION 02 10 00**

### **SELECTIVE SITE DEMOLITION**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

**A. Section Includes:**

1. Removal and disposal of landscaping materials, trees, vegetation, and topsoil.
2. Removal and disposal of existing concrete pavement.
3. Removal and disposal of existing bituminous pavement.
4. Removal and disposal of existing concrete curb and gutter.
5. Removal and disposal of the existing storm sewer, watermain and other underground utilities.
6. Removal and disposal of miscellaneous site improvements as noted on the plans.

##### **1.02 PROTECTION OF EXISTING CONDITIONS**

- A.** Provide protection necessary to prevent damage to existing conditions indicated to remain in place. In particular, protect existing concrete and bituminous pavement surfaces, landscaping to remain and other site features to remain.
- B.** Restore all damaged areas to their original condition, as acceptable to the Owner.

#### **PART 2 PRODUCTS**

Not Used

#### **PART 3 EXECUTION**

##### **3.01 SITE ACCESS**

- A.** Demolition and removal operations shall be performed to ensure minimum interference with roads, parking lots, sidewalks and pathways.
- B.** Erect temporary fencing, signage, barricades, etc., as necessary to keep people and vehicles out of the work area.

##### **3.02 DEMOLITION**

- A.** Remove vegetation, improvements, or obstructions interfering with installation of new construction. Remove such items elsewhere on site or premises as specifically indicated.
- B.** Prior to removing concrete and bituminous pavements and materials, saw cut the bituminous pavement and concrete materials. Protect the edge that remains from damage during construction until the new pavements are installed so that the joint will be uniform



and straight. Should the edge be damaged, additional saw cutting and removal will be required prior to paving or installed in the new concrete materials.

- C. Store salvaged materials on-site in a location where they will not be damaged or interfere with the use of the other facilities. Consult with Owner and Construction Manager for storage locations.
- D. Promptly dispose of demolished materials off-site. Do not allow demolition materials and debris to accumulate on-site.
- E. Restore all damaged underground piping and utilities, including irrigation that are to remain.

**END OF SECTION**

**SECTION 31 10 00****SITE CLEARING****PART 1 GENERAL****1.01 SUMMARY****A. Section Includes:**

1. Removal and disposal of vegetation and topsoil.

**1.02 PROTECTION OF EXISTING CONDITIONS**

- A. Provide protection necessary to prevent damage to the existing conditions indicated to remain in place.
- B. Restore damaged areas to their original condition, as acceptable to the parties having jurisdiction.

**PART 2 PRODUCTS**

Not Used

**PART 3 EXECUTION****3.01 SITE CLEARING**

- A. Remove vegetation, improvements, or obstructions interfering with the installation of new construction. Remove such items elsewhere on the site or premises as specifically indicated.
- B. Clear the site of trees, stumps, roots, shrubs, or other vegetation, except for those indicated to remain standing.
- C. Completely remove stumps, roots, and other debris protruding through the ground surface or to the depths indicated.

**END OF SECTION**

**SECTION 31 20 00****EARTHWORK****PART 1 GENERAL****1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Excavation.
  - 2.** Backfill
  - 3.** Granular Backfill.
  - 4.** Non-Frost Susceptible Fill
  - 5.** Riprap

**1.02 SUBMITTALS**

- A.** Submit laboratory test reports indicating the proposed aggregate grading meets the requirements specified herein.
- B.** The information must be current and represent the material to be supplied to the project site. If test information is not available from the supplier, the Contractor shall make arrangements and pay for required tests.

**1.03 REFERENCES**

- A.** Standard Specifications for Highway and Structure Construction, current edition and latest supplements (WI/DOT).
  - 1.** Part 2 – Earthwork  
Section 209 – Granular Backfill
- B.** ASTM C131, Standard Test Method for Resistance to Degradation of Small-Sized Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- C.** ASTM D698, Standard Test Method for Moisture Density Relations of Soils and Soil-Aggregate Mixtures, using a 5.5 pound Rammer and 12-inch Drop.
- D.** ASTM D1557, Standard Test Method for Moisture Density Relation of Soils and Soil-Aggregate Mixtures, using a 10.0 pound Rammer and 18-inch Drop.
- E.** ASTM D2487, Standard Test Method for Classification of Soils for Engineering Purposes.
- F.** ASTM D2922, Standard Test Method for Density of Soils and Soil-Aggregate In- Place by Nuclear Method (Shallow Depth).

**1.04 QUALITY ASSURANCE**



- A. In-place field density tests will be performed in accordance with ASTM D2922.
- B. The testing laboratory shall submit test reports to the Engineer and Contractor within 48 hours after the test has been performed.

## **PART 2 PRODUCTS**

### **2.01 GRANULAR BACKFILL**

- A. Natural sand or a mixture of sand with gravel, crushed gravel, crushed stone, or other broken or fragmented material.
- B. For trench excavation backfill, use a maximum size of any gravel, stone, or other broken or fragmented material so that 100 percent passes a 6 inch sieve, not less than 85 percent by weight passes a 3 inch sieve, and not less than 25 percent by weight passes a No. 4 sieve. For bedding under a culvert or pipe, use granular backfill that consists substantially of sand with all particles retained on a one-inch sieve removed.
- C. Gradation of Material Passing the No. 4 Sieve shall be as follows:

#### **Maximum Percent Passing by Weight**

| <b>Sieve Size</b> | <b>Grade 1</b> | <b>Grade 2</b> |
|-------------------|----------------|----------------|
| No. 4 (4.75 mm)   | 100            | 100            |
| No. 40 (425 µm)   | 75             | -              |
| No. 100 (150 µm)  | 15             | 30             |
| No. 200 (75 µm)   | 8.0            | 15.0           |

- D. Do not use materials with a liquid limit greater than 25 and a plasticity index greater than 6.

### **2.02 BACKFILL (Fill under landscaped areas)**

- A. Clean, fine earth, sand, or organic material, free from, rocks, roots, brush, stumps or other large objects.
- B. The largest particle size shall be less than 2 inches in diameter.
- C. The backfill shall be brought up to within the specified elevation less the depth of topsoil required for the project.

### **2.03 UNSUITABLE MATERIALS**

- A. Unsuitable soils include soils classified under ASTM D2487, which fall in the classification of PT, OH, CH, MH, OL, CL, or ML.

### **2.04 NON-FROST SUSCEPTIBLE GRANULAR FILL**

- A.** Clean, free draining material meeting the following gradation.

| <b>Sieve Size</b> | <b>Percent Passing by Weight</b> |
|-------------------|----------------------------------|
| 1 inch            | 100                              |
| 3/4 inch          | 90 - 100                         |
| 3/8 inch          | 50 - 95                          |
| No. 4             | 35 - 85                          |
| No. 10            | 20 - 70                          |
| No.40             | 10 - 45                          |
| No. 200           | 0 - 8                            |

## **2.06 COARSE FILTER AGGREGATE**

- A.** Clean, free draining aggregate excluding crushed carbonate quarry rock, crushed concrete and salvaged bituminous mixtures, meeting the following gradation requirements.

| <b>Sieve Size</b> | <b>Percent Passing by Weight</b> |
|-------------------|----------------------------------|
| 1 inch            | 100                              |
| 3/4 inch          | 85 - 100                         |
| 3/8 inch          | 30 - 60                          |
| No. 4             | 0 - 10                           |

## **2.07 RIPRAP MATERIAL**

- A.** Furnish durable or quarry stone that is sound, hard, dense, resistant to the action of air and water, and free of seams, cracks, or other structural defects. Use stone pieces with a length and width no more than twice the thickness. of the quality approved by the Engineer meeting the following gradation requirements.

| <b>Average Dimension Ranges for each Riprap Grade</b> |                                      |                                     |                                           |
|-------------------------------------------------------|--------------------------------------|-------------------------------------|-------------------------------------------|
| <b>Class of Riprap</b>                                |                                      |                                     |                                           |
| <b>Light Riprap<br/>Inches (mm)</b>                   | <b>Medium Riprap<br/>Inches (mm)</b> | <b>Heavy Riprap Inches<br/>(mm)</b> | <b>Extra-Heavy Riprap<br/>Inches (mm)</b> |
| Less than 16 (406)                                    | Less than 20 (508)                   | Less than 25 (635)                  | Less than 30 (762)                        |
| 11 - 13 (279 - 330)                                   | 14 - 16 (356 - 406)                  | 18 -20 (457 - 508)                  | 22 - 25 (559 - 635)                       |

|                    |                     |                      |                     |
|--------------------|---------------------|----------------------|---------------------|
| 9 - 11 (229 - 279) | 11 - 14 (279 - 356) | 14 - 18 (356 - 457)  | 18 - 22 (457 - 559) |
| 4 - 9 (102 - 229)  | 5 - 11 (127 - 279)  | 6.5 - 14 (165 - 356) | 8 - 18 (203 - 457)  |
| Less than 4 (102)  | Less than 5 (127)   | Less than 6.5 (165)  | Less than 8 (203)   |
| Less than 1 (25)   | Less than 1 (25)    | Less than 1 (25)     | Less than 1 (25)    |

- B. The contractor may not substitute waste concrete slabs for stone.

## **PART 3 EXECUTION**

### **3.01 UTILITIES**

- A. Locate existing underground utilities in areas of Work. Provide adequate means of protection during excavation operations. Properly cap, raise, or lower to grade existing valve covers, cleanouts, manholes, drop inlets, or other utilities as shown on the Plans.
- B. Consult utility owner immediately for directions if uncharted or incorrectly charted piping or other utilities are encountered during the excavation. Cooperate with the Owner and utility companies in keeping respective services and facilities in operation. The Contractor shall repair damaged utilities to the satisfaction of the utility owner at no expense to the Owner.
- C. Do not interrupt existing utilities serving facilities occupied and used by the Owner except when permitted in writing by the Owner.

### **3.02 USE OF EXPLOSIVES**

- A. The use of explosives is not permitted.

### **3.03 EXCAVATION**

- A. Remove topsoil, sod, grass, organic materials, or other unsuitable soil from areas to receive new materials.
- B. Do not allow water to accumulate in the excavations. Remove water to prevent softening of subgrade or foundation soils or to eliminate other changes detrimental to the stability of the subgrade. Provide and maintain surface drainage and other dewatering system components necessary to convey water away from the excavations.
- C. For common excavation conform to the elevations and dimensions shown with a tolerance of plus or minus 0.30 feet.



- D. For excavation of roadway or pavement subgrade, conform to the elevations and dimensions shown within a tolerance of plus or minus 0.10 feet.
- E. For the placement of the 2" clear stone and base aggregate, the tolerance is plus or minus 0.05 feet.
- F. All work specified in this Section shall be performed by the Contractor at his own expense in accordance with the Bid Items and the Contract. If additional excavations are required, the Contractor shall not proceed until given notice by the Owner. Additional payment will be made under separate unit prices for additional excavation if such unit prices have been established; otherwise payment will be made in accordance with a negotiated price.
- G. Use all means necessary to prevent operations from producing dust. The Contractor shall be responsible for damage resulting from dust originating from their operations.

### **3.04 OVER-EXCAVATION NOT ORDERED, SPECIFIED OR SHOWN**

- A. Excavations carried below the elevations or depths specified shall be backfilled to the required grade with the specified materials and compaction percentages. The Contractor shall perform such work at his own expense.

### **3.05 DISPOSAL OF EXCESS EXCAVATED MATERIAL**

- A. The Contractor shall remove and dispose of excess excavated material at his own expense.

### **3.06 GRANULAR BACKFILL PLACEMENT**

- A. Deposit and spread in uniform 6-inch maximum thickness layers (after compaction) without segregation of size.
- B. Compact each layer of material to at least (98% of maximum dry density as determined in accordance with ASTM D698) (100% of maximum dry density as determined in accordance with ASTM D1557). Use equipment that is consistently capable of achieving the required degree of compaction. Compact each layer over its entire area while the material is at the required moisture content.
- C. Apply water to the material if the moisture content is below optimum during the mixing, spreading and compacting operations, when and in the amounts directed by the Engineer, as considered necessary for proper compaction.
- D. Flooding, ponding, or jetting shall not be used for compaction.

### **3.07 NON FROST SUSCEPTIBLE FILL PLACEMENT**

- A. Deposit and spread in uniform 24-inch maximum thickness layers (after compaction) without segregation of size.

- B.** Compact each layer of material to at least 98% of maximum dry density as determined in accordance with ASTM D698. Use equipment that is consistently capable of achieving the required degree of compaction. Compact each layer over its entire area while the material is at the required moisture content.
- C.** Apply water to the material if the moisture content is below optimum during the mixing, spreading and compacting operations, when and in the amounts directed by the Engineer, as considered necessary for proper compaction.
- D.** Flooding, ponding, or jetting shall not be used for compaction.

### **3.08 FIELD QUALITY CONTROL**

- A.** Quality assurance testing is the responsibility of the Contractor. The Contractor shall employ the services of an independent materials testing firm to provide the final test information. The Contractor may use their own personnel to provide tests of the materials during the placement and compaction operations; however, an independent testing firm must take the final tests. The testing firm shall test the materials as construction work is performed.
  - 1.** The Contractor shall arrange for the laboratory to perform field density tests in accordance with ASTM D2922 (nuclear densometer method).
  - 2.** Laboratory shall make at least one random field density test of new materials for every 250 square yards of area for each 6 inch depth of material, but in no case less than one test per 12 inch depth.
- B.** Provide additional density testing if the test results are below the specified density until passing test results are achieved. The additional tests shall be performed at the Contractor's expense
- C.** Inspections will be performed during the excavation as requested by the Owner for the following.
  - 1.** Verification of the excavation cross-section.
  - 2.** Acceptability of natural subgrade materials.

**END OF SECTION**

**SECTION 31 25 00****EROSION CONTROL****PART 1 GENERAL****1.01 SUMMARY**

- A.** Section includes:
- 1.** Erosion and Sediment Control.

**1.02 REFERENCES**

- A.** State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, current Edition and latest supplements (WI DOT) Section 628 Erosion Control.
- B.** State of Wisconsin Department of Natural resources Storm Water Runoff web site <http://www.dnr.stae.wi.us/ruffoff/stormwater.htm>.

**PART 2 PRODUCTS**

- A.** All erosion control products must be listed in the WI DOT Product Acceptability List (PAL),

**PART 3 EXECUTION****3.01 INSTALLATION AND MAINTENANCE**

- A.** Installation techniques shall be in accordance with the Wisconsin Construction Site Erosion and Sediment Control Procedures and the Wisconsin Department of Natural Resources Best Management Practices. Prior to commencing any site or demolition work, the Contractor shall install all erosion control systems as shown on the plans. As the work progresses, the Contractor shall install and maintain the erosion control measures as indicated in the following implementation schedule.

| <b>Item</b>                              | <b>Installation</b>       | <b>Removal</b>                                                        |
|------------------------------------------|---------------------------|-----------------------------------------------------------------------|
| Silt Fence                               | Prior to any Construction | By Contractor after turf is established and construction is completed |
| Existing Catch<br>Basin Inlet Protection | Prior to any Construction | By Contractor after turf is established and construction is completed |
| Revegetation                             | As Areas are Completed    | Permanent                                                             |

The Contractor shall inspect and make repairs to all erosion control systems after each rainfall event and/or every 7 days. The Contractor shall remove all accumulated silt and repair washout areas.

**B. Inspection:**

1. The Contractor shall inspect silt fences immediately after each rainfall and at least daily during prolonged rainfall, and/or every 7 days. Immediately repair failed or failing silt fence.

**C. Replacement:**

1. Fabric shall be replaced promptly by the Contractor when it decomposes or becomes ineffective before the barrier is no longer necessary.

**D. Sediment Removal:**

1. Sediment deposits shall be removed after each storm event by the Contractor. The sediment must be removed when deposits reach approximately one-half the height of the barrier or  $1/3$  the volume of the device.
2. Any sediment remaining in place after the silt fence is no longer required shall be regraded to conform to the existing grade. All affected areas shall be prepared, topsoil placed and seeded or sodded as directed by the Owner.

### **3.02 CLEANUP**

- A.** Silt fences shall be removed when they have served their useful purpose, but not before the upward sloping area has been permanently satisfied. If the upward sloping area is to be exposed longer than six (6) months, that area shall be covered with temporary vegetation when first exposed.

**END OF SECTION**



**SECTION 31 30 00****GEOTEXTILES/FABRICS****PART 1 GENERAL****1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Silt fence fabric.

**1.02 REFERENCES**

- A.** ASTM D3786, Test Method for Hydraulic Bursting Strength of Knitted Goods and Non-woven Fabrics.
- B.** ASTM D4491, Test Method for Water Permeability of Geotextiles by Permittivity.
- C.** ASTM D4533, Test Method for Trapezoid Tearing Strength of Geotextiles.
- D.** ASTM D4632, Test Method for Breaking Load and Elongation of Geotextiles.
- E.** State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, current Edition and latest supplements (WI DOT)
  - 1.** Section 628 Erosion Control
  - 2.** Section 645 Geotextile Fabrics
- F.** State of Wisconsin Department of Transportation Product Acceptability List (PAL)
- G.** State of Wisconsin Department of Natural Resources Conservation Standard No.1056 Silt Fence (Tech Standard 1056)
- I.** State of Wisconsin Department of Natural Resources Conservation Standard No.1060 Storm Drain Inlet Protection for Construction Sites (Tech Standard 1060)

**1.03 SUBMITTALS**

- A.** Submit to the Engineer certification from the geotextile manufacturer that the fabrics used in the Work meets the specifications.
- B.** Submit to the Engineer certification from the supplier stating which specified tack coat material will be used in the Work.
- C.** Submit to the Engineer a certification of compliance from the manufacturer that the Type FF inlet protection meets this specification.

**PART 2 PRODUCTS**

## 2.01 SOIL SEPARATION FABRIC

- A.** A highly permeable non-woven fabric with a random arrangement of fibers heat bonded at crossover points, or spun bonded and mechanically entangled by needle punching or other acceptable methods, with the following properties.

|                                         |                                |
|-----------------------------------------|--------------------------------|
| Average Opening Size                    | USS #100 maximum               |
| Minimum Weight                          | 3.7 oz/sq. yd.                 |
| Tensile Strength, ASTM D4632            | 100 lb. minimum each direction |
| Burst, ASTM D3786                       | 215 psi minimum                |
| Elongation to Break, Wet %, ASTM D4632  | 100 maximum                    |
| Coefficient of Permeability, ASTM D4491 | 0.02 cm/sec. Minimum           |

- B.** The fabric shall readily conform to the soil surface.

## 2.02 SILT FENCE FABRIC

- A.** A woven fabric of polypropylene fibers treated to resist degradation caused by exposure to sunlight, resistant to soil chemicals, mildew, and insects. The fabric shall be non-biodegradable with the following properties:

Woven or non-woven polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride. For non-woven fabric the contractor may use needle punched, heat bonded, resin bonded, or combinations of all 3. Submit a certificate of compliance certifying that the geotextile conforms to the following:

| TEST REQUIREMENTS                                                           | METHOD      | VALUE <sup>[1]</sup> |
|-----------------------------------------------------------------------------|-------------|----------------------|
| Minimum grab tensile strength<br>(machine direction)                        | ASTM D 4632 | 120 lb. (550 N)      |
| Minimum grab tensile strength<br>(cross machine direction)                  | ASTM D 4632 | 100lb (450 N)        |
| Maximum apparent opening size<br>(equivalent standard sieve)                | ASTM D 4751 | No. 30 (600 $\mu$ m) |
| Minimum Permittivity                                                        | ASTM D 4491 | 0.05 s <sup>-1</sup> |
| Minimum ultraviolet stability<br>(strength retained at 500 hrs of exposure) | ASTM D 4355 | 70%                  |

- B.** The silt fence shall be ultraviolet stable and have high tear resistance and low permeability.

### **C. Fence Support System**

- (1) Conform to plan requirements.

### **D. Slit Screen**

- (1) Furnish fabric and submit a certificate of compliance certifying that the fabric conforms to the following:

|                                    |                  |
|------------------------------------|------------------|
| Thickness.....                     | 15 mils (0.38mm) |
| Minimum grab tensile strength..... | 120 lb (530 N)   |

Minimum equivalent opening.....No. 170 sieve (90  $\mu$ m)

(2) Heat Seal or sew all fabric seams.

(3) For flotation, use and 8-inch (200 mm) diameter solid expanded polystyrene log, or engineer- approved equal, with a buoyancy of approximately 20 pounds per foot (9 kg/300 mm). Do not use polystyrene beads or chips.

(4) For the main load line, use 5/16 inch (8 mm) cable. For ballast, use ¼ inch (6 mm) chain.

## 2.04 TYPE FF INLET PROTECTION FABRIC

- A.** A woven fabric of polypropylene fibers treated to resist degradation caused by exposure to sunlight, resistant to soil chemicals, mildew and insects. The fabric shall be non-biodegradable with the following properties:

| TEST REQUIREMENTS                                   | METHOD      | VALUE <sup>[1]</sup>     |
|-----------------------------------------------------|-------------|--------------------------|
| Minimum Grab Tensile Strength                       | ASTM D 4632 | 200 lb. (900N) Min       |
| Puncture Strength                                   | ASTM D4833  | 105 lb. (460N) Min       |
| Apparent Breaking Elongation<br>(Machine Direction) | ASTM D 4632 | 24% Min                  |
| Apparent Breaking Elongation<br>(Cross Direction)   | ASTM D 4632 | 10% Min                  |
| Minimum Permittivity                                | ASTM D 4491 | 1.9 s <sup>-1</sup>      |
| Apparent Opening Size                               | ASTM D 4751 | No. 30 (600 $\mu$ m) Max |

## PART 3 EXECUTION

### 3.01 SOIL SEPARATION FABRIC

- A.** Excavate to the dimensions shown on the drawings.
- B.** The foundation surface shall be relatively smooth and free of stones, sticks, and other debris or irregularities that might puncture the fabric.
- C.** Line the excavation with the fabric. Overlap splices and joints a minimum of 18 inches. Joint laps shall be shingled (both in flow direction and from top of slope to bottom) to direct water flow over the joint without undermining.
- D.** Place the aggregate over the fabric in lifts and compact. Placement of granular material and other construction operations shall not tear, puncture, or shift the fabric.
- E.** Wrap the edge of the fabric over the top of the aggregate a minimum of 12 inches.

### 3.02 SILT FENCE FABRIC

- A.** Erect posts to support the silt fence fabric with post spacing maximum of 3 feet for non woven material and 8 feet for woven material on-center.
- B.** Install the fabric and firmly attach to the posts. Dig a trench along the intended face line and cover the fabric, or lay the bottom 6 inches on the ground and backfill over the fabric to create a good seal.

### **3.03 TYPE FF INLET PROTECTION FABRIC**

- A.** Install inlet protection in location noted on the plans. Installation shall be in conformance with Wisconsin DNR Tech Standard 1060.

**END OF SECTION**



## **SECTION 32 05 00**

### **AGGREGATES**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Aggregate base.
  - 2.** Engineered fill
  - 3.** Non-frost susceptible fill (exterior below grade wall backfill)
  - 4.** Drainage aggregate – drain tile
  - 5.** General backfill
  - 6.** Unsuitable material
  - 7.** Washed rock (rock construction entrance)
  - 8.** Coarse filter aggregate (pipe bedding)
  - 9.** Rip Rap
  - 10.** Stormwater basin pre-mixed planting medium

##### **1.02 SUBMITTALS**

- A.** Submit laboratory test reports indicating the proposed aggregate grading meets the requirements specified herein.
- B.** The information must be current and represent the material to be supplied to the project site. If test information is not available from the supplier, the Contractor shall make arrangements and pay for required tests.
- C.** Submit laboratory test results indicating the proposed Crushed Stone and Crushed Gravel Dense Graded Aggregate Base Material meets the Maximum loss of 50% in accordance with the Los Angeles Abrasion Test, AASHTO T 96; Maximum Sodium Sulfate Soundness Loss of 18% in accordance with AASHTO T 104; and Maximum Freeze/thaw Soundness of 18% in accordance with AASHTO T 103.

##### **1.03 REFERENCES**

- A.** Standard Specifications for Highway and Structure Construction, 2019 edition and latest supplements (WisDOT).
  - 1.** Part 2 – Earthwork
    - Section 208 – Borrow
    - Section 209 – Granular Backfill.
    - Section 210 – Structure Backfill
  - 2.** Part 3 – Bases and Subbases
    - Section 301 – General requirement for Base Aggregates
    - Section 305 – Dense Graded Aggregate Base.
  - 3.** Part 6 – Miscellaneous Construction
    - Section 606 – Riprap

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- B. ASTM C131, Standard Test Method for Resistance to Degradation of Small-Sized Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- C. ASTM D1557, Modified Proctor – Standard Test Method for Moisture Density Relations of Soils and Soil-Aggregate Mixtures, using a 10.0-pound Rammer and 18-inch Drop.
- D. ASTM D2922, Standard Test Method for Density of Soils and Soil-Aggregate In-Place by Nuclear Method (Shallow Depth).

#### 1.04 QUALITY ASSURANCE

- A. In-place field density tests will be performed in accordance with ASTM D2922.
- B. The testing laboratory shall submit test reports to the Engineer and Contractor within 48 hours after the test has been performed.

### PART 2 PRODUCTS

#### 2.01 DENSE GRADED AGGREGATE BASE

- A. Crushed stone, crushed gravel, crushed concrete and reprocessed or blended asphalt pavement materials shall be graded according to WisDOT 305.2.2.1 Gradation as follows:

1. Except for reclaimed asphaltic pavement, conform to the following gradation requirements:

| Sieve Size         | Percent Passing by Weight |                            |                         |
|--------------------|---------------------------|----------------------------|-------------------------|
|                    | 3-inch<br>(75 mm)         | 1 ¼-inch<br>(37.5 mm)      | ¾ -inch<br>(19.0 mm)    |
| 3 inch (75.0 mm)   | 90-100                    | -                          | -                       |
| 1 ½ inch (37.5 mm) | 60-85                     | -                          | -                       |
| 1 ¼ inch (31.5 mm) | -                         | 95-100                     | -                       |
| 1-inch (25.0 mm)   | -                         | -                          | 100                     |
| ¾-inch (19.0 mm)   | 40-65                     | 70-93                      | 95-100                  |
| 3/8-inch (9.5 mm)  | -                         | 42-80                      | 50-90                   |
| No. 4 (4.75 mm)    | 15-40                     | 25-63                      | 35-70                   |
| No. 10 (2.00 mm)   | 10-30                     | 16-48                      | 15-55                   |
| No. 40 (425 µm)    | 5-20                      | 8-28                       | 10-35                   |
| No. 200 (75 µm)    | 2.0-12.0                  | 2.0-12.0 <sup>[1][3]</sup> | 5.0-15.0 <sup>[2]</sup> |

<sup>[1]</sup> Limited to a maximum of 8.0 percent for base placed between old and new pavement.

