



Urban Forestry Commission

Cravath Lakefront room 2nd floor 312 West
Whitewater Str, Whitewater, WI, 53190 *In Person
and Virtual

Monday, January 22, 2024 - 4:30 PM

Citizens are welcome (and encouraged) to join our webinar via computer, smart phone, or telephone.
Citizen participation is welcome during topic discussion periods.

Urban Forestry Commission
Jan 22, 2024, 4:30 – 6:30 PM (America/Chicago)

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AGENDA

CALL TO ORDER

ROLL CALL

INTRODUCTION OF KEVIN BOEHM

APPROVAL OF MINUTES

1. Approval of Minutes from October 23, 2023 Meeting.

HEARING OF CITIZEN COMMENTS

No formal Committee action will be taken during this meeting although issues raised may become a part of a future agenda. Participants are allotted a three minute speaking period. Specific items listed on the agenda may not be discussed at this time; however, citizens are invited to speak to those specific issues at the time the Committee discusses that particular item.

To make a comment during this period, or during any agenda item: On a computer or handheld device, locate the controls on your computer to raise your hand. You may need to move your mouse to see these controls. On a traditional telephone, dial *6 to unmute your phone and dial *9 to raise your hand.

TREASURER'S REPORT

STAFF REPORT

CONSIDERATIONS / DISCUSSIONS / REPORTS

- [2.](#) Discussion and possible Approval of the Landscape Plans for Dollar Tree, located at the corner of Indian Mound Parkway and W. Main Street Parcel #/A503300001.
- [3.](#) Discussion and possible approval of the Landscape Plans for Aldi's to be located at 1370 W. Main St., Parcel # WUP 00159.
- 4. Discussion to add a fourth Purple Martin house.
- [5.](#) Discussion and possible approve of the Landscape Plans for Starbucks located at 1280 W Main St., Parcel # /A170900002.

TREE CITY

- [6.](#) Future of Territorial Oak felled timber and possible projects relating to it.
- [7.](#) Discussion of the 2024 Tree Sale
 - Concerning Numbers
 - Types of Trees
 - Date of Sale
- 8. Arboretum Grant Update
- 9. Kiwanis Kids Program recap report from October 30, 2023.
- 10. Pulse Sign order and installation plan

BIRD CITY

- 11. Discussion of 2022 approval

NEW BUSINESS

- [12.](#) Milkweed Protection Discussion
- 13. Protection of oaks from library expansion

FUTURE AGENDA ITEMS

ADJOURNMENT

A quorum of the Common Council may be present. This notice is given to inform the public that no formal action will be taken at this meeting.

Anyone requiring special arrangements is asked to call the Office of the City Manager / City Clerk (262-473-0102) at least 72 hours prior to the meeting.



Urban Forestry Commission Item 1.

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Urban Forestry Commission
Oct 23, 2023, 4:30 – 6:30 PM (America/Chicago)

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MINUTES

CALL TO ORDER

Meeting was called to order at 4:32 p.m. by

ROLL CALL

Present: Sherry Stanek, David Stone, Nicholas Alt, Rose Mary Leaver, Patrick Taylor, Bill Chandler, Andrew Beckman Absent: Ryan Tevis Guest Kori Oberle, Dollar Tree Reps, Andrea Lemken and Civil Engineer Andy Gebhart

APPROVAL OF URBAN FORESTRY SEPTEMBER 25, 2023 MINUTES

1. Approval of September 25, 2023 Minutes

Motion by N. Alt second by D. Stone. Passed unanimously by voice vote.

HEARING OF CITIZEN COMMENTS

No Citizen comments.

TREASURER'S REPORT

Balance is \$1,014.09. No action since last month.

STAFF REPORTS

2. Territorial Oak

Beckman present that the territorial oak is coming down 10-24-2023. Markers taken down. Traffic Flow was discussed. Wood will be going to City garage storage until plan for playground and possible slice for arboretum (slab size needs to be determined). Largest chunks possibly will be preserved. This will take most of the day.

2024 Terrace Tree Order

Order was put in to secure the Butternut from Johnson's. We have 48 trees for spring delivery. Will check later about any price update. Butternut is planned for a park not a terrace. Trees ordered are local and varied. No longer mono-cultures.

CONSIDERATIONS / DISCUSSIONS / REPORTS

3. Review and possible approval of the Landscape Plan for Dollar Tree.

Stanek mention that there are only 5 honey locust trees. There is more than a than a 15 ft buffer on all sides. So little detail on plans and city ordinance and landscape guidelines.

Stone: Usually a lot more detail vegetation.

Alt: One type of tree in 5 spots and calling it landscape Doesn't seem that is not enough.

Dollar tree representative thought they were following all guidelines, but if there is a additional requirements, than would like to see it.

Stanek: Building in wetland area and what are plans to mitigate

Dollar tree: Buy credits from the DNR.

Dollar: Will meet all requirements. If there are additional guidelines then will work with City to do the right thing.

Conclusion: Not approved as is, will work together to make it work.

TREE CITY

4. Tree Sale:

Alt needs to get the last 2 years. Would like to get a number of trees for spring 2024. This past year we sold all but 4 and those were put into parks. The year before we sold out. Would like the ability to do a pre-sale on line as a possible.

Chandler not sure about presale because advertising and delivery. Leaning toward not doing a presale online.

New parks director we can't approved city money. The park director needs to add to the budget.

Stanek: if people want to order tree they can from other sources. Jim wont' all us to use to use his truck to transport trees. Goal of UFC is to get trees into community not to make money, just cover the expenses.

Suggestions for moving forward. Still want community tree sale. Maybe a different date no arbor day and change to a Friday and Saturday.

Alt: Order list has been modified to reflect sales from previous years. Ok to research presale.

Reconsider whether market has been tapped.

Spring and increase adversting with approval of the City.

Alt and Stanek to meet with Park Director.

Northern White Cedar is the densest tree.

Page 18 is cost and trees.

Motion by Taylor to have tree sale with 250 trees to be conducted as in the past, looking for later in spring for pending weather. Pending approval of the City. Second by Alt. Passed unanimously by voice vote.

6. Arboretum Update

Trying to finish up grant needs to be satisfied.

7. Update on Pulse welcome signs

Signs will now be delivered November 4th. Signs paid for. Pulse Company has been difficult to work with.

BIRD CITY

8. 2022 Certification for Bird City Application Discussion

Certification process was discussed. There were a lot of questions about not adding ordinance. City Manager to read resolution regarding Bird City.

NEW BUSINESS

- 9. Milkweed Protection Discussion
Put off till next time.
- 10. Protection of oaks from library expansion
Final approval by the planning board has not been done. Protection still possible.

New item for Next Agenda

Funding for fourth purple martin house.

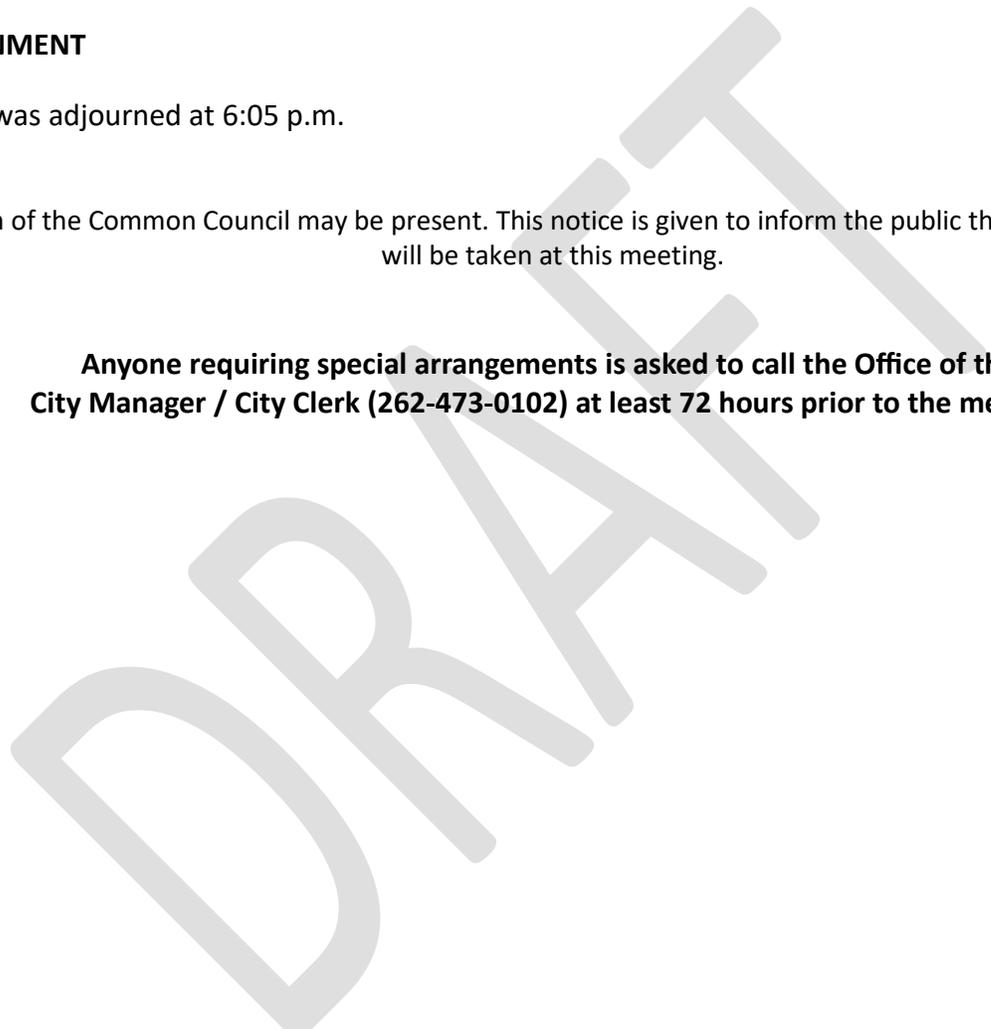
Next Meeting is November 27, 2023

ADJOURNMENT

Meeting was adjourned at 6:05 p.m.

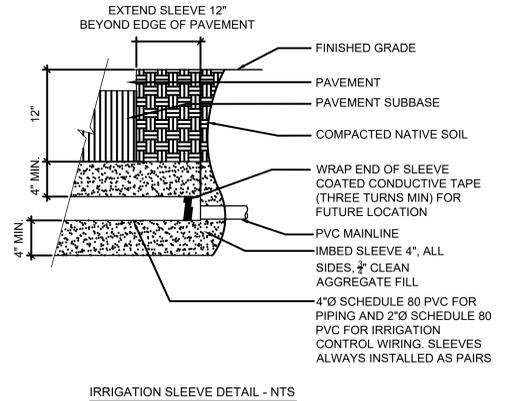
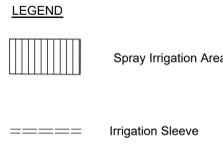
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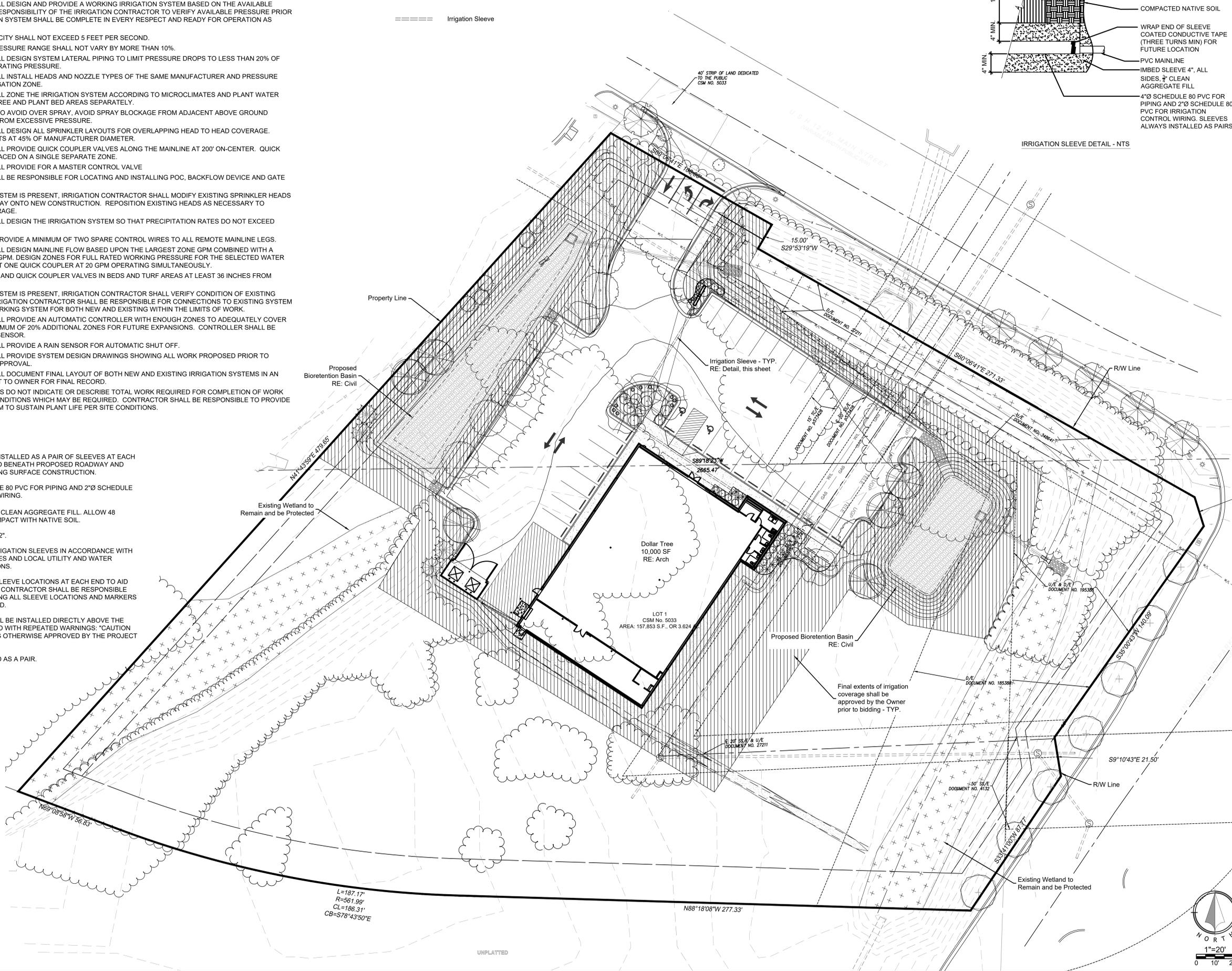


