

**Village of Milford
Downtown Development Authority
Municipal Exterior Landscape Maintenance**

Village of Milford, Michigan

JANUARY 19, 2022
BID PACKAGE

Grissim Metz Andriese Associates, Inc.
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GMA No. M32-214

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INFORMATION SHEET

OWNER: Village of Milford Downtown Development Authority
Contact: Ann Barnette, Director
abarnette@villageofmilford.org
(248) 684-9719

SITE LOCATION: Village of Milford – DDA Limits

SCOPE OF WORK: Exterior Landscape Maintenance

SCHEDULE: Commence: No later than April 11th, 2022

BID DUE DATE: Thursday, February 10th at 2:00pm
Deliver hard copy in **Sealed Envelope and Clearly Labeled**
“PROPOSAL FOR MUNICIPAL EXTERIOR LANDSCAPE MAINTENANCE”
To Debby Frazer, Village Clerk
Village of Milford offices
1100 Atlantic Street
Milford, MI 48381
(248) 684-1515

Email a copy to:
Ann Barnette: abarnette@villageofmilford.org
Susan Grissim: sueg@gma-la.com
ph: (248) 869-2323

BID AWARDED: February 17, 2022

SECTION 011100 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Attention is directed to Bidding and Contract Requirements hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

- A. Purpose:

It is the intent and purpose of these specifications to provide the contractor a guide for properly maintaining the landscape in order to support and promote the design intent of the project. All plantings are to be maintained in such a manner that they are healthy, vigorous in growth, attractive, clean and properly cared for throughout the year so as to meet and exceed The Village of Milford DDA's high level of standards of quality and image. The following is an outline of the scope of work and is intended to highlight the major portions, but is not intended to include all work required to be performed. Using this outline, refer to the contract drawings and specifications for full extent of work to be performed under this contract. The major portions are:

1. Plantings and Plant Bed Maintenance
 - a. General Care, Spring Startup and Fall Cleanup
 - b. Weed Removal and Control
 - c. Mulching
 - d. Watering
 - e. Fertilizing / Additives / Soil Testing
 - f. Insect and Disease Control
 - g. Bed Edges
 - h. Pruning, deadheading, and perennial grooming
 - i. Replacement of Plant Material
2. Lawn Maintenance
 - a. General Care, Spring Startup and Fall Cleanup
 - b. Edging
 - c. Mowing
 - d. Watering
 - e. Aeration / dethatching
 - f. Fertilizing / Soil Testing
 - g. Weed control
 - h. Insect and disease control
3. Irrigation System Monitoring and Adjustment

1.3 CONTRACTOR'S DUTIES:

- A. Except as specifically noted, provide and pay for the following:
 1. Labor, materials, and equipment.
 2. Tools and machinery.
 3. Utilities required for maintenance (outside of electrical and water services provided for onsite).
 4. Other facilities and services required for proper execution and completion of the Work.

1.4 CONTRACTS:

- A. Construct work as specified within the contract documents. Contractor to be paid monthly.
- B. Specify unit prices as indicated in the attached Bid Proposal Form – Exhibit B and Labor Rate / Breakdown – Exhibit C.

1.5 WORK SEQUENCES / SCHEDULE:

- A. Manage the execution of the work and be responsible for all steps, procedures, and policies necessary thereto. Contractor shall coordinate work schedules with the Owner understanding that the Owner may require schedules to be changed due to special festivals and events or construction projects.
- B. Should the Contractor's work fail to progress according to the agreed upon schedule and specifications herein and if, in the opinion of the Owner, the work cannot be completed within the contract time or such extensions granted thereof, either work additional time over the established hours of work, including Saturdays and Sundays and holidays, or enlarge the work force and work within the established hours of work, as required to meet the scheduled time for completion without additional cost to the Owner.

END OF SECTION 011100

SECTION 002113 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 PROPOSAL:

- A. Owner will receive Bids on form provided (ALL blanks must be completed), delivered in conformity with "Information Sheet." Please type, if possible.
- B. Bid must be prepared on "Proposal Form" provided for that purpose, conforming to, and based upon, requirements of Drawing(s) and Specifications. **No deviations on bids are allowed. Contractor to contact Landscape Architect per 1.2 below to request clarification or to consider contract scope revisions.**
- C. Proposal for original Contract work and for all future work thereunder to include all present applicable taxes, premiums, assessments, other like payments, fees or obtaining permits and licenses, and to be in full for all direct and indirect charges and expenses for proposed work.
- D. Erasures or changes in Bid must be initialed by Bidder.
- E. Bid must be in sealed envelope with Bidder's firm name appearing thereon, and clearly labeled per "Information Sheet," Envelope.
- F. No Bid may be withdrawn for a period of sixty (60) days after opening thereof.
- G. Owner reserves right to reject any or all proposals submitted for any reason, to waive any informalities contained therein and to enter into contract with contractor for a portion of the maintenance scope as mutually agreed on.
- H. Owner reserves right to increase or decrease Contract work on basis of Unit Prices submitted by successful Bidder.
- I. Contract based upon completion of work according to Contract Documents as defined in "Contract Work" all in time and manner as therein set forth.

1.2 EXPLANATION BY ADDENDUM:

- A. No oral interpretation shall be made to the Bidder as to meaning of the Drawing(s), Specifications, or other Contract Documents. Every request for interpretation to be made in writing to the Landscape Architect five (5) days prior to Bid Due Date. Every interpretation made to the Bidder shall be in the form of an Addendum. All such Addenda become part of Contract Documents.

1.3 MISCELLANEOUS:

- A. It is the responsibility of the Bidding Contractor to verify project areas and report discrepancy prior to bid due date.
- B. Term "Owner" also refers to Village of Milford DDA.

END OF SECTION 002113

LEGAL STATUS OF CONTRACTOR

ADDRESS, LEGAL STATUS AND SIGNATURE

The undersigned Contractor does hereby designate the address, given below, as the legal address to which all notices, directions, or other communications may be served or mailed.

STREET: _____

CITY: _____ STATE: _____

The undersigned Bidder does hereby declare that the Bidder has the legal status checked below:

INDIVIDUAL: _____

CO-PARTNERSHIP: _____

CORPORATION incorporated under the laws of the STATE of _____

The names and address of all persons indicated as partners in this proposal are as follows:

NAME	ADDRESS
_____	_____
_____	_____
_____	_____

BY: _____ TITLE: _____

Signed and sealed this _____ day of _____, 2021

(Instructions: Two (2) copies of this form are supplied for the use of Bidders. Submit one (1) copy with Bid and retain one (1) copy.

STATE OF MICHIGAN)

)SS

COUNTY OF OAKLAND)

Signed and sworn to before me this

_____ day of _____, A.D., 2021

Notary Public, _____ County, Michigan

My Commission Expires _____

1.01 GENERAL RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to General Specifications and Conditions, hereby made a part of this Section.
- B. Name and legal status of the Bidder, either as a corporation, partnership, or individual, shall be stated in this proposal.
- C. The place of residence of each Bidder, or the office address and telephone number in the case of a firm or company, with County and State, must be given after his signature.
- D. It is the intention of the Owner to award the contract to a Contractor fully capable with regard to experience to perform and complete the work in a satisfactory manner. If required by the Owner, each Bidder under consideration may be required to furnish the Owner, within forty-eight (48) hours at the Owners request, the following information sworn to under oath by him:
 - 1. The address and description of the Bidder's place of business.
 - 2. Itemized list of equipment and personnel available for the use on the contract.
 - 3. A description of any similar contracts, which the Bidder has performed in a satisfactory manner. Provide contact names and telephone numbers.
 - 4. Such additional information that will satisfy the Owner that the Bidder is adequately prepared, in technical experience and otherwise, to fulfill the contract.
- E. The proposals will be received in accordance with the Advertisement of Bids, and shall be submitted only on the forms provided by the Owner. Proposals shall be made in full conformity with all conditions set forth in these specifications. Bids are firm and cannot be withdrawn for a period of sixty (60) days after opening of the Bids unless otherwise specified in the Advertisement for Bids.
- F. The Contractor shall submit an Invoice for work completed. The Invoice will be paid within thirty (30) days of receipt.

The Contractor and all Subcontractors shall perform all of the Work described herein under the rules and regulations of the MIOSHA to protect his employees and the General Public.

2.01 CONTRACT WORK

- A. DDA RIGHT TO OBTAIN ALTERNATE SERVICES
 - 1. It is agreed that if at any time the Contractor should abandon the Work; or if his performance of this agreement is being unnecessarily or unreasonably delayed; or if he should make a general assignment for the benefit of his creditors; or if a

receiver should be appointed on account of his insolvency; or if he should persistently or repeatedly fail to supply enough properly skilled workman or sufficient suitable equipment for the Work; or if he should repeatedly disregard laws or ordinances; or the directions of the DDA, or if he should willfully violate any of the provisions of this agreement; then in any such case the DDA, after giving the Contractor and his sureties written notice thereof, may order the Contractor to discontinue all Work under this agreement or any part thereof.

2. The DDA shall have the right to enter into arrangements with others for continued performance of the Work, or part thereof, by contract or otherwise, as the DDA may elect.

EXHIBIT A
EXTERIOR LANDSCAPE MAINTENANCE SPECIFICATIONS

Site maintenance shall be conducted in conformance with these specifications. Contractor shall furnish all supervision, labor, materials, equipment and transportation required to maintain the landscape and irrigation system at all times throughout the term of this Agreement.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Attention is directed to Bidding and Contract Requirements, and to General Conditions, hereby made a part of this Section.
- B. Exhibits B thru L are hereby made part of this section.

1.2 DESCRIPTION:

- A. This Agreement shall include the performance of the following services by Contractor:
 - 3.1 Plantings and Plant Bed Maintenance
 - 3.2 Lawn Maintenance
 - 3.3 Irrigation System Monitoring and Adjustment
- B. This contract shall not include landscape maintenance for the areas under warranty through November 2022 or areas under construction as shown on Exhibits F and G.

For all years thereafter, this contract shall also include the maintenance for the landscape in these areas.

1.3 SUBMITTALS:

- A. List of representative products used, trade name, and active ingredient.
- B. Proof of adequate insurance including pollution prevention coverage.
- C. List or number of State Certified Pesticide Applicators on staff and areas of certification. References – contact names and numbers.
 - 1. If replacement trees are approved by the owner the contractor shall provide photographs of representative material. Trees not meeting the quality of approved representative sample will be rejected.

1.4 PRODUCT HANDLING:

All fertilizer, herbicide, pesticides, and fungicide shall be stored by Contractor off site in a weatherproof storage and kept dry so its chemical or mechanical properties will not be impaired.

1.5 QUALITY ASSURANCE:

- A. Comply with sizing and grading standards of the latest edition of "American Standard for Nursery Stock." A plant shall be dimensioned as it stands in its natural position.

- B. All plants shall come from nurseries located in Zones 5, 6 and 7a of the USDA Hardiness Zone Map unless approved by the Owner.
 - C. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work.
 - D. Provide percolation testing by filling plant pits with water and monitoring length of time for water to completely percolate into soil. If pits do not drain at 1" per hour, notify Owner with recommendations for remedy.
 - E. Sod: Comply with American Sod Producers Association (ASPA) classes of sod materials.
 - F. Provide soil test information of all supplied topsoil:
 - 1. Tests shall include:
 - a. pH factor
 - b. Soluble Salts Level
 - c. Mechanical analysis (P.K. Ca. mg) and cation ratios
 - d. Percentage of organic content
 - e. Soil series classification
 - f. Clay content
 - g. Herbicide multi-residue test (MR-1) if topsoil from agricultural use
 - h. Available phosphorus
 - 2. Provide Owner with soil lab test reports and recommendations on type and quantity of additives required to establish satisfactory pH factor and to bring nutrients to satisfactory level for planting sustenance and include soil lab recommendations.
 - G. Provide and pay for soil testing beginning in 2022 and every 2 years thereafter for planting bed and lawn areas as described in Sections 3.1.F and 3.2.H. All soil test collection testing and fertilizer recommendations shall be performed by a Michigan certified Arborist/Horticulturalist Expert. Provide certification qualifications.
 - H. All pest management for plantings as described in Section 3.1.G shall be performed by a Michigan certified Arborist/Horticulturalist Expert. Provide certification qualifications.
 - I. Pruning procedures shall meet or exceed ISA Tree Pruning Guidelines ANSI A300, tree, shrub, and other woody plant maintenance standards and ANSI 2133.1 safety standards.
 - J. An in-ground irrigation system is provided throughout most of the project areas. Refer to Exhibits for locations. It is the Contractor's responsibility to monitor and adjust the irrigation system to provide efficient coverage throughout the season, taking into consideration seasonal variations in water needs. The Milford DPS maintains the irrigation system. It is the contractor's responsibility to coordinate the irrigation operation with them.
- 1.6 JOB CONDITIONS:
- A. A walk-through of the grounds with the owner's representative at contract commencement is required to establish acceptance and guarantee of plant care. Upon acceptance, Contractor shall guarantee the care and keeping of such plants and shall replace, at its sole cost, any plants which, in Owner's sole discretion, need replacing. Plant damage caused by vandalism, winter snow operations, or misuse beyond Contractor's control shall be replaced at Owner's cost.
 - B. Throughout the day-to-day maintenance activities, the Contractor will monitor and notify the owner of any dying or dead plant material or plantings not exhibiting normal growth and vigor and

provide the reason for plant failure, along with the location. The Contractor is to proceed with plant material replacements only after receiving owner's written authorization to proceed. Dead or dying plant material shall be removed immediately upon approval with stumps ground down to 12" depth.

- C. All existing structures, overhead, underground utilities, irrigation system components and areas to be protected from damage by maintenance operations. Contractor is responsible to repair any damage at his expense.
- D. General pruning requirements and techniques outlined in this specification apply to all plantings. Pruning, except as specified herein, is not allowed.
- E. Areas damaged by Contractor's operations shall be repaired at his expense.
- F. Contractor will be responsible for irrigation damage resulting from Contractor's operations.
- G. The Contractor shall furnish all fertilizers, weed controls, and other landscape maintenance items necessary to provide a high standard of maintenance. Insecticides, fungicides, weed controls, etc. shall be nationally recognized brands used throughout the landscape profession, acceptable to the Owner, and delivered in containers clearly marked with product weight, chemical analysis, etc. Pesticide applications shall be made only by a certified pesticide applicator and applied only upon Owner's approval and with appropriate signage, barriers, etc. per manufacturer's recommendations in place.
- H. Restrict traffic from lawn areas until grass is established. Erect barriers and signs as required and coordinate with owner.

1.7 SAFETY:

Contractor is responsible for instructing Contractor's employees on the proper and legal safety practices in the completion of their work. All OSHA guides, with relation to this work, shall be followed.

1.8 GUARANTEE:

- A. Plant material shall be maintained in a plumb position, and in a healthy, vigorous growing condition. Plant material shall be kept free from diseases and insect infestation. Any plant loss due to poor or negligent maintenance practices is the responsibility of the Contractor and the expense involved to resolve the problem shall be the Contractor's.

Refer to Sections 1.6 A and 3.1 J.6 for guarantee and warranty of plant material replacements.

- B. Tree mulch rings and all planting beds shall be kept weed-free.
- C. The growth of broadleaf weeds and crabgrass shall be discouraged in all turf areas.

1.9 WORK FORCE:

Contractor shall furnish all labor required for the performance of services under this Agreement, as well as competent and qualified supervisory staff with experience in landscape maintenance. Supervisory staff must be able to communicate in English. It is important that the employees of the Contractor are wearing clean, uniform clothing that clearly indicates the Contractor's company name. Personnel shall, at all times, make a good appearance, be courteous to all visitors to the site. All equipment on site shall be in good condition and clean. Vehicles and equipment must

not drip oil or other liquids on pavement or lawns. Contractor will be responsible for all such actions and cleanup.

