PROJECT MANUAL

August 4, 2023

GRAND RAPIDS PUBLIC SCHOOLS

Kensington School Demolition & Site restoration

8/4/2023

GRPS Facilities & Operations 900 Union Avenue NE Grand Rapids, MI 49503

Telephone (616) 819-3010

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INSTRUCTIONS TO BIDDERS

PROJECT: Kensington School Demolition

OWNER: Grand Rapids Public Schools

DESIGNJeffrey Parker Architects, LLC

PROFESSIONAL: 855 28th St. SE Grand Rapids MI 49508

Wayne Bickel- Project Architect

616-241-0090

wayneb@jp-architects.com

BID DATE: 8/18/2023

BID TIME: 2:00 pm

LOCATION FOR RECEIVING BIDS: Grand Rapids Public Schools

Service Building 900 Union Avenue NE Grand Rapids, MI 49503

SUMMARY OF WORK

Scope of Work: Complete demolition of the Kensington School located at 1031

Kensington Ave SW& surrounding paved areas. A new asphalt/bit pad for basketball and (3) basketball hoops to be provided and installed. The remaining affected areas to be restored as

grass/lawn.

OBTAINING BID DOCUMENTS

Bid Documents may be obtained after 1:00 p.m. on 8/4/2023 on the GRPS website at https://www.grps.org/request-for-proposals.

EXAMINATION

Plans may be examined at the Plan Room noted.

Builders Exchange 678 Front Avenue NW Suite 330 Grand Rapids, MI 49546 (616) 949-8650

e-mail: projects@grbx.com

PRE-BID CONFERENCE

A pre-bid conference will be held at:

ADDRESS: 1031 Kensington Ave SW, Grand

Rapids, MI 49503

DATE: 8/11/2023

TIME: 11:00 am

Attendance at the pre-bid conference is MANDATORY NOT MANDATORY (but encouraged) for those firms wishing to be considered for contract award.

CONTRACT DOCUMENTS

The Contract Documents, alone, detail the requirements of the project, and bids shall be based only on information presented there. Information obtained from others shall not affect the risks or obligations assumed the Constructor or relieve the Constructor from fulfilling any part of the contract.

SUBSTITUTIONS DURING THE BIDDING PERIOD

Unless otherwise noted, manufacturers and products not named in the specifications will be given consideration during the bidding period. Written approval from the Design Professional shall be obtained before a bidder uses substitute materials or manufacturers in its bid estimate. Bidders who base their bids on substitute materials or manufacturers without the Design Professional's written approval do so at their own risk.

Requests for substitutions during the bidding period must be received at least ten calendar days prior to bid date and may be emailed to the Design Professional at the email address noted above. The burden of showing the requested product is an adequate substitution for the specified product rests with the Bidder.

Substitution requests shall be reviewed by the Design Professional for quality and function, only. The Design Professional's approval of a substitution shall be communicated to all plan holders in an addendum. Bidders shall be responsible for any unforeseen costs that result from using an approved substitution.

TIME FOR COMPLETION

The Constructor shall be 100% complete with the work on or before 12/1/2023

Conditions precedent to establishing final completion include:

- A. Final inspection and approval by all relevant agencies.
- B. All punchlist items having been completed and accepted by Owner.
- C. Manufacturer inspection, approval, and warranties.

RESPONSIBILITY OF BIDDERS

Bidders shall study the bid documents and visit the site to satisfy themselves of all conditions before submitting a bid. It is incumbent upon bidders to reconcile any ambiguities, errors or omissions in the documents discovered during the bidding period.

It is the responsibility of each bidder to take those steps necessary to satisfy itself of the physical conditions under which the Work will be performed and the condition of the existing facilities, including those which may not be a part of the Work but could be affected by the performance of the Work, and (b) account for all general, local and prevailing conditions at or near the site that may in any manner affect the cost, schedule, progress or performance of the Work.

Questions about the bid documents, the intent of the design, or errors or omissions discovered in the documents shall be formally submitted to the Design Professional by email at the address given above not less than 10 calendar days prior to the date set for receipt of bids.

INSPECTION OF PREMISES

Call Ronnie Sluiter at Facilities & Operations at (616) 819-3010, prior to visiting site to arrange for entry into building if not the day of pre-bid conference.

COST CONSIDERATIONS

Unless specifically noted otherwise, bids shall include the following costs:

- 1. Permits, fees, notices, etc. for any federal, state or local government agency having jurisdiction over the project.
- 2. Inspections by building authorities and other government agencies.
- 3. Maintaining an environment in compliance with all rules, statutes, regulations and codes as applicable by law.
- 4. All equipment required to fully and safely complete the work. No equipment shall be furnished by or borrowed from Owner.
- Prevailing Wages □ DO, ☒ DO NOT apply to this Project.

BID SECURITY

Bid security shall be made payable to "Grand Rapids Public Schools" in the form of a certified or cashier's check or money order drawn upon a bank insured by an agency of the Federal government, or an executed Bid Bond on Consensus Docs form 262, AIA form A310, or a substantially similar form in the amount of 5% of the bid. A bid bond shall be executed with a surety authorized to do business in the State. A certified or cashier's check or money order submitted as bid security shall be held by the Owner until a contract has been executed.

BIDDING PROCEDURES

- Bids shall be submitted on the Bid Form included with this document. All blank spaces shall be printed in ink or typewritten. The Bid Form must be fully completed, signed and sealed. In the event of a discrepancy between the words and figures entered on the Bid Form, the written word shall take precedence over the numerical figures.
- 2. Three originals of the bid shall be submitted in a sealed, opaque envelope bearing the following information clearly marked on the outside:

Grand Rapids Public Schools Attn: Mr. Alex Smart, Executive Director of Facilities & Operations 900 Union Avenue NE Grand Rapids, MI 49503

Sealed bid for: Kensington School Demolition

The envelope shall also bear, on the outside, the name of the bidding firm, its address and telephone number.

- 3. Include bid security in the amount identified above.
- 4. Include a completed and signed Statement of Familial Relationship or the bid may be disqualified.
- 5. Include a completed and signed Iran Business Relationship Affidavit or the bid may be disqualified.
- 6. Include completed DTMB documents: Demographics, Statistics and Certification and Certification of a Michigan-based business. These forms are collected for statistical purposes and will not affect award of the contract.
- 7. Include a completed and signed Debarment and Suspension Certification.
- 8. Bids will be received until the time and date noted above at the location noted above, unless modified by Addendum, at which time all bids will be opened and read aloud.
- 9. Bids received after the date and time set for receipt of bids will not be considered or accepted.

10. Bids transmitted by fax, telephone, or electronic mail will not be accepted.

EVALUATION AND AWARD

- 1. The Owner may waive informalities or minor defects in a bid, may reject any and all bids, or may award to any bidder, regardless of bid amount, when the Owner deems it is in its best interest.
- 2. Any bid that is incomplete, obscure, or irregular may be rejected. Bids having erasures or corrections may be rejected. Bids that omit a price on any item in the Bid Form may be rejected. A bid for which unit prices are omitted or for which unit prices are, in the sole opinion of GRPS, unbalanced may be rejected. Any bid accompanied by insufficient or unacceptable bid surety may be rejected. A conditional or qualified bid may be rejected.
- The Owner reserves the right to reject all bids if all bids exceed its budget for contract award.
- 4. In accordance with GRPS Policy 3670, a bid discount will be applied to bids from bidders who qualify as a local vendor. Non-local bidders can obtain a bid discount based on the percentage of the bid price that will be awarded to local subcontractors. Certification of the amount to be subcontracted will be required prior to award. GRPS Policy 3670 is attached to the Bid Form.
- 5. Upon approval of contract award by the GRPS Board of Education, the Owner will issue a Notice of Award to that bidder making Grand Rapids Public Schools the most advantageous offer. Payment and performance bonds will be required if the award amount is \$50,000 or more. Once Notice of Award has been issued, the prospective contractor shall obtain and submit payment and performance bonds, if necessary, insurance in accordance with the terms of the construction contract and any additional documentation requested by the Owner.
- 6. Upon receipt of acceptable payment and performance bonds, if necessary, an insurance certificate showing coverages and limits in accordance with the contract, and any additional documentation requested by the Owner, a contract will be forwarded for signature.

INSTRUCTIONS SUBSEQUENT TO AWARD

- After executing a contract, the Owner will issue a Notice to Proceed identifying the agreed upon start date. No work shall be performed prior to the start date in the Notice to Proceed.
- 2. If requested, the Constructor will be furnished, free of charge, up to 3 copies of drawings and specifications, with Amendments current at time of award. Additional copies will be furnished, at cost, payable to the Owner.

BID FORM

Grand Rapids Public Schools

Kensington School Demolition 1031 Kensington Ave SW, Grand Rapids, MI 49503

DATE:	(Bidder to enter date)	
SUBMITTED BY:	(Bidder to enter name and address)	
Bidder's Full Nam	e:	
Address:		
City, State, Zip: _		
Telephone:	Fax:	
E-Mail:		
Bidders and the undersigned, h price of:	ed the place of the Work and all matters referred to in the Instructions e Contract Documents prepared by the Owner for the Project, we, the ereby offer to enter into a Contract to perform the Work for the lump su	
	, dollars (\$), in lawful money of th	ne
United States	of America.	
B. We have include Instructions to	ded bid security in the amount of 10% of the base bid as required by th Bidders.	e
	100% Payment and Performance Bonds included in the base bid is	
	rice includes all applicable taxes.	

ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for sixty days from the date on which bids were opened.
- B. If this bid is accepted by the Owner within the time period stated above, we will:
 - 1. Furnish the required bonds and insurance certificates within ten days of receipt of Notice of Award.
 - 2. Execute the Agreement immediately upon receipt from the Owner.
 - 3. Commence work within ten days after written Notice to Proceed.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds and insurance certificates, the bid security shall be forfeited as damages to Grand Rapids Public Schools by reason of our failure, limited in amount to the lesser of the face value of the bid security or the difference between this bid and the bid upon which a Contract is signed.
- D. In the event our bid is not accepted within the time stated above, the bid security shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders, unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

CONTRACT TIME

- A. If this Bid is accepted, we will complete all work on or before Completion Date. We understand that conditions precedent to achieving Final Completion include:
 - 1. Final inspection and approval by all relevant agencies.
 - 2. All punchlist items having been completed and accepted by Owner.
 - 3. Manufacturer inspection, approval, and warranties.
 - 4. Issuance of a Certificate of Occupancy, if necessary.

ΑD	DENDA			
A.	•	r effect on the cost of	g Addenda. These addenda the Work has been incorp	
	Addendum #	Dated	Addendum #	Dated
	Addendum #	Dated	Addendum #	Dated

BID FORM SUPPLEMENTS

- A. As requested by the Owner, the following additional information is included:
 - 1. Schedule of Unit Prices: Complete the Schedule of Unit Prices attached to the Bid Form.
- B. We agree to submit the following Supplements to Bid Forms within 48 hours after receipt of a Notice of Award:
 - Subcontractors: Include the names of all Subcontractors and the portions of the Work they will perform.

ACKNOWLEDGEMENTS

The Bidder acknowledges:

- a. That this bid was developed without any collusion, undertaking, or agreement, either directly or indirectly, with any other bidder or bidders to maintain the prices of indicated Work or prevent any other bidder or bidders from bidding the Work.
- b. That this bid shall not be withdrawn for a period of 60 calendar days after the date on which bids were opened.
- c. That all work will be complete on or before the Final Completion date(s) identified in the bid documents.
- d. That the following documents, identified in Instructions to Bidders, have been completed and are attached to this Bid Form:
 - 1. Bid Security in the amount of 10% of the base bid
 - 2. DTMB Demographics, Statistics and Certification
 - 3. DTMB Certification of a Michigan-Based Business
 - 4. Sworn Statement of Familial Relationship
 - 5. Iran Business Relationship Affidavit
 - 6. Debarment and Suspension Certification

SCHEDULE OF UNIT PRICES

Provide unit prices for the following line items which will be used to price changes to the Work after award:

Item	Description	Unit Price	Unit
1	Solar powered Parking lot fixture		

SIGNATURE(S)

The Corporate Seal of	was hereunto affixed
(Print the fu	ll name of your firm)
In the presence of:	
Signature	
	(Seal)
Printed Name and Title	
Date	
	n, add additional forms of execution for each int venture as above.
AUTHORIZED CORPORATE OFFICER	Signature
	Printed Name
	Title
	Date

GRPS Policy 3670 – Local Construction Contracting

The District provides a preference (bid discount) in construction contracts from local vendors, providing the quality and service are commensurate with the requirements set forth by the District as to satisfy the demands of the bid or proposal. Bids, or proposals when bids are not required, shall be accepted from non-local vendors in order to maintain a fair market price.

In determining the qualification for a Local Purchasing Preference for purposes of this policy, vendors must have obtained the Certification of a Michigan Based Business as determined by the Michigan Department of Technology, Management and Budget as well as meet one of the following criteria:

- a. For at least the last six months had its primary business operations located within the municipality boundaries of the City of Grand Rapids, Michigan (Grand Rapids).
- b. Be certified by the City of Grand Rapids, as a Micro-Local Business Enterprise and have its primary business operations within the municipality boundaries of the City of Grand Rapids.

A successful recipient of a contract and/or purchase order which has received a Local Purchasing Preference may be required to present proof of its status as a Michigan Based Business and documentation of its location within the City of Grand Rapids at any time upon request from an authorized District official. Failure to provide the requested information or failure to maintain business operations with the city of Grand Rapids for the duration of the contract will make the contract voidable at the District's discretion, and will result in disqualification from future consideration of a Local Purchasing Preference for a period of five years unless excused by the Superintendent or Designee.

Preference will be provided on the following basis:

- a. Constructor Participation: Grand Rapids Public Schools will provide up to a 5% bid discount to prime contractors and/or construction managers who satisfy the criteria set forth for consideration as a Local Vendor.
- b. Subcontractor Participation: Construction bids for non-local vendors may be discounted when a bidder on a Grand Rapids Public Schools' project voluntarily subcontracts with businesses meeting Local Vendor Criteria. Prime contractors and/or construction managers must submit affidavit(s) verifying Local Vendor subcontractor participation.
 - Prime contractors and/or construction managers must require Local Vendor certification documentation to be submitted by each subcontract bidder with their sealed bid. The District at its discretion can request additional documentation for verification of the qualification of any Local Vendor subcontractor participating in a construction project.
- c. The following is a schedule of discounted percentages based upon Local Vendor subcontractor participation achieved by the prime Constructor:

LVS	Subcontractor Participation	Discount Percentage
i.	1.00% - 2.5%	1.0%
ii.	2.51% - 5.0%	1.5%
iii.	5.01% - 7.5%	2.0%
iv.	7.51% - 10.0%	2.5%
v.	10.01% - 15.0%	3.0%
vi.	15.01% - 18.0%	4.0%
vii.	18.01% +	5.0%

d. Prime contractors and/or construction managers may not terminate an approved Local Vendor subcontractor working on a Grand Rapids Public Schools construction project, and then perform the work on the terminated subcontract with its own forces or those of another subcontractor, without prior written consent by the Grand Rapids Public Schools Executive Director of Facilities Planning and Management. If a Local Vendor subcontractor fails to complete its work on the contract for any reason, a prime Constructor/construction manager must notify the Grand Rapids Public Schools

Executive Director of Facilities Planning and Management and make good faith efforts to find another approved Local Vendor subcontractor to substitute for the original Local Vendor subcontractor. Utilizing good faith efforts, and to the extent reasonable, the prime Constructor/construction manager shall substitute an approved Local Vendor subcontractor to perform the same amount of work under the contract as the Local Vendor subcontractor that was terminated.

- e. Joint Venture Bidding: As an incentive to contractors engaging in activities that stimulate the growth and development of local, small emerging businesses as partners bidding as a joint venture, Grand Rapids Public School will apply up to a 5% bid discount for partnering with a qualified Local Vendor.
- f. The Bid Discounts outlined above may not exceed 5% or \$25,000 per bid, whichever is lower. Project bids from prime contractors and/or construction managers are considered a single bid for purposes of the Bid Discount consideration.

Grand Rapids Public Schools, Board of Education Members and employees are prohibited from having any financial interest or personal beneficial interest either directly or indirectly, in the award of any construction contracts, sub-contracts, or the recommendation/selection of any professional design service or construction manager, unless previously disclosed in writing to the Superintendent and approved in writing by the Superintendent.

This policy shall not apply to the extent that it would conflict with any provision of Michigan or federal law, regulation or constitution. The local preference shall not be applied to purchases of goods and services made with federal funds.

Policy Adopted: March 19, 2012

LEGAL Ref: MCL 380.1267; 380.1274

POLICY Ref: 3660 Bids and Ouotation Requirements

3690 Local Purchasing

1900 Contracts and Board Member Disclosure Obligations

GRPS Policy Rules 3670R – Local Construction Contracting Regulations

Qualification for Local Construction Contracting Preference

On an annual basis beginning with July 1st of each fiscal year, a vendor desiring to receive a bid discount for local construction contracting may submit appropriate documentation to the Executive Director of Facilities and Operations. Appropriate documentation shall include the following:

- a. Proof of completed submittal of Certification of a Michigan Based Business as determined by the Michigan Department of Technology, Management, and Budget
- b. Proof it has its primary business operations located within the municipality of the City of Grand Rapids, Michigan for the past six months (on company letterhead)

or

Proof it has been certified as a Micro-Local Business Enterprise by the City of Grand Rapids and has its primary business operations within the municipality boundaries of the City of Grand Rapids (on company letterhead)

A firm may submit the same documentation with its sealed bid or proposal in order to qualify for the bid discount.

Non-Local Vendors

A non-local vendor may qualify for a bid discount if it voluntarily subcontracts with businesses that meet the above documentation requirements. Proof of subcontractors meeting these requirements must be submitted with the sealed bid or proposal in order to qualify for the discount.

Local subcontractor participation will be based on the value of the local subcontracts as compared to the total bid or proposal

Joint Venture Bidding

Contractors that engage in joint venture bidding with a local, small emerging business partner will need to submit documentation of participation level with the sealed bid or proposal. The local bid discount will be based on the value of the local, small emerging business partner as compared to the total bid or proposal.

Eligibility/Verification

The District may request documentation at the conclusion of a project for which a bid discount was received verifying eligibility with local bid discount criteria. If it is determined that a vendor did not actually meet the terms of local preference, disqualification from future consideration of a local purchasing preference may occur for a period of five years unless excused by the Superintendent or Designee.