IRRIGATION NOTES

- IRRIGATION SHALL BE PROVIDED THROUGHOUT THE LIMITS SHOWN.
- IRRIGATION CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF ALL UTILITIES AND MAKING NECESSARY ADJUSTMENTS TO THE IRRIGATION SYSTEM TO ACCOMMODATE THE INFRASTRUCTURE.
- IRRIGATION CONTRACTOR SHALL COORDINATE SLEEVE INSTALLATION TO OCCUR PRIOR TO CONSTRUCTION OF PAVEMENT, WALL OR OTHER SURFACE IMPROVEMENTS.
- IRRIGATION CONTRACTOR SHALL DESIGN AND PROVIDE A WORKING IRRIGATION SYSTEM BASED ON THE AVAILABLE PRESSURE. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO VERIFY AVAILABLE PRESSURE PRIOR TO SYSTEM DESIGN. IRRIGATION SYSTEM SHALL BE COMPLETE IN EVERY RESPECT AND READY FOR OPERATION AS SATISFACTORY TO CONTRACT.
- IRRIGATION PIPING FLOW VELOCITY SHALL NOT EXCEED 5 FEET PER SECOND.
- IRRIGATION SYSTEM STATIC PRESSURE RANGE SHALL NOT VARY BY MORE THAN 10%.
- IRRIGATION CONTRACTOR SHALL DESIGN SYSTEM LATERAL PIPING TO LIMIT PRESSURE DROPS TO LESS THAN 20% OF THE AVERAGE SPRINKLER OPERATING PRESSURE.
- IRRIGATION CONTRACTOR SHALL INSTALL HEADS AND NOZZLE TYPES OF THE SAME MANUFACTURER AND PRESSURE RATING WITHIN THE SAME IRRIGATION ZONE.
- IRRIGATION CONTRACTOR SHALL ZONE THE IRRIGATION SYSTEM ACCORDING TO MICROCLIMATES AND PLANT WATER REQUIREMENTS. ZONE TURF, TREE AND PLANT BED AREAS SEPARATELY.
- DESIGN IRRIGATION SYSTEMS TO AVOID OVER SPRAY, AVOID SPRAY BLOCKAGE FROM ADJACENT ABOVE GROUND UTILITIES AND AVOID MISTING FROM EXCESSIVE PRESSURE.
- IRRIGATION CONTRACTOR SHALL DESIGN ALL SPRINKLER LAYOUTS FOR OVERLAPPING HEAD TO HEAD COVERAGE. DESIGN ALL SPRINKLER LAYOUTS AT 45% OF MANUFACTURER DIAMETER.
- IRRIGATION CONTRACTOR SHALL PROVIDE QUICK COUPLER VALVES ALONG THE MAINLINE AT 200' ON-CENTER. QUICK COUPLER VALVES SHALL BE PLACED ON A SINGLE SEPARATE ZONE.
- IRRIGATION CONTRACTOR SHALL PROVIDE FOR A MASTER CONTROL VALVE
- IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND INSTALLING POC, BACKFLOW DEVICE AND GATE VALVES.
- WHEN EXISTING IRRIGATION SYSTEM IS PRESENT, IRRIGATION CONTRACTOR SHALL MODIFY EXISTING SPRINKLER HEADS & NOZZELS TO AVOID OVERSPRAY ONTO NEW CONSTRUCTION. REPOSITION EXISTING HEADS AS NECESSARY TO ACHIEVE HEAD TO HEAD COVERAGE.
- IRRIGATION CONTRACTOR SHALL DESIGN THE IRRIGATION SYSTEM SO THAT PRECIPITATION RATES DO NOT EXCEED INFILTRATION RATES.
- IRRIGATION CONTRACTOR TO PROVIDE A MINIMUM OF TWO SPARE CONTROL WIRES TO ALL REMOTE MAINLINE LEGS.
- IRRIGATION CONTRACTOR SHALL DESIGN MAINLINE FLOW BASED UPON THE LARGEST ZONE GPM COMBINED WITH A SINGLE QUICK COUPLER AT 20 GPM. DESIGN ZONES FOR FULL RATED WORKING PRESSURE FOR THE SELECTED WATER DELIVERY MEDIA WITH AT LEAST ONE QUICK COUPLER AT 20 GPM OPERATING SIMULTANEOUSLY.
- LOCATE VALVE BOXES, VALVES AND QUICK COUPLER VALVES IN BEDS AND TURF AREAS AT LEAST 36 INCHES FROM HARDSCAPE EDGES.
- WHEN EXISTING IRRIGATION SYSTEM IS PRESENT, IRRIGATION CONTRACTOR SHALL VERIFY CONDITION OF EXISTING SYSTEM PRIOR TO BIDDING. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTIONS TO EXISTING SYSTEM AND SHALL PROVIDE FOR A WORKING SYSTEM FOR BOTH NEW AND EXISTING WITHIN THE LIMITS OF WORK.
- IRRIGATION CONTRACTOR SHALL PROVIDE AN AUTOMATIC CONTROLLER WITH ENOUGH ZONES TO ADEQUATELY COVER ALL PROPOSED ZONES & A MINIMUM OF 20% ADDITIONAL ZONES FOR FUTURE EXPANSIONS. CONTROLLER SHALL BE CAPABLE OF UTILIZING A RAIN SENSOR.
- IRRIGATION CONTRACTOR SHALL PROVIDE A RAIN SENSOR FOR AUTOMATIC SHUT OFF.
- IRRIGATION CONTRACTOR SHALL PROVIDE SYSTEM DESIGN DRAWINGS SHOWING ALL WORK PROPOSED PRIOR TO CONSTRUCTION, FOR OWNER APPROVAL.
- IRRIGATION CONTRACTOR SHALL DOCUMENT FINAL LAYOUT OF BOTH NEW AND EXISTING IRRIGATION SYSTEMS IN AN AS-BUILT DRAWING AND SUBMIT TO OWNER FOR FINAL RECORD.
- DRAWINGS AND SPECIFICATIONS DO NOT INDICATE OR DESCRIBE TOTAL WORK REQUIRED FOR COMPLETION OF WORK AND MAY NOT COVER SOME CONDITIONS WHICH MAY BE REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A WORKING IRRIGATION SYSTEM TO SUSTAIN PLANT LIFE PER SITE CONDITIONS.



- SLEEVE NOTES**
- IRRIGATION SLEEVES SHALL BE INSTALLED AS A PAIR OF SLEEVES AT EACH LOCATION AND SHALL BE INSTALLED BENEATH PROPOSED ROADWAY AND PARKING AREAS PRIOR TO BEGINNING SURFACE CONSTRUCTION.
 - PIPE SLEEVE TO BE 4" SCHEDULE 80 PVC FOR PIPING AND 2" SCHEDULE 80 PVC FOR IRRIGATION CONTROL WIRING.
 - IMBED PIPE 4", ALL SIDES, WITH 3" CLEAN AGGREGATE FILL. ALLOW 48 HOURS TO SETTLE; BACKFILL & COMPACT WITH NATIVE SOIL.
 - MINIMUM TRENCH WIDTH TO BE 12".
 - CONTRACTOR SHALL INSTALL IRRIGATION SLEEVES IN ACCORDANCE WITH APPLICABLE STATE PLUMBING CODES AND LOCAL UTILITY AND WATER MANAGEMENT DISTRICT REGULATIONS.
 - CONTRACTOR SHALL MARK ALL SLEEVE LOCATIONS AT EACH END TO AID FUTURE IRRIGATION INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING ALL SLEEVE LOCATIONS AND MARKERS DURING THE CONSTRUCTION PERIOD.
 - COATED CONDUCTIVE TAPE SHALL BE INSTALLED DIRECTLY ABOVE THE SLEEVE AND SHALL BE PRE-PRINTED WITH REPEATED WARNINGS: "CAUTION WATER LINE BURIED BELOW", OR AS OTHERWISE APPROVED BY THE PROJECT ENGINEER.
 - SLEEVES ARE ALWAYS INSTALLED AS A PAIR.



Construction Documents

22-0111-24
Dollar Tree
Whitewater, Walworth County, WI

Irrigation Coverage Plan

NO.	DATE	REVISION
4	10/20/23	Client Comments
3	10/11/23	SideWalk Revision
2	10/11/23	Driveway Revision
1	10/20/23	City Comments
0	8/18/23	Initial Summary

DRAWN BY: AFB
CHECKED BY: PNC

Renaissance Infrastructure Consulting
3653 PERDUE LANE
LESLIE, WISCONSIN 53033
913.317.9500
WWW.RICONSULT.COM

WI Certificate of Authority: R008918



Sheet
C6.5

aldmkn
 Nov 17, 2023 11:03am
 C:\Users\aldrick\OneDrive\Documents\Drawings\2022\2022-0111-24\CD\Irrigation.dwg

SECTION 329200 - LAWN

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following areas of Work:

- 1. Fine grading and preparing lawn areas.
2. Furnishing and applying topsoil.
3. Furnishing and applying limited soil amendments.
4. Sodding new lawn areas.
5. Reconditioning existing lawn areas.
6. Replanting unsatisfactory or damaged lawns.
7. Maintenance.

B. Related Work Specified Elsewhere:

- 1. Trees and Shrubs: SECTION 329300

1.2 REFERENCES

A. Applicable Standards:

- 1. American Society for Testing and Materials (ASTM) - Equivalent AASHTO standards may be substituted as approved.

1.3 SUBMITTALS

- A. Certification of each seed mixture for sod, identifying the sod source, including name and telephone number of supplier. Seed for sod must be sod quality and is to be gold tag standards with 0% other crop seed and 0% weed seed.
B. Certification of each seed type for Native Grass mixture identifying the seed source, including name and telephone number of supplier.
C. Landscape Architect has final approval of sod grower, no exceptions.

D. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and address of architects and owners, and other information specified.

E. Material test reports from qualified independent testing agency indicating and interpreting test results relative to compliance of the following materials with requirements indicated.

- 1. Agronomic and biological analysis of existing surface soil.
2. Agronomic and biological analysis of all imported topsoil.

F. Maintenance instructions recommending procedures to be performed by Owner for maintenance of landscaping during an entire year. Submit before expiration of required maintenance periods.

1.4 QUALITY ASSURANCE

A. Qualifications: A qualified subcontractor shall employ or provide a qualified installation manager who meets any or all of the required qualifications;

- 1. Bachelor of Science Degree in Horticulture, Botany, Soil Physics, Agronomy, General Agriculture, Agricultural or Biological Engineering, or a related field.
2. An individual with field experience as approved by the Landscape Architect or Registered Engineer.

B. Installer Qualifications: Engage an experienced Installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful turf establishment.

1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on the Project site during times that turf planting is in progress.

C. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to Landscape Architect's satisfaction, based on evaluation of agency-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.

D. Topsoil Analysis: Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter by Loss on ignition, inorganic matter (proportion of silt, clay, and sand), deleterious material including biological contamination, pH, mineral and plant-nutrient content of topsoil, and cationic exchange capacity.

- 1. Report suitability of topsoil for grass growth from horticulturist. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce satisfactory topsoil.

1.5 DELIVERY, STORAGE AND HANDLING

A. Sod: Harvest, deliver, store, and handle sod according to the requirements of the Turfgrass Producers International (TPI) "Specifications for Turfgrass Sod Materials and Transplanting/Installing."

B. Seed & Native Seed: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.

1.6 COORDINATION AND SCHEDULING

A. Planting Season: Install sod during normal planting seasons for type of lawn work required. Correlate planting with specified maintenance periods to provide required maintenance from date of Substantial Completion.

B. Native Seed Planting Season: Spring Planting Season: April 1st - June 1st; Dormant Planting Season: December 15th - March 31st. Planting at any other time will require the use of a cover crop to be approved by Owner or Landscape Architect.

C. Weather Limitations: Proceed with work only when existing and forecast weather conditions are suitable for work.

1.7 MAINTENANCE

A. Lawns/turf areas: Begin maintenance of turfgrass immediately after each area is planted and continue until acceptable establishment, but for no less than the following periods:

- 1. Sodded Lawns: 90 days from the date of Substantial Completion.
2. Seeded Lawns: 90 days from the date of Substantial Completion.
3. Native Grass Areas: 12 months from the date of Substantial Completion.

B. Maintain and establish lawns by watering, fertilizing, weeding, mowing, trimming, replanting and other operations per this Specification.

C. Watering- Subcontractor shall be responsible of watering the sod as required by this Specification. Subcontractor may use irrigation system to accomplish watering. Subcontractor shall be responsible for coordinating with irrigation contractor for scheduling of irrigation system to provide required water needs.

D. Post-fertilization: Apply fertilizer to lawn after first mowing and when grass is dry.

PART 2 - PRODUCTS

2.1 TOPSOIL

A. Standard Topsoil: ASTM 5268, pH range 5.5 to 7. Free of stones 1 inch or larger in any dimension, and other extraneous materials harmful to plant growth.

B. Compost Soil Blend: As located in plan, areas denoted as Compost Soil Blend shall be provided as 50% Standard Topsoil or Native Topsoil and 50% Compost for a depth of 12". pH range shall be 5.5 to 7.

1. Topsoil Source: Reuse surface soil stockpiled on the site where available. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement with imported topsoil when quantities are insufficient. Imported topsoil shall meet the requirements of this specification for composition. Clean all topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.

2. Compost Soil Blend shall have a minimum infiltration rate between 0.25" to 0.5" per hour.

2.2 LIMITED SOIL AMENDMENTS

A. Herbicides: EPA registered and approved, of type recommended by manufacturer and approved by the Landscape Architect.

B. Compost: Well-composted, stable and weed-free organic matter, pH range of 5.5-8; moisture content 35-55 percent by weight; 100 percent passing through 3/4-inch sieve; soluble salt content less than 4 decimeqsm/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings.

C. Water: Potable.

2.3 GRASS SEED:

A. Provide fresh, clean, new crop seed complying with tolerance for purity and germination established by Official Seed Analysis of North America and as required below.

B. Be labeled according to the U.S. Department of Agriculture Federal Seed Act and shall be furnished in containers with tags showing seed mixture, purity, germination, weed content, name of seller, and date on which seed was tested.

C. Seed Mix: 10% Bluegrass & 90% Turf-Type Tall Fescue, composed of an equal mix of three or four compatible species of bluegrass and one or two species of fescue. The mixture shall not include any varieties of the slower growing "Dwarf" fescue types.

- 1. Fescue Varieties, or approved equal Apache, Arid, Austin, Bonanza, Carefree, Cheifan, Cimmaron, Cochie, Falcon, Guardian, Houndog, Jaguar II, Maverick II, Mustang, Olympic, Phoenix, Rebel II, Rebel 3D, Safari, Shenandoah, Thoroughbred, Titan, Tribute, Vegas

- 2. Bluegrass Varieties, or approved equal Asset, Kenblue, Midnight, Nassau, Ruby II, Troy

3. Moldy seed or seed that has been damaged in storage shall not be used.

4. Landscape Architect shall have final approval of all seed blends and mixtures.

D. Cover Crop: As approved by Landscape Architect, Contractor shall submit mix for approval.

2.4 NATIVE GRASSES

D. Fresh, clean, dry, pure-live seed complying with Kansas Department of Agriculture laws for purity, germination, and noxious weed tolerances:

1. Seed Components: Provide seed of grass and forb species and varieties, proportions by weight, and minimum percentages of purity, germination, and maximum percentage of weed seed as indicated on Schedules at the end of this Section. Seed lots, unlabeled, shall be provided to horticulturist in original unopened containers for agro-histological determination and re-testing. The Master label shall be produced by the horticulturist, and shall be sealed according to the appropriate laws and regulations

2. All seed must be tested by a registered seed technologist per AOSA methods and meet all requirements established by the Missouri Department of Agriculture. The contractor will provide documentation with the seed shipment for the following information;

- a. State of Origin
b. Year of Harvest
c. Genus species Identification
d. Seed Lot #
e. Packaged Quantity
f. Identification of Seed Supplier
g. Supplier Certification Number
h. State of Supplier Registration
i. Percent PLS Per Seed Lot
j. Percent Germination
k. Percent Hard Seed
l. Percent Foreign Matter
m. Percent Weed Seed
n. Identification of Noxious Weed Seed
o. Date of Seed Testing
p. Identification of Seed Testing Company

3. Landscape Architect has final approval, no exceptions.

4. Seed Source: Shall be submitted to Landscape Architect for approval.

B. Native Seed Mix (Or Approved Equal): 2 lbs / 1,000 SF

- 1. Lower Basin Native Seed: Detention Basin Seed Mix by Prairie Moon Nursery (ph. 886-417-8156), Low Native Mix by CritSite (ph. 816-331-9738) or Approved Equal.
2. Upper Basin Native Seed: Tallgrass Exposed Clay Subsoil Seed Mix by Prairie Moon Nursery (ph. 886-417-8156), Painted Prairie Seed Mix by CritSite (ph. 816-331-9738) or Approved Equal.

C. Native Seed Cover Crop

1. The use of a Cover Crop to help with the establishment of Native Grasses shall be approved by the Landscape Architect prior to use. Contractor shall submit Cover Crop seed mixes prior to installation.

