



City of Ithaca, MI

REQUEST FOR BIDS

SIDEWALK REPLACEMENT PROGRAM

2024-ZONE 3 / 2025-ZONE 4

**CITY OF ITHACA
ADVERTISEMENT FOR BIDS
SIDEWALK REPLACEMENT PROGRAM**

The City of Ithaca will receive Sealed Proposals on forms prepared by the City at 129 W. Emerson Street, Ithaca, MI 48847 until 9:00 a.m. on March 25, 2024 for Zones 3&4 of the Sidewalk Replacement Program in accordance with Specifications and other Contract Documents prepared by the City. Proposals will be publicly opened and read aloud immediately after the time established above.

Principal items of work include but are not limited to: removal of existing sidewalk sections; preparation of sub-base; trimming or removal of tree roots; installation & finishing of new sidewalk; restoration of adjacent lawn area and/or driveways & driveway aprons.

Specifications and other Contract Documents may be examined and/or obtained at ITHACA CITY HALL at 129 W. Emerson Street, Ithaca, MI. Printable documents are also available on the City's website at http://www.ithacami.com/1/260/bid_opportunities.asp or via an e-mail request to the City's Public Works Superintendent Brandon Smith at DPW@ithacami.com. There is no charge for the documents.

Each proposal shall be accompanied by an acceptable form of Proposal Guaranty (Bid Bond or Cashier's Check) in the amount of five hundred dollars (\$500) payable to CITY OF ITHACA as a guaranty. If the Proposal is accepted, the Bidder will execute the Contract and file acceptable Performance, Labor and Material Payment Bonds within ten (10) days after, and as a condition precedent to the award of the Contract.

The City reserves the right to reject any or all Proposals and to waive irregularities, formalities or technicalities in any Proposal in the interest of the City.

This project will be constructed under a unified contract held by the General Contractor with the City, which will include all construction trades required to complete the work as shown and specified in the contract documents. Segregated bids will not be accepted.

Cathy Cameron
City Clerk

Contract Documents
Sidewalk Replacement Program

INSTRUCTIONS TO BIDDERS

BIDDING

Bids are to be addressed to and will be received at the place, until the time, and in the manner indicated in the Advertisement for Bids. Proposals received after the time specified will be returned unopened.

Bids shall be submitted as stated on proposal forms contained herein and shall be completely executed in strict accordance with the bid documents. No telephonic or telegraphic bids will be accepted.

A bid security shall meet the requirements as stated in the Advertisement for Bids.

Prior to the execution of the contract, the successful General Contractor shall furnish surety company bonds and certificate of insurance covering their own work, as detailed in the General Conditions Section of this document.

The performance bond shall be in favor of the City of Ithaca and shall guarantee the faithful performance and completion of the work to be performed and completed by said contractor in compliance with the terms and conditions of his contract and in the time specified.

The labor and material payment bond shall be in favor of the same party as the performance bond and shall guarantee the discharge and liquidation of said contractor, and of all claims and accounts of indebtedness to all subcontractors arising under the contract; and the full payment, discharge, and liquidation of the indebtedness to any person, firm, or corporation for, or on account of, all labor performed and materials furnished in fulfilling and performing the conditions of his contract, as they shall become due and payable.

Interpretation of plans and specifications: Any person contemplating submittal of a bid for the proposed contract who is in doubt about the true meaning of any part of the plans and/or specifications must submit an interpretation request to the City. It is intended that any item of work or material shown on plans or listed in specifications shall be the responsibility of the respective contractors to provide and install, with the exception of specific items indicated to be provided by one contractor or City and installed by a different contractor. Questions regarding responsibility shall be clarified prior to bid date.

Any addenda issued prior to receipt of bids are to be included in the proposal, and will become part of the contract. Bidders must acknowledge on bid form all addenda received. Failure of a bidder to receive any addendum shall not release the bidder from any obligations under his bid, provided said addendum was sent by U.S. mail or United Parcel Service to the address furnished by the bidder.

The City is generally exempt from Federal Excise and Michigan State Sales Tax. Prices should not include these taxes.

Bidders will note that any salvage from operations under this contract shall belong to the City, with the City having discretion as to retention of any or all salvage material. It shall be the responsibility of the respective contractors to remove and dispose of offsite, as they see fit, any salvage not desired by the City. Contractors and subcontractors shall check with City for allocation of any salvage items.