1.10 TIMING OF OPERATIONS:

Contractor must understand the nature of Owner's business in such a way as to not impact daily operations and business. Communication from the Contractor is of the utmost importance. The Owner reserves the right to reschedule all on-site operations of the Contractor should these operations pose any interference with festivals, special events or construction projects, etc. Typically, spring startup operations to occur no later than April 15th. Fall cleanup is to be completed no later than November 15th. Contractor to verify exact schedule with owner to adjust for seasonal conditions.

1.11 RESPONSE TIME:

All requests for service shall be handled promptly. Phone messages, emails and text messages shall be responded to within 24 hours, or earlier, as appropriate. The client shall be provided with the contact information for the project manager and crew supervisor who will be responsible for handling all requests.

PART 2 - PRODUCT (PERFORMANCE REQUIREMENTS)

2.1 MATERIALS:

- A. Plants - General: Provide plants typical of their species or variety; with densely developed branches and vigorous, fibrous root systems free of insects and diseases and have a fully developed form without voids and open spaces. Plants shall be lush, without dry foliage or root balls, free of defects, disfiguring knots, sunscald, wind burn, broken branches, frost cracks or abrasions.
1. Balled and burlapped plants shall have natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock."
 2. Cracked or mushroomed balls will not be accepted.
 3. Trees to have clay or clay loam balls.
 4. Sandy loam or sandy balls will not be accepted.
 5. Plants planted in rows shall be matched in form, size, height and branching habit.
 6. Plants larger than those specified in the plant list may be used when acceptable to the Owner. If the use of larger plants is acceptable, increase the spread of roots or root ball in proportion to the size of the plant.
 7. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.
 8. Shrubs, perennials, ornamental grasses and ground covers shall meet the requirements for spread and height as requested by Owner.
- B. All single trunk deciduous trees (including specimen stock), shade or ornamental trees, shall have straight trunks of healthy condition without mechanical damage, splits, frost cracks, scars, free of insects or disease.
1. Trees must have a straight central leader through crown of tree.
 2. "V" crotch branching will not be accepted.
 3. Tree crown to be uniform, symmetrical, plumb and characteristic of species.

- C. All Evergreen trees (including specimen stock) shall have straight trunks of healthy condition without mechanical damage, splits, and frost cracks, scars, free of insects or disease.
1. Trees must have a straight central leader from base to top of tree.
 2. "V" crotch branching will not be accepted.
 3. Trees to be uniform, symmetrical and plumb.
 4. Trees must be unshered and fully branched to ground.
- D. Specimen Stock: All specimen designated plantings are to be nursery grown, fully developed, excellent quality and typical example of the species. Plants designated to be planted in rows must be matched, symmetrical and uniform in height, spread, caliper and branching density and shall be obtained from same nursery and, preferably, from same row or line. Landscape Contractor to tag specimen trees or shrubs at the source of supply. The Owner has option to inspect specimen selections at the source of supply or review photographs of the proposed specimen plants for approval.
- E. Container-Grown Stock: Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.
1. No plants shall be loose in the container.
 2. Container stock shall not be root bound.
 3. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.
 4. Single stemmed or thin plants will not be accepted.
 5. Side branches shall be generous, well twigged and the plant as a whole well bushed to the ground.
 6. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.
- F. Topsoil for Planting Mix: Supplied topsoil proposed for use must meet testing criteria results specified and conform to adjustments as recommended by soil test. Supplied topsoil shall be good quality, fertile, friable and similar in condition of on-site soils. It shall be capable of supporting vigorous plant growth and screened free of lumps, subsoil, noxious weeds or other foreign matter such as stones greater than 1" in diameter. Supplied soil pH to range between 5.0 and 7.5. Toxic levels of nutrients and/or high soluble salts are not acceptable. Topsoil shall contain not less than 3% and not greater than 10% organic matter. Clay content as determined by Bouyoucous Hydrometer Test shall range between 5 and 15 percent.
- G. Peat Moss: Brown to black in color, weed and seed free granulated raw peat.
- H. Planting Mixture Type A (for shrubs and ornamental grasses): Standard planting backfill shall be a mixture of 3/4 topsoil, 1/4 compost. Add fertilizer Type "A" or as indicated by soil tests to planting mixture per Arborist/Horticulturalist direction. Follow planting details.
- I. Planting Mixture Type B (for perennials, ground cover beds and ericaceous plants): Planting backfill shall be a mixture of 3/4 topsoil, 1/4 compost. Add fertilizer type "B" or as indicated by soil tests to mixture per Arborist/Horticulturalist direction. Follow planting details.
- J. Plant Fertilizer shall be:
1. Legal and acceptable in the local community of the project and shall not be harmful to the public or wildlife when applied per manufacturer's instructions.
 2. Slow-release, SCU or IBDU fertilizers for turf, flowerbeds, trees, shrubs and ground cover shall be used unless approved otherwise.

3. Turf, shrub, or tree fertilizer used shall contain no phosphate unless soil tests indicate soil is deficient in this nutrient.

Fertilizer Type A with micronutrients to be applied at a NPK ratio of 4-0-2. Fertilizer shall contain slow release forms of nitrogen unless indicated otherwise by owner's representative. Provide 1 lb. of actual nitrogen per 1,000 sf unless the soil test recommendations indicate otherwise.

Fertilizer Type B with micronutrients to be applied at a NPK ratio of 1-0-1. Fertilizer shall contain slow release forms of nitrogen unless indicated otherwise by owner's representative. Provide 1 lb. of actual nitrogen per 1,000 sf unless the soil recommendations indicate otherwise.

Fertilizer for established turf to be high quality, 4 month slow release fertilizer utilizing sulfated potash as potassium source with a NPK 3-0-2 ratio. Provide 2 lbs. actual nitrogen per 1,000 sf unless the soil recommendations indicate otherwise.

Fertilizer for new lawn areas: Use a 1-2-1 NPK ratio SGN 100-210 starter fertilizer that is non injurious to turf with a sustained release of nitrogen to provide 10–16 weeks of fertility. Phosphorus and potassium amendments shall be industry standard. If soil test results show adequate phosphorus and potassium then NPK ratio shall be amended to 3-1-2. Lower rate to 0.1 lb. N per week release, (see 3.2, H for application rates).

K. Pesticides, fungicides, and herbicides shall be:

1. Commercial grade, legal and acceptable in the local community of the project and shall not be harmful to the public or wildlife when applied per manufacturer's instructions.
2. Applied in accordance with local, state and national laws.
3. Applied in a manner consistent with the product labeling.
4. Applied only after notice and arrangements have been made with Owner and signage and barriers, if required, are in place.

Planting bed herbicides: Pre-emergent herbicide product containing 50% glyphosate isopropylamine active ingredient.

Lawn: Pre-emergent herbicide to contain 65% prodiamine active ingredient. Contractor to spot apply as needed after early spring site review. Post emergent herbicide product to be liquid form and have 16% quinclorac active ingredient. Contractor to spot apply as needed after summer site review.

L. "MyCor" Tree Saver Soil Conditioner manufactured by Plant Health Care, Inc., (800) 421-9051. Use for all tree and shrub species except for those not recommended by manufacturer.

M. Superphosphate: Composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than eighteen (18%) percent available phosphoric acid. Apply as required based upon soil test report.

N. Lime: Ground dolomitic limestone, ninety-five (95%) percent passing through #100 mesh screen. Use to adjust soil pH only, as based upon soil test report or as directed by Owner.

Compost: The compost shall be a mature/stabilized, humus-like material derived from the aerobic decomposition of yard clippings or other materials as designated compostable as defined in Part 115 of Act 451 of 1994 as amended in Act 212 dated 2007, and shall be in compliance with all federal and state laws. The compost shall have a dark brown or black color, be capable of supporting plant growth without ongoing addition of fertilizers or other soil amendments and shall not have an objectionable odor. It shall be free of plastic, glass, metal and other physical

contaminants, as well as viable weed seeds and other plant parts capable of reproducing (except airborne weed species). The compost moisture content shall be such that no visible free water or dust is produced when handling it.

<u>Test Items</u>	<u>Acceptable Range</u>
Maturity/Stabilization:	An acceptable test that can demonstrate Maturity/Stability
Temperature:	The material must have undergone the procedure to significantly reduce the pathogen level as referenced in EPA 40 CFR, Part 257 Regulations, Federal Register Vol. 58, No. 32; dated 2/19/93; Rules and Regulations; (Pile temperatures must be maintained at 40 degrees C for 5 days with a temperature exceeding 55 degrees C for at least 4 hours).
Pathogens and Trace:	Shall meet the requirements of EPA 40 CFR, Part 503 *TCLP or Elements EPA 1311 Regulations, Federal Register Vol. 58, No. 32; dated 2/19/93; Rules and Regulations.
Organic Content:	30-65%, dry weight basis
Moisture Content:	30-60%, wet weight basis
Inert Contamination:	Less than 1% by weight (no visible plastic, glass or metal allowed)
Soluble Salts:	1 – 7.5 mmho
Carbon:Nitrogen Ratio:	10:1 to 20:1
pH:	6 to 7.5
Particle Size:	98% pass through 3/4" screen or smaller

A compost sample shall be submitted to the Owner for approval prior to being used.

- O. Antidesiccant: Protective film emulsion providing a protective film over plant surfaces; permeable to permit transpiration. Mixed and applied in accordance with manufacturer's instructions.
- P. Double Processed Shredded Bark Mulch: Dark brown in color, clean, free of debris and sticks, and well aerated. Materials shall be uniform in size, shape and texture. Recycled wood products such as "pallet mulch" shall not be used. Submit samples for approval prior to installation.
- Q. Water: Free of substances harmful to plant growth. Hoses or other methods of transportation furnished by Contractor.
- R. Stakes for Staking: Hardwood stakes, 2" x 2" x 6'-0" minimum length.
- S. Stakes for Guying: Hardwood, 2 x 4 nominal, x 24" length, pointed on one end.
- T. Guying/Staking Wire: New galvanized steel wire, free of kinks or bends, use 11 gauge for trees 4" caliper or 8' height and under; use 9 gauge for larger trees.
- U. Turnbuckles: Galvanized steel of size and gauge required to provide tensile strength equal to that of the wire. Turnbuckle opening shall be at least 3".

- V. Staking and Guying Hose: Two-ply, 3/4" black reinforced garden hose not less than 1/2" inside diameter.
- W. Tree Wrap: Standard waterproofed tree wrapping paper, 2-1/2" wide, made of 2 layers of crepe kraft paper weighing not less than 30 lbs. per ream, cemented together with asphalt.
- X. Twine: Two-ply jute material.
- Y. Sod: Sod is to match adjacent lawn and be an "approved" nursery grown blend of improved Kentucky Blue Grass, Fine or Turf Type Tall Fescue grass varieties.
 - 1. Sod containing Common Bermudagrass, Quackgrass, Johnsongrass, Poison Ivy, Nutsedge, Nimblewill, Canada Thistle, Timothy, Bentgrass, Wild Garlic, Ground Ivy, Perennial Sorrel or Brome grass weeds will not be acceptable.
 - 2. Provide well-rooted, healthy, mineral based topsoil grown sod. Sod shall be free of diseases, nematodes and soil borne insects. Peat grown sod is not acceptable. Provide sod uniform in color, leaf texture, density and free of weeds, undesirable grasses, stones, roots, thatch and extraneous material; viable and capable of growth and development when planted.
 - 3. Furnish sod machine stripped in square pads or strips not more than 3'-0" long; uniformly 1" to 1-1/2" thick with clean-cut edges. Sod to be mown before stripping. Big roll sod is acceptable.
- Z. Lawn Seed: Fresh clean and new crop seed mixture 95% pure with 80% minimum germination. Seed mix to match existing unless directed otherwise.

PART 3 - EXECUTION

3.1 PLANTINGS AND PLANT BED MAINTENANCE:

- A. Spring start up (to begin no later than April 15th and completed by May 15th unless seasonal conditions cause a different schedule):
 - 1. All grounds except for pavements shall be cleaned of debris. This includes branches, leaves, miscellaneous litter, rocks, gravel, broken curbing, etc. Rake and remove all debris (especially cigarette butts) and cultivate and level areas disturbed by snow removal operations or where excessive compaction is evident.
 - 2. Ornamental grasses to be cut down to 3" height above finish grade for grasses under 3' height and 6" height for grasses over 3' height. Other dead perennial or shrub foliage left for winter interest to be removed from plants. All foliage to be removed by the end of April depending on seasonal conditions.
 - 3. As part of spring start up, Contractor to repair any plant bed edges that abut lawn with shovel cut edges at 3" depth.
 - 4. Replacement of Plant Material: As part of spring start up, a complete review of the site's plant material shall be performed. Plants that require replacement shall be noted on a site map. A determination as to why the plant requires replacement should be made and what costs are necessary for replacement. The map with replacement information and associated costs shall be provided to the Owner by May 1st. Upon Owner review, all dead and dying plant material up to 3" caliper per Section 1.6.B shall be removed immediately. Replacements of perennials and ornamental grasses to be identified with associated costs in the same manner no later than May 15th.

5. All tree pruning to be provided by others. All dead or broken branches shall be properly trimmed and removed from shrubs. An annual application of dormant oil spray shall be performed as part of the contract on the Euonymus ground cover if prior year infestation indicates its use.

B. General Care:

1. Plant material shall be maintained in a plumb position and in a healthy, vigorous growing condition and keep free from diseases and insect infestation. Any decline, death of plants, or damage to lawn areas or plants due to poor or negligent maintenance practices are the responsibility of the Contractor and the expense involved to resolve the problem shall be Contractor's.
2. Contractor shall meet with owner's rep mid season (or earlier if needed) to walk through the site. If any issues or concerns are identified during the walk through the contractor shall document the items on a site map.
3. Requisitions for extra services shall be provided within 1 week.
4. Contractor shall begin work within 2 weeks upon verbal approval for work outside the maintenance contract. Work shall be completed in a timely manner.

C. Weed Removal and Control:

1. The Contractor shall utilize both approved herbicides and hand labor for the control of weed growth in tree rings and planting bed areas. All beds shall be kept weed free by hand pulling and by chemical means.
2. In early spring, any weed growth or grass within planting beds or tree mulch rings shall be removed and all beds (areas of mulch) shall be treated with a pre-emergent herbicide per manufacturer's recommendations.
3. Throughout the growing season, planting beds are to be weeded, and/or treated with herbicides when conditions require, to maintain planting beds free of weeds. Herbicides are to be used with extreme care and per manufacturer's specifications and warnings.
4. Inspect bed areas weekly to keep free of stone, twigs and debris.

D. Mulching:

1. Once a year (early spring) top dress all mulch around trees and in planting beds. In addition, the Contractor shall also cultivate these areas as part of fall clean up. Cultivating shall include the areas being turned over in order to recycle mulch as practical and supplement as needed to achieve mulch depths specified. Mulch depth should be maintained at 3" at trees and shrubs and 2" at ground cover, perennials and ornamental grasses.
2. Mulch shall not cover the branches of plants or touch the trunk of trees or shrubs per Exhibits I, J, K and L.

E. Watering:

1. It shall be the Contractor's responsibility to monitor plant material water requirements to assure that all trees and plants receive appropriate water for healthy growth and contact the DPS as needed to provide appropriate amount of irrigation. In all instances, Contractor is expected to conserve water whenever possible, but without detriment to plant material. If plants decline or die due to negligence by Contractor, the Contractor shall be responsible to repair all damage and replace plants at his cost.