2.5 FERTILIZER (Turfgrass only, do not fertilize Native Seed areas)

A. Commercial fertilizer of neutral character, with some elements derived from organic sources, containing not less than 4 lbs. of actual nitrogen per 1,000 square feet of lawn area. Provide nitrogen in form that will be available to the lawn under the following products or approved equal. During the maintenance period the following fertilizers shall be used or approved equal:

- 1. Starter Fertilizer: Dyna Green Starter 12-20-06 with Fertil Blend. Total nitrogen: 7.83% ammoniacal, 4.17% urea; Phosphate: Ammonium phosphate 20%; Potash MOP: 6%; Iron: 1%; SGN 200
2. Spring Fertilizer: Dyna Green Long Lasting 22-0-8 with 50% UMAXX, 1.757% Viper & Fertil Blend. Total nitrogen: 22% urea with slowly available nitrogen from 50% UMAXX; Potash MOP: 8%; Iron: 1%; SGN 200. Apply March to June.
3. Fall Fertilizer: Dyna Green Winterizer 18-0-0 with 1.434% Surge & Fertil Blend. Total nitrogen: 18% urea; Potash MOP: 8%; Iron: 1%; SGN 200. Apply September to October.

B. Deliver to site in labeled bags or containers.

2.6 MYCORRHIZAL INOCULANT

A. The Subcontractor shall utilize an organic, mycorrhizal inoculant for soil prep. The material shall be granular and applied per manufacturer's recommendation. M-Roots w/ Mycorrhiza or approved equal. For exact finish, insert names of coating manufacturers and products.

2.7 STRAW MAT

A. Provide a biodegradable single net, two sided organic straw mat with functional longevity of 10-12 months by Greenfix Amerca, Product WS072 Double Net Straw or Approved Equal.

B. Utilize Straw Mat within all seed areas on slopes greater than 4:1.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive lawns for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 SOIL PREPARATION

A. Dispose of any growth, rocks, or other obstructions which might interfere with tilling, seeding, sodding, or later maintenance operations. Remove stones over 38 mm (1 1/2 inches) in any dimension and sticks, rubbish, and other extraneous matter.

B. Thoroughly loosen and pulverize topsoil to a depth of at least 100 mm (4 inches) for all standard turfgrass areas. Areas denoted as "Compost Soil Blend", shall be loosened and amended to a depth of 12 inches

C. Grade lawn areas to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges and fill depressions to meet finish grades. Limit fine grading to areas which can be planted within immediate future.

D. Moisture prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry off before planting of lawns. Do not create a muddy soil condition.

E. Restore prepared areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.

F. Spread top soil mixture to depth required to meet thickness, grades, and elevations indicated after light rolling and natural settlement.

G. Allow for sod thickness in areas to be sodded.

H. Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been altered or disturbed by excavation, grading, or stripping operations, prepare soil for lawn planting as follows:

- 1. Remove and dispose of existing grass, vegetation, and turf. Do not turn over into soil being prepared for lawns.
2. Till surface soil to a depth of at least 6 inches. Apply required soil amendments and initial fertilizers and mix thoroughly into top 4 inches of soil. Trim high areas and fill in depressions. Till soil to a homogeneous mixture of fine texture.
3. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
4. Remove waste material, including grass, vegetation, and turf, and legally dispose of it off the Owner's property.

3.4 SEEDING NEW LAWNS (Turf-Type Seed):

A. Do not use wet seed or seed which is moldy or otherwise damaged in transit or storage.

B. Sow seed with a Brillion type seeding machine or where applicable and restricted by steep slopes or other areas not accessible to the seeding machine, broadcast or drop seed methods may be used. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in 2 directions at right angles to each other, and 3 directions in high maintenance areas, as directed by the Engineer.

C. Sow not less than rate of 8 pounds per 1,000 square feet.

D. Rake seed lightly into top 1/8" inch of soil, roll lightly, and water with fine spray.

E. Rake seed lightly into top 1/8" inch of topsoil, roll lightly, and water with fine spray.

F. Protect seeded slopes exceeding 1:4 against erosion with erosion-control blankets installed and stapled according to manufacturer's recommendations.

G. Protect seeded areas with slopes less than 1:4 against erosion by spreading mulch as specified after completion of seeding operations. Spread uniformly to form a continuous blanket over seeded areas. Spread by hand, blower, or other suitable equipment.

H. Protect seeded areas against hot, dry weather or drying winds by applying peat mulch within 24 hours after completion of seeding operations. Soak and scatter uniformly to a depth of 3/16 inch thick and roll to a smooth surface.

I. Seasonal Limitations:

- 1. Perform seeding only during the following seasons:
a. Fall Seeding: August 15th to October 1st.
b. Spring Seeding: March 15th to May 15th
c. Recommend seeding when temperatures ranging from 50 degrees Fahrenheit to 70 degrees Fahrenheit for a minimum 6 week period.

J. Methods of Application:

- 1. Dry Seeding: Spreader or seeding machine.
2. Hydroseeding: Mix seed, fertilizer and pulverized mulch with water and constantly agitate. Do not add seed to water more than 4 hours before application:
a. On slopes of 2 horizontal to 1 vertical or flatter, apply seed separately from fertilizer. Cover seed with soil to an average depth of 13 mm (1/2 inch) by raking or other approved methods.
b. On slopes steeper than 2 horizontal to 1 vertical, seed and fertilizer may be applied in a single operation. Incorporation into the soil will not be required.

3.5 RECONDITIONING LAWNS:

A. Recondition lawn areas damaged by construction operations, including storage of materials or equipment and movement of vehicles. Also recondition lawn areas where settlement or washouts occur or where minor regrading is required. Recondition other existing lawn areas where indicated.

B. Provide fertilizer, sod, and soil amendments as specified for new lawns and as required to provide satisfactorily reconditioned lawn. Provide new planting soil as required to fill low spots and meet new finish grades.

C. Cultivate bare and compacted areas thoroughly to provide a good, deep planting bed.

D. Remove diseased or unsatisfactory lawn areas; do not bury into soil. Remove topsoil containing foreign materials resulting from Subcontractor's operations including oil drippings, stone, gravel, and other construction materials. Replace with new topsoil.

E. Where substantial lawn remains (but is thin), mow, rake, aerate if compacted, fill low spots, remove bumps and cultivate soil, fertilize, and seed. Remove weeds before seeding or, if extensive, apply selective chemical weed killers as required. Apply a seed-bed mulch, if required, to maintain moist condition.

F. Water newly planted areas and keep moist until new grass is established.

3.6 SEEDING COVER CROP & NATIVE GRASSES:

A. Sow seeds using seed drill (T-rax-type) that accurately meters the seed types and mixes all seeds uniformly during seeding. It should have, at the minimum, two seed boxes to separate fine seeds from large/fluffy seeds. This seed drill should also be equipped with disc furrow openers and a no-till trash plow assembly, which will compact the soil directly over the drill rows. The maximum row spacing for drill seeding should be 8 inches. Fine seeds shall be dropped onto the ground from the fine seed box, while large/fluffy seed should be placed to obtain final planting depth of 1/4-1/2". The path of the drill seeding shall be done at a right angle to that of the drainage patterns.

1. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.

B. Protect all native grass areas on slopes 4:1 and greater using straw mat erosion control blanket installed and stapled according to manufacturer's recommendations

C. Protect all native grass areas within detention basin by using straw mat erosion control blanket, installed and stapled according to manufacturer's recommendations.

D. Seeding within established vegetated area: Contractor shall apply herbicide per manufacturers recommendations or an approved nonherbicide application to remove grass & weeds prior to installation of Native Grasses. Contractor shall mow existing grass & weeds after herbicide application per the manufacturers recommendation. Ensure all plants are not living. Apply native seeding within the timeframe specified by the manufacturer.

3.7 PROTECTION:

A. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period until lawn is established.

3.8 MAINTENANCE (SEED & SOD):

A. Mow grass to a height of 3 inches as soon as there is enough top growth to cut with mower. Remove no more than 30% of grass leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted.

B. Remove weeds by pulling or chemical treatment.

C. Perform maintenance throughout the maintenance period.

D. Sodded Areas:

- 1. Thoroughly water daily for a period of 15 days after sodding and to a minimum of 1-inch per week thereafter.
2. Maintain sod in good live condition. Replace any sod not in good growing condition with fresh live sod.
3. Water thoroughly whenever sod evidences excessive drying.

E. Seeded Areas:

- 1. Thoroughly water seeded areas daily to keep seeds moist until germination. After seeds have germinated, continue watering daily until the first mowing. Watering shall be in amounts enough to wet seeds and surrounding soil, but not cause erosion or disposition of seeds.

2. Repair any portion of the seeded surface which becomes gullied or otherwise damaged. Reseed as required.

F. Apply second fertilizer application after first mowing and when grass is dry. Use fertilizer which will provide not less than 1 lbs of actual nitrogen per 1,000 square feet of lawn area.

3.9 MAINTENANCE (NATIVE GRASSES)

A. Begin maintenance of native grass areas immediately after each area is planted and continue until established and accepted, but for not less than the following periods:

B. Native grass: 12 MONTHS after date of Substantial Completion

- 1. The Installer shall be responsible for the proper care until verification that all plant materials are present in the density and health to ensure self-maintenance.
2. Maintain and establish native grasses by mowing, weeding, trimming, replanting, and other operations as stated below. Re-grade erosion rills, replant bare or eroded areas, and re-mulch to produce a uniform prairie

3.10 ACCEPTANCE OF LAWNS:

A. When lawn Work is Substantially Complete, continue maintenance per the Specifications.

B. Replant rejected work and continue specified maintenance until re-inspected by Landscape Architect and Owner and found to be acceptable.

C. Sodded lawns will be acceptable provided requirements, including maintenance, have been complied with and healthy, well-rooted, even-colored, viable lawns is established free of weeds, open joints, bare areas, and surface irregularities. Final Acceptance shall be determined by City Inspection and accepted by the City Council.

D. Native Grass Stands

1. An acceptable native grass stand will contain no less than 5 healthy mature or developing plants per square foot with a population distribution per 10,000 square feet representative of ratios in the original blend. The result of maintenance shall be that weeds are being controlled through competition with the desired plants, and that mowed bio-mass is not accumulating in such a manner to be detrimental to existing plant materials as determined by the City Inspector & Landscape Architect. Final Acceptance shall be determined by City Inspection and accepted by the City Council.

2. An acceptable native grass stand shall control erosion through root mass development. The occurrence of rills and gullies shall be unacceptable.

3.11 WARRANTY:

A. All turfgrass (seed, sod & native) shall be warranted one (1) year from the date of substantial completion.

3.12 CLEANUP:

A. Promptly remove soil and debris created by lawn Work from paved areas. Clean wheels of vehicles prior to leaving Site to avoid tracking soil onto surfacing of roads, walks, or other paved areas.

END OF SECTION 329200

SECTION 329200 - LAWN

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following areas of Work:

- 1. Fine grading and preparing lawn areas.
2. Furnishing and applying topsoil.
3. Furnishing and applying limited soil amendments.
4. Sodding new lawn areas.
5. Reconditioning existing lawn areas.
6. Replanting unsatisfactory or damaged lawns.
7. Maintenance.

B. Related Work Specified Elsewhere:

- 1. Trees and Shrubs: SECTION 329300

1.2 REFERENCES

A. Applicable Standards:

- 1. American Society for Testing and Materials (ASTM) - Equivalent AASHTO standards may be substituted as approved.

1.3 SUBMITTALS

A. Certification of each seed mixture for sod, identifying the sod source, including name and telephone number of supplier. Seed for sod must be sod quality and is to be gold tag standards with 0% other crop seed and 0% weed seed.

B. Certification of each seed type for Native Grass mixture identifying the seed source, including name and telephone number of supplier.

C. Engineer has final approval of sod grower, no exceptions.

D. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and address of architects and owners, and other information specified.

E. Material test reports from qualified independent testing agency indicating and interpreting test results relative to compliance of the following materials with requirements indicated.

- 1. Agronomic and biological analysis of existing surface soil.
2. Agronomic and biological analysis of all imported topsoil.

F. Maintenance instructions recommending procedures to be performed by Owner for maintenance of landscaping during an entire year. Submit before expiration of required maintenance periods.

1.4 QUALITY ASSURANCE

A. Qualifications: A qualified subcontractor shall employ or provide a qualified installation manager who meets any or all of the required qualifications;

- 1. Bachelor of Science Degree in Horticulture, Botany, Soil Physics, Agronomy, General Agriculture, Agricultural or Biological Engineering, or a related field.
2. An individual with field experience as approved by the Landscape Architect or Registered Engineer.

B. Installer Qualifications: Engage an experienced Installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful turf establishment.

1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on the Project site during times that turf planting is in progress.

C. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to Landscape Architect's satisfaction, based on evaluation of agency-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.

D. Topsoil Analysis: Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter by Loss on ignition, inorganic matter (proportion of silt, clay, and sand), deleterious material including biological contamination, pH, mineral and plant-nutrient content of topsoil, and cationic exchange capacity.

- 1. Report suitability of topsoil for grass growth from horticulturist. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce satisfactory topsoil.

1.5 DELIVERY, STORAGE AND HANDLING

A. Sod: Harvest, deliver, store, and handle sod according to the requirements of the Turfgrass Producers International (TPI) "Specifications for Turfgrass Sod Materials and Transplanting/Installing."

B. Native Seed: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.

A. Planting Season: Install seed during normal planting seasons for type of lawn work required. Correlate planting with specified maintenance periods to provide required maintenance from date of Substantial Completion.

B. Weather Limitations: Proceed with work only when existing and forecast weather conditions are suitable for work.

1.7 MAINTENANCE

A. Lawns/turf areas: Begin maintenance of turfgrass immediately after each area is planted and continue until acceptable establishment, but for no less than the following periods:

- 1. Sodded Lawns: 90 days after date of Substantial Completion.
2. Maintain and establish lawns by watering, fertilizing, weeding, mowing, trimming, replanting and other operations per this Specification.

LANDSCAPE NOTES

- LOCATE UTILITIES PRIOR TO COMMENCING LANDSCAPE OPERATIONS. ALL TREES SHALL BE FIELD POSITIONED AS TO AVOID CONFLICTS WITH EXISTING AND PROPOSED UTILITIES. NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS OR OBSTRUCTIONS.
- CONTRACTOR SHALL STAKE ALL PLANTING AREAS IN THE FIELD PRIOR TO PLANTING FOR APPROVAL OF THE OWNER OR THEIR REPRESENTATIVE.
- QUANTITIES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES PRIOR TO BIDDING AND SHALL BE RESPONSIBLE FOR ALL QUANTITIES FOR THEIR BID. ANY DISCREPANCIES WITH THE PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE PLAN QUANTITIES SHALL SUPERCEDE SCHEDULED QUANTITIES.
- ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY AND SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 THE 'AMERICAN STANDARD FOR NURSERY STOCK'.
- ALL PLANTING BEDS & NATIVE GRASS STANDS SHALL BE EDGED AS SHOWN IN PLAN.
- PREPARE PLANTING BEDS AND INCORPORATE AMENDMENTS ACCORDING TO PLANS.
- SHREDDED HARDWOOD MULCH, PER SPECIFICATIONS SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL PLANTING BEDS AND AROUND ALL TREES. SINGLE TREES AND SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF THE SAUCER OR LANDSCAPE ISLAND.
- ALL TREES SHALL BE STAKED PER DETAIL.
- ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A ONE FOOT (1') CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT.
- THE LANDSCAPE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE SITE IS FREE OF DEBRIS CAUSED BY ON-GOING CONSTRUCTION OPERATIONS. REMOVAL OF DEBRIS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. LANDSCAPE WORK SHALL NOT BEGIN UNTIL THE LANDSCAPE ARCHITECT AND OWNER HAVE GIVEN WRITTEN APPROVAL FOR SUCH. THERE SHALL BE NO DELAYS DUE TO LACK OF COORDINATION FOR THIS ACTIVITY.
- THE LANDSCAPE ARCHITECT AND OWNER SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SODDING/SEEDING OPERATIONS.
- ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT DESIGNATED FOR OTHER PLANTINGS OR HARDSCAPE SHALL BE SEEDED WITH TURF TYPE FESCUE.
- CONTRACTOR SHALL PROVIDE AN AUTOMATIC IRRIGATION SYSTEM FOR ALL SEEDED AREAS PER THE OWNER'S DIRECTION. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF PROPOSED IRRIGATION SYSTEM AND COVERAGE AREAS FOR OWNER APPROVAL PRIOR TO INSTALLATION. IRRIGATION SYSTEM SHALL PROVIDE FOR THE CONTROLLER, WEATHER SENSOR, AND REQUIRED BACKFLOW DEVICES PER STATE AND LOCAL CODES.

