

CONTRACT DOCUMENTS
FOR

SIDEWALK REPAIR PROGRAM
IN THE
CITY OF WAUWATOSA, WISCONSIN

CONTRACT 24-19

PROJECT 2024
QuestCDN No. 8833525



November 20, 2023

Construction & Inspection
Coordination:

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The plans and specifications for this project were prepared by the Engineering Services Division.

Date November 20, 2023

William T. Wehrley
City Engineer

The plans, specifications, form of contracts and other documents contained in and constituting the contract documents for this project were approved by the Board of Public Works of the City of Wauwatosa, at a meeting held on November 20, 2023.

Steven A. Braatz Jr., City Clerk
Wauwatosa, Wisconsin

SECTION 100 – OFFICIAL NOTICE

OFFICIAL NOTICE TO CONTRACTORS **ADVERTISEMENT FOR BIDS**

The City of Wauwatosa will receive proposals for sidewalk improvements until 11:01 A.M. Local Time, January 3, 2024, at which time all bids will be publicly opened and read virtually via use of the Zoom platform. Access at zoom.us, Meeting ID 858 4894 1097.

CONTRACT 24-19, SIDEWALK REPAIR PROGRAM

Under this proposal, the Contractor shall furnish all labor, materials, supplies, equipment, tools and other services necessary for concrete sidewalk and drive approaches, ADA curb ramps and work incidental thereto within the project area that is largely bounded by Hampton Ave to the north, STH 100 to the east, Fairview Ave to the south and 124th St to the west. North of Capitol Dr, the project area extends east to 92nd St. The work includes 1,500+ squares, 29 curb ramp reconstructions at various locations and sidewalk extension on Potter Rd all in accordance with contract documents.

Interested parties may view and obtain digital copies of the contract documents, including plans and specifications, from Quest Construction Data Network. Access the QuestCDN website at www.questcdn.com. Input QuestCDN eBidDoc No. 8833525 on the website's Project Search page. No password is required. Contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in downloading and working with the digital documents.

There is a nonrefundable charge of \$25.00 for the plans and contract documents. Plans are also available for viewing only at the Engineering office at City Hall, 7725 W. North Avenue, Wauwatosa, Wisconsin. Plans will be available on November 21, 2023.

The City will accept only online electronic bids through QuestCDN. To access the electronic bid form, download the project documents and click the online bidding button at the top of the advertisement.

All proposals must be submitted in electronic format together with a bid bond equal to five (5) percent of the bid payable to the City of Wauwatosa, Wisconsin, as a guarantee that if his bid is accepted, the successful bidder will execute and file the proper contract and bonds within ten (10) days after notification of award of the contract.

Failure on the part of the successful bidder to execute his contract and *performance and labor & material payment* bonds within ten (10) days from the date of notice of the award of contract will be considered as just cause for the annulment of the award and the forfeiture of the proposal guarantee to the City not as a penalty but in payment to the City as liquidated damages as a result of such failure.

No bid shall be withdrawn after the opening of bids for a period of sixty (60) days after the scheduled time of closing of bids.

The letting of the work described herein is subject to the provisions of Section 66.09, Wisconsin Statutes, requiring the bidder to furnish proof of responsibility. Bidder prequalification is required on forms furnished by the City of Wauwatosa and submitted to the City Engineer. Prequalification forms that are submitted after 5 days preceding the contract letting date may be cause for the rejecting of bids.

TIME OF SUBSTANTIAL COMPLETION

The substantial completion date for Contract 24-19, SIDEWALK REPAIR PROGRAM shall be AUGUST 16, 2024. See Section 600 for additional completion requirements.

There will be no other extension of time and no extenuating circumstances, except perhaps an industry strike, or the inability of the City to receive plan and specification approval.

If the contractor does not complete the work on or before the date set forth above for CONTRACT 24-19, SIDEWALK REPAIR PROGRAM or within the extra time allowed under a City Engineer granted time extension, the City will assess liquidated damages. The City will deduct one thousand and forty-five dollars (\$1,045.00) for every calendar day that the work remains uncompleted from payments due the contractor.

The Contractor will also be charged for each and every day inspection is required after the time of completion has expired. This charge will be based on the actual costs of inspection, construction supervision, clerical and administrative costs, traffic control and overhead charges.

A required "Affidavit of Compliance" is included in Section 300 and must be submitted with the bid.

The right to reject or accept any or all bids and the right to waive any informality in bidding is reserved to the City of Wauwatosa, Wisconsin.

Dated at Wauwatosa, Wisconsin November 20, 2023

Steven A. Braatz Jr., City Clerk

City of Wauwatosa, Wisconsin

SECTION 200 – INSTRUCTIONS TO BIDDERS

200.01 - DESCRIPTION OF WORK The work on this contract consists of the following:

CONTRACT 24-19, SIDEWALK REPAIR PROGRAM

Under this proposal, the Contractor shall furnish all labor, materials, supplies, equipment, tools and other services necessary for concrete sidewalk and drive approaches, ADA curb ramps and work incidental thereto. The contractor will perform this work at various locations in areas within the City of Wauwatosa, all in accordance with contract documents.

200.02 - RETURN OF PROPOSAL GUARANTY The bid deposit(s) of all depositors will be returned after the bids have been accepted by the Common Council and the vouchers for the return of the deposit(s) approved by the Common Council.

200.03 - TIME OF SUBSTANTIAL COMPLETION The substantial completion date for Contract 24-19, Sidewalk Repair Program shall be AUGUST 16, 2024. See Section 600 for additional completion requirements.

There will be no other extension of time and no extenuating circumstances, except perhaps an industry strike, or the inability of the City to receive plan and specification approval.

If the contractor does not complete the work on or before the date set forth above for CONTRACT 24-19, SIDEWALK REPAIR PROGRAM or within the extra time allowed under a City Engineer granted time extension, the City will assess liquidated damages. The City will deduct one thousand and forty-five dollars (\$1,045.00) for every calendar day that the work remains uncompleted from payments due the contractor.

200.04 - BOND REQUIREMENTS In addition to the standard full penalty for nonperformance of Contract, the Contractor's attention is directed to Section 504.16 that requires a second performance bond guaranteeing labor and material payments.

200.05 - EXAMINATION OF SITE AND CONTRACT DOCUMENTS The bidder is required to examine carefully the site of the work, the proposal, plans specifications, general conditions, official notice to contractors, contract and bond, all as herein contained and known as the contract documents for the work contemplated; it will be assumed that the bidder has investigated and is satisfied as to the requirements of the contract documents. It is mutually agreed that the submission of a proposal shall be considered as conclusive evidence that the bidder has made such examination and is satisfied as to all the conditions and contingencies.

No pleas of ignorance of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work under this Contract, as a result of failure to make the necessary examinations and investigations

will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill, in every detail, all of the requirements of the contract documents, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time.

200.06 - INTERPRETATION OF CONTRACT DOCUMENTS AND ADDENDA Should any question arise concerning the true meaning of any part of the contract documents, the bidder may submit to the City Engineer a written request for an interpretation thereof. The interpretation of the question so requested will be made as an addendum and either mailed or delivered to all bidders who receive contract documents.

Addenda: Bidders shall acknowledge receipt and incorporation of all addenda at the appropriate location provided in the proposal. Any addenda issued during the time of bidding shall be included with the bid, and in closing a contract they will become a part thereof.

200.07 - PREPARATION OF PROPOSALS The bidder can ONLY submit his proposal through the QuestCDN electronic bidding format. A nominal fee will be charged to the Bidder for an electronic submission of a proposal through QuestCDN.

Wisconsin Statute 77.54(9m) allows a sales and use tax exemption for certain building materials sold to construction contractors for incorporation into public works projects. To claim the exemption, contractors must prepare Wisconsin Form S-211, Sales and Use Tax Exemption Certificate and provide the form to their supplier in compliance with WI 77.54(9m) when purchasing supplies covered by this statute. All other materials, supplies, and equipment purchased by a contractor, sub contractor, or builder for the construction of the work specified under this contract is subject to all applicable sales tax. Proposals are to include all applicable sales tax.

200.08 - REQUIREMENTS FOR SIGNING BIDS

- a) Bids, which are not signed by individuals making them, shall have attached thereto a power of attorney evidencing authority to sign the bid in the name of the person for whom it is signed.
- b) Bids, which are signed for a partnership, shall be signed by all of the partners or by an attorney-in-fact. If signed by an attorney-in-fact there shall be attached to the bid a power-of-attorney evidencing authority to sign the bid, executed by the partners.
- c) Bids, which are signed for a corporation, shall have the corporate name thereof and the signature of the President or other authorized officers of the Corporation, manually written below the corporate name following the word "By _____."

200.09 - INTERPRETATION OF ESTIMATES The estimated quantities of the work, which are the results of calculations as accurate as possible in advance, shall be used

as a basis for determining the lowest bidder. After the contract is awarded, the quantity of work listed under any item, or all items, may be increased or decreased a reasonable amount at the discretion of the City Engineer without in any way invalidating the bid price. The quantities on which payment will be made to the contractor will be determined by the City Engineer who shall measure the work actually performed by the contractor as specified in the contract.

Bidders must determine for themselves the quantities of work that will be required, by such means as they may prefer, and shall assume all risks as to variations in the quantities of the different classes of work actually performed under the contract. Bidders shall not at any time after the submission of their proposal dispute or complain of the aforesaid schedule of quantities or assert that there was any misunderstanding in regard to the amount or character of the work to be done, and shall not make any claim for damages or loss of profits because of a difference between the quantities of work assumed for comparison of bids and the quantities of work actually performed.

200.10 - WHEN AWARD EFFECTUAL The contract shall be deemed as having been awarded when formal notice of award shall have been duly served upon the intended awardee (i.e., the bidder to whom the City contemplates awarding the contract) by some officer or agent of the City duly authorized to give such notice.

200.11 - REQUIRED NUMBER OF EXECUTED CONTRACTS The successful bidder will be required, after the award of the contract, to furnish four (4) counterparts of the contract and bond, no later than 10 days after notification of the award of the contract.

200.12 - WITHDRAWAL OF BIDS Any bidder may withdraw his bid at any time prior to the scheduled time for the receipt of bids.

200.13 - DELIVERY OF PROPOSALS - The bidder can ONLY submit his proposal through the QuestCDN electronic bidding format. A nominal fee will be charged to the Bidder for an electronic submission of a proposal through QuestCDN.

Please note that returning the entire Project Manual is not required; the relevant contract forms, proposals, etc. shall be considered sufficiently complete when submitted through the QuestCDN on-line bidding process.

200.14 - REJECTION OF PROPOSALS Proposals may be rejected, if they show any alterations of form, additions not called for, conditional or alternate bids unless called for, incomplete bids, or irregularities of any kind. Proposals in which the unit prices are obviously unbalanced may be rejected.

200.15 - PROPOSAL GUARANTY No proposal will be considered unless the bid is accompanied by either of the following proposal guarantees:

a) Bid Bond The bidder may accompany his proposal with a bid bond equal to at least five percent (5%) but not more than ten percent (10%) of his bid, made payable to the

City of Wauwatosa, Wisconsin, as a guarantee that if his bid is accepted he will execute and file the proper contract and bond within ten (10) days after notification of the award of the contract.

b) Certified Check The bidder may accompany his proposal with a certified check for at least five percent (5%) of the total amount of his bid, made payable to the City of Wauwatosa, Wisconsin, as a guaranty that if his bid is accepted he will execute and file the proper contract and bond within ten (10) days after notification of the award of the contract.

Failure on the part of the successful bidder to execute his contract and performance bond within ten (10) days from the date of notice of the award of contract will be considered as just cause for the annulment of the award and the forfeiture of the proposal guarantee to the City not as a penalty but in payment to the City as liquidated damages as a result of such failure.

200.16 - CONSIDERATION OF PROPOSALS The City reserves the right to reject any or all proposals, to waive technicalities, and to advertise for new proposals, or to proceed to do the work otherwise.

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, together with samples, which may be subjected to tests provided for in these specifications to determine their quality and fitness for the work.

200.17 – PAYMENT Payment shall be per Section 501.10 by the form specified.

The City will not accept or respond to payment application requests from subcontractors.

No interest will be paid by the Owner for any delay in making any payment unless the Contractor makes written demand of the Owner for payment of interest for any such delay. In no event, however, will any interest be payable for the 10 day period following the 15th of the calendar month. Interest will be payable at the rate of 5% annually and Wisconsin Statutes Section 66.01335 does not apply.

200.18 - RESPONSIBILITY OF THE CONTRACTOR The Contractor, under this contract, shall protect the City against any damage to the equipment and material being used or installed. Any damage occurring because of failure on the part of the equipment, employees, or supervisors, shall be repaired or replaced by the contractor without cost to the City.

200.19 - QUALIFICATIONS OF BIDDERS All bidders are to furnish proof of responsibility by completing the prequalification form furnished by the City of Wauwatosa. This form is to be obtained from the City Engineer's office and is to be

returned to the City Engineer's office in the City Hall of Wauwatosa, Wisconsin, not less than five (5) days prior to the time set for opening of bids as stated in the Official Notice.

200.20 - SUBSTANCE ABUSE PREVENTION PROGRAM

By signing this Bid, the Bidder certifies to the City of Wauwatosa that it has, or will have prior to Contract award, a substance abuse prevention program which complies with State of Wisconsin Act 181 (Chapter 103.503 of the State Statutes) and Section 505.09 - SUBSTANCE ABUSE PREVENTION PROGRAM of these documents. The program must cover all union and non-union employees who work on the Owner's construction sites. Failure to implement such a program prior to award shall result in the Bidder being held to be non-responsible. Following award of the Contract if the Contractor breaches the District Policy by failing to have or to effectively implement the policy, the Owner shall consider this a breach of the Contract by the Contractor and may terminate the Contract. This requirement shall be applicable to all subcontractors with subcontracts in excess of one percent (1%) of the bid.

SECTION 300 - PROPOSAL

CONTRACT 24-19 SIDEWALK REPAIR PROGRAM

Bids to be received until 11:01 A.M. Local Time, January 3, 2024.

TO: CITY OF WAUWATOSA
WAUWATOSA, WISCONSIN

The undersigned, having familiarized oneself with the local conditions affecting the work and with the contract documents including advertisement for bids, instruction to bidders, general conditions, the form of proposal, the form of contract, form of bond, plan, specifications on file in the office of the City Clerk of the City of Wauwatosa, Wisconsin, hereby proposes to perform everything required to be performed and to provide and furnish all labor, materials, supplies, equipment, tools and other services necessary for concrete sidewalk and drive approaches, ADA curb ramps and work incidental thereto all in accordance with the plans and specifications as prepared by the City of Wauwatosa Engineering Services Division, Wauwatosa, Wisconsin, including all addenda issued hereto for the prices as listed below.

Contract 24-19

DIVISION A – CONCRETE SIDEWALK REPLACEMENT

NO.	ITEM CODE	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
A1	D1-04	BASE AGGREGATE DENSE 1-1/4"	42	TON	\$	\$
A2	D1-17	REMOVING CONCRETE SIDEWALK	200	SF	\$	\$
A3	D1-18	SAWCUTTING	2000	FT	\$	\$
A4		SAWCUTTING (CONCRETE SIDEWALK)	435	EA	\$	\$
A5	D1-20	DEEP SAWCUTTING AT TREE ROOT ARCS	96	LF	\$	\$
A6	D2-11	CONCRETE CURB & GUTTER REMOVE AND REPLACE	44	LF	\$	\$
A7	D3-02	5" CONCRETE SIDEWALK, REMOVE AND REPLACE	1227	EACH	\$	\$
A8	D3-05	7" CONCRETE SIDEWALK & DRIVEWAY APPROACH, REMOVE AND REPLACE	274	EACH	\$	\$
A9	D4-18	BASE PATCHING CONCRETE	45	SY	\$	\$
A10	D4-26	2½" ASPHALTIC SURFACE	45	SY	\$	\$
A11	D-40	5" ASPHALTIC SURFACE	142	TON	\$	\$
A12	D5-02	TOPSOIL AND SOD	200	SF	\$	\$

TOTAL FOR DIVISION A – CONCRETE SIDEWALK REPLACEMENT (ITEMS A1 - A12)

\$

DIVISION B – PEDESTRIAN RAMP RECONSTRUCTION

NO.	ITEM CODE	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
B1	D1-02	EXCAVATION COMMON	1	LS	\$	\$
B2	D1-04	BASE AGGREGATE DENSE 1-1/4"	296	TON	\$	\$
B3	D1-15	REMOVING CONCRETE PAVEMENT	485	SY	\$	\$
B4	D1-16	REMOVING CURB AND GUTTER	930	FT	\$	\$
B5	D1-18	REMOVING CONCRETE SIDEWALK AND DRIVE APPROACH	5764	SF	\$	\$
B6	D1-19	SAWCUTTING	1772	FT	\$	\$
B7	D1-20	CONSTRUCTION STAKING CURB RAMPS	1	LS	\$	\$
B8	D2-05	31" CONCRETE CURB & GUTTER	996	FT	\$	\$
B9	D3-03	5" CONCRETE SIDEWALK	7569	SF	\$	\$
B10	D3-07	7" CONCRETE SIDEWALK AND DRIVEWAY	1550	SY	\$	\$
B11	D3-10	DETECTABLE WARINING FIELD	410	SF	\$	\$
B12	D3-11	PEDESTRIAN CURB	89	LF	\$	\$
B13	D4-01	7" CONCRETE PAVEMENT	236	SY	\$	\$
B14	D4-18	BASE PATCHING CONCRETE	148	SY	\$	\$
B15	D4-26	2½" ASPHALTIC SURFACE	148	SY	\$	\$
B16	D-39	5" ASPHALTIC SURFACE (SY)	43	SY	\$	\$
B17	D5-02	TOPSOIL AND SOD	5064	SF	\$	\$
B18	D6-01	TRAFFIC CONTROL	1	LS	\$	\$
B19	E1-41	2" DIAMETER SCHEDULE 40 PVC CONDUIT	124	LF	\$	\$

**TOTAL FOR DIVISION B - PEDESTRIAN RAMP
RECONSTRUCTION (ITEMS B1 – B19)**

\$

**TOTAL FOR CONTRACT 24-19 – SIDEWALK REPAIR PROGRAM
(DIVISION A, DIVISION B)**

\$

PRIME CONTRACTOR

With submission of this proposal, the prime contractor hereby certifies that they are performing a minimum of 1/3 of the value of work within this proposal. The total value of work being performed by the prime contractor is _____ dollars and _____ cents.

SUBCONTRACTOR LIST

The following Subcontractors will be utilized for portions of the Project Work (only list those > \$25,000). Changes shall not be made subsequent to the Bid unless the change(s) is approved by the City. The contractor is required to complete and submit this list no later than 24 hours after the bid is due.

[illegible]

**AFFIDAVIT OF COMPLIANCE WITH THE STATE OF WISCONSIN ACT 181
(CHAPTER 103.503 OF THE STATE STATUTES)
CONTROLLED SUBSTANCE PREVENTION PROGRAM**

State of _____ Project Name _____

_____ County Contract No. _____

I, _____, being duly sworn, state that:

1. I am the _____ of _____, a _____
(State)
Corporation, partnership, or individual of _____,
(City, Village, _____) (State)
and make this affidavit pursuant to the requirements of State of Wisconsin Act 181.
2. I have entered into the City of Wauwatosa's Contract No. _____ and the
total cost (including labor, equipment and materials) of completing the contract will
exceed \$48,000 if a single-trade project or \$200,000 if a multiple trade project.
3. The corporation, partnership or individual I represent has in place a Controlled
Substance Prevention Program that is consistent with and meets the
requirements of the State of Wisconsin Act 181.
4. I have confirmed that the subcontractors I plan to employ on this contract also
have in place a Controlled Substance Prevention Program that is consistent with
and meets the requirements of the State of Wisconsin Act 181.

Title

Officer Name

Address

President _____

Vice President _____

Secretary _____

Treasurer _____

Subscribed and sworn to before me this _____

Day of _____, 20____

(Notary Signature)

(Contractor Signature)

Notary Public, State of _____

My Commission expires: _____

2. Accompanying this proposal is a _____
(Bond-Certified Check)
in the sum of _____ Dollars
\$ _____ as required by the Advertisement for Bids.

3. This bid is based on the following subcontractors:

<u>Name</u>	<u>Address</u>	<u>Class of Work</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

4. I hereby certify that all statements herein are made on behalf of

(Name of Corporation, partnership or person submitting bid)

a corporation organized and existing under the laws of the State of _____;
a partnership consisting of an individual trading as _____
of the City of _____
State of _____.

that I have examined and carefully prepared this proposal from the plans and specifications and have checked the same in detail before submitting this proposal; that I have full authority to make such statements and submit this proposal in (its) (their) behalf, and that the said statements are true and correct.

Signature _____

(Title, if any)

Sworn and subscribed before me this
_____ day of _____, 20____.

(Notary or other officer authorized to administer oaths).

My Commission expires _____.

(Bidders should not add any conditions or qualifying statements to this proposal, as otherwise the proposal may be declared irregular as being not responsive to the advertisement. Do not remove Proposal Form from Contract Documents)

SCHEDULE OF FIXED EXTRAS (Apply only if there is no Bid Item for the same work or the work is specified as being included with another item)

CONSTRUCTION:

1.	Water Service alteration or relay 1 ¼" and smaller in diameter	\$175.00/Lin. Ft.
2.	Water Service alteration or relay 1 ½" to 2" in diameter	\$200.00/Lin. Ft.
3.	Remove & Replace Curb Stop	\$1,500.00 Each
4.	Water Service alteration larger than 2"	To be negotiated
5.	Adjust Manhole Frames	\$ 500.00 Each
6.	Adjust Catch Basin/Inlet Frames	\$ 500.00 Each
7.	Adjust Water Boxes	\$250.00 Each
8.	Internal Manhole Seal Removal and/or Installation	\$ 325.00 Each
9.	4" Underdrain Pipe (Complete)	\$ 15.00/Lin. Ft.
10.	Sawing concrete pavement	\$200.00 plus \$ 3.00/L.F. for each foot over 50 feet
11.	Sawing asphalt pavement	\$200.00 plus \$ 2.00/L.F. for each foot over 50 feet
12.	Sawing asphalt over concrete pavement.	\$200.00 plus \$ 3.50/L.F. for each foot over 50 feet
13.	Relay house sewers and drains (includes reconnect)	\$250.00/Lin. Ft.
14.	Reconnect house sewers and drains	\$450.00 Each
15.	Steel sheeting and bracing left in place	To be negotiated
16.	Close wood sheeting and bracing left in place	To be negotiated
17.	Spot wood sheeting and bracing left in place	To be negotiated
18.	Concrete Cradle	\$ 175.00/Cu. Yd.
19.	Concrete Cap	\$ 150.00/Cu. Yd.
20.	Borrow Excavation	\$ 20.00/Cu. Yd.

21.	Rock excavation by hand	\$ 330.00/Cu. Yd.
22.	Rock excavation by mechanical means	\$ 250.00/Cu. Yd.
23.	Buried concrete removal (including concrete encasement)	\$ 150.00/Cu. Yd.
24.	Concrete pole base removal & disposal	\$ 100.00 Each
25.	Base aggregate dense, 1-1/4 inch, tons in place including disposal of excess excavated materials.	\$ 18.00/Ton
26.	Excavated material used for backfill in lieu of gravel backfill – credit.	\$ 10.00/Cu. Yd.
27.	Aggregate slurry used for backfill in lieu of granular or crushed concrete backfill or vice versa	\$110.00/C.Y. under 5.0 C.Y. \$75.00/C.Y. over 5.0 C.Y.
28.	No. 2 stone for ditch bottom stabilization including disposal of excess excavated material	\$ 24.20/Ton
29.	Crushed limestone No. 1 or smaller, tons in place	\$15.00/Ton
30.	Utility structure masonry repairs	\$ 85.00/Vrt. In. or \$1020/Vrt. Ft.

RESTORATION: (Prices Include Removal and Disposal)

1.	8" concrete pavement.	\$ 70.00/Sq. Yd.
2.	8" concrete base course.	\$ 55.00/Sq. Yd.
3.	5" concrete sidewalk	\$8.00/Sq. Ft.
4.	7" concrete drive	\$ 9.00/Sq. Ft.
5.	Detectible Warning Fields	\$40.00/Sq. Ft.
6.	High strength early setting concrete/"9 bag"	125% of bid price for the relevant pavement type
7.	Vertical face concrete curb and gutter	\$ 42.00/Lin. Ft.
8.	Mountable concrete curb and gutter	\$ 43.00/Lin. Ft.

9.	Concrete Steps	\$ 75.00/Lin. Ft.
10.	Pavement Milling (Asphalt)	\$ 4.00/Sq. Ft.
11.	Pavement Milling (Concrete)	\$ 6.00/Sq. Ft.
12.	Tack Coat	\$ 5.00/Gal.
13.	Asphalt pavement Less than 30 tons in place Greater than 30 tons in place	\$ 90.00/Ton \$ 80.00/Ton
14.	Temporary bituminous cold patch or temporary HMA	\$ 120.00/Ton
15.	Topsoil & Sodding	\$ 1.50/Sq. Ft.
16.	Topsoil, Seeding & Mulching	\$ 0.90/Sq. Ft.
17.	Topsoil, spread	\$ 30.00/Cu. Yd.
18.	Concrete pavement dowel bars.	\$ 9.50 Each
19.	Concrete pavement tie bars.	\$ 7.00 Each

EROSION CONTROLS - ALL ITEMS TO INCLUDE MAINTENANCE: (incidental in this contract)

1.	Silt fence erection and maintenance.	\$ 4.00/Lin. Ft.
2.	Hay Bales.	\$ 7.00 Each
3.	Ditch protection	\$ 6.50/Lin. Ft.
4.	Catch basin and inlet screens.	\$ 50.00 Each
5.	Catch basin and inlet baskets.	\$ 150.00 Each
6.	Tracking Pad Stone	\$ 25.00/Ton

SCHEDULE OF FIXED EXTRAS (CONTINUED)

REPAIR OF WATER MAIN BREAKS DURING CONSTRUCTION

Contractor shall repair all main breaks on existing mains that occur during normal working hours. The Water Works will normally operate the valves for the shutoff.

In emergency situations, the contractor may operate the valves with proper notification and authorization.

Where repairs are made on mains that will be abandoned, the Contractor shall furnish all repair material. The Contractor shall have a minimum of 2 repair clamps, 2 dual purpose sleeves, and 1 length of ductile iron, cast iron or PVC pipe of the existing pipe size on the job before the job starts and at all times thereafter. This repair material need not conform to the standard specifications.

When repairs are required on mains that will remain in service, the contractor shall also furnish all repair materials. The contractor shall have a minimum of 2 repair clamps, 2 dual purpose sleeves, and 1 length of ductile iron, pipe Special Class 54 and of the same size as the existing pipe on the job before the job starts and at all times thereafter. This repair material shall conform to the standard and Wauwatosa's specifications. Where, in unusual circumstances, the City furnishes materials, the cost of such material will be deducted from the amount due the contractor.

All breaks occurring as a result of the negligence of the contractor, whether from actual construction or faulty operation of hydrants and valves, shall be repaired at their own expense. Where the break occurs while exercising normal care, the Contractor will be compensated for the repair of each break as follows:

- a. Where the break can be repaired without replacing pipe and no excavation is required, the Contractor will be paid \$1,300.00.
- b. Where the break can be repaired without replacing pipe, and the Contractor must excavate, the Contractor will be paid \$1,900.00.
- c. Where a piece of pipe must be removed and replaced, including any excavation required to complete the repair, the Contractor will be paid \$2,500.00.

The Contractor, at their own expense, shall repair water services or branches damaged, as a result of the construction.

SECTION 400 - MINIMUM WAGE SCALE

Section intentionally omitted pursuant to 2015 Wisconsin Act 55, effective January 1, 2017.

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SECTION 500 - GENERAL CONDITIONS

501 - SCOPE OF WORK

501.01 - INTENT OF CONTRACT DOCUMENTS

The contract documents are complimentary, and what is called for in one shall be as binding as if called for in all. The true intent of the plans and these specifications is to provide for the construction, execution and completion in every detail of a complete work or improvement which the Contractor undertakes to do in full compliance with the plans, specifications, official notice, general conditions, proposal and the contract. The Contractor shall perform all items of work covered and stipulated in the proposal and perform altered or extra work, all in accordance with the lines, grades, typical sections and dimensions given, and shall furnish, (unless otherwise provided), all materials, implements, machinery, equipment, tools, supplies, transportation and labor necessary to the prosecution and completion of the work.

501.02 - SPECIAL WORK

Should any construction or requirements not covered by these general conditions become necessary, special provisions for the same will be prepared which special provisions shall be considered as a part of these specifications the same as though contained fully herein.

501.03 – CHANGES

The City Engineer may at any time, by a written order, and with notice to the sureties, make changes in the plans and/or specifications of this contract all within the general scope thereof.

501.04 - INCREASED OR DECREASED QUANTITIES OF WORK

If the City Engineer deems it proper or necessary in the execution of the work to make changes which will increase or decrease the quantity of labor or material or the expense of the work, such changes shall not annul nor vitiate the contract or agreement hereby entered into nor release the surety thereon, and the Contractor shall furnish the necessary labor and material to complete the contract as changed.

Items for which quantities change are categorized as major or minor items. A major item shall be considered to be any item whose total cost, determined by multiplying the original quantity and the contract unit price, is equal to or greater than five percent of the total amount of the original contract. A minor item is one of which total cost, determined, as above, is less than five percent of the total amount of the original contract.

When the actual quantity of any major item required to complete the work is increased or decreased, payment for the quantity of work actually performed for such item will be made in accordance with the table below:

Increased or Decreased Quantities of Work

Item	Actual Quantity as % of Contract Quantity	Basis of Payment
Major ($\geq 5\%$ of Total Contract)	75% - 125%	Contract Unit Prices
Major ($\geq 5\%$ of Total Contract)	$< 75\%$	Adjusted Unit Prices (not to exceed cost for 75% of contract quantity times the contract unit price)
Major ($\geq 5\%$ of Total Contract)	$> 125\%$	Adjusted Unit Prices for units $> 125\%$ of contract quantity. (Contract Unit Prices for all units up to 125% of contract quantity).
Minor ($< 5\%$ of Total Contract)	All	Contract Unit Prices

The adjustment or revision of unit prices shall be negotiated on the basis of actual cost for the entire item plus a reasonable allowance for profit and applicable overhead.

If such changes cause an increase or decrease in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly.

No changes shall be made without first obtaining the approval in writing of the City Engineer or their duly authorized representative. Any claim for adjustment under this section must be asserted within ten (10) days from the date the change is ordered, unless the City Engineer shall for proper cause extend such time. Nothing provided in this section shall excuse the Contractor from proceeding with the prosecution of the work so changed.

501.05 - CHANGED CONDITIONS

Should the Contractor encounter or the City discover during the progress of the work, subsurface and/or latent conditions at the site materially differing from those shown on the drawing or indicated in these specifications, the attention of the City Engineer shall be called immediately to such conditions, and, if Contractor finds that the materials differ from those shown on the drawings, or indicated in these specifications, Contractor shall at once make such changes in the drawings and/or specifications, as Contractor may find necessary.

501.06 - EXTRA WORK

The Contractor may be ordered by the City Engineer to perform additional work and furnish materials which do not appear in the proposal or contract as a specific item accompanied by a unit price, or lump sum price, and which are not included under the price bid for other items in the contract. All such work and materials shall be designated as extra work. The Contractor shall perform extra work whenever it is deemed necessary or desirable by the City Engineer to fully complete the project as contemplated and it shall be done in accordance with the intent of these specifications.

Extra work shall be done under the supervision of the City Engineer and their decision shall be final and binding. The plan of the work to be followed, the equipment to be used and the amount and character of labor to be employed shall meet with the approval of the City Engineer. Authorization for extra work shall be given by the City Engineer in writing. The Contractor shall perform the extra work by force account when so ordered by the City Engineer. Work performed on a cost-plus-limited basis shall have itemized statements submitted in accordance with 109.4.5.1(3) of the State Specs. Claims for extra work which have not been authorized by the City Engineer will be rejected.

501.07 - MEASUREMENT OF QUANTITIES

All work acceptably completed under the contract shall be measured by United States standard measures in accordance with well recognized engineering practice and quantities of work performed shall be computed from such measurements.

The completed work will be measured by the City Engineer to determine the quantities of the various items of work performed. The Contractor will, in all cases, be paid for the actual amount of work performed in accordance with these specifications as shown by the final measurements, said measurements being made in accordance with the terms of the contract.

501.08 - SCOPE OF PAYMENTS

The Contractor shall accept the compensation, as herein provided, in full payment for furnishing all material, labor, tools, and equipment necessary to the completed work and for performing all work contemplated and embraced under the contract; also for loss or damage arising from the nature of the work; or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the City Engineer, and for all risks of every description connected with the prosecution of the work, also for all expenses incurred in consequence of the suspension or discontinuance of the work herein specified, and for completing the work according to the plans and specifications, and shall indemnify and hold the City harmless from any and all losses, damages, costs, expenses, actions, and judgments resulting from any infringement of patent, trademark, or copyright.

The payment of any estimate, for partial payment, prior to final acceptance of the work by the City, shall in no way constitute an acknowledgment of the acceptance of the work, nor in any way prejudice or affect the obligation of the Contractor, at the Contractor's expense, to repair, correct, renew, or replace any defects or imperfections in the construction or in the strength or quality of the materials in or about the construction of the work under contract and its appurtenances, nor any damage due or attributed to such defects, which defects, imperfections or damage shall have been discovered on or before the final inspection and acceptance of the work. The City Engineer shall be the sole judge of such defects, imperfections or damage and the Contractor shall be liable to the City for failure to correct the same as provided herein.