Dated: March 12, 2012

LEGAL REF: MCL 380.1267; 380.1274

3660- Bids and Quotation Requirements

3690- Local Purchasing

1900- Contracts and Board Member Disclosure Obligations



DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET

Facilities and Business Services Administration Design & Construction Division

DEMOGRAPHICS, STATISTICS AND CERTIFICATION

1. Company Name:	
2. Company Address:	
3. Principal Place of Business:	
<u>-</u>	
4. Year of Establishment:	
Woman-, Minority-, or	Veteran-Owned Small Business Representation (For Statistical Use Only)
DEFINITIONS:	
"Woman-owned business" means a su who are US citizens and who control	mall business that is at least 51% owned by a woman or women and operate the business.
The vendor represents that it	☐ IS ☐ IS NOT a woman-owned small business.
"Minority-owned business" means a sminorities who are US citizens and w	small business that is at least 51% owned by a minority or who control and operate the business.
The vendor represents that it	☐ IS ☐ IS NOT a minority-owned small business.
	☐ Arab-American ☐ Asian-American ☐ Hispanic ☐ Eskimo
"Qualified Disabled Veteran" means a veterans with a service-connected dis	a business entity that is 51% or more owned by one or more ability.
"Qualified Disabled" means a busines connected disability.	ss entity that is 51% or more owned by one or more with a service-
The vendor represents that it	☐ IS ☐ IS NOT qualified disabled.
who are U.S. citizens and who control	•
The vendor represents that it	\square IS \square IS NOT a veteran-owned small business.
The Constructor represents and warra provide supportive documentation up	nts that the company meets the above (when checked) and can on request.
Authorized Agent Name (print or type	
Authorized Agent Signature	



Certification of a Michigan-Based Business

(Information Required Prior to Contract Award for Application of State Preference/Reciprocity Provisions)

DEFINITION: To qualify as a Michigan business, vendor must have, during the 12 months immediately preceding this bid deadline, or if the business is newly established, for the period the business has been in existence, it has (check all that apply):

Bidde	er shall also indicate one of the following:					
	Bidder qualifies as a Michigan business (provide zip code):					
	Filed a Michigan single business tax return showing a portion or all of the income tax base allocated or apportioned to the State of Michigan pursuant to the Michigan Single Business Tax Act, 1975 PA 228, MCL ~208.1 – 208.145; or,					
	<u>Filed a Michigan income tax return</u> showing income generated in or attributed to the State of Michigan; or,					
	Withheld Michigan income tax form compensation paid to the bidder's owners and remitted that to the Department of Treasury; or	ne				
nomin	ify that I have personal knowledge of such filing or withholding, that it was more that all filing for the purpose of gaining the status of a Michigan business, and that it indicate icant business presence in the state, considering the size of the business and the nature of ties.	es a				
the ci	norize the Michigan Department of Treasury to verify that the business has or has not riteria for a Michigan business indicated above and to disclose the verifying information to ring agency.					
	Bidder does not qualify as a Michigan business (provide name of S	tate)				
	Principal place of business is outside the State of Michigan, however service/commodity provided by a location within the State of Michigan (provide zip code):					
Autho	orized Agent Name (print or type)					
Autho	orized Agent Signature					

SWORN STATEMENT OF FAMILIAL RELATIONSHIP

As required by Section 1267 of the Revised School Code – MCL 380.1267

STATE OF MICHIGAN COUNTY				
OF				
	, bei	ng duly swor	n, deposes and says:	
That to the following described project located Grand Rapids Public Schools:	(The in Kent County	e "Bidder") ha v, Michigan, v	as bid for an improvement which is owned by the	∍nt
Project Name:				
That the following is a statement of disclo- the owner or any employee of the Bidder Board of Education or Superintendent, as School Code, as amended.	and any memb	er of the Gra	and Rapids Public Scho	ools
 ☐ That there are no such famil 	ial relationship	s existing at	this time.	
	OR			
☐ That a familial relationship e	xists between			
an □ owner □ employee of the B		ne	relationship	
of		who is \Box	·	
☐ the Superintendent.		_ , WIIO IS 🗀	a member of the board	,
Deponent				
Subscribed and sworn to before me this _	day of		, 20	
<u>-</u>				
	Acting in:			
	My commis	ssion expires	: :	

IRAN BUSINESS RELATIONSHIP AFFIDAVIT

Effective April 1, 2013 all bids, proposals, and/or qualification statements received in the State of Michigan must comply with the "Iran Economic Sanctions Act". The following certification is to be signed and included at time of submittal.

Certification

Pursuant to the Michigan Iran Economic Sanctions Act, 2012 P.A. 517, by submitting a proposal or response, Respondent certifies, under civil penalty for false certification, that fully eligible to do so under law and that it is not an "Iran linked business" as the term is defined in the Act.				
Signature	Title			
Company	 Date			

DEBARMENT AND SUSPENSION CERTIFICATION

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- Does not have a proposed debarment pending; and,
- Is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification	ation, insert the exceptions in the following space:
	denial or award, but will be considered in ny exception noted above, indicate below to whom action.
	esult in criminal prosecution or administrative of the Bid. Signing this document on the signature ture of this Certification.
Signature	Title
Company	Date

REQUEST FOR INFORMATION

PROJECT:	
COMPANY:	
NAME:	
PHONE:	
E-MAIL:	
DATE:	
QUESTION: (Type or print in	box, or attach additional typed pages with this cover page.)

SEND TO: Marc Bennett

Marc Bennett
Grand Rapids Public Schools
E-Mail: Bennettm@grps.org

ATTACHMENT A

WORK DESCRIPTION DRAWINGS, SKETCHES, SPECIFICATIONS

*REFER TO JPA SPEC DOCUMENT & CIVIL DRAWINGS



8855 28th Street SE Grand Rapids, Michigan 49508

616-241-0090 Jp-architects.com

Specifications for:

Kensington School Demolition

1031 Kensington Ave sw Grand Rapids, Michigan 49503

JPA Project No. 23049 Issued: August 2, 2023

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DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS

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DIVISION 01 – GENERAL REQUIREMENTS

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DIVISION 02 - EXISTING CONDITIONS

02 4119 SELECTIVE DEMOLITION

DIVISION 11 – EQUIPMENT

11 0680 PLAY FIELD EQUIPMENT & STRUCTURES

DIVISION 31 – EARTHWORK

31 0000 GENERAL
 31 1000 SITE CLEARING
 31 2000 EARTH FILL
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 31 2300 EXCAVATION AND FILL

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 3300 SITE FURNISHINGS32 3900 MANUFACTURED SITE SPECIALTIES

00 6000 CONTRACT FORMS

The following publications of the American Institute of Architects are hereby incorporated in this Project Manual and shall be utilized in the administration of the work. References to these documents can be made at the Architect's office; or copies may be obtained from the American Institute of Architects, 1735 New York Avenue, NW, Washington, DC 20006 (800-365-2724).

Standard Form of Agreement between Owner and Construction Manager; AIA Document A101, 2017.

Change Order; AIA Document G701, 2017.

Application and Certificate for Payment; AIA Document, G702, 1992.

Continuation Sheet for Application and Certificate for Payment; G703, 1992.

Bid Bond; AIA Document A310, 2010

Performance Bond and Labor and Material Payment Bond; AIA Document A312, 2010.

Certificate of Substantial Completion; AIA Document G704, 2017.

00 6200 GENERAL CONDITIONS

The "General Conditions of the Contract for Construction," AIA Document A201-2017 edition, Articles 1 through 14 inclusive, is part of this Contract, and is incorporated herein as fully as if here set forth.

Copies of the A201-2017 are available for inspection at the office of the Architect, the Owner, and the preselected Biding Contractor.

00 6250 SUPPLEMENTARY CONDITIONS - DBB

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201, 2017 edition. Where a portion of the General Conditions shall remain in effect.

ARTICLE 9 PAYMENTS AND COMPLETION

Add the following clause 9.3.1.3 to 9.3.1

9.3.1.3 Until final payment, the Owner shall pay 90 percent of the amount due the General Contractor on the account of progress payments. For each Work category shown to be 60 percent or more complete in The Application for Payment, the Architect may, without reduction of previous retainage, certify any remaining progress payments for each Work category to be paid in full.

ARTICLE 11 INSURANCE AND BONDS

Add the following to Paragraph 11.1.5

Limits of Liability for Contractor's Insurance shall be:

- 1. Worker's compensation as required by statue and covering all Contractor and Subcontractor employees.
- 2. Employer's liability: \$1,000,000 each accident, disease
- 3. General Liability insurance (including Premises-Operations; Independent Contractors' Protective; Products and Completed Operations; Broad Form Property Damage) minimum \$3,000,000 including coverage for collapse, explosion, and underground hazards. Owner and Jeffrey Parker Architects shall be named as additional insured.
- 4. Vehicle liability: owned, non-owned, hired: minimum \$1,000,000 each person/accident/occurrence.
- 5. Theft of uninstalled building materials: on and off site and in transit. Contractor shall assume risk of damage/loss to its machinery, tools, and equipment and those of its employees and subcontractors.
- 6. Owner will provide Builder's Risk insurance.

END OF DIVISION	

DIVISION 01 – GENERAL REQUIREMENTS

01 0900	KEY TO ABBREVIATIONS		
AB	Anchor Bolt	CONST	Construction
A/C	Air Conditioning	CONT	Continuous
ACP	Acoustical Lay-in Panels	COORD	Coordinate
ACWP	Acoustical Wall Panel	CPL	Cement Plaster
ADD	Addendum	CPR	Copper
AFF	Above Finished Floor	CPT	Carpet
ALT	Alternate	CSMT	Casement
AHU	Air Handling Unit	CT	Ceramic Tile
AL	Aluminum	СТВ	Ceramic Tile Base
ANCH	Anchor; Anchorage	DET	Detail
ANOD	Anodized	DF	Drinking Fountain
ARCH	Architect	DH	Double-Hung
ASPH	Asphalt	DIA	Diameter
BD	Board	DIAG	Diagonal
BF	Barrier Free	DIM	Dimension
BIT	Bituminous	DIV	Division
BLDG	Building	DL	Dead Load
BLKG	Blocking	DN	Down
ВМ	Benchmark	DR	Door; Drive
BOT	Bottom	DS	Downspout; Door Switch
BRG	Bearing	DW	Dishwasher
BRK	Brick	DWG	Drawing
BSMT	Basement	EA	Each
BULL	Bulletin	EAG	Exhaust Air Grille
СВ	Catch Basin	EAR	Exhaust Air Register
CF	Cubic Foot	EF	Exhaust Fan
CFM	Cubic Feet Per Minute	ELEC	Electrical; Electric
CG	Corner Guard	EL	Elevation
CJ	Control Joint	ELEV	Elevator
CLG	Ceiling	EMER	Emergency
CLR	Clear; Clearance	EQ	Equal
CMU	Concrete Masonry Unit	EQUIP	Equipment
CO	Cleanout	EWC	Electric Water Cooler
COL	Column	EX	Existing
CONC	Concrete	EXP	Exposed Structure