SEEDING NOTES

- SEEDING SHALL OCCUR AS REQUIRED BY THE SPECIFICATIONS. SEEDING AT OTHER TIMES WILL REQUIRE A COVER CROP APPROVED BY THE ENGINEER AND CITY CODE. DORMANT SEEDING SHALL BE APPROVED BY THE ENGINEER.
- GRADED AREAS SHALL PROVIDE A SMOOTH UNIFORM SLOPE, FREE FROM RILLS AND GULLEYS.
- THE TOP FOUR INCHES OF SOIL SHALL BE FERTILE SOIL SUITABLE FOR SEED GROWTH.
- PRIOR TO APPLICATION OF SEED, CONTRACTOR SHALL LOOSEN ALL SOILS TO A DEPTH OF ONE INCH. THE AREA SHALL BE RAKED FREE OF ALL ROCKS AND DEBRIS ACCORDING TO THE SPECIFICATION.
- ALL AREAS TO BE SEEDED LOCATED ON SLOPES STEEPER THAN 4:1 (H:V) SHALL USE SPECIFIED TURF REINFORCEMENT MAT. ALL TRM SHOWN ON THE PLANS SHALL BE CONSIDERED CONCEPTUAL. CONTRACTOR TO VERIFY AND INSTALL ON ALL SLOPES EXCEEDING 4:1 AFTER FINAL GRADING IS ESTABLISHED.
- ALL SEEDED AREAS SHALL BE DRAGGED OR RAKED BEFORE BEING COVERED WITH THE SPECIFIED TRM. MAT SHALL BE PLACED PRIOR TO EXPOSURE TO ADVERSE WEATHER.
- THE CONTRACTOR MUST PROVIDE THE OWNER'S REPRESENTATIVE DOCUMENTATION FROM THE SUPPLIER THAT EACH LOT OF SEED MEETS OR EXCEEDS THE SPECIFIED STANDARD.
- ALL SEED MUST BE TESTED BY A REGISTERED SEED TECHNOLOGIST PER AOSA METHODS AND MEET ALL REQUIREMENTS ESTABLISHED BY THE STATE DEPARTMENT OF AGRICULTURE.
- AFTER COMPLETION OF WORK, CONTRACTOR SHALL WATER SEEDED AREAS DAILY. SATURATING THE MAT AND UNDERLYING SEED BED. CONTRACTOR SHALL CONTINUE WATERING UNTIL PLANT ESTABLISHMENT HAS OCCURRED OR BY NOTIFICATION FROM LANDSCAPE ARCHITECT. NOT WATERING DUE TO RAIN EVENT SHALL BE DOCUMENTED AND APPROVED BY THE GENERAL CONTRACTOR. WATERING LOGS SHALL BE SUPPLIED TO THE OWNER OR ENGINEER.
- CONTRACTOR SHALL PROVIDE AN AUTOMATIC IRRIGATION SYSTEM FOR ALL SEEDED AREAS PER THE OWNER'S DIRECTION. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF PROPOSED IRRIGATION SYSTEM & COVERAGE AREAS FOR OWNER APPROVAL PRIOR TO INSTALLATION. IRRIGATION SYSTEM SHALL PROVIDE FOR THE CONTROLLER, WEATHER SENSOR, AND REQUIRED BACKFLOW DEVICES PER STATE AND LOCAL CODES.

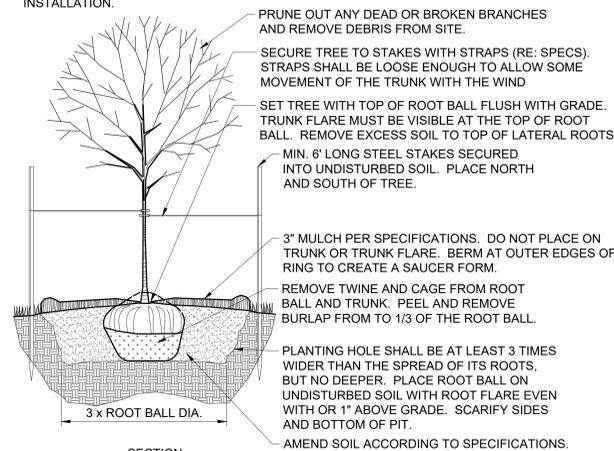


UTILITY BOXES SHALL BE CLUSTERED AS MUCH AS POSSIBLE

TYPICAL UTILITY BOX SCREENING DETAILS - NTS

NOTES:

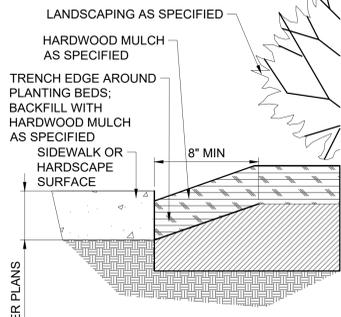
- TREES THAT DO NOT MEET THE SIZE REQUIREMENT WILL BE REJECTED
- TREES SHALL BE INSPECTED BY OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.



DECIDUOUS TREE PLANTING DETAIL - NTS

NOTES:

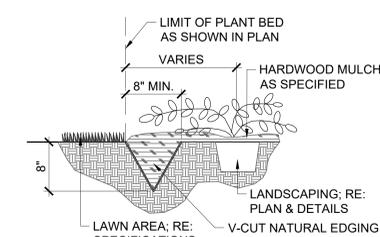
- TRENCH ALL EDGES ADJACENT TO SIDEWALK OR OTHER HARDSCAPE SURFACES FOR MULCH CONTAINMENT.



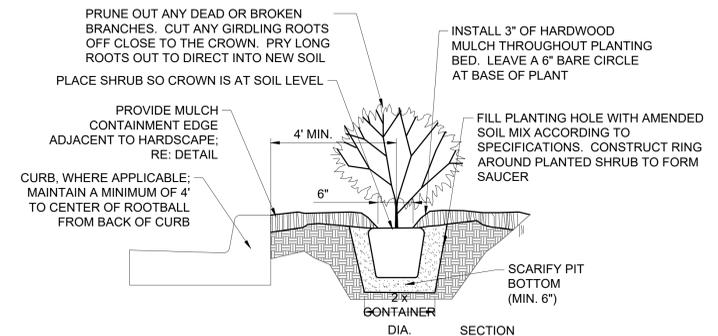
MULCH CONTAINMENT DETAIL - NTS

NOTES:

- CONTRACTOR SHALL LOCATE AND MARK ALL PLANTBED LOCATIONS PRIOR TO EXCAVATING FOR FINAL APPROVAL BY OWNER OR LANDSCAPE ARCHITECT.



V-CUT NATURAL EDGE DETAIL - NTS



NOTES:

- REFER TO SPECIFICATIONS FOR TOPSOIL BACKFILL MIX.
- CONTRACTOR TO WATER THOROUGHLY AFTER PLANTING
- INSTALLATION TO BE IN ACCORDANCE WITH PLANTING SPECIFICATIONS
- WHERE ADJACENT TO CURB, MAINTAIN THE MINIMUM OFFSET SHOWN. FOR SHRUBS LARGER THAN 4" MATURE DIAMETER, PROVIDE A GREATER OFFSET EQUAL TO 1/2 OF THE MATURE DIAMETER MINIMUM.

SHRUB PLANTING DETAIL - NTS

NEW SHEET ADDED

Construction Documents

22-0111-24

Dollar Tree
Whitewater, Walworth County, WI

Landscape Details & Notes

4	10/26/23	Client Comments
3	10/17/23	Sidewalk Revision
2	10/11/23	Driveway Revision
1	10/02/23	City Comments
0	09/28/23	Initial Submittal
NO.	DATE	REVISION
DRAWN BY	AFB	CHECKED BY
		PNC

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Project:
ALDI FOOD STORE #XX
West Main Street (Hwy 12)
Whitewater, WI 53190

Table with 3 columns: Date, Number, Description. Includes entries for Client Review Submittal (04/19/23) and Plan Commission Submittal (04/20/23).

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Sheet Title:
PROPOSED LANDSCAPE AND PHOTOMETRIC PLANS GENERAL NOTES, PLANT MATERIAL TABLE, AND LIGHT FIXTURE TABLE

Date of Drawing: 07/27/23
Scale: 1" = 20'-0"
Drawn By: MCD
Job Number: L23-031
Sheet Number:

LGD 1.0

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LANDSCAPE PLAN GENERAL NOTES

- 1. AT LEAST SEVENTY-TWO HOURS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AS GIVEN BY THE ELECTRIC, GAS, TELEPHONE, WATER, SEWER, AND CABLE TELEVISION COMPANIES, UTILITIES OR ENTITIES. REVIEW WITH OWNER'S REPRESENTATIVE SITE MECHANICAL, SITE ELECTRICAL AND LIGHTING, SITE GRADING AND DRAINAGE, SITE IRRIGATION AND ALL OTHER DRAWINGS PERTAINING TO UNDERGROUND UTILITY LOCATIONS. RECORD SET OF INFORMATION THE SAME AS IN POSSESSION OF OWNER'S REPRESENTATIVE. ALSO REVIEW OWNER'S 'MARK SETS' OF ALL OF THESE DRAWINGS IN POSSESSION OF THE CONTRACTOR OR OWNER. MARK ALL SUCH UTILITIES ON THE SITE PRIOR TO COMMENCING. COORDINATE WITH OWNER BEFORE AND DURING CONSTRUCTION. REPAIR ANY DAMAGE TO ANY SYSTEM THAT IS CAUSED BY LANDSCAPE CONTRACTOR AT NO COST TO OWNER.
2. ALL PLANTINGS SPECIFIED FOR THE ALDI FOOD STORE #48 PROJECT PLANTING TABLES SHALL COMPLY WITH STANDARDS AS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK (ANSI Z60.1-2014 AND ANSI STANDARDS FOR PLANTING 2012).
3. ALL PLANTINGS FROM THE APPROVED ALDI FOOD STORE #48 PROJECT PLANTS SHALL BE NOTED ON THE RECORD DRAWINGS BY THE CONTRACTOR AND MAY BE EXECUTED ONLY WITH FORMAL APPROVAL FROM THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE. VERBAL AGREEMENTS OR REVISIONS WITHOUT A CHANGE ORDER WILL NOT BE RECOGNIZED BY LANDSCAPE ARCHITECT AND OWNER.
4. ALL PLANTS MUST BE 3/4" AND SELECTED PER THE SPECIES SPECIFIED ON THE PLANS. ANY SPECIES SUBSTITUTIONS MUST BE APPROVED IN WRITING BY LANDSCAPE ARCHITECT. THE SIZES OF PLANT MATERIAL LISTED HEREIN IS A MINIMUM ACCEPTABLE SIZE. ADDITIONALLY, IF EXCESSIVE PRUNING REDUCES THE CROWN THE PLANT SHALL BE REPLACED.
5. PROTECT PUBLIC FROM CONSTRUCTION WITH BARRIERS AND BARRICADES.
6. ALL AREAS THAT WERE OBTAINED DURING CONSTRUCTION AND AREAS NOT COVERED WITH PAVEMENT, BUILDING, PLANTING BEDS, OR TREE PITS ARE TO BE TOPDRESSED 3" DEEP (MIN.) AND SHALL BE SOONEST SEEDDED WITH SPECIFIED LAWN GRASS. LANDSCAPE CONTRACTOR SHALL INCLUDE COST PER SQUARE YARD FOR ADDITIONAL SEED OPERATIONS AS MAY BE POSSIBLY REQUIRED TO REESTABLISH ADJACENT TURF GRASS AREAS WHICH MAY BECOME DAMAGED DURING THE CONSTRUCTION PROCESS OR TO REPAIR DAMAGE DONE BY OTHERS.
7. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL MATERIALS, TOOLS, EQUIPMENT, LABOR, AND PLANTS NECESSARY FOR PROPER PLANTING AND INSTALLATION OF ALL LANDSCAPE MATERIAL.
8. QUANTITIES ON PLANT MATERIALS LIST ARE FOR CONVENIENCE OF BIDDING ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON LANDSCAPE PLANS AND COVERAGE OF ALL AREAS DELINEATED. THE PLANTS ARE TO SUPERSEDE THE PLANT LIST IN ALL CASES.
9. CONTRACTOR IS RESPONSIBLE FOR ALL ESTIMATING AND BIDDING, ALL AREAS, QUANTITIES MATERIALS SHOULD BE FIELD VERIFIED WITH SITE CONDITIONS.
10. WHERE DISCREPANCIES OCCUR BETWEEN THE LANDSCAPE PLANS AND/OR ARCHITECTURAL AND/OR THE CIVIL DRAWINGS (AND ANY OTHER SITE DRAWINGS), THE DISCREPANCIES MUST BE BROUGHT TO THE LANDSCAPE ARCHITECT'S ATTENTION FOR COORDINATION AND RESOLUTION.
11. ALL DISEASED, NOXIOUS OR INAPPROPRIATE MATERIALS SHALL BE REMOVED FROM THE PROPOSED SITE PRIOR TO THE START OF CONSTRUCTION AND DURING THE MAINTENANCE PERIOD.
12. GENERAL CONTRACTOR SHALL LEAVE THE SITE FREE OF CONSTRUCTION DEBRIS.
13. ALL LAWN AND PLANTING AREAS SHALL HAVE A MINIMUM OF 2% UNLESS NOTED OTHERWISE AND REVEALED WITH OWNER'S REPRESENTATIVE FOR FINAL APPROVAL.
14. FINISH GRADES FOR SHRUBS AND GROUND COVER AREAS SHALL BE HELD 1" BELOW TOP OF ADJACENT PAVEMENTS AND CURBS, UNLESS NOTED OTHERWISE ON THE PLANS. REFER TO LSP1.2 FOR FURTHER INFORMATION.
15. ALL PERENNIAL ANNUAL AND GROUND COVER AREAS TO RECEIVE A BLEND OF ORGANIC SOIL AMENDMENTS PRIOR TO PLANTING. TILL THE FOLLOWING MATERIALS INTO EXISTING TOPSOIL TO A DEPTH OF APPROXIMATELY 6", A DEPTH OF 12" IN TREE PITS. PROPORTIONS AND QUANTITIES MAY REQUIRE ADJUSTMENT DEPENDING ON THE CONDITION OF EXISTING SOIL. REFER TO LSP1.2 FOR FURTHER INFORMATION.
PER EVERY 100 SQUARE FEET ADD: ONE (1) CUBIC FOOT BALE OF FEAT MOSS, 2 POUNDS OF 5-10-5 GARDEN FERTILIZER, 1/4 CUBIC YARD OF COMPOSTED MANURE OR OTHER COMPOSTED, ORGANIC MATERIAL.
16. ALL SHRUBS TO BE POCKET PLANTED WITH A 50/50 MIX OF COMPOSTED, ORGANIC MATERIAL AND EXISTING SOIL. INSTALL TOPSOIL INTO ALL BEDS AS NEEDED TO ACHIEVE PROPER GRADE. REMOVE ALL EXCESSIVE GRAVEL, CLAY AND STONES. REFER TO LSP1.2 FOR FURTHER INFORMATION.
17. PLANT ALL TREES SLIGHTLY HIGHER THAN FINISHED GRADE AT ROOT FLARE. BACK FILL HOLE WITH 2/3 EXISTING TOPSOIL AND ORGANIC SOIL AMENDMENTS SPECIFIED IN NOTE 15. AVOID ANY AIR POCKETS. DISCARD ANY GRAVEL, CLAY OR STONES. REFER TO LSP1.2 FOR FURTHER INFORMATION.
18. ALL TREES TO BE INSTALLED, STAKED AND GUYED ACCORDING TO DETAILS. REFER TO ANSI STANDARDS FOR PLANTING 2012 AND DETAILS ON LSP1.2 FOR FURTHER INFORMATION.
19. PROVIDE A 4"X4" 5/4" DIAMETER MULCH RING AT THE ROOT BALL FLARE OF ALL LAWN TREES.
20. ALL PLANTINGS TO BE WATERED AT THE TIME OF PLANTING, THROUGHOUT CONSTRUCTION AND UPON COMPLETION OF PROJECT AS REQUIRED.
21. WHERE SPECIFIED, ALL PLANT BEDS, PITS AND TREE RINGS ARE TO RECEIVE A MINIMUM OF 2" - 3" DRESSING OF 5" RIMMED HARDWOOD OR BARK MULCH SHAVING FREE OF GROWTH, WEEDS, FOREIGN MATTER DETRIMENTAL TO PLANT LIFE OR GERMINATION INHIBITING INGREDIENTS. LANDSCAPE CONTRACTOR TO PROVIDE A SAMPLE TO OWNER FOR APPROVAL. CONTRACTOR TO TAKE CARE WITH INSTALLATION NOT TO DAMAGE OR COVER PLANTS. REFER TO LSP1.2 FOR FURTHER INFORMATION.
22. PER ALDI SPECIFICATIONS, TWO LAYERS OF WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT MATERIAL SHALL BE PLACED IN ALL PLANTING BEDS UNDERNEATH SHREDED BARK MULCH. MAKE PROPER OPENINGS FOR ALL PLANT MATERIAL TO ALLOW FOR GROWTH AND PLANT SURVIVABILITY.
23. LAWN INSTALLATION: PER ALDI SPECIFICATIONS, CONTRACTOR TO FINISH AND PREPARE TOPSOIL (4" MIN) AND SEED BED (REMOVE ALL STONES 1" OR LARGER), APPLY STARTER FERTILIZER AND SEED UNIFORMLY, PER ALDI SPECIFICATION REQUIREMENTS. METHOD OF INSTALLATION BE SEED BY BROADCAST SPREADER METHOD; ALL SEEDING OPERATIONS SHALL BE PERFORMED IN SUCH A MANNER THAT THE SEED IS APPLIED IN THE SPECIFIED QUANTITIES EVENLY DISTRIBUTED THROUGHOUT THE AREA SOWN AND UNIFORMLY TEXTURED LAWN. IN THE DESIGNATED TURF GRASS AREAS, APPLICATION FERTILIZER SHALL BE PLACED AT A MINIMUM OF 80 POUNDS PER ACRE AND SEED AT A MINIMUM OF 20 POUNDS PER ACRE. IT IS HIS RESPONSIBILITY TO ESTABLISH AND GUARANTEE A SMOOTH, UNIFORM, QUALITY TURF.
24. PROVIDE A 100% BIODEGRADABLE WOOD FIBER EROSION CONTROL, BLANKET AND ESTABLISH A 100% BIODEGRADABLE TURF STRAP FOR ALL TURF AREAS, SUCH THAT IT PROVIDES TEMPORARY PROTECTION FOR TURF GRASS SEEDS AND TOPSOIL DURING THE GERMINATION AND ROOT SYSTEM DEVELOPMENT STAGE. SPECIFIED BRANDS: CURLEX I O.G. BLANKET AND ESTAPLE FROM AMERICAN EXCELSON COMPANY - LOCAL SUPPLIERS: FENDERS (800) 785-3301. A CURLEX EROSION CONTROL MATTING AND E-STRAPLES SHOULD BE USED IN SWALES AND STEEP GRADES WITH SLOPES GREATER THAN THREE (3) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL IN CASE WHERE APPLICABLE.
25. DELUXE 50 GRASS SEED MIX REINDER'S (800) 785-3301
• 20% KENTUCKY BLUE GRASS
• 15% NEWPORT KENTUCKY BLUE GRASS
• 15% SR 2100 Kentucky Bluegrass
• 25% Creeping Red Fescue
• 15% Resilator Perennial Ryegrass
• 10% Flucta 4 Perennial Ryegrass
• APPLY AT A RATE OF 200 POUNDS PER ACRE. REFER TO SUPPLIER'S SPECIFICATIONS & INSTALLATION OUT SHEETS FOR FURTHER INFORMATION.
26. DURING THE INITIAL 30 DAY MAINTENANCE PERIOD THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE AND ON-GOING PLEASANT VISUAL ENVIRONMENT WHEREAS ANY PLANT WHICH IS NOT RESPONDING TO TRANSPLANTING OR THRIVING SHALL IMMEDIATELY BE REPLACED. NEW LAWNS SHALL BE WATERED AND REPAIRED AND WEEDS MUST CONSTANTLY BE REMOVED, NO EXCEPTIONS WILL BE GRANTED.
MAINTENANCE NOTE:
MAINTENANCE IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN REQUIRED LANDSCAPING IN ACCORDANCE WITH THE MUNICIPALITY'S PROPERTY MAINTENANCE CODE AND AN APPROVED MAINTENANCE PLAN. THE MAINTENANCE MUST INCLUDE, AT A MINIMUM, METHODS FOR PROVIDING THE FOLLOWING:
• NECESSARY IRRIGATION (IF REQUIRED)
• INTEGRATED PEST MANAGEMENT,
• PROPER FERTILIZATION
• TREE CARE AND PRUNING, SHRUB TIP CLIPPING AND SHAVING AS REQUIRED
• REPLACEMENT OF LOST VEGETATION, AND ALL DISEASED, DAMAGED, OR DEAD MATERIAL WILL BE REPLACED BY THE END OF THE FOLLOWING PLANTING SEASON IN PERPETUITY.
• WEED MANAGEMENT AND BED CARE.
27. ALL NEWLY PLANTED TREES AND SHRUBS ARE TO RECEIVE AN APPLICATION OF AN ANTI-TRANSPIRANT SPRAY THAT WILL EFFECTIVELY REDUCE THE WATER LOSS OF TRANSPIRATION OF PLANT MATERIAL, AND REDUCE THE STRESS OF TRANSPIRATION. IT IS RECOMMENDED AS PART OF THE ONGOING MAINTENANCE THAT ANY BROADLEAF EVERGREEN AND CONIFEROUS TREE AND SHRUBS (EXCLUDING ABSORBITIC) RECEIVE AN APPLICATION OF AN ANTI-DESICANT SPRAY TO REDUCE THE LOSS OF MOISTURE DUE TO WINTER DESICCATION.
28. MAINTENANCE, THE OWNER SHALL TEND AND MAINTAIN ALL PLANT MATERIALS IN A HEALTHY GROWING CONDITION AS PER THE APPROVED PLAN. PLANTINGS SHALL BE REPLACED WHEN NECESSARY AND KEPT FREE FROM REFUSE & DEBRIS. ALL PLANTING MATERIAL WHICH IS DYING OR DAMAGED BEYOND RECOVERY SHALL BE REPLACED WITHIN SIX (6) MONTHS OR BY THE NEXT PLANTING SEASON, WHICHEVER COMES FIRST.
29. LANDSCAPE / SITE DEMOLITION CONTRACTOR TO VERIFY LOCATIONS OF EXISTING TREES AND SHRUBS TO BE SALVAGED AND CLEARLY TAG THEM WITH MARKING TAPE AND CONSTRUCTION FENCE.