F. Fertilizers / Additives:

1. Beginning in 2022 and every two years thereafter, soil tests should be taken per Section 1.5.G to determine soil nutrient needs and pH within planting beds. Soil test samples should be taken to represent tree, shrub and ground cover planting soil conditions throughout the sites. Soil test reports shall be performed specifically for plant beds. Test results shall give a detailed analysis of the soil with recommendations for fertilizer types and quantities. Test reports shall include all tests as described in section 1.5.F.1. Submit test reports and recommendations to Owner before implementation of recommendations. Follow all directions specifically. Contractor shall include in the quote the cost for soil testing for 15 locations.
 2. All trees, shrubs and ornamental grasses to receive one application of Fertilizer Type A (unless soil tests indicate otherwise) in early April.
 3. All perennials, ground covers and ericaceous plants to receive one application of Fertilizer Type B (unless soil tests indicate otherwise) in early April.
 4. Contractor to apply additional and/or specific fertilizer or soil amendments as required to maintain healthy growth as required for the different plant species within the project.
- G. Insect and Disease Control:
1. As part of the contract, contractor shall inspect woody trees and shrubs for insect and mite pests, diseases and cultural problems that could impact plant health. Provide treatment recommendations for pests and cultural problems contractor to with pricing for approval by owner.
 2. Once a treatment program is determined the Contractor shall advise the Owner as to:
 - a. The specifics of the program and associated costs.
 - b. Coordination of timing.
 - c. Safety precautions being taken.
 3. It is expected that all plant material will be maintained in a vigorous and healthy state to minimize or even eliminate the need for pesticides. The extent of the infestation will be discussed with the Owner before any pesticide applications are made. Realizing that timing can be critical to the success of the application, it is the Contractor's responsibility to approach the Owner in a timely manner.
- H. Bed Edges:
1. Refer to Spring Cleanup.
- I. Pruning:
1. All tree pruning is to be performed by others in a separate contract. Pruning shall be done only by those qualified as outlined in Section 1.5.I and should be considered only to remove limbs or growth that presents a hazard, detriment to plant health, or to follow the design intent. Prior to beginning any pruning operations, contact the Owner to discuss any intended pruning. General guidelines are as follows:
 - a. This Agreement will require a minimum twenty-four (24) hours' response time to storm damage. It is expected that the Owner will incur additional costs for this work but not at a premium.
 - b. Remove dead or dying portions of plant.
 - c. Remove diseased or insect infected portions of plants if the problem cannot be controlled by other methods of treatment.
 - d. Remove portions of plants injured or killed by winter conditions. Wait until upper and lower new growth begins the following spring before any removal of such branches.
 - e. Remove any broken or damaged portions of plant as soon as possible.

- f. Remove any branch stubs. Do not prune back beyond the branch collar.
 - g. Remove limbs that are rubbing on other limbs causing damage to the bark.
 - h. Remove any lower branches that are a safety hazard or interfere with individual or vehicular traffic.
 - i. Plantings that develop unnatural runners or leaders shall be trimmed to maintain intended massing. Vines on the building walls will be contained as so not to interfere with store, directional and safety signage, fire protection devices, or utility shutoffs. Where a tree is to be backed off a structure, generally it is intended that this should be done to provide 8 to 10 feet clearance; a roadway should have 14 to 16 feet of clearance.
 - j. Poor arboricultural practices, such as "lion-tailing" or "skinning-out" branches, stubbing-off branches, flush cutting, climbing with spikes and unnecessary wounding of trunks or branches will not be acceptable. Refer to ANSI A-300.
 - k. Unless otherwise arranged with the owner, it is expected that all brush and debris will be cleaned up at the end of each workday, it may not be stockpiled.
2. Time of Year to Prune:
- a. Deciduous shrubs should typically be pruned during their dormant period, but not during heavy frost, and as follows: Pruning should be done when all of the foliage has dropped, generally from mid-November to the latter part of December. All pruning should be done before buds show evidence of swelling. Wait until frost-damaged plants begin to grow before pruning them. Shrubs that flower early in the spring should be pruned immediately after flowering. Prune shrubs that flower after the end of June during their dormant season (winter or early spring) and as necessary to maintain appropriate and proper care.
3. Pruning Equipment:
- a. Only employ clean sharp tools. Tools should be clean and sanitized, if necessary, to prevent the spread of disease. Sanitize with 70% denatured alcohol or household bleach diluted 1 to 9 with water.
 - b. Hand pruning saws are to be used on limbs measuring over 1 inch in diameter. Pruning loppers are recommended for limbs less than 1 inch in diameter and hand pruning shears are used for small twigs.
 - c. All cuts 3 inches in diameter or smaller *shall be made with a handsaw.*
4. Pruning General:
- a. When cutting a limb that is broken or requires removal by saw, make proper cuts to prevent peeling of the bark on the portion that will remain. The pruning cut should be made toward the outside portion of the "collar." If a plant does not produce this characteristic collar, then make the cut flush to the limb where it was growing. The first cut should be made on the bottom side of the fractured limb. The location of this cut should be on non-injured wood just beyond the fracture toward the center of the plant. The second cut is made on the top side about 6 to 8 inches beyond the bottom cut (toward the center of the plant). A third cut may be necessary if there is frayed wood. A smooth, clean cut is necessary to promote rapid healing. Do not leave little stumps on trunks or main branches. Remove smaller branches at juncture of limb from which they originate or cut at twig or bud pointing outward.
 - b. Remove dead, damaged or diseased limbs annually. Do not trim or remove lower branches of evergreens. When necessary, prune branches flush to the nearest living limb; maintain a well-rounded, balanced natural form of the trees and shrubs. Pruning to shape evergreens should be limited to the removal of one third of the

current year's growth in late spring or early summer after new growth has started but before it has matured and before buds have developed.

- c. All broken branches shall be properly trimmed and removed from site. Branches should be pruned in a manner that maintains the natural growth pattern of the plant. Pruning shall be performed in order to develop solid branch characteristics and in decreasing proportions of trunk to branch structure. Pruning shall also be used to eliminate diseased or damaged growth.

5. Treating Wounds After Pruning:

Pruning wounds shall not be coated or painted unless for prevention of pathogens. Contractor to submit product information to Owner for approval prior to use.

6. Pruning Hedges, Shrub Masses and Groundcovers:

- a. Refer to Exhibit H for pruning formal hedges, all formal hedges to be trimmed twice per year at a minimum.
- b. All hedges shall be pruned to maintain hedges at the height and width as directed. DO NOT prune plants individually.
- c. In general, hedges (Boxwood, Yew, Juniper and Arborvitae) should be pruned so that they are broader at the base than at the top twice per season as required.
- d. All shrubs in mass plantings shall be thinned and trimmed to maintain the height as directed and never be sheared. Roses shall be pruned in April to remove all dead.
- e. Spiraea to have 1/3 of old growth removed each year.
- f. Groundcovers and vines that develop unnatural runners shall be trimmed to maintain intended massing. Vines shall be contained as so not to interfere with directional and safety signage, fire protection devices or utility shutoffs.
- g. Euonymus to be kept between 4-8" in height, and shall be trimmed a minimum of 4 times per year.

7. Perennial "grooming" and deadheading:

- a. Contractor to dead head Blue Salvia after all blooms have died.
- b. Contractor to trim back Catmint in July to rejuvenate.
- c. Contractor to "groom" Stella D'Oro Daylilies by removing seed pods as they develop and hand pulling out dead foliage throughout the growing season.
- d. Contractor shall cut back ornamental grasses with sharp "bladed" equipment and not "string" trimmers,.

J. Replacement of Plant Material:

1. Beginning of Season: See spring start up section 3.1, A for beginning of season replacement protocol.
2. Monitoring and Corrective Measures: Throughout the year, the Contractor shall monitor all plantings for signs of decline and immediately contact Owner to discuss applicable remedy to improve the health of these plantings. If the plantings do not improve, the Contractor shall promptly notify the Owner of the situation with explanation as to the cause of the plant material demise and if additional corrective measures should be implemented to prevent additional plant loss in the future.
3. Removal and Replacement: Upon Owner review, the Contractor is responsible to immediately remove all plantings that have declined past the point of aesthetically contributing to the landscape. Prior to replacing the plant material, the Contractor must verify with the Owner that all site conditions are remedied, or if this is not feasible, provide information on why the plantings are not suitable or hardy for the planting locations. If this

is the case, Contractor to provide Owner with options for alternative plant material that meet the design intent. In all cases, Contractor shall provide Owner with the cost for replacements and must receive approval prior to beginning any replacement work.

4. Planting: Plant during suitable weather conditions, according to locally accepted procedures, and with the Owner's approval. Plant trees and shrubs vertically and faced to give best appearance in relation to structure, roads and walks. Set plumb in the center of the pit and at the same relation to grade as originally planted, after settlement has taken place. Install plantings per details in Exhibits I, J, K and L. While adding backfill, constantly tamp soil around root ball to eliminate air pockets. Soak planting mixture thoroughly with water when hole is filled half way. Fill hole completely, leaving a shallow saucer directly over the root ball, and slightly smaller in diameter than the excavation. Water trees and planting beds thoroughly immediately after planting.
5. Acceptance and Documentation: Contractor to notify Owner when replacement plants have been installed so that Owner can review for acceptance. Upon Owner's acceptance, Contractor shall provide Owner with a site map marked with replacement locations and installation dates.
6. Warranty: The Contractor shall be required to warranty all replacement plants as specified in this section of the contract, for twelve (12) months from the date of acceptance of replacements. The plants shall be in a healthy growing condition by the end of the warranty period. Plants with dead or dying branches, which detract from the character and form of the plant, will not be accepted. Replacements required at the end of the warranty period shall specifically match those being replaced and planted as specified for the original replacements. The cost of replacement shall be the responsibility of the Contractor.
 - a. All material disturbed/damaged or removed in the replacement procedure, shall be restored to original condition and shall be the responsibility of the Contractor. Replacement plants shall be subject to this guarantee requirement. Replace plant stock that is dead or not in a flourishing and satisfactory growing state, or does not meet specification requirements. Remove dead stock and replace immediately. Adjustment and replacement work shall be performed as specified in this section with materials of same size, variety, and quality of material replaced.

K. Fall Cleanup:

Contractor to perform fall cleanup prior to November 15th as follows:

1. Trim out/remove foliage from perennials, ornamental grasses, Hydrangea and other plants as directed by Owner to optimize the aesthetics of plantings in the winter.
2. Remove all vegetative debris and cultivate and replenish mulch in all planting beds and tree rings per section 3.1.D.
3. Weekly remove all leaves from lawn and planting beds.

3.2 LAWN MAINTENANCE:

A. Spring Start Up and Fall Cleanup:

1. During spring start up and fall cleanup, all lawn areas shall be thoroughly raked to remove all dead grass, surface thatch, vegetative debris, litter, de-icing salt, gravel, etc. from all lawn areas except as noted on the TRW exhibit.
2. Each spring after the initial raking and cleanup the lawn should be thoroughly inspected for areas of poor growth or damage. These include areas damaged by foot or auto traffic, snow, maintenance, erosion, disease or insect infestation, etc. Note areas with square footage measurements damaged by snow removal operation (physical or salt damage) and mark areas on site plan with associated repair costs and submit to Owner for approval. A review of all lawn areas noting areas of necessary seed/sod replacement due to winter

or other damage shall be made and those areas marked on a site plan. An estimated cost for the replacements shall be provided with this report. The Contractor will be responsible for all seed/sod re-establishment. Typically, sod shall be used in high profile areas or areas with pedestrian traffic and seeding shall be used in less visible areas where risk of disturbance is minimal.

3. As part of the spring cleanup, the Contractor shall edge and trim all lawn areas adjacent to all curbs, walkways/mulch areas and planting beds, except in areas noted on the TRW lawn exhibit.

B. General:

1. Contractor to maintain all weekly mown lawn areas in a vigorous, healthy state and keep free from weeds, diseases and insect infestation as reasonable. Any decline, death or damage to lawn areas due to poor or negligent maintenance practices are the responsibility of the Contractor and the expense involved to resolve the problem shall be Contractor's.
2. The areas as noted on the TRW Exhibit are to only receive monthly mowing and no other care other than that listed in Section 3.2.A.

C. Repair:

1. Throughout the season, all bare spots, any holes, ruts, or areas of erosion shall be filled in and resodded/reseeded as appropriate to reestablish a smooth, stable surface per Owner direction. Contractor to provide an allowance for minor repair work under this contract.
2. Contractor shall be responsible to repair irrigation damage resulting from any lawn care procedures.

D. Edging:

1. The edges of all lawns adjacent to planting beds, individual trees, walls, utilities, signs, light poles, fences, guardrails, sidewalks, curbs, etc., shall be mechanically trimmed prior to every other mowing with all clippings removed. Damaged site amenities and/or vegetation from weed whippers or other lawn equipment shall be replaced at the Contractor's expense.
2. The use of chemicals for this purpose is not permitted.

E. Mowing:

1. Prior to mowing operations, lawn areas are to have all trash (e.g. paper, sticks, cigarette butts, plastic, etc.) removed and disposed properly.
2. All weekly mown lawn areas shall be mowed at a height of approximately 2 ½" in spring and 3" minimum in summer. Mowing shall be accomplished when the grass blade reaches a height of no more that one-third greater than the routine mowing height. Lawn shall be cut at approximately 25% increased height during times of turf stress (summer drought). Contractor shall not mow lawn exhibiting drought stress.
3. Mowing to be established on a schedule with a range of five to ten days. The average would be once every seven (7) days. Rain days include conditions when the soil is too saturated and not able to support the weight of the mowers without rutting, or when grass is wet enough to clump mulched clippings. Mowing should continue as long into the season as necessary.
4. Mowing is required to comply with E.2 above. Mulching blades shall be used, however excessive clippings shall be removed from the site immediately after mowing and properly disposed of by the Contractor. Grass clippings on paved areas shall be removed after mowing. Excess grass clippings shall not be blown back on lawn. Lawn shall be mown in different direction from previous cutting where feasible.
5. Mower blades are to be kept sharp - monitor condition of blades and sharpen as needed.

6. Extreme care must be used when mowing or weed whipping near trees to avoid damage. Do not damage tree trunks.
 7. Contractor shall use appropriate mowing equipment to avoid scalping steep grades or creating ruts in soft areas.
 - a. The TRW Field site to be mown monthly to a 4" height or per seasonal conditions. Clippings shall be removed as necessary to avoid injury to grass beneath.
- F. Watering:
1. It shall be the Landscape Contractor's responsibility to monitor water needs of lawn areas, closely and to contact the DPS as needed to adjust the irrigation systems to provide sufficient coverage throughout the season, taking into consideration seasonal variations in water needs.
 2. The contractor is expected to conserve water, whenever possible, but without detriment to plant materials and lawn areas.
- G. Aeration
1. Prior to May 1st (annually), the Contractor shall review all turf areas for compaction. The Contractor shall aerate the lawn areas that are compacted more than 85% density by hollow core aeration with the core size being approximately 1/2" diameter by 2" minimum depth by 3" on center throughout all compacted turf areas. Core material may remain on turf areas if Contractor schedules this operation just before a mowing.
- H. Fertilizing:
1. Work specified in this section shall include soil testing beginning in 2022 and every two years thereafter soil tests shall be taken by a Michigan Certified Arborist or Horticulturist per Section 1.5.G. Test soil from varied locations specifically for lawns. Submit test laboratory soil analysis report with recommendations to the Owner for approval before implementation. Contractor shall include in the quote the cost for soil testing in 5 locations.
 2. Fertilizer to be applied on weekly mown lawn areas 2 times per season as follows: In spring and fall apply 4-month slow release fertilizer per section 2.1.J at a rate of 2 lbs. actual nitrogen/1,000 sf with a 3-0-2 NPK ratio unless soil tests indicate otherwise.
 3. Use mechanical spreading equipment and follow manufacturer's specifications to obtain an even application of fertilizer. Check calibration of spreader to ensure specified rate is achieved. Water immediately after fertilizing to obtain moisture penetration of 2". Rectify uneven spreading as soon as it becomes apparent. Spread additional fertilizer over areas affected or rake out excess application and remove fertilizer from adjacent hardscape surfaces.
- I. Weed Control:
1. The growth of crabgrass and broadleaf weeds shall be discouraged in all lawn areas. The Contractor must have a license for herbicide spraying. Inform Owner of specific weed problems and recommended eradication methods. All weed control spraying shall be approved by the Owner. Required notification and posting of warning signs and all other government regulations shall be adhered to.
 2. Herbicide to be applied only on weekly mown lawns as follows: Lawn shall receive only necessary and appropriate applications of weed control chemicals. It is expected that the turf grass will be maintained in a vigorous and healthy state to minimize or even eliminate the need for herbicides. In spring before crabgrass germination apply a pre-emergent herbicide such as Barricade or approved similar with 40% minimum content of prodiamine active ingredient per manufacturer's recommendations. In late May, apply post emergent