No monies payable under the contract or any part thereof shall become due and payable if the City so elects until the Contractor shall satisfy the City that the Contractor has fully settled or paid for all materials used in or upon the work and labor done in connection therewith, and the City, if it so elects, may pay any or all such bills, wholly or in part, and deduct the payment thereof from any partial or final payment.

501.09 - PAYMENT FOR INCREASED OR DECREASED QUANTITIES

When alterations in the plans or quantities of work as herein provided are ordered or negotiated, the Contractor shall accept payment in accordance with the provisions of Section 502.14, and no allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the bidder and subsequent loss of expected reimbursement thereof, or from any other cause.

501.10 – PROGRESS AND FINAL PAYMENTS

501.10.1 Schedule of Values

- A. The Schedule of Values established as provided in Section 300 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the City Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

501.10.2 Progress Payments

- A. Applications for Payments:
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), the Contractor shall submit to the City Engineer for review an Application for Payment filled out and signed by the Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

- (a) If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
- 2. Retainage shall be an amount equal to 5 percent (5%) of said estimate until 50 percent of the work has been completed. At 50 percent (50%) completion, no additional amounts will be retained, and further partial payments will be made in full to the contractor and unless the City Engineer certifies that the job is not proceeding satisfactorily, but amounts previously retained shall not be paid to the contractor. At 50 percent (50%) completion or any time thereafter when the progress of the work is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 10 percent (10%) of the value of the work completed. Upon substantial completion of the work, an amount retained may be paid to the contractor. When the work has been substantially completed, except for work which cannot be completed because of weather conditions, lack of materials, or other reasons which in the judgment of the City are valid reasons for non-completion, the City may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed or, in the alternative, may pay out entire amount retained and receive from the contractor guarantees in the form of a bond or other collateral sufficient to insure completion of the contract.

B. Review of Applications:

- 1. City Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing City Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
- 2. City Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by City Engineer, based on City Engineer's observations of the executed Work as an experienced and qualified design professional, and on City Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of City Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;

- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under (d.), and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is City Engineer's responsibility to observe the Work.
 - d. City Engineer will document the actual quantities and classifications of Unit Price Work performed by Contractor. City Engineer will review with Contractor the City Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). City Engineer's written decision thereon will be final and binding (except as modified by City Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of this section.
- 3. By recommending any such payment City Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to City Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
- 4. Neither City Engineer's review of Contractor's Work for the purposes of recommending payments nor City Engineer's recommendation of any payment, including final payment, will impose responsibility on City Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

- e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
- 5. City Engineer may refuse to recommend the whole or any part of any payment if, in City Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 501.10.2 B.2. City Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in City Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Section 502.09; or
 - d. City Engineer has actual knowledge of the occurrence of any of the events enumerated in Section 502.11.

C. Payment Becomes Due:

- 1. Ten days after presentation of the Application for Payment to Owner with City Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 510.10.2.D and calendar placement on the next available Board of Public Works Agenda) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

- 1. Owner may refuse to make payment of the full amount recommended by City Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 510.10.2.B and Sections 502.11 and 502.12.

2. If Owner refuses to make payment of the full amount recommended by City Engineer, Owner will give Contractor immediate written notice (with a copy to City Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 510.10.2.C and subject to interest as provided in the Agreement.

501.10.3 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

501.10.4 Final Payment

A. Application for Payment:

1. After Contractor has, in the opinion of City Engineer, satisfactorily completed all corrections identified as defined in Section 502.19.2 and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents, wage affidavits, and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Section 504.17;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 510.10.4.A.2 and as approved by Owner, Contractor may furnish receipts or releases in

full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. City Engineer's Review of Application and Acceptance:

1. If, on the basis of City Engineer's observation of the Work during construction and final inspection, and City Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, final payment is per the provisions of Section 502.19.3. Otherwise, City Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by City Engineer, less any sum Owner is entitled to set off against City Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

501.10.5 Final Completion Delayed

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if City Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of City Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Section 504, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to City Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

501.10.6 Waiver of Claims

- A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final acceptance pursuant to Section 502.19.3, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled

501.11 – CLEAN UP

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by their employees or work and Contractor shall remove all their rubbish from and about the site and all their tools, equipment, scaffolding and surplus materials and shall leave the work clean and ready for use. In case of dispute, the City may remove the rubbish and surplus materials and charge the cost to the Contractor and the Contractor agrees to reimburse such cost to the City.

501.12 - FINAL CLEANING UP

Within fourteen (14) calendar days after the completion of the work and before acceptance and payment will be made, the Contractor shall clean and remove from the site of the work and adjacent property all surplus and discarded materials, rubbish and temporary structures, restore in an acceptable manner all property, both public and private, which has been damaged in the prosecution of the work and shall leave the site of the work in a neat and presentable condition.

SECTION 502 - CONTROL OF THE WORK

502.01 - AUTHORITY OF CITY ENGINEER

All work shall be done under the supervision of the Board of Public Works represented by the City Engineer and to their satisfaction. The City Engineer shall decide all questions which arise as to the quality and acceptability of materials furnished, work performed, manner of performance, rate of progress of the work, interpretation of the plans and specifications, acceptable fulfillment of the contract, compensation and disputes and mutual rights between Contractors under these specifications. The City Engineer shall determine the amount and quantity of work performed and materials furnished.

502.02 - PLANS AND SHOP DRAWINGS

The approved plans will be supplemented by such shop drawings as are necessary to adequately control the work. It is mutually agreed that all authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made on any plan or drawing after the same has been approved by the City Engineer except by direction of the City Engineer.

Shop Drawings and Samples

- A. Contractor shall submit Shop Drawings and Samples to City Engineer for review and approval. Each submittal will be identified as City Engineer may require.
 - 1. Shop Drawings:
 - a. Submit number of copies specified in the General Requirements.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show City Engineer the services, materials, and equipment Contractor proposes to provide and to enable City Engineer to review the information for the limited purposes required by Paragraph 502.02 D.
 - 2. Samples:
 - a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as City Engineer may require to enable City Engineer to review the submittal for the limited purposes required by Paragraph 502.02 D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents, any related Work performed prior to City Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures:

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal. Submittals not bearing a stamp or specific written certification will be returned without review to the contractor for resubmittal.
3. With each submittal, Contractor shall give City Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to City Engineer for review and approval of each such variation.

D. City Engineer's Review:

1. City Engineer will provide timely review of Shop Drawings and Samples. City Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. City Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. City Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 502.02 C.3 and City Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. City Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 502.02 C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by City Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by City Engineer on previous submittals.
2. The Contractor shall be allowed one (1) submittal of each item for review. Additional submittals required due to non-conformance with the specifications, including rejected or incomplete submittals, will be assessed \$250 per item per resubmittal. Any amounts assessed under this specification shall be deducted from payment for the work.

502.03 - CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS

Finished work in all cases shall conform with lines, grade, sections, details and dimensions of the work contemplated as shown on the approved plans. Such deviations from the approved plans and shop drawings, as may be required by the exigencies of construction, will, in all cases, be determined by the City Engineer and authorized in writing.

502.04 - COORDINATION OF PLANS - SPECIFICATIONS, ETC.

The specifications, the plans and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be compatible to describe and provide for a complete work. In case of discrepancy, figured dimensions shall govern over scaled dimensions, plans shall govern over special provisions, and special provisions shall govern over all other specifications.

The Contractor shall take no advantage of any apparent error or omission in the plans or specifications and the City Engineer shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the plans and specifications.

502.05 - COOPERATION BY CONTRACTOR

The Contractor shall conduct their operations so as to interfere as little as possible with those of other Contractors, subcontractors or the public on or near the work.

The Contractor shall arrange and conduct their work so as not to interfere with the operations of other Contractors engaged on adjacent work and to join the work of this contract, including any additional, authorized work, to that of others in a proper manner and in accordance with the spirit of the plans and specifications and to perform his work in the proper sequence to that of other adjacent work all as may be directed by the City Engineer.

The Contractor shall be held responsible for any damage done the Contractor or the Contractor's agents to the work performed by another Contractor.

In case of a dispute arising between two or more Contractors engaged on the same work, as to the respective rights of each under these specifications, the City Engineer shall determine the matters at issue and shall define the respective rights of the various interests involved in order to secure the completion of all parts of the work in general harmony and with satisfactory results, and their decision shall be final and binding on all parties concerned and shall not in any way be a cause for claims for extra compensation by any of the parties.

The Contractor will be supplied two copies of the executed contract documents and an electronic pdf copy of the construction plans, construction specifications, and any subsequent necessary revisions. The Contractor shall at all times have available on the job site one copy of said contract documents complete with any revisions to the plans or specifications; Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the City Engineer and with the other Contractors in every way possible.

502.06 - CONSTRUCTION STAKES

The City Engineer will furnish and set the survey stakes for the general location, alignment, grade, and other necessary points with proper notes thereon. The Contractor shall notify the City Engineer not less than seventy two (72) hours (or three (3) working days, whichever is greater,) in advance of when and where grade and points are desired.

The Contractor shall be responsible for the preservation of all stakes and marks, and if in the opinion of the City Engineer any of the survey stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost to the City of replacing them shall be charged against the Contractor and shall be deducted from the payment for the work.

502.07 - AUTHORITY AND DUTIES OF INSPECTORS

Inspectors, employed by the City, shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. The inspector is not authorized to revoke, alter, or waive any requirements of the specifications. Inspector is authorized to call the attention of the Contractor to any failure of the work or material to conform to the specifications and the contract and shall have authority to reject materials or suspend the work until any questions at issue can be referred to and decided by the City Engineer.

The inspector shall in no case act as foreman or perform other duties for the Contractor nor interfere with the management of the work by the latter. Any advice which the inspector may give the Contractor shall in no way be construed as binding the City Engineer in any way or releasing the Contractor from fulfilling any of the terms of the contract.

If the Contractor refuses to suspend operations on verbal order, the inspector shall issue a written order giving the reason for shutting down the work. After placing the order in the hands of the man in charge, the inspector shall immediately leave the job. Work done after the inspector leaves the job will not be accepted or paid for.

502.08 – INSPECTION

All material and each part or detail of the work shall be subject at all times to inspection by the City Engineer or their authorized representative, and the Contractor will be held strictly to the true intent of the specifications in regard to quality of materials, workmanship and the diligent execution of the contract. Such inspection may include mill, plant or shop inspection, and any material furnished under these specifications is subject to such inspection. The City Engineer or their representatives shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is determined by the City Engineer or their representative, to make a complete and detailed inspection.

The Contractor shall, if the City Engineer requests, remove or uncover such portion of the finished work as the City Engineer may direct before the final acceptance of the same. After the examination, the Contractor shall restore said portion of the work to the standard required by the specifications. If the work thus exposed or examined proves acceptable, the expense of uncovering or removing and the replacing of the parts removed shall be paid for as extra work, but, if the work so exposed or examined is unacceptable, the expense of uncovering or removing and the replacing of the same in accordance with the specifications shall be borne by the Contractor.

Failure or neglect on the part of the City Engineer to condemn or reject bad or inferior work or materials shall not be construed to imply an acceptance of such work or materials, if it becomes evident at any time prior to the final acceptance of the work by the Common

Council. Neither shall it be construed as barring the City, at any subsequent time, from the recovery of damages or of such a sum of money as may be needed to build anew all portions of the work in which fraud was practiced or improper materials hidden, wherever found.

502.09 - REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Work performed without lines and grades being given, work performed beyond the lines and grades shown on the plans or as given, except as herein provided, or any unclassified work done without written authority will be considered as unauthorized and at the expense of the Contractor and will not be measured or paid for by the City. Work so done may be ordered removed and replaced at the Contractor's expense.

All work not conforming to the requirements of these specifications shall be considered as defective and will be rejected. The Contractor shall remove and renew or repair all such defective work as ordered in writing by the City Engineer.

Should the Contractor fail or refuse to remove or renew any defective work performed previously or to make any necessary repairs in an acceptable manner and in accordance with the requirements of the contract and specifications within three days after notification in writing, the City Engineer shall have the authority to cause the unacceptable or defective work to be removed and renewed or repaired at the Contractor's expense. Any expense incurred by the City in making these removals, renewals or repairs, which the Contractor has failed or refused to make shall be paid out of any monies or which may become due the Contractor. The City shall have authority to take over and use defective work without compensation to the Contractor when the Contractor fails or refuses to rebuild such faulty work.

502.10 - TERMINATION OR SUSPENSION

In the event that any of the provisions of this contract are violated by the Contractor or by any of the Contractor's subcontractors, or in the event the work to be performed under this contract shall not be prosecuted with such diligence and with such number of men as to insure its completion within the time limited by this Contract, the City by its City Engineer may serve written notice upon the Contractor and their surety notifying the Contractor and their surety of the Contractor's violations or the Contractor's failure to prosecute the work, and that the City by its City Engineer will suspend the work of the Contractor under this contract or terminate this contract unless the Contractor within the time limitation provided for in such notice by the City Engineer desists from all violations under this contract or makes satisfactory arrangements with the City Engineer for the corrections of and the compliance with all the provisions of this contract. In the event the Contractor fails to comply with the provisions in the notice from the City Engineer within the time limitation provided in such notice by the City Engineer, the Board of Public Works of the City shall be authorized to take charge of and employ men and secure materials for the completion of the work under this contract or re-let the work to be performed under

this contract to another responsible Contractor, or authorize the Contractor's surety to take charge of the work and perform the work under this contract by a Contractor acceptable to the City Engineer, all to the account of and the expense of the Contractor and their surety and to apply the amounts retained by the City to the completion of the work under this contract.

In the case the City shall declare the Contractor in default as to a part of the work only, the Contractor shall discontinue such part, shall continue performing the remainder of the work in strict conformance with the terms of the contract, and shall in no way hinder or interfere with any other Contractor or persons whom the Board of Public Works of the City or its City Engineer may engage to complete the work as to which the Contractor was declared in default.

502.11 - RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

In addition to the payment to be retained by the City under the preceding provisions of these General Conditions, the City may withhold a sufficient amount of any payment otherwise due to the Contractor, to cover (a) payments that may be past due or payable for just claims for labor or materials furnished in and about the performance of the work on the Project under the contract, (b) for defective work not remedied, (c) for failure of the Contractor to make proper payments to subcontractors, or others caused by the act of neglect of the Contractor or of any of their subcontractors, agents, or employees, and (e) for any past due and unpaid obligations owing by the Contractor to the City. The City shall disburse and the Contractor does authorize the City to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment therefrom. The City will render to the Contractor a proper accounting of all such fund disbursed in behalf of the Contractor.

502.12 - DEFINITION OF NOTICE

Unless otherwise provided, where, in any of the contract documents, there is any provision in respect to giving of any notices, such notice shall be deemed to have been given, as to the City, when written notice shall be delivered to the City Engineer of the City or their authorized agent or shall have been placed in the United States mails addressed to the chief executive of the City at the place where the bids or proposals for the contract were opened; as to the Contractor, when a written notice shall be delivered to the chief representative of the Contractor at the site of the project or by mailing such written notice in the United States mails addressed to the Contractor at the place stated in the papers prepared by them to accompany the Contractor's proposal as the address of the Contractor's permanent place of business; as to the surety on the performance bond, when a written notice is placed in the United States mails addressed to the surety at the home office of such surety or its agent or agents who executed such performance bond on behalf of such surety.

502.13 - PAYMENT FOR EXTRA, ADDITIONAL OR OMITTED WORK

The City upon proper action by its governing body, may authorize changes in, additions to, or deductions from the work to be performed or the material to be furnished pursuant to the provisions of the contract or any other contract documents.

Adjustments, if any, in the amounts to be paid to the Contractor by reason of any such change, addition or deduction shall be determined by one or more of the following methods:

- (a) By unit prices contained in the Contractor's original bid and incorporated in the construction contract.
- (b) By a supplemental schedule of prices contained in the Contractor's original bid and incorporated in the construction contract.
- (c) By an acceptable lump sum proposal from the Contractor not to exceed fifteen (15%) percent of the original contract price for all extra, additional or omitted work to comply with Section 62.15(1c) of the Wisconsin Statutes. For lump sum proposals submitted by a subcontractor, the city will allow the contractor a markup on work the subcontractor performs as follows:
 - Use a markup of 10% for the first \$10,000 of work.
 - Use a markup of 2% for work in excess of \$10,000.
- (d) On a cost-plus-limited basis not to exceed fifteen percent (15%) of the original contract price to comply with Section 62.15 (1c) of the Wisconsin Statutes. A cost-plus-limited basis is defined as the cost of labor, materials and insurance, plus fifteen percent (15%) of the said cost to cover superintendence, general expense, overhead, and profit. Equipment necessary to complete work on a cost-plus-limited basis will be paid as an hourly rate and shall include no mark-up above the hourly rate.
 1. Labor – The city will pay the contractor's labor costs at the contractor's personnel actual wage rates or wage rates previously agreed upon with the city, in writing, for personnel directly involved in producing and supervising the cost-plus-limited basis work. The city will only pay for hours that personnel are actually engaged in cost-plus-limited basis work. The city will also reimburse the contractor based on actual costs paid to, or on behalf of, workers for subsistence and travel benefits, health and welfare benefits, pension fund benefits and other contractor-paid benefits. The city will pay no part of wages or benefits for personnel connected with the contractor's forces above the classification of foreman and having only general supervisory responsibility for the cost-plus-limited basis work.

2. Materials – The city will pay the Contractor based on actual invoiced costs, including applicable taxes and actual freight charges, for engineer-approved materials the contractor uses in force account work. If the contractor uses materials from the contractor's stock, the city and the contractor will agree on the price. Do not incorporate materials into the work without agreement. The city reserves the right to furnish materials as it deems appropriate. Make no claims for the costs, overhead, or profit on materials that the city provides.
3. Insurance – The city will pay the contractor based on actual invoiced costs for property damage, liability and workers compensation insurance premiums, unemployment insurance contributions and social security taxes on work performed on a cost-plus-limited basis. The contractor shall furnish satisfactory evidence of the rates actually paid.
4. Equipment – The city will pay for the use of contractor-owned equipment the engineer approves for work on a cost-plus-limited basis only during the hours that it is operated to the nearest half hour. Contractor-owned equipment expense rates will be paid as given in EquipmentWatch Cost Recovery (formerly Rental Rate Blue Book). Base all rates on revisions effective January 1 for all equipment used in that calendar year and provide the engineer with a copy of the rate sheet for each piece of equipment used.

<http://equipmentwatch.com/estimator/>

For equipment not listed in EquipmentWatch, provide an expense rate and furnish cost data to support that rate.

Rental equipment will be paid at the rental cost as invoiced by the rental company.

The city will not pay rental for tools or equipment with a replacement value of \$500 or less.

The engineer may reject equipment not in good working condition or not properly sized for efficient performance of the work.

If a subcontractor performs work on a cost-plus-limited basis, the city will allow the contractor a markup on work the subcontractor performs as follows:

- Use a markup of 10% for the first \$10,000 of work.
- Use a markup of 2% for work in excess of \$10,000.

No claim for an addition to the contract sum shall be valid unless authorized as aforesaid.

502.14 - DISPUTED WORK

If the Contractor is of the opinion that any work required, necessitated, or ordered, is contrary to the terms and provisions of this Contract, Contractor must promptly notify the City Engineer in writing, of their intentions with respect thereto, and request a final determination thereon. If the City Engineer determines that the work in question is contract work and not extra work, or that the order complained of is proper, the City Engineer will direct the Contractor to proceed and the Contractor shall promptly comply. In order, however, to reserve the Contractor's right to claim compensation for such work or damages resulting from such compliance, the Contractor must, within 5 days after receiving notice of the City Engineer's determination and direction, notify the City Engineer, in writing, that the work is being performed or that the determination and direction is being complied with, under protest. Failure of the Contractor so to notify shall be deemed as a waiver of claim for extra compensation or damages therefor.

Before final acceptance by the City, all matters of dispute must be adjusted to the mutual satisfaction of the parties thereto. Determinations and decisions, in case any question shall arise, shall constitute a condition precedent to the right of the Contractor to receive the money therefor, until the matter in question has been adjusted.

502.15 - ASSIGNMENT OF CONTRACT

The Contractor shall not assign this contract or any part hereof without the written consent of the City.

502.16 - SUBCONTRACTING

The Contractor shall not subcontract any work to be performed or any materials to be furnished in the performance of the contract without the written consent of the City. If the Contractor shall sublet any part of this contract, the Contractor shall be as fully responsible to the City for the acts and omissions of their subcontractor(s) and of the persons either directly or indirectly employed by any subcontractor(s) as Contractor is for the acts and omissions of the persons directly employed by the Contractor. The Contractor must perform with their own organization, work amounting to at least one-third of the original contract amount unless a larger portion is specified in the contract.

502.17 - "OR EQUAL" CLAUSE

Whenever in any of the contract documents an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer or vendor, the term "or equal," if not inserted, shall be implied. The specific article, material or equipment mentioned shall be understood as indicating the type, function, minimum standard of design, efficiency and quality desired and shall not be construed in such a manner as to exclude manufacturers' products of comparable quality, design, or efficiency. The Contractor shall comply with the requirements of the contract documents relative to the City's approval of materials and equipment before they are incorporated in

the project. The City Engineer shall decide and shall be the final authority on all questions which arise as to the quality of alternate materials referred to above.

502.18 - OPENING OF SECTION OF ROADWAY TO TRAFFIC

When the contract provides that the road or portions thereof shall be closed to traffic during construction, the work shall not be opened to traffic until so directed or authorized by the City Engineer. Whenever all of the work or any portion thereof is in an acceptable condition for travel, such sections shall be opened to traffic as may be directed by the City Engineer in writing, but such opening shall not be construed as assumption of the maintenance by the City unless specifically provided, nor as an acceptance of the roadway or any part of it, nor as a waiver of any of the provisions of the specifications and contract; provided, however, that on such sections of the project as are used by traffic, the Contractor shall not be required to assume any expense entailed in maintaining that portion of the roadway used by traffic which expense is solely attributable to such traffic use and beyond the control and without fault of the Contractor, including costs in connection with those traffic control devices or facilities required. Such expense shall be borne by the City or shall be compensated for as Extra Work. Any damage to the highway not attributable to traffic which might occur on such sections shall be repaired by the Contractor at their own expense.

Whenever the Contractor is required to open to traffic all of the work or any portion thereof in accordance with the provisions given herein, or whenever Contractor shall of their own volition and when so authorized by the City Engineer, open to traffic all of the work or any portion thereof prior to final acceptance, Contractor shall conduct the remainder of the construction operations so as to cause the least obstruction to traffic.

502.19 – ACCEPTANCE

502.19.1 Partial Acceptance

When requested by the Contractor and upon specific approval of the City Engineer prior to final inspection and acceptance, the Contractor may be relieved of maintenance of sections of the work which have been completed. Such partial acceptance and assumption of the maintenance by the City shall be covered by a written notice from the City Engineer to the Contractor, and such notice shall definitely designate the sections of the work on which the Contractor is to be relieved of maintenance and shall also set for the date upon which such notice will be effective.

Such action will not be construed to be final inspection or acceptance of any part of the work, nor to be a waiver of any legal rights prescribed under this contract.

502.19.2 Project Acceptance

A. General

1. Notify the City Engineer when the project is substantially complete as defined in 502.19.2.C. As soon as practicable, the City Engineer will inspect the work and categorize it as one of the following:
 - i. Unacceptable or not complete.
 - ii. Substantially complete.
 - iii. Complete.

B. Unacceptable or Not Complete

1. The City Engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The City Engineer will assess contract time until the work is corrected or completed.
2. Proceed as specified in 502.19.2.A until the City Engineer determines that the work is complete.

C. Substantially Complete

1. The project is substantially complete and the City Engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch list. As applicable, the following must have occurred:
 - i. All lanes of traffic are open on a finished surface.
 - ii. All signage and traffic control devices are in place and operating.
 - iii. All storm sewer, water main, sanitary sewer, and electrical systems are tested and operational.
 - iv. All drainage, erosion control, excavation, and embankments are completed.
 - v. All safety appurtenances are completed.
 - vi. All landscaping work has been completed.
2. The City Engineer will provide a written punch list enumerating work the contractor must perform and documents the contractor must submit before the City Engineer will categorize the work as complete.
 - i. Punch list work includes uncompleted cleanup work required under 501.12 and minor corrective work. Immediately correct or complete the punch list work. The City Engineer may restart contract time if the contractor does not complete the punch list work within 14 calendar days of the City Engineer issuing the written punch list. The City Engineer and contractor may mutually agree to extend this 14-day requirement.
 - ii. Punch list documents include whatever contract required documentation is missing. The City Engineer may restart contract time if the contractor does not submit the punch list documents within

14 calendar days of the City Engineer issuing the written punch list. The City Engineer and contractor may mutually agree to extend this 14-day requirement.

3. Proceed as specified in 502.19.2.A until the City Engineer determines that the work is complete.

D. Complete

1. The project is complete when the contractor has completed all contract bid items, change order work, and punch list work including the submission of all documentation.

502.19.3 Final Payment and Acceptance

Whenever, in the opinion of the City Engineer, the Contractor shall have completed the work in an acceptable manner and in accordance with the terms of the contract, the City Engineer shall make a final inspection of the work, and upon completion of the same, they shall certify to the Board of Public Works in writing as to said completion, and shall further certify as to the entire amount of every class of work performed and as to the value thereof. The Board of Public Works, upon receipt of said certificate, and its own inspection, shall accept the work and approve final payment according to the terms of the Contract. In the event Common Council approval is necessary, the Board of Public Works shall make the required recommendations to the Common Council. Upon acceptance of the work, the Board of Public Works or Common Council shall order final payment to be made and shall notify the Contractor and the Surety of such acceptance. The action by the City and the City Engineer by which the Contractor is to be bound and the contract concluded according to the terms thereof, shall be evidenced by the aforesaid certificate and final payment, all prior certificates or estimates upon which payments may have been made being merely estimates and subject to correction in the final payment. Whenever the term "final acceptance" is used throughout the contract, it shall be interpreted to mean that the requirement of this section shall be complied with.

502.20 – MAINTENANCE

The Contractor shall be required to repair at the Contractor's own expense, any faulty material or workmanship and any damage therefrom that may develop within a period of one year after the date of "Final Acceptance." The Contractor shall make such repairs to the entire satisfaction of the City Engineer and the City. The performance bond furnished with this contract shall remain in full force and effect until the expiration of the warranty period, and until any necessary repairs have been made to the entire satisfaction of the City Engineer and the City of Wauwatosa.

SECTION 503 - CONTROL OF MATERIAL

503.01 - PLANT INSPECTION

If the volume, progress of the work and other consideration warrant, the City Engineer may undertake the inspection of materials at the sources of supply. Plant inspection, however, will not be undertaken until the City Engineer is assured of the cooperation and the assistance of both the Contractor and the material producer. The representative of the City shall have free entry at all times to such parts of the plant as concern the manufacture or production of the materials ordered and the material producer shall furnish free of charge all reasonable facilities to assist in determining whether the material furnished meets with the requirements of the specifications. The City assumes no obligation to make the inspection of materials at the source of supply and the responsibility of securing satisfactory materials rests with the Contractor.

The City reserves the right to retest all materials which have been tested and accepted at the source of supply after the same have been delivered and to reject all materials which when retested do not meet with the requirements of the specifications.

The Contractor shall give sufficient notification of the placing or orders for materials to permit testing.

503.02 - SAMPLES AND TESTS

The Contractor shall provide such facilities as the City Engineer may require for collecting and forwarding samples, and shall not make use of or incorporate in the work any material represented by these samples until the tests have been made and the material found to be acceptable in accordance with the requirements of the specifications. The Contractor shall furnish without charge all samples required.

When required by the City Engineer, representative preliminary samples of the character and quality prescribed shall be submitted by the Contractor or producer for examination and shall be tested in accordance with the methods referred to herein. The acceptance of preliminary sample, however, shall not be construed as acceptance of the material from the same source delivered later. Only the materials actually delivered for the work will be considered and their acceptance or rejection will be based solely on the results of the tests prescribed in these specifications. All samples shall be submitted before shipment of the material to the site of the work and in ample time to permit making tests or examinations before incorporating the material into the work.

All tests shall be made in accordance with the methods described in these specifications. If any specifications are inadvertently omitted, those of the A.S.T.M. or other recognized societies for such materials will be used. References to A.S.T.M. or other recognized societies, specifications shall be understood to mean the latest revision of the standard specifications. Laboratory tests shall be made by a recognized laboratory acceptable to

the City Engineer. Reports of tests provided by the Contractor shall be submitted promptly to the City Engineer.

The Contractor shall give timely notice to the City Engineer of the place and time of the test to be made, to permit the City Engineer to witness the test if they should so desire. All tests shall be made at the sole expense of the Contractor.

503.03 - STORAGE OF MATERIALS, EQUIPMENT AND VEHICLES

Materials shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, shall be inspected prior to their use in the work and shall meet the requirements of the specifications at the time it is proposed to use them. Stored materials shall be located so as to facilitate prompt inspection. That portion of the public streets or public lands not required for public use or travel may upon approval of the City Engineer be used for storage purposes and for placing of the Contractor's plant and equipment, however, adequate storage space is not guaranteed and, additional space, if required, shall be provided by the Contractor at their own expense.

The Contractor's vehicles, equipment and materials shall not be left on the street except when work operations are actually in progress, unless otherwise authorized by the City Engineer.

503.04 - DEFECTIVE MATERIALS

All materials not conforming to the requirements of these specifications shall be considered as defective, and all such materials, whether in place or not, shall be rejected and shall be removed immediately from the work by the Contractor at the Contractor's expense, unless otherwise permitted by the City Engineer. No rejected materials, the defects of which have been subsequently corrected, shall be used until approval has been given. Upon failure on the part of the Contractor to immediately comply with any order of the City Engineer relative to the provisions of this article, the City Engineer shall have the authority to remove and replace such defective material and to deduct the cost of removal and replacement from any monies due or which may become due the Contractor.

SECTION 504 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

504.01 - LAWS TO BE OBSERVED

The Contractor shall at all times observe and comply with all laws, ordinances and regulations which in any manner affect the conduct of the work, and all such orders or decrees as exist at the present or which may be enacted later by bodies or tribunals having jurisdiction or authority over the work, and no plea of misunderstanding or ignorance thereof will be deemed an excuse or the cause of the Contractor sustaining damages by reason of the Contractor acting at their own peril due to such misunderstanding or ignorance. Contractor shall indemnify and save harmless the City and all its officers, agents, employees and servants against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree whether by the Contractor or the Contractor's employees.

Vehicles hauling materials used in or about the work or the movement of vehicles or equipment over any public highway or street to the project, necessary for the prosecution of the work, shall be regulated in accordance with the provisions of all laws, ordinances and regulations.

All scaffolding, walkways, runways, hoists and other temporary constructions shall comply with all pertinent requirements of all laws, ordinances and regulations.

504.02 - PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

504.03 - PATENTED DEVICES - MATERIALS AND PROCESSES

It is mutually understood and agreed that without exception contract prices are to include all royalties and costs arising from patents, trademarks and copyrights in any way involved in the work. It is the intent that whenever the Contractor is required or desires to use any design, device, material or process covered by letters, patent or copyright, the right for such use shall be provided for by suitable legal agreement with the patentee or owners and copy of this agreement shall be filed with the City Clerk and a copy with the City Engineer, however, whether or not such agreement is made or filed as noted, the Contractor and the surety in all cases shall indemnify and save harmless the City from any and all claims for infringement by reasons of the use of any such patented design, device, material or process to be performed under the contract, and shall indemnify the said City for any losses, costs, expenses, damages, or judgments which it may be obliged to pay, by reason of any such infringement at any time during the prosecution or after the completion of the work.

504.04 - SANITARY PROVISIONS

The Contractor and/or the Contractor's subcontractor's shall provide and maintain in a neat and sanitary condition such accommodation for their employees as may be necessary to comply with the requirements and regulations of the Wisconsin State Board of Health, City Ordinances, or of other authorities having jurisdiction, and shall commit no public nuisance.

504.05 - USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, the Contractor shall observe the utmost care not to endanger life and property. The Contractor shall not use explosives in the course of their work without the approval of the Board of Public Works and/or the City Engineer.

All blasting operations must conform to the State of Wisconsin Statutes, Wisconsin Industrial Commission Orders and City of Wauwatosa regulations therefore.

504.06 - PROTECTION AND RESTORATION OF PROPERTY

The Contractor shall use every precaution to prevent damage or destruction of corporate or private property. The Contractor shall notify, in writing, the owners of all corporate or private property that interferes with the work and shall arrange with them for the disposition of such property. Contractor shall protect and carefully preserve all property marks until the City Engineer has witnessed or otherwise referenced the location or relocation.

The Contractor shall notify within reasonable time all corporate or private property owners and their lessees of any work to be undertaken by the Contractor which will be in close proximity to and which may cause damage to any footings, foundations, or any substructures, and advise all such owners and their lessees that they should take all necessary measures to fortify same.

The Contractor shall be responsible for the damage or destruction of property of any character resulting from neglect, misconduct or omission in the manner or the method of execution or the partial or complete failure in execution of the work or caused by defective work or the use of unsatisfactory materials, and such responsibility shall not be released until the work shall have been completed and the requirements of these specifications complied with.

Wherever public or private property is damaged or destroyed, the Contractor shall, at their own expense, restore such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding or replacing it as may be directed, or Contractor shall otherwise make good such damage or destruction in an acceptable manner. If Contractor fails to do so, the City Engineer may, after the expiration of a period of forty-eight (48) hours after giving notice to the Contractor in writing, proceed

to repair, rebuild or otherwise restore such property as may be deemed necessary and deduct the cost of such restoration from the compensation due or which may become due the Contractor under this contract.