The City reserves the right to reject any or all Proposals and to waive irregularities, formalities or technicalities in any Proposal in the best interest of the City.

The City will evaluate proposals and make an award within 30 days of the bid due date, during which time bids may not be withdrawn by bidders.

CITY OF ITHACA
SIDEWALK REPLACEMENT PROGRAM
2024-2025
Zones 3&4

BID PROPOSAL FORM

A. BASE BID / ADDENDA

The undersigned has carefully examined the bidding and contract documents including the Instructions to Bidders, Agreement between City and Contractor, and General Conditions as issued, and has familiarized himself with all local conditions to be encountered affecting the cost of the work and does hereby propose to perform all work and to furnish all of the labor, materials, tools, equipment, utility and transportation services necessary to complete the contract in connection with the above project, all in accordance with the contract documents prepared by the City of Ithaca, including the following addenda, if issued:

Addendum No. _____, Dated _____

Addendum No. _____, Dated _____

For the following UNIT PRICES:

Item No.	Description	Unit	Unit Price
Remove & Replace Existing Sidewalks (Est. Quantity: 8,500 SQ. FT.)			
1.	4"-Thick Concrete Sidewalk	SQ. FT.	\$ _____
2.	6"-Thick Concrete Sidewalk (across residential driveways)	SQ. FT.	\$ _____
3.	8"-Thick Concrete Sidewalk (across alleys/commercial drives)	SQ. FT.	\$ _____
4.	6"-Thick ADA Pedestrian Ramp (Includes installation of City-provided detectable warning panel)	SQ. FT.	\$ _____
Excavate & Install New Sidewalks (Where none now exist- Unknown quantity)			
5.	4"-Thick Concrete Sidewalk	SQ. FT.	\$ _____
6.	6"-Thick Concrete Sidewalk (across residential driveways)	SQ. FT.	\$ _____
7.	8"-Thick Concrete Sidewalk (across alleys/commercial drives)	SQ. FT.	\$ _____
8.	6"-Thick ADA Pedestrian Ramp (Includes installation of City-provided detectable warning panel)	SQ. FT.	\$ _____

B. FEES FOR ADDITIONAL WORK – TO BE COMPLETED BY THE BIDDER:

For additional work performed upon instructions of the City by subcontractors of the Bidder, a fee of _____% (percent) of the subcontractor's price will be charged by the Bidder for overhead, profit, etc.

For additional work performed upon instruction of the City by work forces of the Bidder, the charges shall be the actual cost of all labor and materials (less all discounts) plus a fee of _____% (percent), which includes all charges of the Bidder for overhead, profit, etc.

C. STARTING AND COMPLETION DATES

The Bidder agrees, if awarded the contract, that he will commence the work at an agreed upon date with the city, and shall complete the entire work within the following calendar days after the date of issuance of the *Notice to Proceed*.

Year 1: Work may begin as early as July 22, 2024
Work must be completed by September 30, 2024

Bidder's calendar days to complete the project: _____

D. BID SECURITY / INSURANCE / PERFORMANCE & PAYMENT BONDS

In compliance with the requirements, this proposal is accompanied by a bid security in the form of a certified check or a surety company bond in the sum of \$500 to guarantee that a contract will be executed if the above proposal is accepted and the contract awarded to the Bidder. It is agreed that the bid security will be retained as liquidated damages by the City if the Bidder fails to execute a contract in accordance with his bid within thirty (30) days after receipt of bids. Also included in the proposal prices are premiums for performance and payment bonds as well as insurance coverage as described in Sections A and B, respectively, of the General Conditions. Submission of documentation of insurance and bonds is not necessary until bid is accepted, but is required prior to the execution of the contract.

E. LIST OF WORK-RELATED REFERENCES

Provide contact information for three recent work-related references for projects of similar size and scope.

	Customer	Description of Work	Phone
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

F. LIST OF SUBCONTRACTORS & MAJOR MATERIAL/ EQUIPMENT SUPPLIERS

Provide contact information for all planned subcontractors and material/equipment suppliers.