- herbicide such as Drive XLR8, or approved similar, per manufacturer's recommendations. If additional applications of herbicide are required, contact Owner for approval.
3. When herbicide application is combined with granular fertilizer, ensure that granular is not spread in planted areas. Should application of herbicide not be combined with fertilizer, ensure that it is done during calm weather to prevent spreading by wind over areas that should not be touched (planted areas, cars, etc.) and to allow for even spreading. Remove herbicide from adjacent hardscape areas. If herbicide is liquid, prepare spray mixture according to manufacturer's recommendation and apply at recommended rates. Do not use mist blower. Confine spray pattern to area(s) to be treated. Do not spray on windy days. Record herbicide use, including type of herbicide, manufacturer, application rate, location, and date of application.
 4. Contractor is responsible to repair any damage caused through improper use of herbicide at his cost.
- J. Insect and Disease Control:
1. Lawn areas are to be inspected regularly and any sign of insects and diseases shall be reported to the Owner immediately, along with a recommendation for the correction of the situation. All insect and disease controls product information with costs to be submitted to the Owner for review and approval prior to application.
 2. Upon Owner approval, Contractor is responsible for posting warning signs, installing barricades (if required) and following all government regulations and manufacturer's recommendations.
 3. Disease (Fungus, Bacteria): When such damage occurs, it is necessary to correctly identify the cause of the problem by defining the symptoms, leading to identification of the disease. Once the cause and remedy are determined, submit reports and treatment product information with cost information to the Owner for review and approval.
 - a. For diseases, where cultural control methods are effective, such as heavy raking with flexible grass rake on areas with "snow mold", the cultural control methods are preferred over applying chemical agents. If chemical control is recommended, Contractor shall notify Owner to seek approval to apply, install barricade and signage if recommended, and apply control agents per manufacturer and government regulations.
 4. Insects: In cases of insect infestation, identify the particular insect involved and the present stage of its life cycle. Determine the particular insecticide to be used as well as the rate and time of application that will achieve satisfactory control in a safe and lawful manner for the public. Provide Owner with product information, and proposed treatment with costs. Upon Owner approval, Contractor shall apply insecticides uniformly with the proper equipment calibrated at the desired rate per manufacturer and install signage and barricades if recommended.

3.3 IRRIGATION SYSTEM MONITORING AND ADJUSTMENTS:

C. General Maintenance Activities:

1. The Contractor shall become familiar with all irrigation components, their function and location and is responsible to monitor the operation of the irrigation system so as to readily identify any abnormalities and report these immediately to the Village of Milford DPS. The contractor shall be responsible for adjusting the time and frequency of operation due to natural rainfall or climate patterns at no cost to the Owner. In all instances, the Contractor is expected to conserve water in an effort to cut utility costs, but without detriment to plant material. The contractor shall also be required to adhere to all water restrictions imposed by city mandate.

2. If repairs are needed, the Contractor shall give immediate notice to the DPS.
3. The Contractor is responsible to repair all damage caused by negligence of the irrigation maintenance at his cost.

END OF SECTION 320190

Landscape & Irrigation Maintenance Bid Proposal Form

Project: Village of Milford Downtown Development Authority Municipal Exterior Landscape Maintenance

Location: Village of Milford, Michigan

Company Name: _____

Contact Name: _____

Address: _____

Phone No.: _____

Date: _____

EXHIBIT B BID PROPOSAL

The following is a summary of services to be performed, which provides a breakdown of the consideration set forth in Section 3: (Note: all costs are to include materials, execution and installation for a **1 year contract**.)

Ground Maintenance

	Total Cost
Spring Start Up (Sections 3.1.A and 3.2.A excluding mulching)	\$ _____
Fall Cleanup (Sections 3.1.K and 3.2.A, excluding mulching and lawn repair)	\$ _____

Plantings and Plant Bed Maintenance

	Frequency/ Qty.	Unit Cost	Total Cost
General Care (Sections 3.1.B, 3.1.E, 3.1.H and 3.1.J)			\$ _____
Trees			
Fertilization (Section 3.1.F)	1		\$ _____
Insect and Disease Control Monitoring (Section 3.1.G) for other woody trees for insect and mite pests, diseases and other cultural problems	as needed		\$ _____
	Frequency		Total Cost
Shrubs, Ground Covers, Perennials and Ornamental Grasses			
Fertilization (Section 3.1.F)	1		\$ _____
Insect and Disease Control Monitoring (Section 3.1.G) for other woody trees for insect and mite pests, diseases and other cultural problems	as needed		\$ _____
Pruning (Section 3.1.I)	as needed		\$ _____
	Frequency		Total Cost

Weed Removal and Control (Section 3.1.C)

Removal as needed \$ _____
 Provide Herbicide Control Product: Product name: _____

Mulching (Section 3.1.D)

Spring Start-Up 1 cy /\$ _____ \$ _____
 Cultivate and Supplement as part of Fall Clean Up 1 cy /\$ _____ \$ _____

Lawn Maintenance

	Frequency	Area/SF or acre	Qty./Unit Cost	Total Cost
General Maintenance Activities, Repair and Watering (Sections 3.2.B, 3.2.C, 3.2.F, and 3.2.J)				
Mowing - Weekly	<u>as needed</u>	_____	<u>/</u> \$ _____	\$ _____
Mowing - Monthly (TRW Field)	<u>every month</u>	_____	<u>/</u> \$ _____	\$ _____
Fertilization (Section 3.2.H)	<u>2</u>	_____	<u>/</u> \$ _____	\$ _____
Edging/Trimming (Section 3.2.D)	<u>everyother mowing</u>	_____	<u>/</u> \$ _____	\$ _____
Aeration (Section 3.2.G)	<u>1</u>	_____	<u>/</u> \$ _____	\$ _____
Weed Control (Section 3.2.1)	<u>as needed</u>	_____	<u>/</u> \$ _____	\$ _____
Weed Control Product Name:	_____			

Irrigation (Section 3.3)

	Frequency	Total Cost
Monitoring and adjustments	<u>per specs</u>	\$ _____

Summary

Total of Base Services - One Year Contract: \$ _____
 Maintenance for 2022 season excluding warranty and construction areas as shown on Exhibits D and E.

Total of Base Services if Awarded - Two Year Contract: (___% of savings = \$ _____) \$ _____
 Maintenance for 2022 and 2023 seasons excluding warranty and construction areas in 2023 as shown on Exhibits D, E, F & G.1.

Total of Base Services if Awarded - Three Year Contract: (___% of savings = \$ _____) \$ _____
 Maintenance for 2022, 2023 and 2024, excluding warranty areas in 2024 as shown on Exhibits D-G.2.

Landscape & Irrigation Maintenance Bid Proposal Form

Labor Rate/Breakdown

Exhibit C

Per Hour

Labor Rate – Plantings

Regular Hourly Rates

Foreman	\$ _____
Laborer	\$ _____
Michigan Certified Arborist or Horticulturalist	\$ _____

Overtime Hourly Rates

Foreman	\$ _____
Laborer	\$ _____

Labor Rate – Irrigation System Repairs

Certified Technician	\$ _____
Laborer	\$ _____

Additional Frequently Used Items (installed costs)

Pear tree sp., 3 1/2" cal.	ea.	\$ _____
Honeylocust, skyline, 3" cal.	ea.	\$ _____
Honeylocust, skyline, 3 1/2" cal.	ea.	\$ _____
Honeylocust, skyline, 4" cal.	ea.	\$ _____
Euonymus fortunei, 2 gal.	ea.	\$ _____
Rosa sp., 3 gal.	ea.	\$ _____
Spiraca sp., 3 gal.	ea.	\$ _____
Taxus sp., 30" ht./spd.	ea.	\$ _____
Boxwood sp., 18" ht.	ea.	\$ _____
Vinca Minor, 4" pot	ea.	\$ _____
Hydrangea sp., 3 gal.	ea.	\$ _____
Pennisetum 'Hamelin', 2 gal.	ea.	\$ _____
Miscanthus sp., 2 gal.	ea.	\$ _____
Coneflower sp., 1 gal.	ea.	\$ _____
Blue salvia sp., 1 gal.	ea.	\$ _____
Geranium sp., 1 gal.	ea.	\$ _____
Catmint sp, 1 gal.	ea.	\$ _____
Daylily sp., 1 gal	ea.	\$ _____

Topsoil (screened)	cy.	\$ _____
Plant mix	cy.	\$ _____
Sodded Lawn	sy.	\$ _____
Seeded Lawn	sy.	\$ _____
Irrigation Lawn Rotor	ea.	\$ _____
Irrigation Spray Head	ea.	\$ _____

Project: _____

Submitted By: _____

Date: _____

Milford Landscape Maintenance Map

CTRL + CLICK ALL LINKS FOR ONLINE MAP

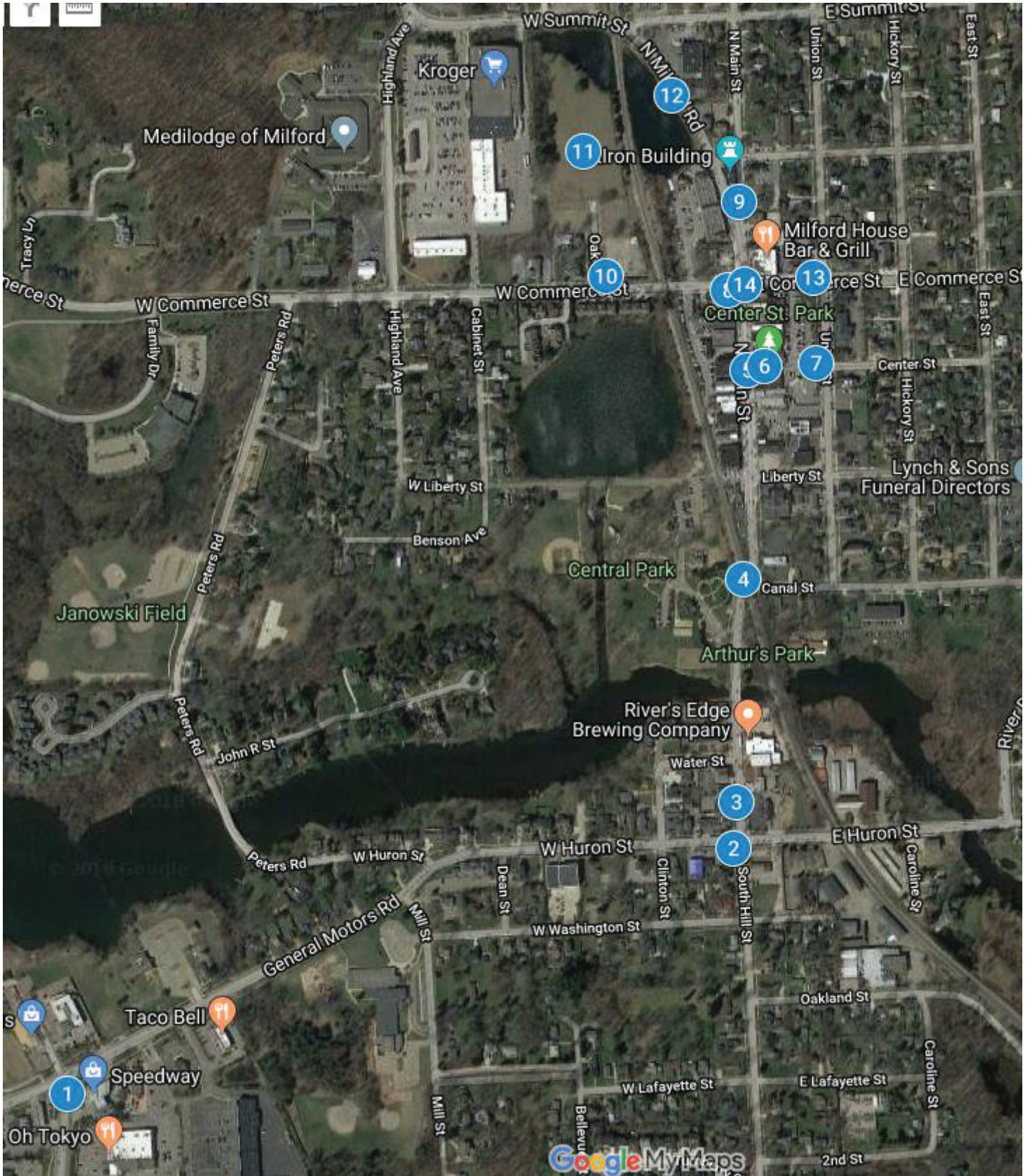


Exhibit D.1

[GM/Milford Road Landscape Island](#), ROW Maintenance
Approximately 70'x10'; trees, shrubs, perennials

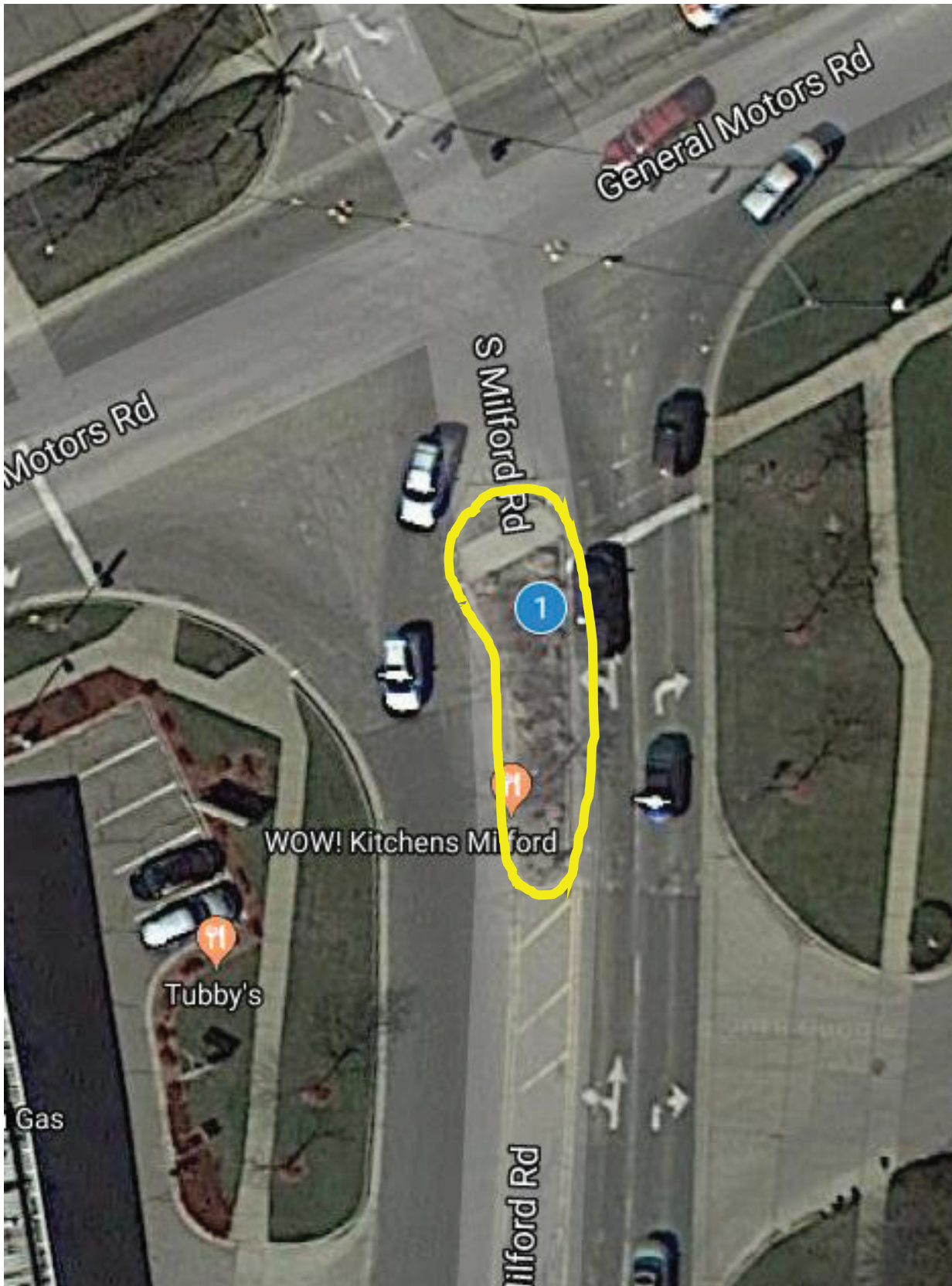


Exhibit D.2

Southside: Intersection of Main & Huron

Includes trees, perennial plantings, various grasses, roses, boxwood plantings.