504.07 - INDEMNIFICATION

Contractor shall indemnify, save harmless, and defend Owner and City Engineer against any and all lawsuits, claims, demands, liabilities, losses and expenses, including attorneys' fees and administrative expenses, that may arise, or be alleged to have arisen, out of or in connection with Contractor's, or its subcontractors' or Suppliers', performance of, or failure to perform, the work or any part thereof, whether or not due or claimed to be done in whole or in part to the active, passive, or concurrent negligence or fault of Contractor, except to the extent caused by the sole negligence of Owner, including, without limitation lawsuits, claims, demands, liabilities, losses, and expenses for or on account of:

1. Any delays or interference or damage to other Contractors; and
2. Labor equipment, materials, or supplies furnished under this Contract, including all liens or notices of liens on account thereof or Contractor's failure to remove or discharge same; and
3. Contractor's failure to obtain any required permits, licenses, approvals, or authorizations; and
4. Bodily injury, sickness, disease, or death sustained by any Person or Persons or injury or damage to, or loss or destruction of, any property; and
5. Any act or omission of Contractor or any of its subcontractors or Suppliers, including but not limited to any failure to fulfill the terms of, or comply with, any laws or to pay any taxes, contributions, or premiums; and
6. Infringement, alleged infringement, or use of patent rights in connection with the work and the use by Owner of any equipment, materials, supplies, processes, or inventions furnished under this contract.

As much of the money due the said Contractor under and by virtue of this contract as shall be considered necessary by the City for indemnification purposes may be retained for the use of the City; or in case no money is due, the Contractor's surety shall be held until such suit or suits, action or actions, claim or claims, judgment or judgments, for injuries or damages as aforesaid shall have been settled or satisfied and suitable evidence to that effect furnished to the City.

The City shall not be liable to the Contractor for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties.

The Contractor agrees to pay, and guarantees the payment of, all claims for labor performed and materials furnished, used or consumed in making the improvement or performing the work herein provided for, without limitation, together with premiums for workmen's compensation, all as provided and required by Section 779.14 of the Wisconsin Statutes.

The Contractor, under these specifications, shall carry liability insurance to indemnify the City and the public for injuries sustained by reason of the carrying on of the work. The Contractor shall furnish evidence that they have complied with Chapter 102, Wisconsin Statutes.

504.08 - CONTRACTOR'S RESPONSIBILITY FOR WORK

The work shall be under the charge and care of the Contractor until final acceptance by the Common Council. The Contractor shall assume all responsibility for injury or damage to the work by action of the elements or for any cause whatsoever, whether arising from the execution or partial or complete failure in execution of the work. The Contractor shall rebuild, restore and make good, at their own expense, all injuries or damages to any portion of the work occasioned by any causes before its completion and acceptance.

504.09 - PERSONAL LIABILITY OF PUBLIC OFFICIALS

In carrying out any of the provisions of this contract or in exercising any power or authority granted to the Contractor hereby, there shall be no personal liability upon the City Engineer or their authorized assistants, it being understood that in such matters they act as agents and representatives of the City.

504.10 - NO WAIVER OF LEGAL RIGHTS

The City shall not be precluded or estopped by any measurements, estimate or certificate made either before or after the completion and acceptance of the work and payment therefore, from showing the true amount and character of the work performed and materials furnished by the Contractor, or from showing that any measurement, estimate or certificate is untrue or incorrectly made, or that the work or materials do not conform in fact to the contract. The City shall not be precluded or estopped, notwithstanding any such measurement, estimate, certificate and payment in accordance therewith, from recovering from the Contractor and their sureties such damage as it may sustain by reasons of the Contractor's failure to comply with the terms of the contract. Neither the acceptance by the Board of Public Works, nor any representative of the Board of Public Works, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the City shall operate as a waiver of any portion of the contract or of any power herein reserved, or any right to damages herein provided. A waiver of breach of the contract shall not be held to be a waiver of any other or subsequent breach.

504.11 - COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that they have not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage or contingent fees. Breach of this warranty shall give the City the right to terminate the contract, or in its discretion to deduct from the contract price or consideration the amount of such

commission, percentage, brokerage or contingent fees. This warranty shall not apply to commission payable to Contractors upon contracts or sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for purposes of securing business.

504.12 - OFFICIALS NOT TO BENEFIT

No member of the Public Body shall be admitted to any share or part of this contract or to any benefit that may arise therefrom but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

504.13 - OTHER CONTRACTS

The owner may award other contracts for additional work and the Contractor shall fully cooperate with such Contractors and carefully fit work within the contract including additional work added to the contract to that provided under other contracts as may be directed by the City. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other Contractor.

504.14 - PUBLIC CONVENIENCE AND SAFETY

After the contract has been executed, the Contractor shall notify the City Engineer, at the earliest possible date, of the starting of any construction work which might in any way inconvenience or adversely impact traffic, so that arrangements may be made, if necessary, for closing the street or alley and providing detours. No street shall be closed to the public except by express permission of the City Engineer. The Contractor shall at all times conduct the work in such a manner as to insure the least obstruction to traffic. The convenience of the general public and of residents along the street or alley shall be provided for in an adequate and satisfactory manner. Temporary bridges for pedestrians shall be provided as required, over new pavement, sidewalks or excavations at all street or alley intersections.

The Contractor shall contact the Fire and Police Departments at least seventy two (72) hours with advance notice in writing before it becomes necessary to close a street or part of a street.

Fire hydrants shall be accessible at all times to the Fire Department. No material or obstructions shall be placed closer to a fire hydrant than ten (10) feet.

The Contractor shall give notice in writing to the proper authorities in charge of streets, gas and water pipes, sewer mains, electric or other conduits, railroad, poles, manholes, catch basins, and all other property that may be affected by the Contractor's operation, at least seventy-two (72) hours before breaking ground. The Contractor shall not hinder or interfere with any persons in the protection of such work or in the operation of utilities at any time except with permission of the City Engineer. The Contractor shall protect such utilities from any injury and shall avoid all unnecessary exposure so they will not

cause injury to the public. In case of damage, the cost of making repairs will be charged to the Contractor.

504.15 - BARRICADES AND WARNING SIGNS

When any section of the street is closed or partially obstructed to the use of traffic, the Contractor shall provide and erect at each end of the closed street and at all intersecting streets or at the place where the street is partially obstructed to the use of traffic, substantial barricades of a design approved by the City Engineer, and shall place at the same points warning signs in conformance with the Manual on Uniform Traffic Control Devices (MUTCD) and Wisconsin MUTCD Supplement. The Contractor shall also furnish and place on or adjacent to the barricades, lights and other adequate warning devices to protect the work properly and to provide for the safety and convenience of the traveling public at night. The Contractor shall maintain constantly such barricades, signs and lights from the date of closing of the street or obstruction in the street until such time as, in the judgment of the City Engineer, they are no longer necessary.

When all traffic is to be maintained over the street during the construction, the Contractor shall provide and maintain such barricades, signs, lights and security guards as may be necessary to protect the work properly and to provide for safe and convenient public travel.

If, during the progress of the work, it is necessary to provide access to private property along the street, the Contractor shall provide and maintain within the closed portion of the street such barricades, signs and lights as may be necessary to protect the work and to safeguard the local traffic.

Whenever any section of the street is opened to traffic before all work on that section is completed, or while construction operations are being conducted thereon, the Contractor shall place and maintain at each end of the section and at all points of possible danger, suitable signs warning the public of such construction operations.

The Contractor will be held responsible for all damages to the work due to failure of barricades, signs, lights and security guards to protect it whenever evidence of such damage is found prior to acceptance. The City Engineer may order the damaged portion immediately removed and replaced by the Contractor without cost to the City if, in their opinion, such action is justified. The Contractor's responsibility for the maintenance of barricades, signs and lights shall not cease until project shall have been accepted, and in the event the Contractor shall fail or neglect to maintain all such necessary barricades, signs and lights, the City shall maintain same at the expense of the Contractor and the City shall withhold such expense from the compensation due the Contractor.

504.16 - CONTRACT SECURITY

A. Performance Bond The Contractor shall execute a performance bond on the form provided herein in an amount at least equal to 100% of the full contract price, such bond

to be executed by a surety company acceptable to the City. The performance bond shall serve as security for the faithful performance of this contract. In the event the surety takes over the work and project under the contract, the surety shall be bound by all the provisions of the contract.

B. Labor and Material Bond The Contractor shall furnish a surety bond in an amount at least equal to 100% of the full contract price, such bond to be executed by a surety company acceptable to the City. The labor and material bond shall serve as security for the payment of all persons performing labor and all persons furnishing materials in connection with this contract.

C. Premium Payment The premiums on the performance bond and labor and material bond shall be paid by the Contractor.

D. All bonding companies and sureties issuing bonds and/or contract security shall be licensed to perform business in the State of Wisconsin.

504.17 - CONTRACTOR'S INSURANCE

The Contractor and the Contractor's insurance company shall be held responsible for and shall save the City harmless from all liability for damages occasioned by the digging up, use or occupancy of the street, alley, highway, public grounds and private grounds, or which may result therefrom, or which may result in any way from the negligence or carelessness of the Contractor, their agents, employees or workmen; or by reason of the elements, unforeseen or unusual difficulties, obstructions, or obstacles encountered in the prosecution of the work; and they shall indemnify the City for and save it harmless from all claims and liabilities, actions and causes of action, and liens for materials furnished or labor performed in the construction or execution of the work, and from all costs, charges and expenses incurred in defending such suits or actions, and from and against all claims and liabilities for injury or damage to persons or property emanating from defective or careless work methods, or from and against all claims or liabilities for royalties, license fees, actions, suits, charges and expenses or damage from infringement for reason of the use of any invention or improvement in tools, equipment or plant or any process, device or combination of devices used in the construction of the work.

The Contractor shall not commence work under a contract until they have obtained all insurance required under this paragraph and has filed certificates thereof with the City, nor shall the Contractor allow a subcontractor to commence work until all similar insurance required has been so obtained and filed. Contractor shall be required to maintain insurance throughout the duration of the contract until final acceptance of the project.

A. WORKMEN'S COMPENSATION INSURANCE Statutory coverage as required by Chapter 102 of the Statutes of the State of Wisconsin, as revised, and all acts amendatory thereof and supplementary thereto, and for all employees of the Contractor. All subcontractors and suppliers shall furnish to the Contractor and the City evidence of

similar insurance for all of their respective employees unless such employees are covered by the protection afforded by the Contractor.

B. COMPREHENSIVE GENERAL LIABILITY AND PROPERTY DAMAGE INSURANCE

(1) COMPREHENSIVE GENERAL LIABILITY

The Contractor shall maintain during the life of this Contract, Comprehensive General Liability written in comprehensive form to protect the Contractor, the Owner and City Engineer against all claims arising from injuries to members of the public or damage to property of others arising out of any act or omission of the Contractor or their agents, employees, or subcontractors. The policy shall be endorsed to include Notice of Cancellation Endorsement Form IL-7002 10-90 or equivalent endorsement language which is approved by the City Attorney. This endorsement shall be specifically reflected on the Certificate of Insurance form required by Section 504.18, *infra*, and a copy of said endorsement shall be provided to the City when available. In addition, this policy shall specifically insure the contractual liability assumed by the Contract.

The scope of this coverage shall also include the Personal Injury Hazards, including "a", "b", and "c". "a" includes false arrest, malicious prosecution, and un-willful detention or imprisonment. "b" includes libel, slander, and defamation of character. "c" includes wrongful eviction, invasion of privacy and wrongful entry. Employee exclusion shall be removed. In addition, coverage will include broad form property damage, host liquor liability, advertising injury, additional persons insured, extended bodily injury, and incidental medical malpractice.

Comprehensive general liability coverage shall contain no exclusions for explosion, collapse, or underground work (X, C, or U).

The contractor shall also provide completed operation and product liability coverage for the life of the Contract and maintain such coverage for a period of 1 year after final acceptance of the work by the Owner.

The liability limits shall not be less than \$1,000,000 combined single limit per occurrence for personal injury, bodily injury and property damage if coverage written on 1973 I.S.O. form or \$1,000,000. combined single limit per occurrence with \$2,000,000. aggregate for personal injury, bodily injury or property damage if coverage is written on 1986 I.S.O. coverage form.

(2) UMBRELLA/EXCESS LIABILITY

The Contractor shall maintain during the life of this Contract, Umbrella/Excess Liability coverage totaling \$5,000,000. If primary comprehensive General Liability is written on a 1986 I.S.O. coverage form, Umbrella/Excess liability shall include a drop down provision to protect, on a primary basis, the contractor, the Owner and City Engineer, in the case of exhaustion of the aggregate primary limits.

C. COMPREHENSIVE AUTOMOBILE LIABILITY AND PROPERTY DAMAGE

Operations of owner, hired and non-owned motor vehicles.

Bodily Injury	\$500,000 per person \$1,000,000 per occurrence
Property Damage	\$500,000 per occurrence

The Contractor shall file with the City a certification of insurance containing a ten (10) day notice of cancellation.

NOTE: The required limits of liabilities may be obtained with primary liability policies or in combination with an umbrella excess third party liability policy.

D. ADDITIONAL INSUREDS All insurance coverages required pursuant to this contract shall name the following persons as additional insured parties:

The City and its boards, commissions, committees, authorities, employees, agencies and officers, voluntary associations, other units operating under the jurisdiction and within the appointment of its budget.

504.18 - PROOF OF CARRIAGE OF INSURANCE

The Contractor shall furnish the City with satisfactory proof of carriage of the insurance required on the Certificate of Insurance form attached hereto. Insurance coverage shall be maintained throughout the duration of the project.

504.19 – DEBARMENT CERTIFICATION

The Contractor certifies that, neither the Contractor firm nor any owner, partner, director, officer, or principal of the Contractor, nor any person in a position with management responsibility or responsibility for the administration of federal funds:

A. Is presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any federal or state department/agency;

B. Has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

C. Is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph B above; or

D. Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

The Contractor further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

504.20 - CONTRACTOR'S WARRANTIES

In consideration of, and to induce the award of this Contract, the Contractor represents and warrants:

- (a) That the Contractor is not in arrears to the city upon debt or contract, and that Contractor is not a defaulter, as surety, Contractor, or otherwise.
- (b) That Contractor is financially solvent and sufficiently experienced and competent to perform the work.
- (c) That the work can be performed as called for by the contract.
- (d) That the facts stated in the Contractor's proposal and the information given by the Contractor are true and correct in all respects.
- (e) That Contractor is fully informed regarding all the conditions affecting the work to be done and labor and materials to be furnished for the completion of this contract, and that the information was secured by personal investigation and research.

504.21 - COMPLIANCE WITH SECTION 71.80(16)

If Section 71.80(16) Wisconsin Statutes is applicable, Contractor hereby agrees to comply with the requirements of such Section. This Section is applicable to Contractors who are nonresidents of Wisconsin when total contract price exceeds \$50,000.00.

504.22 - FINAL GUARANTY

All work shall be and is guaranteed for a period of one year from and after the date of final acceptance of all the work by the Common Council. If, within said guaranty period, repairs or changes are required in connection with the guaranteed work, for any reason, unless the City Engineer determines that the cause is not that of the Contractor, the

Contractor shall promptly, upon receipt of notice from the city, and without expense to the City, place such guaranteed work in satisfactory condition, correct all defects therein, make good all damage to the structure or site, or contents thereof, which damage, in the opinion of the City Engineer, results from the use of such inferior substandard or defective materials, equipment, or workmanship not in accordance with the Contract. The Contractor shall also repair, replace or correct any damage to the buildings, or structure, or to the contents of the building or site as a result of fulfilling any such guarantee.

If within ten (10) days after notice the Contractor fails to comply with the terms of any warranty or guaranty herein contained, the City may have the defects corrected, and the Contractor and their Surety shall be liable for all expense incurred; provided, however, that in case, in the opinion of the City Engineer, delay would cause serious loss or damage, repairs may be made by the City without notice being given to the Contractor, and the Contractor shall pay the cost thereof.

All special guarantees or warranties applicable to specific parts of the work as may be stipulated in the Contract Specifications or other papers forming a part of this Contract shall be subject to the terms of this paragraph during the first year of the life of such guaranty. All special guarantees and manufacturers' warranties shall be delivered to the City Engineer before checking of Shop Drawings on Items of Major Equipment and other items before acceptance of the work.

SECTION 505 - PROSECUTION AND PROGRESS

505.01 - PROSECUTION OF THE WORK

The Contractor shall begin the work within ten (10) days after the date of the City Engineer' notice to the Contractor of the final execution of the Contract and order to the Contractor to proceed with the work. The Contractor shall notify the City Engineer in writing within forty-eight (48) hours before starting the work of the Contractor's intention to do so. The Contractor shall, on a weekday basis, continuously pursue completion of the work. The Contractor shall not suspend work for any reason other than inclement weather or other condition beyond the Contractor's direct control, and shall resume work within 24 hours of the ceasing of inclement weather.

505.02 - ADDITIONAL SECURITY

Should any surety upon the bond for performance of this contract become unacceptable to the City, the Contractor must promptly furnish such additional security as may be provided from time to time to protect the interests of the City and of persons supplying labor or materials in the prosecution of the work contemplated by this contract.

505.03 - CHARACTER OF WORKMEN AND EQUIPMENT

The Contractor shall employ such superintendents, foremen, and workers as are careful and competent. If any persons employed on the work by the Contractor shall be found by the City Engineer to be incompetent or negligent in the performance of their duties or neglects or refuses to comply with directions given, employee shall be discharged immediately on the written requests of the City Engineer, and such persons shall not again be reemployed on the work. Should the Contractor continue to employ such person or persons, the City Engineer may suspend the work until such orders are complied with.

All machinery and equipment used by the Contractor on the work shall be of sufficient size and in such mechanical condition as to meet with the requirements of the work and to produce a satisfactory quality of work.

When so ordered by the City Engineer in writing, unsatisfactory equipment shall be removed and replaced with equipment that will satisfactorily perform the work. Failure of the Contractor to provide adequate equipment may result in the default of the contract.

The Contractor shall at all times have a competent superintendent capable of reading and thoroughly understanding the plans and specifications, as their agent on the work, who shall receive instructions from the City Engineer or their authorized representatives. The Superintendent shall have full authority to execute the orders or directions of the City Engineer without delay and to supply promptly such materials, tools, plant equipment and labor as may be required.

505.04 – ADVERSE WEATHER

- (1) The engineer will award a time extension for severe weather on calendar day and completion date contracts. Submit a request for severe weather days if the number of adverse weather days, as defined in 101.3, exceeds the anticipated number of adverse weather days tabulated below.

TOTAL ANTICIPATED ADVERSE WEATHER DAYS FOR EACH CALENDAR MONTH							
Jan: 31 ^[1]	Feb: 28 ^[1]	Mar: 31 ^[1]	April: 5	May: 4	June: 4	July: 3	Aug: 3
Sep: 4	Oct: 5	Nov 1 thru 15: 2	Nov 16 thru 30: 15 ^[1]		Dec: 31 ^[1]		

^[1]Includes an anticipated winter suspension from November 16 through March 31.

- (2) Submit the request to the engineer at the end of the month. Indicate the number of adverse weather days that occurred during that month. Provide progress schedule documentation to show that the controlling item of work was delayed. Show that the delay was beyond the control of the contractor. The engineer will assess the contractor's submittal and indicate how many adverse weather days are confirmed.
- (3) For each calendar month, the engineer will grant a severe weather day for each confirmed adverse weather day that exceeds the number of anticipated adverse weather days. When the contractor requests severe weather days, the engineer will give the contractor a monthly written statement showing the number of days credited for severe weather. At the end of the project, the engineer will extend time on calendar day and completion date contracts for the cumulative number of severe weather days credited each month.

505.05 - TEMPORARY SUSPENSION OF WORK

The City Engineer shall have authority to suspend the work wholly or in part for such period or periods as they may deem necessary, due to unsuitable weather or such conditions as are considered unfavorable for the suitable prosecution of the work or for such time as it is necessary due to the failure on the part of the Contractor to carry out orders given or perform any and all provisions of the contract.

505.06 - EXTENSION OF CONTRACT TIME FOR COMPLETION

The time for completion of the work contemplated will be as herein specified and it is understood that the completion of the work within the time specified is an essential part of this contract.

The contract time shall start on the date of the City Engineer's notice to the Contractor to proceed with the work.

If the Contractor finds it is impossible to complete the work on or before the time specified for completion, they may make written request for extension of time. Contractor shall set forth fully in their request the reasons the Contractor believes justify the granting of their request.

If the City finds that the work was delayed because of conditions beyond the control of the Contractor, or that the quantities of work done or to be done are in excess of the estimated quantities by an amount sufficient to warrant additional time, it may grant an extension of time for completion as appears reasonable and proper. The extended time for completion shall then be considered as in full force and effect as if it were the original time for completion.

505.07 - FAILURE TO COMPLETE WORK ON TIME

Should the Contractor or the Surety fail to complete the work within the time agreed upon or within such extra time as may be allowed by extensions, there shall be deducted from any monies due or that may become due the Contractor or Surety the sum set forth in the official notice to Contractors for each and every calendar day, including Sundays and holidays, that the work shall remain incomplete. This sum shall be considered and treated not as a penalty but as a fixed, agreed and liquidated damages due the City from the Contractor or Surety by reason of inconvenience to the public, added cost of Engineering and supervision and other items which have caused an expenditure of public funds resulting from the Contractor's failure to complete the work within the time specified.

Permitting the Contractor or Surety to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of the City of any of its rights under the contract.

505.08 - LIMITATION OF OPERATIONS

The Contractor shall conduct the work so as to create a minimum amount of inconvenience to vehicular and foot traffic. At any time when, in the judgment of the City Engineer the Contractor has obstructed or closed, or is carrying on operations on a greater portion of the street than is necessary for the proper prosecution of the work, the City Engineer may require the Contractor to finish the sections on which work is in progress before work is started on any additional section.

505.09 - WORK HOUR RESTRICTIONS

Work operations in residential areas, including daily startup activities under this contract, shall be limited to the period from 7 A.M. to 7 P.M. Monday thru Friday, during the life of the contract except those work operations identified in the special provisions, if any. If, in the opinion of the City Engineer, or their authorized representative, unusual circumstances dictate work outside of these hours is warranted due to an emergency condition, or special circumstance, such authorization by the City Engineer or their representative to extend the working hours beyond those stated herein, shall be given in writing and, if authorized, shall be on a single incidence basis for a specific day. For all other work that is not deemed an unusual circumstance, the Contractor shall follow the

procedures outlined in section 605.1.07 of the specifications to obtain written permission to perform work.

505.010 - SUBSTANCE ABUSE PREVENTION PROGRAM

The contractor shall develop, implement and maintain a Substance Abuse Prevention Program as established by Section 103.503 of the Wisconsin State Statutes, and all acts amendatory thereof and supplementary thereto. This statute establishes certain prohibitions against the use and distribution of drugs and alcohol by employees of contractors and subcontractors that have been awarded contracts for or are performing work on public works projects subject to Wisconsin's prevailing wage requirements.

The program must cover all union and non-union employees who work on the Owner's construction sites. Failure to implement such a program prior to award shall result in the Bidder being held to be non-responsible. Following award of the Contract if the Contractor breaches the District Policy by failing to have or to effectively implement the policy, the Owner shall consider this a breach of the Contract by the Contractor and may terminate the Contract. This requirement shall be applicable to all subcontractors with subcontracts in excess of one percent (1%) of the bid.

The act specifically provides that effective May 1, 2007, contractors, subcontractors and their respective employees must comply with the following requirements:

1. Employees on covered public works projects are prohibited from (a) using, possessing, attempting to possess, distributing, delivering or being under the influence of drugs while performing work on covered public works projects, and (b) using or being under the influence of alcohol while performing work on covered public works projects.
2. Before a contractor or subcontractor begins a covered public works project, the contractor or subcontractor must have a written program for the prevention of substance abuse, including:
 - (a) A prohibition against the use of drugs or alcohol while working on covered public works projects.
 - (b) A requirement that contractor's or subcontractor's employees submit to random, reasonable suspicion and post-accident drug and alcohol tests.
 - (c) A requirement that contractor's and subcontractor's employees submit to drug and alcohol tests before beginning work on covered public works projects, unless those employees have been participating in a random testing program during the preceding 90 days.
 - (d) A procedure for notifying employees that fail a test or refuse to submit to testing that they may not perform work on covered public works projects until they submit to and pass drug and alcohol tests.

3. Each contractor and subcontractor is required to pay for the development, implementation and enforcement of its own substance abuse program. These costs cannot be passed on to covered public works projects.
4. Contractors and subcontractors cannot allow employees that fail a test or refuse to submit to substance abuse tests to work on covered public works projects.
5. All substance abuse testing must be conducted in accordance with guidelines for laboratory testing procedures and chain of custody procedures established by the Substance Abuse and Mental Health Services Administration of the Federal Department of Health and Human Services.

SECTION 506

- (a) CITY The City of Wauwatosa, Wisconsin, the Owner of the work, represented by its duly constituted Common Council.
- (b) BOARD OF PUBLIC WORKS The duly constituted Board of Public Works of the City of Wauwatosa, Wisconsin.
- (c) CITY ENGINEER The City Engineer of the City of Wauwatosa, Wisconsin, or their duly authorized representative.
- (d) INSPECTOR The authorized representative of the Engineer assigned to make detailed inspection of any or all portions of the work or material therefore.
- (e) OFFICIAL NOTICE TO BIDDERS The official notice inviting bids for the proposed work.
- (f) WORK The contemplated improvement covered by the Contract.
- (g) EXTRA WORK Work other than that required either expressed or implied by the Contract in its present form.
- (h) BIDDER Any individual, firm or corporation submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.
- (i) PLANS All official drawings or reproductions of drawings pertaining to the work provided for in the Contract.
- (j) SPECIFICATIONS The body of directions, provisions and requirements contained herein, together with written agreements and all documents of any description, made or to be made pertaining to the method or manner of performing the work, or the quality of materials to be furnished under the Contract.
- (k) ADDENDUM OR ADDENDA Any additional contract provisions issued in writing by the City prior to the receipt of bids.
- (l) GENERAL CONDITIONS SECTION 500 The special body of directions, provisions and requirements prepared to cover the proposed work on the Project. General Conditions Section 500 shall govern the work and shall take precedence over the other Contract Documents wherever they conflict therewith.
- (m) PROPOSAL The written offer of the bidder to perform the work proposed.
- (n) PROPOSAL GUARANTY The security designated in the proposal furnished by the bidder, as a guaranty of good faith to enter into a contract with the Owner for constructing the work, if it be awarded to the bidder.
- (o) AWARD The decision of the City to accept the proposal of the lowest responsible bidder and to let by contract the work to such bidder, subject to a satisfactory contract therefore and bond to secure the performance thereof being executed by and between

such bidder and the City and approved by the City, and further subject to all other conditions as may be specified or otherwise required by law relating to the work and contract being complied with and fulfilled.

(p) CONTRACTOR The individual, firm or corporation undertaking the execution of the work under the terms of the contract and acting directly or through a duly authorized representative.

(q) SUBCONTRACTOR A person, firm or corporation other than a Contractor, supplying labor and materials or labor at the site of the project.

(r) PROJECT The entire public improvement proposed by the City to be constructed in part or in whole pursuant to the written contract.

(s) WORK ON PROJECT Work to be performed, including work normally done, at the location of the Project.

(t) CONTRACT The written agreement covering the performance of the work and furnishing of materials for the construction of the project. The contract includes the official notice to Contractors, proposals, performance bond, bid bond, specifications, general and detailed plans, supplemental agreements, general conditions and special conditions, and other paper pertaining to the work or materials therefore, all referred to as the Contract Documents.

(u) CONTRACT BOND The approved form of security furnished by the Contractor and their surety as a guarantee of good faith and ability on the part of the Contractor to execute the work in accordance with the terms of the Contract.

(v) SURETY The corporate body bound with and for the Contractor to insure the Contractor's acceptable performance of the Contract and for the Contractor's payment of all obligations pertaining to the work.

(w) A.S.T.M. The American Society for Testing Materials.

(x) A.A.S.H.T.O. The American Association of State Highway and Transportation Officials

Any provisions of the contract documents which may be in conflict or inconsistent with any of the foregoing paragraphs in the General Conditions, Section 500, shall be void to the extent of such confliction or inconsistency.

SECTION 600
SPECIAL PROVISIONS

CONTRACT 24-19

These Special Provisions cover items, correction, deletions or additions to the General Contract Conditions, the Standard Specs, the State Specs, and the City Provisions, and take precedence over those other parts of those specifications which are in conflict herewith.

200.03 - **TIME OF SUBSTANTIAL COMPLETION** The substantial completion date for Contract 24-19, SIDEWALK REPAIR PROGRAM shall be AUGUST 16, 2024.

There will be no other extension of time and no extenuating circumstances, except perhaps an industry strike, or the inability of the City to receive plan and specification approval.

If the contractor does not complete the work on or before the date set forth above for CONTRACT 24-19, SIDEWALK REPAIR PROGRAM or within the extra time allowed under a City Engineer granted time extension, the City will assess liquidated damages. The City will deduct one thousand and forty-five dollars (\$1,045.00) for every calendar day that the work remains uncompleted from payments due the contractor. An entire calendar day will be assessed for any period of time within a calendar day that the work is not substantially complete beyond 12:01am.

CONSTRUCTION PHASING REQUIREMENTS

- 1) Construction is allowed to begin on APRIL 1, 2024 for work within Division B (the curb ramps provided on the plan sheets). Division A work (sidewalk squares and drive approaches) shall not begin until MAY 13, 2024 or after.
- 2) The contractor **must** maintain a passable walkway on one side of the street at all times.

SIDEWALK FIELD MARKINGS

The white paint marks were made by our inspectors to identify unsafe or defective pavement in need of repair or replacement in Division A of the Sidewalk Repair Program area.

- An “X”, with no other markings, indicates a sidewalk or pavement section scheduled for replacement.
- A “T” marked under the “X” indicates a sidewalk or driveway section

scheduled for replacement where inspectors have determined that the cause of the defective section is due to the roots of a city tree and requires root sawing for removal and replacement.

- The letters “**R.O.**” (i.e., “Remove Only”) indicates sidewalk which is to be permanently removed and replaced with grass.
- The white letters “**SAW**” indicates a line where sidewalk or other pavement is to be sawed.
- The white letters “**ARC**” on the curb head indicates where a tree arc is to be constructed.

STORAGE OF MATERIALS

Aggregates and backfill materials shall be stored at the work site in such a manner as to prevent deterioration or intrusion of foreign matter.

CURB BOXES

If curb boxes are encountered with sidewalk or approach removal, care should be taken to preserve them. The Contractor will not be responsible for replacement of defective curb boxes, unless they are damaged through carelessness in the Contractor’s operations. Defective curb boxes must be brought to the attention of the Engineer prior to sidewalk or approach removal.

SPRINKLING SYSTEMS

If sprinkling systems are encountered with sidewalk or approach removal, care should be taken to preserve the line and the heads. If it is determined that the sprinkling system will be damaged as a result of construction, the abutting property owner should be notified and given time to remove and relocate the sprinkling system as necessary. The Contractor is not responsible for repair of the sprinkling system unless damaged through carelessness or unworkmanlike operations.

LITTERING

Wauwatosa Municipal Ordinance 8.28 states that it is unlawful for any person, firm, or corporation or their employees, agents members or servants to place, throw or leave any garbage, rubbish or liquid waste in or upon any sidewalk street, alley or other public place or into the Menomonee River within the limits of the City of Wauwatosa.

The Contractor is responsible for policing the construction site daily and disposing of all litter in proper receptacles. Failure to comply with this ordinance may lead to issuance of municipal citations and/or fines.

CLEANUP LIST

The Contractor shall complete the work on the cleanup list within 30 working days of receipt of the written list, unless additional time is provided by the engineer.

Failure to complete the work on the cleanup list within the specified time frame may result in completion of the work by the City at the Contractor's expense. Actual costs incurred by the City for performing this work shall be deducted from the monies due the Contractor.

504.16 – CONTRACT SECURITY

Add the following section:

E. Debarment Certification

The Contractor certifies that, neither the Contractor firm nor any owner, partner, director, officer, or principal of the Contractor, nor any person in a position with management responsibility or responsibility for the administration of federal funds:

- (a) Is presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any federal or state department/agency;
- (b) Has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or
- (d) Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

The Contractor further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

505.01 – PROSECUTION OF THE WORK

The Contractor shall begin the work within ten (10) days after the date of the Engineer's notice to the Contractor of the final execution of the Contract and order to the Contractor to proceed with the work. The Contractor shall notify the Engineer in writing within forty-eight (48) hours before starting the work of his intention to do so.

The Contractor shall work continuously and make substantial progress each day until the project is complete. Work days are defined as Monday through Friday (excluding inclement weather days and holidays). Suitable days shall be determined by the Engineer. **A sum of \$900 for each suitable day on which no substantial work or progress is completed shall be deducted from any monies due to the Contractor.** Substantial progress will be determined with the City in discussions with the Contractor.

506 - DEFINITIONS

Director of Public Works and City Engineer may be used interchangeably within these Specifications but have the same authority and meaning.

600.1.01 – HOLIDAY WORK RESTRICTIONS

The contractor may petition the Board of Public Works for approval of work hours outside of 7am-7pm or Sunday work. Petitions for work outside of permitted hours must be made on the Board of Public Works Application form attached at the end of these special provisions. Applications must be received by the application deadline shown on the form and must include all necessary supporting documentation required by the application. The application fee shall be waived for all extension of work hour requests for work being performed under city construction contracts. Submit completed applications via email to Nicholas Deming ndeming@wauwatosa.net.