FB	Face Brick	M	Meter
FD	Floor Drain	MAX	Maximum
FE	Fire Extinguisher	MC	Mechanical Contractor
FEC	Fire Extinguisher Cabinet	MECH	Mechanic; Mechanical
FF	Finished Floor	MFR	Manufacturer
FIN	Finish; Finished	МН	Manhole
FLR	Floor; Flooring	MIN	Minimum
FND	Foundation	MISC	Miscellaneous
FT	Foot; Feet	MO	Masonry Opening
FTG	Footing	MR	Marble
FURN	Furnish; Furnished	MRB	Marble Base
G	Gas	MTD	Mounted
GA	Gauge	NIC	Not In Contract
GAL	Gallon	NOM	Nominal
GALV	Galvanized	NR	Noise Reduction
GC	General Contract;	NRC	Noise Reduction Coefficient
	General Contractor	NTS	Not To Scale
GCMU	Glazed Concrete Masonry Unit	OC	On Center
GL	Glass; Glazing	OD	Outside Diameter
GLB	Glazed Brick	ОН	Overhead
GYP	Gypsum Drywall	OPG	Opening
GPPL	Gypsum Plaster	OPP	Opposite
НВ	Hose Bib	PCC	Precast Concrete
HM	Hollow Metal	PL	Property Line; Plate
HOR	Horizontal	PLAM	Plastic Laminate
HT	Height	PLAS	Plaster
HVAC	Heating/Ventilation/Air Conditioning	PNT	Paint
HWD	Hardwood	PPB	Prefabricated
ID	Inside Diameter	PREFIN	Prefinished
INV	Invert	PRELIM	Preliminary
JB	Junction Box	PSF	Pounds Per Square Foot
KIT	Kitchen	PSI	Pounds Per Square Inch
LAV	Lavatory	PT	Point
LH	Left Hand	PTD	Paper Towel Dispenser
LL	Live Load	PTDR	Paper Towel Dispenser Receptor
LLH	Long Leg, Horizontal	PTR	Paper Towel Receptor
LLV	Long Leg, Vertical	PWD	Plywood
LP	Light Pole	PWR	Power
LTG	Lighting	QT	Quarry Tile

GRPS- Kensington School Demolition

QTB Quarry Tile Base TOS Top of Steel RA Return Air TOW Top of Wall

RAD Radius TPD Toilet Paper Dispenser

RB Rubber Base TPTN Toilet Partition

RBT Rubber Tile TYP Typical

RD Roof Drain; Road T&G Tongue & Grooved
REF Reference VB Vinyl Base; Valve Box
REFR Refrigerator VCT Vinyl Composition Tile

REV Revise; Revision VERT Vertical

RM Room VF Vinyl Fabric

RO Rough Opening VWC Vinyl Wall Covering

ROW Right-Of-Way W/ With

RTU Rooftop Unit WB Wood Base
SB Soil Boring WC Water Closet

SCHED Schedule WD Wood

SD Storm Drain WDP Wood Parquet Floor

SF Square Foot; Square Feet WDW Window
SIM Similar WG Wire Glass
SL Slate WH Wall Hydrant

SLR Sealer W/O Without

SPEC Specification WP Waterproof; Waterproofing;

SQ Square Weatherproof; Wood Paneling

SS Stainless Steel; Service Sink WPT Working Point

STD Standard WS Water Stop; Waste Stack;

STL Steel Window Sensor

STOR Storage WSCT Wainscot
STR Structural WT Weight

T Tread; Thermostat WW Wood-Paneled Wainscot

TE Top Elevation WWF Welded Wi

TEL Telephone

01 1000 SUMMARY

PART 1 GENERAL

1.01 Summary of Work

A. Work Covered by Contract Documents

1. The Contractor shall provide all material, labor, and equipment necessary to complete the Work of this contract described by the construction documents for the **Kensington School Demolition dated August 4, 2023,** as modified, except as otherwise herein specifically indicated as "by others"; "not in contract"; "by Owner"; or "Owner-provided"; Contractor shall coordinate the work with all such work by others or by Owner, and shall cooperate fully in the scheduling, submittal review, and execution of all such work.

2. Project Summary

Project to Include the removal of existing school building, shut off, removal & capping of all utilities, & the restoration of the demolition area into open green space as shown in the documents. This includes a new asphalt/bituminous pad for basketball with equipment, & hydro seeding for a lawn. Project shall include maintenance of new lawn for (1) year after seeding to ensure proper establishment. Project shall include all abatement work that may be required on site.

1.02 Work Restrictions

A. Use of Site and Premises

1. The Contractor's use of the site shall be confined to the immediate construction site indicated as within limits of contract. Areas on the premises may be utilized for construction personnel parking and for material and equipment storage, and location of temporary offices, (if any).

01 2000 PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 Contingency Allowances

- A. Included in the proposal and contract, a stipulated amount of 10% of overall bid. The contingency is to be used for "risk management"-unpredictable changes of the work which includes unforeseen site items, coordination of construction documents and construction. All uses of Contingency shall be shared with Owner. Any remaining Contingency at the end of the project will be credited back to Owner.
- B. Contractor costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in change orders authorizing expenditure of funds from this allowance.

1.02 Value Analysis/Voluntary Alternates

A. The Architect and the Owner welcome Contractor initiated voluntary alternates at the time of bidding which offer increased value and/or reduced cost to the Owner while maintaining the design intent and level of quality indicated by the construction documents. Voluntary alternates selected by the Owner after the Architect's evaluation will be incorporated in the contract documents by post-bid Addendum.

1.03 Contract Modification Procedures

A. After award, the Contract may only be modified by Change Order. A Change Order may be initiated by the Contractor or by the Architect on the Owner's behalf, and will be prepared by the Architect. Change Orders may be initiated only by issuance of an Architect's Request for Quotation ("Bulletin") or by written claim of the Contractor in response to direction received in the form of a written Request for Interpretation (RFI). Verbal direction in the absence of written documentation shall not be used by the Contractor as the basis of a claim for additional cost or time of completion extension.

1.04 Payment Procedures

A. Progress Payments

 The Contractor shall request progress payments under the contract by submittal of completion, certified AIA Document G702. Payment requests shall be submitted monthly on a date mutually agreed upon by the Construction Manager and Architect.

B. Retainage

1. A retainage of 10 percent of the application amount shall be held by the Owner until certification of final payment. A reduction of the retainage amount may be requested by the Contractor at the point of 60 percent of completion of the project.

C. Waivers

1. Partial and full unconditional waivers of lien from all trade contractors and material suppliers, duly signed and notarized, will be required for previously released funds before issuance of a current progress payment, in addition to the Contractors sworn affidavit.

01 3000 ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 Management and Coordination

A. Preconstruction Meeting

1. A preconstruction meeting including the Contractor, the Architect, the Owner's representative, and all trade contractors will be held prior to mobilization on site for the purpose of coordinating on-site activities. Topics will include review of site and building access issues, parking, staging areas, fencing and security, and cleanup. The Contractor will issue written minutes.

B. Project Progress Meetings

 A project progress meeting including the Contractor, the Architect, the Owner's representative, and all trade contractors active on site during the current and coming month, will be held monthly or bi weekly depending on onsite activities and progress. The purpose of the meeting is to review progress to date, review outstanding Requests for Interpretation, Requests for Proposal, and submittals. Contractor will issue written minutes.

C. Full Time Supervision

1. The Contractor's superintendent shall be present on site full time during the course of the work.

D. Project Management Software

1. Use of Procore project management software or Owner approved equivalent is required

1.02 Construction Schedule

A. Submittal and Intent

 Prior to submittal of the first Application for Payment, the Contractor shall submit a proposed construction schedule for approval by the Architect and Owner. The proposed construction schedule shall indicate the sequencing of construction activities and completion dates in adequate detail to allow evaluation of the percentage of completion of the work.

B. Schedule format and minimum requirements

- 1. Format: Gantt bar chart 11 inch x 17 inch or CPM/Pert 11 inch x length required, or equivalent acceptable to Owner and Architect.
- Required return date of each trade contractor's required submittals.
- 3. Mobilization, commence work, and completion dates for all phases.
- 4. Each portion of continuous work on site by each trade contractor.
- Contractor's progress payment submittal dates.
- 6. Contract date of final completion.

C. Administration of Schedule

1. <u>Submit updated schedule with each progress payment application</u>. Indicate current date and note portions of work behind/ahead of schedule. Take appropriate action to recover time on behind schedule elements.

D. Contract Schedule Requirements

 Construction shall commence upon Owner's issuance of Notice to Proceed and shall be completed within the calendar days submitted on the bid form (or from an agreed upon time frame).

1.03 Submittals

A. General

Submit shop drawings, product data, installation requirements, and samples, for each particular
product and portion of the Work when so required in the respective sections of the Specifications.
Submit 1 digital copy of all required shop drawings and product data, and two physical or color
samples where required. Submittals when not required will be returned as "not reviewed".

General Contractor to review all shop drawings prior to submitting then to the Architect.

B. Non-specified Products

1. <u>Submit only specified products which include products approved by addendum</u>. Submittals of non-specified products will be returned as "not reviewed". Substitutions will be reviewed only as specifically set forth in Section 01 6000 and in the General Conditions.

C. Contractor Certificate

1. Where specifically indicated, a notarized original certificate signed by the Contractor and material supplier or subcontractor, indicating that the product furnished meets or exceeds all requirements of the specification, will be acceptable in lieu of required product data.

01 3529 Health, Safety, and Emergency Response Procedures

GENERAL

- 1. Any emergency event must be communicated to the GRPS project manager.
- 2. Clarify communication sequence, project manager will notify principals, etc
- 3. Communication to Project manager re: job site emergencies involving 911.
- 4. Notify GRPS security and project manager re: incidents of theft, damage, or vandalism, etc.