<sup>[2]</sup> 8.0 – 15.0 percent if base is ≥ 50 percent crushed gravel.

<sup>[3]</sup> 4.0 – 10.0 percent if base is ≥ 50 percent crushed gravel.

2. Use ¾ -inch (19.0 mm) base in top 8 inches of base. Use 1 ¼ - inch base in lower base layers.

3. When reclaimed asphalt pavement materials are used, 100% of the particles shall pass the 1-1/4-inch sieve. Materials appearing to be of unsuitable consistency, shall be tested for gradation under the direction of the Engineer/Owner.
  4. Materials used within the City of Hudson road right of way shall be 100% crushed stone and meet the City of Hudson Standard Specifications.
- B. The coarse aggregate (that portion retained on the No. 4 sieve) shall have a percent of wear of not more than 40 at 500 revolutions as determined by ASTM C131.
  - C. Aggregate shall contain not more than 10 percent shale in the total sample except that when the part passing a No. 200 sieve exceeds 7 percent, the percentage of shale in the sample shall not exceed 7 percent.
  - D. Where base aggregate is used beneath building floor slabs, recycled materials are not allowed and the base aggregate materials shall consist of 100% virgin crushed rock and sand.

## 2.02 ENGINEERED FILL

- A. Granular material graded as indicated below:

| Sieve Size | Percent Passing By Weight |
|------------|---------------------------|
| 2 inch     | 100                       |
| No. 200    | 0 – 12                    |

## 2.03 NON-FROST SUSCEPTIBLE FILL (EXTERIOR BELOW GRADE WALL BACKFILL)

- A. Clean, free draining material graded according to the following:

| Sieve Size | Percent Passing By Weight |
|------------|---------------------------|
| 1 inch     | 100                       |
| No. 200    | 0 - 5                     |

## 2.04 DRAINAGE AGGREGATE – DRAIN TILE

- A. Clean, free-draining, crushed stone or rock material excluding crushed concrete and salvaged bituminous mixtures, meeting the following gradation requirements:

| Sieve Size | Percent Passing By Weight |
|------------|---------------------------|
| 1 inch     | 100                       |
| 3/4 inch   | 85-100                    |
| 3/8 inch   | 30-60                     |
| No. 4      | 0-10                      |

## 2.05 GENERAL BACKFILL

- A. Clean, fine earth, sand, free from organic material, rocks, debris, roots, brush, stumps or other large objects.
- B. The largest particle size shall be less than 2 inches in diameter.
- C. The backfill shall be brought up to within the specified elevation less the depth of topsoil or landscaping required for the project.

## **2.06 UNSUITABLE MATERIALS**

- A. Unsuitable soils include soils classified under ASTM D2487, which fall in the classifications of PT, OH, CH, MH, OL, SC, SM, CL, or ML.

## **2.07 WASHED ROCK (ROCK CONSTRUCTION ENTRANCE)**

- A. Clean, washed, free draining aggregate excluding crushed carbonate quarry rock, crushed concrete and salvaged bituminous mixtures, meeting the following general gradation requirements.

| Sieve Size | Percent Passing By Weight |
|------------|---------------------------|
| 2 inch     | 100                       |
| 1 inch     | 50 - 80                   |
| 1/2 inch   | 20 - 60                   |
| No. 4      | 0- 5                      |

## **2.08 COARSE FILTER AGGREGATE (PIPE BEDDING MATERIAL)**

- A. Wisconsin Department of Transportation aggregate size No. 1, 501.2.5.4

## **2.09 RIP RAP**

- A. Clean, durable field or quarry stone, resistant to the action of water, and free of seams, cracks and structural defects. Length and width shall be no more than twice the thickness.
- B. Based upon the average stone size, riprap shall be Medium Riprap (less than 20-inches maximum size stone) in accordance with WisDOT Specification 606.

## **2.10 STORMWATER BASIN PRE-MIXED PLANTING MEDIUM**

- A. Computerized soil blend of 75% Sand, 25% compost, for use in raingardens and bioretention areas.

## **PART 3 EXECUTION**

### **3.01 BASE AGGREGATE, ENGINEERED FILL, NON-FROST SUSCEPTIBLE FILL, AND GENERAL BACKFILL PLACEMENT**



- A. Deposit and spread in uniform 6-inch maximum thickness layers (after compaction) without segregation of size.
- B. Compact each layer of material to at least 95% of maximum dry density as determined in accordance with ASTM D1557, the Modified Proctor Method. Use equipment that is consistently capable of achieving the required degree of compaction. Compact each layer over its entire area while the material is at the required moisture content.
- C. Apply water to the material if the moisture content is below optimum during the mixing, spreading and compacting operations, when and in the amounts directed by the Engineer, as considered necessary for proper compaction.
- D. Flooding, ponding, or jetting shall not be used for compaction.

### **3.02 RIP RAP PLACEMENT**

- A. Deposit and spread in uniform layers as shown on the Plans. The placement of the riprap shall be performed in a manner to not break any of the rocks into smaller pieces.
- B. The riprap material shall be placed over soil separation fabric, unless otherwise specified.

### **3.02 FIELD QUALITY CONTROL**

- A. Quality assurance testing is the responsibility of the Owner. The Owner shall employ the services of an independent materials testing firm to provide the final test information. The Contractor may use their own personnel to provide tests of the materials during the placement and compaction operations; however, an independent testing firm must take the final tests. The testing firm shall test the materials as construction work is performed.
  - 1. The Contractor shall arrange for the laboratory to perform field density tests in accordance with ASTM D2922 (nuclear densometer method).
  - 2. Laboratory shall make at least one random field density test of new materials for every 250 square yards of area for each 6-inch depth of material, but in no case less than one test per 12-inch depth.
- B. Provide additional density testing if the test results are below the specified density until passing test results are achieved. All additional tests shall be performed at the Contractor's expense.
- C. Inspections will be performed during the excavation for the following.
  - 1. Verification of base aggregate thickness.
  - 2. Acceptability of subgrade materials prior to placement of base aggregate.
  - 3. Test roll of subgrade and base aggregate materials.
  - 4. Examination of fill soil, including the thickness and compaction of fill layers.
  - 5. Compaction testing.

**END OF SECTION**

## **SECTION 32 10 00**

### **PLANT MIX BITUMINOUS PAVEMENT**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

**A. Section Includes:**

- 1. Plant mix bituminous pavement.**

##### **1.02 SUBMITTALS**

- A.** Submit a job mix formula to the Engineer at least 7 days in advance of plant mix bituminous paving, indicating conformance with the specifications. It shall be prepared by the Wisconsin Department of Transportation or a commercial laboratory and signed by a registered Professional Engineer verifying that the job mix and the mix aggregate meet the specifications contained herein.

##### **1.03 REFERENCES**

- A.** Standard Specifications for Highway and Structure Construction, 2019 Edition and latest supplements (WisDOT)
- 1.** Section 450, General Requirements for Asphaltic Pavement.
  - 2.** Section 455, Asphaltic Materials
  - 3.** Section 460, Hot Mix Asphalt Pavement
  - 4.** Section 465, Asphaltic Surface.
  - 5.** Section 490, Salvaged Asphaltic Pavement
- B.** AASHTO M226, Viscosity Graded Asphalt Cement.
- C.** ASTM C131, Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- D.** ASTM D1559, Test Method for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus.
- E.** ASTM D2041, Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Mixtures.
- F.** ASTM D3203, Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures.
- G.** ASTM D4791, Test Method for Flat or Elongated Particles in Coarse Aggregate.
- H.** ASTM D5821, Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate.

I. International Building Code, Chapter 11.

J. International Code Council A117.1, Accessible and Usable Buildings and Facilities.

#### 1.04 QUALITY ASSURANCE

A. Compaction shall be as required in WisDOT Specification 460 of 93% of the target maximum density.

#### 1.05 WARRANTY

A. Provide a warranty for the paving work against failure of defects for a period of one year after the final acceptance of the project by the Owner. Repair or replace, to the satisfaction of the Owner and Engineer, failed or defective work that occurs during the warranty period at no cost to the Owner.

### PART 2 PRODUCTS

#### 2.01 PLANT MIXED ASPHALT PAVEMENTS

A. **WisDOT TABLE 460.1 AGGREGATE GRADATION DESIGN LIMITS MASTER RANGE AND VMA REQUIREMENTS**

| SIEVE SIZE          | PERCENTS PASSING DESIGNATED SIEVES |                   |                   |                   |                    |               |              |
|---------------------|------------------------------------|-------------------|-------------------|-------------------|--------------------|---------------|--------------|
|                     | NOMINAL SIZE                       |                   |                   |                   |                    |               |              |
|                     | 1 ½ inch<br>37.5mm                 | 1 inch<br>25.0 mm | ¾ inch<br>19.0 mm | ½ inch<br>12.5 mm | 3/8 inch<br>9.5 MM | SMA<br>12.5mm | SMA<br>9.5mm |
| 2 inch<br>50.0 mm   | 100                                | -                 | -                 | -                 | -                  |               |              |
| 1 ½ inch<br>37.5 mm | 90 – 100                           | 100               | -                 | -                 | -                  |               |              |
| 1 inch<br>25.0 mm   | 90 max                             | 90 – 100          | 100               | -                 | -                  |               |              |

|                    |       |         |          |          |          |          |           |
|--------------------|-------|---------|----------|----------|----------|----------|-----------|
| ¾ inch<br>19.0 mm  | -     | 90 max  | 90 – 100 | 100      | -        | 100      |           |
| ½ inch<br>12.5 mm  | -     | -       | 90 max   | 90 - 100 | 100      | 90-97    | 100       |
| 3/8 inch<br>9.5 mm |       |         |          | 90 max   | 90-100   | 58-72    | 90-100    |
| #4<br>4.75 mm      |       |         |          |          | 90 max   | 25-35    | 35-45     |
| #8<br>2.36 mm      | 15-41 | 19-45   | 23-49    | 28-58    | 20-65    | 15-25    | 18-28     |
| #200<br>75 µm      | 0-6.0 | 1.0-7.0 | 2.0-8.0  | 2.0-10.0 | 2.0-10.0 | 8.0-12.0 | 10.0-14.0 |
| MINIMUM<br>VMA (%) | 11.0  | 12.0    | 13.0     | 14.0     | 15.0     | 16.0     | 17.0      |

**B. WisDOT TABLE 460-2 MIXTURE REQUIREMENTS**

| Mixture type                                                        | LT   | MT     | HT | SMA |
|---------------------------------------------------------------------|------|--------|----|-----|
| ESALs x 10 <sup>6</sup> (20 yr. design life)                        | <2.0 | 2 - <8 | >8 | —   |
| LA Wear (AASHTO T96)                                                | 13   | 13     | 13 | 13  |
| 100 revolutions (max % loss)                                        | 50   | 45     | 45 | 40  |
| 500 revolutions (max % loss)                                        |      |        |    |     |
| Soundness<br>(AASHTO T104)<br>(sodium sulfate,<br>max % loss)       | 12   | 12     | 12 | 12  |
| Freeze/Thaw<br>(AASHTO T103)<br>(specified counties,<br>max % loss) | 18   | 18     | 18 | 18  |



|                                                                                                                                    |                               |                               |                               |                      |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------------|
| Fractured Faces<br>(ASTMD5821 as modified in<br>CMM8-60) (one face/2 face,<br>% by count)                                          | 65/                           | 75 / 60                       | 98 / 90                       | 100/90               |
| Flat & Elongated<br>(ASTMD4791) (max<br>%, by weight)                                                                              | 5<br>(5:1<br>ratio)           | 5<br>(5:1<br>ratio)           | 5<br>(5:1<br>ratio)           | 20<br>(3:1 ratio)    |
| Fine Aggregate Angularity<br>(AASHTO T304, method A, min)                                                                          | 40                            | 43                            | 45                            | 45                   |
| Sand Equivalency (AASHTO T176,                                                                                                     | 40                            | 40                            | 45                            | 50                   |
| Gyratory                                                                                                                           | 6                             | 7                             | 8                             | 8                    |
| Compaction                                                                                                                         | 40                            | 75                            | 100                           | 65                   |
|                                                                                                                                    | 60                            | 115                           | 160                           | 160                  |
| Air Voids, %Va<br>(%Gmm Ndes)                                                                                                      | 4.0<br>(96.0)                 | 4.0<br>(96.0)                 | 4.0<br>(96.0)                 | 4.0 (96.0)           |
| % Gmm Nini                                                                                                                         | <= 91.5 <sup>[1]</sup>        | <= 89.0 <sup>[1]</sup>        | <= 89.0                       |                      |
| % Gmm Nmax                                                                                                                         | <= 98.0                       | <= 98.0                       | <= 98.0                       |                      |
| Dust to Binder Ratio <sup>[2]</sup> (% passing<br>0.075/Pbe)                                                                       | 0.6 - 1.2                     | 0.6 - 1.2                     | 0.6 - 1.2                     | 1.2 - 2.0            |
| Voids filled with Binder (VFB or VFA,<br>%)                                                                                        | 68 - 80 <sup>[4]</sup><br>[5] | 65 - 75 <sup>[3]</sup><br>[5] | 65 - 75 <sup>[3]</sup><br>[5] | 70 - 80              |
| Tensile Strength Ratio (TSR)<br>(AASHTO T283) <sup>[6] [7]</sup><br>no antistripping<br>additive with<br>antistripping<br>additive | 0.75 min<br>0.80 min          | 0.75 min<br>0.80 min          | 0.75 min<br>0.80 min          | 0.75 min<br>0.80 min |
| Drain down (AASHTO T305) (%)                                                                                                       |                               |                               |                               | 0.30                 |

<sup>[1]</sup> The percent maximum density at initial compaction is only a guideline.

<sup>[2]</sup> For a gradation that passes below the boundaries of the caution zone (ref. AASHTO M323), the dust to binder ratio limits are 0.6 - 1.6.

<sup>[3]</sup> For No. 5 (9.5mm) and No. 4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76 percent.

<sup>[4]</sup> For No. 2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67 percent.

<sup>[5]</sup> For No. 1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67 percent.

[6] WisDOT eliminates freeze-thaw conditioning cycles from the TSR test procedure.

[7] Run TSR at asphalt content corresponding to 3.0% air void regressed design using distilled water for testing.

### **C. WisDOT PAVEMENT MIX ENCODING**

| GRADATIONS (NMAS) |         | TRAFFIC VOLUME |        | BINDER DESIGNATION LEVEL |                 |
|-------------------|---------|----------------|--------|--------------------------|-----------------|
| 1                 | 37.5 mm | LT             | Low    | S                        | Standard        |
| 2                 | 25.0 mm | MT             | Medium | H                        | Heavy           |
| 3                 | 19.0 mm | HT             | High   | V                        | Very Heavy      |
| 4                 | 12.5 mm |                |        | E                        | Extremely Heavy |
| 5                 | 9.5 mm  |                |        |                          |                 |
| 6                 | 4.75 mm |                |        |                          |                 |

## **2.02 PLANT- MIXED BITUMINOUS SURFACE/WEAR AND BINDER/NON-WEAR COURSES**

- A. The bituminous mix design for surface/wear course pavement shall meet Aggregate Grading 9.5 mm, Traffic Volume LT and Binder 5LT 58-28 S.
- B. The bituminous mix design for non-wear course pavement shall meet Aggregate Grading 12.5 mm, Traffic Volume LT and Binder 4LT 58-28 S.

## **2.03 PERFORMANCE GRADE ASPHALT BINDER**

- A. Only Performance Grade (PG) Asphalt Binder is approved for use. The inspection, sampling and testing of PG Asphalt Binder shall conform to the Schedule of Materials Control and the Combined State Binder Group Method of Acceptance for Asphalt Binders.
  - 1. Medium Curing Liquid Asphalt shall be Penetration Grade 58-34 for all paving work.

## **2.04 TACK COAT**

- A. Tack coat to be used where plant mix pavement will be in contact with previously constructed asphalt or Portland cement concrete shall be as shown in paragraph 455.2.5 of the WIDOT Specifications.

## **PART 3 EXECUTION**

### **3.01 SURFACE PREPARATION**

- A. Do not begin paving until deficient areas have been corrected and are ready to receive paving.
- B. Pavement surfaces must be dry and completely free of dust, dirt, debris, and all loose materials and vegetation.

- C. Apply a tack coat to the vertical surface of previously constructed bituminous or concrete that will be in contact with the plant mix bituminous. Distribute the tack coat at a rate of 0.05 gallons per square yard of surface for undiluted asphalt emulsion.
- D. When a successive lift of plant mix bituminous is to be placed, the existing surface shall receive a tack coat if the previous layer is dirty or over 48 hours old.
- E. Complete all reconstruction repairs in accordance with the specifications.

### 3.02 PLANT MIX BITUMINOUS

- A. Plant Mix Bituminous: The aggregate grading shall conform to the specification limits. Asphalt cement content shall be within 0.3 percent of the job mix formula optimum asphalt content. When paving the surface course on tennis courts or athletic tracks, the wearing surface asphalt cement content shall be within 0.3 percent greater than the job mix formula optimum asphalt content.
- B. The trucks for hauling bituminous mixtures shall have tight, clean and smooth beds that have been sprayed with a minimum amount of approved anti-adhesive agent to prevent the mixture from adherence to the beds. Provide each truck with a cover of suitable material and size to protect the mixture from the weather.

### 3.03 PLANT MIX BITUMINOUS TEMPERATURE CONTROL

- A. The minimum laydown temperature in all courses (as measured behind the paver or spreading machine) of the bituminous mixture shall be in accordance with the temperature requirements specified herein:

| Air Temp | Compacted Lift Thickness |          |        |                |
|----------|--------------------------|----------|--------|----------------|
|          | 1 inch                   | 1 ½ inch | 2 inch | 3 inch or more |
| 32 - 40  | -                        | 265      | 255    | 250            |
| 41 - 50  | 270                      | 260      | 250    | 245            |
| 51 - 60  | 260                      | 255      | 245    | 240            |
| 61 - 70  | 250                      | 245      | 240    | 235            |
| 71 - 80  | 245                      | 240      | 235    | 235            |
| 81 - 90  | 235                      | 230      | 230    | 230            |
| 91 - up  | 230                      | 230      | 230    | 225            |

- B. The plant mix bituminous mixture shall not exceed 310 degrees F. or the load will be rejected at Contractor's expense.

### 3.04 PLANT MIX BITUMINOUS PLACEMENT

- A. General: Place the plant mix bituminous on a prepared surface with a paver. Place inaccessible and small areas by hand. Place each course to the required elevation, cross-section, and compacted thickness. The in-place compacted thickness shall be plus or minus 1/4 inch of the planned thickness. Any area, which is constructed to less than the required

minimum thickness, may be removed and replaced by the Contractor at the discretion of the Engineer.

- B. Equipment:** All equipment furnished by the Contractor shall be maintained and in sound mechanical condition capable of performing the work.
- C. Placement:** The mixture shall be delivered to, and spread by, the plant mix bituminous paver. The mixture shall be laid in strips to minimize the number of longitudinal joints required.
- D. Paver:**
  - 1. The paver shall be a self-contained, power-propelled unit provided with adjustable activated screed or strike-off assembly, heated, and capable of spreading and finishing courses of plant mix bituminous material. The paver must be capable of laying the plant mixed bituminous in widths applicable to the typical section and thickness shown on the Plans.
  - 2. Equip the paver with a control system capable of automatically maintaining elevations as specified. The control system shall be automatically actuated from either a reference line or surface through which a system of mechanical sensors will maintain the paver screed at a predetermined slope at the proper elevation to obtain the required surface. When directed, the transfer slope control system shall be made inoperative and the screed shall be controlled by sensor directed automatic mechanisms, which will independently control the screed elevation from the reference line or surface.
- E. Joints:** Make joints between old and new pavements, or between a successive day's work, to ensure a continuous bond between the adjoining work. Construction joints shall be vertical and have the same texture, density, and smoothness as other sections of the bituminous course. Contact surfaces shall be clean and a tack coat applied.
- F. Wear Course:** Place the surface wear course in maximum 2-inch lifts unless otherwise specified by the Engineer.

### **3.05 COMPACTION/ROLLING**

- A.** Compact the plant mix bituminous mixture as quickly as possible after placement. Breakdown rolling shall immediately follow the paver. Intermediate rolling shall follow behind the breakdown rolling. Compaction of the pavement shall continue until in-place air voids are within the specified range. Finish rolling shall be performed at as high a temperature as practical and shall eliminate all the marks left from breakdown and intermediate rolling. All rolling must be completed before the bituminous mixture cools below 180 degrees F.
- B. Rollers:**
  - 1. Steel-wheeled: Self-propelled and capable of reversing without backlash, weighing not less than 8 tons, and exerting a pressure on the rear drum of not less than 250 pounds per linear inch. When vibratory rollers are used, they shall operate at a frequency of 8 to 10 impacts per foot.



2. Pneumatic-tired: Self-propelled, with a minimum of 7 tires, and exerting a pressure of not less than 200 pounds per inch of rolling width.
3. Trench: Self-propelled, exerting a pressure of not less than 250 pounds per linear inch of rear roll.

**C. Rolling:**

1. Unless otherwise directed, begin rolling at the side and proceed longitudinally parallel to the paving lane centerline, overlapping each trip half the roller width, and gradually progressing to the crown of the parking lot or roadway.
2. When the pavement abuts a previously placed lift, roll the longitudinal joint first followed by regular rolling procedures.
3. On sloped sections, begin rolling at the low side and progress to the high side, by overlapping the longitudinal trips parallel to the paving lane centerline.
4. Along forms, curbs, headers, walls, and other places not accessible to rollers, thoroughly compact the mixture with hot hand tampers or with mechanical tampers.
5. The pavement shall be rolled so that no roller marks, ridges, porous spots or impressions are visible and the resulting surface has the required elevation and surface smoothness requirements.

**D.** Compaction shall be based upon a required minimum density of 93% of Target Maximum Density. Uniformly compact each course until there is no further evidence of consolidation and all roller marks are eliminated. A minimum of two rollers shall be on the site at all times. A vibratory steel roller shall be used for breakdown and finish rolling and a pneumatic roller shall be used after breakdown, unless directed otherwise by the Engineer.

**E.** Repairs: Remove and replace areas mixed with foreign materials or defective areas as directed by the Engineer. Sawcut the areas, remove the existing bituminous and replace with new, hot plant mix bituminous. Compact the area by rolling to the air voids and smoothness specified. The removal and replacement of contaminated plant mix bituminous shall be done at no cost to the Owner.

**F.** Surface Smoothness: The surface of the pavement when finished shall be of uniform texture, smooth, true to crown and elevation and free from defects to the satisfaction of the Engineer. When tested with a 10-foot straight edge in any direction, the maximum deviation of the surface shall not exceed 1/8 inch. Unsatisfactory joints, as determined by the Engineer, will be rejected and replaced at the Contractor's expense. Areas showing deviations greater than 1/8 inch or where surface water ponding will result, shall be milled, tack coated and repaved with bituminous.

**G.** Protection: Erect barricades to prohibit vehicular traffic from the pavement after final rolling until it has fully hardened and cooled to the same temperature as the surrounding soil or original asphalt pavement.

**H.** Restrictions: No bituminous mixtures shall be placed after October 15<sup>th</sup>.

### **3.06 FIELD QUALITY CONTROL**

- A.** The plant mix bituminous pavement will be tested for compliance with the following project requirements. The tests and all costs shall be provided by the Owner.
  - 1.** Asphalt Cement Content.
  - 2.** Plant mix bituminous density requirements, if necessary.
  - 3.** Thickness requirements, as specified, +/- ¼ inch.
  - 4.** Surface Smoothness, +/- 1/8 inch in 10 feet measured in any direction.
- B.** Test Frequency: the plant mix bituminous pavement shall be tested for mat thickness and surface smoothness during laydown.

**END OF SECTION**

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## **SECTION 32 20 00**

### **CONCRETE PAVEMENT**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Portland cement concrete.
  - 2.** Expansion joint material.
  - 3.** Truncated domes.

##### **1.02 SUBMITTALS**

- A.** Submit at least 7 days in advance of placement, a Portland cement concrete mix design meeting the requirements of the Wisconsin Department of Transportation WisDOT specifications. The mix design shall show the source and type of aggregate and cement; scale weight of each aggregate, cement, and water; and volume and type of admixtures per cubic yard.
- B.** Coarse and fine aggregate reports indicating the source, grading, specific gravity, absorption, and fineness modulus shall be submitted along with the concrete mix design at least 7 days prior to placement.
- C.** Submit fiber reinforcement manufacturer's specifications.

##### **1.03 REFERENCES**

- A.** Standard Specifications for Highway and Structure Construction, 2019 Edition and latest supplements (WisDOT)
  - 1.** Section 415, Concrete Pavement.
  - 2.** Section 501, Concrete.
- B.** ACI 214, Recommended Practice for Evaluation of Strength Test Results of Concrete.
- C.** ACI 318, Building Code Requirements for Reinforced Concrete.
- D.** ACI 305, Hot Weather Concreting.
- E.** ACI 309, Cold Weather Concreting.
- F.** ACI 347, Recommended Practice for Concrete Formwork.
- G.** ASTM C31, Test Methods for Making and Curing Concrete Test Specimens in the Field.
- H.** ASTM C33, Specification for Concrete Aggregates.