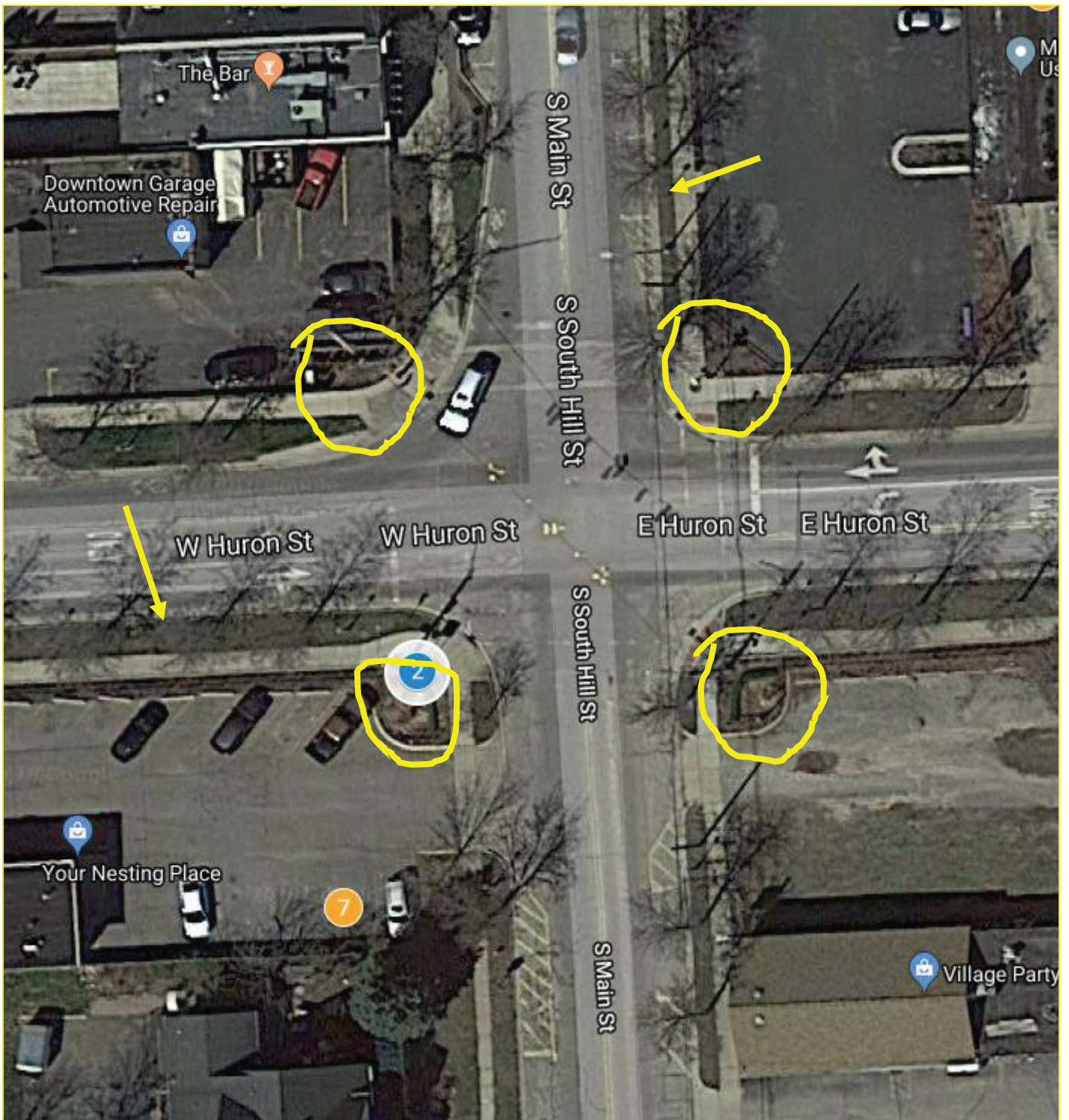


Exhibit D.3

Southside: West Side Treebeds, between Huron and Water Street

General Tree maintenance, perennial and groundcover in ROW

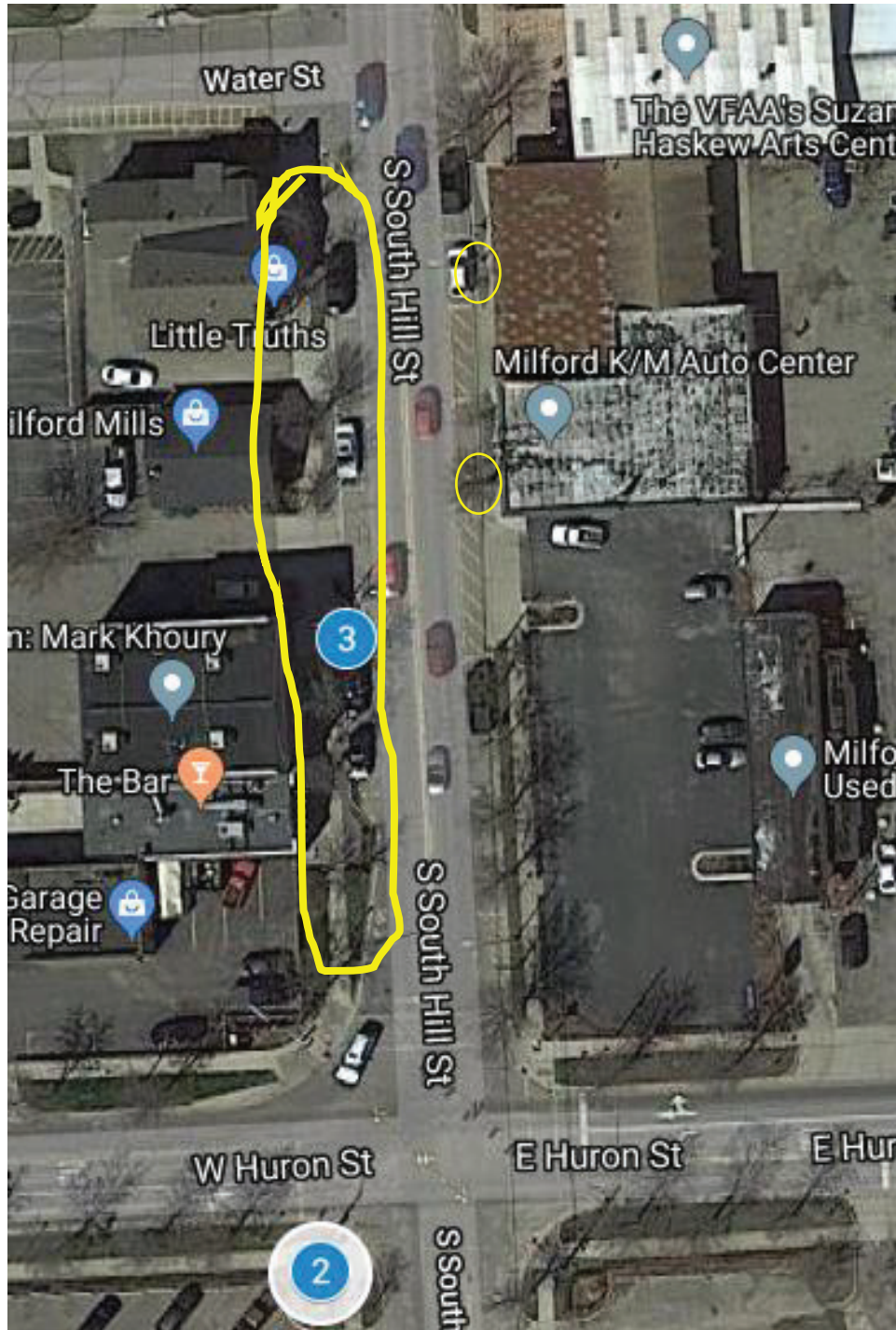


Exhibit D.4

Trestle Area: Intersection of CSX RR/Main Street and Canal

General Maintenance, tree, shrub and perennial

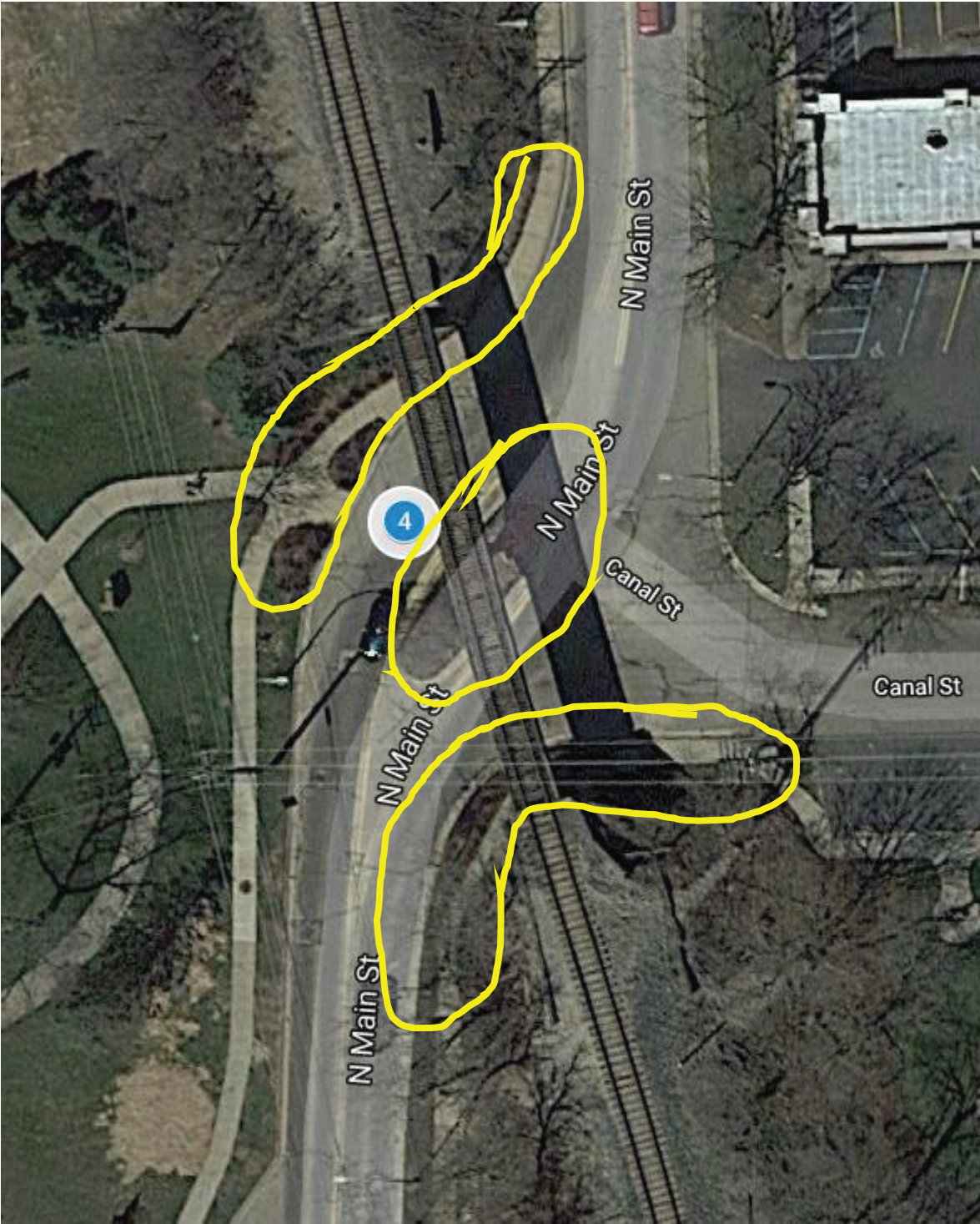


Exhibit D.5

Union Street/East Lot

Minor maintenance of evergreen hedge at Center Street and west of Union Street to keep tidy as hedge to be replaced in 2022. Weeding and mulching.