Holiday Work Restrictions:

Do not perform work on the project during the following holiday periods:

- From 3:00pm Friday, May 24th, 2023 thru 7:00am Tuesday, May 28th, 2024, for Memorial Day
- Wednesday, June 19th, 2024 for City Holiday
- Thursday, July 4th, 2024, for Independence Day

600.1.02 - PLANS AND SPECIFICATIONS

A general description of the work along with the locations is contained in the Instructions to Bidders - Section 200. The plans for the construction of this project consist of 92 sheets. **Final plans with grades for staking and construction will be provided by March 15, 2024.**

600.1.05 – SITE INVESTIGATION AND REPRESENTATION

Any electrical work in the contract or repair needed caused by construction activity, must be inspected by a member of the City of Wauwatosa's Electrical Department.

Please contact Randy Michelz at 414-471-8429 to coordinate electrical inspection.

605.1.02.A – USE OF CITY WATER

Section 605.1.02A of the General Provisions is amended with the following fee schedule for watering of sod. These fees are based on the Wauwatosa Water department current fee schedule.

1) Hydrant Meter Deposit	\$250.00
2) Minimum volume charge (17 ccf = 12,716 gallons)	\$ 87.55
3) Setting Charge	\$ 50.00

605.2.03E – LAWN REPLACEMENT AND LANDSCAPING

The Contractor shall replace all damaged lawns by placing a minimum of 3 inches of compacted top soil in the damaged or filled excavated area and laying Blue Grass nursery sod a minimum of **12 inches wide**. All sod must be fertilized with a Type A granular fertilizer; cost to be included in bid prices. To make a tight match with the undisturbed sod, a sod cutter may be used to line up and square up the trench. Sod must be placed to a butt joint and not wedged off with topsoil or laid on top of existing lawn. Sod shall be properly rolled or tamped in place.

Topsoil must be properly placed within 48 hours after form removal. Sod shall be properly replaced within seven (7) days after form removal. All landscaping work must be watered thoroughly by the Contractor each day for ten (10) consecutive calendar days, excluding Sundays. The Contractor must notify the City when watering on site. In extreme heat, the Contractor must continue watering daily until the sod is accepted as being established by the Engineer. If the Contractor chooses to use City of Wauwatosa water, a permit and water meter may be obtained from the City's Water Department in accordance with Section 605.1.02 of the Specifications and at the Contractor's expense. Water is only available from select hydrants as identified by the City of Wauwatosa Water Department.

On the last day of the 10 day watering period, the Contractor shall provide written notice to each private property where watering has been completed stating that further watering is the responsibility of the property owner. The written notice that shall be used is attached as drawing to this contract.

For an unusual type of sod, such as creeping bent, the Contractor may take care and properly salvage said sod with the permission of the Engineer. Except for conditions such as this, no old sod shall be salvaged.

605.2.04E – PROTECTION OF TREES AND SHRUBS MODIFICATION

If, in the Engineer's opinion, it is necessary to alter the methods of construction in the plans to preserve trees and shrubs, the Contractor shall make such changes as directed. Such adjustments may include, but are not limited to, curb, sidewalk, and drive approach dimension changes, including horizontal and/or vertical alignment.

For all concrete curb, projecting roots from trees larger than 6-inch must be cut and the cost included under other items. However, cutting should be done only to an extent necessary to allow clearance to "slip" the curb (up to a 6-inch maximum behind the curb).

Half-moons are required at the locations shown in the Tree Arc Location Map, and the typical length of a half-moon arc is ten (10) feet. Root cutting at these locations shall be done according to the attached Typical Tree Root Arc detail attached.

620.1.C - SAWCUTTING

Add the following to Section 620.1.C:

For bidding purposes, the total length of sawing that is considered incidental to the contract is approximately **2,300 feet**.

620.2.E - TREE ROOTS

Add the following to Section 620.2.E.1:

For bidding purposes, the total length of tree root cutting by machine is approximately **650 feet**.

For bidding purposes, half-moons are required at the locations shown in the Tree Arc Location Map, and the typical length of a half-moon arc is ten (10) feet. Root cutting at these locations shall be done according to the attached Typical Tree Root Arc detail attached.

Bidders are advised that tree-root sawing by machine is required at some locations and **prohibited** at others.

Local contractors that specialize in sawcutting have the capability to root saw using modified concrete sawing equipment.

Please contact Nick Deming at (414) 507-7153 or Jennifer Schroeder at (414) 479-3544 with root sawing questions.

SECTION 601

MEASUREMENT AND PAYMENT

The bid price for each bid item shall include the furnishing of all materials, tools, labor, etc. It shall include excavation, disposition of surplus material, backfilling, surface replacement, sheeting, shoring, auguring, dewatering, and restoration of public or private property disturbed or damaged by the Contractor's operation and cleanup, all as specified.

The item numbers referred to below correspond to the numerical portion of the number in the proposal. Contractor shall refer to the items below, the plans and the specifications for details of the work included.

DIVISION A – CONCRETE SIDEWALK REPLACEMENT

ITEM D1-04 – BASE AGGREGATE DENSE 1 1/4-INCH

Description This provision describes furnishing and placing Base Aggregate Dense 1 1/4-Inch in accordance with Section 620.

Materials Furnish Materials in accordance with Section 620 for Base Aggregate Dense 1 1/4-Inch.

Construction Construct Base Aggregate Dense 1 1/4-Inch in accordance with Section 620.

Measurement The City will measure Base Aggregate Dense 1 1/4-Inch by the ton acceptably completed. The contractor shall provide copies of the Base Aggregate Dense weight receipts to the engineer at the end of each day.

Payment Base Aggregate Dense 1 1/4-Inch, as measured above, is full compensation for providing material; hauling; and placing to the limits the plans show or as the engineer directs.

ITEM D1-17 – REMOVING CONCRETE SIDEWALK

Description This provision describes removing and disposing of concrete sidewalks, service walk squares and drive approaches at locations marked in the field and as directed by the Engineer.

Materials and Construction Remove and dispose of concrete sidewalk and drive approaches to the limits the plans show.

Measurement and Payment The quantity measured for payment shall be measured by square feet. Bid price shall include the sawcutting, removal and disposal of concrete sidewalk and drive approaches to the limits the plans show or as the engineer directs. The unit price amount for this item shall include all labor, tools, material, equipment, and incidentals necessary to complete the work.

ITEM D1-18 - SAWCUTTING

Description This work shall consist of sawcutting through existing pavement or curb and gutter at locations marked in the field or as directed by the Engineer:

Materials and Construction Sawcutting shall be in accordance with Section 620 of the General Provisions for Grading and Paving. The cut shall be full depth, and shall run straight and true with the item to be cut.

Wet sawcutting sludge shall be removed from the concrete surface immediately upon completion of each sawcut by methods which minimize the amount of sludge flowing onto or being deposited on existing sidewalks, driveways, and roadway pavement.

Measurement Sawcutting shall be measured by the linear foot and paid for only at the designated locations. Sawcutting required to deepen joints or to correct a slab damaged by the Contractor, which was to remain in place, shall not be a part of this item of work, and will not be measured or paid for.

Payment Sawcutting, as measured above, is full compensation for labor, tools, equipment, disposal of wet sawcutting sludge, and other incidentals necessary to complete the work.

ITEM D1-18 - SAWCUTTING CONCRETE SIDEWALK

Description This work shall consist of sawcutting through existing sidewalk at locations marked in the field or as directed by the Engineer.

Materials and Construction Sawcutting Concrete Sidewalk shall be in accordance with Section 620 of the General Provisions for Grading and Paving. The cut shall be full depth, and shall run straight and true with the item to be cut.

Wet sawcutting sludge shall be removed from the concrete surface immediately upon completion of each sawcut by methods which minimize the amount of sludge flowing onto or being deposited on existing sidewalks, driveways, and roadway pavement.

Measurement Sawcutting Concrete Sidewalk shall be measured by each sawcut performed and paid for only at the designated locations where partial panel removal is required. Sawing at existing joints or to provide relief for removal of the concrete sidewalk is not compensable under this item and is incidental to the removal of the concrete sidewalk under other bid items. Sawcutting required to deepen joints or to correct a slab damaged by the Contractor, which was to remain in place, shall not be a part of this item of work, and will not be measured or paid for.

Payment Sawcutting Concrete Sidewalk, as measured above, is full compensation for labor, tools, equipment, disposal of wet sawcutting sludge, and other incidentals necessary to complete the work.

ITEM D1-20 - DEEP SAWCUTTING AT TREE ROOT ARCS

Description This work shall consist of deep sawcutting 9" through existing concrete at the proposed tree root arc locations indicated on the Proposed Tree Arc locations map included in the contract documents.

Materials and Construction Deep sawcutting shall be in accordance with Section 620.2 of the General Provisions for Sidewalk Program and the Typical Tree Root Arc detail provided.

Measurement Deep sawcutting at tree root arcs shall be measured by the linear foot at the location identified above.

Payment Deep sawcutting will be paid at the contract unit price per lineal foot. Said price shall be payment in full for all labor, tools, equipment and incidentals necessary to complete the work.

ITEM D2-11 – CONCRETE CURB & GUTTER REMOVE AND REPLACE

Description This provision describes removing and disposing of concrete curb and gutter and furnishing all materials, equipment, tools, labor and incidentals necessary for the construction of concrete curb and gutter at locations as shown on the Contract Drawings and directed by the Engineer.

Materials The grade and class of all concrete used shall conform to Grade A of said State Specs so that a minimum compressive strength of 3700 pounds per square inch is developed in 28 days of curing. Other grades may be used with the approval of the Engineer. The use of a water reducing admixture is subject to Section 501 of the State Specs. Delete all references to Part 7 of the State Specs.

Construction Remove and dispose of concrete curb and gutter including all surfaces or other pavements superimposed on it.

Curb & gutter construction shall conform to section 601 of the State Specs. The surface of curb and gutter construction shall be finished by troweling and brushing.

Construct Concrete Curb and Gutter in accordance with the construction details shown in the plans.

Honeycombing occurring along the back of the curb and the flange face shall be pointed with mortar (1 part Portland cement to three parts Fine Aggregate) after removal of the forms. All excess concrete behind the curb shall be removed before backfilling.

Tie new work to existing concrete pavement or curb and gutter using tie bars driven or epoxied into the existing concrete. Two (2) tie bars in the gutter pan are required where proposed curb and gutter is adjacent to existing curb and gutter. Tie bars which connect proposed curb and gutter to pavement or proposed pavement to

existing pavement shall be spaced at 30 inches on center, or as directed by the Engineer.

Measurement The City will measure Concrete Curb and Gutter removed and replaced by the linear foot measured along the flow line acceptably completed. No deduction will be made for inlet grates within the new curb and gutter.

Payment Concrete Curb and Gutter Removed and Replaced, as measured above, are full compensation for removing, and disposing concrete curb and gutter to the limits the plans show or as the engineer directs and the construction required at driveways, alleys, and curb ramps; for providing materials, including concrete, expansion joints; for placing, finishing, protecting, and curing; and restoring the worksite. All tie bars required for construction of this item shall be incidental.

ITEM D3-02 – 5" CONCRETE SIDEWALK, REMOVE AND REPLACE

Description This work shall consist of the removal and replacement of 5" concrete walk squares within the sidewalk program area as identified in the attached Map of Sidewalk Program Area. The City has marked the specific defective sidewalk sections with a white "X" in the field.

Materials All concrete shall be in accordance with Section 620.2 of the General Provision for Grading and Paving.

All $\frac{3}{4}$ dense crushed aggregate must be in accordance with Sections 620.1B of the General Provisions for Grading and Paving.

Construction The Contractor under the terms of this contract shall grade out to a depth of seven (7) inches below the established grade of the sidewalk. This depth includes two (2) inches below the existing sidewalk bottom where the existing organic material shall be removed from the site of the work and not be used as part of the base or sub-base material. All roots within two inches of the bottom of the proposed sidewalk must be removed. Cost of this work shall be included in price bid per square foot of walk removed and replaced. Contractor shall make every effort to safeguard and preserve all trees and tree roots not within the limits of root removal specified above.

Two (2) inches of $\frac{3}{4}$ inch dense crushed aggregate must be provided and compacted according to Sidewalk Specifications Sections 620.1.B and 620.1.G. The cost of excavation, grading, removal of existing organic material including tree roots, and aggregate material and placement shall be included in price bid per each square of walk removed and replaced.

See attached Typical Transition Between 5" Thick and 7" Thick concrete sidewalk at Drive Openings Detail for further clarification of concrete thickness transitions at driveway openings.

Grading for new walk shall be to line and grade provided by the Engineer and the work shall be performed as directed. Where sod is to be used, the section shall be kept three (3) inches low on either side of walk to accommodate top soil.

Damage to areas adjacent to walk caused by Contractor's operations to materials other than lawn, such as concrete walks not marked for removal, asphalt paving, flagstone, brick walk, etc. shall be replaced in kind by Contractor to the satisfaction of the Engineer and at no additional charge. Contractor shall adjust or raise slabs adjacent to work in progress where designated by the Engineer to improve line, pitch and/or drainage. This cost is to be incidental to the bid price of sidewalk replacement. The cost of all fill materials used shall be included in the bid price of sidewalk replacement.

Contractor shall take all necessary precautions to prevent damage to parkway areas and drive approaches (e.g. use of plywood sheeting, lighter loads and placing concrete with wheelbarrows). Contractor will be responsible for any damage done during Contractor's operation or that of any subcontractors. Repairs will be made to the satisfaction of the Engineer.

All repairs to lawns adjacent to the sidewalk removed and replaced shall be in accordance with the Special Provisions specifications for Lawn Replacement and Landscaping.

Existing sign removal and re-installation as indicated on the plans and as directed by the Engineer shall be incidental to this unit bid price.

Measurement and Payment The unit bid and contract per each price for this item shall include the sawcutting, removal and disposal of the existing concrete walk square, excavation and disposal of excavated material, root removal and disposal, 2 inches of $\frac{3}{4}$ inch compacted crushed aggregate, installation of a new concrete walk, existing sign removal and re-installation, topsoil, sod, fertilizer, rolling/tamping, watering, and delivery of watering notice to private property owners. The unit price amount for this item shall include all labor, tools, material, equipment, and incidentals necessary to complete the work. For estimating purposes, each sidewalk square has an approximate size of 22 to 28 square feet, or an average of 25 square feet. Sidewalk squares that are below 22 square feet or above 28 square feet will be paid as the mathematical fraction of 25 square feet.

Any additional equipment, labor, or materials required to complete work beyond the normal reach of typical construction equipment is incidental to the unit price of this bid item.

Payment of completed sidewalk will be 50% of the contract unit price until sod restoration is complete. Full payment shall not be made for any segment of sidewalks until adjacent sod is installed and the required 10 calendar day of watering is completed or upon approval by the City Engineer.

ITEM D3-05 – 7" CONCRETE SIDEWALK AND DRIVEWAY APPROACH, REMOVE AND REPLACE

Description This work shall consist of the removal and replacement of 7" concrete walk squares that cross driveway approaches and driveway approaches within the sidewalk program area as identified in the attached Map of Sidewalk Program Area. The City has marked the specific defective sidewalk sections with a white "X" in the field.

Materials All concrete shall be in accordance with Section 620.2 of the General Provision for Grading and Paving.

All $\frac{3}{4}$ dense crushed aggregate must be in accordance with Sections 620.1B of the General Provision for Grading and Paving.

Construction The Contractor under the terms of this contract shall grade out to a depth of nine (9) inches below the established grade of the sidewalk. This depth includes two (2) inches below the existing sidewalk bottom where the existing organic material shall be removed from the site of the work and not be used as part of the base or sub-base material. All roots within two inches of the bottom of the proposed sidewalk must be removed. Cost of this work shall be included in price bid per square foot of walk removed and replaced. Contractor shall make every effort to safeguard and preserve all trees and tree roots not within the limits of root removal specified above.

Two (2) inches of $\frac{3}{4}$ inch dense crushed aggregate must be provided and compacted according to Sidewalk Specifications Sections 620.1.B and 620.1.G. The cost of excavation, grading, removal of existing organic material including tree roots, and aggregate material and placement shall be included in price bid per square of walk removed and replaced.

See attached Typical Transition Between 5" Thick and 7" Thick concrete sidewalk at Drive Openings Detail for further clarification of concrete thickness transitions at driveway openings.

Grading for new walk shall be to line and grade provided by the Engineer and the work shall be performed as directed. Where sod is to be used, the section shall be kept three (3) inches low on either side of walk to accommodate top soil.

Damage to areas adjacent to walk caused by Contractor's operations to materials other than lawn, such as concrete walks not marked for removal, asphalt paving, flagstone, brick walk, etc. shall be replaced in kind by Contractor to the satisfaction of the Engineer and at no additional charge. Contractor shall adjust or raise slabs adjacent to work in progress where designated by the Engineer to improve line, pitch and/or drainage. This cost is to be incidental to the bid price of sidewalk replacement. The cost of all fill materials used shall be included in the bid price of sidewalk replacement.

Contractor shall take all necessary precautions to prevent damage to parkway areas and drive approaches (e.g. use of plywood sheeting, lighter loads and placing concrete with wheelbarrows). Contractor will be responsible for any damage done during Contractor's operation or that of any subcontractors. Repairs will be made to the satisfaction of the Engineer.

All repairs to lawns adjacent to the sidewalk removed and replaced shall be in accordance with the Special Provisions specifications for Lawn Replacement and Landscaping.

Measurement and Payment The unit bid and contract per each price for this item shall include the sawcutting, removal and disposal of the existing concrete walk square, excavation and disposal of excavated material, root removal and disposal, 2 inches of $\frac{3}{4}$ inch compacted crushed aggregate, installation of a new concrete walk, existing sign removal and re-installation, topsoil, sod, fertilizer, rolling/tamping, watering, and delivery of watering notice to private property owners. The unit price amount for this item shall include all labor, tools, material, equipment, and incidentals necessary to complete the work. For estimating purposes, each sidewalk square has an approximate size of 22 to 28 square feet, or an average of 25 square feet. Sidewalk squares that are below 22 square feet or above 28 square feet will be paid as the mathematical fraction of 25 square feet.

Payment of completed sidewalk will be 50% of the contract unit price until sod restoration is complete. Full payment shall not be made for any segment of sidewalks until adjacent sod is installed and the required 10 calendar day of watering is completed or upon approval by the City Engineer.

ITEM D4-18 – BASE PATCHING CONCRETE

Description This provision describes Base Patching the existing concrete prior to overlaying with new pavement.

Materials Furnish pavement ties, and dowel bars conforming to the requirements of Section 390 of the State Specs for Base Patching Concrete. The grade and class of concrete used for this work shall be Grade B of said state specs such that a minimum compressive strength of 3700 pounds per square inch is developed within 28 days of curing. Pavement ties and dowel bars shall be incidental to this item.

Construction Construct in conformance with Section 390 of the State Specs except that locations of Base Patching Concrete shall be identified following removal of the existing asphalt surface, if present, and all patches shall be poured flush with the milled concrete surface. The engineer will allow the contractor to open concrete base patches to service in accordance with Section 415.3.15 of the State specs for the grade of concrete used.

Measurement The City will measure Base Patching Concrete by the square yard acceptably completed.

Payment Base Patching Concrete, as measured above is full compensation for removing the old pavement; furnishing, hauling, preparing, placing, curing, and protecting materials; for replacing damaged pavement designated to remain in place; for sawing joints; for preparing the foundation; for providing and installing pavement ties and dowels; and for backfilling.

ITEM D4-26 – 2½" ASPHALTIC SURFACE

Description This provision describes providing labor and materials in accordance with Sections 605, 620, and the state specs.

Materials Furnish materials in accordance with Section 605 except furnish pavement Type HT meeting the requirements of Section 460 of the state specs for HMA pavement 5 HT.

Construction Construct in accordance with Sections 605 and 620 for asphalt pavement construction.

Asphalt replacement item is used for repairing damaged or removed asphalt areas adjacent to any concrete work as needed or requested by the Engineer. These items include 2.5" Hot Mix asphalt, trimming edges to make a straight butt joint and a tacking substance to insure proper bonding to the old surface. Sawcutting may be required by the Engineer to assure proper butt joints. The quantity of this sawcutting would be paid under the Bid Item – Sawcutting. The Contractor will be given a list of repair locations each week. The repairs on the list are to be completed within 48 hours of receiving the list.

Measurement The City will measure Asphaltic Surface bid items by the square yard acceptably completed.

Payment Asphaltic Surface bid items, as measured above, are full compensation for materials, cleaning, sweeping and providing tack coat on previously placed asphalt, and placing asphalt pavement to the lines, grades, and thicknesses shown on the plans and as directed by the Engineer.

ITEM D-40 – 5" ASPHALTIC PAVEMENT

Description This provision describes providing labor and materials in accordance with Sections 605, 620, and the state specs.

Materials Furnish materials in accordance with Section 605 except furnish pavement Type HT meeting the requirements of Section 460 of the state specs for HMA pavement 5 HT.

Construction Construct in accordance with Sections 605 and 620 for asphalt pavement construction.

Asphalt replacement item is used for repairing damaged or removed asphalt areas adjacent to any concrete work as needed or requested by the Engineer. These

items include 5" Hot Mix asphalt, trimming edges to make a straight butt joint and a tacking substance to insure proper bonding to the old surface. Sawcutting may be required by the Engineer to assure proper butt joints. The quantity of this sawcutting would be paid under the Bid Item – Sawcutting. The Contractor will be given a list of repair locations each week. The repairs on the list are to be completed within 48 hours of receiving the list.

Measurement The City will measure HMA Pavement bid items by the ton acceptably completed.

Payment HMA Pavement Bid items, as measured above, are full compensation for materials, cleaning, sweeping and providing tack coat on previously placed asphalt, and placing asphalt pavement to the lines, grades, and thicknesses listed in the state specs or as directed by the Engineer.

ITEM D5-02 - TOPSOIL AND SOD

Description Work consists of the installation of sod in connection with areas **outside of the normal restoration required for sidewalk** at locations directed by the Engineer.

Materials and Construction In the locations where sod is directed to be installed, the work shall consist of covering the grade with three (3) inches of topsoil and the laying of Blue Grass nursery sod. Before laying sod, a good butt joint shall be provided in all cases. No scraps of any size will be permitted for use. All sod must be fertilized with a Type A granular fertilizer; cost to be included in bid prices. To make a tight match with the undisturbed sod, a sod cutter may be used to line up and square up the trench. Sod must be placed to a butt joint and not wedged off with topsoil or laid on top of existing lawn. Sod shall be properly rolled or tamped in place and kept moist.

All sod must be watered thoroughly each day for ten (10) consecutive calendar days (excluding Sundays) by the Contractor.

The Contractor must notify the City when watering on site. In extreme heat, the Contractor must continue watering daily until the sod is accepted as being established by the Engineer. If the Contractor chooses to use City of Wauwatosa water, a water meter permit may be obtained from the City's Water Department at the Contractor's expense.

On the last day of the 10 day watering period, the Contractor shall provide written notice to each private property where watering has been completed stating that further watering is the responsibility of the property owner. The written notice that shall be used is attached as drawing to this contract.

Measurement Installation of sod shall be measured by the square foot. The quantity measured for payment shall be the number of square feet constructed in accordance with the contract.

Payment Bid price shall include topsoil, sod, fertilizer, rolling/tamping, watering, and delivery of private property notice as specified. All other replacement walk sod shall be as specified for that operation.

DIVISION B – PEDESTRIAN RAMP RECONSTRUCTION

ITEM D1-02 – COMMON EXCAVATION

Description The unit bid price for this item shall include all labor, materials, equipment, and tools necessary for performing all site grading including removal of existing asphaltic pavement and existing base course to subgrade elevation.

Materials (Vacant)

Construction Construction shall be in accordance with section 620 for excavation and includes all excavation required to reach subgrade elevation. Removal of unstable and unsuitable materials below subgrade elevation as the Engineer directs will be paid for as Excavation below Subgrade.

Measurement The City will measure Common Excavation as a single lump sum unit of work acceptably completed, as measured and determined by the Engineer.

Payment Common Excavation, as measured above, is full compensation for all site grading (including any necessary filling), protection of utilities and structures, preparation to subgrade, removal and disposal of asphaltic pavements, existing base course materials, and maintaining drainage over subgrade. Removal of Asphaltic Surface Temporary shall be included in the price bid for Common Excavation.

ITEM D1-15 – REMOVING CONCRETE PAVEMENT

Description This provision describes removing and disposing of concrete pavement.

Materials (Vacant)

Construction Remove and dispose of concrete pavement including all surfaces or other pavements superimposed on it.

Measurement The City will measure Removing Concrete Pavement by the square yard acceptably completed.

Payment Removing Concrete Pavement, as measured above, is full compensation for removing, and disposing concrete pavement to the limits the plans show or as the engineer directs.

ITEM D1-16 – REMOVING CURB AND GUTTER

Description This provision describes removing and disposing of concrete curb and gutter.

Materials (Vacant)

Construction Remove and dispose of concrete curb and gutter including all surfaces or other pavements superimposed on it.

Measurement The City will measure Removing Curb and Gutter by the linear foot acceptably completed.

Payment Removing Curb and Gutter, as measured above, is full compensation for removing and disposing concrete curb and gutter to the limits the plans show or as the engineer directs.

ITEM D1-18 – REMOVING CONCRETE SIDEWALK AND DRIVE APPROACH

Description This provision describes removing and disposing of concrete sidewalks and drive approaches.

Materials (Vacant)

Construction Remove and dispose of concrete sidewalk and drive approach to the limits the plans show.

Measurement The City will measure Removing Concrete Sidewalk and Drive Approach by the square foot acceptably completed.

Payment Removing Concrete Sidewalk and Drive Approach, as measured above, is full compensation for removing and disposing concrete sidewalk and drive approach to the limits the plans show or as the engineer directs. The City will pay for Concrete Sidewalk and Drive Approach removal under this item as noted on the plans.

ITEM D1-20 - CONSTRUCTION STAKING CURB RAMPS

Description This work shall consist of the construction staking, establishment of elevations and grade, and the general layout of the pedestrian ramps such that the ramps are constructed according to the detail drawings provided. The specific locations of where construction staking will be required are shown in the Handicap Reconstruction Location map included in this Contract.

Materials The contractor shall provide all materials and equipment necessary to complete the work.

Construction Staking shall be completed per the lines and grades shown on the plan. If during stake out, discrepancies or plan errors are discovered, the Contractor shall immediately notify the engineer and, at the engineer's request, provide any

relevant cut sheets and notes showing the error to assist in accurate and timely resolution.

Measurement and Payment No measurement will be made for this item. The lump sum bid amount and contract price for this item shall include all labor, material and equipment necessary for the Contractor to provide construction staking for the ramps shown in the detail drawings.

ITEM D2-05, D3-11 – 31” CONCRETE CURB & GUTTER, PEDESTRIAN CURB

Description This provision describes furnishing: all materials, equipment, tools, labor and incidentals necessary for the construction of concrete curb and gutter and pedestrian curb at locations as shown on the Contract Drawings and directed by the Engineer, including any grading and shaping of existing base course. Any temporary curb and gutter will not be measured for payment, if required due to services.

Materials The grade and class of all concrete used shall conform to Grade A or Grade A-FA of said State Specs so that a minimum compressive strength of 3600 pounds per square inch is developed in 28 days of curing (Grade A2 may be used for sidewalks). Other grades may be used with the approval of the Engineer. The use of a water reducing admixture is subject to Section 501 of the State Specs. Delete all references to Part 7 of the State Specs.

Construction Curb & gutter construction shall conform to section 601 of the State Specs. Delete all references to Part 7 of the State Specs. The surface of curb and gutter construction shall be finished by troweling and brushing.

Construct Concrete Curb and Gutter to the section shown in the construction details for the applicable Concrete Curb and Gutter bid item.

Honeycombing occurring along the back of the curb and the flange face shall be pointed with mortar (1 part Portland Cement to three parts Fine Aggregate) after removal of the forms. All excess concrete behind the curb shall be removed before backfilling.

Tie new work to existing & proposed concrete pavements using tie bars driven or epoxied into the concrete.

New Base Aggregate Dense as required in areas of replacement, will be paid for under the Base Aggregate Dense bid item.

Measurement The City will measure Concrete Curb and Gutter bid items by the linear foot measured along the flow line acceptably completed. No deduction will be made for inlet grates within the new curb and gutter.

Payment Concrete Curb and Gutter items, as measured above, are full compensation for special construction required at driveways, alleys, and curb ramps; for providing materials, including concrete, expansion joints; for placing, finishing,

protecting, and curing; for sawing joints; and restoring the worksite. All tie bars required for construction of this item shall be incidental.

ITEM D3-03 – 5" CONCRETE SIDEWALK

Description This provision describes providing all materials, equipment, tools, labor and incidentals necessary to construct 5-inch concrete walks as shown on the Contract Drawings and directed by the Engineer.

Materials Furnish material in accordance with Section 620 General Provisions for Grading and Paving.

Construction Construction shall be in accordance with Section 620. The slope across the walk shall be 1.5% unless otherwise directed or shown on the plans. The surface of sidewalk construction shall be finished by troweling and brushing, and sidewalks shall be 5 feet wide unless otherwise noted or directed by the Engineer. Concrete sidewalk and concrete drive approaches must be constructed on Base Aggregate Dense 1 ¼-Inch as shown in the plans. Base Aggregate Dense 1 ¼-inch for sidewalk and drive approaches will be paid for separately under the applicable bid item.

Measurement The City will measure Concrete Sidewalk and Concrete Drive Approach bid items by the square foot acceptably completed.

Payment Concrete Sidewalk bid items, as measured above, are full compensation for placing, finishing, protecting, and curing concrete.

ITEM D3-10 – DETECTABLE WARINING FIELD

Description This work shall consist of the installation of Detectable Warning Fields as required for the pedestrian ramps in accordance with the pedestrian ramp detail drawings and as directed by the Engineer:

Materials Furnish cast iron detectable warning fields for curb ramps with a natural patina finish.

Construction Embed detectable warning fields in plastic concrete conforming to manufacturer-recommended procedures. Do not install on hardened concrete.

Measurement The City will measure Detectable Warning Field by the square foot acceptably completed.

Payment Detectable Warning Field, as measured above, is full compensation for providing the Detectable Warning Field with a natural patina finish.

ITEM D4-01 – 7" CONCRETE PAVEMENT

Description This work shall consist of the removal and replacement of 7" thick concrete roadway pavement as specified on the pedestrian ramp reconstruction details.

Materials All concrete shall be in accordance with Section 620.2 of the General Provision for Grading and Paving.

Construction Sawcutting as needed for roadway replacement will be paid for separately by the linear foot as Bid Item – Sawcutting.

Tie new work to existing concrete pavement or curb and gutter using tie bars driven or epoxied into the existing concrete. Two (2) tie bars in the gutter pan are required where proposed curb and gutter is adjacent to existing curb and gutter. Tie bars which connect proposed curb and gutter to pavement or proposed pavement to existing pavement shall be spaced at 30 inches on center, or as directed by the Engineer.

Grading for new roadway pavement shall be to line and grade provided by the Engineer and the work shall be performed as directed.

Damage to areas adjacent to pavement caused by Contractor's operations shall be replaced in kind by Contractor to the satisfaction of the Engineer and at no additional charge. Contractor shall adjust or raise slabs adjacent to work in progress where designated by the Engineer to improve line, pitch and/or drainage. This cost is to be incidental to the bid price of roadway approach replacement. The cost of all fill materials used shall be included in the bid price of roadway replacement.

Measurement and Payment The quantity measured for payment shall be the number of square yard constructed in accordance with the contract. Bid price shall include the excavation and disposal of excavated material and installation of a new concrete pavement. The unit price amount for this item shall include all labor, tools, material, equipment, and incidentals necessary to complete the work. All tie bars required for construction of this item shall be incidental.

ITEM D4-39 – 5" ASPHALTIC PAVEMENT (SY)

Description This provision describes providing labor and materials in accordance with Sections 605, 620, and the state specs.

Materials Furnish materials in accordance with Section 605 except furnish pavement Type HT meeting the requirements of Section 460 of the state specs for HMA pavement 5 HT.

Construction Construct in accordance with Sections 605 and 620 for asphalt pavement construction.

Asphalt replacement item is used for repairing damaged or removed asphalt areas adjacent to any concrete work as needed or requested by the Engineer. These items include 5" Hot Mix asphalt, trimming edges to make a straight butt joint and a tacking substance to insure proper bonding to the old surface. Sawcutting may be required by the Engineer to assure proper butt joints. The quantity of this sawcutting would be paid under the Bid Item – Sawcutting. The Contractor will be given a list of repair locations each week. The repairs on the list are to be completed within 48 hours of receiving the list.

Measurement The City will measure HMA Pavement bid items by the square yard acceptably completed.

Payment HMA Pavement Bid items, as measured above, are full compensation for materials, cleaning, sweeping and providing tack coat on previously placed asphalt, and placing asphalt pavement to the lines, grades, and thicknesses listed in the state specs or as directed by the Engineer.

ITEM D5-02 – TOPSOIL AND SOD

Description This provision describes furnishing and placing topsoil and sod at the locations the plan shows and the engineer directs.

Materials Furnish topsoil; bluegrass nursery sod; and Type A granular fertilizer.

Construction Cover the grade with 3 inches of topsoil. Before laying sod, a good butt joint shall be provided in all cases. No scraps of any size will be permitted for use. All sod must be fertilized with a Type A granular fertilizer; cost to be included in bid prices. To make a tight match with the undisturbed sod, a sod cutter may be used to line up and square up the trench. Sod must be placed to a butt joint and not wedged off with topsoil or laid on top of existing lawn. Sod shall be properly rolled or tamped in place and kept moist.