- I. ASTM C39, Test Method for Compressive Strength of Cylindrical concrete Specimens.
- J. ASTM C40, Test Method for Organic Impurities in Sand for Concrete.
- K. ASTM C42, Methods of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
- L. ASTM C88, Test Method for Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate.
- M. ASTM C131, Test Method for Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine.
- N. ASTM C143, Test Method for Slump of Portland Cement Concrete.
- O. ASTM C150, Specification for Portland Cement.
- P. ASTM C231, Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- Q. ASTM C260, Specification for Air-Entraining Admixtures for Concrete.
- R. ASTM C309, Specification for Liquid Membrane-Forming Compounds for curing Concrete.
- S. ASTM C494, Specification for Chemical Admixtures for Concrete.
- T. International Building Code, Chapter 11.
- U. International Code Council A117.1, Accessible and Usable Buildings and Facilities.

#### **1.04 QUALITY ASSURANCE**

- A. Quality assurance personnel shall perform a complete set of tests (Slump, Air Content and Cast 4" by 8" or 6" by 12" Test Cylinders) each day concrete is placed.

#### **1.05 WARRANTY**

- A. Provide a warranty for the concrete work against failure of defects for a period of one year after the final acceptance of the project by the Owner. Repair or replace, to the satisfaction of the Owner and Engineer, failed or defective work that occurs during the warranty period at no cost to the Owner. Excessive concrete pop-outs, greater than 5 per square yard, scaling of the surface, and cracks not following joints shall be deemed defective.

### **PART 2 PRODUCTS**

#### **2.01 PORTLAND CEMENT**

- A. ASTM C150, for Type I, II, III.

## 2.02 FINE AGGREGATE

- A. Fine aggregate consists of a combination of sand with fine gravel, crushed gravel, or crushed stone consisting of hard, durable particles.
- B. Fine aggregate shall be well graded and, when tested by means of laboratory sieves, shall conform to WisDOT 501.2.5.3.4 as listed below:

| Sieve Size            | Percent Passing by Weight |
|-----------------------|---------------------------|
| 3/8 inch (9.5 mm)     | 100                       |
| No. 4 (4.75 mm)       | 90 - 100                  |
| No. 16 (1.18 mm)      | 45 - 85                   |
| No. 50 (300 $\mu$ m)  | 5 - 30                    |
| No. 100 (150 $\mu$ m) | 0 - 10                    |

- C. Fine aggregate deleterious substances shall not exceed the following criteria as listed in WisDOT 501.2.5.4.2 and as shown below

| Deleterious Substances                                                                     | Percent by Weight |
|--------------------------------------------------------------------------------------------|-------------------|
| 1. Coal                                                                                    | 1.0               |
| 2. Clay lumps                                                                              | 0.3               |
| 3. Shale                                                                                   | 1.0               |
| 4. Other deleterious substances like alkali, mica, coated grains, soft and flaky particles | 1.0               |
| 5. Maximum combined total of all deleterious substances                                    | 5.0               |

When tested in accordance with ASTM C40, the fine aggregate shall produce a color in the supernatant liquid no darker than the reference standard color solution.

## 2.03 COARSE AGGREGATE

- A. Clean, hard, durable gravel, crushed gravel, crushed stone or crushed concrete free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.
- B. Coarse aggregate shall conform to WisDOT 501.2.5.4.5 gradation as listed below:

| Sieve Size         | Percent Passing by Weight |          |
|--------------------|---------------------------|----------|
|                    | Size #1                   | Size #2  |
| 2 inch (50 mm)     | -                         | 100      |
| 1 ½ inch (37.5 mm) | -                         | 90 - 100 |
| 1 inch (25.0 mm)   | 100                       | 20 - 55  |
| ¾ inch (19.0 mm)   | 90 - 100                  | 0 - 15   |
| 3/8 inch (9.5 mm)  | 20 - 55                   | 0 - 5    |
| No. 4 (4.75 mm)    | 0 - 10                    | -        |
| No. 8 (2.36 mm)    | 0 - 5                     | -        |

- C. Coarse aggregate deleterious substances shall not exceed the criteria as listed in WisDOT 501.2.5.4.2 and as shown below

| Deleterious Substances                            | Percent by Weight |
|---------------------------------------------------|-------------------|
| 1. Shale                                          | 1.0               |
| 2. Coal                                           | 1.0               |
| 3. Clay lumps                                     | 0.3               |
| 4. Soft fragments                                 | 5.0               |
| 5. Any combination of the above                   | 5.0               |
| 6. Thin and elongated pieces based on a 3:1 ratio | 15.0              |

- D. Coarse aggregate physical properties shall not exceed the criteria as listed in WisDOT 501.2.5.4.3 and as shown below

1. When tested in accordance with ASTM C131, the coarse aggregate shall show a loss not exceeding 50% after 500 revolutions.
2. When tested in accordance with ASTM C88, the loss resulting after five cycles shall not exceed 12% for coarse aggregate when using sodium sulfate.
3. When tested in accordance with AASHTO T103, the coarse aggregate shall show a weighted freeze-thaw average loss not exceeding 18%.

## **2.04 WATER**

- A. Potable, clean, and free from injurious amount of sugar, oil, or other deleterious substances.

## **2.05 AIR-ENTRAINING AGENT**

- A. ASTM C260. Use sufficient air-entraining agent to provide a total air content in accordance with WisDOT specifications, add to the batch in a portion of the mixing water. Batch by means of a mechanical batcher capable of accurate measurement.

## **2.06 ADMIXTURES**

- A. Admixtures will be required at the Engineer's discretion or, if not required, may be added at the Contractor's option to control the set, effect water reduction, and increase workability. In either case, the addition of an admixture shall be at the Contractor's expense. The use of an admixture shall be subject to acceptance by the Engineer. Concrete containing an admixture shall be first placed at a location determined by the Engineer. If the use of an admixture is producing an inferior end result, the Contractor shall discontinue use of the admixture. Admixtures specified herein shall conform to the requirement of ASTM C494. The required quantity of cement shall be used in the mix regardless of whether or not an admixture is used.
- B. Neither accelerators nor retarders are to be used in the Portland cement concrete mix unless approved by the Engineer.

## **2.07 CONCRETE MIX DESIGN**

- A. The mix design shall be composed of Portland cement, coarse and fine aggregate, water, and an air-entraining admixture, and shall be proportioned to meet the WisDOT, Grade A design.

- B. Design mix shall be normal weight air-entrained concrete meeting the following criteria:

| <b>Ingredient</b>               | <b>Range of Acceptable Values</b> |
|---------------------------------|-----------------------------------|
| Portland Cement                 | Type I, II                        |
| Max Water/cement ratio          | 0.45                              |
| Minimum 28 Compressive Strength | 4500 psi                          |
| Entrained Air Content           | 6.0% +/- 1.0%                     |
| Slump                           | 2 to 3 inches                     |

## **2.08 READY-MIXED CONCRETE**

- A. Deliver to the site and completely discharge within one hour after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. In hot weather, or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85 degrees F. or above, the time between the introduction of the cement to the aggregate and discharge shall not exceed 45 minutes.

## **2.09 EXPANSION JOINT MATERIAL**

- A. The expansion joint material shall consist of 1/2" fiberboard with Snap-Cap by W.R. Meadows.
- B. Deck-O-Foam polyethylene closed cell expansion joint filler with perforated reservoir tear-out strip.
- C. Concrete contractor to seal with caulk (BASF NP-1 or equal) all joints where expansion materials are installed.

## **2.10 TRUNCATED DOMES**

- A. Cast-iron, unpainted natural patina, truncated dome plates, 24"x24", manufactured by Neenah Foundry Co.
- B. Approved equal.

## **PART 3 EXECUTION**

### **3.01 PREPARATION OF SURFACES**

- A. Prior to placing concrete, thoroughly wet surfaces by sprinkling. Keep surfaces moist by frequent sprinkling up to the time of concrete placement. The surface shall be free from standing water, mud and debris at the time of concrete placement.
- B. Forms:



1. Forms shall be of wood, metal, or other suitable material and shall extend for the full depth of the concrete. Forms shall be straight, free from warp, and of sufficient strength to resist the pressure of the concrete without displacement. Bracing and staking of forms shall be such that the forms do not move when the plastic concrete is placed. Forms shall be covered with an approved form release agent before concrete placement.
  2. The top surface of the forms shall show no deviations over 1/8" for the length of the form. The face of the form shall show no deviation over 1/2" from a 10-foot straight edge.
- C. Hot weather concreting conditions shall have additional surface preparations and curing provisions as specified by ACI 305.
- D. Cold weather concrete conditions shall have additional surface preparations and curing provisions as specified by ACI 306.

### **3.02 PLACING CONCRETE**

- A. The proportioning, mixing, and placing of the concrete shall be in accordance with the requirements for the concrete specified herein. Deposit concrete in one course to prevent segregation.
- B. Consolidate placed concrete by mechanical vibrating equipment supplemented by handspading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices.
- C. Finish surface with a wooden float and light brooming. No plastering of the surface will be permitted.
- D. Outside edges of the slab and all joints shall be edged with a 1/4-inch radius-edging tool.
- E. ADA Compliance:
1. Sidewalk cross slopes shall not exceed 2%.
  2. Curb ramp shall not have a slope greater than 8.33% (1:12) or height greater than 6".
  3. The maximum allowable vertical change is 1/4".
  4. Vertical changes between 1/4" and 1/2" shall be beveled at 1:2.
  5. Vertical changes over 1/2" shall be sloped no greater than 1:12.

### **3.03 CONTRACTION JOINTS**

- A. Sidewalks: The joint spacing shall not exceed the width of the sidewalk or 2 times (in feet) the slab thickness (in inches) i.e. a 5' wide sidewalk shall have perpendicular joints every 5' or a 4" thick slab shall not have joints spaced more than 8' by 8'. Where applicable, the joint spacing shall match the existing joint spacing.
- B. Curb and Gutter: The perpendicular joint spacing shall not exceed 10'. Where applicable, the joint spacing shall match the existing joint spacing.

- C. All the joints shall be hand trowelled or sawcut to a depth of 1/3 the depth of the concrete section. Sawcutting shall occur within 4 to 12 hours after concrete has hardened.

### **3.04 EXPANSION JOINTS**

- A. The expansion joint material shall consist of 3/8" thick fiberboard designed for use in cast in place concrete. The material shall go the full depth of the slab or curb and gutter.
- B. Sidewalks: place the expansion material against buildings or previously placed concrete. The expansion material shall be placed the full depth of the concrete thickness at a maximum distance of every 200 lineal feet.
- C. Curb and Gutter: place the expansion material 3 feet on either side of any catch basin or manhole structure unless otherwise specified in SECTION 01 11 00. The expansion material shall be placed the full depth of the curb and gutter cross section at a maximum distance of every 200 lineal feet.

### **3.05 CURING**

- A. Cure concrete using a liquid membrane-forming compound complying with ASTM C309, Type 2. The white-pigmented compound shall be applied at a rate of coverage not more than 150 square feet per gallon, providing a uniform white appearance.
- B. Prohibit traffic, both pedestrian and vehicular, from freshly placed concrete for a period of not less than 72 hours. Vehicular traffic shall be excluded for such additional time as the Engineer may direct.

### **3.06 TRUNCATED DOMES**

- A. Install truncated domes in accordance with manufacturer's instructions.

### **3.07 DISPOSAL OF EXCESS AND WASTE MATERIALS**

- A. Contractor shall remove and dispose of excess materials at its own expense.
- B. Liquid and solid wastes shall be contained in a leak-proof containment facility or impermeable liner in accordance with state and federal regulations.

### **3.08 FIELD QUALITY CONTROL**

- A. Sampling and testing for quality control during placement of concrete shall be arranged and paid for by the Owner and shall include the following, as directed by the Engineer.
  - 1. Slump: ASTM C143; one test for each set of compressive strength test specimens.
  - 2. Entrained Air: ASTM C231; one test for each set of compressive strength specimens.
  - 3. Casting and Curing Concrete Test Specimens: ASTM C31; cast one set of four 6" x 12" standard test cylinders for each 100 cubic yards or fraction thereof, of concrete placed in any one day or for each 5,000 square feet of surface area placed.

4. Compression Strength Test Specimens: ASTM C39; per set of four standard cylinders, test one specimen at 7 days, two specimens at 28 days, and one specimen held in reserve for later testing, if required.
  5. When total quantity of a given class of concrete is less than 50 cubic yards, the Engineer may waive strength test if, in his judgment, adequate evidence of satisfactory strength is provided.
- B.** Test results will be reported in writing to the Engineer and Contractor on the same day that tests are made. Reports of compressive strength tests shall contain the project identification and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportion and materials; compressive breaking strength, and type of break for both 7-day and 28-day tests.
- C.** Additional Tests: The testing service will make additional tests of in-place concrete when compressive strength test results indicate specified concrete strengths have not been attained. The hardened concrete will be cored as specified with ASTM C42, or by other methods as directed. Contractor shall pay for such tests conducted, and any other additional testing as may be required when unacceptable concrete is verified.
- D.** Irregularities, abrupt or gradual, in the finished concrete surface in excess of 1/8" as measured with a 5-foot straightedge, in accordance with ACI 347, shall be corrected. The corrective action and resulting product shall be approved by the Owner and Engineer prior to execution.

**END OF SECTION**

## **SECTION 32 58 00**

### **LANDSCAPING**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Topsoil
  - 2.** Fertilizer
  - 3.** Seed
  - 4.** Water
  - 5.** Mulch
  - 6.** Weed barrier
  - 7.** Landscape Edging
  - 8.** Trees – deciduous and coniferous
  - 9.** Shrubs and plants

##### **1.02 SUBMITTALS**

- A.** Furnish the Engineer with a certificate of compliance stating the species, sizes, and quantities furnished meet the requirements of the specification.

##### **1.03 REFERENCES**

- A.** Standard Specifications for Highway and Structure Construction, 2019 Edition and latest supplements (WIDOT)
  - 1.** Section 625, Topsoil and Salvaged Topsoil
  - 2.** Section 627, Mulching
  - 3.** Section 630, Seeding
  - 4.** Section 631, Sodding
  - 5.** Section 632, Furnishing and Planting Plant Materials
- B.** ANZI Z60, Standard for Nursery Stock.

##### **1.04 WARRANTY**

- A.** All material shall be guaranteed by the Contractor to be in good, health, and vigorous conditions of active growth typical of species for a period of one full year following the date of the final inspection.
- B.** Material that at any time during the guarantee period dies or is in obviously declining condition shall be removed immediately and replaced as soon as favorable conditions exist.



- C. At the end of the guarantee period, replace material that, in the opinion of the Engineer or Owner, is in an unhealthy or unsightly condition. Remove rejected materials from the site and replace as originally specified.

## **PART 2 PRODUCTS**

### **2.01 TOPSOIL**

- A. The topsoil, whether it is new or salvaged, should be screened and pulverized. The topsoil should be dry and ready to be fine graded.
- B. Topsoil consists of loam, sandy loam, silt loam, silty clay loam or clay loam humus-bearing soils adapted to sustain plant life, and ensure the topsoil is in a pH range of 6.0 to 7.0

### **2.02 FERTILIZER**

- A. Fertilizers shall be applied at a rate determined by the seed supplier. The type of fertilizer shall be determined based on the type and properties of the topsoil and seed.

### **2.03 SEED**

- A. State-certified seed of the latest season's crop. Deliver in original sealed packages bearing the producer's guaranteed analysis for percentages of mixtures, purity, germination, weed and seed content, and inert material. Label the packages in conformance with the U.S. Department of Agriculture rules and regulations under the Federal Seed Act and applicable state seed laws.
- B. The origin shall be clearly identified on the seed label for all seed types, including native forbs.
- C. Grass seed mix shall be provided by Twin City Seed Company "Tuff Turf" seed mix, or approved equal. Seed mix shall be drought tolerant and mowable turf.
  - 1. **TURF SEED:** Twin City Seed Company 'Tuff Turf' Seed Mix, drilled into the topsoil layer at 400.00 lbs per acre. Submit seed mix for approval. Grading and erosion control per civil plans and specifications.
    - Seed Mix Composition:
      - 30% 2<sup>nd</sup> Millennium Tall Fescue
      - 30% Raindance Tall Fescue
      - 20% Boreal Creeping Red Fescue
      - 15% Carly Perennial Ryegrass
- D. Stormwater basin seed mix: A State of Wisconsin DNR approved native seed mix capable of handling both wet and drought conditions, to be approved by the engineer.

### **2.04 WATER**

- A. Potable (or as otherwise approved) and suitable for plant growth.

## **2.05 MULCH**

- A.** Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of the following processed elements:
  - 1. Wood Mulch: Western Red Cedar wood mulch, free of leaves and foreign matter. Source locally if possible. Submit sample for approval. Dyed (colored) mulch is not acceptable or permitted. NOTE: Install Preen granular herbicide over wood mulch after installation to control broadleaf weed germination. Volume per manufacturer's recommendations.
  - 2. Rock Mulch: Three quarter (3/4) inch washed limestone rock, placed at 3" minimum thickness and matching existing planning beds.

## **2.06 WEED BARRIER**

- A.** Weed Mat Fabric: Polypropylene or polyester fabric, 3 oz or 5oz./sq. yd. minimum, free draining. DeWitt Pro or equal. Use 3oz in plant beds and 5oz under rock mulch. All weed mats shall be water permeable.
- B.** Polyethylene (plastic) Weed Barrier: Not acceptable or permitted.

## **2.07 LANDSCAPE EDGING**

- A.** Metal Edging: Provide 1/8" thick X 4" tall X 8' (min.) long sections of galvanized perforated steel landscape edging with a rounded bull-nose top edge. Ensure sections are straight and true. Inter-lock sections and secure with metal stakes provided by the manufacturer. Use Coyote Products or an approved Equal.

## **2.08 TREES – DECIDUOUS AND CONIFEROUS**

- A.** Straight trunks with leader intact, undamaged, and uncut. Old abrasions and cuts shall be completely callused over. Measure when branches are in their normal position. Height and spread dimensions specified refer to the main body of the tree and not from branch or root tip to tip.
- B.** The determining measurement for trees shall be the caliber, which shall be taken 6 inches above the ground for trees up to 4-inch caliber, and 12 inches above the ground for larger sizes. Trees to be of size and type as indicated in the plans.
- C.** Tree wrapping material shall be standard burlap, heavy crepe paper, or other suitable material in strips 4 to 10 inches wide and shall be specifically designed and manufactured for horticultural use and have insect resistant qualities.

## **2.09 SHRUBS AND PLANTS**

- A.** Plants furnished shall be Minnesota, North Dakota or South Dakota, Wisconsin, Iowa, or Michigan nursery grown stock, and shall have been growing in a nursery for at least two

years. The term plant shall mean any or all trees, bushes, shrubs, vines, annuals or perennials.

- B. Plants to be of size and type as indicated on plans.

### **PART 3 EXECUTION**

#### **3.01 SOIL PREPARATION**

- A. Immediately prior to placing the topsoil, scarify the existing soils to a minimum depth of 3 inches for all areas on slopes shallower than 2 horizontal to 1 vertical.
- B. Perform soil preparation immediately prior to seeding to prevent undesirable weed growth or soil erosion.
- C. Place the topsoil and spread uniformly over lawn areas to a minimum depth of 3 inches. Firm and smooth the topsoil after working the soil.
- D. Apply a starter fertilizer at the Manufacturer's or Supplier's recommended rates and work into the topsoil. The lag time between seeding and fertilizing shall not exceed 48 hours.
- E. Rake the surface until it is smooth and of uniform fine texture immediately prior to seeding.

#### **3.02 SEEDING**

- A. The seed mixture shall be placed with a seed drill that will accurately meter the types of seed to be planted and keep all seeds uniformly mixed during drilling or by scattering the seeds uniformly over the areas to be seeded. Lightly rake or drag to cover the seed with approximately ¼ inch of soil. After seeding, lightly roll or compact the areas using suitable equipment, preferably the cultipacker type when the seed bed is too loose, or if the seedbed contains clods that might reduce seed germination. The contractor shall not roll slopes steeper than 1:3.
- B. The application rate for seed mix 40 shall be 2 lbs/1000 sq ft. The drill shall be equipped with disk furrow openers and packer assembly to compact the soil directly over the drill row. Seeding shall be done at a right angle to the surface drainage. The seeding shall be done with two passes over the entire area, with the second pass in a direction at a right angle to the first pass.
- C. The straw or hay mulch with tackifier shall be spread by mechanical means to provide a uniform distribution over the designated area in one operation. Place straw or hay uniformly over the area 1 inch deep, using 3 tons of mulch per acre. The amount of tackifier used shall coat the straw or hay sufficiently to hold it together and keep it in place.
- D. The seed placed under the Contract shall be watered and maintained by the Owner.

#### **3.03 PLANTING TREES AND SHRUBS**

- A. Excavate pits, beds, and trenches with vertical sides and with the bottom of the excavation slightly raised at the center to provide proper drainage. Loosen hard subsoils in the bottom of the excavation.
- B. For balled and burlapped trees and shrubs, make excavations at least half again as wide as the ball diameter and equal to the ball depth. Allow for setting the ball on a 3 inch layer of good quality topsoil.
- C. For container grown stock, excavate as specified for balled and burlapped stock, adjusted to the size of the container width and depth. Cut into the sides of the root ball, approximately 1/3 through the ball to loosen the root mass prior to planting.
- D. Retain a portion of the existing subsoils and thoroughly mix approximately 25% with 75% new topsoil. Place the soil mixture under and around the new plantings.
- E. Set the balled and burlapped stock on a layer of good quality topsoil and subsoil mixture, plumb and in the center of the pit or trench with the top of the ball 3" higher than the adjacent finished landscape elevations. Remove the burlap from the top and 1/3 the depth of the sides of balls. Retain the burlap on the remaining 2/3 of the sides and bottom. When the planting is set, place additional backfill around the base and sides of ball, and work each layer to settle the backfill and eliminate voids and air pockets.
- F. Fill approximately 1/2 of the excavations with the topsoil and subsoil mixture, then water thoroughly and allow it to percolate out before placing additional backfill. Once the backfill operations are complete, thoroughly water the plants again.
- G. Set container grown stock as specified for balled and burlapped stock. Remove and dispose of all containers.
- H. Place mulch pits around all trees and plantings and within all landscaped planting beds as required. Provide not less than a 6-inch depth of mulch and finish level with the adjacent finished elevations.
- I. Stake trees and plantings in place, as required, immediately after planting.

### **3.04 PROTECTION AND CLEANING**

- A. Keep the pavements clean and the work area in an orderly condition during landscaping work.
- B. Protect the landscape work and materials from damage due to landscape operations or by other Contractors and trades, and trespassers. Maintain the protection measures during the installation and maintenance periods.

**END OF SECTION**

**32 58 00-5**



**SECTION 33 10 00****WATER DISTRIBUTION****PART 1 GENERAL****1.01 SUMMARY****A. Section Includes:**

1. Underground water service piping, watermains and appurtenances.

**1.02 CODES**

- A. A.** All work shall comply with the most current requirements of the City and the Wisconsin Plumbing Code and all applicable codes and ordinances.

**1.03 REFERENCES**

- A.** AWWA B300, Hypochlorites.
- B.** AWWA B301, Liquid Chlorine.
- C.** AWWA C100, Thickness Design of Cast-Iron Pipe.
- D.** AWWA C151, Ductile Iron Pipe Centrifugally Cast in Metal Moulds or Sand-Lined Molds.
- E.** AWWA C500, Gate Valves for Ordinary Water Works Services.
- F.** AWWA C502, Fire Hydrants for Ordinary Water Works Services.
- G.** AWWA C600, Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances
- H.** AWWA C800, Threads for Underground Service Line Fittings.
- I.** AWWA C900, Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4" through 12" for Water.
- J.** ANSI A21.4, American National Standard for Cement-Mortar Lining for Cast Iron and Ductile-Iron Pipe and Fittings for Water.
- K.** ANSI A21.10, American National Standard for Gray-Iron and Ductile-Iron Fittings, 2" through 48", for Water and Other Liquids.
- L.** ANSI A21.11, American National Standard for Rubber-Gasket Joints for Cast-Iron and Ductile-Iron Pressure Pipe and Fittings.
- M.** ASTM B88, Standard Specifications for Seamless Copper Water Tube.
- N.** ASTM D429, Standard Test Methods for Rubber Property Adhesion to Rigid Substrates.

- O.** ASTM D1784, Standard Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds (Type 1, Grade 1).
- P.** ASTM D1785, Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe Schedules 40, 80 and 120.
- Q.** ASTM D2239 Standard Specifications for Polyethylene (PE) Plastic Pipe.
- R.** ASTM D2241, Standard Specifications for Polyvinyl Chloride (PVC) Plastic Pipe (SDR-PR and Class T).
- S.** ASTM D2609, Standard Specifications for Plastic Insert Fittings for Polyethylene Plastic Pipe.
- T.** ASTM D3139, Standard Specifications for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
- U.** ASTM F477, Standard Specifications for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- V.** Ten States Recommended Standards for Water Works, Most Current Edition.

#### **1.04 SUBMITTALS**

- A.** The Contractor shall submit for approval, complete shop drawings and details for all couplings, valves, operators, and other special appurtenances. This required submission for approval shall include all the manufacturer's product data, dimensions, sizes, types, maximum loading, and thrust anchorages.
- B.** The manufacturer shall furnish an affidavit stating that the valves and all materials conform to the applicable requirements and all tests specified under the respective standard have been performed and requirements have been met.

#### **1.05 SITE CONDITIONS**

- A.** The existing underground utilities, as shown on the plans, are located in accordance with available data, but the locations may vary and cannot be guaranteed. The exact locations shall be determined by the Contractor as the work proceeds. The excavation work shall be done carefully so as to avoid damaging the existing utilities.
- B.** The Contractor shall provide for the protection, temporary removal and replacement, or relocation of said obstructions as required for the performance of the work required in these contract documents. No extra payment will be made for this work.