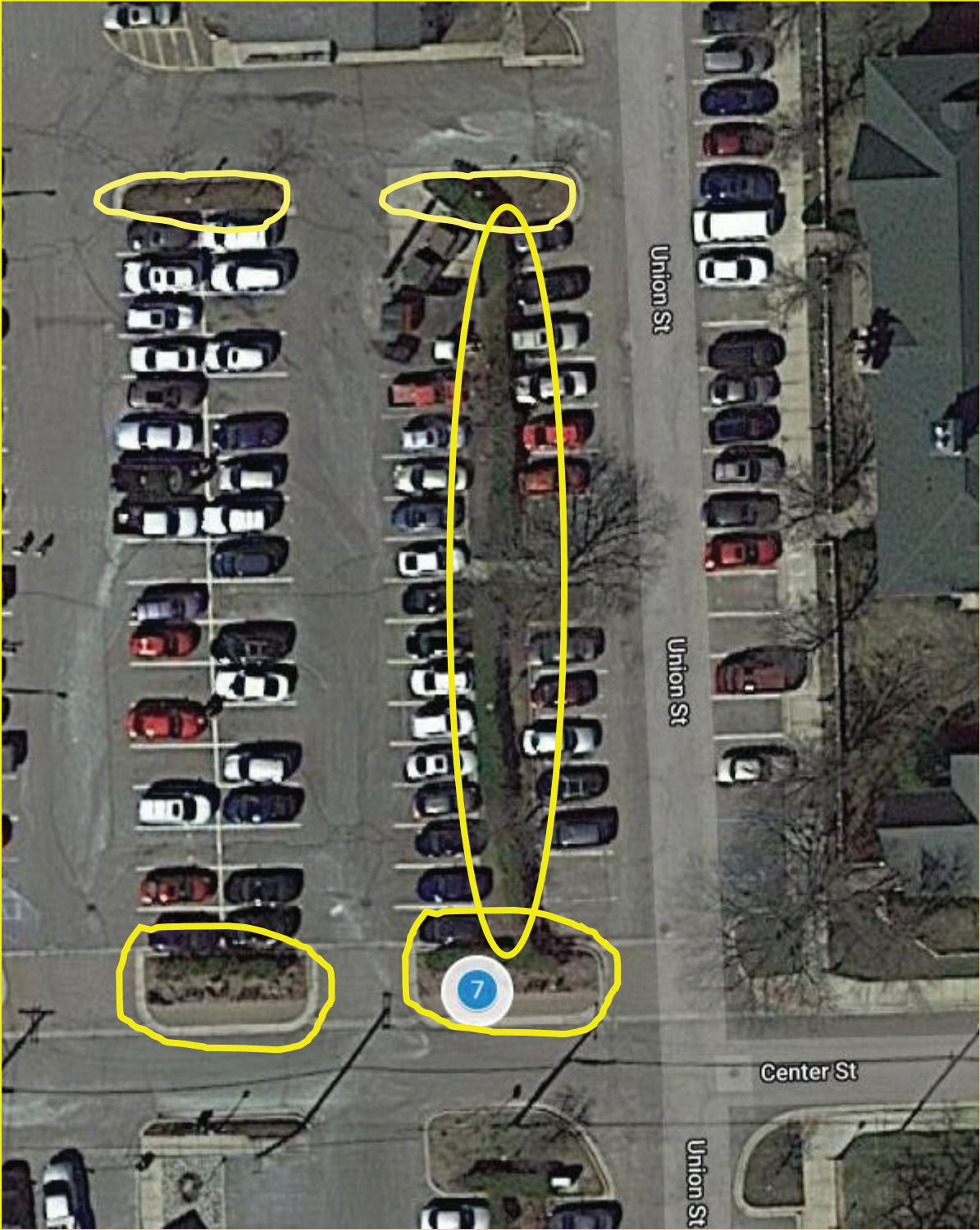


Exhibit D.6

Commerce Road

General shrub and perennial maintenance

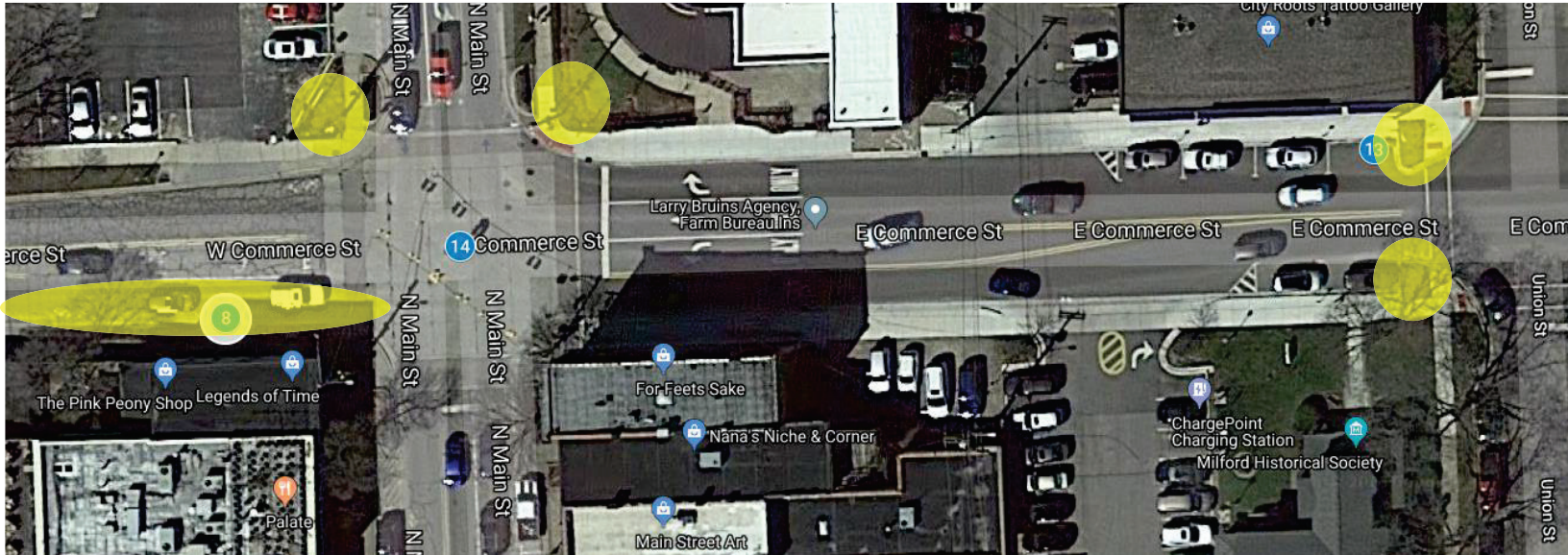


Exhibit D.7

Heritage Wheel Garden

Grasses, perennial, and shrub maintenance. Also includes row of spirea due east of the site

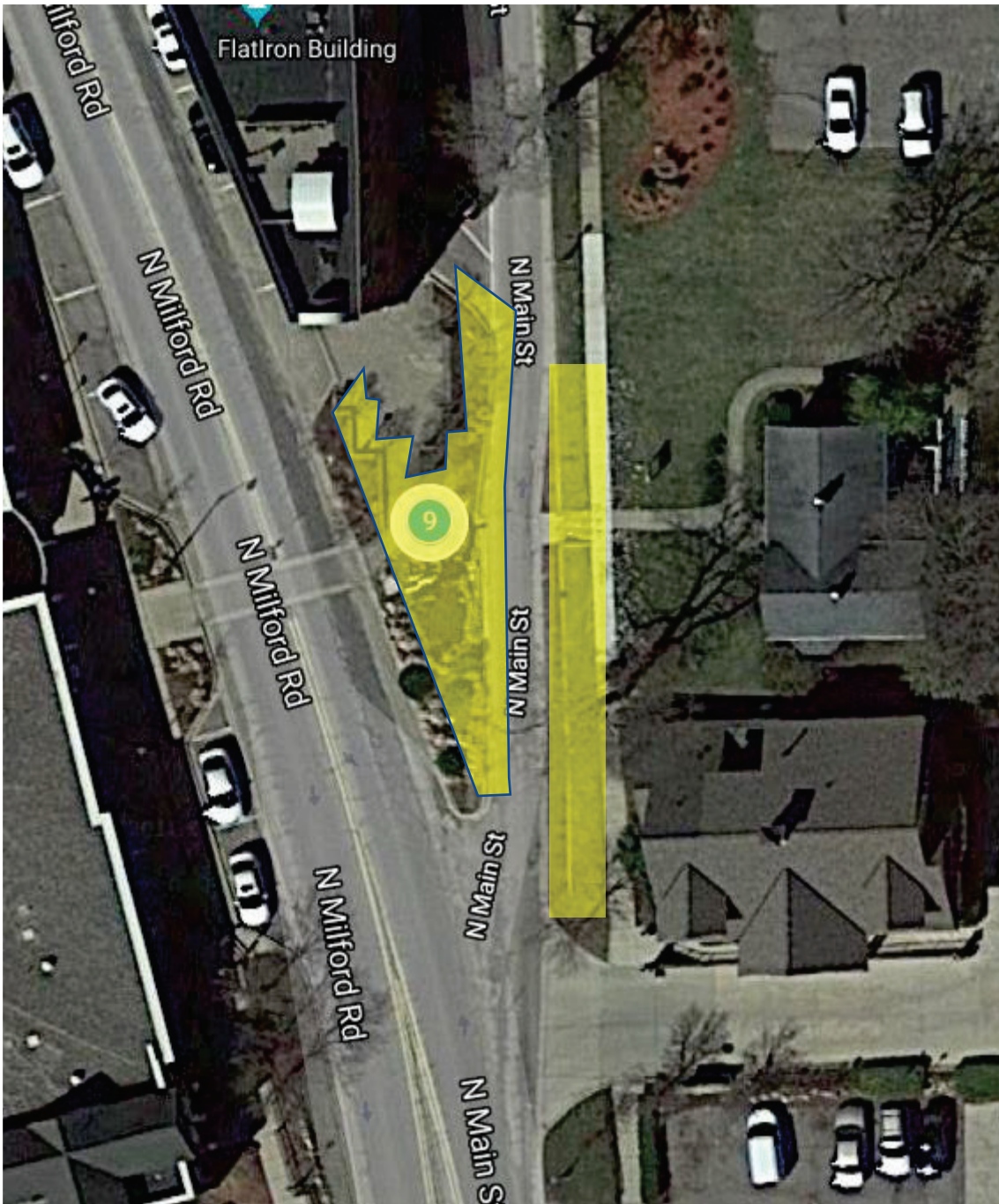


Exhibit D.8 Mill Valley and Flat Iron (525 & 545 N. Milford Rd
Tree, shrub and perennial maintenance

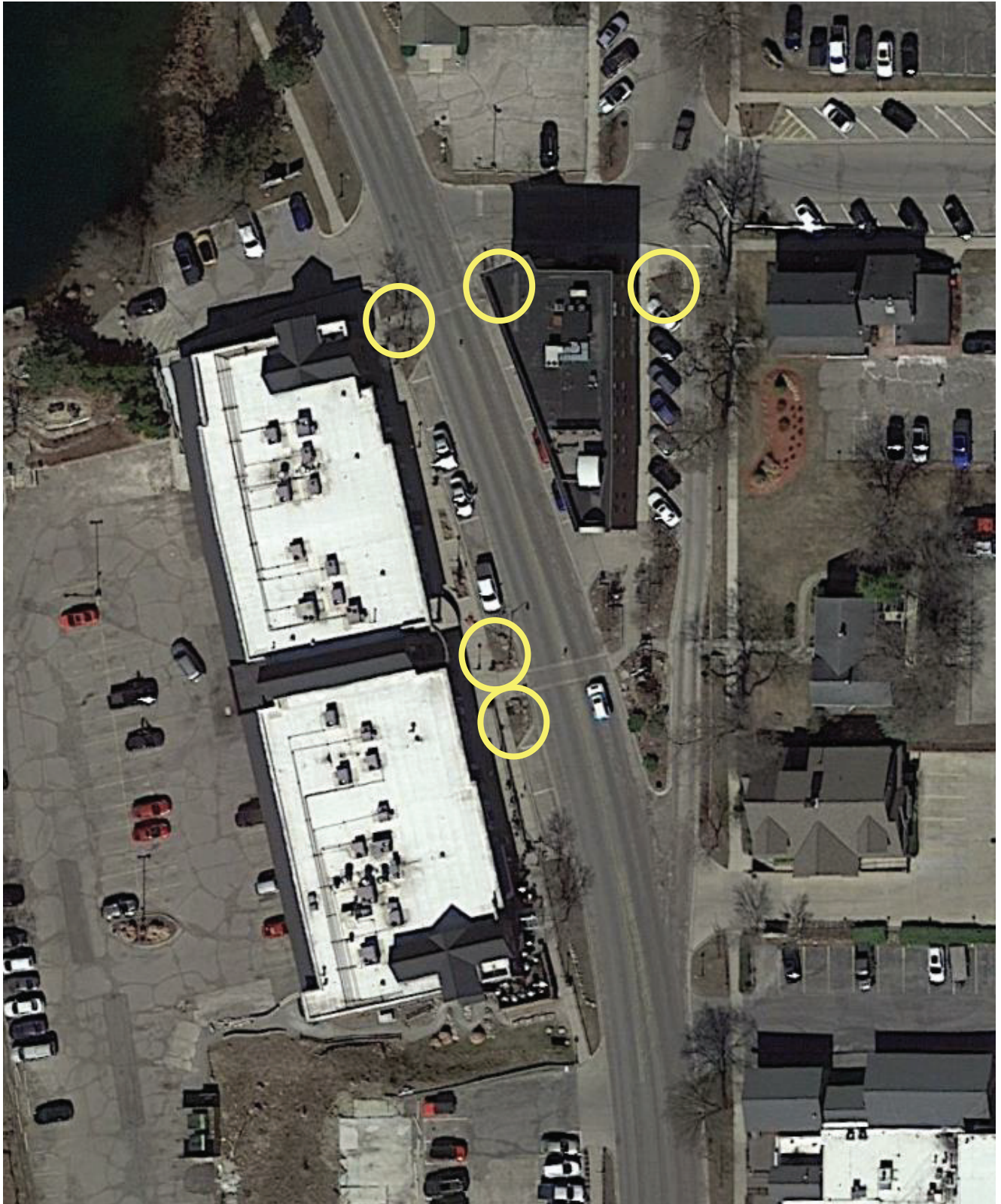


Exhibit E.1

TRW Site: ROW, Commerce and Oak Street

Weekly mowing of the ROW at Comm

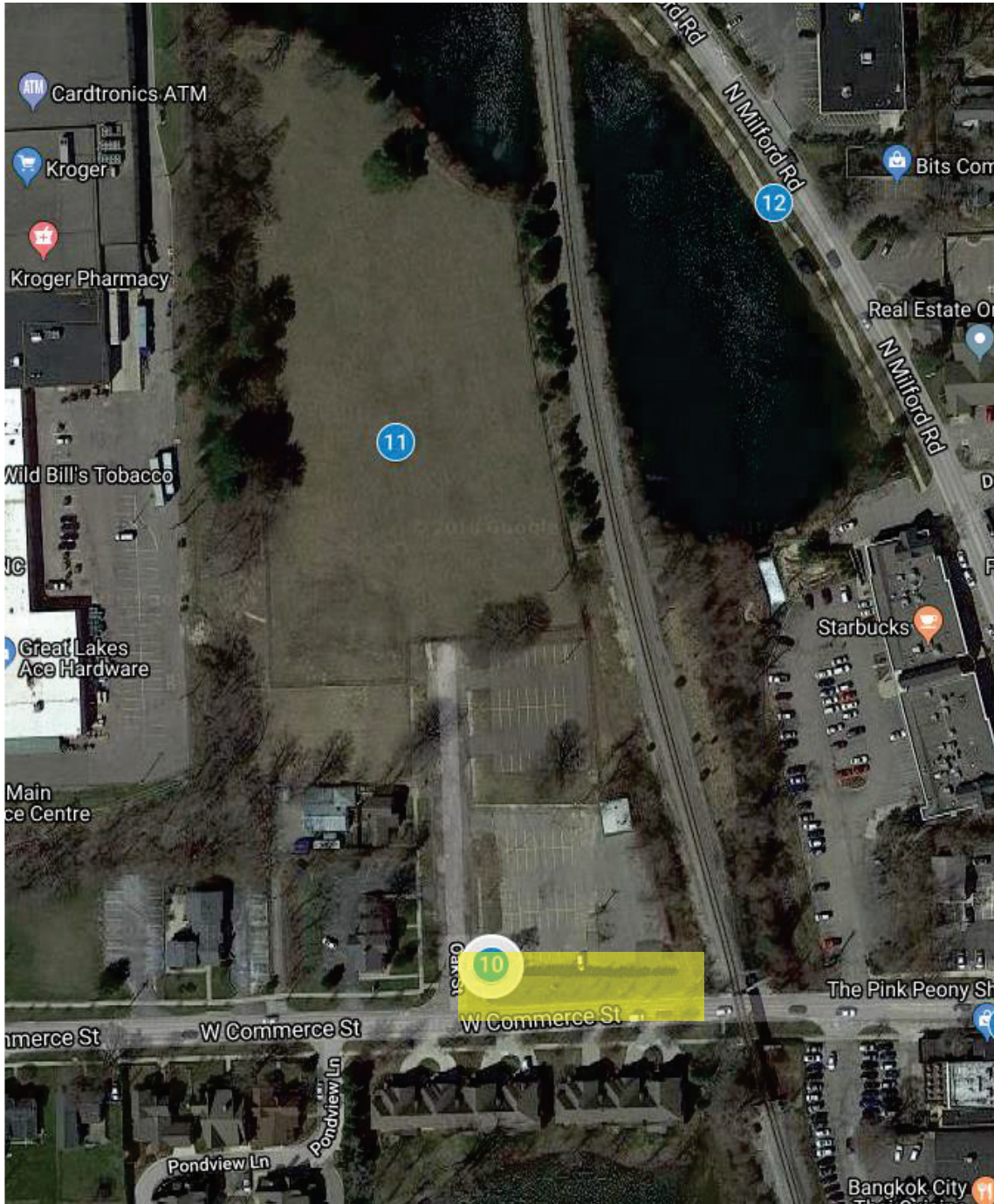


Exhibit E.2

[TRW Site](#): Field, 101 Oak Street

Monthly mowing of the field; Weekly mowing of 101 Oak St. ROW and lawn area between parking lots as shown