01 3553 Background Checks

GENERAL

1. All personnel shall meet the requirements of the current GRPS Board of Education policies regarding background checks. It is the responsibility of the Contractor to verify the current policies and to notify the Project Manager of any questions or concerns. Policies may be found at grps.org.

01 4000 QUALITY REQUIREMENTS

PART 1 GENERAL

- 1.01 Regulatory Requirements
 - A. Comply with the requirements of all officials having jurisdiction, which include but are not limited to the following:
 - 1. Zoning Regulations: City of Grand Rapids Planning Office.
 - 2. Storm Water Erosion and Sedimentation Regulations: State of Michigan Dept. of Environmental Quality.
 - 3. Energy Code: ASHRAE Standard 90.1-2013 with Amendments
 - 4. Building/Structural Code: 2015 Michigan Building Code
 - 5. Accessibility Requirements: Michigan Barrier Free Rules.
 - 6. Fire Code: 2015 Michigan Building Code.
 - 7. Plumbing Code: 2015 International Plumbing Code w/ Michigan Amendments.
 - 8. Mechanical Code: 2015 International Mechanical Code
 - 9. Electrical Code: National Electrical Code, 2017.
 - 10. Health Regulations: Michigan Health Dept. Rules; County Environmental Health Dept.

1.02 Quality Assurance

A. Qualifications

- Unless otherwise specified in the individual sections, parties to the construction shall have the following minimum qualifications and experience:
 - Fabricator Qualifications: 5 years experience in satisfactory performance of similar work; qualified to interpret, apply, and certify compliance with the requirements of the specifications.
 - b. Installer Qualifications: Lead site installer shall have 3 years experience in satisfactory performance of similar work and shall be licensed where required by law. Certification and training by manufacturer where specified.
 - c. Manufacturer Qualifications: 5 years experience in satisfactory production of similar work.
 - d. Manufacturer's Field Services: Technical representative shall have 3 years experience in satisfactory performance of similar work, with certification and/or training by manufacturer.
 - e. Supplier Qualifications: Approved by manufacturer; capable of adequately preparing submittals as required for review; of demonstrated financial standing to satisfactorily supply product as required for completion of work.
 - Testing Agency Qualifications: As specifically qualified and certified by building code and officials having jurisdiction.

1.03 Quality Control

A. Contractor's Field Quality Control

- Contractor is responsible for ongoing field quality control for all work performed under the
 contract. Quality control effort shall include but not be limited to routine daily observation and
 inspection of trade work to ensure compliance with the standards of the contract documents,
 direction for the removal and replacement of non-complying and otherwise poor quality work, and
 documentation through photographs and other means that concealed work has been properly
 installed in accordance with the requirements of the contract documents.
- 2. Documentation of quality control effort, including photographs of concealed work, shall be made available to the Architect for evaluation during the Architect's site observations.
- Contractor shall ensure and certify that work rejected by the Contractor and/or the Architect is not included in an Application for Payment until such time as the work has been corrected to the satisfaction of the Architect.

B. Source Quality Control

 Contractor shall coordinate inspections as specified and as required by officials having jurisdiction. Source quality control work shall include code requirements for special structural inspections of fabricator operations.

C. Testing and Inspection Services

- Unless otherwise indicated, the Owner shall secure and pay for on-site and source testing and
 inspection services in accordance with code requirements and the requirements of this
 specification. Contractor shall coordinate all testing and inspection activities and shall not proceed
 with any portion of the work prior to completion of required testing and inspection.
- 2. The cost of uncovering untested or uninspected concealed work, and the cost of repeat testing for work rejected due to failure of testing, shall be borne by the Contractor.
- 3. Inspections
 - a. As required by Building Official
- 4. Reports
 - a. The Contractor will maintain and forward all reports for inspections and special inspections to the Architect and Owner or Owners Agent.

D. Testing Laboratory Services

1. Contractor shall assist the Owner's Testing and Inspection service in coordinating laboratory testing of materials as required by code and by this specification. Unless otherwise noted, Owner shall pay for testing laboratory services. The cost of repeat testing for work rejected due to failure of testing, shall be borne by the Contractor.

01 5000 TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 Temporary Utilities

A. Fire Protection

1. Provide portable temporary fire suppression equipment throughout construction site per NFPA and as additionally required by officials having jurisdiction.

B. Electrical

Contractor may use sites available power until such time that it is shut off & capped.

C. Lighting

1. Contractor shall provide lighting adequate for performance of the work and as required to maintain safety. Contractor shall provide yard light for security.

D. Water

1. Use Owner's existing system until such time it is disconnected

1.02 Construction Facilities

A. Construction Sanitary Facilities

1. The Contractor shall provide and maintain temporary sanitary facilities for use by all project personnel.

1.03 Vehicular Access and Parking

A. Coordinate delivery access and contractor's parking to areas indicated and as directed by the Owner. Prevent construction traffic and parking on paved and unpaved areas outside of the contract limits. Repair damage to paved and unpaved areas resulting from construction traffic.

1.04 Temporary Barriers and Enclosures

A. Fences

1. Provide vinyl safety fence to completely separate construction operations and staging areas from casual public access.

B. Tree and Plant Protection

- 1. Protect lawn and plant material in areas to remain undisturbed. Provide vinyl safety fence barrier to separate disturbed from undisturbed areas. Repair damaged plant materials and planted areas to original condition.
- 2. Remove, store for replanting, and replant plant material indicated.
- 3. Do not operate or park vehicles or store equipment or materials within 10 feet of the outside of the drip line of any trees to remain.
- 4. Special Root Protection: Provide vinyl safety fence surround and min. 6 inch deep mulch over protected root areas of trees where indicated.

1.05 Temporary Controls

A. Erosion and Sediment Control

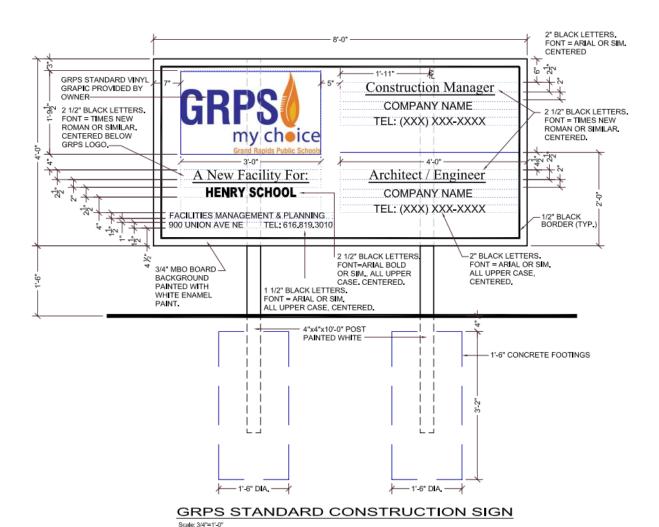
 Comply with requirements of officials having jurisdiction. Comply with requirements of State of Michigan. Prevent spread of disturbed soil and storm water from site to areas outside of contract limits if indicated or either offsite or onto paved areas in use by the Owner. Promptly clean up any prohibited spread of soil or water.

2.	GRPS- Kensington School Demolition Provide a method of dust control as it relates to the neighboring homes & streetscape	GRPS- Kensington School Demolition trol as it relates to the neighboring homes & streetscape			

01 5800 Project Identification

GENERAL

1. Job Site Sign shall meet the following requirements:



01 5800

01 7700 Closeout Procedures

- 1.01 Full size set including as-built
- 1.02 ½ size set including as-built
- 1.03 2 digital copies of what is required in specs on usb
- 1.04 Including but not limited to construction drawings, as-builts (.dwg and .pdf), specs, background checks, insurances, close-out, insurance, warranty, approved submittals, operations manuals, testing procedures, test and balance reports, asbestos reports, hazardous materials reports, shop drawings, summary of contacts for warranty and maintenance, summary of materials and equipment warranty periods, summary of attic stock with part numbers,

DIVISION 02 - EXISTING CONDITIONS

02 4119 SELECTIVE DEMOLITION

PART 2 GENERAL

2.01 Description of work:

- A. This project consists of building and site demolition/deconstruction of buildings and basement/foundations including backfill of the excavation, securing all necessary permits (demolition, water/sewer cuts, soil erosion and any other required permits by Local, State or Federal government) and disconnect gas, water and sewer utilities or cap wells and abandonment of septic (if any) and identification, removal, and disposal of asbestos, lead paint and any other items requiring abatement.
- B. The CONTRACTOR shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment, and services, including utility and transportation services, and perform and complete all work required for the demolition and complete site preparation and clearance and supplemental work as required to meet the specifications herein of all structures listed in the contract documents. OWNER reserves the right, without invalidating the agreement, to increase or decrease the work by adding and/or deleting any or all items from the Scope of Work.

2.02 Section includes:

A. Selective Site Demolition:

- Demolition of designated site improvements including paving, curbing, site walls, and utility structures.
- 2. Demolition of below-grade foundations and site improvements to depth to avoid conflict with new construction or site work.
- 3. Removal of hollow items or items which could collapse.
- 4. Salvage of designated items.
- 5. Protection of site work and adjacent structures.
- 6. Disconnection, capping, and removal of utilities
 - a. All drains, sanitary or storm, shall be located and sealed with concrete or clay plugs, laid in mortar, document location of all plugs
- 7. Pollution control during building demolition, including noise control.
- 8. Removal and legal disposal of materials.
- 9. Designated site improvements and adjacent construction.
- 10. Prior to beginning backfill operations, the contractor shall remove all wood, lath, plaster, or other deleterious material from area to be filled.
- B. Building Demolition: This item shall consist of the removal of all building and appurtenances in accordance with the Proposal, General Provisions, and the requirements hereinafter set forth.
 - 1. Existing basement, pit, well or cistern shall be removed to an elevation of three feet (3') below the existing grade and all material remaining shall be removed from the voids to present a neat appearance for inspection, prior to backfilling.