**PART 2 PRODUCTS****2.01 POLYVINYL CHLORIDE PIPE**

- A. ASTM D1784, Type 1, Grade 1 PVC pressure pipe shall be manufactured in accordance with the latest revision of AWWA Standard C900. The pipe shall be Class 150, SDR 18. The outside diameters shall conform to the outside diameters of ductile iron pipe for the various sizes.
- B. ASTM D1785, Schedule 40 PVC pressure pipe shall be manufactured in accordance with the latest codes. The outside diameters shall conform to the outside diameters of ductile iron pipe for the various sizes.

**2.02 PVC PRESSURE PIPE JOINTS**

- A. The joints shall be rubber gasketed conforming to ASTM D3139.
- B. The lubrication material shall be water soluble, non-objectionable in taste and odor imparted to the water, non-supporting of bacterial growth, with no deteriorating effects on the PVC or rubber gaskets.

**2.03 DUCTILE IRON PIPE, SPECIALS, AND FITTINGS**

- A. All pipe, specials, and fittings shall be ductile iron conforming to ANSI A21.10. The joints shall conform to the requirements of ANSI A21.11. The fittings shall all have bell connections of standard AWWA dimensions or special dimensions as required, or shall be equipped with adapters of the proper class for the size of the pipe as required by the manufacturer. Specials and fittings shall have a pressure rating of 250 psi. Where mechanical joints are utilized, all bolts must be stainless steel.
- B. The ductile iron pipe shall be Class 53 unless otherwise noted on the plans and shall be provided with a Portland cement lining conforming to the requirements of AWWA C151/ANSI A21.4 for standard thickness of lining. The thickness of any cement mortar pipe lining furnished shall not be less than the minimum thickness specified for the applicable pipe size in the following table:

| Size of Pipe         | Minimum Lining Thickness |
|----------------------|--------------------------|
| 12 inches or smaller | 1/16 inch                |
| 16 inches            | 3/32 inch                |

- C. All exterior surfaces of the pipe and fittings shall have a tar or bituminous seal coating at least one mil thick. Spotty or thin seal coating, or poor coating adhesion, shall be cause for rejection.
- D. All joint fittings and valves shall be fastened with Cor-Blue T-bolts, as manufactured by NSS Industries, Plymouth, Michigan, or approved equal.

- E. Conductive gaskets with approved copper inserts equal to American Fastite or copper straps shall be welded to the pipe and connected with a silicone bronze bolt. Conductors shall be rated at 600 amps sustained current.

## **2.04 HIGH DENSITY POLYETHYLENE PIPE**

- A. ASTM D1248, Type III, Class C, Category 5, Grade P34 High Density Polyethylene pipe shall be manufactured in accordance with the latest revision of AWWA C-906. The pipe shall conform to ASTM D3350 with cell classification 345434C as manufactured by Drisc-pipe 4000/4100 Series, or equal. The pipe shall have a working pressure of 160 psi and a DR of 11. Materials shall be resistant to aggressive soils and corrosive substances.

## **2.05 HDPE PRESSURE PIPE JOINTS**

- A. HDPE pipe joints shall be butt-fused.
- B. Fitting and adaptors shall be butt-fused meeting the same requirements as the pipe. Fittings shall meet requirements of ASTM D2513 and D3261.
- C. Mechanical joints shall be restricted with ductile iron clamps (Ebaa Iron, Inc., or equal).

## **2.06 SEAMLESS COPPER PIPE**

- A. Seamless copper pipe shall be annealed temper, which meets the requirements of ASTM B88, with brass compression or flared joint fittings.

## **2.07 CONNECTIONS TO DUCTILE-IRON FITTINGS**

- A. Connections between ductile-iron and polyvinyl chloride pipe and cast-iron fittings or gate valves shall be made with jointing materials recommended by the pipe manufacturer and approved by the Engineer.

## **2.08 GATE VALVES**

- A. The gate valves shall conform to AWWA C500, designed for a minimum working pressure of 150 psi. All gate valves shall be resilient seated gate valves. The mechanical joints shall conform to AWWA C111/ANSI A21.11-85. The gate valves furnished shall comply with the following supplementary requirements.
  - 1. Resilient wedge gate valves shall conform to ANSI/AWWA C509. The valves shall be R/W resilient wedge gate valves as manufactured by Clow Corporation, or approved equal.
  - 2. The gate valves shall have joints as specified for the piping in which they are installed. Stems for non-rising stem assemblies shall be cast bronze with integral collars. The non-rising stem stuffing box shall be the O-ring seal type with two rings located above the thrust collar. The rings shall be replaceable with the valve fully open at the full rated working pressure.
  - 3. The gate valves shall have a clear waterway equal to the full nominal diameter of the valve, and shall be opened by turning counterclockwise. There shall be two low

torque thrust bearings located above and below the stem collar. The stem nut shall be separate from the wedge and shall be of solid bronze.

4. Each valve shall have an open indicating arrow, the manufacturer's name, pressure rating, and year of manufacture cast on the body.
  5. The gate valves shall be two-faced, double disc type, with parallel seats and a 2" operating nut opening counterclockwise.
  6. The wedge shall be cast iron completely encapsulated with polyurethane rubber (except for guide and stem area). The polyurethane rubber shall be permanently bonded to the cast iron wedge to meet ASTM tests for rubber to metal bond (ASTM D-429).
  7. All gears on the gate valves shall be cut tooth steel gears, housed in heavy cast iron extended type grease cases of approved design.
  8. All gate valves shall have mechanical joint ends.
  9. Both the interior and exterior of the body and bonnet shall be coated with fusion bonded epoxy.
- B. All the valves shall be provided with valve boxes. All valve boxes shall be of cast iron, buffalo-type adjustable. The valve boxes shall be provided for 7.5 feet of cover, except where greater depths are indicated on the profiles of the plans. The valve boxes shall not be less than 5" in diameter, shall have a minimum thickness at any point of 3/16", and shall be provided with suitable cast iron bases and covers. The covers shall have the word "water" cast on them.
- C. Wrap the ductile iron pipe and cast iron fittings with polyethylene plastic film having a minimum thickness of 0.008 inches.

## **2.09 VALVE BOXES**

- A. The valve boxes shall be round base, three piece cast iron, Mueller H-10357 or approved equal, suitable for the depth of cover required by the plans or required by the city.
- B. The valve boxes shall be 5-1/4" diameter and shall have a sufficient length to permit not less than 6" adjustment above and below the required elevation when the pipe is laid to the specified depth. The length adjustment shall be screw type.
- C. The covers shall have the word "water" cast on the top.

## **2.10 TAPPING SLEEVE AND TAPPING VALVE**

- A. Tapping Sleeve and Tapping Valve: Complete assembly, including tapping sleeve, tapping valve, and bolts and nuts. Use sleeve and valve compatible with tapping machine.
1. Tapping Sleeve: Cast-iron or ductile-iron 2-piece bolted sleeve with flanged outlet for new branch connection. Sleeve may have mechanical joint ends with rubber gaskets or sealing rings in sleeve body. Use sleeve that mates with size and type pipe material being tapped. Outlet flange shall be size required for branch connection.

## **2.11 CORPORATION STOPS**



- A. The corporation stops shall be Ford F600-34, McDonald 4701, or approved equal. The sizes of the inlet thread and the size of the copper service coupling shall be 3/4" x 1".

## **2.12 CURB STOPS**

- A. Curb stops shall be B22-444, McDonald 6104, or approved equal (Minneapolis pattern).

## **2.13 CURB BOXES**

- A. The curb boxes shall be the extension type with a stationary rod, McDonald Arch base pattern, or approved equal. The lid shall be equal to McDonald 5601L-Lid, 2 hole Erie pattern.

## **2.14 FLARED END COUPLINGS**

- A. The flared end couplings shall be as manufactured by Ford or approved equal. Compression joint couplings will not be accepted.

## **2.15 FIRE HYDRANTS**

- A. The fire hydrants shall be Waterous Model WB-67 pacer type with traffic flange or approved equal, conforming to AWWA C-502.
- B. Traffic Flange Type to be supplied with a 16" break-off section.
- C. AWWA C502.64 Standard Specifications for Fire Hydrants for Ordinary Water Works Service shall govern the design, construction and manufacture of fire hydrants unless as added to or modified herein.
  - 1. Hydrants shall be the City standard.
  - 2. Operating nut and nozzle caps shall be the standard pentagon nut type of the dimension, which currently exists in the City.
  - 3. Main Valve Opening: 5
  - 4. The hydrant barrels shall be two-piece, non-jacket type, with flanged joints above the finished elevation line and with mechanical joint connections at the hub end.
  - 5. Type of Shut-Off: Compression, unless otherwise approved by the Engineer.
  - 6. Bury Length: 7 .5' from the ground surface to the top of the connecting pipe.
  - 7. The hydrants shall have two outlet nozzles for 2-1/2" (I.D.) hose connection and one outlet nozzle for 4" (I.D.) steamer connection. All outlet nozzle threads shall be National Standard threads, equal to those presently in use by the Owner. The Contractor shall obtain the necessary thread information.
  - 8. Operating Nut: One 1-1/2" National Standard Pentagonal operating nut.
  - 9. The hydrant operating mechanisms shall be provided with "O" ring seals preventing entrance of moisture and shall be lubricated through an opening in the operating nut or bonnet.
  - 10. The hydrants shall include stainless steel clips for the two upper bolts on the water pipe side of the elbow.
  - 11. Direction to Open: To the left (counterclockwise).
  - 12. Finish Paint above the Ground Line: standard red.

**PART 3 EXECUTION****3.01 PIPE INSTALLATION****A. Handling**

1. Thoroughly clean the interior of the pipe of all foreign materials before lowering it into the trench.
2. Perform pipe cutting in a neat and workmanlike manner without damage to the pipe. The cutting methods used shall conform to the manufacturer's recommendations.

**B. Granular Pipe Bedding**

1. The bedding material shall be a clean pit-run sand or fine gravel, free from deleterious matter and rocks over 1" in diameter. Place the bedding material uniformly over the trench bottom to a minimum depth of 3". Shape the material to give uniform support to the lower fourth of the pipe for its entire length. Make depressions in the bedding to accommodate the joints. Carry bedding material to 6" above the top of the pipe.

**C. Pipe Laying**

1. Do not lay the pipe in water or when the trench or weather conditions are not suitable for the work except by permission of the Engineer. When the work is not in progress, securely close open ends of the pipe and fittings so that no water or other foreign matter enters the pipe or fittings.
2. Unless shown otherwise on the plans, the pipe shall have a minimum of 7.5' of cover below all finished elevations and shall not be laid closer horizontally than 10' to a sanitary sewer line. Deflections from a straight line or grade as required by horizontal or vertical curves shall not exceed 5 degrees (a 5-degree deflection is equivalent to an offset of approximately 1" per lineal foot of pipe). If the alignment required deflects in excess of this limit, provide bends and fittings or shorter lengths of pipe until these conditions are met. Brace bends and fittings in the pipe with concrete thrust blocks poured in place against undisturbed earth.

**D. Gate Valves and Valve Boxes**

1. Install where shown on the plans or as directed by the Engineer.
2. Set the gate valves and valve boxes plumb and center the valve boxes on the valves. Carefully place and compact fill materials around the valve box for a distance of 4' on all sides of the box, or to the undisturbed trench face, whichever is less. Set the top of the valve box at the elevation of the existing ground or as shown on the plans.
3. Post indicator valves shall be maintained in a plumb position with 36" between the finish ground elevation and the top of the valve.

**E. Fire Hydrants**

1. Set the fire hydrants at such an elevation that the specified minimum pipe cover is provided throughout the length of the branch supply line and that the nozzles are 24" above the proposed ground elevation. Set the hydrants plumb and place on a

concrete pad not less than 4" deep and 15" square. Firmly block the back of the hydrants, opposite the pipe connections, against the vertical face of the trench with a concrete thrust block poured in place against undisturbed earth with minimum dimensions of 12" each way. If, in the opinion of the Engineer, the soil is unstable and will not support the thrust block, use bridle rods to secure the hydrant. The rods shall be a minimum of 3/4" in diameter and shall be covered with an acid resistant coating.

2. Place a minimum of 9 cubic feet of crushed rock or coarse gravel at the base of each hydrant for drainage.
3. Place and compact fill around the hydrant to a minimum distance of 4' on all sides of the hydrant or to the undisturbed sides of the trench, whichever is less.

### **3.02 SANITARY SEWER, STORM SEWER, AND WATER CROSSINGS**

- A. Water pipe crossing sewers shall be laid to provide a separation of at least 12" between the bottom of the water pipe and the top of the sewer. When local conditions prevent a vertical separation as described, the following construction shall be used.
  1. Construct the sewers of materials equal to water service piping standards of construction.
  2. Protect the water pipes passing under sewers by providing a vertical separation of at least 12" between the bottom of the sewer and the top of the water pipe.
  3. Provide adequate structural support for the sewers to prevent excessive deflection of the joints and settling on and breaking the water pipe. The length of water piping shall be centered at the point of crossing the sewer pipe so that the joints will be equidistant from the crossing.

### **3.03 STERILIZATION**

- A. Sterilize each completed portion of the water pipe installation with chlorine before use for domestic purposes.
- B. The materials used may be either liquid chlorine conforming to AWWA B301 or hypochlorites conforming to AWWA B300.
- C. The amount of dosage shall provide a minimum of 50 parts per million of chlorine. The chlorine solution shall remain in the pipe for a maximum of 24 hours before the system is flushed. Open and close the valves in the mains being sterilized a minimum of three times during the contact period.
- D. After the contact period is over, thoroughly flush the pipe with clean water until the residual chlorine content is less than one part per million.
- E. Extreme care shall be taken during the sterilizing operation to ensure that a strong chlorine solution does not enter the existing water supply.

### **3.04 HYDROSTATIC TESTING OF WATER MAINS**

- A. After the pipe has been laid, including fittings, valves and blocking, all newly-laid pipe or any valved section thereof, unless directed otherwise by the Engineer, shall be subject to hydrostatic pressure of 150 pounds per square inch. The duration of each such test shall be at least two hours.
- B. Each section of pipe to be tested shall be filled with water and all air expelled at the highest point. The required taps to expel air or to fill the water main shall be supplied and installed by the Contractor and shall be  $\frac{3}{4}$  inch and shall include an approved service saddle when required.

The test apparatus shall be applied at the lowest elevation on the section to be tested. The apparatus shall be connected to the pipe at a service tap or special tap location.

The pressure gauge shall be a standard pressure gauge. The dial shall register from 0 – 200 psi and have a dial size of 4  $\frac{1}{2}$  inches with 1 psi increments.

The hydrostatic test, pressure requirement for an acceptable test shall be a maximum pressure drop of 2 psi during the last hour of the two hour pressure test.

If this test requirement cannot be met, the Contractor shall investigate the cause, make corrections, and retest until the pressure drop requirement can be met.

Only if several consecutive tests indicate a consistent pressure drop and only after the Contractor has made numerous attempts to resolve the problem, acceptable to the Engineer, may the Contractor request in writing and the Engineer consider the use of the leakage test. The leakage test may be performed by the Contractor to determine the magnitude of the leak. However, meeting the leakage allowance shall not automatically be considered acceptance, in lieu of the pressure test, for the section being tested. Final acceptance shall be at the discretion of the Engineer.

When allowed, the leakage test shall be performed in accordance with AWWA C-600, Section 4.1.5, 4.1.6 and the line will be accepted as per Section 4.1.7.

### **3.05 ELECTRICAL CONDUCTIVITY TESTS**

- A. The contractor shall perform a conductivity test within one week upon completion of pressure testing on the pipe to establish that electrical thawing may be carried out in the future. Conductivity testing must be carried out in the Engineer's presence and be approved before acceptance.
- B. The system (pipeline, valves, fittings and hydrants) shall be tested for electrical continuity and current capacity. The electrical test shall be made after the hydrostatic pressure test and while the line is at normal operation pressure. Backfilling shall have been completed. The line may be tested in sections of convenient length as approved by the Engineer.
- C. A direct current of 350 amperes +/- 10% shall be passed through the pipeline for five minutes. The current flow through the pipe shall be measured continuously on an ammeter

and shall remain steady without interruption or excessive fluctuation throughout the five-minute test period.

- D.** Insufficient current or intermittent current or arcing, indicated by large fluctuations of the ammeter needle, shall be evidence of defective contact in the pipeline. The cause shall be isolated and corrected. Thereafter, the section in which the defective test occurred shall be re-tested as a unit and shall meet the requirements.
- E.** After the test, the hydrant shall be shut off and a cap loosened to allow the hydrant to drain. Tighten the cap after drainage is complete.

### **3.06 CLEANING**

- A.** Upon completion of the installation of the water piping and appurtenances, remove excess materials, equipment, temporary structures, and debris resulting from the construction work.

**END OF SECTION**



## **SECTION 33 30 00**

### **SANITARY SEWER**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Sanitary sewer pipe.
  - 2.** Sewer clean-out.
  - 3.** Televising.

##### **1.02 CODES**

- A.** All work shall comply with the most current requirements of the City, the Wisconsin Plumbing Code published by the Wisconsin Department of Commerce, latest edition.

##### **1.03 REFERENCES**

- A.** Wisconsin Plumbing Code published by the Wisconsin Department of Commerce, latest edition.
- B.** ASTM A48, Specification for Gray Iron Castings.
- C.** ASTM C443, Standard Specifications for Joints for Concrete Pipe and Manholes.
- D.** ASTM C478, Specification for Pre-cast Reinforced Concrete Manhole Sections.
- E.** ASTM C923; Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals.
- F.** ASTM D3034, Specification for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
- G.** ASTM D3212, Specification for Joints for Drains and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
- H.** ASTM F477, Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- I.** ASTM F949, Specification for Polyvinyl Chloride (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings.

##### **1.04 DELIVERY, STORAGE AND HANDLING**

- A.** Inspect the materials delivered to the site for damage and store the materials with a minimum of handling. The materials shall be kept under cover and out of the direct sunlight. Do not store the materials directly on the ground. Keep the inside of the pipes and fittings free from dirt and debris.

## **1.05 QUALITY ASSURANCE**

- A.** Quality assurance personnel shall be at the project site on an intermittent basis during the storm sanitary sewer system placement.

## **1.06 SUBMITTALS**

- A.** The Contractor shall submit for approval complete shop drawings and details for all structures, pipes, castings, fittings, and accessories. Submittal shall include all the manufacturer's product data, certifications, dimensions, sizes, types, and installation requirements.

## **1.07 SITE CONDITIONS**

- A.** The existing underground utilities, as shown on the plans, are located in accordance with available data, but the locations may vary and cannot be guaranteed. The exact locations shall be determined by the Contractor as the work proceeds. The excavation work shall be done carefully so as to avoid damaging the existing utilities.
- B.** The Contractor shall provide for the protection, temporary removal and replacement, or relocation of said obstructions as required for the performance of the work required in these contract documents. No extra payment will be made for this work.

## **PART 2 PRODUCTS**

### **2.01 SANITARY SEWER PIPE**

- A.** All pipe shall be new and unused.
- B.** Polyvinyl chloride (PVC) pipe, ASTM D3034 SDR35.
- C.** Polyvinyl chloride (PVC) pipe, ASTM D1784 Schedule 40.
- D.** Joints: ASTM D3212.
- E.** Gaskets: ASTM F477.

### **2.02 GASKETS**

- A.** Gaskets and pipe ends for rubber gasket joints: ASTM C443.
- B.** Elastomeric seals (gaskets) for joining plastic pipe: ASTM D3212.
- C.** Rubber gaskets for joints between manhole sections: ASTM C443.
- D.** Rubber boot gaskets with stainless steel band for structure to pipe connections: ASTM C923.

## **2.03 CASTINGS**

- A.** Drop inlet and manhole covers, grates, and boxes: Cast iron, ASTM A48, Class 35B.
- B.** Uniform quality, free of blowholes, shrinkage, distortion, and other defects.
- C.** Covers shall have 2 concealed pick holes, rubber gasket type self-sealing cover with "SANITARY SEWER" in 2-inch letters
- D.** The product numbers are as manufactured by Neenah Foundry Company and are shown on the Plans. Standard castings differing in non-essential details may be acceptable if approved by the Engineer.

## **2.04 PIPE BEDDING MATERIAL**

- A.** The pipe bedding shall consist of clean pit-run sand or fine gravel, free from deleterious matter and rocks over 1 inch in diameter.

## **PART 3 EXECUTION**

### **3.01 PIPE INSTALLATION**

- A.** Shape the bottom of the trench to give substantially uniform circumferential support to the lower fourth of each pipe allowing for pipe bedding material. Pipe laying shall proceed up-grade with the groove (bell) ends in the up-grade direction. Adjust the tongues in grooves to produce a uniform space. Lay each pipe true to line and grade to form a close concentric joint with the adjoining pipe. Blocking or wedging between tongues and grooves will not be permitted. As the work progresses, clean the interior of the pipe free of dirt and extraneous materials.
- B.** Keep the trenches free from water until the pipe jointing is completed. Do not lay the pipe when conditions of the trench or the weather are unsuitable for such work. Keep the open ends of the pipe and fittings securely closed at all times when the work is not in progress.
- C.** The bedding material shall be placed uniformly over the trench bottom to a depth of not less than 3 inches. The bedding shall be shaped to provide uniform support to the lower fourth of the pipe for its entire length. Depressions shall be made in the bedding material to accommodate the joints. The pipe bedding material shall be carried to 6 inches above the tip of the pipe. The remaining trench backfill material shall be on-site material similar in composition to the surrounding subsoils.

### **3.02 JOINT CONSTRUCTION**

- A.** Make joints with rubber gaskets. Clean and dry the surfaces to receive lubricants, cements, or adhesives. Affix gaskets to the pipe not more than 24 hours prior to the installation of the pipe. Protect the gaskets from sun, wind, dust or other deleterious agents at all times.

- B. Before the installation of the pipe, inspect gaskets and remove and replace loose or improperly attached gaskets. Align each pipe section with the previously installed pipe section and pull the joint together.
- C. If the gasket becomes loose while pulling the joint, and can be seen through the exterior joints, recessed to within one inch of closure, remove the pipe, and remake the joint.

### **3.03 MANHOLE CONSTRUCTION**

- A. For pre-cast concrete construction provide a smooth finish to the inside joints of pre-cast concrete manholes.
- B. Provide a hole greater in diameter than the pipe at pipe entrances to the pre-cast concrete structures. Install watertight connector in the annular space between the pipe and pre-cast concrete manhole.
- C. Lay sections of the structures in a full mortar bed. Keep the masonry materials and mortar at a temperature above freezing until the mortar has set up sufficiently to prevent damage by freezing.
- D. The mortar shall be composed of 1 part Portland cement and 3 parts of washed and screened sand with sufficient water to make a workable mix.
- E. The top 8 inches of the structures shall be made of concrete rings 2 inches thick. Lay the concrete adjusting rings in a full bed of mortar 1/4 inch to 3/4 inch thick.
- F. Set the manhole frames and lids / grates flush with the existing elevations shown on the Plans. Place the frames upon a full bed of mortar and shim to the correct elevation with suitable concrete wedges and mortar. Install exterior chimney seal.

### **3.04 FIELD QUALITY CONTROL**

- A. Check each straight run of pipe for gross deficiencies by holding a light in the manholes. The light shall show a practically full circle through the pipe when viewed from the adjoining end of the line.
- B. Leakage testing shall be performed on sewer lines and service connections by the Contractor at his own expense. Testing may be either Hydrostatic or Air Test Method in accordance with the City Engineers Association of Minnesota standard specifications and the Minnesota Plumbing Code.
- C. Deflection testing shall be performed 30 days after backfilling by pulling a rigid ball or nine-point mandrel through the pipe without the aid of a mechanical pulling device. The ball or mandrel diameter shall be at least 95% of the pipe diameter. The line will be considered acceptable if the mandrel can pass without binding. The testing shall be performed by the Contractor at his own expense.

### **3.05 TELEVISION**

- A.** Immediately prior to televising the contractor shall jet and vacuum the lines followed by flushing sufficient clear water to assist in identifying sags and misalignments.
- B.** Televising shall be performed by experienced personnel. The pipeline shall be carefully inspected to determine the location of breaks, obstacles, service connections, sags, or other conditions which may impair the flow or indicate improper installation.
- C.** A digital video and log shall be prepared and submitted to the Engineer.

**END OF SECTION**



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## **SECTION 33 40 00**

### **STORM DRAINAGE SYSTEM**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Storm sewer pipe.
  - 2.** Precast concrete manhole sections.
  - 3.** Castings.
  - 4.** Adjusting rings.
  - 5.** Chimney Seals.

##### **1.02 REFERENCES**

- A.** Wisconsin Plumbing Code published by the Wisconsin Department of Commerce, latest edition.
- B.** ASTM A48; Specification for Gray Iron Castings.
- C.** ASTM A929; Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dipped Process for Corrugated Steel Pipe
- D.** ASTM A536; Standard Specification for Ductile Iron Castings
- E.** ASTM C76; Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe.
- F.** ASTM C443; Specification for Joints for Circular Concrete Sewer and Culvert Pipe Using Rubber Gaskets.
- G.** ASTM C478; Specification for Pre-cast Reinforced Concrete Manhole Sections.
- H.** ASTM C923; Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals.
- I.** ASTM D3034; Specification for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
- J.** ASTM D3212; Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
- K.** ASTM F1336; Standard Specification for Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings
- L.** AASHTO M294; Specification for Corrugated Polyethylene Pipe (12" to 48").
- M.** AASHTO M36; Corrugated Steel Pipe, Metallic Coated, for Sewers and Drains

- N. AASHTO MP7; Specification for Corrugated Polyethylene Pipe (54" to 60").

### **1.03 QUALITY ASSURANCE**

- A. Quality assurance personnel shall be at the project site on an intermittent basis during the storm drainage system placement.

### **1.04 DELIVERY, STORAGE AND HANDLING**

- A. Inspect the materials delivered to the site for damage and store the materials with a minimum of handling. The materials shall be kept under cover and out of the direct sunlight. Do not store the materials directly on the ground. Keep the inside of the pipes and fittings free from dirt and debris.