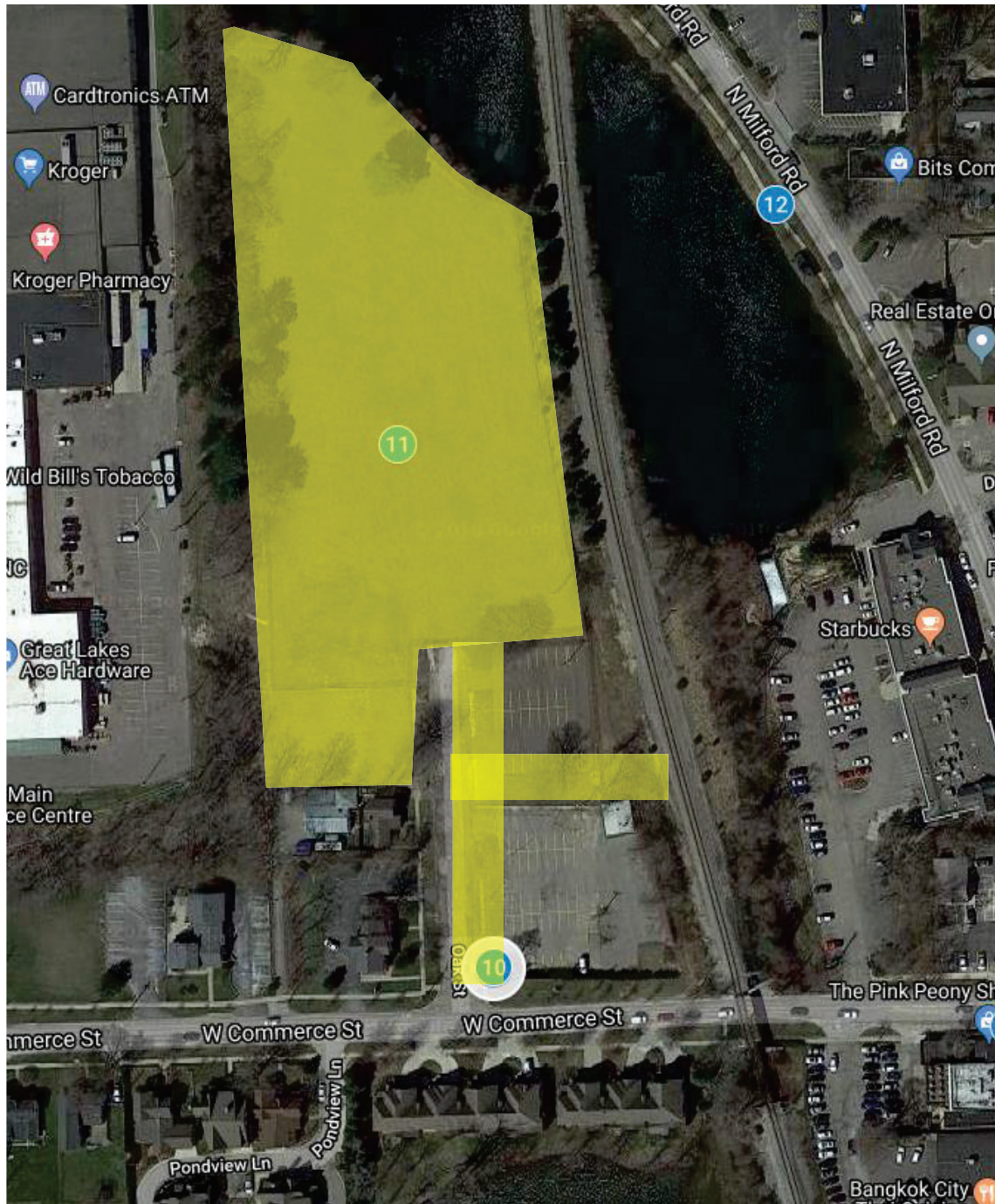


Exhibit E.3 (mowing) and D.9 (plantings)

Mill Pond Pathway: generally the greenbelt along Milford Road from the Mill Valley Shopping Center to Prospect Hill (PH) Shopping Center, west side of Milford Road, between Detroit Street and the entrance to the Kroger Shopping Center (PH), Lawn Mowing, shrub and perennial maintenance

Includes lawn and shrub maintenance on the east ROW in front of MJ Whelan and Network One bldgs.

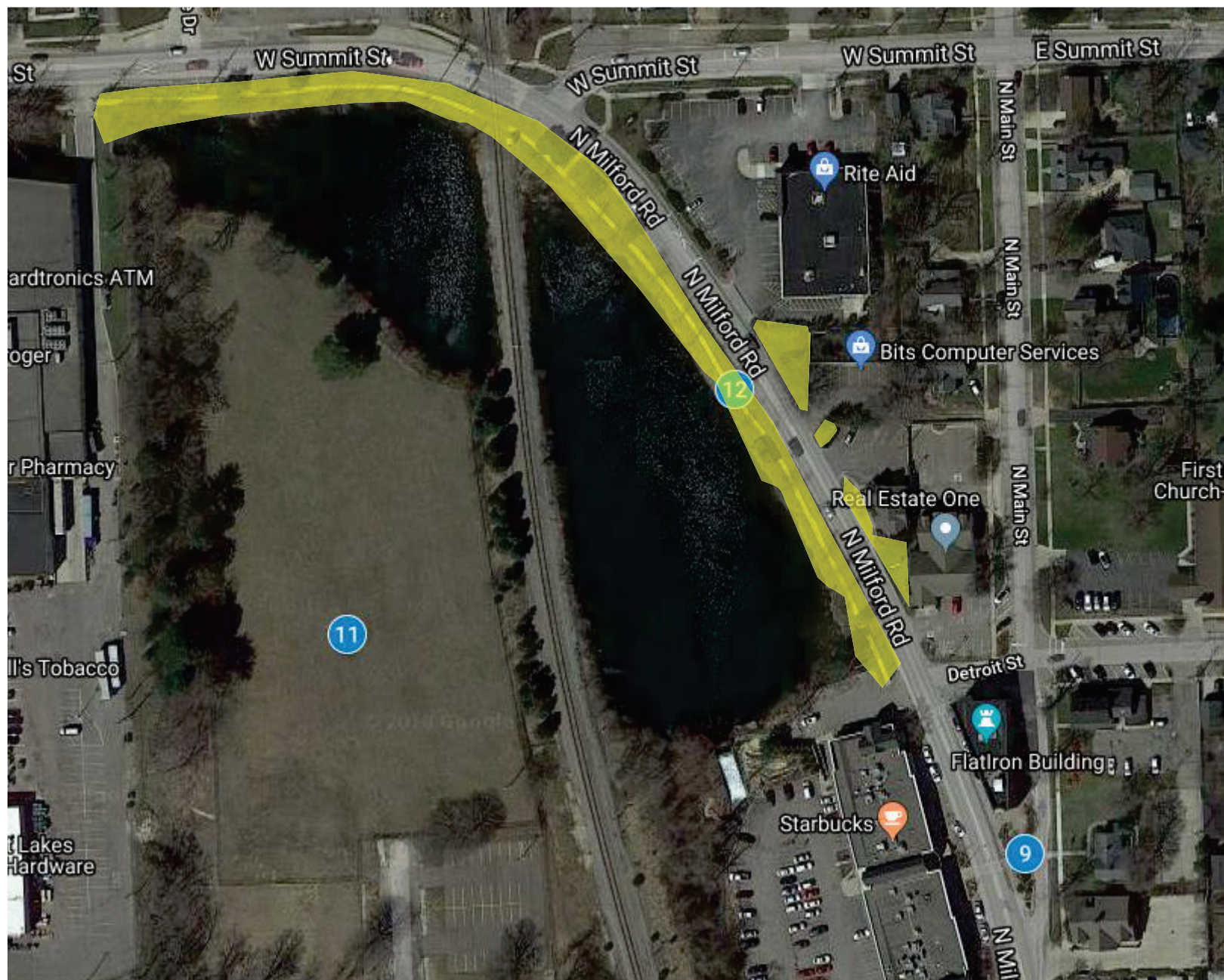


Exhibit F.1

Downtown: Treebeds

Maintenance to begin in 2023. Tree, shrub, grasses, perennials and ground cover maintenance

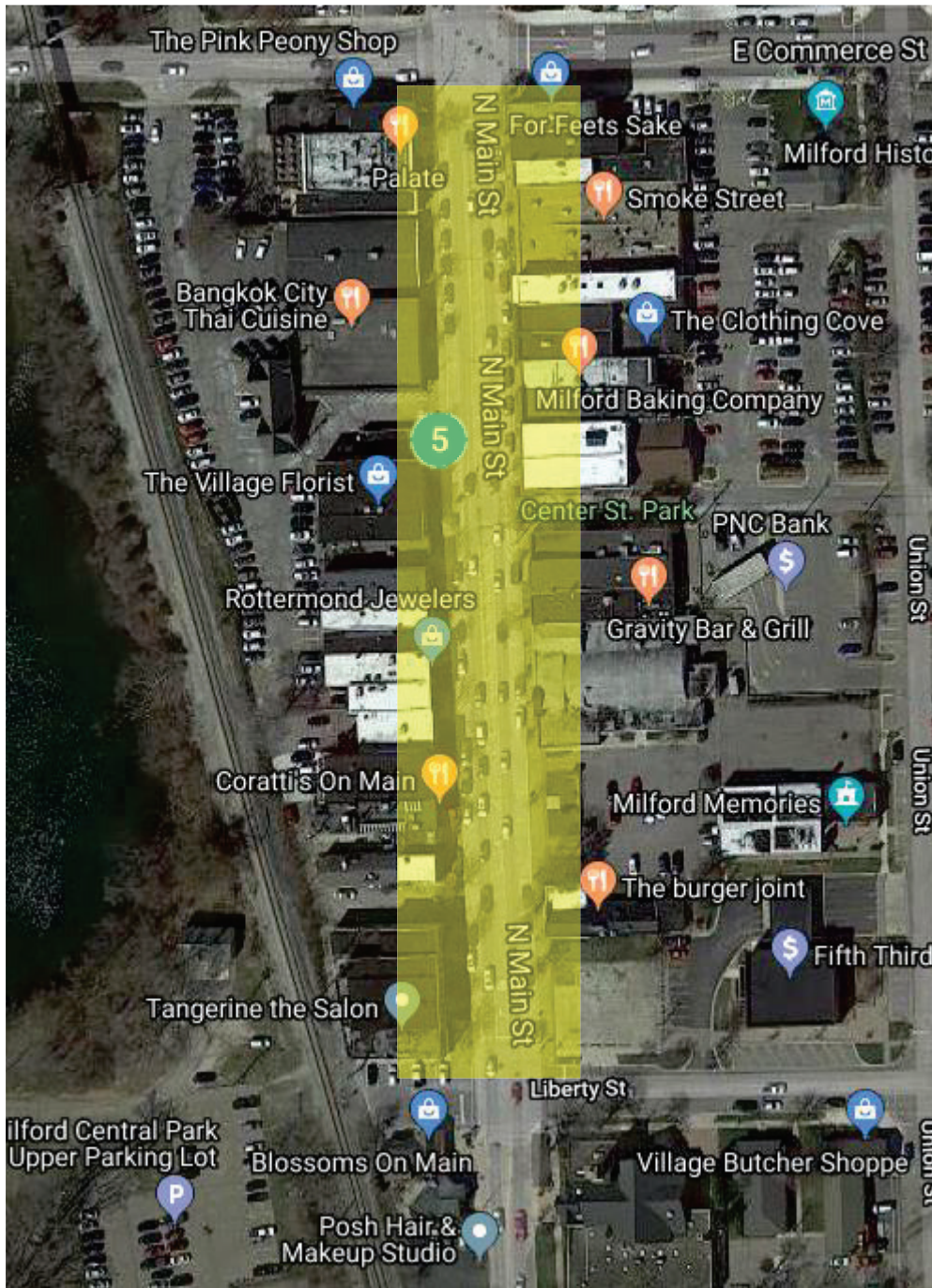


Exhibit F.2

Center Street Park

Maintenance to begin in 2023

Trees, shrubs, grasses, perennials and groundcover



EXHIBIT G.1 {Maintenance to begin in 2023}

NEW COMMERCE ROAD GARDEN (planned)

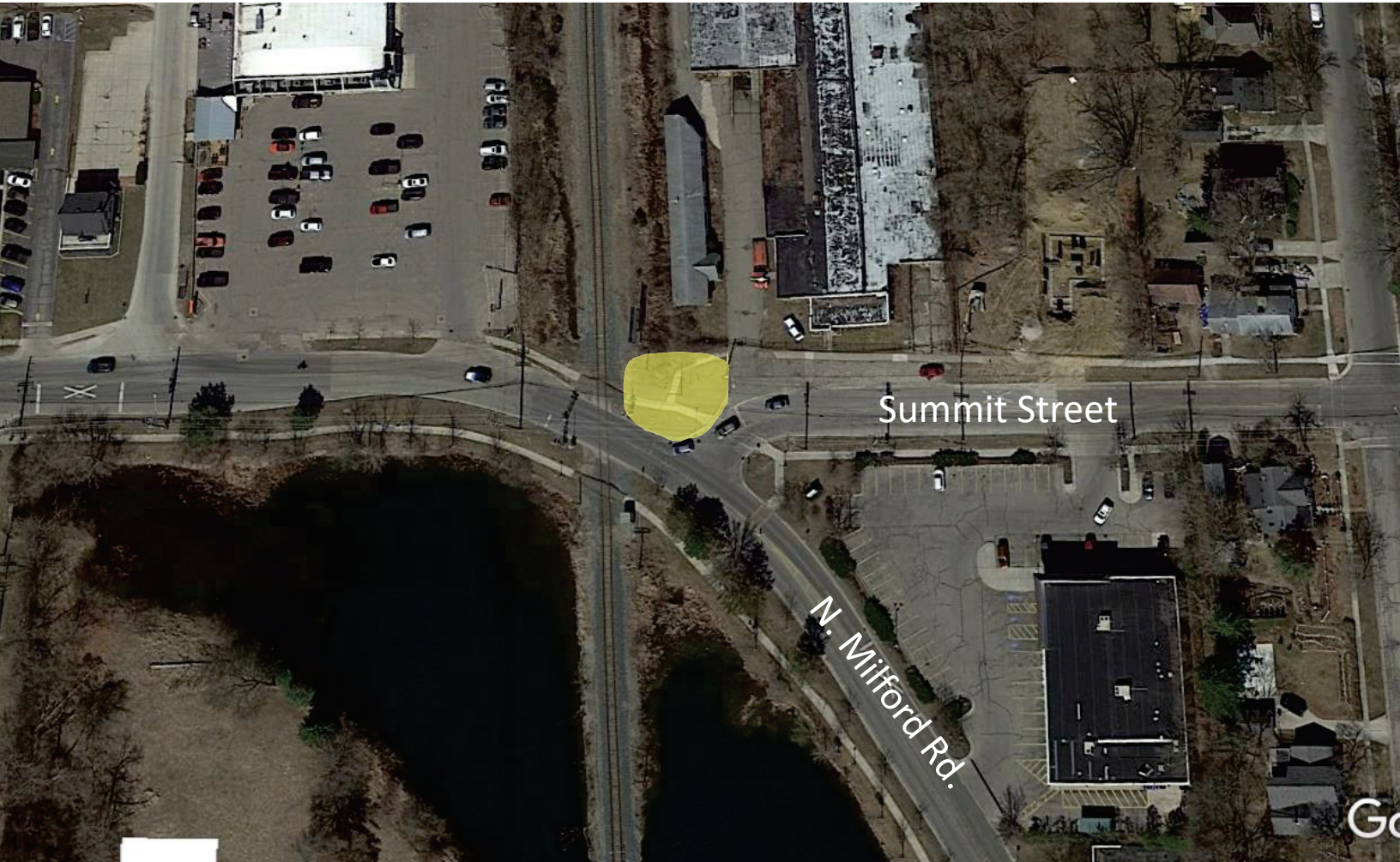
At Commerce Road, west of Main Street at the RR Trestle. Assume garden is 1000 sf and similar to Heritage Wheel Garden Exhibit D.7