	Sub/Supplier	Business City/ Location	Phone
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

G. BID SUBMITTAL DOCUMENTS

The bid shall be submitted in a sealed envelope marked "2024-25 Sidewalk Program Bid." In order to be considered complete, the Bidder shall submit the following documents with the bid:

This fully completed Proposal Form (all 3 pages)

Bid Security (bond or certified check for \$500)

Completed IRS Form W-9 (Request for Taxpayer I.D. Number - attached)

H. CONTACT INFORMATION AND SIGNATURE OF BIDDER

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

COMPANY NAME: _____

CONTACT NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

OFFICE PHONE: () _____

FAX NUMBER: () _____

CELL PHONE: () _____

E-MAIL: _____

AUTHORIZED SIGNATURE OF BIDDER: _____

CITY OF ITHACA
SIDEWALK REPLACEMENT PROGRAM
2024-2025
Zones 3&4

GENERAL CONDITIONS

SUMMARY DESCRIPTION OF WORK

The work for this project includes, but is not limited to the following:

Saw cutting and removing approximately 8,500 square feet of existing deteriorated sidewalk

Removing any asphalt, topsoil, tree roots or other objects

Placing a minimum of 4" of compacted granular base

Forming, pouring, finishing, curing & jointing new concrete sidewalk (4", 6" and 8" thick)

Restoring adjacent lawns, driveways and alleys

A. PERFORMANCE BOND, LABOR & MATERIAL BOND

1. The successful Bidder shall, within fifteen (15) days after acceptance of his proposal, furnish a Performance Bond, in an amount equal to one hundred percent (100%) of the contract sum as security for the faithful performance of this contract and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the contract sum as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract.
2. Cost of said bonds shall be included as a part of the Bid.
3. The Contractor shall obtain such bonds in a manner consistent with Michigan law.
4. Bonds signed by an *Attorney-In-Fact* must be accompanied by a certified and effectively dated copy of their *Power of Attorney*.

B. INSURANCE REQUIREMENTS

1. Certificates of Insurance acceptable to the City shall be filed with the City prior to commencement of the work. Certificates shall state that the City of Ithaca is both a *Certificate Holder* and an *Additional Insured Party* for the life of the contract. Certificates shall contain a provision that coverages afforded under the policies will not be modified or canceled until at least 30 days prior written notice has been given to the City. Furnish to the City copies of any endorsements that are subsequently issued amending coverage or limits.
2. All insurance shall be carried with companies that are financially responsible. If any such insurance is due to expire during the term of the Contract, the Contractor shall not permit the coverage to lapse and shall furnish evidence of continuing coverage to the City.
3. Workmen's Compensation: As required by all applicable Federal and State laws, including Employer's Liability with a limit of at least \$100,000.

4. Comprehensive General Liability: Including Contractor's Liability, Contingent Liability, Contractual Liability, Products including Completed Operations, all on an occurrence basis with Personal Injury Coverage and Broad Form Property Damage. Including CCU related to Explosion, Collapse and Underground Property Damage.

5. Contractor's Liability Insurance, including Contractual Liability (Comprehensive General Liability Form):

Minimum Coverage

Bodily Injury:

Each Occurrence	\$ 1,000,000
Aggregate	\$ 2,000,000

Property Damage:

Each Accident	\$ 1,000,000
Aggregate	\$ 2,000,000
Fire Damage	\$ 50,000
Medical Expenses	\$ 5,000

6. Comprehensive Automobile Liability, including non-ownership and hired car coverage as well as vehicles:

Minimum Coverage

Bodily Injury and Death:

Each Person	\$ 1,000,000
Each Occurrence	\$ 1,000,000

Property Damage:

Each Occurrence	\$ 1,000,000
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7. Umbrella Liability

Each Occurrence	\$ 2,000,000
Aggregate	\$ 2,000,000

8. Worker's Compensation and Employer's Liability

Each Accident	\$ 100,000
Disease - Policy Limit	\$ 500,000
Disease - Each Employee	\$ 100,000

9. The Contractor shall furnish the City with Certificates of Insurance showing by specific reference that each of the foregoing items has been provided.

C. NOTICE TO PROCEED

The Contractor shall not commence work on this contract until receipt of the City's "Notice to Proceed." Once received, Contractor shall commence construction by the agreed upon date between contractor and city.