All sod must be watered thoroughly each day for thirty (30) consecutive calendar days (excluding Sundays) by the Contractor.

The Contractor must notify the City when watering on site. In extreme heat, the Contractor must continue watering daily until the sod is accepted as being established by the Engineer. If the Contractor chooses to use City of Wauwatosa water, water may be obtained at the City's Public Works facility at 11100 W. Walnut Road, at the Contractor's expense.

On the last day of the 30 day watering period, the Contractor shall provide written notice to each private property where watering has been completed stating that further watering is the responsibility of the property owner.

Measurement The City will measure Topsoil and Sod by the square foot acceptably completed.

Payment Topsoil and Sod, as measured above, is full compensation for furnishing and placing earth fill, topsoil, blue grass nursery sod, and Type-A fertilizer; and watering for 30 days.

ITEM D6-01 – TRAFFIC CONTROL

Description Installation and maintenance of traffic control components for diversion of traffic around the work site.

Materials and Construction Traffic control shall include all traffic control plan preparation, labor, material and equipment necessary for furnishing, maintaining and removing all approved traffic control devices. It shall include placing signs, barricades, and all other items required by the traffic control plan, any necessary covering and uncovering of signs, and removal of all items when traffic control is no longer necessary.

Measurement Traffic control will be measured lump sum for labor and materials.

Payment Traffic control shall be paid for at 50 percent for maintaining traffic control, and 50 percent for the removal of equipment as determined by the City of Wauwatosa.

ITEM E1-41 - 2" DIAMETER SCHEDULE 40 PVC CONDUIT

Description The conduit work under this Bid Item shall consist of the furnishing and installing of conduit for future use by the City by the open trench method where directed by the Engineer. The work requires excavation, backfill with crushed aggregate, and compaction of the trenched area as required is part of said Item. The anticipated locations are identified on the contract details and drawings.

Materials and Construction Conduits listed by Underwriters Laboratories, as suitable for use as electrical underground conduit, shall be provided where needed. At each end of a PVC conduit termination, the Contractor shall furnish and install a bell bushing (PVC) to provide smooth edges for cable entry into the conduit run. The conduit shall be placed 24" to 30" below top of curb under road crossings. The conduit shall be placed 18" to 24" beneath the surface of walks and driveways. Conduits shall extend a minimum of 12" beyond pavement edges. Payment will be made only to these minimum points. Conduit shall be pitched to drain toward an end of the length installed at each location. Each end of the conduit shall be covered with a suitable all-weather tape to prevent debris from entering the conduit.

Measurement and Payment Installation of the 2" Schedule 40 Heavywall PVC Conduit for Street Light Cable will be paid at the contract unit price per linear foot. Said price shall be payment in full for all materials, labor, tools, equipment and incidentals necessary to complete the work and in accordance with this contract.

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SECTION 605 – GENERAL PROVISIONS FOR CONSTRUCTION

SECTION 605.1 - GENERAL CONDITIONS

605.1.01 - PLANS AND SPECIFICATIONS

All work performed and all materials supplied under this contract shall be in strict compliance with the Contract Documents including plans and specifications and to all other specifications, codes, and ordinances referred to or established by law. The following Specifications are made a part of these Standard Specifications:

- A. The "Standard Specifications for Sewer & Water Construction in Wisconsin" Sixth Edition, December 22, 2003, and any addenda where applicable to sewer and water construction, hereinafter called "Standard Specs."
- B. The current edition with supplements of the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, hereinafter called "State Specs," excluding Bid Items and Part 7 – Quality Management Program. The "current edition" shall include all projects approved for bidding by the Wauwatosa Board of Public Works on or after November 1st of the preceeding year of the edition year. ie - The 2023 Edition would be effective for projects approved from November 1st, 2022 to Oct. 31st, 2023.

In general, all sewer, water, paving, or other construction work in the City of Wauwatosa shall be in accordance with the "Standard Specs", these "City Specs" as they modify and amend the "Standard Specs", "State Specs", and any Contract Special provisions and the terms of the Contract. The Contractor shall also refer to special notes on each sheet of the plans and shall arrange and conduct the work so as to conform to the requirements thereon. These notes shall be an integral and binding part of the specifications.

Copies of the aforementioned Standard Specs are on file at the Engineering Department of the City of Wauwatosa for use and reference on the premises by prospective bidders. An electronic copy of the State Specs can be downloaded from WisDOT's website at the following web address:

<https://wisconsindot.gov/Pages/doing-business/eng-consultants/cnslt-rsrcs/rdwy/ss-archive.aspx>

605.1.02 - PERMITS AND FEES

The Contractor shall obtain all necessary permits except as noted below. The cost of any permits or fees shall be included in the Contractor's base bid and contract price except where otherwise noted. The amounts for permits and fees are subject to change.

The occupancy permit fee will be waived for this Contract.

There will be **no** permit fee for water services or sewer laterals installed or altered. A properly licensed plumber or utility contractor shall do this work, and the Wauwatosa Plumbing Department has authorized the City's Public Works Inspectors to make detailed inspections of any and all portions of work or materials relating to any sewer lateral or water service work. The City's Plumbing Inspector may make verification inspections from time to time.

The Contractor will not be billed by the City for inspection time charged to this project by the Engineering Division except as specified in the Standard Specs on Page 1-49, Subsection 1.10.5: Contractor to be charged for inspection after time allowed for completion has expired.

If L.P. Gas is used in a construction shanty, a permit must be obtained from the Fire Department at the Contractor's expense.

A. USE OF CITY WATER

Water is only available from select hydrants as identified by the City of Wauwatosa Water Department.

The Contractor shall secure permission from the Water Department, obtain all necessary permits, pay any fees **at their own expense**, and notify the Engineer and Fire Department before obtaining water from fire hydrants. The Contractor shall make his own arrangements and pay all costs for water, connecting to hydrants, and transporting the water to the construction work. The water department will bill the Contractor based on the actual metered amount of water used. The contractor shall not use a hydrant without a hydrant meter in place. Use of a hydrant without a meter will result in the contractor being charged a \$50 fee per use in addition to being charged for the water to fill the water tank to full capacity with the costs to be deducted from monies due the Contractor.

Upon payment of the fees, the City will furnish one hydrant meter setting with vacuum breaker, backwater valve, and control valve. The Contractor shall be responsible for the meter setting and valves at each location water is drawn. By using the meter setting, cross connections to and contamination of the City's water supply is minimized.

Hoses from hydrants shall not extend across roadways which are open to traffic, unless they are properly protected from any wheel loads. Water main breaks caused by pressure surges introduced into the system from wheel loads or improper use of hydrants shall be repaired at the expense of the Contractor.

The Contractor shall use only special hydrant-operating wrenches to open hydrants. Hydrant valves must be opened "full" since "cracking" the valve causes damage to the hydrant. If any hydrants are damaged, the Contractor will be held responsible and shall notify the appropriate agency and the Engineer so that all damage can be repaired as quickly as possible. Upon completion of the work, the Contractor shall remove all temporary piping and facilities.

Fire hydrants shall be completely accessible to the Fire Department at all times. No material or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules, or regulations, or within 10 feet of a fire hydrant in the absence of such ordinances, rules, or regulations.

605.1.03 - COOPERATION BY CONTRACTOR

A. TRAFFIC

Prior to the preconstruction meeting, the Contractor may be requested by the City to submit to the Engineer, for approval, a written schedule of operations and proposed construction sequencing and staging.

The Contractor shall start work by making the proper notifications as specified, and by placing the necessary detour signs, barricades, warning lights, and warning and information signs to provide for the safety and convenience of the public. Strict adherence to the Manual on Uniform Traffic Control Devices (MUTCD) and Wisconsin MUTCD Supplement is required. Control of arterial traffic shall be in conformance with Section 643 of the current State Specs.

The street shall be kept open to all traffic, and the Contractor shall keep the portions of the street being used by public traffic in such condition that traffic will be reasonably and adequately accommodated, unless otherwise noted. The Contractor shall provide and maintain in safe and adequate condition temporary approaches, crossings, and intersections with roads and necessary driveways. **The Contractor shall bear all of the expense** of maintaining traffic over the section of street undergoing improvement and the construction and maintenance of such approaches, crossings, intersections, and other features as may be necessary without direct compensation except as to those features of such work which are a part of planned, completed construction work.

During the life of the project the Contractor, at all locations, shall provide means satisfactory to the Engineer for crossings for the traffic on intersecting streets in a manner which will not interrupt the flow of such traffic or be harmful to the improvement, unless otherwise noted.

During a suspension of work under the terms of the contract or authorized by the Engineer due to unfavorable weather or other conditions which are not the fault of the Contractor, and which make such suspension advisable, the Contractor shall make passable and shall open to traffic such portions of the street under improvement and such temporary roadways or portions thereof as may be agreed upon between the Contractor and Engineer for temporary accommodation of necessary traffic during the period of suspension. During the period of suspension, the surface maintenance of the traveled way of the temporary route or line of travel agreed upon shall be **at the expense of the Contractor**. When work is resumed, the Contractor shall replace or renew any work or material lost or damaged because of such temporary use of the roadway under improvement. The Contractor shall remove, when required, work or material used in the temporary maintenance

thereof, and shall complete the improvements in every respect as though its prosecution had been continuous and without interference, except as may otherwise have been agreed upon by the Contractor and Engineer at the time arrangements were made for the temporary accommodation of necessary traffic during the anticipated period of suspension.

1. PAYMENT

If there is a separate bid item for Traffic Control, the lump sum price shall be payment in full for all work specified. **If the contract does not include a separate bid item for Traffic Control, then the work required shall be considered as incidental to the contract.**

2. MATERIALS

The Contractor shall furnish, install, and maintain during construction all standard construction signing, barricade(s), barricade lights, and delineation necessary to protect the public traveling in and around the project. Signs shall have reflective backgrounds. Barricades and drums left in place to delineate the traveled way through and around obstructions shall have steady burning lighting affixed to each barricade or drum during darkness. All other barricades shall have flashing warning lights.

3. TRENCH RESTORATION

The Contractor shall replace the pavement in the trench areas, with the specified material, as soon as possible so traffic can utilize the entire width of the roadway, unless otherwise noted. The Contractor shall place a sufficient number of barricades to provide for adequate tapers into and around the sanitary sewer, storm sewer, or water main construction sites.

4. PEDESTRIANS

The Contractor shall make a special effort to accommodate ADA pedestrian traffic in and through the project, particularly by the required replacement of public sidewalk prior to other work, **at his own expense**. Sidewalks not usable shall be barricaded and clearly signed to indicate that the walk is closed per Part 6 of the MUTCD and Wisconsin MUTCD Supplement, and temporary pathways and/or detours shall also be clearly marked and/or signed in this manner. Where removal of sidewalk keystones (and adjacent stones) are specified at intersections, the new curb radius must be in place prior to such removal. However, if the Contractor elects to remove the walks earlier, the Contractor must provide temporary crushed aggregate to grade in their place. Temporary bridges for pedestrians shall be provided as required by the plans or special provisions or as ordered by the Engineer over new pavement, sidewalks, trenches, street intersections, and any other locations as determined by the Engineer. **This work shall be incidental to the contract.**

B. NOISE AND DUST CONTROL

The Contractor shall so conduct all his operations that they will cause the least annoyance to the residents in the vicinity of the work, and shall comply with all applicable local ordinances, **at the Contractor's own expense**. The compressors, hoists, and other apparatus shall be equipped with such mechanical devices as may be necessary to minimize noise and dust. Compressors shall be equipped with silencers on intake lines.

All gasoline or oil operated equipment shall be equipped with silencers or mufflers on intake and exhaust lines. Storage bins and hoppers shall be lined with material that will deaden the sounds. The operation of dumping rock and of carrying rock away in trucks shall be so conducted as to cause a minimum of noise and dust.

Vehicles carrying rock, concrete, or other material shall be routed over such streets as will cause the least annoyance to the public and shall not be operated on public streets between the hours of 9 p.m. and 7 a.m., or on Saturdays, Sundays, or legal holidays unless approved by the Engineer.

All unpaved streets, roads, detours, or haul roads used in the construction area shall be given an approved dust-preventive treatment or periodically watered to prevent dust. Applicable environmental regulations for dust prevention shall be strictly enforced. **Any application of dust palliative shall be incidental to the contract unless otherwise stated as a separate base bid item.**

C. NOTICE TO UTILITIES

The Contractor shall give notice in writing to all utilities (such as the gas, electric, telephone, transport company, and all other utilities) that may be affected by the Contractor's operations at least 3 working days before starting work.

The Contractor shall contact all private utilities, through Diggers Hotline, for necessary location or relocation of facilities including, but not limited to, poles, wires, and underground services. The Contractor shall also contact the Wauwatosa Fire and Police Departments when closing a street to all but municipal access. The Contractor shall also be responsible for notifying residents as necessary in regard to the work or the work of subcontractors. Adjustments to MMSD facilities require 72 hour notice to MMSD.

The Contractor shall not hinder or interfere with any person in the protection of such work, or with the operation of buses, at any time, except with the written permission of the Engineer. The Contractor must obtain all necessary information in regard to existing utilities and shall protect such utilities from injury and shall avoid unnecessary exposure so that they will not cause injury to the public. The cost of making repairs in case of any damage whatsoever shall be borne by the Contractor.

The Contractor shall also give 3 working days of notice to the following City of Wauwatosa departments and other affected organizations:

1. Traffic & Electrical Supervisor
Randy Michelz
414-471-8429
2. Engineering Division
7725 W. North Avenue
Construction Inspection & Survey Engineer
Nick Deming
414-479-3541
3. Fire Department
1643 Underwood Ave.
911 (Emergencies)
414-471-8490 (Non-emergencies)
4. Police Department
1700 N. 116th St.
911 (Emergencies)
414-471-8430 (Non-emergencies)
5. Water Department
Water Department Supervisor
Adam Florin
414-471-8480 ex: 5915
6. Street and Sewer Department
414-471-8422
7. Forestry Section
Urban Forestry & Grounds Superintendent
Alex Krutch
c. 414-975-0635
8. Milwaukee Metropolitan Sewerage Commission
District Construction Services
260 W. Seeboth Street
414-225-2241
9. Digger's Hotline
800-242-8511 (811)
10. Milwaukee County Transit Company
Melanie Flynn
1942 N. 17th Street
Milwaukee, WI 53205

D. GRAFFITI

The Contractor shall not allow graffiti to remain on any vehicle, equipment, barricade, materials or structures owned, rented, installed, or constructed by the Contractor. The Contractor shall remove graffiti within 48 hours of discovery **at his own expense**. Failure to remove graffiti within 48 hours may result in the City removing the graffiti at the Contractor's expense. These costs shall be deducted from monies owed to the Contractor.

E. SNOW REMOVAL

Provide for snow removal in those areas closed to traffic and outside of the traveled way as required to facilitate safe construction operations and provide access to residents. Proper drainage and erosion control shall be maintained in order to minimize runoff across lanes open to travel. The City of Wauwatosa or other Authority Having Jurisdiction (AHJ) shall be responsible for maintaining travel lanes fully open to traffic and sidewalks that remain open to traffic or as otherwise defined by city ordinances. The Contractor shall be responsible to clear snow from closed travel lanes (including travel lanes closed to through traffic) and sidewalks to the satisfaction of the City Engineer prior to opening closed lanes and sidewalks to traffic. The contractor shall maintain any and all traffic control for closed lanes and sidewalks that may be impacted by the snow removal operations of the City of Wauwatosa or other AHJ. This work shall be considered incidental to the contract.

605.1.04 - SCOPE OF WORK

A. SITE INVESTIGATION AND REPRESENTATION

The Contractor acknowledges that **they have** satisfied **themselves** as to the nature and location of the work, the general and local conditions – particularly those bearing upon the availability of transportation, disposal, handling, and storage of materials, and those bearing upon vehicular access to commercial, industrial, and residential properties – the availability of labor, water, electric power, and roads, uncertainties of weather, river stages, or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the work, and all other matters which can in any way affect the work or the cost thereof under this Contract.

The Contractor further acknowledges that **they have** satisfied **themselves** as to the character, quality, and quantity of surface and subsurface materials and groundwater to be encountered from inspecting the site, as well as from information presented herein as a part of these Contract Documents. Any failure by the Contractor to acquaint **themselves** with all the available information will not relieve **the Contractor** from responsibility for properly estimating the difficulty or cost of

successfully performing the work. Neither the Owner nor the Engineer assumes responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner or the Engineer.

B. FIELD RELOCATION

During the progress of the work, minor relocation of the work may be necessary. Such relocation shall be made only with the agreement of the Engineer. If existing structures are encountered that will prevent construction as shown, notify the Engineer before continuing with the work in order that the Engineer may make such field revisions as necessary to avoid conflict with the existing structures, or to have the affected utility altered by others. The Contractor shall proceed to work on other portions of the project during the delay. No additional compensation will be given for such delays. If the Contractor proceeds with the work despite this interference, **they** shall be responsible for any damage that may occur.

605.1.05 - PROTECTION OF WORK

A. ACCESS FOR EMERGENCY, PUBLIC TRANSPORTATION AND POSTAL VEHICLES

Notify the fire department, police department, and applicable public and school transportation companies at least 3 working days before closing any street or portion thereof. No closing shall be made without appropriate concurrence of aforementioned departments. Notify said departments when the streets are again passable for emergency vehicles. Maintain vehicle access to consecutive arterial crossings or dead end streets in excess of 300 linear feet, unless special written permission has been obtained from the Fire and Police departments.

The Contractor shall provide a 24 hour emergency telephone number or numbers with the Fire and Police departments so that contact may be made easily at all times in case of barricade or flare trouble or other emergencies.

The Contractor shall develop a written plan for the storage of vehicles and materials at the construction site. This plan shall be submitted to the Construction Engineer for his approval prior to starting construction. **If the Contractor wishes to use any property outside the City right-of-way, they must provide written approval from the property owner to the City.**

Maintain postal service facilities in accordance with the requirements of the US Postal Service.

605.1.06 - LEGAL RELATIONS

A. GENERAL

1. SAFETY

The Contractor shall be solely and completely responsible, at his expense, for conditions at the job site, including safety of all persons (including employees) and property during execution of the work. This requirement shall apply continuously and not be limited to normal working hours. Project safety provisions shall conform to US Department of Labor (OSHA) requirements, the Wisconsin Occupational Safety and Health Act, and all other applicable laws including those which may be specified in other parts of these Contract Documents, and shall in any event comply with the common law standards of due care. Where any of these are in conflict, the more stringent shall apply. The Contractor's failure to thoroughly familiarize **themselves** with these safety provisions shall not relieve **the Contractor** of responsibility.

2. CONSTRUCTION SAFETY PROGRAM

The Contractor shall develop, and maintain for the duration of the Contract, a safety program that will effectively incorporate and implement, as a minimum, all required safety provisions. The Contractor's Superintendent shall be qualified and experienced in construction safety and shall be at the work site and be authorized to supervise and enforce compliance with the safety program. A written outline of the Contractor's safety program may be required prior to commencing any operations, for record purposes only.

3. SAFETY EQUIPMENT

The Contractor shall maintain at the job site safety equipment applicable to the work as prescribed by the governing safety authorities, including all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons who may be injured on the job site. The Contractor shall do all work necessary to protect the general public from hazards including, but not limited to, surface irregularities or un-ramped grade changes in pedestrian sidewalks or walkways, and trenches or excavations in roadways.

Barricades, lanterns, and proper signs shall be furnished by the Contractor and placed as necessary to insure safety to the public and the work at his own expense.

4. COMPLAINTS

All complaints received by the Contractor shall be reported to the Engineer no later than the working day following receipt thereof. Such reports shall include the name, address, date, time received, date and time of action complained about, and a brief description of the alleged damages or other circumstances upon which the complaint is predicated.

Each complaint shall be assigned a separate number and all complaints shall be numbered consecutively in order of receipt. In the event more than one complaint is received from the same complainant, each later complaint shall show all

previous complaint numbers registered by the same complainant. In addition, a summary report shall be made to the Engineer each month which shall indicate the date, time, and name of the person investigating the complaint, and the amount of damages claimed (or estimate thereof), including the amount of settlement, if any.

When settlement of a claim is made, the claimant shall furnish the Engineer with a copy of the release of claim. The Owner shall be notified immediately, throughout the statutory period of liability, of any formal claims or demands made by attorneys on behalf of claimants, of the serving of any notice, summons, subpoena, or other legal documents incidental to litigation, and for any out-of-court settlement or court verdicts resulting from litigation.

5. NOTICE OF WORK

The Contractor shall provide written notice to the Engineer at least 5 days prior to the start of actual construction. If requested by the City, the Contractor shall provide written notice of work to affected property owners and residents adjacent to the construction at least 3 days prior to the start of actual construction to such properties.

The Contractor shall develop a written plan for the storage of vehicles and materials at the construction site. This plan shall be submitted to the Construction Engineer for his approval prior to starting construction. **If the Contractor wishes to use any property outside the City right-of-way, they must provide written approval from the property owner to the City.**

6. TRAFFIC SAFETY AND ACCESS TO PROPERTY

Comply with all laws regarding closing or restricting the use of public streets or highways. No public or private road shall be closed except by express written permission of the Engineer. Conduct the work so as to assure the least possible obstruction to traffic and normal commercial pursuits. Protect all obstructions within traveled roadways by installing signs, barricades, and lights where necessary for the safety of the public.

Signs, barricades, lights, and other traffic control devices shall conform to the requirements of the State of Wisconsin Manual of Uniform Traffic Control Devices (MUTCD).

The convenience of the general public and residents adjacent to the project and the protection of persons and property are of prime importance and shall be provided for in an adequate and satisfactory manner. During construction operations, construct and maintain such facilities as may be required to provide access by all property owners to their property. Pedestrian access to properties adjacent to the work shall be provided for at all times. **This work shall be incidental to the contract unless otherwise stated as a bid item.**

Where traffic will pass over backfilled areas before they are permanently paved, and where, in the opinion of the Engineer, the final pavement replacement has not followed in a timely fashion, the top of the area shall be maintained with temporary bituminous surfacing that will allow normal vehicular traffic to pass over. **This shall be done at no additional cost to the City.** This does not apply to sections where no surface replacement is called for under this contract. If the Engineer orders this type of restoration for such sections that do not call for surface replacement, the Contractor shall be paid at the amount specified under the temporary asphalt item included in the contract. If a temporary asphalt item is not included within the contract, the Engineer will pay the amount in the Schedule of Fixed Extras.

Temporary access driveways must be provided where required. The Contractor shall maintain access to driveways by use of steel plates, compacted gravel, and/or temporary asphalt when practicable. **This work shall be incidental to the contract unless otherwise stated as a bid item.**

Cleanup operations shall follow immediately behind backfilling and the work site shall be kept in an orderly condition at all times. The Contractor shall immediately clean up accidental spills of any type of material that may be a hazard to safe movement of vehicular traffic. Where the type and amount of spilled material creates a hazard, the Contractor shall immediately post flag persons, initiate cleanup, and advise the Engineer of the spill.

Flag persons shall follow MUTCD requirements and have the proper safety equipment and apparel, per MUTCD and OSHA recommendations.

B. FIRE PREVENTION AND PROTECTION

The Contractor shall execute all work in a fire-safe manner. **The Contractor** shall supply and maintain on the site adequate firefighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable fire prevention laws. Where these laws do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.

605.1.07 - PROSECUTION AND PROGRESS

The work shall be performed at such time and in or on such parts of the project and with such forces, materials, and equipment to prevent any delay to the completion of the project within the time limits stated in the Contract, and in conformance with the Overall Construction Schedule specified herein.

The contractor may petition the Board of Public Works for approval of night work (7 p.m. to 7 a.m.) or Sunday work. The Board generally meets the 1st and 3rd Monday of every month. A request for approval of night or Sunday work must be made on a Board of Public Works Application and received by the appropriate City staff by deadlines indicated on the application form. No fees will be assessed to the

Contractor for a request to the Board of Public Works to perform night work or Sunday work. The Contractor shall comply with all applicable requirements of the Owner. Please send an electronic copy of the completed application to BoPW to ndeming@wauwatosa.net and jhenderson@wauwatosa.net by the deadlines listed on the form in addition to any recipients required on the application form.

The Contractor may, with written permission of the Engineer and acquisition of all necessary permits, **and at the contractor's expense**, work outside regular hours of 7 a.m. to 7 p.m., Monday through Friday (City holidays are not considered part of this regular working week). A written request shall be made to the Engineer and allow 7 calendar days for satisfactory arrangements to be made to inspect the work in progress which occurs between 7 p.m. and 7 a.m. or Sundays, and allow 3 regular working days for satisfactory arrangements to be made to inspect the work in progress which occurs on 7 a.m. to 7 p.m. on Saturdays.

The Contractor shall not be allowed to perform work on City holidays without written permission from the Engineer.

If the Contractor schedules work outside regular hours and days which requires an inspector, and does not arrive on site within one hour of the scheduled time on the scheduled day, excluding inclement weather conditions, the Contractor shall be charged a fee of \$300 to the City, to be deducted from monies owed to the Contractor. The scheduled day shall count as a working day towards the completion of the project deadline regardless of whether the Contractor works. If the Contractor needs to cancel the work scheduled outside regular hours and days, they must contact the City Engineering Department or the inspector who is scheduled to be on site at least 24 hours in advance of the scheduled time and date.

A. PRECONSTRUCTION CONFERENCE REQUIREMENTS

A preconstruction conference shall be held after the time of the Contract award and before the notice to proceed to discuss the responsibility of each party in the project and to clarify any questions. Required attendance shall include representatives of all contractors, including the superintendents designated for the project, resident engineer in charge of inspection and his principal staff, and representatives of the municipality or governing authority. A representative of the resident inspection staff shall preside over the conference.

The Contractor shall submit to the Engineer for approval a schedule of operations and proposed construction sequencing and staging, as described in section C below. The Engineer may waive this requirement for the convenience of the City. This schedule will be used to check and control the progress of the work.

A suggested format for the preconstruction conference would include but not be limited to the following subjects:

1. Presentation of a proposed *Overall Construction Schedule* by the General Construction Contractor.

2. Presentation of *Traffic Control Plan* by the Contractor.
3. Review of *Erosion Control Plan*.
4. Check off required bonds and insurance certifications prior to notice to proceed.
5. Shop drawing submittal and approval procedure.
6. Chain of command, direction of correspondence, and coordinating responsibility between contractors.
7. Request for a weekly job meeting for all involved.
8. Laboratory testing of materials requirements.
9. Inventory of material stored on site provisions.
10. Progress estimate and payment procedure.

B. PRECONSTRUCTION SURVEY

After the Contract is awarded and before starting the work, the Contractor shall make a thorough examination, and should photograph, in color, if the Contractor feels it is warranted, all existing buildings, structures, and other improvements which are within 100 feet of the work and/or which might be damaged by the Contractor's operations. The examination may be made jointly by the Contractor, the Engineer, and the property owner. The scope of the examination and photographs taken shall include cracks in structures, settlement, leakage, and similar conditions.

The above records and photographs are intended for use as evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of property owners, the Contractor, and the Owner. The records will provide a means of determining whether, and to what extent, damage may have occurred as a result of the Contractor's operation. The City intends to videotape the condition of the roadways and the areas surrounding the project sites when possible.

C. OVERALL CONSTRUCTION SCHEDULE

The Contractor shall prepare and submit to the Engineer within 10 working days after the awarding of the Contract his Overall Construction Schedule. The Overall Schedule shall be comprised of preparatory and construction operations covering all work to be done in connection with the Contract.

Failure to submit the Overall Schedule or subsequent updates of the Schedule shall be considered cause for withholding any partial payments due or that may become due under the Contract.

Therefore, it is imperative that the Contractor adheres to the completion dates listed in the Official Notice and Instructions to Bidders. If after the award of any paving contracts it is determined that a change in sequence would be mutually beneficial to all parties involved, the Engineer shall issue a Contract Modification. However, this modification will not alter the final completion date unless otherwise agreed upon and noted in the Contract Modification.

The Overall Schedule shall meet the following minimum requirements:

1. Include activities that describe essential features of the work and activities that might potentially delay contract completion. Identify activities that are controlling items of work. Procurement of long lead time items shall be included as tasks within the schedule but can exceed the 15 working day duration limit noted below. Build in the specified amount of severe weather days as specified in the contract.
2. Identify the contemplated start and completion dates for each activity. Provide a duration, ranging from one to 15 working days, for each activity. Break longer activities into 2 or more activities distinguished by the addition of a location or some other description.
3. For contracts with 15 activities or less or 8 weeks or less in duration, specify the sequencing of all activities. For contracts with more than 15 activities or longer than 8 weeks in duration, provide a logic diagram that shows the sequence of activities and the scheduling interrelationships among activities. Alternatively, the contractor may identify the activity interrelationships in a tabular listing. Ensure all activity interrelationships are finish to start relationships with no leads or lags. Use only contractual constraints in the schedule logic. The engineer may accept requested exceptions.
4. Provide on or with the schedule the following information:
 - a. Work days per week
 - b. Number of shifts per day
 - c. Number of hours per shift
5. Show completing the work within interim completion dates and the specified contract time or completion date.
6. Provide the engineer with a pdf copy of the information required in items 3 and 4.

Handwritten schedules are NOT acceptable. It is recommended that the contractor include third-party activities related to the contract within the schedule if third-party work is anticipated to occur within coordination of the project.

As the work progresses, the Engineer may request an update to the original progress schedule for reasons including but not limited to the following:

1. The project completion or interim completion targets are delayed 14 calendar days or more for portions of work governed by calendar days or 10 working days or more for portions of work governed by working days.
2. The progress of the work differs significantly from the original progress schedule.
3. A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

The Overall Schedule shall be incidental to the contract.

605.1.08 - MAILBOXES

(Where Applicable) Maintaining mailboxes along the construction route is the responsibility of the Contractor, including his subcontractors, and shall be incidental to the work. The Contractor shall notify the property owner(s), if necessary, prior to the start of work that their mailbox may require removal and replacement. A notification letter will be provided by the Engineer for distribution by the Contractor if requested. Mailboxes which require removal as part of any work shall be carefully removed by the Contractor and delivered to the property owner. Resetting the mail box shall be the responsibility of the Contractor. The Contractor shall also, at his own expense, maintain a temporary mailbox to allow the property owner to continue receiving mail until such time as the permanent resetting is completed. **The Contractor shall coordinate the location(s) of any temporary mailboxes with the United States Postal Service and the Engineer. Temporary mailboxes shall be keyed mailboxes unless otherwise approved by the Engineer.**

Should a mailbox be damaged as the result of any construction activity, the Contractor shall take the responsibility of repairing, replacing, and/or re-installing it at his own expense, within a reasonable amount of time as determined by the Engineer. The Contractor shall also, at their own expense, maintain a temporary mailbox to allow the property owner to continue receiving mail until such time as the permanent repairs are completed, if needed. Failure of the Contractor to complete this work in a timely fashion, as determined by the Engineer, may result in the City hiring a third party or using a City crew to perform it, at the Contractor's expense, to be deducted from monies owed to the Contractor.

Any and all work relating to mailboxes shall be incidental to the contract unless otherwise listed as a separate base bid item or directed by the Engineer.

605.1.09 - PAYMENT

The work specified in this Section 605 shall be considered **incidental to the contract** and the cost shall be included as part of the appropriate unit price stated in the Proposal unless otherwise stated.

Lump sum amounts are not subject to negotiation for cases where actual amounts of work and/or materials are larger than the engineering estimates.

Existing sign removal and re-installation as indicated on the plans and as directed by the Engineer shall be **incidental** to the contract base price unless otherwise noted.

SECTION 605.2 - CONSTRUCTION GENERAL

605.2.01 – Driveways

Driveway access shall be maintained at all times whenever possible, unless directed by the Engineer or stated on the plans. This may require driveways to be constructed one-half at a time, with steel plates, and/or the coordination with the business or industry, or a temporary driveway access point. This maintenance of approach access shall be considered incidental to the work. Maintenance of driveway access to residential properties may be waived with the written permission of the Engineer.,

The Contractor shall be limited to a maximum of 30 calendar days from the time an approach, its adjacent sidewalks, and/or adjacent curb and gutter is removed, to the time that said pavements have sufficient cure time for bearing vehicle traffic from the street to the property or alley. Failure of the Contractor to meet this deadline will cause the City to charge liquidated damages of \$25 per day **per approach** until access is provided.

For contracts that do NOT include replacing all of the curb and gutter and/or all of the existing pavement (ie. selective replacement of these two items), the above time frame is reduced in the following manner, unless otherwise directed by the Engineer or shown in the plans:

- Residential driveways shall be replaced within 5 days after removal of the driveway approach or sidewalk.
- Driveway access to commercial and industrial properties shall be maintained at all times.

605.2.02 - BACKFILL

A. MAINTENANCE OF TRENCH SURFACE

The Contractor will be required to maintain the trench area, during the interval between the sewer or water main installation and the pavement restoration, by keeping it to grade and spreading calcium chloride, if necessary, for dust control. This trench maintenance shall be **incidental** to the contract, unless otherwise noted.

Settlement of replaced pavement over trenches within the warranty period shall be considered the result of improper or inadequate compaction of the subgrade or backfilling materials. The Contractor shall promptly repair all pavement deficiencies noted during the warranty period at no cost to the City.

605.2.03 - PAVEMENT RESTORATION AND SITE RESTORATION

A. PAVEMENT RESTORATION

1. PROTECTION OF STRUCTURES

Provide whatever protective coverings as necessary to protect the exposed portions of bridges, culverts, curbs, gutters, manhole and valve box covers, posts, guard fences, road signs, and any other structures from splashing oil, asphalt, or concrete from the paving operations. Remove any oil, asphalt, concrete, dirt, or any other undesirable matter that may come upon these structures by reason of the paving operations.