SITE INFORMATION

Table with 4 columns: USDA PLANT HARDINESS ZONE, LOT ZONING, LOT AREA, SITE BUILDING AREA. Values include 5a (-20 to -15 Degrees F), B-1 - General Business District, 120,722 SQ. FT. (2.77 Acres), 20,664 SQ. FT.

DESIGN COMPLIANCE: THIS LANDSCAPE PLAN IS ACCURATE AND IN COMPLIANCE WITH THE CITY OF WHITEWATER LANDSCAPING GUIDELINES RECOMMENDED LOCATIONS AND AMOUNT OF NEW LANDSCAPING
1. STREET FRONTAGES: ONE DECIDUOUS TREE MUST BE PLANTED FOR EACH 35 FEET ALONG EACH SIDE OF ASTREET RIGHT-OF-WAY. STREET TREES SHOULD BE PLANTED MIDWAY BETWEEN THE STREET CURB AND THE SIDEWALK, OR WITHIN 15 FEET OF THE PROPERTY LINE ADJOINING THE STREET.
34.5 LINEAL FEET OF STREET FRONTAGE
10 STREET TREES REQUIRED
10 STREET TREES PROVIDED

2. PAVED AREAS, ONE LARGE DECIDUOUS TREE AND 60 POINTS OF ADDITIONAL LANDSCAPING SHOULD BE PLANTED FOR EACH 1,500 SQUARE FEET OF PAVED AREA. PLANTS SHOULD BE INSTALLED IN LANDSCAPED ISLANDS WITHIN THE PAVED AREA OR WITHIN 15 FEET OF THE EDGES OF THE PAVED AREA. LANDSCAPED ISLANDS OR PENINSULAS MUST BE PROVIDED AT THE END OF EVERY PARKING ROW, AND INTERIOR ISLANDS SHOULD BE PROVIDED FOR EVERY 20 PARKING SPACES IN NON-INDUSTRIAL PROJECTS.
64,955 SQUARE FEET OF PAVED AREA
43 TREES AND 2398 LANDSCAPE POINTS ARE REQUIRED
21 TREES AND 1961 LANDSCAPE POINTS ARE REQUIRED PROVIDED

3. BUILDING FOUNDATIONS: 160 POINTS OF LANDSCAPING SHOULD BE PLANTED FOR EACH 100 LINEAL FEET OF EXTERIOR BUILDING WALL THAT IS VISIBLE FROM PUBLIC RIGHTS-OF-WAY AND ADJOINING SITES. PLANTS REQUIRED BY THIS SECTION SHOULD BE INSTALLED WITHIN 20 FEET OF THE BUILDING FOUNDATION.
65 LINEAL FEET OF FOUNDATION
339 LANDSCAPE POINTS ARE REQUIRED
356 LANDSCAPE POINTS ARE REQUIRED PROVIDED

19.51.100 - LANDSCAPED ISLANDS FOR PARKING BAYS. LANDSCAPED ISLANDS SHALL BE REQUIRED AT THE ENDS OF PARKING BAYS TO CLEARLY DEFINE LANE AND TURNING PATTERNS,
19.57.100 - OUTDOOR LIGHTING STANDARDS.
0. MAXIMUM LUMINAIRE HEIGHT, THE MAXIMUM PERMITTED LUMINAIRE HEIGHT SHALL BE THIRTY-FIVE FEET IN ALL COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL DISTRICTS, AND TWENTY-FIVE FEET IN ALL RESIDENTIAL DISTRICTS. THE HEIGHT OF BOTH THE POLE AND BASE SHALL BE CONSIDERED IN THE MEASUREMENT OF LUMINAIRE HEIGHT.
EMAXIMUM ILLUMINATION LEVELS, AVERAGE ILLUMINATION LEVELS WITHIN PARKING LOTS SHALL NOT EXCEED 1.0 FOOTCANDLE WITHIN RESIDENTIAL DISTRICTS, AND 2.5 FOOTCANDLES WITHIN ALL OTHER DISTRICTS. THE ILLUMINATION LEVEL, AT ANY PROPERTY LINE SHALL NOT EXCEED 0.5 FOOTCANDLES ABOVE THE AMBIENT LIGHTING CONDITIONS ON A CLOUDLESS NIGHT WHERE THE PROPERTY ADJOINS LAND IN A RESIDENTIAL DISTRICT, AND 2.0 FOOTCANDLES ABOVE THE AMBIENT LIGHTING CONDITIONS ON A CLOUDLESS NIGHT WHERE THE PROPERTY ADJOINS LAND IN ANY OTHER ZONING DISTRICT.
FLUORESCENT LIGHT FIXTURES, ALL OUTDOOR LIGHTING FIXTURES SHALL BE SHIELDED AS DEPICTED IN SECTION 19.59.020.
HORIZONTAL, NO EXTERIOR LIGHT FIXTURE SHALL BE LOCATED WITHIN ANY REQUIRED LANDSCAPE BUFFER YARD OR WITHIN THREE FEET OF ANY PROPERTY LINE.

CONTRACTOR NOTE: THE LANDSCAPE CONTRACTOR, GENERAL CONTRACTOR ARE RESPONSIBLE TO INSTALL THE LANDSCAPE AS PER THE APPROVED PLAN. IF ANY CHANGES OR DEVIATIONS ARE MADE FROM THE THIS APPROVED PLAN, THE LANDSCAPE CONTRACTOR / GENERAL CONTRACTOR ARE RESPONSIBLE FOR UPDATING THE PLANS ACCORDINGLY AND SUBMITTING THOSE REVISED PLANS FOR APPROVAL AND SIGN OFF WITH THE CITY OF WHITEWATER. THE LANDSCAPE CONTRACTOR ARE ALSO RESPONSIBLE FOR VERIFYING THAT ANY PLANT MATERIAL SUBSTITUTIONS OR MODIFICATIONS THAT ARE MADE TO THE APPROVED LANDSCAPE DESIGN DOCUMENTS WILL NOT CHANGE OR ALTER ANY OF THE REQUIRED SUPPORTING LANDSCAPE REQUIREMENT CALCULATIONS. UPON COMPLETION OF THE CONSTRUCTION PROJECT AND FILE THAT AFFIDAVIT WITH THE CITY OF WHITEWATER

EXISTING CONDITIONS GENERAL NOTES

- 1. INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE LANDSCAPE DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE ACTUAL EXISTING FIELD CONDITIONS. INSITE LANDSCAPE DESIGN, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THEIR NEW WORK. REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE LANDSCAPE ARCHITECT IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACTOR.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA OF DISTURBANCE THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES.
3. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ALIGNMENT OF WALLS. BRING ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECTS ATTENTION PRIOR TO FABRICATION / CONSTRUCTION BEGINS.
4. VERIFY LOCATION OF ACCESS PANELS W/ MECHANICAL AND ELECTRICAL EQUIPMENT FOR ACCESSIBILITY OF MECHANICAL & ELECTRICAL ITEMS, VERIFY LOCATIONS OF ALL BUILT UTILITIES AND STRUCTURES AND LOCATIONS OF ALL OVERHEAD WIRES.
5. VERIFY LOCATION OF ALL EXISTING EASEMENTS.
6. INSITE LANDSCAPE DESIGN, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITY OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF INSITE LANDSCAPE DESIGN, INC.

Proposed Plant Material Table

Table with 8 columns: Quantity, Code Name, Symbol, Scientific Name, Common Name, Planting Size, Points, Mature Size, Comments. Includes sections for Broadleaf Deciduous Tree, Conifer Evergreen Tree, Broadleaf Deciduous Shrub, Conifer Evergreen Shrub, Perennial Grass, and Perennial.

- Comments
1. Straight central leader, full & even crown. Prune only after planting.
2. Prune existing trees, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
3. Evenly shaped upright tree with full branching to the ground.
4. Full, well rooted plant, evenly shaped.
5. Full, well rooted plant.
6. Male only

DIGGERS HOTLINE
WISCONSIN STATUTE 182.0175 (1974) REQUIRES A MINIMUM OF 3 DAYS NOTICE BEFORE YOU EXCAVATE (NOT INCLUDING SATURDAY, SUNDAY OR LEGAL HOLIDAYS)
UNDERGROUND SEWER AND UTILITY INFORMATION AS SHOWN IS OBTAINED FROM THE RECORDS OF MUNICIPALITY AND LOCAL UTILITY COMPANIES. THE ACCURACY OF WHICH CAN NOT BE GUARANTEED OR CERTIFIED TO. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS SURVEY ARE APPROXIMATE, THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
811
www.DiggersHotline.com
(800)-242-8511
Know what's below. Call before you dig.