### **1.05 SUBMITTALS**

- A. The Contractor shall submit for approval complete shop drawings and details for all structures, pipes, castings, fittings, and accessories. Submittal shall include all the manufacturer's product data, certifications, dimensions, sizes, types, and installation requirements.

### **1.06 SITE CONDITIONS**

- A. The existing underground utilities, as shown on the plans, are located in accordance with available data, but the locations may vary and cannot be guaranteed. The exact locations shall be determined by the Contractor as the work proceeds. The excavation work shall be done carefully so as to avoid damaging the existing utilities.
- B. The Contractor shall provide for the protection, temporary removal and replacement, or relocation of said obstructions as required for the performance of the work required in these contract documents. No extra payment will be made for this work.

## **PART 2 PRODUCTS**

### **2.01 STORM SEWER PIPE**

- A. All pipe shall be new and unused.
- B. Reinforced concrete pipe: ASTM C76, Class V.
- C. Polyvinyl chloride (PVC) pipe: ASTM D1785 Schedule 40.
- D. High density polyethylene (HDPE) pipe: ASTM F2306.

### **2.02 PRECAST CONCRETE MANHOLE SECTIONS**

- A. Precast concrete manhole risers, base sections, and tops: ASTM C478.

- B. Boot connections, watertight: ASTM C923 and ASTM C443.
- C. Reinforced polyethylene plastic Steps with No.2 deformed grade steel rod.

#### **2.04 GASKETS**

- A. Gaskets and pipe ends for rubber gasket joints: ASTM C443.
- B. Elastomeric seals (gaskets) for joining plastic pipe: ASTM D3212.
- C. Rubber gaskets for joints between manhole sections: ASTM C443.
- D. Gaskets for PVC sewer fittings: ASTM F1336.
- E. Rubber gaskets for structure to pipe connections: ASTM C923.

#### **2.05 CASTINGS – PRECAST CONCRETE SECTIONS**

- A. Precast concrete manhole covers, grates, and boxes: Cast iron, ASTM A48, Class 35B.
- B. Uniform quality, free of blowholes, shrinkage, distortion, and other defects.
- C. The product numbers are as manufactured by Neenah Foundry Company and are shown on the Plans. Standard castings differing in non-essential details may be acceptable if approved by the Engineer.

#### **2.06 ADJUSTING RINGS**

- A. Cast iron adjusting rings manufactured by Neenah Foundry R-1979, or equal.
- B. High Density Polyethylene (HDPE) adjusting rings conforming to ASTM D1248.

#### **2.07 CHIMNEY SEAL**

- A. Infi-shield Uni-band external sealing system or approved equal.

#### **2.08 PIPE BEDDING MATERIAL**

- A. The pipe bedding shall consist of clean pit-run sand or fine gravel, free from deleterious matter and rocks over 1 inch in diameter.

### **PART 3 EXECUTION**

#### **3.01 PIPE INSTALLATION**

- A. Shape the bottom of the trench to give substantially uniform circumferential support to the lower fourth of each pipe allowing for pipe bedding material. Pipe laying shall proceed up-grade with the groove (bell) ends in the up-grade direction. Adjust the tongues in grooves to

produce a uniform space. Lay each pipe true to line and grade to form a close concentric joint with the adjoining pipe. Blocking or wedging between tongues and grooves will not be permitted. As the work progresses, clean the interior of the pipe free of dirt and extraneous materials.

- B. Keep the trenches free from water until the pipe jointing is completed. Do not lay the pipe when conditions of the trench or the weather are unsuitable for such work. Keep the open ends of the pipe and fittings securely closed at all times when the work is not in progress.
- C. The last three sections of pipe not entering a catch basin manhole are to be fastened together with an anchor bolt system.
- D. The bedding material shall be placed uniformly over the trench bottom to a depth of not less than 3 inches. The bedding shall be shaped to provide uniform support to the lower fourth of the pipe for its entire length. Depressions shall be made in the bedding material to accommodate the joints. The pipe bedding material shall be carried to 6 inches above the top of the pipe. The remaining trench backfill material shall be on-site material similar in composition to the surrounding subsoils.

### **3.02 JOINT CONSTRUCTION**

- A. Make joints with rubber gaskets. Clean and dry the surfaces to receive lubricants, cements, or adhesives. Affix gaskets to the pipe not more than 24 hours prior to the installation of the pipe. Protect the gaskets from sun, wind, dust or other deleterious agents at all times.
- B. Before the installation of the pipe, inspect gaskets and remove and replace loose or improperly attached gaskets. Align each pipe section with the previously installed pipe section and pull the joint together.
- C. If the gasket becomes loose while pulling the joint, and can be seen through the exterior joints, recessed to within one inch of closure, remove the pipe, and remake the joint.

### **3.03 MANHOLE CONSTRUCTION – PRECAST CONCRETE**

- A. For pre-cast concrete construction provide a smooth finish to the inside joints of pre-cast concrete manholes and catch basins.
- B. Provide a hole greater in diameter than the pipe at pipe entrances to the pre-cast concrete structures. Install watertight connector in the annular space between the pipe and pre-cast concrete manhole.
- C. Lay sections of the structures in a full mortar bed. Keep the masonry materials and mortar at a temperature above freezing until the mortar has set up sufficiently to prevent damage by freezing.
- D. The mortar shall be composed of 1 part Portland cement and 3 parts of washed and screened sand with sufficient water to make a workable mix.



- E. The top 8 inches of the structures shall be made of concrete rings 2 inches thick. Lay the concrete adjusting rings in a full bed of mortar 1/4 inch to 3/4 inch thick.
- F. Set the manhole or catch basin frames and lids / grates flush with the existing elevations shown on the Plans. Place the frames upon a full bed of mortar and shim to the correct elevation with suitable concrete wedges and mortar. Install external chimney seal.

#### **3.04 FIELD QUALITY CONTROL**

- A. Type of pipe and size will be verified during installation.
- B. Installation methods and techniques will be reviewed, to ensure pipe is not damaged during placement.
- C. Check each straight run of pipe for gross deficiencies by holding a light in the manhole or catch basin. The light shall show a practically full circle through the pipe when viewed from the adjoining end of the line.
- D. Leakage testing shall be performed on new lines within 10 feet of buildings and water lines by the Contractor at his own expense. Testing may be by Air Test Method in accordance with the Wisconsin Plumbing Code, City requirements, or the Hydrostatic Test Method in accordance with the City Engineers Association of Minnesota standard specifications.

**END OF SECTION**

## **SECTION 33 42 00**

### **DRAIN TILE**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A.** Section Includes:
  - 1.** Drain tile systems.

##### **1.02 REFERENCES**

- A.** ASTM D3212, Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
- B.** ASTM F405, Specification for Corrugated Polyethylene (PE) Tubing and Fittings.
- C.** ASTM F449, Practice for Subsurface Installation of Corrugated Thermoplastic Tubing for Agricultural Drainage of Water Table Control.
- D.** ASTM F477, Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- E.** ASTM F667, Specification for Large Diameter Corrugated Polyethylene Tubing and Fittings.
- F.** ASTM F794, Specification for Poly (Vinyl Chloride) (PVC) Large Diameter Ribbed Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.

##### **1.03 DELIVERY, STORAGE AND HANDLING**

- A.** Inspect the materials delivered to the site for damage. Store the materials with a minimum of handling. Store the materials under cover and out of direct sunlight. Do not store the materials directly on the ground. Keep the inside of the pipes and fittings free from dirt and debris.

##### **1.04 QUALITY ASSURANCE**

- A.** Quality assurance personnel shall be at the project site on an intermittent basis during the drain tile system placement.

#### **PART 2 PRODUCTS**

##### **2.01 CORRUGATED POLYETHYLENE (PE) PIPE**

- A.** Pipe and fittings: ASTM F405, filter fabric wrap as specified on the plans.
- B.** Joints and jointing materials: ASTM D3212.

- C. Gaskets, ASTM F477.

## **PART 3 EXECUTION**

### **3.01 PIPE BENEATH PERVIOUS SURFACE INSTALLATION**

- A. Before the installation of the pipe, inspect gaskets, and remove and replace loose or improperly attached gaskets. As the work progresses, clear the interior of the pipe free from dirt and extraneous materials.
- B. Place soil separation fabric in the excavation prior to the placement of the pipe.
- C. Pipe laying shall proceed up-grade. Lay each pipe true to line and elevation to form a close concentric joint with the adjoining pipe. Align each pipe section with the previously installed pipe section and pull the joint together.
- D. If the gasket becomes loose while pulling the joint, and can be seen through the exterior joints, recessed to within one inch of closure, remove the pipe, and remake the joint.
- E. Backfill the trench with the required drainage rock or sand filter materials to the finished elevations. Compact the rock/sand until there is no further evidence of consolidation. Compaction should be performed with equipment that will not crush the drain tile pipe.

### **3.02 MANHOLE AND CATCH BASIN CONNECTION**

- A. Provide resilient rubber watertight boot connectors at pipe entrances to pre-cast concrete structures.
- B. Install backwater flow valve to prevent water flowing into the drain tile pipe from the storm sewer structure where as indicated on the plans.

### **3.03 FIELD QUALITY CONTROL**

- A. Type of pipe and size will be verified during installation.
- B. Installation methods and techniques will be reviewed, to ensure pipe is not damaged during placement.

**END OF SECTION**

**ASHLAND APARTMENTS**

**STORMWATER CALCULATIONS**  
**BY**  
**LARSON ENGINEERING**

**JUNE 26, 2025**

**CONTENTS:**

- 1. Stormwater Runoff Summary**
- 2. Existing Drainage Map**
- 3. HydroCAD Report for Existing Conditions  
(1-yr, 2-yr, 10-yr, and 100-yr events)**
- 4. Proposed Drainage Map**
- 5. HydroCAD Report for Proposed Conditions  
(1-yr, 2-yr, 10-yr, and 100-yr events)**
- 6. WinSLAMM Inputs and Results**

## *Ashland Apartments*

### **SUMMARY OF STORMWATER RUNOFF**

#### **Introduction:**

The project will consist of the construction of a new school addition, parking lots, drives, sidewalks, stormwater basins, and related utilities. There are no wetland impacts associated with the project.

Curve Numbers used in the stormwater models:

- 61, >75% Grass cover, Good, HSG B
- 98, Impervious
- 98, Roof

#### **Erosion Control:**

Silt fence/sediment logs shall line the down gradient slopes of the project and rock construction entrances will be used to help control sediment removal from the site. Inlet protection devices will also be implemented to help filter sediment. Erosion control blankets will be utilized to stabilize side slopes.

#### **Stormwater Peak Runoff Rate:**

Per Wisconsin DNR requirements, proposed runoff rates shall not exceed existing runoff rates for the 1- and 2-year 24-hour critical storm events. For the design of the pond and storm pipes, the 10- and 100-yr 24-hour critical storm events were also analyzed. The existing and proposed peak runoff rates are listed in the table below.

**Peak Runoff Rates** (in cubic feet per second):

|                       | Existing | Proposed |
|-----------------------|----------|----------|
| <b>1-year event</b>   |          |          |
| Offsite West [1R]     | 5.17     | 1.99     |
| Offsite East [2R]     | 0.99     | 0.87     |
| <b>2-year event</b>   |          |          |
| Offsite West [1R]     | 6.50     | 2.38     |
| Offsite East [2R]     | 1.27     | 1.08     |
| <b>10-year event</b>  |          |          |
| Offsite West [1R]     | 11.72    | 4.02     |
| Offsite East [2R]     | 2.41     | 2.07     |
| <b>100-year event</b> |          |          |
| Offsite West [1R]     | 23.86    | 10.93    |
| Offsite East [2R]     | 5.13     | 4.78     |

#### **Stormwater Management**

A wet detention pond is proposed to treat the new and reconstructed impervious surfaces. The basins will be utilized to reduce runoff rates and remove TSS. It is located on the south side of the site. Grassed swales are proposed on the north and east sides of the building to treat additional runoff.

#### **Water Quality**

Per Wisconsin DNR and City of New Richmond requirements, TSS load shall be reduced by 80% for the site as a whole, based on average annual rainfall, as compared to no runoff management controls. This is not a comparison of pre- and post-development. WinSLAMM



was used to calculate TSS removal. Only the disturbed area was included in the model. Per DNR requirements, roof area is not included in the water quality calculation.

Annual TSS Removal = 80.07%

### **BMP Contributing Areas and Design Parameters**

#### Wet Detention Pond:

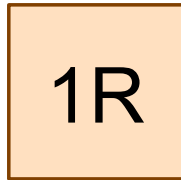
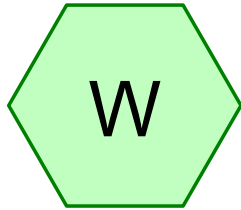
##### Contributing Areas

|              |          |                   |
|--------------|----------|-------------------|
| New Building | =        | 21,224 SF         |
| New Pavement | =        | 64,665 SF         |
| Gravel       | =        | 442 SF            |
| Grass Area   | =        | 37,598 SF         |
| <b>Total</b> | <b>=</b> | <b>123,929 SF</b> |

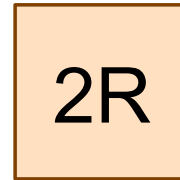
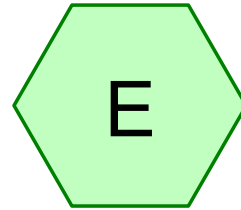
##### Basin Design Parameters:

|                       |   |         |
|-----------------------|---|---------|
| Bottom Elevation      | = | 651.00' |
| Normal Water Level    | = | 657.00' |
| Pond Outlet Elevation | = | 657.00' |
| 100-year HWL          | = | 659.98' |
| Permanent Pool Depth  | = | 6.0'    |

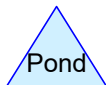
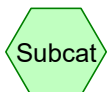




Offsite West



Offsite East



## Ashland Apartments - Existing

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### Rainfall Events Listing

| Event# | Event Name | Storm Type | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|------------|-------|---------|------------------|-----|----------------|-----|
| 1      | 1-Year     | MSE 24-hr  | 4     | Default | 24.00            | 1   | 2.38           | 2   |
| 2      | 2-Year     | MSE 24-hr  | 4     | Default | 24.00            | 1   | 2.75           | 2   |
| 3      | 10-Year    | MSE 24-hr  | 4     | Default | 24.00            | 1   | 4.15           | 2   |
| 4      | 100-Year   | MSE 24-hr  | 4     | Default | 24.00            | 1   | 7.37           | 2   |

## Ashland Apartments - Existing

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### Area Listing (all nodes)

| Area<br>(sq-ft) | CN        | Description<br>(subcatchment-numbers) |
|-----------------|-----------|---------------------------------------|
| 51,545          | 61        | >75% Grass cover, Good, HSG B (E, W)  |
| 145,783         | 96        | Gravel surface, HSG B (E, W)          |
| <b>197,328</b>  | <b>87</b> | <b>TOTAL AREA</b>                     |



**Ashland Apartments - Existing***MSE 24-hr 4 1-Year Rainfall=2.38"*

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E:**Runoff Area=32,020 sf 0.00% Impervious Runoff Depth=1.02"  
Flow Length=320' Tc=10.9 min CN=84/0 Runoff=0.99 cfs 2,731 cf**Subcatchment W:**Runoff Area=165,308 sf 0.00% Impervious Runoff Depth=1.21"  
Flow Length=880' Tc=15.7 min CN=87/0 Runoff=5.17 cfs 16,688 cf**Reach 1R: Offsite West**Inflow=5.17 cfs 16,688 cf  
Outflow=5.17 cfs 16,688 cf**Reach 2R: Offsite East**Inflow=0.99 cfs 2,731 cf  
Outflow=0.99 cfs 2,731 cf**Total Runoff Area = 197,328 sf Runoff Volume = 19,419 cf Average Runoff Depth = 1.18"**  
**100.00% Pervious = 197,328 sf 0.00% Impervious = 0 sf**

**Ashland Apartments - Existing**

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MSE 24-hr 4 1-Year Rainfall=2.38"

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**Summary for Subcatchment E:**

Runoff = 0.99 cfs @ 12.19 hrs, Volume= 2,731 cf, Depth= 1.02"  
 Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 1-Year Rainfall=2.38"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 21,321    | 96 | Gravel surface, HSG B         |
| 10,699    | 61 | >75% Grass cover, Good, HSG B |
| 32,020    | 84 | Weighted Average              |
| 32,020    | 84 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                             |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------|
| 9.5      | 100           | 0.0250        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"   |
| 1.4      | 220           | 0.0160        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps |
| 10.9     | 320           | Total         |                   |                |                                                         |

**Ashland Apartments - Existing**

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MSE 24-hr 4 1-Year Rainfall=2.38"

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**Summary for Subcatchment W:**

Runoff = 5.17 cfs @ 12.24 hrs, Volume= 16,688 cf, Depth= 1.21"  
 Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 1-Year Rainfall=2.38"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 124,462   | 96 | Gravel surface, HSG B         |
| 40,846    | 61 | >75% Grass cover, Good, HSG B |
| 165,308   | 87 | Weighted Average              |
| 165,308   | 87 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                            |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------|
| 9.1      | 100           | 0.0280        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"                                                  |
| 1.6      | 230           | 0.0140        | 2.40              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                |
| 5.0      | 550           | 0.0040        | 1.83              | 8.23           | <b>Channel Flow, grassed ditch</b><br>Area= 4.5 sf Perim= 8.0' r= 0.56'<br>n= 0.035 Earth, dense weeds |
| 15.7     | 880           | Total         |                   |                |                                                                                                        |

**Ashland Apartments - Existing***MSE 24-hr 4 1-Year Rainfall=2.38"*

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**Summary for Reach 1R: Offsite West**

Inflow Area = 165,308 sf, 0.00% Impervious, Inflow Depth = 1.21" for 1-Year event  
Inflow = 5.17 cfs @ 12.24 hrs, Volume= 16,688 cf  
Outflow = 5.17 cfs @ 12.24 hrs, Volume= 16,688 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Existing***MSE 24-hr 4 1-Year Rainfall=2.38"*

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**Summary for Reach 2R: Offsite East**

Inflow Area = 32,020 sf, 0.00% Impervious, Inflow Depth = 1.02" for 1-Year event  
Inflow = 0.99 cfs @ 12.19 hrs, Volume= 2,731 cf  
Outflow = 0.99 cfs @ 12.19 hrs, Volume= 2,731 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs



**Ashland Apartments - Existing***MSE 24-hr 4 2-Year Rainfall=2.75"*

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E:**Runoff Area=32,020 sf 0.00% Impervious Runoff Depth=1.31"  
Flow Length=320' Tc=10.9 min CN=84/0 Runoff=1.27 cfs 3,504 cf**Subcatchment W:**Runoff Area=165,308 sf 0.00% Impervious Runoff Depth=1.52"  
Flow Length=880' Tc=15.7 min CN=87/0 Runoff=6.50 cfs 20,978 cf**Reach 1R: Offsite West**Inflow=6.50 cfs 20,978 cf  
Outflow=6.50 cfs 20,978 cf**Reach 2R: Offsite East**Inflow=1.27 cfs 3,504 cf  
Outflow=1.27 cfs 3,504 cf**Total Runoff Area = 197,328 sf Runoff Volume = 24,482 cf Average Runoff Depth = 1.49"**  
**100.00% Pervious = 197,328 sf 0.00% Impervious = 0 sf**

**Ashland Apartments - Existing**

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MSE 24-hr 4 2-Year Rainfall=2.75"

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**Summary for Subcatchment E:**

Runoff = 1.27 cfs @ 12.19 hrs, Volume= 3,504 cf, Depth= 1.31"  
 Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 2-Year Rainfall=2.75"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 21,321    | 96 | Gravel surface, HSG B         |
| 10,699    | 61 | >75% Grass cover, Good, HSG B |
| 32,020    | 84 | Weighted Average              |
| 32,020    | 84 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                             |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------|
| 9.5      | 100           | 0.0250        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"   |
| 1.4      | 220           | 0.0160        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps |
| 10.9     | 320           | Total         |                   |                |                                                         |

**Ashland Apartments - Existing**

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MSE 24-hr 4 2-Year Rainfall=2.75"

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**Summary for Subcatchment W:**

Runoff = 6.50 cfs @ 12.24 hrs, Volume= 20,978 cf, Depth= 1.52"  
 Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 2-Year Rainfall=2.75"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 124,462   | 96 | Gravel surface, HSG B         |
| 40,846    | 61 | >75% Grass cover, Good, HSG B |
| 165,308   | 87 | Weighted Average              |
| 165,308   | 87 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                            |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------|
| 9.1      | 100           | 0.0280        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"                                                  |
| 1.6      | 230           | 0.0140        | 2.40              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                |
| 5.0      | 550           | 0.0040        | 1.83              | 8.23           | <b>Channel Flow, grassed ditch</b><br>Area= 4.5 sf Perim= 8.0' r= 0.56'<br>n= 0.035 Earth, dense weeds |
| 15.7     | 880           | Total         |                   |                |                                                                                                        |

**Ashland Apartments - Existing***MSE 24-hr 4 2-Year Rainfall=2.75"*

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**Summary for Reach 1R: Offsite West**

Inflow Area = 165,308 sf, 0.00% Impervious, Inflow Depth = 1.52" for 2-Year event  
Inflow = 6.50 cfs @ 12.24 hrs, Volume= 20,978 cf  
Outflow = 6.50 cfs @ 12.24 hrs, Volume= 20,978 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Existing***MSE 24-hr 4 2-Year Rainfall=2.75"*

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**Summary for Reach 2R: Offsite East**

Inflow Area = 32,020 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-Year event  
Inflow = 1.27 cfs @ 12.19 hrs, Volume= 3,504 cf  
Outflow = 1.27 cfs @ 12.19 hrs, Volume= 3,504 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs



**Ashland Apartments - Existing***MSE 24-hr 4 10-Year Rainfall=4.15"*

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E:**Runoff Area=32,020 sf 0.00% Impervious Runoff Depth=2.50"  
Flow Length=320' Tc=10.9 min CN=84/0 Runoff=2.41 cfs 6,681 cf**Subcatchment W:**Runoff Area=165,308 sf 0.00% Impervious Runoff Depth=2.77"  
Flow Length=880' Tc=15.7 min CN=87/0 Runoff=11.72 cfs 38,222 cf**Reach 1R: Offsite West**Inflow=11.72 cfs 38,222 cf  
Outflow=11.72 cfs 38,222 cf**Reach 2R: Offsite East**Inflow=2.41 cfs 6,681 cf  
Outflow=2.41 cfs 6,681 cf**Total Runoff Area = 197,328 sf Runoff Volume = 44,903 cf Average Runoff Depth = 2.73"**  
**100.00% Pervious = 197,328 sf 0.00% Impervious = 0 sf**

**Ashland Apartments - Existing**

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MSE 24-hr 4 10-Year Rainfall=4.15"

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**Summary for Subcatchment E:**

Runoff = 2.41 cfs @ 12.19 hrs, Volume= 6,681 cf, Depth= 2.50"  
 Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 10-Year Rainfall=4.15"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 21,321    | 96 | Gravel surface, HSG B         |
| 10,699    | 61 | >75% Grass cover, Good, HSG B |
| 32,020    | 84 | Weighted Average              |
| 32,020    | 84 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                             |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------|
| 9.5      | 100           | 0.0250        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"   |
| 1.4      | 220           | 0.0160        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps |
| 10.9     | 320           | Total         |                   |                |                                                         |

**Ashland Apartments - Existing**

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MSE 24-hr 4 10-Year Rainfall=4.15"

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**Summary for Subcatchment W:**

Runoff = 11.72 cfs @ 12.23 hrs, Volume= 38,222 cf, Depth= 2.77"  
 Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 10-Year Rainfall=4.15"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 124,462   | 96 | Gravel surface, HSG B         |
| 40,846    | 61 | >75% Grass cover, Good, HSG B |
| 165,308   | 87 | Weighted Average              |
| 165,308   | 87 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                            |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------|
| 9.1      | 100           | 0.0280        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"                                                  |
| 1.6      | 230           | 0.0140        | 2.40              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                |
| 5.0      | 550           | 0.0040        | 1.83              | 8.23           | <b>Channel Flow, grassed ditch</b><br>Area= 4.5 sf Perim= 8.0' r= 0.56'<br>n= 0.035 Earth, dense weeds |
| 15.7     | 880           | Total         |                   |                |                                                                                                        |

**Ashland Apartments - Existing**

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*MSE 24-hr 4 10-Year Rainfall=4.15"*

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**Summary for Reach 1R: Offsite West**

Inflow Area = 165,308 sf, 0.00% Impervious, Inflow Depth = 2.77" for 10-Year event  
Inflow = 11.72 cfs @ 12.23 hrs, Volume= 38,222 cf  
Outflow = 11.72 cfs @ 12.23 hrs, Volume= 38,222 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Existing**

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*MSE 24-hr 4 10-Year Rainfall=4.15"*

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**Summary for Reach 2R: Offsite East**

Inflow Area = 32,020 sf, 0.00% Impervious, Inflow Depth = 2.50" for 10-Year event  
Inflow = 2.41 cfs @ 12.19 hrs, Volume= 6,681 cf  
Outflow = 2.41 cfs @ 12.19 hrs, Volume= 6,681 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Existing***MSE 24-hr 4 100-Year Rainfall=7.37"*

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E:**Runoff Area=32,020 sf 0.00% Impervious Runoff Depth=5.49"  
Flow Length=320' Tc=10.9 min CN=84/0 Runoff=5.13 cfs 14,655 cf**Subcatchment W:**Runoff Area=165,308 sf 0.00% Impervious Runoff Depth=5.84"  
Flow Length=880' Tc=15.7 min CN=87/0 Runoff=23.86 cfs 80,416 cf**Reach 1R: Offsite West**Inflow=23.86 cfs 80,416 cf  
Outflow=23.86 cfs 80,416 cf**Reach 2R: Offsite East**Inflow=5.13 cfs 14,655 cf  
Outflow=5.13 cfs 14,655 cf**Total Runoff Area = 197,328 sf Runoff Volume = 95,072 cf Average Runoff Depth = 5.78"**  
**100.00% Pervious = 197,328 sf 0.00% Impervious = 0 sf**