- Concrete slabs more than three feet (3') below grade shall be broken; all others shall be broken and removed
- 3. Demolition of interior partitions, systems, and building components designated to be removed
- 4. Demolition of exterior facade, structures, and components designated to be removed.
- 5. Removal of abandoned utilities and wiring systems.
- 6. Notification to Owner of schedule of shut-off of utilities which serve occupied spaces.
- 7. Pollution control during selective demolition, including noise control.
- 8. Removal and legal disposal of materials.
 - Loading, removal, transportation costs, dumping fees, dumpster fees, or any other fees
 associated with the disposal of all demolition debris and material shall be the sole
 responsibility of the CONTRACTOR
- 9. Protection of designated site improvements and adjacent construction.
- 10. Salvage of designated items.
- 11. Interruption, capping or removal of utilities as applicable.
- 12. All basements, pits, wells, cisterns, or other open voids shall be filled with suitable materials as provided herein
 - a. The CONTRACTOR shall not use concrete from walks, steps, curbs, or any other material of this nature for such backfilling. The final grade of backfill for basements, pits, wells, and cisterns shall conform to surrounding area in such a manner as to present a neat, well drained appearance.
 - b. The final grade of backfill for basements, pits, wells, cisterns, or other open voids shall conform to the existing surrounding grade in such a manner as to present a neat well-drained appearance, and to prevent water draining unnecessarily onto adjacent properties.

2.03 Hazardous Materials:

A. All to be removed as a part of this contract (including but not limited to Asbestos & Lead paint).

2.04 Submittals

- A. Schedule: Submit for approval demolition schedule, including schedule and methods for capping utilities to be abandoned existing utility services.
- B. Landfill Records: Indicate receipt and acceptance of demolished material by a landfill facility authorized to accept such material.

C.

2.05 Materials Ownership

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

2.06 Quality Assurance

- A. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.
- B. Notify the Michigan Department of Environmental Quality as required by law, of demolition work, including work that does not involve asbestos abatement work

2.07 Pre-Installation Meetings

- A. Convene minimum two weeks prior to starting work of this section. A Pre-Demolition Conference will be held with the CONTRACTOR prior to review methods, procedures and requirements related to the demolition including, but not limited to, the following:
 - 1. Provide the date that the work is to start
 - 2. Provide demolition plan along with schedule
 - 3. Demolition permit and any other required permits
 - 4. Written verification from utilities that service is shut off
 - 5. Review of the Pre-demolition survey of potential environment hazards
 - 6. Erosion & Sediment Control Permit (if applicable)
 - 7. Proposed dump site location(s)

2.08 Sequencing

- A. Immediate areas of work will not be occupied during selective demolition. The public, including children, may occupy adjacent areas.
- B. No responsibility for buildings and structures to be demolished will be assumed by the Owner.
- C. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 3 PRODUCTS - Not applicable to this Section.

PART 4 EXECUTION

4.01 Demolition

- A. Demolition Operations: Do not damage building elements and improvements indicated to remain. Coordinate with owner's items to be salvaged prior to commencing demolition. Storage or sale of items at project site is prohibited.
- B. The contractor shall clear the site the work before grading operations are begun, He shall remove and dispose of all dead trees, brush, rubbish, and any other junk or debris. Live trees, hedges, and shrubbery shall not be removed and the contractor shall be held liable for damage to or removal of them
- C. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished. It shall be the responsibility of the contractor to notify all utility suppliers of intended demolition, to insure all utilities are disconnected
- D. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction.
- E. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
- F. Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
- G. Unless otherwise directed or permitted, the CONTRACTOR **s**hall arrange and execute the Work in such a manner that all highways, streets, alleys and public sidewalks within the construction limits shall be open to normal vehicular traffic and pedestrian traffic at all times.
 - 1. If the CONTRACTOR blocks or uses a portion of the Right of Way, then the CONTRACTOR may have to obtain a Right of Way Permit in advance from contracting authority.

- H. The CONTRACTOR shall keep the site clean, orderly and safe while the Work is in progress. Tracked type construction equipment on the pavement, including public streets, alleys and sidewalks, is not permitted. The operation of overweight or oversize equipment on the pavement shall be governed by State and Local ordinances, laws, and regulations.
- I. The CONTRACTOR may store demolition equipment and materials within the construction Limits, but outside the public Right of Way by at least 30 feet. All equipment and materials shall be removed immediately following work completion.

J.

4.02 Demolition of Concrete or Asphalt

A. Water used during concrete and asphalt work (including sweeping and saw-cutting) must be contained and collected for proper disposal. Do not discharge water containing dust or debris from concrete or asphalt work into storm drains, catch basins or to the sanitary sewer system.

4.03 Post Demolition

A. Upon completion of demolition and grading, the site shall be seeded and mulched. Refer to Drawings

DIVISION 11 - EQUIPMENT

11 0680 PLAY FIELD EQUIPMENT & STRUCTURES

PART 1 APPROVED MANUFACTURES

- A. Recreation Creations Inc. (RCI)
- B. Gared Company
- C. Bison

PART 2 Preferred Equipment

- 2.01 Support posts shall be mode of 4 ½" O.D. galvanized steel pipe with a 4" extension.
 - 1. Preferred: RCI model 411 single cantilevered or GRPS equivalent
- 2.02 Backboards shall be 13 gauge all steel construction, deep drawn from a single piece of steel, finished with a minimum of 2 coats of non-glare white enamel paint. Size 54" x 35".
 - 1. Preferred: RCI model 5400 or GRPS equivalent
- 2.03 Goals shall be extra heavy duty, office size 16", double ring of 5/8" and ½" welded together with double bracing for additional strength and rigidity, equipped with "no-tie" net fastening system, furnished with a nylon net.
 - 1. Preferred: RCI model 601, Gared Company model 240 super goal, or GRPS equivalent

DIVISION 31 – EARTHWORK

31 0000 **GENERAL**

- 1.01 Refer carefully to the Drawings. No attempt is made herein to list or refer to all items included in Site Work and selective building demolition.
- 1.02 The General Conditions, Supplementary Conditions and General Requirements are a part of this division.
- 1.03 Site work shall include furnishing all materials, equipment, tools, transportation, and performing all services and labor required to execute the work for this project.
- 1.04 Prior to any digging, call "MISS DIG" at 1-800-482-7171 to locate all underground utilities. Verify exact location of existing water main and maintain 10 feet clear to any new grading as shown on drawings.

31 1000 SITE CLEARING

- 1.01 The contractor shall provide protection necessary to prevent damage to existing improvements that are indicated to remain in place.
- 1.02 During the grubbing operation, the contractor shall remove and dispose of all shrubs, stumps, and roots larger than 1.5 inch in diameter to a depth of 20 inches.
- 1.03 The contractor shall strip topsoil to whatever depths encountered in a manner to prevent intermingling with underlying subsoil or other objectional material. Stockpile topsoil to be reused in storage piles on site.

31 2000 **EARTH FILL**

PART 1 GENERAL

1.01 A registered Soils Engineer shall verify densification of fill material. Comply with resulting recommendations for site preparation.

31 2200 **ROUGH GRADING**

- 1.01 Rough grading shall be conducted in accordance with a "Soil and Erosion Sedimentation Control Plan" approved by the department of environmental quality, Kent County, Michigan.
- 1.02 All existing GRPS and municipal water and sewer lines shall be kept free of mud and debris. Catch basins shall be cleaned out and maintained on a regular basis, to keep all lines operational through the construction period.
- 1.03 Where there is the potential for airborne dust, the contractor is responsible for controlling the dust by watering during grading operations.
- 1.04 Where there is the potential for mud on neighboring streets, the contractor shall provide wheel washout stations for vehicles and equipment.

- 1.01 On projects where the District has retained the services of a geotechnical engineer, that consultant shall approve all backfill material.
- 1.02 Debris is not permitted to be used for backfill. Unsuitable fill material must be removed from the site.
- 1.03 Unit prices for removal of unsuitable soil, increased foundation depth, etc., should be requested as needed in the bidding documents.
- 1.04 Blasting is strictly prohibited on all GRPS projects
- 1.05 The contractor shall prevent surface water and subsurface, or groundwater, from entering excavations, ponding on prepared subgrades, or flooding the project site and surrounding areas.
- 1.06 The contractor shall notify the design consultant and the GRPS project manager when excavations reach required subgrade for inspection.

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 3300 SITE FURNISHINGS

PART 1 BICYCLE RACKS

- 1.01 Use products to match the park benches.
 - A. Preferred: Madrax "Heavy Duty Challenger" bike rack
- 1.02 Bicycle racks shall be anchored below grade.

32 3900 MANUFACTURED SITE SPECIALTIES

PART 1 OUTDOOR BASKETBALL BACKSTOPS

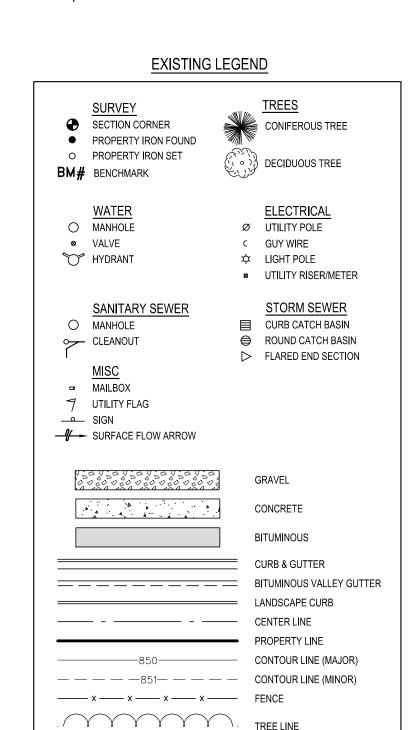
- 1.01 It is preferred that a 4 ½" O.D. schedule 40 galvanized posts with a 4' offset extension be installed in a 5" I.D. schedule 40 galvanized steel, metal sleeve set in a 3' wide by 4'-4" deep concrete base.
- 1.02 Provide vandal resistant fasteners at all exposed locations..