INSITE
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 mdavis@insitedesigninc.com

Project:
ALDI FOOD STORE #XX
 West Main Street (Hwy 12)
 Whitewater, WI 53190

Issuance and Revisions:

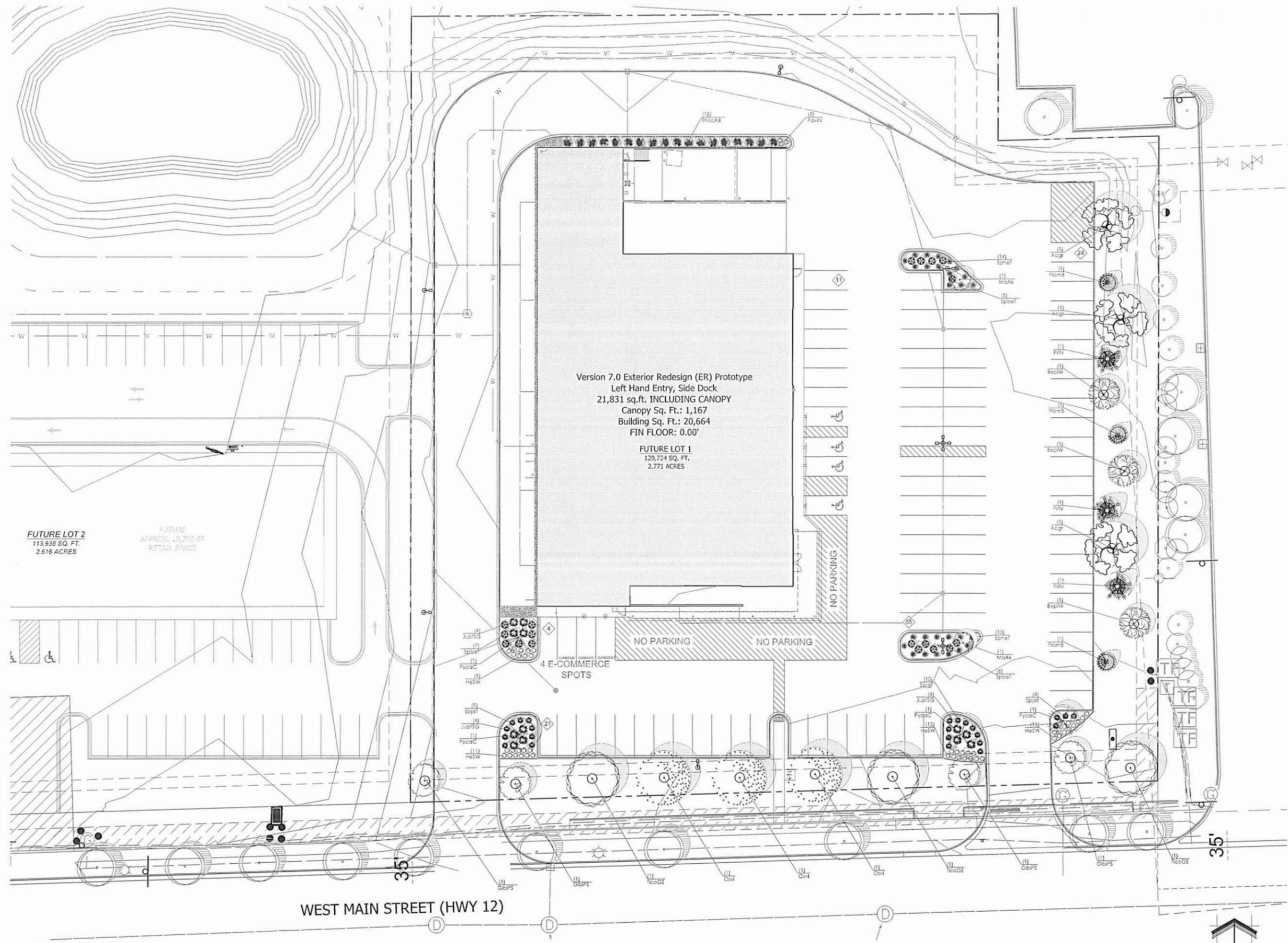
Date	Number	Description
04/19/23		Client Review Submittal
04/20/23		Plan Commission Submittal
07/27/23		Revisions Based on Site Changes

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Sheet Title:
 PROPOSED LANDSCAPE PLAN,
 GENERAL NOTES,
 AND PLANT MATERIAL TABLE

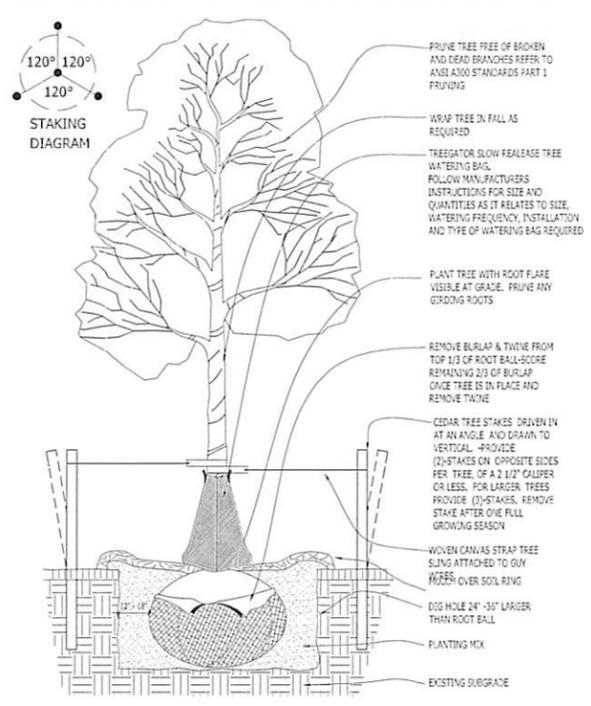
Date of Drawing: 07/27/23
 Scale: 1" = 20'-0"
 Drawn By: MCD
 Job Number: L23-031
 Sheet Number:

LSP1.1

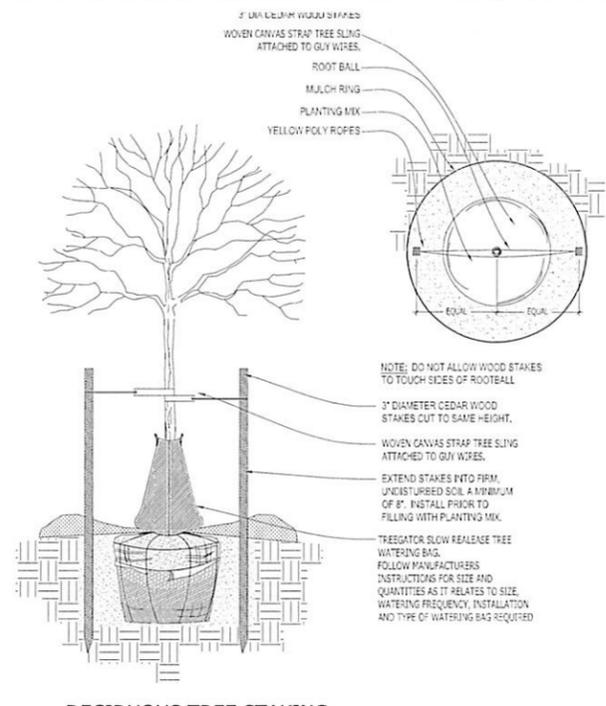


1 PROPOSED LANDSCAPE PLAN

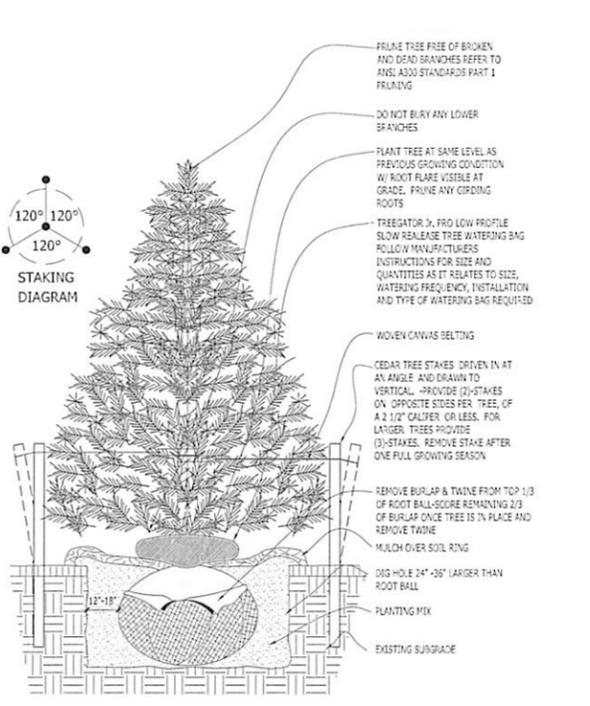
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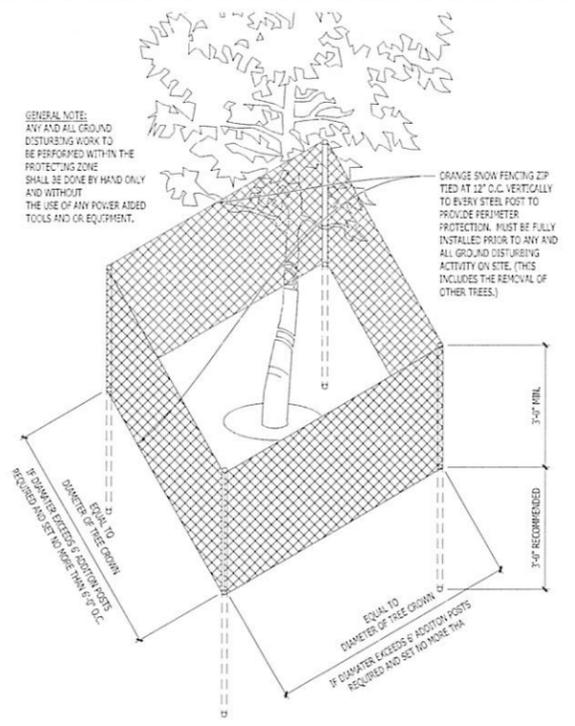
1 DECIDUOUS TREE PLANTING DETAIL SCALE: NONE



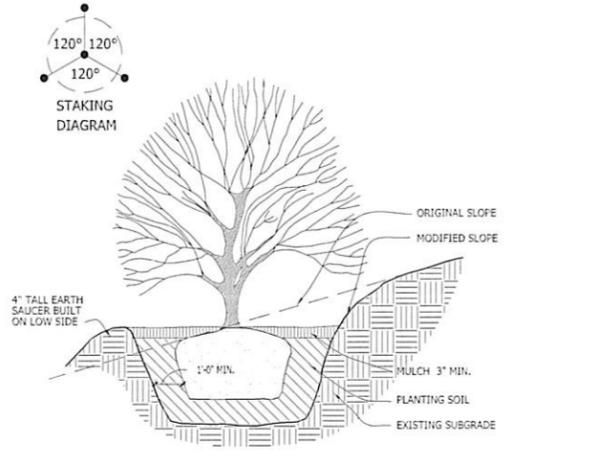
2 DECIDUOUS TREE STAKING PARKING ISLAND/RESTRICTED AREAS SCALE: NONE



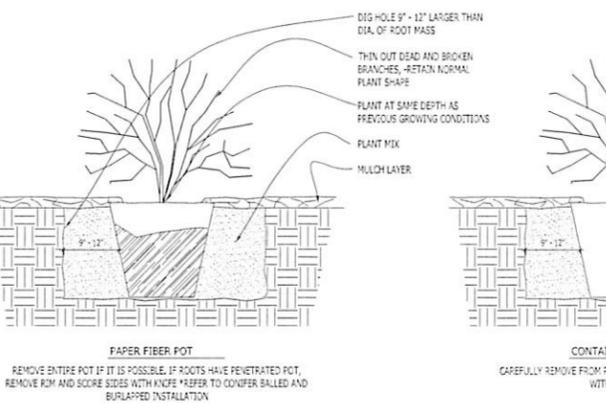
3 CONIFEROUS TREE PLANTING DETAIL SCALE: NONE



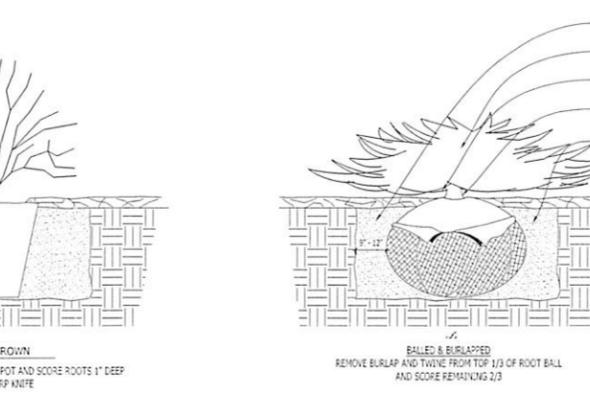
4 EXISTING TREE PROTECTION DETAIL SCALE: NONE



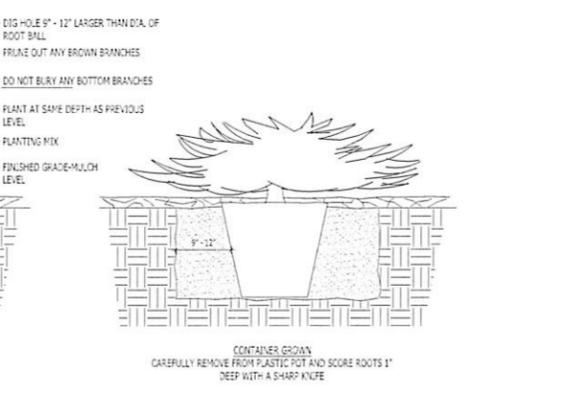
5 SLOPE PLANTING DETAIL SCALE: NONE
REFER TO TYPICAL DECIDUOUS TREE DETAIL FOR STAKING



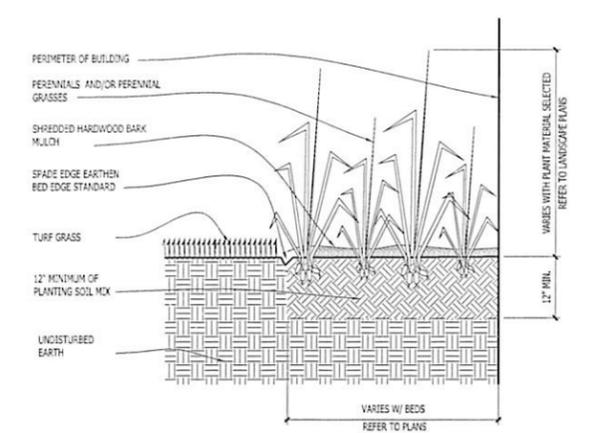
6 DECIDUOUS SHRUB PLANTING DETAIL SCALE: NONE



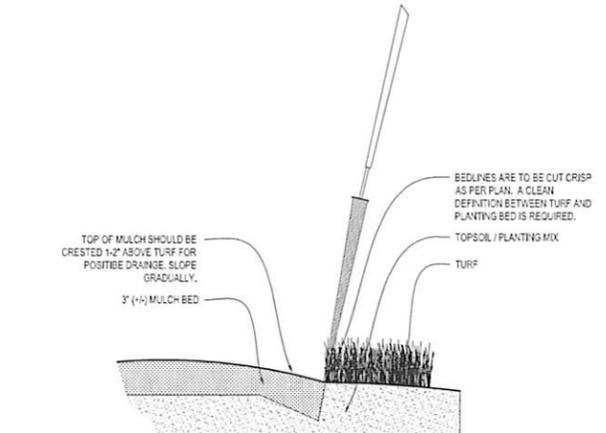
7 CONIFEROUS SHRUB PLANTING DETAIL SCALE: NONE