**Ashland Apartments - Existing**

MSE 24-hr 4 100-Year Rainfall=7.37"

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**Summary for Subcatchment E:**

Runoff = 5.13 cfs @ 12.18 hrs, Volume= 14,655 cf, Depth= 5.49"  
 Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 100-Year Rainfall=7.37"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 21,321    | 96 | Gravel surface, HSG B         |
| 10,699    | 61 | >75% Grass cover, Good, HSG B |
| 32,020    | 84 | Weighted Average              |
| 32,020    | 84 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                             |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------|
| 9.5      | 100           | 0.0250        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"   |
| 1.4      | 220           | 0.0160        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps |
| 10.9     | 320           | Total         |                   |                |                                                         |

**Ashland Apartments - Existing**

MSE 24-hr 4 100-Year Rainfall=7.37"

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**Summary for Subcatchment W:**

Runoff = 23.86 cfs @ 12.23 hrs, Volume= 80,416 cf, Depth= 5.84"  
 Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 100-Year Rainfall=7.37"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 124,462   | 96 | Gravel surface, HSG B         |
| 40,846    | 61 | >75% Grass cover, Good, HSG B |
| 165,308   | 87 | Weighted Average              |
| 165,308   | 87 | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                            |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------|
| 9.1      | 100           | 0.0280        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.83"                                                  |
| 1.6      | 230           | 0.0140        | 2.40              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                |
| 5.0      | 550           | 0.0040        | 1.83              | 8.23           | <b>Channel Flow, grassed ditch</b><br>Area= 4.5 sf Perim= 8.0' r= 0.56'<br>n= 0.035 Earth, dense weeds |
| 15.7     | 880           | Total         |                   |                |                                                                                                        |

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**Summary for Reach 1R: Offsite West**

Inflow Area = 165,308 sf, 0.00% Impervious, Inflow Depth = 5.84" for 100-Year event  
Inflow = 23.86 cfs @ 12.23 hrs, Volume= 80,416 cf  
Outflow = 23.86 cfs @ 12.23 hrs, Volume= 80,416 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Existing***MSE 24-hr 4 100-Year Rainfall=7.37"*

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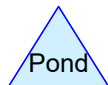
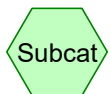
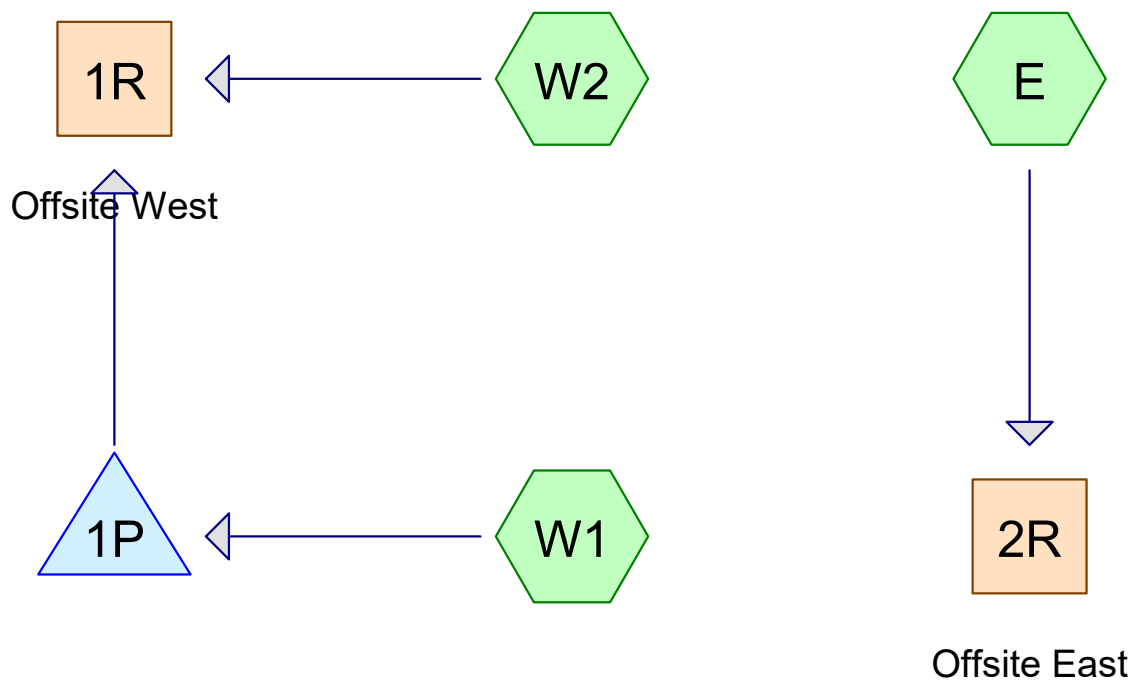
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**Summary for Reach 2R: Offsite East**

Inflow Area = 32,020 sf, 0.00% Impervious, Inflow Depth = 5.49" for 100-Year event  
Inflow = 5.13 cfs @ 12.18 hrs, Volume= 14,655 cf  
Outflow = 5.13 cfs @ 12.18 hrs, Volume= 14,655 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs





**Routing Diagram for Ashland Apartments - Proposed**  
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## Ashland Apartments - Proposed

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### Rainfall Events Listing

| Event# | Event Name | Storm Type | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|------------|-------|---------|------------------|-----|----------------|-----|
| 1      | 1-Year     | MSE 24-hr  | 4     | Default | 24.00            | 1   | 2.38           | 2   |
| 2      | 2-Year     | MSE 24-hr  | 4     | Default | 24.00            | 1   | 2.75           | 2   |
| 3      | 10-Year    | MSE 24-hr  | 4     | Default | 24.00            | 1   | 4.15           | 2   |
| 4      | 100-Year   | MSE 24-hr  | 4     | Default | 24.00            | 1   | 7.37           | 2   |

## Ashland Apartments - Proposed

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### Area Listing (all nodes)

| Area<br>(sq-ft) | CN        | Description<br>(subcatchment-numbers) |
|-----------------|-----------|---------------------------------------|
| 42,150          | 61        | Grass/ Landscaping (E, W2)            |
| 37,598          | 61        | Grass/Landscaping (W1)                |
| 1,969           | 96        | Gravel (W1, W2)                       |
| 67,049          | 98        | Parking Lot (W1, W2)                  |
| 44,028          | 98        | Roof (E, W1, W2)                      |
| 4,533           | 98        | Sidewalk (E, W1, W2)                  |
| <b>197,327</b>  | <b>83</b> | <b>TOTAL AREA</b>                     |

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MSE 24-hr 4 1-Year Rainfall=2.38"

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

### Subcatchment E:

Runoff Area=31,099 sf 38.95% Impervious Runoff Depth=0.94"

Tc=6.0 min CN=61/98 Runoff=0.87 cfs 2,428 cf

### Subcatchment W1:

Runoff Area=123,929 sf 69.31% Impervious Runoff Depth=1.54"

Tc=6.0 min CN=61/98 Runoff=6.06 cfs 15,912 cf

### Subcatchment W2:

Runoff Area=42,299 sf 41.63% Impervious Runoff Depth=1.02"

Tc=6.0 min CN=63/98 Runoff=1.30 cfs 3,579 cf

### Reach 1R: Offsite West

Inflow=1.99 cfs 19,439 cf

Outflow=1.99 cfs 19,439 cf

### Reach 2R: Offsite East

Inflow=0.87 cfs 2,428 cf

Outflow=0.87 cfs 2,428 cf

### Pond 1P:

Peak Elev=658.03' Storage=24,333 cf Inflow=6.06 cfs 15,912 cf

Outflow=0.83 cfs 15,859 cf

**Total Runoff Area = 197,327 sf Runoff Volume = 21,919 cf Average Runoff Depth = 1.33"**  
**41.41% Pervious = 81,717 sf 58.59% Impervious = 115,610 sf**

**Ashland Apartments - Proposed**

MSE 24-hr 4 1-Year Rainfall=2.38"

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**Summary for Subcatchment E:**

Runoff = 0.87 cfs @ 12.13 hrs, Volume= 2,428 cf, Depth= 0.94"  
Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 1-Year Rainfall=2.38"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,586    | 98 | Roof                   |
| * | 526       | 98 | Sidewalk               |
| * | 18,987    | 61 | Grass/ Landscaping     |
|   | 31,099    | 75 | Weighted Average       |
|   | 18,987    | 61 | 61.05% Pervious Area   |
|   | 12,112    | 98 | 38.95% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

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MSE 24-hr 4 1-Year Rainfall=2.38"

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**Summary for Subcatchment W1:**

Runoff = 6.06 cfs @ 12.13 hrs, Volume= 15,912 cf, Depth= 1.54"  
 Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 1-Year Rainfall=2.38"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 21,224    | 98 | Roof                   |
| * | 61,041    | 98 | Parking Lot            |
| * | 3,624     | 98 | Sidewalk               |
| * | 442       | 96 | Gravel                 |
| * | 37,598    | 61 | Grass/Landscaping      |
|   | 123,929   | 87 | Weighted Average       |
|   | 38,040    | 61 | 30.69% Pervious Area   |
|   | 85,889    | 98 | 69.31% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

**Ashland Apartments - Proposed**

MSE 24-hr 4 1-Year Rainfall=2.38"

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**Summary for Subcatchment W2:**

Runoff = 1.30 cfs @ 12.13 hrs, Volume= 3,579 cf, Depth= 1.02"  
Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 1-Year Rainfall=2.38"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,218    | 98 | Roof                   |
| * | 6,008     | 98 | Parking Lot            |
| * | 383       | 98 | Sidewalk               |
| * | 1,527     | 96 | Gravel                 |
| * | 23,163    | 61 | Grass/ Landscaping     |
|   | 42,299    | 78 | Weighted Average       |
|   | 24,690    | 63 | 58.37% Pervious Area   |
|   | 17,609    | 98 | 41.63% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |



**Ashland Apartments - Proposed***MSE 24-hr 4 1-Year Rainfall=2.38"*

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**Summary for Reach 1R: Offsite West**

Inflow Area = 166,228 sf, 62.26% Impervious, Inflow Depth = 1.40" for 1-Year event  
Inflow = 1.99 cfs @ 12.14 hrs, Volume= 19,439 cf  
Outflow = 1.99 cfs @ 12.14 hrs, Volume= 19,439 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Proposed***MSE 24-hr 4 1-Year Rainfall=2.38"*

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**Summary for Reach 2R: Offsite East**

Inflow Area = 31,099 sf, 38.95% Impervious, Inflow Depth = 0.94" for 1-Year event  
Inflow = 0.87 cfs @ 12.13 hrs, Volume= 2,428 cf  
Outflow = 0.87 cfs @ 12.13 hrs, Volume= 2,428 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Proposed**

MSE 24-hr 4 1-Year Rainfall=2.38"

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**Summary for Pond 1P:**

Inflow Area = 123,929 sf, 69.31% Impervious, Inflow Depth = 1.54" for 1-Year event  
 Inflow = 6.06 cfs @ 12.13 hrs, Volume= 15,912 cf  
 Outflow = 0.83 cfs @ 12.56 hrs, Volume= 15,859 cf, Atten= 86%, Lag= 25.6 min  
 Primary = 0.83 cfs @ 12.56 hrs, Volume= 15,859 cf  
 Routed to Reach 1R : Offsite West

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 Starting Elev= 657.00' Surf.Area= 6,795 sf Storage= 16,640 cf  
 Peak Elev= 658.03' @ 12.56 hrs Surf.Area= 8,145 sf Storage= 24,333 cf (7,693 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)  
 Center-of-Mass det. time= 179.9 min ( 945.2 - 765.4 )

| Volume              | Invert               | Avail.Storage             | Storage Description                                        |
|---------------------|----------------------|---------------------------|------------------------------------------------------------|
| #1                  | 651.00'              | 69,478 cf                 | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet)                                  |
| 651.00              | 958                  | 0                         | 0                                                          |
| 652.00              | 1,394                | 1,176                     | 1,176                                                      |
| 653.00              | 1,917                | 1,655                     | 2,831                                                      |
| 654.00              | 2,483                | 2,200                     | 5,031                                                      |
| 655.00              | 3,136                | 2,810                     | 7,841                                                      |
| 656.00              | 3,833                | 3,485                     | 11,326                                                     |
| 657.00              | 6,795                | 5,314                     | 16,640                                                     |
| 658.00              | 8,102                | 7,449                     | 24,089                                                     |
| 659.00              | 9,540                | 8,821                     | 32,910                                                     |
| 660.00              | 11,064               | 10,302                    | 43,212                                                     |
| 661.00              | 13,112               | 12,088                    | 55,299                                                     |
| 662.00              | 15,246               | 14,179                    | 69,478                                                     |

| Device | Routing  | Invert  | Outlet Devices                                                                                                                                                                                                        |
|--------|----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary  | 656.83' | <b>12.0" Round Culvert</b><br>L= 321.0' RCP, mitered to conform to fill, Ke= 0.700<br>Inlet / Outlet Invert= 656.83' / 653.58' S= 0.0101 ' / Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1 | 657.00' | <b>6.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                                                                                            |
| #3     | Device 1 | 659.00' | <b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)                                                                                                                                                  |

**Primary OutFlow** Max=0.83 cfs @ 12.56 hrs HW=658.03' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.83 cfs of 2.79 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.83 cfs @ 4.25 fps)
- 3=Sharp-Crested Rectangular Weir ( Controls 0.00 cfs)

**Ashland Apartments - Proposed**

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MSE 24-hr 4 1-Year Rainfall=2.38"

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**Stage-Area-Storage for Pond 1P:**

| Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 651.00              | 958                | 0                       | 661.40              | 13,965             | 60,715                  |
| 651.20              | 1,045              | 200                     | 661.60              | 14,392             | 63,551                  |
| 651.40              | 1,133              | 418                     | 661.80              | 14,819             | 66,472                  |
| 651.60              | 1,220              | 653                     | 662.00              | <b>15,246</b>      | <b>69,478</b>           |
| 651.80              | 1,307              | 906                     |                     |                    |                         |
| 652.00              | 1,394              | 1,176                   |                     |                    |                         |
| 652.20              | 1,498              | 1,465                   |                     |                    |                         |
| 652.40              | 1,603              | 1,776                   |                     |                    |                         |
| 652.60              | 1,708              | 2,107                   |                     |                    |                         |
| 652.80              | 1,812              | 2,459                   |                     |                    |                         |
| 653.00              | 1,917              | 2,831                   |                     |                    |                         |
| 653.20              | 2,030              | 3,226                   |                     |                    |                         |
| 653.40              | 2,143              | 3,643                   |                     |                    |                         |
| 653.60              | 2,256              | 4,083                   |                     |                    |                         |
| 653.80              | 2,370              | 4,546                   |                     |                    |                         |
| 654.00              | 2,483              | 5,031                   |                     |                    |                         |
| 654.20              | 2,614              | 5,541                   |                     |                    |                         |
| 654.40              | 2,744              | 6,077                   |                     |                    |                         |
| 654.60              | 2,875              | 6,639                   |                     |                    |                         |
| 654.80              | 3,006              | 7,227                   |                     |                    |                         |
| 655.00              | 3,136              | 7,841                   |                     |                    |                         |
| 655.20              | 3,276              | 8,482                   |                     |                    |                         |
| 655.40              | 3,415              | 9,151                   |                     |                    |                         |
| 655.60              | 3,554              | 9,848                   |                     |                    |                         |
| 655.80              | 3,694              | 10,573                  |                     |                    |                         |
| 656.00              | 3,833              | 11,326                  |                     |                    |                         |
| 656.20              | 4,426              | 12,151                  |                     |                    |                         |
| 656.40              | 5,018              | 13,096                  |                     |                    |                         |
| 656.60              | 5,611              | 14,159                  |                     |                    |                         |
| 656.80              | 6,203              | 15,340                  |                     |                    |                         |
| 657.00              | 6,795              | 16,640                  |                     |                    |                         |
| 657.20              | 7,057              | 18,025                  |                     |                    |                         |
| 657.40              | 7,318              | 19,463                  |                     |                    |                         |
| 657.60              | 7,579              | 20,952                  |                     |                    |                         |
| 657.80              | 7,841              | 22,494                  |                     |                    |                         |
| 658.00              | 8,102              | 24,089                  |                     |                    |                         |
| 658.20              | 8,390              | 25,738                  |                     |                    |                         |
| 658.40              | 8,677              | 27,445                  |                     |                    |                         |
| 658.60              | 8,965              | 29,209                  |                     |                    |                         |
| 658.80              | 9,252              | 31,030                  |                     |                    |                         |
| 659.00              | 9,540              | 32,910                  |                     |                    |                         |
| 659.20              | 9,845              | 34,848                  |                     |                    |                         |
| 659.40              | 10,149             | 36,847                  |                     |                    |                         |
| 659.60              | 10,454             | 38,908                  |                     |                    |                         |
| 659.80              | 10,759             | 41,029                  |                     |                    |                         |
| 660.00              | 11,064             | 43,212                  |                     |                    |                         |
| 660.20              | 11,474             | 45,465                  |                     |                    |                         |
| 660.40              | 11,883             | 47,801                  |                     |                    |                         |
| 660.60              | 12,293             | 50,219                  |                     |                    |                         |
| 660.80              | 12,702             | 52,718                  |                     |                    |                         |
| 661.00              | 13,112             | 55,299                  |                     |                    |                         |
| 661.20              | 13,538             | 57,964                  |                     |                    |                         |

## Ashland Apartments - Proposed

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MSE 24-hr 4 2-Year Rainfall=2.75"

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

### Subcatchment E:

Runoff Area=31,099 sf 38.95% Impervious Runoff Depth=1.15"  
Tc=6.0 min CN=61/98 Runoff=1.08 cfs 2,978 cf

### Subcatchment W1:

Runoff Area=123,929 sf 69.31% Impervious Runoff Depth=1.83"  
Tc=6.0 min CN=61/98 Runoff=7.18 cfs 18,905 cf

### Subcatchment W2:

Runoff Area=42,299 sf 41.63% Impervious Runoff Depth=1.24"  
Tc=6.0 min CN=63/98 Runoff=1.62 cfs 4,383 cf

### Reach 1R: Offsite West

Inflow=2.38 cfs 23,234 cf  
Outflow=2.38 cfs 23,234 cf

### Reach 2R: Offsite East

Inflow=1.08 cfs 2,978 cf  
Outflow=1.08 cfs 2,978 cf

### Pond 1P:

Peak Elev=658.20' Storage=25,739 cf Inflow=7.18 cfs 18,905 cf  
Outflow=0.92 cfs 18,852 cf

**Total Runoff Area = 197,327 sf Runoff Volume = 26,266 cf Average Runoff Depth = 1.60"**  
**41.41% Pervious = 81,717 sf 58.59% Impervious = 115,610 sf**

**Ashland Apartments - Proposed**

MSE 24-hr 4 2-Year Rainfall=2.75"

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**Summary for Subcatchment E:**

Runoff = 1.08 cfs @ 12.13 hrs, Volume= 2,978 cf, Depth= 1.15"  
Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 2-Year Rainfall=2.75"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,586    | 98 | Roof                   |
| * | 526       | 98 | Sidewalk               |
| * | 18,987    | 61 | Grass/ Landscaping     |
|   | 31,099    | 75 | Weighted Average       |
|   | 18,987    | 61 | 61.05% Pervious Area   |
|   | 12,112    | 98 | 38.95% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |



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MSE 24-hr 4 2-Year Rainfall=2.75"

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**Summary for Subcatchment W1:**

Runoff = 7.18 cfs @ 12.13 hrs, Volume= 18,905 cf, Depth= 1.83"  
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 2-Year Rainfall=2.75"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 21,224    | 98 | Roof                   |
| * | 61,041    | 98 | Parking Lot            |
| * | 3,624     | 98 | Sidewalk               |
| * | 442       | 96 | Gravel                 |
| * | 37,598    | 61 | Grass/Landscaping      |
|   | 123,929   | 87 | Weighted Average       |
|   | 38,040    | 61 | 30.69% Pervious Area   |
|   | 85,889    | 98 | 69.31% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

**Ashland Apartments - Proposed**

MSE 24-hr 4 2-Year Rainfall=2.75"

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**Summary for Subcatchment W2:**

Runoff = 1.62 cfs @ 12.13 hrs, Volume= 4,383 cf, Depth= 1.24"  
Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 2-Year Rainfall=2.75"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,218    | 98 | Roof                   |
| * | 6,008     | 98 | Parking Lot            |
| * | 383       | 98 | Sidewalk               |
| * | 1,527     | 96 | Gravel                 |
| * | 23,163    | 61 | Grass/ Landscaping     |
|   | 42,299    | 78 | Weighted Average       |
|   | 24,690    | 63 | 58.37% Pervious Area   |
|   | 17,609    | 98 | 41.63% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

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**Summary for Reach 1R: Offsite West**

Inflow Area = 166,228 sf, 62.26% Impervious, Inflow Depth = 1.68" for 2-Year event  
Inflow = 2.38 cfs @ 12.14 hrs, Volume= 23,234 cf  
Outflow = 2.38 cfs @ 12.14 hrs, Volume= 23,234 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Proposed***MSE 24-hr 4 2-Year Rainfall=2.75"*

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**Summary for Reach 2R: Offsite East**

Inflow Area = 31,099 sf, 38.95% Impervious, Inflow Depth = 1.15" for 2-Year event  
Inflow = 1.08 cfs @ 12.13 hrs, Volume= 2,978 cf  
Outflow = 1.08 cfs @ 12.13 hrs, Volume= 2,978 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

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MSE 24-hr 4 2-Year Rainfall=2.75"

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**Summary for Pond 1P:**

Inflow Area = 123,929 sf, 69.31% Impervious, Inflow Depth = 1.83" for 2-Year event  
 Inflow = 7.18 cfs @ 12.13 hrs, Volume= 18,905 cf  
 Outflow = 0.92 cfs @ 12.58 hrs, Volume= 18,852 cf, Atten= 87%, Lag= 26.8 min  
 Primary = 0.92 cfs @ 12.58 hrs, Volume= 18,852 cf  
 Routed to Reach 1R : Offsite West

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 Starting Elev= 657.00' Surf.Area= 6,795 sf Storage= 16,640 cf  
 Peak Elev= 658.20' @ 12.58 hrs Surf.Area= 8,390 sf Storage= 25,739 cf (9,099 cf above start)

Plug-Flow detention time= 1,090.5 min calculated for 2,212 cf (12% of inflow)  
 Center-of-Mass det. time= 177.1 min ( 940.9 - 763.8 )

| Volume | Invert  | Avail.Storage | Storage Description                                        |
|--------|---------|---------------|------------------------------------------------------------|
| #1     | 651.00' | 69,478 cf     | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 651.00              | 958                  | 0                         | 0                         |
| 652.00              | 1,394                | 1,176                     | 1,176                     |
| 653.00              | 1,917                | 1,655                     | 2,831                     |
| 654.00              | 2,483                | 2,200                     | 5,031                     |
| 655.00              | 3,136                | 2,810                     | 7,841                     |
| 656.00              | 3,833                | 3,485                     | 11,326                    |
| 657.00              | 6,795                | 5,314                     | 16,640                    |
| 658.00              | 8,102                | 7,449                     | 24,089                    |
| 659.00              | 9,540                | 8,821                     | 32,910                    |
| 660.00              | 11,064               | 10,302                    | 43,212                    |
| 661.00              | 13,112               | 12,088                    | 55,299                    |
| 662.00              | 15,246               | 14,179                    | 69,478                    |

| Device | Routing  | Invert  | Outlet Devices                                                                                                                                                                                                        |
|--------|----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary  | 656.83' | <b>12.0" Round Culvert</b><br>L= 321.0' RCP, mitered to conform to fill, Ke= 0.700<br>Inlet / Outlet Invert= 656.83' / 653.58' S= 0.0101 ' / Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1 | 657.00' | <b>6.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                                                                                            |
| #3     | Device 1 | 659.00' | <b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)                                                                                                                                                  |

**Primary OutFlow** Max=0.92 cfs @ 12.58 hrs HW=658.20' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.92 cfs of 3.11 cfs potential flow)  
 2=Orifice/Grate (Orifice Controls 0.92 cfs @ 4.69 fps)  
 3=Sharp-Crested Rectangular Weir ( Controls 0.00 cfs)

**Ashland Apartments - Proposed**

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MSE 24-hr 4 2-Year Rainfall=2.75"