D. PRECONSTRUCTION / PRE-INSTALLATION MEETING

City requests at least one preconstruction meeting with Contractor following the issuance of the Notice to Proceed but prior to commencing construction. Said meeting shall be held at Ithaca City Hall, 129 W. Emerson Street. Meeting topics include, but are not limited confirmation of Contractor's crew and contact information, use of subcontractors, review of the contract, general provisions, sidewalk specifications, payment submittals, and safety program.

E. MARKING OF SIDEWALK SECTIONS TO BE REMOVED AND INSTALLED

Included with these General Conditions are copies of three sidewalk zone maps:

- Citywide basemap showing all six sidewalk improvement zones
- Detailed map of Zone 3
- Detailed map of Zone 4

Each flag will be marked in the field by the City.

It is the general intent of this program to install replacement sections (flags) of sidewalk with a width of five (5) feet, regardless of the size of the sections removed. The City will notify Contractor prior to installation of forms of any sections that will be less than five feet in width.

F. PRESERVATION OF TREES ADJACENT TO SIDEWALKS; EASEMENTS

Where trees and/or tree roots have lifted creating an uneven sidewalk, or caused other damage, no roots should be removed as a means of leveling without prior permission of the City. In those cases, and if possible, the new sidewalk shall be relocated to create space away from the tree, or the sidewalk shall be elevated to accommodate the tree roots as long as finish grades meet specifications. In certain circumstances, relocating the sidewalk may entail the City acquiring a permanent easement from the adjacent property owner. The City will attempt to acquire these easements where needed prior to the award of the contract.

Where no other option exists to relocate the sidewalk away from trees or tree roots, as a last resort the City may consider the removal of a tree. This will be coordinated with the Contractor, but the City will initiate and pay for any tree removals and grinding of stumps to a depth of at least eight (8) inches below finish grade.

G. INSTALLATION OF ADA-COMPLIANT CURB RAMPS

Contractor is required to construct the pedestrian ramps using concrete six (6) inches thick in compliance with the Americans with Disabilities Act (ADA) and current MDOT Standard Specifications for construction. Installation of a detectable warning panel shall be considered incidental to the ramp unit costs. The City will provide the needed detectable warning panels to the contractor at no cost.

H. BATCH TICKETS FOR EACH CONCRETE TRUCK LOAD

Contractor shall obtain certifications from concrete supplier for each truck load of concrete stating that it meets the specifications as detailed herein. Before unloading, Contractor shall furnish to the City the "Batch Ticket" for each load of concrete containing the details of the concrete's mixture composition in compliance with ASTM C94 and as required by the specifications herein.

I. ACCESS TO TEMPORARY WATER SERVICE

Contractor shall provide all water needed for the project. Alternatively, the City will designate a hydrant with a hose bib connection where Contractor may access water for the duration of the project. Hydrant will have a meter that will record the amount of water used. Contractor will be billed and must pay for all water used before final payout and release of retainer is made. Water rates are \$6.89/1,000 gallons used.

J. ACCESS TO TEMPORARY SANITARY FACILITIES

Contractor shall provide access to temporary sanitary facilities at Contractor's cost. Placement of temporary facilities shall be mutually agreed upon between the City and Contractor.

K. FIELD OFFICE/TRAILER & MATERIAL/EQUIPMENT STORAGE

Contractor and subcontractors/suppliers may store material and/or equipment at the Dept. of Public Works yard located at 254 West South Street. This includes supplies of sand, topsoil, seed and equipment, as well as a field office/trailer.

L. LOCATION FOR DEPOSIT OF REMOVED CONCRETE; EXCAVATION DISPOSAL

Contractor shall dispose of removed concrete and asphalt at the Dept. of Public Works concrete disposal site at the east end of Meadow Lane (near the wastewater treatment plant entrance.) Meadow Lane is located just south of the railroad tracks running east from St. Johns Street. All other materials excavated from the job sites shall be disposed of off-site by the Contractor.

M. RINSING/CLEANING OF CONCRETE TRUCKS

Concrete supply companies shall not rinse/clean trucks or dump unneeded concrete at any of the individual job sites. Provisions will be made to allow suppliers to do so at the Dept. of Public Works concrete disposal site at the east end of Meadow Lane (near the wastewater treatment plant entrance.) Meadow Lane is located just south of the railroad tracks running east from St. Johns Street.