TAX DESCRIPTION for 41-13-35-476-022

Lots 140 to 150 inclusive, Coit Park Addition. Also part of the East 1/2, of the Southeast 1/4 of Section 35, T7N, R12W; Commencing at the Southwest corner of Lot 140 Coit Park Addition; thence Northerly along the West line of said Addition to the Northwest corner of Lot 148 of said Addition; thence Westerly perpendicular to the Westerly line of said Addition 131 feet; thence Southerly Parallel with the Westerly line of said Addition to the North line of Curve Street Extended West; thence Easterly to the Point of Beginning,

> A title insurance policy was not provided to this office at the time of the survey. One should be obtained to compare for accuracy of legal description and easements of record.



SANITARY SEWER

— NATURAL GAS FIBER OPTIC

OVERHEAD ELECTRIC

— ug-c — UNDERGROUND CABLE UNDERGROUND ELECTRIC

UNDERGROUND TELEPHONE

EXIST 1031 IN PAR OF GRAN

NEEDS OF SINCE 1987

THE

PROJECT NO. 230709

<u>LEGEND</u>

● - IRON FOUND
□ - WOOD STAKE

o - IRON STAKE - SET

R — RECORDED DIMENSION D — DEED DIMENSION

P - PLATTED DIMENSION

CC - CORNER ON CONCRETE EB - EDGE OF BITUMINOUS

EC - EDGE OF CONCRETE

G — GROUND ELEVATION

GTR - FLOW LINE OF GUTTER

BIT. — BITUMINOUS PAVEMENT

P/L - PROPERTY LINE PVMT. - PAVEMENT W.S. - WATER SERVICE LATERAL

OHE - OVERHEAD ELEC/UTILITY LINE

ENCR - PROPERTY LINE ENCROACHMENT

EG — EDGE OF GRAVEL

X—X - FENCE LINE

CONC. - CONCRETE

BM - BENCHMARK

W.V. - WATER VALVE

CB — CATCH BASIN MH — MANHOLE

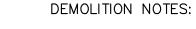
HYD. - FIRE HYDRANT

UTIL — UTILITY ELEC. — ELECTRIC RET. — RETAINING WALL

M - MEASURED DIMENSION CL - CENTER LINE

BENCHMARK NO. 1 ELEV. = 674.97' NORTHWEST FLANGE BOLT UNDER "E" IN "TRAVERSE CITY" ON HYDRANT LOCATED 18' ± WEST OF THE CENTERLINE OF KENSINGTON STREET AND 370' ± NORTH OF THE CENTERLINE OF CURVE STREET. (N.A.V.D. 88)

BENCHMARK NO. 2 ELEV. = 660.32NORTHWEST FLANGE BOLT UNDER "A" IN "TRAVERSE CITY" ON HYDRANT LOCATED 41'± NORTH WEST OF THE CENTERLINE OF CURVE STREET AND 23'± WEST OF CENTERLINE OF KENSINGTON STREET (N.A.V.D. 88)



1) EXCEPT AS NOTED. ALL BUILDING ROOFS, WALLS, FLOORS, APPURTENANCES AND CONTENTS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS AND GUIDELINES.

2) ALL SITE AND BUILDING DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF DIVISION 02 4119 "SELECTIVE DEMOLITION" OF THE PROJECT SPECIFICATIONS.

3) NO RECORDS WERE AVAILABLE FOR THE LOCATION OF UNDERGROUND UTILITIES ADJACENT TO AND UNDER THE EXISTING BUILDINGS. CONTRACTOR SHOULD EXERCISE DUE CAUTION DURING DEMOLITION AND EXCAVATION.

4) WHENEVER PRACTICAL, UNDERGROUND UTILITY PIPES SHALL BE REMOVED. UNDERGROUND UTILITY PIPES GREATER THAN 4" IN DIAMETER SHALL BE PLUGGED WITH GROUT.

5) WHERE MATERIALS ARE INDICATED TO BE REMOVED, THE CONTRACTOR SHALL REMOVE FROM SITE AND DISPOSE OF PROPERLY. CONCRETE, ASPHALT & OTHER INERT MATERIALS (RUBBLE) MAY BE USED FOR FILL IF PROCESSED SUCH THAT IT MEETS MDOT, CLASS II SPECIFICATIONS.

6) THE CONTRACTOR SHALL COORDINATE WITH ANY AFFECTED UTILITY COMPANIES/AUTHORITIES ON ANY REMOVAL AND/OR TERMINATION AS MAY BE NECESSARY. ALL EXISTING UTILITIES LINES SHALL BE REMOVED AND TERMINATED AT THE PUBLIC ROAD RIGHT-OF-WAY LINE OR AS DIRECTED BY THE UTILITY PROVIDER.

7) THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND DETERMINING THE EXTENT THAT REMOVALS WILL NEED TO BE MADE TO ACCOMPLISH THE PROPOSED WORK.

8) WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED ADJACENT TO PAVEMENT TO REMAIN, THE CONTRACTOR SHALL SAW CUT (FULL DEPTH) ALONG THE REMOVAL LINE TO PROVIDE A CLEAN JOINT.

9) ALL AGGREGATE UNDER PAVEMENT SHALL BE REMOVED FROM SITE OR MAY BÉ USED FOR FILL IN ANY BASEMENT AREAS. AGGREGATE MAY NOT BE LESS THAN 24" BELOW FINISHED SURFACE ELEVATION.

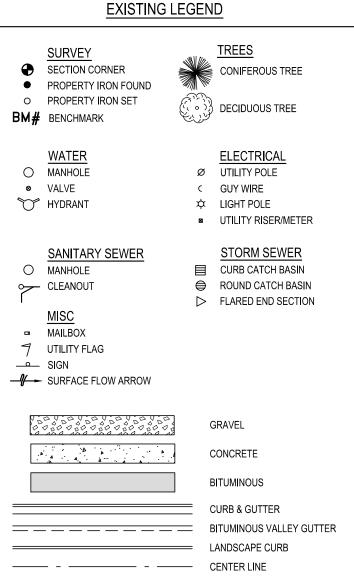
10) ALL TREES SHOWN ON THIS PLAN SHALL BE PROTECTED.

11) ALL EXISTING CONCRETE TO REMAIN MUST BE PROTECTED.

REMOVAL LEGEND

DEMO CONCRETE **DEMO BITUMINOUS** -X ·X ·X ·X ·X ·X ·X ·X - DEMO UTILITIES

— — — — — — — SAWCUT LINE



PROPERTY LINE

SANITARY SEWER

 NATURAL GAS FIBER OPTIC

OVERHEAD ELECTRIC

— ug-c — UNDERGROUND CABLE

—— UG-E ———— UNDERGROUND ELECTRIC

UNDERGROUND TELEPHONE

— — — — — — — — — — — — — — — CONTOUR LINE (MINOR)

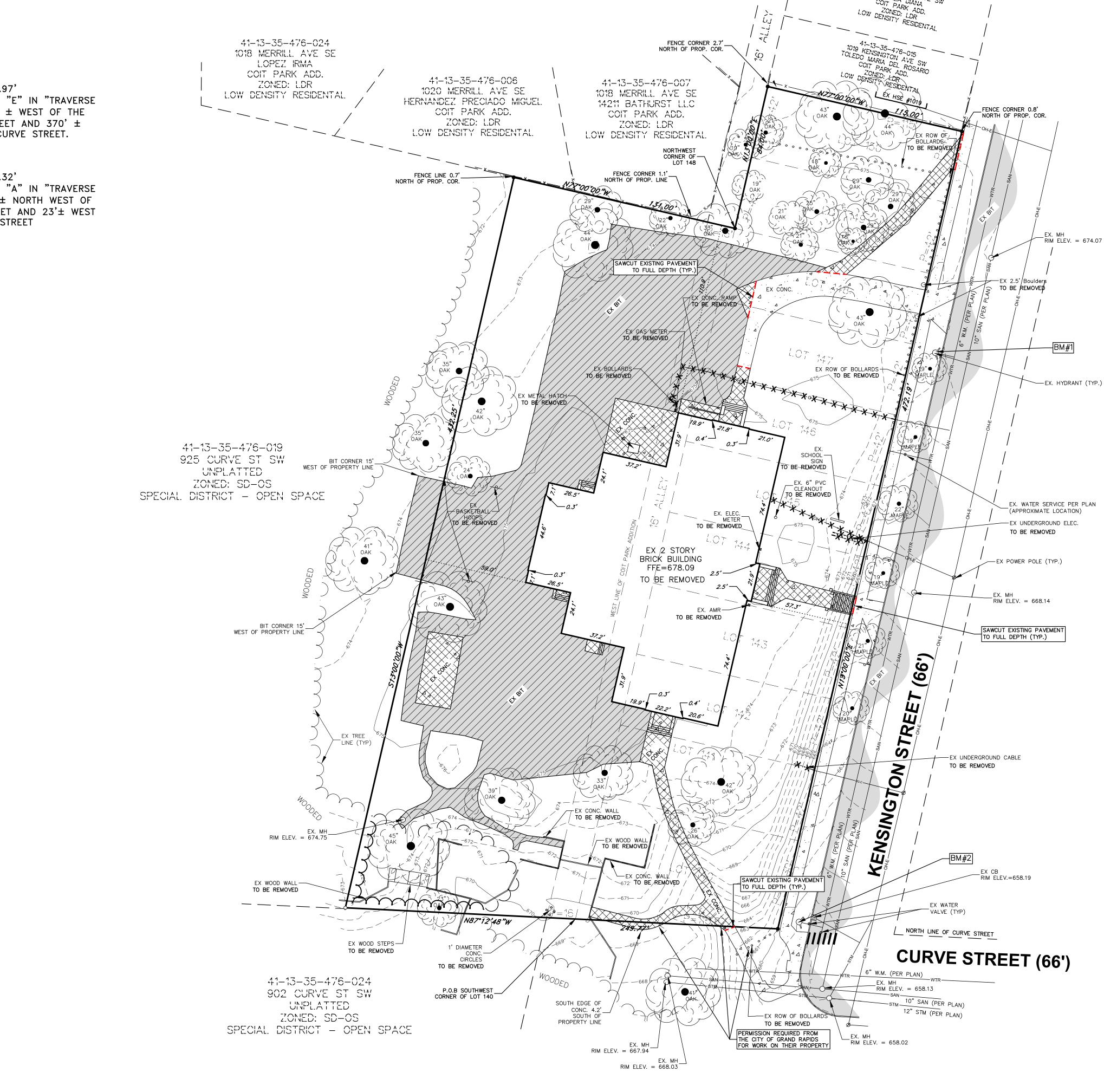
GRAPHIC SCALE

(IN FEET 1 inch = 30 ft.