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**Stage-Area-Storage for Pond 1P:**

| Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 651.00              | 958                | 0                       | 661.40              | 13,965             | 60,715                  |
| 651.20              | 1,045              | 200                     | 661.60              | 14,392             | 63,551                  |
| 651.40              | 1,133              | 418                     | 661.80              | 14,819             | 66,472                  |
| 651.60              | 1,220              | 653                     | 662.00              | <b>15,246</b>      | <b>69,478</b>           |
| 651.80              | 1,307              | 906                     |                     |                    |                         |
| 652.00              | 1,394              | 1,176                   |                     |                    |                         |
| 652.20              | 1,498              | 1,465                   |                     |                    |                         |
| 652.40              | 1,603              | 1,776                   |                     |                    |                         |
| 652.60              | 1,708              | 2,107                   |                     |                    |                         |
| 652.80              | 1,812              | 2,459                   |                     |                    |                         |
| 653.00              | 1,917              | 2,831                   |                     |                    |                         |
| 653.20              | 2,030              | 3,226                   |                     |                    |                         |
| 653.40              | 2,143              | 3,643                   |                     |                    |                         |
| 653.60              | 2,256              | 4,083                   |                     |                    |                         |
| 653.80              | 2,370              | 4,546                   |                     |                    |                         |
| 654.00              | 2,483              | 5,031                   |                     |                    |                         |
| 654.20              | 2,614              | 5,541                   |                     |                    |                         |
| 654.40              | 2,744              | 6,077                   |                     |                    |                         |
| 654.60              | 2,875              | 6,639                   |                     |                    |                         |
| 654.80              | 3,006              | 7,227                   |                     |                    |                         |
| 655.00              | 3,136              | 7,841                   |                     |                    |                         |
| 655.20              | 3,276              | 8,482                   |                     |                    |                         |
| 655.40              | 3,415              | 9,151                   |                     |                    |                         |
| 655.60              | 3,554              | 9,848                   |                     |                    |                         |
| 655.80              | 3,694              | 10,573                  |                     |                    |                         |
| 656.00              | 3,833              | 11,326                  |                     |                    |                         |
| 656.20              | 4,426              | 12,151                  |                     |                    |                         |
| 656.40              | 5,018              | 13,096                  |                     |                    |                         |
| 656.60              | 5,611              | 14,159                  |                     |                    |                         |
| 656.80              | 6,203              | 15,340                  |                     |                    |                         |
| 657.00              | 6,795              | 16,640                  |                     |                    |                         |
| 657.20              | 7,057              | 18,025                  |                     |                    |                         |
| 657.40              | 7,318              | 19,463                  |                     |                    |                         |
| 657.60              | 7,579              | 20,952                  |                     |                    |                         |
| 657.80              | 7,841              | 22,494                  |                     |                    |                         |
| 658.00              | 8,102              | 24,089                  |                     |                    |                         |
| 658.20              | 8,390              | 25,738                  |                     |                    |                         |
| 658.40              | 8,677              | 27,445                  |                     |                    |                         |
| 658.60              | 8,965              | 29,209                  |                     |                    |                         |
| 658.80              | 9,252              | 31,030                  |                     |                    |                         |
| 659.00              | 9,540              | 32,910                  |                     |                    |                         |
| 659.20              | 9,845              | 34,848                  |                     |                    |                         |
| 659.40              | 10,149             | 36,847                  |                     |                    |                         |
| 659.60              | 10,454             | 38,908                  |                     |                    |                         |
| 659.80              | 10,759             | 41,029                  |                     |                    |                         |
| 660.00              | 11,064             | 43,212                  |                     |                    |                         |
| 660.20              | 11,474             | 45,465                  |                     |                    |                         |
| 660.40              | 11,883             | 47,801                  |                     |                    |                         |
| 660.60              | 12,293             | 50,219                  |                     |                    |                         |
| 660.80              | 12,702             | 52,718                  |                     |                    |                         |
| 661.00              | 13,112             | 55,299                  |                     |                    |                         |
| 661.20              | 13,538             | 57,964                  |                     |                    |                         |



**Ashland Apartments - Proposed**

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MSE 24-hr 4 10-Year Rainfall=4.15"

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E:**

Runoff Area=31,099 sf 38.95% Impervious Runoff Depth=2.07"

Tc=6.0 min CN=61/98 Runoff=2.07 cfs 5,359 cf

**Subcatchment W1:**

Runoff Area=123,929 sf 69.31% Impervious Runoff Depth=2.99"

Tc=6.0 min CN=61/98 Runoff=11.78 cfs 30,840 cf

**Subcatchment W2:**

Runoff Area=42,299 sf 41.63% Impervious Runoff Depth=2.21"

Tc=6.0 min CN=63/98 Runoff=3.04 cfs 7,803 cf

**Reach 1R: Offsite West**

Inflow=4.02 cfs 38,590 cf

Outflow=4.02 cfs 38,590 cf

**Reach 2R: Offsite East**

Inflow=2.07 cfs 5,359 cf

Outflow=2.07 cfs 5,359 cf

**Pond 1P:**

Peak Elev=658.86' Storage=31,611 cf Inflow=11.78 cfs 30,840 cf

Outflow=1.20 cfs 30,787 cf

**Total Runoff Area = 197,327 sf Runoff Volume = 44,003 cf Average Runoff Depth = 2.68"**  
**41.41% Pervious = 81,717 sf 58.59% Impervious = 115,610 sf**

**Ashland Apartments - Proposed**

MSE 24-hr 4 10-Year Rainfall=4.15"

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**Summary for Subcatchment E:**

Runoff = 2.07 cfs @ 12.13 hrs, Volume= 5,359 cf, Depth= 2.07"  
Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 10-Year Rainfall=4.15"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,586    | 98 | Roof                   |
| * | 526       | 98 | Sidewalk               |
| * | 18,987    | 61 | Grass/ Landscaping     |
|   | 31,099    | 75 | Weighted Average       |
|   | 18,987    | 61 | 61.05% Pervious Area   |
|   | 12,112    | 98 | 38.95% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

**Ashland Apartments - Proposed**

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MSE 24-hr 4 10-Year Rainfall=4.15"

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**Summary for Subcatchment W1:**

Runoff = 11.78 cfs @ 12.13 hrs, Volume= 30,840 cf, Depth= 2.99"  
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 10-Year Rainfall=4.15"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 21,224    | 98 | Roof                   |
| * | 61,041    | 98 | Parking Lot            |
| * | 3,624     | 98 | Sidewalk               |
| * | 442       | 96 | Gravel                 |
| * | 37,598    | 61 | Grass/Landscaping      |
|   | 123,929   | 87 | Weighted Average       |
|   | 38,040    | 61 | 30.69% Pervious Area   |
|   | 85,889    | 98 | 69.31% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

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MSE 24-hr 4 10-Year Rainfall=4.15"

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**Summary for Subcatchment W2:**

Runoff = 3.04 cfs @ 12.13 hrs, Volume= 7,803 cf, Depth= 2.21"  
Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
MSE 24-hr 4 10-Year Rainfall=4.15"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,218    | 98 | Roof                   |
| * | 6,008     | 98 | Parking Lot            |
| * | 383       | 98 | Sidewalk               |
| * | 1,527     | 96 | Gravel                 |
| * | 23,163    | 61 | Grass/ Landscaping     |
|   | 42,299    | 78 | Weighted Average       |
|   | 24,690    | 63 | 58.37% Pervious Area   |
|   | 17,609    | 98 | 41.63% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

**Ashland Apartments - Proposed***MSE 24-hr 4 10-Year Rainfall=4.15"*

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**Summary for Reach 1R: Offsite West**

Inflow Area = 166,228 sf, 62.26% Impervious, Inflow Depth = 2.79" for 10-Year event  
Inflow = 4.02 cfs @ 12.14 hrs, Volume= 38,590 cf  
Outflow = 4.02 cfs @ 12.14 hrs, Volume= 38,590 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Proposed***MSE 24-hr 4 10-Year Rainfall=4.15"*

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**Summary for Reach 2R: Offsite East**

Inflow Area = 31,099 sf, 38.95% Impervious, Inflow Depth = 2.07" for 10-Year event  
Inflow = 2.07 cfs @ 12.13 hrs, Volume= 5,359 cf  
Outflow = 2.07 cfs @ 12.13 hrs, Volume= 5,359 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs



**Ashland Apartments - Proposed**

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MSE 24-hr 4 10-Year Rainfall=4.15"

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**Summary for Pond 1P:**

Inflow Area = 123,929 sf, 69.31% Impervious, Inflow Depth = 2.99" for 10-Year event  
 Inflow = 11.78 cfs @ 12.13 hrs, Volume= 30,840 cf  
 Outflow = 1.20 cfs @ 12.68 hrs, Volume= 30,787 cf, Atten= 90%, Lag= 32.7 min  
 Primary = 1.20 cfs @ 12.68 hrs, Volume= 30,787 cf  
 Routed to Reach 1R : Offsite West

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 Starting Elev= 657.00' Surf.Area= 6,795 sf Storage= 16,640 cf  
 Peak Elev= 658.86' @ 12.68 hrs Surf.Area= 9,342 sf Storage= 31,611 cf (14,971 cf above start)

Plug-Flow detention time= 504.4 min calculated for 14,147 cf (46% of inflow)  
 Center-of-Mass det. time= 182.0 min ( 941.9 - 759.9 )

| Volume              | Invert               | Avail.Storage             | Storage Description                                        |
|---------------------|----------------------|---------------------------|------------------------------------------------------------|
| #1                  | 651.00'              | 69,478 cf                 | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet)                                  |
| 651.00              | 958                  | 0                         | 0                                                          |
| 652.00              | 1,394                | 1,176                     | 1,176                                                      |
| 653.00              | 1,917                | 1,655                     | 2,831                                                      |
| 654.00              | 2,483                | 2,200                     | 5,031                                                      |
| 655.00              | 3,136                | 2,810                     | 7,841                                                      |
| 656.00              | 3,833                | 3,485                     | 11,326                                                     |
| 657.00              | 6,795                | 5,314                     | 16,640                                                     |
| 658.00              | 8,102                | 7,449                     | 24,089                                                     |
| 659.00              | 9,540                | 8,821                     | 32,910                                                     |
| 660.00              | 11,064               | 10,302                    | 43,212                                                     |
| 661.00              | 13,112               | 12,088                    | 55,299                                                     |
| 662.00              | 15,246               | 14,179                    | 69,478                                                     |

| Device | Routing  | Invert  | Outlet Devices                                                                                                                                                                                                         |
|--------|----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary  | 656.83' | <b>12.0" Round Culvert</b><br>L= 321.0' RCP, mitered to conform to fill, Ke= 0.700<br>Inlet / Outlet Invert= 656.83' / 653.58' S= 0.0101 ' /' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1 | 657.00' | <b>6.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                                                                                             |
| #3     | Device 1 | 659.00' | <b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)                                                                                                                                                   |

**Primary OutFlow** Max=1.20 cfs @ 12.68 hrs HW=658.86' TW=0.00' (Dynamic Tailwater)

↑ **1=Culvert** (Passes 1.20 cfs of 3.80 cfs potential flow)  
 ↑ **2=Orifice/Grate** (Orifice Controls 1.20 cfs @ 6.11 fps)  
 ↑ **3=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Ashland Apartments - Proposed**

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MSE 24-hr 4 10-Year Rainfall=4.15"

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**Stage-Area-Storage for Pond 1P:**

| Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 651.00              | 958                | 0                       | 661.40              | 13,965             | 60,715                  |
| 651.20              | 1,045              | 200                     | 661.60              | 14,392             | 63,551                  |
| 651.40              | 1,133              | 418                     | 661.80              | 14,819             | 66,472                  |
| 651.60              | 1,220              | 653                     | 662.00              | <b>15,246</b>      | <b>69,478</b>           |
| 651.80              | 1,307              | 906                     |                     |                    |                         |
| 652.00              | 1,394              | 1,176                   |                     |                    |                         |
| 652.20              | 1,498              | 1,465                   |                     |                    |                         |
| 652.40              | 1,603              | 1,776                   |                     |                    |                         |
| 652.60              | 1,708              | 2,107                   |                     |                    |                         |
| 652.80              | 1,812              | 2,459                   |                     |                    |                         |
| 653.00              | 1,917              | 2,831                   |                     |                    |                         |
| 653.20              | 2,030              | 3,226                   |                     |                    |                         |
| 653.40              | 2,143              | 3,643                   |                     |                    |                         |
| 653.60              | 2,256              | 4,083                   |                     |                    |                         |
| 653.80              | 2,370              | 4,546                   |                     |                    |                         |
| 654.00              | 2,483              | 5,031                   |                     |                    |                         |
| 654.20              | 2,614              | 5,541                   |                     |                    |                         |
| 654.40              | 2,744              | 6,077                   |                     |                    |                         |
| 654.60              | 2,875              | 6,639                   |                     |                    |                         |
| 654.80              | 3,006              | 7,227                   |                     |                    |                         |
| 655.00              | 3,136              | 7,841                   |                     |                    |                         |
| 655.20              | 3,276              | 8,482                   |                     |                    |                         |
| 655.40              | 3,415              | 9,151                   |                     |                    |                         |
| 655.60              | 3,554              | 9,848                   |                     |                    |                         |
| 655.80              | 3,694              | 10,573                  |                     |                    |                         |
| 656.00              | 3,833              | 11,326                  |                     |                    |                         |
| 656.20              | 4,426              | 12,151                  |                     |                    |                         |
| 656.40              | 5,018              | 13,096                  |                     |                    |                         |
| 656.60              | 5,611              | 14,159                  |                     |                    |                         |
| 656.80              | 6,203              | 15,340                  |                     |                    |                         |
| 657.00              | 6,795              | 16,640                  |                     |                    |                         |
| 657.20              | 7,057              | 18,025                  |                     |                    |                         |
| 657.40              | 7,318              | 19,463                  |                     |                    |                         |
| 657.60              | 7,579              | 20,952                  |                     |                    |                         |
| 657.80              | 7,841              | 22,494                  |                     |                    |                         |
| 658.00              | 8,102              | 24,089                  |                     |                    |                         |
| 658.20              | 8,390              | 25,738                  |                     |                    |                         |
| 658.40              | 8,677              | 27,445                  |                     |                    |                         |
| 658.60              | 8,965              | 29,209                  |                     |                    |                         |
| 658.80              | 9,252              | 31,030                  |                     |                    |                         |
| 659.00              | 9,540              | 32,910                  |                     |                    |                         |
| 659.20              | 9,845              | 34,848                  |                     |                    |                         |
| 659.40              | 10,149             | 36,847                  |                     |                    |                         |
| 659.60              | 10,454             | 38,908                  |                     |                    |                         |
| 659.80              | 10,759             | 41,029                  |                     |                    |                         |
| 660.00              | 11,064             | 43,212                  |                     |                    |                         |
| 660.20              | 11,474             | 45,465                  |                     |                    |                         |
| 660.40              | 11,883             | 47,801                  |                     |                    |                         |
| 660.60              | 12,293             | 50,219                  |                     |                    |                         |
| 660.80              | 12,702             | 52,718                  |                     |                    |                         |
| 661.00              | 13,112             | 55,299                  |                     |                    |                         |
| 661.20              | 13,538             | 57,964                  |                     |                    |                         |

**Ashland Apartments - Proposed**

MSE 24-hr 4 100-Year Rainfall=7.37"

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Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E:**

Runoff Area=31,099 sf 38.95% Impervious Runoff Depth=4.59"

Tc=6.0 min CN=61/98 Runoff=4.78 cfs 11,900 cf

**Subcatchment W1:**

Runoff Area=123,929 sf 69.31% Impervious Runoff Depth=5.85"

Tc=6.0 min CN=61/98 Runoff=23.22 cfs 60,458 cf

**Subcatchment W2:**

Runoff Area=42,299 sf 41.63% Impervious Runoff Depth=4.82"

Tc=6.0 min CN=63/98 Runoff=6.82 cfs 17,007 cf

**Reach 1R: Offsite West**

Inflow=10.93 cfs 77,411 cf

Outflow=10.93 cfs 77,411 cf

**Reach 2R: Offsite East**

Inflow=4.78 cfs 11,900 cf

Outflow=4.78 cfs 11,900 cf

**Pond 1P:**

Peak Elev=659.98' Storage=42,998 cf Inflow=23.22 cfs 60,458 cf

Outflow=4.27 cfs 60,403 cf

**Total Runoff Area = 197,327 sf Runoff Volume = 89,365 cf Average Runoff Depth = 5.43"**  
**41.41% Pervious = 81,717 sf 58.59% Impervious = 115,610 sf**

**Ashland Apartments - Proposed**

MSE 24-hr 4 100-Year Rainfall=7.37"

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**Summary for Subcatchment E:**

Runoff = 4.78 cfs @ 12.13 hrs, Volume= 11,900 cf, Depth= 4.59"  
 Routed to Reach 2R : Offsite East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 100-Year Rainfall=7.37"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,586    | 98 | Roof                   |
| * | 526       | 98 | Sidewalk               |
| * | 18,987    | 61 | Grass/ Landscaping     |
|   | 31,099    | 75 | Weighted Average       |
|   | 18,987    | 61 | 61.05% Pervious Area   |
|   | 12,112    | 98 | 38.95% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

**Ashland Apartments - Proposed**

MSE 24-hr 4 100-Year Rainfall=7.37"

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**Summary for Subcatchment W1:**

Runoff = 23.22 cfs @ 12.13 hrs, Volume= 60,458 cf, Depth= 5.85"  
 Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 100-Year Rainfall=7.37"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 21,224    | 98 | Roof                   |
| * | 61,041    | 98 | Parking Lot            |
| * | 3,624     | 98 | Sidewalk               |
| * | 442       | 96 | Gravel                 |
| * | 37,598    | 61 | Grass/Landscaping      |
|   | 123,929   | 87 | Weighted Average       |
|   | 38,040    | 61 | 30.69% Pervious Area   |
|   | 85,889    | 98 | 69.31% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |

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MSE 24-hr 4 100-Year Rainfall=7.37"

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**Summary for Subcatchment W2:**

Runoff = 6.82 cfs @ 12.13 hrs, Volume= 17,007 cf, Depth= 4.82"  
 Routed to Reach 1R : Offsite West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 MSE 24-hr 4 100-Year Rainfall=7.37"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 11,218    | 98 | Roof                   |
| * | 6,008     | 98 | Parking Lot            |
| * | 383       | 98 | Sidewalk               |
| * | 1,527     | 96 | Gravel                 |
| * | 23,163    | 61 | Grass/ Landscaping     |
|   | 42,299    | 78 | Weighted Average       |
|   | 24,690    | 63 | 58.37% Pervious Area   |
|   | 17,609    | 98 | 41.63% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description          |
|-------------|------------------|------------------|----------------------|-------------------|----------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry,</b> |



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**Summary for Reach 1R: Offsite West**

Inflow Area = 166,228 sf, 62.26% Impervious, Inflow Depth = 5.59" for 100-Year event  
Inflow = 10.93 cfs @ 12.13 hrs, Volume= 77,411 cf  
Outflow = 10.93 cfs @ 12.13 hrs, Volume= 77,411 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

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**Summary for Reach 2R: Offsite East**

Inflow Area = 31,099 sf, 38.95% Impervious, Inflow Depth = 4.59" for 100-Year event  
Inflow = 4.78 cfs @ 12.13 hrs, Volume= 11,900 cf  
Outflow = 4.78 cfs @ 12.13 hrs, Volume= 11,900 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

**Ashland Apartments - Proposed**

MSE 24-hr 4 100-Year Rainfall=7.37"

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**Summary for Pond 1P:**

Inflow Area = 123,929 sf, 69.31% Impervious, Inflow Depth = 5.85" for 100-Year event  
 Inflow = 23.22 cfs @ 12.13 hrs, Volume= 60,458 cf  
 Outflow = 4.27 cfs @ 12.45 hrs, Volume= 60,403 cf, Atten= 82%, Lag= 19.4 min  
 Primary = 4.27 cfs @ 12.45 hrs, Volume= 60,403 cf  
 Routed to Reach 1R : Offsite West

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs  
 Starting Elev= 657.00' Surf.Area= 6,795 sf Storage= 16,640 cf  
 Peak Elev= 659.98' @ 12.45 hrs Surf.Area= 11,035 sf Storage= 42,998 cf (26,358 cf above start)

Plug-Flow detention time= 318.6 min calculated for 43,763 cf (72% of inflow)  
 Center-of-Mass det. time= 146.7 min ( 902.1 - 755.4 )

| Volume              | Invert               | Avail.Storage             | Storage Description                                        |
|---------------------|----------------------|---------------------------|------------------------------------------------------------|
| #1                  | 651.00'              | 69,478 cf                 | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet)                                  |
| 651.00              | 958                  | 0                         | 0                                                          |
| 652.00              | 1,394                | 1,176                     | 1,176                                                      |
| 653.00              | 1,917                | 1,655                     | 2,831                                                      |
| 654.00              | 2,483                | 2,200                     | 5,031                                                      |
| 655.00              | 3,136                | 2,810                     | 7,841                                                      |
| 656.00              | 3,833                | 3,485                     | 11,326                                                     |
| 657.00              | 6,795                | 5,314                     | 16,640                                                     |
| 658.00              | 8,102                | 7,449                     | 24,089                                                     |
| 659.00              | 9,540                | 8,821                     | 32,910                                                     |
| 660.00              | 11,064               | 10,302                    | 43,212                                                     |
| 661.00              | 13,112               | 12,088                    | 55,299                                                     |
| 662.00              | 15,246               | 14,179                    | 69,478                                                     |

| Device | Routing  | Invert  | Outlet Devices                                                                                                                                                                                                         |
|--------|----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary  | 656.83' | <b>12.0" Round Culvert</b><br>L= 321.0' RCP, mitered to conform to fill, Ke= 0.700<br>Inlet / Outlet Invert= 656.83' / 653.58' S= 0.0101 ' /' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1 | 657.00' | <b>6.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                                                                                             |
| #3     | Device 1 | 659.00' | <b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)                                                                                                                                                   |

**Primary OutFlow** Max=4.27 cfs @ 12.45 hrs HW=659.98' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Barrel Controls 4.27 cfs @ 5.43 fps)
- 2=Orifice/Grate (Passes < 1.56 cfs potential flow)
- 3=Sharp-Crested Rectangular Weir (Passes < 12.08 cfs potential flow)

**Ashland Apartments - Proposed**

Prepared by Larson Engineering Inc

HydroCAD® 10.20-7a s/n 01934 © 2025 HydroCAD Software Solutions LLC

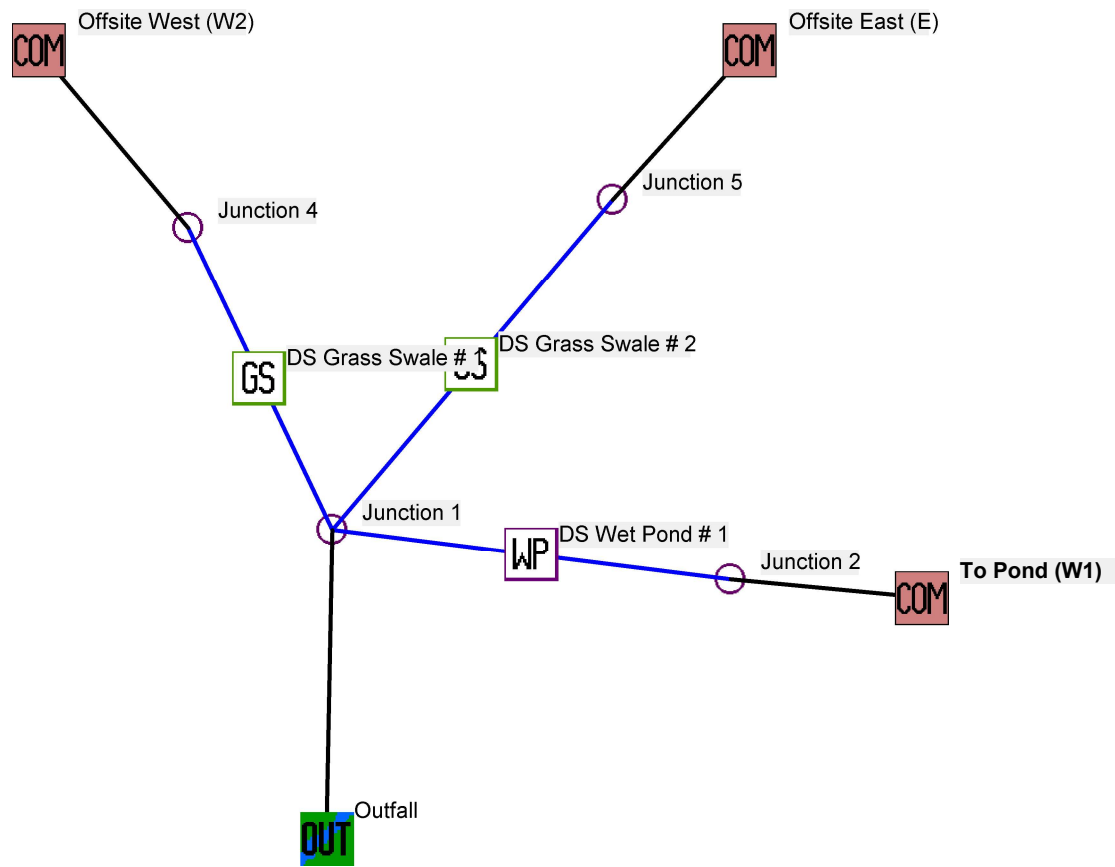
MSE 24-hr 4 100-Year Rainfall=7.37"

Printed 6/27/2025

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**Stage-Area-Storage for Pond 1P:**

| Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | Surface<br>(sq-ft) | Storage<br>(cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 651.00              | 958                | 0                       | 661.40              | 13,965             | 60,715                  |
| 651.20              | 1,045              | 200                     | 661.60              | 14,392             | 63,551                  |
| 651.40              | 1,133              | 418                     | 661.80              | 14,819             | 66,472                  |
| 651.60              | 1,220              | 653                     | 662.00              | <b>15,246</b>      | <b>69,478</b>           |
| 651.80              | 1,307              | 906                     |                     |                    |                         |
| 652.00              | 1,394              | 1,176                   |                     |                    |                         |
| 652.20              | 1,498              | 1,465                   |                     |                    |                         |
| 652.40              | 1,603              | 1,776                   |                     |                    |                         |
| 652.60              | 1,708              | 2,107                   |                     |                    |                         |
| 652.80              | 1,812              | 2,459                   |                     |                    |                         |
| 653.00              | 1,917              | 2,831                   |                     |                    |                         |
| 653.20              | 2,030              | 3,226                   |                     |                    |                         |
| 653.40              | 2,143              | 3,643                   |                     |                    |                         |
| 653.60              | 2,256              | 4,083                   |                     |                    |                         |
| 653.80              | 2,370              | 4,546                   |                     |                    |                         |
| 654.00              | 2,483              | 5,031                   |                     |                    |                         |
| 654.20              | 2,614              | 5,541                   |                     |                    |                         |
| 654.40              | 2,744              | 6,077                   |                     |                    |                         |
| 654.60              | 2,875              | 6,639                   |                     |                    |                         |
| 654.80              | 3,006              | 7,227                   |                     |                    |                         |
| 655.00              | 3,136              | 7,841                   |                     |                    |                         |
| 655.20              | 3,276              | 8,482                   |                     |                    |                         |
| 655.40              | 3,415              | 9,151                   |                     |                    |                         |
| 655.60              | 3,554              | 9,848                   |                     |                    |                         |
| 655.80              | 3,694              | 10,573                  |                     |                    |                         |
| 656.00              | 3,833              | 11,326                  |                     |                    |                         |
| 656.20              | 4,426              | 12,151                  |                     |                    |                         |
| 656.40              | 5,018              | 13,096                  |                     |                    |                         |
| 656.60              | 5,611              | 14,159                  |                     |                    |                         |
| 656.80              | 6,203              | 15,340                  |                     |                    |                         |
| 657.00              | 6,795              | 16,640                  |                     |                    |                         |
| 657.20              | 7,057              | 18,025                  |                     |                    |                         |
| 657.40              | 7,318              | 19,463                  |                     |                    |                         |
| 657.60              | 7,579              | 20,952                  |                     |                    |                         |
| 657.80              | 7,841              | 22,494                  |                     |                    |                         |
| 658.00              | 8,102              | 24,089                  |                     |                    |                         |
| 658.20              | 8,390              | 25,738                  |                     |                    |                         |
| 658.40              | 8,677              | 27,445                  |                     |                    |                         |
| 658.60              | 8,965              | 29,209                  |                     |                    |                         |
| 658.80              | 9,252              | 31,030                  |                     |                    |                         |
| 659.00              | 9,540              | 32,910                  |                     |                    |                         |
| 659.20              | 9,845              | 34,848                  |                     |                    |                         |
| 659.40              | 10,149             | 36,847                  |                     |                    |                         |
| 659.60              | 10,454             | 38,908                  |                     |                    |                         |
| 659.80              | 10,759             | 41,029                  |                     |                    |                         |
| 660.00              | 11,064             | 43,212                  |                     |                    |                         |
| 660.20              | 11,474             | 45,465                  |                     |                    |                         |
| 660.40              | 11,883             | 47,801                  |                     |                    |                         |
| 660.60              | 12,293             | 50,219                  |                     |                    |                         |
| 660.80              | 12,702             | 52,718                  |                     |                    |                         |
| 661.00              | 13,112             | 55,299                  |                     |                    |                         |
| 661.20              | 13,538             | 57,964                  |                     |                    |                         |