N. BARRICADES FOR WORK SITES

Contractor shall be responsible for providing and placing all necessary barricades. There should be sufficient barricades on the job to direct both pedestrian and vehicle traffic around the newly poured concrete. A piece(s) of caution tape is not considered to be a barricade and is not acceptable as a barricade substitute.

O. ON-SITE INSPECTIONS

If necessary, the Contractor shall provide continuous on-site inspection of the newly poured concrete until it is set to a point beyond potential damage by vandals. Contractor shall be held responsible for replacing any sidewalk sections damaged during the curing process.

P. RESTORATION REQUIREMENTS

All disturbed lawn areas shall be restored with new topsoil flush with new installed concrete. Contractor is responsible for providing and hauling topsoil. Topsoil shall be clean and screened to remove all undesirable organic & inorganic materials, such as stone, rocks, roots, weeds & litter. Topsoil should receive "sun/shade lawn mix" grass seed at the recommended rate of 200 lbs./acre and shall be raked into the prepared surface and mulched with clean straw (not hay). Seed & soil shall then be watered sufficient to wet seed/soil but not overly watered to allow run off of seed/soil. Restoration is considered an incidental cost and shall be included in the unit bid prices for the various depth of concrete.

Q. APPLICATION FOR PROGRESS PAYMENTS

Progress payments may be requested by submission of an invoice at least ten (10) working days before the 1st and/or 3rd Tuesdays of each month and shall be paid on the Friday following the 1st and/or 3rd Tuesdays. The invoice shall state the number of square feet of installed concrete of the various depths in the bid since any previous invoices. Contractor and City's Public Works Superintendent shall agree on the square footages prior to submission of an invoice. The City will withhold a 10% retainer from each progress payment until final inspection and acceptance of the completed contract.

R. WARRANTY FOR SIDEWALK WORK

Contractor shall warranty the concrete work for a period of five (5) years from the date of final acceptance by the City. During that period, any section of concrete showing cracks, spalling, settlement, etc. shall be replaced within thirty (30) days' notice from the City.

S. SOURCE OF PROJECT FUNDING

Funding for the sidewalk replacement program comes from a property tax millage approved by the voters of Ithaca for a one-mill, six-year levy. This is the third and fourth of six designated zones that will receive funding over the six years. No other state or federal funds are involved in the program. Thus, there are no "prevailing wage rate" requirements.



City of Ithaca, MI SIDEWALK SPECIFICATIONS

Sidewalk Specifications v. 2024-01

MATERIALS

Aggregates

Aggregates shall conform to ASTM C33 or MDOT specifications.
MDOT 6AA stone is recommended (ASTM #57, 4S).

Portland Cement

Portland cement shall conform to ASTM C150.
○ Use only one source/type of cement for each driveway or sidewalk project.

Supplemental Cementitious Materials

Fly ash shall conform to ASTM C618.
Slag cement shall conform to ASTM C989.

Chemical Admixtures

Chemical admixtures shall conform to the requirements of ASTM C494.
Air entraining admixtures shall conform to ASTM C260.

Reinforcing Steel

Not required for sidewalk or driveway construction except for re-entrant corners, and support over utility trenches.

CONCRETE PROPERTIES AND PROPORTIONS OF MATERIALS

Compressive Strength and Water/Cement Ratio

The minimum specified compressive strength (f'_c) shall be 3,500 psi (28 days) – ACI 332.
○ The maximum in-place water to cement (w/c) or water to cementitious ratio (w/cm) shall be 0.45.
Water shall not be added to the truck unless it is approved as part of the mix design.

Slump

The maximum slump at the point of placement shall not exceed 4 inches.
The maximum slump may be increased up to 7 inches by using a mid-range or high-range water reducing admixture.

Air Content

Concrete shall be designed for a total air content, by volume, of 6.5% +/- 1.5%.

PREPARATION

Subgrade Preparation

The subgrade shall be free of topsoil, vegetation, roots, stumps, wood, and other loose, unstable materials.
Removal of unstable materials shall be to a minimum depth of 8 inches below existing grade.
○ Replace with crushed stone, gravel or clean sand compacted by use of a mechanical plate compactor to 95% compaction.
○ Sub-base materials shall be a minimum of 4 inches in thickness on top of subgrade.