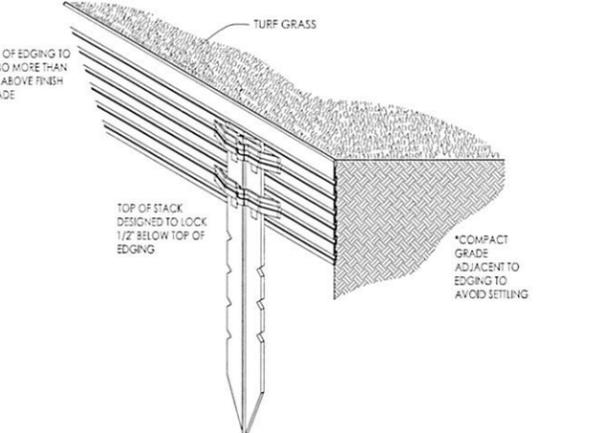
8 CONTAINER GROWN SHRUB PLANTING DETAIL SCALE: NONE



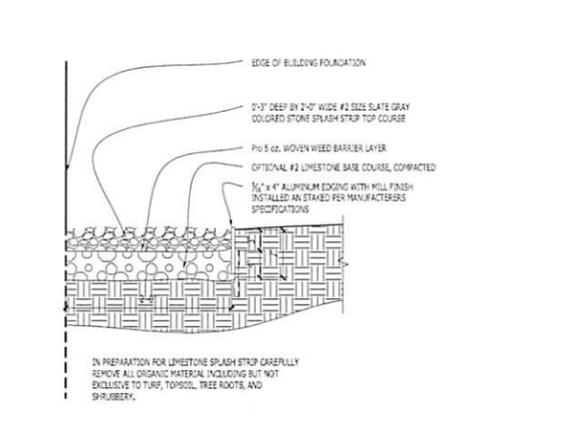
8 PERENNIAL BED PLANTING DETAIL SCALE: NONE



9 SPADE EDGE PLANT BED EDGE DETAIL SCALE: NONE



10 METAL LANDSCAPE EDGING DETAIL SCALE: 1/2" = 1'-0"



11 COMPACTED GRAVEL SPLASH STRIP SCALE: 1" = 1'-0"

Project:
ALDI FOOD STORE #XX
West Main Street (Hwy 12)
Whitewater, WI 53190

Issuance and Revisions:

Date	Number	Description
04/19/23		Plan Commission Submittal

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Sheet Title:
PROPOSED LANDSCAPE PLAN, PLANTING DETAILS

Date of Drawing: 04/19/23
Scale: As Noted
Drawn By: MCD
Job Number: L23-031
Sheet Number:

LSP1.2

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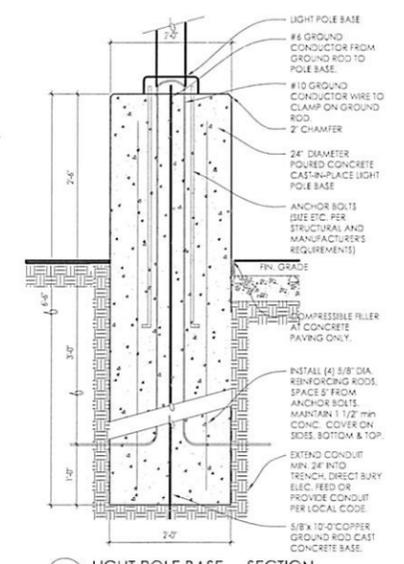
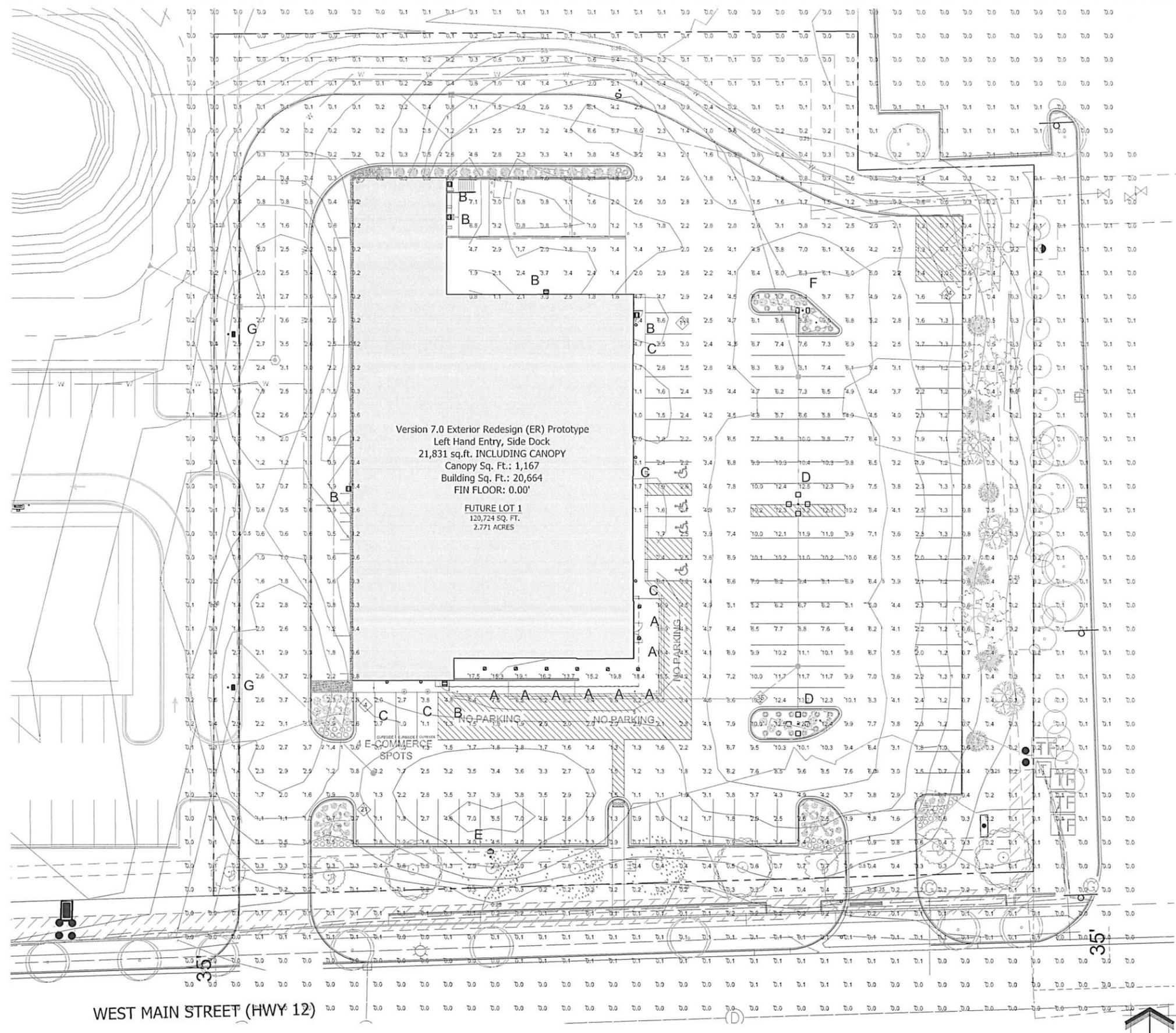
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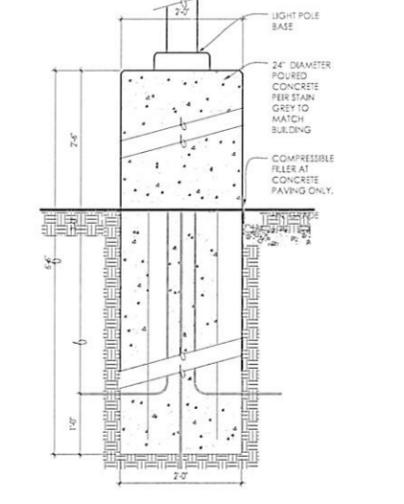
Sheet Title:
 PROPOSED PHOTOMETRIC LIGHT LEVEL CALCULATIONS PLAN AND LIGHT POLE BASE SECTIONS

Date of Drawing: 07/27/23
 Scale: 1" = 20'-0"
 Drawn By: MCD
 Job Number: L23-031
 Sheet Number:

PHO1.1



2 LIGHT POLE BASE - SECTION
 SCALE: 3/4\"/>



3 LIGHT POLE BASE - ELEVATION
 SCALE: 3/4\"/>

ALL EXISTING AND NEW CONCRETE LIGHT POLE BASES ARE TO HAVE ALL FORM MARK REMOVED, GROUND FLUSH AND THE SURFACE IS TO BE PROPERLY PREPARED TO RECEIVE A HAND TROWELED, MASONRY SKIM COAT OF APPROPRIATE THICKNESS TO ACHIEVE A DURABLE SURFACE AND LONG LASTING AESTHETIC.

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The Future of Whitewater's Territorial Oak Tree

On October 24th, 2023 Whitewater's historic Territorial Oak was taken down. Since the 1800s, it has been located at the intersection of what became Franklin and Main Streets. Unfortunately, the tree had been in decline for a long time, but in the past few years had stopped producing acorns and produced only a few leaves as is common for dying trees. Unlike its sister tree located just across Franklin Street in a front lawn with plenty of soil to live in, this tree has struggled to thrive in its confined quarters between a cement sidewalk and a street and had become a hazard to drivers and pedestrians as it had started to drop chunks of branches, some landing on cars. It's time had come.

When this tree sprouted from its acorn, this was still Indian country. The squirrel who probably planted this tree nearly 250 years ago was just doing its job. When the area was surveyed, this tree's diameter at breast height was 16 inches and was used as the "witness" tree from which much of this area was platted. On October 23rd that measurement was 169 inches. Just imagine all that this tree has been witness to! The Urban Forestry Commission along with the Landmarks Committee and city staff decided that we can't just say good-bye to this historical treasure.

The City of Whitewater and its Urban Forestry Commission intend to honor this tree by keeping it as an active part of this community. When the Arboretum at Starin Park was proposed a few years ago, the designs included a natural play area that will be adjacent to the existing playground. When we started this project, we had no idea that the Territorial Oak would be coming down at this time. Next summer, parts of this tree will be used to create a natural playground at Starin Park.

Sections of the tree will be used to create different kinds of play spaces and signage will be located throughout the area to explain why these logs and "wooden boulders" have come to live in the park. There will be safe and interesting climbing, jumping and educational opportunities for many, many years to come as this tree continues to be a living part of Whitewater's community.

Slices of the trunk will be used to create historical tree ring maps that will show the life of this tree from its beginning until now. They will chronicle historic events in line with the rings of the tree, showing its size at various points of its history and the history of our town and the world. These will be on display at Starin Park and also at the Walworth County Historical Society. Other slices will be used for signage at the Generac Welcome and Education Center at the Arboretum to honor the donors who've been essential to creating this Arboretum, and at the local Historical Society at the Whitewater Depot.

The Whitewater Urban Forestry Commission is always grateful for volunteers who have skills that would be useful to our efforts both at continuing to build and maintain the plantings at the Arboretum, this playground project, or for other ideas that you have and would like to share. Contact the Park and Recreation Department to get involved in our great community!

October 25, 2023

Tree Sale Order

1 to 10 11 to 24 25 or more As is Size Cost Total
2023

Maple, Black	Acer nigrum		\$22.5	\$19.5	\$17.0				Std. Tree
Maple, Red	Acer rubrum								No
Maple, Sugar	Acer saccharinum	5	\$50.0			\$250 RM	55		Std. Tree
Maple, Striped	Acer pennsylvanicum	3	\$55.0	\$19.5	\$17.0	\$165 RM	55		Std. Tree
Ohio Buckeye	Aesculus glabra		\$22.5	\$19.5	\$17.0				Std. Tree
Speckled Alder	Alnus incana	5	\$22.5	\$19.5	\$17.0	\$113 #5	22.5		Std. Tree
Serviceberry/ Juneberr	Amelanchier arborea		\$22.5	\$19.5	\$17.0	\$0			Std. Tree
Running Serviceberry	Amelanchier stolonifera	12	\$18.0			\$216 #2	18		
Juneberry	Amelanchier interior		\$22.5	\$19.5	\$17.0				Std. Tree
Allegheny Shadblow	Amelanchier laevis		\$22.5	\$19.5	\$17.0	\$0			Std. Tree
Indigo Bush	Amorpha fruticosa	4	\$20	\$17.5	\$15	\$80 #5	20		Std. Shrub
Black Chokeberry	Aronia melanocarpa	4	\$16			\$64 #2	16		
Paw Paw	Asimina triloba	6	\$26.5	\$24.5	\$22.5	\$159 #1	26.5		T1
Birch, Yellow	Betula alleghaniensis		\$22.5	\$19.5	\$17.0	\$0 #5	22.5		Std. Tree
Birch, River	Betula nigra		\$22.5	\$19.5	\$17.0	\$0 #5	19.5		Std. Tree
Musclewood	Carpinus carolinia	5	\$22.5	\$19.5	\$17.0	\$113 #5	22.5		Std. Tree
Pecan	Carya illinoensis		\$26.5	\$24.5	\$22.5	\$0 #5	26.5		T1
Kingnut Hickory	Carya ovalis		\$26.5	\$24.5	\$22.5				T1
Hackberry	Celtis occidentalis	2	\$55.0			\$110 RM	55		
Buttonbush	Cephalanthus occidentali	3	\$16.0			\$48 #2	16		
Redbud	Cercis canadensis	11	\$22.5	\$19.5	\$16.5	\$215 #5	19.5		Std. Tree
Yellowwood	Cladrastis kentukea		\$34.5	\$32.5	\$30.5	\$0			T2
Dogwood, Pagoda	Cornus alternifolia	11	\$17.5	\$19.5	\$17.0	\$193 #5	17.5		Std. Tree
Hazelnut	Corylus americana	11	\$20	\$17.5	\$15	\$193	17.5		Std. Shrub
Dwarf Honeysuckle	Diervilla lonicera	5	\$16	\$17.5	\$15	\$80 #2	16		Std. Shrub
Persimmon	Diospyros virginiana	3	\$22.5	\$19.5	\$17.0	\$68 #5	22.5		Std. Tree
Eastern Wahoo	Euanamous atropurpea	3	\$26	\$17.5	\$15	\$78 #2	26		Std. Shrub
Beech, American	Fagus grandifolia	3	\$85.0	\$32.5	\$30.5	\$255 RM	85		T2
Kentucky Coffee Tree	Gymnocladus dioicus	5	\$22.5	\$19.5	\$17.0	\$113	22.5		Std. Tree
Witch Hazel	Hamamelis virginiana	5	\$22.5	\$19.5	\$17.0	\$113 3'	22.5		Std. Tree
Butternut	Juglans cinerea	2	\$55.0	\$19.5	\$17.0	\$110 RM	55		Std. Tree

Common Juniper	Juniperis communis		\$25.0	\$18.5	\$16.5			Spec. Shrub
Larch	Larix laricina	0	\$22.5	\$19.5	\$17.0	\$0		Std. Tree
Tuliptree	Liriodendron tulipifera	5	\$22.5	\$19.5	\$17.0	\$113	22.5	Std. Tree
Cucumber Magnolia	Magnolia acuminata		\$34.5	\$32.5	\$30.5			T2
Sweetgale	Myrica gale	3	\$16.0			\$16 #2		
Tupelo	Nyssa sylvatica	2	\$22.5	\$19.5	\$17.0	\$45 #5	22.5 pH issue	Std. Tree
Ironwood	Ostrya virginiana	7	\$22.5	\$19.5	\$17.0	\$158	22.5	Std. Tree
Sycamore	Plantanus occidentalis	0	\$22.5	\$19.5	\$17.0	\$0		Std. Tree
Aspen, Bigtooth	Populus grandentata	2	\$45.0			\$90 RM	45	
Plum, American	Prunus americana	11	\$22.5	\$19.5	\$17.0	\$215 #1	19.5	Std. Tree
Cherry, Pin	Prunus pensylvanica	2	\$50.0			\$100 RM	50	
Hoptree, Common	Ptelea trifoliata	2	\$55.0			\$110 RM	55	
Oak, Chinkapin	Quercus muehlenbergii	11	\$22.5	\$19.5	\$17.0	\$215 #5	19.5	Std. Tree
Oak, Swamp White	Quercus bicolor	11	\$22.5	\$19.5	\$17.0	\$215 #5	19.5	Std. Tree
Oak, Bur	Quercus macrocarpa	11	\$22.5	\$19.5	\$17.0	\$215 #5	19.5	Std. Tree
Fragrant sumac	Rhus aromatica	2	\$16.0			\$32 #2	16	
American Mountain As	Sorbus americana		\$22.5	\$19.5	\$17.0	\$0.00		Std. Tree
Showy Mointain Ash	Sorbus decora	2	\$99.0			\$198 #10	99	
Bladdernut	Staphylea trifolia	11	\$20	\$17.5	\$15	\$193 #5	17.5	Std. Shrub
Bald Cypress	Taxodium distichum	5	\$22.5	\$19.5	\$17.0	\$113 #5	22.5	Std. Tree
Hemlock	Tsuga canadensis							No
Downy Arrowwood	Viburnum rafinesqueanum	5	\$22.0	\$18.5	\$16.5	\$110 #3	22	Spec. Shrub
Total		200			Total Cost	\$4,756	Avg./Tree	\$23.78