Data file name: W:\2025\Civil\12256011 - Ashland Apartments\3. Working Docs\B. Calculations\WinSLAMM\Ashland Apartments.mdb

WinSLAMM Version 10.5.0

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI\_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI\_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI\_GEO03.ppdx

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

Seed for random number generator: -42

Study period starting date: 01/01/81

Study period ending date: 12/31/81

Start of Winter Season: 12/02

End of Winter Season: 03/12

Date: 06-27-2025

Time: 10:59:16

Site information:

LU# 1 - Commercial: Offsite East (E) Total area (ac): 0.448

13 - Paved Parking 1: 0.012 ac. Disconnected Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.c

45 - Large Landscaped Areas 1: 0.436 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: Offsite West (W2) Total area (ac): 0.714

13 - Paved Parking 1: 0.182 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.532 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: To Pond (W1) Total area (ac): 2.357

13 - Paved Parking 1: 1.494 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.863 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - DS Wet Pond # 1

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 6

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.5

2. Number of orifices: 1

3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 3

2. Weir crest width (ft): 3

3. Height from datum to bottom of weir opening: 10

Pond stage and surface area

| Entry Number | Stage (ft) | Pond Area (acres) | Natural Seepage (in/hr) | Other Outflow (cfs) |
|--------------|------------|-------------------|-------------------------|---------------------|
| 0            | 0.00       | 0.0000            | 0.00                    | 0.00                |
| 1            | 0.01       | 0.0220            | 0.00                    | 0.00                |
| 2            | 1.00       | 0.0320            | 0.00                    | 0.00                |
| 3            | 2.00       | 0.0440            | 0.00                    | 0.00                |
| 4            | 3.00       | 0.0570            | 0.00                    | 0.00                |
| 5            | 4.00       | 0.0720            | 0.00                    | 0.00                |
| 6            | 5.00       | 0.0880            | 0.00                    | 0.00                |
| 7            | 6.00       | 0.1560            | 0.00                    | 0.00                |
| 8            | 7.00       | 0.1860            | 0.00                    | 0.00                |
| 9            | 8.00       | 0.2190            | 0.00                    | 0.00                |
| 10           | 9.00       | 0.2540            | 0.00                    | 0.00                |
| 11           | 10.00      | 0.3010            | 0.00                    | 0.00                |
| 12           | 11.00      | 0.3500            | 0.00                    | 0.00                |

Control Practice 2: Grass Swale CP# 1 (DS) - DS Grass Swale # 1

Total drainage area (acres)= 0.714

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 442

Average swale length to outlet (ft)= 313

Typical bottom width (ft) = 8.0

Typical swale side slope (H:1V) = 3.0

Typical longitudinal slope (ft.H/ft.V) = 0.005

Swale retardance factor: C

Typical grass height (in) = 3.0

Swale dynamic infiltration rate (in/hr)= 0.450

Typical swale depth (ft) for cost analysis (optional) = 0.0

Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration calculations: True

Control Practice 3: Grass Swale CP# 2 (DS) - DS Grass Swale # 2

Total drainage area (acres)= 0.448

Fraction of drainage area served by swales (ac) = 1.00

Swale density (ft/ac) = 0.00

Total swale length (ft) = 468

Average swale length to outlet (ft)= 234

Typical bottom width (ft) = 12.0

Typical swale side slope (H:1V) = 3.0

Typical longitudinal slope (ft.H/ft.V) = 0.011

Swale retardance factor: C

Typical grass height (in) = 0.0

Swale dynamic infiltration rate (in/hr)= 0.045

Typical swale depth (ft) for cost analysis (optional) = 0.0

Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration calculations: True



Data file name: W:\2025\Civil\12256011 - Ashland Apartments\3. Working Docs\B. Calculations\WinSLAMM\Ashland Apartments.mdb  
WinSLAMM Version 10.5.0  
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN  
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI\_AVG01.pscx  
Runoff Coefficient file name: C:\WinSLAMM Files\WI\_SL06 Dec06.rsvx  
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI\_GEO03.ppdx  
Residential Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std  
Institutional Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std  
Commercial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std  
Industrial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std  
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std  
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std  
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False  
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv  
Cost Data file name:  
Seed for random number generator: -42  
Study period starting date: 01/01/81      Study period ending date: 12/31/81  
Start of Winter Season: 12/02      End of Winter Season: 03/12  
Model Run Start Date: 01/01/81    Model Run End Date: 12/31/81  
Date of run: 06-27-2025    Time of run: 10:58:29  
Total Area Modeled (acres): 3.519  
Years in Model Run: 1.00

|                                          | Runoff<br>Volume<br>(cu ft) | Percent<br>Runoff<br>Volume<br>Reduction | Particulate<br>Solids<br>Conc.<br>(mg/L) | Particulate<br>Solids<br>Yield<br>(lbs) | Percent<br>Particulate<br>Solids<br>Reduction |
|------------------------------------------|-----------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-----------------------------------------------|
| Total of all Land Uses without Controls: | 138786                      | -                                        | 138.0                                    | 1196                                    | -                                             |
| Outfall Total with Controls:             | 121296                      | 12.60%                                   | 31.48                                    | 238.4                                   | 80.07%                                        |
| Annualized Total After Outfall Controls: | 121629                      |                                          |                                          | 239.1                                   |                                               |

Ref: 2025-172

**COUNCIL AGENDA:  
9.G. (7/29/2025)**

**SUBJECT:** Consider an Ordinance to Amend Chapter 781 (1764) Unified Development Ordinance, Ashland City Ordinances, Amending 6.7(C)(3)(e) General Requirements for Freestanding Light Fixtures (*Planning & Development*) Roll

**RECOMMENDATION:** Approval

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**DEPARTMENT OF ORIGIN:** Planning & Development

**CLEARANCES:** Planning and Development Director  
Plan Commission (Unanimously recommended approval at the July 15th, 2025 Plan Commission meeting)

**EXHIBITS:**

1. Proposed Ordinance 2025-2022
2. Plan Commission Staff Report - July 15, 2025
3. UDO 6.7 Lighting Standards - redlined to show change

**EXPENDITURES REQUIRED:** N/A

**AMOUNT BUDGETED:** N/A

**APPROPRIATION REQUIRED:** N/A

**TREASURER'S CERTIFICATE:** N/A

**COMPLIANCE WITH CHAPTER 51:** Plan Commission reviewed and unanimously recommended approval at their July 15, 2025 meeting.

**STATEMENT OF CONFORMANCE WITH COMPREHENSIVE PLAN:** The proposed text amendment is consistent with the Comprehensive Plan. It allows increased flexibility to property owners while leaving all UDO lighting standards in place and applicable to development within the two zoning districts. Though the Comprehensive Plan does not

specifically mention lighting standards, it does recognize the importance of land use regulations including zoning standards to preserve neighborhood character and mitigate potential negative impacts on adjacent properties.

#### **SUMMARY STATEMENT:**

Planning staff are proposing a text amendment to the UDO lighting standards to allow for increased freestanding light fixture mounting heights in two zoning districts. Within the past year, an applicant working on two projects within the City (parking lot upgrades at the Ashland Medical Center and Northwood Technical College) has proposed pole heights of up to 30 feet. Planning staff informed the applicant that under the current UDO standards, freestanding light fixtures are considered accessory structures and subject to the 20-foot accessory structure height maximum. Currently the UDO does not allow for increased height maximums for specific zoning districts.

The intent of the proposed ordinance amendment is to provide increased flexibility for freestanding light fixtures for properties in the Regional Commercial (RC) and Public Institutional (PI) zoning districts. The proposed language is a simple addition to the UDO lighting standards to allow for freestanding light fixtures, specifically in the RC and PI zoning districts, to have a maximum height of up to thirty (30) feet.

The Plan Commission reviewed the proposed ordinance amendment at the July 15th, 2025 Plan Commission meeting and unanimously recommended approval. The draft ordinance amendment and marked-up version are included in the Council packet along with the Plan Commission staff report. Please see the draft ordinance and Plan Commission staff report for more information.

## Sequential Ordinance No 2025-2022

### **ORDINANCE TO AMEND CHAPTER 781 (1764) UNIFIED DEVELOPMENT ORDINANCE (UDO), ASHLAND CITY ORDINANCES**

An Ordinance adopted by the Common Council for the City of Ashland at a regular meeting of July 29, 2025 for the purpose of amending Chapter 781 (1764) Unified Development Ordinance (UDO) and Zoning District Map, Ashland City Ordinances.

#### **SECTION I:**

**Section 6.7 Exterior Lighting** *shall be amended to read as follows:*

#### **C. General Requirements**

##### **3. General**

e. Freestanding light fixtures. Freestanding light fixtures are considered accessory structures and shall comply with Section 5.6 B: Accessory Structures, except that freestanding light fixtures in the Regional Commercial (RC) and Public Institutional (PI) districts may have a maximum height of thirty (30) feet. Such fixtures shall meet all other requirements of this Section.

#### **SECTION II**

Effective Date. *This ordinance shall take effect on the day after publication.*

PASSED: July 29, 2025  
PUBLISHED: August 7, 2025

\_\_\_\_\_  
Aldersperson

ATTEST:

\_\_\_\_\_  
Denise Oliphant, City Clerk

\_\_\_\_\_  
Matthew MacKenzie, Mayor

APPROVED AS TO FORM:

\_\_\_\_\_  
Tyler W. Wickman, City Attorney

*Find yourself next to the water.*



*City of Ashland, Wisconsin*

601 Main Street West Ashland, WI 54806 [www.coawi.org](http://www.coawi.org)

**DEPARTMENT OF  
PLANNING &  
DEVELOPMENT**

601 Main Street West  
Ashland, WI 54806

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## STAFF REPORT

Plan Commission – June 15<sup>th</sup>, 2025

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**Agenda Item # 6e:** Public Hearing and vote on Unified Development Ordinance Text Amendment

Applicant: Planning and Development Department

Staff Contact: Steven Wiley

### **Background**

Planning staff is proposing a text amendment to the UDO lighting standards to allow for increased freestanding light fixture mounting heights in two zoning districts. Within the past year an applicant working on two projects within the City (parking lot upgrades at the Ashland Medical Center and Northwood Technical College) has proposed pole heights of up to 30 feet. Planning staff informed the applicant that under the current UDO standards, freestanding light fixtures are considered accessory structures and subject to the 20-foot accessory structure height maximum. Currently the UDO does not allow for increased height maximums for specific zoning districts.

The intent of the proposed ordinance amendment is to provide increased flexibility for freestanding light fixtures for properties in the Regional Commercial (RC) and Public Institutional (PI) zoning districts. The proposed language is a simple addition to the UDO lighting standards to allow for freestanding light fixtures specifically in the RC and PI zoning districts to have a maximum height of up to thirty (30) feet.

### **Analysis**

The ordinance updates consist of revisions to the following section of the Unified Development Ordinance:

- Part 6 General Development Standards: Section 6.7(3)(5)

In all zoning districts freestanding light fixtures are considered accessory structures and shall comply with Section 5.6B Accessory Structures, except that freestanding light fixtures in the Regional Commercial (RC) and Public Institutional (PI) districts may have a maximum height of thirty (30) feet. Such fixtures shall meet all other requirements of the ordinance.

Since the April 22<sup>nd</sup>, 2025 Plan Commission meeting, an applicant approached the Planning Department with an application to upgrade an institutional parking lot including the facility's freestanding light fixtures. The current UDO lighting regulations state that freestanding light fixtures shall be subject to the accessory structure standards in the UDO. This limits the height of new freestanding light fixtures in all districts of the city to 20 feet. Staff and the applicant's engineer discussed that a number of commercial and institutional uses include existing freestanding light fixtures over 20 feet tall. After discussing internally,

Planning staff are of the opinion that an ordinance change to allow taller light fixtures in limited zoning districts of the City would be appropriate.

A redline draft of the proposed amendment is included in the packet materials.

### **Standards for UDO Text Amendment Review**

The City of Ashland's Unified Development Ordinance Section 3.4 (C) Unified Development Ordinance Text Amendment – Approval Criteria (and all subsections thereof), create the legal framework for UDO Text Amendments for the City of Ashland. The following decision criteria were used to review the proposed UDO Text Amendments:

#### **Consistency with the Comprehensive Plan**

The proposed text amendment is consistent with the Comprehensive Plan. It allows increased flexibility to property owners while leaving all UDO lighting standards in place and applicable to development within the two zoning districts. Though the Comprehensive Plan does not specifically mention lighting standards, it does recognize the importance of land use regulations including zoning standards to preserve neighborhood character and mitigate potential negative impacts on adjacent properties.

#### **Promotion of the public health, safety, morals, and general welfare and efficiency and economy in the process of development**

The proposed ordinance amendments promote the public health, safety, morals, and welfare. The intent of the lighting standards is “to specify practical and effective standards by which the obtrusive aspects of excessive and/or careless exterior light usage can be minimized, while preserving safety, security, and the nighttime use and enjoyment of property. These standards are intended to curtail the degradation of the night time visual environment by encouraging lighting practices that direct appropriate amounts of light where and when it is needed, increasing the use of energy-efficient sources, and decreasing the wastage of light, sky glow, and glare resulting from over-lighting and poorly shielded or inappropriately directed lighting fixtures.” The proposed text amendment would permit a ten-foot increase in maximum fixture height (from 20 feet to 30 feet) in the Regional Commercial (RC) and Public Institutional (PI) districts while still requiring all properties to meet lighting standards regarding illumination levels, light trespass, fixture types, and average to minimum light levels.

#### **Compatibility with present zoning and conforming uses of property and character of neighborhoods**

The proposed ordinance change would allow applicants increased flexibility to use taller freestanding light fixtures in the RC and PI zoning districts while leaving in place the standards for light trespass and full cut-off fixture requirement that are intended to prevent light spillover onto adjacent properties and light pollution. Staff does not have concerns regarding compatibility with present zoning and impact on neighborhood character. Staff would still require lighting plans to demonstrate compliance with the UDO lighting standards.

#### **Principles of Sustainability specified in Section 1.4: Integration of Principles of Sustainability**

The proposed UDO text amendment is consistent with the principles of sustainability. If an applicant can demonstrate compliance with the UDO lighting standards the greater height allowances would allow for potentially fewer light fixtures to light a greater area of parking surface on larger commercial and institutional properties within the RC and PI districts.

### **Recommendation**

Staff recommends APPROVAL of the proposed UDO text amendment.

Additionally, as a Public Hearing is scheduled for the proposed UDO text amendment review, the Plan Commission should hear all input from the public prior to making a determination. A Class 2 public notice was issued on June 26<sup>th</sup> and July 3<sup>rd</sup>.

*Approvals are based on background information provided by the applicant and known conditions. Deviations from this information may be considered a change in the application and reconsideration and possible revision to the approvals may be made by the Plan Commission and Common Council.*



## 6.7 Exterior Lighting

1. **Intent.** This Section is intended to specify practical and effective standards by which the obtrusive aspects of excessive and/or careless exterior light usage can be minimized, while preserving safety, security, and the nighttime use and enjoyment of property. These standards are intended to curtail the degradation of the night time visual environment by encouraging lighting practices that direct appropriate amounts of light where and when it is needed, increasing the use of energy-efficient sources, and decreasing the wastage of light, sky glow, and glare resulting from over-lighting and poorly shielded or inappropriately directed lighting fixtures.
2. **Compliance and Applicability.**
  1. **Compliance.** All exterior illuminating devices shall be installed in compliance with the provisions of this Ordinance and all applicable building and electrical codes.
  2. **General applicability.** All proposed new land uses, developments, buildings, structures, and/or additions and site modifications that require a development permit and/or building permit, as well as all proposed lighting fixtures for existing development, uses, or structures, shall comply with the provisions of this Section for all new exterior lighting. Where practical (as determined by the Designated Approval Authority), existing lighting associated with such development shall comply with the provisions of this Section.
  3. **Exemptions.** The following shall be exempt from the provisions of this Section. However, to the extent practical, compliance with the intent of this Section is encouraged.
    1. Existing lighting. All exterior lighting fixtures installed prior to the effective date of this Ordinance shall be exempt from this Section except that if any modification, construction, or change to an existing outdoor lighting fixture system is proposed to fifty (50) percent or more of the total number of fixtures, then all fixtures shall comply with the provisions of this Section.
    2. Street and highway lighting. Street and highway lighting shall comply with the standards set forth by the applicable jurisdiction relating to required street and highway lighting.
    3. State and federal facilities. Compliance with the intent of this Section at all state and federal facilities in the City of Ashland is encouraged, but not mandatory.
    4. Emergency lighting. Emergency lighting, used by police, firefighters, medical personnel, public works, and others is exempt from this Section as it pertains to the emergency situation.
    5. Swimming pool and fountain lighting. Underwater lighting used for the illumination of swimming pools and fountains is exempt from the lamp type and shielding standards of this Section.
    6. Low-Output Exterior Lighting. Exterior lighting fixtures are exempted from this ordinance where the lights are:
      1. Top-shielded or located below an eave; and
      2. Rated less than one thousand (1,000) lumens; and
      3. Individually and collectively in conformance with light trespass provisions of Section 6.7, C., 1., a: Light trespass.
    7. Flood, area, or security lighting. Flood lights or other area lights shall be exempt from the provisions of this ordinance only where:
      1. Lights are rated less than two thousand (2,000) lumens;

2. Lights are directed so as to limit direct glare onto adjacent occupied premises;
3. Light switching is automated, for example by motion sensor, so as to limit sustained light bursts to ten minutes or less and to limit the total ratio of unlighted-to-lighted time per night to no less than eight to one (8:1);
4. When activated, the illumination level at a distance of twenty-five (25) feet shall not exceed one-half (1/2) foot candles;
5. Light fixtures two thousand (2,000) lumens and over are not exempt. Exterior light fixtures above the eaves or attached to buildings or poles separate from the principal building are not exempt;
6. Examples of lamp types of less than two thousand (2,000) lumens include a 100 watt standard incandescent, a fifteen (15) watt cool fluorescent, a fifteen (15) watt compact fluorescent, or a eighteen (18) watt low pressure sodium lamp.
8. Lighted flags. Flags of the United States, State of Wisconsin, City of Ashland and any other flag adopted or sanctioned by an elected legislative body of competent jurisdiction are exempt from the provisions of this Section. All other outdoor lighted flags, including, but not limited to, decorative and commercial flags shall comply with this Section. Property owners are encouraged to lower all flags at sunset and during inclement weather.
9. Holiday lighting. Holiday lighting, as defined, is exempt from the provisions of this Section.
10. Search and spot lights. Approved search and spot lights for temporary use, shall be exempt from the lamp type and shielding provisions of this Section.
11. Towers. Legally required safety lighting for towers shall be exempt from the provisions of this Section.
12. Airports. Airport related lighting shall be exempt from the provisions of this Section where the lighting is used for air safety reasons.
3. **General Requirements.**
  1. **General.** All exterior lighting fixtures (except those specifically exempted in this Section) installed and thereafter maintained shall comply with the following:
    1. Light trespass. The maximum allowable light trespass shall be one-half (1/2) footcandle four (4) feet above the ground. The point of measurement of this offending light shall be any point at the outer wall of an adjacent building occupied for residential or public use, or at any point greater than ten (10) feet from the adjacent parcel line. This measurement shall not include any ambient, natural light.
    2. Cutoff or shields. All fixtures greater than one thousand (1,000) initial lumens (equivalent to 70 watts incandescent) shall be full cutoff, or shall be shielded or installed so that there is not a direct line of sight between the light source or its reflection and a point five (5) feet or higher above the ground at the parcel line. The light source shall not be of such intensity so as to cause discomfort or annoyance.
    3. Lamp types. Any exterior lighting fixture installed on a parking lot, parking structure, or outdoor merchandise sales area shall use high pressure sodium, low pressure sodium, metal halide, LED, fluorescent lamps, or other type approved by the Zoning Administrator or Designated Authorized Agent.

4. Commercial business hours of lighting. The lighting system shall be extinguished or reduced to fifty (50) percent no later than thirty (30) minutes after the close of business for the day or after the end of normal office hours for the majority of employees. All property owners are encouraged to turn off all unnecessary exterior lighting.
5. Freestanding light fixtures. Freestanding light fixtures are considered accessory structures and shall comply with Section 5.6 B: Accessory Structures, except that freestanding light fixtures in the Regional Commercial (RC) and Public Institutional (PI) districts may have a maximum height of thirty (30) feet. Such fixtures shall meet all other requirements of this Section.
2. **Maintenance.** All exterior lighting fixtures shall be maintained according to approved plans.
3. **Trees and shrubs.** Trees and shrubs shall not be located where they significantly reduce or block the lighting, intended for safety, of parking facilities or streets.
4. **Allowable uses.** Exterior lighting fixtures may be used to illuminate buildings and structures; recreational areas, sports fields and courts; parking lots; parking structures, garages, or ramps; landscape areas; outdoor merchandise sales; building overheads and open canopies. Exterior lighting fixtures may be installed to provide building and parking lot security.
4. **Specific Design Requirements.**
  1. **Non-residential open parking facilities.** Horizontal illuminance for open parking facilities shall comply with the standards specified in Table 6.7.A and Table 6.7.B. The illumination requirements of an open parking facility depend on the amount of usage the facility receives. The following levels of activity are herein to reflect both vehicular traffic and pedestrian activity:
    1. High activity. Facilities for major or league athletic events or major cultural or civic events or similar activities.
    2. Moderate activity. Shopping centers, retail parking areas, hospital and clinic parking, or similar activities.
    3. Low activity. Employee parking, office parks, religious institutions, or similar activities.

| Table 6.7.A General Parking and Pedestrian Areas Illuminance Standards for Open Parking Facilities |                                 |                                         |                                    |                                     |
|----------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------|------------------------------------|-------------------------------------|
| Level of Activity                                                                                  | Minimum Footcandles on Pavement | Maximum Average Footcandles on Pavement | Maximum Uniformity Ratio (Avg:Min) | Watts per Square Foot Lighting Load |
| High                                                                                               | 0.6 footcandle                  | 3.75 footcandle                         | 5:1                                | 0.12                                |
| Moderate                                                                                           | 0.4 footcandle                  | 2.5 footcandle                          | 5:1                                | 0.10                                |
| Low                                                                                                | 0.2 footcandle                  | 1.5 footcandle                          | 5:1                                | 0.08                                |

| Table 6.7.B Driveway Area Illuminance Standards for Open Parking Facilities |                                 |                                         |                                    |
|-----------------------------------------------------------------------------|---------------------------------|-----------------------------------------|------------------------------------|
| Level of Activity                                                           | Minimum Footcandles on Pavement | Maximum Average Footcandles on Pavement | Maximum Uniformity Ratio (Avg:Min) |
| High                                                                        | 0.67 footcandle                 | 2.5 footcandle                          | 5:1                                |
| Moderate                                                                    | 0.33 footcandle                 | 1.5 footcandle                          | 5:1                                |
| Low                                                                         | 0.125 footcandle                | 1.0 footcandle                          | 5:1                                |

2. **Commercial residential open parking facilities.** A parking facility for more than three (3) cars on a residential site should be lighted to provide at least 0.25 footcandles on any surface with an average illumination level of at least 0.75 footcandles. Exterior light

fixtures shall be designed and installed to minimize light trespass. In addition, the uniformity ratio between the average illumination and minimum illumination shall be no greater than 4:1.

3. **Building and structure illumination.** An exterior lighting system for illuminating buildings and structures shall have a maximum connected lighting load of five (5) watts per lineal foot. Watts shall mean lamp wattage and ballast consumption. Such lighting shall be shielded or installed so as to illuminate the building and not the sky.
4. **Outdoor merchandise sales.** For an outdoor merchandise sales area and outdoor vehicle sales, the maximum initial illumination level in seventy-five (75) percent of the parcel shall not exceed twenty (20) footcandles. A contiguous area not to exceed twenty-five (25) percent of the parcel may be illuminated to a level that shall not exceed forty (40) footcandles.
5. **Outdoor canopy.** The maximum initial illumination level under an outdoor canopy shall not exceed fifty (50) footcandles at any point.
6. **LED light bands.** Dimmable technology shall be installed and utilized to adjust the light output of permitted LED light bands based on the ambient light such that the light band dims automatically when it is less bright outside.