Where water valve boxes, manholes, catch basins, or other underground utility appurtenances are within the area to be resurfaced, the structure shall be level with the top of the final restoration grade as directed by the Engineer. If it is evident that these facilities are not in accordance with the proposed finished surface, notify the Engineer **a minimum of 14** calendar days in advance so the proper authority can be contacted in order to have the facility altered before proceeding with the resurfacing. Consider any delays experienced from such obstructions as **incidental** to the paving operation.

B. LAWN REPLACEMENT AND LANDSCAPING

Topsoiling, mulching, fertilizing, and seeding shall conform, respectively, to Sections 625, 627, 629, 630 and 631 of the State Specs and as they are amended herein.

All landscaping work must be watered until sustained growth is assured. All watering shall be considered **incidental** to the contract.

Backfill required at curb repairs must be topped with a minimum of 6 inches of screened topsoil to top of curb.

If restoration in accordance with these specifications is not completed (aside from watering) within 2 weeks of the completion of adjacent paving and underground operations (restoration may be delayed with written permission from the Engineer), the City reserves the right to hire a third party, independent of the Contractor, to complete the work, or utilize City workers, to be paid with funds deducted from monies owed to the Contractor. Should the City exercise this right, the Contractor will not be paid for any of the quantities that were completed by the third party or City workers.

1. GENERAL

The Contractor shall give the Engineer at least 3 working days of notice of the time and place of planting and keep them advised of the schedule of planting operations.

2. SOIL PREPARATION

Remove any non-topsoil material to a depth of 6 inches and backfill with topsoil/compost blend as specified in Section 625.2 of the State Specs. Apply a Type A granular fertilizer per the supplier/manufacturer's specified rate and mix

into the upper 4 to 6 inches of soil thoroughly. Rake or drag area until surface is thoroughly settled with a smooth, firm surface, free of humps or hollows. Ensure proper placement to eliminate the risk of future settling or sinking.

The Contractor shall dispose of all extraneous and excess materials at his expense and in accordance with any Federal, State, or Local laws.

3. SOD

All sod shall be placed on topsoil as specified within 24 hours after it has been cut. It must be staked or pegged on all slopes steeper than one foot vertical to three feet horizontal and where shown on the plans, which shall be incidental. The sod for Type "A" Lawn Replacement shall be a blend of bluegrass and fescues nursery sod, and shall be practically free from weeds or undesirable grasses. Sod must be placed to a butt joint and not wedged-off with topsoil. After being placed, it must be rolled or tamped. **All sod work must be watered for a minimum of 10 consecutive calendar days by the Contractor or until sustained growth is assured. The contractor shall provide 3 days notice to residents prior to turning over watering requirements to the resident.**

4. SEED

All areas designated to be seeded shall be placed on topsoil fertilized with a Type A granular fertilizer fertilizer per the supplier/manufacturer's specified rate and covered with Urban Type B erosion mat, unless otherwise specified. The seed mix for Type "C" Lawn Replacement shall be as noted below unless otherwise noted in the plans, free from weeds or undesirable grasses. After being placed, rake seed/soil as necessary to provide seed to soil contact and covered with mulch or erosion fabric where designated. All seed, mulch, and erosion fabric work must be watered until sustained growth is assured, a minimum of 14 calendar days.

- a. General Lawn Areas: Wisconsin Department of Transportation Seed Mixture No. 40. Seeding rate shall be 4-5 pounds per 1000 square feet. Provide the empty seed bags brought to site to the inspector immediately after installation.
- b. River Banks, Ravine Slopes, and Drainage Swales: Shady woodland seed mix shall be used for wet mesic to dry mesic soils. Species such as Solomon's Plume, Columbine, Jacob's Ladder, Jackin-the-Pulpit, Wild Geranium, and Early Meadow Rue are representative of a natural woodland. Seeding rate shall be in accordance with suppliers instructions.

C. SIGNAGE

New signs called out to be provided under the contract shall conform to Section 637 of the State Specs. New signs shall be installed on new posts and shall have hardware provided by the Contractor and included with the costs of the signs and/or sign post item(s).

New posts shall be 2" (2 3/8" O.D.) x 10' Schedule 40 Aluminum extruded post with a mill finish and plain end. The Post Anchor shall be Tapco V-Loc Steel Breakaway post or Engineer approved equal.

Hardware to attach existing signs to new poles shall be salvaged from the existing signs and posts, unless otherwise noted. New hardware required to resinstall existing signs shall be approved by the Engineer prior to ordering.

Signs, posts and materials within the project limits may be removed and salvaged and shall be stored at the DPW Yard until reinstallation. Obtain permission from the Engineer to removal signs, posts, etc. if no item to remove, salvage and reinstall signs exists on the contract. Sign posts that are not V-Loc Steel Breakaway posts shall be disposed of by the Contractor at their expense. If no item to remove, salvage and resinstall signs, posts & hardware, the work shall be considered incidental to the contract and performed at the Contractor's expense. The Contractor shall provide a minimum of 3 days notice to DPW Electrical Superintendent before delivering the signs to the yard.

Prior to delivering the signs to the DPW Yard, the contractor shall provide a detailed list to the DPW Electrical Superintendent containing the following information:

1. Description and number of each sign(s) being delivered to the DPW Yard that will be reinstalled
2. Number of brackets being salvaged to the yard
3. Number of poles being salvaged to the yard that will be reinstalled.
4. The list shall have the contract number, the project description, the name of the contractor storing the materials and a contact person listed at the top of the page.

Upon delivery to the DPW Yard, the contractor shall assist the City/consultant inspector on the project to verify that all signs, hardware, posts and other materials contained on the list have been delivered. The Contractor shall store the signs in a manner that will not cause the signs to be damaged while being left in storage. All loose hardware shall be stored together in a labeled box or storage container noting what hardware is stored in each box or storage container. The box or storage container shall also be labeled with the contract number and the project description.

The Contractor shall be responsible for replacing any signs, posts or hardware that are damaged as a result of construction operations or due to improper storage by the contractor. The Contractor shall also be responsible to replace any missing signs, posts or hardware that were not properly delivered and stored to the DPW Yard.

The Contractor shall notify the inspector of any damaged signs, posts or hardware prior to removal for documentation purposes. Failure to notify the on-site inspector prior to removal may result in the Contractor being responsible for replacement of the damaged signs, posts or hardware.

The Contractor shall immediately notify the Engineer of any signs, posts, or hardware that the Contractor deems unsuitable to be salvaged and reinstalled to allow the Engineer to resolve any concerns prior to reinstallation. The Engineer may require the contractor to furnish new material(s) under the contract using a bid item in the proposal or, if no such item exists for a particular item deemed unsuitable for reinstallation, by negotiating a price for replacement. The City also may elect to provide new material(s) to the contractor for reinstallation at no additional cost to the City.

The Contractor shall provide the DPW Electrical Superintendent with a minimum of 7 calendar day's notice prior to picking up the stored signs, posts and hardware. The City may replace salvaged signs, posts and hardware at their discretion while the signs are in storage at the DPW Yard. Before removing items from the DPW Yard, the contractor shall verify ALL items are present that were documented as delivered to the DPW Yard for storage. Notify the Engineer immediately and DO NOT remove any items from the DPW Yard if any item is missing. The Contractor will be responsible to replace any items discovered missing after removal of all items from storage at the DPW Yard.

605.2.04 PROTECTION OF THE ENVIRONMENT

A. GENERAL

The Contractor, in executing the work, shall maintain all work areas on and off the site as needed to keep them free from environmental pollution that would be in violation of any Federal, State, or Local regulations. All costs related to conformance with Protection of The Environment within these City Specs shall be considered incidental to the contract, unless otherwise noted by the Engineer.

B. PROTECTION OF SEWERS

Take adequate measures to prevent the impairment of the operation of the existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering a sewer or sewer structure. All sewer and groundwater flow interfering with construction and requiring diversion shall be diverted to sewers leading to a wastewater treatment plant. Non-sanitary sewage may only be diverted to non-wastewater treated areas if proper erosion and pollution control measures are followed in accordance with Wisconsin DNR regulations.

Prior to commencing excavation and construction, the Contractor shall submit for the City's review detailed plans (including routing and connections) showing how **the Contractor** intends to handle and dispose of sanitary sewer wastes. By reviewing the plan, the City neither accepts any responsibility for the adequacy thereof nor for any damages to public or private property resulting therefrom, such responsibilities remaining with the Contractor.

C. PROTECTION OF AIR QUALITY

Air pollution shall be minimized by wetting down bare soils during windy periods, by requiring the use of properly operating combustion emission control devices on

construction vehicles and equipment used by contractors, and by encouraging the shutdown of motorized equipment not actually in use.

Burning of waste, debris, and rubbish will not be permitted on the construction site.

If temporary heating devices are necessary for protection of the work, such devices shall be of a type that will not cause pollution of the air.

D. EROSION CONTROL FOR SEWER & WATER INSTALLATIONS IN PAVED AREAS

1. GENERAL

The latest edition of the DNR technical standards shall be adhered to for erosion control installation and maintenance, and shall overrule any potential specifications conflicts herein. Chapter 2.8.0 of the Standard Specs contains the general criteria for erosion control. In addition, since the control of soil erosion is a dynamic process, the Contract requires flexibility by the Contractor to accommodate changing conditions as the project progresses.

Excavated materials and imported backfill materials stored at the project site shall be kept to a minimum and shall be used or removed from the site as soon as practicable, which shall be incidental. Such materials shall be stored in such a manner that will not result in runoff of stockpiled materials. Backfilled trenches and other areas shall be left to the level of the adjacent area or slightly below until restored to reduce the potential for erosion. All excess excavated materials and all excess imported backfill materials shall be promptly removed from the site and disposed of at the Contractor's expense.

The Contractor shall monitor each location where water may run off the site and shall provide measures to guard against sediments leaving the site. The Contractor shall have adequate erosion fabric fence or bales of hay and means of anchoring the same in place for erosion control as determined necessary by the Engineer. The type and amount of materials required will be determined by the type and amount of open excavation. The Contractor shall schedule the work so that the amount of open excavation and the stockpiling of construction materials on the job site is minimized for erosion control. Diversion berms or sediment filtration berms shall be constructed and maintained as determined necessary by the Engineer. Replacement of preexisting erosion control measures which are disturbed in the course of the work shall be completed promptly following completion of the work on the project causing such disturbance.

Tracking of foreign materials (e.g. mud, stone) on street surfaces shall be controlled during the working day as necessary, but no later than the end of the working day, by one or more of the following methods as required:

- a. Hand shoveling material off street pavement.

- b. Machine removal (such as with end loader or grader), provided that the results are equal to that of hand shoveling.
- c. Sweeping material off street pavement. If using a mechanical sweeper that does not contain a built in water system to mitigate dust, the contractor shall sufficiently wet the surface or the area needing to be swept prior to sweep to reduce **the spread of** dust.

Specific erosion control measures are shown on the plans and shall be as described in these specifications. Sample details of erosion control devices follow these specifications. All control measures protruding above the normal paved and/or ground surface shall be marked by barricades and flashers. Maintenance of erosion control measures shall be considered **incidental**, including if an erosion control device needs to be replaced.

2. CONTROL OF SURFACE RUNOFF

- a. STORM WATER INLET AND CATCH BASIN, hereinafter called inlet protection: Inlet protection shall be installed **prior** to disturbing any pavement or earth areas, and shall remain in place and maintained until the surface is restored with temporary or permanent pavement. Inlet protection shall be installed at all inlets that will receive runoff from the construction site, including adjacent streets and where materials are stockpiled. Depending on the slope of the street, this will include inlets in the block(s) downstream from the work site due to anticipated bypassing. The contractor shall install Type D inlet baskets at all locations permissible. The contractor shall indicate on their erosion control implementation plan those inlets which Type D inlet protection is unable to be placed and their proposed substitution.

PLACEMENT: The inlet insert basket or sheet shall fit into the inlet without gaps around the insert as illustrated in the detail drawings. If the inlet being protected has a curb box, the curb box shall be protected as shown in the appropriate detail drawings until inlet protection is no longer needed.

FABRIC SPECIFICATIONS: The filter fabric shall be a geotextile fabric Type FF of polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride meeting the following specifications:

- Grab strength: 120 lb. minimum in the machine direction and 100 lb. in the cross machine direction (ASTM D4632).
- The fabric shall have an opening no greater than a number 30 US Standard Sieve.
- Water Flow Rate of approximately 120 gal/min/ft² at 50 MM constant head as determined by multiplying permittivity in sec as determined by ASTM D-4491 by a conversion factor of 74.

- Ultra violet radiation stability of 70% for strength retained at 500 hrs of exposure (ASTM D4355).

MAINTENANCE: Inlet protection shall be inspected by the Contractor within 24 hours after each working day rainfall or daily during periods of prolonged rainfall on working days. Repair or replacement shall be made immediately as incidental to the work.

Sediment deposits shall be removed after each storm event, or more often if the fabric becomes clogged.

b. GUTTER DETENTION

1. In areas where the street grade is greater than 4%, additional control is necessary to reduce flow velocity and to prevent sediment from bypassing the inlet screen/inlet grate screen.
2. Gravel filled nylon bags each containing a minimum of one-half cubic foot of material shall be placed in the gutter section with the long dimension of the bag perpendicular to the curb line, abutting the curb face at approximately 75 foot intervals.
3. Sediment deposits shall be removed after each storm event, or when reaching a maximum depth of 3 inches.
4. If the street is open for traffic, a barricade with flashers shall be placed by each bag.
5. The protection shall be installed prior to disturbing any pavement or earth areas, and shall remain in place and be maintained until the surface is restored with temporary or permanent pavement.

3. CONTROL OF TRENCH SEDIMENT

a. DEWATERING

1. If it becomes necessary to pump water from any trench or excavation, it shall be the Contractor's responsibility to remove particles greater than 100 microns. To demonstrate that settling or filtering is not required, all particles must pass through a US Standard No. 140 sieve.

2. METHODS OF REMOVAL

- a. Pumped water requiring particle removal may be settled in portable tanks. The tank capacity must be large enough to allow for sufficient settling time to remove particles greater than 100 microns. The Contractor may add a flocculation substance to enhance the settlement process.

- b. A second method of treating pump water may be as shown in the detail drawings, if applicable. This basin should be placed on the paved surface near a protected inlet. If a temporary settling basin is to be left unattended, it shall be covered with a half inch plywood or similar safety cover. Due to space and traffic constraints, this method must have prior approval from the Engineer.
 - c. The fabric shall be geo-textile fabric, polyester, polypropylene stabilized nylon, polyethylene, or polyvinylidene chloride meeting the following specifications:
 - Grab strength: 400 lb. minimum in any principal direction (ASTM D1682)
 - Mullen Burst Strength: Minimum 600 psi (ASTM D774)
 - The fabric shall have an opening no greater than a number 140 US Standard Sieve, and a minimum permeability of 25 gpm/sq.ft. (Multiply the Permittivity in Sec. from ASTM. D4491-85 Constant Head Test using the conversion factor of 74.)
 - d. Other methods demonstrated to produce the desired results may be submitted for the approval of the Engineer.
- a. DOWNSTREAM SEWER PROTECTION: At the end of each work day, the Contractor shall cover the entire annular space at both ends of the flume with a sheet of filter fabric. The fabric shall be of sufficient width so as to be tightly banded around the sewer pipes and the flume pipe. The fabric shall be geo-textile fabric of polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride meeting the following specifications:
- Grab strength: 400 lb. minimum in any principal direction (ASTM D1682)
 - Mullen Burst Strength: Minimum 600 psi (ASTM D774)
 - The fabric shall have an opening no greater than a number 140 US Standard Sieve, and a minimum permeability of 25 gpm/sq.ft. (Multiply the Permittivity in Sec. from ASTM D4491-85 Constant Head Test using the conversion factor of 74.)

4. PAYMENT

Erosion Control as herein before prescribed, required, and performed will not be separately measured for payment, but will be considered **incidental** to other

items in the contract unless there is a separate bid item specifically for erosion control. Maintenance of any erosion control item shall be considered **incidental**.

D. PROTECTION OF TREES AND SHRUBS

No trees, shrubs, or any other vegetation shall be removed without the written permission of the Engineer.

Unless specifically shown on the plans, or otherwise directed by the Engineer, it is the intent of the work operations under this contract to make every effort to preserve and protect trees and shrubs from damage or removal within the limits of, and adjacent to, the work included in the contract. The Contractor shall take all necessary precautions to protect trees, shrubs, and roots at the work site. Any costs associated with this work and work described within this section shall be considered incidental unless otherwise noted or directed by the Engineer.

There are, at various locations on the project, existing trees and shrubs which will require special care and protection during the removal and subsequent construction of new pavements, curbs, drive approaches, and walks. Prior to beginning construction operations for the removal and/or replacement of these contract work items, the Contractor shall conform to the following procedure:

The Contractor shall, prior to construction, conduct a detailed walk-through field inspection of all potential conflicts of the contract work with trees and shrubs within and adjacent to the project limits. The Contractor shall not excavate or cut the roots of trees or shrubs unless so indicated by the Engineer's written order or explicitly noted on the plans.

1. ROOTS

Root foundations must remain adequate to withstand heavy windstorms. To protect the immediate portion of the tree roots, a Root Protection Zone shall be maintained. This zone is 5 feet on each side of the edge of the tree trunk parallel with the street and from the backside of the curb to the backside of the walk. No construction equipment or materials, sand, soil, gravel, block, or pipe shall be placed, parked, or stored within this area. All cutting for the removal of sod and soil in order to establish a finished grade within this zone must be done manually. No excavation shall occur within this zone unless otherwise directed on the plans or by the Engineer.

Tree roots interfering with the work shall be completely severed with a clean, sharp tool e.g. axe, or chainsaw, and removed with an approved machine or other approved methods. All old walk shall be removed prior to root cutting.

- a. SIDEWALKS: The root system on the walk side of the tree shall not be cut by means of mechanical root cutting machines. If root removal is essential to concrete walk replacement, interfering roots shall be manually cut with hand implements. Roots below the proposed walk shall be removed only to a depth of 9 inches below the proposed elevation of the new walk surface. The cut must be within 2 inches of the edge of the proposed sidewalk to avoid cutting

too close to the trunk of the tree. All roots within 2 inches of the bottom of the proposed sidewalk must be removed.

All debris from the root sawing and/or tree removal operations shall be removed from the sidewalk area and root sawing trenches filled with approved topsoil before the end of the work day. All exposed and severed tree roots shall be immediately covered with mulch and watered to prevent drying until such time that the concrete work is complete, the forms removed, and the area between the tree and concrete work backfilled with approved topsoil.

Stumps and roots shall be ground by an Engineer approved mechanical grinding machine to a depth of 18 inches below the proposed ground elevation. Other methods of grubbing may be used only with the approval of the Engineer. All grubbing holes shall be cleaned of chips and grindings and filled with approved compacted backfill, with at least the top 3 inches being topsoil. All debris from root sawing and/or tree removal operations shall be hauled from site and disposed of in a reasonable amount of time, as determined by the Engineer, and in accordance with any Federal, State, or Local regulations.

Dead, diseased, infected, or infested trees may not be hauled away until a permit has been obtained from the City Forester. No fee will be charged for the permit. Clearing and grubbing shall conform to Section 201 of the current State Specs.

If, in the Engineer's opinion, if it is necessary to alter the methods of construction in the plans to preserve trees and shrubs, the Contractor shall make such changes as directed. Such adjustments may include, but are not limited to, curb, sidewalk, and drive approach dimension changes, including horizontal and/or vertical alignment.

If the Engineer determines that damage to trees has occurred due to negligence of the Contractor, or failure to comply with above procedures and as directed by the Engineer, the Contractor shall be held liable for the basic formula value of such trees, based on caliper size, with such amounts to be deducted from the monies due under the contract (see following Table on the next page).

BASIC FORMULA VALUE OF TREES BASED ON CALIPER SIZE

<u>TRUNK</u> (Diameter)	<u>CROSS-SECTION AREA</u> (Square Inches)	<u>BASIC VALUE</u> (U.S. Dollars)
2		85.00
4		230.00
6		415.00
8		625.00
10		780.00
12	113	3,051.00
13	133	3,591.00
14	154	4,158.00
15	177	4,779.00
16	201	5,427.00
17	227	6,129.00
18	254	6,858.00
19	284	7,668.00
20	314	8,478.00
21	346	9,342.00
22	380	10,260.00
23	415	11,205.00
24	452	12,204.00
25	491	13,257.00
26	531	14,337.00
27	573	15,471.00
28	616	16,632.00
29	661	17,847.00
30	707	19,089.00
31	755	20,385.00
32	804	21,708.00
33	855	23,085.00
34	908	24,516.00
35	962	25,974.00
36	1,018	27,486.00
37	1,075	29,025.00
38	1,134	30,618.00
39	1,195	32,265.00
40	1,257	33,939.00

Diameter: measurements taken 4.5 ft. (1.4m) above ground level.

Basic values established at \$27.00 per square inch cross-section of trunk. Basic price based on industry survey and U.S. Department of Labor Consumer Price Index.

F. PROTECTION OF STREET LIGHTS AND TRAFFIC SIGNALS

All electrical work shall, where pertinent, conform to the Wisconsin Electrical Code and good electrical construction practices.

Where there is enclosed or unenclosed lighting cable within the project limits, care must be exercised by the Contractor to avoid damage to the cable during work. Where the Contractor or any of his Subcontractors damage any part of the lighting system which results in identifiable fault in the wiring, inoperative street lights or traffic signals, or an outage has occurred anywhere within the project limits, the damage shall be repaired by a qualified electrician **at the Contractor's expense** in accordance with City specifications. All lighting systems shall be kept 100% operational.

1. TIME LIMITS FOR REPAIRS

The Contractor shall have **24 hours** from the report of a problem in the existing or permanent lighting system to inspect and identify the cause, and **2 hours** for a temporary system (if applicable). Repairs shall be made no later than **3 days** after the problem is identified. Should these limits be exceeded, the Engineer reserves the right to hire a third party, independent of the Contractor, or use City workers to perform the repair(s). The cost of hiring a third party or using City workers and having them repair the damage will be paid for by the Contractor. Contractor agrees they will be informed of the final cost, which will be deducted from monies owed in a subsequent payment. In lieu of hiring a third party or using their own staff, the Engineer may also choose to fine the Contractor \$100, to be charged each day the lights are not properly functioning outside of aforementioned time limits, and to be deducted from monies owed to the Contractor.

2. TEMPORARY LIGHTING

If no plans for temporary lighting are included in the Contract Documents, the Contractor may choose, at their own expense, to maintain street lighting via overhead connections to existing poles, the installation of temporary poles and luminaires with their own wiring, or splicing (in existing wires only) around new and/or old pole bases as needed.

Any repairs and/or replacements made by the Contractor shall be incidental to the contract unless otherwise stated as a separate base bid item. Repairs shall be investigated and completed promptly in accordance with City of Wauwatosa specifications, or as instructed by the Engineer if no lighting specifications are included in the Contract Documents. The City may require temporary repairs **at the Contractor's expense**, including the installation of overhead facilities, to accelerate the return of functional electrical systems. Backfilling of the repair locations must not be done until all needed repairs have been made and inspected by the City Electrical Supervisor.

Splices in poles shall be made with reusable set-screw type connectors. Penn Union SX-2 or approved equal, copper service entrance connector, or approved equal. Complete splice with layer of nonstick varnished cambric insulating tape, followed by multiples laps of Scotch 130C rubber insulating tape, followed by multiple laps of Scotch Super 88 vinyl insulating tape. Split bolt compression connectors are not acceptable for this contract.

When applicable, cable work at existing conduit locations damaged during construction is to be corrected by utilizing newly placed conduit which has been laid as part of the contract work. Frost loops of at least 12 inches shall be provided where cables enter conduit systems. **Any direct-buried cable must be enveloped with mason sand.**

SECTION 620
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SECTION 620 – GRADING AND PAVING

SECTION 620.1 – GRADING CONSTRUCTION

A. GENERAL

Grading work, when required, is to be performed in accordance with Section 205, 207, and 305 of the State Specs to the depths and thicknesses indicated on the plans. The item of common excavation includes the work of fine grading.

The approaches to the street being graded shall be sloped as indicated on the plan or as directed in the field by the Engineer to reasonably accommodate any equipment or vehicles entering the site. The side slopes shall be graded at a 3-to-1 slope unless otherwise directed.

All sidewalks shall have 4 inches of base aggregate dense unless otherwise noted.

B. MATERIALS

Dense graded base shall be 1-1/4 inch per section 305.2.1 of the State Specs, constructed to the thickness as shown on the plans or as directed in the field by the Engineer, and constructed in accordance with State Spec 305, except as noted herein, to the compacted thickness shown on the plans or stated in the proposal. All organic material shall be removed from the site of the work and shall not be used as part of the base or subgrade material, and this shall be considered incidental to the work.

The 1-1/4 inch crushed aggregate shall conform to the following gradation requirements:

Sieve Size	Percentage by Weight Passing
1 ¼ inch	95-100
1 inch	—
¾ inch	70-93
⅜ inch	42-80
No. 4	25-63
No. 10	16-48
No. 40	8-28
No. 200	2-12

The stone shall be shaped and thoroughly compacted to the specified thickness to at least 95% of maximum density.

C. SAWCUTTING

All sawing is considered incidental to the contract unless otherwise noted.

Sawcutting consists of sawing existing concrete or asphaltic pavements, curb and gutter, driveways, or sidewalks, and the washing of the sawing debris at locations where cuts have been made in areas still open to traffic, or as directed by the Engineer. **The saw cuts shall be straight, vertical, and to the full depth of the pavement.** Washing off of the sawing debris shall be required when the pavement being cut will be open to traffic.

For sawing that is not straight or for sawing where the debris is not washed off of pavement that is open to traffic, 5% of the pavement cost may be credited to the project if the Contractor does not re-saw or cleanup as directed. Any re-cuts or extra cleaning shall be at the Contractor's expense.

For trenches, the width of pavement cut shall be sufficiently sized to allow for a minimum of an 8 inch undisturbed ledge on each side, where gravel backfill is used. The contractor may elect to re-saw prior to pavement replacement **at the contractor's own expense**. Curbs and sidewalks shall be completely removed to existing expansion or scored joints sawed full depth, falling within 4 feet of the normal restoration limits, as directed by the Engineer.

D. EXCAVATION

Surplus excavation must be wasted by the Contractor, at their expense, in locations permitted to such disposal outside the right-of-way (unless otherwise indicated). The estimated quantity for grading is based on information provided by the cross-sections of the roadway and does not include the backfill for utility excavations. **If a Common Excavation item is not included in the contract, backfilling and beveling along replaced pavement, sidewalk, driveway approaches, curb & gutter and other hard surface restoration is considered incidental to the contract.**

Earth in excavation shall be removed to the proper cross section as shown on the plans. The Contractor shall dispose of all excess earth not required in the Contract, and shall also dispose of earth not suitable in the judgment of the Engineer to be used in the work.

Large rocks and other obstructions shall be removed to a depth of not less than 1 foot below subgrade or the existing ground elevation, whichever is lower. The cost of this work is to be included in the bid price for excavation.

1. REMOVING EXISTING STRUCTURES

This work shall consist of removing old pavement, curb and gutter, sidewalk, driveways, and other similar structures to the lines as shown on the plans or as directed in the field by the Engineer.

At those locations designated by the Engineer the Contractor shall remove the existing concrete pavement and replace it as directed. Excavation and disposal of excess material to the specified depth of the new pavement is required and will be paid for under the unit bid item for removals, but the removal of temporary pavement shall be considered incidental to the price of placing said pavement.

The edges of existing pavements to remain in place shall be cut as straight lines with vertical faces. The defective pavement shall be removed from an area without damaging the remaining pavement. Damage to pavements due to the Contractor's negligence, as determined by the City, shall be replaced as directed by the Engineer at the expense of the Contractor.

The Contractor may break existing pavements by the use of a drop weight or by a pneumatic pavement breaker if, in the opinion of the Engineer, said uses are unlikely to cause damage to utilities or adjacent property. The Engineer reserves the right to order the Contractor to change the method of pavement breaking during the progress of the work if damages seem likely to occur. In any event, the Contractor shall be solely responsible for all damages.

Service walks, fences, and other structures within the grading limits belonging to abutting property owners shall be removed and delivered to the abutting property when ordered by the Engineer. Any other material not required by the City shall become the property of the Contractor, who shall remove and dispose of such material at **their** own expense.

E. EARTH FILL

Earth taken from excavation shall be placed in embankment to the proper cross section as shown on the plans. Such filling shall be placed in layers not to exceed 8 inches in depth and shall be uniformly spread and compacted in such a manner and with such equipment as is deemed acceptable by the Engineer. All sod and other vegetable matter shall be stripped from the ground surface before any filling operations begin. Material used in the preparation of the subgrade shall consist of suitable sand, clay, earth, or gravel, and be free from animal, vegetable, or any other organic matter.

The Contractor shall grade the area around the sidewalk to the proper cross section for topsoil before paving. This work shall be done by hand methods or by use of equipment which, in the opinion of the Engineer, will not cause damage to the curb, walk, or trees. Backfill material placed between the curb and the lot line shall be free from roots, rocks, and construction debris, and shall be subject to the approval of the Engineer.

F. SUBGRADE

Before depositing stone, the Contractor shall shape the subgrade and roll it with a power roller weighing not less than 5 tons, or with an approved type of pneumatic-

tired roller, in such a manner that the subgrade will be compacted uniformly over its entire length and width and be at the proper elevation. Areas which are inaccessible to the roller shall be thoroughly compacted with a plate compactor. Use of plate compactors for utility frame adjustments is not permitted. The Contractor shall not do unnecessary hauling upon the finished subgrade. Any ruts or holes that develop during trucking operations in the subgrade or dense graded base shall be re-graded and compacted at the expense of the Contractor.

G. PROOF ROLL

The Contractor shall attempt to locate any soft or spongy areas in the subgrade using a method approved by the Engineer. Any soft or spongy areas in the subgrade must be removed and replaced with suitable material as directed by the Engineer. The Engineer may also choose to require a proof roll of the dense graded base before paving operations begin.

1. UNDERCUTTING

Undercutting of unstable subgrade or base must be authorized by the Engineer. The volume of material removed will be determined either by direct measurement or markings on the subgrade/base measured by the Engineer. The Contractor shall make undercuts approximately 1 foot deep unless instructed otherwise by the Engineer. The aggregate used to fill the undercuts shall be as directed by the Engineer.

H. PLACING DENSE GRADED BASE

The subgrade shall be checked and approved by the Engineer, crushed dense graded base (gradation 1-1/4 inch) shall be placed and compacted by means a power roller weighing not less than 5 tons, or with an approved type of pneumatic-tired roller, to lifts no thicker than 6 inches until the overall thickness indicated by the plans is reached. Compaction shall be to 95% of maximum density per section 305.3.2 of the State Specs. Soft or yielding spots must be reworked or removed, replaced, and rolled until the dense graded base is uniformly compacted over its entire length and width with no tendency to ravel.

No payment will be made for dense graded base quantities exceeding 125% of the final estimated quantities as computed by the City unless additional earth excavation has been approved by the Engineer. Dense graded base may be incidental to some items in the contract and will not be paid under the Dense Graded Base bid item, if present in the contract.

620.2 – CONCRETE CONSTRUCTION

A. GENERAL

Concrete construction shall conform to Sections 415 and 501 of the State Specs, except the portions which refer to field testing on the construction site, **and except all concrete provided shall be Class A or Grade C concrete with class C fly ash being the only acceptable Supplemental Cementitious Material (SCM).** The Engineer reserves the right to reject any concrete at the Contractor's expense that does not reasonably meet the mix specifications, or is not reasonably workable enough to be properly placed in areas including, but not limited to, corners and angles.

If required by the City, the Contractor shall provide "high-early strength" concrete at the rate listed in the Schedule of Fixed Extras for the specified pavement type unless it is a specific bid item.

During slip-form construction, the Contractor must avoid the hazard of leaving up, overnight, the lines which control the machine sensors ("string line").

The Contractor shall mark the ends of each portion of concrete work with a stamp that shall show "City of Wauwatosa", the year in which the work was placed, and the name of the contracting company that performed the work.

The Contractor will be required to remove all broken concrete, excess dirt, debris, and any other materials resulting from the work and dispose of it with **their** own resources at **the Contractors** own expense.

Tunneling under curbs and sidewalks is optional and at the expense of the Contractor, unless otherwise stated. However, should any subsequent cracking, subsidence, or any other indication of failure occur within the warranty period, the damaged section shall promptly be replaced by the Contractor at no additional cost to the Owner.

The Contractor particularly warrants and agrees, when signing this contract, that **they** will replace, within a year after **final acceptance** of the work under the contract, any pavement, curb, walk, stairs, or driveway that develops pop-outs, scaling, spalling of the surface, structural defects, or any other nonconforming defects as determined by the Engineer.

Quality Control (QC) field testing referenced in Part 7 of the State Specs for concrete is not required unless otherwise noted within Section 600 or Section 601 of these specifications. Voluntary QC field testing may be done at the Contractor's own discretion and own expense.

1. MATERIALS

The grade and class of all concrete used shall conform to **Grade A or Grade C** of the State Specs (**excluding all SCMs other than class C fly ash**) so a minimum

compressive strength of 3600 pounds per square inch is developed in 28 days of curing. Where the plans call for Special High Early Strength (SHES) Concrete Pavement, the contractor shall conform to the requirements of 416.2.5 of the State Specs. Other grades may be used with the written approval of the Engineer. The use of a water reducing admixture is subject to Section 501 of the State Specs. The Contractor shall provide a list of concrete mix product codes, admixture product information sheets, and their relative WisDOT concrete grades from the concrete supplier.