0F 987

031 PARI GRAN

PROJECT NO 230709



W.V. — WATER VALVE HYD. — FIRE HYDRANT CB — CATCH BASIN MH — MANHOLE

EXCESS SPOILS AREA

1) EXCEPT AS NOTED IN DEMOLITION NOTES IT IS INTENDED THAT ALL ÉXCESS SOILS BE LEFT ON SITE.

2) THE MINIMUM SLOPE IN THIS AREA IS 2% AND THE MAXIMUM SLOPE IS 10%. THE HEIGHT SHALL NOT EXCEED 48". NOTIFY OWNER IF ADDITIONAL AREA IS NEEDED.

3) THERE IS A MECHANICAL BASEMENT AREA IN THE BUILDING. THE LÓCATION AND SIZE IS NOT KNOWN. IT SHALL BE BACKFILLED ACCORDING TO THE SPECIFICATIONS ON SHEET C-501. IF THERE IS NOT SUFFICIENT SOILS TO BACKFILL THE BASEMENT AND GRADE THE SITE PER PLAN NOTIFY THE PROJECT ENGINEER SO THAT THE SITE GRADING MAY BE MODIFIED TO BALANCE THE EARTHWORK.

NOTES:

1) BICYCLE RACK SHALL BE PER SECTION 323900 OF THE PROJECT SPECIFICATIONS. USE PRODUCTS TO MATCH THE BENCHES. MADRAX -"HEAVY DUTY CHALLENGER" BIKE RACK IS PREFERED. BICYCLE RACKS SHALL BE ANCHORED BELOW GRADE.

2) BASKETBALL BACKSTOPS SHALL BE PER SECTION 323900 OF THE PROJECT SPECIFICATIONS. IN PLAYGROUND APPLICATIONS, IT IS PREFERRED THAT 4 1/2" O.D. SCHEDULE 40 GALVANIZED POSTS WITH A 4' OFFSET EXTENSION BE INSTALLED IN A 5" I.D. SCHEDULE 40 GALVANIZED STEEL, METAL SLEEVE SET IN A 3' WIDE BY 4'4" DEEP CONCRETE BASE. PROVIDE VANDAL RESISTANT FASTENERS AT ALL EXPOSED LOCATIONS.

3) SEED SHALL BE MICHIGAN CERTIFIED. MIXTURES SHALL NOT CONTAIN MORE THAN 0.05% WEED OR OTHER CROP SEED, NOR MORE THAN 3" INERT MATTER.

SOIL EROSION CONTROL KEY

GEOTEXTILE SILT FENCE

SOIL EROSION CONTROL BLANKET

LEGEND

EXISTING CONTOUR LINE PROPOSED CONTOUR LINE EXISTING STORM SEWER DISTURBANCE LIMITS (1.46 ACRES)

SURFACE DRAINAGE EXISTING BIT. PAVEMENT

PROPOSED BIT PAVEMENT

EXISTING CONCRETE

EXCESS SPOILS AREA

C - 103

JEFFE 855 - 2 GRANI 616-24

PROJECT NO.

230709

0F 987

THE ITS

GRADING, AND RESTORATION 031 KENSINGTON SW ST.

N PART OF SECTION 35, T7N, R12W GRAND RAPIDS, KENT COUNTY, MICHIGAN

SITE, (10 10 IN OF OF OF

ARCHITEC SE 1 49508

(3) PERMANENT/TEMPORARY SEEDING

39B INLET PROTECTION WITH GEOTEXTILE AND STONE

(N.A.G. S-150 OR EQUAL)

GRAPHIC SCALE (IN FEET)

1 inch = 30 ft.

PROJECT NOTES AND SPECIFICATIONS

B) ALL ITEMS OF WORK NOT COVERED BY THESE SPECIFICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE GRAND RAPIDS PUBLIC SCHOOLS SPECIFICATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE MOST STRINGENT REQUIREMENTS AS LISTED IN THE GEOTECHNICAL REPORT, PLANS AND SPECIFICATIONS SHALL APPLY.

C) ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS DIG AT 811/482-7171 AT LEAST 3 WORKING DAYS PRIOR TO ANY UNDERGROUND CONSTRUCTION.

D) CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER 48 HOURS BEFORE WORK BEGINS.

E) ROOSIEN AND ASSOCIATES AS THE DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE OR LIABLE FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE DRAWINGS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH RISE FROM OTHERS' FAILURE TO OBTAIN AND FOLLOW THE DESIGN PROFESSIONAL'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

F) CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY, CONSTRUCTION MEANS, CONTROLS, TECHNIQUES, SEQUENCES AND PROCEDURES.

GENERAL SPECIFICATIONS

A) STRIP ALL TOPSOIL AND ORGANIC MATERIAL ON SITE WITHIN THE CONSTRUCTION LIMITS OF THE PROJECTS WHERE GRADES ARE TO BE CHANGED, OR IN AREAS TO BE IMPROVED. IF MATERIAL IS FREE OF ROOTS, ROCKS AND DEBRIS, AND IS APPROVED BY THE ENGINEER, IT SHALL BE TEMPORARILY STOCKPILED ON SITE FOR LATER USE.

B) CONSTRUCTION ACCESS AND MATERIAL STORAGE IS LIMITED TO THE AREAS DESIGNATED ON THE DRAWINGS OR AS APPROVED BY THE OWNER.

C) WHERE IT IS NECESSARY TO WORK OUTSIDE THE PROPERTY CONTROLLED BY THE OWNER, THE CONTRACTOR SHALL OBTAIN LEGAL AUTHORITY FROM ADJACENT PROPERTY OWNERS TO COMPLETE THE WORK AS OUTLINED IN THESE DOCUMENTS.

D) ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE BROUGHT TO FINISH GRADES AS SHOWN ON THE DRAWINGS. ALL AREAS DISTURBED SHALL BE RESTORED WITH A MINIMUM OF 4" OF TOPSOIL, SEEDED AND MULCHED.

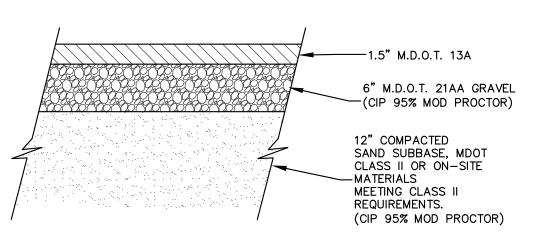
E) THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION ON THE NEED FOR IMPORTED OR EXPORTED

MATERIAL. THE PROPOSED GRADING PLAN MAY NOT PROVIDE FOR A "BALANCED" SITE.

F) ALL AREAS DISTURBED DUE TO SITE ACCESS SHALL BE RESTORED TO THE PRECONSTRUCTION CONDITION OR BETTER.

G) BACKFILL AND COMPACTION: ALL BACKFILL SHALL BE CLEAN, FREE OF LARGE ROCKS, DEBRIS AND ORGANIC MATERIAL. COMPACT ALL BACKFILL TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST, ASTM D-1557. BACKFILL SHALL BE PLACED IN A MAXIMUM OF 12" LIFTS.

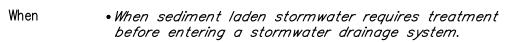
H) SEE SECTION 312200 "ROUGH GRADING" AND 312300 "EXCAVATION AND FILL" OF THE PROJECT SPECIFICATIONS.



LIGHT DUTY BIT. PAVEMENT

NOT TO SCALE

INLET PROTECTION — FABRIC 558 DROP SPECIFICATIONS



•To prevent sediment from entering stormwater systems.

• Use in or at stormwater inlets, especially at construction sites or in streets.

1. A filter fabric bag is hung inside the inlet, beneath the

2. Replace grate, which will hold bag in place. 3. Anchor filter bag with 1" rebar for removal from inlet. 4. Flaps of bag that extend beyond the bag can be

Maintenance • Drop inlet filters should be inspected routinely and after each major rain event.

buried in soil in earth areas.

SECTION B

SECTION A

While he will have the state of the state of

JOINING SECTIONS OF ENVIROFENCE

-NATIVE SOIL

TOE-IN METHODS

FABRIC SILTATION FENCING

NOT TO SCALE

• Damaged filter bags should be replaced.

• Clean and/or replace filter bag when 1/2 full.

• Replace clogged fabric immediately. • If needed, initiate repairs immediately upon inspection.

• Remove entire protective mechanism when upgradient

areas are stabilized and streets have been swept.

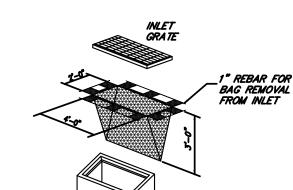
• Ponding may occur around storm drains if filter is clogged.

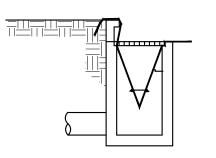
Limitations • Can only accommodate small flow quantities. • Requires frequent maintenance.

MICHIGAN

DEPARTMENT OF MANAGEMENT AND MANAGEMENT AND BUDGET







INSTALLATION DETAIL



C - 501

230709