- No roots shall remain closer than 3” to the bottom or sides of the poured concrete.
- In warm or hot weather, the sub-base shall be dampened prior to concrete placement.
No standing water shall be present when concrete is placed.
In no case shall a driveway be constructed on frozen subgrade/sub-base materials.

Drainage

Sidewalk shall have a drop of ¼ inch per foot across the width of the walk, with the property side being higher than the street side.

CONCRETE THICKNESS

The minimum concrete thickness for standard sidewalk sections is 4 inches.
The minimum concrete thickness for a sidewalk going thru a residential driveway is 6 inches.
When traffic will include delivery vehicles (commercial driveway or alley), the minimum concrete thickness for a sidewalk shall be 8 inches.

BATCHING and DELIVERY

Concrete shall be batched, transported and discharged in accordance with ASTM C94.

FINISHING

It is recommended that at least one ACI flatwork finisher be involved in the finishing.
The Contractor shall sign the concrete delivery tickets.
The recommended sequence for finishing includes strike-off, bullfloating, edging, jointing and texturing.

- **Do not** perform finishing operations while bleed water is still visible.
- **Do not** use steel trowels, fresnos or other tools that may seal the surface prematurely.
- **Do not** sprinkle water onto the surface (blessing the concrete) to aid in finishing.
- Edge the concrete around the perimeter (maximum radius = 0.5 inch) and at all tooled joints.
- Using a stiff-bristle broom, apply a “broomed” texture in a transverse direction so as to produce a uniform gritty surface of the proper texture.

CURING

Curing requires the maintenance of proper temperature and moisture in the concrete.

- As the cement hydrates concrete gains strength.

Curing shall begin within 30 minutes after texturing.
Curing can be accomplished by covering the concrete with polyethylene or by continuous water application.

- Curing by these methods must extend for a **MINIMUM** of three days.

For residential construction, it is recommended that curing be accomplished by applying a product meeting ASTM C1315 within 30 minutes of texturing.

JOINTING

Control Joints

Panels should be as square as possible and in no case shall the ratio of length to width exceed 1.5 to 1.
Control joints shall have a minimum depth equal to ¼ the slab thickness:

- 1.0 inch for a 4-inch thick slab
- 1.5 inches for a 6-inch thick slab
- 2.0 inches for an 8-inch thick slab

Control joints may be installed by pre-formed materials, hand tooling or by saw cutting.

Isolation/Expansion Joints

Isolation joints shall be installed at points of restraint to isolate freshly placed concrete from fixed objects.

- i.e. existing structures (water valve covers, utility manholes, handhold boxes, etc.)

Isolation joints shall extend the full depth of the slab.

Expansion joint material shall conform to ASTM Standard Specification D-544, Type 5. The Contractor shall install an expansion joint at the beginning of each pour against the existing sidewalk and every 200 lineal feet of continuous sidewalk pour thereafter. It shall be ½” in

thickness, shall have a width equal to the full depth of the slab in which it is to be used, and be ¼”

below the finished surface of the sidewalk. Expansion joints shall be placed at 200-foot intervals, and at driveway edges, each property corner, along abutting sidewalks and along existing curbs

abutting the sidewalk, or as directed by the City.

OPENING TO TRAFFIC

Forms shall not be removed from freshly placed concrete until it has set for at least 12 hours.

The driveway/sidewalk can be opened to pedestrian and vehicle traffic following seven (7) days of curing, or if it has attained a strength of at least 2,500 psi.

COLD-WEATHER CONCRETING

Concrete matures at a slower rate during cool/cold weather conditions.

Concrete shall not be placed on a frozen subgrade.

- The subgrade temperature must be a minimum of 40°F

The contractor shall take measures to protect the concrete (i.e. straw/hay, insulating blankets, etc.)

to maintain the required curing temperature of at least 50°F for a minimum of three days.

To offset the effects of cool/cold weather the mix may contain additional Type I cement, substitute Type III for Type I or contain an accelerator meeting ASTM C494.

HOT-WEATHER CONCRETING

Concrete hydrates faster as ambient temperatures increase.

Caution should be exercised when placing concrete at temperatures above 90°F.

Moisten the subgrade prior to placement (however, no standing water should be present).

Place concrete when ambient temperatures are most favorable, i.e. early mornings.