2. ADJUSTING UTILITY FRAMES

Concrete around utility frames or any other fixtures shall not be placed until such frames and fixtures have been accurately adjusted, properly secured, and set to the required alignment and grade by the Contractor.

For concrete paving, the practice of boxing out covers and then placing adjacent concrete promotes random cracking and will NOT be permitted. Whenever possible, the frames may be adjusted and set to grade on a full bed of mortar in advance of the paving operation or curb and gutter placement (except of asphalt pavement and asphalt resurfacing projects where the manhole frames shall only be adjusted after the lower layer(s) of hot mix asphalt pavements is completed). Otherwise frames shall be “wedged” high enough during concrete paving that the aggregates in the agitated concrete mix can move freely under the frame, and thus allow the frame to sit on solid concrete.

If the condition of the structure to be adjusted requires masonry repairs beyond 6 inches of vertical feet from the bottom of the frame, the additional repairs beyond this limit shall be paid per the relevant bid item, or if no bid item exists the Fixed Extra rate.

3. TIME OF HAULING READY MIXED CONCRETE

Concrete shall be discharged at the work site within 1-1/2 hours after the cement has been added to the water and/or the aggregates, except for high-early strength concrete mixes which shall be discharged within 45 minutes of water added to cement and SHES concrete shall be discharged per the requirements in 416.2.5 of the State Specs. The Engineer, at their discretion, may still choose to reject loads at the Contractor’s expense if the discharged concrete does not appear to reasonably meet the mix specifications, regardless of whether the allotted discharge time for that mix type has passed.

4. CURING COMPOUNDS

Liquid Membrane-Forming Curing Compounds shall conform to the requirements of Section 415.2.4 of the State Specs. Curing compounds shall be used on all concrete surface courses such as, but not limited to pavement, curbs and gutter, walks, and drives.

B. FORMS

Forms shall be used when concrete is not being poured against existing pavement. The construction of sidewalks without forms is prohibited. **The side pitch of sidewalks shall be ¼ inch per foot and shall slope toward the street unless otherwise noted or shown in the plans.**

The forms shall be clean, straight, of sufficient strength to resist springing out of shape, and an approved type of metal or wood extending the full depth of the concrete, and shall be equipped with fastening devices to prevent movement in any direction. **All foreign material shall be removed from forms that have been previously used.** Flexible forms of an approved type shall be used for all inside radii under 200 feet. Flexible face/outside forms shall be used on radii of less than 300 feet. When flange forms without a bar recess are used, the Contractor shall provide a metal parting strip for the reinforcing steel so that the steel will be fully exposed when the forms are removed, or drill in the rebar at their own expense when the concrete is hardened.

All rubble, broken concrete, and other debris shall be removed from the area between the curb and lot line before the curb forms are set.

The forms shall be set upon the prepared subgrade to proper line and grade and firmly staked in position. Areas which are inaccessible to a mechanical vibratory roller shall be compacted by using an approved mechanical compactor. Non-mechanical compaction methods will NOT be permitted. Before steel reinforcing or concrete is placed, the contact surfaces of the forms shall be cleaned and oiled.

The Contractor must continually have, in advance of the concrete pour, at least 200 linear feet of form setting, fine grading, and compacting completed for inspection.

For pavement **and sidewalk**, forms and form pins shall not be removed for at least 4 hours after the concrete is finished, unless approved by the Engineer. The removal of forms and form pins shall be at a time and in a manner which will not cause damage to the newly poured concrete.

Where finishing machinery is to ride on the forms, the Contractor shall use an approved type of "Road" form. The foundation under the forms shall be firm and cut true to grade so that the form, when set upon, will be firmly in contact for its whole length and at the desired grade. The material under the forms shall be mechanically tamped so no settlement or springing of forms under the finishing equipment occurs.

The Contractor shall, at their own expense, repair lighting systems which are damaged by their form pins. Refer to Section 605 of the City Specs for repair requirements.

C. JOINTS

The Contractor shall provide whatever assistance is requested by the Engineer to properly locate all joints. The location and spacing of contraction points shall be determined by both the Contractor and the Engineer. In the event that both cannot agree on the location of a joint, the decision of the Engineer shall be utilized.

The depth of joints must be 1/3 the thickness of the pavement. Joints in the curb section must be a minimum of 2 inches deep.

Contraction joints shall be cut in drive approaches as specified and shown on the plans or details, or as directed by the Engineer at a minimum depth of 1-3/4 inches.

The sawing of any contraction or longitudinal joints must be approved by the Engineer. Sawing expansion joints and joints in sidewalks is prohibited.

Any required tie bars shall be considered incidental to any concrete work

1. PAVEMENT

Transverse joints in concrete pavement are required at 10-15 foot intervals as directed by the Engineer, except as otherwise indicated. The Engineer may require joints to vary to match the center of a driveway, utility cover, or any other structure as they see fit. Curb joints must match pavement joints.

a. CONSTRUCTION JOINTS: Shall be constructed at the formed edges of all pavement slabs. Reinforcing bars, No. 4 bar x 30 inches long deformed bars shall be placed at 30 inch centers midway between the top and bottom of the slab. The ends of the rods shall be bent down or suitable chairs provided so that the main portion of the bar is parallel to the surface of the slab. The reinforcing bars shall be straightened after the forms are removed and before the adjacent slab is poured. Transverse construction joints with pavement thicknesses 8" or greater shall be doweled.

Construction joints shall be provided at the end of each day's pour or at locations where the interval of time between loads of concrete exceeds 1 hour. Construction joints shall be constructed only at regular planned joint locations.

b. CONTRACTION/TRANSVERSE JOINTS: All transverse joints shall be installed at right angles or radial to the centerline of the pavement unless otherwise shown in the plans or directed by the Engineer. Contraction joints shall be provided at approximately 10-15 foot intervals or as directed by the Engineer. The joint spacing and the decision concerning the location of sawed or formed contraction joints shall be entirely at the discretion of the Engineer. Pavement thicknesses 8" thick or greater shall be doweled.

Sawed contraction joints shall be provided to a depth of 1/3rd of the pavement thickness by using a blade that cuts approximately 1/8th of an inch in width. During the finishing sequence, hand cut joints shall be provided at a minimum of approximately 80 foot intervals. The length of time between the finishing of

the concrete and the sawing of joints shall not exceed 12 hours for transverse joints and 24 hours for longitudinal joints. "Soft-cut" or other methods for the construction of contraction joints shall be subject to the approval of the Engineer prior to their use.

c. LONGITUDINAL JOINTS: Reinforcing bars, No. 4 bars x 30 inches in length, shall be placed at 36 inch centers midway between the top and bottom of the slab during pouring. Longitudinal joints shall be constructed as and in the locations shown on the plans. Joints shall be true to line and perpendicular to the surface of the pavement. Longitudinal joints may consist of construction joints where new work joins work previously completed. All other longitudinal joints shall be constructed by sawing in accordance with the plans, or any method approved by the Engineer.

The equipment used in any sawing of joints shall meet the approval of the Engineer. The sawing shall be done as soon as practicable after the concrete has set sufficiently to preclude raveling during the sawing and before any cracking takes place in the concrete.

d. BASE PATCHING AND CONCRETE REPAIR AND REPLACEMENT:
Base Patching Construction shall conform to the State Specs 390.3 for concrete patching and as modified by these specifications. Base patching shall use grade A concrete, grade B concrete is not permitted. A minimum of 6 inches in depth of 1 ¼ inch base aggregate shall be placed prior to pouring the concrete base patch. Base aggregate shall be incidental to the base patching item(s) unless otherwise noted in the plans.

Base Patching shall be tied with reinforcing bars, No. 6 x 12 inches in length at 30 inch centers midway between the top and bottom of the slab, on all sides to the existing concrete. Transverse joints in base patching for pavement thicknesses 8 inches thick or greater shall be doweled at intermediate joints within the repair area. Required reinforcing bars and dowel bars shall be included within the costs of the Base Patching item(s).

Concrete Pavement Repair and Replacement shall conform to the State Specs 416.3.7 and as modified by these specifications. The existing base shall be removed and new 1 ¼ inch base aggregate a minimum of 6 inches in depth shall be placed unless otherwise noted in the plans or approved by the Engineer. Base aggregate shall be incidental to the Concrete Pavement Repair and Replacement item(s) unless otherwise noted in the plans.

Transverse joints in Concrete Pavement Repair and Replacement for pavement thicknesses 8 inches thick or greater shall be doweled and dowels shall be included in the costs of the Concrete Pavement Repair and Replacement item(s). Reinforcing bars, No. 6 bars x 12 inches in length, shall be placed at 30 inch centers midway between the top and bottom of the slab along longitudinal joints. Required reinforcing bars and dowel bars shall be included within the costs of the Concrete Pavement Repair and Replacement item(s).

2. CURB & GUTTER

When concrete curb and gutter abuts new concrete pavement, contraction joints shall be constructed coincident with pavement joints at approximately 10-15 foot intervals or as directed by the Engineer. Contraction joints abutting other pavement types shall be placed at approximately 10 foot intervals or as directed by the Engineer. Joints are required at the beginning and end of each radius. Trim ends of existing curbs to be joined to a vertical plane.

The contraction joint may be formed by placing a steel template 3/16th of an inch thick, 2 inches deep and cut to the cross section of curb and gutter, on the back form and flange form. At radii and where the height of the face varies, the Contractor may use 3/16th inch thick plates cut to the exact cross section of the full depth of the curb and gutter. In all cases, the finished joint shall be perpendicular or radial to the forms.

Backfilling behind curb and gutter is considered incidental to the work.

- a. TYPE B AGGREGATE SLURRY BACKFILL ALONG CURB FLANGE: When indicated in the plans to slurry backfill along the curb flange, the slurry backfill should conform to Section 6.43.9 of the Standard Specs, *with the addition of one bag of fly ash* per cubic yard. The mix shall be deposited in the trench directly from a concrete transit mix truck.

3. SIDEWALK

Joints shall be cut a minimum of 1-3/4 inches deep. Joints for sidewalks shall be cut at approximately 5 foot intervals unless directed otherwise by the Engineer.

4. EXPANSION JOINTS

Expansion joints of 1/2 inch thick material, i.e. "felt", shall be used at any location where sidewalks abut other buildings or pavements, e.g. driveways and curb heads, or any other location as directed by the Engineer. They shall also be placed approximately every 100 feet or as directed by the Engineer when pouring continuous, new sidewalk. Expansion joints in curbs shall conform to 601.3.6 of the State Specs. Unless otherwise directed by the Engineer, place expansion joints at 3 feet on either side of an inlet frame. The Engineer may further decide to have expansion joints placed at any spot and in any thickness where they see fit, and **at all locations the expansion material must be to the full depth of the cross section.**

Expansion joints are also required around any hydrant, power pole, light pole base, or structure next to which concrete is being poured, and at any other location as directed by the Engineer. Felted isolation box outs around applicable items above shall be 30" x 30" unless otherwise shown in the plans or directed by the engineer.

- a. MATERIAL: Joint material shall conform to 415.2.3 of the State Specs.

5. JOINT SEALING

- a. GENERAL: All joint sealers shall conform to current Wisconsin D.O.T. practice. Joint Sealing shall consist of cleaning the joint in preparation for sealing and sealing all contraction and expansion joints in the concrete pavement with a hot applied joint sealing material. The work shall conform to the plan details and as follows.
- b. MATERIALS: All joints shall be sealed with a hot applied joint sealant conforming to the Specification for Joint and Crack Sealants, Hot-Applied, for Concrete and Asphalt Pavements, ASTM Designation D6690, type II. A Certification of Compliance shall be furnished to the Engineer prior to application.

CONSTRUCTION: Joints shall not be sealed until they have been inspected and approved by the Engineer. All contraction and expansion joints in concrete pavement shall be sealed with a hot-poured sealer. All sawed longitudinal joints shall be sealed with a hot-poured sealer.

The operation of sealing shall be performed as soon as practicable upon elapse of the curing period and, in any event, prior to the time traffic of any kind uses the pavement **unless otherwise approved by the Engineer**. Application of the joint sealer shall be made when the joint surfaces are clean and dry.

1. Immediately before sealing the joint, thoroughly clean the joints of all laitance, curing compound, and other foreign material. Exposed joint faces shall be cleaned by sandblasting or water blasting with sufficient pressure to thoroughly and completely clean the joint. A multiple-pass technique shall be used until the surfaces are free of material that might prevent bonding. For the final cleaning immediately prior to installation of the sealer, the joints shall be blown clean with oil-free compressed air. The joint faces must be surface dry when sealant is applied.
2. The sealing compound shall be heated to the pouring temperature recommended by the manufacturer in an approved kettle or tank, constructed as a double boiler, with the space between the inner and outer shells filled with oil or other satisfactory heat transfer medium. The heating kettle shall be equipped with a mechanical agitator, positive temperature control, and an approved dial thermometer for checking temperatures of the compound. The heating kettle, if and when operated on concrete, shall be properly insulated against the radiation of heat to the concrete surface.
3. The sealing compound shall NOT be heated above the maximum safe heating temperature **as specified by the manufacturer**. Any material heated above the maximum safe heating temperature shall be discarded.

4. Pouring of joints shall be made when the sealing material is at the required temperature and, insofar as practicable, the sealing compound shall be maintained at a uniform temperature during pouring operations. Pouring shall not be permitted when the temperature of the sealing compound in the applicator, as it is applied to the joint, is more than 10° F below the recommended pouring temperature. Pouring of the molten sealer in the joint opening shall be done with such equipment that the sealer completely fills the joint opening **without overflowing on the adjoining surface and when finished** and, after shrinkage, the sealer is approximately flush with the adjoining surfaces. In the event satisfactory sealing of a joint is not accomplished in a single pouring, the sealing compound shall be placed in two pourings. At least one-half of the required amount shall be placed in the first pouring, and the second pouring shall follow the first as soon as practicable after the first pouring has attained maximum shrinkage, but not later than one hour after the first pouring.

D. CURB & GUTTER

Curb & gutter construction shall conform to Section 601 of the State Specs. The surface of curb and gutter construction shall be finished by troweling and brushing

All curb heads must be 7 inches thick and 6 inches high (to the gutter line), with a 24 inch wide gutter and 1-1/4 inches in the pan, **unless otherwise shown in the plan**. Refer to the "Concrete Curb and Gutter Detail" in the plans for more information.

One (1) inch expansion material shall be installed at 3' from the edges of inlets and catch basin castings. When abutting asphalt pavements, curb joints shall be 10-12 foot intervals, except as specifically noted in the plans and special provisions, or as directed by the Engineer. **One (1) inch expansion material is required at the end of all radius points at intersections or sharp curves in the street and at a maximum interval of 300'.**

Honeycombing occurring along the back of the curb and the flange face shall be pointed with mortar (1 part Portland Cement to three parts Fine Aggregate) after removal of the forms. All excess concrete behind the curb shall be removed before backfilling.

1. REINFORCING BARS

The curb and gutter section shall be tied to the **concrete pavement or concrete base** by reinforcing tie bars, with spacing no greater than 36 inches on center. Curbs shall be tied in at the pan only – no rebar shall be installed in the curb head. Parting strips shall be used when practicable or as directed by the Engineer. The Contractor may elect, at their own expense, to drill in tie bars after the concrete has hardened. The cost of reinforcement shall be included in the price for curb and gutter. **Tie bars between existing and proposed curbs shall be in the flange/gutter only and NOT in the curb head.**

2. CURB & GUTTER MACHINE

The Contractor may, with prior approval of the Engineer, elect to use a machine for placing, forming, and consolidating the curb and gutter. The machine must be of the tracked vehicular type rather than rubber tired. If a machine is used, extreme care shall be taken when inserting the steel tie bars required in the flange (only for areas where the flange abuts concrete pavement). Any deformations shall immediately be repaired to the satisfaction of the Engineer or the use of such machine shall be discontinued. The resulting curb and gutter shall be of such quality as to equal or exceed that produced by hand methods. Final finishing operations shall be the same as that for hand poured curb.

Before pouring the curb with the slip form machine, the following should be checked by the Contractor: the tracing area shall be uniformly graded so as not of produce undue stress on the self-leveling mechanisms, the machine must have an operational, calibrated variable slope control in order to vary the flange or widening pitch, and **the cross-section of the slip form machine shall be the cross-section called for on the plans**. All vibrators must be operational and the machine must be set at the correct line and grade. Adjustments to slump must be approved by the Engineer who also reserves the right to reject the use of the machine.

Curb and gutter machinery and/or machines which form integral curb and pavement shall not be utilized to construct curbs with a radius of 30 feet or less.

In the event that the Engineer directs the curb and gutter to be constructed integrally with pavement by approved machinery, the Contractor will not be required to install curb and gutter reinforcing bars. No adjustment in the unit price bid will be made for the addition or deletion of curb reinforcement bars.

Supports for the line and grade control line shall have a maximum spacing of 25 feet.

If machine methods are used for forming and finishing curb and gutter, the Contractor may saw contraction joints approximately 1/8th inch thick and 2 inches deep, cut to the cross section of the curb. The equipment used in sawing shall meet the approval of the Engineer. The sawing shall be done as soon as practicable after the concrete has set sufficiently to preclude raveling during the sawing and before any cracking takes place in the concrete.

E. SIDEWALK

Sidewalk construction shall conform to Section 602 of the State Specs. **Sidewalks shall be a minimum of 7 inches thick at alleys and driveways and 5 inches thick at all other locations unless otherwise noted in the plans or directed by the Engineer.**

The cross-slope of the walk shall be ¼ inch per foot (approximately 2%) unless otherwise directed or shown on the plans.

The detectible warning fields used in pedestrian ramps shall be **cast iron of a natural patina** finish unless otherwise directed by the Engineer. Warning fields with coatings of any kind are not allowed unless directed by the Engineer. Installation shall conform to the manufacturer's recommended procedures.

The surface of sidewalk construction shall be finished by troweling and brushing, and sidewalks shall be 5 feet wide unless otherwise noted or directed by the Engineer. The Contractor must provide compacted crushed aggregate when necessary to fill up to subgrade for walk construction. **Compacted crushed aggregate is** to be considered incidental to the work unless otherwise stated as a separate bid item. Expansion joints must be used where sidewalks abut any other pavement or as directed by the Engineer. All joints must be hand cut. Where sidewalk is being installed on a radius of less than 250 feet flexible forms shall be used.

Where non-continuous walk removal and replacement is encountered, the Contractor shall replace the walk sections within 4 business days after removal. In the case of walk abutting commercial properties such as hospitals, churches, businesses, schools, or as directed by the Engineer, the walk shall be replaced within 1 calendar day. Backfilling and cleanup at each work location shall be completed within 5 business days after the finishing operation. Extensions to these deadlines may be made with written approval of the Engineer. Requests to use temporary access must be submitted to and approved in writing by the Engineer. Temporary access shall be at the Contractor's expense unless otherwise explicitly noted in writing by the Engineer.

1. TREE ARCS

Where "half moon" tree arccs are required, roots shall be cut manually, using only hand tools, after the adjacent concrete slabs have been removed. Manual root cutting shall be performed along the line needed to accommodate the flexible form used to construct the tree arc. Non-manual means to cut roots shall not be permitted unless otherwise approved in writing by the Engineer.

Contractor shall make every effort to safeguard and preserve all trees and tree roots not within the limits of root removal specified and/or approved by the Engineer.

2. ROOTS OUTSIDE OF TREE ARCS

Tree roots at sidewalk slabs marked with a "T" not at tree arcs shall be cut by the contractor at six (6) inches outside of the sidewalk area using hand tools, a root cutting machine, or other engineer approved method. Machine root cutting must be completed prior to removing adjacent concrete slabs. Root cutting using hand tools may be done after the adjacent concrete slabs have been removed.

Machine cuts shall be made along the length of the slabs only where slabs are marked for removal with a "T" due to root damage. Root cutting before slab removal is not allowed at any other locations. Cuts shall be made perpendicular to the length of the root and shall be done in a manner so as not to splinter the wood. Cutting depth shall be nine (9) inches from the proposed sidewalk surface.

3. BRICK PAVERS

The paving block installation shall be rigid and shall not be displaced even when subjected to heavy loads. Paving Blocks shall be reset to match the existing pattern. They shall be sawcut as required to fit existing conditions and shall tightly abut all existing construction without gaps. Material for setting bed course and the joints between the pavers shall consist of a wet mixture of 1-part Portland cement to 10 parts mason sand. Where Paving Blocks abut existing curb, the finished surface shall be 1/2-inch above the top-of-curb.

Sealant shall be placed at all joints between paver block and water, gas, or other utility boxes. Sealant for joints around utility boxes shall be SikaFlex 1A, as manufactured by Sika Corp, Lyndhurst, NJ, 800-933-7452, or approved equal. Color shall be concrete gray unless otherwise specified or noted in the plans. Seal around all utility boxes with specified material in accordance with manufacturer's requirements.

Where there are existing gaps wider than 1/2 inch between blocks to be removed and reset or replaced, paver blocks shall be cut with a saw to provide the pieces necessary to fill in the gaps.

Bricks that are part of an adjacent driveway, sidewalk, carriage walk, or other feature shall be removed as necessary to complete the scope of work, salvaged and stored in a safe location and reinstalled within 5 days of the sidewalk being replaced even if these bricks are within the right-of-way. Reinstallation of privately owned sidewalk bricks shall match the existing condition of the sidewalk prior to the work taking place. Removal, salvaging, storing and reinstallation of bricks that are part of an adjacent driveway, sidewalk, carriage walk, or other feature shall be considered incidental to the contract.

4. CONCRETE STEPS

The existing concrete step shall be completely removed and new step formed and poured. Any sawcutting or concrete walk removal and replacement required behind the joint of the existing step will be paid for separately under the bid item for walk removal and replacement.

The dimensions of the new step shall match the existing one as closely as practicable, however the Engineer may change the final dimensions as they see fit. Any reinforcement for the step(s) required by the Engineer shall be considered incidental to the contract. No additional payments shall be made for any concrete required by a change in dimensions.

F. DRIVE APPROACHES

The drive approaches and drives shall be constructed so the width at the sidewalk edge is equal to the width of the private portion of the driveway, or as directed by the Engineer. The approaches and flares for approaches shall be placed as directed by the Engineer (typically 3 feet from the start of the flare to the start of the transition), and the transitions in the curb head from the bottom of the driveway to the end of the flare shall be 1 foot unless otherwise directed by the Engineer. The shape shall be as marked by the Engineer.

The Engineer may require moving replacement service walks and adjusting driveways. The Contractor shall leave curb openings for driveway approaches as indicated and as further directed by the Engineer. Approaches shall have expansion joints where they abut other pavements and sidewalk, unless otherwise directed by the Engineer.

All approaches, including at alleys, shall have a minimum of 7 inches of concrete and 6 inches of mechanically compacted crushed recycled aggregate unless otherwise noted or directed by the Engineer.

Backfilling and cleanup at each work location shall be completed within 5 business days after the finishing operation, **unless otherwise approved by the Engineer.**

G. PLACING CONCRETE

After all the form work has been completed and inspected, and before placing concrete, the forms shall be oiled, checked for correct line and grade, and the compacted base checked for correct elevation. All debris shall be removed from the pouring area. The **compacted base** shall then be sprinkled with sufficient water to thoroughly dampen it.

The concrete shall then be placed in as nearly a continuous operation as possible to the proper height, consolidated, and stuck-off flush with the top of the forms in a manner which the Engineer finds satisfactory. No concrete that has partially hardened or been contaminated by foreign material shall be deposited on the work, nor shall re-tempered concrete be used. The Engineer reserves the right to reject any nonconforming concrete at any time.

H. FINISHING

A metal, non-aluminum, straightedge must be used on the gutter lines along driveway openings. The curb and gutter crew must also be provided with templates or "gauges" in order to obtain the proper depth from the top of a back form to the top of the concrete along driveway openings. At said driveway openings, construction procedure must provide a smooth and uniform vertical plane along the back in order to receive the expansion joint material. The height of this back edge

shall be level with the flange edge of the curb unless otherwise directed by the Engineer.

Excessive troweling and watering will not be permitted. Surface applications to hasten hardening are prohibited. Patching will not be permitted except upon approval of the Engineer.

All concrete construction shall have applied approved curing compounds as stated in Section 415.2.4 of the State Specs, forming emulsions or emulsifiable concentrates for curing and protection of concrete surfaces, as soon as practicable after the surface water sheen has disappeared from the fresh concrete. Costs shall be included with the price of the concrete.

The Contractor shall make an impression of an arrowhead in the concrete curb to indicate the location of all new and existing street lighting conduit crossings, which shall be incidental, or they may elect to grind in equivalent arrows after the concrete has hardened. **Marking of all new and existing street lighting conduit crossings shall be incidental to the contract.**

The alignment of the curbs in existing streets must be matched in all locations. The proposed dimension at the sidewalk for each new concrete approach is indicated on the plan or marked in the field by the Engineer. All portions of **non-concrete** service walks necessarily disturbed for the curb construction must be salvaged and piled in such a manner as to protect them from damage during the work and shall be replaced in kind when work is complete, except concrete walks indicated by the Engineer for removal and new replacement. This work shall be incidental unless otherwise noted **in the plans or directed** by the Engineer.

The Contractor shall provide for a minimum of one finisher to remain on the project site after final finishing of all concrete until such time as said concrete has hardened sufficiently to resist surface scarring caused by footprints, handprints, or any other type of imprint, malicious or otherwise. An unreasonable amount of leaf imprints will be considered nonconforming. The finisher shall actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above. The cost for providing the finisher(s) and necessary equipment and materials shall be considered incidental to the contract unit price for each specific concrete item.

1. PAVEMENT

a. GENERAL

The sequence of operations shall be strike-off, consolidation, screeding, float finishing, straight-edging, and final surface finish. The machine method of strike-off and consolidation shall be employed, except for those areas where the slab width is variable for strips or lanes of pavement uniformly less than 10 feet in width, and other areas where the use of machine methods is impractical, as determined by the Engineer who will then allow hand methods. All finishing equipment and tools shall be cleaned immediately after use and

kept clean so as to maintain such equipment in satisfactory condition during use. The Contractor shall provide whatever assistance is requested by the Engineer to check the adjustment and operating condition of the machine.

b. MACHINE STRIKE-OFF

1. After the concrete is deposited, the surface of the pavement shall be struck off by the use of an approved type of finishing machine. The screeds shall be adjusted to the grades indicated on the plans. The surface of the pavement shall be struck off a sufficient number of times to form a consolidated mass of concrete with a mortar surface at finished grade.
2. Immediately after the last pass of the finishing machine, the surface of the pavement shall be floated by the use of an approved mechanically operated float or a "pan" attached to the finishing machine. Each type of float finisher shall be in first class mechanical condition, adjusted to conform to required crown and grade and shall be capable of producing the required surface finish. The width of the "pan" type of float shall be less than the width to be paved.
3. The finishing of the pavement shall comply with the provisions of "Hand Strike-Off" as described in section "c" below. Unless otherwise specified, provide a final finish with an Engineer approved artificial turf drag or equal. Use a drag made of molded polyethylene with synthetic turf blades approximately 0.85 inches long containing approximately 7200 individual blades per square foot. Use a seamless strip of artificial turf approximately full pavement width and of sufficient size that during the finishing operation approximately 2 feet of turf, measured parallel to the pavement centerline, is in contact with the pavement surface. Pull the drag with an Engineer approved device that allows control of the time and rate of texturing. Operate the drag in the longitudinal direction to produce a finish acceptable to the Engineer. Weight the drag as necessary to maintain contact with the pavement. Keep each drag clean and free of particles of hardened concrete. Replace the drag as necessary to produce the desired finish.
4. All edges of each slab, including the edges of the joints, shall be floated by hand and finished with an edging tool with a ½ inch radius. At the proper time, depending upon the rate of set of the concrete, the contraction joints shall be re-cut and the finishing of the joints completed. The completed pavement surface, including areas at expansion and contraction joints, shall not deviate more than 1/8th of an inch from the edge of a 10 foot testing device.
5. SLIP FORM MACHINE STRIKE-OFF: Before constructing pavement with slip form machines, the following shall be checked by the Engineer and Contractor: the tracking area shall be uniformly graded so as not to produce undue stress on the self-leveling mechanisms. The machine must

have an operational, calibrated, variable slope control. The machine must have the ability to produce a cross section complying with the required crown sections shown on the plans or in the special provisions.

All vibrators must be in good operating condition. Slumped edges must be immediately corrected by the use of forms. In all cases, the use of the slip form machine shall produce a continuous cross section as shown on the plans. The use of hand methods in conjunction with the slip form equipment may be allowed only with the permission of the Engineer. The Engineer reserves the right to reject the use of this machine.

c. HAND STRIKE-OFF

1. After the concrete is deposited, the surface of the pavement shall be struck off with an approved type of screed that is cut to the required form of the pavement surface. A mechanical vibrator shall be attached to the screed. The surface of the pavement shall be struck off a sufficient number of times to form a consolidated mass of concrete with a mortar surface at finished grade.
2. The entire surface shall then be floated by means of a long handled float until all surface irregularities are corrected. The pavement must then be checked by pulling a 10 foot metal, **non-aluminum**, straight edge over the surface. For this purpose, the Contractor shall furnish and use an accurate 10 foot straight edge with a handle at least 3 feet longer than one-half the width of the slab. The straight edge shall then be held in successive positions parallel to the street centerline in contact with the surface and the whole area gone over from one side of the slab to the other as necessary. Advance along the street in successive stages of not more than one-half the length of the straight edge. Any depressions found shall be immediately filled with fresh concrete, struck off, consolidated, and refinished. Projections also shall be struck off and finished. The straight edge testing and refloating shall continue until the entire surface is found to be free from observable deviations or irregularities and the slab has the required grade and contour. Following this, the pavement shall be finished by dragging a seamless strip of artificial turf or a broom over the full width of the pour. This operation shall be done at such times and in such a manner that will produce a surface texture satisfactory to the Engineer.
3. All edges of each slab, including the edges of the joints, shall be floated by hand and finished with an edging tool with $\frac{1}{2}$ inch radius. At the proper time, depending upon the rate of set of the concrete, the contraction joints shall be re-cut and the finishing of the joint completed. The completed pavement surface, including areas at expansion and contraction joints, shall not deviate more than $\frac{1}{8}$ th of an inch from the edge of 10 foot testing device.

4. CONCRETE BASE

- a. After depositing the concrete, the surface of the pavement shall be struck off with an approved type of screed that is cut to the required form of the pavement surface. A mechanical vibrator shall be attached to the screed unless otherwise allowed by the Engineer. The surface of the pavement shall be struck off a sufficient number of times to form a consolidated mass of concrete with a mortar surface at the depth below finished grade as indicated on the plans. A finishing machine will not be required unless stipulated in the Special Provisions.
- b. The entire surface shall then be floated by means of a long handled float until all the surface irregularities are corrected..

2. SIDEWALK

After deposing the concrete, the surface of the walk shall be struck off at finished grade with an approved type of screed. A mechanical vibrator shall be attached to the screed if directed by the Engineer.

The surface shall then be worked with wood or metal, **non-aluminum**, floats until a uniform mortar surface is obtained. A hand float operated in a circular motion shall be the final floating operation. Immediately after the water glaze or sheen has disappeared, the surface troweling shall be performed with a rectangular steel trowel operated by hand in a circular motion. The application of neat cement to the surface is prohibited.

As soon as the concrete will retain its shape, the joints shall be re-cut with the jointer and the edges of all slabs rounded with an edging tool having $\frac{1}{4}$ inch radius. After all troweling and edging is completed and the concrete has attained a partial set, the surface shall be brushed with a damp, soft bristle brush.

3. CURB & GUTTER

Immediately after depositing and spading the concrete, the exposed surfaces shall be floated with wooden **or metal, non-aluminum**, floats, troweled, and edged. As soon as the concrete has sufficiently set, the face forms shall be removed and separator plates withdrawn. All exposed surfaces shall be checked with a **metal, non-aluminum**, straight edge 10 feet in length. All deviations shall be immediately corrected. The edges along the back of curb, flange, and the joints shall be finished with suitable tools.

The radii at the top and bottom of the curb face shall be rounded with special tools that fit the cross section. All exposed surfaces shall then be troweled smooth.

As soon as partial set has taken place and the water glaze or sheen has disappeared, the surface shall be brushed lightly with a damp, soft bristle brush.

I. CURING TIME AND CLEANUP

Before opening the street to vehicular traffic, the Contractor shall clean the area of all forms, lumber, dirt, and other debris to the satisfaction of the Engineer.

The newly placed concrete shall be protected from carrying vehicular traffic until sufficient curing time has elapsed to permit traffic to use the area, i.e. when the concrete reaches 3000 psi or more in compressive strength. If new concrete is opened to traffic before the results of cylinder breaks are delivered, and the strength is found to be below 3000 psi on the day traffic was first allowed, to be determined by the Engineer, the City may require the Contractor to credit the project all or part of the cost for the concrete work since such pavement would be nonconforming. In severe cases the City may direct the Contractor to remove and replace the pavement at **the Contractors** own expense.

When a concrete saw has been utilized to cut joints, the Contractor will be required to clean the area of all forms, lumber, dirt, and other debris, and shall use equipment that will provide a flushing force capable of removing all residual materials of the sawing operation.

The Contractor shall restore in an acceptable manner all property, both public and private, which has been damaged in the prosecution of the work, and shall remove all surplus and discarded materials, rubbish, and temporary structures from the right-of-way and any adjacent properties to the satisfaction of the Engineer. The Contractor shall restore all work completed under other previous contracts which has been damaged by **the Contractors** operations, in a manner in conformance with the specifications for the item(s) involved.