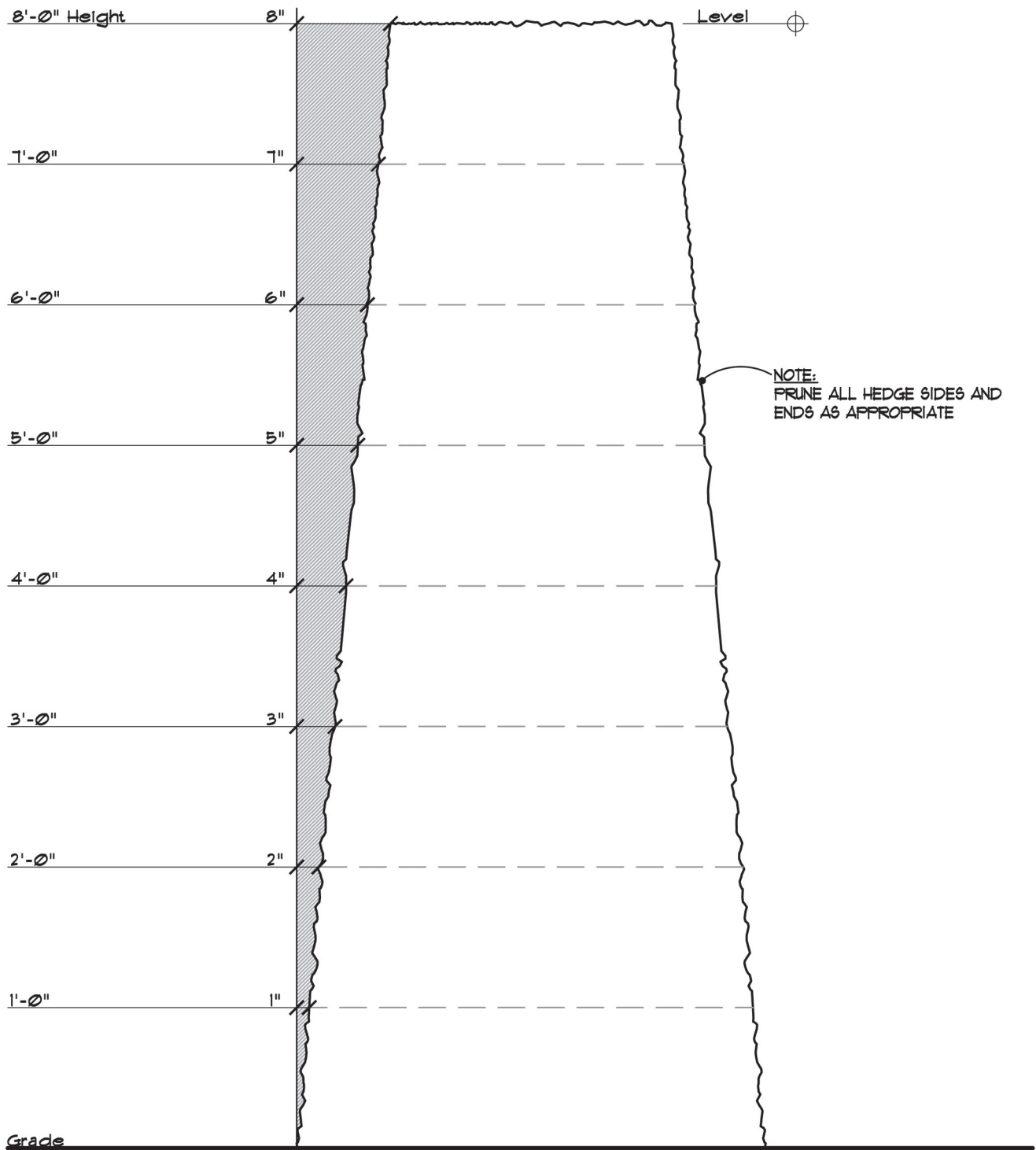


Exhibit G.2 {Maintenance to begin in 2024}

NEW SUMMIT VIEW GARDEN (planned)

At Summit Street/North Milford Road intersection, east of the RR tracks and north of Summit. Assume garden is 2000sf and similar to Heritage Wheel Garden Exhibit D.7





NOT TO SCALE

Municipal Exterior Landscape Maintenance

Village of Milford, Michigan

Formal Hedge
Pruning Taper Ratio
Exhibit H



NOTES:

STAKE TREES 8' HEIGHT AND UNDER, 2 PER TREE

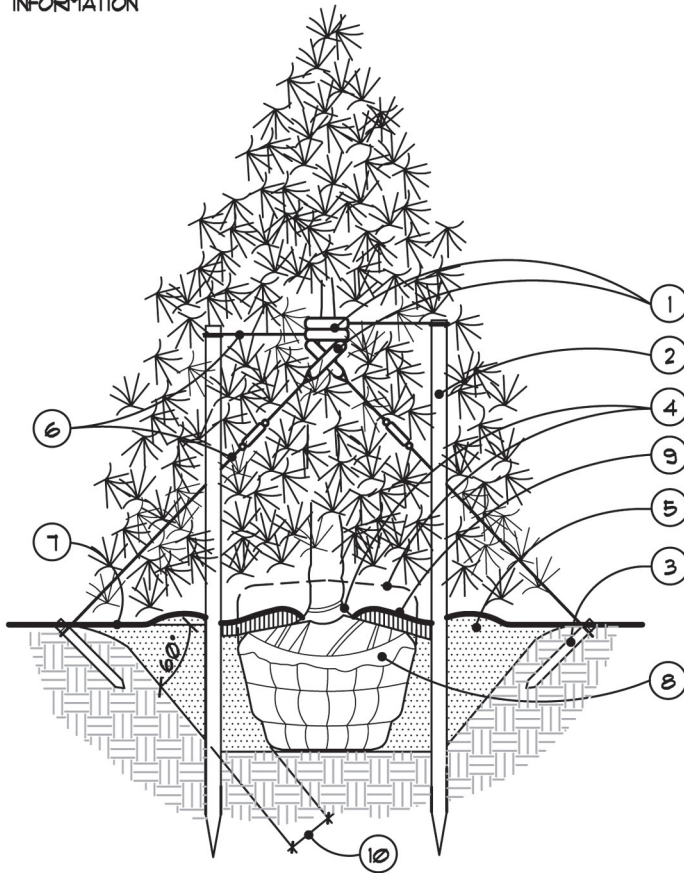
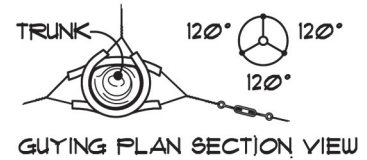
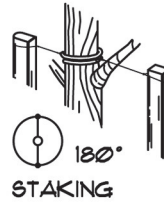
GUY TREES OVER 8' HEIGHT, 3 PER TREE

CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION

SET STAKES VERTICAL AND EVENLY SPACED

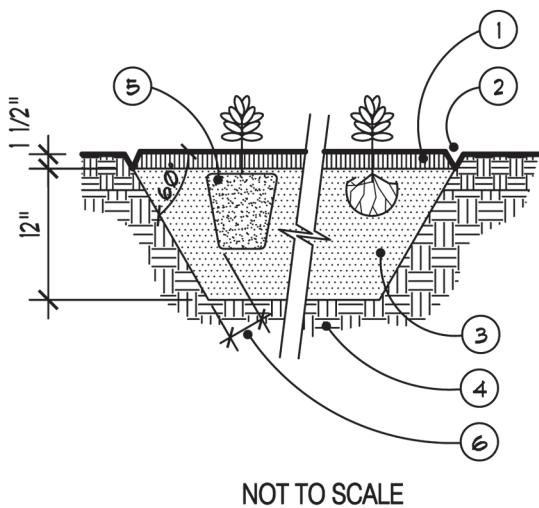
STAYS OR GUYS TO BE SET ABOVE FIRST BRANCH

SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION



NOT TO SCALE

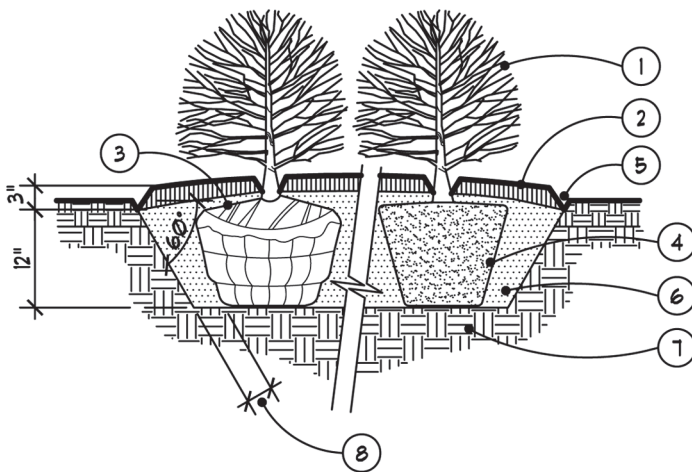
- ① 3/4" DIA. BLACK RUBBER HOSE AROUND GUY CABLE.
- ② 6' LONG 2" x 2" HARDWOOD STAKES. STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED SOIL.
- ③ 2' LONG, 2X4 HARDWOOD STAKE WITH POINTED END
- ④ AREA OF "RAPID TAPER" (REMOVE ALL SOILS ABOVE THIS LINE AND SET TREE TO THIS FINISH GRADE)
- ⑤ TREE PIT, 2X BALL DIAMETER BACKFILL WITH EXCAVATED, NATIVE SOIL PER SPECS. PULVERIZE SOIL PRIOR TO BACKFILL TO 1" OR SMALLER ELIMINATE ALL VOIDS. PROVIDE SOIL SAUCER RING AROUND TREE PIT
- ⑥ STAKING AND GUY CABLE - NEW GALV. STEEL WIRE FREE OF KINKS OR BENDS. USE #1 GA. FOR 4" CALIPER TREE AND UNDER, OR #3 GA. FOR TREES OVER 4" CALIPER
- ⑦ FINISH GRADE WITH LAWN SLOPED AWAY FROM TREE
- ⑧ REMOVE BURLAP BACK TO 6" BELOW GRADE, CUT WIRE BASKET
- ⑨ 3" DEPTH DOUBLE PROCESSED SHREDDED BARK MULCH. MULCH SHALL NOT COVER TREE TAPER
- ⑩ 12" MINIMUM BETWEEN ROOT BALL AND EDGE OF PLANT PIT, CUT PIT SIDES @ 60° ANGLE



NOTES:

1. IN MASS PLANTINGS ENTIRE BED SHALL BE EXCAVATED
2. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
3. SEE PLANS FOR SPACING

- ① 1-1/2" DEPTH DOUBLE PROCESSED SHREDDED BARK MULCH
- ② SHOVEL CUT EDGE OR ALUM. EDGE, SEE PLAN
- ③ EXCAVATE EXISTING SOIL 12" DEEP FILL WITH PLANT MIX AND FERTILIZER (SEE SPECS.) CUT PLANTING PIT SIDES @ 60° ANGLE
- ④ UNDISTURBED SUBGRADE
- ⑤ REMOVE CONTAINER
- ⑥ 6" MINIMUM BETWEEN ROOT BALL AND EDGE OF PLANT PIT, CUT PIT SIDES @ 60° ANGLE



NOT TO SCALE

NOTES:

1. IN MASS PLANTINGS ENTIRE BED SHALL BE EXCAVATED
2. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
3. SEE PLANS FOR SHRUB SPACING

- ① SHRUB PLANTS
- ② SHREDDED BARK MULCH 3" DEPTH TYPICAL
- ③ REMOVE BURLAP & CUT TWINE FROM TOP 1/3 OF BALL
- ④ REMOVE CONTAINER
- ⑤ SHOVEL CUT EDGE OR ALUM. EDGE, SEE PLAN
- ⑥ EXCAVATE EXISTING SOIL 12" DEEP, FILL WITH PLANT MIX AND FERTILIZER (SEE SPECS.)
- ⑦ UNDISTURBED SUBGRADE
- ⑧ 8" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT, CUT PIT SIDES @ 60° ANGLE

NOTES:

STAKE TREES 4" CALIPER AND UNDER, 2 PER TREE

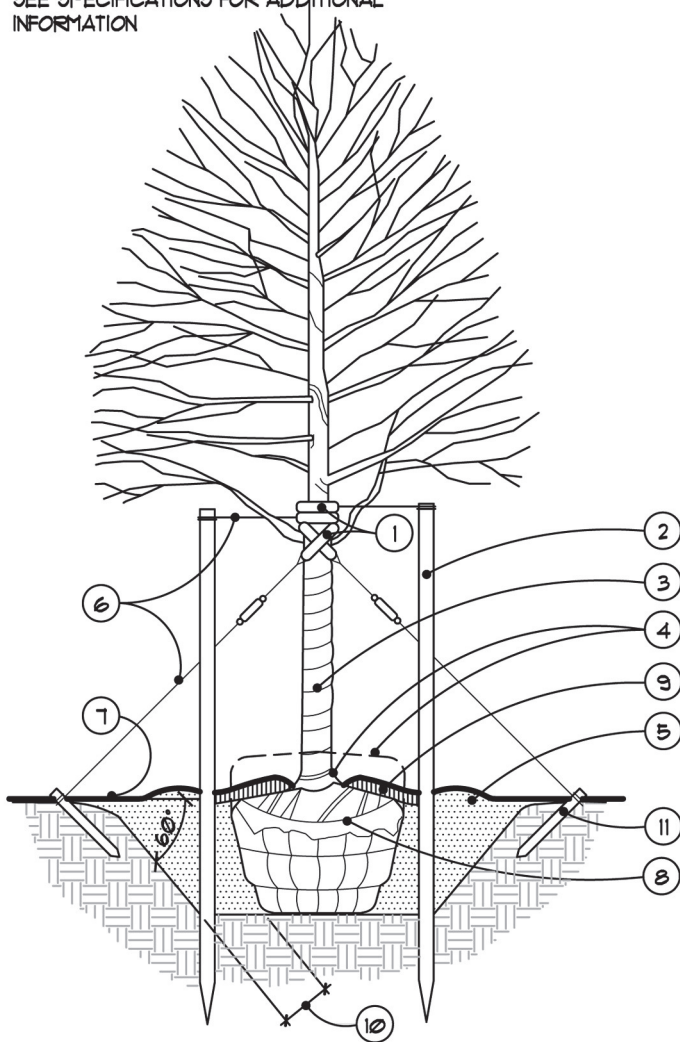
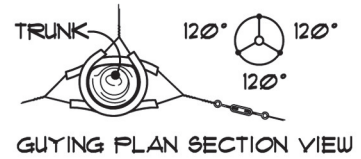
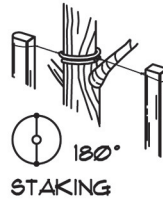
GUY TREES OVER 4" CALIPER, 3 PER TREE

CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION

SET STAKES VERTICAL AND EVENLY SPACED

STAYS OR GUYS TO BE SET ABOVE FIRST BRANCH

SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION



NOT TO SCALE

- ① 3/4" DIA. BLACK RUBBER HOSE AROUND GUY CABLE.
- ② 6' LONG 2" x 2" HARDWOOD STAKES. STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED SOIL
- ③ TREE WRAP - REMOVE AFTER FIRST YEAR
- ④ AREA OF "RAPID TAPER" (REMOVE ALL SOILS ABOVE THIS LINE AND SET TREE TO THIS FINISH GRADE)
- ⑤ TREE PIT, 2X BALL DIAMETER BACKFILL WITH EXCAVATED, NATIVE SOIL PER SPECS. PULVERIZE SOIL PRIOR TO BACKFILL TO 1" OR SMALLER ELIMINATE ALL VOIDS. PROVIDE SOIL SAUCER RING AROUND TREE PIT
- ⑥ STAKING AND GUY CABLE - NEW GALV. STEEL WIRE FREE OF KINKS OR BENDS. USE #11 GA. FOR 4" CALIPER TREE AND UNDER, OR #9 GA. FOR TREES OVER 4" CALIPER
- ⑦ FINISH GRADE WITH LAWN SLOPED AWAY FROM TREE
- ⑧ REMOVE BURLAP BACK TO 6" BELOW GRADE, CUT WIRE BASKET
- ⑨ 3" DEPTH DOUBLE PROCESSED SHREDDED BARK MULCH. MULCH SHALL NOT COVER TREE TAPER
- ⑩ 12" MINIMUM BETWEEN ROOT BALL AND EDGE OF PLANT PIT, CUT PIT SIDES @ 60° ANGLE
- ⑪ 2' LONG, 2X4 HARDWOOD STAKE WITH POINTED END