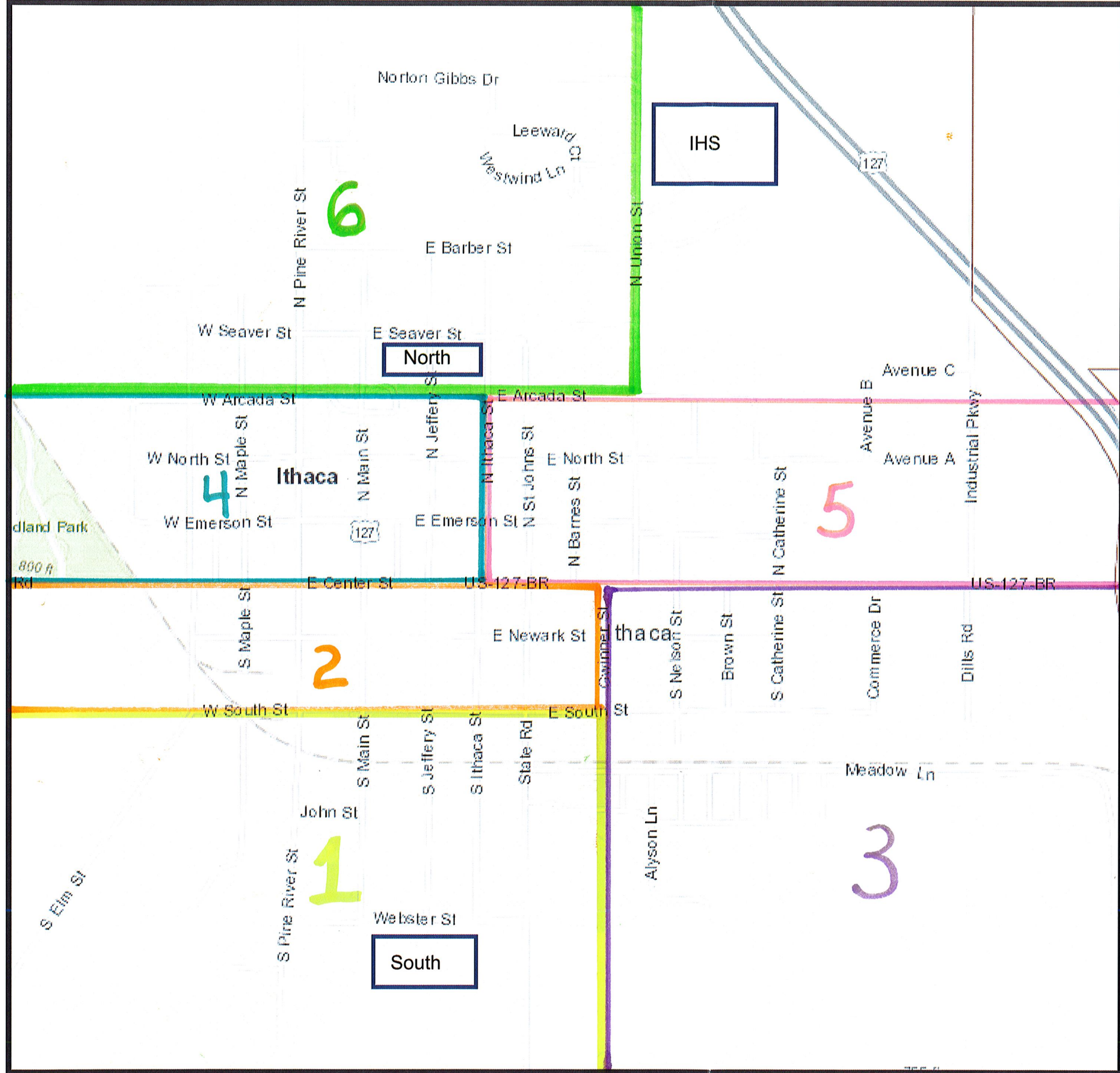
The use of fly ash and slag cement will be beneficial in slowing the rate of hydration.

Set retarding admixtures meeting ASTM C494 may be used.

To reduce the rate of evaporation from the surface resulting from low humidity, warm temperatures and moderate to high winds, the use of an evaporation retarding membrane is suggested.

The concrete producer shall take measures to ensure that the maximum water to cement ratio of

0.45 is not exceeded.



City of Ithaca



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