Available Available
PP JN

0
0
0 yes
0 yes
0
15
0
yes
0
10
4
yes
12
0
0
31
0
0
yes
yes
34
0
0 yes
32
0 yes
40
0 5
0 yes
8
69
0 yes

0
0
7
0
yes
27
7
0
0 yes
14
yes
yes

37
10
10
0 yes
0
0 8
29
8
0 0

0 yes

Tree Sale Proposal

2024

Maple, Sugar	Acer saccharum	11	\$55.0	\$605.0 JN
Maple, Striped	Acer pennsylvanicum	3	\$60.0	\$180.0 JN
Speckled Alder	Alnus incana	5	\$28.5	\$142.5 JN
Running Serviceberry	Amelanchier stolonifera	15	\$19.0	\$285.0 JN
Fringe Tree	Chionanthus virginicus	1	\$100.0	\$100.0 JN
Beech, American	Fagus grandifolia	2	\$90.0	\$180.0 JN
Witch Hazel	Hamamelis virginiana	5	\$21.0	\$105.0 JN
Winterberry	Ilex verticillata (Female)	6	\$23.0	\$138.0 JN
Winterberry	Ilex verticillata (Male)	3	\$23.0	\$69.0 JN
Larch	Larix laricina	2	\$55.0	\$110.0 JN
Sweetgale	Myrica gale	2	\$17.0	\$34.0 JN
Ironwood	Ostrya virginiana	7	\$22.5	\$157.5 JN
Common Ninebark	Physocarpus opulifolius	4	\$17.0	\$68.0 JN
Aspen, Bigtooth	Populus grandidentata	2	\$45.0	\$90.0 JN
Plum, American	Prunus americana	5	\$22.5	\$112.5 JN
Western Sand Cherry	Prunus besseyi	2	\$13.0	\$26.0 JN
Chokecherry	Prunus virginiana	5	\$13.0	\$65.0 JN
Fragrant sumac	Rhus aromatica	2	\$17.0	\$34.0 JN
Showy Mountain Ash	Sorbus decora	4	\$60.0	\$240.0 JN
Meadowsweet	Spiraea alba	5	\$17.0	\$85.0 JN
Steeplebush/Hardhack	Spiraea tomentosa	5	\$17.0	\$85.0 JN
Bladdernut	Staphylea trifolia	4	\$19	\$76.0 JN
Canadian Yew	Taxus Canadensis	6	\$46	\$276.0 JN
Northern White Cedar	Thuja Occidentalis	15	\$55.0	\$825.0 JN
Hemlock	Tsuga canadensis	5	\$90	\$450.0 JN
Ohio Buckeye	Aesculus glabra	2	\$21.00	\$42.00 PP
Black Chokeberry	Aronia melanocarpa	4	\$22.00	\$88.00 PP
Musclewood	Carpinus carolinia	5	\$24.50	\$122.50 PP
Hackberry	Celtis occidentalis	2	\$24.50	\$49.00 PP
Buttonbush	Cephalanthus occidentalis	3	\$22.00	\$66.00 PP
Dogwood, Pagoda	Cornus alternifolia	11	\$21.50	\$236.50 PP
Hazelnut	Corylus americana	5	\$22.00	\$110.00 PP
Dwarf Honeysuckle	Diervilla lonicera	15	\$19.50	\$292.50 PP
Persimmon	Diospyros virginiana	2	\$24.50	\$49.00 PP
Tuliptree	Liriodendron tulipifera	4	\$21.00	\$84.00 PP
Tupelo	Nyssa sylvatica	2	\$24.50	\$49.00 PP
Plum, American	Prunus americana	12	\$21.50	\$258.00 PP
Oak, White	Quercus alba	11	\$21.50	\$236.50 PP
Oak, Chinkapin	Quercus muehlenbergii	11	\$21.50	\$236.50 PP
Oak, Bur	Quercus macrocarpa	11	\$21.50	\$236.50 PP
Oak, Dwarf Chinquapin	Quercus prinoides	2	\$21.00	\$42.00 PP
Maple Leaf Viburnum	Viburnum acerifolium	11	\$21.50	\$236.50 PP
Downy Arrowwood	Viburnum rafinesqueanum	11	\$21.00	\$231.00 PP
Total		250		\$7,204.00

Milkweed - Monarch's

- Milkweeds Native to Wisconsin (13 milkweed species) 1 non-aggressive (close neighbor introduced)
 - Swamp/Rose, Butterfly, Common, Poke, Whorled are the most common
 - Each has a bit different bloom time and location where they live naturally
 - *Asclepias amplexicaulis* - Claspig - Soils: Sandy; dry Habitat: grasslands, savannas, woodland edges. 3' Tall Max.
 - *Asclepias asperula* - Antelope-horns (Spider) milkweed - Typically 1-2ft tall - **Southwestern United States**
 - *Asclepias incarnata* - Swamp/Rose/Red - Soils: Silty to loamy or clayey: moist-wet, tolerates some mesic Habitat: Moist prairies, marshes, ditches, edges of ponds, lakes, streams.
 - *Asclepias hirtella* - Green - Soils: Sandy, rocky to clay; dry-wet. Habitat: Prairies, meadows, open woods, disturbed areas, railways. It tends to grow in light to moderate shade, but tolerates full sun
 - *Asclepias exaltata* - Poke - Soils: All Habitat: upland woods to rich woodland openings, dappled to full shade.
 - *Asclepias lanuginosa* - Woolly - Soils: rocky soil Habitat: sunny; dry prairies, open woods 10-12" Tall **Rare in WI**
 - *Asclepias quadrifolia* - Four leaf - Soil: dry, rocky, open woods, often inhabiting slopes and ridges 1-2.5' T **Just South & East of WI**
 - *Asclepias ovalifolia* - Oval leafed - High Quality prairies and savannas, prefers open sun and frequent wildfire. **Rare in WI**
 - *Asclepias purpurascens* - Purple - Soils: Loamy to clayey Habitat: Oak Savannah, woodland edges, savannas **Endangered**
 - *Asclepias speciosa* - Showy - Habitat: along canal banks and riparian sites and in sub-irrigated or occasionally flooded wetlands with sedges and rushes. **(West of Wisconsin) Introduced to WI**
 - *Asclepias stenophylla* - Narrow- leaved - Habitat: sun, dry hill prairies 1-2' Tall **Just West and South of WI**
 - *Asclepias sullivantii* - Prairie - Soils: Sandy clay or loamy: mesic-moist Habitat: prairies, wet meadows. 4' Tall Max
 - *Asclepias syriaca* - Common - Soils: All Habitat: All, disturbed areas.
 - *Asclepias tuberosa* - Butterfly - Soils: Sandy, loamy, rocky, dry-mesic; Habitat: Prairies, old fields, open woods
 - *Asclepias variegata* - Redring/White-Flowered - Soil: dry clay, loam, or rocky soil Habitat: Full sun to light shade, upland forests and woodland edge habitats, sandy open ground, ravine bottoms, low woods, slopes, ridges and roadsides. 1-3' Tall. **SE United States**

- *Asclepias verticillata* - Whorled - Soils: Sandy, rocky, clayey; dry-mesic
Habitat: Prairies, open woods, fields, flood plains, glades, railways,
disturbed areas.
- *Asclepias viridiflora* - Green Comet - Sandy, Rocky, dry; prairies, old
fields, dunes, open woods 3' Tall

MILKWEEDS OF THE GREAT LAKES

MICHIGAN, OHIO, ILLINOIS, INDIANA & WISCONSIN



ROADSIDE HABITAT
FOR MONARCHS



Milkweeds (*Asclepias* spp.) are herbaceous perennial plants named for their milky sap. These plants occur in a wide range of habitats, including intact natural communities on roadsides and highly disturbed roadsides. As required host plants for monarch (*Danaus plexippus*) caterpillars, milkweeds play an essential role in the butterfly's life cycle (see reverse). Vegetation management that allows milkweeds to persist can support monarchs. This guide can help you recognize the most common native species found on roadsides in your region.

KEY ↘

↑
MAX
HEIGHT
↓

↑
RHIZOMATOUS
↓
MAY BE MORE
TOLERANT OF MOWING

The most common milkweeds in roadsides in the Great Lakes Region (in alphabetical order):

Green milkweed (*A. hirtella*)

↑
3'
↓

PLANT: Upright, unbranched stems. **LEAVES:** Alternate; long and narrow; pointed at tips; with short hairs. **HABITAT:** Prairies, meadows, open woods, disturbed areas, railways. **SOILS:** Sandy, rocky to clay; dry-wet. **BLOOM:** Jun-Aug; green with purple or cream.

Swamp milkweed (*A. incarnata*)

↑
5'
↓

PLANT: One to many upright, branched stems; smooth or with short hairs. **LEAVES:** Opposite; lance-shaped or narrow; with few short hairs. **HABITAT:** Moist prairies, marshes, ditches, edges of ponds, lakes, streams. **SOILS:** Silty to loamy or clayey; moist-wet, tolerates some mesic. **BLOOM:** Jun-Aug; pink or light purple.

Common milkweed (*A. syriaca*)

↑
6'
↓

↑
RHIZOMATOUS
↓

PLANT: One to many stout, upright, unbranched stems; usually with short dense hairs. **LEAVES:** Opposite; oval-shaped; hairy underneath. **HABITAT:** Prairies, old fields, railways, open woods, flood plains, disturbed areas. **SOILS:** Sandy to loamy, rocky or clayey; dry-wet. **BLOOM:** May-Aug; light purple or pink.

Butterfly milkweed (*A. tuberosa*)

↑
3'
↓

PLANT: One to many spreading to upright stems; with short hairs; lacks milky sap. **LEAVES:** Alternate; lance-shaped; hairy underneath. **HABITAT:** Prairies, old fields, open woods. **SOILS:** Sandy, loamy, rocky; dry-mesic. **BLOOM:** May-Aug; orange to red or yellow.

Most common milkweed species *continued*

Whorled milkweed (*A. verticillata*)



PLANT: One to several upright, unbranched stems; with short hairs. **LEAVES:** Whorled; narrow to needle-like; smooth or with short hairs. **HABITAT:** Prairies, open woods, fields, flood plains, glades, railways, disturbed areas. **SOILS:** Sandy, rocky, clayey; dry-mesic. **BLOOM:** May-Sep; white to green.

Less common roadside milkweeds:

Item 12.

Clasping milkweed (*A. amplexicaulis*)



PLANT: Upright, unbranched, stems; smooth; 3' max. **LEAVES:** Opposite; oval-shaped; wavy margins; base of leaves clasp stem. **SOILS/HABITAT:** Sandy; dry; grasslands, savannas, woodland edges. **BLOOM:** Apr-Jun; pink or green with cream, sometimes purple.

Purple milkweed (*A. purpurascens*)



PLANT: Upright, unbranched, stout stems; smooth; 6' max. **LEAVES:** Opposite; oval-shaped; smooth above with fine hairs below. **SOILS/HABITAT:** Loamy to clayey; mesic; prairies, meadows, woodland edges, savannas. **BLOOM:** May-Jul; dark rose to purple.

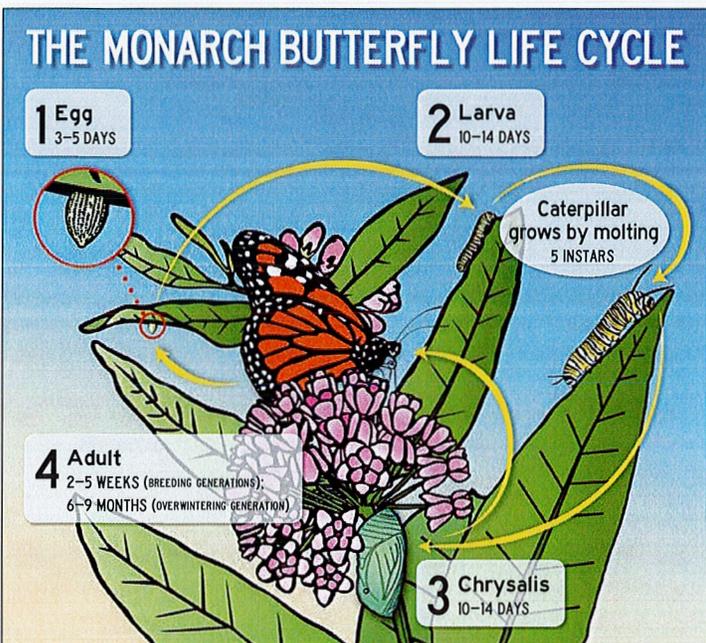
Prairie milkweed (*A. sullivantii*)



PLANT: Upright, unbranched, stout stems; smooth; 4' max. **LEAVES:** Opposite; lance- to oval-shaped; very smooth. **SOILS/HABITAT:** Sandy clay or loamy; mesic-moist; prairies, wet meadows. **BLOOM:** Jun-Aug; pink with light green or purple.

Additional Resources:

- For more information on monarchs and roadsides, including monitoring, visit: tinyurl.com/MJV-Monarchs-Roadsides
- Mowing and Monarchs: tinyurl.com/MJV-MowingForMonarchs
- Xerces Society for Invertebrate Conservation: xerces.org
- Monarch Joint Venture: monarchjointventure.org



Multiple generations of monarchs are produced over the spring and summer, with the fall generation migrating to overwintering sites. You can monitor monarchs or milkweeds; see Additional Resources above.

Green comet milkweed (*A. viridiflora*)



PLANT: Multiple unbranched, spreading or upright stems; with short hairs; 3' max. **LEAVES:** Opposite; lance- or oval-shaped, edges folded upward or wavy. **SOILS/HABITAT:** Sandy, rocky; dry; prairies, old fields, dunes, open woods. **BLOOM:** Jun-Jul; light to yellowish green.

Additional milkweeds in the Great Lakes region: *Asclepias exaltata*, *A. lanuginosa*, *A. quadrifolia*, *A. ovalifolia*, *A. speciosa*, *A. stenophylla*, *A. variegata*.

Maps & Distribution Data:

These profiles are derived from regional floras and field guides and Woodson's *The North American Species of Asclepias* (1954). Most common species are abundant across the states and are found in roadsides. Less common species might not occur in all states, have a limited distribution across a state, or may be less common in roadsides. Additional species may be uncommon in roadsides, have a small distribution in a state or region, or are uncommon or rare. The range maps indicate counties where species have been observed (but may be incomplete), and were created by USDA-NRCS using the latest data from the USDA's PLANTS database (<https://plants.sc.egov.usda.gov>).

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PHOTO CREDITS: Jim Fowler (*A. syriaca*); Krista Lundgren, USFWS / flickr (*A. viridiflora*); Joshua Mayer / flickr (*A. hirtellæ*); Jerry Oldenettel / flickr (*A. verticillata*); Tom Potterfield / flickr (*A. incarnata*, *A. purpurascens*); Paul Rothrock / SEINet (*A. amplexicaulis*); Scott Seigfreid (*A. tuberosa*); Xerces Society / Ray Moranz (*A. sullivantii*). Photographs remain under the copyright of the photographer. © 2019 by The Xerces Society for Invertebrate Conservation. Xerces® is a trademark registered in the U.S. Patent and Trademark Office.