All cleanup, repair, and restoration work shall be considered incidental unless otherwise indicated as separate bid items in the proposal.

J. CONCRETE WORK DURING COLD WEATHER

Concrete shall be placed in accordance with Section 415 of the State Specs. The Engineer, at **their** discretion, may order the concrete work to cease, irrespective of air temperature, if it is anticipated that the temperature and/or wind chill will drop below freezing.

The Contractor shall remove and replace at **their** expense any concrete damaged by frost or freezing, irrespective of the fact that the Contractor may have had the approval of the Engineer to pour said concrete.

When concreting during cold weather, the water and the aggregates in the concrete mixture may be heated. When specifically allowed by the Engineer, the Contractor may use magnesium free calcium chloride as an admixture in the concrete at **their** own expense. The maximum quantity to be used shall not exceed 1% of the cement content of the mix.

Other methods of protection from freezing may be used with the written approval of the Engineer.

All costs associated with abiding by weather specifications for all materials shall be at the expense of the Contractor, unless specifically called out as a base bid item. The Engineer shall not be required to grant overall schedule, phasing schedule, or milestone schedule extensions due to weather, but the Contractor may still submit a written request for such extensions, within reason.

K. MUDJACKING

1. GENERAL

The Contractor shall furnish all equipment, tools, and other apparatus necessary for the proper construction and acceptable completion of the work specified under this contract. The equipment shall be approved by the Engineer prior to starting the work, and maintained in good working condition by the Contractor during the progress of the work.

All necessary hoses, valves, valve manifolds, and positive cut-off and bypass provisions to control pressure and volume, pressure gauges with gauge protectors, expanding packers for positive seal grout injection, wood plugs, hole washing tools, and drill steel and bits shall be provided by the Contractor.

Prior to jacking any pavement, the slabs shall be closely examined for any existing cracks. This investigation shall be performed by the Contractor and the Engineer. Both parties shall agree regarding the existing condition of the pavement, and existing cracks shall be noted or marked.

The Contractor shall replace or repair any slabs broken due to jacking as determined by the Engineer. The Engineer may require the removal and replacement of the entire slab or a portion of the slab damaged by radial or transverse cracks.

2. WATER SUPPLY

If water tanks are not an integral part of the grout delivery machine, the Contractor shall supply water for delivery to the work site. See section 605.1.02A. Use of City Water for more information.

3. INJECTION HOLES & DRILLING

An air compressor and rock drill or other device capable of drilling the grout injection holes through the sidewalk slab and base material shall be provided. The equipment shall be in good condition. The holes shall be vertical and round. Down-feed pressure whether by hand or mechanical means shall not exceed 200 psi. Holes shall be drilled to prevent breakout at the bottom of the pavement.

Grout injection holes shall be drilled in a pattern approved by the Engineer. Holes shall not be larger than 2 inches in diameter, drilled vertically to a depth sufficient to penetrate through any chemically stabilized base, but not more than 3 inches into the subgrade. Holes shall be drilled so that breakout shall not occur at the bottom of the slab.

Subject to the Engineer's approval, holes may be washed or air blown to create a small cavity to allow the initial spread of grout.

After jacking has been completed at any one hole, the packer shall be removed and the hole temporarily plugged immediately with a tapered wooden plug. The temporary wooden plugs shall not be removed until the grout has set sufficiently so that back pressure will not force it through the hole. Each hole shall be permanently sealed flush with the pavement surface with a fast setting sand/cement or other patch material approved by the Engineer. The patch material shall have a minimum thickness of 3 inches.

4. WEATHER LIMITATIONS

Pavement mudjacking shall not be performed when the ambient temperature at the bottom of the pavement slab is less than 40° F, or when the subgrade or subbase is frozen.

5. GROUT MIXTURE

At least 2 weeks before the start of mudjacking operations, the Contractor shall submit the grout mix design to the Engineer for approval. Submit a mix design for each type of grout or blended material including a complete list of ingredients, admixtures, and set time.

6. JACKING

An expanding rubber packer or other approved device providing a positive seal and connected to the discharge hose on the grout plant shall be lowered into the holes. The discharge end of the packer or hose shall not extend below the lower surface of the concrete pavement. The Contractor shall pump in a pattern and in the amount required to raise the pavement to within 1/4 inch of final grade. Grade tolerances shown in this section shall be applicable to transverse grades as well as longitudinal grades. Continuous pressures to 200 psi will be permitted. Pressures to 300 psi will be allowed only for short periods. In the event the pavement is bonded to the subgrade, brief pressure rises (10 seconds or less) to 600 psi will be allowed. **Loss of grout through cracks, joints, other injection holes, or from back pressure in the hose or in the shoulder area will not be tolerated.** Grout held in the mixer or in the injection pump or hose for more than 1 hour after mixing shall not be used for jacking.

The slabs shall not be raised more than 1/4 inch when pumping in any one hole at any time. No part of the slab shall lead any other part of the slab or any

adjacent slab more than 1/4 inch at any time. The entire slab and all adjacent slabs shall be kept on the same plane at all times, within the 1/4 inch tolerance. The Contractor shall make observations to assure that when pumping from one hole, the grout flows to adjacent holes to ensure that all voids are filled. The Contractor may cut a slab to prevent breakage when it is bound against an adjoining slab. If the temperature is 80° F, or higher during the jacking operation, the slabs shall be sufficiently moistened to prevent expansion of the slabs.

Upon completion of jacking operations, slabs within the work area shall present an even grade at each joint and shall not vary from the final elevations by more than 1/4 inch. If slabs are found that are lower than the specified tolerance from the final grade, these slabs shall be further jacked until the tolerance is met. Should any over-jacking be greater than 1/4 inch the Engineer has the option to require removal and replacement of the pavement. These repairs shall be accomplished at no additional cost to the City.

The Contractor shall not permit pedestrian traffic on the pavement slab until the grout has set for a minimum of 24 hours.

7. ACCEPTANCE OF WORK

Prior to acceptance, the Contractor shall remove loose concrete, joint filler, or grout spilled on the surface or shoulder. Waste construction material shall be removed and the surrounding areas shall be left in a neat, orderly condition by the Contractor prior to opening to traffic or final acceptance.

L. TESTING

The Engineer may, at any time, perform **one or a combination of** concrete tests including, but not limited to, strength, air content, **slump**, and temperature as they see fit. The Engineer may also perform plant inspections and source material testing in accordance with the State Specs. The Contractor is free to perform their own testing at their own expense whenever they choose.

Should the Engineer perform testing but the Contractor chooses not to test on their own, the Contractor waives their right to dispute any testing results, except in cases where gross negligence of acceptable industry methods was documented. **The Contractor is solely responsible to cast strength cylinders for their use to determine the permissible timing to reopen concrete pavements, approaches, and sidewalk to use that they determine necessary and/or to meet specific contract requirements.**

M. PAYMENT

Payment adjustments for any pavement items, including but not limited to streets, alleys, walks, and drives, may be made in accordance with the table shown below, at the discretion of the Engineer:

Deficiency in Thickness Determined by Cores (in.)	Proportional Part of Bid Price Allowed
0.00 to 0.25	100%
0.26 to 0.35	80%
0.36 to 0.45	72%
0.46 to 0.55	68%
0.56 to 0.75	57%
0.76 to 1.00	50%

Areas of pavement determined to be deficient in thickness by more than 1 inch shall be removed and replaced by the Contractor at **their** expense with concrete pavement of specified plan thickness. The Engineer may permit the deficient pavement to remain in place, in which case the value of the nonconforming area will be deducted from monies owed to the Contractor.

City Verification cylinders will be at a minimum taken as follows by HTCP or ACI certified technicians:

Class I Concrete, as defined by State Specs, will have (3) cylinders made for testing at least once per 800 CY of concrete placed or at minimum of once daily.

Class II Concrete, as defined by State Specs, will have (3) cylinders made for testing at least once per 400 CY of concrete placed.

The City will have a certified testing lab test the cylinders for compressive strength. Payment adjustments for any concrete items, including but not limited to streets, alleys, walks, and drives, may be made in accordance with the table shown below, at the discretion of the Engineer, for the full amount of concrete placed between City Verification Cylinders:

Deficiency in Average Strength Determined by Cast Cylinders	Proportional Part of Bid Price Allowed
3600 PSI or Greater	100%
3400 – 3599 PSI	95%
3000 – 3399 PSI	90%
2500 – 2999 PSI	80%
Less than 2500 PSI	Remove & Replace

The Contractor, at their own cost, may elect to take cylinders at the same or increased frequency for their own quality control purposes.

620.3 – ASPHALT CONSTRUCTION

This work shall consist of the construction of plant mixed hot mix asphalt (HMA) pavement on the approved prepared foundation, base/binder course, or existing surface in accordance with the specifications and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the plans or established by the Engineer.

Asphalt construction shall conform to the requirements of Sections 450, 455, 460, and 465 of the State Specs.

Bituminous pavement shall not be applied to wet material, or when the material below is frozen, or when the atmospheric temperature is lower than 35°F and falling (35°F and rising is acceptable). Asphalt and Portland cement concrete shall not be placed during rainfall, snow storms, or any imminent weather that might adversely affect the construction. The Engineer will determine when surfaces and material are dry enough to proceed with construction.

Tack coat shall not be applied when the surface temperature is less than 40° F. Exceptions will be permitted only in special cases and only with prior written approval of the Engineer.

All sweeping, cleaning and preparation of the base/binder surface for topping must be completed prior to the paving crew arriving on the site.

A. GENERAL

When the surface has cooled to a temperature of 140° F or less, the edges of longitudinal joints shall be painted with hot asphalt cement, or heated to the point of softening with an infrared joint heater, before work is resumed.

The finishing machines shall lap previously laid HMA material a minimum of 3 inches and the material left sufficiently high to allow for compaction. The longitudinal joints in each layer shall be offset from the previous layer by a minimum of 6 inches.

Placing of the asphalt mixtures shall be as continuous as possible. The width of paving passes shall be adjusted so the locations of longitudinal joints do not coincide for successive passes. However, whatever the width of a pass, the action of the spreader on the mat must be uniform throughout the width of the mat.

All milled butt joints, in drives where there is no existing joint, are to be sawed, prior to milling.

No asphalt mixtures shall be laid when the air temperature is below 35° F unless permitted by the Engineer. Binder mixture shall be spread at a temperature between 225° F and 325° F, and the surface mixture at a temperature between 250° F and 340° F.

The use of hand tampers or other non-mechanical compaction methods is prohibited. The Contractor shall protect all sections of the newly compacted mixture from traffic until they have been cooled and hardened to the satisfaction of the Engineer.

1. MATERIALS

The materials, equipment, and methods used to produce an HMA pavement shall, unless otherwise directed in these specifications, conform to the requirements of sections 450, 455, 460, and 465 of the State Specs. All asphalt used for this contract shall have the grade PG58-28 unless given written direction by the Engineer **or otherwise specified**.

Bidders shall submit a statement setting forth a source of all aggregates and asphalt materials to be used. All materials must be secured from sources which in the past have produced satisfactory asphalt paving mixtures in the vicinity of Wauwatosa and the source of materials shall be adequate for this project.

In the State Specs, *Upper Layer* and *Lower Layer* are synonymous with surface course and binder course respectively.

- a. **RECYCLED PAVEMENT**: The Contractor may, at their option, use recycled asphalt pavement. The bituminous base or base/binder course mixtures may contain a combined maximum of 35% (25% combined maximum for surface course mixtures) of fractionated reclaimed asphaltic pavement (FRAP) and reclaimed asphaltic pavement (RAP). The City Engineer reserves the right to approve the source and actual quantity of the reclaimed asphalt pavement to be used. Recycled asphaltic shingles (RAS) are not permitted.

If the project requires the Contractor to mill or grind off existing pavement, the milled pavement or grindings shall become the property of Contractor and must be removed at the Contractors expense.

Where sewer or water construction takes place on streets which are to be repaved in the same construction season, binder material may be used for the surface course but only within the proposed paving limits **as approved by the Engineer**.

B. ADJUSTING UTILITY FRAMES

The Contractor shall adjust to finished grade all catch basins and City manhole frames. The masonry mortar and concrete bricks shall comply with the requirements of section 519 of the State Specs. Utility frame adjustments may include rebuilding block or brick as designated on the plans, or as determined by the Engineer.

The Contractor shall remove the existing catch basin or manhole frame, adjust the top of the existing masonry structure, and reinstall the frame.

Adjustment on manhole frames in asphalt pavement to finished grade shall only be done after the lower layer of hot mix asphalt pavement is completed on asphalt pavement and asphalt resurfacing projects. The lower layer of hot mix asphalt pavement shall be removed only after a vertical edge has been sawed in a box around the frame. The removal and sawing of any lower layers shall be incidental to the work. Backfilling around the frames after adjustment shall be done with compacted fill as specified for the pavement base, and compacted asphalt base/binder material, at Contractor's expense.

The area of asphalt removed around the frame shall be large enough to fully accommodate compaction by a self-propelled pneumatic roller completely within the patched area. **The use of plate compactors will not be permitted for compacting the base aggregate dense and lower layer of HMA around manholes.**

If only one layer of asphalt is to be laid, then the adjustment of catch basin and manhole frames shall be done before the upper layer is laid.

While performing the masonry work involved in making adjustments, the Contractor should provide the means to intercept dropped materials before they reach the bottom of the structure.

1. SURFACE REQUIREMENTS

The Contractor shall set the frames, grates, and lids accurately so the complete installation is at the correct elevation required to fit the adjoining surfaces. The frames shall be set in pavement areas so that they comply with the following surface requirements.

Place a 6 foot straightedge over the centerline of each frame parallel to the direction of traffic at the completion of the paving. Make a measurement at each side of the frame and average the two measurements. If this average is greater than 5/8 inch, reset the frame to the correct plane and elevation. If this average is 5/8 inch or less but greater than 3/8 inch, the City will allow the frame to remain in place but shall pay only 50% of the contract unit price for adjusting catch basin or manhole frames. If the frame is higher than the adjacent pavement, then make the two measurements at each end of the straightedge and average them.

The Engineer in the field is permitted to direct adjustment measurements to be taken at different locations and/or with different reference points wherever they deem necessary e.g. if a frame is close to the edge of the curb flange.

C. ADJUSTING WATER VALVE BOXES

The Contractor shall furnish all labor and equipment necessary to adjust all water valve boxes within the street right-of-way within the actual work limits. This work requires the boxes to be placed at finished grade and be operational.

In asphaltic pavement, all valve boxes shall be set to finished grade after any binder courses and prior to installation of the surface course.

After the pavement is installed, if the City Water Department determines the valve is inoperable due to displacement or faulty adjusting or lack of protection, the Contractor will be required to perform all work necessary to correct the condition with materials, and make the valve operational at **the Contractor's** own expense within 5 days of notification by the City.

D. QUALITY CONTROL

The cost of furnishing a quality control program and providing the tests and reports as specified, including density testing, shall be considered incidental to the pavement bid item.

The Contractor shall provide and maintain a quality control program. A quality control program is defined as all activities, including mix design, process control inspection, sampling and testing, and necessary process adjustments related to producing and placing HMA pavement conforming to the specifications.

The testing shall include density testing of in-place HMA pavement with the use of nuclear density gauges. Section 460 of the State Specs shall be modified by these specifications to require the Contractor to test for nuclear density a minimum of every 300 feet. The Contractor shall perform HMA pavement density testing with nuclear gauges operated by a Nuclear Technician I who has been certified by the Highway Technician Certification Program. The Contractor shall furnish nuclear gauges from the State of Wisconsin's **most current** "List of Approved Nuclear Density Gauges".

The Contractor shall select the test site, station, and offset distance randomly as specified in the State of Wisconsin Construction & Materials Manual. When requested, the Contractor shall provide the Engineer with the original data sheet for each lot within 24 hours of testing completion for that lot. A lot represents 750 tons of a mixture placed within a single layer for each location and target maximum density category.

The Contractor shall not re-roll compacted mixtures with deficient density test results or operate continuously below the specified minimum density. The Contractor shall stop production, identify the source of the problem, and make corrections to produce work meeting specification requirements.

The Engineer may at any time request that a sample of HMA be taken from the field or plant by the Contractor at the Contractor's expense, or perform a plant inspection.

E. CONTRACTOR ASPHALTIC MIXTURE DESIGN

For each course, the Contractor shall submit, for the Engineer's review, an asphaltic mix design meeting all necessary criteria. The asphaltic mix design shall consist of

aggregate gradations, aggregate blend percentages, Job Mix Formula (JMF), recommended asphalt content, recommended plant mix temperature range, and shall be signed by a Certified Asphaltic Technician III. The design shall be conducted according to procedures in the latest version of the Department's Test Method 1559, Standard Method of Asphaltic Mix Design. The Contractor will run tests on the quality of the aggregates, review the asphaltic mixture design and issue a report. The asphaltic mixture design shall be in effect until modified, in writing, by the Engineer.

The submitted mix design report must be approved by the Engineer or **their** authorized testing laboratory before paving can begin.

F. SAMPLES

For the purpose of mix design verification, the Contractor shall supply aggregate samples (upon request only), representative of the average gradation of the job materials, along with the complete Contractor Asphaltic Mix Design, to the City at least 14 calendar days prior to use in the work. No aggregate shall be used in the production of mixtures without prior approval of the Engineer.

The Engineer may at any time request that a sample of HMA be taken from the field or plant by the Contractor at the Contractor's expense, or perform a plant inspection.

G. PREPARATION OF BASE

The surface of the base shall be clean, dry, and free of foreign material before paving commences. If the HMA is being placed in multiple lifts, each lift shall be clean, dry, and free of foreign material before applying tack coat for the next lift. The binder and surface course mixtures shall be laid only upon a base which is dry, and only when weather conditions are suitable as determined by the Engineer.

When directed by the Engineer, all breakups, depressions, or any other distressed or unsatisfactory areas of the existing foundation to be paved will be repaired, and the surface cleaned, prior to placement of the binder and/or surface course. The cost of preparing the foundation to be paved, repairing the old existing base or pavement, and prime or tack coats are incidental to the pavement construction and should not be considered a separate item *unless so designated in the proposal*.

1. DENSE GRADED BASE

Prior to placing the lower layer, the Engineer may require that the dense graded base be proof-rolled with a fully loaded tandem-axle dump truck. Any soft, spongy, or otherwise unsuitable areas shall be removed as necessary and replaced with base aggregate dense, gradation 1-1/4 inch.

2. TACK COAT OF CONCRETE OR HMA PAVEMENT

Except when otherwise specifically provided by the contract or ordered by the Engineer, penetration tack coat shall be placed in a single application. Tack Coat shall conform to 455.2.5 of the State Specs. Surfaces shall be clean and dry before tack coat is applied.

After the binder or concrete base has been placed, as applicable, apply an asphalt tack coat at 0.05 to 0.07 gallons per square yard after dilution to the surface of concrete base or the binder course and to the edges of the existing pavement, and on any subsequent lifts of binder course. The Engineer may adjust the application rate based on surface conditions. Also tack coat manhole and inlet frames below grade.

The rate of application of asphaltic material shall be determined on the basis of the condition of the surface to be treated and the requirements to produce contemplated results and the amount per square yard to be applied will be specified by the Engineer. The asphaltic material shall not be applied at such a rate as will cause it to flow off the surface. The grade of emulsified asphalt and the time interval between application of tack and laying of HMA pavement shall also be entirely at the discretion of the Engineer.

In addition to the general application of a "tack" coat prior to laying the final surface, hand spraying of "tack" must be performed along all curb flanges and all transverse butt joints and feathered ends. The distributor truck must remain within 500 feet of the surfacing crew to avoid "tacking" too far ahead. The Contractor may be required to remove "tack" that may have been tracked, or carelessly sprayed, on concrete surfaces.

The Contractor shall apply tack coat as directed by the Engineer. Tack shall be considered **incidental** to paving unless noted as a separate bid item.

H. CONCRETE BASE PREPARATION

Concrete base shall conform to section 501 of the State Specs.

Prior to HMA pavement resurfacing, the surface of the existing concrete pavement shall be prepared as follows:

Existing asphaltic surface and all loose patching material or asphaltic patches which protrude above the existing concrete pavement shall be removed. This removal shall be accomplished by scraping of the pavement with the blade of a motor grader or other approved means.

Joint, crack, and pavement surface spalls exceeding 1-1/2 inches in width, with a depth of less than 4 inches, shall have all loose or deteriorated concrete removed to sound concrete. The void shall be vacuumed thoroughly clean. Any joint and crack repair over 4 inches deep will be removed and replaced and

paid under the respective items for concrete base patching. Tie bars must be used in any area where patches abut existing concrete.

The cleaned void shall be filled with HMA to the level of the pavement and compacted by hand operated vibratory compactors and/or motorized rollers approved by the Engineer. HMA shall be placed in lifts to insure complete compaction.

Alternate methods and materials may be used when approved by the Engineer in writing. Requests for use of alternate methods and materials must be submitted at least 2 weeks prior to the date of proposed use.

I. PAYMENT

Payment for the HMA pavement of various types as shown on the plans is full compensation for providing HMA mixture designs, quality control program, testing (including density testing), and for furnishing, preparing, hauling, mixing, placing, and compacting the mixture used in the upper layer, lower layer, and leveling courses, and for furnishing all materials including asphaltic materials.

HMA pavement shall be paid for at the contract unit price per ton (2,000 lbs), unless it is noted that payment is in square yards. Material must be weighed on a scale approved by the Engineer and weight tickets showing the gross, tare, and net weight of each load must be supplied to the Engineer or Inspector at the time of delivery. Payment will be made for the tons of material incorporated in the work. Such payment shall be the full pay for all equipment, material, and construction costs.

Tack coat shall be paid per gallon if it is included in the proposal as its own bid item. Otherwise it shall be incidental to the work.

SECTION 700 - CONTRACT

THIS contract made this _____ Day of _____, 20____ by and between _____ hereinafter called the "Contractor" and the City of Wauwatosa, Wisconsin, hereinafter called the "City".

WITNESSETH, that the Contractor and the City for the consideration stated herein, agree as follows:

ARTICLE I. SCOPE OF WORK The Contractor shall perform everything required to be performed and shall provide and furnish all labor, material and equipment for the work of _____

_____ all in strict accordance with the Plans and Specifications, including any or all addenda prepared by the City of Wauwatosa Engineering Services Division under the direction of the Director of Public Works, acting and in these contract documents referred to as the Director of Public Works, which plans and specifications are made a part of this contract in strict compliance with the Contractor's proposal and the other contract documents herein mentioned which are a part of this contract and the Contractor shall do everything required by this contract and the other contract documents constituting a part hereof.

ARTICLE II. THE CONTRACT PRICE In consideration of the completion of the work described herein and in fulfillment of all stipulations of this contract to the satisfaction and acceptance of the Director of Public Works and the City, the City shall pay and the Contractor further agrees to receive and accept payment based on the prices hereto attached, which prices shall agree with those in the accepted Contractor's proposal as filed with the City of Wauwatosa, Wisconsin on the _____ day of _____, 20____, as full compensation subject to the additions or deductions provided therein, in current funds.

ARTICLE III. COMPONENT PARTS OF THE CONTRACT This contract consists of the following component parts, all of which are as fully a part of this contract as if herein set out verbatim, if not attached as if hereto attached.

1. General Conditions (Section 500)
2. Advertisement for Bids (Section 100)
3. Instructions to Bidders (Section 200)
4. Contractor's Proposal (Section 300)
5. Wage Scale (Section 400)
6. Contract (Section 700)
7. Plans and Specifications (Section 600)
8. Bonds (Section 800)

In the event any provision in any of the above component parts of this contract conflicts with any provision in any other of the component parts, the provision in the component part first enumerated above shall govern over any component part which follows it numerically except as may otherwise be specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in four original counterparts the day and year first above written.

(SEAL)

Contractor

Address

Attest:

By _____

Title

Title

(SEAL)

CITY OF WAUWATOSA

Owner

Attest:

By _____

City Clerk

Mayor

City Clerk

Provision has been made to pay the liability that will accrue under this contract up to the original amount thereof as specified in the Common Council resolution authorizing the same. Liability in excess of the original amount of this contract may accrue only after additional endorsement hereon by the City Comptroller as to provision of funds therefor.

_____, 20 ____

City Comptroller

Approved as to form _____, 20 ____.

City Attorney

*CORPORATE CERTIFICATE

I, _____ certify that I am the _____
of the Corporation named as Contractor hereinabove; that _____
_____, who signed the foregoing contract on behalf of the
Contractor was then _____ of said Corporation; that
said contract was duly signed for and in behalf of said Corporation by authority of its
governing body, and is within the scope of its Corporate Powers.

Corporate Seal

* If the Contractor is a corporation, the above Corporate Certificate should be executed.

If the contract is signed by the secretary of the Corporation, the above certificate should be executed by some other officer of the Corporation, under the corporate seal. In lieu of the foregoing certificate, there may be attached to the contract copies of so much of the records of the Corporation as will show the official character and authority of the officers signing, duly certified by the secretary or assistant secretary under the corporate seal to be true copies.

The full name and business address of the Contractor should be inserted and the contract should be signed with his official signature. Please have the names of the signing party or parties typewritten or printed under all signatures to the contract.

If the contractor should be operating as a partnership, each partner should sign the contract. If the contract is not signed by each partner, there should be attached to the contract a duly authenticated power of attorney evidencing the signer's (signers') authority to sign such contract for and in behalf of the partnership.

If the contractor is an individual, the trade name (if the contractor is operating under a trade name) should be indicated in the contract and the contract should be signed by such individual. If signed by one other than the contractor, there should be attached to the contract a duly authenticated power-of-attorney evidencing the signer's authority to execute such contract for and in behalf of the Contractor.

CERTIFICATE OF INSURANCE

DATE (MM/DD/YYYY)

PRODUCER

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY

A

COMPANY

B

COMPANY

C

COMPANY

D

INSURED

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATION MAY BE ISSUED OR MAY PERTAIN, THE ISSUANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY				GENERAL AGGREGATE	\$
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OP AGG	\$
	<input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR				PERSONAL & ADV INJURY	\$
	<input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	\$
					FIRE DAMAGE (Any one fire)	\$
					MED EXP (Any one person)	\$
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	\$
	<input type="checkbox"/> ANY AUTO				BODILY INJURY (Per Person)	\$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per Accident)	\$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE	\$
	<input type="checkbox"/> HIRED AUTOS					
	<input type="checkbox"/> NON-OWNED AUTOS					
	GARAGE LIABILITY				AUTO ONLY-EA ACCIDENT	\$
	<input type="checkbox"/> ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	\$
					AGGREGATE	\$
	EXCESS LIABILITY				EACH OCCURRENCE	\$
	<input type="checkbox"/> UMBRELLA FORM				AGGREGATE	\$
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM					\$
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY LIMITS	\$
	THE PROPRIETOR/PARTNERS/EXECUTIVE OFFICERS ARE:				EACH ACCIDENT	\$
	<input type="checkbox"/> INCL <input type="checkbox"/> EXCL				DISEASE-POLICY LIMIT	\$
					DISEASE-EACH EMPLOYEE	\$
	OTHER					\$
						\$
						\$

DESCRIPTION OF OPERATIONS/LOCATION/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

City of Wauwatosa
7725 W. North Avenue
Wauwatosa, WI 53213

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL 10 DAYS WRITTEN NOTICE TO THE CITY OF WAUWATOSA.

AUTHORIZED REPRESENTATIVE:

CERTIFICATION OF COMPLIANCE WITH UNEMPLOYMENT INSURANCE AND
SOCIAL SECURITY ACT REQUIREMENTS

The Contractor hereby certifies that he has heretofore complied and will during the progress of the work, comply with the Wisconsin Unemployment Insurance Act and will hold the City harmless from any liability for benefits under such Act or Acts by reason of discontinuance by the Contractor of the employment of any person engaged by the Contractor upon the work. The Contractor also hereby certifies that he will during the progress of the work comply with the Federal Social Security Act and will hold the City harmless from any Social Security payments and provisions required by such Act respecting his or his subcontractors' employees.

Contractor Name

Contractor Signature

Date

Accepted by City:

City Attorney

Date

DEBARMENT CERTIFICATION FORM

The Contractor certifies that, neither the Contractor firm nor any owner, partner, director, officer, or principal of the Contractor, nor any person in a position with management responsibility or responsibility for the administration of federal funds:

(a) Is presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any federal or state department/agency;

(b) Has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or

(d) Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

If the contractor is "Actively" registered with SAMS (Service for Award Management), the following UEI (Unique Entity ID) number has been assigned: _____

The Contractor further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

Dated this _____ day of _____, 20 _____

By _____
Authorized Signature for Contractor

Printed Name and Title

Subscribed and sworn to before me this _____
_____, 20 _____

(Notary Signature)

Notary Public, State of _____

My Commission expires: _____

SECTION 800 - BONDS
BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT we _____

(hereinafter called the Principal) and _____

(hereinafter called the Surety), A corporation chartered and existing under the laws of the State of _____, with its principal offices in the City of _____, and authorized to do business in Wauwatosa, Wisconsin, in the full and just sum of _____ Dollars (\$_____) good and lawful money of the United States of America, to be paid upon demand of the CITY OF WAUWATOSA, WISCONSIN, to which payment, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators and assigns, jointly and severally and firmly by these presents.

WHEREAS, The Principal is about to submit, or has submitted to the City of Wauwatosa, Wisconsin, a proposal for furnishing all labor, materials, equipment and incidentals necessary to _____

_____ and;

WHEREAS, The Principal desires to file this bond in accordance with law, in lieu of a certified bidder's check otherwise required to accompany this proposal.

NOW, THEREFORE: The conditions of this obligation are such that if the Proposal is accepted, the Principal shall, within ten days after the date of receipt of a written notice of award of contract, execute a contract in accordance with the Proposal and upon the terms, conditions, and price(s) set forth therein, of the form and manner required by the City of Wauwatosa, Wisconsin and execute a sufficient and satisfactory contract performance bond payable to the City of Wauwatosa, Wisconsin, in an amount of One Hundred Percent (100%) of the total Contract price, in form and with security satisfactory to said City, then this obligation to be void; otherwise to be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid City, upon demand, the amount hereof in good and lawful money of the United States of American, not as a penalty but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this _____ day of _____ 20 ____.

Principal

By _____
(Seal)

Surety

(Seal)

Countersigned _____

Local Resident Producing Agent for _____

(Note: This form of bond must be executed after the award of the contract.)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That we, _____

_____ as Principal, and _____

as Surety, are held and firmly bound unto the City of Wauwatosa, 7725 W. North Avenue, Wauwatosa, Wisconsin 53213, hereinafter called the City, in the penal sum of _____

_____ Dollars, (\$ _____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Obligation is such, that whereas the principal has executed the attached Agreement dated _____

Now, Therefore, if the attached agreement is executed on behalf of the City and if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said agreement, and any and all duly authorized modifications of the said agreement that may hereafter be made and shall pay to each and every person or party entitled thereto all the claims for work or labor performed or materials furnished, including premiums for Worker's Compensation Insurance, for or in or about or under such agreement as provided in Section 779.14 and 779.15 of the Wisconsin Statutes, and any such authorized extension or modification of said agreement, then this obligation to be void, otherwise to remain in full force and virtue.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligations on this bond, it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement to the work or to the specifications.

IN WITNESS WHEREOF the above-bounden parties have executed this instrument, in _____ original counterparts, under their several seals this _____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In presence of:

(Individual Principal) (SEAL)

(Business Address)

(SEAL)

(Business Address)

Attest:

(Corporate Principal)

(Business Address)

By _____ (Affix
Corporate Seal)

Attest:

(Corporate Surety)

(Business Address)

By _____ (Affix
Corporate Seal)

Approved _____, 20 ____.

Mayor
(Title)

NOTE: The Bond must be approved and the approval dated in every case;
refer to Section 779.14 and 779.15 Wisconsin Statutes. The title
of the person signing must be indicated.

LABOR & MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____
(Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called Principal, and _____
(Here insert full name and address or legal title of surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the City of Wauwatosa, 7725 West North Avenue, Wauwatosa, Wisconsin 53213, as Obligee, hereinafter called City for the use and benefit of claimants as hereinbelow defined, in the amount of _____ Dollars (_____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____, 20 __, entered into a contract with City for _____

(Here insert full name, address and description of project)
in accordance with Drawings and Specifications prepared by _____

(Here insert full name and address or legal title of Director of Public Works)
which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor, material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use, in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above name Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the City, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, City or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased work on said Contract or after the expiration of one (1) year following the date of Substantial Completion of the Project, whichever is later, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the State in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this _____ day of _____, 20 ____.

_____	_____ (Principal)	_____ (Seal)
(Witness)	By _____	(Title)
_____	_____ (Surety)	_____ (Seal)
(Witness)	By _____	(Attorney-in-Fact)

AFFIDAVIT

(To be attached to all contracts)

STATE OF WISCONSIN)

)SS.

COUNTY)

_____ being first
duly sworn on oath deposes and says he is _____

_____ (Attorney-in-fact or agent) of

_____ (Bonding Company)

surety on the attached contract number _____ executed by

_____ (Contractor).

Affiant further deposes and says that no officer, official or employee of the
City of Wauwatosa has any interest directly or indirectly, or is receiving any
premium, commission fee or other thing of value on account of the same or
furnishing of the bond, undertaking or contract of indemnity, guaranty, or
suretyship in connection with the above mentioned contract.

Signed _____

Subscribed and sworn to before me

This _____ day of _____, A.D.; 20 ____.

_____ (Notary Public)

_____ County, Wisconsin

My Commission expires _____.